



January 19 2016

Ms. Lisa Dernbach  
Senior Engineering Geologist  
Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, California 96150

**Re: Final PCE Investigation Report  
South Lake Tahoe, California**

Dear Ms. Dernbach:

URS Corporation Americas (URS) is pleased to present this report for the tetrachloroethene (PCE) investigation within a nine-block area in South Lake Tahoe, El Dorado County, California (site) (Figure 1). This report was prepared on behalf of the State of California Department of General Services – Real Estate Services Division under Agreement No. 3181300, Task Order Number 5. The purpose of the investigation was to evaluate PCE concentrations in groundwater near several potential sources.

Background information and other data used in preparing this work plan have been furnished to URS by the State of California and/or third parties. URS has relied on this information as furnished, and is neither responsible for nor has confirmed the accuracy of this information. The data interpretation, conclusions, and recommendations presented in the report were governed by URS' experience and professional judgment. This report has been prepared based on data current at the time of preparation. Assumptions based on this data, although believed to be reasonable and appropriate, may not prove to be true in the future as new data are collected. The conclusions and recommendations of URS are conditioned upon these assumptions.

## **1.0 BACKGROUND**

In June 2014, the Lukins Brothers Water Company in South Lake Tahoe notified the Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board [LWB]) of detections of tetrachloroethene (PCE) at concentrations greater than the maximum contaminant level (MCL) of 5 parts per billion (ppb) in two municipal wells: No. 2 and No. 5. PCE at levels up to 46 ppb detected in the municipal wells was a large increase over lower PCE levels detected in previous years. The source(s) of PCE is unknown and both municipal wells were shut off in July 2014, leaving Lukins with just one municipal well in operation and no backup water supply.

During the summer of 2014, LWB staff collected samples from 10 private wells operating within the Lukins Brothers Water Company service area. Sampling was conducted to determine whether other wells besides the two Lukins municipal wells are impacted with PCE. Sample results from two private wells (Figure 1) showed PCE levels greater than the 5 ppb MCL. PCE was detected at 52 ppb in a domestic well at a residential-office property and at 260 ppb in a domestic well for a restaurant and apartment complex. The owner of the former well converted to bottled water as a water supply source when notified of the sample results. The owner of the latter well, regulated as small

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community water supply by El Dorado County, elected to open a connection to a Lukins water line to maintain continuous water supply.

Results of private well sampling have narrowed the area of likely PCE discharge to a nine-block area in the city. Businesses that use or may have used the solvent have already been researched.

## **2.0 SITE DESCRIPTION**

The site is within the city of South Lake Tahoe (Figure 1). The site is bounded by 11th Street to the northwest, Roger Avenue to the south-southwest, Patricia Lane to the northeast, and 5th Street to the southeast, which is north and adjacent to the Emerald Bay Road and Lake Tahoe Boulevard intersection, colloquially referred to as the “Y.” Land use within the site is predominately residential with commercial properties along Emerald Bay Road and Eloise Avenue.

Topographic coverage of the site is provided by the United State Geological Survey 7.5-minute series quadrangle of Emerald Bay, California, dated 2012. According to the topographic map, topography at the site is relatively flat with a decreasing gradient to the east. Elevation at the site is approximately 6,275 feet above mean sea level.

### **2.1 Geology**

The site is situated on the eastern flank of the Sierra Nevada Mountain Range within the Sierra Nevada Geomorphic Province. The near surface geology is characterized as alluvial deposits based on the soil cores obtained during this investigation. Generally, coarse-grained material (e.g., sand and silty sand) were predominate from the surface to the maximum depth explored (up to 40 feet). Thin layers of fine-grained material (e.g., silt and clay) approximately 1 to 2 feet thick were encountered between approximately 8 and 12 feet below ground surface (bgs) and 18 to 23 feet bgs across the site. Weathered granitic rock was encountered in the northern portion of the site within the depth range of 12 to 24 feet (SB-16 through SB-19). Table 1 summarizes the soil type encountered at each sample depth. Appendix B includes the boring logs.

### **2.2 Hydrogeology**

The flow of groundwater in the Lake Tahoe Basin is towards the lake unless intercepted by a surface water body or a pumping well. As shown on Figure 1, four active municipal wells operate in the west side of the city limits with Lake Tahoe existing beyond the north edge of the map.

During this investigation, groundwater was encountered at approximately 14 to 17 feet bgs in most borings, but was encountered as deep as 24 feet bgs in some borings. According to the *Third Quarter 2015 Groundwater Monitoring Report and Current Site Remediation Status Report* for the nearby Lake Tahoe Laundry Works site at 1024 Lake Tahoe Boulevard, the groundwater flow direction is generally northwest to north (Engineering Remediation, 2015), though groundwater has been shown to flow to the north-northeast in previous years (PES Environmental, Inc., 2006; Stantec Consulting Inc., 2008).

### **3.0 SCOPE OF WORK**

Following a proposed scope of work presented in the *PCE Investigation Work Plan, South Lake Tahoe, California* (URS, 2015), URS conducted a groundwater investigation within the city of South Lake Tahoe to evaluate potential properties responsible for PCE discharge(s).

#### **3.1 Pre-Field Activities**

##### **3.1.1 Database Review**

URS contacted Environmental Database Resources, Inc. (EDR) to provide a report identifying on which environmental databases the site and surrounding sites are listed and their current regulatory status. The California State Water Resources Control Board Geotracker database provides information on the Lake Tahoe Laundry Works site, located at 1024 Lake Tahoe Boulevard and shown in Figure 1. This site is the only active PCE case in the South Y area where remedial actions are being implemented.

Because LWB previously researched businesses within the site boundary that used or likely used PCE in their operations, the focus of the database review was to identify potential properties downgradient of the site boundary as defined in this investigation but upgradient and cross-gradient to Lukins wells No. 2 and No. 5 that could be responsible for or contributing to PCE-impacted groundwater detected at Lukins No. 2 and No. 5 wells.

The EDR database report indicates that there a few businesses that may use PCE in their operations within the area between the site boundary and Lukins wells No. 2 and No. 5, generally between Anita Road to the north, Tahoe Vista Drive to the east, Highway 89/Emerald Bay Road to the south, and 15th Street to the west. Appendix A includes the EDR database report.

##### **3.1.2 Permitting and Access**

Before field activities began, URS obtained a drilling permit from the County of El Dorado Environmental Management Department (Permit #6633) and encroachment permit (Permit #EN15-082) from the City of South Lake Tahoe. Several borings were located on private properties, which required access from the property owners. All access agreements were secured prior to mobilization.

##### **3.1.3 Health and Safety**

URS prepared a site-specific health and safety plan with traffic control plans that was reviewed by all field staff prior to beginning field work and was available on site through the duration of the field work.

##### **3.1.4 Utility Clearance**

On October 21, 2015, Ground Penetrating Radar Systems of Sacramento, California, cleared all boring locations of subsurface utilities using a ground penetrating radar (GPR) system (GSSI, model SIR-3000) with a 400 MHz GPR antenna and radio detection to detect live power and communication

signals. URS also notified Underground Service Alert to clear each drilling location for utilities approximately 48 hours before field activities began.

#### **4.0 FIELD INVESTIGATION**

##### **4.1 Drilling**

Between October 26 and 30 and November 12 and 13, 2015, Enprobe of Oroville, California, advanced 22 2-inch-diameter borings (SB-01 through SB-22) using a direct-push drill rig and dual-tube system to approximately 24 to 40 feet bgs (Figure 2). Table 1 summarizes the depths of each boring. The upper 5 feet of each boring was hand-cleared to prevent encounters with utility lines. Soil core was continuously collected in acetate liners and logged by a URS geologist using the United Soil Classification System. A photoionization detector (PID) was used to determine the presence of organic vapors in the soil core. No elevated PID readings were detected. Appendix B includes the boring logs from SB-01 through SB-22.

Borings were backfilled with neat cement grout from total depth to approximately 1 foot bgs and finished with concrete or cement to match surrounding surface.

##### **4.2 Hydropunch Sampling**

Two grab groundwater samples were collected from each boring, except at SB-18 where the drill rig encountered a tight formation at approximately 28 feet bgs that did not yield adequate sample volume. Samples generally were collected from the water table and approximately 10 feet below the water table or as directed by LWB. Groundwater was encountered at approximately 14 to 17 feet bgs, but was encountered as deep as 24 feet bgs in some borings.

Upon reaching each sampling depth, groundwater was purged from the boring to ensure formation water entered the boring and representative samples were collected. Groundwater samples were collected using a Hydropunch or bailer and transferred into 40-milliliter acid-preserved volatile organic analysis vials without headspace or bubbles. All sampling equipment was washed with a non-phosphate detergent and rinsed after each use. Samples were placed on ice and transported to a laboratory under control of chain-of-custody and analyzed within allowable holding times. Samples were analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (EPA) Method 8260B and total petroleum hydrocarbons using EPA Method SW8015.

##### **4.3 Well Sampling**

Three inactive groundwater monitoring wells on Patricia Lane that are associated with another site were identified during the utility locating. LWB directed URS to sample the shallow and intermediate wells with the hopes that the wells would provide useful groundwater data.

URS measured the total depth of the shallow well (22.4 feet bgs) and the groundwater level (16.22 feet bgs) before using a peristaltic pump to purge stagnant water within its casing. Temperature, pH, conductivity, turbidity, and ORP were measured to evaluate stabilization before sampling. Samples were analyzed for VOCs and total petroleum hydrocarbon (TPH) using Method 8260B and SW8015, respectively. Appendix C contains the sample data sheet for the shallow well (PATLANSS).



Upon inspection of the intermediate well, URS noted that the security lid was missing and well casing was not intact. Based on these observations, LWB and URS jointly decided not to sample the intermediate well and instead collect a hydropunch sample (SB-22).

## **5.0 RESULTS**

Tables 2 and 3 summarize the PCE results in hydropunch and well samples, respectively. Table 4 summarizes the diesel results in hydropunch samples. The format of the sample names indicate the boring name, sample depth, and type of sample (i.e., NS or FD indicates a normal or field duplicate sample, respectively). Appendix D includes the laboratory analytical reports with a quality assurance/quality control review.

### **5.1 Lithology**

As discussed in Section 2.1, lithology at the site consisted of predominately coarse-grained material (e.g., sand and silty sand) from the surface to 40 feet with interbedded layers of fine-grained material (e.g., silt and clay) approximately 1 to 2 feet thick between 8 and 12 feet bgs and 18 to 23 feet bgs across the site. Table 1 summarizes the soil type encountered at each sample.

### **5.2 Volatile Organic Compounds**

Curtis and Tompkins of Berkeley, California, analyzed all groundwater samples for VOCs using Method SW8260B.

#### **5.2.1 VOCs**

Of the 42 hydropunch samples that were collected during this investigation, 6 samples had detectable PCE concentrations:

- SB-08-14-NS: 1.80 micrograms per liter ( $\mu\text{g/L}$ )
- SB-09-16-FD: 1.40  $\mu\text{g/L}$
- SB-10-16-NS: 1.60  $\mu\text{g/L}$
- SB-19-36-NS: 0.6  $\mu\text{g/L}$
- SB-21-23-NS: 3  $\mu\text{g/L}$

All PCE concentrations were less than the California Maximum Contaminant Level of 5  $\mu\text{g/L}$ . Based on these results, no specific sources of PCE contamination were identified within the horizontal and vertical boundaries of the project area.

Some low-level concentrations of various VOCs were reported, but at concentrations less than their respective MCLs.

### **5.3 Total Petroleum Hydrocarbons**

Of the 42 samples collected during this investigation, 26 samples had detectable diesel concentrations that ranged from 24 J  $\mu\text{g/L}$  in SB-04-18-NS to 380 J in SB-13-26-NS (Table 4). Concentrations of TPH as diesel were detected throughout the entire study area, with higher concentrations reported

adjacent to and north of Eloise Avenue businesses, as shown in Figure 3. Seventeen of the 26 diesel detections exceed the secondary MCL of 100 µg/L enforced by LWB.

TPH as gasoline was detected in 5 of the 42 samples at concentrations, ranging from 51 J µg/L in SB-12-12-NS to 170 J in SB-10-16-NS (Appendix C). The highest reported gasoline detection was in a shallow groundwater sample on James Avenue near the corner of 10th Street. All five detections exceed the secondary MCL of 5 µg/L enforced by LWB.

### **5.3.1 Well Sample Results**

The sample collected from the shallow groundwater monitoring well (PATLNSS) did not contain detectable levels of VOCs or TPH.

LWB sampled groundwater monitoring wells EW-4A, EW-4B, MW-4A, MW-4B, and Hurzel-N (Figures 2 and 3). Monitoring well designs for these locations are included in Appendix B2; Hurzel-N, shown on Figures 1 through 3, is identified as MW-3 for the Hurzel Properties wells listed in Appendix B. PCE was detected at MW-4A and MW-4B at concentrations of 14 and 150 µg/L, respectively. Low PCE concentrations were also detected at EW-4B and Hurzel-N. No other VOCs or diesel were detected in any of the well samples. The laboratory report for these samples is included near the end of Appendix D.

### **5.4 QA/QC**

URS completed a quality assurance/quality control review of all analytical data obtained during this investigation (except for the data provided to URS by LWB) according to EPA's guidelines for accuracy, precision, and completeness (Appendix D). No issues were noted in the review.

## **6.0 DEVIATIONS FROM THE WORK PLAN**

### **6.1 Boring Relocations**

Several borings needed to be relocated based on access limitations, obstructions, utilities, or property owner requests:

- SB-01 and SB-15 were relocated due to nearby utilities.
- SB-05 was relocated due to the property owner not granting access.
- SB-07 was relocated to avoid the Caltrans right-of-way on Highway 89/Emerald Bay Road, respectively.
- SB-18 was added to evaluate groundwater conditions upgradient of a potential source.
- SB-22 was added to evaluate groundwater conditions upgradient of the Lukins No. 4 supply well.

## **6.2 Well Sampling**

Three inactive groundwater monitoring wells associated with a site that received regulatory closure was observed near the intersection of Patricia Lane and Shore Drive during the geophysical survey. LWB directed URS to collect samples from the shallow and intermediate wells and analyze the samples for VOCs and TPH.

Subsection 5.3.2 presents sample results from these wells.

## **6.3 Sample Analyses**

TPH was added to the sample analyses at the request of the LWB to use as a marker for potential PCE source contributors.

Section 5.3 discusses the TPH sample results.

## **7.0 WASTE DISPOSAL**

All soil cuttings and decontamination water were stored in 55-gallon drums at a nearby Lukins Brothers Water Company maintenance yard until proper disposal. Representative samples were collected from the drums and submitted for laboratory analysis of VOCs by SW8260 and lead by SW6010. Laboratory results indicate that the waste is characterized as non-hazardous and disposing of the waste is currently in process.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

Between October 26 and 30, 2015 and November 12 and 13, 2015, URS completed a groundwater investigation that comprised of 42 hydropunch samples from 22 geoprobe borings that were advanced to approximately 20 to 40 feet bgs. Samples were analyzed for VOCs by EPA Method 8260B and TPH by SW8015. PCE was detected in 5 of the 42 samples at concentrations less than the MCL of 5 µg/L; PCE concentrations in the remaining samples were less than the reporting limit of 0.5 µg/L.

Based on the results of this investigation, URS concludes:

- The highest PCE concentrations were detected at the eastern end of the site boundary, as supported by the results at MW-4A, MW-4B, and SB-21B (14, 150, and 3 µg/L, respectively).
- PCE detections in the eastern end were separated from PCE detections in the western end by 1,100 feet and three locations showing non-detect concentrations. This information suggests separate PCE sources for each end of the study boundary.
- The test results indicate no pattern connecting PCE detections with TPH as diesel or gasoline detections.
- TPH has not been detected in water supply wells in the west side of the city and, therefore, is not a constituent of concern. Considering that PCE is a dense, non-aqueous phase liquid and no

significant detections were found within the vertical extent of the investigation, a potential PCE source may be located farther upgradient or cross-gradient than expected and/or PCE may be present in deeper water-bearing zones within the site boundary.

- PCE-impacted groundwater at Lukins wells No. 2 and No. 5 could originate from potential sources between the site boundary and Lukins wells No. 2 and No. 5 in addition to a source upgradient to the site boundary.

Therefore, URS recommends:

- Additional sampling at depths greater than those explored in this investigation within the site boundary and at multiple depths upgradient and/or cross-gradient of the site.
- Additional sampling in the south, east, and north directions to define the extent of PCE contamination at depths aligned with the screened intervals of wells MW-4A and MW-4B.
- Routinely sample Lukins well No. 4 for VOCs using Method SW8260B to evaluate potential impacts from PCE migration within the screened interval coinciding with the water-bearing zone.
- Further evaluate potential sources upgradient to Lukins wells No. 2 and No. 5 in the general area bounded by Anita Road to the north, Tahoe Vista Drive to the east, Highway 89/Emerald Bay Road to the south, and 15th Street to the west.

## 9.0 REFERENCES

Engineering Remediation, 2015. *Third Quarter 2015 Groundwater Monitoring Report and Current Site Remediation Status Report, Lake Tahoe Laundry Works, 1024 Lake Tahoe Boulevard, South Lake Tahoe, California*. November 11.

PES Environmental, Inc., 2006. *Additional Soil Investigation, Lake Tahoe Laundry Works, 1024 Lake Tahoe Boulevard, South Lake Tahoe, California*. January 31.

Stantec Consulting Inc., 2008. *Second Quarter 2008 Water Quality Report, Former Dry Cleaning Business, 949 Emerald Bay Road, South Lake Tahoe*. August 21.

URS, 2015. *Lukins Service Area PCE Investigation Work Plan, South Lake Tahoe, California*. October 8.

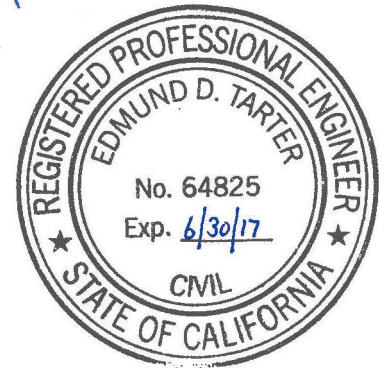
If you have any questions or require additional information, please contact Ms. Chani Hutto at (916) 679-2313 or me at (916) 679 2055.

Ms. Lisa Derrmbach  
Regional Water Quality Control Board, Lahontan Region  
January 19, 2016

Sincerely,  
URS Corporation Americas

Chani Hutto  
Project Geologist

Edmund Tarter, P.E.  
Project Manager



Attachments:

- Table 1 Depths and Lithology at Sample Depths
- Table 2 PCE Results – Hydropunch Samples
- Table 3 PCE Results – Well Samples
- Table 4 Diesel Results – Hydropunch Samples.

- Figure 1 Site Location
- Figure 2 PCE Concentrations in Groundwater
- Figure 3 Diesel Concentrations in Groundwater

- Appendix A EDR Database Report
- Appendix B Boring Logs/Well Completion Information
- Appendix C Field Data Sheets
- Appendix D Laboratory Analytical Reports with QA/QC Review

cc: Mr. Daniel O'Brien, DGS

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## TABLES

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**Table 1. Depths and Lithology at Sample Depths**

<b>Boring Name</b>	<b>Boring Depth (feet)</b>	<b>Sample Depth (feet bgs)</b>	<b>USCS Symbol</b>
SB-01A	32	16	SW/SM
SB-01B		26	SW
SB-02A	30	16	ML/SW
SB-02B		24	SM/ML
SB-03A	36	24	SW
SB-03B		32	SW
SB-04A	32	16	ML/SP
SB-04B		28	SM/ML
SB-05A	28	16	SW/ML
SB-05B		24	SW
SB-06A	28	14	SW
SB-06B		24	SW/SM
SB-07A	30	16	SW
SB-07B		26	SW
SB-08A	30	14	SP/SM
SB-08B		28	SP
SB-09A	28	16	SW/SM
SB-09B		24	SW/ML
SB-10A	28	16	SM/ML
SB-10B		26	SW
SB-11A	24	12	SM
SB-11B		22	SW
SB-12A	24	12	SW
SB-12B		22	SW
SB-13A	30	16	ML/SW
SB-13B		26	SM
SB-14A	32	20	SM
SB-14B		30	ML
SB-15A	32	20	SM/ML
SB-15B		30	ML
SB-16A	32	20	SW
SB-16B		30	SW
SB-17A	32	20	SW
SB-17B		30	SW
SB-18A	28	12	SM
SB-19A	40	26	SW
SB-19B		36	SM
SB-20A	34	32	SM
SB-21A	34	20	SP
SB-21B		32	SM
SB-22A	34	20	SP
SB-22B		32	SP

bgs = below ground surface

ML = silt

SM = silty sand

SW = well graded sand

SP = poorly graded sand

USCS = Unified Soil Classification System

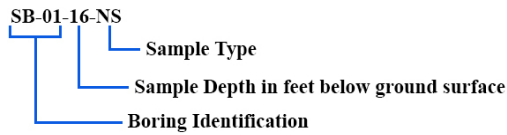
**Table 2. PCE Results - Hydropunch Samples**

<b>Location</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Code</b>	<b>PCE (µg/L)</b>
SB-01A	SB-01-16-NS	10/29/15	NS1	<0.5
SB-01B	SB-01-26-NS	10/28/15	NS1	<0.5
SB-02A	SB-02-16-NS	11/13/15	NS1	<0.5
SB-02B	SB-02-24-NS	11/13/15	NS1	<0.5
SB-03A	SB-03-24-FD	10/30/15	FD1	<0.5
SB-03A	SB-03-24-NS	10/30/15	NS1	<0.5
SB-03B	SB-03-32-NS	10/30/15	NS1	<0.5
SB-04A	SB-04-16-NS	11/12/15	NS1	<0.5
SB-04B	SB-04-18-NS	11/12/15	NS1	<0.5
SB-05A	SB-05-16-NS	10/28/15	NS1	<0.5
SB-05B	SB-05-24-NS	10/28/15	NS1	<0.5
SB-06A	SB-06-14-NS	10/30/15	NS1	<0.5
SB-06B	SB-06-24-NS	10/30/15	NS1	<0.5
SB-07A	SB-07-16-NS	10/28/15	NS1	<0.5
SB-07B	SB-07-26-NS	10/28/15	NS1	<0.5
SB-08A	SB-08-14-NS	11/12/15	NS1	<b>1.80</b>
SB-08B	SB-08-28-NS	11/12/15	NS1	<0.5
SB-09A	SB-09-16-FD	10/28/15	FD1	<b>1.40</b>
SB-09A	SB-09-16-NS	10/28/15	NS1	<b>1.20</b>
SB-09B	SB-09-24-NS	10/28/15	NS1	<0.5
SB-10A	SB-10-16-NS	10/28/15	NS1	<b>1.60</b>
SB-10B	SB-10-26-NS	10/28/15	NS1	<0.5
SB-11A	SB-11-12-NS	10/28/15	NS1	<0.5
SB-11B	SB-11-22-NS	10/28/15	NS1	<0.5
SB-12A	SB-12-12-NS	10/29/15	NS1	<0.5
SB-12B	SB-12-22-NS	10/29/15	NS1	<0.5
SB-13A	SB-13-16-NS	10/27/15	NS1	<0.5
SB-13B	SB-13-26-NS	10/27/15	NS1	<0.5
SB-14A	SB-14-20-FD	10/27/15	FD1	<0.5
SB-14A	SB-14-20-NS	10/27/15	NS1	<0.5

**Table 2 PCE Results - Hydropunch Samples (continued)**

<b>Location</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Code</b>	<b>PCE (µg/L)</b>
SB-14B	SB-14-30-NS	10/27/15	NS1	<0.5
SB-15A	SB-15-20-NS	10/27/15	NS1	<0.5
SB-15B	SB-15-30-NS	10/27/15	NS1	<0.5UJ
SB-16A	SB-16-20-NS	10/26/15	NS1	<0.5
SB-16B	SB-16-30-NS	10/26/15	NS1	<0.5
SB-17A	SB-17-20-NS	10/26/15	NS1	<0.5
SB-17B	SB-17-30-NS	10/26/15	NS1	<0.5 UJ
SB-18A	SB-18-12-NS	10/29/15	NS1	<0.5 UJ
SB-19A	SB-19-26-NS	10/26/15	NS1	<0.5 UJ
SB-19B	SB-19-36-NS	10/26/15	NS1	<b>0.6</b>
SB-20A	SB-20-32-NS	11/13/15	NS1	<0.5
SB-21A	SB-21-20-FD	11/12/15	FD1	<0.5
SB-21A	SB-21-20-NS	11/12/15	NS1	<0.5
SB-21B	SB-21-32-NS	11/12/15	NS1	<b>3</b>
SB-22A	SB-22-20-NS	11/13/15	NS1	<0.5
SB-22B	SB-22-32-NS	11/13/15	NS1	<0.5

FD1 = field duplicate  
 ID = identification  
 NS1 = normal sample  
 PCE = tetrachloride  
 SB-01A = shallow sample depth  
 SB-01B = deep sample depth



**Table 3. PCE Results - Well Samples**

<b>Location</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Code</b>	<b>PCE (<math>\mu\text{g/L}</math>)</b>
PATLNSS-S	PATLANSS-S	10/28/15	NS1	<0.5
MW-4A	516 RB 6028 MW-4A	10/30/15	-	14
MW-4B	516 RB 6027 MW-4B	10/30/15	-	150
EW-4A	516 RB 6030 EW-4A	10/30/15	-	<0.5
EW-4B	516 RB 6029 EW-4B	10/30/15	-	0.49
Hanzel-N	516 RB 6026 Hanzel-N	10/30/15	-	1.9

ID = identification

NS1 = normal sample

PCE = tetrachloride

$\mu\text{g/L}$  = micrograms per liter

< = less than

**Table 4. Diesel Results - Hydropunch Samples**

<b>Location</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Code</b>	<b>Diesel (µg/L)</b>
SB-01A	SB-01-16-NS	10/29/15	NS1	<63
SB-01B	SB-01-26-NS	10/28/15	NS1	<59
SB-02A	SB-02-16-NS	11/13/15	NS1	<50
SB-02B	SB-02-24-NS	11/13/15	NS1	<b>61 J</b>
SB-03A	SB-03-24-FD	10/30/15	FD1	<b>140 J</b>
SB-03A	SB-03-24-NS	10/30/15	NS1	<50 UJ
SB-03B	SB-03-32-NS	10/30/15	NS1	<56
SB-04A	SB-04-16-NS	11/12/15	NS1	<50
SB-04B	SB-04-18-NS	11/12/15	NS1	<b>52 J</b>
SB-05A	SB-05-16-NS	10/28/15	NS1	<63
SB-05B	SB-05-24-NS	10/28/15	NS1	<63
SB-06A	SB-06-14-NS	10/30/15	NS1	<56
SB-06B	SB-06-24-NS	10/30/15	NS1	<b>260 J</b>
SB-07A	SB-07-16-NS	10/28/15	NS1	<b>78 J</b>
SB-07B	SB-07-26-NS	10/28/15	NS1	<b>66 J</b>
SB-08A	SB-08-14-NS	11/12/15	NS1	<50
SB-08B	SB-08-28-NS	11/12/15	NS1	<50
SB-09A	SB-09-16-FD	10/28/15	FD1	<56
SB-09A	SB-09-16-NS	10/28/15	NS1	<56
SB-09B	SB-09-24-NS	10/28/15	NS1	<63
SB-10A	SB-10-16-NS	10/28/15	NS1	<b>190 J</b>
SB-10B	SB-10-26-NS	10/28/15	NS1	<b>97 J</b>
SB-11A	SB-11-12-NS	10/28/15	NS1	<59
SB-11B	SB-11-22-NS	10/28/15	NS1	<67
SB-12A	SB-12-12-NS	10/29/15	NS1	<b>140 J</b>
SB-12B	SB-12-22-NS	10/29/15	NS1	<56
SB-13A	SB-13-16-NS	10/27/15	NS1	<b>260 J</b>
SB-13B	SB-13-26-NS	10/27/15	NS1	<b>380 J</b>
SB-14A	SB-14-20-FD	10/27/15	FD1	<b>130 J+</b>
SB-14A	SB-14-20-NS	10/27/15	NS1	<b>130 J+</b>

**Table 4 Diesel Results - Hydropunch Samples (continued)**

<b>Location</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Code</b>	<b>Diesel (µg/L)</b>
SB-14B	SB-14-30-NS	10/27/15	NS1	<b>150 J+</b>
SB-15A	SB-15-20-NS	10/27/15	NS1	<b>60 J+</b>
SB-15B	SB-15-30-NS	10/27/15	NS1	<b>370 J</b>
SB-16A	SB-16-20-NS	10/26/15	NS1	<b>180 J+</b>
SB-16B	SB-16-30-NS	10/26/15	NS1	<b>99 J+</b>
SB-17A	SB-17-20-NS	10/26/15	NS1	<b>210 J+</b>
SB-17B	SB-17-30-NS	10/26/15	NS1	<b>150 J+</b>
SB-18A	SB-18-12-NS	10/29/15	NS1	<83
SB-19A	SB-19-26-NS	10/26/15	NS1	<b>170 J+</b>
SB-19B	SB-19-36-NS	10/26/15	NS1	<b>220 J</b>
SB-20A	SB-20-32-NS	11/13/15	NS1	<b>62 J</b>
SB-21A	SB-21-20-FD	11/12/15	FD1	<50 UJ
SB-21A	SB-21-20-NS	11/12/15	NS1	<b>130 J</b>
SB-21B	SB-21-32-NS	11/12/15	NS1	<50
SB-22A	SB-22-20-NS	11/13/15	NS1	<b>62 J</b>
SB-22B	SB-22-32-NS	11/13/15	NS1	<b>190 J</b>

FD1 = field duplicate  
ID = identification  
J = estimated concentration  
J+ = estimated concentration, potential high bias  
NS1 = normal sample  
PCE = tetrachloride  
UJ = estimated concentration  
µg/L = micrograms per liter  
< = less than



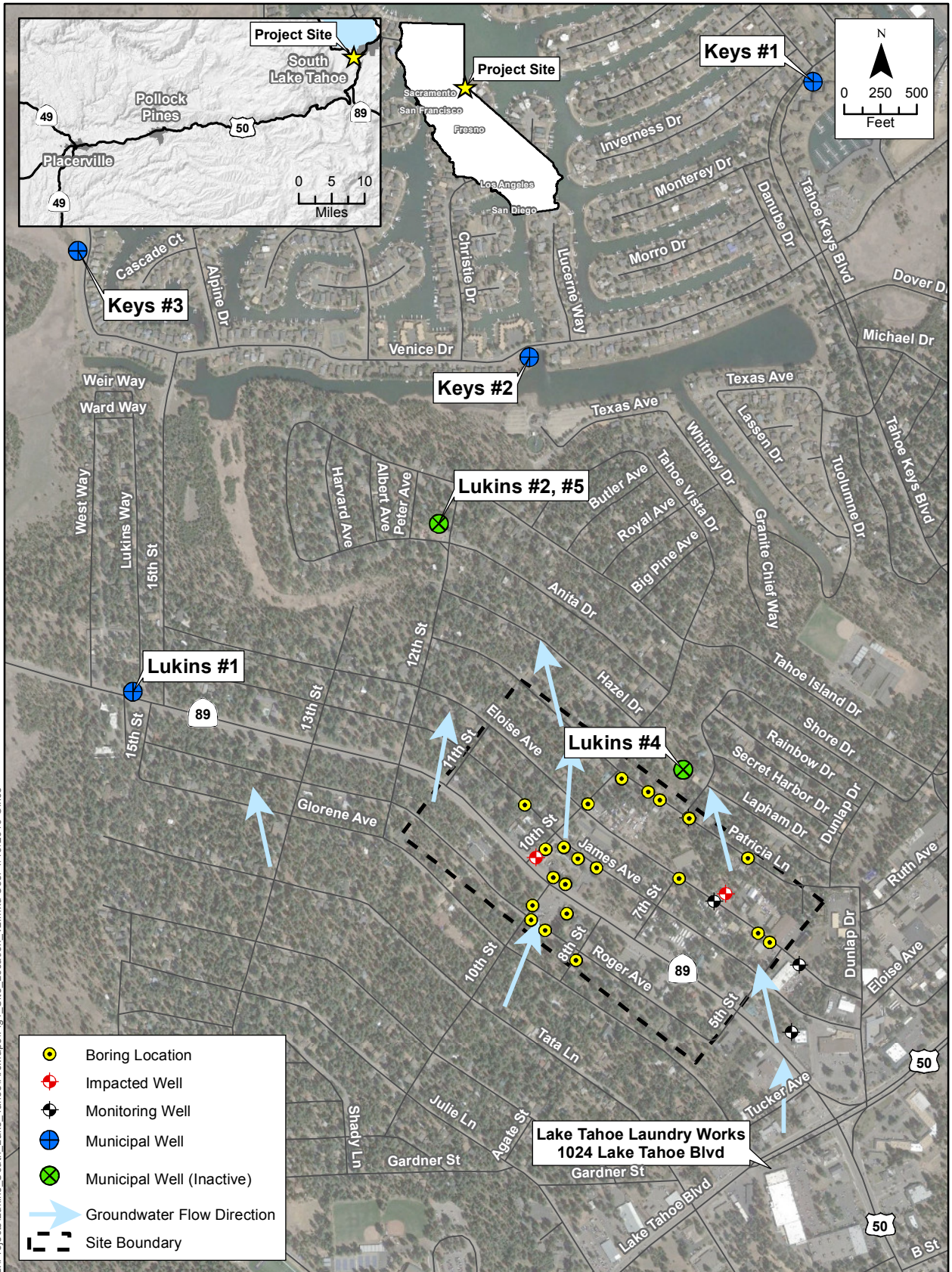
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## FIGURES

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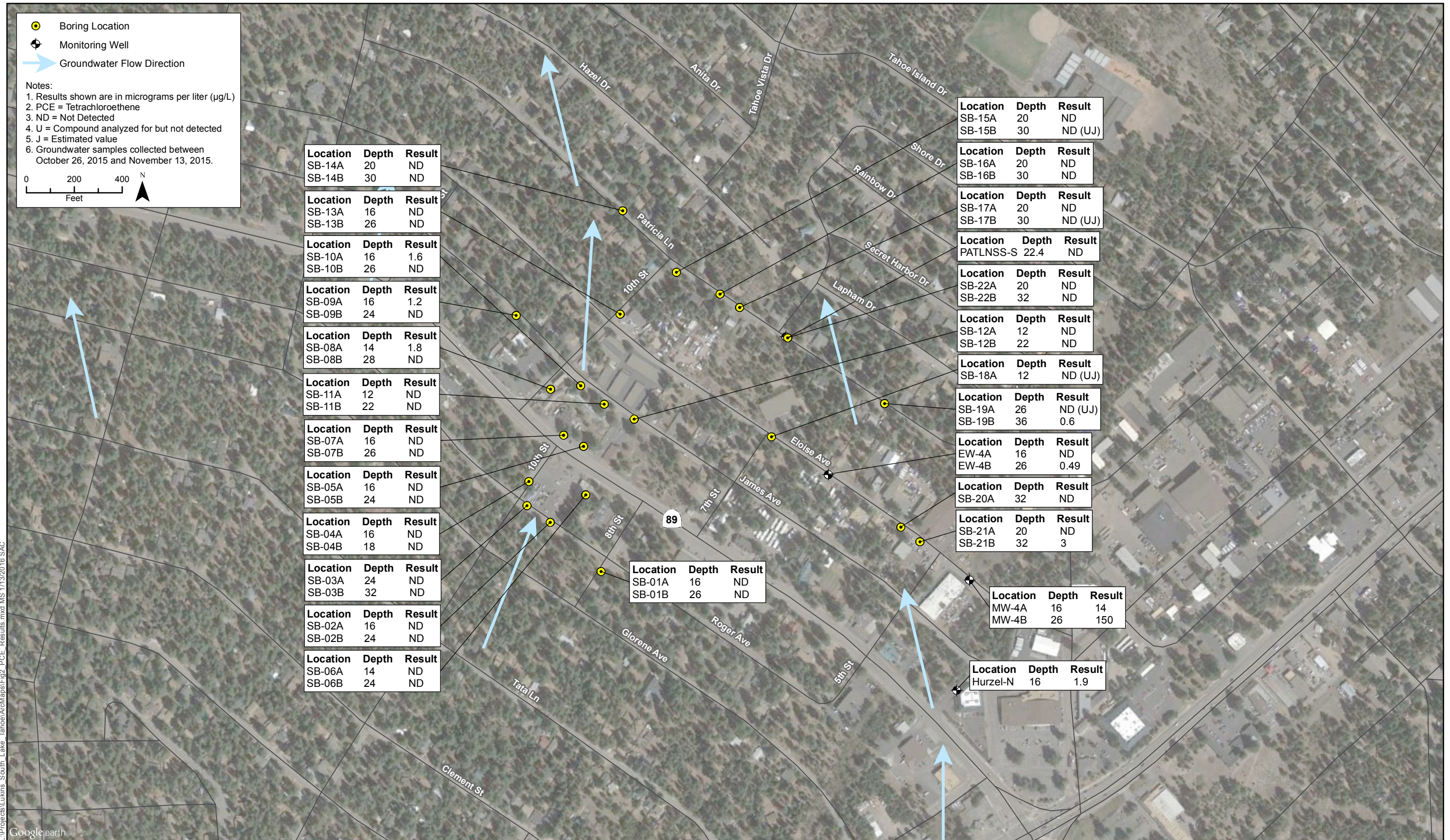
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**Figure 1**  
Site Location





● Boring Location  
⊕ Monitoring Well  
→ Groundwater Flow Direction

Notes:

1. Results shown are in micrograms per liter (µg/L)
2. PCE = Tetrachloroethene
3. ND = Not Detected
4. U = Compound analyzed for but not detected
5. J = Estimated value
6. Groundwater samples collected between October 26, 2015 and November 13, 2015.

0 200 400  
 Feet

Location	Depth	Result
SB-14A	20	ND
SB-14B	30	ND

Location	Depth	Result
SB-13A	16	ND
SB-13B	26	ND

Location	Depth	Result
SB-10A	16	1.6
SB-10B	26	ND

Location	Depth	Result
SB-09A	16	1.2
SB-09B	24	ND

Location	Depth	Result
SB-08A	14	1.8
SB-08B	28	ND

Location	Depth	Result
SB-11A	12	ND
SB-11B	22	ND

Location	Depth	Result
SB-07A	16	ND
SB-07B	26	ND

Location	Depth	Result
SB-05A	16	ND
SB-05B	24	ND

Location	Depth	Result
SB-04A	16	ND
SB-04B	18	ND

Location	Depth	Result
SB-03A	24	ND
SB-03B	32	ND

Location	Depth	Result
SB-02A	16	ND
SB-02B	24	ND

Location	Depth	Result
SB-06A	14	ND
SB-06B	24	ND

Location	Depth	Result
SB-01A	16	ND
SB-01B	26	ND

Location	Depth	Result
SB-15A	20	ND
SB-15B	30	ND (UJ)

Location	Depth	Result
SB-16A	20	ND
SB-16B	30	ND

Location	Depth	Result
SB-17A	20	ND
SB-17B	30	ND (UJ)

Location	Depth	Result
PATLNSS-S	22.4	ND

Location	Depth	Result
SB-22A	20	ND
SB-22B	32	ND

Location	Depth	Result
SB-12A	12	ND
SB-12B	22	ND

Location	Depth	Result
SB-18A	12	ND (UJ)

Location	Depth	Result
SB-19A	26	ND (UJ)
SB-19B	36	0.6

Location	Depth	Result
EW-4A	16	ND
EW-4B	26	0.49

Location	Depth	Result
SB-20A	32	ND

Location	Depth	Result
SB-21A	20	ND
SB-21B	32	3

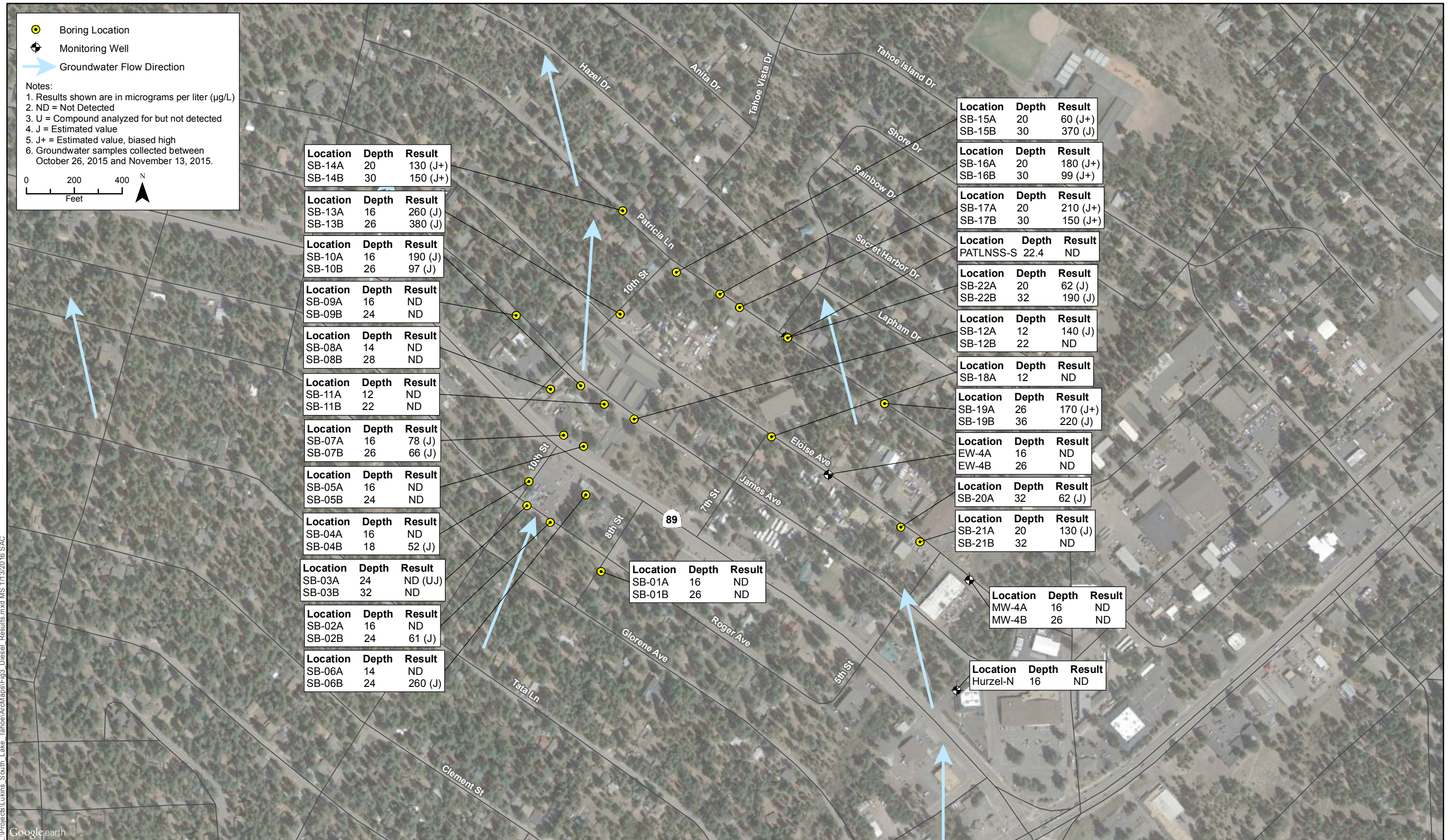
Location	Depth	Result
MW-4A	16	14
MW-4B	26	150

Location	Depth	Result
Hurzel-N	16	1.9

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**Figure 2**  
 PCE Concentrations in Groundwater





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Google earth

**Figure 3**  
 Diesel Concentrations in Groundwater



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**APPENDIX A**

**EDR Database Report**

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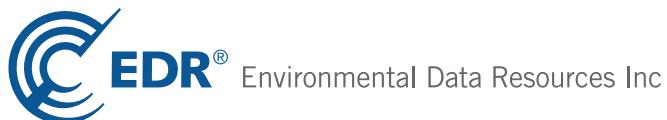
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**Lukins Service Area PCE Investigation**

800 Emerald Bay Road  
South Lake Tahoe, CA 96150

Inquiry Number: 4429845.2s  
October 05, 2015

**The EDR Radius Map™ Report with GeoCheck®**



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)



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***Thank you for your business.***  
 Please contact EDR at 1-800-352-0050  
 with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

800 EMERALD BAY ROAD  
SOUTH LAKE TAHOE, CA 96150

#### COORDINATES

Latitude (North): 38.9175000 - 38° 55' 3.00"  
Longitude (West): 120.0110000 - 120° 0' 39.60"  
Universal Transverse Mercator: Zone 10  
UTM X (Meters): 759154.7  
UTM Y (Meters): 4311662.5  
Elevation: 6274 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5640850 EMERALD BAY, CA  
Version Date: 2012  
  
East Map: 5641806 SOUTH LAKE TAHOE, CA  
Version Date: 2012

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20120628, 20100613, 20120706  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
 800 EMERALD BAY ROAD  
 SOUTH LAKE TAHOE, CA 96150

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	7-ELEVEN INC. STORE	800 EMERALD BAY RD	FINDS		TP
A2	7-ELEVEN INC. STORE	800 EMERALD BAY RD	CUPA Listings		TP
A3	TED'S FIX-IT SHOP	807 ROGER AVE	HAZNET	Higher	188, 0.036, WSW
A4	DAVID EDGE , LAC	821 ROGER AVE	CUPA Listings	Higher	204, 0.039, South
B5	ROCKWATER APTS.	787 EMERALD BAY RD	CUPA Listings, ENF	Higher	379, 0.072, NW
B6	MCNAMARA PROPERTY	787 EMERALD BAY ROAD	RGA LUST	Higher	379, 0.072, NW
B7	MCNAMARA PROPERTY	787 E EMERALD BAY RO	LUST	Higher	379, 0.072, NW
B8	MCNAMARA	787 EMERALD BAY ROAD	LUST	Higher	383, 0.073, NW
B9	ROCKWATER APTS.		FINDS	Higher	429, 0.081, NW
10	TAHOE MONTESSORI HOU	848 GLORENE AVE	FINDS	Higher	522, 0.099, South
11	PRIVATE PROPERTY	845 JAMES ST	SWEEPS UST, CA FID UST	Lower	533, 0.101, ENE
C12	BEL PAC ENTERPRISES	854-868 EMERALD BAY	ENF, WDS	Lower	536, 0.102, ESE
C13	REDWOOD PRINTING	854 EMERALD BAY RD S	CUPA Listings	Lower	536, 0.102, ESE
B14	CANTINA	765 EMERALD BAY RD	WDS	Higher	638, 0.121, NW
C15		868 EMERALD BAY RD	EDR US Hist Cleaners	Lower	712, 0.135, ESE
C16	LAKE MONSTER TATTOO	868 EMERALD BAY RD A	CUPA Listings	Lower	712, 0.135, ESE
C17	LAKE TAHOE BASIN	870 EMERALD BAY RD	CERCLIS	Lower	732, 0.139, ESE
C18	MEEKS BAY RESORT	870 EMERALD BAY RD	HIST UST	Lower	732, 0.139, ESE
C19	MEEKS BAY RESORT	870 EMERAL BAY RD	SWEEPS UST, CA FID UST	Lower	732, 0.139, ESE
C20	LAKE TAHOE BASIN	870 EMERALD BAY RD	FINDS	Lower	737, 0.140, ESE
D21	KC'S AUTOMOTIVE	867 ELOISE AVE STE C	HAZNET	Lower	835, 0.158, ENE
D22	PRECISION AUTO BODY	867 ELOISE AVE	HAZNET	Lower	835, 0.158, ENE
D23		867 ELOISE AVE	EDR US Hist Auto Stat	Lower	835, 0.158, ENE
D24	PRECISION AUTO BODY	867 ELOISE AVE	RCRA-SQG, FINDS	Lower	835, 0.158, ENE
D25	PRECISION AUTO BODY	867 ELOISE AVE	HAZNET	Lower	835, 0.158, ENE
D26	PRECISION AUTO BODY	867 ELOISE AVE #C	CUPA Listings	Lower	835, 0.158, ENE
27	MCFARLANE MORTUARY	887 EMERALD BAY RD	CUPA Listings	Lower	942, 0.178, ESE
28		735 SR 89	CHMIRS	Higher	976, 0.185, NW
E29		927 JAMES AVE	EDR US Hist Auto Stat	Lower	1241, 0.235, ESE
F30		913 SR 89	CHMIRS	Lower	1271, 0.241, ESE
F31		913 EMERALD BAY ROAD	CHMIRS	Lower	1271, 0.241, ESE
F32	SWISS MART	913 EMERALD BAY RD	RGA LUST	Lower	1271, 0.241, ESE
F33	BEACON SWISS MART	913 EMERALD BAY AVE	HAZNET	Lower	1271, 0.241, ESE
F34		913 EMERALD BAY RD	EDR US Hist Auto Stat	Lower	1271, 0.241, ESE
F35	SWISS MART GAS STATI	913 EMERALD BAY ROAD	RGA LUST	Lower	1271, 0.241, ESE
F36	BEACON SWISS MART	913 EMERALD BAY RD	LUST, SWEEPS UST, CA FID UST, Cortese, CUPA...	Lower	1271, 0.241, ESE
F37		913 SR 89	ERNS	Lower	1271, 0.241, ESE
F38	SWISS MART	913 EMERALD BAY RD	RGA LUST	Lower	1271, 0.241, ESE
F39	SWISS MART - BEACON	913 EMERALD BAY RD	LUST, UST	Lower	1271, 0.241, ESE

MAPPED SITES SUMMARY

Target Property Address:  
 800 EMERALD BAY ROAD  
 SOUTH LAKE TAHOE, CA 96150

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
E40	SUNSHINE TAXI INC	912 ELOISE AVE	HAZNET	Lower	1273, 0.241, East
E41	SUNSHINE YELLOW CAB	912 ELOISE AVE	CUPA Listings	Lower	1273, 0.241, East
E42	HATCH ELECTRIC	921 ELOISE AVE	RGA LUST	Lower	1287, 0.244, East
E43	HATCH ELECTRIC	921 ELOISE AVE	LUST	Lower	1287, 0.244, East
44	PAMELA POLOMSKI	855 CLEMENT ST	HAZNET	Higher	1311, 0.248, SSW
E45		920 ELOISE AVE	EDR US Hist Auto Stat	Lower	1340, 0.254, East
E46	SOUTH SIDE AUTO BODY	920 ELOISE AVE	RCRA-SQG, FINDS, HAZNET	Lower	1340, 0.254, East
E47	STRUVE AUTOMOTIVE	927 ELOISE AVE	HAZNET	Lower	1344, 0.255, East
E48	STRUVE AUTOMOTIVE	927 ELOISE AVE	CUPA Listings	Lower	1344, 0.255, East
E49		927 ELOISE AVE	EDR US Hist Auto Stat	Lower	1344, 0.255, East
F50	ALPINE ANIMAL HOSPIT	921 EMERALD BAY RD	CUPA Listings	Lower	1391, 0.263, ESE
E51	SIERRA PACIFIC POWER	933 ELOISE AVE	HAZNET	Lower	1401, 0.265, East
E52	CALPECO MAIN OFFICE	933 ELOISE AVE	CUPA Listings	Lower	1401, 0.265, East
E53	CALPECO SOUTH LAKE T	933 ELOISE AVE	HAZNET	Lower	1401, 0.265, East
F54	TCI BUILDING	924 EMERALD BAY ROAD	SLIC	Lower	1421, 0.269, ESE
E55		2032 5TH ST	EDR US Hist Auto Stat	Lower	1438, 0.272, ESE
F56	CHARTER COMMUNICATIO	924 EMERALD BAY	SLIC, CUPA Listings, ENF	Lower	1439, 0.273, ESE
F57		924 EMERALD BAY RD	CDL	Lower	1439, 0.273, ESE
F58	COLDWELL BANKER	924 EMERALD BAY RD	HAZNET	Lower	1439, 0.273, ESE
F59	CHARTER COMMUNICATIO	924 EMERALD BAY RD	WDS	Lower	1439, 0.273, ESE
E60	HIGHER GROUND AUTOWO	2042 5TH ST UNIT 10	CUPA Listings	Lower	1448, 0.274, ESE
E61	PERFORMANCE SLEDS (H	2042 FIFTH ST #8	CUPA Listings	Lower	1448, 0.274, ESE
E62		2042 5TH ST	EDR US Hist Auto Stat	Lower	1448, 0.274, ESE
E63	CROW'S AUTO CARE (HM	2042 FIFTH ST STE 6	CUPA Listings	Lower	1448, 0.274, ESE
E64	ABBEY MOTORS (HM) CL	2042 FIFTH ST #11	CUPA Listings	Lower	1448, 0.274, ESE
E65		2046 5TH ST	EDR US Hist Auto Stat	Lower	1452, 0.275, ESE
G66	SOUTH SIDE AUTO BODY	934 ELOISE AVE	CUPA Listings, WDS	Lower	1456, 0.276, East
G67		934 ELOISE AVE	EDR US Hist Auto Stat	Lower	1456, 0.276, East
E68	VANEKS ENGINE SPECIA	2035 FIFTH STREET	CUPA Listings	Lower	1464, 0.277, ESE
G69	MATHISEN AUTOMOTIVE	944 ELOISE AVE	CUPA Listings	Lower	1566, 0.297, ESE
G70		944 ELOISE AVE	EDR US Hist Auto Stat	Lower	1566, 0.297, ESE
G71		948 ELOISE AVE	EDR US Hist Auto Stat	Lower	1604, 0.304, ESE
G72	OLSEN PAVING (HM)	950 ELOISE AVE	CUPA Listings	Lower	1624, 0.308, ESE
73	GREG COLE	2394 TAHOE VISTA DR	HAZNET	Lower	1650, 0.312, NNE
H74	HURZEL PROPERTIES	949 EMERALD BAY ROAD	SLIC	Lower	1730, 0.328, SE
75		916 SECRET HARBOR	CDL	Lower	1731, 0.328, ENE
H76		949 EMERALD BAY RD	EDR US Hist Cleaners	Lower	1732, 0.328, SE
H77	HURZEL PROPERTIES -	949 EMERALD BAY RD	SLIC, CUPA Listings	Lower	1732, 0.328, SE
I78	PACIFIC BELL (TB-661	DUNLAP & ELOISE	HIST UST	Lower	1847, 0.350, ESE

MAPPED SITES SUMMARY

Target Property Address:  
800 EMERALD BAY ROAD  
SOUTH LAKE TAHOE, CA 96150

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">I79</a>	PACIFIC BELL (TB-661	DUNLAP & ELOISE	SWEEPS UST, CA FID UST	Lower	1847, 0.350, ESE
<a href="#">I80</a>	PACIFIC BELL	DUNLAP AND ELOISE	RCRA-SQG	Lower	1858, 0.352, ESE
<a href="#">H81</a>	THOR ALLEN STENRUD	960 EMERALD BAY RD	HAZNET	Lower	1874, 0.355, SE
<a href="#">H82</a>	SCREAMERS ICE CREAM	960 EMERALD BAY RD	CUPA Listings	Lower	1874, 0.355, SE
<a href="#">83</a>	EMERALD PINES RESORT	661-681 EMERALD BAY	ENF, WDS	Higher	1940, 0.367, NW
<a href="#">J84</a>	SIERRA PACIFIC POWER	2129 DUNLAP DR	HAZNET	Lower	2031, 0.385, East
<a href="#">J85</a>	MYERS MARINE	2140 DUNLAP ST	LUST, CUPA Listings, HIST CORTESE	Lower	2040, 0.386, East
<a href="#">J86</a>	MYERS MARINE SERVICE	2140 DUNLAP AVE	WDS	Lower	2040, 0.386, East
<a href="#">J87</a>		2132 DUNLAP DR	EDR US Hist Auto Stat	Lower	2040, 0.386, East
<a href="#">J88</a>	SOUTH SIDE AUTO BODY	2132 DUNLAP DR	HAZNET	Lower	2040, 0.386, East
<a href="#">J89</a>	SOUTH TAHOE REFUSE	2132 DUNLAP DR	CUPA Listings	Lower	2040, 0.386, East
<a href="#">J90</a>	TAHOE PRINTING	2116 DUNLAP DR	CUPA Listings	Lower	2061, 0.390, East
<a href="#">I91</a>	SIERRA ALTERNATORS &	2108 DUNLAP DR UNIT	CUPA Listings	Lower	2090, 0.396, ESE
<a href="#">J92</a>	ART'S TRANSMISSION	2105 RUTH AVE	CUPA Listings	Lower	2112, 0.400, East
<a href="#">J93</a>		2105 RUTH AVE	EDR US Hist Auto Stat	Lower	2112, 0.400, East
<a href="#">K94</a>	RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	RGA LUST	Lower	2135, 0.404, SE
<a href="#">K95</a>	RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	LUST, SWEEPS UST, CA FID UST, CUPA Listings, HIST...	Lower	2135, 0.404, SE
<a href="#">K96</a>		986 EMERALD BAY RD	EDR US Hist Auto Stat	Lower	2135, 0.404, SE
<a href="#">K97</a>	RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	RGA LUST	Lower	2135, 0.404, SE
<a href="#">K98</a>	RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	HAZNET	Lower	2135, 0.404, SE
<a href="#">L99</a>	PACIFIC BELL	2090 DUNLAP ROAD	SWEEPS UST, CA FID UST, CUPA Listings	Lower	2145, 0.406, ESE
<a href="#">100</a>	I CAN FIX THAT!	2199 DUNLAP DR	CUPA Listings	Lower	2146, 0.406, ENE
<a href="#">L101</a>	AVISTA UTILITIES (HM	2071 DUNLAP	CUPA Listings	Lower	2157, 0.409, ESE
<a href="#">L102</a>	CP NATURAL GAS	2071 DUNLAP DR	HIST UST	Lower	2157, 0.409, ESE
<a href="#">L103</a>	CP NATURAL GAS	2071 DUNLAP	SWEEPS UST, CA FID UST	Lower	2163, 0.410, ESE
<a href="#">L104</a>	PACIFIC BELL TELEPHO	2075 ELOISE	HAZNET	Lower	2179, 0.413, ESE
<a href="#">M105</a>	LAKESIDE NAPA AUTOMO	1935 LAKE TAHOE BOUL	SLIC	Higher	2181, 0.413, SSE
<a href="#">M106</a>	LAKESIDE AUTOMOTIVE	1935 LAKE TAHOE BLVD	HAZNET	Higher	2181, 0.413, SSE
<a href="#">M107</a>	LAKESIDE NAPA AUTO P	1935 LAKE TAHOE BLVD	CUPA Listings	Higher	2181, 0.413, SSE
<a href="#">M108</a>	LAKESIDE NAPA STORE	1935 LAKE TAHOE BLVD	SLIC	Higher	2185, 0.414, SSE
<a href="#">M109</a>	SCOTTY'S HARDWARE	1931 LAKE TAHOE BLVD	CUPA Listings, HAZNET	Higher	2190, 0.415, SSE
<a href="#">M110</a>		1931 LAKE TAHOE BLVD	ERNS	Higher	2190, 0.415, SSE
<a href="#">L111</a>	MARINE PERFORMANCE	2050 DUNLAP ST	CUPA Listings, HAZNET	Lower	2196, 0.416, ESE
<a href="#">N112</a>		1961 LAKE TAHOE BLV	EDR US Hist Auto Stat	Lower	2196, 0.416, SE
<a href="#">N113</a>	BIG O TIRE STORE #65	1961 LAKE TAHOE BLVD	HAZNET	Lower	2196, 0.416, SE
<a href="#">N114</a>	BIG O TIRES	1961 LAKE TAHOE BOUL	SLIC, CUPA Listings, ENF	Lower	2196, 0.416, SE
<a href="#">N115</a>	BIG O TIRE STORE	1961 LAKE TAHOE BLVD	SLIC	Lower	2199, 0.416, SE
<a href="#">L116</a>	SELLERS BUILDING	2048 DUNLAP DR	CUPA Listings	Lower	2201, 0.417, ESE
<a href="#">M117</a>	SOUTH LAKE TAHOE	1920 LAKE TAHOE BLVD	SWEEPS UST, CA FID UST	Higher	2236, 0.423, SSE

MAPPED SITES SUMMARY

Target Property Address:  
 800 EMERALD BAY ROAD  
 SOUTH LAKE TAHOE, CA 96150

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
M118		1920 LAKE TAHOE BLV	EDR US Hist Auto Stat	Higher	2236, 0.423, SSE
M119	KRAGEN AUTO #1654 (C	1920 LAKE TAHOE BLVD	HIST UST, CUPA Listings, ENF	Higher	2236, 0.423, SSE
O120		2119 RUTH AVE	EDR US Hist Auto Stat	Lower	2272, 0.430, East
O121	FIVE STAR AUTOMOTIVE	2119 RUTH AVE	CUPA Listings	Lower	2272, 0.430, East
O122	FIVE STAR AUTO MIKES	2119 RUTH AVE	RCRA-SQG, FINDS	Lower	2272, 0.430, East
P123	DBA LAKE TAHOE AUTO	1901 LAKE TAHOE BLVD	CUPA Listings, HAZNET	Higher	2282, 0.432, SSE
P124	AMC/JEEP.RENAULT DEA	1901 LAKE TAHOE BLVD	RGA LUST	Higher	2282, 0.432, SSE
P125	LES SCHWAB TIRE CENT	1901 LAKE TAHOE BLVD	HAZNET	Higher	2282, 0.432, SSE
P126	LAKE TAHOE AUTO VILL	1901 LAKE TAHOE BLVD	WDS	Higher	2282, 0.432, SSE
P127	BILL WINKS MOTOR SAL	1901 LAKE TAHOE BLVD	HAZNET	Higher	2282, 0.432, SSE
P128	BAKER AUTOMOTIVE	1901 LAKE TAHOE BLVD	HAZNET	Higher	2282, 0.432, SSE
P129	TERRY LIBBON MOTORS	1901 LAKE TAHOE BOUL	CUPA Listings, ENF	Higher	2282, 0.432, SSE
L130	PACIFIC BELL	2075 ELOISE	FINDS	Lower	2286, 0.433, ESE
L131	AT&T CALIFORNIA - TB	2075 ELOISE ST	FINDS	Lower	2286, 0.433, ESE
L132	AT&T CALIFORNIA - TB	2075 ELOISE ST	CUPA Listings	Lower	2286, 0.433, ESE
L133	16060 RB6T	2060 ELOISE AVE	FINDS	Lower	2288, 0.433, ESE
L134	REDWOOD OIL CO	2060 ELOISE	HAZNET	Lower	2288, 0.433, ESE
L135	REDWOOD OIL CO	2060 ELOISE AVE	LUST, CUPA Listings, ENF, HIST CORTESE	Lower	2288, 0.433, ESE
L136	SIERRA KEY-LOCK	2060 ELOISE AVE	HIST UST	Lower	2288, 0.433, ESE
L137	REDWOOD OIL CO	2060 ELOISE AVE	SWEEPS UST, CA FID UST	Lower	2288, 0.433, ESE
L138	REDWOOD OIL CO	2060 ELOISE ST	HAZNET	Lower	2288, 0.433, ESE
L139	REDWOOD OIL COMPANY	2060 ELOISE	LUST	Lower	2290, 0.434, ESE
L140	SBC FACILITY/2075 EL	2075 ELOISE	WDS	Lower	2295, 0.435, ESE
K141	SOUTH Y PCE	US HIGHWAY 50/EMERAL	SLIC	Lower	2310, 0.438, SE
P142	PACIFIC BELL	1900 LAKE TAHOE BLVD	RCRA-SQG, FINDS	Higher	2317, 0.439, SSE
P143	TROUT CREEK RESTORAT	1900 LAKE TAHOE BLVD	ENF	Higher	2317, 0.439, SSE
P144	CITY OF SLT MAINT. Y	1900 LAKE TAHOE BLVD	RGA LUST	Higher	2317, 0.439, SSE
P145	MUN STRMWTR DISCHARG	1900 LAKE TAHOE BLVD	ENF	Higher	2317, 0.439, SSE
P146	CITY OF SLT MAINT. Y	1900 LAKE TAHOE BLVD	RGA LUST	Higher	2317, 0.439, SSE
Q147	STEPHANIE R MCKNIGHT	575 ROGER AVE	PEST LIC	Higher	2338, 0.443, WNW
R148	LAKE TAHOE USD-TAHOE	943 TAHOE ISLAND DR	HAZNET	Lower	2351, 0.445, NE
Q149		617 GLORENE AVE	EDR US Hist Auto Stat	Higher	2355, 0.446, WNW
K150	SOUTH "Y" EXXON	1000 EMERALD BAY RD	LUST, SWEEPS UST, CA FID UST	Lower	2365, 0.448, SE
K151	SOUTH "Y" EXXON	1000 EMERALD BAY RD	HIST UST	Lower	2365, 0.448, SE
K152	FACILITY #27943-EXXO	1000 EMERALD BAY ROA	RGA LUST	Lower	2365, 0.448, SE
P153	SOUTH SHORE MOTORS,	1875 LAKE TAHOE BLVD	HAZNET	Higher	2379, 0.451, SSE
P154	SOUTH SHORE MOTORS	1875 LAKE TAHOE BLVD	SWEEPS UST, HIST UST, CA FID UST, CUPA Listings	Higher	2379, 0.451, SSE
P155	LUMBER CITY CORP DBA	1875 LAKE TAHOE BLVD	HAZNET	Higher	2379, 0.451, SSE
S156	FIVE STAR TEXACO	2037 HWY 50	RCRA-SQG, FINDS	Lower	2401, 0.455, ESE



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<a href="#">S157</a>	TEXACO	2037 HIGHWAY 50 BOX	SWEEPS UST	Lower	2401, 0.455, ESE
<a href="#">S158</a>	FORMER FIVE STAR TEX	2037 LAKE TAHOE BLVD	LUST	Lower	2401, 0.455, ESE
<a href="#">S159</a>	FIVE STAR TEXACO	2037 LAKE TAHOE BLVD	Cortese, ENF, HIST CORTESE	Lower	2401, 0.455, ESE
<a href="#">L160</a>	CHEVRON 1001382	2070 JAMES AVE	FINDS	Lower	2402, 0.455, ESE
<a href="#">L161</a>	BERRY-HINCKLEY - SLT	2070 JAMES AVENUE	SLIC	Lower	2402, 0.455, ESE
<a href="#">L162</a>	BI STATE PETROLEUM	2070 JAMES AVE	SWEEPS UST	Lower	2402, 0.455, ESE
<a href="#">L163</a>	BI-STATE PETROLEUM	2070 JAMES ST	WDS	Lower	2402, 0.455, ESE
<a href="#">L164</a>	BERRY-HINCKLEY INDUS	2070 JAMES AVENUE	LUST, SLIC, CUPA Listings	Lower	2402, 0.455, ESE
<a href="#">L165</a>	CHEVRON 1001382	2070 JAMES AVE	RCRA-LQG	Lower	2402, 0.455, ESE
<a href="#">L166</a>	NELLA OIL #3002	2070 JAMES	AST	Lower	2402, 0.455, ESE
<a href="#">L167</a>	WESTERN ENERGETIX	2070 JAMES AVE	ICIS, FINDS	Lower	2402, 0.455, ESE
<a href="#">T168</a>	AT&T MOBILITY - JAME	2082 ELOISE AVE	CUPA Listings	Lower	2421, 0.459, East
<a href="#">S169</a>	EUGENE GARFINKLE	2011 LAKE TAHOE BLVD	HAZNET	Lower	2426, 0.459, ESE
<a href="#">S170</a>		2015 LAKE TAHOE BLVD	ERNS	Lower	2427, 0.460, ESE
<a href="#">S171</a>	TJ MAXX 1283	2015 LAKE TAHOE BLVD	CHMIRS, CUPA Listings	Lower	2427, 0.460, ESE
<a href="#">R172</a>	LAKE TAHOE UNIFIED S	943 TAHOE ISLAND	HAZNET	Lower	2464, 0.467, ENE
<a href="#">S173</a>		2000 LAKE TAHOE BLV	EDR US Hist Auto Stat	Lower	2474, 0.469, ESE
<a href="#">U174</a>	SHEHADI MOTORS, INC	1855 LAKE TAHOE BLVD	RCRA-SQG, SWEEPS UST, HIST UST, CA FID UST, FINDS,...	Higher	2477, 0.469, South
<a href="#">U175</a>	CARDINALE AUTOMOTIVE	1855 LAKE TAHOE BLVD	HAZNET	Higher	2477, 0.469, South
<a href="#">U176</a>	SHEHADI MOTORS, INC	1855 LAKE TAHOE BLVD	RCRA-SQG, FINDS	Higher	2477, 0.469, South
<a href="#">T177</a>	RON FULLER CONSTRUCT	2092 ELOISE AVE	CUPA Listings	Lower	2503, 0.474, East
<a href="#">V178</a>	SOUTH TAHOE REFUSE T	2141 RUTH AVE	HAZNET	Lower	2516, 0.477, East
<a href="#">V179</a>	SOUTH TAHOE REFUSE M	2140 RUTH AVE	WMUDS/SWAT, HAULERS, SWEEPS UST, HIST UST, CA FID.	Lower	2551, 0.483, East
<a href="#">V180</a>	SOUTH TAHOE REFUSE C	2140 RUTH AVE	HAZNET	Lower	2551, 0.483, East
<a href="#">V181</a>	SOUTH TAHOE REFUSE M	2140 RUTH AVE	WMUDS/SWAT	Lower	2551, 0.483, East
<a href="#">V182</a>	SOUTH TAHOE REFUSE C	2140 RUTH AVE	FINDS	Lower	2551, 0.483, East
<a href="#">V183</a>	SOUTH TAHOE REFUSE C	2140 RUTH AVE	UST	Lower	2551, 0.483, East
<a href="#">V184</a>	EL DORADO CTY ENVIR	2140 RUTH AVE	HAZNET	Lower	2551, 0.483, East
<a href="#">V185</a>	SOUTH TAHOE REFUSE M	2140 RUTH AVE	WDS	Lower	2551, 0.483, East
<a href="#">S186</a>	STAPLES OFFICE SUPPL	2061 LAKE TAHOE BLVD	CUPA Listings	Lower	2557, 0.484, ESE
<a href="#">U187</a>		JULIE AND LAKE TAHOE	ERNS	Higher	2595, 0.491, South
<a href="#">W188</a>	KMART GARDEN SHOP &	1030 TATA LN	WDS	Higher	2596, 0.492, SSE
<a href="#">W189</a>	KMART (GARDEN SHOP)	1030 TATA LANE	FINDS	Higher	2596, 0.492, SSE
<a href="#">W190</a>	KMART #9153/GARDEN S	1030 TATA LN	CUPA Listings, HAZNET	Higher	2596, 0.492, SSE
<a href="#">U191</a>	TAHOE VERDE TRAILER	LAKE TAHOE BLVD & JU	ENF	Higher	2615, 0.495, South
<a href="#">X192</a>	SHELL OIL COMPANY	1020 EMERALD BAY RD	SWEEPS UST	Lower	2627, 0.498, SE
<a href="#">X193</a>	EQUILON ENTERPRISES	1020 EMERALD BAY RD	FINDS	Lower	2627, 0.498, SE
<a href="#">X194</a>	SOUTH TAHOE SHELL SE	1020 EMERALD BAY RD	LUST, SWEEPS UST, Cortese, CUPA Listings, ENF,...	Lower	2627, 0.498, SE
<a href="#">X195</a>	RALEY'S AISLE 1 #177	1020 EMERALD BAY RD	HAZNET	Lower	2627, 0.498, SE

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 800 EMERALD BAY ROAD  
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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
X196	SHELL SERVICE STATIO	1020 EMERALD BAY ROA	RCRA-SQG	Lower	2627, 0.498, SE
X197	EQUILON ENTERPRISES	1020 EMERALD BAY RD	HAZNET	Lower	2627, 0.498, SE
X198	SOUTH Y SHELL	1020 EMERALD BAY ROA	RGA LUST	Lower	2627, 0.498, SE
X199	SOUTH Y SHELL	1020 EMERALD BAY ROA	HIST CORTESE	Lower	2627, 0.498, SE
X200	SOUTH Y SHELL	1020 EMERALD BAY ROA	LUST	Lower	2631, 0.498, SE
X201	SHELL STATION	1020 EMERALD BAY ROA	LUST	Lower	2631, 0.498, SE
X202	SOUTH Y CENTER	1022 EMERALD BAY RD	CUPA Listings	Lower	2631, 0.498, SE
X203	LAKE TAHOE LAUNDRY W	1024 EMERALD BAY RD	CUPA Listings	Lower	2652, 0.502, SE
X204		1024 EMERALD BAY RD	EDR US Hist Cleaners	Lower	2652, 0.502, SE
V205	ALPINE METALS		CUPA Listings	Lower	2699, 0.511, East
Y206	TERRIBLE HERBST GAS	2762 LAKE TAHOE BLVD	Notify 65	Lower	2742, 0.519, ESE
Z207	SOUTH TAHOE REFUSE C	RUTH AVE BTWN DUNLAP	SWF/LF	Lower	2742, 0.519, ENE
AA208	TRINITY LANDSCAPING	2118 ELOISE AVE	CUPA Listings	Lower	2743, 0.520, East
209	BI STATE PROPANE	2070 JAMES AVE STE A	CUPA Listings	Lower	2778, 0.526, East
X210	RALEY'S SUPERMARKET	1040 EMERALD BAY RD	CUPA Listings	Lower	2812, 0.533, SE
Y211	ADVANCED FAMILY FOOT	2074 LAKE TAHOE SUIT	CUPA Listings	Lower	2817, 0.534, ESE
Y212	GROELZ , ROSS DDS	2074 LAKE TAHOE BLVD	CUPA Listings	Lower	2817, 0.534, ESE
AA213	LASTING BEAUTY	2083 JAMES AVE	CUPA Listings	Lower	2827, 0.535, East
Z214	CALIFORNIA TAHOE CON	931 3RD ST	CUPA Listings	Lower	2831, 0.536, East
Z215	CROW'S AUTO CARE	931 THIRD ST	CUPA Listings	Lower	2831, 0.536, East
Z216		931 3RD ST	EDR US Hist Auto Stat	Lower	2831, 0.536, East
AA217	LORRAINE BAKERY SITE	2087 JAMES STREET	CUPA Listings	Lower	2842, 0.538, East
AA218	TAHOE TOURS (HM)	2133 ELOISE AVE	CUPA Listings	Lower	2842, 0.538, East
AA219	TAHOE FILM WORKS	2095 JAMES AVE	RCRA-SQG, FINDS, HAZNET	Lower	2873, 0.544, East
Y220	BARTON MEMORIAL HOSP	2092 LAKE TAHOE BLVD	CUPA Listings	Lower	2920, 0.553, ESE
Z221	DIAMOND WOODCRAFT	2197 RUTH AVE UNIT 1	CUPA Listings	Lower	2927, 0.554, ENE
Z222	SCOTT'S CUSTOM MACHI	2197 RUTH AVE #4	CUPA Listings	Lower	2927, 0.554, ENE
Z223		2197 RUTH AVE	EDR US Hist Auto Stat	Lower	2927, 0.554, ENE
AB224	CVS PHARMACY #9713	1043 EMERALD BAY RD	CUPA Listings	Lower	2954, 0.559, SE
AB225	CVS PHARMACY NO 9713	1043 EMERALD BAY RD	RCRA-LQG	Lower	2954, 0.559, SE
AC226	CREATIVE FABRICATION	2140 ELOISE AVE 1	CUPA Listings	Lower	2961, 0.561, East
AC227	TAHOE TEST TUNE (HM)	2143 ELOISE AVE 2	CUPA Listings	Lower	2961, 0.561, East
AC228		2143 ELOISE AVE	EDR US Hist Auto Stat	Lower	2961, 0.561, East
AC229	CONSTRUCTION YARD	2143 ELOISE AVE	SWEEPS UST, CA FID UST	Lower	2961, 0.561, East
AC230	CONSTRUCTION YARD	2143 ELOISE AVE	HIST UST	Lower	2961, 0.561, East
AA231	PRAXAIR (SLT)	2117 JAMES AVE	CUPA Listings	Lower	2967, 0.562, East
AB232	RALEYS DRUG CTR 167	1045 EMERALD BAY RD	RCRA-SQG, FINDS	Lower	2969, 0.562, SE
AB233	VERIZON WIRELESS SOU	1054 EMERALD BAY RD	CUPA Listings	Lower	2972, 0.563, SE
AC234	EMERALD BAY TOWING	948 THIRD ST	CUPA Listings	Lower	2980, 0.564, East

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 800 EMERALD BAY ROAD  
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<a href="#">AD235</a>		2104 LAKE TAHOE BLV	EDR US Hist Auto Stat	Lower	2989, 0.566, ESE
<a href="#">AD236</a>	KEN'S TIRE CENTER	2104 LAKE TAHOE BLVD	CUPA Listings	Lower	2989, 0.566, ESE
<a href="#">AB237</a>	KMART #9153	1056 EMERALD BAY RD	LUST, CUPA Listings, HIST CORTESE	Lower	2996, 0.567, SE
<a href="#">AD238</a>	SOUTH TAHOE BLOCK CO	2112 LAKE TAHOE BLVD	SWEEPS UST, CA FID UST	Lower	3040, 0.576, ESE
<a href="#">AD239</a>	SOUTH TAHOE BLOCK CO	2112 LAKE TAHOE BLVD	HIST UST	Lower	3040, 0.576, ESE
<a href="#">AC240</a>	FRANK SUNKEL WAREHOU	2141 JAMES AVE	HIST UST	Lower	3074, 0.582, East
<a href="#">AC241</a>	ECHO PLUMBING SUPPLY	2141 JAMES AVE	HIST UST	Lower	3074, 0.582, East
<a href="#">242</a>	TAHOE KEYS POA	2100 TEXAS AVENUE	Cortese, CUPA Listings, ENF, NPDES, WDS	Lower	3093, 0.586, North
<a href="#">AC243</a>	FRANK SUNKEL WAREHOU	2141 JAMES ST	SWEEPS UST	Lower	3095, 0.586, East
<a href="#">AC244</a>	ECHO PLUMBING SUPPLY	2141 JAMES	SWEEPS UST, CA FID UST	Lower	3095, 0.586, East
<a href="#">AE245</a>	AXELSON IRON SHOP	2184 RUTH AVE	CUPA Listings	Lower	3119, 0.591, ENE
<a href="#">AE246</a>		2186 RUTH AVE	EDR US Hist Auto Stat	Lower	3147, 0.596, ENE
<a href="#">AE247</a>	NORM'S AUTO REPAIR	2186 RUTH AVE	CUPA Listings	Lower	3147, 0.596, ENE
<a href="#">248</a>	STPUD GARDNER MOUNTA	589 GARDNER ST	CUPA Listings	Higher	3153, 0.597, WSW
<a href="#">AF249</a>	TAHOE URGENT CARE	2130 LAKE TAHOE BLVD	CUPA Listings	Lower	3157, 0.598, East
<a href="#">AB250</a>		1069 EMERALD BAY RD	EDR US Hist Auto Stat	Higher	3177, 0.602, SE
<a href="#">AB251</a>	PIER 1IMPORTS #1483	1069 EMERALD BAY RD	LUST, CUPA Listings	Higher	3177, 0.602, SE
<a href="#">AB252</a>	CHEVRON #90672	1069 EMERAL BAY RD	SWEEPS UST	Higher	3186, 0.603, SE
<a href="#">AC253</a>	TAHOE POOL SERVICE	971 THIRD ST	CUPA Listings	Lower	3193, 0.605, East
<a href="#">254</a>	SOUTH TAHOE HIGH SCH	1735 LAKE TAHOE BLVD	CUPA Listings	Higher	3208, 0.608, SSW
<a href="#">AE255</a>	SOUTH TAHOE REFUSE C	2192 RUTH AVE	SWRCY	Lower	3219, 0.610, ENE
<a href="#">AG256</a>	GEORGE'S PERFORMANCE	2176 ELOISE AVE	CUPA Listings	Lower	3296, 0.624, East
<a href="#">AG257</a>	CLARK PLUMMING/ SERV	2178 ELOISE	SWEEPS UST, CA FID UST	Lower	3312, 0.627, East
<a href="#">AF258</a>	ALPINE SMITH , INC.	2120 BARTON AVE	CUPA Listings	Lower	3350, 0.634, ESE
<a href="#">259</a>	CAMPUS CRUSADE FOR C	531 EMERALD BAY RD	LUST, CUPA Listings	Lower	3395, 0.643, WNW
<a href="#">AG260</a>	ALPINE SMITH	2193 ELOISE AVE	CUPA Listings	Lower	3415, 0.647, East
<a href="#">AH261</a>	NATIONAL CAR RENTAL	1101 EMERALD BAY ROA	LUST, HIST UST	Higher	3444, 0.652, SE
<a href="#">AH262</a>	T-SHIRT OUTLET	1101 EMERALD BAY RD	LUST, SWEEPS UST, CA FID UST, CUPA Listings, HIST...	Higher	3444, 0.652, SE
<a href="#">AH263</a>	U-HAUL OF TAHOE	1105 EMERALD BAY RD	LUST, SWEEPS UST, HIST UST, CA FID UST, CHMIRS,...	Higher	3463, 0.656, SE
<a href="#">AI264</a>	TAHOE VERDE MOBILE H	1080 JULIE LN	SLIC, CUPA Listings	Higher	3471, 0.657, South
<a href="#">AI265</a>	TAHOE VERDE MOBILE H	1080 JULIE LANE	SLIC	Higher	3471, 0.657, South
<a href="#">AJ266</a>	EASTERN SIERRA HISTO	2176 LAKE TAHOE BLVD	CUPA Listings	Lower	3491, 0.661, East
<a href="#">267</a>		2240 IDAHO AVE	EDR US Hist Auto Stat	Lower	3527, 0.668, ENE
<a href="#">AJ268</a>		2180 LAKE TAHOE BLV	EDR US Hist Cleaners	Lower	3532, 0.669, East
<a href="#">AJ269</a>	PARK , ERIC SONG, DD	2180 LAKE TAHOE BLVD	CUPA Listings	Lower	3532, 0.669, East
<a href="#">270</a>		1107 MARGARET AVE	EDR US Hist Auto Stat	Higher	3600, 0.682, SSE
<a href="#">AH271</a>		1140 EMERALD BAY RD	EDR US Hist Auto Stat	Higher	3630, 0.688, SE
<a href="#">AH272</a>	USA SERVICE STATION	1140 EMERAL BAY RD	Cortese, WDS	Higher	3630, 0.688, SE
<a href="#">AH273</a>	AMERICAN #1	1140 EMERALD BAY RD	LUST, SWEEPS UST, CUPA Listings	Higher	3630, 0.688, SE

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AH274	USA GAS STATION	1140 EMERALD BAY RD	LUST, Cortese, ENF, HIST CORTESE	Higher	3630, 0.688, SE
AH275	AMERICAN OIL #1	1140 EMERALD BAY ROA	UST	Higher	3630, 0.688, SE
AH276	EXPERT AUTO SERVICE	1144 EMERALD BAY RD	CUPA Listings, HAZNET	Higher	3649, 0.691, SE
AH277		1144 EMERALD BAY RD	EDR US Hist Auto Stat	Higher	3649, 0.691, SE
AK278		2226 ELOISE AVE	EDR US Hist Auto Stat	Lower	3695, 0.700, East
AK279	SOUTH SHORE TRANSMIS	2226 ELOISE D	CUPA Listings	Lower	3695, 0.700, East
AH280	EMERALD BAY CENTER F	1154 EMERALD BAY RD	CUPA Listings, WDS	Higher	3696, 0.700, SE
AL281	LUKINS BROTHERS WATE	2031 WEST WY	ENVIROSTOR, SWEEPS UST, CA FID UST, Cortese, ENF,...	Lower	3718, 0.704, WNW
AL282	MELVIN L. LUKINS & S	2031 WEST WAY	HIST UST	Lower	3718, 0.704, WNW
AM283	MICHAEL SULLIVAN , M	2101 SOUTH AVE	CUPA Listings	Higher	3783, 0.716, ESE
284	KAUFMAN, J. & CERCEO	1077 4TH ST	CUPA Listings	Lower	3785, 0.717, ESE
AN285	CITY OF SLT CORP. YA	1700 D STREET	LUST	Higher	3818, 0.723, South
AN286	CITY OF SLT - D STRE	1700 D	AST	Higher	3818, 0.723, South
AN287	CITY CORPORATION YAR	1700 D ST	LUST, SWEEPS UST, CA FID UST, CUPA Listings, HIST...	Higher	3827, 0.725, South
AN288	PUBLIC WORKS EQUIPME	1700 D ST	HIST UST	Higher	3827, 0.725, South
AN289	SOUTH LAKE TAHOE CIT	1700 D ST	RCRA-SQG, FINDS, HAZNET	Higher	3827, 0.725, South
AN290	CITY OF SLT D ST	1700 D ST	CUPA Listings	Higher	3827, 0.725, South
291	ALPINE FAMILY PRACTI	1108 4TH ST	CUPA Listings	Higher	3895, 0.738, ESE
AK292	KIMBALL CHATFIELD ,	2241 JAMES AVE	CUPA Listings	Lower	3899, 0.738, East
AM293	LAB CORP	2133 SOUTH AVE	CUPA Listings	Higher	3899, 0.738, ESE
294	ROAD RASH CAFE	2218 LAKE TAHOE BLVD	CUPA Listings	Lower	3944, 0.747, East
AM295	BARTON MEMORIAL HOSP	004TH & SOUTH	SWEEPS UST, CA FID UST	Higher	3946, 0.747, ESE
AM296	BARTON MEMORIAL HOSP	2170 SOUTH AVENUE	LUST	Higher	4006, 0.759, ESE
AM297	BARTON HOSPITAL	2170 SOUTH AVENUE	LUST	Higher	4006, 0.759, ESE
AO298	UNITED PARCEL SERVIC	1746 D ST	RCRA-SQG, LUST, FINDS	Higher	4254, 0.806, South
AO299	UPS SOUTH LAKE TAHOE	1746 D ST	LUST, SWEEPS UST, CA FID UST, CUPA Listings, HIST...	Higher	4254, 0.806, South
300	TECTRANS	1669 SHOP ST	LUST, SWEEPS UST, CUPA Listings, HIST CORTESE	Higher	4464, 0.845, South
301	LITTLE TRUCKEE MOBIL	2333 ELOISE STREET	Cortese, ENF, HIST CORTESE, Notify 65	Lower	4480, 0.848, ENE
AP302	TAHOE BIKE SHOP - HM	2277 LAKE TAHOE BLVD	LUST, CUPA Listings, HIST CORTESE	Lower	4498, 0.852, East
AP303	HOUSE OF CARPETS	2280 LAKE TAHOE BLVD	LUST	Lower	4505, 0.853, East
AP304	HOUSE OF CARPETS	2280 S LAKE TAHOE BO	LUST	Lower	4507, 0.854, East
AQ305	BEACON STATION NO 68	2304 LAKE TAHOE BLVD	LUST, Cortese, CUPA Listings, ENF, HIST CORTESE	Lower	4783, 0.906, East
306	HEAVENLY VALLEY-MAIN	HEAVENLY VALLEY SKI	LUST	Lower	4831, 0.915, East
AQ307	CSK AUTO, INC (TIRES	2317 LAKE TAHOE BOUL	SLIC	Lower	4904, 0.929, ENE
AQ308	TIRES PLUS (HM)	2317 LAKE TAHOE BLVD	LUST, CUPA Listings	Lower	4904, 0.929, ENE
AQ309	ED'S AUTO BODY (JOHN	2314 LAKE TAHOE BLVD	LUST	Lower	4916, 0.931, ENE
AQ310	EDS AUTO BODY	2314 LAKE TAHOE BLVD	LUST, Cortese, CUPA Listings, ENF, HIST CORTESE	Lower	4951, 0.938, ENE
311	TAHOE KEYS POA CORPO	END OF DOVER DR	LUST	Lower	4982, 0.944, NE

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

<u>Site</u>	<u>Database(s)</u>	<u>EPA ID</u>
7-ELEVEN INC. STORE 800 EMERALD BAY RD SOUTH LAKE TAHOE, CA 96150	FINDS Registry ID:: 110059756358	N/A
7-ELEVEN INC. STORE 800 EMERALD BAY RD SOUTH LAKE TAHOE, CA 96150	CUPA Listings Status: Active, billable	N/A

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal NPL site list***

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

### ***Federal CERCLIS list***

FEDERAL FACILITY..... Federal Facility Site Information listing

### ***Federal CERCLIS NFRAP site List***

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

## EXECUTIVE SUMMARY

### ***Federal RCRA generators list***

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

### ***Federal institutional controls / engineering controls registries***

LUCIS..... Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List

US INST CONTROL..... Sites with Institutional Controls

### ***State- and tribal - equivalent NPL***

RESPONSE..... State Response Sites

### ***State and tribal leaking storage tank lists***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***State and tribal registered storage tank lists***

FEMA UST..... Underground Storage Tank Listing

INDIAN UST..... Underground Storage Tanks on Indian Land

### ***State and tribal voluntary cleanup sites***

VCP..... Voluntary Cleanup Program Properties

INDIAN VCP..... Voluntary Cleanup Priority Listing

### ***State and tribal Brownfields sites***

BROWNFIELDS..... Considered Brownfields Sites Listing

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

ODI..... Open Dump Inventory

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

### ***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL..... National Clandestine Laboratory Register

HIST Cal-Sites..... Historical Calsites Database

SCH..... School Property Evaluation Program

Toxic Pits..... Toxic Pits Cleanup Act Sites

US CDL..... Clandestine Drug Labs

### ***Local Land Records***

LIENS..... Environmental Liens Listing

## EXECUTIVE SUMMARY

LIENS 2..... CERCLA Lien Information  
DEED..... Deed Restriction Listing

### **Records of Emergency Release Reports**

HMIRS..... Hazardous Materials Information Reporting System  
MCS..... Military Cleanup Sites Listing  
SPILLS 90..... SPILLS 90 data from FirstSearch

### **Other Ascertainable Records**

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated  
FUDS..... Formerly Used Defense Sites  
DOD..... Department of Defense Sites  
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing  
US FIN ASSUR..... Financial Assurance Information  
EPA WATCH LIST..... EPA WATCH LIST  
2020 COR ACTION..... 2020 Corrective Action Program List  
TSCA..... Toxic Substances Control Act  
TRIS..... Toxic Chemical Release Inventory System  
SSTS..... Section 7 Tracking Systems  
ROD..... Records Of Decision  
RMP..... Risk Management Plans  
RAATS..... RCRA Administrative Action Tracking System  
PRP..... Potentially Responsible Parties  
PADS..... PCB Activity Database System  
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)  
MLTS..... Material Licensing Tracking System  
COAL ASH DOE..... Steam-Electric Plant Operation Data  
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List  
PCB TRANSFORMER..... PCB Transformer Registration Database  
RADINFO..... Radiation Information Database  
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing  
DOT OPS..... Incident and Accident Data  
CONSENT..... Superfund (CERCLA) Consent Decrees  
INDIAN RESERV..... Indian Reservations  
UMTRA..... Uranium Mill Tailings Sites  
LEAD SMELTERS..... Lead Smelter Sites  
US AIRS..... Aerometric Information Retrieval System Facility Subsystem  
US MINES..... Mines Master Index File  
CA BOND EXP. PLAN..... Bond Expenditure Plan  
DRYCLEANERS..... Cleaner Facilities  
EMI..... Emissions Inventory Data  
Financial Assurance..... Financial Assurance Information Listing  
HWP..... EnviroStor Permitted Facilities Listing  
HWT..... Registered Hazardous Waste Transporter Database  
MINES..... Mines Site Location Listing  
MWMP..... Medical Waste Management Program Listing  
PROC..... Certified Processors Database  
UIC..... UIC Listing  
WASTEWATER PITS..... Oil Wastewater Pits Listing  
WIP..... Well Investigation Program Case List

### **EDR HIGH RISK HISTORICAL RECORDS**

#### **EDR Exclusive Records**

EDR MGP..... EDR Proprietary Manufactured Gas Plants

# EXECUTIVE SUMMARY

## EDR RECOVERED GOVERNMENT ARCHIVES

### ***Exclusive Recovered Govt. Archives***

RGA LF..... Recovered Government Archive Solid Waste Facilities List

## SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal CERCLIS list***

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 10/25/2013 has revealed that there is 1 CERCLIS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LAKE TAHOE BASIN	870 EMERALD BAY RD	ESE 1/8 - 1/4 (0.139 mi.)	C17	24

### ***Federal RCRA generators list***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/09/2015 has revealed that there are 2 RCRA-LQG sites within approximately 0.75 miles of the target property.



## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHEVRON 1001382	2070 JAMES AVE	ESE 1/4 - 1/2 (0.455 mi.)	L165	240
CVS PHARMACY NO 9713	1043 EMERALD BAY RD	SE 1/2 - 1 (0.559 mi.)	AB225	317

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/09/2015 has revealed that there are 12 RCRA-SQG sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>PACIFIC BELL</i>	<i>1900 LAKE TAHOE BLVD</i>	<i>SSE 1/4 - 1/2 (0.439 mi.)</i>	<i>P142</i>	<i>200</i>
<i>SHEHADI MOTORS, INC</i>	<i>1855 LAKE TAHOE BLVD</i>	<i>S 1/4 - 1/2 (0.469 mi.)</i>	<i>U174</i>	<i>247</i>
<i>SHEHADI MOTORS, INC</i>	<i>1855 LAKE TAHOE BLVD</i>	<i>S 1/4 - 1/2 (0.469 mi.)</i>	<i>U176</i>	<i>253</i>
<i>SOUTH LAKE TAHOE CIT</i>	<i>1700 D ST</i>	<i>S 1/2 - 1 (0.725 mi.)</i>	<i>AN289</i>	<i>438</i>

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>PRECISION AUTO BODY</i>	<i>867 ELOISE AVE</i>	<i>ENE 1/8 - 1/4 (0.158 mi.)</i>	<i>D24</i>	<i>35</i>
<i>SOUTH SIDE AUTO BODY</i>	<i>920 ELOISE AVE</i>	<i>E 1/4 - 1/2 (0.254 mi.)</i>	<i>E46</i>	<i>99</i>
<i>PACIFIC BELL</i>	<i>DUNLAP AND ELOISE</i>	<i>ESE 1/4 - 1/2 (0.352 mi.)</i>	<i>I80</i>	<i>126</i>
<i>FIVE STAR AUTO MIKES</i>	<i>2119 RUTH AVE</i>	<i>E 1/4 - 1/2 (0.430 mi.)</i>	<i>O122</i>	<i>162</i>
<i>FIVE STAR TEXACO</i>	<i>2037 HWY 50</i>	<i>ESE 1/4 - 1/2 (0.455 mi.)</i>	<i>S156</i>	<i>230</i>
<i>SHELL SERVICE STATIO</i>	<i>1020 EMERALD BAY ROA</i>	<i>SE 1/4 - 1/2 (0.498 mi.)</i>	<i>X196</i>	<i>303</i>
<i>TAHOE FILM WORKS</i>	<i>2095 JAMES AVE</i>	<i>E 1/2 - 1 (0.544 mi.)</i>	<i>AA219</i>	<i>313</i>
<i>RALEYS DRUG CTR 167</i>	<i>1045 EMERALD BAY RD</i>	<i>SE 1/2 - 1 (0.562 mi.)</i>	<i>AB232</i>	<i>323</i>

### ***Federal ERNS list***

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 06/22/2015 has revealed that there are 4 ERNS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	1931 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.415 mi.)	M110	152
Not reported	JULIE AND LAKE TAHOE	S 1/4 - 1/2 (0.491 mi.)	U187	271

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	913 SR 89	ESE 1/8 - 1/4 (0.241 mi.)	F37	94
Not reported	2015 LAKE TAHOE BLVD	ESE 1/4 - 1/2 (0.460 mi.)	S170	243

## EXECUTIVE SUMMARY

### **State- and tribal - equivalent CERCLIS**

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 08/03/2015 has revealed that there is 1 ENVIROSTOR site within approximately 1.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>LUKINS BROTHERS WATE</b> Facility Id: 9490010 Status: Refer: Other Agency	<b>2031 WEST WY</b>	<b>WNW 1/2 - 1 (0.704 mi.)</b>	<b>AL281</b>	<b>425</b>

### **State and tribal landfill and/or solid waste disposal site lists**

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 08/17/2015 has revealed that there is 1 SWF/LF site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH TAHOE REFUSE C</b> Facility ID: 09-AA-0002 Operational Status: Active Regulation Status: Permitted	<b>RUTH AVE BTWN DUNLAP</b>	<b>ENE 1/2 - 1 (0.519 mi.)</b>	<b>Z207</b>	<b>308</b>

### **State and tribal leaking storage tank lists**

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 06/15/2015 has revealed that there are 39 LUST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>MCNAMARA PROPERTY</b> Status: Completed - Case Closed	<b>787 E EMERALD BAY RO</b>	<b>NW 0 - 1/8 (0.072 mi.)</b>	<b>B7</b>	<b>12</b>

## EXECUTIVE SUMMARY

Global Id: T060175566				
MCNAMARA Active OR Closed Site: A	787 EMERALD BAY ROAD	NW 0 - 1/8 (0.073 mi.)	B8	18
<b>PIER 1IMPORTS #1483</b> Status: Completed - Case Closed Global Id: T0601781532	<b>1069 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.602 mi.)</b>	<b>AB251</b>	<b>346</b>
<b>NATIONAL CAR RENTAL</b> Active OR Closed Site: A	<b>1101 EMERALD BAY ROA</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH261</b>	<b>355</b>
<b>T-SHIRT OUTLET</b> Status: Completed - Case Closed Global Id: T0601700140	<b>1101 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH262</b>	<b>356</b>
<b>U-HAUL OF TAHOE</b> Status: Completed - Case Closed Global Id: T0601700126 Active OR Closed Site: C Date Closed: 4/15/96	<b>1105 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.656 mi.)</b>	<b>AH263</b>	<b>363</b>
<b>AMERICAN #1</b> Active OR Closed Site: A	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH273</b>	<b>373</b>
<b>USA GAS STATION</b> Status: Completed - Case Closed Global Id: T0601700091	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH274</b>	<b>375</b>
CITY OF SLT CORP. YA Active OR Closed Site: A	1700 D STREET	S 1/2 - 1 (0.723 mi.)	AN285	432
<b>CITY CORPORATION YAR</b> Status: Completed - Case Closed Global Id: T0601700157	<b>1700 D ST</b>	<b>S 1/2 - 1 (0.725 mi.)</b>	<b>AN287</b>	<b>432</b>
BARTON MEMORIAL HOSP Status: Completed - Case Closed Global Id: T0601700158	2170 SOUTH AVENUE	ESE 1/2 - 1 (0.759 mi.)	AM296	443
BARTON HOSPITAL Active OR Closed Site: C Date Closed: 6/11/02	2170 SOUTH AVENUE	ESE 1/2 - 1 (0.759 mi.)	AM297	446
<b>UNITED PARCEL SERVIC</b> Active OR Closed Site: C Date Closed: 5/16/01	<b>1746 D ST</b>	<b>S 1/2 - 1 (0.806 mi.)</b>	<b>AO298</b>	<b>446</b>
<b>UPS SOUTH LAKE TAHOE</b> Status: Completed - Case Closed Global Id: T0601700141	<b>1746 D ST</b>	<b>S 1/2 - 1 (0.806 mi.)</b>	<b>AO299</b>	<b>448</b>
<b>TECTRANS</b> Status: Completed - Case Closed Global Id: T0601700128 Active OR Closed Site: C Date Closed: 11/8/95	<b>1669 SHOP ST</b>	<b>S 1/2 - 1 (0.845 mi.)</b>	<b>300</b>	<b>453</b>
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>BEACON SWISS MART</b> Status: Completed - Case Closed Global Id: T0601700123 Global Id: T0601700148	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
<b>SWISS MART - BEACON</b>	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F39</b>	<b>95</b>

## EXECUTIVE SUMMARY

Active OR Closed Site: A Active OR Closed Site: C Date Closed: 11/8/95				
HATCH ELECTRIC Status: Completed - Case Closed Global Id: T060177894	921 ELOISE AVE	E 1/8 - 1/4 (0.244 mi.)	E43	98
<b>MYERS MARINE</b> Status: Completed - Case Closed Global Id: T0601700098 Active OR Closed Site: C Date Closed: 7/15/96	<b>2140 DUNLAP ST</b>	<b>E 1/4 - 1/2 (0.386 mi.)</b>	<b>J85</b>	<b>131</b>
<b>RUNNELS AUTOMOTIVE</b> Status: Completed - Case Closed Global Id: T0601700134 Active OR Closed Site: C Date Closed: 4/28/99	<b>986 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.404 mi.)</b>	<b>K95</b>	<b>138</b>
<b>REDWOOD OIL CO</b> Status: Completed - Case Closed Global Id: T0601700139	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L135</b>	<b>173</b>
REDWOOD OIL COMPANY Active OR Closed Site: A	2060 ELOISE	ESE 1/4 - 1/2 (0.434 mi.)	L139	198
<b>SOUTH "Y" EXXON</b> Status: Completed - Case Closed Global Id: T10000005380	<b>1000 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.448 mi.)</b>	<b>K150</b>	<b>221</b>
FORMER FIVE STAR TEX Active OR Closed Site: C	2037 LAKE TAHOE BLVD	ESE 1/4 - 1/2 (0.455 mi.)	S158	233
<b>BERRY-HINCKLEY INDUS</b> Status: Completed - Case Closed Global Id: T060172028	<b>2070 JAMES AVENUE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L164</b>	<b>237</b>
<b>SOUTH TAHOE SHELL SE</b> Status: Completed - Case Closed Global Id: T0601700150	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>
SOUTH Y SHELL Active OR Closed Site: A	1020 EMERALD BAY ROA	SE 1/4 - 1/2 (0.498 mi.)	X200	306
SHELL STATION Active OR Closed Site: C	1020 EMERALD BAY ROA	SE 1/4 - 1/2 (0.498 mi.)	X201	307
<b>KMART #9153</b> Status: Completed - Case Closed Global Id: T0601700124 Active OR Closed Site: C Date Closed: 7/28/95	<b>1056 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.567 mi.)</b>	<b>AB237</b>	<b>325</b>
<b>CAMPUS CRUSADE FOR C</b> Status: Completed - Case Closed Global Id: T060171366 Active OR Closed Site: A	<b>531 EMERALD BAY RD</b>	<b>WNW 1/2 - 1 (0.643 mi.)</b>	<b>259</b>	<b>352</b>
<b>TAHOE BIKE SHOP - HM</b> Status: Completed - Case Closed Global Id: T0601700138 Active OR Closed Site: C Date Closed: 8/5/96	<b>2277 LAKE TAHOE BLVD</b>	<b>E 1/2 - 1 (0.852 mi.)</b>	<b>AP302</b>	<b>458</b>
HOUSE OF CARPETS	2280 LAKE TAHOE BLVD	E 1/2 - 1 (0.853 mi.)	AP303	460

## EXECUTIVE SUMMARY

Active OR Closed Site: A				
HOUSE OF CARPETS Status: Completed - Case Closed Global Id: T0601793601	2280 S LAKE TAHOE BO	E 1/2 - 1 (0.854 mi.)	AP304	460
<b>BEACON STATION NO 68</b> Status: Completed - Case Closed Global Id: T0601700099 Active OR Closed Site: A	<b>2304 LAKE TAHOE BLVD</b>	<b>E 1/2 - 1 (0.906 mi.)</b>	<b>AQ305</b>	<b>462</b>
HEAVENLY VALLEY-MAIN Status: Completed - Case Closed Global Id: T0601700136	HEAVENLY VALLEY SKI	E 1/2 - 1 (0.915 mi.)	306	484
<b>TIRES PLUS (HM)</b> Status: Completed - Case Closed Global Id: T10000004254	<b>2317 LAKE TAHOE BLVD</b>	<b>ENE 1/2 - 1 (0.929 mi.)</b>	<b>AQ308</b>	<b>486</b>
ED'S AUTO BODY (JOHN Active OR Closed Site: C Date Closed: 7/25/03	2314 LAKE TAHOE BLVD	ENE 1/2 - 1 (0.931 mi.)	AQ309	489
<b>EDS AUTO BODY</b> Status: Completed - Case Closed Global Id: T0601700151	<b>2314 LAKE TAHOE BLVD</b>	<b>ENE 1/2 - 1 (0.938 mi.)</b>	<b>AQ310</b>	<b>489</b>
TAHOE KEYS POA CORPO Status: Completed - Case Closed Global Id: T10000001664	END OF DOVER DR	NE 1/2 - 1 (0.944 mi.)	311	495

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 06/15/2015 has revealed that there are 14 SLIC sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LAKESIDE NAPA AUTOMO Facility Status: Completed - Case Closed Global Id: SL0601756146	1935 LAKE TAHOE BOUL	SSE 1/4 - 1/2 (0.413 mi.)	M105	148
LAKESIDE NAPA STORE Date Open or Closed: 8/5/03 Active or Closed: A Case Number: T6S035	1935 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.414 mi.)	M108	151
<b>TAHOE VERDE MOBILE H</b> Facility Status: Completed - Case Closed Global Id: SL0601769949	<b>1080 JULIE LN</b>	<b>S 1/2 - 1 (0.657 mi.)</b>	<b>AI264</b>	<b>368</b>
TAHOE VERDE MOBILE H Active or Closed: A Case Number: T6S019	1080 JULIE LANE	S 1/2 - 1 (0.657 mi.)	AI265	369
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TCI BUILDING Active or Closed: A Case Number: T6S017	924 EMERALD BAY ROAD	ESE 1/4 - 1/2 (0.269 mi.)	F54	110
<b>CHARTER COMMUNICATIO</b>	<b>924 EMERALD BAY</b>	<b>ESE 1/4 - 1/2 (0.273 mi.)</b>	<b>F56</b>	<b>110</b>

## EXECUTIVE SUMMARY

Facility Status: Completed - Case Closed				
Global Id: SL0601746499				
HURZEL PROPERTIES	949 EMERALD BAY ROAD	SE 1/4 - 1/2 (0.328 mi.)	H74	123
Date Open or Closed: 4/13/04				
Active or Closed: A				
Case Number: T6S044				
<b>HURZEL PROPERTIES -</b>	<b>949 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.328 mi.)</b>	<b>H77</b>	<b>124</b>
Facility Status: Completed - Case Closed				
Global Id: SL0601790916				
<b>BIG O TIRES</b>	<b>1961 LAKE TAHOE BOUL</b>	<b>SE 1/4 - 1/2 (0.416 mi.)</b>	<b>N114</b>	<b>153</b>
Facility Status: Completed - Case Closed				
Global Id: SL0601729739				
BIG O TIRE STORE	1961 LAKE TAHOE BLVD	SE 1/4 - 1/2 (0.416 mi.)	N115	157
Date Open or Closed: 8/5/03				
Active or Closed: A				
Case Number: T6S034				
SOUTH Y PCE	US HIGHWAY 50/EMERAL	SE 1/4 - 1/2 (0.438 mi.)	K141	199
Facility Status: Completed - Case Closed				
Global Id: SL0601794942				
BERRY-HINCKLEY - SLT	2070 JAMES AVENUE	ESE 1/4 - 1/2 (0.455 mi.)	L161	236
Active or Closed: A				
Case Number: T6S021				
<b>BERRY-HINCKLEY INDUS</b>	<b>2070 JAMES AVENUE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L164</b>	<b>237</b>
Facility Status: Completed - Case Closed				
Global Id: SL0601781518				
CSK AUTO, INC (TIRES)	2317 LAKE TAHOE BOUL	ENE 1/2 - 1 (0.929 mi.)	AQ307	486
Facility Status: Completed - Case Closed				
Global Id: T10000000115				

### **State and tribal registered storage tank lists**

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 06/15/2015 has revealed that there are 3 UST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AMERICAN OIL #1 Facility Id: FA0001054	1140 EMERALD BAY ROA	SE 1/2 - 1 (0.688 mi.)	AH275	420
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SWISS MART - BEACON</b> Facility Id: FA0001167	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F39</b>	<b>95</b>
SOUTH TAHOE REFUSE C Facility Id: FA0001172	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V183	268

## EXECUTIVE SUMMARY

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 08/01/2009 has revealed that there are 2 AST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CITY OF SLT - D STRE	1700 D	S 1/2 - 1 (0.723 mi.)	AN286	432
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NELLA OIL #3002	2070 JAMES	ESE 1/4 - 1/2 (0.455 mi.)	L166	241

### ADDITIONAL ENVIRONMENTAL RECORDS

#### **Local Lists of Landfill / Solid Waste Disposal Sites**

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there are 2 WMUDS/SWAT sites within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH TAHOE REFUSE M</b>	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>
SOUTH TAHOE REFUSE M	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V181	267

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 06/15/2015 has revealed that there is 1 SWRCY site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SOUTH TAHOE REFUSE C Cert Id: RC4152	2192 RUTH AVE	ENE 1/2 - 1 (0.610 mi.)	AE255	350

HAULERS: A listing of registered waste tire haulers.

A review of the HAULERS list, as provided by EDR, and dated 05/26/2015 has revealed that there is 1 HAULERS site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH TAHOE REFUSE M</b> Facility ID: 1002883	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>

## EXECUTIVE SUMMARY

### **Local Lists of Hazardous waste / Contaminated Sites**

CDL: A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

A review of the CDL list, as provided by EDR, and dated 12/31/2014 has revealed that there are 2 CDL sites within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported Facility Id: 201207005	924 EMERALD BAY RD	ESE 1/4 - 1/2 (0.273 mi.)	F57	115
Not reported Facility Id: 199809135	916 SECRET HARBOR	ENE 1/4 - 1/2 (0.328 mi.)	75	123

### **Local Lists of Registered Storage Tanks**

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 29 SWEEPS UST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH LAKE TAHOE</b> Status: A Tank Status: A Comp Number: 21169	<b>1920 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.423 mi.)</b>	<b>M117</b>	<b>158</b>
<b>SOUTH SHORE MOTORS</b> Comp Number: 65125	<b>1875 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.451 mi.)</b>	<b>P154</b>	<b>226</b>
<b>SHEHADI MOTORS, INC</b> Comp Number: 8908	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
CHEVRON #90672 Status: A Tank Status: A Comp Number: 61875	1069 EMERALD BAY RD	SE 1/2 - 1 (0.603 mi.)	AB252	347
<b>T-SHIRT OUTLET</b> Comp Number: 58507	<b>1101 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH262</b>	<b>356</b>
<b>U-HAUL OF TAHOE</b> Status: A Tank Status: A Comp Number: 58912	<b>1105 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.656 mi.)</b>	<b>AH263</b>	<b>363</b>
<b>AMERICAN #1</b> Status: A Tank Status: A Comp Number: 205	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH273</b>	<b>373</b>
<b>CITY CORPORATION YAR</b>	<b>1700 D ST</b>	<b>S 1/2 - 1 (0.725 mi.)</b>	<b>AN287</b>	<b>432</b>



## EXECUTIVE SUMMARY

Status: A Tank Status: A Comp Number: 160				
<b>BARTON MEMORIAL HOSP</b>	<b>004TH &amp; SOUTH</b>	<b>ESE 1/2 - 1 (0.747 mi.)</b>	<b>AM295</b>	<b>443</b>
Status: A Tank Status: A Comp Number: 57				
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>PRIVATE PROPERTY</b>	<b>845 JAMES ST</b>	<b>ENE 0 - 1/8 (0.101 mi.)</b>	<b>11</b>	<b>19</b>
Comp Number: 883				
<b>MEEKS BAY RESORT</b>	<b>870 EMERAL BAY RD</b>	<b>ESE 1/8 - 1/4 (0.139 mi.)</b>	<b>C19</b>	<b>28</b>
Comp Number: 65214				
<b>BEACON SWISS MART</b>	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
Status: A Tank Status: A Comp Number: 303				
<b>PACIFIC BELL (TB-661)</b>	<b>DUNLAP &amp; ELOISE</b>	<b>ESE 1/4 - 1/2 (0.350 mi.)</b>	<b>I79</b>	<b>125</b>
Status: A Tank Status: A Comp Number: 23057				
<b>RUNNELS AUTOMOTIVE</b>	<b>986 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.404 mi.)</b>	<b>K95</b>	<b>138</b>
Status: A Tank Status: A Comp Number: 457				
<b>PACIFIC BELL</b>	<b>2090 DUNLAP ROAD</b>	<b>ESE 1/4 - 1/2 (0.406 mi.)</b>	<b>L99</b>	<b>143</b>
Comp Number: 193				
<b>CP NATURAL GAS</b>	<b>2071 DUNLAP</b>	<b>ESE 1/4 - 1/2 (0.410 mi.)</b>	<b>L103</b>	<b>146</b>
Comp Number: 2375				
<b>REDWOOD OIL CO</b>	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L137</b>	<b>196</b>
Status: A Tank Status: A Comp Number: 41030				
<b>SOUTH "Y" EXXON</b>	<b>1000 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.448 mi.)</b>	<b>K150</b>	<b>221</b>
Comp Number: 57652				
<b>TEXACO</b>	<b>2037 HIGHWAY 50 BOX</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>S157</b>	<b>231</b>
Comp Number: 7329				
<b>BI STATE PETROLEUM</b>	<b>2070 JAMES AVE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L162</b>	<b>236</b>
Status: A Tank Status: A Comp Number: 481				
<b>SOUTH TAHOE REFUSE M</b>	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>
Status: A Tank Status: A Comp Number: 15801 Comp Number: 126				
<b>SHELL OIL COMPANY</b>	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X192</b>	<b>282</b>
Comp Number: 159				
<b>SOUTH TAHOE SHELL SE</b>	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>

## EXECUTIVE SUMMARY

Status: A  
 Tank Status: A  
 Comp Number: 972

<b>CONSTRUCTION YARD</b> Comp Number: 60520	<b>2143 ELOISE AVE</b>	<b>E 1/2 - 1 (0.561 mi.)</b>	<b>AC229</b>	<b>321</b>
<b>SOUTH TAHOE BLOCK CO</b> Comp Number: 40484	<b>2112 LAKE TAHOE BLVD</b>	<b>ESE 1/2 - 1 (0.576 mi.)</b>	<b>AD238</b>	<b>327</b>
FRANK SUNKEL WAREHOU Comp Number: 54002	2141 JAMES ST	E 1/2 - 1 (0.586 mi.)	AC243	342
<b>ECHO PLUMBING SUPPLY</b> Comp Number: 51494	<b>2141 JAMES</b>	<b>E 1/2 - 1 (0.586 mi.)</b>	<b>AC244</b>	<b>342</b>
<b>CLARK PLUMMING/ SERV</b> Comp Number: 432	<b>2178 ELOISE</b>	<b>E 1/2 - 1 (0.627 mi.)</b>	<b>AG257</b>	<b>351</b>
<b>LUKINS BROTHERS WATE</b> Comp Number: 40445	<b>2031 WEST WY</b>	<b>WNW 1/2 - 1 (0.704 mi.)</b>	<b>AL281</b>	<b>425</b>

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 17 HIST UST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>KRAGEN AUTO #1654 (C)</b> Facility Id: 00000021169	<b>1920 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.423 mi.)</b>	<b>M119</b>	<b>159</b>
<b>SOUTH SHORE MOTORS</b> Facility Id: 00000065125	<b>1875 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.451 mi.)</b>	<b>P154</b>	<b>226</b>
<b>SHEHADI MOTORS, INC</b> Facility Id: 00000008908	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
<b>NATIONAL CAR RENTAL</b> Facility Id: 00000058507 Facility Id: 00000067209	<b>1101 EMERALD BAY ROA</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH261</b>	<b>355</b>
<b>U-HAUL OF TAHOE</b> Facility Id: 00000058912	<b>1105 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.656 mi.)</b>	<b>AH263</b>	<b>363</b>
PUBLIC WORKS EQUIPME Facility Id: 00000033101	1700 D ST	S 1/2 - 1 (0.725 mi.)	AN288	437
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MEEKS BAY RESORT Facility Id: 00000065214	870 EMERALD BAY RD	ESE 1/8 - 1/4 (0.139 mi.)	C18	26
PACIFIC BELL (TB-661 Facility Id: 00000023057	DUNLAP & ELOISE	ESE 1/4 - 1/2 (0.350 mi.)	I78	124
CP NATURAL GAS Facility Id: 00000002375	2071 DUNLAP DR	ESE 1/4 - 1/2 (0.409 mi.)	L102	145
SIERRA KEY-LOCK Facility Id: 00000041030	2060 ELOISE AVE	ESE 1/4 - 1/2 (0.433 mi.)	L136	195
SOUTH "Y" EXXON	1000 EMERALD BAY RD	SE 1/4 - 1/2 (0.448 mi.)	K151	224

## EXECUTIVE SUMMARY

Facility Id: 00000057652				
<b>SOUTH TAHOE REFUSE M</b>	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>
Facility Id: 00000015801				
CONSTRUCTION YARD	2143 ELOISE AVE	E 1/2 - 1 (0.561 mi.)	AC230	322
Facility Id: 00000060520				
SOUTH TAHOE BLOCK CO	2112 LAKE TAHOE BLVD	ESE 1/2 - 1 (0.576 mi.)	AD239	328
Facility Id: 00000040484				
FRANK SUNKEL WAREHOU	2141 JAMES AVE	E 1/2 - 1 (0.582 mi.)	AC240	328
Facility Id: 00000054002				
ECHO PLUMBING SUPPLY	2141 JAMES AVE	E 1/2 - 1 (0.582 mi.)	AC241	329
Facility Id: 00000051494				
MELVIN L. LUKINS & S	2031 WEST WAY	WNW 1/2 - 1 (0.704 mi.)	AL282	430
Facility Id: 00000040445				

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 22 CA FID UST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH LAKE TAHOE</b>	<b>1920 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.423 mi.)</b>	<b>M117</b>	<b>158</b>
Facility Id: 09000248 Status: A				
<b>SOUTH SHORE MOTORS</b>	<b>1875 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.451 mi.)</b>	<b>P154</b>	<b>226</b>
Facility Id: 09000511 Status: A				
<b>SHEHADI MOTORS, INC</b>	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
Facility Id: 09000196 Status: A				
<b>T-SHIRT OUTLET</b>	<b>1101 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH262</b>	<b>356</b>
Facility Id: 09000101 Status: A				
<b>U-HAUL OF TAHOE</b>	<b>1105 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.656 mi.)</b>	<b>AH263</b>	<b>363</b>
Facility Id: 09000485 Status: A				
<b>CITY CORPORATION YAR</b>	<b>1700 D ST</b>	<b>S 1/2 - 1 (0.725 mi.)</b>	<b>AN287</b>	<b>432</b>
Facility Id: 09000134 Status: A				
<b>BARTON MEMORIAL HOSP</b>	<b>004TH &amp; SOUTH</b>	<b>ESE 1/2 - 1 (0.747 mi.)</b>	<b>AM295</b>	<b>443</b>
Facility Id: 09000127 Status: A				
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>PRIVATE PROPERTY</b>	<b>845 JAMES ST</b>	<b>ENE 0 - 1/8 (0.101 mi.)</b>	<b>11</b>	<b>19</b>
Facility Id: 09000119 Status: I				
<b>MEEKS BAY RESORT</b>	<b>870 EMERAL BAY RD</b>	<b>ESE 1/8 - 1/4 (0.139 mi.)</b>	<b>C19</b>	<b>28</b>

## EXECUTIVE SUMMARY

Facility Id: 09000514 Status: A				
<b>BEACON SWISS MART</b> Facility Id: 09000142 Status: A	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
<b>PACIFIC BELL (TB-661)</b> Facility Id: 09000267 Status: A	<b>DUNLAP &amp; ELOISE</b>	<b>ESE 1/4 - 1/2 (0.350 mi.)</b>	<b>I79</b>	<b>125</b>
<b>RUNNELS AUTOMOTIVE</b> Facility Id: 07001187 Status: A	<b>986 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.404 mi.)</b>	<b>K95</b>	<b>138</b>
<b>PACIFIC BELL</b> Facility Id: 09000135 Status: A	<b>2090 DUNLAP ROAD</b>	<b>ESE 1/4 - 1/2 (0.406 mi.)</b>	<b>L99</b>	<b>143</b>
<b>CP NATURAL GAS</b> Facility Id: 09000179 Status: A	<b>2071 DUNLAP</b>	<b>ESE 1/4 - 1/2 (0.410 mi.)</b>	<b>L103</b>	<b>146</b>
<b>REDWOOD OIL CO</b> Facility Id: 09000358 Status: A	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L137</b>	<b>196</b>
<b>SOUTH "Y" EXXON</b> Facility Id: 09000095 Status: A	<b>1000 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.448 mi.)</b>	<b>K150</b>	<b>221</b>
<b>SOUTH TAHOE REFUSE M</b> Facility Id: 09000229 Status: A	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>
<b>CONSTRUCTION YARD</b> Facility Id: 09000496 Status: A	<b>2143 ELOISE AVE</b>	<b>E 1/2 - 1 (0.561 mi.)</b>	<b>AC229</b>	<b>321</b>
<b>SOUTH TAHOE BLOCK CO</b> Facility Id: 09000354 Status: A	<b>2112 LAKE TAHOE BLVD</b>	<b>ESE 1/2 - 1 (0.576 mi.)</b>	<b>AD238</b>	<b>327</b>
<b>ECHO PLUMBING SUPPLY</b> Facility Id: 09000440 Status: A	<b>2141 JAMES</b>	<b>E 1/2 - 1 (0.586 mi.)</b>	<b>AC244</b>	<b>342</b>
<b>CLARK PLUMMING/ SERV</b> Facility Id: 09000149 Status: A	<b>2178 ELOISE</b>	<b>E 1/2 - 1 (0.627 mi.)</b>	<b>AG257</b>	<b>351</b>
<b>LUKINS BROTHERS WATE</b> Facility Id: 09000353 Status: A	<b>2031 WEST WY</b>	<b>WNW 1/2 - 1 (0.704 mi.)</b>	<b>AL281</b>	<b>425</b>

### **Records of Emergency Release Reports**

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 06/15/2015 has revealed that there are 4

## EXECUTIVE SUMMARY

CHMIRS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported OES Incident Number: 09666	735 SR 89	NW 1/8 - 1/4 (0.185 mi.)	28	39

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported OES Incident Number: 540	913 SR 89	ESE 1/8 - 1/4 (0.241 mi.)	F30	40
Not reported OES Incident Number: 014703 Date Completed: 24-DEC-90	913 EMERALD BAY ROAD	ESE 1/8 - 1/4 (0.241 mi.)	F31	42
<b>TJ MAXX 1283</b> OES Incident Number: 0-1590	<b>2015 LAKE TAHOE BLVD</b>	<b>ESE 1/4 - 1/2 (0.460 mi.)</b>	<b>S171</b>	<b>243</b>

LDS: The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

A review of the LDS list, as provided by EDR, and dated 06/15/2015 has revealed that there is 1 LDS site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH TAHOE REFUSE M</b> Global Id: L10004566096 Status: Open	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>

### **Other Ascertainable Records**

ICIS: The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

A review of the ICIS list, as provided by EDR, and dated 01/23/2015 has revealed that there is 1 ICIS site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>WESTERN ENERGETIX</b>	<b>2070 JAMES AVE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L167</b>	<b>241</b>

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 01/18/2015 has revealed that there are 18

## EXECUTIVE SUMMARY

FINDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ROCKWATER APTS.		NW 0 - 1/8 (0.081 mi.)	B9	19
TAHOE MONTESSORI HOU	848 GLORENE AVE	S 0 - 1/8 (0.099 mi.)	10	19
<b>PACIFIC BELL</b>	<b>1900 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.439 mi.)</b>	<b>P142</b>	<b>200</b>
<b>SHEHADI MOTORS, INC</b>	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
<b>SHEHADI MOTORS, INC</b>	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U176</b>	<b>253</b>
KMART (GARDEN SHOP)	1030 TATA LANE	SSE 1/4 - 1/2 (0.492 mi.)	W189	272
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LAKE TAHOE BASIN	870 EMERALD BAY RD	ESE 1/8 - 1/4 (0.140 mi.)	C20	30
<b>PRECISION AUTO BODY</b>	<b>867 ELOISE AVE</b>	<b>ENE 1/8 - 1/4 (0.158 mi.)</b>	<b>D24</b>	<b>35</b>
<b>SOUTH SIDE AUTO BODY</b>	<b>920 ELOISE AVE</b>	<b>E 1/4 - 1/2 (0.254 mi.)</b>	<b>E46</b>	<b>99</b>
<b>FIVE STAR AUTO MIKES</b>	<b>2119 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.430 mi.)</b>	<b>O122</b>	<b>162</b>
PACIFIC BELL	2075 ELOISE	ESE 1/4 - 1/2 (0.433 mi.)	L130	171
AT&T CALIFORNIA - TB	2075 ELOISE ST	ESE 1/4 - 1/2 (0.433 mi.)	L131	172
16060 RB6T	2060 ELOISE AVE	ESE 1/4 - 1/2 (0.433 mi.)	L133	172
<b>FIVE STAR TEXACO</b>	<b>2037 HWY 50</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>S156</b>	<b>230</b>
CHEVRON 1001382	2070 JAMES AVE	ESE 1/4 - 1/2 (0.455 mi.)	L160	235
<b>WESTERN ENERGETIX</b>	<b>2070 JAMES AVE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L167</b>	<b>241</b>
SOUTH TAHOE REFUSE C	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V182	268
EQUILON ENTERPRISES	1020 EMERALD BAY RD	SE 1/4 - 1/2 (0.498 mi.)	X193	283

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 06/24/2015 has revealed that there are 10 Cortese sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>USA SERVICE STATION</b>	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH272</b>	<b>372</b>
<b>USA GAS STATION</b>	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH274</b>	<b>375</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BEACON SWISS MART</b>	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
<b>FIVE STAR TEXACO</b>	<b>2037 LAKE TAHOE BLVD</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>S159</b>	<b>233</b>
<b>SOUTH TAHOE SHELL SE</b>	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>
<b>TAHOE KEYS POA</b>	<b>2100 TEXAS AVENUE</b>	<b>N 1/2 - 1 (0.586 mi.)</b>	<b>242</b>	<b>329</b>
<b>LUKINS BROTHERS WATE</b>	<b>2031 WEST WY</b>	<b>WNW 1/2 - 1 (0.704 mi.)</b>	<b>AL281</b>	<b>425</b>
<b>LITTLE TRUCKEE MOBIL</b>	<b>2333 ELOISE STREET</b>	<b>ENE 1/2 - 1 (0.848 mi.)</b>	<b>301</b>	<b>455</b>
<b>BEACON STATION NO 68</b>	<b>2304 LAKE TAHOE BLVD</b>	<b>E 1/2 - 1 (0.906 mi.)</b>	<b>AQ305</b>	<b>462</b>
<b>EDS AUTO BODY</b>	<b>2314 LAKE TAHOE BLVD</b>	<b>ENE 1/2 - 1 (0.938 mi.)</b>	<b>AQ310</b>	<b>489</b>

CUPA Listings: A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 105 CUPA Listings

## EXECUTIVE SUMMARY

sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
DAVID EDGE , LAC Status: Inactive, non-billable	821 ROGER AVE	S 0 - 1/8 (0.039 mi.)	A4	9
<b>ROCKWATER APTS.</b> Status: Inactive, non-billable	<b>787 EMERALD BAY RD</b>	<b>NW 0 - 1/8 (0.072 mi.)</b>	<b>B5</b>	<b>10</b>
LAKESIDE NAPA AUTO P Status: Inactive, non-billable	1935 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.413 mi.)	M107	150
<b>SCOTTY'S HARDWARE</b> Status: Active, billable Status: Active, exempt from billing	<b>1931 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.415 mi.)</b>	<b>M109</b>	<b>151</b>
<b>KRAGEN AUTO #1654 (C</b> Status: Inactive, non-billable	<b>1920 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.423 mi.)</b>	<b>M119</b>	<b>159</b>
<b>DBA LAKE TAHOE AUTO</b> Status: Inactive, non-billable Status: Active, billable	<b>1901 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.432 mi.)</b>	<b>P123</b>	<b>164</b>
<b>TERRY LIBBON MOTORS</b> Status: Inactive, non-billable	<b>1901 LAKE TAHOE BOUL</b>	<b>SSE 1/4 - 1/2 (0.432 mi.)</b>	<b>P129</b>	<b>170</b>
<b>SOUTH SHORE MOTORS</b> Status: Inactive, non-billable	<b>1875 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.451 mi.)</b>	<b>P154</b>	<b>226</b>
<b>SHEHADI MOTORS, INC</b> Status: Inactive, non-billable Status: Active, billable Status: Active, exempt from billing	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
<b>KMART #9153/GARDEN S</b> Status: Active, billable Status: Active, exempt from billing	<b>1030 TATA LN</b>	<b>SSE 1/4 - 1/2 (0.492 mi.)</b>	<b>W190</b>	<b>273</b>
STPUD GARDNER MOUNTA Status: Active, billable	589 GARDNER ST	WSW 1/2 - 1 (0.597 mi.)	248	345
<b>PIER 1IMPORTS #1483</b> Status: Inactive, non-billable	<b>1069 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.602 mi.)</b>	<b>AB251</b>	<b>346</b>
SOUTH TAHOE HIGH SCH Status: Active, billable Status: Active, exempt from billing Status: Inactive, non-billable	1735 LAKE TAHOE BLVD	SSW 1/2 - 1 (0.608 mi.)	254	349
<b>T-SHIRT OUTLET</b> Status: Inactive, non-billable	<b>1101 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.652 mi.)</b>	<b>AH262</b>	<b>356</b>
<b>U-HAUL OF TAHOE</b> Status: Active, billable Status: Inactive, non-billable	<b>1105 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.656 mi.)</b>	<b>AH263</b>	<b>363</b>
<b>TAHOE VERDE MOBILE H</b> Status: Inactive, non-billable	<b>1080 JULIE LN</b>	<b>S 1/2 - 1 (0.657 mi.)</b>	<b>AI264</b>	<b>368</b>
<b>AMERICAN #1</b> Status: Active, billable Status: Active, exempt from billing	<b>1140 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.688 mi.)</b>	<b>AH273</b>	<b>373</b>
<b>EXPERT AUTO SERVICE</b> Status: Active, billable Status: Active, exempt from billing	<b>1144 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.691 mi.)</b>	<b>AH276</b>	<b>421</b>

## EXECUTIVE SUMMARY

Status: Inactive, non-billable				
<b>EMERALD BAY CENTER F</b>	<b>1154 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.700 mi.)</b>	<b>AH280</b>	<b>424</b>
Status: Inactive, non-billable				
MICHAEL SULLIVAN , M	2101 SOUTH AVE	ESE 1/2 - 1 (0.716 mi.)	AM283	431
Status: Inactive, non-billable				
<b>CITY CORPORATION YAR</b>	<b>1700 D ST</b>	<b>S 1/2 - 1 (0.725 mi.)</b>	<b>AN287</b>	<b>432</b>
Status: Inactive, non-billable				
CITY OF SLT D ST	1700 D ST	S 1/2 - 1 (0.725 mi.)	AN290	441
Status: Active, billable				
Status: Active, exempt from billing				
Status: Inactive, non-billable				
ALPINE FAMILY PRACTI	1108 4TH ST	ESE 1/2 - 1 (0.738 mi.)	291	442
Status: Inactive, non-billable				
LAB CORP	2133 SOUTH AVE	ESE 1/2 - 1 (0.738 mi.)	AM293	442
Status: Inactive, non-billable				
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
REDWOOD PRINTING	854 EMERALD BAY RD S	ESE 0 - 1/8 (0.102 mi.)	C13	23
Status: Active, billable				
LAKE MONSTER TATTOO	868 EMERALD BAY RD A	ESE 1/8 - 1/4 (0.135 mi.)	C16	24
Status: Inactive, non-billable				
PRECISION AUTO BODY	867 ELOISE AVE #C	ENE 1/8 - 1/4 (0.158 mi.)	D26	38
Status: Inactive, non-billable				
MCFARLANE MORTUARY	887 EMERALD BAY RD	ESE 1/8 - 1/4 (0.178 mi.)	27	39
Status: Inactive, non-billable				
<b>BEACON SWISS MART</b>	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
Status: Active, billable				
Status: Inactive, non-billable				
Status: Active, exempt from billing				
SUNSHINE YELLOW CAB	912 ELOISE AVE	E 1/8 - 1/4 (0.241 mi.)	E41	97
Status: Active, billable				
Status: Active, exempt from billing				
STRUVE AUTOMOTIVE	927 ELOISE AVE	E 1/4 - 1/2 (0.255 mi.)	E48	104
Status: Active, billable				
Status: Active, exempt from billing				
Status: Inactive, non-billable				
ALPINE ANIMAL HOSPIT	921 EMERALD BAY RD	ESE 1/4 - 1/2 (0.263 mi.)	F50	106
Status: Inactive, non-billable				
CALPECO MAIN OFFICE	933 ELOISE AVE	E 1/4 - 1/2 (0.265 mi.)	E52	108
Status: Active, billable				
Status: Active, exempt from billing				
<b>CHARTER COMMUNICATIO</b>	<b>924 EMERALD BAY</b>	<b>ESE 1/4 - 1/2 (0.273 mi.)</b>	<b>F56</b>	<b>110</b>
Status: Inactive, non-billable				
HIGHER GROUND AUTOWO	2042 5TH ST UNIT 10	ESE 1/4 - 1/2 (0.274 mi.)	E60	117
Status: Active, exempt from billing				
PERFORMANCE SLEDS (H	2042 FIFTH ST #8	ESE 1/4 - 1/2 (0.274 mi.)	E61	117
Status: Inactive, non-billable				
CROW'S AUTO CARE (HM	2042 FIFTH ST STE 6	ESE 1/4 - 1/2 (0.274 mi.)	E63	118



## EXECUTIVE SUMMARY

Status: Inactive, non-billable				
ABBEY MOTORS (HM) CL Status: Inactive, non-billable	2042 FIFTH ST #11	ESE 1/4 - 1/2 (0.274 mi.)	E64	118
<b>SOUTH SIDE AUTO BODY</b> Status: Active, billable Status: Active, exempt from billing	<b>934 ELOISE AVE</b>	<b>E 1/4 - 1/2 (0.276 mi.)</b>	<b>G66</b>	<b>119</b>
VANEKS ENGINE SPECIA Status: Inactive, non-billable	2035 FIFTH STREET	ESE 1/4 - 1/2 (0.277 mi.)	E68	121
MATHISEN AUTOMOTIVE Status: Inactive, non-billable	944 ELOISE AVE	ESE 1/4 - 1/2 (0.297 mi.)	G69	121
OLSEN PAVING (HM) Status: Inactive, non-billable	950 ELOISE AVE	ESE 1/4 - 1/2 (0.308 mi.)	G72	122
<b>HURZEL PROPERTIES -</b> Status: Inactive, non-billable	<b>949 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.328 mi.)</b>	<b>H77</b>	<b>124</b>
SCREAMERS ICE CREAM Status: Inactive, non-billable	960 EMERALD BAY RD	SE 1/4 - 1/2 (0.355 mi.)	H82	127
<b>MYERS MARINE</b> Status: Inactive, non-billable	<b>2140 DUNLAP ST</b>	<b>E 1/4 - 1/2 (0.386 mi.)</b>	<b>J85</b>	<b>131</b>
SOUTH TAHOE REFUSE Status: Inactive, non-billable	2132 DUNLAP DR	E 1/4 - 1/2 (0.386 mi.)	J89	136
TAHOE PRINTING Status: Active, billable Status: Active, exempt from billing	2116 DUNLAP DR	E 1/4 - 1/2 (0.390 mi.)	J90	136
SIERRA ALTERNATORS & Status: Active, billable	2108 DUNLAP DR UNIT	ESE 1/4 - 1/2 (0.396 mi.)	I91	137
ART'S TRANSMISSION Status: Active, billable Status: Active, exempt from billing	2105 RUTH AVE	E 1/4 - 1/2 (0.400 mi.)	J92	137
<b>RUNNELS AUTOMOTIVE</b> Status: Inactive, non-billable	<b>986 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.404 mi.)</b>	<b>K95</b>	<b>138</b>
<b>PACIFIC BELL</b> Status: Inactive, non-billable	<b>2090 DUNLAP ROAD</b>	<b>ESE 1/4 - 1/2 (0.406 mi.)</b>	<b>L99</b>	<b>143</b>
I CAN FIX THAT! Status: Inactive, non-billable	2199 DUNLAP DR	ENE 1/4 - 1/2 (0.406 mi.)	100	144
AVISTA UTILITIES (HM) Status: Inactive, non-billable	2071 DUNLAP	ESE 1/4 - 1/2 (0.409 mi.)	L101	145
<b>MARINE PERFORMANCE</b> Status: Inactive, non-billable	<b>2050 DUNLAP ST</b>	<b>ESE 1/4 - 1/2 (0.416 mi.)</b>	<b>L111</b>	<b>152</b>
<b>BIG O TIRES</b> Status: Inactive, non-billable	<b>1961 LAKE TAHOE BOUL</b>	<b>SE 1/4 - 1/2 (0.416 mi.)</b>	<b>N114</b>	<b>153</b>
SELLERS BUILDING Status: Inactive, non-billable	2048 DUNLAP DR	ESE 1/4 - 1/2 (0.417 mi.)	L116	157
FIVE STAR AUTOMOTIVE Status: Active, billable Status: Active, exempt from billing	2119 RUTH AVE	E 1/4 - 1/2 (0.430 mi.)	O121	162
AT&T CALIFORNIA - TB Status: Active, billable	2075 ELOISE ST	ESE 1/4 - 1/2 (0.433 mi.)	L132	172

## EXECUTIVE SUMMARY

Status: Inactive, non-billable Status: Active, exempt from billing				
<b>REDWOOD OIL CO</b> Status: Inactive, non-billable	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L135</b>	<b>173</b>
<b>BERRY-HINCKLEY INDUS</b> Status: Active, billable Status: Inactive, non-billable Status: Active, exempt from billing	<b>2070 JAMES AVENUE</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>L164</b>	<b>237</b>
AT&T MOBILITY - JAME Status: Active, billable Status: Inactive, non-billable	2082 ELOISE AVE	E 1/4 - 1/2 (0.459 mi.)	T168	242
<b>TJ MAXX 1283</b> Status: Active, billable	<b>2015 LAKE TAHOE BLVD</b>	<b>ESE 1/4 - 1/2 (0.460 mi.)</b>	<b>S171</b>	<b>243</b>
RON FULLER CONSTRUCT Status: Active, billable Status: Active, exempt from billing	2092 ELOISE AVE	E 1/4 - 1/2 (0.474 mi.)	T177	255
<b>SOUTH TAHOE REFUSE M</b> Status: Active, billable Status: Active, exempt from billing Status: Inactive, non-billable	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>
STAPLES OFFICE SUPPL Status: Inactive, non-billable	2061 LAKE TAHOE BLVD	ESE 1/4 - 1/2 (0.484 mi.)	S186	271
<b>SOUTH TAHOE SHELL SE</b> Status: Inactive, non-billable Status: Active, billable Status: Active, exempt from billing	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>
SOUTH Y CENTER Status: Inactive, non-billable	1022 EMERALD BAY RD	SE 1/4 - 1/2 (0.498 mi.)	X202	307
LAKE TAHOE LAUNDRY W Status: Active, billable	1024 EMERALD BAY RD	SE 1/2 - 1 (0.502 mi.)	X203	307
ALPINE METALS Status: Active, billable Status: Inactive, non-billable		E 1/2 - 1 (0.511 mi.)	V205	308
TRINITY LANDSCAPING Status: Inactive, non-billable	2118 ELOISE AVE	E 1/2 - 1 (0.520 mi.)	AA208	309
BI STATE PROPANE Status: Active, billable	2070 JAMES AVE STE A	E 1/2 - 1 (0.526 mi.)	209	310
RALEY'S SUPERMARKET Status: Active, billable Status: Active, exempt from billing	1040 EMERALD BAY RD	SE 1/2 - 1 (0.533 mi.)	X210	310
ADVANCED FAMILY FOOT Status: Inactive, non-billable	2074 LAKE TAHOE SUIT	ESE 1/2 - 1 (0.534 mi.)	Y211	310
GROELZ , ROSS DDS Status: Inactive, non-billable	2074 LAKE TAHOE BLVD	ESE 1/2 - 1 (0.534 mi.)	Y212	311
LASTING BEAUTY Status: Inactive, non-billable	2083 JAMES AVE	E 1/2 - 1 (0.535 mi.)	AA213	311
CALIFORNIA TAHOE CON Status: Inactive, non-billable	931 3RD ST	E 1/2 - 1 (0.536 mi.)	Z214	311
CROW'S AUTO CARE	931 THIRD ST	E 1/2 - 1 (0.536 mi.)	Z215	311

## EXECUTIVE SUMMARY

Status: Active, billable				
Status: Active, exempt from billing				
LORRAINE BAKERY SITE Status: Inactive, non-billable	2087 JAMES STREET	E 1/2 - 1 (0.538 mi.)	AA217	312
TAHOE TOURS (HM) Status: Inactive, non-billable	2133 ELOISE AVE	E 1/2 - 1 (0.538 mi.)	AA218	312
BARTON MEMORIAL HOSP Status: Inactive, non-billable	2092 LAKE TAHOE BLVD	ESE 1/2 - 1 (0.553 mi.)	Y220	315
DIAMOND WOODCRAFT Status: Active, billable	2197 RUTH AVE UNIT 1	ENE 1/2 - 1 (0.554 mi.)	Z221	315
SCOTT'S CUSTOM MACHI Status: Inactive, non-billable	2197 RUTH AVE #4	ENE 1/2 - 1 (0.554 mi.)	Z222	315
CVS PHARMACY #9713 Status: Active, billable Status: Inactive, non-billable Status: Active, exempt from billing	1043 EMERALD BAY RD	SE 1/2 - 1 (0.559 mi.)	AB224	317
CREATIVE FABRICATION Status: Inactive, non-billable	2140 ELOISE AVE 1	E 1/2 - 1 (0.561 mi.)	AC226	319
TAHOE TEST TUNE (HM) Status: Active, billable Status: Active, exempt from billing Status: Inactive, non-billable	2143 ELOISE AVE 2	E 1/2 - 1 (0.561 mi.)	AC227	319
PRAXAIR (SLT) Status: Active, billable	2117 JAMES AVE	E 1/2 - 1 (0.562 mi.)	AA231	322
VERIZON WIRELESS SOU Status: Active, billable	1054 EMERALD BAY RD	SE 1/2 - 1 (0.563 mi.)	AB233	324
EMERALD BAY TOWING Status: Active, billable Status: Active, exempt from billing	948 THIRD ST	E 1/2 - 1 (0.564 mi.)	AC234	324
KEN'S TIRE CENTER Status: Active, billable Status: Active, exempt from billing	2104 LAKE TAHOE BLVD	ESE 1/2 - 1 (0.566 mi.)	AD236	325
<b>KMART #9153</b> Status: Active, billable Status: Active, exempt from billing	<b>1056 EMERALD BAY RD</b>	<b>SE 1/2 - 1 (0.567 mi.)</b>	<b>AB237</b>	<b>325</b>
<b>TAHOE KEYS POA</b> Status: Inactive, non-billable	<b>2100 TEXAS AVENUE</b>	<b>N 1/2 - 1 (0.586 mi.)</b>	<b>242</b>	<b>329</b>
AXELSON IRON SHOP Status: Active, billable Status: Active, exempt from billing	2184 RUTH AVE	ENE 1/2 - 1 (0.591 mi.)	AE245	343
NORM'S AUTO REPAIR Status: Active, billable Status: Active, exempt from billing	2186 RUTH AVE	ENE 1/2 - 1 (0.596 mi.)	AE247	345
TAHOE URGENT CARE Status: Inactive, non-billable	2130 LAKE TAHOE BLVD	E 1/2 - 1 (0.598 mi.)	AF249	345
TAHOE POOL SERVICE Status: Active, billable Status: Active, exempt from billing	971 THIRD ST	E 1/2 - 1 (0.605 mi.)	AC253	349
GEORGE'S PERFORMANCE	2176 ELOISE AVE	E 1/2 - 1 (0.624 mi.)	AG256	350

## EXECUTIVE SUMMARY

Status: Inactive, non-billable				
ALPINE SMITH , INC.	2120 BARTON AVE	ESE 1/2 - 1 (0.634 mi.)	AF258	351
Status: Inactive, non-billable				
<b>CAMPUS CRUSADE FOR C</b>	<b>531 EMERALD BAY RD</b>	<b>WNW 1/2 - 1 (0.643 mi.)</b>	<b>259</b>	<b>352</b>
Status: Inactive, non-billable				
ALPINE SMITH	2193 ELOISE AVE	E 1/2 - 1 (0.647 mi.)	AG260	355
Status: Active, billable				
Status: Active, exempt from billing				
EASTERN SIERRA HISTO	2176 LAKE TAHOE BLVD	E 1/2 - 1 (0.661 mi.)	AJ266	369
Status: Inactive, non-billable				
PARK , ERIC SONG, DD	2180 LAKE TAHOE BLVD	E 1/2 - 1 (0.669 mi.)	AJ269	371
Status: Inactive, non-billable				
SOUTH SHORE TRANSMIS	2226 ELOISE D	E 1/2 - 1 (0.700 mi.)	AK279	423
Status: Inactive, non-billable				
KAUFMAN, J. & CERCEO	1077 4TH ST	ESE 1/2 - 1 (0.717 mi.)	284	431
Status: Inactive, non-billable				
KIMBALL CHATFIELD ,	2241 JAMES AVE	E 1/2 - 1 (0.738 mi.)	AK292	442
Status: Inactive, non-billable				
ROAD RASH CAFE	2218 LAKE TAHOE BLVD	E 1/2 - 1 (0.747 mi.)	294	442
Status: Inactive, non-billable				

ENF: A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

A review of the ENF list, as provided by EDR, and dated 08/24/2015 has revealed that there are 14 ENF sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>ROCKWATER APTS.</b>	<b>787 EMERALD BAY RD</b>	<b>NW 0 - 1/8 (0.072 mi.)</b>	<b>B5</b>	<b>10</b>
Status: Withdrawn				
Status: Never Active				
Facility Id: 201496				
<b>EMERALD PINES RESORT</b>	<b>661-681 EMERALD BAY</b>	<b>NW 1/4 - 1/2 (0.367 mi.)</b>	<b>83</b>	<b>128</b>
Status: Withdrawn				
Status: Historical				
Facility Id: 222685				
<b>KRAGEN AUTO #1654 (C</b>	<b>1920 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.423 mi.)</b>	<b>M119</b>	<b>159</b>
Status: Active				
Status: Never Active				
Facility Id: 235250				
<b>TERRY LIBBON MOTORS</b>	<b>1901 LAKE TAHOE BOUL</b>	<b>SSE 1/4 - 1/2 (0.432 mi.)</b>	<b>P129</b>	<b>170</b>
Status: Historical				
Status: Never Active				
Facility Id: 208553				
TROUT CREEK RESTORAT	1900 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.439 mi.)	P143	201
Status: Historical				
Status: Historical				
Facility Id: 266537				
MUN STRMWTR DISCHARG	1900 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.439 mi.)	P145	205

## EXECUTIVE SUMMARY

Status: Historical Status: Historical Facility Id: 241870				
TAHOE VERDE TRAILER Status: Historical Status: Withdrawn Status: Never Active Facility Id: 262845	LAKE TAHOE BLVD & JU	S 1/4 - 1/2 (0.495 mi.)	U191	274
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>BEL PAC ENTERPRISES</b> Status: Historical Status: Historical Facility Id: 209117	<b>854-868 EMERALD BAY</b>	<b>ESE 0 - 1/8 (0.102 mi.)</b>	<b>C12</b>	<b>20</b>
<b>BEACON SWISS MART</b> Status: Active Status: Historical Status: Withdrawn Status: Historical Status: Never Active Facility Id: 259822	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
<b>CHARTER COMMUNICATIO</b> Status: Historical Facility Id: 214090	<b>924 EMERALD BAY</b>	<b>ESE 1/4 - 1/2 (0.273 mi.)</b>	<b>F56</b>	<b>110</b>
<b>BIG O TIRES</b> Status: Active Status: Historical Facility Id: 209475	<b>1961 LAKE TAHOE BOUL</b>	<b>SE 1/4 - 1/2 (0.416 mi.)</b>	<b>N114</b>	<b>153</b>
<b>REDWOOD OIL CO</b> Status: Active Status: Historical Status: Never Active Facility Id: 252249	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L135</b>	<b>173</b>
<b>FIVE STAR TEXACO</b> Status: Active Status: Never Active Facility Id: 224583	<b>2037 LAKE TAHOE BLVD</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>S159</b>	<b>233</b>
<b>SOUTH TAHOE SHELL SE</b> Status: Withdrawn Status: Active Status: Never Active Facility Id: 257903	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2013 has revealed that there are 41

## EXECUTIVE SUMMARY

HAZNET sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TED'S FIX-IT SHOP GEPaid: CAL000041296	807 ROGER AVE	WSW 0 - 1/8 (0.036 mi.)	A3	8
PAMELA POLOMSKI GEPaid: CAC002755913	855 CLEMENT ST	SSW 1/8 - 1/4 (0.248 mi.)	44	99
LAKESIDE AUTOMOTIVE GEPaid: CAL000037672	1935 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.413 mi.)	M106	149
<b>SCOTTY'S HARDWARE</b> GEPaid: CAL000250398	<b>1931 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.415 mi.)</b>	<b>M109</b>	<b>151</b>
<b>DBA LAKE TAHOE AUTO</b> GEPaid: CAL000212672	<b>1901 LAKE TAHOE BLVD</b>	<b>SSE 1/4 - 1/2 (0.432 mi.)</b>	<b>P123</b>	<b>164</b>
LES SCHWAB TIRE CENT GEPaid: CAL000299020	1901 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.432 mi.)	P125	165
BILL WINKS MOTOR SAL GEPaid: CAL000022513	1901 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.432 mi.)	P127	168
BAKER AUTOMOTIVE GEPaid: CAL000172700	1901 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.432 mi.)	P128	169
SOUTH SHORE MOTORS, GEPaid: CAD045995941	1875 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.451 mi.)	P153	225
LUMBER CITY CORP DBA GEPaid: CAL000368217	1875 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.451 mi.)	P155	228
<b>SHEHADI MOTORS, INC</b> GEPaid: CAD981445836	<b>1855 LAKE TAHOE BLVD</b>	<b>S 1/4 - 1/2 (0.469 mi.)</b>	<b>U174</b>	<b>247</b>
CARDINALE AUTOMOTIVE GEPaid: CAL000314606	1855 LAKE TAHOE BLVD	S 1/4 - 1/2 (0.469 mi.)	U175	252
<b>KMART #9153/GARDEN S</b> GEPaid: CAL000333142	<b>1030 TATA LN</b>	<b>SSE 1/4 - 1/2 (0.492 mi.)</b>	<b>W190</b>	<b>273</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KC'S AUTOMOTIVE GEPaid: CAL000308716	867 ELOISE AVE STE C	ENE 1/8 - 1/4 (0.158 mi.)	D21	31
PRECISION AUTO BODY GEPaid: CAL000168368	867 ELOISE AVE	ENE 1/8 - 1/4 (0.158 mi.)	D22	32
PRECISION AUTO BODY GEPaid: CAD981689268	867 ELOISE AVE	ENE 1/8 - 1/4 (0.158 mi.)	D25	36
BEACON SWISS MART GEPaid: CAC001266640	913 EMERALD BAY AVE	ESE 1/8 - 1/4 (0.241 mi.)	F33	43
SUNSHINE TAXI INC GEPaid: CAL000240368	912 ELOISE AVE	E 1/8 - 1/4 (0.241 mi.)	E40	95
<b>SOUTH SIDE AUTO BODY</b> GEPaid: CAD981686041	<b>920 ELOISE AVE</b>	<b>E 1/4 - 1/2 (0.254 mi.)</b>	<b>E46</b>	<b>99</b>
STRUVE AUTOMOTIVE GEPaid: CAL000312895	927 ELOISE AVE	E 1/4 - 1/2 (0.255 mi.)	E47	103
SIERRA PACIFIC POWER GEPaid: CAL000245067	933 ELOISE AVE	E 1/4 - 1/2 (0.265 mi.)	E51	106
CALPECO SOUTH LAKE T	933 ELOISE AVE	E 1/4 - 1/2 (0.265 mi.)	E53	108



## EXECUTIVE SUMMARY

GEPaid: CAL000361009				
COLDWELL BANKER GEPaid: CAC001065368	924 EMERALD BAY RD	ESE 1/4 - 1/2 (0.273 mi.)	F58	116
GREG COLE GEPaid: CAC002718479	2394 TAHOE VISTA DR	NNE 1/4 - 1/2 (0.312 mi.)	73	122
THOR ALLEN STENRUD GEPaid: CAC002620570	960 EMERALD BAY RD	SE 1/4 - 1/2 (0.355 mi.)	H81	127
SIERRA PACIFIC POWER GEPaid: CAD980676811	2129 DUNLAP DR	E 1/4 - 1/2 (0.385 mi.)	J84	130
SOUTH SIDE AUTO BODY GEPaid: CAL000061870	2132 DUNLAP DR	E 1/4 - 1/2 (0.386 mi.)	J88	134
RUNNELS AUTOMOTIVE GEPaid: CAL000011126	986 EMERALD BAY RD	SE 1/4 - 1/2 (0.404 mi.)	K98	143
PACIFIC BELL TELEPHO GEPaid: CAT080024516	2075 ELOISE	ESE 1/4 - 1/2 (0.413 mi.)	L104	146
<b>MARINE PERFORMANCE</b> GEPaid: CAC000876256	<b>2050 DUNLAP ST</b>	<b>ESE 1/4 - 1/2 (0.416 mi.)</b>	<b>L111</b>	<b>152</b>
BIG O TIRE STORE #65 GEPaid: CAL000031474	1961 LAKE TAHOE BLVD	SE 1/4 - 1/2 (0.416 mi.)	N113	153
REDWOOD OIL CO GEPaid: CAC001056440	2060 ELOISE	ESE 1/4 - 1/2 (0.433 mi.)	L134	173
REDWOOD OIL CO GEPaid: CAC001109928	2060 ELOISE ST	ESE 1/4 - 1/2 (0.433 mi.)	L138	197
LAKE TAHOE USD-TAHOE GEPaid: CAL000080398	943 TAHOE ISLAND DR	NE 1/4 - 1/2 (0.445 mi.)	R148	221
EUGENE GARFINKLE GEPaid: CAC002680988	2011 LAKE TAHOE BLVD	ESE 1/4 - 1/2 (0.459 mi.)	S169	243
LAKE TAHOE UNIFIED S GEPaid: CAC001339776	943 TAHOE ISLAND	ENE 1/4 - 1/2 (0.467 mi.)	R172	245
SOUTH TAHOE REFUSE T GEPaid: CAC002644943	2141 RUTH AVE	E 1/4 - 1/2 (0.477 mi.)	V178	255
SOUTH TAHOE REFUSE C GEPaid: CAH111000472	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V180	265
EL DORADO CTY ENVIR GEPaid: CAH777000896	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V184	269
RALEY'S AISLE 1 #177 GEPaid: CAL000373440	1020 EMERALD BAY RD	SE 1/4 - 1/2 (0.498 mi.)	X195	301
EQUILON ENTERPRISES GEPaid: CAD981460637	1020 EMERALD BAY RD	SE 1/4 - 1/2 (0.498 mi.)	X197	304

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there

## EXECUTIVE SUMMARY

are 7 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BEACON SWISS MART</b> Reg Id: 6A099810N02 Reg Id: 6T0297A Reg Id: 6T0173A	<b>913 EMERALD BAY RD</b>	<b>ESE 1/8 - 1/4 (0.241 mi.)</b>	<b>F36</b>	<b>45</b>
<b>MYERS MARINE</b> Reg Id: 6T0054A	<b>2140 DUNLAP ST</b>	<b>E 1/4 - 1/2 (0.386 mi.)</b>	<b>J85</b>	<b>131</b>
<b>RUNNELS AUTOMOTIVE</b> Reg Id: 6T0228A	<b>986 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.404 mi.)</b>	<b>K95</b>	<b>138</b>
<b>REDWOOD OIL CO</b> Reg Id: 6T0242A	<b>2060 ELOISE AVE</b>	<b>ESE 1/4 - 1/2 (0.433 mi.)</b>	<b>L135</b>	<b>173</b>
<b>FIVE STAR TEXACO</b> Reg Id: 6A098911N72	<b>2037 LAKE TAHOE BLVD</b>	<b>ESE 1/4 - 1/2 (0.455 mi.)</b>	<b>S159</b>	<b>233</b>
<b>SOUTH TAHOE SHELL SE</b> Reg Id: 6A099812N01	<b>1020 EMERALD BAY RD</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X194</b>	<b>283</b>
<b>SOUTH Y SHELL</b> Reg Id: 6T0300A	<b>1020 EMERALD BAY ROA</b>	<b>SE 1/4 - 1/2 (0.498 mi.)</b>	<b>X199</b>	<b>306</b>

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 08/17/2015 has revealed that there is 1 NPDES site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SOUTH TAHOE REFUSE M</b> Facility Status: Historical Facility Status: Active	<b>2140 RUTH AVE</b>	<b>E 1/4 - 1/2 (0.483 mi.)</b>	<b>V179</b>	<b>255</b>

PEST LIC: A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

A review of the PEST LIC list, as provided by EDR, and dated 06/07/2015 has revealed that there is 1 PEST LIC site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>STEPHANIE R MCKNIGHT</b>	<b>575 ROGER AVE</b>	<b>WNW 1/4 - 1/2 (0.443 mi.)</b>	<b>Q147</b>	<b>220</b>

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>TERRIBLE HERBST GAS</b>	<b>2762 LAKE TAHOE BLVD</b>	<b>ESE 1/2 - 1 (0.519 mi.)</b>	<b>Y206</b>	<b>308</b>

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>LITTLE TRUCKEE MOBIL</b>	<b>2333 ELOISE STREET</b>	<b>ENE 1/2 - 1 (0.848 mi.)</b>	<b>301</b>	<b>455</b>

WDS: California Water Resources Control Board - Waste Discharge System.

A review of the WDS list, as provided by EDR, and dated 06/19/2007 has revealed that there are 11 WDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CANTINA Facility Status: A Facility Id: 6A099501003	765 EMERALD BAY RD	NW 0 - 1/8 (0.121 mi.)	B14	23
<b>EMERALD PINES RESORT</b> Facility Status: A Facility Id: 6A099401005	<b>661-681 EMERALD BAY</b>	<b>NW 1/4 - 1/2 (0.367 mi.)</b>	<b>83</b>	<b>128</b>
LAKE TAHOE AUTO VILL Facility Status: A Facility Id: 6A099409007	1901 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.432 mi.)	P126	167
KMART GARDEN SHOP & Facility Status: H Facility Id: 6A099303001	1030 TATA LN	SSE 1/4 - 1/2 (0.492 mi.)	W188	271

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BEL PAC ENTERPRISES</b> Facility Status: A Facility Id: 6A099407002	<b>854-868 EMERALD BAY</b>	<b>ESE 0 - 1/8 (0.102 mi.)</b>	<b>C12</b>	<b>20</b>
CHARTER COMMUNICATIO Facility Status: H Facility Id: 6A099409006	924 EMERALD BAY RD	ESE 1/4 - 1/2 (0.273 mi.)	F59	116
<b>SOUTH SIDE AUTO BODY</b> Facility Status: A Facility Id: 6A099409004	<b>934 ELOISE AVE</b>	<b>E 1/4 - 1/2 (0.276 mi.)</b>	<b>G66</b>	<b>119</b>
MYERS MARINE SERVICE Facility Status: A Facility Id: 6A099409002	2140 DUNLAP AVE	E 1/4 - 1/2 (0.386 mi.)	J86	133
SBC FACILITY/2075 EL Facility Status: A Facility Id: 6A090406004	2075 ELOISE	ESE 1/4 - 1/2 (0.435 mi.)	L140	198
BI-STATE PETROLEUM Facility Status: A Facility Id: 6A099501004	2070 JAMES ST	ESE 1/4 - 1/2 (0.455 mi.)	L163	236
SOUTH TAHOE REFUSE M Facility Status: H Facility Id: 6A099001008	2140 RUTH AVE	E 1/4 - 1/2 (0.483 mi.)	V185	270

# EXECUTIVE SUMMARY

## EDR HIGH RISK HISTORICAL RECORDS

### ***EDR Exclusive Records***

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 30 EDR US Hist Auto Stat sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	1920 LAKE TAHOE BLV	SSE 1/4 - 1/2 (0.423 mi.)	M118	158
Not reported	617 GLORENE AVE	WNW 1/4 - 1/2 (0.446 mi.)	Q149	221
Not reported	1069 EMERALD BAY RD	SE 1/2 - 1 (0.602 mi.)	AB250	346
Not reported	1107 MARGARET AVE	SSE 1/2 - 1 (0.682 mi.)	270	371
Not reported	1140 EMERALD BAY RD	SE 1/2 - 1 (0.688 mi.)	AH271	371
Not reported	1144 EMERALD BAY RD	SE 1/2 - 1 (0.691 mi.)	AH277	422

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	867 ELOISE AVE	ENE 1/8 - 1/4 (0.158 mi.)	D23	34
Not reported	927 JAMES AVE	ESE 1/8 - 1/4 (0.235 mi.)	E29	40
Not reported	913 EMERALD BAY RD	ESE 1/8 - 1/4 (0.241 mi.)	F34	44
Not reported	920 ELOISE AVE	E 1/4 - 1/2 (0.254 mi.)	E45	99
Not reported	927 ELOISE AVE	E 1/4 - 1/2 (0.255 mi.)	E49	105
Not reported	2032 5TH ST	ESE 1/4 - 1/2 (0.272 mi.)	E55	110
Not reported	2042 5TH ST	ESE 1/4 - 1/2 (0.274 mi.)	E62	118
Not reported	2046 5TH ST	ESE 1/4 - 1/2 (0.275 mi.)	E65	119
Not reported	934 ELOISE AVE	E 1/4 - 1/2 (0.276 mi.)	G67	120
Not reported	944 ELOISE AVE	ESE 1/4 - 1/2 (0.297 mi.)	G70	121
Not reported	948 ELOISE AVE	ESE 1/4 - 1/2 (0.304 mi.)	G71	122
Not reported	2132 DUNLAP DR	E 1/4 - 1/2 (0.386 mi.)	J87	134
Not reported	2105 RUTH AVE	E 1/4 - 1/2 (0.400 mi.)	J93	137
Not reported	986 EMERALD BAY RD	SE 1/4 - 1/2 (0.404 mi.)	K96	142
Not reported	1961 LAKE TAHOE BLV	SE 1/4 - 1/2 (0.416 mi.)	N112	153
Not reported	2119 RUTH AVE	E 1/4 - 1/2 (0.430 mi.)	O120	161
Not reported	2000 LAKE TAHOE BLV	ESE 1/4 - 1/2 (0.469 mi.)	S173	246
Not reported	931 3RD ST	E 1/2 - 1 (0.536 mi.)	Z216	312
Not reported	2197 RUTH AVE	ENE 1/2 - 1 (0.554 mi.)	Z223	316
Not reported	2143 ELOISE AVE	E 1/2 - 1 (0.561 mi.)	AC228	320
Not reported	2104 LAKE TAHOE BLV	ESE 1/2 - 1 (0.566 mi.)	AD235	325
Not reported	2186 RUTH AVE	ENE 1/2 - 1 (0.596 mi.)	AE246	344
Not reported	2240 IDAHO AVE	ENE 1/2 - 1 (0.668 mi.)	267	369
Not reported	2226 ELOISE AVE	E 1/2 - 1 (0.700 mi.)	AK278	422

## EXECUTIVE SUMMARY

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 4 EDR US Hist Cleaners sites within approximately 0.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	868 EMERALD BAY RD	ESE 1/8 - 1/4 (0.135 mi.)	C15	24
Not reported	949 EMERALD BAY RD	SE 1/4 - 1/2 (0.328 mi.)	H76	123
Not reported	1024 EMERALD BAY RD	SE 1/2 - 1 (0.502 mi.)	X204	307
Not reported	2180 LAKE TAHOE BLV	E 1/2 - 1 (0.669 mi.)	AJ268	370

### EDR RECOVERED GOVERNMENT ARCHIVES

#### *Exclusive Recovered Govt. Archives*

RGA LUST: The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

A review of the RGA LUST list, as provided by EDR, has revealed that there are 12 RGA LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MCNAMARA PROPERTY	787 EMERALD BAY ROAD	NW 0 - 1/8 (0.072 mi.)	B6	11
AMC/JEEP.RENAULT DEA	1901 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.432 mi.)	P124	165
CITY OF SLT MAINT. Y	1900 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.439 mi.)	P144	204
CITY OF SLT MAINT. Y	1900 LAKE TAHOE BLVD	SSE 1/4 - 1/2 (0.439 mi.)	P146	220

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SWISS MART	913 EMERALD BAY RD	ESE 1/8 - 1/4 (0.241 mi.)	F32	43
SWISS MART GAS STATI	913 EMERALD BAY ROAD	ESE 1/8 - 1/4 (0.241 mi.)	F35	44
SWISS MART	913 EMERALD BAY RD	ESE 1/8 - 1/4 (0.241 mi.)	F38	94
HATCH ELECTRIC	921 ELOISE AVE	E 1/8 - 1/4 (0.244 mi.)	E42	97
RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	SE 1/4 - 1/2 (0.404 mi.)	K94	138
RUNNELS AUTOMOTIVE	986 EMERALD BAY RD	SE 1/4 - 1/2 (0.404 mi.)	K97	142
FACILITY #27943-EXXO	1000 EMERALD BAY ROA	SE 1/4 - 1/2 (0.448 mi.)	K152	225
SOUTH Y SHELL	1020 EMERALD BAY ROA	SE 1/4 - 1/2 (0.498 mi.)	X198	306

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

<u>Site Name</u>	<u>Database(s)</u>
AMERICAN TOWER	LUST



# OVERVIEW MAP - 4429845.2S



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Manufactured Gas Plants

■ National Priority List Sites

■ Dept. Defense Sites



■ Indian Reservations BIA

▲ Power transmission lines

■ 100-year flood zone

■ 500-year flood zone

■ National Wetland Inventory

■ Areas of Concern

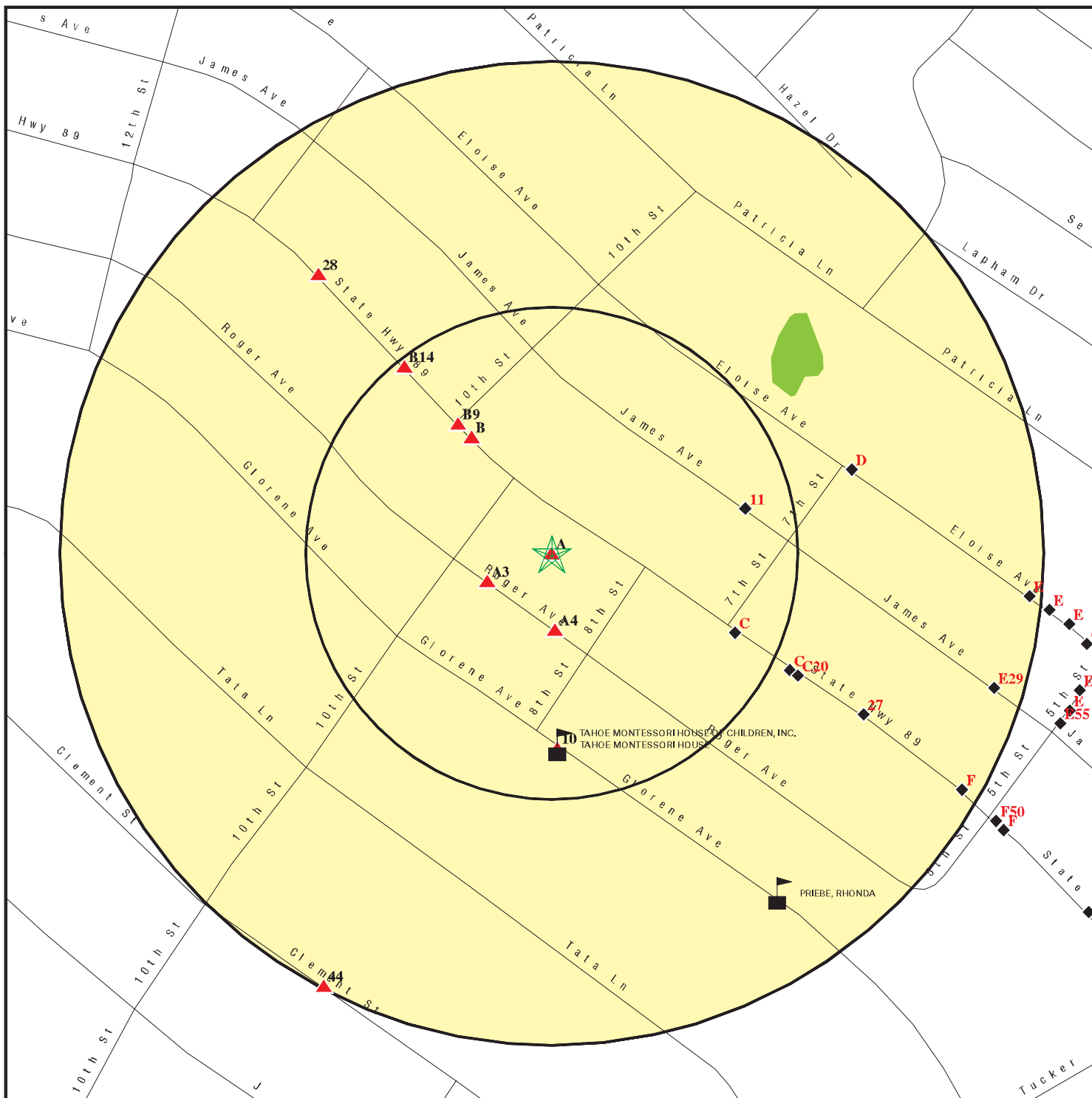


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lukins Service Area PCE Investigation  
 ADDRESS: 800 Emerald Bay Road  
 South Lake Tahoe CA 96150  
 LAT/LONG: 38.9175 / 120.011

CLIENT: AECOM  
 CONTACT: Chani Hutto  
 INQUIRY #: 4429845.2s  
 DATE: October 05, 2015 5:45 pm

# DETAIL MAP - 4429845.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lukins Service Area PCE Investigation  
 ADDRESS: 800 Emerald Bay Road  
 South Lake Tahoe CA 96150  
 LAT/LONG: 38.9175 / 120.011

CLIENT: AECOM  
 CONTACT: Chani Hutto  
 INQUIRY #: 4429845.2s  
 DATE: October 05, 2015 5:51 pm

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**APPENDIX B**

**Boring Logs/  
Well Completion Information**

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**APPENDIX B1**

**Boring Logs**

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# Project: PCE Investigation

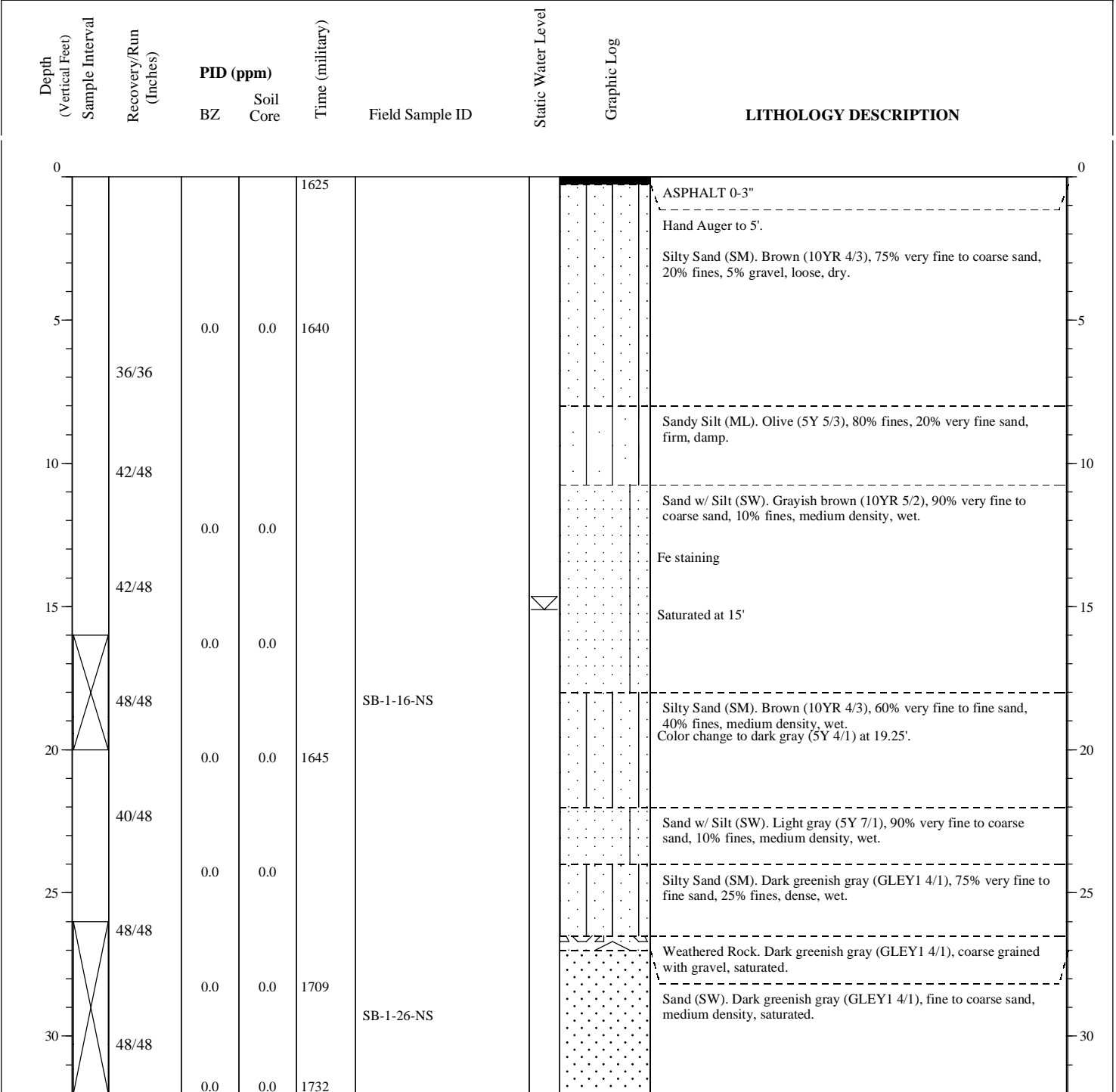
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-1

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-1	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/29/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

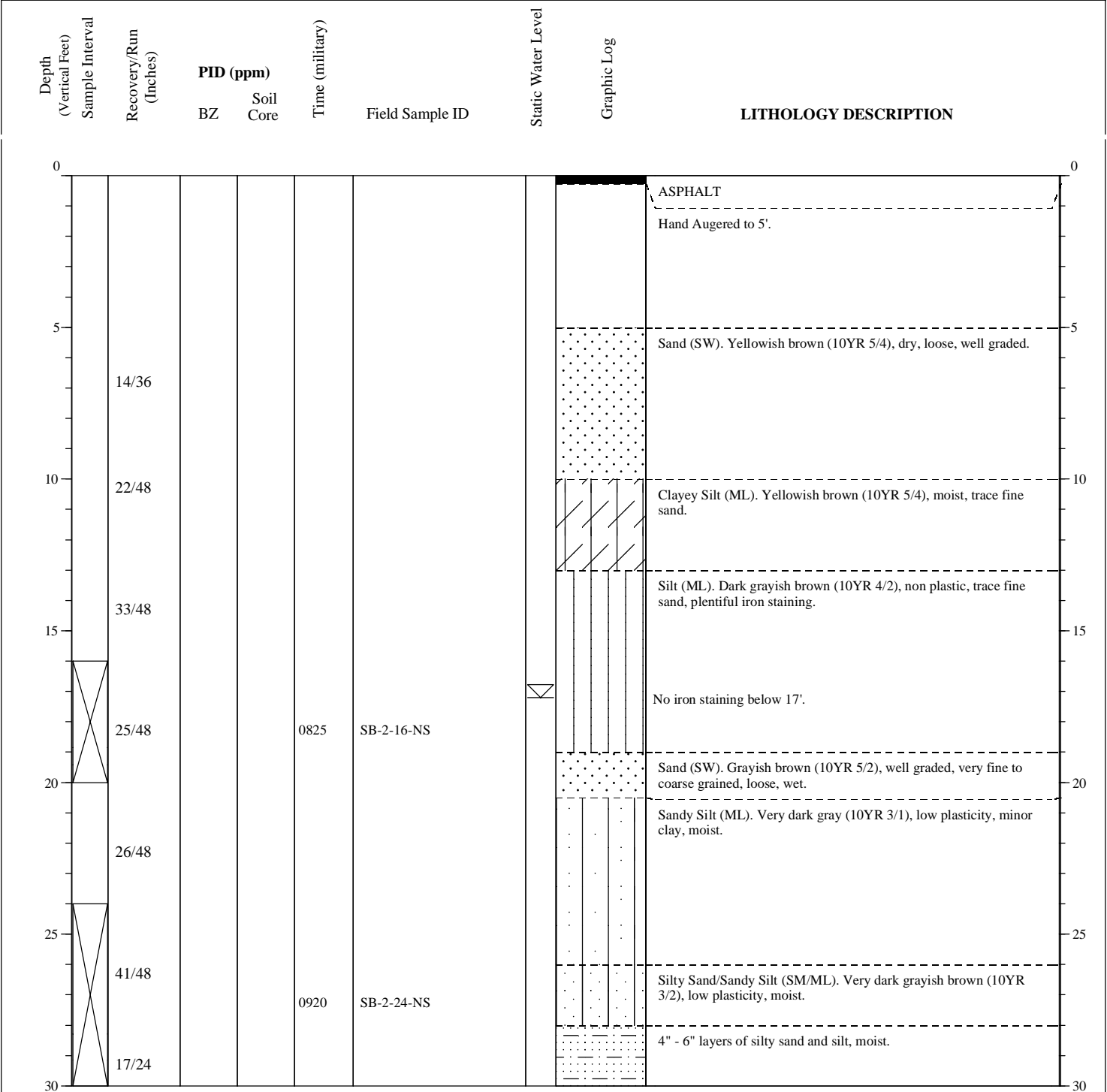
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-2

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-2	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/13/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 30	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:





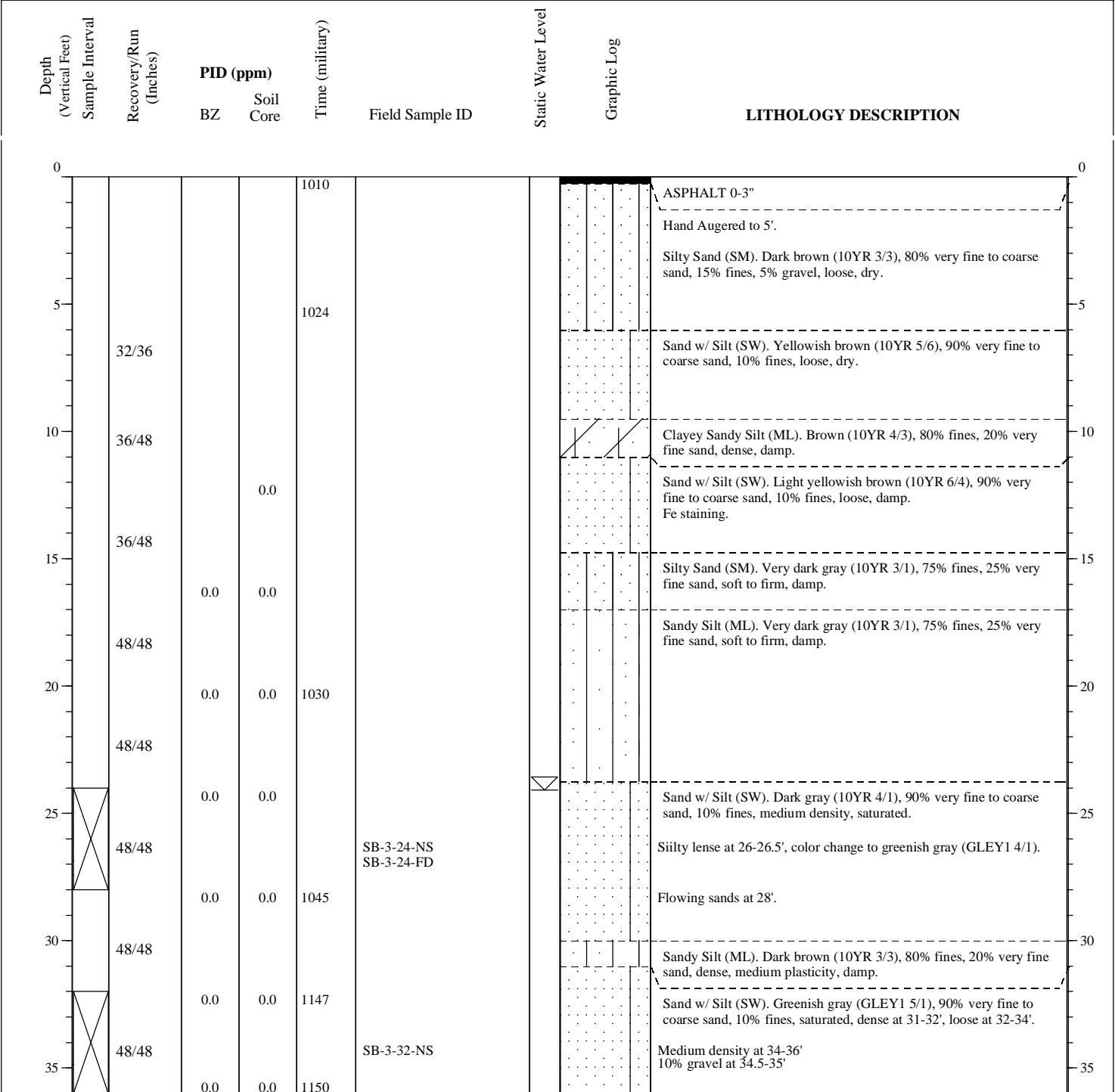
# Project: PCE Investigation

Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-3

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-3	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/30/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 36'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:
Comments:			



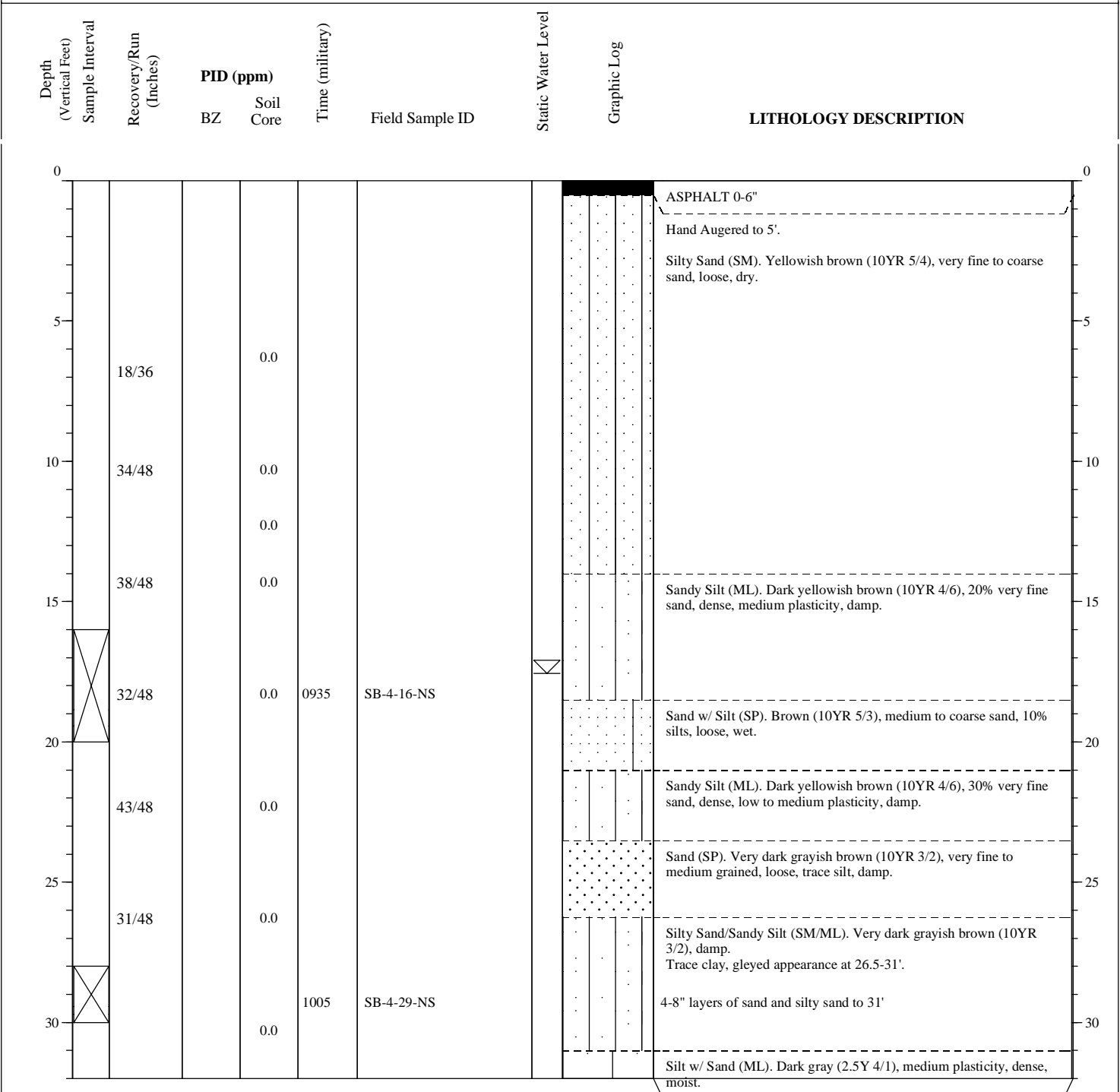
# Project: PCE Investigation

Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-4

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-4	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/12/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:
Comments:			



# Project: PCE Investigation

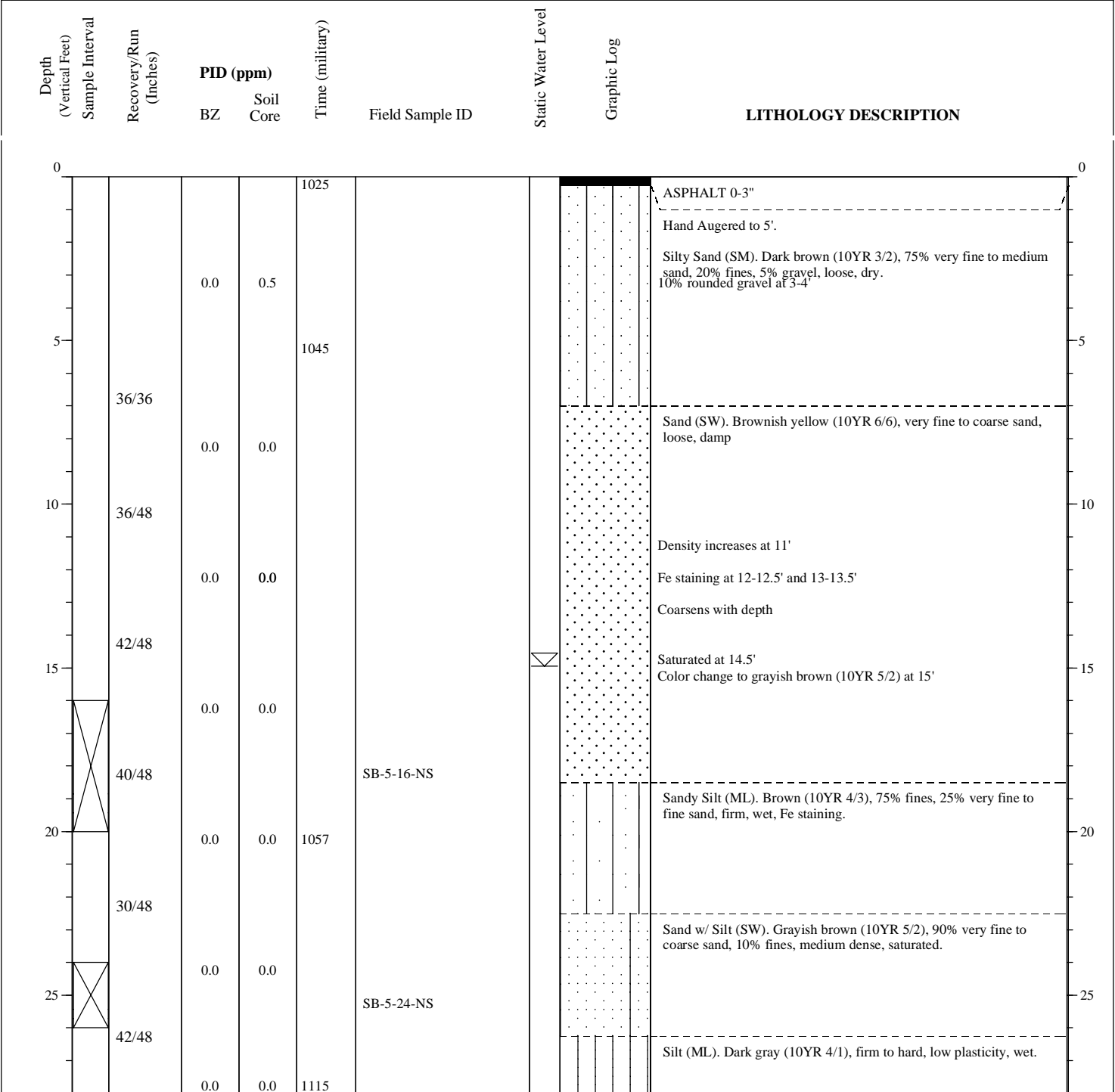
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-5

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-5	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/28/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 28'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

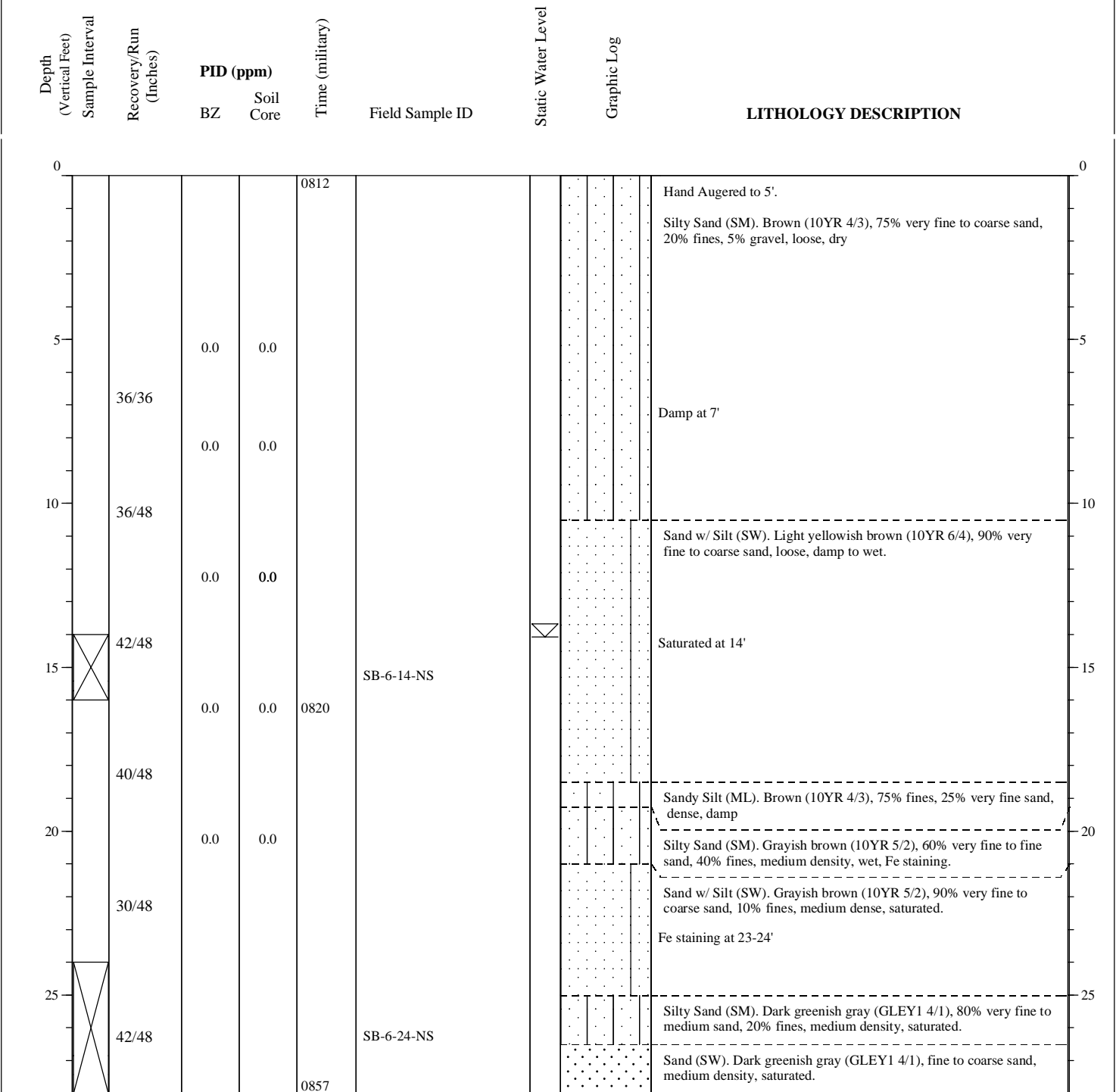
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-6

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-6	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/30/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 28'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

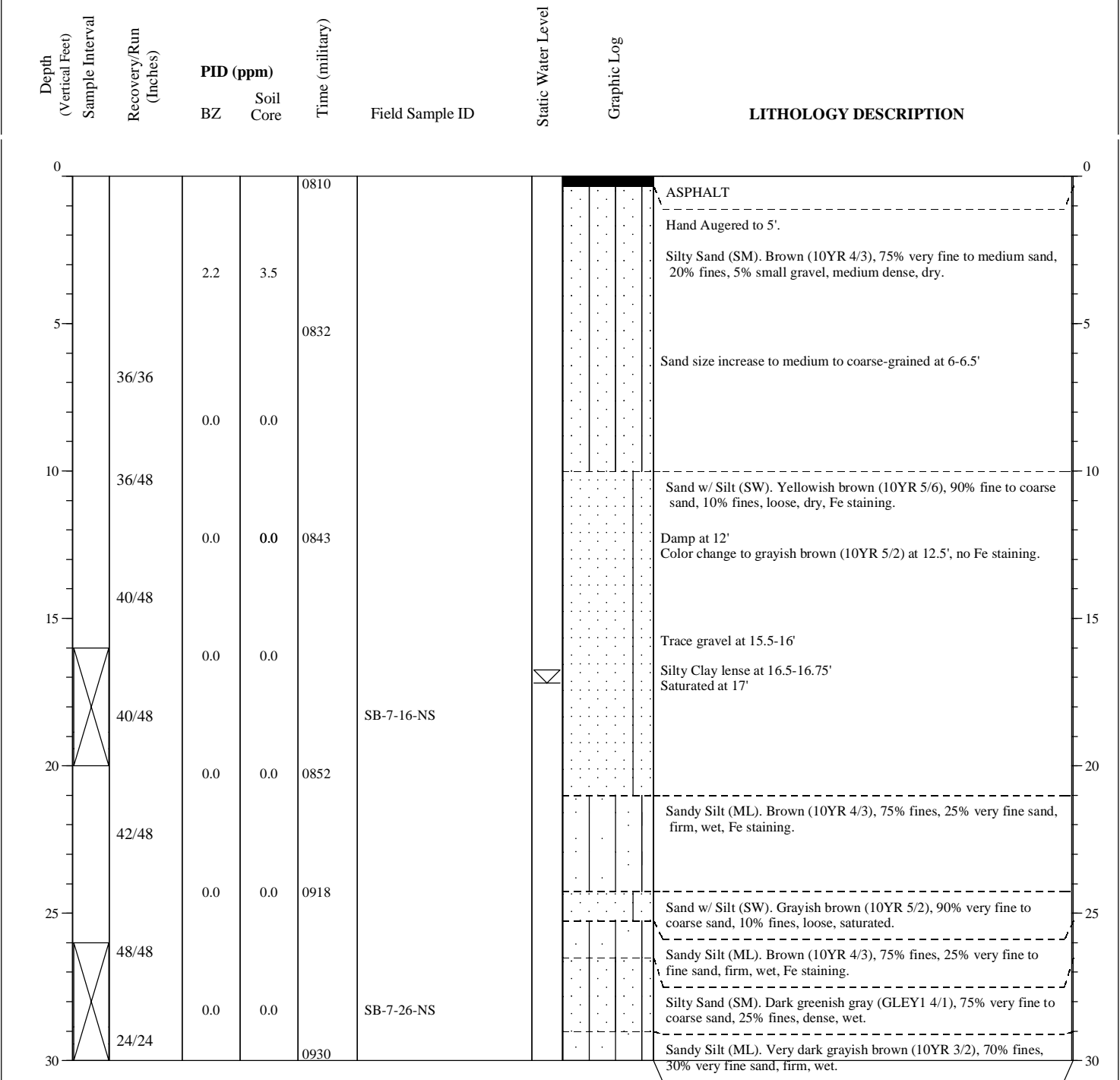
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-7

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-7	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/28/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 30'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

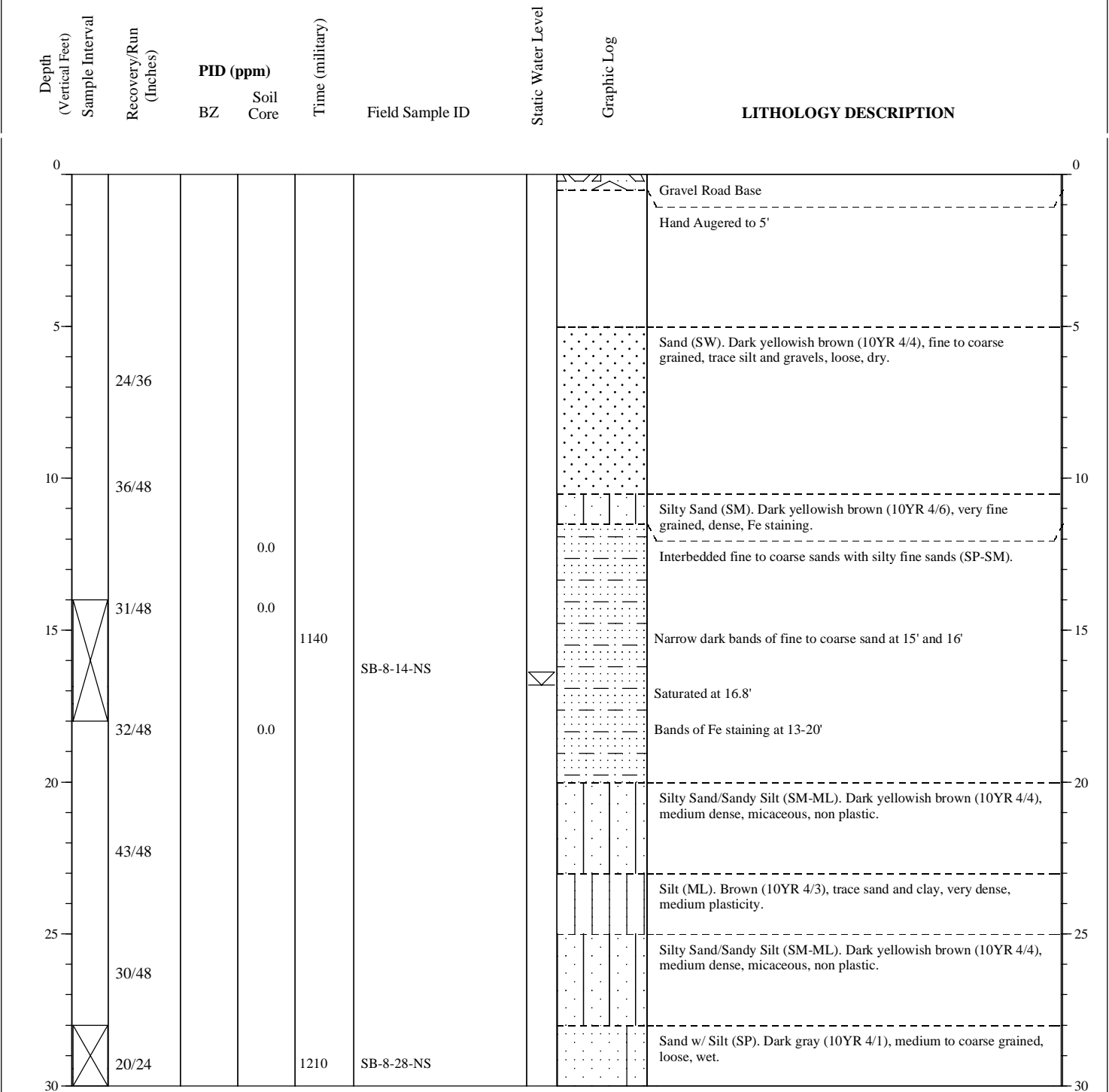
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-8

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-8	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/2/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 30'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

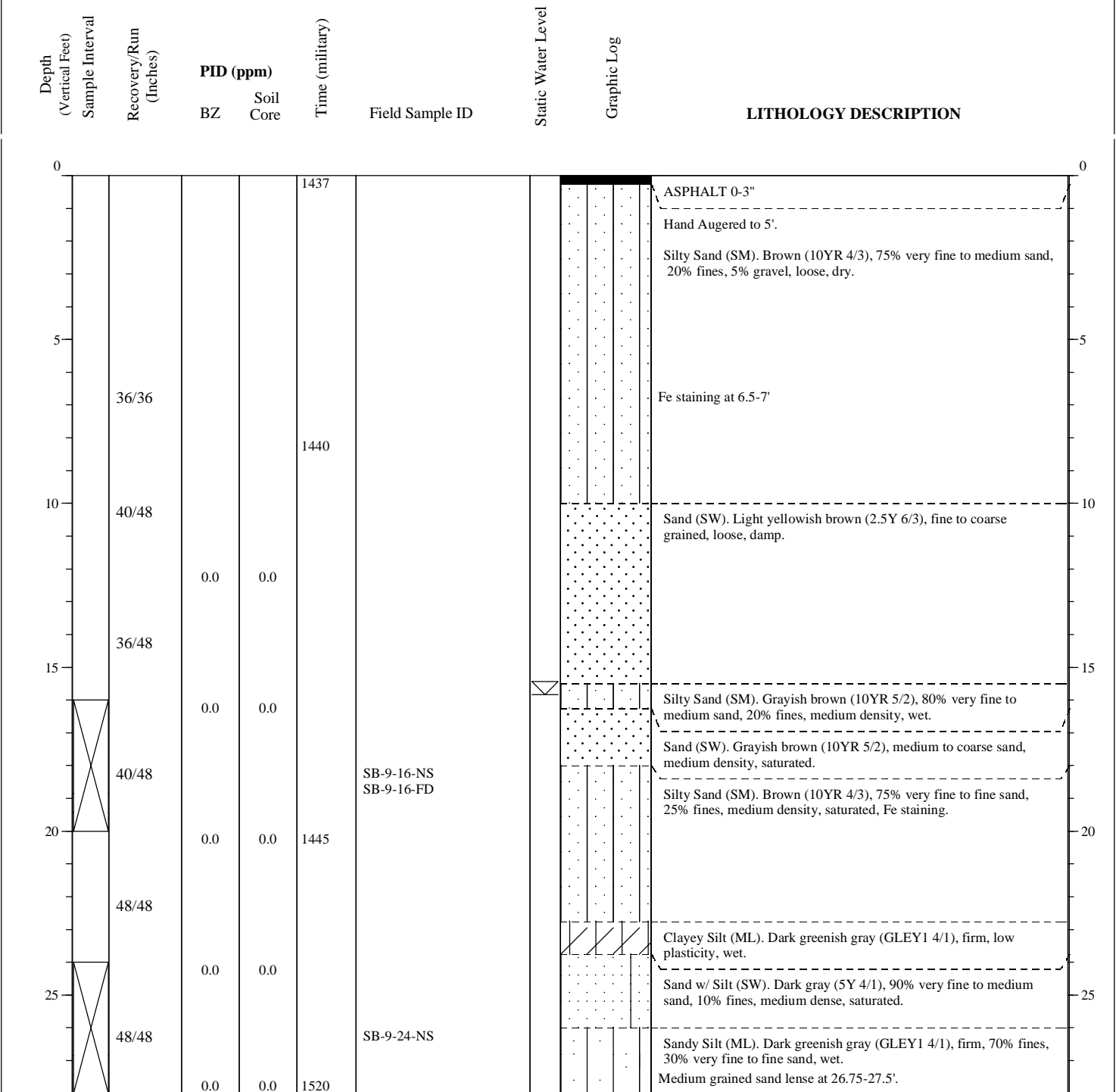
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-9

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-9	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/28/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 28'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:





# Project: PCE Investigation

Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-10

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-10	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/28/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 28'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:

Depth (Vertical Feet) Sample Interval	Recovery/Run (Inches)	PID (ppm)		Time (military)	Field Sample ID	Static Water Level	Graphic Log	LITHOLOGY DESCRIPTION
		BZ	Soil Core					
0				1207				Hand Augered to 5'. Silty Sand (SM). Brown (10YR 4/3), 75% very fine to fine sand, 20% fines, 5% gravel, loose, dry.
5	36/36	0.0	0.0					
10	48/48	0.0	0.0					Sand w/ Silt (SW). Brownish yellow (10YR 6/6), 90% very fine to fine sand, 10% fines, loose, damp. Silt lense at 9-9.5'
15	42/48	0.0	0.0	1209				
20	48/48	0.0	0.0	1217	SB-10-16-NS			Silty Sand (SM). Grayish brown (10YR 5/2), 60% very fine to fine sand, 40% fines, medium density, wet, Fe staining.
25	48/48	0.0	0.0	1222				Clayey Silt (ML). Brown (10YR 4/3), medium plasticity, firm, wet, Fe staining.
28	24/48	0.0	0.0	1301				Sand (SW). Dark gray (5Y 4/1), fine to coarse sand, medium density, saturated.
		0.0	0.0	1307	SB-10-26-NS			

# Project: PCE Investigation

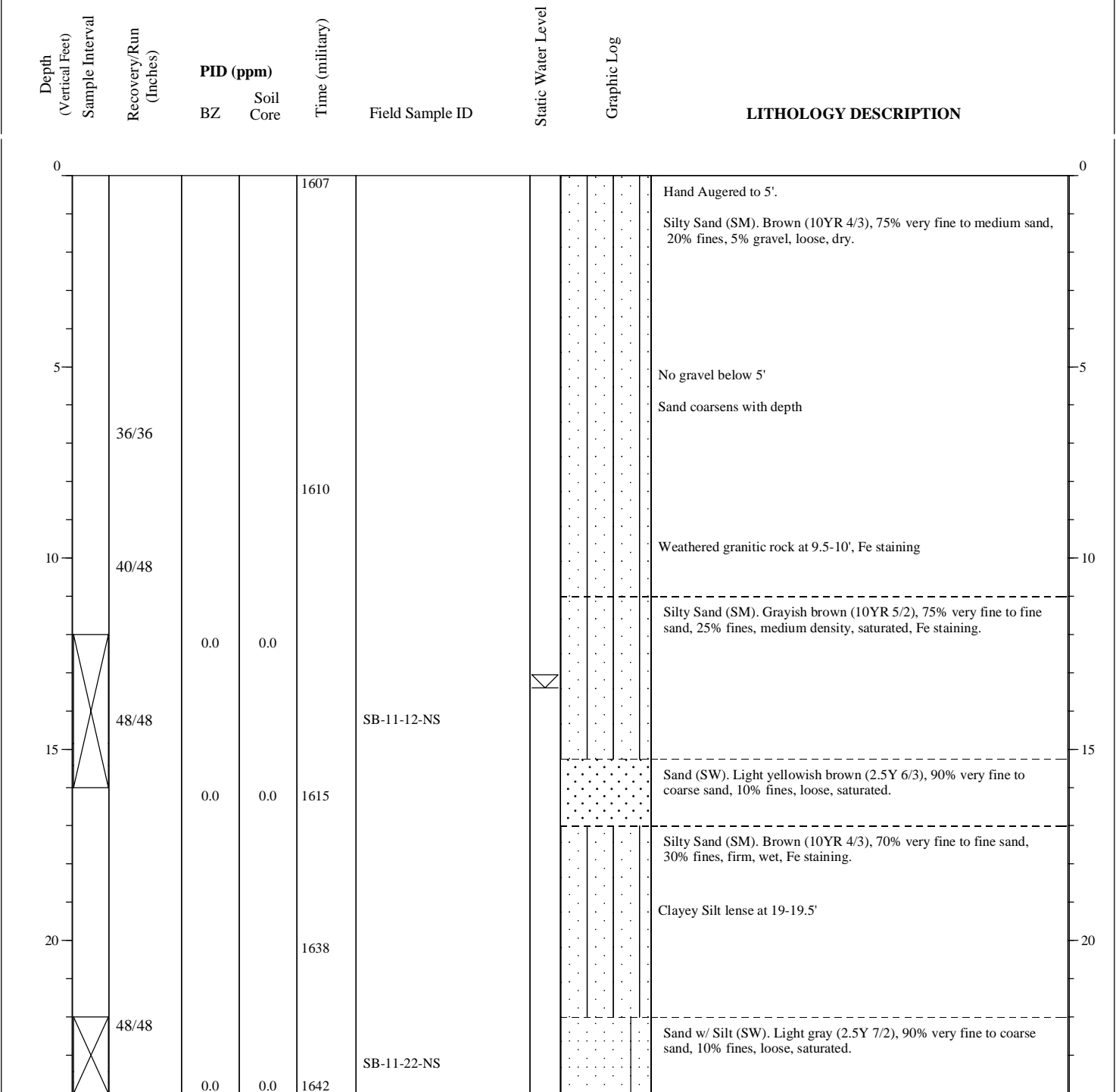
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-11

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-11	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/28/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 24'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

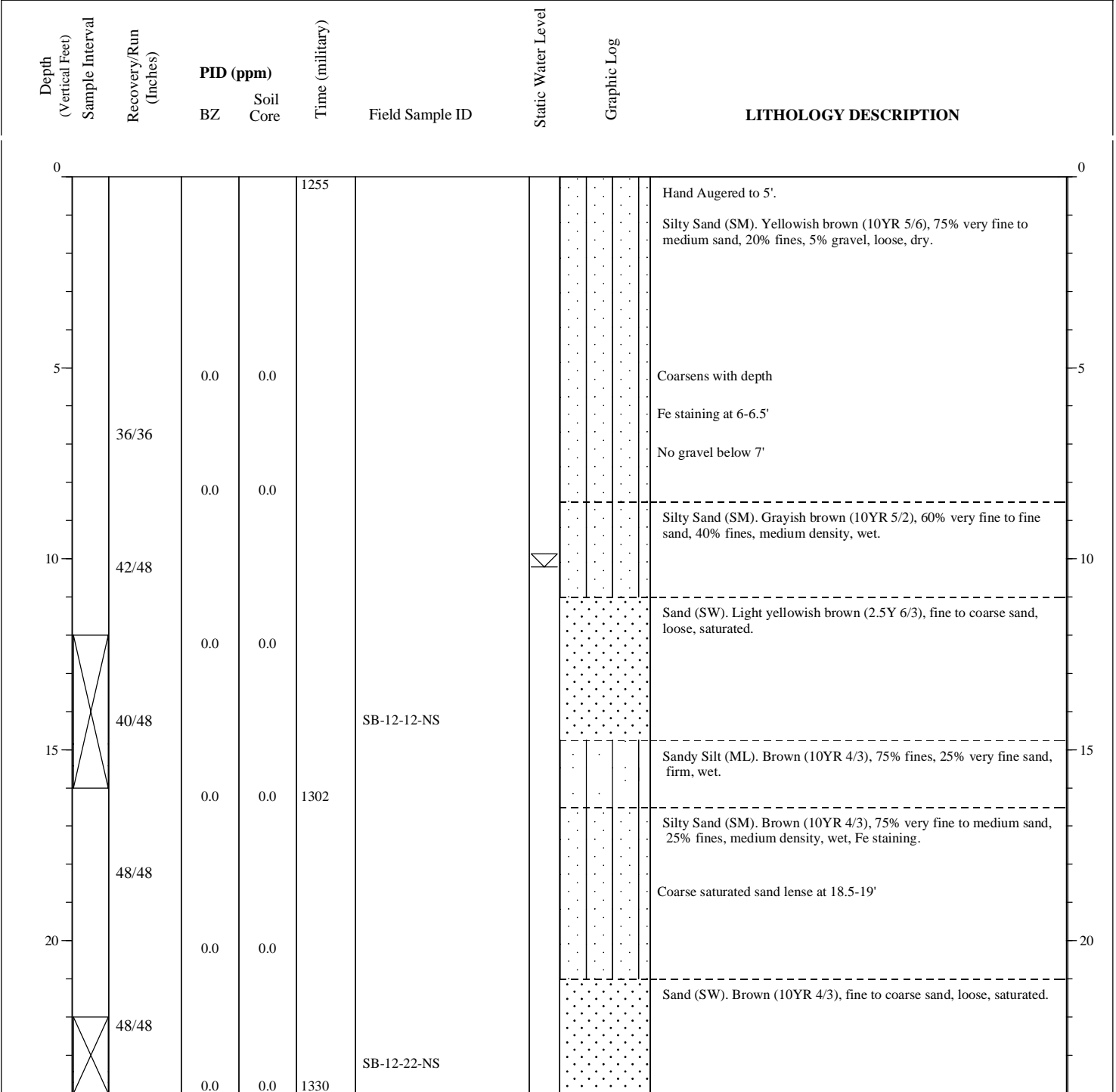
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-12

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-12	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/29/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 24'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

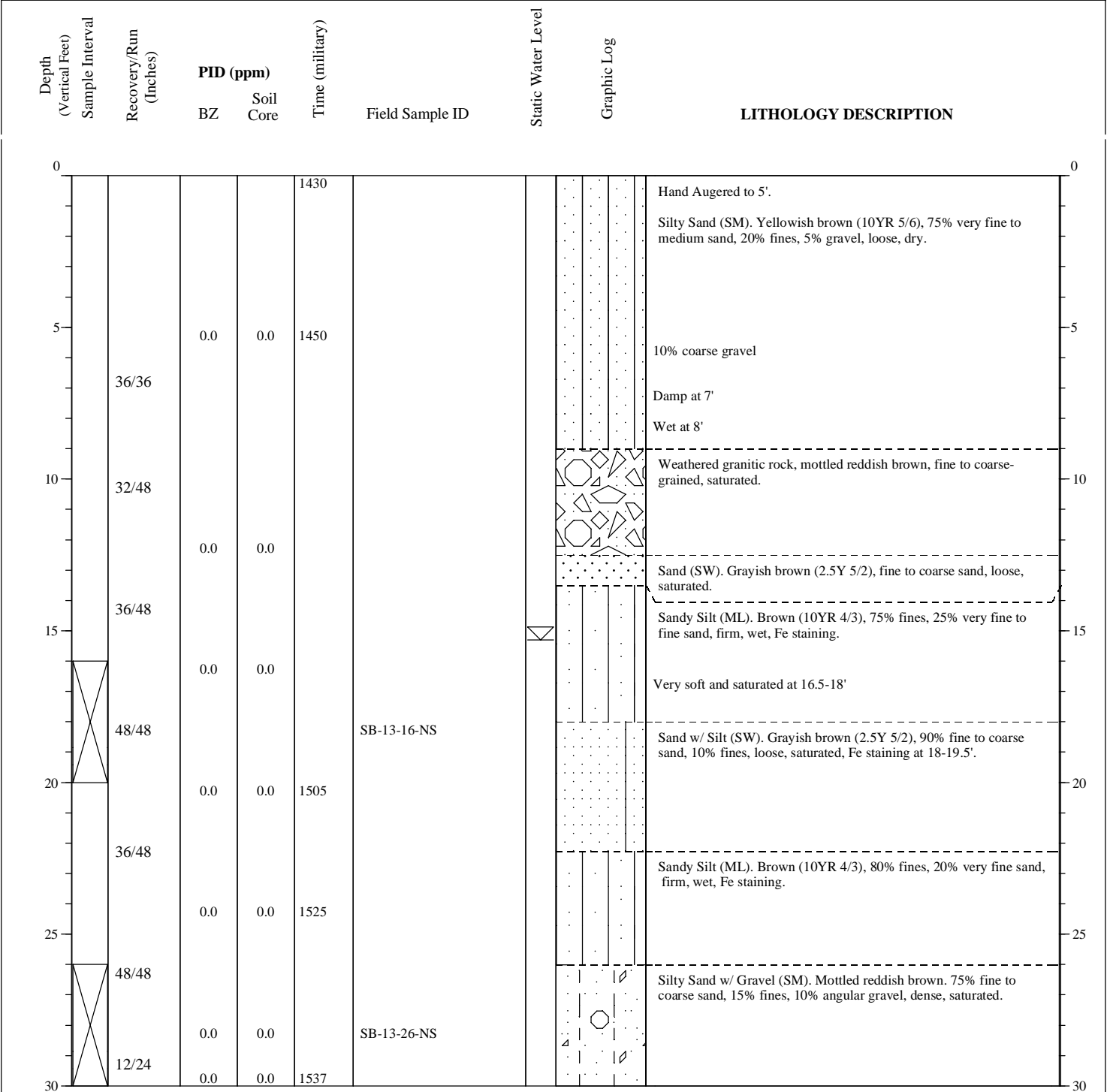
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-13

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-13	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/27/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 30'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



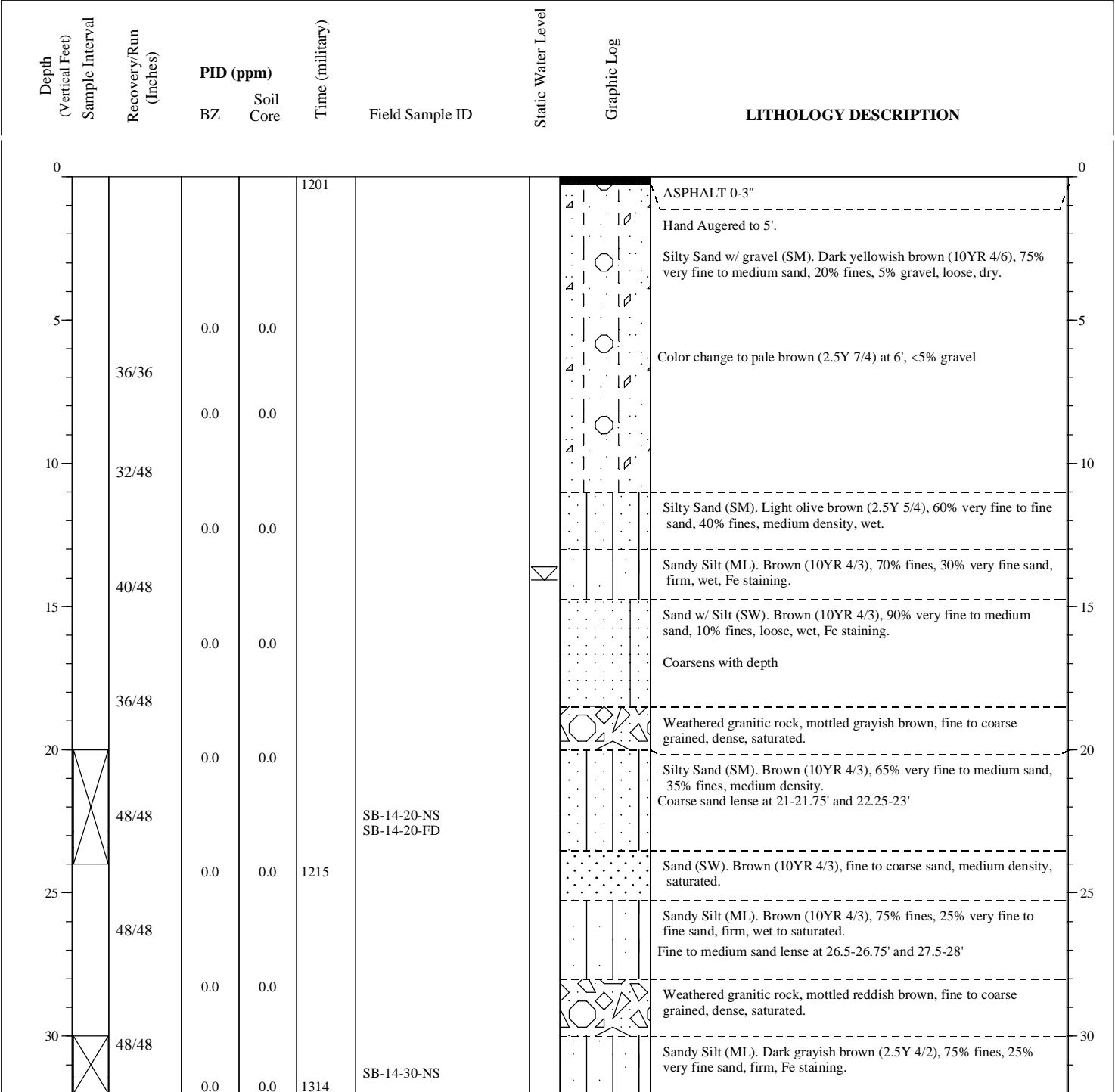
# Project: PCE Investigation

Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-14

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-14	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/27/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:
Comments:			



# Project: PCE Investigation

Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-15

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-15	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/27/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:

Depth (Vertical Feet) Sample Interval	Recovery/Run (Inches)	PID (ppm)		Time (military)	Field Sample ID	Static Water Level	Graphic Log	LITHOLOGY DESCRIPTION
		BZ	Soil Core					
0				0805				ASPHALT 0-3" Hand Augered to 5'. Silty Sand w/ gravel (SM). Brown (7.5YR 4/4), 70% very fine to coarse sand, 20% fines, 10% small gravel, loose to medium density, dry.
5	32/36							Silty Sand (SM). Yellowish brown (10YR 5/4), 70% very fine to fine sand, 30% fines, loose, dry.  Increase in silt content to 50% at 9.5'
10	36/48							Fe staining at 11.5-12' Sand w/ Silt (SW). Yellowish brown (10YR 5/4), 90% very fine to coarse sand, 10% fines, loose to medium density, damp to wet, Fe staining throughout.
15	37/48	0.0	0.0					Coarse sand and heavy Fe staining at 17-17.5'
20	39/48	0.0	0.0					Silty Sand (SM). Brown (10YR 4/3), 75% very fine to fine sand, 25% fines, medium density, damp to wet, Fe staining throughout.  Medium to coarse saturated sand lense at 20-20.75' and 21.5-22'.
25	48/48	0.0	0.0	0845	SB-15-20-NS			Sandy Silt (ML). Brown (10YR 4/3), 75% fines, 25% very fine to fine sand, soft to firm, wet.
30	42/48	0.0	0.0	0935				Silty Clay (CL). Light olive brown (2.5Y 5/3), soft, medium plasticity, wet. Silty Sand w/ Gravel (SM). Grayish brown (2.5Y 5/2), 70% very fine to coarse sand, 20% fines, 10% small gravel, dense, saturated, Fe staining.
30	48/48	0.0	0.0	0947	SB-15-30-NS			Silty Sand (SM). Light olive brown (2.5Y 5/4), 60% very fine to fine sand, 40% fines, medium density, saturated, Fe staining throughout. Sandy Silt (ML). Dark grayish brown (2.5Y 4/2), 70% fines, 30% very fine to fine sand, firm to hard, wet.

# Project: PCE Investigation

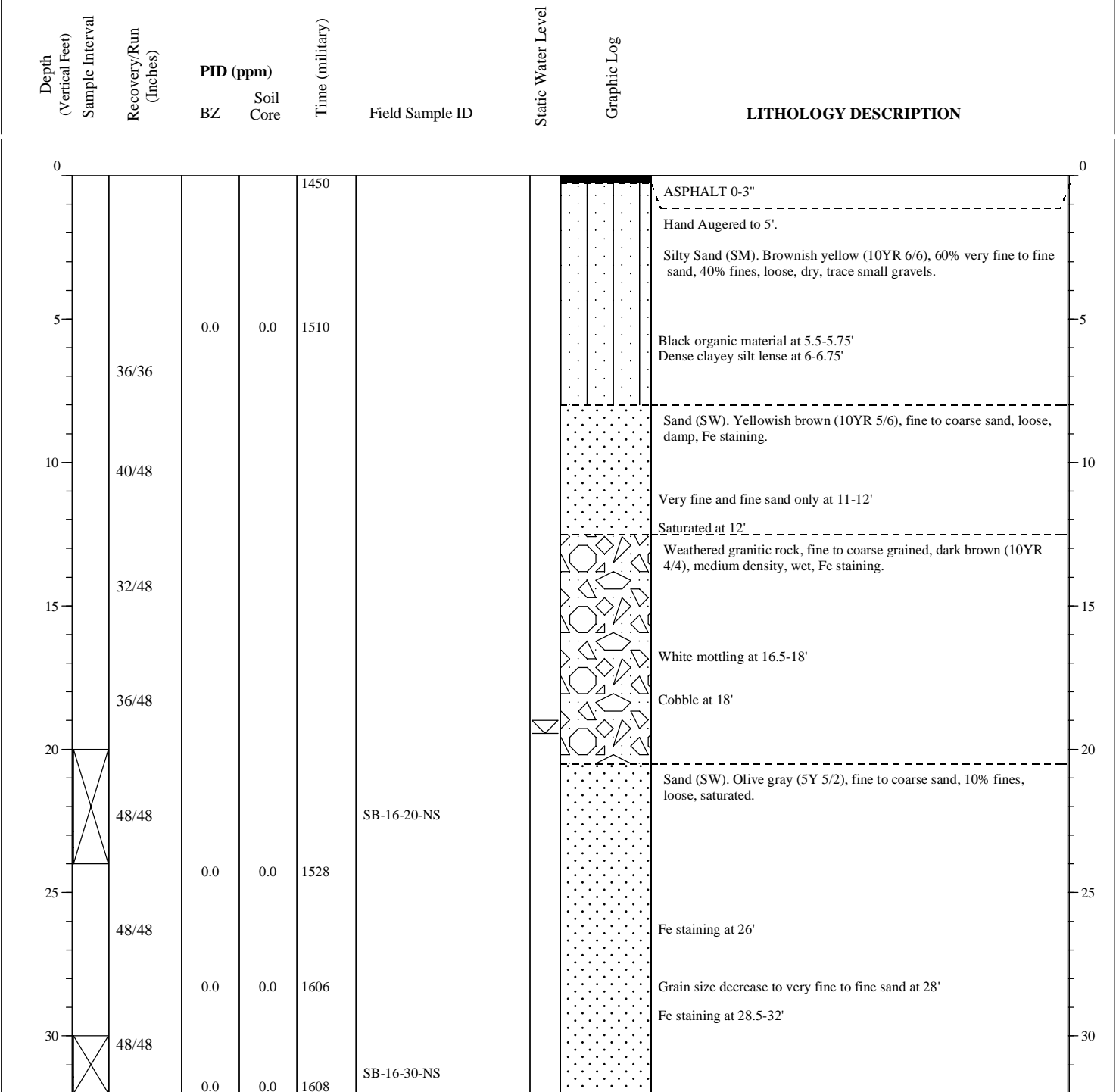
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-16

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-16	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/26/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:





# Project: PCE Investigation

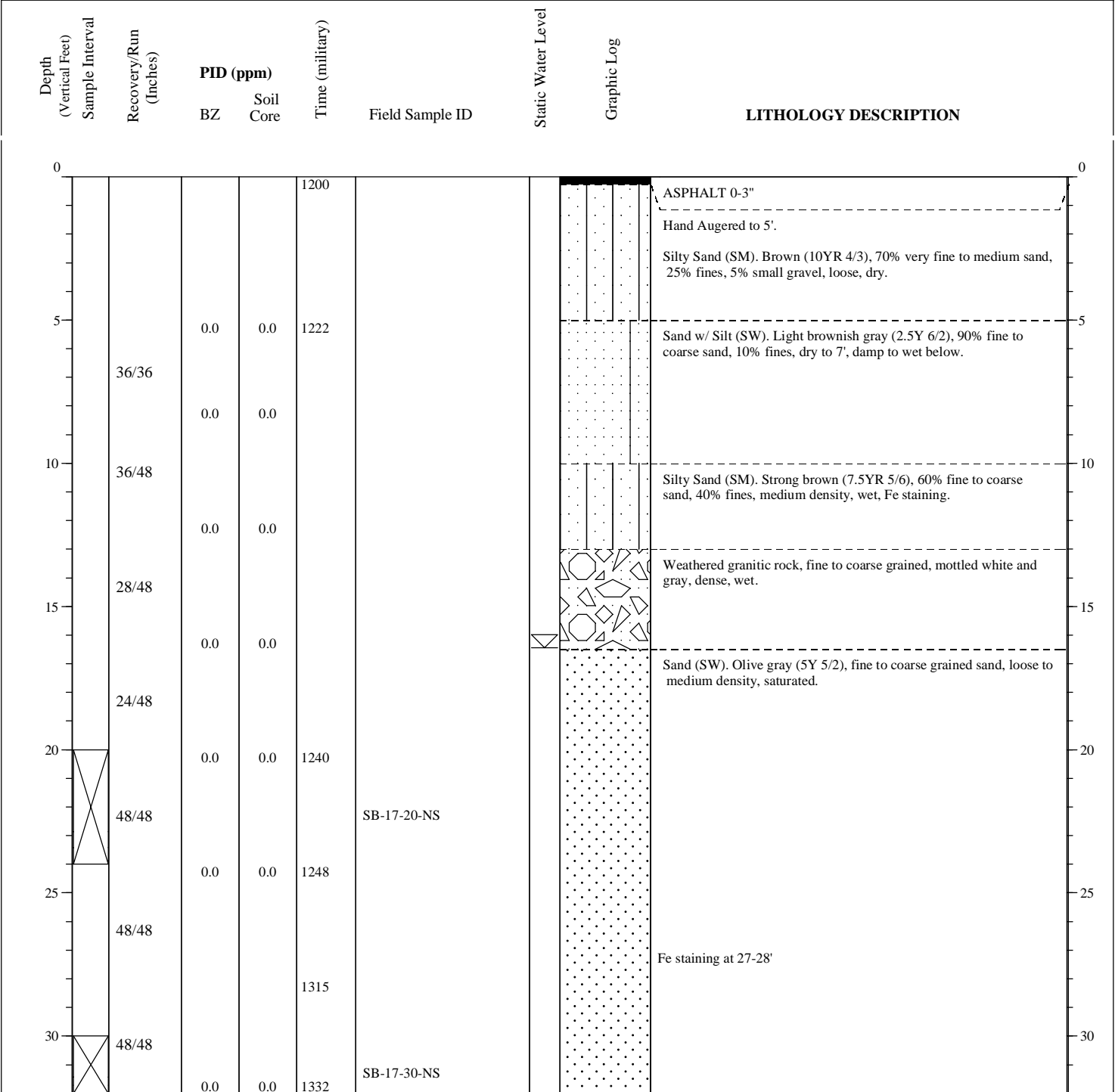
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-17

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-17	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/26/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 32'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

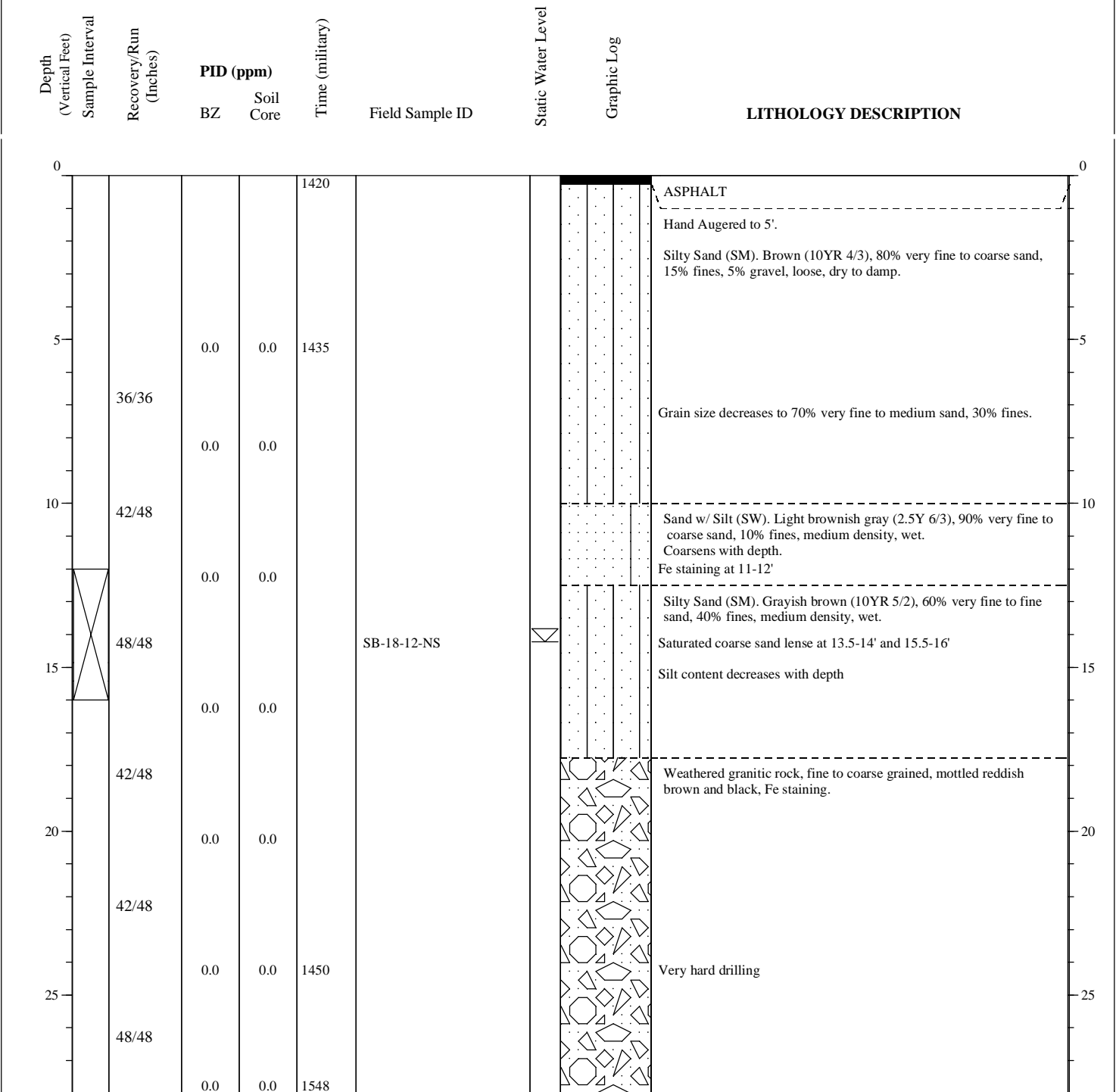
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-18

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-18	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/29/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 28'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

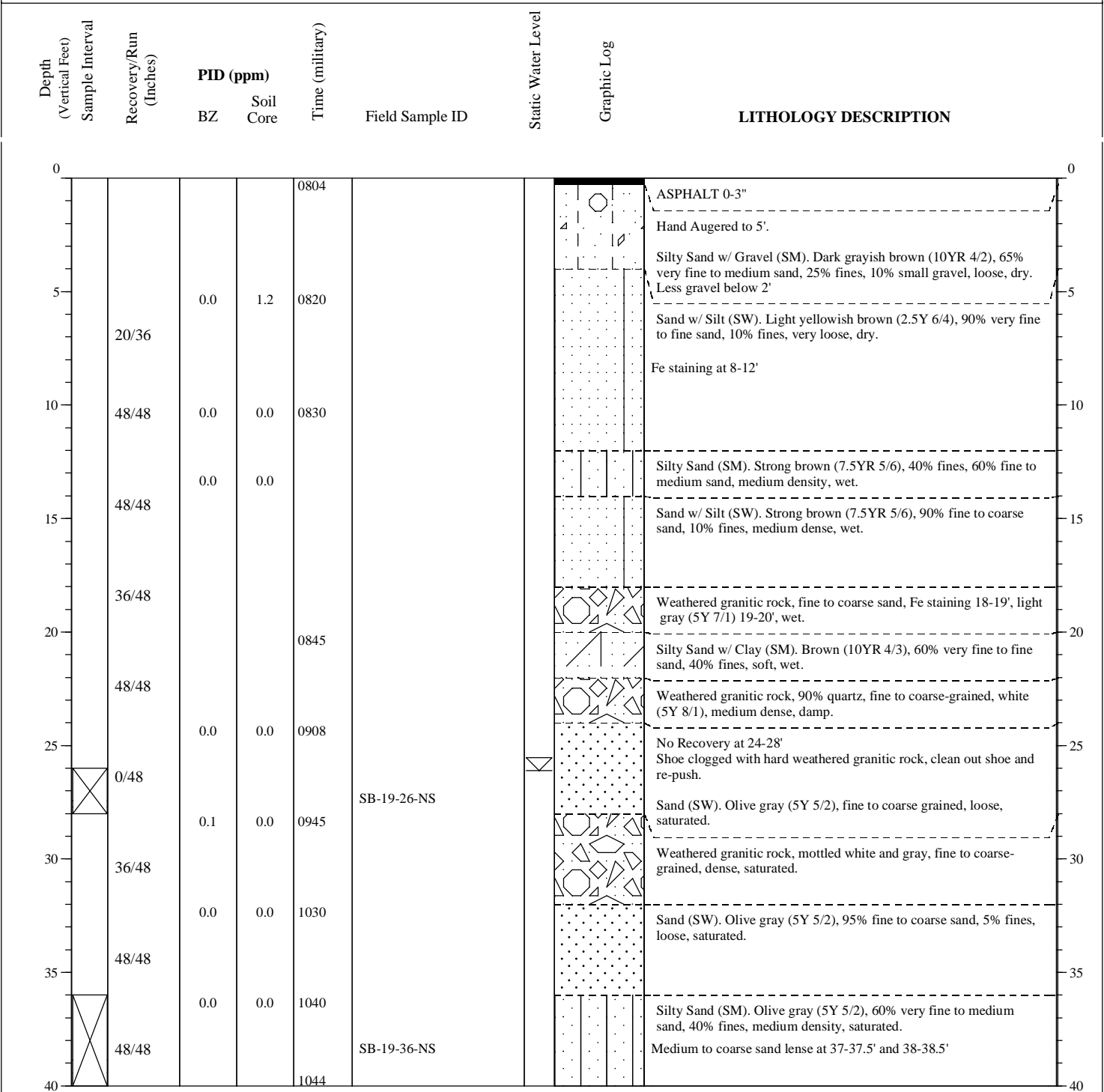
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-19

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-19	Logged By: B. Russell
Drilling Method: Geoprobe	Dates Drilled: 10/26/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 40'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

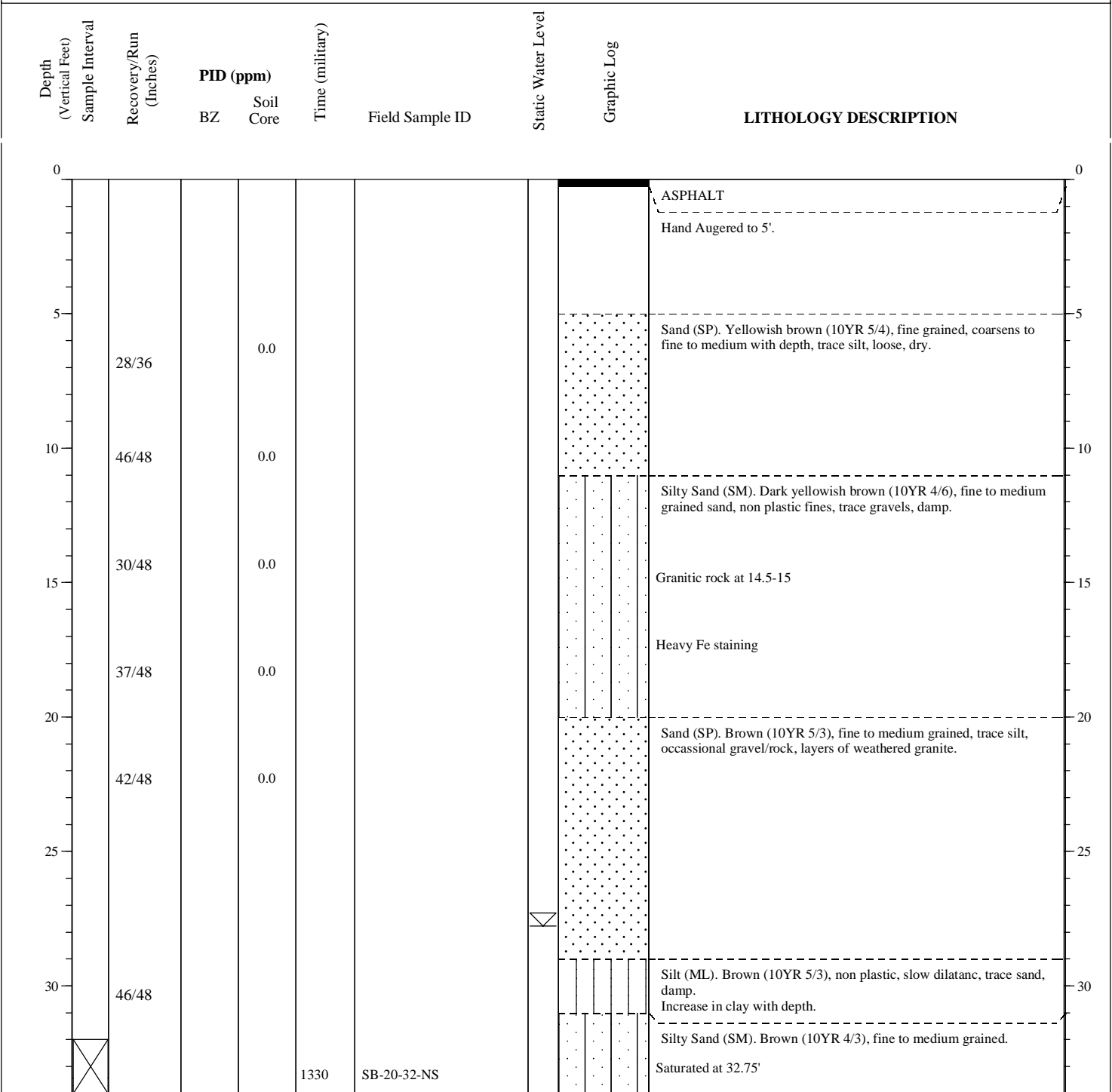
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-20

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-20	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/13/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 34'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

Location: South Lake Tahoe, CA

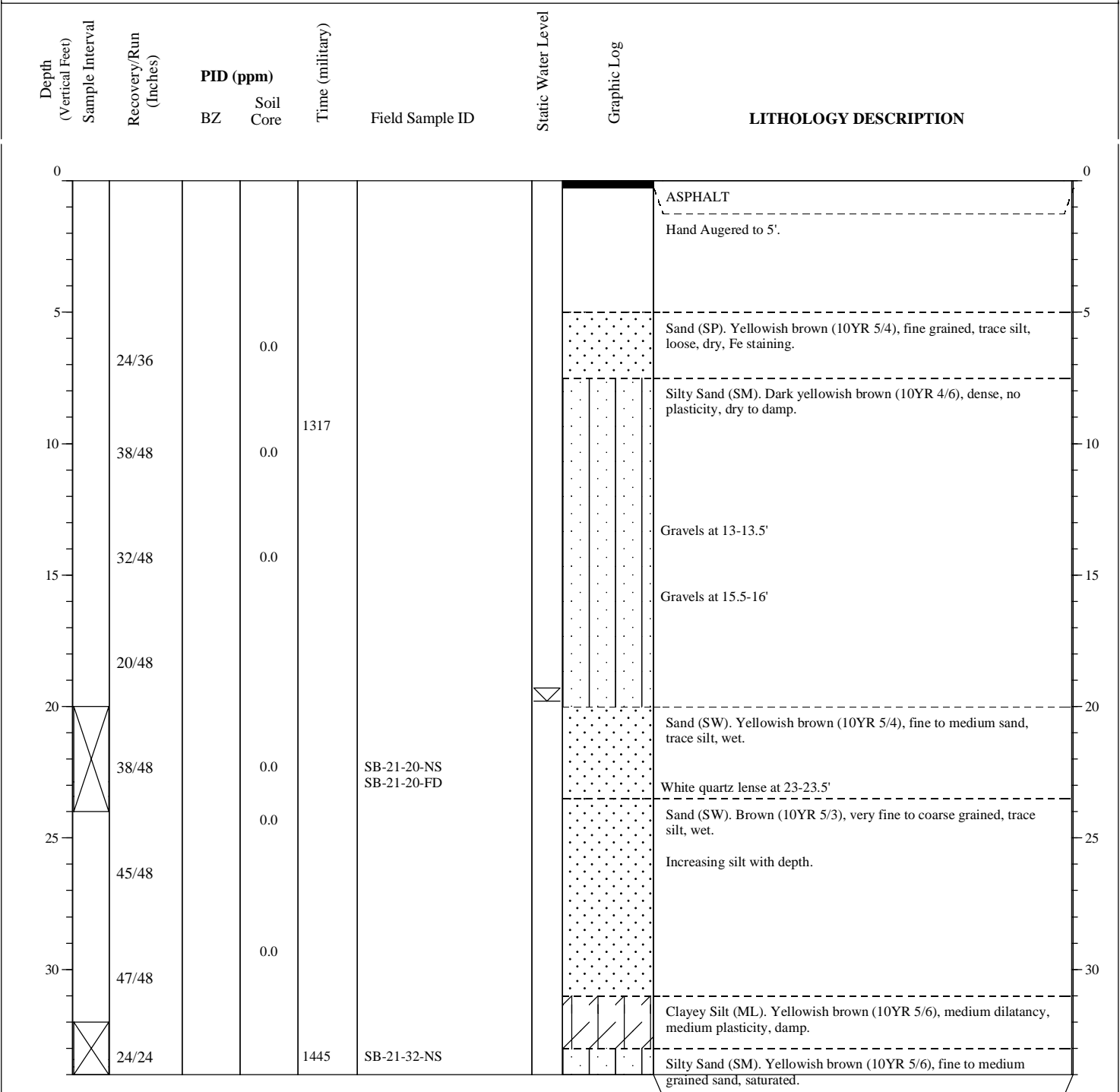
Project: 60443271

# Log of Boring

SB-21

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-21	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/12/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 34'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



# Project: PCE Investigation

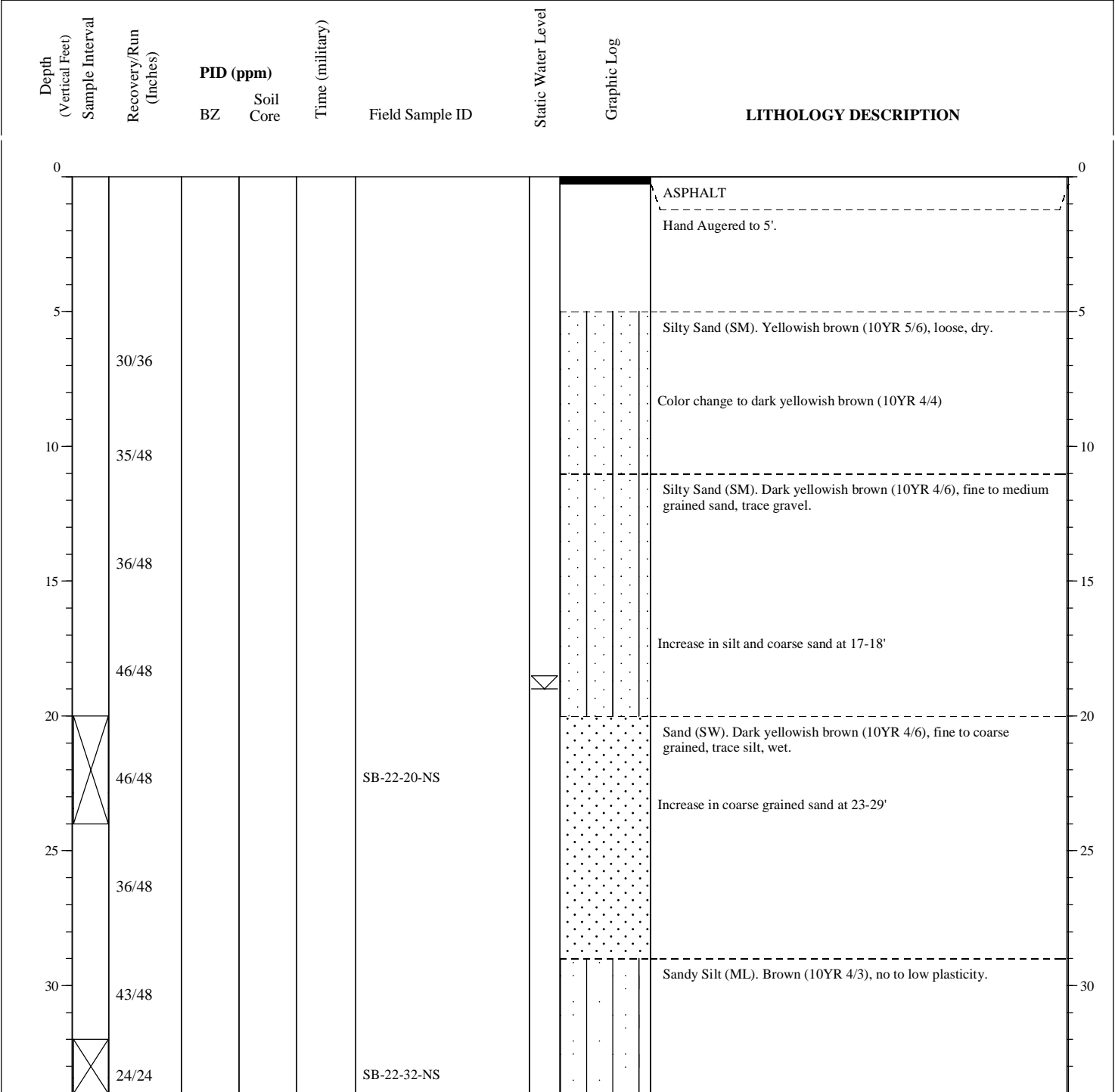
Location: South Lake Tahoe, CA

Project: 60443271

# Log of Boring SB-22

Drilling Contractor: Enprobe	Drilled by: Josh Zwemke	Borehole Name: SB-22	Logged By: P. Barbree
Drilling Method: Geoprobe	Dates Drilled: 11/13/15	Well Construction: NA	Checked By:
Borehole Diameter: 2-inch	Casing Diameter: NA	Casing Type: NA	QC Initial:
Total Depth Drilled: 34'	Screen Interval: NA	Slot Size: NA	Ground Surface Elevation:
Sampling Method: Acetate Liner (soil core); Bailer (water)			Northing: Easting:

Comments:



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**APPENDIX B2**

**Well Completion Information**

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SWISS MART GASOLINE STATION  
 SCREENED DEPTH ELEVATION RANGES

WELL I.D.	Date Installed	Measuring Point Elevation (ft msl)	Top of Screen Depth (ft)	Top of Screen Elev. (ft msl)	Bottom of Screen Depth (ft)	Bottom of Screen Elev. (ft msl)	Total Depth (ft)	Bottom of Well Elev. (ft msl)	Depth to Water (Dec. 2000) (ft)	Water Level Elev. (Dec. 2000) (ft msl)
MW-1		6264.24	7.00	6257.24	30.00	6234.24	30.00	6234.24	12.40	6251.84
MW-2A		6266.43	15.00	6251.43	25.00	6241.43	25.00	6241.43	22.82	6243.61
MW-2B		6266.22	34.00	6232.22	49.00	6217.22	49.00	6217.22	27.42	6238.80
MW-2C		6266.40	61.00	6205.40	81.00	6185.40	81.00	6185.40	27.55	6238.85
MW-3A		6264.99	15.00	6249.99	30.00	6234.99	30.00	6234.99	17.20	6247.79
MW-3B		6264.58	35.00	6229.58	50.00	6214.58	50.00	6214.58	16.55	6248.03
MW-3C		6265.33	58.00	6207.33	78.00	6187.33	78.00	6187.33	26.37	6238.96
MW-4A		6255.85	15.00	6240.85	25.00	6230.85	25.00	6230.85	12.70	6243.15
MW-4B		6256.02	35.00	6221.02	50.00	6206.02	50.00	6206.02	17.20	6238.82
MW-4C		6256.32	59.00	6197.32	79.00	6177.32	79.00	6177.32	19.35	6236.97
MW-5A		6265.04	15.00	6250.04	25.00	6240.04	25.00	6240.04	13.75	6251.29
MW-5B		6265.18	35.00	6230.18	50.00	6215.18	50.00	6215.18	25.80	6239.38
MW-5C		6264.93	60.00	6204.93	79.50	6185.43	79.50	6185.43	26.50	6238.43
MW-5D		6265.19	120.00	6145.19	140.00	6125.19	140.00	6125.19	33.45	6231.74
MW-6A		6263.15	20.00	6243.15	30.00	6233.15	30.00	6233.15	21.55	6241.60
MW-6C		6263.27	69.50	6193.77	79.50	6183.77	80.00	6183.27	26.70	6236.57
MW-6D		6263.09	120.00	6143.09	140.00	6123.09	140.00	6123.09	32.11	6230.98
MW-7A		6251.61	15.00	6236.61	25.00	6226.61	25.00	6226.61	13.25	6238.36
MW-7C		6251.12	70.00	6181.12	80.00	6171.12	80.00	6171.12	19.81	6231.31
MW-7D		6251.25	120.00	6131.25	140.00	6111.25	140.00	6111.25	20.85	6230.60
EW-2D		6265.41	120.00	6145.41	140.00	6125.41	140.00	6125.41		
EW-4A		6261.62	15.00	6246.62	30.00	6231.62	30.00	6231.62	19.81	6241.81
EW-4C		6261.83	60.00	6201.83	77.50	6184.33	77.50	6184.33	27.60	6234.23
EW-4D		6261.68	120.00	6141.68	140.00	6121.68	140.00	6121.68	31.10	6230.58
EW-5A		6262.35	15.00	6247.35	30.00	6232.35	30.00	6232.35	21.00	6241.35
EW-5C		6262.16	58.50	6203.66	78.50	6183.66	78.50	6183.66	27.65	6234.51
EW-5D		6262.30	105.00	6157.30	115.00	6147.30	115.00	6147.30	31.10	6231.20
DVE-1			15.00		30.00		30.00		20.50	
DVE-2		6265.00	15.00	6250.00	30.00	6235.00	30.00	6235.00	21.00	6244.00
DVE-3		6265.80	15.00	6250.80	23.00	6242.80	23.00	6242.80	17.65	6248.15
DVE-4		6265.11	15.00	6250.11	25.00	6240.11	25.00	6240.11	21.50	6243.61



<b>PROJECT: Hurzel Properties, LLC</b> <b>LOCATION: 949 Emerald Bay Drive, South Lake Tahoe</b> <b>PROJECT NUMBER:</b>	<b>WELL / PROBEHOLE / BOREHOLE NO:</b> <div style="text-align: center; font-size: 1.2em;"><b>MW-3</b></div> PAGE 1 OF 1
<b>DRILLING: STARTED 11/6/07 COMPLETED: 11/6/07</b> <b>INSTALLATION: STARTED 11/6/07 COMPLETED: 11/6/07</b> <b>DRILLING COMPANY: Gregg Drilling</b> <b>DRILLING EQUIPMENT:</b> <b>DRILLING METHOD: Hollow Stem Auger</b> <b>SAMPLING EQUIPMENT: Continuous Core</b>	<b>NORTHING (ft):</b> <b>LATITUDE: 38° 54' 54.7986"</b> <b>GROUND ELEV (ft):</b> <b>INITIAL DTW (ft): 12 11/6/07</b> <b>STATIC DTW (ft): NE</b> <b>WELL CASING DIAMETER (in): 2</b> <b>LOGGED BY: E. Farrar</b>
	<b>EASTING (ft):</b> <b>LONGITUDE: 120° 0' 19.677"</b> <b>TOC ELEV (ft): 6265.13</b> <b>BOREHOLE DEPTH (ft): 24.0</b> <b>WELL DEPTH (ft): 24.0</b> <b>BOREHOLE DIAMETER (in): 8</b> <b>CHECKED BY: J. Collins</b>

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
1130		SM	<b>SILTY SAND WITH GRAVEL; SM; reddish brown; loose; dry; gravel to 1", iron oxide staining at 8'</b>						5	
10		SW	<b>SAND WITH SILT AND GRAVEL; SW; grayish brown; dense; moist to wet; gravel to 1", sampler refused at 20'</b>						10	
15									15	
20			Soil logging terminated at 20 feet.						20	
			Hole terminated at 24 feet.							

GEO FORM 304 FROST-HURZEL GPJ SECOR INTL GDT 6/2/08

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**APPENDIX C**

**Field Data Sheets**

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Lukins - 10/28/15 - 6043271

# Purge Log

Location: Lukins - Patricia Lane @ Southshore - shallow well Purge Method: peristaltic pump

Purge Rate (GPM): 1/6 GPM Required Purge Volume: 3 gal

Sampler Initials: pm B Water Level Meter #: 11858

1020 Samples PATHSS-S

Time	Volume Purged	Temp °C	pH	Conductivity mS/cm	Turbidity	D.O. (ppm) mg/L	ORP mV	Comments
0928	0	11.52	5.27	0.343	536	7.47	226	light tan odorless
0932	1	11.70	5.33	0.383	526	7.81	233	↓
0937	2	11.66	5.31	0.398	355	7.67	242	↓ WL = 16.80
0943	3	11.60	5.32	0.390	275	7.27	249	turbidity ↓ not stable, cont. purge
0949	4	11.60	5.32	0.409	107	7.05	255	↓
0955	5	11.61	5.32	0.394	40.3	6.95	260	nearly clear, colorless, odorless WL = 16.81

Event 1

TD = 22.4  
 initial water level = 16.22

## Site Calibration Log

Turbidity Meter #: L Rowmc 70	
Initial (NTU)	Adjusted Reading (NTU)
0854	Auto cal
0854	Auto cal

pH Meter #:	Time	pH Readings Initial		pH Readings Adjusted	
		pH 7.0	pH 10.0	pH 7.0	pH 10.0
L Rowmc 70	0854	Auto cal			
Horiba U-52					
Post Check					

Conductivity Meter #:	Time	Conductivity Initial			Conductivity Adjusted		
		70µs	700µs	1410µs	70µs	700µs	1410µs
L Rowmc 70	0854	Auto cal					
Post Check							

D.O. Meter #: L Rowmc 70	
Diss. Oxy	
Initial	Adjusted
9.38	11.30

1001	6	11.62	5.33	0.398	0.0	6.71	265	clear, colorless, odorless
1009	7	11.61	5.33	0.398	10.5	6.48	270	↓
1013	8	11.64	5.33	0.395	9.8	6.33	272	↓

# LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: Bev Mo property, 949 Emerald Bay Rd CONSULTING FIRM: RWQCB  
 DATE: 10/30/15 FIELD PERSONNEL: L. Dernbach  
 WEATHER: clear

MONITOR WELL #: Hurzel-N WELL DEPTH: 24 ft SCREENED/OPEN INTERVAL: 9 to 24 ft  
 WELL PERMIT #: (mw-4) WELL DIAMETER: 2 inches mud inside well vault

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 14.5 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
12:20	✓		6.4	NA		NA		NA	0.9	NA		NA	62.8	NA	<250/ml	14.5'
12:25	✓								0.8				62.4			
12:35	✓								0.9				62.6			

COMMENTS: water got muddier with purging

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

# LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: 933 Eloise Ave  
 DATE: 10/30/15  
 WEATHER: Clear

CONSULTING FIRM: RWQCB  
 FIELD PERSONNEL: L. Dernbach

MONITOR WELL #: MW-4B WELL DEPTH: 50 ft SCREENED/OPEN INTERVAL: 35 to 50 ft  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1330			6.6	NA		NA		NA	0.8	NA		NA	60.6	NA	>250/ml	18.8'
1340			}						0.7				60.7			
1350									0.7					60.6		

COMMENTS: Very clean sample

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

# LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: 933 Eloise Ave  
 DATE: 10/30/15  
 WEATHER: clear

CONSULTING FIRM: RWQCB  
 FIELD PERSONNEL: L. Dernbach

MONITOR WELL #: MW-4A WELL DEPTH: 25 ft SCREENED/OPEN INTERVAL: 15 to 25 ft  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1405			6.4	NA		NA		NA	0.7	NA		NA	61.8	NA	>250/ml	18.7'
1410			S						0.8				62.0			
1415									0.8				61.7			

COMMENTS: clear samples

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

# LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: 883 Eloise Ave  
 DATE: 10/30/15  
 WEATHER: clear

CONSULTING FIRM: RWD CB  
 FIELD PERSONNEL: L. Dernbach

MONITOR WELL #: EW-4B WELL DEPTH: 77.5 ft  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 Inches

SCREENED/OPEN INTERVAL: 60 - 77.5 ft

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_  
 BENEATH OUTER CAP: \_\_\_\_\_  
 BENEATH INNER CAP: \_\_\_\_\_

PUMP INTAKE DEPTH:      ft below TOC  
 DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1400			6.7	NA		NA		NA	.7	NA		NA	59.2	NA	250/ml	29.6'
1410			S						.7				59.6			
1415									.7				59.7			

COMMENTS: slightly turbid sample

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity



# LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

883  
 SITE: 912 Eloise Ave  
 DATE: 10/30/15  
 WEATHER: clear

CONSULTING FIRM: RWQCB  
 FIELD PERSONNEL: L. Dernbach

MONITOR WELL #: EW-4A WELL DEPTH: 30 ft SCREENED/OPEN INTERVAL: 15 to 30 ft  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ *mud inside well vault*

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1425			6.5	NA		NA		NA	0.8	NA		NA	62.4	NA	< 250/ml	19.2'
1430			5						0.8				62.5			
1435									0.8				62.5			

COMMENTS: *water got muddier with purging*

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity



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**APPENDIX D**

**Laboratory Analytical Reports  
with QA/QC Review**

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## **Introduction**

This section summarizes the quality assurance effort and quality control (QC) results for the samples collected and data generated for Lukins. Based on the data review, all data collected and analyzed during this period are of known and acceptable quality in relation to the data quality objectives of this project. All data are considered usable, as qualified, for the intended purposes.

Groundwater samples were collected from 22 boreholes and 1 monitoring well at this site on 26 through 29 October and 12 through 13 November 2015 and analyzed for the following constituents:

- Gasoline by United States Environmental Protection Agency (EPA) Method SW8015B
- Diesel by EPA Method SW8015B
- Volatile organic compounds (VOCs) by EPA Method SW8260B

Two composite soil samples and two purge water samples were also collected and analyzed for the above analytes and lead by EPA Method SW6010B. These samples were collected for waste disposal characterization only.

All analyses were performed by Curtis & Tompkins in Berkeley, California. Data were reviewed and qualified by AECOM using the laboratory control limits for each method. Precision and accuracy were evaluated from field and laboratory QC samples. The calculated relative percent difference (RPD) from matrix spike (MS)/MS duplicate (MSD), laboratory control samples (LCSs)/LCS duplicates (LCSDs) and/or laboratory duplicate pairs provided information on the precision of chemical analyses and field sampling procedures. Evaluation of the percent recoveries of spiked analytes in LCSs, project-specific MSs, and surrogate spikes were used to evaluate accuracy. External contamination was assessed through the evaluation of method blanks (MBs) and trip blanks (TBs) for volatile methods. Comparability of the data was ensured by having project personnel follow standardized field procedures and having laboratories follow analytical methods and standard operating procedures. The completeness of the data is measured by the percentage of valid data for each method and matrix. Completeness and integrity of data were evaluated by validating all project data, ensuring that all analytical requests were met, noting whether samples were received in proper condition, and verification that analyses were performed within the appropriate holding times.

The analytical results can be used with the following exceptions. Data results qualified with a “UJ” indicate that the analyte was not detected and the reporting limit is estimated. There is a potential for false negative results. Results qualified with a “J” indicate the presence of the analyte; however, the result is considered an estimated concentration. Results qualified with a “J+” are considered potentially high biased concentrations. Table 1 lists all qualified results.

A total of 317 results (including field duplicate samples) are qualified. The following summarize the qualified results by method:

- Method SW6010B (Lead) – No results are qualified and the data can be used as reported. This analysis was used only for investigation-derived waste characterization.
- Method SW8015B (Diesel) – A total of 30 results are qualified. Nineteen results are qualified as estimated concentrations (J) because the petroleum pattern did not match the diesel standard pattern use for quantitation. Two of these 19 are also qualified for field duplicate imprecision. Nine results are qualified for potential high bias (J+) because of potential blank contamination

and the chromatographic pattern did not match diesel. Two additional not detected results are qualified for field duplicate imprecision (UJ).

- Method SW8015B (Gasoline) – A total of 19 results are qualified. Fifteen results (2 detected [J-] and 13 not detected [UJ]) are qualified because the sample was analyzed using a container with headspace greater than 6 millimeters. The two detected results are also qualified because the petroleum pattern did not match the gasoline standard used for quantitation. Four additional results are qualified only because the petroleum pattern did not match the gasoline standard used for quantitation.
- Method SW8260B (VOCs) – A total of 268 results are qualified for potential low bias (J-) (266 results) or potential for false negative results (UJ) (2 results) because the sample was analyzed using a container with headspace greater than 6 millimeters.

### **Summary of Data Usability**

Based on the validation performed, all data for this effort are acceptable and can be used for data interpretation with the limitations of potential biased data. Data qualified as estimated can be used for interpretation (modeling or risk assessment) as long as the associated data qualifier flags are considered. The number of qualified results and percent completeness is presented in Table 2.

### **Quality Control Results**

QC results of the samples collected concluded that all of the data produced are usable. There are no rejected results. However, gasoline range organic results from 15 samples (including the field duplicate) and VOCs for 4 samples are qualified for potential low bias and/or false negative results; these samples were analyzed from containers where there was noted headspace.

### **External Contamination**

Laboratory contamination was assessed by the use of MBs for all methods and TBs for gasoline and VOCs. MBs are processed through the same analytical procedures as the associated samples. MBs are analyzed with each batch of samples to provide information on contamination originating in the analytical process. No target analytes were detected in TBs. Diesel was detected in MBs and associated samples are qualified for potential high bias.

### **Precision and Accuracy**

Precision and accuracy were evaluated based on the results of QC samples (LCSs/LCSDs, MS/MSDs, laboratory duplicates and surrogate spikes). The calculated RPD for MS/MSDs and laboratory duplicates provided information on the precision of sampling and analytical procedures. All data were reviewed for accuracy based surrogate spike, MSs, and LCS percent recoveries. Laboratory criteria were used for the evaluation.

### **Representativeness**

Representativeness was evaluated through the use of standard sampling and analytical procedures that meet required data quality objectives. Representativeness is also influenced by appropriate sample collection and handling, as well as sample locations and frequency. All sample bottles were received in good condition as received as noted on the chain-of-custody. The review of field QC samples is also used to determine the representativeness of the data set.

## **Completeness**

Completeness is quantitatively defined as the percentage of measurements that are determined useable compared to the total number of measurements planned. Completeness of data was evaluated by assuring that all analytical requests were met, samples were received in proper condition, and all analyses were performed using the correct method within the appropriate holding times.

## **Comparability**

Comparability is a quantitative objective that expresses the confidence with which one data set can be compared to another for similar samples and sample conditions. It is also evaluated using precision and bias. Comparability was evaluated for this sampling event by analyzing all samples according to the specified EPA analytical methods, which use standard units of measurement.

**Table 1. Qualified Data**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>M8015D</b>								
11/13/15 15:00	COMP-1-NS	Diesel	24	mg/kg	J	6H	0.35	1.1
11/13/15 15:00	COMP-2-NS	Diesel	31	mg/kg	J	6H	0.35	1.1
11/13/15 9:20	SB-02-24-NS	Diesel	61	µg/L	J	6H	16	50
10/30/15 11:15	SB-03-24-FD	Diesel	140	µg/L	J	3D,6H	16	50
10/30/15 11:15	SB-03-24-NS	Diesel	0	µg/L	UJ	3D	16	50
11/12/15 10:05	SB-04-18-NS	Diesel	52	µg/L	J	6H	16	50
10/30/15 9:10	SB-06-24-NS	Diesel	260	µg/L	J	6H	21	63
10/28/15 9:00	SB-07-16-NS	Diesel	78	µg/L	J	6H	19	59
10/28/15 9:40	SB-07-26-NS	Diesel	66	µg/L	J	6H	21	63
10/28/15 12:50	SB-10-16-NS	Diesel	190	µg/L	J	6H	23	69
10/28/15 13:25	SB-10-26-NS	Diesel	97	µg/L	J	6H	21	64
10/29/15 13:15	SB-12-12-NS	Diesel	140	µg/L	J	6H	21	63
10/27/15 15:20	SB-13-16-NS	Diesel	260	µg/L	J	6H	17	52
10/27/15 15:45	SB-13-26-NS	Diesel	380	µg/L	J	6H	17	52
10/27/15 12:30	SB-14-20-NS	Diesel	130	µg/L	J+	1A,6H	16	50
10/27/15 12:30	SB-14-20-FD	Diesel	130	µg/L	J+	1A,6H	16	50
10/27/15 14:00	SB-14-30-NS	Diesel	150	µg/L	J+	1A,6H	16	50
10/27/15 9:15	SB-15-20-NS	Diesel	60	µg/L	J+	1A,6H	16	50
10/27/15 10:00	SB-15-30-NS	Diesel	370	µg/L	J	6H	16	50
10/26/15 15:45	SB-16-20-NS	Diesel	180	µg/L	J+	1A,6H	16	50
10/26/15 16:20	SB-16-30-NS	Diesel	99	µg/L	J+	1A,6H	16	50
10/26/15 13:00	SB-17-20-NS	Diesel	210	µg/L	J+	1A,6H	16	50
10/26/15 13:45	SB-17-30-NS	Diesel	150	µg/L	J+	1A,6H	16	50
10/26/15 10:15	SB-19-26-NS	Diesel	170	µg/L	J+	1A,6H	16	50
10/26/15 10:50	SB-19-36-NS	Diesel	220	µg/L	J	6H	16	50
11/13/15 13:30	SB-20-32-NS	Diesel	62	µg/L	J	6H	16	50
11/12/15 13:50	SB-21-20-FD	Diesel	0	µg/L	UJ	3D	16	50
11/12/15 13:50	SB-21-20-NS	Diesel	130	µg/L	J	3D,6H	16	50
11/13/15 10:50	SB-22-20-NS	Diesel	62	µg/L	J	6H	16	50
11/13/15 11:30	SB-22-32-NS	Diesel	190	µg/L	J	6H	16	50
<b>M8015V</b>								
11/13/15 9:20	SB-02-24-NS	Gasoline	0	µg/L	UJ	4A	11	50
10/28/15 9:00	SB-07-16-NS	Gasoline	0	µg/L	UJ	4A	11	50

Table 1. (Continued)

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>M8015V (cont'd)</b>								
10/28/15 9:40	SB-07-26-NS	Gasoline	0	µg/L	UJ	4A	11	50
10/28/15 12:50	SB-10-16-NS	Gasoline	170	µg/L	J	6H	13	50
10/28/15 16:50	SB-11-22-NS	Gasoline	0	µg/L	UJ	4A	13	50
10/29/15 13:15	SB-12-12-NS	Gasoline	51	µg/L	J	6H	13	50
10/27/15 15:20	SB-13-16-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/27/15 15:45	SB-13-26-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/27/15 12:30	SB-14-20-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/27/15 12:30	SB-14-20-FD	Gasoline	0	µg/L	UJ	4A	5.7	50
10/27/15 14:00	SB-14-30-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/27/15 10:00	SB-15-30-NS	Gasoline	53	µg/L	J-	4A,6H	5.7	50
10/26/15 16:20	SB-16-30-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/26/15 13:45	SB-17-30-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/29/15 15:30	SB-18-12-NS	Gasoline	56	µg/L	J-	4A,6H	13	50
10/26/15 10:15	SB-19-26-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
10/26/15 10:50	SB-19-36-NS	Gasoline	0	µg/L	UJ	4A	5.7	50
11/12/15 13:50	SB-21-20-NS	Gasoline	56	µg/L	J	6H	11	50
11/13/15 11:30	SB-22-32-NS	Gasoline	64	µg/L	J	6H	11	50
<b>SW8260B</b>								
10/27/15 10:00	SB-15-30-NS	1,1,1,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Dibromomethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Carbon Disulfide	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,1-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Dichlorodifluoromethane	0	µg/L	UJ	4A	0.1	1
10/27/15 10:00	SB-15-30-NS	Trichloroethylene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Isopropylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	n-Butyl Benzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	4-Methyl-2-pentanone (MIBK)	0	µg/L	UJ	4A	0.4	10
10/27/15 10:00	SB-15-30-NS	Chlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	tert-Butyl methyl ether	0.9	µg/L	J-	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	2-Hexanone	0	µg/L	UJ	4A	0.4	10
10/27/15 10:00	SB-15-30-NS	Chloromethane	0	µg/L	UJ	4A	0.1	1

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/27/15 10:00	SB-15-30-NS	Bromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,1-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Trichlorofluoromethane	0	µg/L	UJ	4A	0.1	1
10/27/15 10:00	SB-15-30-NS	1,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	2-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	trans 1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,3,5-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Toluene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,3-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	trans 1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	2,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2-Dibromo-3-chloropropane	0	µg/L	UJ	4A	0.3	2
10/27/15 10:00	SB-15-30-NS	1,2,3-Trichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Styrene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	n-Propylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2-Dibromoethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2,4-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	cis-1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Bromoform	0	µg/L	UJ	4A	0.1	1
10/27/15 10:00	SB-15-30-NS	2-Butanone (MEK)	0	µg/L	UJ	4A	0.6	10
10/27/15 10:00	SB-15-30-NS	1,1,2-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Ethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	4-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,4-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Vinyl Acetate	0	µg/L	UJ	4A	0.9	10
10/27/15 10:00	SB-15-30-NS	Bromobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Dibromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Tetrachloroethene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Carbon tetrachloride	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,1-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Methylene Chloride	0	µg/L	UJ	4A	0.1	10
10/27/15 10:00	SB-15-30-NS	Bromodichloromethane	0	µg/L	UJ	4A	0.1	0.5

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/27/15 10:00	SB-15-30-NS	1,2,4-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,3-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,1,1-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,1,2,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Hexachlorobutadiene	0	µg/L	UJ	4A	0.1	2
10/27/15 10:00	SB-15-30-NS	o-Xylene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	tert-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	sec-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Acetone	11	µg/L	J-	4A	3.3	10
10/27/15 10:00	SB-15-30-NS	Benzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Chloroethane	0	µg/L	UJ	4A	0.2	1
10/27/15 10:00	SB-15-30-NS	Vinyl Chloride	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	1,2,3-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	cis-1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Chloroform	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	Bromomethane	0	µg/L	UJ	4A	0.1	1
10/27/15 10:00	SB-15-30-NS	1,1,2-Trichloro-1,2,2-trifluoroethane	0	µg/L	UJ	4A	0.1	2
10/27/15 10:00	SB-15-30-NS	Naphthalene	0	µg/L	UJ	4A	0.1	2
10/27/15 10:00	SB-15-30-NS	p-Isopropyltoluene	0	µg/L	UJ	4A	0.1	0.5
10/27/15 10:00	SB-15-30-NS	m,p-Xylenes	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,4-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Vinyl Acetate	0	µg/L	UJ	4A	0.9	10
10/26/15 13:45	SB-17-30-NS	1,3,5-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	cis-1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Bromoform	0	µg/L	UJ	4A	0.1	1
10/26/15 13:45	SB-17-30-NS	1,1,2,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Isopropylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Toluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Vinyl Chloride	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Methylene Chloride	0	µg/L	UJ	4A	0.1	10
10/26/15 13:45	SB-17-30-NS	Carbon Disulfide	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Trichlorofluoromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 13:45	SB-17-30-NS	1,1,2-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5



**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/26/15 13:45	SB-17-30-NS	2-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2-Dibromo-3-chloropropane	0	µg/L	UJ	4A	0.3	2
10/26/15 13:45	SB-17-30-NS	sec-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Bromodichloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2,4-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Ethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2,4-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	2-Hexanone	0	µg/L	UJ	4A	0.4	10
10/26/15 13:45	SB-17-30-NS	Chloroform	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Bromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Dichlorodifluoromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 13:45	SB-17-30-NS	Hexachlorobutadiene	0	µg/L	UJ	4A	0.1	2
10/26/15 13:45	SB-17-30-NS	1,2-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	cis-1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	trans 1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Dibromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,3-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	tert-Butyl methyl ether	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Carbon tetrachloride	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Acetone	0	µg/L	UJ	4A	3.3	10
10/26/15 13:45	SB-17-30-NS	Chloromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 13:45	SB-17-30-NS	Trichloroethylene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Naphthalene	0	µg/L	UJ	4A	0.1	2
10/26/15 13:45	SB-17-30-NS	tert-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Styrene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2-Dibromoethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	4-Methyl-2-pentanone (MIBK)	0	µg/L	UJ	4A	0.4	10
10/26/15 13:45	SB-17-30-NS	Bromobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Chlorobenzene	0	µg/L	UJ	4A	0.1	0.5

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/26/15 13:45	SB-17-30-NS	Tetrachloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	trans 1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	2,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Benzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Bromomethane	0	µg/L	UJ	4A	0.1	1
10/26/15 13:45	SB-17-30-NS	Chloroethane	0	µg/L	UJ	4A	0.2	1
10/26/15 13:45	SB-17-30-NS	1,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	2-Butanone (MEK)	0	µg/L	UJ	4A	0.6	10
10/26/15 13:45	SB-17-30-NS	1,2,3-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	p-Isopropyltoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	n-Propylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	n-Butyl Benzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	4-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1,1,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1,2-Trichloro-1,2,2-trifluoroethane	0	µg/L	UJ	4A	0.1	2
10/26/15 13:45	SB-17-30-NS	m,p-Xylenes	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,3-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,1,1-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	Dibromomethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	o-Xylene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 13:45	SB-17-30-NS	1,2,3-Trichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	4-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	sec-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,3-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	cis-1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Dichlorodifluoromethane	0	µg/L	UJ	4A	0.2	1
10/29/15 15:30	SB-18-12-NS	1,2,3-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Styrene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	n-Propylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	2-Hexanone	0	µg/L	UJ	4A	0.2	10
10/29/15 15:30	SB-18-12-NS	2,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Vinyl Chloride	0	µg/L	UJ	4A	0.2	0.5

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/29/15 15:30	SB-18-12-NS	Bromoform	0	µg/L	UJ	4A	0.1	1
10/29/15 15:30	SB-18-12-NS	Trichlorofluoromethane	0	µg/L	UJ	4A	0.1	1
10/29/15 15:30	SB-18-12-NS	1,2,3-Trichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Ethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,4-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,3,5-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2,4-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1,1,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Benzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Dibromomethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Chloroethane	0	µg/L	UJ	4A	0.2	1
10/29/15 15:30	SB-18-12-NS	Trichloroethylene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1,2,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2,4-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	n-Butyl Benzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Toluene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Dibromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Tetrachloroethene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	trans 1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Carbon tetrachloride	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1,1-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Methylene Chloride	0	µg/L	UJ	4A	0.1	10
10/29/15 15:30	SB-18-12-NS	Carbon Disulfide	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1,2-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	2-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Vinyl Acetate	0	µg/L	UJ	4A	0.3	10
10/29/15 15:30	SB-18-12-NS	tert-Butyl methyl ether	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,3-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Chloroform	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Bromomethane	0	µg/L	UJ	4A	0.2	1
10/29/15 15:30	SB-18-12-NS	1,1,2-Trichloro-1,2,2-trifluoroethane	0	µg/L	UJ	4A	0.2	2
10/29/15 15:30	SB-18-12-NS	1,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	2-Butanone (MEK)	0	µg/L	UJ	4A	0.4	10

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/29/15 15:30	SB-18-12-NS	tert-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Isopropylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	p-Isopropyltoluene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Bromobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,1-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	trans 1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	4-Methyl-2-pentanone (MIBK)	0	µg/L	UJ	4A	0.1	10
10/29/15 15:30	SB-18-12-NS	Chloromethane	0	µg/L	UJ	4A	0.1	1
10/29/15 15:30	SB-18-12-NS	Hexachlorobutadiene	0	µg/L	UJ	4A	0.3	2
10/29/15 15:30	SB-18-12-NS	m,p-Xylenes	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	cis-1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2-Dibromoethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Chlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Acetone	0	µg/L	UJ	4A	3.3	10
10/29/15 15:30	SB-18-12-NS	Bromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Bromodichloromethane	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	Naphthalene	0	µg/L	UJ	4A	0.1	2
10/29/15 15:30	SB-18-12-NS	o-Xylene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/29/15 15:30	SB-18-12-NS	1,2-Dibromo-3-chloropropane	0	µg/L	UJ	4A	0.3	2
10/26/15 10:15	SB-19-26-NS	n-Propylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	4-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,3,5-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Toluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	tert-Butyl methyl ether	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	2-Hexanone	0	µg/L	UJ	4A	0.4	10
10/26/15 10:15	SB-19-26-NS	Acetone	0	µg/L	UJ	4A	3.3	10
10/26/15 10:15	SB-19-26-NS	Chloroform	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1,2,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/26/15 10:15	SB-19-26-NS	o-Xylene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2,4-Trimethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2-Dibromo-3-chloropropane	0	µg/L	UJ	4A	0.3	2
10/26/15 10:15	SB-19-26-NS	Ethylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Vinyl Acetate	0	µg/L	UJ	4A	0.9	10
10/26/15 10:15	SB-19-26-NS	Bromobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Chlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	cis-1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Methylene Chloride	0	µg/L	UJ	4A	0.1	10
10/26/15 10:15	SB-19-26-NS	2-Butanone (MEK)	0	µg/L	UJ	4A	0.6	10
10/26/15 10:15	SB-19-26-NS	Trichloroethylene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,4-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	4-Methyl-2-pentanone (MIBK)	0	µg/L	UJ	4A	0.4	10
10/26/15 10:15	SB-19-26-NS	1,2,4-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Tetrachloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,3-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1,1,2-Tetrachloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2,3-Trichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	2-Chlorotoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	cis-1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	sec-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Carbon tetrachloride	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1,1-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Bromomethane	0	µg/L	UJ	4A	0.1	1
10/26/15 10:15	SB-19-26-NS	Vinyl Chloride	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Dichlorodifluoromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 10:15	SB-19-26-NS	Hexachlorobutadiene	0	µg/L	UJ	4A	0.1	2
10/26/15 10:15	SB-19-26-NS	1,2-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Dibromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,3-Dichlorobenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2,3-Trichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2-Dibromoethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,2-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5

**Table 1. (Continued)**

Sample Date	Sample Name	Analyte	Result	Unit	EPA Flag	Reason	DL	RL
<b>SW8260B (cont'd)</b>								
10/26/15 10:15	SB-19-26-NS	trans 1,2-Dichloroethene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Dibromomethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Bromodichloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Trichlorofluoromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 10:15	SB-19-26-NS	1,1,2-Trichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	trans 1,3-Dichloropropene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Styrene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	n-Butyl Benzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	2,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Benzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Bromochloromethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Carbon Disulfide	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	1,1,2-Trichloro-1,2,2-trifluoroethane	0	µg/L	UJ	4A	0.1	2
10/26/15 10:15	SB-19-26-NS	1,2-Dichloropropane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	tert-Butylbenzene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	p-Isopropyltoluene	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	m,p-Xylenes	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Chloromethane	0	µg/L	UJ	4A	0.1	1
10/26/15 10:15	SB-19-26-NS	Chloroethane	0	µg/L	UJ	4A	0.2	1
10/26/15 10:15	SB-19-26-NS	Bromoform	0	µg/L	UJ	4A	0.1	1
10/26/15 10:15	SB-19-26-NS	1,1-Dichloroethane	0	µg/L	UJ	4A	0.1	0.5
10/26/15 10:15	SB-19-26-NS	Naphthalene	0	µg/L	UJ	4A	0.1	2
10/26/15 10:15	SB-19-26-NS	Isopropylbenzene	0	µg/L	UJ	4A	0.1	0.5

DL	=	detection limit	1A	=	associated with blank contamination
EPA	=	United States Environmental Protection Agency	3D	=	field duplicate imprecision
J	=	estimated result	4A	=	sample integrity issues
J+	=	estimated result; potential for high bias	6H	=	chromatogram does not resemble the standard chromatogram
J-	=	estimated result; potential for low bias			
mg/kg	=	milligrams per kilogram			
RL	=	reporting limit			
UJ	=	estimated reporting limit (analyte not detected); potential for false negative result			
µg/L	=	micrograms per liter			

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**Table 2. Method Completeness**

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<b>Method</b>	<b>Number of Samples</b>	<b>Number of Analytes</b>	<b>Total Number of Results</b>	<b>Number of Qualified Results</b>	<b>Number of Rejected Results</b>	<b>Percent Completeness<sup>a</sup></b>
SW8015-diesel	49	1	49	30	0	100
M8015V	49	1	49	19	0	100
SW8260B	49	67	3,283	268	0	100

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<sup>a</sup> Percent of results (field duplicate samples included) that are not qualified as unusable (rejected).

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2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 271127
ANALYTICAL REPORT

URS Corporation
2870 Gateway Oaks Drive
Sacramento, CA 95833

Project : RWQCB PCE LUKIN
Location : RWQCB PCE LUKIN
Level : III

Table with 2 columns: Sample ID, Lab ID. Rows include SB-13-16-NS, SB-13-26-NS, SB-14-20-FD, SB-14-20-NS, SB-14-30-NS, SB-15-20-NS, SB-15-30-NS, SB-16-20-NS, SB-16-30-NS, SB-17-20-NS, SB-17-30-NS, SB-19-26-NS, SB-19-36-NS.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 11/12/2015

### CASE NARRATIVE

Laboratory number: 271127  
Client: URS Corporation  
Project: RWQCB PCE LUKIN  
Location: RWQCB PCE LUKIN  
Request Date: 10/29/15  
Samples Received: 10/29/15

This data package contains sample and QC results for thirteen water samples, requested for the above referenced project on 10/29/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B):**

SB-15-30-NS (lab # 271127-007) was analyzed with more than 1 mL of headspace in the VOA vial.

No other analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

Diesel C10-C24 was detected between the MDL and the RL in the method blank for batch 228909.

No other analytical problems were encountered.

**Volatile Organics by GC/MS (EPA 8260B):**

High response was observed for vinyl acetate in the CCV analyzed 11/02/15 11:58; this analyte was not detected at or above the RL in the associated samples.

SB-15-30-NS (lab # 271127-007) was analyzed with more than 1 mL of headspace in the VOA vial.

SB-15-30-NS (lab # 271127-007) had pH greater than 2.

SB-15-30-NS (lab # 271127-007) had multiple vials combined due to sediment.

No other analytical problems were encountered.

## Chain of Custody

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK



2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409792

271127

TASK OR SUB TASK (one per form): **RWQCB PCE LUKIN**  
 LABORATORY NAME AND ADDRESS:  
**Curtis & Tompkins, Berkeley, CA**

CONTRACT NAME:

CHARGE NUMBER: **80443271.2**

SAMPLE NUMBER	COLLECTION		NUMBER OF UNITS	CONTAINER TYPE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME				
1 SB-13-16-NS	10/27/15	15:20 BK	2.00	1 L Amber Glass	WG NONE	SW8015D
SB-13-16-NS			3.00	40 ml VOA	WG HCL	SW8015G
SB-13-16-NS			3.00	40 ml VOA	WG HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>Be...</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>R...</i>	10/29/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
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# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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409793

TASK OR SUB TASK (one per form):  
 RWQCB PCE LUKIN  
 LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA  
 CONTRACT NAME:  
 CHARGE NUMBER: 804432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
2 SB-13-26-NS	10/27/15	15:15	LSR	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-13-26-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8015G
SB-13-26-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8280B

RELEASED BY	DATE	TIME	COOLER ID:
<i>TS</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>LS</i>	10/29/15	10:10	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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409794

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
3 SB-14-20-FD	10/27/15	030	UV	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-14-20-FD				3.00	40 ml VOA	WG	HCL	SW8015G
SB-14-20-FD				3.00	40 ml VOA	WG	HCL	SW8260B
4 SB-14-20-NS				2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-14-20-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-14-20-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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409795



TASK OR SUB TASK (one per form):  
**RWQCB PCE LUKIN**  
 LABORATORY NAME AND ADDRESS:  
**Curtis & Tompkins, Berkeley, CA**

CONTRACT NAME:  
 CHARGE NUMBER: **604432712**

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
5 SB-14-30-NS	10/27/15	1420	Bf	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-14-30-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-14-30-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	1530	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/28/15	10:04	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

**CHAIN OF CUSTODY RECORD**  
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409796

TASK OR SUB TASK (one per form):  
 RWQCB PCE LUKIN  
 LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA  
 CONTRACT NAME:  
 CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
6 SB-15-20-NS	10/27/15	06:15	WJ	3.00	1 L Amber Glass	WG	NONE	SW8015D M
SB-15-20-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-15-20-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>WJ</i>	10/27/15	08:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>RW</i>	10/28/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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409797

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
7 SB-15-30-NS	10/27/15	10:00 AM	LL	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-15-30-NS			LL	3.00	40 ml VOA	WG	HCL	SW8015G
SB-15-30-NS			LL	3.00	40 ml VOA	WG	HCL	SW8250B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	10:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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409798

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 804432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
8 SB-16-20-NS	10/26/15	15:45	bjk	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-16-20-NS	↓	↓	↓	3.00	40 ml VOA	WG	HCL	SW8015G
SB-16-20-NS	↓	↓	↓	3.00	40 ml VOA	WG	HCL	SW8280B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/27/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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409799

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
9 SB-16-30-NS	10/26/15	10:00	BP	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-16-30-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8015G
SB-16-30-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /

**CHAIN OF CUSTODY RECORD**  
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409800

TASK OR SUB TASK (one per form): **RWQCB PCE LUKIN**  
 LABORATORY NAME AND ADDRESS:  
**Curtis & Tompkins, Berkeley, CA**

CONTRACT NAME:

CHARGE NUMBER: **60443271.2**

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
10 SB-17-20-NS	10/27/15	13:00	dk	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-17-20-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-17-20-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/27/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /



# CHAIN OF CUSTODY RECORD

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SACRAMENTO, CA 95833  
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FAX (916) 679-2900

409801

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
11 SB-17-30 -NS	10/24/15	13:45	1912	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-17-30 -NS				5.00	40 ml VOA	WG	HCL	SW8015G
SB-17-30 -NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	19:40	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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PH. (916) 679-2000  
FAX (916) 679-2900

409804



TASK OR SUB TASK (one per form):  
 RWQCB PCE LUKIN  
 LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:  
 CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
12 SB-19-26-NS	10/26/15	1015	BLK	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-19-26-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-19-26-NS				5.00	40 ml VOA	WG	HCL	SW8260B

M

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

409805

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

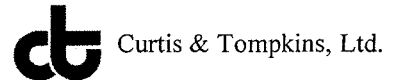
CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
13 SB-19-36-NS	10/26/15	1050	BR	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-19-36-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8015G
SB-19-36-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/27/15	18:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	16:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

COOLER RECEIPT CHECKLIST



Login # 271127 Date Received 10/29/15 Number of coolers 2
Client URS Project RWQCB PCE LUKIN

Date Opened 10/29 By (print) CN (sign) [Signature]
Date Logged in 10/30 By (print) BL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) Fed Ex YES NO CN
Shipping info 7816 0004 1890

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many 2 Name BR Date 10/27/15

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 2.7°

Temperature blank(s) included? Thermometer IR Gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

9. 2 VOA containers for sample 2 arrived broken
20. 1 of 4 VOAs for sample 2 have bubbles > 6mm, 3 of 6 VOAs for sample 4 have bubbles > 6mm, 6 of 6 VOAs for samples 5 & 7 are > 6mm, 2 of 6 VOAs for sample 5 are > 6mm, 1 of 6 VOAs for sample 8 are > 6mm, 2 of 6 are > 6mm for sample 9, 8 of 8 are > 6mm for samples 11 and 12



### Detections Summary for 271127

Results for any subcontracted analyses are not included in this summary.

Client : URS Corporation  
 Project : RWQCB PCE LUKIN  
 Location : RWQCB PCE LUKIN

Client Sample ID : SB-13-16-NS                      Laboratory Sample ID :                      271127-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	260	Y	52	17	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-13-26-NS                      Laboratory Sample ID :                      271127-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	380	Y	52	17	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
1,2-Dichlorobenzene	0.6		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-14-20-FD                      Laboratory Sample ID :                      271127-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	130	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
1,1,1-Trichloroethane	1.1		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-14-20-NS                      Laboratory Sample ID :                      271127-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	130	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
1,1,1-Trichloroethane	1.2		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-14-30-NS                      Laboratory Sample ID :                      271127-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	150	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-15-20-NS                      Laboratory Sample ID :                      271127-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	60	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	2.8		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-15-30-NS

Laboratory Sample ID :

271127-007

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	53	Y	50		ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	370	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Acetone	11		10		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	0.9		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-16-20-NS

Laboratory Sample ID :

271127-008

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	180	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-16-30-NS

Laboratory Sample ID :

271127-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	99	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-17-20-NS

Laboratory Sample ID :

271127-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	210	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-17-30-NS

Laboratory Sample ID :

271127-011

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	150	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-19-26-NS

Laboratory Sample ID :

271127-012

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	170	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-19-36-NS

Laboratory Sample ID :

271127-013

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	220	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Tetrachloroethene	0.6		0.5		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Y = Sample exhibits chromatographic pattern which does not resemble standard

Laboratory Job Number 271127

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Water

Total Volatile Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228901
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000		

Field ID: SB-13-16-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                Analyzed: 10/30/15  
 Lab ID: 271127-001

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	80-132

Field ID: SB-13-26-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                Analyzed: 10/30/15  
 Lab ID: 271127-002

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	80-132

Field ID: SB-14-20-FD                      Sampled: 10/27/15  
 Type: SAMPLE                                Analyzed: 10/30/15  
 Lab ID: 271127-003

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	80-132

Field ID: SB-14-20-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                Analyzed: 10/31/15  
 Lab ID: 271127-004

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

### Total Volatile Hydrocarbons

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228901
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000		

Field ID: SB-14-30-NS	Sampled: 10/27/15
Type: SAMPLE	Analyzed: 10/31/15
Lab ID: 271127-005	

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Field ID: SB-15-20-NS	Sampled: 10/27/15
Type: SAMPLE	Analyzed: 10/31/15
Lab ID: 271127-006	

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Field ID: SB-15-30-NS	Sampled: 10/27/15
Type: SAMPLE	Analyzed: 10/31/15
Lab ID: 271127-007	

Analyte	Result	RL
Gasoline C7-C12	53 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-16-20-NS	Sampled: 10/26/15
Type: SAMPLE	Analyzed: 10/31/15
Lab ID: 271127-008	

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228901
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000		

Field ID: SB-16-30-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                      Analyzed: 10/31/15  
 Lab ID: 271127-009

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Field ID: SB-17-20-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                      Analyzed: 10/31/15  
 Lab ID: 271127-010

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

Field ID: SB-17-30-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                      Analyzed: 10/31/15  
 Lab ID: 271127-011

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Field ID: SB-19-26-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                      Analyzed: 10/31/15  
 Lab ID: 271127-012

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228901
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000		

Field ID:	SB-19-36-NS	Sampled:	10/26/15
Type:	SAMPLE	Analyzed:	10/31/15
Lab ID:	271127-013		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Type:	BLANK	Analyzed:	10/30/15
Lab ID:	QC810609		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC810608	Batch#:	228901
Matrix:	Water	Analyzed:	10/30/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,046	105	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	94	80-132



Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	228901
MSS Lab ID:	271076-001	Sampled:	10/29/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	10/30/15
Diln Fac:	1.000		

Type: MS Lab ID: QC810610

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	362.4	2,000	2,401	102	76-120

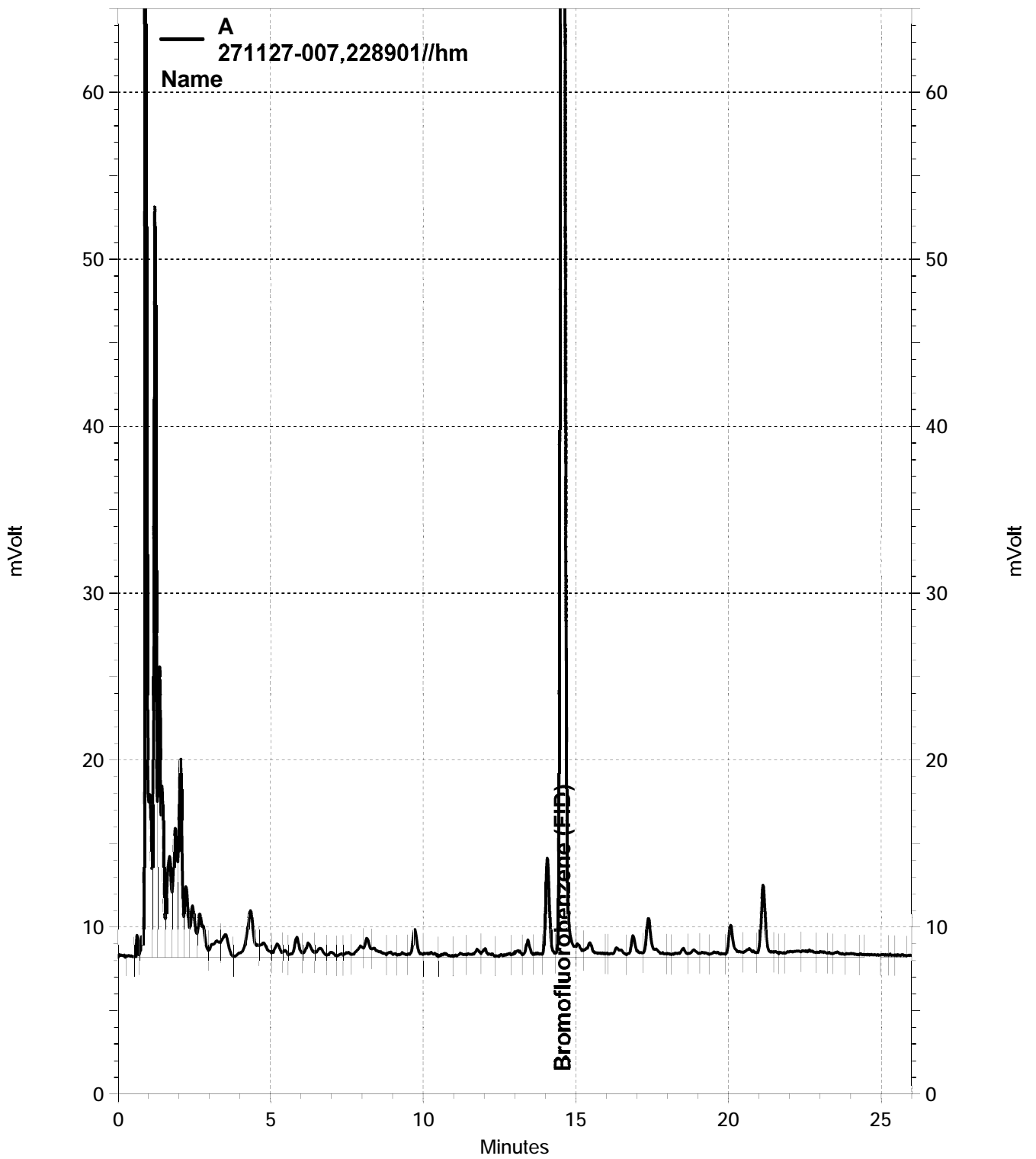
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Type: MSD Lab ID: QC810611

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,263	95	76-120	6	20

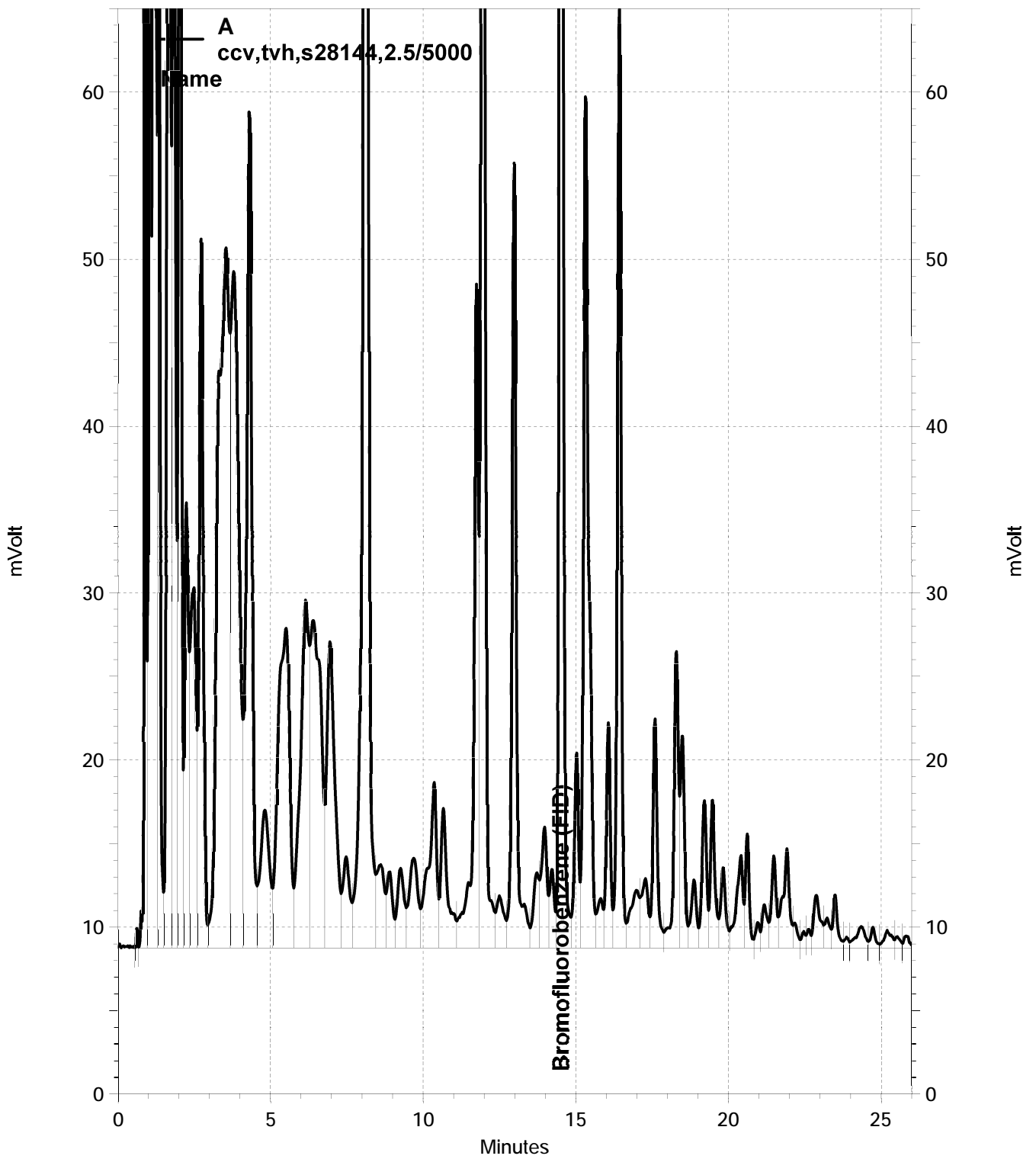
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	111	80-132

RPD= Relative Percent Difference



A  
271127-007,228901//hm  
Name

\\Lims\gdrive\ezchrom\Projects\GC19\Data\303-023, A



— \\Lims\gdrive\ezchrom\Projects\GC19\Data\303-003, A

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 GCVOA Water: EPA 8015B

Inst : GC19  
 Calnum : 345282641001  
 Units : ng

Name : tvh\_bfb196  
 Date : 15-JUL-2015 09:20  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	196_004	345282641004	TVH_14	15-JUL-2015 09:20	S27569 (1000X), S27207 (5000X)
L2	196_005	345282641005	TVH_15	15-JUL-2015 09:58	S27568 (1000X), S27207 (5000X)
L3	196_006	345282641006	TVH_16	15-JUL-2015 10:35	S27567 (1000X), S27207 (5000X)
L4	196_007	345282641007	TVH_17	15-JUL-2015 11:13	S27566 (2000X), S27207 (5000X)
L5	196_008	345282641008	TVH_18	15-JUL-2015 11:50	S27566 (1000X), S27207 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	2168.2	1852.1	1751.5	1836.8	1753.5	AVRG		5.34E-4		1872.4	9	0.995	20	
Bromofluorobenzene (FID)	A	1558.2	1503.1	1561.6	1512.8	1774.1	AVRG		6.32E-4		1581.9	7	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	16	2500.0	-1	10000	-6	25000	-2	50000	-6
Bromofluorobenzene (FID)	A	900.00	-2	900.00	-5	900.00	-1	900.00	-4	900.00	12

Analyst: ERR

Date: 07/16/15

Reviewer: EAH

Date: 07/16/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19  
Calnum : 345282641001

Name : tvh\_bfb196  
Cal Date : 15-JUL-2015

ICV 345282641010 (196\_010 15-JUL-2015) stds: S27613 (1000X), S27207 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9962	ng	0	15	

Analyst: ERR

Date: 07/16/15

Reviewer: EAH

Date: 07/16/15

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                                      Run Name : QC810608                                      IDF : 1.0  
 Seqnum : 345436957003.3                      File : 303\_003                                      Time : 30-OCT-2015 11:53  
 Cal : 345282641001                              Caldate : 15-JUL-2015  
 Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max	%D	Flags
		RF/CF	RF/CF							
Gasoline C7-C12	A	1872.4	1959.4	5000	5232	ng	5	15		u
Bromofluorobenzene (FID)	A	1581.9	1488.0	900.0	846.5	ng	-6	15		u

CAR 11/02/15 : ccv/lcs, qc810608, 228901 [general version]

Analyst: CAR                                      Date: 11/02/15                                      Reviewer: EAH                                      Date: 11/04/15

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                                      Run Name : TVH                                      IDF : 1.0  
 Seqnum : 345436957012                      File : 303\_012                                      Time : 30-OCT-2015 19:18  
 Cal : 345282641001                      Caldate : 15-JUL-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	1872.4	1860.1	10000	9934	ng	-1	15	
Bromofluorobenzene (FID)	A	1581.9	1738.9	900.0	989.3	ng	10	15	

Analyst: CAR                                      Date: 11/02/15                                      Reviewer: EAH                                      Date: 11/02/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                                      Run Name : TVH                                      IDF : 1.0  
 Seqnum : 345436957013                      File : 303\_013                                      Time : 30-OCT-2015 19:56  
 Cal : 345282641001                      Caldate : 15-JUL-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	1872.4	1850.5	10000	9883	ng	-1	15	
Bromofluorobenzene (FID)	A	1581.9	1618.3	900.0	920.7	ng	2	15	

Analyst: CAR                                      Date: 11/02/15                                      Reviewer: EAH                                      Date: 11/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                                      Run Name : TVH                                      IDF : 1.0  
 Seqnum : 345436957025                      File : 303\_025                                      Time : 31-OCT-2015 03:26  
 Cal : 345282641001                      Caldate : 15-JUL-2015  
 Standards: S28144 (666.7X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	1872.4	1892.3	15000	15160	ng	1	15	
Bromofluorobenzene (FID)	A	1581.9	1757.5	900.0	999.9	ng	11	15	

Analyst: CAR                                      Date: 11/02/15                                      Reviewer: EAH                                      Date: 11/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 345436957026        File : 303\_026                      Time : 31-OCT-2015 04:04  
 Cal : 345282641001          Caldate : 15-JUL-2015  
 Standards: S28144 (666.7X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	1872.4	1807.0	15000	14480	ng	-3	15	
Bromofluorobenzene (FID)	A	1581.9	1699.5	900.0	966.9	ng	7	15	

Analyst: CAR                      Date: 11/02/15                      Reviewer: EAH                      Date: 11/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCVOA Water  
EPA 8015B

Inst : GC19                                      Run Name : TVH                                      IDF : 1.0  
 Seqnum : 345436957033                      File : 303\_033                                      Time : 31-OCT-2015 08:27  
 Cal : 345282641001                      Caldate : 15-JUL-2015  
 Standards: S28144 (666.7X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	1872.4	1791.9	15000	14360	ng	-4	15	
Bromofluorobenzene (FID)	A	1581.9	1691.9	900.0	962.6	ng	7	15	

Analyst: CAR                                      Date: 11/02/15                                      Reviewer: EAH                                      Date: 11/02/15

## **Logbooks & Sequences**

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 345282641

Instrument : GC19  
 Method : EPA 8015B, EPA 8021B

Begun : 07/15/15 06:41  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	196_001	X	CMARKER			07/15/15 06:41	1.0	1 2
002	196_002	CCV	BTXE			07/15/15 07:23	1.0	3 2
003	196_003	IB	CALIB			07/15/15 08:42	1.0	2
004	196_004	ICAL	TVH_14			07/15/15 09:20	1.0	4 2
005	196_005	ICAL	TVH_15			07/15/15 09:58	1.0	5 2
006	196_006	ICAL	TVH_16			07/15/15 10:35	1.0	6 2
007	196_007	ICAL	TVH_17			07/15/15 11:13	1.0	7 2
008	196_008	ICAL	TVH_18			07/15/15 11:50	1.0	7 2
009	196_009	X	IB			07/15/15 12:28	1.0	2
010	196_010	ICV	TVH			07/15/15 13:06	1.0	8 2
011	196_011	X	ICV			07/15/15 13:43	1.0	8 2
012	196_012	CMARKER	CMARK			07/15/15 14:21	1.0	9 2

ERR 07/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 12.

Reviewed by: ERR Date: 07/16/15

Standards used: 1=S27332 2=S27207 3=S27205 4=S27569 5=S27568 6=S27567 7=S27566 8=S27613 9=S26730

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 345436957

Instrument : GC19  
 Method : EPA 8015B, EPA 8021B

Begun : 10/30/15 10:37  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	303_001	X	CMARKER			10/30/15 10:37	1.0	1 2	
002	303_002	CCV/BS	QC810625	Water	228901	10/30/15 11:15	1.0	3 2	
003	303_003	CCV/LCS	QC810608	Water	228901	10/30/15 11:53	1.0	4 2	
004	303_004	BSD	QC810626	Water	228901	10/30/15 12:30	1.0	3 2	
005	303_005	BLANK	QC810609	Water	228901	10/30/15 13:22	1.0	2	
006	303_006	MSS	271076-001	Water	228901	10/30/15 15:32	1.0	2	
007	303_007	MS	QC810610	Water	228901	10/30/15 16:10	1.0	4 2	
008	303_008	MSD	QC810611	Water	228901	10/30/15 16:47	1.0	4 2	
009	303_009	SAMPLE	271076-002	Water	228901	10/30/15 17:25	1.0	2	
010	303_010	SAMPLE	271076-003	Water	228901	10/30/15 18:03	1.0	2	
011	303_011	SAMPLE	271080-001	Water	228901	10/30/15 18:40	1.0	2	
012	303_012	CCV	TVH			10/30/15 19:18	1.0	4 2	
013	303_013	CCV	TVH			10/30/15 19:56	1.0	4 2	
014	303_014	X	CMARKER			10/30/15 20:33	1.0	1 2	
015	303_015	CCV	BTXE			10/30/15 21:11	1.0	3 2	
016	303_016	CCV	BTXE			10/30/15 21:48	1.0	3 2	
017	303_017	SAMPLE	271127-001	Water	228901	10/30/15 22:26	1.0	2	
018	303_018	SAMPLE	271127-002	Water	228901	10/30/15 23:03	1.0	2	headspace <= 1 mL
019	303_019	SAMPLE	271127-003	Water	228901	10/30/15 23:41	1.0	2	headspace <= 1 mL
020	303_020	SAMPLE	271127-004	Water	228901	10/31/15 00:19	1.0	2	headspace <= 1 mL
021	303_021	SAMPLE	271127-005	Water	228901	10/31/15 00:56	1.0	2	headspace <= 1 mL
022	303_022	SAMPLE	271127-006	Water	228901	10/31/15 01:34	1.0	2	
023	303_023	SAMPLE	271127-007	Water	228901	10/31/15 02:11	1.0	2	headspace > 1 mL
024	303_024	SAMPLE	271127-008	Water	228901	10/31/15 02:49	1.0	2	
025	303_025	CCV	TVH			10/31/15 03:26	1.0	4 2	
026	303_026	CCV	TVH			10/31/15 04:04	1.0	4 2	
027	303_027	X	CMARKER			10/31/15 04:42	1.0	1 2	
028	303_028	SAMPLE	271127-009	Water	228901	10/31/15 05:19	1.0	2	headspace <= 1 mL
029	303_029	SAMPLE	271127-010	Water	228901	10/31/15 05:57	1.0	2	
030	303_030	SAMPLE	271127-011	Water	228901	10/31/15 06:34	1.0	2	headspace <= 1 mL
031	303_031	SAMPLE	271127-012	Water	228901	10/31/15 07:12	1.0	2	headspace <= 1 mL
032	303_032	SAMPLE	271127-013	Water	228901	10/31/15 07:49	1.0	2	headspace <= 1 mL
033	303_033	CCV	TVH			10/31/15 08:27	1.0	4 2	
034	303_034	CCV	TVH			10/31/15 09:05	1.0	4 2	
035	303_035	X	CMARKER			10/31/15 09:42	1.0	1 2	

CAR 11/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 35.

Reviewed by: CAR Date: 11/02/15

Standards used: 1=S27955 2=S28390 3=S27975 4=S28144

Laboratory Job Number 271127

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Water



Total Extractable Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228909
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000	Prepared:	10/30/15

Field ID: SB-13-16-NS      Sampled: 10/27/15  
 Type: SAMPLE      Analyzed: 11/03/15  
 Lab ID: 271127-001

Analyte	Result	RL	MDL
Diesel C10-C24	260 Y	52	17

Surrogate	%REC	Limits
o-Terphenyl	104	67-136

Field ID: SB-13-26-NS      Sampled: 10/27/15  
 Type: SAMPLE      Analyzed: 11/03/15  
 Lab ID: 271127-002

Analyte	Result	RL	MDL
Diesel C10-C24	380 Y	52	17

Surrogate	%REC	Limits
o-Terphenyl	107	67-136

Field ID: SB-14-20-FD      Sampled: 10/27/15  
 Type: SAMPLE      Analyzed: 11/03/15  
 Lab ID: 271127-003

Analyte	Result	RL	MDL
Diesel C10-C24	130 Y	50	16

Surrogate	%REC	Limits
o-Terphenyl	103	67-136

Field ID: SB-14-20-NS      Sampled: 10/27/15  
 Type: SAMPLE      Analyzed: 11/03/15  
 Lab ID: 271127-004

Analyte	Result	RL	MDL
Diesel C10-C24	130 Y	50	16

Surrogate	%REC	Limits
o-Terphenyl	86	67-136

J= Estimated value  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 RL= Reporting Limit  
 MDL= Method Detection Limit

Total Extractable Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228909
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000	Prepared:	10/30/15

Field ID: SB-14-30-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                  Analyzed: 11/03/15  
 Lab ID: 271127-005

Analyte	Result	RL	MDL
Diesel C10-C24	150 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	95	67-136	

Field ID: SB-15-20-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                  Analyzed: 11/03/15  
 Lab ID: 271127-006

Analyte	Result	RL	MDL
Diesel C10-C24	60 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	97	67-136	

Field ID: SB-15-30-NS                      Sampled: 10/27/15  
 Type: SAMPLE                                  Analyzed: 11/03/15  
 Lab ID: 271127-007

Analyte	Result	RL	MDL
Diesel C10-C24	370 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	99	67-136	

Field ID: SB-16-20-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                  Analyzed: 11/03/15  
 Lab ID: 271127-008

Analyte	Result	RL	MDL
Diesel C10-C24	180 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	105	67-136	

J= Estimated value  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 RL= Reporting Limit  
 MDL= Method Detection Limit

Total Extractable Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	228909
Units:	ug/L	Received:	10/29/15
Diln Fac:	1.000	Prepared:	10/30/15

Field ID: SB-16-30-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                Analyzed: 11/03/15  
 Lab ID: 271127-009

Analyte	Result	RL	MDL
Diesel C10-C24	99 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	104	67-136	

Field ID: SB-17-20-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                Analyzed: 11/03/15  
 Lab ID: 271127-010

Analyte	Result	RL	MDL
Diesel C10-C24	210 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	91	67-136	

Field ID: SB-17-30-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                Analyzed: 11/04/15  
 Lab ID: 271127-011

Analyte	Result	RL	MDL
Diesel C10-C24	150 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	99	67-136	

Field ID: SB-19-26-NS                      Sampled: 10/26/15  
 Type: SAMPLE                                Analyzed: 11/04/15  
 Lab ID: 271127-012

Analyte	Result	RL	MDL
Diesel C10-C24	170 Y	50	16
Surrogate	%REC	Limits	
o-Terphenyl	88	67-136	

J= Estimated value  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 RL= Reporting Limit  
 MDL= Method Detection Limit



## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC810642	Batch#:	228909
Matrix:	Water	Prepared:	10/30/15
Units:	ug/L	Analyzed:	11/03/15

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,070	83	60-121

Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	SB-15-20-NS	Batch#:	228909
MSS Lab ID:	271127-006	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Prepared:	10/30/15
Diln Fac:	1.000	Analyzed:	11/03/15

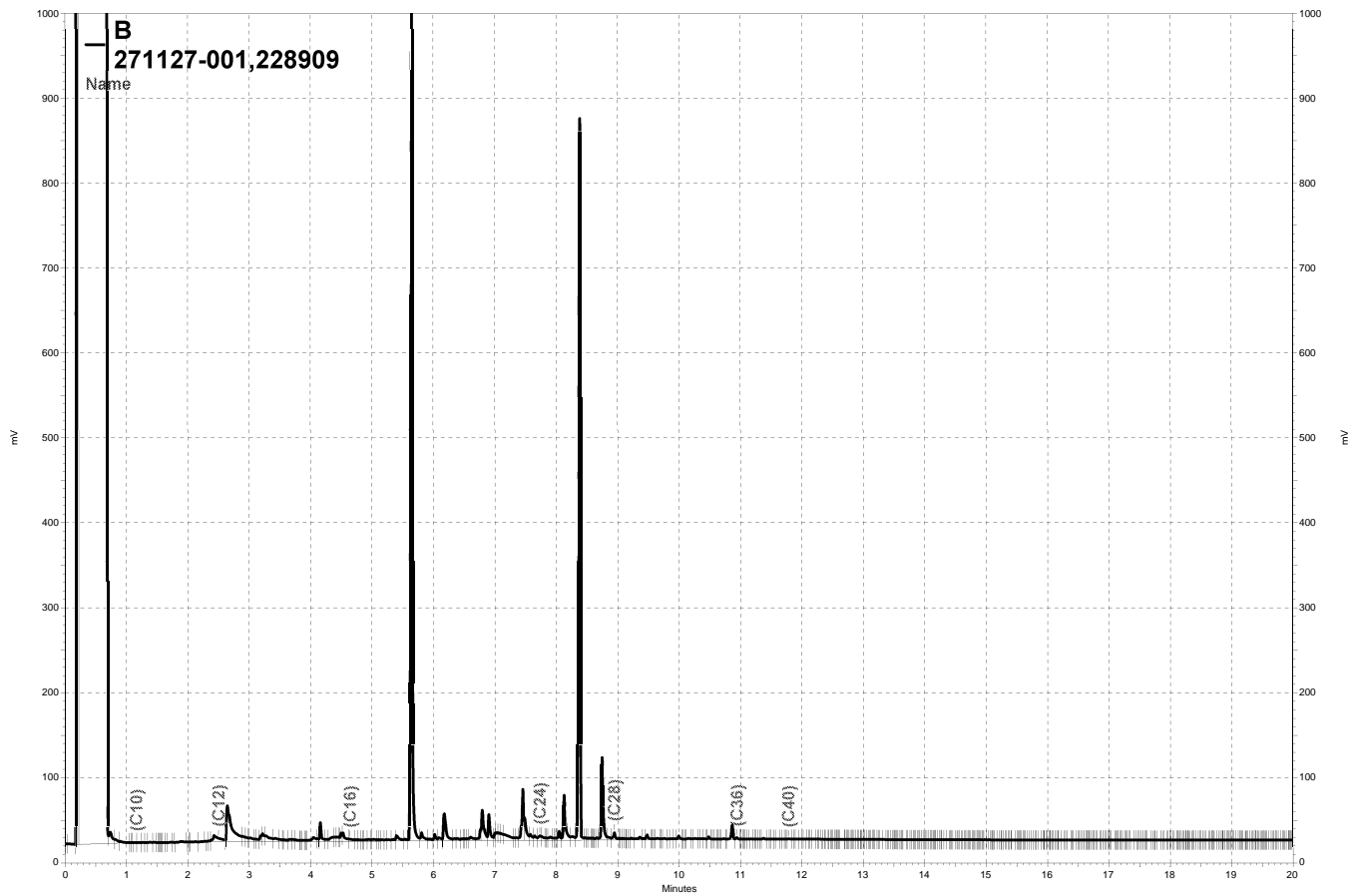
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Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	59.54	2,500	1,939	75	55-122
Surrogate	%REC	Limits			
o-Terphenyl	72	67-136			

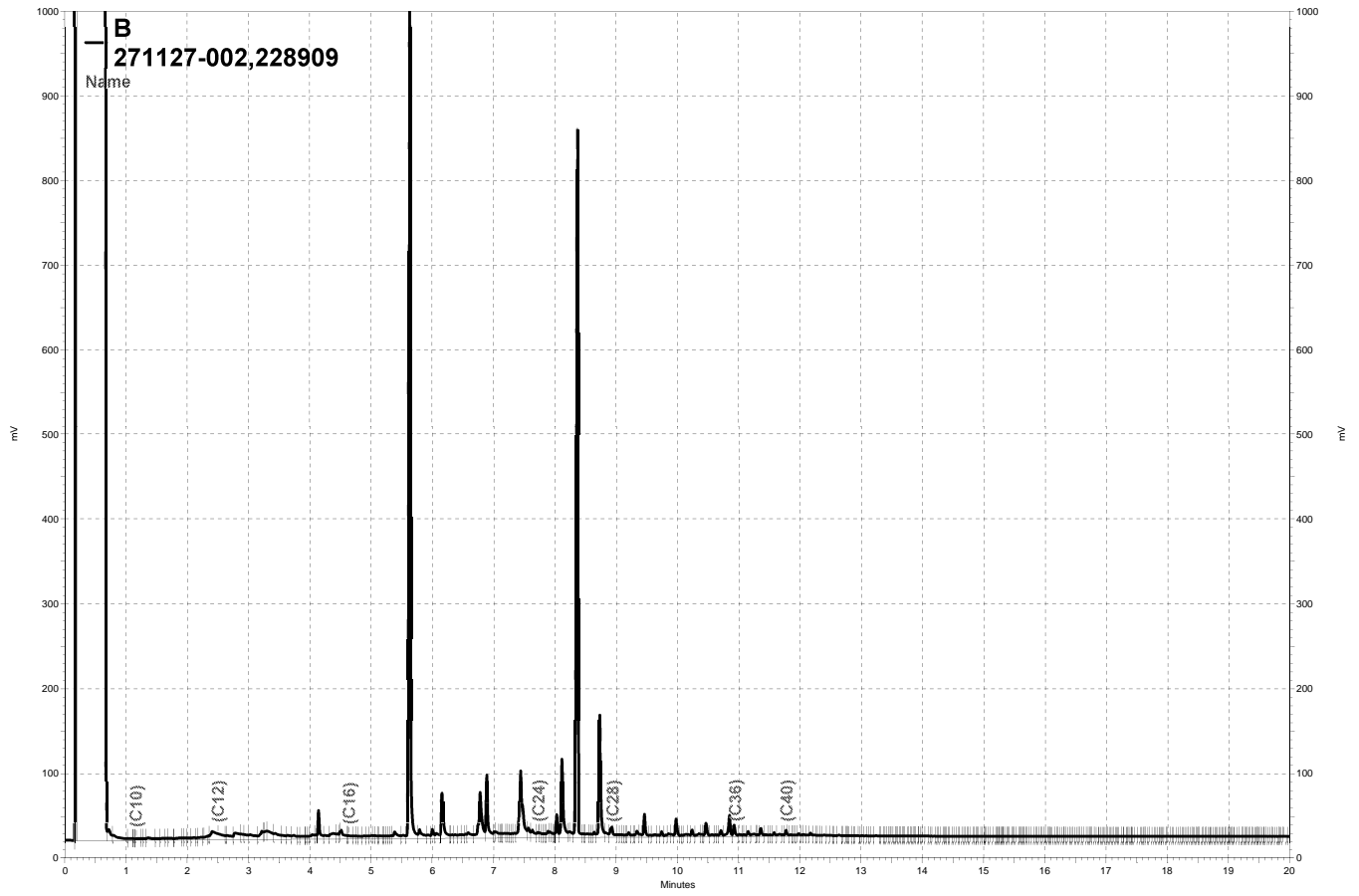
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Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,364	92	55-122	20	53
Surrogate	%REC	Limits				
o-Terphenyl	101	67-136				

RPD= Relative Percent Difference

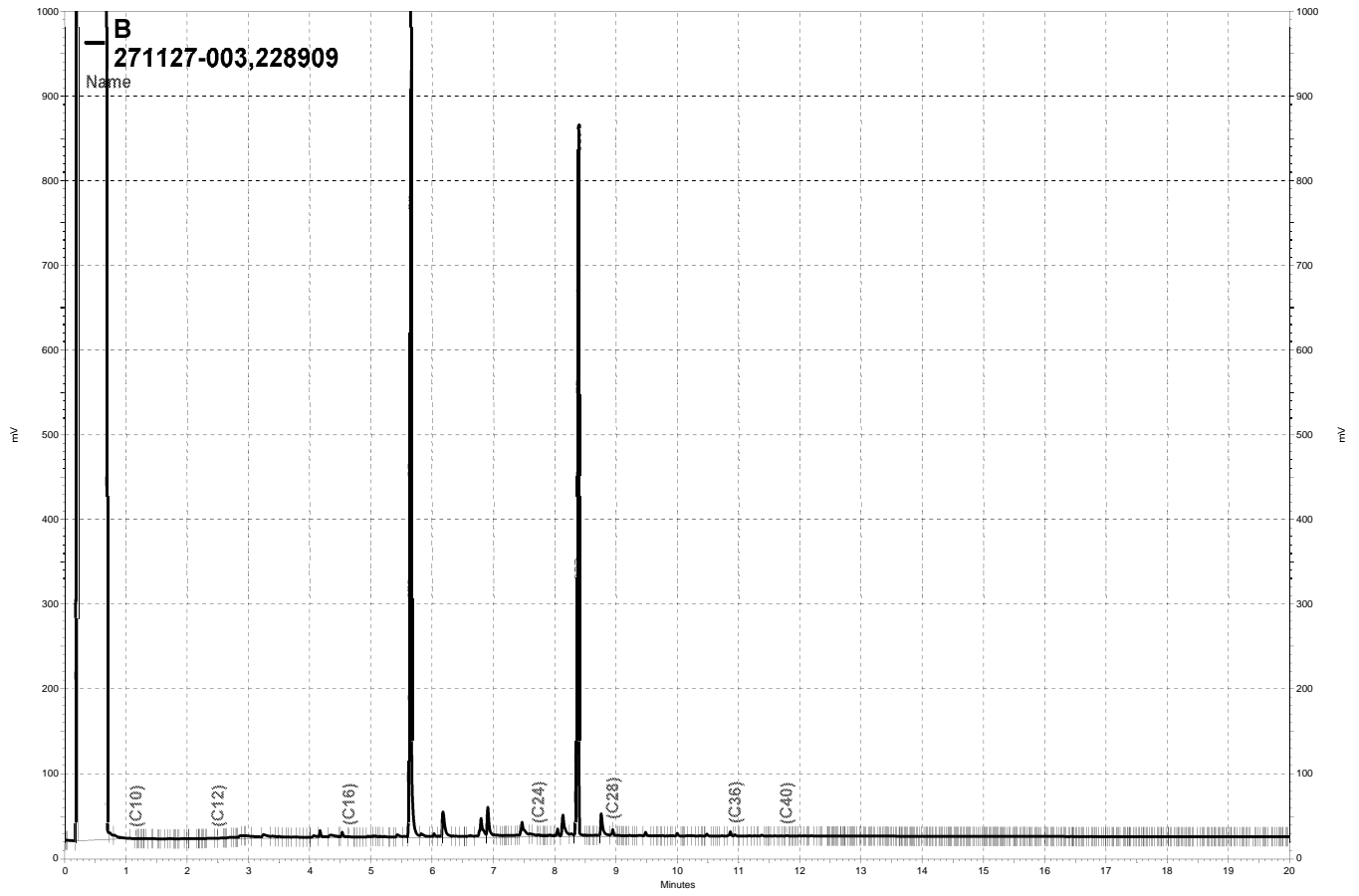


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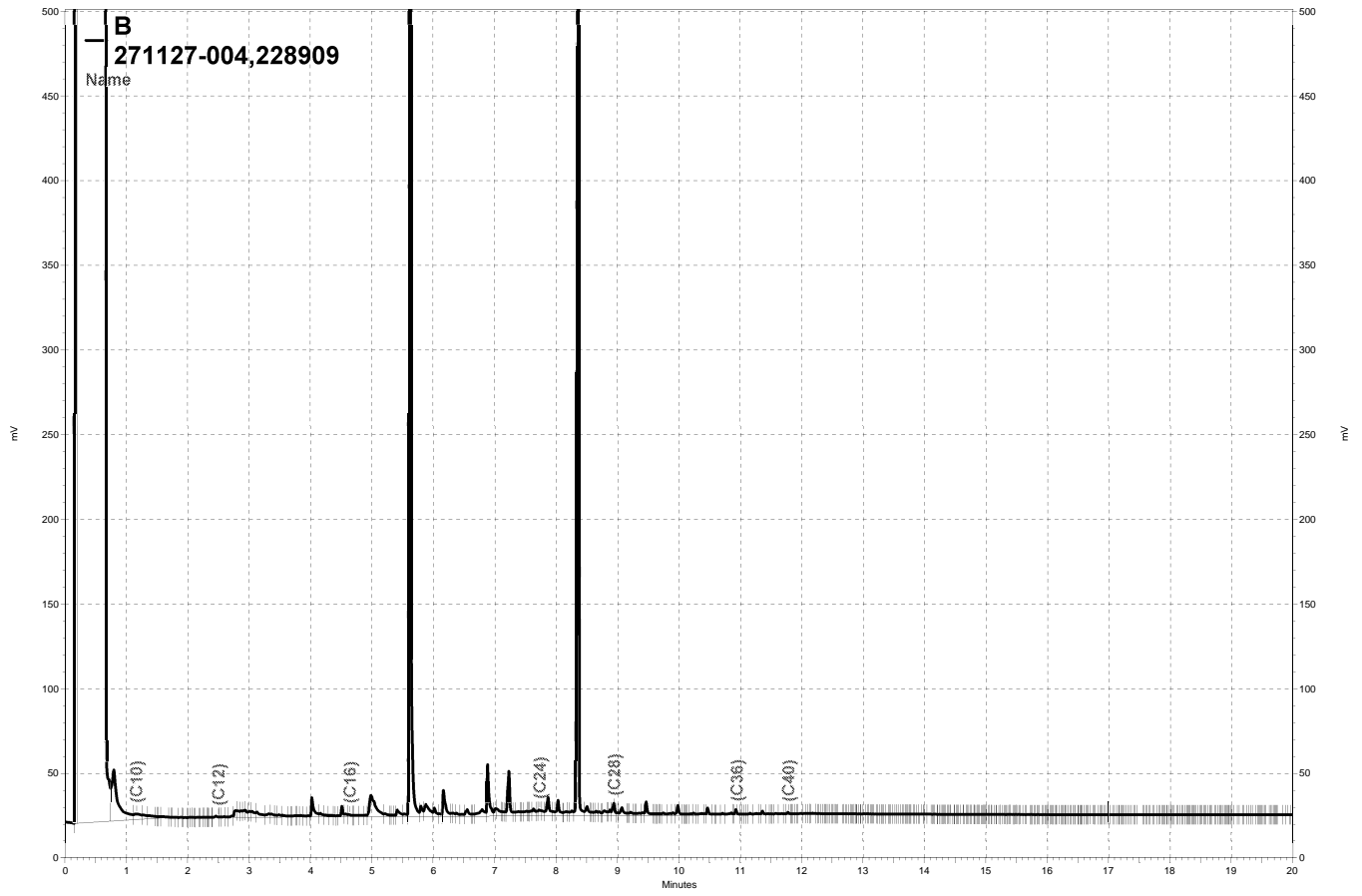


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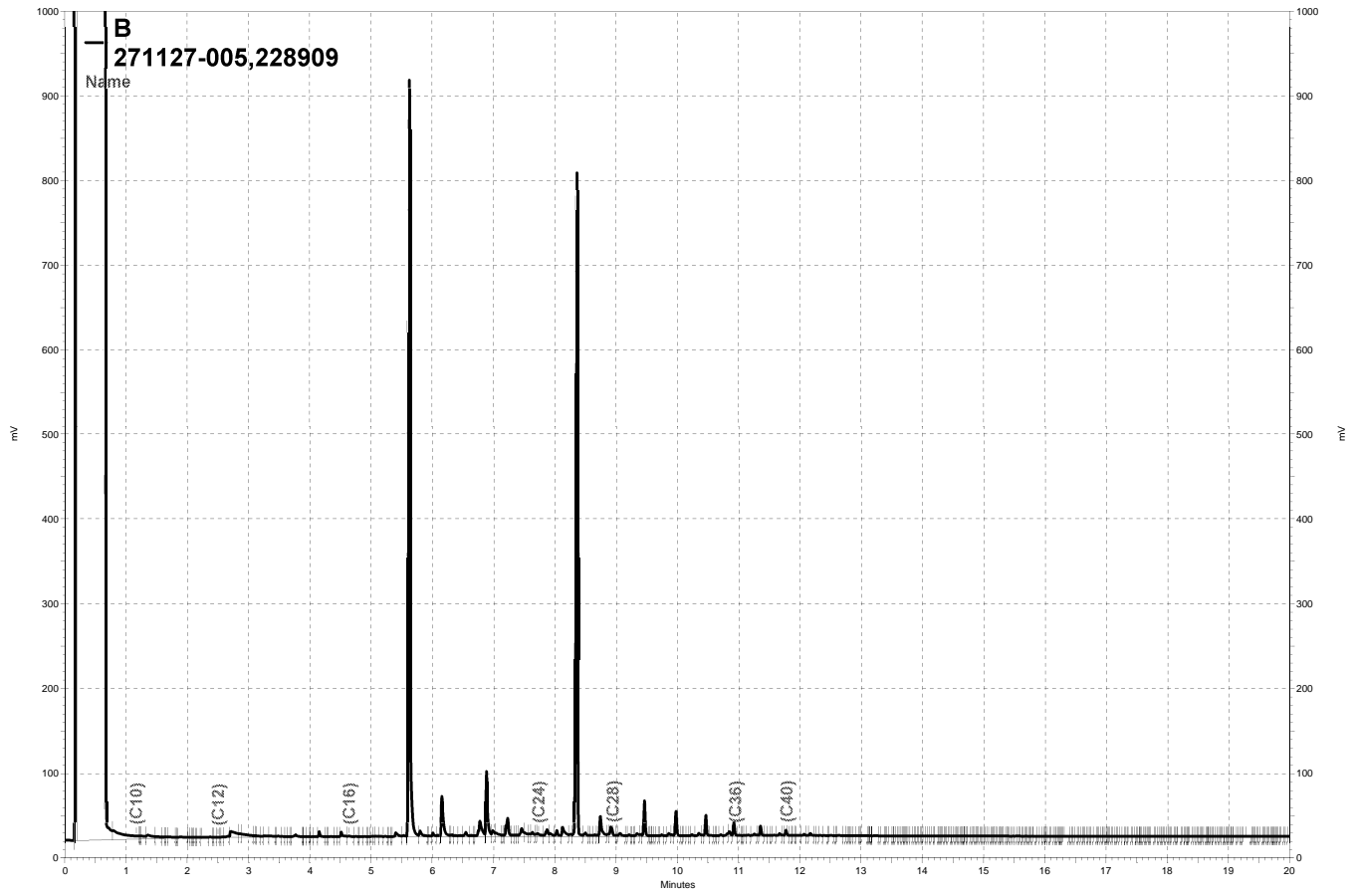




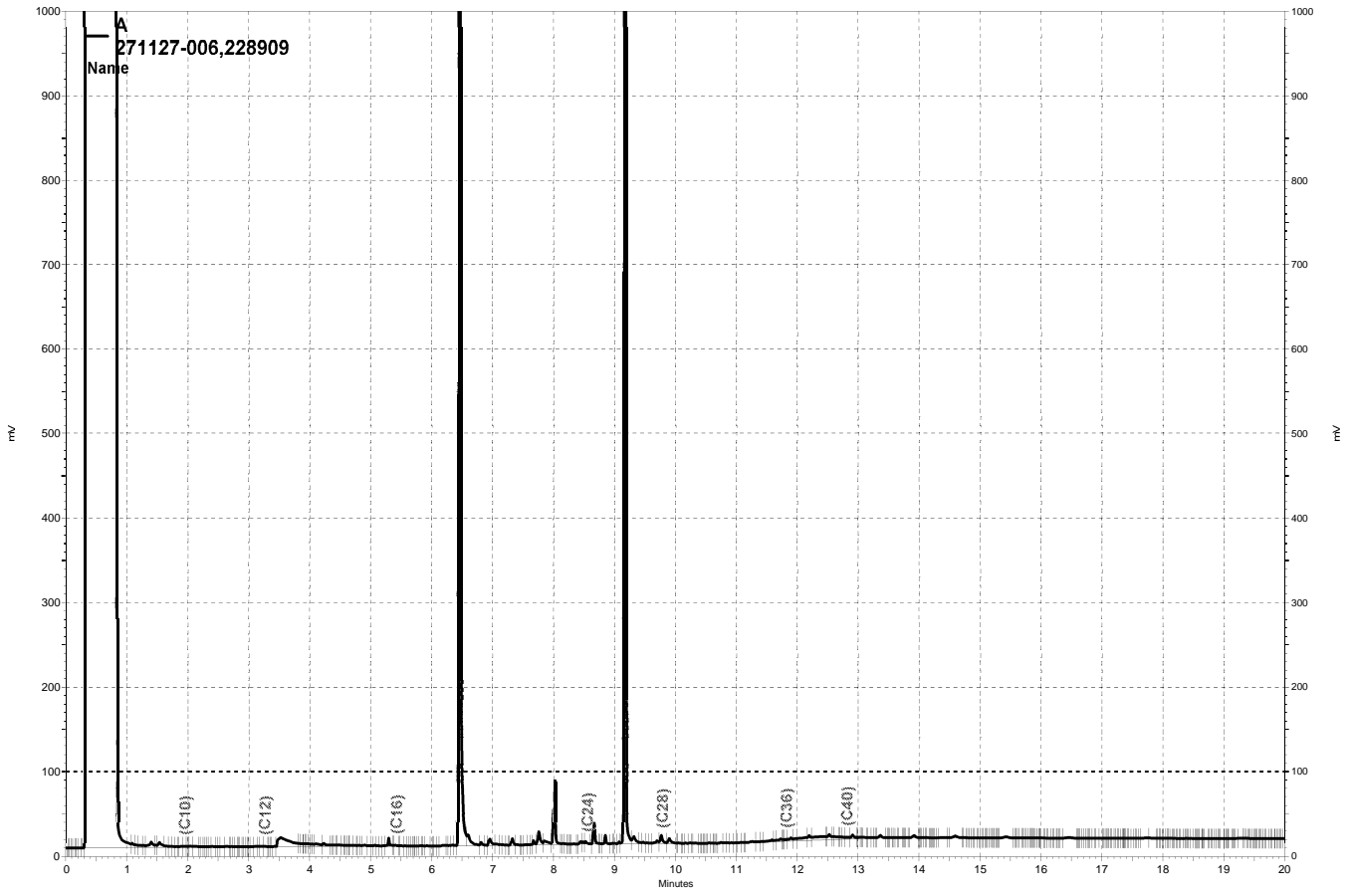
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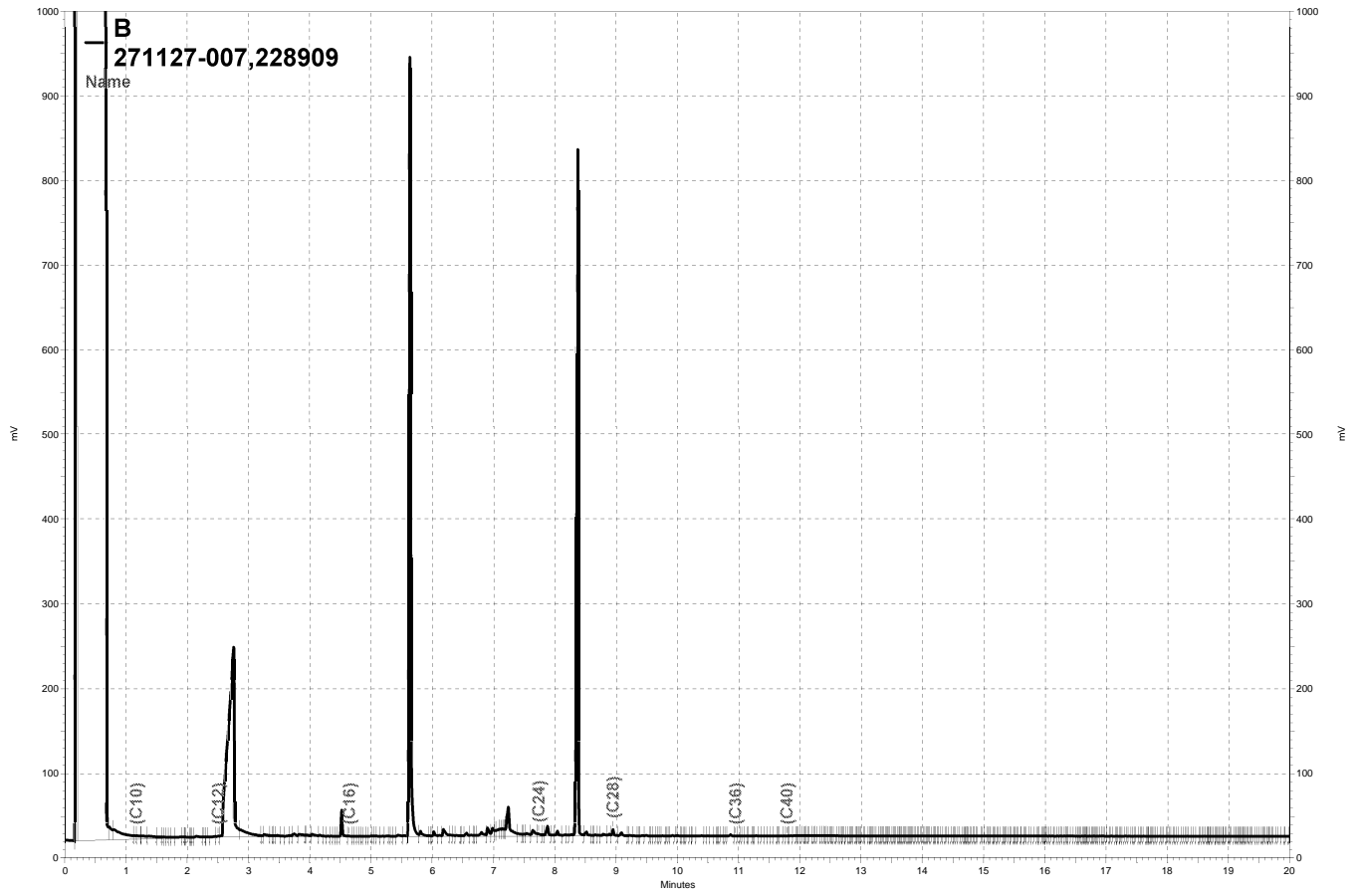
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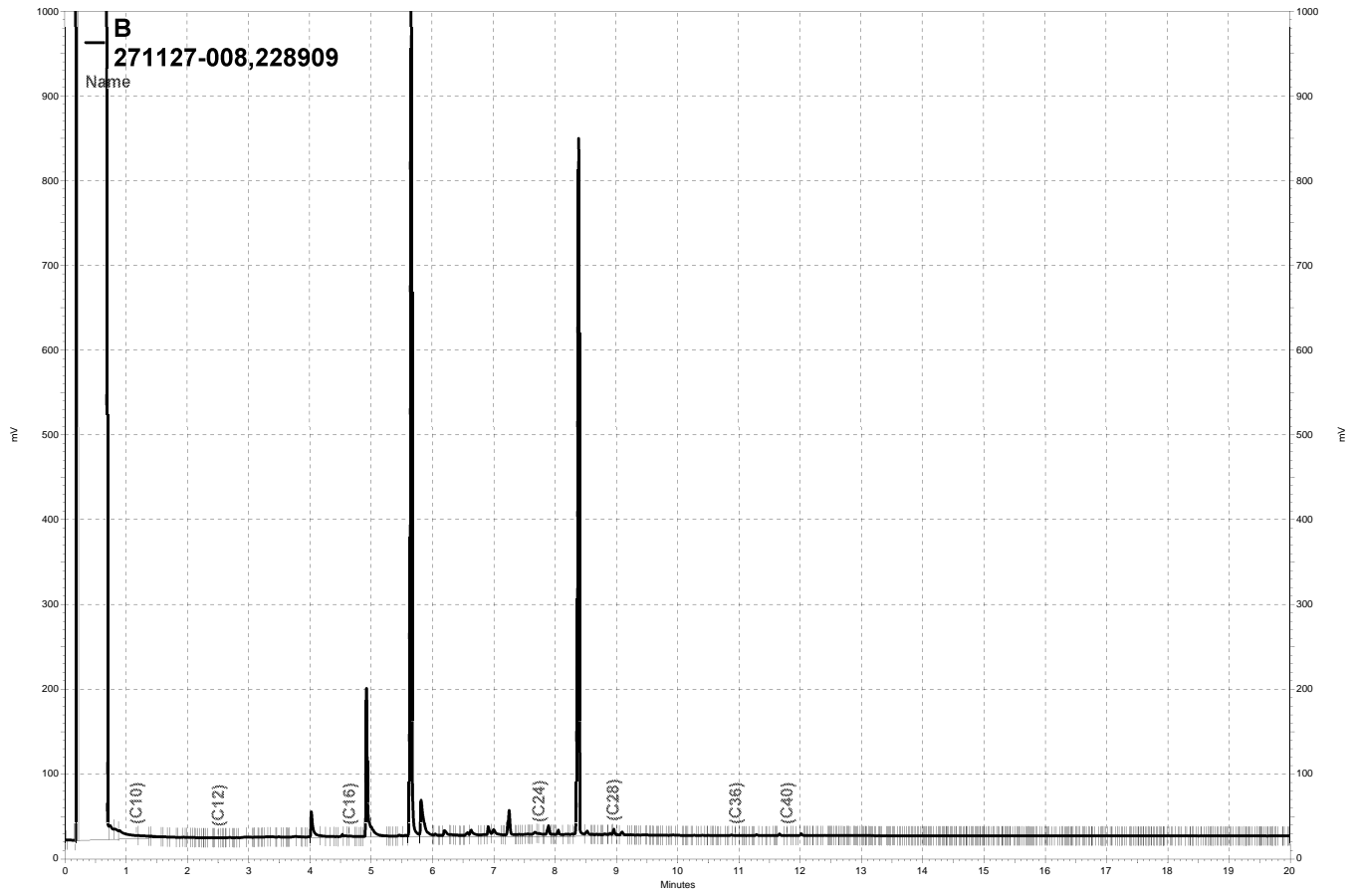
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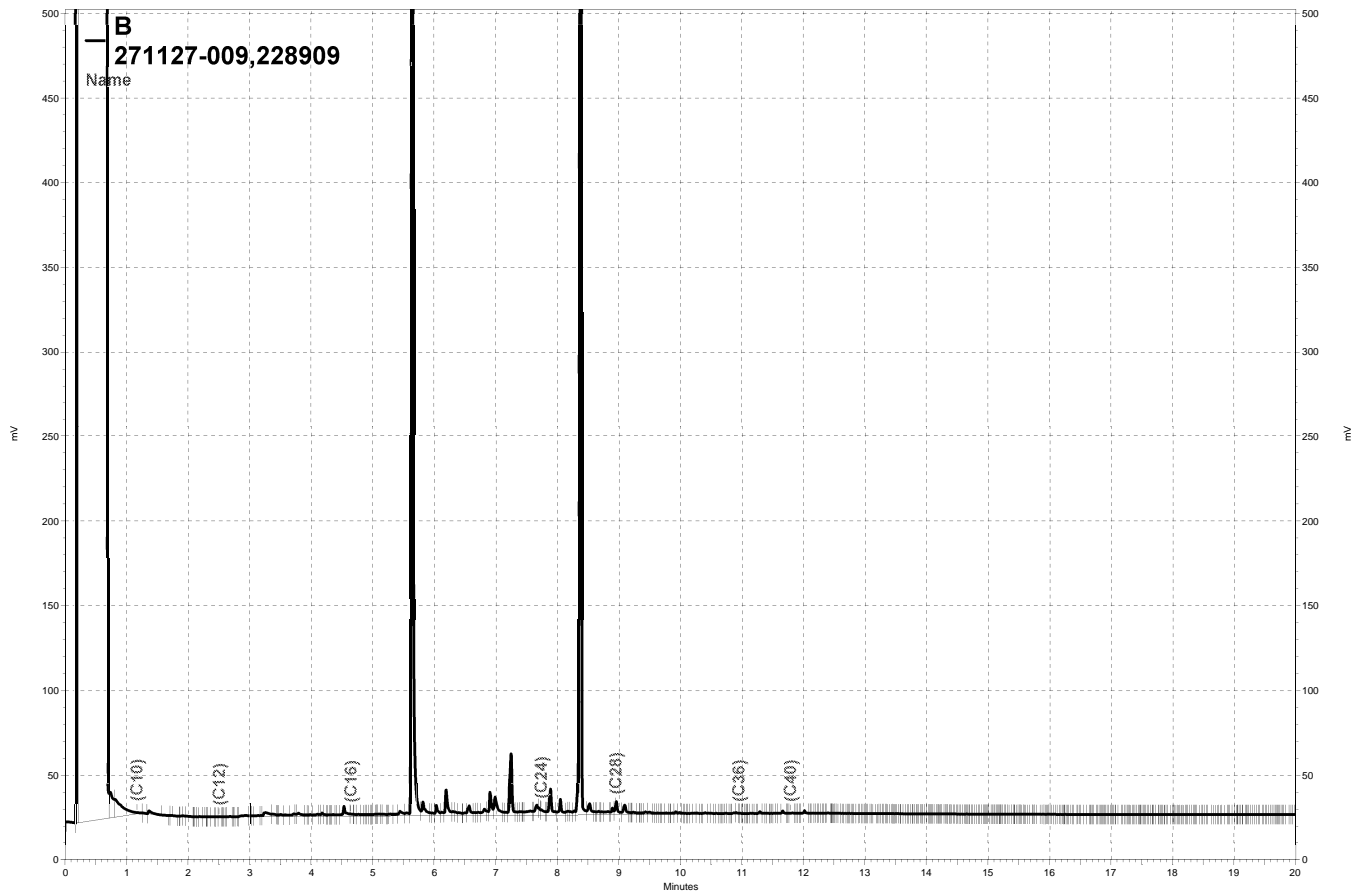
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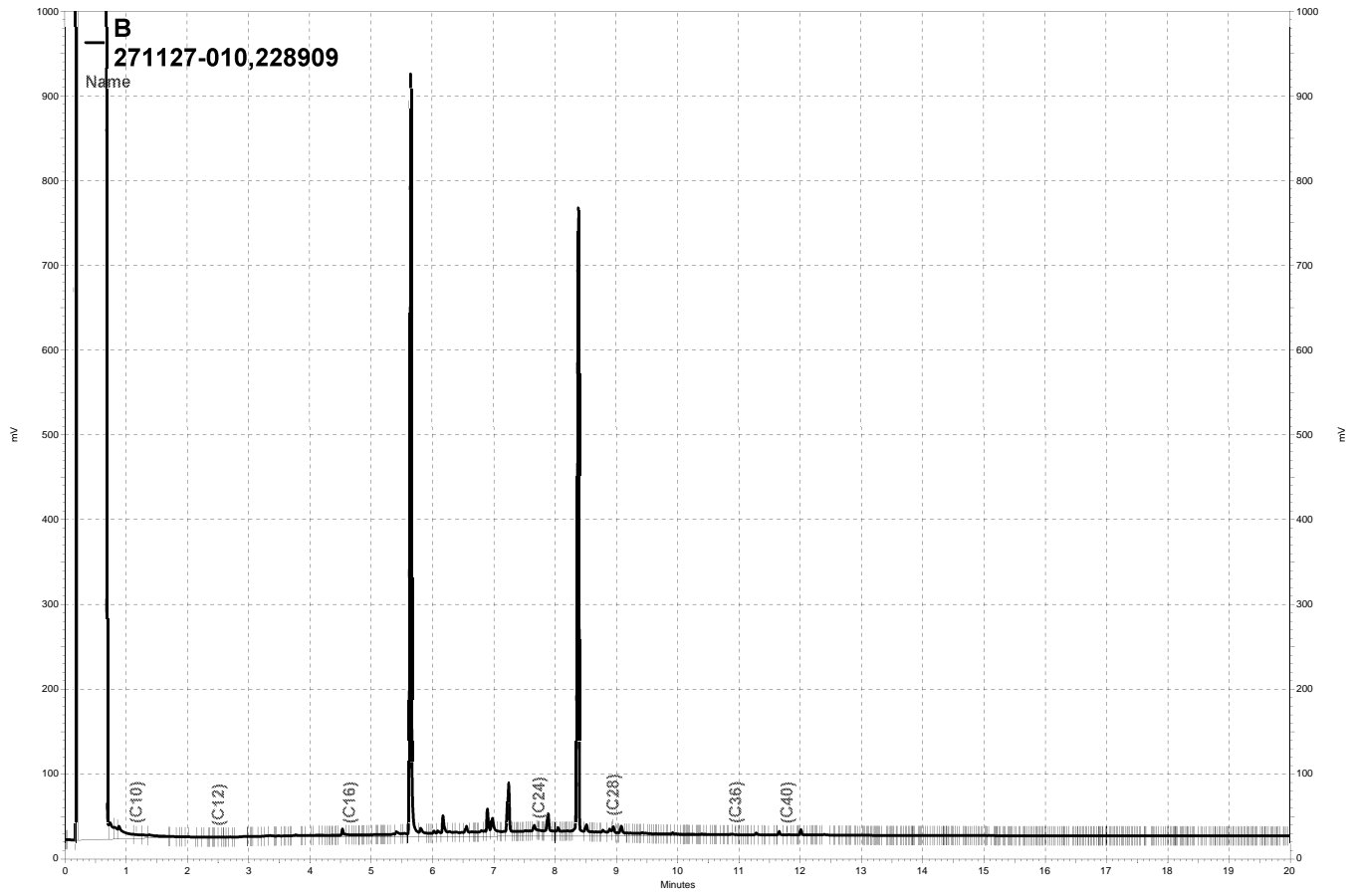
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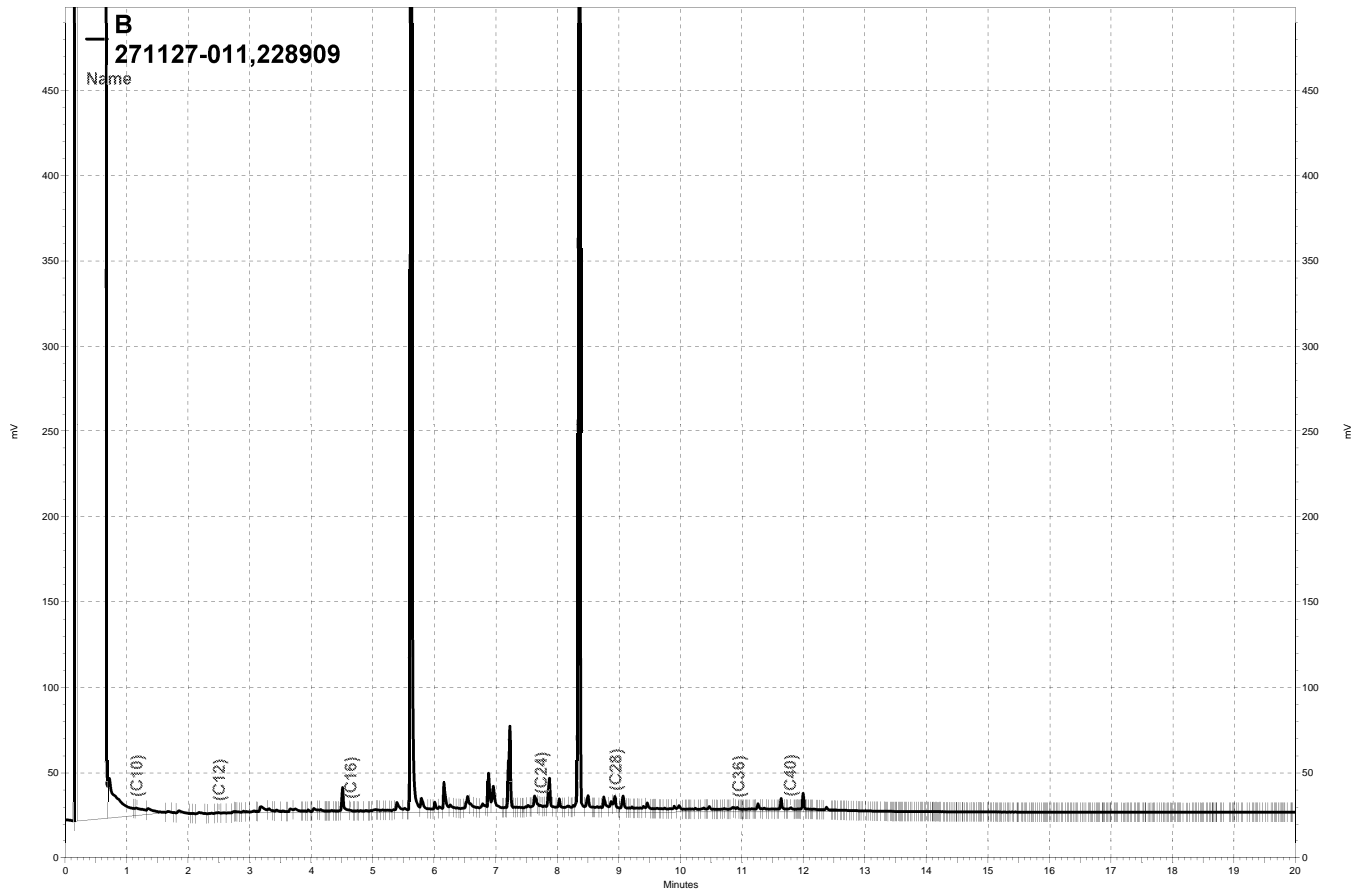


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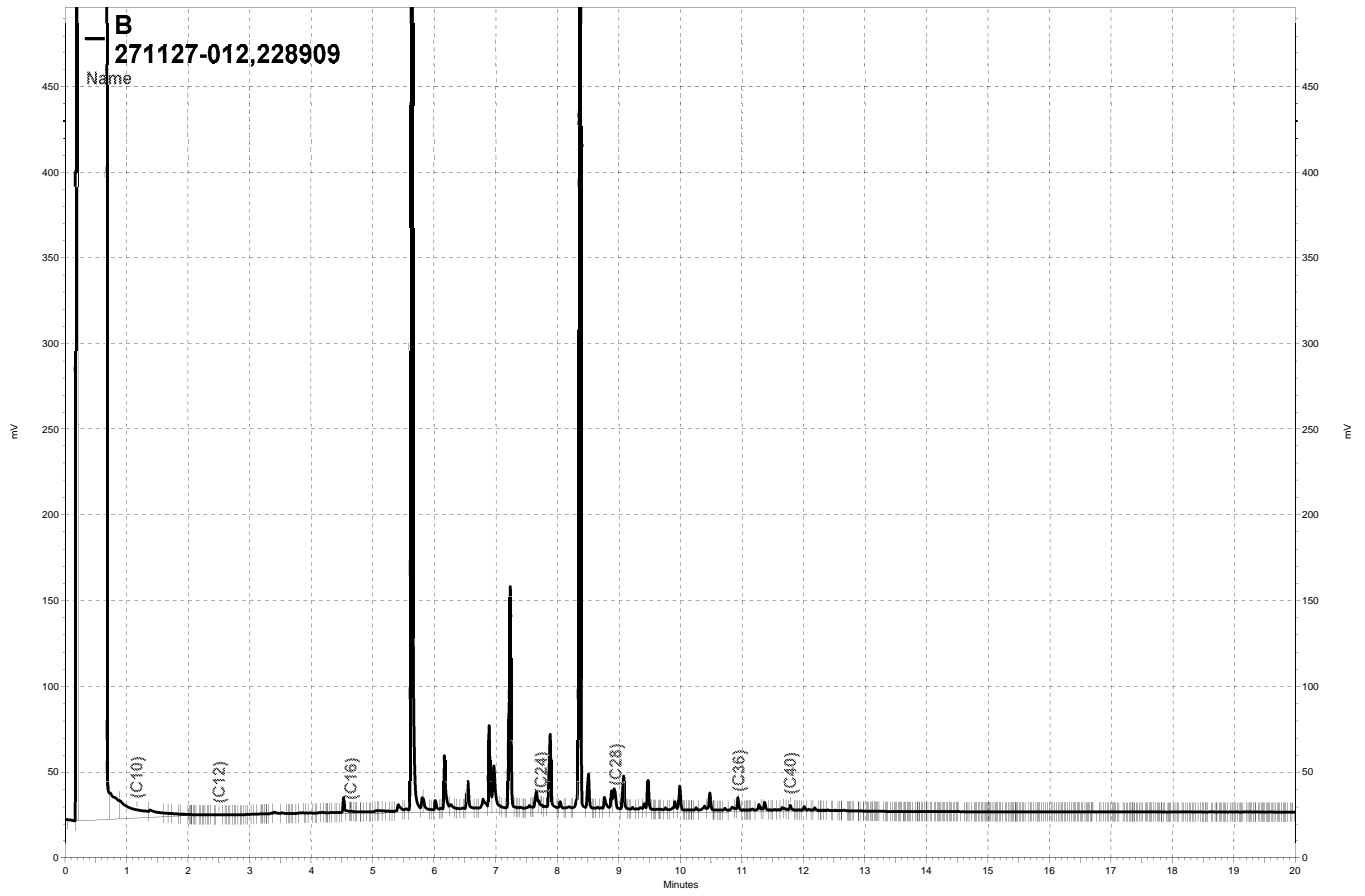


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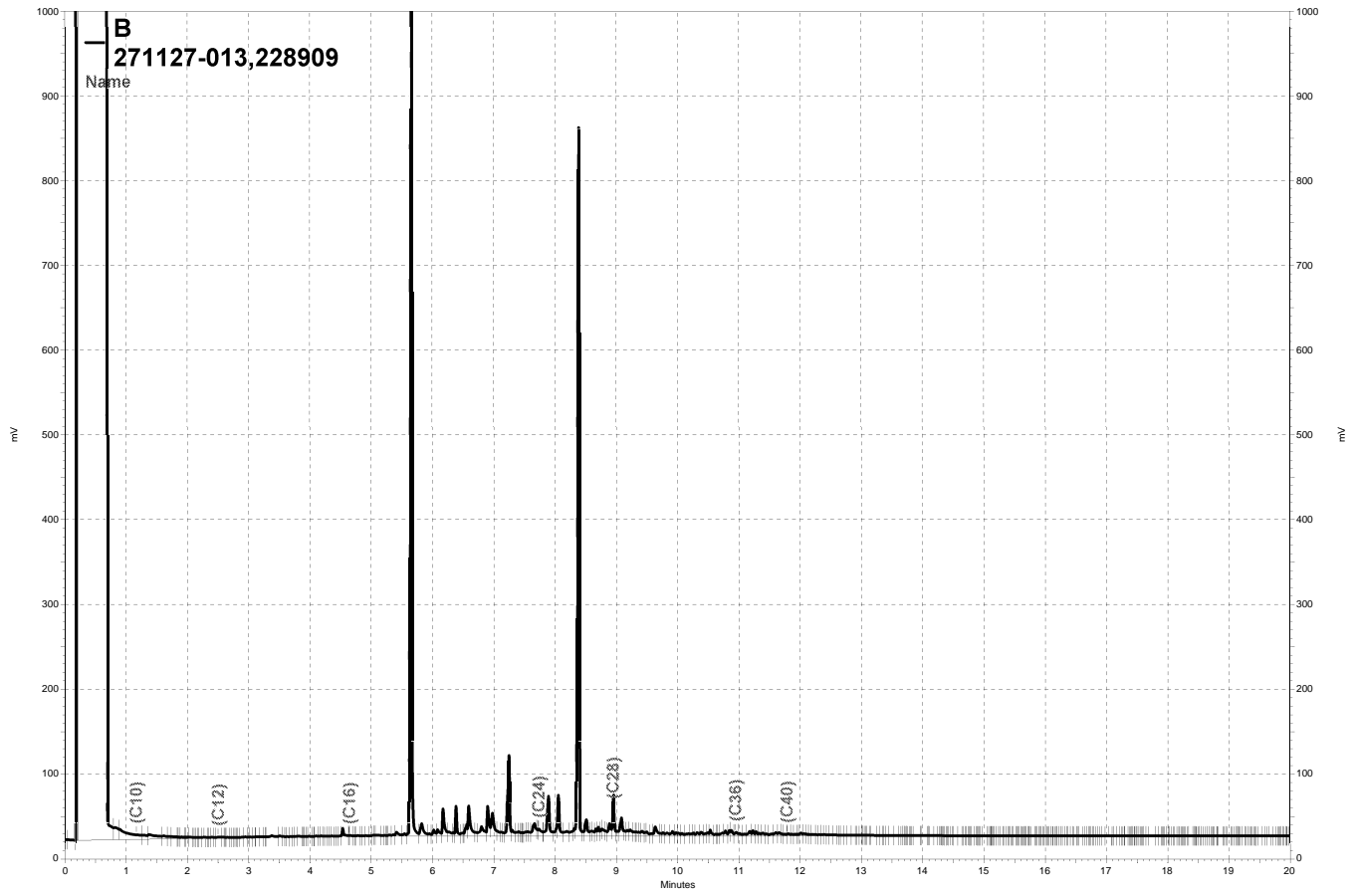




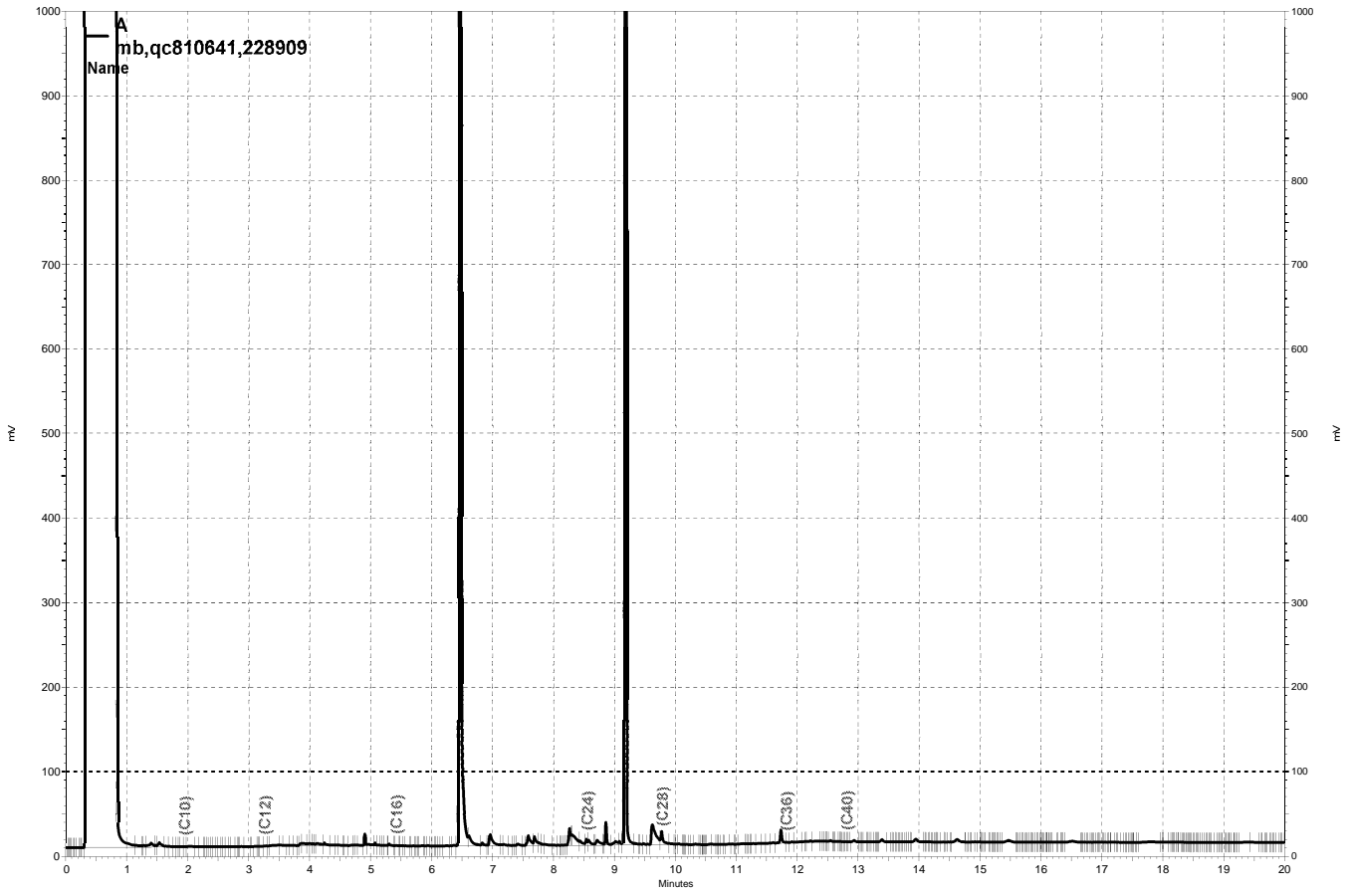
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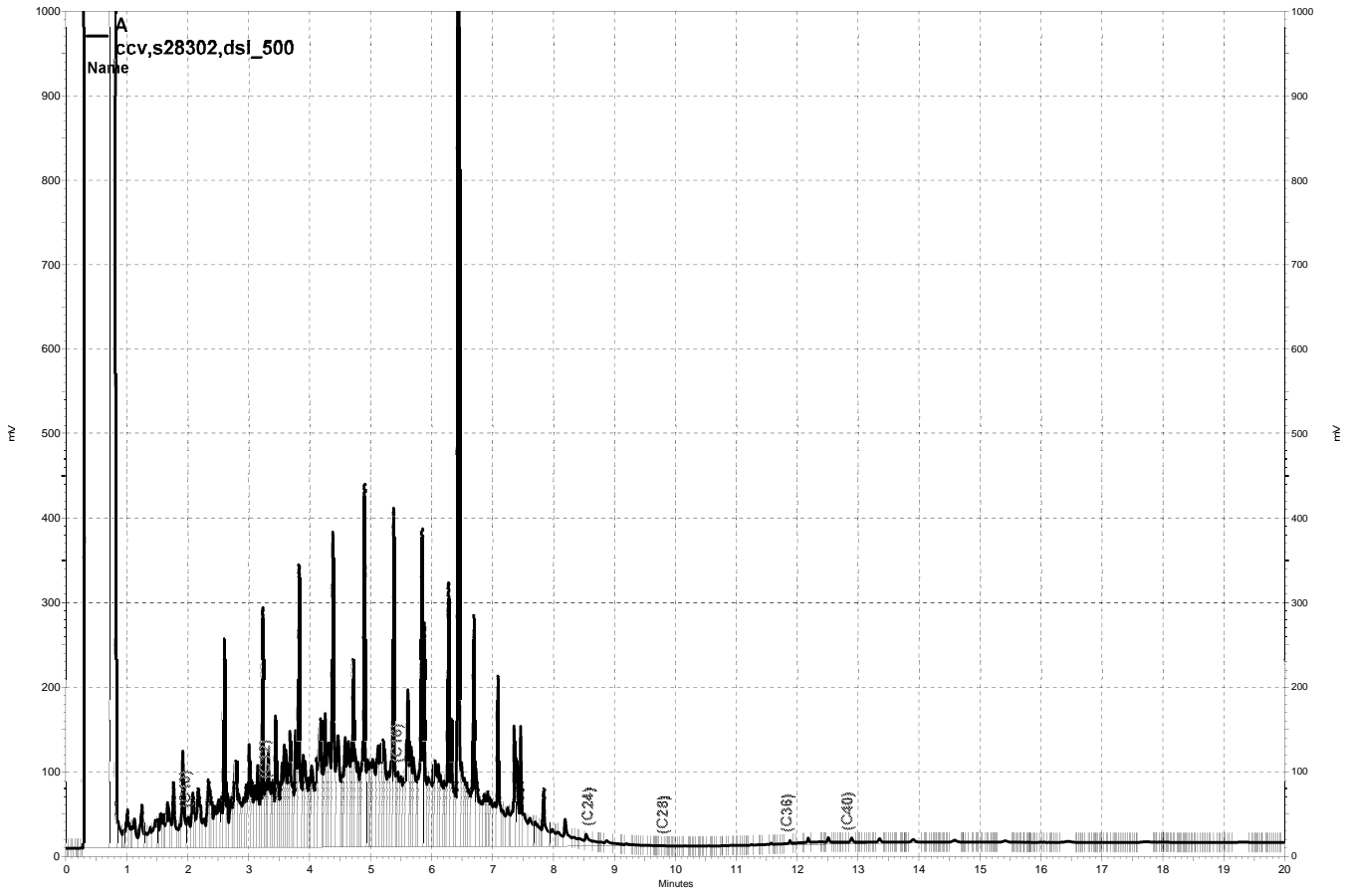
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**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 224523202001  
 Units : mg/L

Name : DSL\_364  
 Date : 29-DEC-2014 15:35  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	364_009	224523202009	DSL_10	29-DEC-2014 15:35	S26213
L2	364_010	224523202010	DSL_100	29-DEC-2014 16:04	S25844
L3	364_011	224523202011	DSL_500	29-DEC-2014 16:32	S25845
L4	364_012	224523202012	DSL_1000	29-DEC-2014 17:00	S25846
L5	364_013	224523202013	DSL_5000	29-DEC-2014 17:28	S25842

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	B	22270	35068	37375	37151	34353	AVRG		3.01E-5		33243	19	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	B	10.000	-33	100.00	5	500.00	12	1000.0	12	5000.0	3

SFL 12/30/14 : Samples that require carbon ranges Diesel C16-C24 will not be loaded on this instrument.

Analyst: SFL

Date: 12/30/14

Reviewer: EAH

Date: 12/30/14

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271127 GCSV Water  
EPA 8015B

Inst : GC14B  
Calnum : 224523202001

Name : DSL\_364  
Cal Date : 29-DEC-2014

ICV 224523202016 (364\_016 29-DEC-2014) stds: S25996

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	543.3	mg/L	9	15	

Analyst: SFL

Date: 12/30/14

Reviewer: EAH

Date: 12/30/14



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 225426669001  
 Units : mg/L

Name : OTPHEX\_296  
 Date : 23-OCT-2015 14:10  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	296_006	225426669006	HEX OTP_5	23-OCT-2015 14:10	S27409
L2	296_007	225426669007	HEX OTP_10	23-OCT-2015 14:40	S27410
L3	296_008	225426669008	HEX OTP_25	23-OCT-2015 15:09	S27411
L4	296_009	225426669009	HEX OTP_50	23-OCT-2015 15:39	S27412
L5	296_010	225426669010	HEX OTP_100	23-OCT-2015 16:09	S27413
L6	296_011	225426669011	HEX OTP_200	23-OCT-2015 16:38	S27414

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	B	30954	31774	31981	35007	33195	32269	AVRG		3.07E-5		32530	4	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	B	5.0000	-5	10.000	-2	25.000	-2	50.000	8	100.00	2	200.00	-1

SFL 10/24/15 : Corrected automatically drawn baseline in HEX OTP\_200 (296\_011).

SFL 10/24/15 : Any samples that require HEXACOSANE will not be loaded on this instrument.

Analyst: SFL

Date: 10/24/15

Reviewer: EAH

Date: 10/26/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 GCSV Water: EPA 8015B

Inst : GC17A  
 Calnum : 175247623002  
 Units : mg/L

Name : DSL\_171  
 Date : 20-JUN-2015 15:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	171a010	175247623010	DSL_10	20-JUN-2015 15:31	S27111
L2	171a011	175247623011	DSL_100	20-JUN-2015 15:59	S27112
L3	171a012	175247623012	DSL_500	20-JUN-2015 16:27	S27113
L4	171a013	175247623013	DSL_1000	20-JUN-2015 16:56	S27114
L5	171a014	175247623014	DSL_5000	20-JUN-2015 17:24	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	59139	64770	65011	65212	64156	AVRG		1.57E-5		63657	4	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	-7	100.00	2	500.00	2	1000.0	2	5000.0	1

JDG 06/22/15 : Corrected automatically drawn baseline in DSL\_10 (171a010).

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271127 GCSV Water  
EPA 8015B

Inst : GC17A  
Calnum : 175247623002

Name : DSL\_171  
Cal Date : 20-JUN-2015

ICV 175247623016 (171a016 20-JUN-2015) stds: S27446

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	495.1	mg/L	-1	15	

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 GCSV Water: EPA 8015B

Inst : GC17A  
 Calnum : 175394216001  
 Units : mg/L

Name : OTPHEX\_273  
 Date : 30-SEP-2015 19:13  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	273a003	175394216003	HEXOTP_5	30-SEP-2015 19:13	S27409
L2	273a004	175394216004	HEXOTP_10	30-SEP-2015 19:41	S27410
L3	273a005	175394216005	HEXOTP_25	30-SEP-2015 20:09	S27411
L4	273a006	175394216006	HEXOTP_50	30-SEP-2015 20:37	S27412
L5	273a007	175394216007	HEXOTP_100	30-SEP-2015 21:06	S27413
L6	273a008	175394216008	HEXOTP_200	30-SEP-2015 21:34	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	71460	70831	71260	68676	69800	75121	AVRG		1.40E-5		71191	3	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	0	10.000	-1	25.000	0	50.000	-4	100.00	-2	200.00	6

JDG 10/01/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 10/01/15

Reviewer: EAH

Date: 10/01/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 225442498010              File : 307\_010                      Time : 03-NOV-2015 14:31  
 Standards: S28301

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	32755	250.0	246.3	mg/L	-1	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	34621	50.00	53.21	mg/L	6	15	

JDG 11/04/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/04/15                      Reviewer: EAH                      Date: 11/06/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 225442498022              File : 307\_022                      Time : 03-NOV-2015 21:51  
 Standards: S28302

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	31186	500.0	469.1	mg/L	-6	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	35087	50.00	53.93	mg/L	8	15	

JDG 11/04/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 225442498037              File : 307\_037                      Time : 04-NOV-2015 05:15  
 Standards: S28303

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	30744	1000	924.8	mg/L	-8	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	34617	50.00	53.21	mg/L	6	15	

JDG 11/04/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 175442494013              File : 307a013                      Time : 03-NOV-2015 13:01  
 Cal : 175394216001              Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	78350	50.00	55.03	mg/L	10	15	

JDG 11/03/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/03/15                      Reviewer: EAH                      Date: 11/03/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 175442494014              File : 307a014                      Time : 03-NOV-2015 13:29  
 Standards: S28302

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	175247623002	20-JUN-2015	63657	60545	500.0	475.6	mg/L	-5	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	70994	50.00	49.86	mg/L	0	15	

JDG 11/03/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/03/15                      Reviewer: EAH                      Date: 11/03/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 175442494027          File : 307a027                      Time : 03-NOV-2015 21:09  
 Cal : 175394216001              Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	78179	50.00	54.91	mg/L	10	15	

JDG 11/04/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271127 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 175442494028              File : 307a028                      Time : 03-NOV-2015 21:37  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	61293	1000	962.9	mg/L	-4	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	75069	50.00	52.72	mg/L	5	15	

JDG 11/04/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175247623

Instrument : GC17A  
 Method : EPA 8015B

Begun : 06/20/15 11:16  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	171a001	X	IB			06/20/15 11:16	1.0	
002	171a002	IB	CALIB			06/20/15 11:45	1.0	
003	171a003	ICAL	HEXOTP_5			06/20/15 12:13	1.0	1
004	171a004	ICAL	HEXOTP_10			06/20/15 12:41	1.0	2
005	171a005	ICAL	HEXOTP_25			06/20/15 13:09	1.0	3
006	171a006	ICAL	HEXOTP_50			06/20/15 13:38	1.0	4
007	171a007	ICAL	HEXOTP_100			06/20/15 14:06	1.0	5
008	171a008	ICAL	HEXOTP_200			06/20/15 14:34	1.0	6
009	171a009	IB	CALIB			06/20/15 15:02	1.0	
010	171a010	ICAL	DSL_10			06/20/15 15:31	1.0	7
011	171a011	ICAL	DSL_100			06/20/15 15:59	1.0	8
012	171a012	ICAL	DSL_500			06/20/15 16:27	1.0	9
013	171a013	ICAL	DSL_1000			06/20/15 16:56	1.0	10
014	171a014	ICAL	DSL_5000			06/20/15 17:24	1.0	11
015	171a015	IB	CALIB			06/20/15 17:52	1.0	
016	171a016	ICV	DSL_500			06/20/15 18:20	1.0	12
017	171a017	X	ICV			06/20/15 18:48	1.0	12
018	171a018	IB	CALIB			06/20/15 19:16	1.0	
019	171a019	ICAL	MO_50			06/20/15 19:44	1.0	13
020	171a020	ICAL	MO_250			06/20/15 20:13	1.0	14
021	171a021	ICAL	MO_500			06/20/15 20:41	1.0	15
022	171a022	ICAL	MO_1000			06/20/15 21:09	1.0	16
023	171a023	ICAL	MO_2500			06/20/15 21:38	1.0	17
024	171a024	ICAL	MO_5000			06/20/15 22:06	1.0	17
025	171a025	IB	CALIB			06/20/15 22:35	1.0	
026	171a026	CMARKER	C8-C50			06/20/15 23:03	1.0	18
027	171a027	IB	CALIB			06/20/15 23:32	1.0	

JDG 06/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Standards used: 1=S27409 2=S27410 3=S27411 4=S27412 5=S27413 6=S27414 7=S27111 8=S27112 9=S27113 10=S27114 11=S27110  
 12=S27446 13=S26392 14=S26393 15=S26394 16=S26395 17=S26389 18=S27269

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175394216

Instrument : GC17A  
 Method : EPA 8015B

Begun : 09/30/15 18:16  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	273a001	X	IB			09/30/15 18:16	1.0	
002	273a002	IB	CALIB			09/30/15 18:44	1.0	
003	273a003	ICAL	HEXOTP_5			09/30/15 19:13	1.0	1
004	273a004	ICAL	HEXOTP_10			09/30/15 19:41	1.0	2
005	273a005	ICAL	HEXOTP_25			09/30/15 20:09	1.0	3
006	273a006	ICAL	HEXOTP_50			09/30/15 20:37	1.0	4
007	273a007	ICAL	HEXOTP_100			09/30/15 21:06	1.0	5
008	273a008	ICAL	HEXOTP_200			09/30/15 21:34	1.0	6
009	273a009	IB	CALIB			09/30/15 22:02	1.0	

JDG 10/01/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 9.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175442494

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/03/15 06:54  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	307a001	X	IB				11/03/15 06:54	1.0		
002	307a002	X	CMARKER				11/03/15 07:22	1.0	1	
003	307a003	CCV	MO_500				11/03/15 08:02	1.0	2	
004	307a004	CCV	DSL_250				11/03/15 08:30	1.0	3	
005	307a005	BLANK	QC810830	S	Soil	228956	11/03/15 08:58	1.0		
006	307a006	BLANK	QC810830		Soil	228956	11/03/15 09:27	1.0		
007	307a007	LCS	QC810831	S	Soil	228956	11/03/15 09:55	1.0		
008	307a008	LCS	QC810831		Soil	228956	11/03/15 10:28	1.0		
009	307a009	SAMPLE	271137-001		Soil	228956	11/03/15 10:57	1.0		
010	307a010	MSS	271126-001		Soil	228956	11/03/15 11:36	5.0		
011	307a011	MS	QC810832		Soil	228956	11/03/15 12:04	5.0		
012	307a012	MSD	QC810833		Soil	228956	11/03/15 12:33	5.0		
013	307a013	CCV	MO_500				11/03/15 13:01	1.0	2	
014	307a014	CCV	DSL_500				11/03/15 13:29	1.0	4	
015	307a015	BLANK	QC810641		Water	228909	11/03/15 15:30	1.0		
016	307a016	LCS	QC810642		Water	228909	11/03/15 15:58	1.0		
017	307a017	SAMPLE	270975-001		Water	228807	11/03/15 16:26	1.0		
018	307a018	SAMPLE	270975-002		Water	228807	11/03/15 16:55	1.0		
019	307a019	SAMPLE	271045-018	S	Soil	228890	11/03/15 17:23	5.0		2:BUNKC:12-40=5600
020	307a020	X	IB				11/03/15 17:51	1.0		
021	307a021	SAMPLE	271087-001		Water	228909	11/03/15 18:19	1.0		11:BUNKC:12-40=570000
022	307a022	SAMPLE	271087-002		Water	228909	11/03/15 18:47	1.0		6:BUNKC:12-40=17000
023	307a023	SAMPLE	271087-003		Water	228909	11/03/15 19:16	1.0		
024	307a024	SAMPLE	271087-004		Water	228909	11/03/15 19:44	1.0		
025	307a025	SAMPLE	271087-005		Water	228909	11/03/15 20:12	1.0		
026	307a026	MSS	271127-006		Water	228909	11/03/15 20:40	1.0		
027	307a027	CCV	MO_500				11/03/15 21:09	1.0	2	
028	307a028	CCV	DSL_1000				11/03/15 21:37	1.0	5	
029	307a029	X	CCV				11/03/15 22:05	1.0	2	
030	307a030	X	CCV				11/03/15 22:33	1.0	5	
031	307a031	SAMPLE	271148-001	S	Soil	228956	11/03/15 23:01	100.0		1:BUNKC:10-40=5200
032	307a032	SAMPLE	271148-002	S	Soil	228956	11/03/15 23:29	100.0		
033	307a033	X	IB				11/03/15 23:57	1.0		
034	307a034	SAMPLE	271148-003	S	Soil	228956	11/04/15 00:25	100.0		
035	307a035	SAMPLE	271148-004	S	Soil	228956	11/04/15 00:53	100.0		
036	307a036	X	IB				11/04/15 01:20	1.0		
037	307a037	SAMPLE	271148-005	S	Soil	228956	11/04/15 01:48	100.0		
038	307a038	SAMPLE	271148-001		Soil	228956	11/04/15 02:16	200.0		
039	307a039	X	IB				11/04/15 02:44	1.0		
040	307a040	SAMPLE	271148-002		Soil	228956	11/04/15 03:12	200.0		
041	307a041	SAMPLE	271148-003		Soil	228956	11/04/15 03:40	200.0		
042	307a042	SAMPLE	271148-004		Soil	228956	11/04/15 04:08	200.0		
043	307a043	X	IB				11/04/15 04:36	1.0		
044	307a044	SAMPLE	271148-005		Soil	228956	11/04/15 05:04	200.0		
045	307a045	X	CMARKER				11/04/15 05:32	1.0	1	
046	307a046	CCV	MO_500				11/04/15 06:00	1.0	2	
047	307a047	CCV	DSL_500				11/04/15 06:28	1.0	4	
048	307a048	X	CCV				11/04/15 06:56	1.0	2	
049	307a049	X	CCV				11/04/15 07:25	1.0	4	
050	307a050	MSS	271116-014	S	Soil	228951	11/04/15 09:11	1.0		
051	307a051	SAMPLE	271116-012	S	Soil	228951	11/04/15 09:39	1.0		
052	307a052	SAMPLE	271116-013	S	Soil	228951	11/04/15 10:07	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175442494

Instrument : GC17A Begun : 11/03/15 06:54  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	307a053	SAMPLE	271116-011	S	Soil	228951	11/04/15 10:35	1.0		
054	307a054	SAMPLE	271116-010	S	Soil	228951	11/04/15 11:03	1.0		
055	307a055	SAMPLE	271116-009	S	Soil	228951	11/04/15 11:31	1.0		
056	307a056	SAMPLE	271116-007	S	Soil	228951	11/04/15 11:59	1.0		
057	307a057	SAMPLE	271060-005	S	Soil	228956	11/04/15 12:28	1.0		
058	307a058	SAMPLE	271092-001	S	Soil	228956	11/04/15 12:56	1.0		sh
059	307a059	SAMPLE	271116-008	S	Soil	228951	11/04/15 13:24	1.0		
060	307a060	CCV	MO_500				11/05/15 07:02	1.0	2	
061	307a061	CCV	DSL_1000				11/05/15 07:30	1.0	5	
062	307a062	X	CMARKER				11/05/15 07:59	1.0	1	
063	307a063	SAMPLE	270998-001		Water	228972	11/05/15 08:29	1.0		
064	307a064	SAMPLE	271089-001		Soil	228956	11/05/15 08:58	1.0		
065	307a065	SAMPLE	271282-001		Water	229054	11/05/15 09:26	1.0		
066	307a066	SAMPLE	271282-003		Water	229054	11/05/15 09:55	1.0		
067	307a067	SAMPLE	271087-001		Water	228909	11/05/15 10:23	100.0		
068	307a068	CCV	MO_500				11/05/15 11:02	1.0	2	
069	307a069	CCV	DSL_500				11/05/15 11:30	1.0	4	
070	307a070	CHECK	TEHSURR				11/05/15 12:00	1.0	6	
071	307a071	MSS	271283-001		Soil	229097	11/05/15 12:28	1.0		
072	307a072	MS	QC811382		Soil	229097	11/05/15 12:57	1.0		
073	307a073	MSD	QC811383		Soil	229097	11/05/15 13:25	1.0		
074	307a074	X	TEST#5: GLASS WOOL				11/05/15 13:54	1.0		
075	307a075	X	MO_500				11/05/15 14:55	1.0	2	
076	307a076	CCV	DSL_1000				11/05/15 15:23	1.0	5	
077	307a077	CCV	MO_500				11/05/15 16:36	1.0	2	
078	307a078	X	CMARKER				11/05/15 17:04	1.0	1	

JDG 11/03/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 14.

JDG 11/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 15 through 54.

JDG 11/05/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 55 through 69.

Standards used: 1=S27935 2=S28150 3=S28301 4=S28302 5=S28303 6=S28140

Flags used: sh=out of sample hold



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 224523202

Instrument : GC14B  
 Method : EPA 8015B

Begun : 12/29/14 08:02  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	364_001	X	IB			12/29/14 08:02	1.0	
002	364_002	X	CMARKER			12/29/14 08:30	1.0	1
003	364_003	X	MO_500			12/29/14 08:58	1.0	2
004	364_004	X	DSL_1000			12/29/14 09:26	1.0	3
005	364_005	X	DSL_1000			12/29/14 10:12	1.0	3
006	364_006	X	DSL_500			12/29/14 11:56	1.0	4
007	364_007	X	IB			12/29/14 14:39	1.0	
008	364_008	IB	CALIB			12/29/14 15:07	1.0	
009	364_009	ICAL	DSL_10			12/29/14 15:35	1.0	5
010	364_010	ICAL	DSL_100			12/29/14 16:04	1.0	6
011	364_011	ICAL	DSL_500			12/29/14 16:32	1.0	7
012	364_012	ICAL	DSL_1000			12/29/14 17:00	1.0	8
013	364_013	ICAL	DSL_5000			12/29/14 17:28	1.0	9
014	364_014	IB	CALIB			12/29/14 17:56	1.0	
015	364_015	X	DSL_500			12/29/14 18:24	1.0	4
016	364_016	ICV	DSL_500			12/29/14 18:52	1.0	4
017	364_017	IB	CALIB			12/29/14 19:20	1.0	
018	364_018	CMARKER	C8-C50			12/29/14 19:49	1.0	1
019	364_019	IB	CALIB			12/29/14 20:17	1.0	

SFL 12/30/14 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225426669

Instrument : GC14B  
 Method : EPA 8015B

Begun : 10/23/15 07:09  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	296_001	X	IB			10/23/15 07:09	1.0	
002	296_002	X	CMARKER			10/23/15 07:39	1.0	1
003	296_003	CCV	MO_500			10/23/15 08:09	1.0	2
004	296_004	CCV	DSL_500			10/23/15 08:39	1.0	3
005	296_005	IB	CALIB			10/23/15 13:41	1.0	
006	296_006	ICAL	HEX OTP_5			10/23/15 14:10	1.0	4
007	296_007	ICAL	HEX OTP_10			10/23/15 14:40	1.0	5
008	296_008	ICAL	HEX OTP_25			10/23/15 15:09	1.0	6
009	296_009	ICAL	HEX OTP_50			10/23/15 15:39	1.0	7
010	296_010	ICAL	HEX OTP_100			10/23/15 16:09	1.0	8
011	296_011	ICAL	HEX OTP_200			10/23/15 16:38	1.0	9
012	296_012	IB	CALIB			10/23/15 17:08	1.0	

SFL 10/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 12.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	307_001	X	IB				11/03/15 06:58	1.0	
002	307_002	X	CMARKER				11/03/15 07:29	1.0	1
003	307_003	X	MO_500				11/03/15 07:59	1.0	2
004	307_004	X	DSL_250				11/03/15 08:30	1.0	3
005	307_005	X	MO_500				11/03/15 09:06	1.0	2
006	307_006	X	IB				11/03/15 12:24	1.0	
007	307_007	CMARKER	C8-C50				11/03/15 12:54	1.0	1
008	307_008	X	IB				11/03/15 13:31	1.0	
009	307_009	X	MO_500				11/03/15 14:01	1.0	2
010	307_010	CCV	DSL_250				11/03/15 14:31	1.0	3
011	307_011	CCV	MO_500				11/03/15 16:08	1.0	2
012	307_012	MS	QC810643		Water	228909	11/03/15 16:48	1.0	
013	307_013	MSD	QC810644		Water	228909	11/03/15 17:18	1.0	
014	307_014	SAMPLE	271127-001		Water	228909	11/03/15 17:48	1.0	
015	307_015	SAMPLE	271127-002		Water	228909	11/03/15 18:19	1.0	
016	307_016	SAMPLE	271127-003		Water	228909	11/03/15 18:49	1.0	
017	307_017	SAMPLE	271127-004		Water	228909	11/03/15 19:20	1.0	
018	307_018	SAMPLE	271127-005		Water	228909	11/03/15 19:50	1.0	
019	307_019	SAMPLE	271127-007		Water	228909	11/03/15 20:21	1.0	
020	307_020	SAMPLE	271127-008		Water	228909	11/03/15 20:51	1.0	
021	307_021	SAMPLE	271127-009		Water	228909	11/03/15 21:21	1.0	
022	307_022	CCV	DSL_500				11/03/15 21:51	1.0	4
023	307_023	CCV	MO_500				11/03/15 22:21	1.0	2
024	307_024	X	CCV				11/03/15 22:50	1.0	4
025	307_025	X	CCV				11/03/15 23:20	1.0	2
026	307_026	SAMPLE	271127-010		Water	228909	11/03/15 23:49	1.0	
027	307_027	SAMPLE	271127-011		Water	228909	11/04/15 00:19	1.0	
028	307_028	SAMPLE	271127-012		Water	228909	11/04/15 00:48	1.0	
029	307_029	SAMPLE	271127-013		Water	228909	11/04/15 01:17	1.0	
030	307_030	SAMPLE	270980-001		Water	228972	11/04/15 01:47	1.0	
031	307_031	SAMPLE	270998-001		Water	228972	11/04/15 02:16	1.0	
032	307_032	SAMPLE	271050-002		Soil	228956	11/04/15 02:45	1.0	
033	307_033	SAMPLE	271050-003		Soil	228956	11/04/15 03:15	1.0	
034	307_034	SAMPLE	271050-004		Soil	228956	11/04/15 03:44	1.0	
035	307_035	SAMPLE	271050-005		Soil	228956	11/04/15 04:14	1.0	
036	307_036	X	CMARKER		Soil		11/04/15 04:44	1.0	1
037	307_037	CCV	DSL_1000				11/04/15 05:15	1.0	5
038	307_038	CCV	MO_500				11/04/15 05:45	1.0	2
039	307_039	X	CCV				11/04/15 06:15	1.0	5
040	307_040	X	CCV				11/04/15 06:45	1.0	2
041	307_041	X	POWDER TEST: TRAY 2				11/04/15 07:28	1.0	
042	307_042	X	TANK CHECK: EM51175				11/04/15 07:58	1.0	
043	307_043	CCV	MINOIL_500				11/04/15 09:08	1.0	6
044	307_044	SAMPLE	270941-004		Soil	228763	11/04/15 09:43	20.0	
045	307_045	SAMPLE	270941-005		Soil	228763	11/04/15 10:13	20.0	
046	307_046	X	IB				11/04/15 10:43	1.0	
047	307_047	SAMPLE	271050-002	S	Soil	228956	11/04/15 11:14	1.0	
048	307_048	SAMPLE	271050-003	S	Soil	228956	11/04/15 11:44	1.0	
049	307_049	SAMPLE	271050-004	S	Soil	228956	11/04/15 12:14	1.0	
050	307_050	SAMPLE	271050-005	S	Soil	228956	11/04/15 12:44	1.0	
051	307_051	SAMPLE	271050-006	S	Soil	228956	11/04/15 13:14	1.0	
052	307_052	CCV	MO_500				11/04/15 13:44	1.0	2

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	307_053	CCV	DSL_250				11/04/15 14:14	1.0	3
054	307_054	CCV	MINOIL_500				11/04/15 14:43	1.0	6
055	307_055	BLANK	QC811110		Soil	229025	11/04/15 15:37	1.0	
056	307_056	BLANK	QC811110	S	Soil	229025	11/04/15 16:06	1.0	
057	307_057	LCS	QC811111	S	Soil	229025	11/04/15 16:36	1.0	
058	307_058	MSS	271034-003		Soil	229025	11/04/15 17:06	2.0	
059	307_059	MS	QC811112		Soil	229025	11/04/15 17:36	2.0	
060	307_060	MSD	QC811113		Soil	229025	11/04/15 18:06	2.0	
061	307_061	SAMPLE	271034-004		Soil	229025	11/04/15 18:37	1.0	
062	307_062	SAMPLE	271034-005		Soil	229025	11/04/15 19:07	1.0	
063	307_063	SAMPLE	271150-001		Soil	229025	11/04/15 19:37	100.0	
064	307_064	SAMPLE	271156-002		Soil	229025	11/04/15 20:07	1.0	
065	307_065	X	IB				11/04/15 20:37	1.0	
066	307_066	SAMPLE	271243-001		Soil	229025	11/04/15 21:08	1.0	
067	307_067	X	IB				11/04/15 21:39	1.0	
068	307_068	SAMPLE	270974-003	S	Soil	229025	11/04/15 22:10	1.0	
069	307_069	SAMPLE	271213-001	S	Soil	229025	11/04/15 22:40	1.0	
070	307_070	CCV	MO_500				11/04/15 23:10	1.0	2
071	307_071	CCV	DSL_500				11/04/15 23:40	1.0	4
072	307_072	X	CCV				11/05/15 00:11	1.0	2
073	307_073	X	CCV				11/05/15 00:40	1.0	4
074	307_074	SAMPLE	271213-002	S	Soil	229025	11/05/15 01:11	1.0	
075	307_075	SAMPLE	271217-001	S	Soil	229025	11/05/15 01:40	1.0	
076	307_076	SAMPLE	271217-002	S	Soil	229025	11/05/15 02:10	1.0	
077	307_077	SAMPLE	271217-003	S	Soil	229025	11/05/15 02:40	1.0	
078	307_078	SAMPLE	271217-004	S	Soil	229025	11/05/15 03:11	1.0	
079	307_079	SAMPLE	271217-005	S	Soil	229025	11/05/15 03:40	1.0	
080	307_080	SAMPLE	271217-006	S	Soil	229025	11/05/15 04:11	1.0	
081	307_081	SAMPLE	271217-007	S	Soil	229025	11/05/15 04:43	1.0	
082	307_082	SAMPLE	271108-001		Soil	228956	11/05/15 05:14	1.0	
083	307_083	SAMPLE	271125-001		Soil	228956	11/05/15 05:45	1.0	
084	307_084	X	CMARKER				11/05/15 06:16	1.0	1
085	307_085	X	MO_500				11/05/15 06:47	1.0	2
086	307_086	CCV	DSL_1000				11/05/15 07:18	1.0	5
087	307_087	CCV	MO_500				11/05/15 08:25	1.0	2
088	307_088	BLANK	QC811158	S	Soil	229040	11/05/15 08:56	1.0	
089	307_089	LCS	QC811159	S	Soil	229040	11/05/15 09:26	1.0	
090	307_090	BLANK	QC811214		Water	229054	11/05/15 09:57	1.0	
091	307_091	LCS	QC811215		Water	229054	11/05/15 10:27	1.0	
092	307_092	BLANK	QC811158		Soil	229040	11/05/15 11:08	1.0	
093	307_093	BLANK	QC811380		Soil	229097	11/05/15 11:39	1.0	
094	307_094	LCS	QC811381		Soil	229097	11/05/15 12:10	1.0	
095	307_095	BLANK	QC811018		Water	229008	11/05/15 12:40	1.0	
097	307_097	CCV	MO_500				11/05/15 13:47	1.0	2
098	307_098	CCV	DSL_500				11/05/15 14:16	1.0	4
099	307_099	CHECK	MO_500				11/05/15 14:57	1.0	7
100	307_100	X	1.NOTSONICATED-GRANU				11/05/15 15:26	1.0	
101	307_101	X	2.NOTSONICATED-POWDE				11/05/15 15:55	1.0	
102	307_102	X	3.SONICATED-POWDER				11/05/15 16:24	1.0	
103	307_103	X	4.SONICATED-GRANULAR				11/05/15 16:54	1.0	
104	307_104	X	6.NOSONICATION				11/05/15 17:25	1.0	
105	307_105	X	7.SAND NOT SONICATED				11/05/15 17:55	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
106	307_106	X	8.SAND SONICATED				11/05/15 18:25	1.0		
107	307_107	SAMPLE	271013-002		Soil	228998	11/05/15 18:56	2.0		
108	307_108	SAMPLE	271013-006		Soil	228998	11/05/15 19:26	1.0		
109	307_109	SAMPLE	271013-007		Soil	228998	11/05/15 19:56	2.0		
110	307_110	SAMPLE	271013-008		Soil	228998	11/05/15 20:26	1.0		
111	307_111	SAMPLE	271013-016		Soil	228998	11/05/15 20:56	1.0		
112	307_112	SAMPLE	271013-018		Soil	228998	11/05/15 21:26	1.0		
113	307_113	SAMPLE	271045-006		Soil	228998	11/05/15 21:57	1.0		
114	307_114	SAMPLE	271045-008		Soil	228998	11/05/15 22:26	1.0		
115	307_115	SAMPLE	271045-009		Soil	228998	11/05/15 22:56	1.0		
116	307_116	SAMPLE	271045-010		Soil	228998	11/05/15 23:25	1.0		
117	307_117	CCV	MO_500				11/05/15 23:54	1.0	2	
118	307_118	CCV	DSL_1000				11/06/15 00:24	1.0	5	
119	307_119	X	CCV				11/06/15 00:53	1.0	2	
120	307_120	X	CCV				11/06/15 01:22	1.0	5	
121	307_121	SAMPLE	271045-016		Soil	228998	11/06/15 01:51	1.0		
122	307_122	SAMPLE	271045-010	S	Soil	228998	11/06/15 02:20	1.0		
123	307_123	SAMPLE	271045-016	S	Soil	228998	11/06/15 02:50	1.0		
124	307_124	SAMPLE	271144-005	S	Soil	228998	11/06/15 03:19	1.0		
125	307_125	X	IB				11/06/15 03:49	1.0		
126	307_126	MSS	271144-006	S	Soil	228998	11/06/15 04:20	20.0		
127	307_127	SAMPLE	271144-007	S	Soil	228998	11/06/15 04:49	1.0		2:BUNKC:12-40=6500
128	307_128	X	IB				11/06/15 05:19	1.0		
129	307_129	SAMPLE	271144-008	S	Soil	228998	11/06/15 05:50	1.0		
130	307_130	SAMPLE	271144-009	S	Soil	228998	11/06/15 06:21	20.0		
131	307_131	SAMPLE	271144-010	S	Soil	228998	11/06/15 06:51	1.0		2:BUNKC:12-40=5400
132	307_132	X	IB				11/06/15 07:21	1.0		
133	307_133	SAMPLE	271144-011	S	Soil	228998	11/06/15 07:51	1.0		
134	307_134	X	CMARKER				11/06/15 08:22	1.0	1	
135	307_135	X	MO_500				11/06/15 08:52	1.0	2	
136	307_136	CCV	DSL_500				11/06/15 09:22	1.0	4	
137	307_137	X	TEST 1: SAND EM48118				11/06/15 09:52	1.0		
138	307_138	X	TEST2: POWDER (BAKED				11/06/15 10:22	1.0		
139	307_139	CCV	MO_500				11/06/15 10:52	1.0	7	
140	307_140	MSS	271034-006		Soil	229040	11/06/15 14:08	1.0		
141	307_141	SAMPLE	271034-010		Soil	229040	11/06/15 14:37	1.0		
142	307_142	SAMPLE	271320-001		Soil	229157	11/06/15 15:45	1.0		
143	307_143	SAMPLE	271321-002		Soil	229157	11/06/15 16:14	1.0		
144	307_144	CCV	MO_500				11/06/15 18:17	1.0	2	
145	307_145	CCV	DSL_1000				11/06/15 18:47	1.0	5	
146	307_146	X	CMARKER				11/06/15 20:58	1.0	1	
147	307_147	CCV	JET_250				11/06/15 21:28	1.0	8	
148	307_148	SAMPLE	271144-005		Soil	228998	11/06/15 21:58	2.0		
149	307_149	MSS	271144-006		Soil	228998	11/06/15 22:27	2.0		
150	307_150	SAMPLE	271144-007		Soil	228998	11/06/15 22:57	2.0		
151	307_151	SAMPLE	271144-008		Soil	228998	11/06/15 23:26	2.0		
152	307_152	SAMPLE	271144-009		Soil	228998	11/06/15 23:56	2.0		
153	307_153	SAMPLE	271144-010		Soil	228998	11/07/15 00:25	2.0		
154	307_154	SAMPLE	271144-011		Soil	228998	11/07/15 00:54	1.0		
155	307_155	SAMPLE	271144-012		Soil	228998	11/07/15 01:23	2.0		
156	307_156	MS	QC810984		Soil	228998	11/07/15 01:52	2.0		
157	307_157	MSD	QC810985		Soil	228998	11/07/15 02:22	2.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B Begun : 11/03/15 06:58  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
158	307_158	CCV	DSL_1000				11/07/15 02:51	1.0	5
159	307_159	CCV	MO_500				11/07/15 03:20	1.0	2
160	307_160	X	CCV				11/07/15 03:51	1.0	5
161	307_161	X	CCV				11/07/15 04:22	1.0	2
162	307_162	CCV	JET_250				11/07/15 04:53	1.0	8
163	307_163	SAMPLE	271144-005	S	Soil	228998	11/07/15 05:23	1.0	
164	307_164	MSS	271144-006	S	Soil	228998	11/07/15 05:54	1.0	3:BUNKC:12-40=7500
165	307_165	SAMPLE	271144-008	S	Soil	228998	11/07/15 06:25	1.0	

JDG 11/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 54.

JDG 11/05/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 55 through 98.

JDG 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 99 through 141.

BJP 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 142 through 145.

SFL 11/07/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 146 through 165.

SAMPLE PREPARATION SUMMARY

Batch # : 228909  
 Started By : ARW  
 Method : 3520C  
 Spike #1 ID : S28305

Prep Date : 30-OCT-2015 16:25  
 SOP Version : TEH\_3520\_rv15  
 Spike #2 ID : S28139

Analysis : TEH  
 Finished By : JCD  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271087-001		Water	500	2.5	1	0.005	7	.5				TEHM	
271087-002		Water	500	2.5	1	0.005	7	.5				TEHM	
271087-003		Water	500	2.5	1	0.005	7	.5				TEHM	
271087-004		Water	500	2.5	1	0.005	7	.5				TEHM	
271087-005		Water	500	2.5	1	0.005	7	.5				TEHM	
271127-001		Water	480	2.5	1	0.005208	7	.5				TEH	
271127-002		Water	480	2.5	1	0.005208	7	.5				TEH	
271127-003		Water	500	2.5	1	0.005	7	.5				TEH	
271127-004		Water	500	2.5	1	0.005	7	.5				TEH	
271127-005		Water	500	2.5	1	0.005	7	.5				TEH	
271127-006		Water	500	2.5	1	0.005	7	.5				TEH	
271127-007		Water	500	2.5	1	0.005	7	.5				TEH	
271127-008		Water	500	2.5	1	0.005	7	.5				TEH	
271127-009		Water	500	2.5	1	0.005	7	.5				TEH	
271127-010		Water	500	2.5	1	0.005	7	.5				TEH	
271127-011		Water	500	2.5	1	0.005	7	.5				TEH	
271127-012		Water	500	2.5	1	0.005	7	.5				TEH	
271127-013		Water	500	2.5	1	0.005	7	.5				TEH	
QC810641	BLANK	Water	500	2.5	1	0.005		.5					
QC810642	LCS	Water	500	2.5	1	0.005		.5	.5				
QC810643	MS	Water	500	2.5	1	0.005	7	.5	.5				
QC810644	MSD	Water	500	2.5	1	0.005	7	.5	.5				

Analyst: JDG

Date: 11/06/15

Reviewer: EAH

Date: 11/06/15

TEH (8015) Water Prep Log

Curtis & Tompkins, Ltd.

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BK 3680

LIMS Batch No: 228909  
 LIMS Analysis: TEH (m)  
 Date Extracted: 10/30/2015

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
231175-001	G	<input checked="" type="checkbox"/> 500 <input checked="" type="checkbox"/> 480	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/2" sediment on bottom
2	F	<input checked="" type="checkbox"/> 500 <input checked="" type="checkbox"/> 480	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	2"
3	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1"
4	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1"
5	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/4"
6	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/2"
7	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/2"
8	G	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1"
9	H	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/3"
10	H	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/8"
11	I	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1/2"
12	I	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1"
13	H	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1"
231175-001	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	very oily layer on top
15	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
2	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
3	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
4	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
5	A	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
20	WJ	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> WJ	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
WJ	2	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> WJ	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
WJ	3	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	about 1" sediment on top & bottom
WSD	4	<input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1" sediment
		<input type="checkbox"/> 500	<input type="checkbox"/> 7	<input type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	
		<input type="checkbox"/> 500	<input type="checkbox"/> 7	<input type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	

MS/MSD not included due to:  insufficient volume, or  other (reason)

0.5 mL of TEH\_SURR was added to all samples  
 0.5 mL of TEH\_SP was added to all spikes  
 pH of all samples adjusted to pH ≤ 2 with H<sub>2</sub>SO<sub>4</sub>

3520c: Samples were continually extracted about 450 mL of CH<sub>2</sub>Cl<sub>2</sub>

Extraction Start Time: 1025  
 Extraction End Time: 1112

3510c: Samples were extracted 3 times with 60 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to TEH Department

Mfg & Lot# / LIMS # / Time	Date / Initials
S28305B	APW 10/20/15
J28137E	
FS152524	
EMSS175	
N/A	VG 10/31/15
PS153213	JCD 11/2/15
100	

Fin P. Uy 10/30/2015  
 Extraction Chemist Date

Continued from Page \_\_\_\_\_  
 Continued on Page \_\_\_\_\_

APW 11/3/15  
 Reviewed by Date



Laboratory Job Number 271127

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Water

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-13-16-NS	Batch#:	228947
Lab ID:	271127-001	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-13-16-NS	Batch#:	228947
Lab ID:	271127-001	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	126	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-13-26-NS	Batch#:	228947
Lab ID:	271127-002	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-13-26-NS	Batch#:	228947
Lab ID:	271127-002	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	0.6	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	125	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-20-FD	Batch#:	228947
Lab ID:	271127-003	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	1.1	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-20-FD	Batch#:	228947
Lab ID:	271127-003	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	128	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-20-NS	Batch#:	228947
Lab ID:	271127-004	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	1.2	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-20-NS	Batch#:	228947
Lab ID:	271127-004	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	126	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-30-NS	Batch#:	228947
Lab ID:	271127-005	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-14-30-NS	Batch#:	228947
Lab ID:	271127-005	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-15-20-NS	Batch#:	228947
Lab ID:	271127-006	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	2.8	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-15-20-NS	Batch#:	228947
Lab ID:	271127-006	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	128	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-15-30-NS	Batch#:	228947
Lab ID:	271127-007	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	11	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.9	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-15-30-NS	Batch#:	228947
Lab ID:	271127-007	Sampled:	10/27/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-16-20-NS	Batch#:	228947
Lab ID:	271127-008	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-16-20-NS	Batch#:	228947
Lab ID:	271127-008	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-16-30-NS	Batch#:	228947
Lab ID:	271127-009	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-16-30-NS	Batch#:	228947
Lab ID:	271127-009	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-17-20-NS	Batch#:	228947
Lab ID:	271127-010	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-17-20-NS	Batch#:	228947
Lab ID:	271127-010	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-17-30-NS	Batch#:	228947
Lab ID:	271127-011	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-17-30-NS	Batch#:	228947
Lab ID:	271127-011	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-19-26-NS	Batch#:	228947
Lab ID:	271127-012	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-19-26-NS	Batch#:	228947
Lab ID:	271127-012	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	128	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-19-36-NS	Batch#:	228947
Lab ID:	271127-013	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	0.6	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-19-36-NS	Batch#:	228947
Lab ID:	271127-013	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	228947
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Type: BS Lab ID: QC810786

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	10.87	87	66-135
Benzene	12.50	12.10	97	80-123
Trichloroethene	12.50	12.83	103	80-123
Toluene	12.50	12.09	97	80-121
Chlorobenzene	12.50	12.65	101	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	91	80-120

Type: BSD Lab ID: QC810787

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.07	89	66-135	2	24
Benzene	12.50	11.78	94	80-123	3	20
Trichloroethene	12.50	12.59	101	80-123	2	20
Toluene	12.50	11.71	94	80-121	3	20
Chlorobenzene	12.50	12.60	101	80-123	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	126	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC810788	Batch#:	228947
Matrix:	Water	Analyzed:	11/02/15
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC810788	Batch#:	228947
Matrix:	Water	Analyzed:	11/02/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	126	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271127	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-19-26-NS	Batch#:	228947
MSS Lab ID:	271127-012	Sampled:	10/26/15
Matrix:	Water	Received:	10/29/15
Units:	ug/L	Analyzed:	11/02/15
Diln Fac:	1.000		

Type: MS Lab ID: QC810859

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1117	12.50	11.53	92	73-129
Benzene	0.1027	12.50	12.91	102	80-120
Trichloroethene	<0.1000	12.50	13.33	107	73-123
Toluene	0.1925	12.50	12.79	101	80-120
Chlorobenzene	<0.1000	12.50	13.43	107	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	91	80-120

Type: MSD Lab ID: QC810860

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.44	91	73-129	1	25
Benzene	12.50	12.46	99	80-120	4	20
Trichloroethene	12.50	13.01	104	73-123	2	20
Toluene	12.50	12.55	99	80-120	2	21
Chlorobenzene	12.50	13.46	108	80-120	0	24

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	131	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**



CURTIS & TOMPKINS BFB TUNE FOR 271127 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955422499012              File : njk12                      Time : 20-OCT-2015 13:29

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	6135	25.97	
75	30% - 60% of mass 95	11611	49.16	
95		23619	100.00	
96	5% - 9% of mass 95	1771	7.50	
173	< 2% of mass 174	181	1.03	
174	> 50% and < 100% of mass 95	17576	74.41	
175	5% - 9% of mass 174	1199	6.82	
176	> 95% and < 101% of mass 174	17083	97.20	
177	5% - 9% of mass 176	1070	6.26	

Analyst: MCT                      Date: 10/21/15                      Reviewer: LW                      Date: 10/22/15

CURTIS & TOMPKINS BFB TUNE FOR 271127 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955423728005              File : njl05                      Time : 21-OCT-2015 10:43

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	9284	26.58	
75	30% - 60% of mass 95	17331	49.61	
95		34931	100.00	
96	5% - 9% of mass 95	2234	6.40	
173	< 2% of mass 174	246	1.02	
174	> 50% and < 100% of mass 95	24045	68.84	
175	5% - 9% of mass 174	1674	6.96	
176	> 95% and < 101% of mass 174	23349	97.11	
177	5% - 9% of mass 176	1688	7.23	

MCT: 10/21/15 \*      DJA: 10/22/15      LW: 10/23/15

CURTIS & TOMPKINS BFB TUNE FOR 271127 MSVOA Water  
EPA 8260B

Inst : MSVOA14 Run Name : BFB IDF : 1.0  
Seqnum : 955441010010 File : nk210 Time : 02-NOV-2015 11:31

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	7543	34.11	
75	30% - 60% of mass 95	11881	53.73	
95		22112	100.00	
96	5% - 9% of mass 95	1532	6.93	
173	< 2% of mass 174	188	1.06	
174	> 50% and < 100% of mass 95	17707	80.08	
175	5% - 9% of mass 174	1231	6.95	
176	> 95% and < 101% of mass 174	17168	96.96	
177	5% - 9% of mass 176	1251	7.29	

Analyst: MCT Date: 11/02/15 Reviewer: LW Date: 11/03/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271127 MSVOA Water: EPA 8260B

Inst : MSVOA14  
 Calnum : 955422499001  
 Units : ug/L

Name : 8260X14W  
 Date : 20-OCT-2015 15:49  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	njk17	955422499017		20-OCT-2015 15:49	S27004 (2000000X), S28008 (2000000X), S28355 (2000000X), S27081 (1000000X), S28246 (2500X)
L2	njk18	955422499018		20-OCT-2015 16:15	S27004 (1000000X), S28008 (1000000X), S28355 (1000000X), S27081 (500000X), S28246 (2500X)
L3	njk19	955422499019		20-OCT-2015 16:41	S27004 (500000X), S28008 (250000X), S28355 (250000X), S27081 (250000X), S28246 (2500X)
L4	njk20	955422499020		20-OCT-2015 17:08	S27004 (200000X), S28008 (100000X), S28355 (100000X), S27081 (100000X), S28246 (2500X)
L5	njk21	955422499021		20-OCT-2015 17:34	S27004 (100000X), S28008 (50000X), S28355 (50000X), S27081 (50000X), S28246 (2500X)
L6	njk22	955422499022		20-OCT-2015 18:00	S27004 (50000X), S28008 (25000X), S28355 (25000X), S27081 (25000X), S28246 (2500X)
L7	njk23	955422499023		20-OCT-2015 18:26	S27004 (20000X), S28008 (10000X), S28355 (10000X), S27081 (10000X), S28246 (2500X)
L8	njk24	955422499024		20-OCT-2015 18:53	S27004 (13330X), S28008 (6667X), S28355 (6667X), S27081 (6667X), S28246 (2500X)
L9	njk25	955422499025		20-OCT-2015 19:19	S27004 (10000X), S28008 (5000X), S28355 (5000X), S27081 (5000X), S28246 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.6837	0.6585	0.6598	0.6465	0.6233	0.6133	0.6239	0.6226	AVRG		1.55896		0.6415	4	15	0.05	0.99	
Chloromethane	0.9255	1.1154	0.9404	0.9896	0.9803	0.8971	0.9091	0.8887	0.9132	AVRG		1.05148		0.9510	7	15	0.10	0.99	
Vinyl Chloride	0.8999	1.0998	0.9717	0.9947	0.9714	0.9323	0.9560	0.9515	0.9588	AVRG		1.03020		0.9707	6	15	0.05	0.99	
Bromomethane		0.2097	0.2055	0.2338	0.2282	0.2241	0.2349	0.2304	0.2266	AVRG		4.46123		0.2242	5	15	0.05	0.99	
Chloroethane		0.6283	0.5547	0.5452	0.5234	0.5146	0.5057	0.5021	0.5021	AVRG		1.87084		0.5345	8	15	0.05	0.99	
Trichlorofluoromethane		0.9312	0.8190	0.8477	0.8279	0.8073	0.7916	0.7943	0.8005	AVRG		1.20854		0.8274	6	15	0.05	0.99	
Acetone			0.4907m	0.4211m	0.4174m	0.4203m	0.3912m	0.3730m	0.3952m	AVRG		2.40635		0.4156	9	15	0.05	0.99	
Freon 113		0.5077	0.4409	0.4305	0.4099	0.4100	0.4298	0.4276	0.4209	AVRG		2.30057		0.4347	7	15	0.05	0.99	
1,1-Dichloroethene		0.4902	0.4204	0.4204	0.4075	0.3943	0.4100	0.4093	0.4061	AVRG		2.38219		0.4198	7	15	0.05	0.99	
Methylene Chloride		0.5744	0.4944	0.5013	0.4855	0.4733	0.4934	0.4875	0.4851	AVRG		2.00255		0.4994	6	15	0.05	0.99	
Carbon Disulfide		1.6007	1.5105	1.4858	1.4361	1.3946	1.4590	1.4543	1.4486	AVRG		0.67857		1.4737	4	15	0.05	0.99	
MTBE		1.8670	1.6464	1.6428	1.6332	1.6163	1.6646	1.6531	1.6950	AVRG		0.59620		1.6773	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5631	0.4839	0.4724	0.4676	0.4501	0.4642	0.4637	0.4643	AVRG		2.08918		0.4787	7	15	0.05	0.99	
Vinyl Acetate		1.7426	1.4446	1.7048	1.5558	1.7632	1.8221	1.7386	1.9343	AVRG		0.58369		1.7132	9	15	0.05	0.99	
1,1-Dichloroethane		1.5314	1.3333	1.3266	1.3053	1.2600	1.3091	1.2960	1.3074	AVRG		0.74984		1.3336	6	15	0.10	0.99	
2-Butanone			0.5179	0.4876	0.4793	0.4796	0.4848	0.4727	0.4985	AVRG		2.04652		0.4886	3	15	0.05	0.99	
2,2-Dichloropropane		0.7631	0.6617	0.6577	0.6369	0.6165	0.6452	0.6397	0.6364	AVRG		1.52174		0.6571	7	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6344	0.5605	0.5725	0.5451	0.5320	0.5509	0.5520	0.5522	AVRG		1.77795		0.5624	6	15	0.05	0.99	
Chloroform		1.0104	0.9092	0.8810	0.8677	0.8361	0.8779	0.8764	0.8784	AVRG		1.12093		0.8921	6	15	0.05	0.99	
Bromochloromethane		0.2823	0.2653	0.2526	0.2458	0.2368	0.2408	0.2356	0.2327	AVRG		4.01645		0.2490	7	15	0.05	0.99	
1,1,1-Trichloroethane		0.8544	0.7822	0.7928	0.7752	0.7424	0.7819	0.7782	0.7817	AVRG		1.27208		0.7861	4	15	0.05	0.99	
1,1-Dichloropropene		0.5075	0.4901	0.4843	0.4655	0.4587	0.4788	0.4831	0.4826	AVRG		2.07764		0.4813	3	15	0.05	0.99	
Carbon Tetrachloride		0.4378	0.3967	0.4105	0.3905	0.3878	0.4132	0.4186	0.4157	AVRG		2.44587		0.4089	4	15	0.05	0.99	
1,2-Dichloroethane		0.6891	0.6343	0.6391	0.6267	0.6133	0.6248	0.6320	0.6346	AVRG		1.57054		0.6367	4	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.6254	1.3784	1.4119	1.3495	1.3209	1.3753	1.3789	1.3730	AVRG		0.71344		1.4017	7	15	0.05	0.99	
Trichloroethene		0.4025	0.3692	0.3582	0.3493	0.3487	0.3589	0.3589	0.3565	AVRG		2.75647		0.3628	5	15	0.05	0.99	
1,2-Dichloropropane		0.5757	0.4929	0.5244	0.4817m	0.4821m	0.4992m	0.4980m	0.4974m	AVRG		1.97465		0.5064	6	15	0.05	0.99	
Bromodichloromethane		0.4533	0.4459	0.4344	0.4366	0.4280	0.4517	0.4533	0.4556	AVRG		2.24799		0.4448	2	15	0.05	0.99	
Dibromomethane		0.2428	0.2246	0.2279	0.2128	0.2108	0.2160	0.2156	0.2186	AVRG		4.52219		0.2211	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6560	0.6384	0.6210	0.6446	0.6454	0.6358	0.6711	AVRG		1.55130		0.6446	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6089	0.5354	0.5413	0.5251	0.5310	0.5586	0.5619	0.5638	AVRG		1.80754		0.5532	5	15	0.05	0.99	
Toluene		1.9507	1.6507	1.6330	1.6277	1.5840	1.6564	1.6419	1.6301	AVRG		0.59816		1.6718	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5638	0.5265	0.5471	0.5354	0.5405	0.5648	0.5680	0.5725	AVRG		1.81051		0.5523	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.2042	0.1862	0.1868	0.1823	0.1794	0.1849	0.1829	0.1830	AVRG		5.37022		0.1862	4	15	0.05	0.99	
2-Hexanone			0.4851	0.4874	0.4896	0.4905	0.5035	0.4921	0.5175	AVRG		2.01976		0.4951	2	15	0.05	0.99	
1,3-Dichloropropane		0.6835	0.6350	0.6219	0.6187	0.6136	0.6304	0.6219	0.6312	AVRG		1.58221		0.6320	3	15	0.05	0.99	
Tetrachloroethene		0.4048	0.3665	0.3651	0.3474	0.3398	0.3565	0.3543	0.3539	AVRG		2.76980		0.3610	5	15	0.05	0.99	
Dibromochloromethane		0.4335	0.3523	0.3636	0.3677	0.3690	0.3898	0.3881	0.3917	AVRG		2.61807		0.3820	7	15	0.05	0.99	
1,2-Dibromoethane		0.4210	0.3578	0.3536	0.3543	0.3528	0.3666	0.3640	0.3675	AVRG		2.72342		0.3672	6	15	0.05	0.99	
Chlorobenzene		1.1930	1.0437	1.0547	1.0088	0.9940	1.0357	1.0309	1.0231	AVRG		0.95422		1.0480	6	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.4003	0.3408	0.3541	0.3493	0.3507	0.3662	0.3658	0.3667	AVRG		2.76439		0.3617	5	15	0.05	0.99	
Ethylbenzene		2.2020	1.9060	1.9237	1.8725	1.8465	1.9238	1.9190	1.9236	AVRG		0.51556		1.9396	6	15	0.05	0.99	
m,p-Xylenes	0.6673	0.8362	0.7342	0.7448	0.7084	0.7126	0.7401	0.7368	0.7375	AVRG		1.35991		0.7353	6	15	0.05	0.99	
o-Xylene		0.7708	0.7121	0.7417	0.7154	0.7075	0.7337	0.7320	0.7326	AVRG		1.36850		0.7307	3	15	0.05	0.99	
Styrene		1.4284	1.2162	1.2466	1.2092	1.2092	1.2606	1.2573	1.2598	AVRG		0.79308		1.2609	6	15	0.05	0.99	
Bromoform		0.2976	0.2582	0.2607	0.2546	0.2583	0.2748	0.2723	0.2843	AVRG		3.70223		0.2701	6	15	0.10	0.99	
Isopropylbenzene		3.9761	3.5450	3.6250	3.4828	3.4189	3.5304	3.5404	3.5087	AVRG		0.27945		3.5784	5	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.0367	0.8055	0.8587	0.7907	0.8097	0.8217	0.8186	0.8550	AVRG		1.17709		0.8496	9	15	0.30	0.99	
1,2,3-Trichloropropane		1.1143	0.9847	0.9773	0.9535	0.9429	0.9603	0.9452	0.9752	AVRG		1.01868		0.9817	6	15	0.05	0.99	
Propylbenzene		4.7698	4.3192	4.3657	4.2011	4.1600	4.3312	4.3185	4.3047	AVRG		0.23008		4.3463	4	15	0.05	0.99	
Bromobenzene		0.9841	0.8326	0.8466	0.8202	0.8060	0.8238	0.8190	0.8084	AVRG		1.18683		0.8426	7	15	0.05	0.99	
1,3,5-Trimethylbenzene		3.4587	3.0402	3.1055	2.9658	2.9331	3.0739	3.0886	3.0777	AVRG		0.32332		3.0929	5	15	0.05	0.99	
2-Chlorotoluene		3.2675	2.9352	2.9659	2.8163	2.7289	2.8697	2.8591	2.8589	AVRG		0.34333		2.9127	6	15	0.05	0.99	
4-Chlorotoluene		2.9939	2.6512	2.7564	2.6373	2.5811	2.6823	2.6733	2.6739	AVRG		0.36952		2.7062	5	15	0.05	0.99	
tert-Butylbenzene		2.9899	2.6374	2.6651	2.5470	2.5447	2.6403	2.6300	2.6164	AVRG		0.37610		2.6588	5	15	0.05	0.99	
1,2,4-Trimethylbenzene		3.2533	3.1263	3.1636	3.0200	2.9884	3.1369	3.1498	3.1495	AVRG		0.32016		3.1235	3	15	0.05	0.99	
sec-Butylbenzene		4.5661	3.9855	4.0250	3.8675	3.8320	4.0254	3.9857	3.9955	AVRG		0.24781		4.0353	6	15	0.05	0.99	
para-Isopropyl Toluene		3.6147	3.3196	3.3606	3.2451	3.2444	3.3996	3.3729	3.3681	AVRG		0.29712		3.3656	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.8036	1.5631	1.6145	1.5338	1.5081	1.5635	1.5542	1.5585	AVRG		0.62996		1.5874	6	15	0.05	0.99	
1,4-Dichlorobenzene		1.9904	1.6226	1.6369	1.5736	1.5443	1.5889	1.5728	1.5750	AVRG		0.61048		1.6381	9	15	0.05	0.99	
n-Butylbenzene		3.6954	3.1137	3.1369	3.0403	3.0612	3.2155	3.1986	3.2209	AVRG		0.31150		3.2103	6	15	0.05	0.99	
1,2-Dichlorobenzene		1.7139	1.5835	1.5779	1.4877	1.4738	1.5320	1.5251	1.5205	AVRG		0.64441		1.5518	5	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2906	0.2292	0.2143	0.2078	0.2173	0.2215	0.2194	0.2364	AVRG		4.35583		0.2296	11	15	0.05	0.99	
1,2,4-Trichlorobenzene		1.3164	1.1849	1.2055	1.1777	1.1526	1.2023	1.1824	1.1691	AVRG		0.83412		1.1989	4	15	0.05	0.99	
Hexachlorobutadiene		0.6213	0.5325	0.5136	0.5382	0.5470	0.5910	0.5929	0.5879	AVRG		1.76812		0.5656	7	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		3.8240	3.3505	3.4727	3.3602	3.3820	3.4978	3.4049	3.4519	AVRG		0.28835		3.4680	4	15	0.05	0.99	
1,2,3-Trichlorobenzene		1.2864	1.1793	1.2248	1.1701	1.1346	1.1732	1.1654	1.1444	AVRG		0.84406		1.1848	4	15	0.05	0.99	
Dibromofluoromethane	0.4466	0.4485	0.4526	0.4538	0.4531	0.4511	0.4533	0.4576	0.4581	AVRG		2.20877		0.4527	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.4571	0.4656	0.4693	0.4632	0.4637	0.4685	0.4625	0.4660	0.4695	AVRG		2.15041		0.4650	1	15	0.05	0.99	
Toluene-d8	1.3377	1.3408	1.3415	1.3438	1.3335	1.3520	1.3441	1.3312	1.3394	AVRG		0.74602		1.3404	0	15	0.05	0.99	
Bromofluorobenzene	1.0206	1.0203	1.0242	1.0391	1.0109	1.0120	1.0134	1.0040	1.0036	AVRG		0.98379		1.0165	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	7	2.0000	3	5.0000	3	10.000	1	20.000	-3	50.000	-4	75.000	-3	100.00	-3
Chloromethane	0.5000	-3	1.0000	17	2.0000	-1	5.0000	4	10.000	3	20.000	-6	50.000	-4	75.000	-7	100.00	-4
Vinyl Chloride	0.5000	-7	1.0000	13	2.0000	0	5.0000	2	10.000	0	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Bromomethane			1.0000	-6	2.0000	-8	5.0000	4	10.000	2	20.000	0	50.000	5	75.000	3	100.00	1
Chloroethane			1.0000	18	2.0000	4	5.0000	2	10.000	-2	20.000	-4	50.000	-5	75.000	-6	100.00	-6
Trichlorofluoromethane			1.0000	13	2.0000	-1	5.0000	2	10.000	0	20.000	-2	50.000	-4	75.000	-4	100.00	-3
Acetone					2.0000	18	5.0000	1	10.000	0	20.000	1	50.000	-6	75.000	-10	100.00	-5
Freon 113			0.5000	17	2.0000	1	5.0000	-1	10.000	-6	20.000	-6	50.000	-1	75.000	-2	100.00	-3
1,1-Dichloroethene			0.5000	17	2.0000	0	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-3
Methylene Chloride			0.5000	15	2.0000	-1	5.0000	0	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-3
Carbon Disulfide			0.5000	9	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-2
MTBE			0.5000	11	2.0000	-2	5.0000	-2	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	1
trans-1,2-Dichloroethene			0.5000	18	2.0000	1	5.0000	-1	10.000	-2	20.000	-6	50.000	-3	75.000	-3	100.00	-3
Vinyl Acetate			0.5000	2	2.0000	-16	5.0000	0	10.000	-9	20.000	3	50.000	6	75.000	1	100.00	13
1,1-Dichloroethane			0.5000	15	2.0000	0	5.0000	-1	10.000	-2	20.000	-6	50.000	-2	75.000	-3	100.00	-2
2-Butanone					2.0000	6	5.0000	0	10.000	-2	20.000	-2	50.000	-1	75.000	-3	100.00	2
2,2-Dichloropropane			0.5000	16	2.0000	1	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-3	100.00	-3
cis-1,2-Dichloroethene			0.5000	13	2.0000	0	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
Chloroform			0.5000	13	2.0000	2	5.0000	-1	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Bromochloromethane			0.5000	13	2.0000	7	5.0000	1	10.000	-1	20.000	-5	50.000	-3	75.000	-5	100.00	-7
1,1,1-Trichloroethane			0.5000	9	2.0000	0	5.0000	1	10.000	-1	20.000	-6	50.000	-1	75.000	-1	100.00	-1
1,1-Dichloropropene			0.5000	5	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	0	100.00	0
Carbon Tetrachloride			0.5000	7	2.0000	-3	5.0000	0	10.000	-4	20.000	-5	50.000	1	75.000	2	100.00	2
1,2-Dichloroethane			0.5000	8	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-2	75.000	-1	100.00	0
Benzene			0.5000	16	2.0000	-2	5.0000	1	10.000	-4	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Trichloroethene			0.5000	11	2.0000	2	5.0000	-1	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2-Dichloropropane			0.5000	14	2.0000	-3	5.0000	4	10.000	-5	20.000	-5	50.000	-1	75.000	-2	100.00	-2
Bromodichloromethane			0.5000	2	2.0000	0	5.0000	-2	10.000	-2	20.000	-4	50.000	2	75.000	2	100.00	2
Dibromomethane			0.5000	10	2.0000	2	5.0000	3	10.000	-4	20.000	-5	50.000	-2	75.000	-2	100.00	-1
4-Methyl-2-Pentanone					2.0000	2	5.0000	-1	10.000	-4	20.000	0	50.000	0	75.000	-1	100.00	4
cis-1,3-Dichloropropene			0.5000	10	2.0000	-3	5.0000	-2	10.000	-5	20.000	-4	50.000	1	75.000	2	100.00	2
Toluene			0.5000	17	2.0000	-1	5.0000	-2	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-2
trans-1,3-Dichloropropene			0.5000	2	2.0000	-5	5.0000	-1	10.000	-3	20.000	-2	50.000	2	75.000	3	100.00	4
1,1,2-Trichloroethane			0.5000	10	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-1	75.000	-2	100.00	-2
2-Hexanone					2.0000	-2	5.0000	-2	10.000	-1	20.000	-1	50.000	2	75.000	-1	100.00	5
1,3-Dichloropropane			0.5000	8	2.0000	0	5.0000	-2	10.000	-2	20.000	-3	50.000	0	75.000	-2	100.00	0
Tetrachloroethene			0.5000	12	2.0000	2	5.0000	1	10.000	-4	20.000	-6	50.000	-1	75.000	-2	100.00	-2
Dibromochloromethane			0.5000	13	2.0000	-8	5.0000	-5	10.000	-4	20.000	-3	50.000	2	75.000	2	100.00	3
1,2-Dibromoethane			0.5000	15	2.0000	-3	5.0000	-4	10.000	-4	20.000	-4	50.000	0	75.000	-1	100.00	0
Chlorobenzene			0.5000	14	2.0000	0	5.0000	1	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,1,1,2-Tetrachloroethane			0.5000	11	2.0000	-6	5.0000	-2	10.000	-3	20.000	-3	50.000	1	75.000	1	100.00	1
Ethylbenzene			0.5000	14	2.0000	-2	5.0000	-1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-9	1.0000	14	4.0000	0	10.000	1	20.000	-4	40.000	-3	100.00	1	150.00	0	200.00	0
o-Xylene			0.5000	5	2.0000	-3	5.0000	2	10.000	-2	20.000	-3	50.000	0	75.000	0	100.00	0
Styrene			0.5000	13	2.0000	-4	5.0000	-1	10.000	-4	20.000	-4	50.000	0	75.000	0	100.00	0
Bromoform			0.5000	10	2.0000	-4	5.0000	-3	10.000	-6	20.000	-4	50.000	2	75.000	1	100.00	5
Isopropylbenzene			0.5000	11	2.0000	-1	5.0000	1	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,1,2,2-Tetrachloroethane			0.5000	<b>22</b>	2.0000	-5	5.0000	1	10.000	-7	20.000	-5	50.000	-3	75.000	-4	100.00	1
1,2,3-Trichloropropane			0.5000	14	2.0000	0	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-4	100.00	-1
Propylbenzene			0.5000	10	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	0	75.000	-1	100.00	-1
Bromobenzene			0.5000	17	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-3	100.00	-4
1,3,5-Trimethylbenzene			0.5000	12	2.0000	-2	5.0000	0	10.000	-4	20.000	-5	50.000	-1	75.000	0	100.00	0
2-Chlorotoluene			0.5000	12	2.0000	1	5.0000	2	10.000	-3	20.000	-6	50.000	-1	75.000	-2	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	12	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2,4-Trimethylbenzene			0.5000	4	2.0000	0	5.0000	1	10.000	-3	20.000	-4	50.000	0	75.000	1	100.00	1
sec-Butylbenzene			0.5000	13	2.0000	-1	5.0000	0	10.000	-4	20.000	-5	50.000	0	75.000	-1	100.00	-1
para-Isopropyl Toluene			0.5000	7	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	1	75.000	0	100.00	0
1,3-Dichlorobenzene			0.5000	14	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
1,4-Dichlorobenzene			0.5000	<b>22</b>	2.0000	-1	5.0000	0	10.000	-4	20.000	-6	50.000	-3	75.000	-4	100.00	-4
n-Butylbenzene			0.5000	15	2.0000	-3	5.0000	-2	10.000	-5	20.000	-5	50.000	0	75.000	0	100.00	0
1,2-Dichlorobenzene			0.5000	10	2.0000	2	5.0000	2	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,2-Dibromo-3-Chloropropane			0.5000	<b>27</b>	2.0000	0	5.0000	-7	10.000	-9	20.000	-5	50.000	-4	75.000	-4	100.00	3
1,2,4-Trichlorobenzene			0.5000	10	2.0000	-1	5.0000	1	10.000	-2	20.000	-4	50.000	0	75.000	-1	100.00	-2
Hexachlorobutadiene			0.5000	10	2.0000	-6	5.0000	-9	10.000	-5	20.000	-3	50.000	5	75.000	5	100.00	4
Naphthalene			0.5000	10	2.0000	-3	5.0000	0	10.000	-3	20.000	-2	50.000	1	75.000	-2	100.00	0
1,2,3-Trichlorobenzene			0.5000	9	2.0000	0	5.0000	3	10.000	-1	20.000	-4	50.000	-1	75.000	-2	100.00	-3
Dibromofluoromethane	50.000	-1	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	0	50.000	1	50.000	1
1,2-Dichloroethane-d4	50.000	-2	50.000	0	50.000	1	50.000	0	50.000	0	50.000	1	50.000	-1	50.000	0	50.000	1
Toluene-d8	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	1	50.000	0	50.000	-1	50.000	0
Bromofluorobenzene	50.000	0	50.000	0	50.000	1	50.000	2	50.000	-1	50.000	0	50.000	0	50.000	-1	50.000	-1

MCT 10/21/15 [Acetone]: Separated from coeluting peak in multiple levels.

MCT 10/21/15 [1,2-Dichloropropane]: Corrected fronting or tailing peak integration in multiple levels.

MCT 10/21/15 [Iodomethane]: Corrected fronting or tailing peak integration in (nj25).

MCT 10/21/15 [Iodomethane]: ICV doesn't pass for Iodomethane

MCT 10/21/15 [tert-Butyl Alcohol (TBA)]: Rerun if sample hit less than 20ppb for TBA.

MCT 10/21/15 [2-Chloroethylvinylether]: Rerun if sample hit less than 5ppb for 2-Cleve.



MCT: 10/23/15 LW: 10/23/15 DJA: 10/26/15 KKM: 10/26/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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955422499001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271127 MSVOA Water  
EPA 8260B

Inst : MSVOA14  
Calnum : 955422499001

Name : 8260X14W  
Cal Date : 20-OCT-2015

ICV 955422499028 (njk28 20-OCT-2015) stds: S28219 (10000X), S28220 (10000X),  
S28167 (10000X), S28246 (2500X)  
ICV 955423728006 (njl06 21-OCT-2015) stds: S27267 (10000X), S28246 (2500X)

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
Freon 12	955423728006	21-OCT-2015	20.00	20.12	ug/L	1	30	
Chloromethane	955423728006	21-OCT-2015	20.00	21.56	ug/L	8	30	
Vinyl Chloride	955423728006	21-OCT-2015	20.00	19.65	ug/L	-2	20	
Bromomethane	955423728006	21-OCT-2015	20.00	16.95	ug/L	-15	30	
Chloroethane	955423728006	21-OCT-2015	20.00	19.51	ug/L	-2	30	
Trichlorofluoromethane	955423728006	21-OCT-2015	20.00	19.08	ug/L	-5	30	
Acetone	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	40	m
Freon 113	955422499028	20-OCT-2015	25.00	20.88	ug/L	-16	30	
1,1-Dichloroethene	955422499028	20-OCT-2015	25.00	24.12	ug/L	-4	20	
Methylene Chloride	955422499028	20-OCT-2015	25.00	24.71	ug/L	-1	30	
Carbon Disulfide	955422499028	20-OCT-2015	25.00	23.73	ug/L	-5	30	
MTBE	955422499028	20-OCT-2015	25.00	24.47	ug/L	-2	30	
trans-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	22.79	ug/L	-9	30	
Vinyl Acetate	955422499028	20-OCT-2015	25.00	23.17	ug/L	-7	40	
1,1-Dichloroethane	955422499028	20-OCT-2015	25.00	24.05	ug/L	-4	30	
2-Butanone	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	40	
2,2-Dichloropropane	955422499028	20-OCT-2015	25.00	21.79	ug/L	-13	30	
cis-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	25.08	ug/L	0	30	
Chloroform	955422499028	20-OCT-2015	25.00	24.63	ug/L	-1	20	
Bromochloromethane	955422499028	20-OCT-2015	25.00	24.14	ug/L	-3	30	
1,1,1-Trichloroethane	955422499028	20-OCT-2015	25.00	25.01	ug/L	0	30	
1,1-Dichloropropene	955422499028	20-OCT-2015	25.00	21.55	ug/L	-14	30	
Carbon Tetrachloride	955422499028	20-OCT-2015	25.00	25.22	ug/L	1	30	
1,2-Dichloroethane	955422499028	20-OCT-2015	25.00	24.66	ug/L	-1	30	
Benzene	955422499028	20-OCT-2015	25.00	23.67	ug/L	-5	30	
Trichloroethene	955422499028	20-OCT-2015	25.00	25.16	ug/L	1	30	
1,2-Dichloropropane	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	20	
Bromodichloromethane	955422499028	20-OCT-2015	25.00	24.50	ug/L	-2	30	
Dibromomethane	955422499028	20-OCT-2015	25.00	23.78	ug/L	-5	30	
4-Methyl-2-Pentanone	955422499028	20-OCT-2015	25.00	25.11	ug/L	0	40	
cis-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	25.80	ug/L	3	30	
Toluene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	20	
trans-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,1,2-Trichloroethane	955422499028	20-OCT-2015	25.00	24.62	ug/L	-2	30	
2-Hexanone	955422499028	20-OCT-2015	25.00	25.90	ug/L	4	40	
1,3-Dichloropropane	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	30	
Tetrachloroethene	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Dibromochloromethane	955422499028	20-OCT-2015	25.00	24.22	ug/L	-3	30	
1,2-Dibromoethane	955422499028	20-OCT-2015	25.00	23.75	ug/L	-5	30	
Chlorobenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	23.70	ug/L	-5	30	
Ethylbenzene	955422499028	20-OCT-2015	25.00	23.87	ug/L	-5	20	
m,p-Xylenes	955422499028	20-OCT-2015	50.00	48.60	ug/L	-3	30	
o-Xylene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Styrene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Bromoform	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	30	
Isopropylbenzene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	30	

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	24.78	ug/L	-1	30	
1,2,3-Trichloropropane	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Propylbenzene	955422499028	20-OCT-2015	25.00	23.64	ug/L	-5	30	
Bromobenzene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,3,5-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
2-Chlorotoluene	955422499028	20-OCT-2015	25.00	23.98	ug/L	-4	30	
4-Chlorotoluene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
tert-Butylbenzene	955422499028	20-OCT-2015	25.00	24.03	ug/L	-4	30	
1,2,4-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.04	ug/L	-4	30	
sec-Butylbenzene	955422499028	20-OCT-2015	25.00	23.81	ug/L	-5	30	
para-Isopropyl Toluene	955422499028	20-OCT-2015	25.00	23.83	ug/L	-5	30	
1,3-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.82	ug/L	-1	30	
1,4-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.84	ug/L	-1	30	
n-Butylbenzene	955422499028	20-OCT-2015	25.00	23.56	ug/L	-6	30	
1,2-Dichlorobenzene	955422499028	20-OCT-2015	25.00	25.14	ug/L	1	30	
1,2-Dibromo-3-Chloropropane	955422499028	20-OCT-2015	25.00	23.68	ug/L	-5	30	
1,2,4-Trichlorobenzene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
Hexachlorobutadiene	955422499028	20-OCT-2015	25.00	24.32	ug/L	-3	30	
Naphthalene	955422499028	20-OCT-2015	25.00	22.90	ug/L	-8	30	
1,2,3-Trichlorobenzene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	

955422499028: DJA: 10/22/15 \* MCT: 10/23/15 LW: 10/23/15  
955423728006: Analyst: DJA Date: 10/22/15 Reviewer: LW Date: 10/22/15

m=manual integration

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271127 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : QC810786                      IDF : 1.0  
 Seqnum : 955441010011.1            File : nk211                      Time : 02-NOV-2015 11:58  
 Cal : 955422499001                  Caldate : 20-OCT-2015  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S27267 (20000X),  
 S28449 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.6415	0.7995	10.00	12.46	ug/L	25	30	0.0500	u
Chloromethane	0.9510	1.1599	10.00	12.20	ug/L	22	30	0.1000	u
Vinyl Chloride	0.9707	1.0503	10.00	10.82	ug/L	8	20	0.0500	u
Bromomethane	0.2242	0.2275	10.00	10.15	ug/L	1	30	0.0500	u
Chloroethane	0.5345	0.5466	10.00	10.23	ug/L	2	30	0.0500	u
Trichlorofluoromethane	0.8274	0.9775	10.00	11.81	ug/L	18	30	0.0500	u
Acetone	0.4156	0.4665	12.50	14.03	ug/L	12	40	0.0500	m u
Freon 113	0.4347	0.3847	12.50	11.06	ug/L	-12	30	0.0500	u
1,1-Dichloroethene	0.4198	0.3652	12.50	10.87	ug/L	-13	20	0.0500	u
Methylene Chloride	0.4994	0.4682	12.50	11.72	ug/L	-6	30	0.0500	u
Carbon Disulfide	1.4737	1.3155	12.50	11.16	ug/L	-11	30	0.0500	u
MTBE	1.6773	1.4986	12.50	11.17	ug/L	-11	30	0.0500	u
trans-1,2-Dichloroethene	0.4787	0.4163	12.50	10.87	ug/L	-13	30	0.0500	u
Vinyl Acetate	1.7132	2.4243	12.50	17.69	ug/L	42	40	0.0500	c+ u ***
1,1-Dichloroethane	1.3336	1.4065	12.50	13.18	ug/L	5	30	0.1000	u
2-Butanone	0.4886	0.5546	12.50	14.19	ug/L	13	40	0.0500	u
cis-1,2-Dichloroethene	0.5624	0.5277	12.50	11.73	ug/L	-6	30	0.0500	u
2,2-Dichloropropane	0.6571	0.8276	12.50	15.74	ug/L	26	30	0.0500	u
Chloroform	0.8921	0.9607	12.50	13.46	ug/L	8	20	0.0500	u
Bromochloromethane	0.2490	0.2387	12.50	11.99	ug/L	-4	30	0.0500	u
1,1,1-Trichloroethane	0.7861	0.8823	12.50	14.03	ug/L	12	30	0.0500	u
1,1-Dichloropropene	0.4813	0.4408	12.50	11.45	ug/L	-8	30	0.0500	u
Carbon Tetrachloride	0.4089	0.5186	12.50	15.85	ug/L	27	30	0.0500	u
1,2-Dichloroethane	0.6367	0.8171	12.50	16.04	ug/L	28	30	0.0500	u
Benzene	1.4017	1.3563	12.50	12.10	ug/L	-3	30	0.0500	u
Trichloroethene	0.3628	0.3723	12.50	12.83	ug/L	3	30	0.0500	u
1,2-Dichloropropane	0.5064	0.5588	12.50	13.79	ug/L	10	20	0.0500	u
Bromodichloromethane	0.4448	0.5011	12.50	14.08	ug/L	13	30	0.0500	u
Dibromomethane	0.2211	0.2332	12.50	13.18	ug/L	5	30	0.0500	u
4-Methyl-2-Pentanone	0.6446	0.7647	12.50	14.83	ug/L	19	40	0.0500	u
cis-1,3-Dichloropropene	0.5532	0.6116	12.50	13.82	ug/L	11	30	0.0500	u
Toluene	1.6718	1.6175	12.50	12.09	ug/L	-3	20	0.0500	u
trans-1,3-Dichloropropene	0.5523	0.5746	12.50	13.00	ug/L	4	30	0.0500	u
1,1,2-Trichloroethane	0.1862	0.1799	12.50	12.07	ug/L	-3	30	0.0500	u
2-Hexanone	0.4951	0.5707	12.50	14.41	ug/L	15	40	0.0500	u
1,3-Dichloropropane	0.6320	0.6110	12.50	12.08	ug/L	-3	30	0.0500	u
Tetrachloroethene	0.3610	0.4006	12.50	13.87	ug/L	11	30	0.0500	u
Dibromochloromethane	0.3820	0.4141	12.50	13.55	ug/L	8	30	0.0500	u
1,2-Dibromoethane	0.3672	0.3510	12.50	11.95	ug/L	-4	30	0.0500	u
Chlorobenzene	1.0480	1.0605	12.50	12.65	ug/L	1	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3617	0.3784	12.50	13.07	ug/L	5	30	0.0500	u
Ethylbenzene	1.9396	1.9300	12.50	12.44	ug/L	0	20	0.0500	u
m,p-Xylenes	0.7353	0.7273	25.00	24.73	ug/L	-1	30	0.0500	u
o-Xylene	0.7307	0.6941	12.50	11.87	ug/L	-5	30	0.0500	u
Styrene	1.2609	1.2335	12.50	12.23	ug/L	-2	30	0.0500	u
Bromoform	0.2701	0.3008	12.50	13.92	ug/L	11	30	0.1000	u
Isopropylbenzene	3.5784	3.1876	12.50	11.13	ug/L	-11	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8496	0.7343	12.50	10.80	ug/L	-14	30	0.3000	u
1,2,3-Trichloropropane	0.9817	0.8517	12.50	10.84	ug/L	-13	30	0.0500	u
Propylbenzene	4.3463	3.8871	12.50	11.18	ug/L	-11	30	0.0500	u
Bromobenzene	0.8426	0.8319	12.50	12.34	ug/L	-1	30	0.0500	u
1,3,5-Trimethylbenzene	3.0929	2.9104	12.50	11.76	ug/L	-6	30	0.0500	u
2-Chlorotoluene	2.9127	2.7290	12.50	11.71	ug/L	-6	30	0.0500	u
4-Chlorotoluene	2.7062	2.4590	12.50	11.36	ug/L	-9	30	0.0500	u
tert-Butylbenzene	2.6588	2.3913	12.50	11.24	ug/L	-10	30	0.0500	u
1,2,4-Trimethylbenzene	3.1235	2.9351	12.50	11.75	ug/L	-6	30	0.0500	u
sec-Butylbenzene	4.0353	3.6598	12.50	11.34	ug/L	-9	30	0.0500	u
para-Isopropyl Toluene	3.3656	3.1807	12.50	11.81	ug/L	-5	30	0.0500	u
1,3-Dichlorobenzene	1.5874	1.6113	12.50	12.69	ug/L	2	30	0.0500	u
1,4-Dichlorobenzene	1.6381	1.6420	12.50	12.53	ug/L	0	30	0.0500	u
n-Butylbenzene	3.2103	3.0496	12.50	11.87	ug/L	-5	30	0.0500	u
1,2-Dichlorobenzene	1.5518	1.5752	12.50	12.69	ug/L	2	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2296	0.1840	12.50	10.02	ug/L	-20	30	0.0500	u
1,2,4-Trichlorobenzene	1.1989	1.1962	12.50	12.47	ug/L	0	30	0.0500	u
Hexachlorobutadiene	0.5656	0.6392	12.50	14.13	ug/L	13	30	0.0500	u
Naphthalene	3.4680	2.7401	12.50	9.877	ug/L	-21	30	0.0500	u
1,2,3-Trichlorobenzene	1.1848	1.1731	12.50	12.38	ug/L	-1	30	0.0500	u
Dibromofluoromethane	0.4527	0.4582	50.00	50.60	ug/L	1	30	0.0500	u
1,2-Dichloroethane-d4	0.4650	0.5901	50.00	63.45	ug/L	27	30	0.0500	u
Toluene-d8	1.3404	1.3147	50.00	49.04	ug/L	-2	30	0.0500	u
Bromofluorobenzene	1.0165	0.9233	50.00	45.42	ug/L	-9	30	0.0500	u

ISTD (ICAL njk23)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	742664	615841	-17.08	9.49	9.48	-0.01
1,4-Difluorobenzene	1178583	906686	-23.07	10.56	10.55	-0.01
Chlorobenzene-d5	1092554	878245	-19.62	14.13	14.13	0.00
1,4-Dichlorobenzene-d4	591395	529145	-10.53	16.56	16.55	-0.01

MCT 11/02/15 [Acetone]: Separated from coeluting peak. [general version]

Analyst: MCT Date: 11/03/15 Reviewer: LW Date: 11/04/15

+ = high bias c = CCV m = manual integration u = use

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 955441010

Date : 11/02/15  
 Sequence : MSVOA14 nk2

Reference : njk23  
 Analyzed : 10/20/15 18:26

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	742664	9.49	1178583	10.56	1092554	14.13	591395	16.56
		LOWER LIMIT	371332	8.99	589292	10.06	546277	13.63	295698	16.06
		UPPER LIMIT	1485328	9.99	2357166	11.06	2185108	14.63	1182790	17.06
011	CCV/BS	QC810786	615841	9.48	906686	10.55	878245	14.13	529145	16.55
012	BSD	QC810787	624338	9.48	920351	10.55	888015	14.13	537204	16.56
014	BLANK	QC810788	569116	9.48	868613	10.56	824110	14.13	470960	16.56
015	SAMPLE	271114-001	498578	9.48	748822	10.55	712797	14.13	406320	16.56
016	SAMPLE	271114-002	554020	9.48	844794	10.56	802183	14.13	462138	16.56
017	SAMPLE	271114-004	557357	9.48	853378	10.56	810596	14.13	464785	16.56
018	SAMPLE	271114-005	560954	9.48	852496	10.56	800010	14.13	461879	16.56
019	SAMPLE	271114-006	563527	9.48	846783	10.56	807780	14.13	458306	16.56
020	SAMPLE	271127-001	546243	9.49	828794	10.56	790149	14.13	443122	16.56
021	SAMPLE	271127-002	560149	9.48	849925	10.56	807113	14.13	463478	16.56
022	SAMPLE	271127-004	559607	9.48	854257	10.56	808524	14.13	460138	16.56
023	SAMPLE	271127-005	544736	9.48	832280	10.56	802795	14.13	455801	16.56
024	SAMPLE	271127-007	570323	9.48	858903	10.56	809677	14.13	464223	16.56
025	SAMPLE	271127-006	558755	9.48	847006	10.56	807932	14.13	458456	16.56
026	SAMPLE	271127-008	556297	9.48	843787	10.56	807611	14.13	457698	16.56
027	SAMPLE	271127-009	553126	9.48	830900	10.56	786704	14.13	453616	16.56
028	SAMPLE	271127-010	539895	9.48	821258	10.56	781132	14.13	443865	16.56
029	SAMPLE	271127-011	554701	9.48	833506	10.56	794733	14.13	455933	16.56
030	SAMPLE	271114-003	544902	9.48	812323	10.56	770612	14.13	445362	16.56
031	SAMPLE	271127-013	537686	9.49	818933	10.56	781220	14.13	449941	16.56
032	SAMPLE	271127-003	539267	9.48	827416	10.56	784970	14.13	449699	16.56
033	MSS	271127-012	550002	9.48	827672	10.56	783784	14.13	448305	16.56
034	MS	QC810859	561721	9.48	831299	10.56	801245	14.13	482887	16.56
035	MSD	QC810860	565742	9.48	835944	10.56	804974	14.13	492432	16.56

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955422499

Instrument : MSVOA14 Begun : 10/20/15 09:39  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used							
001	njk01	TUN	BFB			10/20/15 09:39	1.0	1							t
002	njk02	TUN	BFB			10/20/15 09:51	1.0	1							t
003	njk03	TUN	BFB			10/20/15 10:48	1.0	1							
004	njk04	TUN	BFB			10/20/15 10:57	1.0	1							t
005	njk05	TUN	BFB			10/20/15 11:08	1.0	1							t
006	njk06	TUN	BFB			10/20/15 11:16	1.0	1							
007	njk07	TUN	BFB			10/20/15 11:26	1.0	1							t
008	njk08	TUN	BFB			10/20/15 11:36	1.0	1							
009	njk09	TUN	BFB			10/20/15 11:45	1.0	1							t
010	njk10	TUN	BFB			10/20/15 12:54	1.0	1							
011	njk11	TUN	BFB			10/20/15 13:20	1.0	1							
012	njk12	TUN	BFB			10/20/15 13:29	1.0	1							
013	njk13	X	LOW POINT			10/20/15 13:55	1.0	2							
014	njk14	X	IB			10/20/15 14:30	1.0	2							
015	njk15	X	IB			10/20/15 14:57	1.0	2							
016	njk16	IB	CALIBRATION			10/20/15 15:23	1.0	2							
017	njk17	ICAL				10/20/15 15:49	1.0	3	4	5	6	2			
018	njk18	ICAL				10/20/15 16:15	1.0	3	4	5	6	2			
019	njk19	ICAL				10/20/15 16:41	1.0	3	4	5	6	2			
020	njk20	ICAL				10/20/15 17:08	1.0	3	4	5	6	2			
021	njk21	ICAL				10/20/15 17:34	1.0	3	4	5	6	2			
022	njk22	ICAL				10/20/15 18:00	1.0	3	4	5	6	2			
023	njk23	ICAL				10/20/15 18:26	1.0	3	4	5	6	2			
024	njk24	ICAL				10/20/15 18:53	1.0	3	4	5	6	2			
025	njk25	ICAL				10/20/15 19:19	1.0	3	4	5	6	2			
026	njk26	ICV				10/20/15 19:45	1.0	7	2						
027	njk27	ICV				10/20/15 20:11	1.0	8	2						
028	njk28	ICV				10/20/15 20:38	1.0	9	10	11	2				
029	njk29	X	IB			10/20/15 21:04	1.0	2							
030	njk30	X	IB			10/20/15 21:30	1.0	2							

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Analyst: MCT Date: 10/21/15 Reviewer: LW Date: 10/22/15

Standards used: 1=S27180 2=S28246 3=S27004 4=S28008 5=S28355 6=S27081 7=S27267 8=S18173 9=S28219 10=S28220 11=S28167

Flags used: t=tune failure



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955423728

Instrument : MSVOA14 Begun : 10/21/15 06:08  
Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	njl01	X	IB			10/21/15 06:08	1.0	1	
002	njl02	X	IB			10/21/15 06:34	1.0	1	
003	njl03	X	HIGH GASES			10/21/15 09:53	1.0	1	
004	njl04	X	IB			10/21/15 10:19	1.0	1	
005	njl05	TUN	BFB			10/21/15 10:43	1.0	2	
006	njl06	ICV				10/21/15 11:07	1.0	3 1	
007	njl07	TUN	BFB			10/21/15 12:16	1.0	2	
008	njl08	CCV				10/21/15 12:39	1.0	4 5 6 7 1	
009	njl09	BS	QC809187	Water	228541	10/21/15 13:28	1.0	8 9 10 11 1	
010	njl10	BSD	QC809188	Water	228541	10/21/15 13:54	1.0	8 9 10 11 1	
011	njl11	X	IB			10/21/15 14:20	1.0	1	
012	njl12	BLANK	QC809189	Water	228541	10/21/15 14:46	1.0	1	
013	njl13	SAMPLE	270754-020	Water	228541	10/21/15 15:12	1.0	1	
014	njl14	SAMPLE	270759-004	Water	228541	10/21/15 15:38	1.0	1	
015	njl15	SAMPLE	270747-005	Water	228541	10/21/15 16:05	1.0	1	
016	njl16	SAMPLE	270759-001	Water	228541	10/21/15 16:31	1.0	1	
017	njl17	SAMPLE	270759-003	Water	228541	10/21/15 16:57	1.0	1	
018	njl18	SAMPLE	270819-025	Water	228541	10/21/15 17:23	1.0	1	
019	njl19	SAMPLE	270819-026	Water	228541	10/21/15 17:49	1.0	1	
020	njl20	SAMPLE	270819-027	Water	228541	10/21/15 18:16	1.0	1	
021	njl21	SAMPLE	270819-028	Water	228541	10/21/15 18:42	1.0	1	
022	njl22	SAMPLE	270819-029	Water	228541	10/21/15 19:08	1.0	1	
023	njl23	SAMPLE	270819-030	Water	228541	10/21/15 19:34	1.0	1	
024	njl24	SAMPLE	270819-031	Water	228541	10/21/15 20:01	1.0	1	
025	njl25	SAMPLE	270819-032	Water	228541	10/21/15 20:27	1.0	1	
026	njl26	SAMPLE	270819-033	Water	228541	10/21/15 20:53	1.0	1	
027	njl27	SAMPLE	270819-034	Water	228541	10/21/15 21:20	1.0	1	
028	njl28	SAMPLE	270747-001	Water	228541	10/21/15 21:46	1.0	1	
029	njl29	SAMPLE	270747-002	Water	228541	10/21/15 22:12	1.0	1	
030	njl30	SAMPLE	270747-003	Water	228541	10/21/15 22:39	1.0	1	high SO2
031	njl31	SAMPLE	270747-004	Water	228541	10/21/15 23:05	1.0	1	
032	njl32	SAMPLE	270759-002	Water	228541	10/21/15 23:31	25.0	1	
033	njl33	X	IB			10/21/15 23:58	1.0	1	
034	njl34	X	IB			10/22/15 00:24	1.0	1	
035	njl35	X	IB			10/22/15 00:51	1.0	1	
036	njl36	X	IB			10/22/15 01:17	1.0	1	

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 6.

DJA 10/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 36.

DJA 10/22/15 : Matrix spikes were not performed for this analysis in batch 228541 due to insufficient sample amount.

Analyst:  MCT  Date:  10/21/15  Reviewer:  LW  Date:  10/23/15

Standards used: 1=S28246 2=S27180 3=S27267 4=S27004 5=S28008 6=S28355 7=S27081 8=S28219 9=S28220 10=S28167 11=S28123

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955441010

Instrument : MSVOA14  
 Method : EPA 8260B

Begun : 11/02/15 06:10  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	nk201	X	IB			11/02/15 06:10	1.0	1	
002	nk202	X	IB			11/02/15 06:36	1.0	1	
003	nk203	TUN	BFB			11/02/15 07:41	1.0	2	t
004	nk204	TUN	BFB			11/02/15 07:51	1.0	2	t
005	nk205	TUN	BFB			11/02/15 08:26	1.0	2	t
006	nk206	TUN	BFB			11/02/15 08:45	1.0	2	t
007	nk207	TUN	BFB			11/02/15 08:53	1.0	2	t
008	nk208	TUN	BFB			11/02/15 11:05	1.0	2	t
009	nk209	TUN	BFB			11/02/15 11:22	1.0	2	t
010	nk210	TUN	BFB			11/02/15 11:31	1.0	2	
011	nk211	CCV/BS	QC810786	Water	228947	11/02/15 11:58	1.0	3 4 5 6 7	
012	nk212	BSD	QC810787	Water	228947	11/02/15 12:45	1.0	3 4 5 6 7	
013	nk213	X	A/A			11/02/15 13:12	1.0	7	
014	nk214	BLANK	QC810788	Water	228947	11/02/15 13:38	1.0	7	
015	nk215	SAMPLE	271114-001	Water	228947	11/02/15 14:15	1.0	7	
016	nk216	SAMPLE	271114-002	Water	228947	11/02/15 14:41	1.0	7	
017	nk217	SAMPLE	271114-004	Water	228947	11/02/15 15:07	1.0	7	
018	nk218	SAMPLE	271114-005	Water	228947	11/02/15 15:33	1.0	7	
019	nk219	SAMPLE	271114-006	Water	228947	11/02/15 16:00	1.0	7	
020	nk220	SAMPLE	271127-001	Water	228947	11/02/15 16:26	1.0	7	
021	nk221	SAMPLE	271127-002	Water	228947	11/02/15 16:52	1.0	7	
022	nk222	SAMPLE	271127-004	Water	228947	11/02/15 17:18	1.0	7	
023	nk223	SAMPLE	271127-005	Water	228947	11/02/15 17:44	1.0	7	
024	nk224	SAMPLE	271127-007	Water	228947	11/02/15 18:10	1.0	7	combined (sediment), headspace > 1 mL, pH > 2
025	nk225	SAMPLE	271127-006	Water	228947	11/02/15 18:37	1.0	7	
026	nk226	SAMPLE	271127-008	Water	228947	11/02/15 19:03	1.0	7	
027	nk227	SAMPLE	271127-009	Water	228947	11/02/15 19:30	1.0	7	
028	nk228	SAMPLE	271127-010	Water	228947	11/02/15 19:56	1.0	7	
029	nk229	SAMPLE	271127-011	Water	228947	11/02/15 20:22	1.0	7	headspace <= 1 mL
030	nk230	SAMPLE	271114-003	Water	228947	11/02/15 20:48	2.0	7	
031	nk231	SAMPLE	271127-013	Water	228947	11/02/15 21:15	1.0	7	
032	nk232	SAMPLE	271127-003	Water	228947	11/02/15 21:41	1.0	7	
033	nk233	MSS	271127-012	Water	228947	11/02/15 22:07	1.0	7	headspace <= 1 mL
034	nk234	MS	QC810859	Water	228947	11/02/15 22:34	1.0	3 4 5 6 7	
035	nk235	MSD	QC810860	Water	228947	11/02/15 23:00	1.0	3 4 5 6 7	headspace <= 1 mL
036	nk236	X	IB			11/02/15 23:27	1.0	7	
037	nk237	X	IB			11/02/15 23:53	1.0	7	
038	nk238	X	IB			11/03/15 00:20	1.0	7	
039	nk239	X	IB			11/03/15 00:46	1.0	7	

MCT 11/02/15 : Adjusted tune before file : nk203,nk205,nk206,nk208,nk209,nk210.

MCT 11/03/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 39.

Analyst: MCT Date: 11/03/15 Reviewer: LW Date: 11/03/15

Standards used: 1=S28246 2=S27825 3=S28219 4=S28220 5=S28167 6=S27267 7=S28449

Flags used: t=tune failure

# MSVOA WATER Prepsheet

Batch #: 228947  
 Prep Date: 11/2/15  
 Instrument: W514

Dilutions prepared & pH of dilutions checked (initials/date): MS 11/2/15  
 For Undiluted samples, pH checked (initials/date): ZIE 11/3/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% CCV?	hold	due	\$ Rush
1 0271127-1	C	✓					1X					
2 -2	B	✓										
3 -3	B	✓										
4 -4	B	✓										
5 -5	B	✓										
6 -6	C	✓										
7 -7	CAD	4						VERY HIGH SEDIMENT - 2ml each / backspace				
8 -8	B	✓										
9 -9	B	✓										
10 -10	C	✓										
11 -11	C	✓										
12 -12	C	✓										
13 -12	DE	✓										
14 -12	F	✓										
15 -13	C	✓										
16 271114-1	B	✓					1X					
17 -2		✓										
18 -3		✓					2X					
19 -4		✓					1X					
20 -5		✓										
21 -6		✓										
22												





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Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 271203
ANALYTICAL REPORT

URS Corporation
2870 Gateway Oaks Drive
Sacramento, CA 95833

Project : RWQCB PCE LUKIN
Location : RWQCB PCE LUKIN
Level : III

Table with 2 columns: Sample ID and Lab ID. Lists 25 sample entries such as PATLNSS-S, SB-01-16-NS, etc.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 11/17/2015

## CASE NARRATIVE

Laboratory number: 271203  
Client: URS Corporation  
Project: RWQCB PCE LUKIN  
Location: RWQCB PCE LUKIN  
Request Date: 11/02/15  
Samples Received: 10/31/15

This data package contains sample and QC results for twenty five water samples, requested for the above referenced project on 11/02/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

A number of samples were analyzed with more than 1 mL of headspace in the VOA vial.

No other analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B):

Diesel C10-C24 was detected above the RL in the method blank for batch 229054; this analyte was not detected in samples at or above the RL.

No other analytical problems were encountered.

### Volatile Organics by GC/MS (EPA 8260B):

High response was observed for Freon 12 in the ICV analyzed 08/11/15 20:35; this analyte was not detected at or above the RL in the associated samples.

High responses were observed for a number of analytes in the CCV analyzed 11/09/15 15:26; these analytes were not detected at or above the RL in the associated samples.

High responses were observed for many analytes in the CCV analyzed 11/06/15 14:20.

Low response was observed for acetone in the CCV/LCS analyzed 11/05/15 19:49; affected data was qualified with "b".

Low recovery was observed for trichloroethene in the MSD for batch 229102; the parent sample was not a project sample, and the LCS was within limits. High recovery was observed for benzene in the MS for batch 229102; the LCS was within limits, and this analyte was not detected at or above the RL in the associated samples. High RPD was observed for benzene and 1,1-dichloroethene in the MS/MSD for batch 229102; these analytes were not detected at or above the RL in the associated samples.

Low recovery was observed for trichloroethene in the MSD for batch 229193; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits.

### CASE NARRATIVE

Laboratory number: 271203  
Client: URS Corporation  
Project: RWQCB PCE LUKIN  
Location: RWQCB PCE LUKIN  
Request Date: 11/02/15  
Samples Received: 10/31/15

#### Volatile Organics by GC/MS (EPA 8260B):

High RPD was observed for trichloroethene in the BS/BSD for batch 229155; the high RPD was not associated with any reported results.

High surrogate recoveries were observed for bromofluorobenzene in TB-2 (lab # 271203-019) and the method blank for batch 229193; no target analytes were detected in these samples.

SB-18-12-NS (lab # 271203-025) had multiple vials combined due to sediment.

No other analytical problems were encountered.

## Chain of Custody



271203

15958

# CHAIN OF CUSTODY RECORD

2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH: (916) 679-2000  
FAX: (916) 679-2900



USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK

TASK OR SUB TASK (one per form):

RWQCB PCE Lukin

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
PatL55-S	10/28/15	10:20	VMK	3	40ml VOA	GW	HCL	SW8260B
↓	↓	↓	↓	3	↓	↓	↓	SW8015G
↓	↓	↓	↓	2	1L Amber	↓	None	SW8015D

press 10/28/15

RELEASED BY	DATE	TIME	COOLER ID
	10/29/15	14:30	

COMMENTS:

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	10/25/15	12:00			

DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY	DATE	TIME

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409768

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:  
Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-01-16-NS	10/29/15	13:00	BT	3.00	1 L Amber Glass	WG NONE	NONE	SW8015D M
SB-01-16-NS	I	I	I	3.00	40 ml VOA	WG HCL	HCL	SW8015G
SB-01-16-NS	I	I	I	3.00	40 ml VOA	WG HCL	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/29/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /
	/ /	:	/ /

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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FAX (916) 679-2900

409769

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-01-26-NS	10/28/15	1745	BP	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-01-26-NS			I	3.00	40 ml VOA	WG	HCL	SW8015G
SB-01-26-NS			I	3.00	40 ml VOA	WG	HCL	SW8280B
WTD-1	10/29/15	1600	BP	3	40 ml VOA	HCL		SW8260B, 80156

RELEASED BY	DATE	TIME	COOLER ID:
[Signature]	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
[Signature]	10/29/15	17:00	
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	/ /	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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PH. (916) 679-2000  
FAX (916) 679-2900

409772

TASK OR SUB TASK (one per form): **RWQCB PCE LUKIN**

LABORATORY NAME AND ADDRESS:  
**Curtis & Tompkins, Berkeley, CA**

CONTRACT NAME:

CHARGE NUMBER: **60443271.2**

SAMPLE NUMBER	COLLECTION		NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME					
SB-03-24-FD	10/24/15	11:15	2.00	1 L Amber Glass	WG	NONE	SW8015D
5 SB-03-24-FD			3.00	40 ml VOA	WG	HCL	SW8015G
SB-03-24-FD			3.00	40 ml VOA	WG	HCL	SW8260B
SB-03-24-NS			2.00	1 L Amber Glass	WG	NONE	SW8015D
6 SB-03-24-NS			3.00	40 ml VOA	WG	HCL	SW8015G
SB-03-24-NS			3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/20/15	8:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/23/15	12:00	
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /



# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409773

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	GC
	DATE	TIME							
SB-03-32-NS	10/30/15	12:15	BR	2.00	1 L Amber Glass	WG	NONE	SW8015D	
7 SB-03-32-NS				3.00	40 ml VOA	WG	HCL	SW8015G	
SB-03-32-NS				3.00	40 ml VOA	WG	HCL	SW8260B	

*[Large handwritten scribble]*

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/30/15	13:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /
	/ /	:	/ /

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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THIS FORM ARE ON THE BACK



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SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409776

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN LABORATORY NAME AND ADDRESS:  
Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 80443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-05-16-NS	10/28/15	1100	PL	2.00	1 L Amber Glass	WG	NONE	SW8015D
8 SB-05-16-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-05-16-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	1130	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /
	/ /	:	/ /

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
 HE INSTRUCTIONS FOR FILLING OUT  
 HIS FORM ARE ON THE BACK



2870 GATEWAY OAKS, SUITE 300  
 SACRAMENTO, CA 95833  
 PH. (916) 679-2000  
 FAX (916) 679-2900

409777

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 804432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX COEF	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-06-24-NS	10/26/15	1130	BJL	2.00	1 L Amber Glass	WG	NONE	SW8015D
9 SB-06-24-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-06-24-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/26/15	1930	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
	/ /	:	/ /
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409778

TASK OR SUB TASK (one per form):

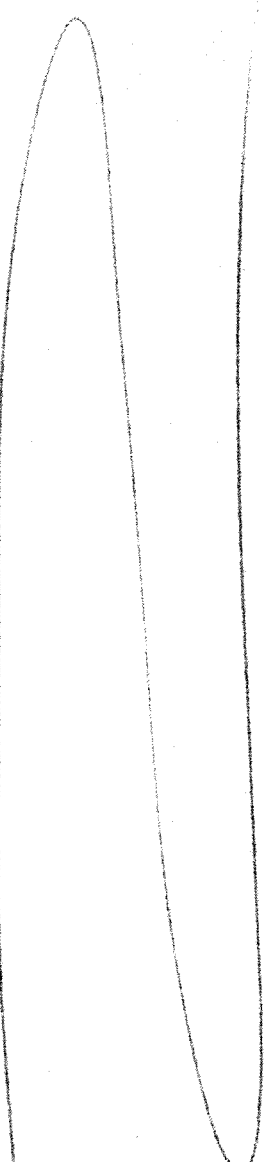
RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:  
Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 804432712

SAMPLE NUMBER	COLLECTION		SAMPLERS	INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	CC
	DATE	TIME								
SB-06-14-NS	10/20/15	0840	1	BZ	2.00	1 L Amber Glass	WG	NONE	SW8015D	
SB-06-14-NS	1	1	1		3.00	40 ml VOA	WG	HCL	SW8015G	
SB-06-14-NS	1	1	1		3.00	40 ml VOA	WG	HCL	SW8260B	



RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/20/15	8:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/21/15	10:00	
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	11	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	11	:	
	11	:	

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY



# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK



2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409779

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

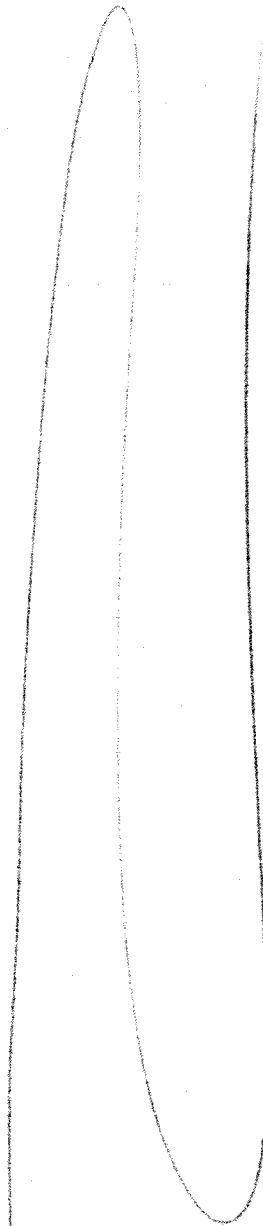
LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-06-24-NS	10/30/15	0910	PLC	2.00	1 L Amber Glass	WG	NONE	SW8015D
11 SB-06-24-NS	↓	↓	↓	3.00	40 ml VOA	WG	HCL	SW8015G
SB-06-24-NS	↓	↓	↓	3.00	40 ml VOA	WG	HCL	SW8260B
12 TB-3	10/30/15	0830	GR	3	40 ml VOA	HCL	HCL	8260B, 8015G



RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/30/15	13:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

40978

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-07-16-NS	10/28/15	09:00	RT	2.00	1 L Amber Glass	WG	NONE	SW801bD
SB-07-16-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-07-16-NS				3.00	40 ml VOA	WG	HCL	SW8260B

*[Large handwritten scribble]*

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	17:30	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
<i>[Signature]</i>	10/21/15	12:00		/ /	:
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY	DATE	TIME
	/ /	:		/ /	:

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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40978

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:  
Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432742

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-07-26 -NS	10/28/15	4:45	CGH	2.00	1 L Amber Glass	WG	NONE	SW8015D
1/1 SB-07-26 -NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-07-26 -NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/21/15	19:30	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
<i>[Signature]</i>	10/21/15	12:00		/ /	:
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY	DATE	TIME
	/ /	:		/ /	:

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

**CHAIN OF CUSTODY RECORD**  
 USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
 SACRAMENTO, CA 95833  
 PH. (916) 679-2000  
 FAX (916) 679-2900

409784

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	QC
	DATE	TIME							
SB-09-16-FD	10/28/15	1500	UJ	2.00	1 L Amber Glass	WG	NONE	SW8015D	
SB-09-16-FD				3.00	40 ml VOA	WG	HCL	SW8015G	
SB-09-16-FD				3.00	40 ml VOA	WG	HCL	SW8260B	
SB-09-16-NS				2.00	1 L Amber Glass	WG	NONE	SW8015D	
10 SB-09-16-NS				5.00	40 ml VOA	WG	HCL	SW8015G	
SB-09-16-NS				3.00	40 ml VOA	WG	HCL	SW8260B	

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RELEASED BY	DATE	TIME	COOLER ID:
[Signature]	10/29/15	14:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
[Signature]	10/31/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY



# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

409785

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLER INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-09-24-NS	10/28/15	15:40	BR	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-09-24-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-09-24-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	17:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:10	
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	/ /	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
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409786

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME					
SB-10-16-NS	10/28/15	14:50	2.00	1 L Amber Glass	WG	NONE	SW8015D
16 SB-10-16-NS	11/11	11:11	3.00	40 ml VOA	WG	HCL	SW8015G
SB-10-16-NS	11/11	11:11	3.00	40 ml VOA	WG	HCL	SW8280B
1-TP-2	10/29/15	16:00	3	40 ml VOA	HCL	HCL	8260B, 8615G

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/24/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/23/15	12:00	
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	11/11	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN OF CUSTODY RETURNED BY
	11/11	:	
	11/11	:	

# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

409787

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-10-26-NS	10/28/15	1325	JK	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-10-26-NS	11/11	1111	J	3.00	40 ml VOA	WG	HCL	SW8015G
SB-10-26-NS	11/11	1111	J	3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
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	11/11	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	11/11	:	

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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409788

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-11-12-NS	10/28/15	16:30	RL	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-11-12-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-11-12-NS				3.00	40 ml VOA	WG	HCL	SW6260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/30/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
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# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

409789

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-11-22-NS	10/28/15	1650	br	2.00	1 L Amber Glass	WG NONE	NONE	SW8016D
SB-11-22-NS				3.00	40 ml VOA	WG HCL	HCL	SW8016G
SB-11-22-NS				3.00	40 ml VOA	WG HCL	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

40979

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-12-12-NS	10/24/15	13:15	BP	2.00	1 L Amber Glass	WG	NONE	SW5015D
SB-12-12-NS			I	3.00	40 ml VOA	WG	HCL	SW5015G
SB-12-12-NS			I	3.00	40 ml VOA	WG	HCL	SW5260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/24/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

# CHAIN OF CUSTODY RECORD

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SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409791

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271 2

SAMPLE NUMBER	COLLECTION		INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-12-22-NS	10/24/15	1340	BZ	2.00	1 L Amber Glass	WG	NONE	SW8015D
24 SB-12-22-NS	I	I	I	3.00	40 ml VOA	WG	HCL	SW8015G
SB-12-22-NS	I	I	I	5.00	40 ml VOA	WG	HCL	SW8260B M

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/29/15	19:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/31/15	2:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

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FAX (916) 679-2900

409802

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

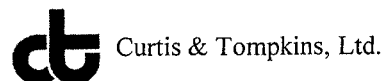
SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-18-12-NS	10/19/15	1530	W	2.00	1 L Amber Glass	WG NONE	NONE	SW8015D
SB-18-12-NS			L	3.00	40 ml VOA	WG HCL	HCL	SW8015G
SB-18-12-NS			L	3.00	40 ml VOA	WG HCL	HCL	SW8260B

*[Large handwritten scribble]*

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	10/21/15	10:30	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	10/21/15	12:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	/ /



**COOLER RECEIPT CHECKLIST**



Login # 271203 Date Received 10/31/15 Number of coolers 3  
 Client URS Inc Project COKIN

Date Opened 10-31-15 By (print) J. Goyette (sign)   
 Date Logged in 11/2 By (print) BL (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES NO  
 Shipping info Fed Ex 781622082997/094902/109026

2A. Were custody seals present? ...  YES (circle)  NO  
 on cooler on samples  
 How many 2 each Name \_\_\_\_\_ Date 10/30/15

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

- Bubble Wrap  Foam blocks  Bags  None
- Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) 3.8 | 2.9 | 3.5

Temperature blank(s) included?  Phermometer  IR Gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES NO

If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO N/A

17. Did you document your preservative check? \_\_\_\_\_ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS**

9. 2 VOA containers were broken on arrival from sample 23  
 11. Sample 20 reads as "SB-10-26-NS" on COL but "SB-10-24-NS" on sample containers  
 20. 2 of 6 VOAs have bubbles > 6mm for sample 5, 3 of 6 VOAs have bubbles > 6mm for sample 6, 1 of 6 VOAs have bubbles > 6mm for sample 7, 4 of 6 VOAs have bubbles > 6mm for sample 9, 5 of 6 VOAs have bubbles > 6mm for sample 10, 4 of 6 VOAs have bubbles > 6mm for sample 11, 6 of 6 VOAs have bubbles > 6mm for sample 13, 14, 20, and 25, 4 of 6 VOAs have bubbles > 6mm for sample 22, 4 of 8 VOAs have bubbles > 6mm for sample 24

→ matched by sample time

## Detections Summary for 271203

Results for any subcontracted analyses are not included in this summary.

Client : URS Corporation  
 Project : RWQCB PCE LUKIN  
 Location : RWQCB PCE LUKIN

Client Sample ID : PATLNSS-S                      Laboratory Sample ID :                      271203-001

No Detections

Client Sample ID : SB-01-16-NS                      Laboratory Sample ID :                      271203-002

No Detections

Client Sample ID : SB-01-26-NS                      Laboratory Sample ID :                      271203-003

No Detections

Client Sample ID : TB-1                              Laboratory Sample ID :                      271203-004

No Detections

Client Sample ID : SB-03-24-FD                      Laboratory Sample ID :                      271203-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	140	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-03-24-NS                      Laboratory Sample ID :                      271203-006

No Detections

Client Sample ID : SB-03-32-NS                      Laboratory Sample ID :                      271203-007

No Detections

Client Sample ID : SB-05-16-NS                      Laboratory Sample ID :                      271203-008

No Detections

Client Sample ID : SB-05-24-NS

Laboratory Sample ID :

271203-009

No Detections

Client Sample ID : SB-06-14-NS

Laboratory Sample ID :

271203-010

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Chloroform	1.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-06-24-NS

Laboratory Sample ID :

271203-011

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	260	Y	63	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Acetone	13		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Carbon Disulfide	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	1.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : TB-3

Laboratory Sample ID :

271203-012

No Detections

Client Sample ID : SB-07-16-NS

Laboratory Sample ID :

271203-013

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	78	Y	59	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-07-26-NS

Laboratory Sample ID :

271203-014

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	66	Y	63	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Carbon Disulfide	0.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-09-16-FD

Laboratory Sample ID :

271203-015

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Tetrachloroethene	1.4		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-09-16-NS

Laboratory Sample ID :

271203-016

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Tetrachloroethene	1.2		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-09-24-NS

Laboratory Sample ID :

271203-017

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	0.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-10-16-NS

Laboratory Sample ID :

271203-018

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	170	Y,Z	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	190	Y	69	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Tetrachloroethene	1.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : TB-2

Laboratory Sample ID :

271203-019

No Detections

Client Sample ID : SB-10-26-NS

Laboratory Sample ID :

271203-020

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	97	Y	64	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Carbon Disulfide	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-11-12-NS

Laboratory Sample ID :

271203-021

No Detections

Client Sample ID : SB-11-22-NS

Laboratory Sample ID :

271203-022

No Detections

Client Sample ID : SB-12-12-NS

Laboratory Sample ID :

271203-023

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	51	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	140	Y	63	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-12-22-NS

Laboratory Sample ID :

271203-024

No Detections

Client Sample ID : SB-18-12-NS

Laboratory Sample ID :

271203-025

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	56	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B



Y = Sample exhibits chromatographic pattern which does not resemble standard  
Z = Sample exhibits unknown single peak or peaks

Laboratory Job Number 271203

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Water

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: PATLNSS-S                      Batch#: 228992  
 Type: SAMPLE                              Sampled: 10/28/15  
 Lab ID: 271203-001                      Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	80-132

Field ID: SB-01-16-NS                      Batch#: 228992  
 Type: SAMPLE                              Sampled: 10/29/15  
 Lab ID: 271203-002                      Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-01-26-NS                      Batch#: 228992  
 Type: SAMPLE                              Sampled: 10/28/15  
 Lab ID: 271203-003                      Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	80-132

Field ID: TB-1                                      Batch#: 228992  
 Type: SAMPLE                              Sampled: 10/29/15  
 Lab ID: 271203-004                      Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-03-24-FD                      Batch#: 228992  
 Type: SAMPLE                                Sampled: 10/30/15  
 Lab ID: 271203-005                        Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	95	80-132

Field ID: SB-03-24-NS                      Batch#: 228992  
 Type: SAMPLE                                Sampled: 10/30/15  
 Lab ID: 271203-006                        Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Field ID: SB-03-32-NS                      Batch#: 228992  
 Type: SAMPLE                                Sampled: 10/30/15  
 Lab ID: 271203-007                        Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-05-16-NS                      Batch#: 228992  
 Type: SAMPLE                                Sampled: 10/28/15  
 Lab ID: 271203-008                        Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-05-24-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/28/15  
 Lab ID: 271203-009                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-06-14-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/30/15  
 Lab ID: 271203-010                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-06-24-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/30/15  
 Lab ID: 271203-011                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	80-132

Field ID: TB-3                                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/30/15  
 Lab ID: 271203-012                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-07-16-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/28/15  
 Lab ID: 271203-013                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	80-132

Field ID: SB-07-26-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/28/15  
 Lab ID: 271203-014                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	80-132

Field ID: SB-09-16-FD                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/28/15  
 Lab ID: 271203-015                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	80-132

Field ID: SB-09-16-NS                      Batch#: 228992  
 Type: SAMPLE                                  Sampled: 10/28/15  
 Lab ID: 271203-016                          Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	SB-09-24-NS	Batch#:	228992
Type:	SAMPLE	Sampled:	10/28/15
Lab ID:	271203-017	Analyzed:	11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	80-132

Field ID:	SB-10-16-NS	Batch#:	229015
Type:	SAMPLE	Sampled:	10/28/15
Lab ID:	271203-018	Analyzed:	11/03/15

Analyte	Result	RL
Gasoline C7-C12	170 Y Z	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	80-132

Field ID:	TB-2	Batch#:	229015
Type:	SAMPLE	Sampled:	10/29/15
Lab ID:	271203-019	Analyzed:	11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	80-132

Field ID:	SB-10-26-NS	Batch#:	229015
Type:	SAMPLE	Sampled:	10/28/15
Lab ID:	271203-020	Analyzed:	11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-11-12-NS                      Batch#: 229015  
 Type: SAMPLE                                Sampled: 10/28/15  
 Lab ID: 271203-021                        Analyzed: 11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	80-132

Field ID: SB-11-22-NS                      Batch#: 229015  
 Type: SAMPLE                                Sampled: 10/28/15  
 Lab ID: 271203-022                        Analyzed: 11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	80-132

Field ID: SB-12-12-NS                      Batch#: 229015  
 Type: SAMPLE                                Sampled: 10/29/15  
 Lab ID: 271203-023                        Analyzed: 11/04/15

Analyte	Result	RL
Gasoline C7-C12	51 Y	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	80-132

Field ID: SB-12-22-NS                      Batch#: 229015  
 Type: SAMPLE                                Sampled: 10/29/15  
 Lab ID: 271203-024                        Analyzed: 11/04/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit



Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-18-12-NS                      Batch#: 229015  
 Type: SAMPLE                                  Sampled: 10/29/15  
 Lab ID: 271203-025                          Analyzed: 11/04/15

Analyte	Result	RL
Gasoline C7-C12	56 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	80-132

Type: BLANK                                      Batch#: 228992  
 Lab ID: QC810958                              Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	80-132

Type: BLANK                                      Batch#: 229015  
 Lab ID: QC811053                              Analyzed: 11/03/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	101	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC810957	Batch#:	228992
Matrix:	Water	Analyzed:	11/03/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,074	107	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	80-132

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	SB-09-16-NS	Batch#:	228992
MSS Lab ID:	271203-016	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/03/15
Diln Fac:	1.000		

Type: MS Lab ID: QC810959

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	32.66	2,000	2,039	100	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	111	80-132

Type: MSD Lab ID: QC810960

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,979	97	76-120	3	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	80-132

RPD= Relative Percent Difference

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC811052	Batch#:	229015
Matrix:	Water	Analyzed:	11/03/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,064	106	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	117	80-132

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	229015
MSS Lab ID:	271228-002	Sampled:	11/02/15
Matrix:	Water	Received:	11/02/15
Units:	ug/L	Analyzed:	11/03/15
Diln Fac:	1.000		

Type: MS Lab ID: QC811054

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	42.85	2,000	1,999	98	76-120

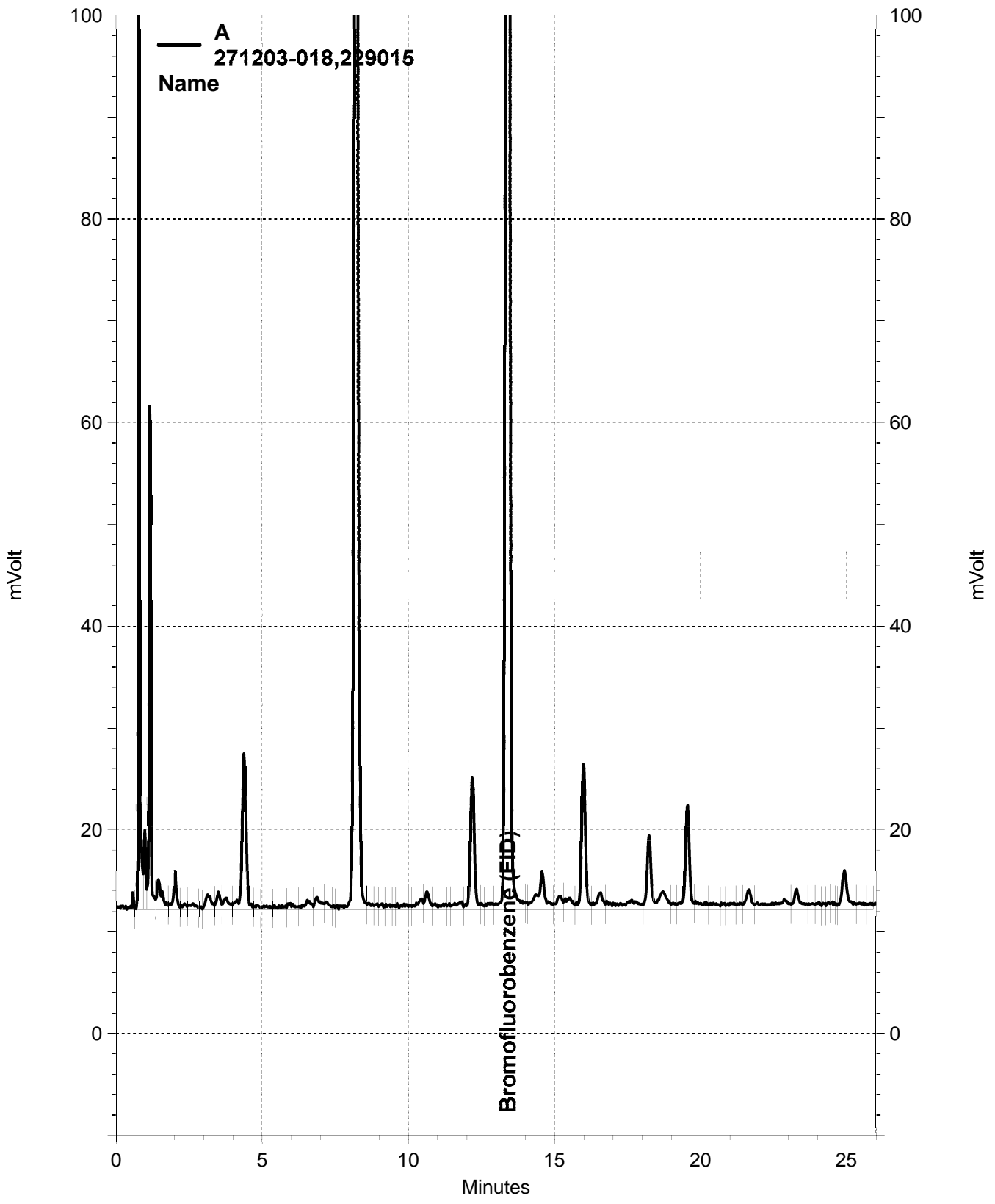
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	120	80-132

Type: MSD Lab ID: QC811055

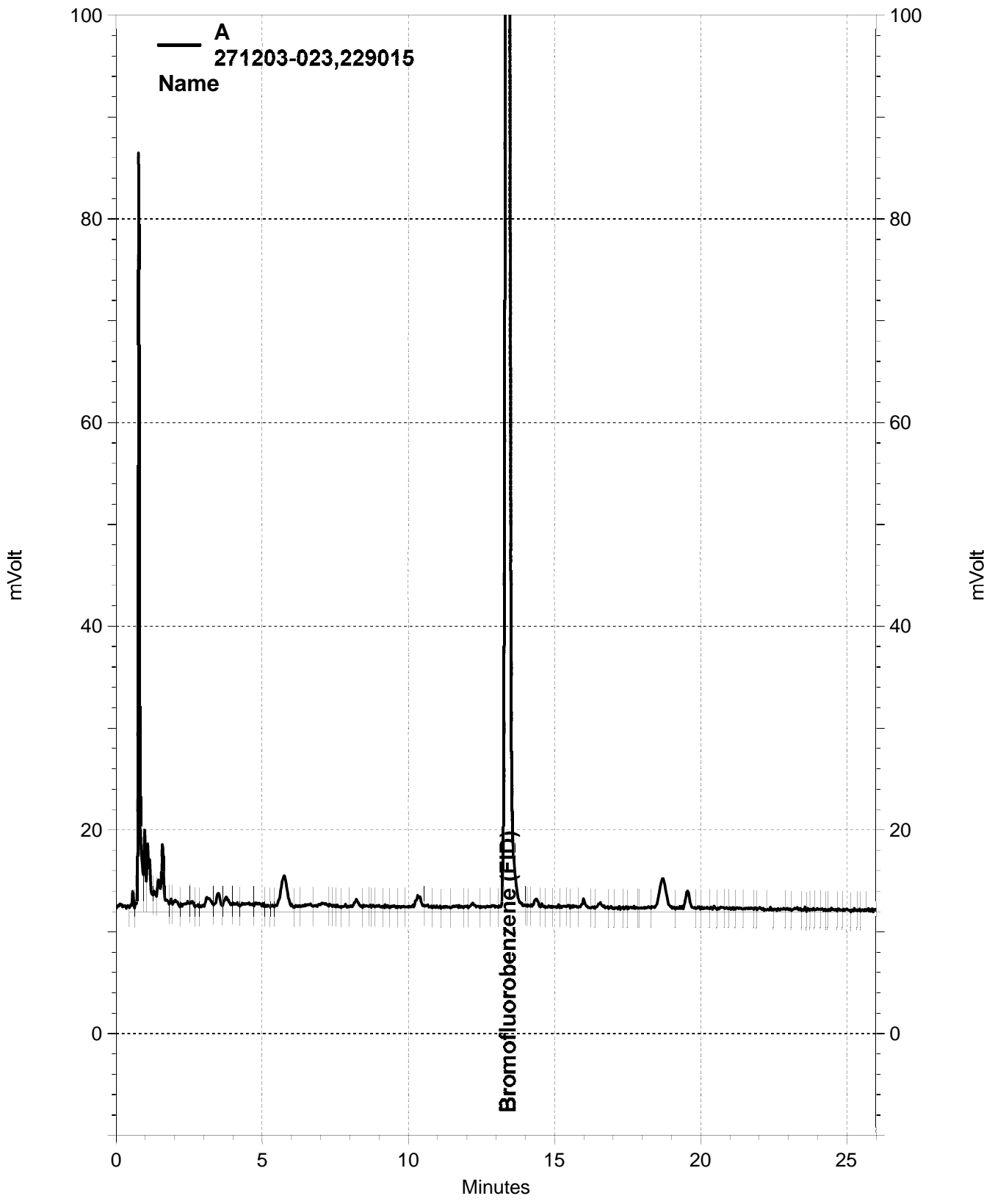
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,917	94	76-120	4	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	118	80-132

RPD= Relative Percent Difference



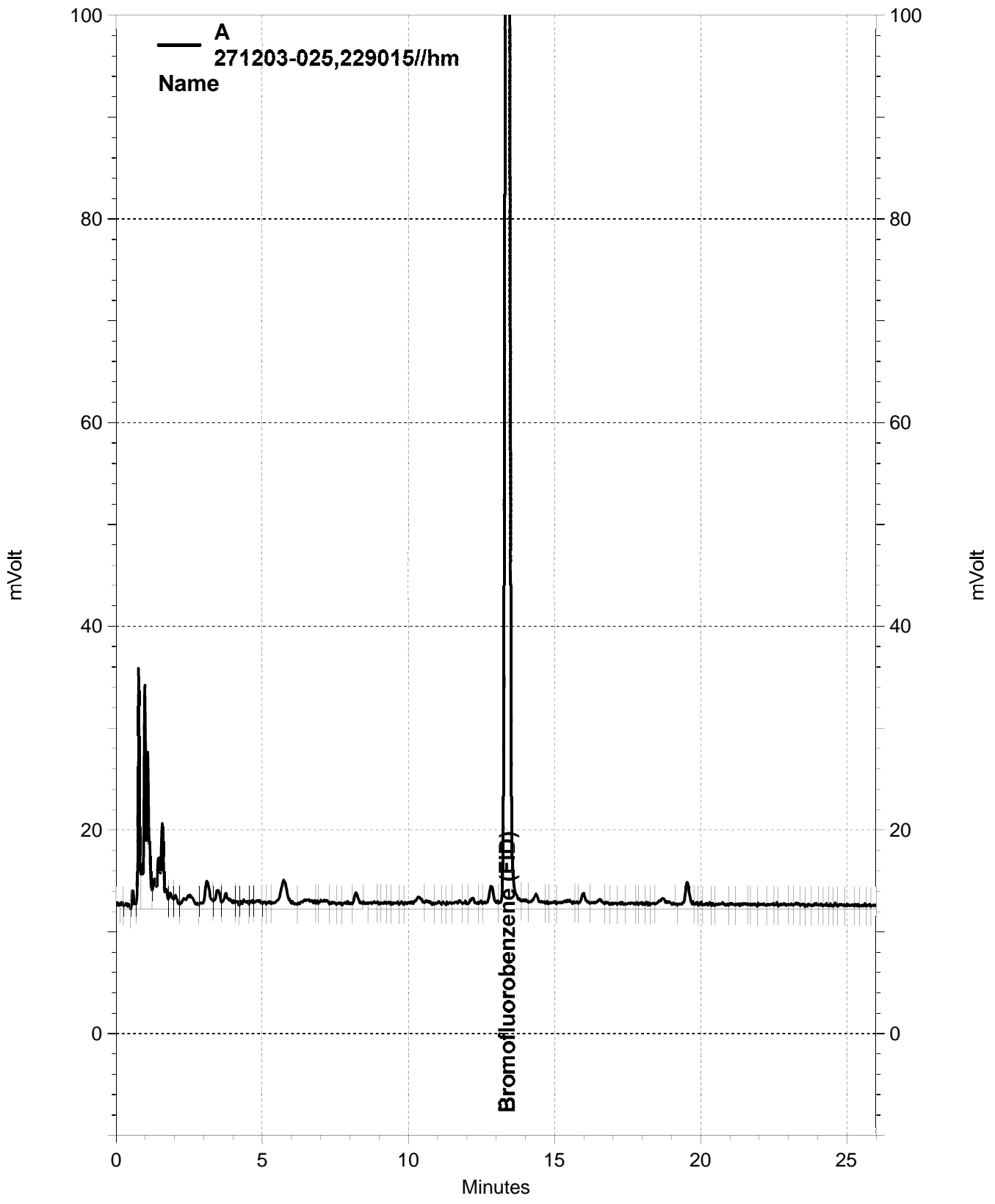
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**A**  
271203-023,229015  
Name

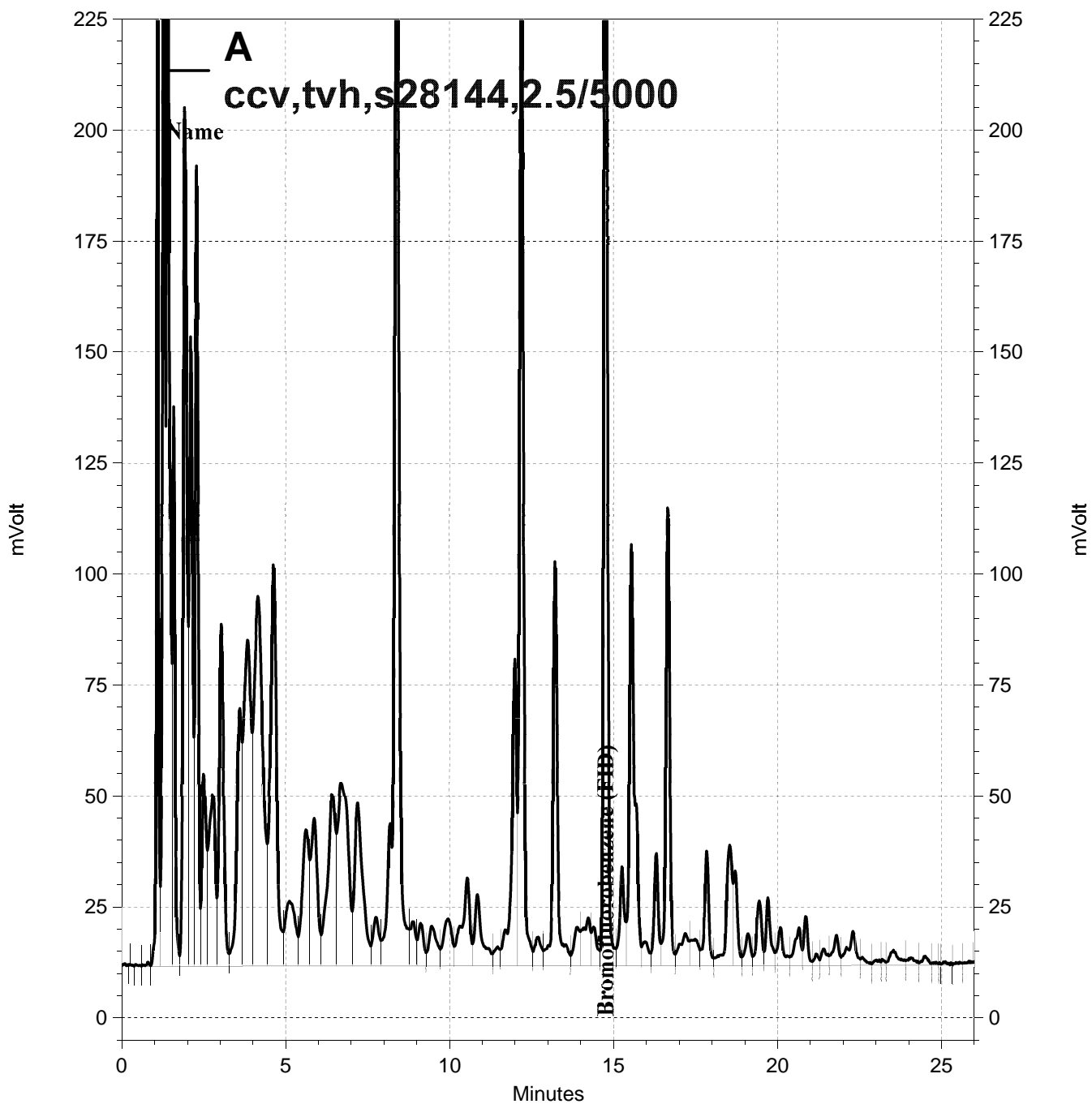
Bromofluorobenzene (FID)

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— \\Lims\gdrive\ezchrom\Projects\GC05\Data\307-025, A





— \\Lims\gdrive\ezchrom\Projects\GC04\Data\307-003, A

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCVOA Water: EPA 8015B

Inst : GC04  
 Calnum : 305422905001  
 Units : ng

Name : TVH/BFB  
 Date : 20-OCT-2015 17:03  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	293_003	305422905003	TVH_14	20-OCT-2015 17:03	S27569 (1000X), S27808 (5000X)
L2	293_004	305422905004	TVH_15	20-OCT-2015 17:41	S27568 (1000X), S27808 (5000X)
L3	293_005	305422905005	TVH_16	20-OCT-2015 18:18	S27567 (1000X), S27808 (5000X)
L4	293_006	305422905006	TVH_17	20-OCT-2015 18:56	S27566 (2000X), S27808 (5000X)
L5	293_007	305422905007	TVH_18	20-OCT-2015 19:33	S27566 (1000X), S27808 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	4168.9	2981.9	2906.1	3047.8	2891.9	AVRG		3.13E-4		3199.3	17	0.995	20	
Bromofluorobenzene (FID)	A	2253.8	2257.6	2391.6	2631.2	2735.9	AVRG		4.07E-4		2454.0	9	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	30	2500.0	-7	10000	-9	25000	-5	50000	-10
Bromofluorobenzene (FID)	A	900.00	-8	900.00	-8	900.00	-3	900.00	7	900.00	11

DAR 10/21/15 : This ical does not pass G6-G10

DAR: 10/21/15 FBJ: 10/23/15 EAH: 10/23/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC04  
Calnum : 305422905001

Name : TVH/BFB  
Cal Date : 20-OCT-2015

ICV 305422905010 (293\_010 20-OCT-2015) stds: S27613 (1000X), S27808 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9200	ng	-8	15	

Analyst: DAR

Date: 10/21/15

Reviewer: EAH

Date: 10/21/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCVOA Water: EPA 8015B

Inst : GC05  
 Calnum : 315090403001  
 Units : ng

Name : tvh/BFB\_062  
 Date : 04-MAR-2015 06:00  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	062_019	315090403019	TVH_15	04-MAR-2015 06:00	S26764 (1000X), S26658 (5000X)
L2	062_020	315090403020	TVH_16	04-MAR-2015 06:38	S26763 (1000X), S26658 (5000X)
L3	062_021	315090403021	TVH_17	04-MAR-2015 07:16	S26761 (2000X), S26658 (5000X)
L4	062_022	315090403022	TVH_18	04-MAR-2015 07:53	S26761 (1000X), S26658 (5000X)
L5	062_028	315090403028	TVH_14	04-MAR-2015 12:44	S26765 (1000X), S26658 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	3071.8	2632.6	2316.7	2473.8	3553.9	AVRG		3.56E-4		2809.8	18	0.995	20	
Bromofluorobenzene (FID)	A	2056.4	1960.4	1953.0	2504.9	2301.1	AVRG		4.64E-4		2155.2	11	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	2500.0	9	10000	-6	25000	-18	50000	-12	250.00	<b>26</b>
Bromofluorobenzene (FID)	A	900.00	-5	900.00	-9	900.00	-9	900.00	16	900.00	7

ERR 03/05/15 [Bromofluorobenzene (FID) A]: Separated from coeluting peak in multiple levels.

ERR 03/05/15 : Corrected baseline noise or negative peak in multiple levels.

ERR 03/05/15 : TVH14\_L4 low point out high, reran for better fit.

Analyst: ERR

Date: 03/05/15

Reviewer: EAH

Date: 03/05/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC05 Name : tvh/BFB\_062  
Calnum : 315090403001 Cal Date : 04-MAR-2015

ICV 315090403030 (062\_030 04-MAR-2015) stds: S26760 (1000X), S26658 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9289	ng	-7	15	

Analyst: ERR

Date: 03/05/15

Reviewer: EAH

Date: 03/05/15

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : QC810957                      IDF : 1.0  
 Seqnum : 305442526003.1        File : 307\_003                      Time : 03-NOV-2015 09:17  
 Cal : 305422905001              Caldate : 20-OCT-2015  
 Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	3199.3	3436.9	5000	5371	ng	7	15	u
Bromofluorobenzene (FID)	A	2454.0	2632.9	900.0	965.6	ng	7	15	u

FBJ 11/04/15 : ccv/lcs,qc810957,228992 [general version]

Analyst: CAR                      Date: 11/04/15                      Reviewer: EAH                      Date: 11/06/15

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 305442526015        File : 307\_015                      Time : 03-NOV-2015 17:12  
 Cal : 305422905001            Caldate : 20-OCT-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	3199.3	3223.4	10000	10080	ng	1	15	
Bromofluorobenzene (FID)	A	2454.0	2819.6	900.0	1034	ng	15	15	

Analyst: FBJ                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 305442526017        File : 307\_017                      Time : 03-NOV-2015 18:27  
 Cal : 305422905001            Caldate : 20-OCT-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	3199.3	3120.3	10000	9753	ng	-2	15	
Bromofluorobenzene (FID)	A	2454.0	2551.9	900.0	935.9	ng	4	15	

Analyst: FBJ                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 305442526027        File : 307\_027                      Time : 04-NOV-2015 00:43  
 Cal : 305422905001            Caldate : 20-OCT-2015  
 Standards: S28144 (666.7X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	3199.3	2960.8	15000	13880	ng	-7	15	
Bromofluorobenzene (FID)	A	2454.0	2429.0	900.0	890.8	ng	-1	15	

Analyst: FBJ                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC05 Run Name : QC811052 IDF : 1.0  
Seqnum : 315442775003.1 File : 307\_003 Time : 03-NOV-2015 12:50  
Cal : 315090403001 Caldate : 04-MAR-2015  
Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2809.8	2989.0	5000	5319	ng	6	15	u
Bromofluorobenzene (FID)	A	2155.2	2515.2	900.0	1050	ng	17	15	c+ u

CAR 11/03/15 [Bromofluorobenzene (FID) A]: Passes control limits. [general version]

CAR 11/04/15 [Bromofluorobenzene (FID) A]: Separated from coeluting peak for Ch. A. [general version]

CAR 11/04/15 : ccv/lcs, qc811052, 229015 [general version]

Analyst: CAR Date: 11/04/15 Reviewer: EAH Date: 11/06/15

+ = high bias c = CCV u = use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC05 Run Name : TVH IDF : 1.0  
 Seqnum : 315442775014 File : 307\_014 Time : 03-NOV-2015 21:04  
 Cal : 315090403001 Caldate : 04-MAR-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2809.8	2537.5	10000	9031	ng	-10	15	
Bromofluorobenzene (FID)	A	2155.2	2393.1	900.0	999.3	ng	11	15	

CAR 11/04/15 [Bromofluorobenzene (FID) A]: Separated from coeluting peak for Ch. A.

Analyst: CAR Date: 11/04/15 Reviewer: TKM Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC05                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 315442775015        File : 307\_015                      Time : 03-NOV-2015 21:41  
 Cal : 315090403001          Caldate : 04-MAR-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2809.8	2510.2	10000	8934	ng	-11	15	
Bromofluorobenzene (FID)	A	2155.2	2220.6	900.0	927.3	ng	3	15	

Analyst: CAR                      Date: 11/04/15                      Reviewer: TKM                      Date: 11/04/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCVOA Water  
EPA 8015B

Inst : GC05 Run Name : TVH IDF : 1.0  
 Seqnum : 315442775026 File : 307\_026 Time : 04-NOV-2015 04:35  
 Cal : 315090403001 Caldate : 04-MAR-2015  
 Standards: S28144 (666.7X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2809.8	2560.6	15000	13670	ng	-9	15	
Bromofluorobenzene (FID)	A	2155.2	2646.6	900.0	1105	ng	<b>23</b>	15	c+

CAR 11/04/15 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: CAR Date: 11/04/15 Reviewer: TKM Date: 11/04/15

+=high bias c=CCV

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 305422905

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 10/20/15 16:25  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
002	293_002	IB	CALIB			10/20/15 16:25	1.0	1
003	293_003	ICAL	TVH_14			10/20/15 17:03	1.0	2 1
004	293_004	ICAL	TVH_15			10/20/15 17:41	1.0	3 1
005	293_005	ICAL	TVH_16			10/20/15 18:18	1.0	4 1
006	293_006	ICAL	TVH_17			10/20/15 18:56	1.0	5 1
007	293_007	ICAL	TVH_18			10/20/15 19:33	1.0	5 1
008	293_008	X	IB			10/20/15 20:11	1.0	1
009	293_009	X	ICV			10/20/15 20:49	1.0	6 1
010	293_010	ICV	TVH			10/20/15 21:26	1.0	6 1
011	293_011	CMARKER				10/20/15 22:04	1.0	7 1

DAR 10/21/15 : file 1 was an IB that did not run

DAR 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 2 through 11.

Reviewed by: DAR Date: 10/21/15

Standards used: 1=S27808 2=S27569 3=S27568 4=S27567 5=S27566 6=S27613 7=S27955



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 305442526

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 11/03/15 07:26  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	307_001	X	CMARKER			11/03/15 07:26	1.0	1 2	
002	307_002	X	TVH			11/03/15 08:25	1.0	3 2	
003	307_003	CCV/LCS	QC810957	Water	228992	11/03/15 09:17	1.0	3 2	
004	307_004	BLANK	QC810958	Water	228992	11/03/15 10:04	1.0	2	
005	307_005	MSS	271203-016	Water	228992	11/03/15 10:56	1.0	2	
006	307_006	MS	QC810959	Water	228992	11/03/15 11:34	1.0	3 2	
007	307_007	MSD	QC810960	Water	228992	11/03/15 12:11	1.0	3 2	
008	307_008	SAMPLE	271203-001	Water	228992	11/03/15 12:49	1.0	2	
009	307_009	SAMPLE	271203-002	Water	228992	11/03/15 13:26	1.0	2	
010	307_010	SAMPLE	271203-003	Water	228992	11/03/15 14:04	1.0	2	
011	307_011	SAMPLE	271203-004	Water	228992	11/03/15 14:42	1.0	2	
012	307_012	SAMPLE	271203-005	Water	228992	11/03/15 15:19	1.0	2	
013	307_013	SAMPLE	271203-006	Water	228992	11/03/15 15:57	1.0	2	
014	307_014	SAMPLE	271203-007	Water	228992	11/03/15 16:35	1.0	2	
015	307_015	CCV	TVH			11/03/15 17:12	1.0	3 2	
016	307_016	X	CMARKER			11/03/15 17:50	1.0	1 2	
017	307_017	CCV	TVH			11/03/15 18:27	1.0	3 2	
018	307_018	SAMPLE	271203-008	Water	228992	11/03/15 19:05	1.0	2	
019	307_019	SAMPLE	271203-009	Water	228992	11/03/15 19:43	1.0	2	
020	307_020	SAMPLE	271203-010	Water	228992	11/03/15 20:20	1.0	2	
021	307_021	SAMPLE	271203-011	Water	228992	11/03/15 20:58	1.0	2	
022	307_022	SAMPLE	271203-012	Water	228992	11/03/15 21:36	1.0	2	
023	307_023	SAMPLE	271203-013	Water	228992	11/03/15 22:13	1.0	2	headspace > 1 mL
024	307_024	SAMPLE	271203-014	Water	228992	11/03/15 22:51	1.0	2	headspace > 1 mL
025	307_025	SAMPLE	271203-015	Water	228992	11/03/15 23:28	1.0	2	
026	307_026	SAMPLE	271203-017	Water	228992	11/04/15 00:06	1.0	2	
027	307_027	CCV	TVH			11/04/15 00:43	1.0	3 2	
028	307_028	CCV	TVH			11/04/15 01:21	1.0	3 2	
029	307_029	X	CMARKER			11/04/15 01:59	1.0	1 2	

FBJ 11/03/15 : X'd otu run 2, BFB failed low

FBJ 11/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 29.

Reviewed by:  FBJ  Date:  11/04/15

Standards used: 1=S27955 2=S28390 3=S28144

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 315090403

Instrument : GC05  
 Method : EPA 8015B, EPA 8021B

Begun : 03/03/15 18:43  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	062_001	X	IB			03/03/15 18:43	1.0	1
002	062_002	X	IB			03/03/15 19:21	1.0	1
003	062_003	IB	CALIB			03/03/15 19:58	1.0	1
004	062_004	ICAL	BTXE_1			03/03/15 20:36	1.0	2 1
005	062_005	ICAL	MBTXE_2			03/03/15 21:14	1.0	3 1
006	062_006	ICAL	MBTXE_3			03/03/15 21:51	1.0	3 1
007	062_007	ICAL	MBTXE_4			03/03/15 22:29	1.0	3 1
008	062_008	ICAL	MBTXE_5			03/03/15 23:06	1.0	4 1
009	062_009	ICAL	MBTXE_6			03/03/15 23:44	1.0	4 1
010	062_010	ICAL	MBTXE_7			03/04/15 00:22	1.0	4 1
011	062_011	ICAL	MBTBE_7			03/04/15 00:59	1.0	5 1
012	062_012	X	IB			03/04/15 01:37	1.0	1
013	062_013	ICV	MBTXE			03/04/15 02:15	1.0	6 1
014	062_014	ICV	MBTXE			03/04/15 02:52	1.0	6 1
015	062_015	X	IB			03/04/15 03:30	1.0	1
016	062_016	X	IB			03/04/15 04:07	1.0	1
017	062_017	IB	CALIB			03/04/15 04:45	1.0	1
018	062_018	X	X			03/04/15 05:23	1.0	7 1
019	062_019	ICAL	TVH_15			03/04/15 06:00	1.0	8 1
020	062_020	ICAL	TVH_16			03/04/15 06:38	1.0	9 1
021	062_021	ICAL	TVH_17			03/04/15 07:16	1.0	10 1
022	062_022	ICAL	TVH_18			03/04/15 07:53	1.0	10 1
023	062_023	X	IB			03/04/15 08:31	1.0	1
024	062_024	ICV	TVH			03/04/15 09:08	1.0	11 1
025	062_025	X	ICV			03/04/15 09:46	1.0	11 1
026	062_026	CMARKER	CMARK			03/04/15 10:23	1.0	12 1
027	062_027	X	CMARKER			03/04/15 11:01	1.0	12 1
028	062_028	ICAL	TVH_14			03/04/15 12:44	1.0	7 1
029	062_029	X	IB			03/04/15 13:21	1.0	1
030	062_030	ICV	TVH			03/04/15 13:59	1.0	11 1
031	062_031	X	ICV			03/04/15 14:37	1.0	11 1
032	062_032	X	CMARKER			03/04/15 15:14	1.0	12 1

ERR 03/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 26.

ERR 03/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 32.

Reviewed by: ERR Date: 03/04/15

Standards used: 1=S26658 2=S26340 3=S26339 4=S26338 5=S26368 6=S26659 7=S26765 8=S26764 9=S26763 10=S26761 11=S26760  
 12=S26730

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 315442775

Instrument : GC05  
 Method : EPA 8015B, EPA 8021B

Begun : 11/03/15 11:35  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	307_001	X	CMARKER			11/03/15 11:35	1.0	1 2	
002	307_002	CCV/BS	QC811056	Water	229015	11/03/15 12:13	1.0	3 2	
003	307_003	CCV/LCS	QC811052	Water	229015	11/03/15 12:50	1.0	4 2	
004	307_004	BSD	QC811057	Water	229015	11/03/15 13:28	1.0	3 2	
005	307_005	BLANK	QC811053	Water	229015	11/03/15 14:30	1.0	2	
006	307_006	MSS	271228-002	Water	229015	11/03/15 16:03	1.0	2	
007	307_007	MS	QC811054	Water	229015	11/03/15 16:40	1.0	4 2	
008	307_008	MSD	QC811055	Water	229015	11/03/15 17:18	1.0	4 2	
009	307_009	SAMPLE	271228-001	Water	229015	11/03/15 17:55	1.0	2	
010	307_010	SAMPLE	271228-003	Water	229015	11/03/15 18:33	1.0	2	
011	307_011	SAMPLE	271228-004	Water	229015	11/03/15 19:11	1.0	2	
012	307_012	SAMPLE	271238-006	Water	229015	11/03/15 19:48	1.0	2	
013	307_013	SAMPLE	271203-018	Water	229015	11/03/15 20:26	1.0	2	
014	307_014	CCV	TVH			11/03/15 21:04	1.0	4 2	
015	307_015	CCV	TVH			11/03/15 21:41	1.0	4 2	
016	307_016	X	CMARKER			11/03/15 22:19	1.0	1 2	
017	307_017	CCV	BTXE			11/03/15 22:56	1.0	3 2	
018	307_018	CCV	BTXE			11/03/15 23:34	1.0	3 2	
019	307_019	SAMPLE	271203-019	Water	229015	11/04/15 00:12	1.0	2	
020	307_020	SAMPLE	271203-020	Water	229015	11/04/15 00:49	1.0	2	headspace > 1 mL
021	307_021	SAMPLE	271203-021	Water	229015	11/04/15 01:27	1.0	2	headspace <= 1 mL
022	307_022	SAMPLE	271203-022	Water	229015	11/04/15 02:05	1.0	2	headspace > 1 mL
023	307_023	SAMPLE	271203-023	Water	229015	11/04/15 02:42	1.0	2	
024	307_024	SAMPLE	271203-024	Water	229015	11/04/15 03:20	1.0	2	headspace <= 1 mL
025	307_025	SAMPLE	271203-025	Water	229015	11/04/15 03:57	1.0	2	headspace > 1 mL
026	307_026	CCV	TVH			11/04/15 04:35	1.0	4 2	
027	307_027	CCV	TVH			11/04/15 05:13	1.0	4 2	
028	307_028	X	CMARKER			11/04/15 05:50	1.0	1 2	
029	307_029	CCV	BTXE			11/04/15 06:28	1.0	3 2	
030	307_030	CCV	BTXE			11/04/15 07:05	1.0	3 2	

CAR 11/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Reviewed by:  CAR  Date:  11/04/15

Standards used: 1=S27955 2=S28390 3=S27975 4=S28144

Laboratory Job Number 271203

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Water

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	PATLNSS-S	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-001	Analyzed:	11/07/15
Batch#:	229054		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Field ID:	SB-01-16-NS	Sampled:	10/29/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-002	Analyzed:	11/07/15
Batch#:	229054		

Analyte	Result	RL
Diesel C10-C24	ND	63

Surrogate	%REC	Limits
o-Terphenyl	112	67-136

Field ID:	SB-01-26-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-003	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	59

Surrogate	%REC	Limits
o-Terphenyl	103	67-136

Field ID:	SB-03-24-FD	Sampled:	10/30/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-005	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	140 Y	50

Surrogate	%REC	Limits
o-Terphenyl	110	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	SB-03-24-NS	Sampled:	10/30/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-006	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	108	67-136

Field ID:	SB-03-32-NS	Sampled:	10/30/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-007	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	56

Surrogate	%REC	Limits
o-Terphenyl	111	67-136

Field ID:	SB-05-16-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-008	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	63

Surrogate	%REC	Limits
o-Terphenyl	99	67-136

Field ID:	SB-05-24-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-009	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	63

Surrogate	%REC	Limits
o-Terphenyl	109	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	SB-06-14-NS	Sampled:	10/30/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-010	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	56
Surrogate	%REC	Limits
o-Terphenyl	98	67-136

Field ID:	SB-06-24-NS	Sampled:	10/30/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-011	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	260 Y	63
Surrogate	%REC	Limits
o-Terphenyl	93	67-136

Field ID:	SB-07-16-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-013	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	78 Y	59
Surrogate	%REC	Limits
o-Terphenyl	107	67-136

Field ID:	SB-07-26-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-014	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	66 Y	63
Surrogate	%REC	Limits
o-Terphenyl	124	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID: SB-09-16-FD                      Sampled: 10/28/15  
 Type: SAMPLE                                Prepared: 11/04/15  
 Lab ID: 271203-015                        Analyzed: 11/14/15  
 Batch#: 229062

Analyte	Result	RL
Diesel C10-C24	ND	56
Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Field ID: SB-09-16-NS                      Sampled: 10/28/15  
 Type: SAMPLE                                Prepared: 11/04/15  
 Lab ID: 271203-016                        Analyzed: 11/14/15  
 Batch#: 229062

Analyte	Result	RL
Diesel C10-C24	ND	56
Surrogate	%REC	Limits
o-Terphenyl	105	67-136

Field ID: SB-09-24-NS                      Sampled: 10/28/15  
 Type: SAMPLE                                Prepared: 11/04/15  
 Lab ID: 271203-017                        Analyzed: 11/14/15  
 Batch#: 229062

Analyte	Result	RL
Diesel C10-C24	ND	63
Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Field ID: SB-10-16-NS                      Sampled: 10/28/15  
 Type: SAMPLE                                Prepared: 11/04/15  
 Lab ID: 271203-018                        Analyzed: 11/14/15  
 Batch#: 229062

Analyte	Result	RL
Diesel C10-C24	190 Y	69
Surrogate	%REC	Limits
o-Terphenyl	114	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit



Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	SB-10-26-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-020	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	97 Y	64

Surrogate	%REC	Limits
o-Terphenyl	114	67-136

Field ID:	SB-11-12-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-021	Analyzed:	11/14/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	59

Surrogate	%REC	Limits
o-Terphenyl	98	67-136

Field ID:	SB-11-22-NS	Sampled:	10/28/15
Type:	SAMPLE	Prepared:	11/04/15
Lab ID:	271203-022	Analyzed:	11/13/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	67

Surrogate	%REC	Limits
o-Terphenyl	111	67-136

Field ID:	SB-12-12-NS	Sampled:	10/29/15
Type:	SAMPLE	Prepared:	11/05/15
Lab ID:	271203-023	Analyzed:	11/13/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	140 Y	63

Surrogate	%REC	Limits
o-Terphenyl	92	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Field ID:	SB-12-22-NS	Sampled:	10/29/15
Type:	SAMPLE	Prepared:	11/03/15
Lab ID:	271203-024	Analyzed:	11/08/15
Batch#:	229010		

Analyte	Result	RL
Diesel C10-C24	ND	56

Surrogate	%REC	Limits
o-Terphenyl	106	67-136

Field ID:	SB-18-12-NS	Sampled:	10/29/15
Type:	SAMPLE	Prepared:	11/03/15
Lab ID:	271203-025	Analyzed:	11/08/15
Batch#:	229010		

Analyte	Result	RL
Diesel C10-C24	ND	83

Surrogate	%REC	Limits
o-Terphenyl	84	67-136

Type:	BLANK	Prepared:	11/03/15
Lab ID:	QC811026	Analyzed:	11/07/15
Batch#:	229010		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	102	67-136

Type:	BLANK	Prepared:	11/04/15
Lab ID:	QC811214	Analyzed:	11/05/15
Batch#:	229054		

Analyte	Result	RL
Diesel C10-C24	62 b	50

Surrogate	%REC	Limits
o-Terphenyl	95	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	10/31/15

Type:	BLANK	Prepared:	11/04/15
Lab ID:	QC811242	Analyzed:	11/13/15
Batch#:	229062		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	101	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229010
Units:	ug/L	Prepared:	11/03/15
Diln Fac:	1.000	Analyzed:	11/07/15

Type: BS Lab ID: QC811027

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,413	97	60-121

Surrogate	%REC	Limits
o-Terphenyl	111	67-136

Type: BSD Lab ID: QC811028

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,966	79	60-121	20	32

Surrogate	%REC	Limits
o-Terphenyl	94	67-136

RPD= Relative Percent Difference

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC811215	Batch#:	229054
Matrix:	Water	Prepared:	11/04/15
Units:	ug/L	Analyzed:	11/05/15

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,080	83	60-121

Surrogate	%REC	Limits
o-Terphenyl	101	67-136

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	SB-01-16-NS	Batch#:	229054
MSS Lab ID:	271203-002	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Prepared:	11/04/15
Diln Fac:	1.000	Analyzed:	11/07/15

Type: MS Lab ID: QC811216

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	23.14	3,125	2,518	80	55-122

Surrogate	%REC	Limits
o-Terphenyl	106	67-136

Type: MSD Lab ID: QC811217

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	3,125	2,431	77	55-122	3	53

Surrogate	%REC	Limits
o-Terphenyl	102	67-136

RPD= Relative Percent Difference

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229062
Units:	ug/L	Prepared:	11/04/15
Diln Fac:	1.000	Analyzed:	11/13/15

Type: BS Lab ID: QC811243

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,271	91	60-121

Surrogate	%REC	Limits
o-Terphenyl	108	67-136

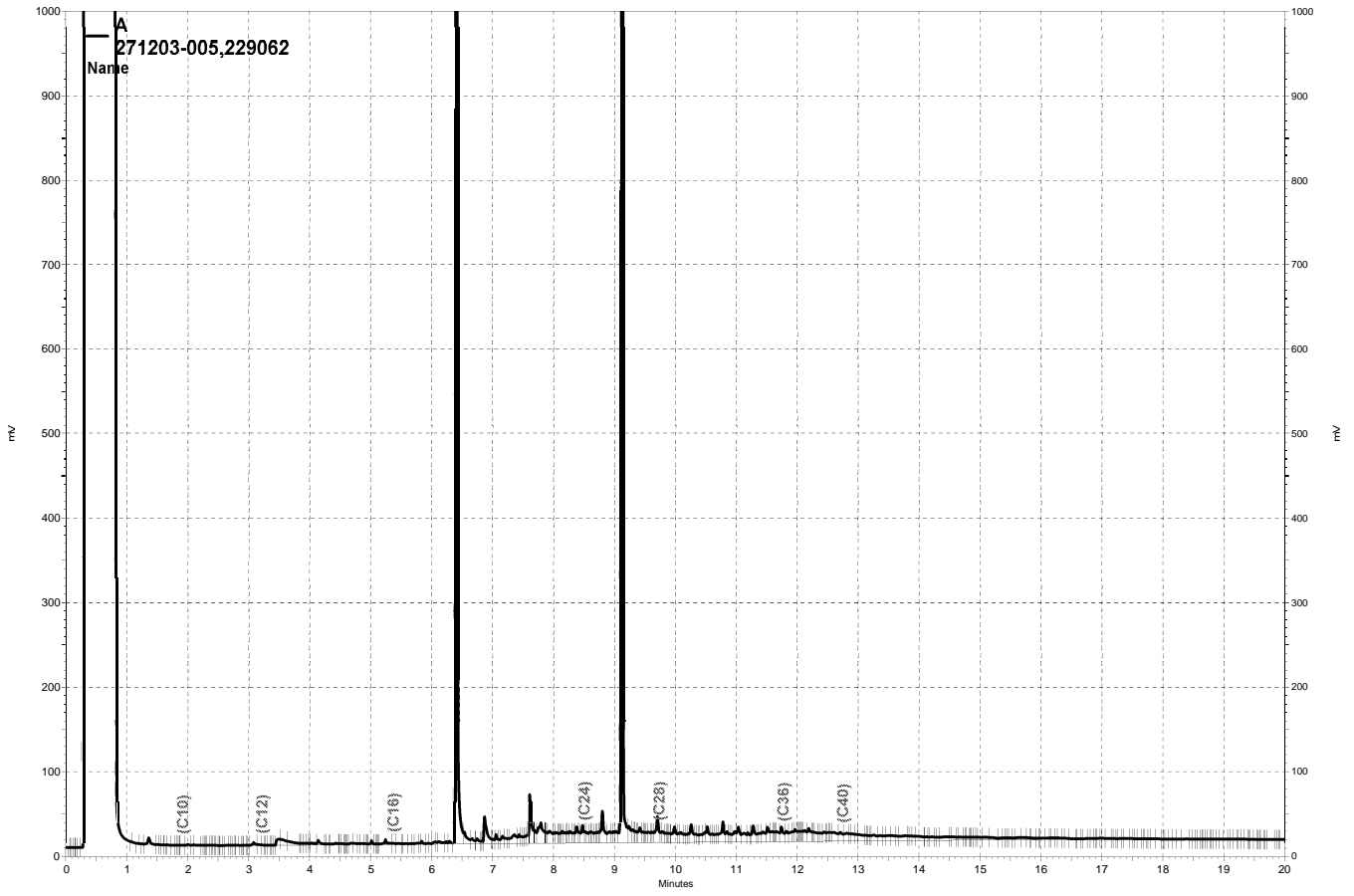
Type: BSD Lab ID: QC811244

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,205	88	60-121	3	32

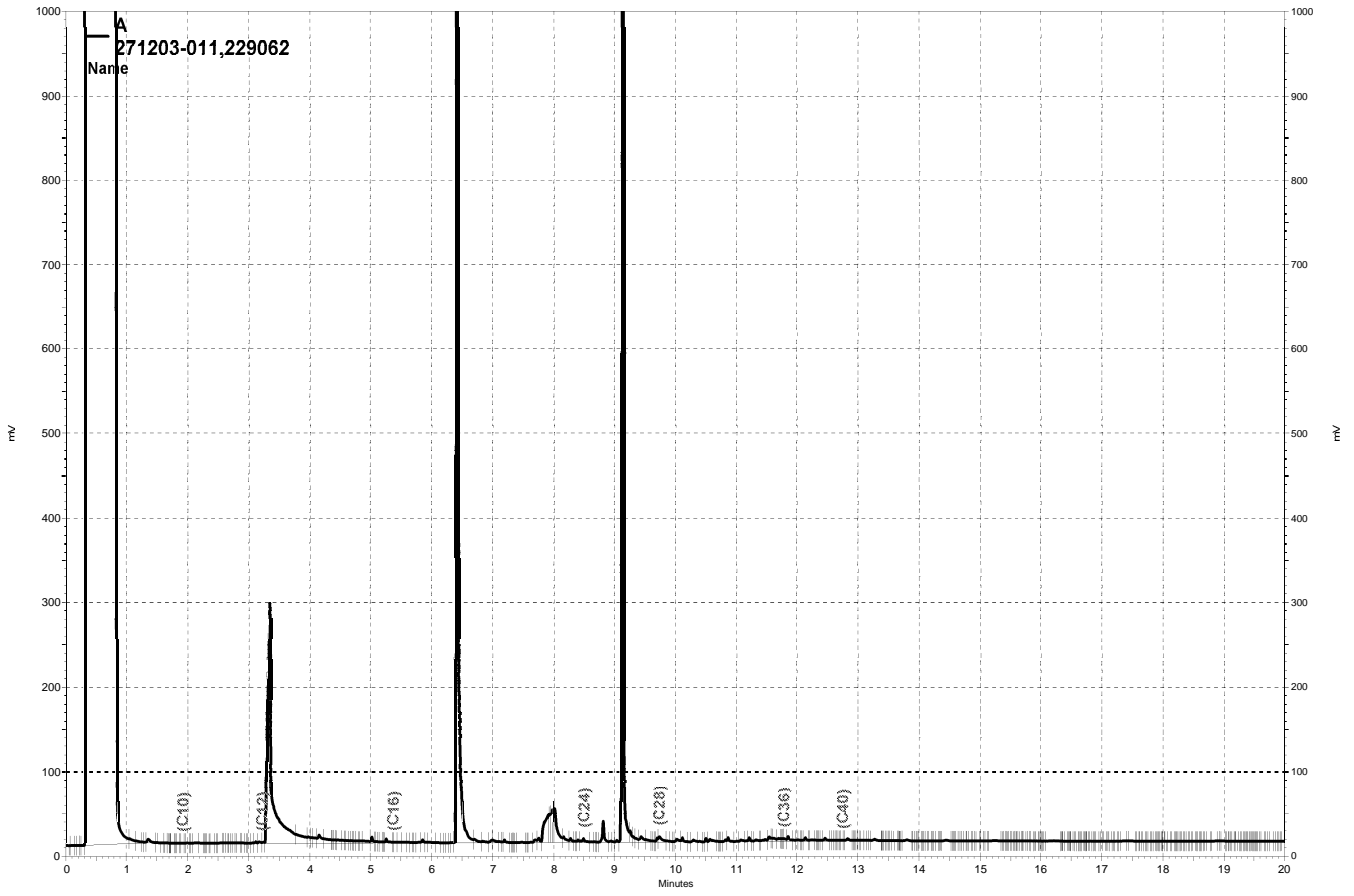
Surrogate	%REC	Limits
o-Terphenyl	98	67-136

RPD= Relative Percent Difference

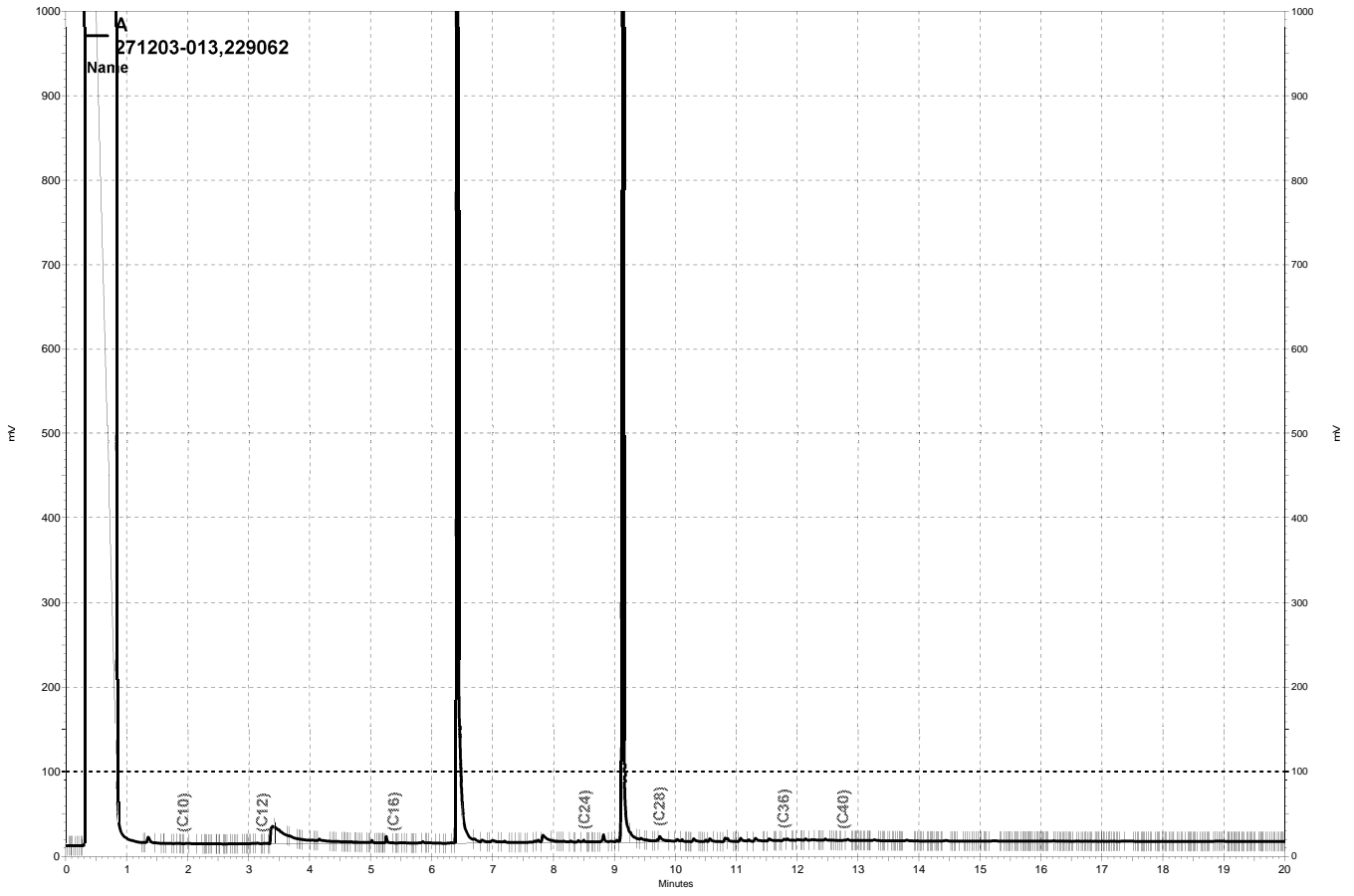


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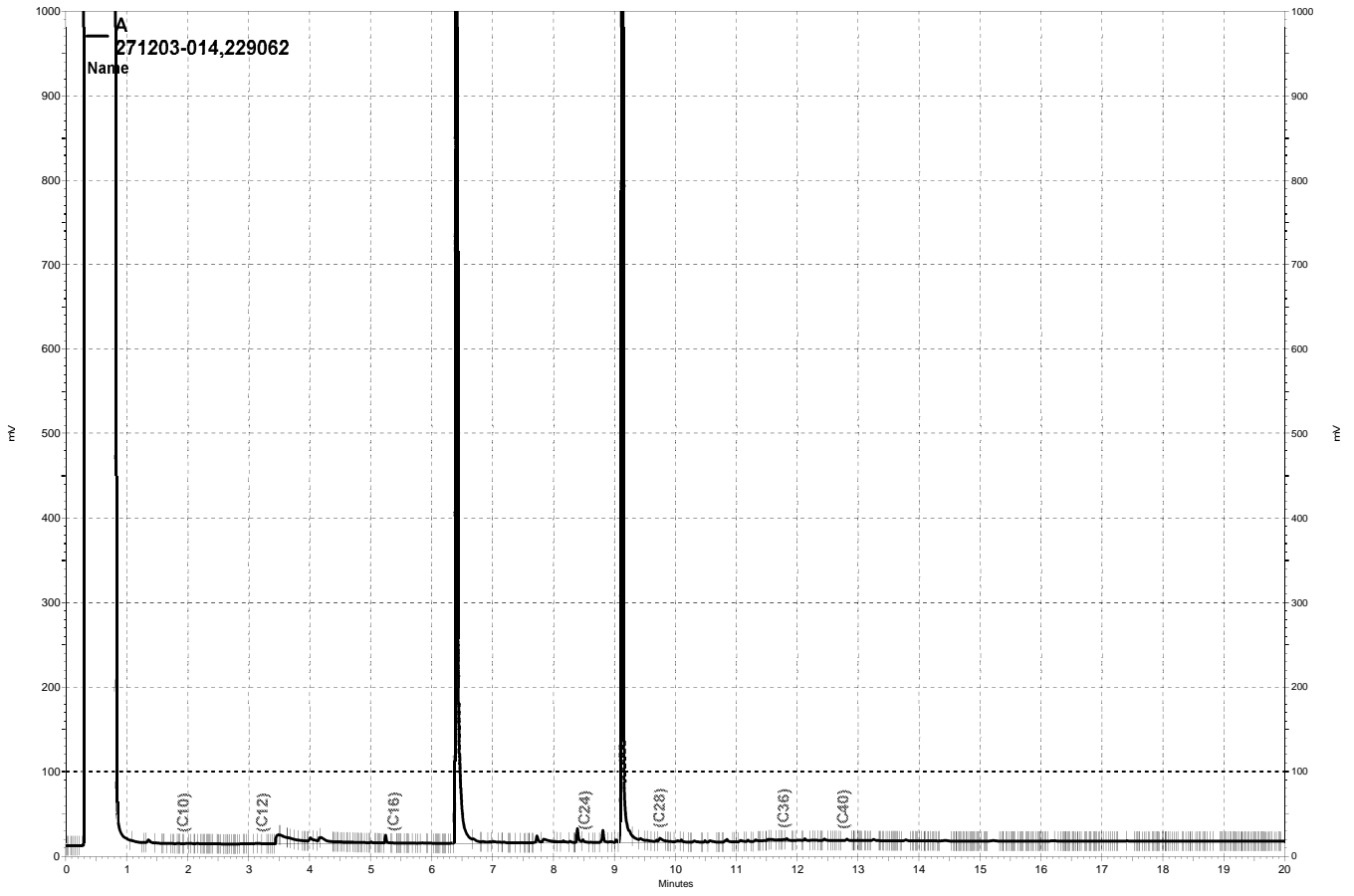




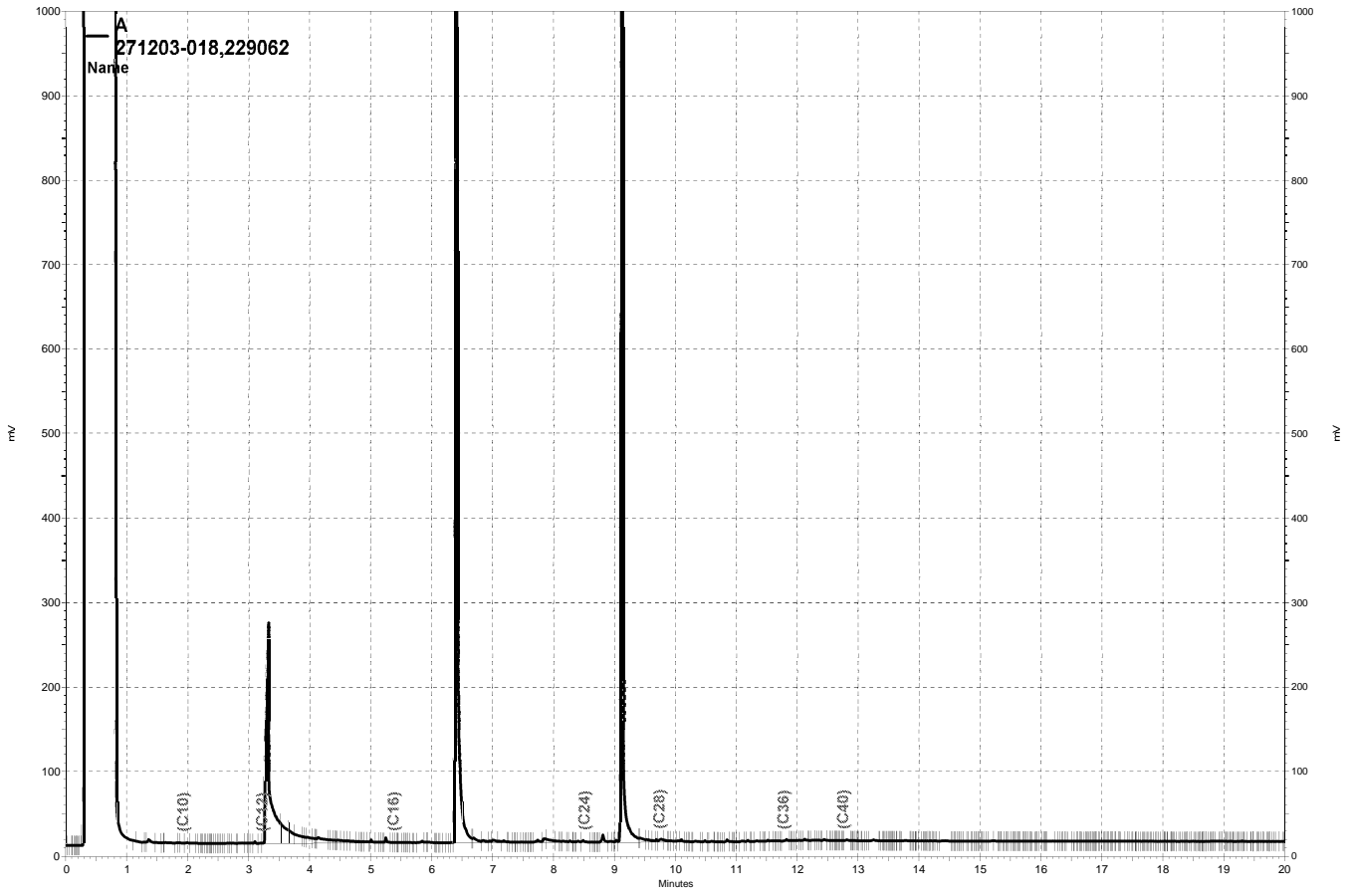
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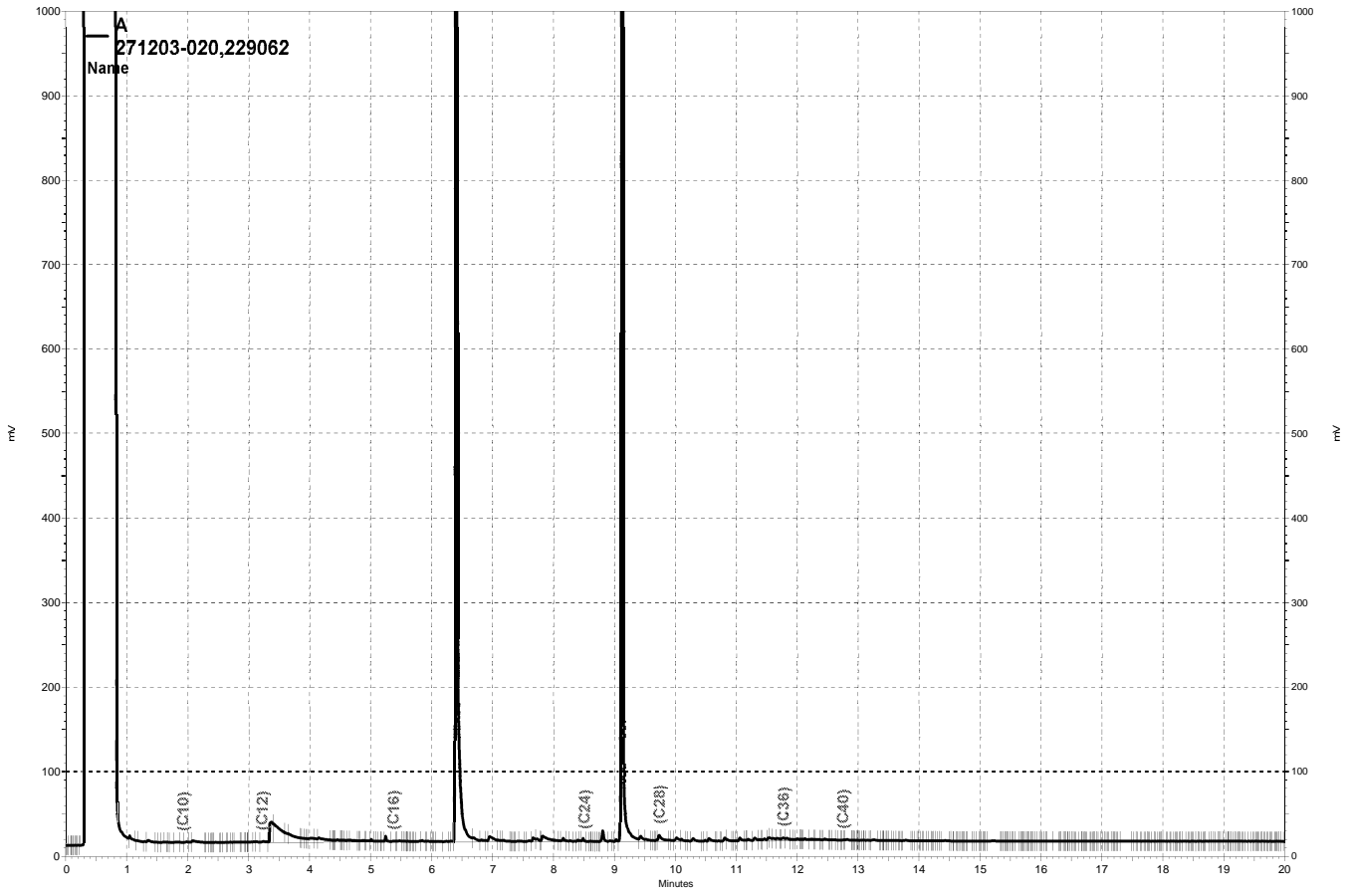
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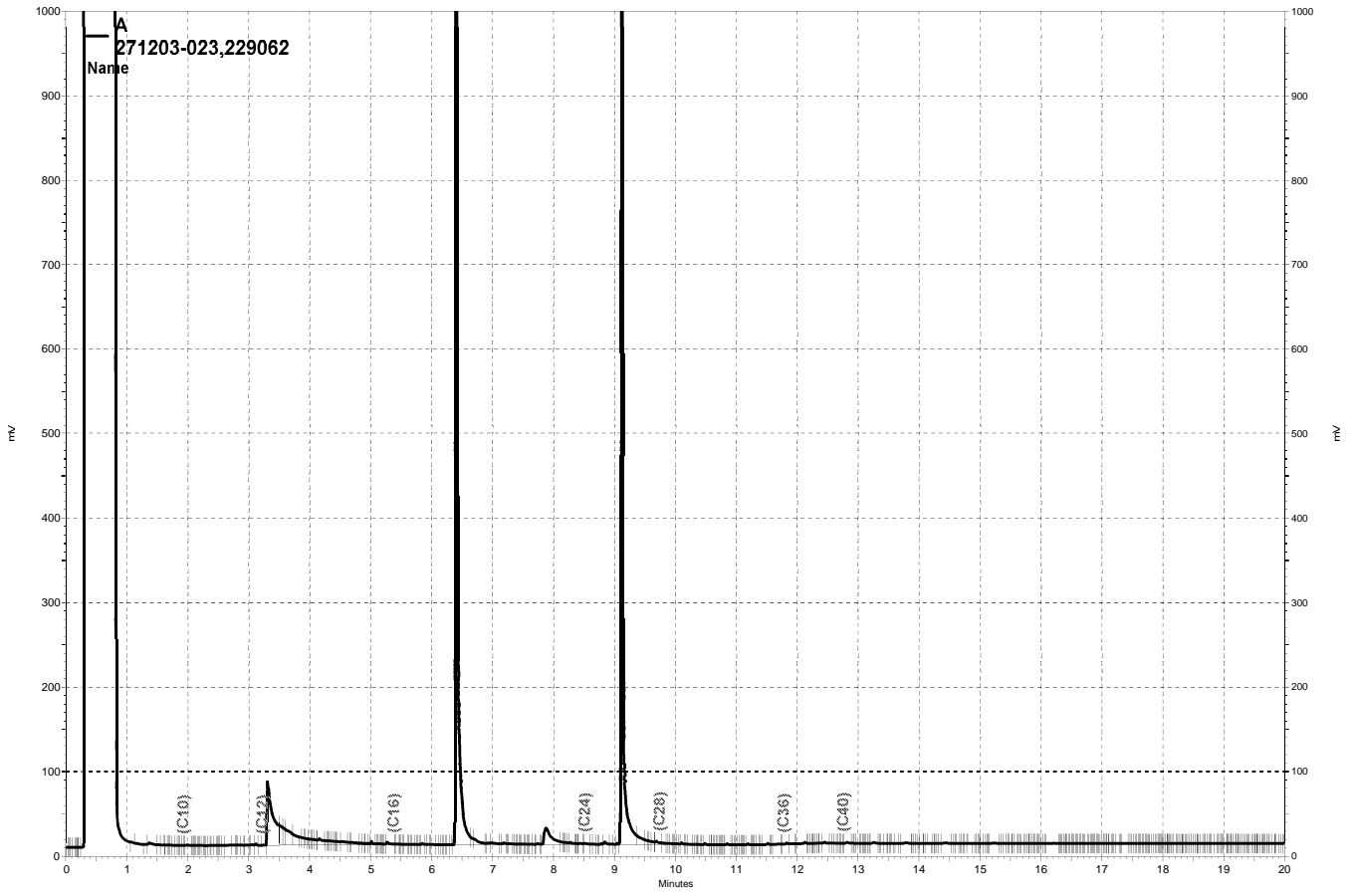
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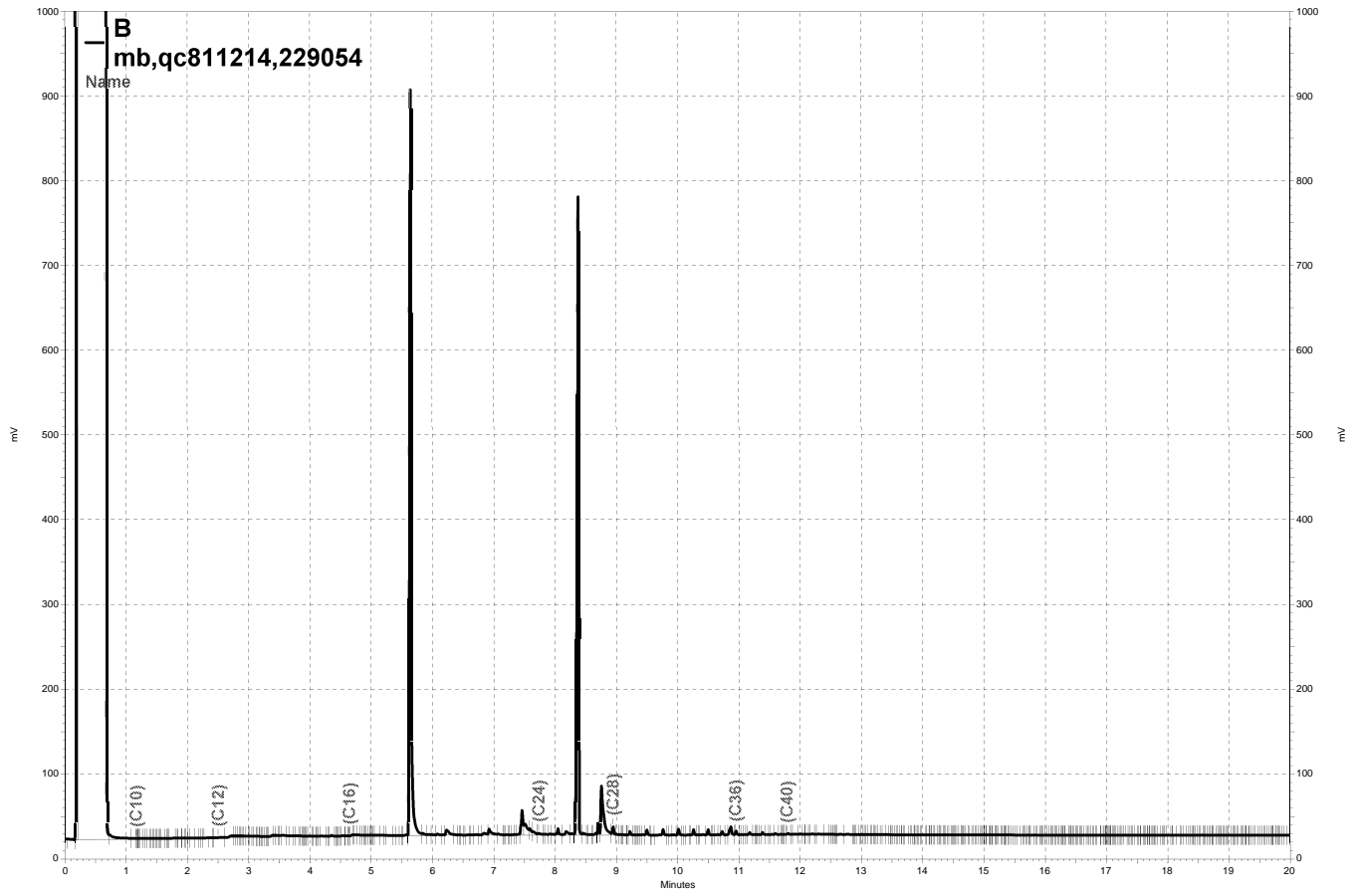
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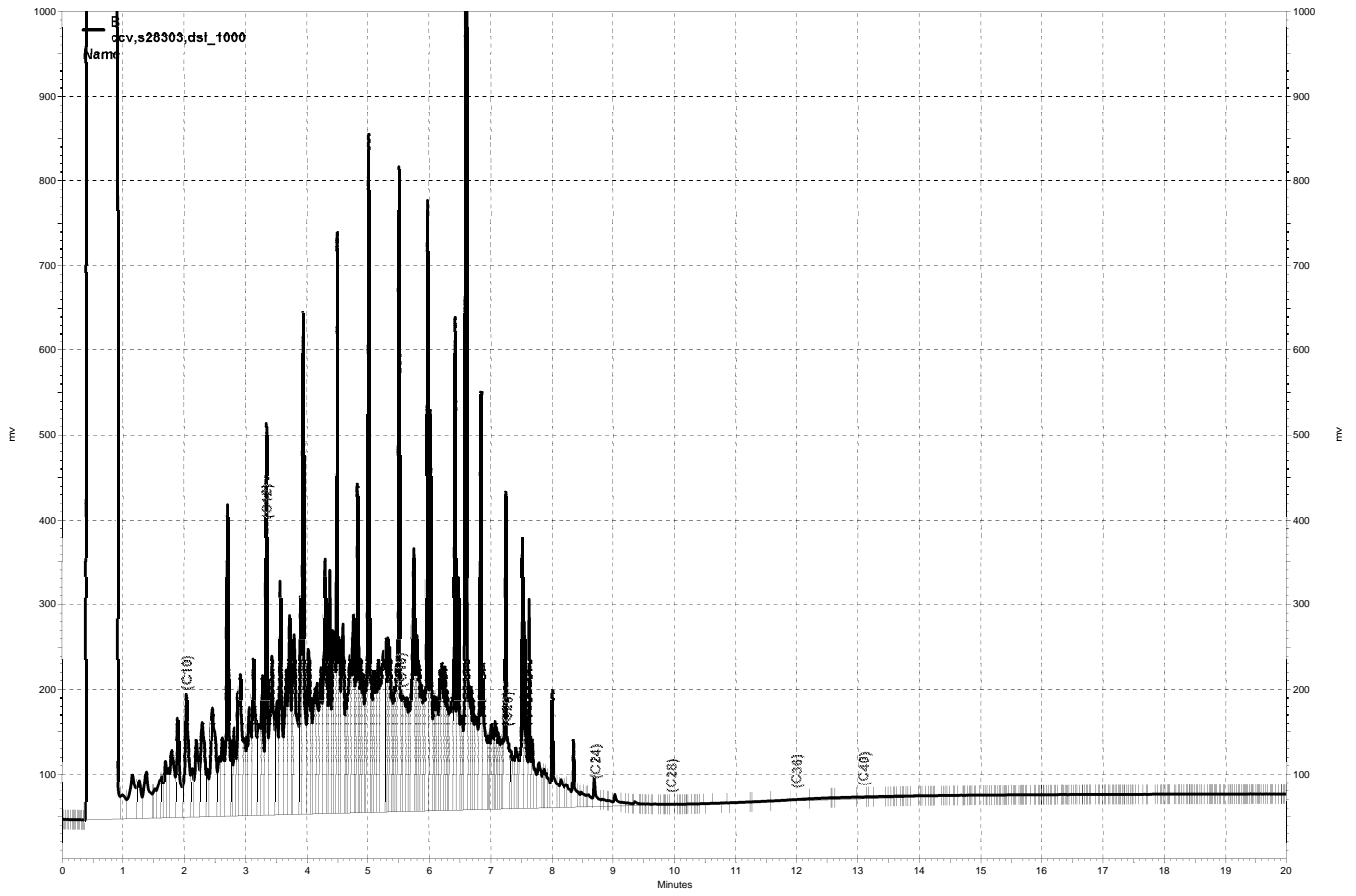
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**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 224523202001  
 Units : mg/L

Name : DSL\_364  
 Date : 29-DEC-2014 15:35  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	364_009	224523202009	DSL_10	29-DEC-2014 15:35	S26213
L2	364_010	224523202010	DSL_100	29-DEC-2014 16:04	S25844
L3	364_011	224523202011	DSL_500	29-DEC-2014 16:32	S25845
L4	364_012	224523202012	DSL_1000	29-DEC-2014 17:00	S25846
L5	364_013	224523202013	DSL_5000	29-DEC-2014 17:28	S25842

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	B	22270	35068	37375	37151	34353	AVRG		3.01E-5		33243	19	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	B	10.000	-33	100.00	5	500.00	12	1000.0	12	5000.0	3

SFL 12/30/14 : Samples that require carbon ranges Diesel C16-C24 will not be loaded on this instrument.

Analyst: SFL

Date: 12/30/14

Reviewer: EAH

Date: 12/30/14

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B  
Calnum : 224523202001

Name : DSL\_364  
Cal Date : 29-DEC-2014

ICV 224523202016 (364\_016 29-DEC-2014) stds: S25996

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	543.3	mg/L	9	15	

Analyst: SFL

Date: 12/30/14

Reviewer: EAH

Date: 12/30/14

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 225426669001  
 Units : mg/L

Name : OTPHEX\_296  
 Date : 23-OCT-2015 14:10  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	296_006	225426669006	HEX OTP_5	23-OCT-2015 14:10	S27409
L2	296_007	225426669007	HEX OTP_10	23-OCT-2015 14:40	S27410
L3	296_008	225426669008	HEX OTP_25	23-OCT-2015 15:09	S27411
L4	296_009	225426669009	HEX OTP_50	23-OCT-2015 15:39	S27412
L5	296_010	225426669010	HEX OTP_100	23-OCT-2015 16:09	S27413
L6	296_011	225426669011	HEX OTP_200	23-OCT-2015 16:38	S27414

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	B	30954	31774	31981	35007	33195	32269	AVRG		3.07E-5		32530	4	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	B	5.0000	-5	10.000	-2	25.000	-2	50.000	8	100.00	2	200.00	-1

SFL 10/24/15 : Corrected automatically drawn baseline in HEX OTP\_200 (296\_011).

SFL 10/24/15 : Any samples that require HEXACOSANE will not be loaded on this instrument.

Analyst: SFL Date: 10/24/15 Reviewer: EAH Date: 10/26/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 165229449002  
 Units : mg/L

Name : DSL\_159  
 Date : 08-JUN-2015 16:06  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	159b011	165229449011	DSL_10	08-JUN-2015 16:06	S27111
L2	159b012	165229449012	DSL_100	08-JUN-2015 16:34	S27112
L3	159b013	165229449013	DSL_500	08-JUN-2015 17:02	S27113
L4	159b014	165229449014	DSL_1000	08-JUN-2015 17:30	S27114
L5	159b015	165229449015	DSL_5000	08-JUN-2015 17:58	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	51297	43811	48117	51433	47837	AVRG		2.06E-5		48499	6	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	6	100.00	-10	500.00	-1	1000.0	6	5000.0	-1

JDG 06/10/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCSV Water  
EPA 8015B

Inst : GC15B  
Calnum : 165229449002

Name : DSL\_159  
Cal Date : 08-JUN-2015

ICV 165229449017 (159b017 08-JUN-2015) stds: S26960

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	532.7	mg/L	7	15	

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 165383482001  
 Units : mg/L

Name : OTPHEX\_266  
 Date : 23-SEP-2015 11:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	266b009	165383482009	HEXOTP_5	23-SEP-2015 11:31	S27409
L2	266b010	165383482010	HEXOTP_10	23-SEP-2015 11:59	S27410
L3	266b011	165383482011	HEXOTP_25	23-SEP-2015 12:27	S27411
L4	266b012	165383482012	HEXOTP_50	23-SEP-2015 12:54	S27412
L5	266b013	165383482013	HEXOTP_100	23-SEP-2015 13:22	S27413
L6	266b014	165383482014	HEXOTP_200	23-SEP-2015 13:49	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	50594	59399	58914	58956	59523	62187	AVRG		1.72E-5		58262	7	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	-13	10.000	2	25.000	1	50.000	1	100.00	2	200.00	7

JDG 09/23/15 [Hexacosane B]: Picked or reassigned peak in HEXOTP\_5 (266b009).

JDG 09/23/15 : Corrected automatically drawn baseline in multiple levels.

JDG 09/23/15 [Hexacosane B]: Samples requiring HEX will not be analyzed on this instrument.

Analyst: JDG

Date: 09/23/15

Reviewer: EAH

Date: 09/23/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC17A  
 Calnum : 175247623002  
 Units : mg/L

Name : DSL\_171  
 Date : 20-JUN-2015 15:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	171a010	175247623010	DSL_10	20-JUN-2015 15:31	S27111
L2	171a011	175247623011	DSL_100	20-JUN-2015 15:59	S27112
L3	171a012	175247623012	DSL_500	20-JUN-2015 16:27	S27113
L4	171a013	175247623013	DSL_1000	20-JUN-2015 16:56	S27114
L5	171a014	175247623014	DSL_5000	20-JUN-2015 17:24	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	59139	64770	65011	65212	64156	AVRG		1.57E-5		63657	4	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	-7	100.00	2	500.00	2	1000.0	2	5000.0	1

JDG 06/22/15 : Corrected automatically drawn baseline in DSL\_10 (171a010).

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor



CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A  
Calnum : 175247623002

Name : DSL\_171  
Cal Date : 20-JUN-2015

ICV 175247623016 (171a016 20-JUN-2015) stds: S27446

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	495.1	mg/L	-1	15	

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC17A  
 Calnum : 175394216001  
 Units : mg/L

Name : OTPHEX\_273  
 Date : 30-SEP-2015 19:13  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	273a003	175394216003	HEXOTP_5	30-SEP-2015 19:13	S27409
L2	273a004	175394216004	HEXOTP_10	30-SEP-2015 19:41	S27410
L3	273a005	175394216005	HEXOTP_25	30-SEP-2015 20:09	S27411
L4	273a006	175394216006	HEXOTP_50	30-SEP-2015 20:37	S27412
L5	273a007	175394216007	HEXOTP_100	30-SEP-2015 21:06	S27413
L6	273a008	175394216008	HEXOTP_200	30-SEP-2015 21:34	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	71460	70831	71260	68676	69800	75121	AVRG		1.40E-5		71191	3	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	0	10.000	-1	25.000	0	50.000	-4	100.00	-2	200.00	6

JDG 10/01/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 10/01/15

Reviewer: EAH

Date: 10/01/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC26A  
 Calnum : 865421170001  
 Units : mg/L

Name : OTPHEX\_292  
 Date : 19-OCT-2015 15:42  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	292a009	865421170009	HEXOTP_5	19-OCT-2015 15:42	S27409
L2	292a010	865421170010	HEXOTP_10	19-OCT-2015 16:10	S27410
L3	292a011	865421170011	HEXOTP_25	19-OCT-2015 16:38	S27411
L4	292a012	865421170012	HEXOTP_50	19-OCT-2015 17:06	S27412
L5	292a013	865421170013	HEXOTP_100	19-OCT-2015 17:34	S27413
L6	292a014	865421170014	HEXOTP_200	19-OCT-2015 18:02	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	65123	60926	62790	63513	65439	66107	AVRG		1.56E-5		63983	3	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	2	10.000	-5	25.000	-2	50.000	-1	100.00	2	200.00	3

JDG 10/22/15 : Corrected automatically drawn baseline in all levels.

Analyst: JDG

Date: 10/22/15

Reviewer: EAH

Date: 10/22/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 GCSV Water: EPA 8015B

Inst : GC26A  
 Calnum : 865421170002  
 Units : mg/L

Name : DSL\_292  
 Date : 19-OCT-2015 18:57  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	292a016	865421170016	DSL_10	19-OCT-2015 18:57	S27111
L2	292a017	865421170017	DSL_100	19-OCT-2015 19:25	S27112
L3	292a018	865421170018	DSL_500	19-OCT-2015 19:53	S27113
L4	292a019	865421170019	DSL_1000	19-OCT-2015 20:21	S27114
L5	292a020	865421170020	DSL_5000	19-OCT-2015 20:48	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	57839	56786	60020	57935	58521	AVRG		1.72E-5		58220	2	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	-1	100.00	-2	500.00	3	1000.0	0	5000.0	1

JDG 10/22/15 : Corrected automatically drawn baseline in all levels.

Analyst: JDG

Date: 10/22/15

Reviewer: EAH

Date: 10/22/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 GCSV Water  
EPA 8015B

Inst : GC26A  
Calnum : 865421170002

Name : DSL\_292  
Cal Date : 19-OCT-2015

ICV 865421170022 (292a022 19-OCT-2015) stds: S27804

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	502.9	mg/L	1	15	

Analyst: JDG

Date: 10/22/15

Reviewer: EAH

Date: 10/22/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 225442498086              File : 307\_086                      Time : 05-NOV-2015 07:18  
 Standards: S28303

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	28704	1000	863.4	mg/L	-14	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	32064	50.00	49.28	mg/L	-1	15	

JDG 11/05/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/05/15                      Reviewer: EAH                      Date: 11/05/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 225442498097              File : 307\_097                      Time : 05-NOV-2015 13:47  
 Cal : 225426669001              Caldate : 23-OCT-2015  
 Standards: S28150

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
o-Terphenyl	B	32530	36076	50.00	55.45	mg/L	11	15	

Analyst: JDG                      Date: 11/05/15                      Reviewer: EAH                      Date: 11/05/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 225442498098              File : 307\_098                      Time : 05-NOV-2015 14:16  
 Standards: S28302

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	32626	500.0	490.7	mg/L	-2	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	34530	50.00	53.07	mg/L	6	15	

JDG 11/05/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/05/15                      Reviewer: EAH                      Date: 11/05/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 225448419003              File : 311\_003                      Time : 07-NOV-2015 10:39  
 Cal : 225426669001              Caldate : 23-OCT-2015  
 Standards: S28150

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
o-Terphenyl	B	32530	34841	50.00	53.55	mg/L	7	15	

Analyst: SFL                      Date: 11/07/15                      Reviewer: EAH                      Date: 11/09/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 225448419004              File : 311\_004                      Time : 07-NOV-2015 11:09  
 Standards: S28302

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	224523202001	29-DEC-2014	33243	31348	500.0	471.5	mg/L	-6	15	
o-Terphenyl	B	225426669001	23-OCT-2015	32530	33851	50.00	52.03	mg/L	4	15	

SFL 11/07/15 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 11/07/15                      Reviewer: EAH                      Date: 11/09/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 225448419018          File : 311\_018                      Time : 07-NOV-2015 18:32  
 Cal : 225426669001              Caldate : 23-OCT-2015  
 Standards: S28150

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
o-Terphenyl	B	32530	35173	50.00	54.06	mg/L	8	15	

BJP 11/09/15 : Corrected automatically drawn baseline.

Analyst: BJP                      Date: 11/09/15                      Reviewer: EAH                      Date: 11/09/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 165456901003          File : 317b003                      Time : 13-NOV-2015 07:57  
 Cal : 165383482001              Caldate : 23-SEP-2015  
 Standards: S28475

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	58262	60576	50.00	51.99	mg/L	4	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/13/15                      Reviewer: EAH                      Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 165456901004              File : 317b004                      Time : 13-NOV-2015 08:25  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	165229449002	08-JUN-2015	48499	50842	1000	1048	mg/L	5	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	63247	50.00	54.28	mg/L	9	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/13/15                      Reviewer: EAH                      Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 165456901012              File : 317b012                      Time : 13-NOV-2015 14:58  
 Cal : 165383482001              Caldate : 23-SEP-2015  
 Standards: S28475

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	58262	61766	50.00	53.01	mg/L	6	15	

Analyst: JDG

Date: 11/13/15

Reviewer: EAH

Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 165456901013              File : 317b013                      Time : 13-NOV-2015 15:25  
 Standards: S28302

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	165229449002	08-JUN-2015	48499	49947	500.0	514.9	mg/L	3	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	61484	50.00	52.76	mg/L	6	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/13/15                      Reviewer: EAH                      Date: 11/13/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_250                      IDF : 1.0  
Seqnum : 175446857078              File : 310a078                      Time : 08-NOV-2015 01:56  
Standards: S28301

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	68185	250.0	267.8	mg/L	7	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	78280	50.00	54.98	mg/L	10	15	

JDG 11/10/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/10/15                      Reviewer: EAH                      Date: 11/10/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 175446857093              File : 310a093                      Time : 08-NOV-2015 08:58  
 Cal : 175394216001              Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max	%D	Flags
	RF/CF	RF/CF							
o-Terphenyl	71191	77750	50.00	54.61	mg/L	9	15		

JDG 11/10/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/10/15                      Reviewer: EAH                      Date: 11/10/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 175446857094              File : 310a094                      Time : 08-NOV-2015 09:27  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	64724	1000	1017	mg/L	2	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	77972	50.00	54.76	mg/L	10	15	

JDG 11/10/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/10/15                      Reviewer: EAH                      Date: 11/10/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 175456904003          File : 317a003                      Time : 13-NOV-2015 08:00  
 Cal : 175394216001              Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	73171	50.00	51.39	mg/L	3	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/13/15                      Reviewer: EAH                      Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 175456904004              File : 317a004                      Time : 13-NOV-2015 08:28  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	61032	1000	958.8	mg/L	-4	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	72910	50.00	51.21	mg/L	2	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/13/15                      Reviewer: EAH                      Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A Run Name : MO\_500 IDF : 1.0  
Seqnum : 175456904014 File : 317a014 Time : 13-NOV-2015 14:56  
Cal : 175394216001 Caldate : 30-SEP-2015  
Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	72030	50.00	50.59	mg/L	1	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG Date: 11/13/15 Reviewer: EAH Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A    Run Name : DSL\_500    IDF : 1.0  
Seqnum : 175456904015                                  File : 317a015    Time : 13-NOV-2015 15:24  
Standards: S28302

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	175247623002	20-JUN-2015	63657	60198	500.0	472.8	mg/L	-5	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	68550	50.00	48.14	mg/L	-4	15	

JDG 11/13/15 : Corrected automatically drawn baseline.

Analyst: JDG                                  Date: 11/13/15                                  Reviewer: EAH    Date: 11/13/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 175456904032              File : 317a032                      Time : 13-NOV-2015 23:45  
 Standards: S28301

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	63206	250.0	248.2	mg/L	-1	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	72282	50.00	50.77	mg/L	2	15	

JDG 11/16/15 : DSL\_250: S28301

JDG 11/16/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/16/15                      Reviewer: EAH                      Date: 11/16/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 175456904052          File : 317a052                      Time : 14-NOV-2015 09:04  
 Cal : 175394216001              Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	67151	50.00	47.16	mg/L	-6	15	

JDG 11/16/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/16/15                      Reviewer: EAH                      Date: 11/16/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 175456904053              File : 317a053                      Time : 14-NOV-2015 09:32  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	60183	1000	945.4	mg/L	-5	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	72393	50.00	50.84	mg/L	2	15	

JDG 11/16/15 : DSL\_1000: S28303

Analyst: JDG                      Date: 11/16/15                      Reviewer: EAH                      Date: 11/16/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A Run Name : MO\_500 IDF : 1.0  
 Seqnum : 175456904067 File : 317a067 Time : 14-NOV-2015 16:05  
 Cal : 175394216001 Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	74658	50.00	52.43	mg/L	5	15	

JDG 11/16/15 : Corrected automatically drawn baseline.

Analyst: JDG Date: 11/16/15 Reviewer: EAH Date: 11/16/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 175456904068              File : 317a068                      Time : 14-NOV-2015 16:33  
 Standards: S28302

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	61326	500.0	481.7	mg/L	-4	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	71426	50.00	50.16	mg/L	0	15	

JDG 11/16/15 : DSL\_500: S28302

Analyst: JDG                      Date: 11/16/15                      Reviewer: EAH                      Date: 11/16/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC26A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 865448413003              File : 311a003                      Time : 07-NOV-2015 10:30  
 Cal : 865421170001              Caldate : 19-OCT-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	63983	66323	50.00	51.83	mg/L	4	15	

SFL 11/07/15 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 11/07/15                      Reviewer: JDG                      Date: 11/10/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 865448413004              File : 311a004                      Time : 07-NOV-2015 10:58  
 Standards: S28301

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	865421170002	19-OCT-2015	58220	55218	250.0	237.1	mg/L	-5	15	
o-Terphenyl	865421170001	19-OCT-2015	63983	67406	50.00	52.67	mg/L	5	15	

SFL 11/07/15 : Corrected automatically drawn baseline.

SFL 11/07/15 : s28301

Analyst: SFL                      Date: 11/07/15                      Reviewer: JDG                      Date: 11/10/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC26A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 865448413023              File : 311a023                      Time : 07-NOV-2015 21:15  
 Cal : 865421170001              Caldate : 19-OCT-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	63983	63275	50.00	49.45	mg/L	-1	15	

JDG 11/10/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/10/15                      Reviewer: EAH                      Date: 11/11/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271203 GCSV Water  
EPA 8015B

Inst : GC26A Run Name : DSL\_500 IDF : 1.0  
Seqnum : 865448413024 File : 311a024 Time : 07-NOV-2015 21:44  
Standards: S28302

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	865421170002	19-OCT-2015	58220	56071	500.0	481.5	mg/L	-4	15	
o-Terphenyl	865421170001	19-OCT-2015	63983	65692	50.00	51.34	mg/L	3	15	

JDG 11/10/15 : Corrected automatically drawn baseline.

Analyst: JDG Date: 11/10/15 Reviewer: EAH Date: 11/11/15  
Page 1 of 1 865448413024



## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165229449

Instrument : GC15B Begun : 06/08/15 08:09  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	159b001	X	IB			06/08/15 08:09	1.0	
002	159b002	X	CMARKER			06/08/15 10:43	1.0	1
003	159b003	IB	CALIB			06/08/15 12:21	1.0	
004	159b004	ICAL	HEXOTP_5			06/08/15 12:49	1.0	2
005	159b005	ICAL	HEXOTP_10			06/08/15 13:17	1.0	3
006	159b006	ICAL	HEXOTP_25			06/08/15 13:45	1.0	4
007	159b007	ICAL	HEXOTP_50			06/08/15 14:13	1.0	5
008	159b008	ICAL	HEXOTP_100			06/08/15 14:42	1.0	6
009	159b009	ICAL	HEXOTP_200			06/08/15 15:10	1.0	7
010	159b010	IB	CALIB			06/08/15 15:38	1.0	
011	159b011	ICAL	DSL_10			06/08/15 16:06	1.0	8
012	159b012	ICAL	DSL_100			06/08/15 16:34	1.0	9
013	159b013	ICAL	DSL_500			06/08/15 17:02	1.0	10
014	159b014	ICAL	DSL_1000			06/08/15 17:30	1.0	11
015	159b015	ICAL	DSL_5000			06/08/15 17:58	1.0	12
016	159b016	IB	CALIB			06/08/15 18:26	1.0	
017	159b017	ICV	DSL_500			06/08/15 18:54	1.0	13
018	159b018	X	ICV			06/08/15 19:21	1.0	13
019	159b019	IB	CALIB			06/10/15 08:01	1.0	
020	159b020	CMARKER	C8-C50			06/10/15 08:29	1.0	1
021	159b021	IB	CALIB			06/10/15 08:56	1.0	

JDG 06/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.

Standards used: 1=S27269 2=S27409 3=S27410 4=S27411 5=S27412 6=S27413 7=S27414 8=S27111 9=S27112 10=S27113 11=S27114  
 12=S27110 13=S26960

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165383482

Instrument : GC15B  
 Method : EPA 8015B

Begun : 09/23/15 07:22  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	266b001	X	IB				09/23/15 07:22	1.0	
002	266b002	X	CMARKER				09/23/15 07:49	1.0	1
003	266b003	X	MO_500				09/23/15 08:17	1.0	2
004	266b004	X	DSL_250				09/23/15 08:45	1.0	3
005	266b005	CCV	JET_250				09/23/15 09:13	1.0	4
006	266b006	CCV	MO_500				09/23/15 09:56	1.0	2
007	266b007	CCV	DSL_250				09/23/15 10:24	1.0	3
008	266b008	IB	CALIB				09/23/15 11:03	1.0	
009	266b009	ICAL	HEXOTP_5				09/23/15 11:31	1.0	5
010	266b010	ICAL	HEXOTP_10				09/23/15 11:59	1.0	6
011	266b011	ICAL	HEXOTP_25				09/23/15 12:27	1.0	7
012	266b012	ICAL	HEXOTP_50				09/23/15 12:54	1.0	8
013	266b013	ICAL	HEXOTP_100				09/23/15 13:22	1.0	9
014	266b014	ICAL	HEXOTP_200				09/23/15 13:49	1.0	10
016	266b016	X	CMARKER				09/23/15 14:45	1.0	1
017	266b017	CCV	MO_500				09/23/15 15:12	1.0	2
018	266b018	CCV	DSL_250				09/23/15 15:40	1.0	3
019	266b019	BLANK	QC804745		Water	227441	09/23/15 16:32	1.0	
020	266b020	BLANK	QC804745	S	Water	227441	09/23/15 16:59	1.0	
021	266b021	BS	QC804746		Water	227441	09/23/15 17:27	1.0	
022	266b022	BSD	QC804747		Water	227441	09/23/15 17:54	1.0	
023	266b023	BS	QC804746	S	Water	227441	09/23/15 18:22	1.0	
024	266b024	BSD	QC804747	S	Water	227441	09/23/15 18:49	1.0	
025	266b025	SAMPLE	269947-001	S	Water	227441	09/23/15 19:17	1.0	
026	266b026	SAMPLE	269947-002	S	Water	227441	09/23/15 19:45	1.0	
027	266b027	SAMPLE	269947-006	S	Water	227441	09/23/15 20:13	1.0	
028	266b028	SAMPLE	269947-007	S	Water	227441	09/23/15 20:40	1.0	
029	266b029	SAMPLE	269947-008	S	Water	227441	09/23/15 21:08	1.0	
030	266b030	SAMPLE	269947-009	S	Water	227441	09/23/15 21:36	1.0	
031	266b031	SAMPLE	269947-010	S	Water	227441	09/23/15 22:04	1.0	
032	266b032	SAMPLE	269947-011	S	Water	227441	09/23/15 22:32	1.0	
033	266b033	SAMPLE	269947-012	S	Water	227441	09/23/15 23:00	1.0	
034	266b034	SAMPLE	269947-014	S	Water	227441	09/23/15 23:27	1.0	
035	266b035	X	MO_500				09/23/15 23:55	1.0	2
036	266b036	CCV	DSL_500				09/24/15 00:23	1.0	11
037	266b037	CCV	MO_500				09/24/15 00:50	1.0	2
038	266b038	CCV	DSL_500				09/24/15 01:18	1.0	11
039	266b039	SAMPLE	269947-015	S	Water	227441	09/24/15 01:46	1.0	
040	266b040	SAMPLE	269947-016	S	Water	227441	09/24/15 02:13	1.0	
041	266b041	SAMPLE	269947-017	S	Water	227441	09/24/15 02:41	1.0	
042	266b042	SAMPLE	269947-018	S	Water	227441	09/24/15 03:09	1.0	
043	266b043	SAMPLE	269983-001	S	Water	227441	09/24/15 03:37	1.0	
044	266b044	SAMPLE	269934-001		Water	227441	09/24/15 04:04	1.0	
045	266b045	X	CMARKER				09/24/15 04:32	1.0	1
046	266b046	X	MO_500				09/24/15 05:00	1.0	2
047	266b047	CCV	DSL_1000				09/24/15 05:28	1.0	12
048	266b048	CCV	MO_500				09/24/15 05:56	1.0	2
049	266b049	CCV	DSL_1000				09/24/15 06:23	1.0	12

SFL 09/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165383482

Instrument : GC15B                      Begun                : 09/23/15 07:22  
Method     : EPA 8015B                  SOP Version       : TEH\_rv18

Standards used: 1=S27935 2=S27865 3=S27803 4=S28111 5=S27409 6=S27410 7=S27411 8=S27412 9=S27413 10=S27414 11=S27804  
12=S27805

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165456901

Instrument : GC15B  
 Method : EPA 8015B

Begun : 11/13/15 07:01  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	317b001	X	IB				11/13/15 07:01	1.0		
002	317b002	X	CMARKER				11/13/15 07:29	1.0	1	
003	317b003	CCV	MO_500				11/13/15 07:57	1.0	2	
004	317b004	CCV	DSL_1000				11/13/15 08:25	1.0	3	
005	317b005	BLANK	QC812501		Soil	229370	11/13/15 09:20	1.0		
006	317b006	MSS	271411-002		Soil	229370	11/13/15 09:48	5.0		
007	317b007	BLANK	QC811242		Water	229062	11/13/15 11:38	1.0		
008	317b008	BS	QC811243		Water	229062	11/13/15 12:05	1.0		
009	317b009	BSD	QC811244		Water	229062	11/13/15 12:33	1.0		
010	317b010	BLANK	QC812681		Soil	229398	11/13/15 13:59	1.0		
011	317b011	LCS	QC812682		Soil	229398	11/13/15 14:27	1.0		
012	317b012	CCV	MO_500				11/13/15 14:58	1.0	2	
013	317b013	CCV	DSL_500				11/13/15 15:25	1.0	4	
014	317b014	BLANK	QC812774		Soil	229436	11/13/15 17:31	1.0		
015	317b015	BLANK	QC812681	S	Soil	229398	11/13/15 17:59	1.0		
016	317b016	LCS	QC812682	S	Soil	229398	11/13/15 18:27	1.0		
017	317b017	SAMPLE	271582-005		Soil	229436	11/13/15 18:55	20.0		
018	317b018	SAMPLE	271582-010		Soil	229436	11/13/15 19:23	20.0		
019	317b019	SAMPLE	271582-015		Soil	229436	11/13/15 19:51	20.0		
020	317b020	SAMPLE	271507-001		Soil	229398	11/13/15 20:18	1.0		
021	317b021	SAMPLE	271553-001		Soil	229398	11/13/15 20:46	1.0		
022	317b022	SAMPLE	271516-001	S	Soil	229398	11/13/15 21:14	1.0		
023	317b023	MSS	271495-001		Soil	229398	11/13/15 21:42	1.0		
024	317b024	MS	QC812683		Soil	229398	11/13/15 22:10	1.0		
025	317b025	MSD	QC812684		Soil	229398	11/13/15 22:37	1.0		
026	317b026	SAMPLE	271497-001		Soil	229436	11/13/15 23:05	1.0		
027	317b027	CCV	MO_500				11/13/15 23:32	1.0	2	
028	317b028	CCV	DSL_1000				11/14/15 00:00	1.0	3	
029	317b029	X	CCV				11/14/15 00:27	1.0	2	
030	317b030	X	CCV				11/14/15 00:55	1.0	3	
031	317b031	SAMPLE	271493-001		Soil	229436	11/14/15 01:23	5.0		
032	317b032	SAMPLE	271256-021	S	Water	229054	11/14/15 01:51	1.0		
033	317b033	SAMPLE	271269-010	S	Soil	229157	11/14/15 02:18	1.0		
034	317b034	SAMPLE	271264-010		Soil	229398	11/14/15 02:45	1.0		
035	317b035	SAMPLE	271264-011		Soil	229398	11/14/15 03:13	1.0		
036	317b036	SAMPLE	271264-012		Soil	229398	11/14/15 03:40	1.0		
037	317b037	SAMPLE	271475-001		Soil	229398	11/14/15 04:08	1.0		3:BUNKC:12-40=10000
038	317b038	SAMPLE	271475-002		Soil	229398	11/14/15 04:36	1.0		5:BUNKC:12-40=16000
039	317b039	SAMPLE	271475-003		Soil	229398	11/14/15 05:04	1.0		
040	317b040	SAMPLE	271496-001		Soil	229436	11/14/15 05:32	1.0		
041	317b041	X	CMARKER				11/14/15 06:00	1.0	1	
042	317b042	CCV	MO_500				11/14/15 06:27	1.0	2	
043	317b043	CCV	DSL_500				11/14/15 06:55	1.0	4	
044	317b044	X	CCV				11/14/15 07:23	1.0	2	
045	317b045	X	CCV				11/14/15 07:51	1.0	4	
046	317b046	BLANK	QC812774	S	Soil	229436	11/14/15 08:19	1.0		
047	317b047	LCS	QC812775	S	Soil	229436	11/14/15 08:47	1.0		
048	317b048	SAMPLE	271478-006		Soil	229436	11/14/15 09:15	1.0		
049	317b049	SAMPLE	271478-007		Soil	229436	11/14/15 09:43	1.0		
050	317b050	SAMPLE	271478-008		Soil	229436	11/14/15 10:11	1.0		
051	317b051	SAMPLE	271478-009		Soil	229436	11/14/15 10:39	1.0		
052	317b052	SAMPLE	271412-001	S	Soil	229398	11/14/15 11:06	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165456901

Instrument : GC15B Begun : 11/13/15 07:01  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	317b053	SAMPLE	271412-002	S	Soil	229398	11/14/15 11:34	1.0	
054	317b054	SAMPLE	271412-003	S	Soil	229398	11/14/15 12:02	1.0	
055	317b055	SAMPLE	271412-004	S	Soil	229398	11/14/15 12:30	1.0	
056	317b056	SAMPLE	271412-005	S	Soil	229398	11/14/15 12:57	1.0	
057	317b057	SAMPLE	271412-006	S	Soil	229398	11/14/15 13:25	1.0	
058	317b058	CCV	MO_500				11/14/15 13:53	1.0	2
059	317b059	CCV	DSL_1000				11/14/15 14:21	1.0	3
060	317b060	X	CCV				11/14/15 14:48	1.0	2
061	317b061	X	CCV				11/14/15 15:16	1.0	3
062	317b062	SAMPLE	271412-007	S	Soil	229398	11/14/15 15:44	1.0	
063	317b063	SAMPLE	271412-008	S	Soil	229398	11/14/15 16:12	1.0	
064	317b064	SAMPLE	271412-009	S	Soil	229398	11/14/15 16:40	1.0	
065	317b065	SAMPLE	271412-010	S	Soil	229436	11/14/15 17:07	1.0	
066	317b066	SAMPLE	271412-011	S	Soil	229436	11/14/15 17:35	1.0	
067	317b067	SAMPLE	271412-012	S	Soil	229436	11/14/15 18:03	1.0	
068	317b068	SAMPLE	271412-013	S	Soil	229436	11/14/15 18:31	1.0	
069	317b069	SAMPLE	271412-014	S	Soil	229436	11/14/15 18:59	1.0	
070	317b070	X	CMARKER				11/14/15 19:26	1.0	1
071	317b071	CCV	MO_500				11/14/15 19:54	1.0	2
072	317b072	CCV	DSL_500				11/14/15 20:22	1.0	4
073	317b073	X	CCV				11/14/15 20:50	1.0	2
074	317b074	X	CCV				11/14/15 21:18	1.0	4

JDG 11/13/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 13.

JDG 11/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 14 through 74.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175247623

Instrument : GC17A  
 Method : EPA 8015B

Begun : 06/20/15 11:16  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	171a001	X	IB			06/20/15 11:16	1.0	
002	171a002	IB	CALIB			06/20/15 11:45	1.0	
003	171a003	ICAL	HEXOTP_5			06/20/15 12:13	1.0	1
004	171a004	ICAL	HEXOTP_10			06/20/15 12:41	1.0	2
005	171a005	ICAL	HEXOTP_25			06/20/15 13:09	1.0	3
006	171a006	ICAL	HEXOTP_50			06/20/15 13:38	1.0	4
007	171a007	ICAL	HEXOTP_100			06/20/15 14:06	1.0	5
008	171a008	ICAL	HEXOTP_200			06/20/15 14:34	1.0	6
009	171a009	IB	CALIB			06/20/15 15:02	1.0	
010	171a010	ICAL	DSL_10			06/20/15 15:31	1.0	7
011	171a011	ICAL	DSL_100			06/20/15 15:59	1.0	8
012	171a012	ICAL	DSL_500			06/20/15 16:27	1.0	9
013	171a013	ICAL	DSL_1000			06/20/15 16:56	1.0	10
014	171a014	ICAL	DSL_5000			06/20/15 17:24	1.0	11
015	171a015	IB	CALIB			06/20/15 17:52	1.0	
016	171a016	ICV	DSL_500			06/20/15 18:20	1.0	12
017	171a017	X	ICV			06/20/15 18:48	1.0	12
018	171a018	IB	CALIB			06/20/15 19:16	1.0	
019	171a019	ICAL	MO_50			06/20/15 19:44	1.0	13
020	171a020	ICAL	MO_250			06/20/15 20:13	1.0	14
021	171a021	ICAL	MO_500			06/20/15 20:41	1.0	15
022	171a022	ICAL	MO_1000			06/20/15 21:09	1.0	16
023	171a023	ICAL	MO_2500			06/20/15 21:38	1.0	17
024	171a024	ICAL	MO_5000			06/20/15 22:06	1.0	17
025	171a025	IB	CALIB			06/20/15 22:35	1.0	
026	171a026	CMARKER	C8-C50			06/20/15 23:03	1.0	18
027	171a027	IB	CALIB			06/20/15 23:32	1.0	

JDG 06/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Standards used: 1=S27409 2=S27410 3=S27411 4=S27412 5=S27413 6=S27414 7=S27111 8=S27112 9=S27113 10=S27114 11=S27110  
 12=S27446 13=S26392 14=S26393 15=S26394 16=S26395 17=S26389 18=S27269

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175394216

Instrument : GC17A Begun : 09/30/15 18:16  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	273a001	X	IB			09/30/15 18:16	1.0	
002	273a002	IB	CALIB			09/30/15 18:44	1.0	
003	273a003	ICAL	HEXOTP_5			09/30/15 19:13	1.0	1
004	273a004	ICAL	HEXOTP_10			09/30/15 19:41	1.0	2
005	273a005	ICAL	HEXOTP_25			09/30/15 20:09	1.0	3
006	273a006	ICAL	HEXOTP_50			09/30/15 20:37	1.0	4
007	273a007	ICAL	HEXOTP_100			09/30/15 21:06	1.0	5
008	273a008	ICAL	HEXOTP_200			09/30/15 21:34	1.0	6
009	273a009	IB	CALIB			09/30/15 22:02	1.0	

JDG 10/01/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 9.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175446857

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/06/15 07:37  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	310a001	X	IB				11/06/15 07:37	1.0	
002	310a002	X	TEST: GLASS PIPETTE				11/06/15 08:06	1.0	
003	310a003	X	CMARKER				11/06/15 08:34	1.0	1
004	310a004	X	MO_500				11/06/15 09:02	1.0	2
005	310a005	CCV	DSL_1000				11/06/15 09:30	1.0	3
006	310a006	X	TEST 3: POWDER (BAKE				11/06/15 09:58	1.0	
007	310a007	CCV	MO_500				11/06/15 10:26	1.0	4
008	310a008	X	TEST 4: POWDER FS154				11/06/15 10:54	1.0	
009	310a009	SAMPLE	271013-007		Soil	228998	11/06/15 12:22	1.0	
010	310a010	CCV	MO_500				11/06/15 12:50	1.0	2
011	310a011	CCV	DSL_500				11/06/15 13:18	1.0	5
012	310a012	LCS	QC811159		Soil	229040	11/06/15 14:05	1.0	
013	310a013	SAMPLE	271254-005	S	Soil	229040	11/06/15 14:33	1.0	
014	310a014	LCS	QC811632		Soil	229157	11/06/15 15:44	1.0	
015	310a015	BLANK	QC811631		Soil	229157	11/06/15 16:12	1.0	
016	310a016	CCV	MO_500				11/06/15 18:16	1.0	2
017	310a017	CCV	DSL_1000				11/06/15 18:45	1.0	3
018	310a018	X	CMARKER				11/06/15 20:43	1.0	1
019	310a019	SAMPLE	271240-001	S	Soil	229040	11/06/15 21:11	1.0	
020	310a020	SAMPLE	271240-002	S	Soil	229040	11/06/15 21:40	1.0	
021	310a021	SAMPLE	271240-003	S	Soil	229040	11/06/15 22:08	1.0	
022	310a022	SAMPLE	271240-004	S	Soil	229040	11/06/15 22:36	1.0	
023	310a023	SAMPLE	271240-005	S	Soil	229040	11/06/15 23:04	1.0	
024	310a024	SAMPLE	271240-006	S	Soil	229040	11/06/15 23:32	1.0	
025	310a025	SAMPLE	271240-007	S	Soil	229040	11/07/15 00:00	1.0	
026	310a026	SAMPLE	271240-008	S	Soil	229040	11/07/15 00:28	1.0	
027	310a027	SAMPLE	271240-009	S	Soil	229040	11/07/15 00:56	1.0	
028	310a028	SAMPLE	271240-010	S	Soil	229040	11/07/15 01:23	1.0	
029	310a029	CCV	DSL_500				11/07/15 01:51	1.0	5
030	310a030	CCV	MO_500				11/07/15 02:19	1.0	2
031	310a031	X	CCV				11/07/15 02:47	1.0	5
032	310a032	X	CCV				11/07/15 03:14	1.0	2
033	310a033	X	CMARKER				11/07/15 03:43	1.0	1
034	310a034	SAMPLE	271229-001		Soil	229040	11/07/15 04:10	1.0	
035	310a035	SAMPLE	271229-002		Soil	229040	11/07/15 04:39	1.0	6:BUNKC:10-40=22000
036	310a036	SAMPLE	271229-003		Soil	229040	11/07/15 05:07	1.0	4:BUNKC:10-40=15000
037	310a037	SAMPLE	271229-004		Soil	229040	11/07/15 05:36	1.0	
038	310a038	SAMPLE	271229-005		Soil	229040	11/07/15 06:04	1.0	1:BUNKC:10-40=8600
039	310a039	SAMPLE	271117-001		Soil	229040	11/07/15 06:32	2.0	
040	310a040	SAMPLE	271117-002		Soil	229040	11/07/15 07:00	50.0	
041	310a041	MS	QC811160		Soil	229040	11/07/15 07:28	1.0	
042	310a042	MSD	QC811161		Soil	229040	11/07/15 07:56	1.0	
043	310a043	LCS	QC811159		Soil	229040	11/07/15 08:25	1.0	
044	310a044	BLANK	QC811158		Soil	229040	11/07/15 08:53	1.0	
045	310a045	CCV	DSL_250				11/07/15 09:21	1.0	6
046	310a046	CCV	MO_500				11/07/15 09:50	1.0	2
047	310a047	BLANK	QC811158	S	Soil	229040	11/07/15 11:26	1.0	
048	310a048	LCS	QC811159	S	Soil	229040	11/07/15 11:54	1.0	
049	310a049	BLANK	QC811631		Soil	229157	11/07/15 12:23	1.0	
050	310a050	BLANK	QC811631	S	Soil	229157	11/07/15 12:51	1.0	
051	310a051	LCS	QC811632	S	Soil	229157	11/07/15 13:19	1.0	
052	310a052	MSS	271034-003		Soil	229157	11/07/15 13:47	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175446857

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/06/15 07:37  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	310a053	MS	QC811633		Soil	229157	11/07/15 14:15	1.0	
054	310a054	MSD	QC811634		Soil	229157	11/07/15 14:43	1.0	
055	310a055	SAMPLE	271156-002		Soil	229157	11/07/15 15:11	5.0	
056	310a056	SAMPLE	271358-001		Soil	229157	11/07/15 15:39	5.0	
057	310a057	X	IB				11/07/15 16:07	1.0	
058	310a058	SAMPLE	271034-004		Soil	229157	11/07/15 16:35	1.0	
059	310a059	SAMPLE	271034-005		Soil	229157	11/07/15 17:03	1.0	
060	310a060	SAMPLE	271318-001		Soil	229157	11/07/15 17:31	1.0	
061	310a061	SAMPLE	271269-004	S	Soil	229157	11/07/15 17:59	1.0	
062	310a062	SAMPLE	271269-005	S	Soil	229157	11/07/15 18:27	1.0	
063	310a063	X	CMARKER				11/07/15 18:56	1.0	1
064	310a064	CCV	MO_500				11/07/15 19:24	1.0	2
065	310a065	CCV	DSL_500				11/07/15 19:52	1.0	5
066	310a066	CCV	MO_500				11/07/15 20:20	1.0	2
067	310a067	CCV	DSL_1000				11/07/15 20:48	1.0	3
068	310a068	SAMPLE	271269-006	S	Soil	229157	11/07/15 21:17	1.0	
069	310a069	SAMPLE	271269-007	S	Soil	229157	11/07/15 21:45	1.0	
070	310a070	SAMPLE	271269-008	S	Soil	229157	11/07/15 22:13	1.0	
071	310a071	SAMPLE	271269-009	S	Soil	229157	11/07/15 22:41	1.0	
072	310a072	SAMPLE	271269-010	S	Soil	229157	11/07/15 23:09	1.0	
073	310a073	SAMPLE	271269-011	S	Soil	229157	11/07/15 23:37	1.0	
074	310a074	SAMPLE	271269-012	S	Soil	229157	11/08/15 00:05	1.0	
075	310a075	SAMPLE	271256-001	S	Water	229054	11/08/15 00:33	1.0	
076	310a076	SAMPLE	271256-002	S	Water	229054	11/08/15 01:01	1.0	
077	310a077	SAMPLE	271256-009	S	Water	229054	11/08/15 01:29	1.0	
078	310a078	CCV	DSL_250				11/08/15 01:56	1.0	6
079	310a079	CCV	MO_500				11/08/15 02:24	1.0	2
080	310a080	X	CCV				11/08/15 02:52	1.0	6
081	310a081	X	CCV				11/08/15 03:20	1.0	2
082	310a082	SAMPLE	271256-021	S	Water	229054	11/08/15 03:48	1.0	
083	310a083	SAMPLE	271256-022	S	Water	229054	11/08/15 04:16	1.0	
084	310a084	SAMPLE	271076-001		Water	229010	11/08/15 04:44	1.0	
085	310a085	SAMPLE	271076-002		Water	229010	11/08/15 05:12	1.0	
086	310a086	SAMPLE	271076-003		Water	229010	11/08/15 05:41	1.0	
087	310a087	SAMPLE	271149-001	S	Water	229010	11/08/15 06:09	1.0	
088	310a088	SAMPLE	271149-002	S	Water	229010	11/08/15 06:37	1.0	
089	310a089	SAMPLE	271203-024		Water	229010	11/08/15 07:05	1.0	
090	310a090	SAMPLE	271203-025		Water	229010	11/08/15 07:34	1.0	
091	310a091	SAMPLE	271229-002		Soil	229040	11/08/15 08:02	5.0	
092	310a092	X	CMARKER				11/08/15 08:30	1.0	1
093	310a093	CCV	MO_500				11/08/15 08:58	1.0	2
094	310a094	CCV	DSL_1000				11/08/15 09:27	1.0	3
095	310a095	X	CCV				11/08/15 09:55	1.0	2
096	310a096	X	CCV				11/08/15 10:23	1.0	3

JDG 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 11.

BJP 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 12 through 17.

SFL 11/07/15 : I verified that the vials loaded on the instrument matched the

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175446857

Instrument : GC17A                              Begun                      : 11/06/15 07:37  
Method      : EPA 8015B                          SOP Version               : TEH\_rv18

sequence data entry, for runs 18 through 46.

JDG 11/10/15 : I verified that the vials loaded on the instrument matched the  
sequence data entry, for runs 47 through 96.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175456904

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/13/15 07:04  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	317a001	X	IB				11/13/15 07:04	1.0		
002	317a002	X	CMARKER				11/13/15 07:32	1.0	1	
003	317a003	CCV	MO_500				11/13/15 08:00	1.0	2	
004	317a004	CCV	DSL_1000				11/13/15 08:28	1.0	3	
005	317a005	X	TANKCHECK: EM55175				11/13/15 08:57	1.0		
006	317a006	SAMPLE	271203-022		Water	229062	11/13/15 09:36	1.0		
007	317a007	SAMPLE	271203-023		Water	229062	11/13/15 10:04	1.0		
008	317a008	SAMPLE	271302-004	S	Water	229254	11/13/15 11:09	300.0		2:BUNKC:10-40=6900
009	317a009	SAMPLE	271302-019	S	Water	229254	11/13/15 11:37	300.0		2:BUNKC:10-40=7000
010	317a010	X	IB				11/13/15 12:05	1.0		
011	317a011	SAMPLE	271594-001		Soil	229398	11/13/15 12:35	5.0		
012	317a012	SAMPLE	271302-004		Water	229254	11/13/15 14:00	500.0		
013	317a013	SAMPLE	271302-019		Water	229254	11/13/15 14:28	500.0		
014	317a014	CCV	MO_500				11/13/15 14:56	1.0	2	
015	317a015	CCV	DSL_500				11/13/15 15:24	1.0	4	
016	317a016	CCV	JET_250				11/13/15 16:15	1.0	5	
017	317a017	CCV	JP5_250				11/13/15 16:43	1.0	6	
018	317a018	CCV	BUNK_500				11/13/15 17:11	1.0	7	
019	317a019	BLANK	QC812183		Water	229296	11/13/15 17:39	1.0		
020	317a020	SAMPLE	271144-007	S	Soil	228998	11/13/15 18:08	1.0		2:BUNKC:12-40=5500
021	317a021	SAMPLE	271144-009	S	Soil	228998	11/13/15 18:36	1.0		2:BUNKC:12-40=5900
022	317a022	X	IB				11/13/15 19:04	1.0		
023	317a023	SAMPLE	271087-003		Water	228909	11/13/15 19:32	1.0		
024	317a024	MS	QC812503		Soil	229370	11/13/15 20:01	5.0		
025	317a025	MSD	QC812504		Soil	229370	11/13/15 20:29	5.0		
026	317a026	SAMPLE	271411-001		Soil	229370	11/13/15 20:57	5.0		
027	317a027	X	IB				11/13/15 21:25	1.0		
028	317a028	SAMPLE	271118-006		Water	229010	11/13/15 21:53	1.0		
029	317a029	SAMPLE	271348-011	S	Soil	229370	11/13/15 22:21	1.0		
030	317a030	SAMPLE	271348-013	S	Soil	229370	11/13/15 22:49	1.0		
031	317a031	SAMPLE	271348-014	S	Soil	229370	11/13/15 23:17	1.0		
032	317a032	CCV	DSL_250				11/13/15 23:45	1.0	8	
033	317a033	CCV	MO_500				11/14/15 00:13	1.0	9	
034	317a034	X	JET_250				11/14/15 00:41	1.0	5	
035	317a035	CCV	JP5_250				11/14/15 01:08	1.0	6	
036	317a036	CCV	BUNK_500				11/14/15 01:36	1.0	7	
037	317a037	X	CCV				11/14/15 02:04	1.0	2	
038	317a038	X	CCV				11/14/15 02:32	1.0	8	
039	317a039	CCV	JET_250				11/14/15 02:59	1.0	5	
040	317a040	X	CCV				11/14/15 03:27	1.0	6	
041	317a041	X	CCV				11/14/15 03:55	1.0	7	
042	317a042	SAMPLE	271203-010		Water	229062	11/14/15 04:23	1.0		
043	317a043	SAMPLE	271203-011		Water	229062	11/14/15 04:52	1.0		
044	317a044	SAMPLE	271203-013		Water	229062	11/14/15 05:20	1.0		
045	317a045	SAMPLE	271203-014		Water	229062	11/14/15 05:48	1.0		
046	317a046	SAMPLE	271203-015		Water	229062	11/14/15 06:16	1.0		
047	317a047	SAMPLE	271203-016		Water	229062	11/14/15 06:44	1.0		
048	317a048	SAMPLE	271203-017		Water	229062	11/14/15 07:12	1.0		
049	317a049	SAMPLE	271203-018		Water	229062	11/14/15 07:40	1.0		
050	317a050	SAMPLE	271203-020		Water	229062	11/14/15 08:08	1.0		
051	317a051	SAMPLE	271203-021		Water	229062	11/14/15 08:36	1.0		
052	317a052	CCV	MO_500				11/14/15 09:04	1.0	2	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175456904

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/13/15 07:04  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	317a053	CCV	DSL_1000				11/14/15 09:32	1.0	3
054	317a054	X	CCV				11/14/15 10:00	1.0	2
055	317a055	X	CCV				11/14/15 10:28	1.0	4
056	317a056	SAMPLE	271269-001	S	Soil	229244	11/14/15 10:56	1.0	
057	317a057	SAMPLE	271269-002	S	Soil	229244	11/14/15 11:24	1.0	
058	317a058	SAMPLE	271269-003	S	Soil	229244	11/14/15 11:52	1.0	
059	317a059	SAMPLE	271312-001	S	Soil	229252	11/14/15 12:20	1.0	11:BUNKC:10-40=39000
060	317a060	SAMPLE	271203-003		Water	229062	11/14/15 12:48	1.0	
061	317a061	SAMPLE	271203-005		Water	229062	11/14/15 13:16	1.0	
062	317a062	SAMPLE	271203-006		Water	229062	11/14/15 13:44	1.0	
063	317a063	SAMPLE	271203-007		Water	229062	11/14/15 14:12	1.0	
064	317a064	SAMPLE	271203-008		Water	229062	11/14/15 14:40	1.0	
065	317a065	SAMPLE	271203-009		Water	229062	11/14/15 15:08	1.0	
066	317a066	X	CMARKER				11/14/15 15:36	1.0	1
067	317a067	CCV	MO_500				11/14/15 16:05	1.0	2
068	317a068	CCV	DSL_500				11/14/15 16:33	1.0	4
069	317a069	X	CCV				11/14/15 17:01	1.0	2
070	317a070	X	CCV				11/14/15 17:29	1.0	3
071	317a071	SAMPLE	271348-001	S	Soil	229370	11/14/15 17:57	1.0	
072	317a072	SAMPLE	271348-002	S	Soil	229370	11/14/15 18:25	1.0	
073	317a073	SAMPLE	271348-003	S	Soil	229370	11/14/15 18:53	1.0	
074	317a074	SAMPLE	271348-004	S	Soil	229370	11/14/15 19:21	1.0	
075	317a075	SAMPLE	271348-005	S	Soil	229370	11/14/15 19:49	1.0	
076	317a076	SAMPLE	271348-006	S	Soil	229370	11/14/15 20:17	1.0	
077	317a077	SAMPLE	271348-007	S	Soil	229370	11/14/15 20:46	1.0	
078	317a078	SAMPLE	271348-008	S	Soil	229370	11/14/15 21:13	1.0	
079	317a079	SAMPLE	271348-009	S	Soil	229370	11/14/15 21:42	1.0	
080	317a080	SAMPLE	271348-010	S	Soil	229370	11/14/15 22:10	1.0	
081	317a081	CCV	MO_500				11/14/15 22:38	1.0	2
082	317a082	CCV	DSL_500				11/14/15 23:06	1.0	4
083	317a083	X	CCV				11/14/15 23:34	1.0	2
084	317a084	X	CCV				11/15/15 00:02	1.0	4
085	317a085	SAMPLE	271348-012	S	Soil	229370	11/15/15 00:30	1.0	
086	317a086	SAMPLE	271348-015	S	Soil	229370	11/15/15 00:58	1.0	
087	317a087	SAMPLE	271408-001	S	Soil	229370	11/15/15 01:25	1.0	
088	317a088	SAMPLE	271478-001		Soil	229436	11/15/15 01:53	1.0	8:BUNKC:10-40=52000
089	317a089	SAMPLE	271478-002		Soil	229436	11/15/15 02:21	1.0	
090	317a090	SAMPLE	271478-003		Soil	229436	11/15/15 02:49	1.0	
091	317a091	SAMPLE	271478-004		Soil	229436	11/15/15 03:16	1.0	
092	317a092	MSS	271478-005		Soil	229436	11/15/15 03:44	1.0	
093	317a093	MS	QC812776		Soil	229436	11/15/15 04:12	1.0	
094	317a094	MSD	QC812777		Soil	229436	11/15/15 04:40	1.0	
095	317a095	X	CMARKER				11/15/15 05:09	1.0	1
096	317a096	CCV	MO_500				11/15/15 05:37	1.0	2
097	317a097	CCV	DSL_1000				11/15/15 06:05	1.0	3
098	317a098	X	CCV				11/15/15 06:33	1.0	2
099	317a099	X	CCV				11/15/15 07:01	1.0	3

JDG 11/13/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

JDG 11/16/15 : I verified that the vials loaded on the instrument matched the

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175456904

Instrument : GC17A Begun : 11/13/15 07:04  
Method : EPA 8015B SOP Version : TEH\_rv18

sequence data entry, for runs 16 through 99.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 224523202

Instrument : GC14B  
 Method : EPA 8015B

Begun : 12/29/14 08:02  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	364_001	X	IB			12/29/14 08:02	1.0	
002	364_002	X	CMARKER			12/29/14 08:30	1.0	1
003	364_003	X	MO_500			12/29/14 08:58	1.0	2
004	364_004	X	DSL_1000			12/29/14 09:26	1.0	3
005	364_005	X	DSL_1000			12/29/14 10:12	1.0	3
006	364_006	X	DSL_500			12/29/14 11:56	1.0	4
007	364_007	X	IB			12/29/14 14:39	1.0	
008	364_008	IB	CALIB			12/29/14 15:07	1.0	
009	364_009	ICAL	DSL_10			12/29/14 15:35	1.0	5
010	364_010	ICAL	DSL_100			12/29/14 16:04	1.0	6
011	364_011	ICAL	DSL_500			12/29/14 16:32	1.0	7
012	364_012	ICAL	DSL_1000			12/29/14 17:00	1.0	8
013	364_013	ICAL	DSL_5000			12/29/14 17:28	1.0	9
014	364_014	IB	CALIB			12/29/14 17:56	1.0	
015	364_015	X	DSL_500			12/29/14 18:24	1.0	4
016	364_016	ICV	DSL_500			12/29/14 18:52	1.0	4
017	364_017	IB	CALIB			12/29/14 19:20	1.0	
018	364_018	CMARKER	C8-C50			12/29/14 19:49	1.0	1
019	364_019	IB	CALIB			12/29/14 20:17	1.0	

SFL 12/30/14 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225426669

Instrument : GC14B Begun : 10/23/15 07:09  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	296_001	X	IB			10/23/15 07:09	1.0	
002	296_002	X	CMARKER			10/23/15 07:39	1.0	1
003	296_003	CCV	MO_500			10/23/15 08:09	1.0	2
004	296_004	CCV	DSL_500			10/23/15 08:39	1.0	3
005	296_005	IB	CALIB			10/23/15 13:41	1.0	
006	296_006	ICAL	HEX OTP_5			10/23/15 14:10	1.0	4
007	296_007	ICAL	HEX OTP_10			10/23/15 14:40	1.0	5
008	296_008	ICAL	HEX OTP_25			10/23/15 15:09	1.0	6
009	296_009	ICAL	HEX OTP_50			10/23/15 15:39	1.0	7
010	296_010	ICAL	HEX OTP_100			10/23/15 16:09	1.0	8
011	296_011	ICAL	HEX OTP_200			10/23/15 16:38	1.0	9
012	296_012	IB	CALIB			10/23/15 17:08	1.0	

SFL 10/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 12.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	307_001	X	IB				11/03/15 06:58	1.0	
002	307_002	X	CMARKER				11/03/15 07:29	1.0	1
003	307_003	X	MO_500				11/03/15 07:59	1.0	2
004	307_004	X	DSL_250				11/03/15 08:30	1.0	3
005	307_005	X	MO_500				11/03/15 09:06	1.0	2
006	307_006	X	IB				11/03/15 12:24	1.0	
007	307_007	CMARKER	C8-C50				11/03/15 12:54	1.0	1
008	307_008	X	IB				11/03/15 13:31	1.0	
009	307_009	X	MO_500				11/03/15 14:01	1.0	2
010	307_010	CCV	DSL_250				11/03/15 14:31	1.0	3
011	307_011	CCV	MO_500				11/03/15 16:08	1.0	2
012	307_012	MS	QC810643		Water	228909	11/03/15 16:48	1.0	
013	307_013	MSD	QC810644		Water	228909	11/03/15 17:18	1.0	
014	307_014	SAMPLE	271127-001		Water	228909	11/03/15 17:48	1.0	
015	307_015	SAMPLE	271127-002		Water	228909	11/03/15 18:19	1.0	
016	307_016	SAMPLE	271127-003		Water	228909	11/03/15 18:49	1.0	
017	307_017	SAMPLE	271127-004		Water	228909	11/03/15 19:20	1.0	
018	307_018	SAMPLE	271127-005		Water	228909	11/03/15 19:50	1.0	
019	307_019	SAMPLE	271127-007		Water	228909	11/03/15 20:21	1.0	
020	307_020	SAMPLE	271127-008		Water	228909	11/03/15 20:51	1.0	
021	307_021	SAMPLE	271127-009		Water	228909	11/03/15 21:21	1.0	
022	307_022	CCV	DSL_500				11/03/15 21:51	1.0	4
023	307_023	CCV	MO_500				11/03/15 22:21	1.0	2
024	307_024	X	CCV				11/03/15 22:50	1.0	4
025	307_025	X	CCV				11/03/15 23:20	1.0	2
026	307_026	SAMPLE	271127-010		Water	228909	11/03/15 23:49	1.0	
027	307_027	SAMPLE	271127-011		Water	228909	11/04/15 00:19	1.0	
028	307_028	SAMPLE	271127-012		Water	228909	11/04/15 00:48	1.0	
029	307_029	SAMPLE	271127-013		Water	228909	11/04/15 01:17	1.0	
030	307_030	SAMPLE	270980-001		Water	228972	11/04/15 01:47	1.0	
031	307_031	SAMPLE	270998-001		Water	228972	11/04/15 02:16	1.0	
032	307_032	SAMPLE	271050-002		Soil	228956	11/04/15 02:45	1.0	
033	307_033	SAMPLE	271050-003		Soil	228956	11/04/15 03:15	1.0	
034	307_034	SAMPLE	271050-004		Soil	228956	11/04/15 03:44	1.0	
035	307_035	SAMPLE	271050-005		Soil	228956	11/04/15 04:14	1.0	
036	307_036	X	CMARKER		Soil		11/04/15 04:44	1.0	1
037	307_037	CCV	DSL_1000				11/04/15 05:15	1.0	5
038	307_038	CCV	MO_500				11/04/15 05:45	1.0	2
039	307_039	X	CCV				11/04/15 06:15	1.0	5
040	307_040	X	CCV				11/04/15 06:45	1.0	2
041	307_041	X	POWDER TEST: TRAY 2				11/04/15 07:28	1.0	
042	307_042	X	TANK CHECK: EM51175				11/04/15 07:58	1.0	
043	307_043	CCV	MINOIL_500				11/04/15 09:08	1.0	6
044	307_044	SAMPLE	270941-004		Soil	228763	11/04/15 09:43	20.0	
045	307_045	SAMPLE	270941-005		Soil	228763	11/04/15 10:13	20.0	
046	307_046	X	IB				11/04/15 10:43	1.0	
047	307_047	SAMPLE	271050-002	S	Soil	228956	11/04/15 11:14	1.0	
048	307_048	SAMPLE	271050-003	S	Soil	228956	11/04/15 11:44	1.0	
049	307_049	SAMPLE	271050-004	S	Soil	228956	11/04/15 12:14	1.0	
050	307_050	SAMPLE	271050-005	S	Soil	228956	11/04/15 12:44	1.0	
051	307_051	SAMPLE	271050-006	S	Soil	228956	11/04/15 13:14	1.0	
052	307_052	CCV	MO_500				11/04/15 13:44	1.0	2

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	307_053	CCV	DSL_250				11/04/15 14:14	1.0	3
054	307_054	CCV	MINOIL_500				11/04/15 14:43	1.0	6
055	307_055	BLANK	QC811110		Soil	229025	11/04/15 15:37	1.0	
056	307_056	BLANK	QC811110	S	Soil	229025	11/04/15 16:06	1.0	
057	307_057	LCS	QC811111	S	Soil	229025	11/04/15 16:36	1.0	
058	307_058	MSS	271034-003		Soil	229025	11/04/15 17:06	2.0	
059	307_059	MS	QC811112		Soil	229025	11/04/15 17:36	2.0	
060	307_060	MSD	QC811113		Soil	229025	11/04/15 18:06	2.0	
061	307_061	SAMPLE	271034-004		Soil	229025	11/04/15 18:37	1.0	
062	307_062	SAMPLE	271034-005		Soil	229025	11/04/15 19:07	1.0	
063	307_063	SAMPLE	271150-001		Soil	229025	11/04/15 19:37	100.0	
064	307_064	SAMPLE	271156-002		Soil	229025	11/04/15 20:07	1.0	
065	307_065	X	IB				11/04/15 20:37	1.0	
066	307_066	SAMPLE	271243-001		Soil	229025	11/04/15 21:08	1.0	
067	307_067	X	IB				11/04/15 21:39	1.0	
068	307_068	SAMPLE	270974-003	S	Soil	229025	11/04/15 22:10	1.0	
069	307_069	SAMPLE	271213-001	S	Soil	229025	11/04/15 22:40	1.0	
070	307_070	CCV	MO_500				11/04/15 23:10	1.0	2
071	307_071	CCV	DSL_500				11/04/15 23:40	1.0	4
072	307_072	X	CCV				11/05/15 00:11	1.0	2
073	307_073	X	CCV				11/05/15 00:40	1.0	4
074	307_074	SAMPLE	271213-002	S	Soil	229025	11/05/15 01:11	1.0	
075	307_075	SAMPLE	271217-001	S	Soil	229025	11/05/15 01:40	1.0	
076	307_076	SAMPLE	271217-002	S	Soil	229025	11/05/15 02:10	1.0	
077	307_077	SAMPLE	271217-003	S	Soil	229025	11/05/15 02:40	1.0	
078	307_078	SAMPLE	271217-004	S	Soil	229025	11/05/15 03:11	1.0	
079	307_079	SAMPLE	271217-005	S	Soil	229025	11/05/15 03:40	1.0	
080	307_080	SAMPLE	271217-006	S	Soil	229025	11/05/15 04:11	1.0	
081	307_081	SAMPLE	271217-007	S	Soil	229025	11/05/15 04:43	1.0	
082	307_082	SAMPLE	271108-001		Soil	228956	11/05/15 05:14	1.0	
083	307_083	SAMPLE	271125-001		Soil	228956	11/05/15 05:45	1.0	
084	307_084	X	CMARKER				11/05/15 06:16	1.0	1
085	307_085	X	MO_500				11/05/15 06:47	1.0	2
086	307_086	CCV	DSL_1000				11/05/15 07:18	1.0	5
087	307_087	CCV	MO_500				11/05/15 08:25	1.0	2
088	307_088	BLANK	QC811158	S	Soil	229040	11/05/15 08:56	1.0	
089	307_089	LCS	QC811159	S	Soil	229040	11/05/15 09:26	1.0	
090	307_090	BLANK	QC811214		Water	229054	11/05/15 09:57	1.0	
091	307_091	LCS	QC811215		Water	229054	11/05/15 10:27	1.0	
092	307_092	BLANK	QC811158		Soil	229040	11/05/15 11:08	1.0	
093	307_093	BLANK	QC811380		Soil	229097	11/05/15 11:39	1.0	
094	307_094	LCS	QC811381		Soil	229097	11/05/15 12:10	1.0	
095	307_095	BLANK	QC811018		Water	229008	11/05/15 12:40	1.0	
097	307_097	CCV	MO_500				11/05/15 13:47	1.0	2
098	307_098	CCV	DSL_500				11/05/15 14:16	1.0	4
099	307_099	CHECK	MO_500				11/05/15 14:57	1.0	7
100	307_100	X	1.NOTSONICATED-GRANU				11/05/15 15:26	1.0	
101	307_101	X	2.NOTSONICATED-POWDE				11/05/15 15:55	1.0	
102	307_102	X	3.SONICATED-POWDER				11/05/15 16:24	1.0	
103	307_103	X	4.SONICATED-GRANULAR				11/05/15 16:54	1.0	
104	307_104	X	6.NOSONICATION				11/05/15 17:25	1.0	
105	307_105	X	7.SAND NOT SONICATED				11/05/15 17:55	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/03/15 06:58  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
106	307_106	X	8.SAND SONICATED				11/05/15 18:25	1.0		
107	307_107	SAMPLE	271013-002		Soil	228998	11/05/15 18:56	2.0		
108	307_108	SAMPLE	271013-006		Soil	228998	11/05/15 19:26	1.0		
109	307_109	SAMPLE	271013-007		Soil	228998	11/05/15 19:56	2.0		
110	307_110	SAMPLE	271013-008		Soil	228998	11/05/15 20:26	1.0		
111	307_111	SAMPLE	271013-016		Soil	228998	11/05/15 20:56	1.0		
112	307_112	SAMPLE	271013-018		Soil	228998	11/05/15 21:26	1.0		
113	307_113	SAMPLE	271045-006		Soil	228998	11/05/15 21:57	1.0		
114	307_114	SAMPLE	271045-008		Soil	228998	11/05/15 22:26	1.0		
115	307_115	SAMPLE	271045-009		Soil	228998	11/05/15 22:56	1.0		
116	307_116	SAMPLE	271045-010		Soil	228998	11/05/15 23:25	1.0		
117	307_117	CCV	MO_500				11/05/15 23:54	1.0	2	
118	307_118	CCV	DSL_1000				11/06/15 00:24	1.0	5	
119	307_119	X	CCV				11/06/15 00:53	1.0	2	
120	307_120	X	CCV				11/06/15 01:22	1.0	5	
121	307_121	SAMPLE	271045-016		Soil	228998	11/06/15 01:51	1.0		
122	307_122	SAMPLE	271045-010	S	Soil	228998	11/06/15 02:20	1.0		
123	307_123	SAMPLE	271045-016	S	Soil	228998	11/06/15 02:50	1.0		
124	307_124	SAMPLE	271144-005	S	Soil	228998	11/06/15 03:19	1.0		
125	307_125	X	IB				11/06/15 03:49	1.0		
126	307_126	MSS	271144-006	S	Soil	228998	11/06/15 04:20	20.0		
127	307_127	SAMPLE	271144-007	S	Soil	228998	11/06/15 04:49	1.0		2:BUNKC:12-40=6500
128	307_128	X	IB				11/06/15 05:19	1.0		
129	307_129	SAMPLE	271144-008	S	Soil	228998	11/06/15 05:50	1.0		
130	307_130	SAMPLE	271144-009	S	Soil	228998	11/06/15 06:21	20.0		
131	307_131	SAMPLE	271144-010	S	Soil	228998	11/06/15 06:51	1.0		2:BUNKC:12-40=5400
132	307_132	X	IB				11/06/15 07:21	1.0		
133	307_133	SAMPLE	271144-011	S	Soil	228998	11/06/15 07:51	1.0		
134	307_134	X	CMARKER				11/06/15 08:22	1.0	1	
135	307_135	X	MO_500				11/06/15 08:52	1.0	2	
136	307_136	CCV	DSL_500				11/06/15 09:22	1.0	4	
137	307_137	X	TEST 1: SAND EM48118				11/06/15 09:52	1.0		
138	307_138	X	TEST2: POWDER (BAKED				11/06/15 10:22	1.0		
139	307_139	CCV	MO_500				11/06/15 10:52	1.0	7	
140	307_140	MSS	271034-006		Soil	229040	11/06/15 14:08	1.0		
141	307_141	SAMPLE	271034-010		Soil	229040	11/06/15 14:37	1.0		
142	307_142	SAMPLE	271320-001		Soil	229157	11/06/15 15:45	1.0		
143	307_143	SAMPLE	271321-002		Soil	229157	11/06/15 16:14	1.0		
144	307_144	CCV	MO_500				11/06/15 18:17	1.0	2	
145	307_145	CCV	DSL_1000				11/06/15 18:47	1.0	5	
146	307_146	X	CMARKER				11/06/15 20:58	1.0	1	
147	307_147	CCV	JET_250				11/06/15 21:28	1.0	8	
148	307_148	SAMPLE	271144-005		Soil	228998	11/06/15 21:58	2.0		
149	307_149	MSS	271144-006		Soil	228998	11/06/15 22:27	2.0		
150	307_150	SAMPLE	271144-007		Soil	228998	11/06/15 22:57	2.0		
151	307_151	SAMPLE	271144-008		Soil	228998	11/06/15 23:26	2.0		
152	307_152	SAMPLE	271144-009		Soil	228998	11/06/15 23:56	2.0		
153	307_153	SAMPLE	271144-010		Soil	228998	11/07/15 00:25	2.0		
154	307_154	SAMPLE	271144-011		Soil	228998	11/07/15 00:54	1.0		
155	307_155	SAMPLE	271144-012		Soil	228998	11/07/15 01:23	2.0		
156	307_156	MS	QC810984		Soil	228998	11/07/15 01:52	2.0		
157	307_157	MSD	QC810985		Soil	228998	11/07/15 02:22	2.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225442498

Instrument : GC14B Begun : 11/03/15 06:58  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
158	307_158	CCV	DSL_1000				11/07/15 02:51	1.0	5
159	307_159	CCV	MO_500				11/07/15 03:20	1.0	2
160	307_160	X	CCV				11/07/15 03:51	1.0	5
161	307_161	X	CCV				11/07/15 04:22	1.0	2
162	307_162	CCV	JET_250				11/07/15 04:53	1.0	8
163	307_163	SAMPLE	271144-005	S	Soil	228998	11/07/15 05:23	1.0	
164	307_164	MSS	271144-006	S	Soil	228998	11/07/15 05:54	1.0	3:BUNKC:12-40=7500
165	307_165	SAMPLE	271144-008	S	Soil	228998	11/07/15 06:25	1.0	

JDG 11/04/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 54.

JDG 11/05/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 55 through 98.

JDG 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 99 through 141.

BJP 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 142 through 145.

SFL 11/07/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 146 through 165.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225448419

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/07/15 09:39  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	311_001	X	IB				11/07/15 09:39	1.0	
002	311_002	X	CMARKER				11/07/15 10:09	1.0	1
003	311_003	CCV	MO_500				11/07/15 10:39	1.0	2
004	311_004	CCV	DSL_500				11/07/15 11:09	1.0	3
005	311_005	CCV	JET_250				11/07/15 11:42	1.0	4
006	311_006	BLANK	QC811214	S	Water	229054	11/07/15 12:36	1.0	
007	311_007	LCS	QC811215	S	Water	229054	11/07/15 13:06	1.0	
008	311_008	MSS	271203-002		Water	229054	11/07/15 13:36	1.0	
009	311_009	MS	QC811216		Water	229054	11/07/15 14:05	1.0	
010	311_010	MSD	QC811217		Water	229054	11/07/15 14:35	1.0	
011	311_011	SAMPLE	271203-001		Water	229054	11/07/15 15:04	1.0	
012	311_012	SAMPLE	271256-011	S	Water	229054	11/07/15 15:33	1.0	
013	311_013	SAMPLE	271256-012	S	Water	229054	11/07/15 16:02	1.0	
014	311_014	SAMPLE	271256-014	S	Water	229054	11/07/15 16:32	1.0	
015	311_015	SAMPLE	271256-018	S	Water	229054	11/07/15 17:02	1.0	
016	311_016	SAMPLE	271256-019	S	Water	229054	11/07/15 17:32	1.0	
017	311_017	SAMPLE	271256-020	S	Water	229054	11/07/15 18:02	1.0	
018	311_018	CCV	MO_500				11/07/15 18:32	1.0	2
019	311_019	CCV	DSL_250				11/07/15 19:02	1.0	5
020	311_020	CCV	JET_250				11/07/15 19:33	1.0	4
021	311_021	X	CCV				11/07/15 20:03	1.0	2
022	311_022	X	CCV				11/07/15 20:33	1.0	5
023	311_023	X	CCV				11/07/15 21:04	1.0	4
024	311_024	SAMPLE	271144-005		Soil	228998	11/07/15 21:34	2.0	
025	311_025	MSS	271144-006		Soil	228998	11/07/15 22:04	2.0	
026	311_026	SAMPLE	271144-007		Soil	228998	11/07/15 22:34	2.0	
027	311_027	X	IB				11/07/15 23:03	1.0	
028	311_028	SAMPLE	271144-008		Soil	228998	11/07/15 23:33	2.0	
029	311_029	SAMPLE	271144-009		Soil	228998	11/08/15 00:02	2.0	
030	311_030	SAMPLE	271144-010		Soil	228998	11/08/15 00:31	2.0	
031	311_031	SAMPLE	271144-012		Soil	228998	11/08/15 01:01	2.0	
032	311_032	X	IB				11/08/15 01:30	1.0	
033	311_033	SAMPLE	271144-011		Soil	228998	11/08/15 01:59	1.0	
034	311_034	SAMPLE	271144-010	S	Soil	228998	11/08/15 02:29	1.0	
035	311_035	SAMPLE	271144-011	S	Soil	228998	11/08/15 02:58	1.0	
036	311_036	X	CMARKER				11/08/15 03:27	1.0	1
037	311_037	CCV	MO_500				11/08/15 03:57	1.0	2
038	311_038	CCV	DSL_500				11/08/15 04:27	1.0	3
039	311_039	CCV	JET_250				11/08/15 04:57	1.0	4
040	311_040	X	CCV				11/08/15 05:27	1.0	2
041	311_041	X	CCV				11/08/15 05:58	1.0	3
042	311_042	X	CCV				11/08/15 06:28	1.0	4
043	311_043	SAMPLE	271144-005	S	Soil	228998	11/08/15 06:59	1.0	
044	311_044	MSS	271144-006	S	Soil	228998	11/08/15 07:29	1.0	2:BUNKC:12-40=7300
045	311_045	SAMPLE	271144-008	S	Soil	228998	11/08/15 07:59	1.0	
046	311_046	CCV	MO_500				11/08/15 08:29	1.0	2
047	311_047	CCV	DSL_250				11/08/15 08:59	1.0	5
048	311_048	CCV	JET_250				11/08/15 09:30	1.0	4
049	311_049	X	CCV				11/08/15 10:00	1.0	2
050	311_050	X	CCV				11/08/15 10:30	1.0	5
051	311_051	X	CCV				11/08/15 11:00	1.0	4

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225448419

Instrument : GC14B                      Begun                : 11/07/15 09:39  
Method     : EPA 8015B                  SOP Version        : TEH\_rv18

BJP 11/09/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 51.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 865421170

Instrument : GC26A  
 Method : EPA 8015B

Begun : 10/19/15 07:27  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	292a001	X	IB			10/19/15 07:27	1.0	
002	292a002	X	CMARKER			10/19/15 07:55	1.0	1
003	292a003	X	MO_500			10/19/15 08:23	1.0	2
004	292a004	X	DSL_500			10/19/15 08:52	1.0	3
005	292a005	X	IB			10/19/15 11:30	1.0	
006	292a006	X	IB			10/19/15 11:58	1.0	
007	292a007	X	CMARKER			10/19/15 12:28	1.0	1
008	292a008	IB	CALIB			10/19/15 15:14	1.0	
009	292a009	ICAL	HEXOTP_5			10/19/15 15:42	1.0	4
010	292a010	ICAL	HEXOTP_10			10/19/15 16:10	1.0	5
011	292a011	ICAL	HEXOTP_25			10/19/15 16:38	1.0	6
012	292a012	ICAL	HEXOTP_50			10/19/15 17:06	1.0	7
013	292a013	ICAL	HEXOTP_100			10/19/15 17:34	1.0	8
014	292a014	ICAL	HEXOTP_200			10/19/15 18:02	1.0	9
015	292a015	IB	CALIB			10/19/15 18:29	1.0	
016	292a016	ICAL	DSL_10			10/19/15 18:57	1.0	10
017	292a017	ICAL	DSL_100			10/19/15 19:25	1.0	11
018	292a018	ICAL	DSL_500			10/19/15 19:53	1.0	12
019	292a019	ICAL	DSL_1000			10/19/15 20:21	1.0	13
020	292a020	ICAL	DSL_5000			10/19/15 20:48	1.0	14
021	292a021	IB	CALIB			10/19/15 21:16	1.0	
022	292a022	ICV	DSL_500			10/19/15 21:44	1.0	3
023	292a023	X	ICV			10/19/15 22:12	1.0	3
024	292a024	IB	CALIB			10/19/15 22:40	1.0	
025	292a025	ICAL	MO_50			10/19/15 23:08	1.0	15
026	292a026	ICAL	MO_250			10/19/15 23:36	1.0	16
027	292a027	ICAL	MO_500			10/20/15 00:04	1.0	17
028	292a028	ICAL	MO_1000			10/20/15 00:32	1.0	18
029	292a029	ICAL	MO_2500			10/20/15 00:59	1.0	19
030	292a030	ICAL	MO_5000			10/20/15 01:27	1.0	19
031	292a031	X	IB			10/20/15 01:55	1.0	
032	292a032	CMARKER	C8-C50			10/20/15 02:23	1.0	1

JDG 10/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 32.

Standards used: 1=S27935 2=S28150 3=S27804 4=S27409 5=S27410 6=S27411 7=S27412 8=S27413 9=S27414 10=S27111 11=S27112  
 12=S27113 13=S27114 14=S27110 15=S27679 16=S27680 17=S27681 18=S27682 19=S27678

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 865448413

Instrument : GC26A  
 Method : EPA 8015B

Begun : 11/07/15 09:33  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	311a001	X	IB				11/07/15 09:33	1.0	
002	311a002	X	CMARKER				11/07/15 10:01	1.0	1
003	311a003	CCV	MO_500				11/07/15 10:30	1.0	2
004	311a004	CCV	DSL_250				11/07/15 10:58	1.0	3
005	311a005	CCV	JP5_250				11/07/15 12:39	1.0	4
006	311a006	CCV	BUNK_500				11/07/15 13:07	1.0	5
007	311a007	BLANK	QC811026		Water	229010	11/07/15 13:45	1.0	
008	311a008	BS	QC811027		Water	229010	11/07/15 14:13	1.0	
009	311a009	BSD	QC811028		Water	229010	11/07/15 14:41	1.0	
010	311a010	BLANK	QC811026	S	Water	229010	11/07/15 15:08	1.0	
011	311a011	BS	QC811027	S	Water	229010	11/07/15 15:36	1.0	
012	311a012	BSD	QC811028	S	Water	229010	11/07/15 16:04	1.0	
013	311a013	SAMPLE	271118-001		Water	229010	11/07/15 16:32	1.0	
014	311a014	SAMPLE	271118-002		Water	229010	11/07/15 17:00	1.0	
015	311a015	SAMPLE	271118-003		Water	229010	11/07/15 17:28	1.0	
016	311a016	SAMPLE	271118-004		Water	229010	11/07/15 17:57	1.0	
017	311a017	SAMPLE	271118-005		Water	229010	11/07/15 18:25	1.0	
018	311a018	SAMPLE	271118-006		Water	229010	11/07/15 18:53	1.0	
019	311a019	SAMPLE	271118-007		Water	229010	11/07/15 19:22	1.0	
020	311a020	SAMPLE	271118-008		Water	229010	11/07/15 19:50	1.0	
021	311a021	SAMPLE	271118-009		Water	229010	11/07/15 20:19	1.0	
022	311a022	SAMPLE	271107-001		Water	229010	11/07/15 20:47	1.0	
023	311a023	CCV	MO_500				11/07/15 21:15	1.0	2
024	311a024	CCV	DSL_500				11/07/15 21:44	1.0	6
025	311a025	CCV	JP5_250				11/07/15 22:12	1.0	4
026	311a026	CCV	BUNK_500				11/07/15 22:40	1.0	5
027	311a027	X	CCV				11/07/15 23:08	1.0	2
028	311a028	X	CCV				11/07/15 23:36	1.0	6
029	311a029	X	CCV				11/08/15 00:03	1.0	4
030	311a030	X	CCV				11/08/15 00:31	1.0	5
031	311a031	X	CMARKER				11/08/15 00:59	1.0	1
032	311a032	SAMPLE	271118-001	S	Water	229010	11/08/15 01:27	1.0	
033	311a033	SAMPLE	271118-002	S	Water	229010	11/08/15 01:54	1.0	
034	311a034	SAMPLE	271118-003	S	Water	229010	11/08/15 02:22	1.0	
035	311a035	SAMPLE	271118-004	S	Water	229010	11/08/15 02:50	1.0	
036	311a036	SAMPLE	271118-005	S	Water	229010	11/08/15 03:17	1.0	
037	311a037	SAMPLE	271118-006	S	Water	229010	11/08/15 03:46	1.0	
038	311a038	SAMPLE	271118-007	S	Water	229010	11/08/15 04:15	1.0	
039	311a039	SAMPLE	271118-008	S	Water	229010	11/08/15 04:43	1.0	
040	311a040	SAMPLE	271118-009	S	Water	229010	11/08/15 05:12	1.0	
041	311a041	SAMPLE	271156-001		Water	229010	11/08/15 05:40	1.0	
042	311a042	CCV	MO_500				11/08/15 06:09	1.0	2
043	311a043	CCV	DSL_1000				11/08/15 06:37	1.0	7
044	311a044	CCV	JP5_250				11/08/15 07:05	1.0	4
045	311a045	CCV	BUNK_500				11/08/15 07:34	1.0	5
046	311a046	X	CCV				11/08/15 08:03	1.0	2
047	311a047	X	CCV				11/08/15 08:31	1.0	7
048	311a048	X	CCV				11/08/15 08:59	1.0	4
049	311a049	X	CCV				11/08/15 09:28	1.0	5

SFL 11/07/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 6.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 865448413

Instrument : GC26A                      Begun                : 11/07/15 09:33  
Method       : EPA 8015B                SOP Version       : TEH\_rv18

JDG 11/10/15 : I verified that the vials loaded on the instrument matched the  
sequence data entry, for runs 7 through 49.

SAMPLE PREPARATION SUMMARY

Batch # : 229010  
 Started By : EYL  
 Method : 3520C  
 Spike #1 ID : S28305

Prep Date : 03-NOV-2015 14:54  
 SOP Version : TEH\_3520\_rv15  
 Spike #2 ID : S28139

Analysis : TEH  
 Finished By : BOY  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271076-001		Water	500	2.5	1	0.005	9	.5				TEH	
271076-002		Water	500	2.5	1	0.005	7	.5				TEH	
271076-003		Water	500	2.5	1	0.005	9	.5				TEH	
271107-001		Water	500	2.5	1	0.005	9	.5				TEHM	
271118-001		Water	500	2.5	1	0.005	9	.5			3630C	TEH	
271118-002		Water	500	2.5	1	0.005	9	.5			3630C	TEH	
271118-003		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271118-004		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271118-005		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271118-006		Water	500	2.5	1	0.005	8	.5			3630C	TEH	
271118-007		Water	500	2.5	1	0.005	8	.5			3630C	TEH	
271118-008		Water	500	2.5	1	0.005	8	.5			3630C	TEH	
271118-009		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271149-001		Water	500	2.5	1	0.005	8	.5			3630C	TEHM	
271149-002		Water	500	2.5	1	0.005	8	.5			3630C	TEHM	
271156-001		Water	1000	2.5	1	0.0025	9	1				TEHM	
271203-024		Water	450	2.5	1	0.005556	9	.5				TEH	
271203-025		Water	300	2.5	1	0.008333	8	.5				TEH	
QC811026	BLANK	Water	500	2.5	1	0.005		.5			3630C		
QC811027	BS	Water	500	2.5	1	0.005		.5	.5		3630C		
QC811028	BSD	Water	500	2.5	1	0.005		.5	.5		3630C		

BJP 11/11/15 : Matrix spikes were not performed for this analysis in batch 229010 due to insufficient sample amount.

EAH 11/11/15 : Reviewed for all jobs except 271156.

Analyst: BJP Date: 11/11/15 Reviewer: EAH Date: 11/11/15

Prep Chemist: BOY  
 Cleanup Date: 11/6/15

Benchbook # **BK 3729**  
 Page 54

Sample #	Extraction Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
271118-001	229010	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
3		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
4		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
5		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
6		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
7		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
8		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
9		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
10	271149-001	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
	2	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
	MB QC811026	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
	BS 7	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
	BSO 8	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
15		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
20		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
25		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
30		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	AP26 11/15

Extracts were cleaned up using C&T assembled 1.0 g columns  
 Extracts were cleaned up using      g cartridges  
 Extracts were eluted with 4.0 mL CH<sub>2</sub>Cl<sub>2</sub>  
 Concentrated to volumes as noted above

Mfg & Lot # / Time / Program	Initials / Date
Y14A041	BOY 11/6/15
NA	
FC156010	
✓	

BOY 11/6/15  
 Extraction Chemist / Date

Continued from page       
 Continued on page     

AP26 11/15  
 Reviewed by / Date

# Gravity Separation Log

Sample ID	Sep Funnel used	Date/Time Started w/ initials	Date/Time Stopped w/ initials	turbid	Sediment	screen	comber
271063-001	A	10/20/2015 @ 1855 APW	11/2/2015 @ 1600 EML	no	no	no	
2	B						
3	A						
4	A						
5	A						
6	A						
7	B						
8	B						
9	B						
10	A						
12	B						
271118-001	B		11/3/2015 @ 13:17 EML	yes	no	no	
2	B			no			
3	B			yes			
4	B						
5	B						
6	B			no			
7	B						
8	B						
9	D						

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

TEH (8015) Water Prep Log

Curtis & Tompkins, Ltd.

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BK 3680

LIMS Batch No: 229010  
 LIMS Analysis: TEHM  
 Date Extracted: 11/3/15

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
271076-001	A	500	7.9	2.5		
↓ 2	I	500	7	2.5		
↓ 3	G	500	7.9	2.5		
271107-001	↓	500	7.9	2.5		
5 271118-001	B	500	7.9	2.5	X	
↓ 2		500	7.9	2.5	X	
↓ 3		500	7	2.5	X	
↓ 4		500	7	2.5	X	
↓ 5		500	7	2.5	X	
10 ↓ 6		500	7.9	2.5	X	
↓ 7		500	7.8	2.5	X	
↓ 8	V	500	7.8	2.5	X	
↓ 9	D	500	7	2.5	X	
271149-001	G	500	7.8	2.5	X	
15 ↓ 2	J	500	7.8	2.5	X	
271156-001	L	500	7.9	2.5		*
271201-001		500	7	2.5		ALL
<del>271201-002</del>		<del>500</del>	<del>7</del>	<del>2.5</del>		<del>11/3/15</del>
271203-024	J	500	7.9	2.5		decanted 0.5 inch of sediment
↓ 25	G	500	7.8	2.5		decanted 2.25 inches of sediment
MS QC811024	NA	500	NA	2.5	X	
BS ↓ 7	↓	500	NA	2.5	X	
BSD ↓ 8	V	500	NA	2.5	X	
		500	7	2.5		

MS/MSD not included due to:  insufficient volume, or  other (reason)

\* 1 mL surr used

Mfg & Lot# / LIMS # / Time Date/ Initials

0.5 mL of TEH SURR was added to all samples  
 0.5 mL of TEH\_SP was added to all spikes  
 pH of all samples adjusted to pH ≤ 2 with H<sub>2</sub>SO<sub>4</sub>

3520c: Samples were continually extracted about 450 mL of CH<sub>2</sub>Cl<sub>2</sub>

Extraction Start Time: 14:54

Extraction End Time: 0854

3510c: Samples were extracted 3 times with 60 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)

Relinquished to TEH Department

528305	CUL 11/3/15
528139	
FS152524	
EM55175	
14:54	
0854	CPT 11/4/15
NA	BYE 11/5/15
FS2535C502	
100	
✓	

AGE  
 Extraction Chemist  
11/3/15  
 Date

Continued from Page \_\_\_\_\_  
 Continued on Page \_\_\_\_\_

AGE  
 Reviewed by  
11/5/15  
 Date

SAMPLE PREPARATION SUMMARY

Batch # : 229054  
 Started By : BOY  
 Method : 3520C  
 Spike #1 ID : S28305

Prep Date : 04-NOV-2015 12:34  
 SOP Version : TEH\_3520\_rv15  
 Spike #2 ID : S28139

Analysis : TEH  
 Finished By : JCD  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271203-001		Water	1000	5	1	0.005	7	1				TEH	
271203-002		Water	400	2.5	1	0.00625	7	.5				TEH	
271222-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271222-002		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271222-003		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271222-004		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271222-005		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-002		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-009		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271256-011		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271256-012		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271256-014		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-018		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-019		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271256-020		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271256-021		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271256-022		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
271282-001		Water	1060	5	1	0.004717	7	1				TEHM	
271282-003		Water	1000	5	1	0.005	7	1				TEHM	
QC811214	BLANK	Water	500	2.5	1	0.005		.5			3630C		
QC811215	LCS	Water	500	2.5	1	0.005		.5	.5		3630C		
QC811216	MS	Water	400	2.5	1	0.00625	7	.5	.5				
QC811217	MSD	Water	400	2.5	1	0.00625	7	.5	.5				

JDG 11/06/15 : Reviewed for rush job 271282

EAH 11/06/15 : Reviewed 271282 without MS/MSD.

Analyst: BJP Date: 11/09/15 Reviewer: EAH Date: 11/09/15

TEH (8015) Water Prep Log

Curtis & Tompkins, Ltd.

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BK 3680

LIMS Batch No: 229054  
 LIMS Analysis: TEHM  
 Date Extracted: 11/4/15

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
271203-001	G	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH <input type="checkbox"/> *	
↓ 2	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	1.25m of sediment; mss
271222-001	B	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 2		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
5 ↓ 3		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 4		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 5	C	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
271256-001	I	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	pressure cracked, minimal liquid lost
↓ 2		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
10 ↓ 9	E	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 11	D	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 12		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 14	B	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 18	A	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
15 ↓ 19		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 20	B	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 21	E	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
↓ 22	B	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
271282-001	O	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 1060	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5.0	<input checked="" type="checkbox"/> ≤2pH	*
↓ 3	P	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5.0	<input checked="" type="checkbox"/> ≤2pH	*
MB acs11214	NA	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> NA	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
LCS 5		<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> NA	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	X <input checked="" type="checkbox"/> ≤2pH	
MS 6		<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	1.2m of sediment
MSD 7	I	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	1.25m of sediment

MS/MSD not included due to:  insufficient volume, or  other (reason)

\* 1ml surr used

0.5 mL of TEH\_SURR was added to all samples  
0.5 mL of TEH\_SP was added to all spikes  
 pH of all samples adjusted to pH ≤ 2 with H<sub>2</sub>SO<sub>4</sub>  
 3520c: Samples were continually extracted about 450 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extraction Start Time: \_\_\_\_\_  
 Extraction End Time: \_\_\_\_\_  
 3510c: Samples were extracted 3 times with 60 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C) \_\_\_\_\_  
 Relinquished to TEH Department

Mfg & Lot# / LIMS # / Time	Date / Initials
S28305B	11/4/15 BUJ
S2813AE	
FS152524	
FC 102215	
12:34	↓
0652	JCD 11/5/15
NA	
FS154411	
100	

MB, LCS + RUSHES

[Signature] 11/4/15  
 Extraction Chemist Date

Continued from Page \_\_\_\_\_  
 Continued on Page \_\_\_\_\_

[Signature] 11/6/15  
 Reviewed by Date

Prep Chemist: BOY  
 Cleanup Date: 11/6/15

Benchbook # **BK 3729**  
 Page 56

Sample #	Extraction Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
271222-001	229054	1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
2		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
3		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
4		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
5		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
271256-001		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
2		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
9		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
11		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
10		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
12		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
14		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
18		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
19		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
15		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
20		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
21		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
22		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
MB QC811214		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
LES QC811215		1.0 <input checked="" type="checkbox"/>	1.0 <input checked="" type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
20		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
25		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
30		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	
		1.0 <input type="checkbox"/>	1.0 <input type="checkbox"/>	

Extracts were cleaned up using C&T assembled 1.0 g columns  
 Extracts were cleaned up using \_\_\_\_\_ g cartridges  
 Extracts were eluted with 4.0 mL CH<sub>2</sub>Cl<sub>2</sub>  
 Concentrated to volumes as noted above

Mfg & Lot # / Time / Program	Initials / Date
Y14A041	BOY 11/6/15
NA	
RC156910	

[Signature] 11/6/15  
 Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

[Signature] 11/9/15  
 Reviewed by / Date



SAMPLE PREPARATION SUMMARY

Batch # : 229062  
 Started By : BOY  
 Method : 3520C  
 Spike #1 ID : S28305

Prep Date : 04-NOV-2015 14:19  
 SOP Version : TEH\_3520\_rv15  
 Spike #2 ID : S28139

Analysis : TEH  
 Finished By : BOY  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271203-003		Water	425	2.5	1	0.005882	7	.5				TEH	
271203-005		Water	500	2.5	1	0.005	7	.5				TEH	Prepped 05-NOV-2015 19:00
271203-006		Water	500	2.5	1	0.005	7	.5				TEH	Prepped 05-NOV-2015 19:00
271203-007		Water	450	2.5	1	0.005556	7	.5				TEH	Prepped 05-NOV-2015 19:00
271203-008		Water	400	2.5	1	0.00625	7	.5				TEH	
271203-009		Water	400	2.5	1	0.00625	7	.5				TEH	
271203-010		Water	450	2.5	1	0.005556	7	.5				TEH	Prepped 05-NOV-2015 19:00
271203-011		Water	400	2.5	1	0.00625	7	.5				TEH	Prepped 05-NOV-2015 19:00
271203-013		Water	425	2.5	1	0.005882	7	.5				TEH	
271203-014		Water	400	2.5	1	0.00625	7	.5				TEH	
271203-015		Water	450	2.5	1	0.005556	7	.5				TEH	
271203-016		Water	450	2.5	1	0.005556	7	.5				TEH	
271203-017		Water	400	2.5	1	0.00625	7	.5				TEH	
271203-018		Water	360	2.5	1	0.006944	7	.5				TEH	
271203-020		Water	390	2.5	1	0.00641	7	.5				TEH	
271203-021		Water	425	2.5	1	0.005882	7	.5				TEH	
271203-022		Water	375	2.5	1	0.006667	7	.5				TEH	
271203-023		Water	400	2.5	1	0.00625	7	.5				TEH	Prepped 05-NOV-2015 19:00
QC811242	BLANK	Water	500	2.5	1	0.005	7	.5					
QC811243	BS	Water	500	2.5	1	0.005	7	.5	.5				
QC811244	BSD	Water	500	2.5	1	0.005	7	.5	.5				

JDG 11/13/15 : Matrix spikes were not performed for this analysis in batch 229062 due to insufficient sample amount.

Analyst: JDG

Date: 11/16/15

Reviewer: EAH

Date: 11/17/15

LIMS Batch No: 229062  
 LIMS Analysis: TEHM  
 Date Extracted: 11/4/15

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
271203-003	G	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 425	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	1.1g of sediment; decanted
8	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1.1g of sediment; decanted
9	G	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.76g of sediment; decanted
13	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 425	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.5g of sediment; decanted
14	G	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1.5g of sediment; decanted
15	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 450	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.5g of sediment; decanted
16	I	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 450	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.5g of sediment; decanted
17	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.76g of sediment; decanted
18	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 360	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1.5g of sediment; decanted
20	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 390	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1.25g of sediment; decanted
21	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 425	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	0.76g of sediment; decanted
22	G	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 375	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	1.25g of sediment; decanted
MB	QC811242	NA	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
BS	3	NA	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
BSD	4	NA	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input checked="" type="checkbox"/> ≤2pH	
271203-005	H	<input type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	0.5g of sediment; decanted
6	H	<input type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	0.25g of sediment; decanted
7	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 450	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	1.1g of sediment; decanted
10	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 450	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	0.15g of sediment; decanted
11	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	1.5g of sediment; decanted
23	E	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 400	<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	1.1g of sediment; decanted
		<input type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	
		<input type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	
		<input type="checkbox"/> 500	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 2.5	<input type="checkbox"/> ≤2pH	

MS/MSD not included due to:  insufficient volume, or  other (reason)

Mfg & Lot# / LIMS # / Time Date/ Initials

0.5 mL of TEH_SURR was added to all samples	S2830C	11/4/15 BOT
0.5 mL of TEH_SP was added to all spikes	S28139E	
pH of all samples adjusted to pH ≤ 2 with H <sub>2</sub> SO <sub>4</sub>	FS152524	
<input checked="" type="checkbox"/> 3520c: Samples were continually extracted about 450 mL of CH <sub>2</sub> Cl <sub>2</sub>	EG102215	
Extraction Start Time:	14:19/1900	
Extraction End Time:	<del>15:00</del> 8:19/2000	11/5/15 CPS
<input type="checkbox"/> 3510c: Samples were extracted 3 times with 60 mL of CH <sub>2</sub> Cl <sub>2</sub>	NA	11/6/15 BOT
Extracts filtered through baked, CH <sub>2</sub> Cl <sub>2</sub> -rinsed granular Na <sub>2</sub> SO <sub>4</sub>	PS253502	
Concentrated to final volume at temperature (degrees C)	100	
Relinquished to TEH Department	✓	

[Signature] 11/4/15  
 Extraction Chemist Date

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[Signature] 11/5/15  
 Reviewed by Date

Laboratory Job Number 271203

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Water

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PATLNSS-S	Diln Fac:	1.000
Lab ID:	271203-001	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229102	11/05/15
Chloromethane	ND	1.0	229102	11/05/15
Vinyl Chloride	ND	0.5	229102	11/05/15
Bromomethane	ND	1.0	229102	11/05/15
Chloroethane	ND	1.0	229102	11/05/15
Trichlorofluoromethane	ND	1.0	229102	11/05/15
Acetone	ND	10	229155	11/06/15
Freon 113	ND	2.0	229102	11/05/15
1,1-Dichloroethene	ND	0.5	229102	11/05/15
Methylene Chloride	ND	10	229102	11/05/15
Carbon Disulfide	ND	0.5	229102	11/05/15
MTBE	ND	0.5	229102	11/05/15
trans-1,2-Dichloroethene	ND	0.5	229102	11/05/15
Vinyl Acetate	ND	10	229102	11/05/15
1,1-Dichloroethane	ND	0.5	229102	11/05/15
2-Butanone	ND	10	229102	11/05/15
cis-1,2-Dichloroethene	ND	0.5	229102	11/05/15
2,2-Dichloropropane	ND	0.5	229102	11/05/15
Chloroform	ND	0.5	229102	11/05/15
Bromochloromethane	ND	0.5	229102	11/05/15
1,1,1-Trichloroethane	ND	0.5	229102	11/05/15
1,1-Dichloropropene	ND	0.5	229102	11/05/15
Carbon Tetrachloride	ND	0.5	229102	11/05/15
1,2-Dichloroethane	ND	0.5	229102	11/05/15
Benzene	ND	0.5	229102	11/05/15
Trichloroethene	ND	0.5	229102	11/05/15
1,2-Dichloropropane	ND	0.5	229102	11/05/15
Bromodichloromethane	ND	0.5	229102	11/05/15
Dibromomethane	ND	0.5	229102	11/05/15
4-Methyl-2-Pentanone	ND	10	229102	11/05/15
cis-1,3-Dichloropropene	ND	0.5	229102	11/05/15
Toluene	ND	0.5	229102	11/05/15
trans-1,3-Dichloropropene	ND	0.5	229102	11/05/15
1,1,2-Trichloroethane	ND	0.5	229102	11/05/15
2-Hexanone	ND	10	229102	11/05/15
1,3-Dichloropropane	ND	0.5	229102	11/05/15
Tetrachloroethene	ND	0.5	229102	11/05/15
Dibromochloromethane	ND	0.5	229102	11/05/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PATLNSS-S	Diln Fac:	1.000
Lab ID:	271203-001	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229102	11/05/15
Chlorobenzene	ND	0.5	229102	11/05/15
1,1,1,2-Tetrachloroethane	ND	0.5	229102	11/05/15
Ethylbenzene	ND	0.5	229102	11/05/15
m,p-Xylenes	ND	0.5	229102	11/05/15
o-Xylene	ND	0.5	229102	11/05/15
Styrene	ND	0.5	229102	11/05/15
Bromoform	ND	1.0	229102	11/05/15
Isopropylbenzene	ND	0.5	229102	11/05/15
1,1,2,2-Tetrachloroethane	ND	0.5	229102	11/05/15
1,2,3-Trichloropropane	ND	0.5	229102	11/05/15
Propylbenzene	ND	0.5	229102	11/05/15
Bromobenzene	ND	0.5	229102	11/05/15
1,3,5-Trimethylbenzene	ND	0.5	229102	11/05/15
2-Chlorotoluene	ND	0.5	229102	11/05/15
4-Chlorotoluene	ND	0.5	229102	11/05/15
tert-Butylbenzene	ND	0.5	229102	11/05/15
1,2,4-Trimethylbenzene	ND	0.5	229102	11/05/15
sec-Butylbenzene	ND	0.5	229102	11/05/15
para-Isopropyl Toluene	ND	0.5	229102	11/05/15
1,3-Dichlorobenzene	ND	0.5	229102	11/05/15
1,4-Dichlorobenzene	ND	0.5	229102	11/05/15
n-Butylbenzene	ND	0.5	229102	11/05/15
1,2-Dichlorobenzene	ND	0.5	229102	11/05/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229102	11/05/15
1,2,4-Trichlorobenzene	ND	0.5	229102	11/05/15
Hexachlorobutadiene	ND	2.0	229102	11/05/15
Naphthalene	ND	2.0	229102	11/05/15
1,2,3-Trichlorobenzene	ND	0.5	229102	11/05/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	95	80-128	229102	11/05/15
1,2-Dichloroethane-d4	100	75-139	229102	11/05/15
Toluene-d8	88	80-120	229102	11/05/15
Bromofluorobenzene	96	80-120	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-01-16-NS	Diln Fac:	1.000
Lab ID:	271203-002	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-01-16-NS	Diln Fac:	1.000
Lab ID:	271203-002	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	97	80-128	229102
1,2-Dichloroethane-d4	100	75-139	229102
Toluene-d8	92	80-120	229102
Bromofluorobenzene	96	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-01-26-NS	Diln Fac:	1.000
Lab ID:	271203-003	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229102	11/05/15
Chloromethane	ND	1.0	229102	11/05/15
Vinyl Chloride	ND	0.5	229102	11/05/15
Bromomethane	ND	1.0	229102	11/05/15
Chloroethane	ND	1.0	229102	11/05/15
Trichlorofluoromethane	ND	1.0	229102	11/05/15
Acetone	ND	10	229155	11/06/15
Freon 113	ND	2.0	229102	11/05/15
1,1-Dichloroethene	ND	0.5	229102	11/05/15
Methylene Chloride	ND	10	229102	11/05/15
Carbon Disulfide	ND	0.5	229102	11/05/15
MTBE	ND	0.5	229102	11/05/15
trans-1,2-Dichloroethene	ND	0.5	229102	11/05/15
Vinyl Acetate	ND	10	229102	11/05/15
1,1-Dichloroethane	ND	0.5	229102	11/05/15
2-Butanone	ND	10	229102	11/05/15
cis-1,2-Dichloroethene	ND	0.5	229102	11/05/15
2,2-Dichloropropane	ND	0.5	229102	11/05/15
Chloroform	ND	0.5	229102	11/05/15
Bromochloromethane	ND	0.5	229102	11/05/15
1,1,1-Trichloroethane	ND	0.5	229102	11/05/15
1,1-Dichloropropene	ND	0.5	229102	11/05/15
Carbon Tetrachloride	ND	0.5	229102	11/05/15
1,2-Dichloroethane	ND	0.5	229102	11/05/15
Benzene	ND	0.5	229102	11/05/15
Trichloroethene	ND	0.5	229102	11/05/15
1,2-Dichloropropane	ND	0.5	229102	11/05/15
Bromodichloromethane	ND	0.5	229102	11/05/15
Dibromomethane	ND	0.5	229102	11/05/15
4-Methyl-2-Pentanone	ND	10	229102	11/05/15
cis-1,3-Dichloropropene	ND	0.5	229102	11/05/15
Toluene	ND	0.5	229102	11/05/15
trans-1,3-Dichloropropene	ND	0.5	229102	11/05/15
1,1,2-Trichloroethane	ND	0.5	229102	11/05/15
2-Hexanone	ND	10	229102	11/05/15
1,3-Dichloropropane	ND	0.5	229102	11/05/15
Tetrachloroethene	ND	0.5	229102	11/05/15
Dibromochloromethane	ND	0.5	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-01-26-NS	Diln Fac:	1.000
Lab ID:	271203-003	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229102	11/05/15
Chlorobenzene	ND	0.5	229102	11/05/15
1,1,1,2-Tetrachloroethane	ND	0.5	229102	11/05/15
Ethylbenzene	ND	0.5	229102	11/05/15
m,p-Xylenes	ND	0.5	229102	11/05/15
o-Xylene	ND	0.5	229102	11/05/15
Styrene	ND	0.5	229102	11/05/15
Bromoform	ND	1.0	229102	11/05/15
Isopropylbenzene	ND	0.5	229102	11/05/15
1,1,2,2-Tetrachloroethane	ND	0.5	229102	11/05/15
1,2,3-Trichloropropane	ND	0.5	229102	11/05/15
Propylbenzene	ND	0.5	229102	11/05/15
Bromobenzene	ND	0.5	229102	11/05/15
1,3,5-Trimethylbenzene	ND	0.5	229102	11/05/15
2-Chlorotoluene	ND	0.5	229102	11/05/15
4-Chlorotoluene	ND	0.5	229102	11/05/15
tert-Butylbenzene	ND	0.5	229102	11/05/15
1,2,4-Trimethylbenzene	ND	0.5	229102	11/05/15
sec-Butylbenzene	ND	0.5	229102	11/05/15
para-Isopropyl Toluene	ND	0.5	229102	11/05/15
1,3-Dichlorobenzene	ND	0.5	229102	11/05/15
1,4-Dichlorobenzene	ND	0.5	229102	11/05/15
n-Butylbenzene	ND	0.5	229102	11/05/15
1,2-Dichlorobenzene	ND	0.5	229102	11/05/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229102	11/05/15
1,2,4-Trichlorobenzene	ND	0.5	229102	11/05/15
Hexachlorobutadiene	ND	2.0	229102	11/05/15
Naphthalene	ND	2.0	229102	11/05/15
1,2,3-Trichlorobenzene	ND	0.5	229102	11/05/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	96	80-128	229102	11/05/15
1,2-Dichloroethane-d4	101	75-139	229102	11/05/15
Toluene-d8	92	80-120	229102	11/05/15
Bromofluorobenzene	98	80-120	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-1	Diln Fac:	1.000
Lab ID:	271203-004	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229102	11/05/15
Chloromethane	ND	1.0	229102	11/05/15
Vinyl Chloride	ND	0.5	229102	11/05/15
Bromomethane	ND	1.0	229102	11/05/15
Chloroethane	ND	1.0	229102	11/05/15
Trichlorofluoromethane	ND	1.0	229102	11/05/15
Acetone	ND	10	229155	11/06/15
Freon 113	ND	2.0	229102	11/05/15
1,1-Dichloroethene	ND	0.5	229102	11/05/15
Methylene Chloride	ND	10	229102	11/05/15
Carbon Disulfide	ND	0.5	229102	11/05/15
MTBE	ND	0.5	229102	11/05/15
trans-1,2-Dichloroethene	ND	0.5	229102	11/05/15
Vinyl Acetate	ND	10	229102	11/05/15
1,1-Dichloroethane	ND	0.5	229102	11/05/15
2-Butanone	ND	10	229102	11/05/15
cis-1,2-Dichloroethene	ND	0.5	229102	11/05/15
2,2-Dichloropropane	ND	0.5	229102	11/05/15
Chloroform	ND	0.5	229102	11/05/15
Bromochloromethane	ND	0.5	229102	11/05/15
1,1,1-Trichloroethane	ND	0.5	229102	11/05/15
1,1-Dichloropropene	ND	0.5	229102	11/05/15
Carbon Tetrachloride	ND	0.5	229102	11/05/15
1,2-Dichloroethane	ND	0.5	229102	11/05/15
Benzene	ND	0.5	229102	11/05/15
Trichloroethene	ND	0.5	229102	11/05/15
1,2-Dichloropropane	ND	0.5	229102	11/05/15
Bromodichloromethane	ND	0.5	229102	11/05/15
Dibromomethane	ND	0.5	229102	11/05/15
4-Methyl-2-Pentanone	ND	10	229102	11/05/15
cis-1,3-Dichloropropene	ND	0.5	229102	11/05/15
Toluene	ND	0.5	229102	11/05/15
trans-1,3-Dichloropropene	ND	0.5	229102	11/05/15
1,1,2-Trichloroethane	ND	0.5	229102	11/05/15
2-Hexanone	ND	10	229102	11/05/15
1,3-Dichloropropane	ND	0.5	229102	11/05/15
Tetrachloroethene	ND	0.5	229102	11/05/15
Dibromochloromethane	ND	0.5	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-1	Diln Fac:	1.000
Lab ID:	271203-004	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229102	11/05/15
Chlorobenzene	ND	0.5	229102	11/05/15
1,1,1,2-Tetrachloroethane	ND	0.5	229102	11/05/15
Ethylbenzene	ND	0.5	229102	11/05/15
m,p-Xylenes	ND	0.5	229102	11/05/15
o-Xylene	ND	0.5	229102	11/05/15
Styrene	ND	0.5	229102	11/05/15
Bromoform	ND	1.0	229102	11/05/15
Isopropylbenzene	ND	0.5	229102	11/05/15
1,1,2,2-Tetrachloroethane	ND	0.5	229102	11/05/15
1,2,3-Trichloropropane	ND	0.5	229102	11/05/15
Propylbenzene	ND	0.5	229102	11/05/15
Bromobenzene	ND	0.5	229102	11/05/15
1,3,5-Trimethylbenzene	ND	0.5	229102	11/05/15
2-Chlorotoluene	ND	0.5	229102	11/05/15
4-Chlorotoluene	ND	0.5	229102	11/05/15
tert-Butylbenzene	ND	0.5	229102	11/05/15
1,2,4-Trimethylbenzene	ND	0.5	229102	11/05/15
sec-Butylbenzene	ND	0.5	229102	11/05/15
para-Isopropyl Toluene	ND	0.5	229102	11/05/15
1,3-Dichlorobenzene	ND	0.5	229102	11/05/15
1,4-Dichlorobenzene	ND	0.5	229102	11/05/15
n-Butylbenzene	ND	0.5	229102	11/05/15
1,2-Dichlorobenzene	ND	0.5	229102	11/05/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229102	11/05/15
1,2,4-Trichlorobenzene	ND	0.5	229102	11/05/15
Hexachlorobutadiene	ND	2.0	229102	11/05/15
Naphthalene	ND	2.0	229102	11/05/15
1,2,3-Trichlorobenzene	ND	0.5	229102	11/05/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	96	80-128	229102	11/05/15
1,2-Dichloroethane-d4	105	75-139	229102	11/05/15
Toluene-d8	91	80-120	229102	11/05/15
Bromofluorobenzene	98	80-120	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-24-FD	Diln Fac:	1.000
Lab ID:	271203-005	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-24-FD	Diln Fac:	1.000
Lab ID:	271203-005	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	97	80-128	229102
1,2-Dichloroethane-d4	103	75-139	229102
Toluene-d8	90	80-120	229102
Bromofluorobenzene	100	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-24-NS	Diln Fac:	1.000
Lab ID:	271203-006	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-24-NS	Diln Fac:	1.000
Lab ID:	271203-006	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	96	80-128	229102
1,2-Dichloroethane-d4	103	75-139	229102
Toluene-d8	90	80-120	229102
Bromofluorobenzene	96	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-32-NS	Diln Fac:	1.000
Lab ID:	271203-007	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229102	11/05/15
Chloromethane	ND	1.0	229102	11/05/15
Vinyl Chloride	ND	0.5	229102	11/05/15
Bromomethane	ND	1.0	229102	11/05/15
Chloroethane	ND	1.0	229102	11/05/15
Trichlorofluoromethane	ND	1.0	229102	11/05/15
Acetone	ND	10	229155	11/06/15
Freon 113	ND	2.0	229102	11/05/15
1,1-Dichloroethene	ND	0.5	229102	11/05/15
Methylene Chloride	ND	10	229102	11/05/15
Carbon Disulfide	ND	0.5	229102	11/05/15
MTBE	ND	0.5	229102	11/05/15
trans-1,2-Dichloroethene	ND	0.5	229102	11/05/15
Vinyl Acetate	ND	10	229102	11/05/15
1,1-Dichloroethane	ND	0.5	229102	11/05/15
2-Butanone	ND	10	229102	11/05/15
cis-1,2-Dichloroethene	ND	0.5	229102	11/05/15
2,2-Dichloropropane	ND	0.5	229102	11/05/15
Chloroform	ND	0.5	229102	11/05/15
Bromochloromethane	ND	0.5	229102	11/05/15
1,1,1-Trichloroethane	ND	0.5	229102	11/05/15
1,1-Dichloropropene	ND	0.5	229102	11/05/15
Carbon Tetrachloride	ND	0.5	229102	11/05/15
1,2-Dichloroethane	ND	0.5	229102	11/05/15
Benzene	ND	0.5	229102	11/05/15
Trichloroethene	ND	0.5	229102	11/05/15
1,2-Dichloropropane	ND	0.5	229102	11/05/15
Bromodichloromethane	ND	0.5	229102	11/05/15
Dibromomethane	ND	0.5	229102	11/05/15
4-Methyl-2-Pentanone	ND	10	229102	11/05/15
cis-1,3-Dichloropropene	ND	0.5	229102	11/05/15
Toluene	ND	0.5	229102	11/05/15
trans-1,3-Dichloropropene	ND	0.5	229102	11/05/15
1,1,2-Trichloroethane	ND	0.5	229102	11/05/15
2-Hexanone	ND	10	229102	11/05/15
1,3-Dichloropropane	ND	0.5	229102	11/05/15
Tetrachloroethene	ND	0.5	229102	11/05/15
Dibromochloromethane	ND	0.5	229102	11/05/15

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-03-32-NS	Diln Fac:	1.000
Lab ID:	271203-007	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229102	11/05/15
Chlorobenzene	ND	0.5	229102	11/05/15
1,1,1,2-Tetrachloroethane	ND	0.5	229102	11/05/15
Ethylbenzene	ND	0.5	229102	11/05/15
m,p-Xylenes	ND	0.5	229102	11/05/15
o-Xylene	ND	0.5	229102	11/05/15
Styrene	ND	0.5	229102	11/05/15
Bromoform	ND	1.0	229102	11/05/15
Isopropylbenzene	ND	0.5	229102	11/05/15
1,1,2,2-Tetrachloroethane	ND	0.5	229102	11/05/15
1,2,3-Trichloropropane	ND	0.5	229102	11/05/15
Propylbenzene	ND	0.5	229102	11/05/15
Bromobenzene	ND	0.5	229102	11/05/15
1,3,5-Trimethylbenzene	ND	0.5	229102	11/05/15
2-Chlorotoluene	ND	0.5	229102	11/05/15
4-Chlorotoluene	ND	0.5	229102	11/05/15
tert-Butylbenzene	ND	0.5	229102	11/05/15
1,2,4-Trimethylbenzene	ND	0.5	229102	11/05/15
sec-Butylbenzene	ND	0.5	229102	11/05/15
para-Isopropyl Toluene	ND	0.5	229102	11/05/15
1,3-Dichlorobenzene	ND	0.5	229102	11/05/15
1,4-Dichlorobenzene	ND	0.5	229102	11/05/15
n-Butylbenzene	ND	0.5	229102	11/05/15
1,2-Dichlorobenzene	ND	0.5	229102	11/05/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229102	11/05/15
1,2,4-Trichlorobenzene	ND	0.5	229102	11/05/15
Hexachlorobutadiene	ND	2.0	229102	11/05/15
Naphthalene	ND	2.0	229102	11/05/15
1,2,3-Trichlorobenzene	ND	0.5	229102	11/05/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	97	80-128	229102	11/05/15
1,2-Dichloroethane-d4	105	75-139	229102	11/05/15
Toluene-d8	86	80-120	229102	11/05/15
Bromofluorobenzene	95	80-120	229102	11/05/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-05-16-NS	Diln Fac:	1.000
Lab ID:	271203-008	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-05-16-NS	Diln Fac:	1.000
Lab ID:	271203-008	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	97	80-128	229102
1,2-Dichloroethane-d4	109	75-139	229102
Toluene-d8	92	80-120	229102
Bromofluorobenzene	97	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-05-24-NS	Diln Fac:	1.000
Lab ID:	271203-009	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-05-24-NS	Diln Fac:	1.000
Lab ID:	271203-009	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	98	80-128	229102
1,2-Dichloroethane-d4	103	75-139	229102
Toluene-d8	86	80-120	229102
Bromofluorobenzene	98	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-06-14-NS	Diln Fac:	1.000
Lab ID:	271203-010	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	1.0	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-06-14-NS	Diln Fac:	1.000
Lab ID:	271203-010	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	100	80-128	229102
1,2-Dichloroethane-d4	107	75-139	229102
Toluene-d8	92	80-120	229102
Bromofluorobenzene	92	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-06-24-NS	Diln Fac:	1.000
Lab ID:	271203-011	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	13	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	0.6	0.5	229102
MTBE	1.0	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-06-24-NS	Diln Fac:	1.000
Lab ID:	271203-011	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	99	80-128	229102
1,2-Dichloroethane-d4	107	75-139	229102
Toluene-d8	90	80-120	229102
Bromofluorobenzene	95	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-3	Diln Fac:	1.000
Lab ID:	271203-012	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-3	Diln Fac:	1.000
Lab ID:	271203-012	Sampled:	10/30/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	97	80-128	229102
1,2-Dichloroethane-d4	101	75-139	229102
Toluene-d8	93	80-120	229102
Bromofluorobenzene	97	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-07-16-NS	Diln Fac:	1.000
Lab ID:	271203-013	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	ND	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-07-16-NS	Diln Fac:	1.000
Lab ID:	271203-013	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	97	80-128	229102
1,2-Dichloroethane-d4	97	75-139	229102
Toluene-d8	94	80-120	229102
Bromofluorobenzene	100	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-07-26-NS	Diln Fac:	1.000
Lab ID:	271203-014	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
Freon 12	ND	1.0	229102
Chloromethane	ND	1.0	229102
Vinyl Chloride	ND	0.5	229102
Bromomethane	ND	1.0	229102
Chloroethane	ND	1.0	229102
Trichlorofluoromethane	ND	1.0	229102
Acetone	ND	10	229155
Freon 113	ND	2.0	229102
1,1-Dichloroethene	ND	0.5	229102
Methylene Chloride	ND	10	229102
Carbon Disulfide	0.8	0.5	229102
MTBE	ND	0.5	229102
trans-1,2-Dichloroethene	ND	0.5	229102
Vinyl Acetate	ND	10	229102
1,1-Dichloroethane	ND	0.5	229102
2-Butanone	ND	10	229102
cis-1,2-Dichloroethene	ND	0.5	229102
2,2-Dichloropropane	ND	0.5	229102
Chloroform	ND	0.5	229102
Bromochloromethane	ND	0.5	229102
1,1,1-Trichloroethane	ND	0.5	229102
1,1-Dichloropropene	ND	0.5	229102
Carbon Tetrachloride	ND	0.5	229102
1,2-Dichloroethane	ND	0.5	229102
Benzene	ND	0.5	229102
Trichloroethene	ND	0.5	229102
1,2-Dichloropropane	ND	0.5	229102
Bromodichloromethane	ND	0.5	229102
Dibromomethane	ND	0.5	229102
4-Methyl-2-Pentanone	ND	10	229102
cis-1,3-Dichloropropene	ND	0.5	229102
Toluene	ND	0.5	229102
trans-1,3-Dichloropropene	ND	0.5	229102
1,1,2-Trichloroethane	ND	0.5	229102
2-Hexanone	ND	10	229102
1,3-Dichloropropane	ND	0.5	229102
Tetrachloroethene	ND	0.5	229102
Dibromochloromethane	ND	0.5	229102

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-07-26-NS	Diln Fac:	1.000
Lab ID:	271203-014	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15

Analyte	Result	RL	Batch#
1,2-Dibromoethane	ND	0.5	229102
Chlorobenzene	ND	0.5	229102
1,1,1,2-Tetrachloroethane	ND	0.5	229102
Ethylbenzene	ND	0.5	229102
m,p-Xylenes	ND	0.5	229102
o-Xylene	ND	0.5	229102
Styrene	ND	0.5	229102
Bromoform	ND	1.0	229102
Isopropylbenzene	ND	0.5	229102
1,1,2,2-Tetrachloroethane	ND	0.5	229102
1,2,3-Trichloropropane	ND	0.5	229102
Propylbenzene	ND	0.5	229102
Bromobenzene	ND	0.5	229102
1,3,5-Trimethylbenzene	ND	0.5	229102
2-Chlorotoluene	ND	0.5	229102
4-Chlorotoluene	ND	0.5	229102
tert-Butylbenzene	ND	0.5	229102
1,2,4-Trimethylbenzene	ND	0.5	229102
sec-Butylbenzene	ND	0.5	229102
para-Isopropyl Toluene	ND	0.5	229102
1,3-Dichlorobenzene	ND	0.5	229102
1,4-Dichlorobenzene	ND	0.5	229102
n-Butylbenzene	ND	0.5	229102
1,2-Dichlorobenzene	ND	0.5	229102
1,2-Dibromo-3-Chloropropane	ND	2.0	229102
1,2,4-Trichlorobenzene	ND	0.5	229102
Hexachlorobutadiene	ND	2.0	229102
Naphthalene	ND	2.0	229102
1,2,3-Trichlorobenzene	ND	0.5	229102

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	99	80-128	229102
1,2-Dichloroethane-d4	107	75-139	229102
Toluene-d8	87	80-120	229102
Bromofluorobenzene	100	80-120	229102

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-16-FD	Batch#:	229211
Lab ID:	271203-015	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.4	0.5

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-16-FD	Batch#:	229211
Lab ID:	271203-015	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	130	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-16-NS	Batch#:	229211
Lab ID:	271203-016	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.2	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-16-NS	Batch#:	229211
Lab ID:	271203-016	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	132	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-24-NS	Batch#:	229211
Lab ID:	271203-017	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.5	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-09-24-NS	Batch#:	229211
Lab ID:	271203-017	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-10-16-NS	Batch#:	229211
Lab ID:	271203-018	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.6	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-10-16-NS	Batch#:	229211
Lab ID:	271203-018	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	133	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	85	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-2	Batch#:	229193
Lab ID:	271203-019	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/07/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	TB-2	Batch#:	229193
Lab ID:	271203-019	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/07/15
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-128
1,2-Dichloroethane-d4	82	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	127 *	80-120

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit  
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### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-10-26-NS	Batch#:	229211
Lab ID:	271203-020	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	0.6	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-10-26-NS	Batch#:	229211
Lab ID:	271203-020	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	85	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-11-12-NS	Batch#:	229211
Lab ID:	271203-021	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-11-12-NS	Batch#:	229211
Lab ID:	271203-021	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	130	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-11-22-NS	Batch#:	229211
Lab ID:	271203-022	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-11-22-NS	Batch#:	229211
Lab ID:	271203-022	Sampled:	10/28/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	130	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-12-12-NS	Batch#:	229118
Lab ID:	271203-023	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-12-12-NS	Batch#:	229118
Lab ID:	271203-023	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	82	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-12-22-NS	Batch#:	229118
Lab ID:	271203-024	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-12-22-NS	Batch#:	229118
Lab ID:	271203-024	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	80	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	114	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-18-12-NS	Batch#:	229118
Lab ID:	271203-025	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-18-12-NS	Batch#:	229118
Lab ID:	271203-025	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/05/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	83	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	111	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	229102
MSS Lab ID:	271236-009	Sampled:	11/02/15
Matrix:	Water	Received:	11/03/15
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Type: MS Lab ID: QC811403

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	3.556	25.00	32.82	117	73-129
Benzene	<0.1000	25.00	30.27	121 *	80-120
Trichloroethene	47.46	25.00	72.39	100	73-123
Toluene	<0.1000	25.00	24.32	97	80-120
Chlorobenzene	<0.1136	25.00	24.68	99	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	81	80-120
Bromofluorobenzene	96	80-120

Type: MSD Lab ID: QC811404

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	23.11	78	73-129	35 *	25
Benzene	25.00	22.20	89	80-120	31 *	20
Trichloroethene	25.00	58.97	46 *	73-123	20	20
Toluene	25.00	22.51	90	80-120	8	21
Chlorobenzene	25.00	22.79	91	80-120	8	24

Surrogate	%REC	Limits
Dibromofluoromethane	88	80-128
1,2-Dichloroethane-d4	83	75-139
Toluene-d8	89	80-120
Bromofluorobenzene	95	80-120

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811405	Batch#:	229102
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND b	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811405	Batch#:	229102
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	89	80-120
Bromofluorobenzene	99	80-120

b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
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**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-12-22-NS	Batch#:	229118
MSS Lab ID:	271203-024	Sampled:	10/29/15
Matrix:	Water	Received:	10/31/15
Units:	ug/L	Analyzed:	11/06/15
Diln Fac:	1.000		

Type: MS Lab ID: QC811472

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1000	25.00	29.35	117	73-129
Benzene	<0.1000	25.00	28.37	113	80-120
Trichloroethene	<0.1161	25.00	27.17	109	73-123
Toluene	<0.1000	25.00	27.53	110	80-120
Chlorobenzene	<0.1000	25.00	28.50	114	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	97	80-120

Type: MSD Lab ID: QC811473

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	28.61	114	73-129	3	25
Benzene	25.00	27.94	112	80-120	2	20
Trichloroethene	25.00	26.83	107	73-123	1	20
Toluene	25.00	27.19	109	80-120	1	21
Chlorobenzene	25.00	27.85	111	80-120	2	24

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	78	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811474	Batch#:	229118
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811474	Batch#:	229118
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	97	80-128
1,2-Dichloroethane-d4	82	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	116	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC811523	Batch#:	229118
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	13.54	108	66-135
Benzene	12.50	13.54	108	80-123
Trichloroethene	12.50	12.73	102	80-123
Toluene	12.50	13.16	105	80-121
Chlorobenzene	12.50	13.67	109	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-128
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	106	80-120

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC811536	Batch#:	229102
Matrix:	Water	Analyzed:	11/05/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.62	94	66-135
Benzene	25.00	26.80	107	80-123
Trichloroethene	25.00	26.56	106	80-123
Toluene	25.00	25.01	100	80-121
Chlorobenzene	25.00	25.50	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	89	80-120
Bromofluorobenzene	95	80-120

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	229155
Units:	ug/L	Analyzed:	11/06/15
Diln Fac:	1.000		

Type: BS Lab ID: QC811624

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.51	100	66-135
Benzene	12.50	13.79	110	80-123
Trichloroethene	12.50	13.30	106	80-123
Toluene	12.50	15.02	120	80-121
Chlorobenzene	12.50	14.30	114	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	115	75-139
Toluene-d8	111	80-120
Bromofluorobenzene	113	80-120

Type: BSD Lab ID: QC811625

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	10.06	80	66-135	22	24
Benzene	12.50	11.26	90	80-123	20	20
Trichloroethene	12.50	10.77	86	80-123	21 *	20
Toluene	12.50	12.39	99	80-121	19	20
Chlorobenzene	12.50	11.73	94	80-123	20	20

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	118	75-139
Toluene-d8	110	80-120
Bromofluorobenzene	112	80-120

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811626	Batch#:	229155
Matrix:	Water	Analyzed:	11/06/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811626	Batch#:	229155
Matrix:	Water	Analyzed:	11/06/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	111	80-128
1,2-Dichloroethane-d4	118	75-139
Toluene-d8	111	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected

RL= Reporting Limit



## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC811768	Batch#:	229193
Matrix:	Water	Analyzed:	11/07/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.20	98	66-135
Benzene	12.50	12.79	102	80-123
Trichloroethene	12.50	12.02	96	80-123
Toluene	12.50	12.44	99	80-121
Chlorobenzene	12.50	12.85	103	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	110	80-120

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811770	Batch#:	229193
Matrix:	Water	Analyzed:	11/07/15
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811770	Batch#:	229193
Matrix:	Water	Analyzed:	11/07/15
Units:	ug/L		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	82	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	123 *	80-120

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	229193
MSS Lab ID:	271248-002	Sampled:	11/03/15
Matrix:	Water	Received:	11/03/15
Units:	ug/L	Analyzed:	11/07/15
Diln Fac:	3.333		

Type: MS Lab ID: QC811785

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.3333	83.33	93.94	113	73-129
Benzene	<0.3333	83.33	94.81	114	80-120
Trichloroethene	226.3	83.33	303.7	93	73-123
Toluene	<0.3333	83.33	92.03	110	80-120
Chlorobenzene	<0.3333	83.33	95.08	114	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	80	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	98	80-120

Type: MSD Lab ID: QC811786

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	83.33	84.60	102	73-129	10	25
Benzene	83.33	89.17	107	80-120	6	20
Trichloroethene	83.33	283.3	68 *	73-123	7	20
Toluene	83.33	85.12	102	80-120	8	21
Chlorobenzene	83.33	89.29	107	80-120	6	24

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	92	80-120
Bromofluorobenzene	100	80-120

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	229211
Units:	ug/L	Analyzed:	11/09/15
Diln Fac:	1.000		

Type: BS Lab ID: QC811845

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	9.979	80	66-135
Benzene	12.50	11.51	92	80-123
Trichloroethene	12.50	12.65	101	80-123
Toluene	12.50	11.77	94	80-121
Chlorobenzene	12.50	12.99	104	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-128
1,2-Dichloroethane-d4	128	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	84	80-120

Type: BSD Lab ID: QC811846

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	9.484	76	66-135	5	24
Benzene	12.50	11.39	91	80-123	1	20
Trichloroethene	12.50	12.60	101	80-123	0	20
Toluene	12.50	11.37	91	80-121	4	20
Chlorobenzene	12.50	12.66	101	80-123	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-128
1,2-Dichloroethane-d4	128	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	84	80-120

RPD= Relative Percent Difference

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811847	Batch#:	229211
Matrix:	Water	Analyzed:	11/09/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271203	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC811847	Batch#:	229211
Matrix:	Water	Analyzed:	11/09/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	129	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	85	80-120

ND= Not Detected

RL= Reporting Limit

**Initial & Continuing Calibration Data**



CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA03 Run Name : BFB IDF : 1.0  
Seqnum : 425383715013 File : cin13 Time : 23-SEP-2015 20:54

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	57842	20.44	
75	30% - 60% of mass 95	128698	45.47	
95		283029	100.00	
96	5% - 9% of mass 95	19250	6.80	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	213845	75.56	
175	5% - 9% of mass 174	15834	7.40	
176	> 95% and < 101% of mass 174	205610	96.15	
177	5% - 9% of mass 176	13648	6.64	

Analyst: DAR Date: 09/24/15 Reviewer: LW Date: 09/29/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : BFB                      IDF : 1.0  
Seqnum : 425447153002              File : ck602                      Time : 06-NOV-2015 13:16

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	80269	23.62	
75	30% - 60% of mass 95	165120	48.59	
95		339818	100.00	
96	5% - 9% of mass 95	22488	6.62	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	252245	74.23	
175	5% - 9% of mass 174	18475	7.32	
176	> 95% and < 101% of mass 174	244373	96.88	
177	5% - 9% of mass 176	15933	6.52	

Analyst: TEW                      Date: 11/09/15                      Reviewer: LW                      Date: 11/10/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : BFB                      IDF : 1.0  
Seqnum : 485399877003              File : ij403                      Time : 04-OCT-2015 18:52

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	16384	24.19	
75	30% - 60% of mass 95	33384	49.29	
95		67725	100.00	
96	5% - 9% of mass 95	4641	6.85	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	51917	76.66	
175	5% - 9% of mass 174	3943	7.59	
176	> 95% and < 101% of mass 174	50093	96.49	
177	5% - 9% of mass 176	3384	6.76	

Analyst: DAR                      Date: 10/06/15                      Reviewer: LW                      Date: 10/07/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : BFB                      IDF : 1.0  
Seqnum : 485401479002              File : ij502                      Time : 05-OCT-2015 19:52

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	15657	22.89	
75	30% - 60% of mass 95	32573	47.61	
95		68410	100.00	
96	5% - 9% of mass 95	4761	6.96	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	55885	81.69	
175	5% - 9% of mass 174	4234	7.58	
176	> 95% and < 101% of mass 174	53674	96.04	
177	5% - 9% of mass 176	3473	6.47	

Analyst: DAR                      Date: 10/06/15                      Reviewer: LW                      Date: 10/07/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : BFB                      IDF : 1.0  
Seqnum : 485402532002              File : ij602                      Time : 06-OCT-2015 13:23

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	28597	24.33	
75	30% - 60% of mass 95	58338	49.63	
95		117538	100.00	
96	5% - 9% of mass 95	7947	6.76	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	90168	76.71	
175	5% - 9% of mass 174	7198	7.98	
176	> 95% and < 101% of mass 174	87394	96.92	
177	5% - 9% of mass 176	6079	6.96	

Analyst: DAR                      Date: 10/06/15                      Reviewer: LW                      Date: 10/07/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : BFB                      IDF : 1.0  
Seqnum : 485445681009              File : ik509                      Time : 05-NOV-2015 18:46

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	14227	21.38	
75	30% - 60% of mass 95	29720	44.66	
95		66541	100.00	
96	5% - 9% of mass 95	4560	6.85	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	61368	92.23	
175	5% - 9% of mass 174	4772	7.78	
176	> 95% and < 101% of mass 174	58757	95.75	
177	5% - 9% of mass 176	3945	6.71	

Analyst:   NJT                        Date:   11/06/15                        Reviewer:   LW                        Date:   11/06/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : BFB                      IDF : 1.0  
Seqnum : 485451358008              File : ik908                      Time : 09-NOV-2015 16:25

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	41234	20.48	
75	30% - 60% of mass 95	90122	44.76	
95		201344	100.00	
96	5% - 9% of mass 95	13610	6.76	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	180480	89.64	
175	5% - 9% of mass 174	14044	7.78	
176	> 95% and < 101% of mass 174	174250	96.55	
177	5% - 9% of mass 176	11239	6.45	

Analyst:   NJT                        Date:   11/10/15                        Reviewer:   LW                        Date:   11/10/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10                      Run Name : BFB                      IDF : 1.0  
Seqnum : 495321824003              File : jhb03                      Time : 11-AUG-2015 13:21

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	138637	25.18	
75	30% - 60% of mass 95	276864	50.29	
95		550549	100.00	
96	5% - 9% of mass 95	37531	6.82	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	366506	66.57	
175	5% - 9% of mass 174	27706	7.56	
176	> 95% and < 101% of mass 174	360490	98.36	
177	5% - 9% of mass 176	24042	6.67	

Analyst: KKM                      Date: 08/12/15                      Reviewer: LW                      Date: 08/12/15



CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10                      Run Name : BFB                      IDF : 1.0  
Seqnum : 495445756003              File : jk503                      Time : 05-NOV-2015 14:23

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	84474	22.37	
75	30% - 60% of mass 95	175850	46.57	
95		377621	100.00	
96	5% - 9% of mass 95	26282	6.96	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	283669	75.12	
175	5% - 9% of mass 174	20525	7.24	
176	> 95% and < 101% of mass 174	278293	98.10	
177	5% - 9% of mass 176	17382	6.25	

Analyst: KKM                      Date: 11/06/15                      Reviewer: LW                      Date: 11/06/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0  
Seqnum : 495448497003 File : jk703 Time : 07-NOV-2015 12:10

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	107080	22.99	
75	30% - 60% of mass 95	218965	47.01	
95		465813	100.00	
96	5% - 9% of mass 95	31928	6.85	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	347605	74.62	
175	5% - 9% of mass 174	25384	7.30	
176	> 95% and < 101% of mass 174	336661	96.85	
177	5% - 9% of mass 176	22426	6.66	

Analyst: KER Date: 11/09/15 Reviewer: LW Date: 11/09/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955422499012              File : njk12                      Time : 20-OCT-2015 13:29

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	6135	25.97	
75	30% - 60% of mass 95	11611	49.16	
95		23619	100.00	
96	5% - 9% of mass 95	1771	7.50	
173	< 2% of mass 174	181	1.03	
174	> 50% and < 100% of mass 95	17576	74.41	
175	5% - 9% of mass 174	1199	6.82	
176	> 95% and < 101% of mass 174	17083	97.20	
177	5% - 9% of mass 176	1070	6.26	

Analyst: MCT                      Date: 10/21/15                      Reviewer: LW                      Date: 10/22/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955423728005              File : njl05                      Time : 21-OCT-2015 10:43

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	9284	26.58	
75	30% - 60% of mass 95	17331	49.61	
95		34931	100.00	
96	5% - 9% of mass 95	2234	6.40	
173	< 2% of mass 174	246	1.02	
174	> 50% and < 100% of mass 95	24045	68.84	
175	5% - 9% of mass 174	1674	6.96	
176	> 95% and < 101% of mass 174	23349	97.11	
177	5% - 9% of mass 176	1688	7.23	

MCT: 10/21/15 \*      DJA: 10/22/15      LW: 10/23/15

CURTIS & TOMPKINS BFB TUNE FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955451069011              File : nk911                      Time : 09-NOV-2015 14:58

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	4825	30.10	
75	30% - 60% of mass 95	9136	57.00	
95		16028	100.00	
96	5% - 9% of mass 95	1047	6.53	
173	< 2% of mass 174	220	1.53	
174	> 50% and < 100% of mass 95	14418	89.96	
175	5% - 9% of mass 174	1238	8.59	
176	> 95% and < 101% of mass 174	14134	98.03	
177	5% - 9% of mass 176	873	6.18	

Analyst: MCT                      Date: 11/10/15                      Reviewer: LW                      Date: 11/10/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 MSVOA Water: EPA 8260B

Inst : MSVOA03  
 Calnum : 425383715001  
 Units : ug/L

Name : 8260GX3W  
 Date : 23-SEP-2015 23:45  
 X Axis : R

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	cin18	425383715018	.25/.5PPB	23-SEP-2015 23:45	S27005 (2000000X), S27823 (2000000X), S27893 (2000000X), S26571 (1000000X), S27973 (5000X)
L2	cin19	425383715019	.5/1PPB	24-SEP-2015 00:07	S27973 (5000X), S27005 (1000000X), S27823 (1000000X), S27893 (1000000X), S26571 (500000X)
L3	cin20	425383715020	2PPB	24-SEP-2015 00:50	S27005 (250000X), S27823 (250000X), S27893 (250000X), S26571 (250000X), S27973 (5000X)
L4	cin21	425383715021	5PPB	24-SEP-2015 01:11	S27973 (5000X), S27005 (100000X), S27823 (100000X), S27893 (100000X), S26571 (100000X)
L5	cin22	425383715022	10PPB	24-SEP-2015 01:54	S27973 (5000X), S27005 (50000X), S27823 (50000X), S27893 (50000X), S26571 (50000X)
L6	cin23	425383715023	20PPB	24-SEP-2015 02:37	S27973 (5000X), S27005 (25000X), S27823 (25000X), S27893 (25000X), S26571 (25000X)
L7	cin24	425383715024	50PPB	24-SEP-2015 02:58	S27973 (5000X), S27005 (10000X), S27823 (10000X), S27893 (10000X), S26571 (10000X)
L8	cin25	425383715025	75PPB	24-SEP-2015 03:41	S27973 (5000X), S27005 (6667X), S27823 (6667X), S27893 (6667X), S26571 (6667X)
L9	cin26	425383715026	100PPB	24-SEP-2015 04:24	S27973 (5000X), S27005 (5000X), S27823 (5000X), S27893 (5000X), S26571 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.5073	0.5042	0.5536	0.5000	0.4829	0.5209	0.4776	0.4799	AVRG		1.98696		0.5033	5	15	0.05	0.99	
Chloromethane	0.6172	0.5010	0.4729	0.5033	0.4523	0.4609	0.4354	0.4493	0.4195	AVRG		2.08731		0.4791	12	15	0.10	0.99	
Vinyl Chloride	0.4453	0.4441	0.4176	0.4640	0.4201	0.4435	0.4268	0.4192	0.3990	AVRG		2.31981		0.4311	5	15	0.05	0.99	
Bromomethane		0.2686	0.2307	0.2588	0.2195	0.2707	0.2440	0.2657	0.2397	AVRG		4.00446		0.2497	8	15	0.05	0.99	
Chloroethane		0.2308	0.2507	0.2734	0.2496	0.2606	0.2545	0.2485	0.2303	AVRG		4.00340		0.2498	6	15	0.05	0.99	
Trichlorofluoromethane		0.5659	0.5435	0.5694	0.5102	0.5385	0.5171	0.4942	0.4973	AVRG		1.88847		0.5295	6	15	0.05	0.99	
Acetone				0.2325	0.2315	0.1969	0.2264	0.1912	0.2184	AVRG		4.62637		0.2162	8	15	0.05	0.99	
Freon 113		0.3718	0.4455	0.4375	0.4021	0.4196	0.3928	0.3958	0.3933	AVRG		2.45512		0.4073	6	15	0.05	0.99	
1,1-Dichloroethene		0.3643	0.4379	0.4324	0.3841	0.3978	0.3946	0.3846	0.3830	AVRG		2.51673		0.3973	6	15	0.05	0.99	
Methylene Chloride		0.4334	0.5674	0.5710	0.5535	0.5513	0.5366	0.5322	0.5301	AVRG		1.87109		0.5344	8	15	0.05	0.99	
Carbon Disulfide		1.4808	1.7776	1.7869	1.6096	1.6685	1.5695	1.5513	1.5520	AVRG		0.61556		1.6245	7	15	0.05	0.99	
MTBE		1.0902	1.2758	1.2877	1.3594	1.3385	1.3385	1.2805	1.2571	AVRG		0.78220		1.2784	7	15	0.05	0.99	
trans-1,2-Dichloroethene		0.4336	0.4815	0.4832	0.4548	0.4690	0.4674	0.4439	0.4370	AVRG		2.17961		0.4588	4	15	0.05	0.99	
Vinyl Acetate					0.9175	1.2091	0.9294	0.9789	0.8856	AVRG		1.01615		0.9841	13	15	0.05	0.99	
1,1-Dichloroethane		0.7873	0.9139	0.9253	0.8937	0.9286	0.8860	0.8365	0.8671	AVRG		1.13662		0.8798	6	15	0.10	0.99	
2-Butanone				0.3164	0.3487	0.3038	0.3224	0.2741	0.3056	AVRG		3.20702		0.3118	8	15	0.05	0.99	
2,2-Dichloropropane		0.4428	0.5126	0.5000	0.4702	0.4989	0.4501	0.4327	0.4223	AVRG		2.14505		0.4662	7	15	0.05	0.99	
cis-1,2-Dichloroethene		0.5046	0.5427	0.5543	0.5393	0.5465	0.5350	0.5272	0.5206	AVRG		1.87348		0.5338	3	15	0.05	0.99	
Chloroform		0.7722	0.8796	0.9134	0.8704	0.8899	0.8513	0.8343	0.8177	AVRG		1.17153		0.8536	5	15	0.05	0.99	
Bromochloromethane		0.2551	0.3001	0.3036	0.3099	0.3099	0.2980	0.2938	0.2809	AVRG		3.40237		0.2939	6	15	0.05	0.99	
1,1,1-Trichloroethane		0.5663	0.6509	0.6537	0.6186	0.6422	0.6122	0.6097	0.6002	AVRG		1.61492		0.6192	5	15	0.05	0.99	
1,1-Dichloropropene		0.3185	0.3546	0.3627	0.3404	0.3526	0.3379	0.3394	0.3403	AVRG		2.91303		0.3433	4	15	0.05	0.99	
Carbon Tetrachloride		0.1910	0.2625	0.2786	0.2745	0.2955	0.2898	0.2988	0.3002	AVRG		3.65149		0.2739	13	15	0.05	0.99	
1,2-Dichloroethane		0.3151	0.3687	0.3741	0.3759	0.3760	0.3673	0.3634	0.3571	AVRG		2.76087		0.3622	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		0.9027	1.0217	1.0332	0.9905	0.9987	0.9460	0.9395	0.9110	AVRG		1.03315		0.9679	5	15	0.05	0.99	
Trichloroethene		0.2360	0.2895	0.2931	0.2774	0.2805	0.2747	0.2703	0.2699	AVRG		3.65080		0.2739	6	15	0.05	0.99	
1,2-Dichloropropane		0.2724	0.3137	0.3191	0.3108	0.3167	0.3125	0.3111	0.3028	AVRG		3.25322		0.3074	5	15	0.05	0.99	
Bromodichloromethane		0.3306	0.3617	0.3856	0.3837	0.3928	0.3858	0.3883	0.3849	AVRG		2.65482		0.3767	6	15	0.05	0.99	
Dibromomethane		0.1950	0.2202	0.2252	0.2303	0.2274	0.2254	0.2214	0.2192	AVRG		4.53501		0.2205	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.3921	0.3558	0.3957	0.3697	0.3941	0.3628	0.3836	AVRG		2.63767		0.3791	4	15	0.05	0.99	
cis-1,3-Dichloropropene		0.3925	0.4264	0.4334	0.4375	0.4474	0.4445	0.4410	0.4333	AVRG		2.31478		0.4320	4	15	0.05	0.99	
Toluene		0.5795	0.6232	0.6391	0.6132	0.6314	0.5958	0.5939	0.5858	AVRG		1.64548		0.6077	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.3428	0.3780	0.3947	0.3994	0.4197	0.4171	0.4067	0.4133	AVRG		2.52230		0.3965	6	15	0.05	0.99	
1,1,2-Trichloroethane		0.1434	0.1583	0.1629	0.1610	0.1664	0.1646	0.1599	0.1610	AVRG		6.26272		0.1597	4	15	0.05	0.99	
2-Hexanone			0.3038	0.2742	0.3041	0.2758	0.3024	0.2705	0.2929	AVRG		3.45894		0.2891	5	15	0.05	0.99	
1,3-Dichloropropane		0.4315	0.4760	0.4809	0.4892	0.4929	0.4804	0.4709	0.4727	AVRG		2.10826		0.4743	4	15	0.05	0.99	
Tetrachloroethene		0.2380	0.2641	0.2650	0.2474	0.2625	0.2519	0.2536	0.2579	AVRG		3.92097		0.2550	4	15	0.05	0.99	
Dibromochloromethane		0.2743	0.3176	0.3244	0.3416	0.3551	0.3592	0.3603	0.3644	AVRG		2.96637		0.3371	9	15	0.05	0.99	
1,2-Dibromoethane		0.2950	0.3297	0.3220	0.3328	0.3340	0.3391	0.3325	0.3371	AVRG		3.05110		0.3278	4	15	0.05	0.99	
Chlorobenzene		0.6987	0.7618	0.7751	0.7366	0.7640	0.7265	0.7230	0.7153	AVRG		1.35571		0.7376	4	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.2272	0.2640	0.2740	0.2719	0.2819	0.2763	0.2764	0.2762	AVRG		3.72469		0.2685	7	15	0.05	0.99	
Ethylbenzene		1.0373	1.1807	1.2219	1.1282	1.1769	1.1048	1.0995	1.0840	AVRG		0.88561		1.1292	5	15	0.05	0.99	
m,p-Xylenes	0.3957	0.3716	0.4325	0.4563	0.4282	0.4475	0.4113	0.4040	0.3904	AVRG		2.40809		0.4153	7	15	0.05	0.99	
o-Xylene		0.3834	0.4236	0.4533	0.4312	0.4588	0.4226	0.4243	0.4130	AVRG		2.34594		0.4263	6	15	0.05	0.99	
Styrene		0.6550	0.7438	0.7920	0.7742	0.8187	0.7645	0.7573	0.7425	AVRG		1.32275		0.7560	6	15	0.05	0.99	
Bromoform		0.1833	0.1987	0.2023	0.2185	0.2286	0.2447	0.2401	0.2491	AVRG		4.53173		0.2207	11	15	0.10	0.99	
Isopropylbenzene		1.8368	2.1137	2.1934	2.0555	2.1799	2.0128	2.0239	1.9990	AVRG		0.48736		2.0519	6	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.7630	0.8180	0.7886	0.8282	0.8572	0.8327	0.8050	0.8134	AVRG		1.22963		0.8133	4	15	0.30	0.99	
1,2,3-Trichloropropane		0.6234m	0.6802m	0.6264m	0.6715m	0.6308m	0.6213m	0.5997m	0.5977m	AVRG		1.58387		0.6314	5	15	0.05	0.99	
Propylbenzene		2.3019	2.6203	2.6749	2.5161	2.6008	2.3441	2.3273	2.2390	AVRG		0.40765		2.4531	7	15	0.05	0.99	
Bromobenzene		0.5863	0.6229	0.6438	0.6300	0.6475	0.6099	0.6069	0.5900	AVRG		1.62031		0.6172	4	15	0.05	0.99	
1,3,5-Trimethylbenzene		1.4720	1.7399	1.8040	1.6729	1.7644	1.5893	1.5702	1.5395	AVRG		0.60827		1.6440	7	15	0.05	0.99	
2-Chlorotoluene		1.6069	1.7773	1.8346	1.7267	1.7758	1.6068	1.5721	1.5224	AVRG		0.59601		1.6778	7	15	0.05	0.99	
4-Chlorotoluene		1.5104	1.6756	1.7296	1.6237	1.6999	1.5731	1.5760	1.5524	AVRG		0.61820		1.6176	5	15	0.05	0.99	
tert-Butylbenzene		1.2264	1.4579	1.4495	1.3727	1.4427	1.3330	1.3558	1.3507	AVRG		0.72802		1.3736	6	15	0.05	0.99	
1,2,4-Trimethylbenzene		1.5705	1.7515	1.8465	1.7490	1.8472	1.7140	1.7179	1.7039	AVRG		0.57552		1.7376	5	15	0.05	0.99	
sec-Butylbenzene		1.8894	2.1525	2.2019	2.0955	2.2228	2.0609	2.0804	2.0751	AVRG		0.47680		2.0973	5	15	0.05	0.99	
para-Isopropyl Toluene		1.4120	1.7049	1.7409	1.6588	1.7839	1.6458	1.6673	1.6751	AVRG		0.60201		1.6611	7	15	0.05	0.99	
1,3-Dichlorobenzene		0.9972	1.0804	1.1370	1.0736	1.1394	1.0710	1.0764	1.0771	AVRG		0.92464		1.0815	4	15	0.05	0.99	
1,4-Dichlorobenzene		1.0585	1.1594	1.1754	1.1193	1.1657	1.1027	1.1081	1.1058	AVRG		0.88939		1.1244	4	15	0.05	0.99	
n-Butylbenzene		1.2135	1.5152	1.5535	1.4708	1.6166	1.4705	1.5040	1.5061	AVRG		0.67510		1.4813	8	15	0.05	0.99	
1,2-Dichlorobenzene		0.9521	1.0846	1.1053	1.0753	1.1227	1.0594	1.0740	1.0758	AVRG		0.93576		1.0687	5	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.0946	0.1392	0.1264	0.1357	0.1345	0.1419	0.1311	0.1421	AVRG		7.65201		0.1307	12	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.4087	0.5467	0.5761	0.5783	0.6209	0.5983	0.6025	0.6165	AVRG		1.75898		0.5685	12	15	0.05	0.99	
Hexachlorobutadiene		0.1243	0.1842	0.1901	0.1811	0.1986	0.1795	0.1865	0.1934	AVRG		5.56427		0.1797	13	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		1.1936	1.4158	1.4739	1.5871	1.6634	1.7487	1.6896	1.8211	AVRG		0.63526		1.5742	13	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.3778	0.5187	0.5482	0.5598	0.5948	0.5850	0.5851	0.6067	AVRG		1.82811		0.5470	14	15	0.05	0.99	
Dibromofluoromethane	0.7032	0.7017	0.7058	0.6994	0.6994	0.6962	0.6898	0.6832	0.6771	AVRG		1.43870		0.6951	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3764	0.3744	0.3779	0.3745	0.3834	0.3620	0.3534	0.3482	0.3408	AVRG		2.73469		0.3657	4	15	0.05	0.99	
Toluene-d8	1.1333	1.1252	1.1333	1.1312	1.1348	1.1381	1.1358	1.1438	1.1446	AVRG		0.88062		1.1356	1	15	0.05	0.99	
Bromofluorobenzene	0.9683	0.9632	0.9701	0.9524	0.9457	0.9539	0.9342	0.9366	0.9351	AVRG		1.05144		0.9511	1	15	0.05	0.99	



Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	1	2.0000	0	5.0000	10	10.000	-1	20.000	-4	50.000	3	75.000	-5	100.00	-5
Chloromethane	0.5000	29	1.0000	5	2.0000	-1	5.0000	5	10.000	-6	20.000	-4	50.000	-9	75.000	-6	100.00	-12
Vinyl Chloride	0.5000	3	1.0000	3	2.0000	-3	5.0000	8	10.000	-3	20.000	3	50.000	-1	75.000	-3	100.00	-7
Bromomethane			1.0000	8	2.0000	-8	5.0000	4	10.000	-12	20.000	8	50.000	-2	75.000	6	100.00	-4
Chloroethane			1.0000	-8	2.0000	0	5.0000	9	10.000	0	20.000	4	50.000	2	75.000	-1	100.00	-8
Trichlorofluoromethane			1.0000	7	2.0000	3	5.0000	8	10.000	-4	20.000	2	50.000	-2	75.000	-7	100.00	-6
Acetone							5.0000	8	10.000	7	20.000	-9	50.000	5	75.000	-12	100.00	1
Freon 113			0.5000	-9	2.0000	9	5.0000	7	10.000	-1	20.000	3	50.000	-4	75.000	-3	100.00	-3
1,1-Dichloroethene			0.5000	-8	2.0000	10	5.0000	9	10.000	-3	20.000	0	50.000	-1	75.000	-3	100.00	-4
Methylene Chloride			0.5000	-19	2.0000	6	5.0000	7	10.000	4	20.000	3	50.000	0	75.000	0	100.00	-1
Carbon Disulfide			0.5000	-9	2.0000	9	5.0000	10	10.000	-1	20.000	3	50.000	-3	75.000	-5	100.00	-4
MTBE			0.5000	-15	2.0000	0	5.0000	1	10.000	6	20.000	5	50.000	5	75.000	0	100.00	-2
trans-1,2-Dichloroethene			0.5000	-5	2.0000	5	5.0000	5	10.000	-1	20.000	2	50.000	2	75.000	-3	100.00	-5
Vinyl Acetate									10.000	-7	20.000	23	50.000	-6	75.000	-1	100.00	-10
1,1-Dichloroethane			0.5000	-11	2.0000	4	5.0000	5	10.000	2	20.000	6	50.000	1	75.000	-5	100.00	-1
2-Butanone							5.0000	1	10.000	12	20.000	-3	50.000	3	75.000	-12	100.00	-2
2,2-Dichloropropane			0.5000	-5	2.0000	10	5.0000	7	10.000	1	20.000	7	50.000	-3	75.000	-7	100.00	-9
cis-1,2-Dichloroethene			0.5000	-5	2.0000	2	5.0000	4	10.000	1	20.000	2	50.000	0	75.000	-1	100.00	-2
Chloroform			0.5000	-10	2.0000	3	5.0000	7	10.000	2	20.000	4	50.000	0	75.000	-2	100.00	-4
Bromochloromethane			0.5000	-13	2.0000	2	5.0000	3	10.000	5	20.000	5	50.000	1	75.000	0	100.00	-4
1,1,1-Trichloroethane			0.5000	-9	2.0000	5	5.0000	6	10.000	0	20.000	4	50.000	-1	75.000	-2	100.00	-3
1,1-Dichloropropene			0.5000	-7	2.0000	3	5.0000	6	10.000	-1	20.000	3	50.000	-2	75.000	-1	100.00	-1
Carbon Tetrachloride			0.5000	-30	2.0000	-4	5.0000	2	10.000	0	20.000	8	50.000	6	75.000	9	100.00	10
1,2-Dichloroethane			0.5000	-13	2.0000	2	5.0000	3	10.000	4	20.000	4	50.000	1	75.000	0	100.00	-1
Benzene			0.5000	-7	2.0000	6	5.0000	7	10.000	2	20.000	3	50.000	-2	75.000	-3	100.00	-6
Trichloroethene			0.5000	-14	2.0000	6	5.0000	7	10.000	1	20.000	2	50.000	0	75.000	-1	100.00	-1
1,2-Dichloropropane			0.5000	-11	2.0000	2	5.0000	4	10.000	1	20.000	3	50.000	2	75.000	1	100.00	-1
Bromodichloromethane			0.5000	-12	2.0000	-4	5.0000	2	10.000	2	20.000	4	50.000	2	75.000	3	100.00	2
Dibromomethane			0.5000	-12	2.0000	0	5.0000	2	10.000	4	20.000	3	50.000	2	75.000	0	100.00	-1
4-Methyl-2-Pentanone					2.0000	3	5.0000	-6	10.000	4	20.000	-2	50.000	4	75.000	-4	100.00	1
cis-1,3-Dichloropropene			0.5000	-9	2.0000	-1	5.0000	0	10.000	1	20.000	4	50.000	3	75.000	2	100.00	0
Toluene			0.5000	-5	2.0000	3	5.0000	5	10.000	1	20.000	4	50.000	-2	75.000	-2	100.00	-4
trans-1,3-Dichloropropene			0.5000	-14	2.0000	-5	5.0000	0	10.000	1	20.000	6	50.000	5	75.000	3	100.00	4
1,1,2-Trichloroethane			0.5000	-10	2.0000	-1	5.0000	2	10.000	1	20.000	4	50.000	3	75.000	0	100.00	1
2-Hexanone					2.0000	5	5.0000	-5	10.000	5	20.000	-5	50.000	5	75.000	-6	100.00	1
1,3-Dichloropropane			0.5000	-9	2.0000	0	5.0000	1	10.000	3	20.000	4	50.000	1	75.000	-1	100.00	0
Tetrachloroethene			0.5000	-7	2.0000	4	5.0000	4	10.000	-3	20.000	3	50.000	-1	75.000	-1	100.00	1
Dibromochloromethane			0.5000	-19	2.0000	-6	5.0000	-4	10.000	1	20.000	5	50.000	7	75.000	7	100.00	8
1,2-Dibromoethane			0.5000	-10	2.0000	1	5.0000	-2	10.000	2	20.000	2	50.000	3	75.000	1	100.00	3
Chlorobenzene			0.5000	-5	2.0000	3	5.0000	5	10.000	0	20.000	4	50.000	-2	75.000	-2	100.00	-3
1,1,1,2-Tetrachloroethane			0.5000	-15	2.0000	-2	5.0000	2	10.000	1	20.000	5	50.000	3	75.000	3	100.00	3
Ethylbenzene			0.5000	-8	2.0000	5	5.0000	8	10.000	0	20.000	4	50.000	-2	75.000	-3	100.00	-4

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-5	1.0000	-11	4.0000	4	10.000	10	20.000	3	40.000	8	100.00	-1	150.00	-3	200.00	-6
o-Xylene			0.5000	-10	2.0000	-1	5.0000	6	10.000	1	20.000	8	50.000	-1	75.000	0	100.00	-3
Styrene			0.5000	-13	2.0000	-2	5.0000	5	10.000	2	20.000	8	50.000	1	75.000	0	100.00	-2
Bromoform			0.5000	-17	2.0000	-10	5.0000	-8	10.000	-1	20.000	4	50.000	11	75.000	9	100.00	13
Isopropylbenzene			0.5000	-10	2.0000	3	5.0000	7	10.000	0	20.000	6	50.000	-2	75.000	-1	100.00	-3
1,1,2,2-Tetrachloroethane			0.5000	-6	2.0000	1	5.0000	-3	10.000	2	20.000	5	50.000	2	75.000	-1	100.00	0
1,2,3-Trichloropropane			0.5000	-1	2.0000	8	5.0000	-1	10.000	6	20.000	0	50.000	-2	75.000	-5	100.00	-5
Propylbenzene			0.5000	-6	2.0000	7	5.0000	9	10.000	3	20.000	6	50.000	-4	75.000	-5	100.00	-9
Bromobenzene			0.5000	-5	2.0000	1	5.0000	4	10.000	2	20.000	5	50.000	-1	75.000	-2	100.00	-4
1,3,5-Trimethylbenzene			0.5000	-10	2.0000	6	5.0000	10	10.000	2	20.000	7	50.000	-3	75.000	-4	100.00	-6
2-Chlorotoluene			0.5000	-4	2.0000	6	5.0000	9	10.000	3	20.000	6	50.000	-4	75.000	-6	100.00	-9
4-Chlorotoluene			0.5000	-7	2.0000	4	5.0000	7	10.000	0	20.000	5	50.000	-3	75.000	-3	100.00	-4
tert-Butylbenzene			0.5000	-11	2.0000	6	5.0000	6	10.000	0	20.000	5	50.000	-3	75.000	-1	100.00	-2
1,2,4-Trimethylbenzene			0.5000	-10	2.0000	1	5.0000	6	10.000	1	20.000	6	50.000	-1	75.000	-1	100.00	-2
sec-Butylbenzene			0.5000	-10	2.0000	3	5.0000	5	10.000	0	20.000	6	50.000	-2	75.000	-1	100.00	-1
para-Isopropyl Toluene			0.5000	-15	2.0000	3	5.0000	5	10.000	0	20.000	7	50.000	-1	75.000	0	100.00	1
1,3-Dichlorobenzene			0.5000	-8	2.0000	0	5.0000	5	10.000	-1	20.000	5	50.000	-1	75.000	0	100.00	0
1,4-Dichlorobenzene			0.5000	-6	2.0000	3	5.0000	5	10.000	0	20.000	4	50.000	-2	75.000	-1	100.00	-2
n-Butylbenzene			0.5000	-18	2.0000	2	5.0000	5	10.000	-1	20.000	9	50.000	-1	75.000	2	100.00	2
1,2-Dichlorobenzene			0.5000	-11	2.0000	1	5.0000	3	10.000	1	20.000	5	50.000	-1	75.000	1	100.00	1
1,2-Dibromo-3-Chloropropane			0.5000	<b>-28</b>	2.0000	7	5.0000	-3	10.000	4	20.000	3	50.000	9	75.000	0	100.00	9
1,2,4-Trichlorobenzene			0.5000	<b>-28</b>	2.0000	-4	5.0000	1	10.000	2	20.000	9	50.000	5	75.000	6	100.00	8
Hexachlorobutadiene			0.5000	<b>-31</b>	2.0000	2	5.0000	6	10.000	1	20.000	10	50.000	0	75.000	4	100.00	8
Naphthalene			0.5000	<b>-24</b>	2.0000	-10	5.0000	-6	10.000	1	20.000	6	50.000	11	75.000	7	100.00	16
1,2,3-Trichlorobenzene			0.5000	<b>-31</b>	2.0000	-5	5.0000	0	10.000	2	20.000	9	50.000	7	75.000	7	100.00	11
Dibromofluoromethane	50.000	1	50.000	1	50.000	2	50.000	1	50.000	1	50.000	0	50.000	-1	50.000	-2	50.000	-3
1,2-Dichloroethane-d4	50.000	3	50.000	2	50.000	3	50.000	2	50.000	5	50.000	-1	50.000	-3	50.000	-5	50.000	-7
Toluene-d8	50.000	0	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	0	50.000	1	50.000	1
Bromofluorobenzene	50.000	2	50.000	1	50.000	2	50.000	0	50.000	-1	50.000	0	50.000	-2	50.000	-2	50.000	-2

DAR 09/24/15 [1,2,3-Trichloropropane]: Separated from coeluting peak in multiple levels.

DAR 09/24/15 [tert-Butyl Alcohol (TBA)]: ICV out high, rerun all hits

DAR 09/24/15 [Ethanol]: ICV out high, rerun all hits

DAR 09/24/15 [Isopropanol]: ICV out high, rerun all hits

LW 09/30/15 [n-Hexane]: High bias at low point - ok for ND results and hits over 5 ppb.

Analyst: DAR

Date: 09/24/15

Reviewer: LW

Date: 09/30/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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425383715001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA03  
Calnum : 425383715001

Name : 8260GX3W  
Cal Date : 23-SEP-2015

Type : WATER

ICV 425383715027 (cin27 24-SEP-2015) stds: S27858 (10000X), S27973 (5000X), S27929 (10000X), S27930 (10000X)

ICV 425383715028 (cin28 24-SEP-2015) stds: S27007 (10000X), S27973 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	425383715028	20.00	14.28	ug/L	-29	30	!v-
Chloromethane	425383715028	20.00	17.62	ug/L	-12	30	
Vinyl Chloride	425383715028	20.00	19.10	ug/L	-5	20	
Bromomethane	425383715028	20.00	15.33	ug/L	-23	30	!v-
Chloroethane	425383715028	20.00	19.80	ug/L	-1	30	
Trichlorofluoromethane	425383715028	20.00	18.17	ug/L	-9	30	
Acetone	425383715027	25.00	28.02	ug/L	12	40	
Freon 113	425383715027	25.00	19.83	ug/L	-21	30	!v-
1,1-Dichloroethene	425383715027	25.00	22.63	ug/L	-9	20	
Methylene Chloride	425383715027	25.00	25.05	ug/L	0	30	
Carbon Disulfide	425383715027	25.00	22.35	ug/L	-11	30	
MTBE	425383715027	25.00	26.57	ug/L	6	30	
trans-1,2-Dichloroethene	425383715027	25.00	23.18	ug/L	-7	30	
Vinyl Acetate	425383715027	25.00	22.53	ug/L	-10	40	
1,1-Dichloroethane	425383715027	25.00	24.02	ug/L	-4	30	
2-Butanone	425383715027	25.00	27.22	ug/L	9	40	
2,2-Dichloropropane	425383715027	25.00	22.23	ug/L	-11	30	
cis-1,2-Dichloroethene	425383715027	25.00	26.24	ug/L	5	30	
Chloroform	425383715027	25.00	24.70	ug/L	-1	20	
Bromochloromethane	425383715027	25.00	25.75	ug/L	3	30	
1,1,1-Trichloroethane	425383715027	25.00	23.94	ug/L	-4	30	
1,1-Dichloropropene	425383715027	25.00	20.54	ug/L	-18	30	
Carbon Tetrachloride	425383715027	25.00	24.03	ug/L	-4	30	
1,2-Dichloroethane	425383715027	25.00	23.67	ug/L	-5	30	
Benzene	425383715027	25.00	23.24	ug/L	-7	30	
Trichloroethene	425383715027	25.00	23.72	ug/L	-5	30	
1,2-Dichloropropane	425383715027	25.00	22.46	ug/L	-10	20	
Bromodichloromethane	425383715027	25.00	23.21	ug/L	-7	30	
Dibromomethane	425383715027	25.00	24.20	ug/L	-3	30	
4-Methyl-2-Pentanone	425383715027	25.00	25.33	ug/L	1	40	
cis-1,3-Dichloropropene	425383715027	25.00	24.43	ug/L	-2	30	
Toluene	425383715027	25.00	23.76	ug/L	-5	20	
trans-1,3-Dichloropropene	425383715027	25.00	24.10	ug/L	-4	30	
1,1,2-Trichloroethane	425383715027	25.00	24.58	ug/L	-2	30	
2-Hexanone	425383715027	25.00	26.81	ug/L	7	40	
1,3-Dichloropropane	425383715027	25.00	25.45	ug/L	2	30	
Tetrachloroethene	425383715027	25.00	23.37	ug/L	-7	30	
Dibromochloromethane	425383715027	25.00	24.32	ug/L	-3	30	
1,2-Dibromoethane	425383715027	25.00	24.71	ug/L	-1	30	
Chlorobenzene	425383715027	25.00	23.89	ug/L	-4	30	
1,1,1,2-Tetrachloroethane	425383715027	25.00	24.52	ug/L	-2	30	
Ethylbenzene	425383715027	25.00	23.82	ug/L	-5	20	
m,p-Xylenes	425383715027	50.00	48.79	ug/L	-2	30	
o-Xylene	425383715027	25.00	24.11	ug/L	-4	30	
Styrene	425383715027	25.00	24.97	ug/L	0	30	
Bromoform	425383715027	25.00	24.90	ug/L	0	30	
Isopropylbenzene	425383715027	25.00	23.55	ug/L	-6	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	425383715027	25.00	24.38	ug/L	-2	30	
1,2,3-Trichloropropane	425383715027	25.00	25.11	ug/L	0	30	m
Propylbenzene	425383715027	25.00	23.10	ug/L	-8	30	
Bromobenzene	425383715027	25.00	24.20	ug/L	-3	30	
1,3,5-Trimethylbenzene	425383715027	25.00	24.52	ug/L	-2	30	
2-Chlorotoluene	425383715027	25.00	23.64	ug/L	-5	30	
4-Chlorotoluene	425383715027	25.00	23.74	ug/L	-5	30	
tert-Butylbenzene	425383715027	25.00	23.56	ug/L	-6	30	
1,2,4-Trimethylbenzene	425383715027	25.00	23.73	ug/L	-5	30	
sec-Butylbenzene	425383715027	25.00	23.59	ug/L	-6	30	
para-Isopropyl Toluene	425383715027	25.00	23.76	ug/L	-5	30	
1,3-Dichlorobenzene	425383715027	25.00	23.93	ug/L	-4	30	
1,4-Dichlorobenzene	425383715027	25.00	23.59	ug/L	-6	30	
n-Butylbenzene	425383715027	25.00	23.95	ug/L	-4	30	
1,2-Dichlorobenzene	425383715027	25.00	23.91	ug/L	-4	30	
1,2-Dibromo-3-Chloropropane	425383715027	25.00	26.01	ug/L	4	30	
1,2,4-Trichlorobenzene	425383715027	25.00	25.32	ug/L	1	30	
Hexachlorobutadiene	425383715027	25.00	24.84	ug/L	-1	30	
Naphthalene	425383715027	25.00	25.34	ug/L	1	30	
1,2,3-Trichlorobenzene	425383715027	25.00	26.01	ug/L	4	30	

425383715027: Analyst: DAR  
425383715028: Analyst: DAR

Date: 09/24/15 Reviewer: LW  
Date: 09/24/15 \* Reviewer: LW

Date: 09/30/15  
Date: 09/30/15

!=warning --low bias m=manual integration v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 MSVOA Water: EPA 8260B

Inst : MSVOA09  
 Calnum : 485399877001  
 Units : ug/L

Name : 826GOX9W  
 Date : 04-OCT-2015 22:30  
 X Axis : R

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	ij409	485399877009	.25/.5PPB	04-OCT-2015 22:30	S27004 (2000000X), S28008 (2000000X), S28087 (2000000X), S27081 (1000000X), S28060 (5000X)
L2	ij410	485399877010	.5/1PPB	04-OCT-2015 23:05	S28060 (5000X), S27004 (1000000X), S28008 (1000000X), S28087 (1000000X), S27081 (500000X)
L3	ij411	485399877011	2PPB	04-OCT-2015 23:40	S27004 (500000X), S28008 (250000X), S28087 (250000X), S27081 (250000X), S28060 (5000X)
L4	ij412	485399877012	5PPB	05-OCT-2015 00:15	S28060 (5000X), S27004 (200000X), S28008 (100000X), S28087 (100000X), S27081 (100000X)
L5	ij413	485399877013	10PPB	05-OCT-2015 00:50	S28060 (5000X), S27004 (100000X), S28008 (50000X), S28087 (50000X), S27081 (50000X)
L6	ij414	485399877014	20PPB	05-OCT-2015 01:25	S28060 (5000X), S27004 (50000X), S28008 (25000X), S28087 (25000X), S27081 (25000X)
L7	ij415	485399877015	50PPB	05-OCT-2015 01:59	S28060 (5000X), S27004 (20000X), S28008 (10000X), S28087 (10000X), S27081 (10000X)
L8	ij416	485399877016	75PPB	05-OCT-2015 02:34	S28060 (5000X), S27004 (13330X), S28008 (6667X), S28087 (6667X), S27081 (6667X)
L9	ij417	485399877017	100PPB	05-OCT-2015 03:10	S28060 (5000X), S27004 (10000X), S28008 (5000X), S28087 (5000X), S27081 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.2698	0.3002	0.2810	0.3108	0.2655	0.2905	0.2821	0.2722	AVRG		3.52108		0.2840	6	15	0.05	0.99	
Chloromethane	0.4189	0.3284	0.3439	0.2867	0.3191	0.3436	0.3296	0.3256	0.3141	AVRG		2.99022		0.3344	11	15	0.10	0.99	
Vinyl Chloride	0.3274	0.2684	0.2884	0.2572	0.2797	0.2895	0.2796	0.2660	0.2619	AVRG		3.57433		0.2798	8	15	0.05	0.99	
Bromomethane		0.1894m	0.2190	0.2051	0.2528	0.2657	0.2701	0.2638	0.2548	AVRG		4.16501		0.2401	13	15	0.05	0.99	
Chloroethane		0.1878	0.1976	0.1770	0.1972	0.1978	0.1990	0.1982	0.1900	AVRG		5.17908		0.1931	4	15	0.05	0.99	
Trichlorofluoromethane		0.3838	0.3885	0.3607	0.3925	0.3699	0.3958	0.3714	0.3700	AVRG		2.63810		0.3791	3	15	0.05	0.99	
Acetone			0.0608	0.0537	0.0583	0.0508	0.0566	0.0610	0.0600	AVRG		17.4442		0.0573	7	15	0.05	0.99	
Freon 113		0.2241	0.1867	0.2055	0.2234	0.2204	0.2352	0.2246	0.2254	AVRG		4.58366		0.2182	7	15	0.05	0.99	
1,1-Dichloroethene		0.2262	0.2045	0.2139	0.2296	0.2292	0.2423	0.2367	0.2317	AVRG		4.41008		0.2268	5	15	0.05	0.99	
Methylene Chloride		0.2626	0.2614	0.2511	0.2815	0.2665	0.2804	0.2697	0.2641	AVRG		3.74320		0.2672	4	15	0.05	0.99	
Carbon Disulfide		0.9100	0.8480	0.8581	0.9254	0.9193	0.9768	0.9478	0.9120	AVRG		1.09627		0.9122	5	15	0.05	0.99	
MTBE		0.4851	0.4485	0.4491	0.5068	0.4589	0.4704	0.4784	0.4862	AVRG		2.11445		0.4729	4	15	0.05	0.99	
trans-1,2-Dichloroethene		0.2574	0.2374	0.2412	0.2597	0.2585	0.2607	0.2520	0.2530	AVRG		3.96024		0.2525	3	15	0.05	0.99	
Vinyl Acetate			0.3566	0.3048	0.3884	0.3560	0.3372	0.2941	0.3500	AVRG		2.93254		0.3410	10	15	0.05	0.99	
1,1-Dichloroethane		0.5027	0.4722	0.4623	0.5206	0.4890	0.5112	0.4634	0.4444	AVRG		2.06945		0.4832	6	15	0.10	0.99	
2-Butanone			0.0805	0.0805m	0.0832	0.0751	0.0745	0.0772	0.0763	AVRG		12.7911		0.0782	4	15	0.05	0.99	
2,2-Dichloropropane		0.3369	0.2930	0.2924	0.3180	0.3169	0.3301	0.2981	0.2901	AVRG		3.23176		0.3094	6	15	0.05	0.99	
cis-1,2-Dichloroethene		0.2790	0.2545	0.2531	0.2792	0.2803	0.2920	0.2838	0.2699	AVRG		3.64997		0.2740	5	15	0.05	0.99	
Chloroform		0.4513	0.4469	0.4302	0.4741	0.4604	0.4791	0.4529	0.4410	AVRG		2.20017		0.4545	4	15	0.05	0.99	
Bromochloromethane		0.1228	0.1198	0.1247	0.1338	0.1303	0.1389	0.1368	0.1301	AVRG		7.71354		0.1296	5	15	0.05	0.99	
1,1,1-Trichloroethane		0.3684	0.3216	0.3231	0.3421	0.3404	0.3509	0.3332	0.3292	AVRG		2.95315		0.3386	5	15	0.05	0.99	
1,1-Dichloropropene		0.3009	0.2687	0.2715	0.2869	0.2801	0.2958	0.2763	0.2695	AVRG		3.55607		0.2812	4	15	0.05	0.99	
Carbon Tetrachloride		0.2768	0.2415	0.2465	0.2624	0.2549	0.2696	0.2585	0.2510	AVRG		3.88143		0.2576	5	15	0.05	0.99	
1,2-Dichloroethane		0.2259	0.2174	0.2174	0.2384	0.2165	0.2262	0.2197	0.2061	AVRG		4.52578		0.2210	4	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		0.7403	0.7120	0.7022	0.7723	0.7174	0.7528	0.7157	0.6766	AVRG		1.38186		0.7237	4	15	0.05	0.99	
Trichloroethene		0.2160	0.1946	0.2007	0.2183	0.2117	0.2268	0.2120	0.2034	AVRG		4.75211		0.2104	5	15	0.05	0.99	
1,2-Dichloropropane		0.2423	0.2240	0.2211	0.2391	0.2277	0.2378	0.2266	0.2092	AVRG		4.37703		0.2285	5	15	0.05	0.99	
Bromodichloromethane		0.2403	0.2372	0.2371	0.2648	0.2525	0.2773	0.2615	0.2490	AVRG		3.96070		0.2525	6	15	0.05	0.99	
Dibromomethane		0.1110	0.1098	0.1144	0.1254	0.1132	0.1197	0.1207	0.1177	AVRG		8.58397		0.1165	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.1481	0.1326	0.1514	0.1325	0.1368	0.1335	0.1311	AVRG		7.24739		0.1380	6	15	0.05	0.99	
cis-1,3-Dichloropropene		0.2826	0.2762	0.2794	0.3219	0.2920	0.3050	0.2886	0.2873	AVRG		3.42925		0.2916	5	15	0.05	0.99	
Toluene		0.7580	0.6978	0.7353	0.7183	0.7043	0.7088	0.6492	0.6167	AVRG		1.43152		0.6986	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.3757	0.3718	0.3957	0.4178	0.3900	0.4148	0.3896	0.3949	AVRG		2.53952		0.3938	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.1212	0.1312	0.1300	0.1318	0.1274	0.1334	0.1280	0.1285	AVRG		7.75724		0.1289	3	15	0.05	0.99	
2-Hexanone			0.1691	0.1692	0.1852	0.1643	0.1647	0.1628	0.1630	AVRG		5.94057		0.1683	5	15	0.05	0.99	
1,3-Dichloropropane		0.3880	0.3824	0.3885	0.4162	0.3867	0.3877	0.3713	0.3759	AVRG		2.58329		0.3871	3	15	0.05	0.99	
Tetrachloroethene		0.3715	0.2947	0.3284	0.3329	0.3264	0.3428	0.3397	0.3375	AVRG		2.99186		0.3342	6	15	0.05	0.99	
Dibromochloromethane		0.3110	0.2897	0.3124	0.3195	0.3070	0.3449	0.3403	0.3442	AVRG		3.11423		0.3211	6	15	0.05	0.99	
1,2-Dibromoethane		0.2254	0.2232	0.2470	0.2499	0.2316	0.2497	0.2500	0.2518	AVRG		4.14793		0.2411	5	15	0.05	0.99	
Chlorobenzene		0.9036	0.7945	0.8518	0.8442	0.8293	0.8343	0.8212	0.8014	AVRG		1.19756		0.8350	4	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.2979	0.2819	0.2988	0.2965	0.2907	0.3210	0.3032	0.3095	AVRG		3.33420		0.2999	4	15	0.05	0.99	
Ethylbenzene		1.5334	1.3032	1.4126	1.4093	1.3564	1.3897	1.2649	1.2473	AVRG		0.73281		1.3646	7	15	0.05	0.99	
m,p-Xylenes	0.5431	0.5452	0.4782	0.4959	0.5140	0.4920	0.4595	0.4273	0.4232	AVRG		2.05553		0.4865	9	15	0.05	0.99	
o-Xylene		0.5142	0.4998	0.5135	0.5217	0.5122	0.5299	0.4779	0.4523	AVRG		1.98931		0.5027	5	15	0.05	0.99	
Styrene		0.8473	0.8026	0.8509	0.8576	0.8584	0.7909	0.5922	0.5953	AVRG		1.29133		0.7744	15	15	0.05	0.99	
Bromoform		0.1791	0.1664	0.1712	0.1822	0.1729	0.2003	0.2081	0.2142	AVRG		5.35356		0.1868	10	15	0.10	0.99	
Isopropylbenzene		2.7329	2.5011	2.7177	2.7036	2.6825	2.5585	2.4049	2.2174	AVRG		0.38989		2.5648	7	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.4732	0.5393	0.5237	0.5420	0.4875	0.4719	0.4886	0.4792	AVRG		1.99735		0.5007	6	15	0.30	0.99	
1,2,3-Trichloropropane		0.1089	0.1309	0.1226	0.1284	0.1129	0.1089	0.1204	0.1158	AVRG		8.43167		0.1186	7	15	0.05	0.99	
Propylbenzene		3.3779	3.0257	3.3001	3.2205	3.1789	2.9340	2.6757	2.4195	AVRG		0.33151		3.0165	11	15	0.05	0.99	
Bromobenzene		0.7324	0.7333	0.7559	0.7471	0.7429	0.7319	0.7002	0.6455	AVRG		1.38184		0.7237	5	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.1793	1.9910	2.1269	2.1269	2.1905	1.8933	1.6962	1.6778	AVRG		0.50372		1.9852	11	15	0.05	0.99	
2-Chlorotoluene		2.2433	2.1133	2.1441	2.1528	2.1651	1.8587	1.6199	1.5841	AVRG		0.50374		1.9852	13	15	0.05	0.99	
4-Chlorotoluene		2.0481	1.8898	1.9471	1.9323	1.9294	1.8714	1.7569	1.6722	AVRG		0.53166		1.8809	6	15	0.05	0.99	
tert-Butylbenzene		1.9747	1.7648	1.9417	1.8953	1.9374	1.8270	1.6863	1.5785	AVRG		0.54773		1.8257	8	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.0592	1.9605	2.0620	2.0338	2.1136	1.7995	1.7301	1.7008	AVRG		0.51748		1.9324	9	15	0.05	0.99	
sec-Butylbenzene		2.8807	2.5170	2.8386	2.7036	2.7935	2.4954	2.4578	2.3850	AVRG		0.37966		2.6340	7	15	0.05	0.99	
para-Isopropyl Toluene		2.1665	1.9232	2.1714	2.0900	2.1022	2.0484	1.9483	1.8234	AVRG		0.49160		2.0342	6	15	0.05	0.99	
1,3-Dichlorobenzene		1.3571	1.2659	1.3048	1.2808	1.2904	1.2921	1.2785	1.2335	AVRG		0.77647		1.2879	3	15	0.05	0.99	
1,4-Dichlorobenzene		1.4214	1.2839	1.3240	1.3054	1.3085	1.3046	1.3016	1.2555	AVRG		0.76156		1.3131	4	15	0.05	0.99	
n-Butylbenzene		2.0334	1.6912	1.8026	1.8122	1.7512	1.7861	1.6651	1.6064	AVRG		0.56545		1.7685	7	15	0.05	0.99	
1,2-Dichlorobenzene		1.2206	1.1846	1.2168	1.1896	1.1758	1.2057	1.2469	1.1967	AVRG		0.83016		1.2046	2	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.0769	0.0805	0.0803	0.0841	0.0728	0.0745	0.0841	0.0797	AVRG		12.6436		0.0791	5	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.6523	0.5974	0.6204	0.6075	0.6152	0.6481	0.6720	0.6511	AVRG		1.57977		0.6330	4	15	0.05	0.99	
Hexachlorobutadiene		0.3625	0.2904	0.3142	0.3192	0.3240	0.3364	0.3329	0.3300	AVRG		3.06562		0.3262	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	Max %RSD	Min RF	Min r <sup>2</sup>	Flg
Naphthalene		0.8223	0.8800	0.8937	0.9322	0.8456	0.8825	0.9707	0.9537	AVRG		1.11409		0.8976	6	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.5559	0.5422	0.5436	0.5473	0.5392	0.5630	0.5995	0.5768	AVRG		1.79073		0.5584	4	15	0.05	0.99	
Dibromofluoromethane	0.4757	0.4803	0.4848	0.4714	0.4828	0.4857	0.4825	0.4768	0.4694	AVRG		2.08848		0.4788	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.2286	0.2295	0.2469	0.2260	0.2374	0.2199	0.2163	0.2146	0.1997	AVRG		4.45774		0.2243	6	15	0.05	0.99	
Toluene-d8	1.6334	1.6815	1.6785	1.7105	1.6296	1.6946	1.6864	1.5849	1.6152	AVRG		0.60343		1.6572	3	15	0.05	0.99	
Bromofluorobenzene	0.9610	0.9091	0.9540	0.9430	0.9343	0.9249	0.8791	0.8628	0.8336	AVRG		1.09731		0.9113	5	15	0.05	0.99	



Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	-5	2.0000	6	5.0000	-1	10.000	9	20.000	-7	50.000	2	75.000	-1	100.00	-4
Chloromethane	0.5000	25	1.0000	-2	2.0000	3	5.0000	-14	10.000	-5	20.000	3	50.000	-1	75.000	-3	100.00	-6
Vinyl Chloride	0.5000	17	1.0000	-4	2.0000	3	5.0000	-8	10.000	0	20.000	3	50.000	0	75.000	-5	100.00	-6
Bromomethane			1.0000	-21	2.0000	-9	5.0000	-15	10.000	5	20.000	11	50.000	12	75.000	10	100.00	6
Chloroethane			1.0000	-3	2.0000	2	5.0000	-8	10.000	2	20.000	2	50.000	3	75.000	3	100.00	-2
Trichlorofluoromethane			1.0000	1	2.0000	2	5.0000	-5	10.000	4	20.000	-2	50.000	4	75.000	-2	100.00	-2
Acetone					2.0000	6	5.0000	-6	10.000	2	20.000	-11	50.000	-1	75.000	6	100.00	5
Freon 113			0.5000	3	2.0000	-14	5.0000	-6	10.000	2	20.000	1	50.000	8	75.000	3	100.00	3
1,1-Dichloroethene			0.5000	0	2.0000	-10	5.0000	-6	10.000	1	20.000	1	50.000	7	75.000	4	100.00	2
Methylene Chloride			0.5000	-2	2.0000	-2	5.0000	-6	10.000	5	20.000	0	50.000	5	75.000	1	100.00	-1
Carbon Disulfide			0.5000	0	2.0000	-7	5.0000	-6	10.000	1	20.000	1	50.000	7	75.000	4	100.00	0
MTBE			0.5000	3	2.0000	-5	5.0000	-5	10.000	7	20.000	-3	50.000	-1	75.000	1	100.00	3
trans-1,2-Dichloroethene			0.5000	2	2.0000	-6	5.0000	-4	10.000	3	20.000	2	50.000	3	75.000	0	100.00	0
Vinyl Acetate					2.0000	5	5.0000	-11	10.000	14	20.000	4	50.000	-1	75.000	-14	100.00	3
1,1-Dichloroethane			0.5000	4	2.0000	-2	5.0000	-4	10.000	8	20.000	1	50.000	6	75.000	-4	100.00	-8
2-Butanone					2.0000	3	5.0000	3	10.000	6	20.000	-4	50.000	-5	75.000	-1	100.00	-2
2,2-Dichloropropane			0.5000	9	2.0000	-5	5.0000	-6	10.000	3	20.000	2	50.000	7	75.000	-4	100.00	-6
cis-1,2-Dichloroethene			0.5000	2	2.0000	-7	5.0000	-8	10.000	2	20.000	2	50.000	7	75.000	4	100.00	-1
Chloroform			0.5000	-1	2.0000	-2	5.0000	-5	10.000	4	20.000	1	50.000	5	75.000	0	100.00	-3
Bromochloromethane			0.5000	-5	2.0000	-8	5.0000	-4	10.000	3	20.000	1	50.000	7	75.000	6	100.00	0
1,1,1-Trichloroethane			0.5000	9	2.0000	-5	5.0000	-5	10.000	1	20.000	1	50.000	4	75.000	-2	100.00	-3
1,1-Dichloropropene			0.5000	7	2.0000	-4	5.0000	-3	10.000	2	20.000	0	50.000	5	75.000	-2	100.00	-4
Carbon Tetrachloride			0.5000	7	2.0000	-6	5.0000	-4	10.000	2	20.000	-1	50.000	5	75.000	0	100.00	-3
1,2-Dichloroethane			0.5000	2	2.0000	-2	5.0000	-2	10.000	8	20.000	-2	50.000	2	75.000	-1	100.00	-7
Benzene			0.5000	2	2.0000	-2	5.0000	-3	10.000	7	20.000	-1	50.000	4	75.000	-1	100.00	-7
Trichloroethene			0.5000	3	2.0000	-8	5.0000	-5	10.000	4	20.000	1	50.000	8	75.000	1	100.00	-3
1,2-Dichloropropane			0.5000	6	2.0000	-2	5.0000	-3	10.000	5	20.000	0	50.000	4	75.000	-1	100.00	-8
Bromodichloromethane			0.5000	-5	2.0000	-6	5.0000	-6	10.000	5	20.000	0	50.000	10	75.000	4	100.00	-1
Dibromomethane			0.5000	-5	2.0000	-6	5.0000	-2	10.000	8	20.000	-3	50.000	3	75.000	4	100.00	1
4-Methyl-2-Pentanone					2.0000	7	5.0000	-4	10.000	10	20.000	-4	50.000	-1	75.000	-3	100.00	-5
cis-1,3-Dichloropropene			0.5000	-3	2.0000	-5	5.0000	-4	10.000	10	20.000	0	50.000	5	75.000	-1	100.00	-1
Toluene			0.5000	9	2.0000	0	5.0000	5	10.000	3	20.000	1	50.000	1	75.000	-7	100.00	-12
trans-1,3-Dichloropropene			0.5000	-5	2.0000	-6	5.0000	0	10.000	6	20.000	-1	50.000	5	75.000	-1	100.00	0
1,1,2-Trichloroethane			0.5000	-6	2.0000	2	5.0000	1	10.000	2	20.000	-1	50.000	3	75.000	-1	100.00	0
2-Hexanone					2.0000	0	5.0000	1	10.000	10	20.000	-2	50.000	-2	75.000	-3	100.00	-3
1,3-Dichloropropane			0.5000	0	2.0000	-1	5.0000	0	10.000	8	20.000	0	50.000	0	75.000	-4	100.00	-3
Tetrachloroethene			0.5000	11	2.0000	-12	5.0000	-2	10.000	0	20.000	-2	50.000	3	75.000	2	100.00	1
Dibromochloromethane			0.5000	-3	2.0000	-10	5.0000	-3	10.000	0	20.000	-4	50.000	7	75.000	6	100.00	7
1,2-Dibromoethane			0.5000	-7	2.0000	-7	5.0000	2	10.000	4	20.000	-4	50.000	4	75.000	4	100.00	4
Chlorobenzene			0.5000	8	2.0000	-5	5.0000	2	10.000	1	20.000	-1	50.000	0	75.000	-2	100.00	-4
1,1,1,2-Tetrachloroethane			0.5000	-1	2.0000	-6	5.0000	0	10.000	-1	20.000	-3	50.000	7	75.000	1	100.00	3
Ethylbenzene			0.5000	12	2.0000	-5	5.0000	4	10.000	3	20.000	-1	50.000	2	75.000	-7	100.00	-9

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	12	1.0000	12	4.0000	-2	10.000	2	20.000	6	40.000	1	100.00	-6	150.00	-12	200.00	-13
o-Xylene			0.5000	2	2.0000	-1	5.0000	2	10.000	4	20.000	2	50.000	5	75.000	-5	100.00	-10
Styrene			0.5000	9	2.0000	4	5.0000	10	10.000	11	20.000	11	50.000	2	75.000	-24	100.00	-23
Bromoform			0.5000	-4	2.0000	-11	5.0000	-8	10.000	-2	20.000	-7	50.000	7	75.000	11	100.00	15
Isopropylbenzene			0.5000	7	2.0000	-2	5.0000	6	10.000	5	20.000	5	50.000	0	75.000	-6	100.00	-14
1,1,2,2-Tetrachloroethane			0.5000	-5	2.0000	8	5.0000	5	10.000	8	20.000	-3	50.000	-6	75.000	-2	100.00	-4
1,2,3-Trichloropropane			0.5000	-8	2.0000	10	5.0000	3	10.000	8	20.000	-5	50.000	-8	75.000	2	100.00	-2
Propylbenzene			0.5000	12	2.0000	0	5.0000	9	10.000	7	20.000	5	50.000	-3	75.000	-11	100.00	-20
Bromobenzene			0.5000	1	2.0000	1	5.0000	4	10.000	3	20.000	3	50.000	1	75.000	-3	100.00	-11
1,3,5-Trimethylbenzene			0.5000	10	2.0000	0	5.0000	7	10.000	7	20.000	10	50.000	-5	75.000	-15	100.00	-15
2-Chlorotoluene			0.5000	13	2.0000	6	5.0000	8	10.000	8	20.000	9	50.000	-6	75.000	-18	100.00	-20
4-Chlorotoluene			0.5000	9	2.0000	0	5.0000	4	10.000	3	20.000	3	50.000	-1	75.000	-7	100.00	-11
tert-Butylbenzene			0.5000	8	2.0000	-3	5.0000	6	10.000	4	20.000	6	50.000	0	75.000	-8	100.00	-14
1,2,4-Trimethylbenzene			0.5000	7	2.0000	1	5.0000	7	10.000	5	20.000	9	50.000	-7	75.000	-10	100.00	-12
sec-Butylbenzene			0.5000	9	2.0000	-4	5.0000	8	10.000	3	20.000	6	50.000	-5	75.000	-7	100.00	-9
para-Isopropyl Toluene			0.5000	7	2.0000	-5	5.0000	7	10.000	3	20.000	3	50.000	1	75.000	-4	100.00	-10
1,3-Dichlorobenzene			0.5000	5	2.0000	-2	5.0000	1	10.000	-1	20.000	0	50.000	0	75.000	-1	100.00	-4
1,4-Dichlorobenzene			0.5000	8	2.0000	-2	5.0000	1	10.000	-1	20.000	0	50.000	-1	75.000	-1	100.00	-4
n-Butylbenzene			0.5000	15	2.0000	-4	5.0000	2	10.000	2	20.000	-1	50.000	1	75.000	-6	100.00	-9
1,2-Dichlorobenzene			0.5000	1	2.0000	-2	5.0000	1	10.000	-1	20.000	-2	50.000	0	75.000	4	100.00	-1
1,2-Dibromo-3-Chloropropane			0.5000	-3	2.0000	2	5.0000	1	10.000	6	20.000	-8	50.000	-6	75.000	6	100.00	1
1,2,4-Trichlorobenzene			0.5000	3	2.0000	-6	5.0000	-2	10.000	-4	20.000	-3	50.000	2	75.000	6	100.00	3
Hexachlorobutadiene			0.5000	11	2.0000	-11	5.0000	-4	10.000	-2	20.000	-1	50.000	3	75.000	2	100.00	1
Naphthalene			0.5000	-8	2.0000	-2	5.0000	0	10.000	4	20.000	-6	50.000	-2	75.000	8	100.00	6
1,2,3-Trichlorobenzene			0.5000	0	2.0000	-3	5.0000	-3	10.000	-2	20.000	-3	50.000	1	75.000	7	100.00	3
Dibromofluoromethane	50.000	-1	50.000	0	50.000	1	50.000	-2	50.000	1	50.000	1	50.000	1	50.000	0	50.000	-2
1,2-Dichloroethane-d4	50.000	2	50.000	2	50.000	10	50.000	1	50.000	6	50.000	-2	50.000	-4	50.000	-4	50.000	-11
Toluene-d8	50.000	-1	50.000	1	50.000	1	50.000	3	50.000	-2	50.000	2	50.000	2	50.000	-4	50.000	-3
Bromofluorobenzene	50.000	5	50.000	0	50.000	5	50.000	3	50.000	3	50.000	1	50.000	-4	50.000	-5	50.000	-9

DAR 10/06/15 [Bromomethane]: Combined split peak1PPB (ij410).

DAR 10/06/15 [tert-Butyl Alcohol (TBA)]: Combined split peak1PPB (ij410).

DAR 10/06/15 [Vinyl Acetate]: Combined split peak1PPB (ij410).

DAR 10/06/15 [2-Butanone]: Combined split peak in 5PPB (ij412).

DAR 10/06/15 [2-Hexanone]: Combined split peak1PPB (ij410).

DAR 10/06/15 : Does not meet min RF, cannot use for 8260c. Acetone, 2-butanone

DAR 10/07/15 : final Iodomethane and 2-Cleve ICV runs were third source

Analyst: DAR

Date: 10/07/15

Reviewer: LW

Date: 10/08/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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485399877001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09  
Calnum : 485399877001

Name : 826GOX9W  
Cal Date : 04-OCT-2015

Type : WATER

ICV 485399877018 (ij418 05-OCT-2015) stds: S27267 (10000X), S28060 (5000X)  
ICV 485399877019 (ij419 05-OCT-2015) stds: S28219 (10000X), S28220 (10000X),  
S27929 (10000X), S28060 (5000X)  
ICV 485401479003 (ij503 05-OCT-2015) stds: S27929 (10000X), S28060 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	485399877018	20.00	18.32	ug/L	-8	30	
Chloromethane	485399877018	20.00	19.42	ug/L	-3	30	
Vinyl Chloride	485399877018	20.00	19.95	ug/L	0	20	
Bromomethane	485399877018	20.00	14.06	ug/L	<b>-30</b>	30	!v-
Chloroethane	485399877018	20.00	19.77	ug/L	-1	30	
Trichlorofluoromethane	485399877018	20.00	19.84	ug/L	-1	30	
Acetone	485401479003	25.00	22.33	ug/L	-11	40	
Freon 113	485401479003	25.00	20.00	ug/L	-20	30	
1,1-Dichloroethene	485401479003	25.00	20.20	ug/L	-19	20	
Methylene Chloride	485401479003	25.00	21.52	ug/L	-14	30	
Carbon Disulfide	485401479003	25.00	20.11	ug/L	-20	30	
MTBE	485399877019	25.00	22.64	ug/L	-9	30	
trans-1,2-Dichloroethene	485401479003	25.00	19.74	ug/L	<b>-21</b>	30	!v-
Vinyl Acetate	485401479003	25.00	32.85	ug/L	<b>31</b>	40	!v+
1,1-Dichloroethane	485401479003	25.00	21.20	ug/L	-15	30	
2-Butanone	485401479003	25.00	24.24	ug/L	-3	40	
2,2-Dichloropropane	485401479003	25.00	26.28	ug/L	5	30	
cis-1,2-Dichloroethene	485401479003	25.00	23.16	ug/L	-7	30	
Chloroform	485401479003	25.00	22.50	ug/L	-10	20	
Bromochloromethane	485401479003	25.00	22.64	ug/L	-9	30	
1,1,1-Trichloroethane	485401479003	25.00	21.83	ug/L	-13	30	
1,1-Dichloropropene	485401479003	25.00	20.64	ug/L	-17	30	
Carbon Tetrachloride	485401479003	25.00	22.71	ug/L	-9	30	
1,2-Dichloroethane	485401479003	25.00	23.17	ug/L	-7	30	
Benzene	485401479003	25.00	22.80	ug/L	-9	30	
Trichloroethene	485401479003	25.00	22.72	ug/L	-9	30	
1,2-Dichloropropane	485401479003	25.00	20.85	ug/L	-17	20	
Bromodichloromethane	485401479003	25.00	23.56	ug/L	-6	30	
Dibromomethane	485401479003	25.00	24.21	ug/L	-3	30	
4-Methyl-2-Pentanone	485401479003	25.00	25.43	ug/L	2	40	
cis-1,3-Dichloropropene	485401479003	25.00	25.08	ug/L	0	30	
Toluene	485401479003	25.00	25.05	ug/L	0	20	
trans-1,3-Dichloropropene	485401479003	25.00	26.32	ug/L	5	30	
1,1,2-Trichloroethane	485401479003	25.00	26.48	ug/L	6	30	
2-Hexanone	485401479003	25.00	29.06	ug/L	16	40	
1,3-Dichloropropane	485401479003	25.00	27.02	ug/L	8	30	
Tetrachloroethene	485401479003	25.00	26.74	ug/L	7	30	
Dibromochloromethane	485401479003	25.00	25.69	ug/L	3	30	
1,2-Dibromoethane	485401479003	25.00	26.16	ug/L	5	30	
Chlorobenzene	485401479003	25.00	25.53	ug/L	2	30	
1,1,1,2-Tetrachloroethane	485401479003	25.00	25.70	ug/L	3	30	
Ethylbenzene	485401479003	25.00	25.38	ug/L	2	20	
m,p-Xylenes	485401479003	50.00	54.02	ug/L	8	30	
o-Xylene	485401479003	25.00	25.60	ug/L	2	30	
Styrene	485401479003	25.00	28.75	ug/L	15	30	
Bromoform	485401479003	25.00	26.48	ug/L	6	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Isopropylbenzene	485401479003	25.00	26.52	ug/L	6	30	
1,1,2,2-Tetrachloroethane	485401479003	25.00	28.02	ug/L	12	30	
1,2,3-Trichloropropane	485401479003	25.00	27.88	ug/L	12	30	
Propylbenzene	485401479003	25.00	26.78	ug/L	7	30	
Bromobenzene	485401479003	25.00	26.28	ug/L	5	30	
1,3,5-Trimethylbenzene	485401479003	25.00	27.83	ug/L	11	30	
2-Chlorotoluene	485401479003	25.00	26.41	ug/L	6	30	
4-Chlorotoluene	485401479003	25.00	26.26	ug/L	5	30	
tert-Butylbenzene	485401479003	25.00	26.11	ug/L	4	30	
1,2,4-Trimethylbenzene	485401479003	25.00	26.51	ug/L	6	30	
sec-Butylbenzene	485401479003	25.00	27.47	ug/L	10	30	
para-Isopropyl Toluene	485401479003	25.00	27.08	ug/L	8	30	
1,3-Dichlorobenzene	485401479003	25.00	25.57	ug/L	2	30	
1,4-Dichlorobenzene	485401479003	25.00	25.51	ug/L	2	30	
n-Butylbenzene	485401479003	25.00	27.62	ug/L	10	30	
1,2-Dichlorobenzene	485401479003	25.00	25.36	ug/L	1	30	
1,2-Dibromo-3-Chloropropane	485401479003	25.00	26.61	ug/L	6	30	
1,2,4-Trichlorobenzene	485401479003	25.00	26.50	ug/L	6	30	
Hexachlorobutadiene	485401479003	25.00	28.33	ug/L	13	30	
Naphthalene	485401479003	25.00	25.05	ug/L	0	30	
1,2,3-Trichlorobenzene	485401479003	25.00	26.94	ug/L	8	30	

485399877018: Analyst: DAR

Date: 10/07/15

Reviewer: LW

Date: 10/08/15

485399877019: Analyst: DAR

Date: 10/07/15

Reviewer: LW

Date: 10/08/15

485401479003: Analyst: DAR

Date: 10/07/15

Reviewer: LW

Date: 10/08/15

!=warning +=high bias -=low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 MSVOA Water: EPA 8260B

Inst : MSVOA10  
 Calnum : 495321824001  
 Units : ug/L

Name : 826GOX10  
 Date : 11-AUG-2015 15:53  
 X Axis : R

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	jhb08	495321824008	0.25/.5PPB	11-AUG-2015 15:53	S27699 (2000000X), S26220 (1000000X), S27697 (2500X), S26360 (2000000X), S27823 (2000000X)
L2	jhb09	495321824009	0.5/1PPB	11-AUG-2015 16:24	S26360 (1000000X), S27823 (1000000X), S27699 (1000000X), S26220 (500000X), S27697 (2500X)
L3	jhb10	495321824010	2PPB	11-AUG-2015 16:56	S26360 (500000X), S27823 (250000X), S27699 (250000X), S26220 (250000X), S27697 (2500X)
L4	jhb11	495321824011	5PPB	11-AUG-2015 17:27	S26360 (200000X), S27823 (100000X), S27699 (100000X), S26220 (100000X), S27697 (2500X)
L5	jhb12	495321824012	10PPB	11-AUG-2015 17:59	S26360 (100000X), S27823 (50000X), S27699 (50000X), S26220 (50000X), S27697 (2500X)
L6	jhb13	495321824013	20PPB	11-AUG-2015 18:30	S26360 (50000X), S27823 (25000X), S27699 (25000X), S26220 (25000X), S27697 (2500X)
L7	jhb14	495321824014	50PPB	11-AUG-2015 19:01	S26360 (20000X), S27823 (10000X), S27699 (10000X), S26220 (10000X), S27697 (2500X)
L8	jhb15	495321824015	75PPB	11-AUG-2015 19:32	S26360 (13330X), S27823 (6667X), S27699 (6667X), S26220 (6667X), S27697 (2500X)
L9	jhb16	495321824016	100PPB	11-AUG-2015 20:04	S26360 (10000X), S27823 (5000X), S27699 (5000X), S26220 (5000X), S27697 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		1.3415m	1.2241	1.1886m	0.8091	0.8281	0.8035	0.7782	0.7241	QUAD	-0.3134	1.09275	0.003863	0.9621	0.999	15	0.05	0.99	
Chloromethane	2.0077	1.7097	1.5495	1.4604	1.2534	1.1571	1.1104	1.1110	0.9953	QUAD	-0.0637	0.75235	0.002321	1.3727	0.998	15	0.10	0.99	
Vinyl Chloride	1.3548m	1.2905m	1.2330m	1.1439	1.0058	0.9830	0.9373	0.9187		AVRG		0.90224		1.1084	15	15	0.05	0.99	
Bromomethane		0.6877	0.6651	0.5910	0.5543	0.5063	0.5010	0.5234	0.5045	AVRG		1.76478		0.5666	13	15	0.05	0.99	
Chloroethane		0.6916	0.6592	0.6594	0.6255	0.6004	0.5828	0.5805	0.5443	AVRG		1.61824		0.6180	8	15	0.05	0.99	
Trichlorofluoromethane		1.2528	1.2175	1.2043	1.1230	1.1296	1.1024	1.0646	1.0113	AVRG		0.87859		1.1382	7	15	0.05	0.99	
Acetone				0.3920	0.4823	0.3896	0.4595	0.4226	0.3587	AVRG		2.39550		0.4174	11	15	0.05	0.99	
Freon 113		0.4585	0.4712	0.5040	0.5569	0.5540	0.5495	0.5822	0.5606	AVRG		1.88815		0.5296	9	15	0.05	0.99	
1,1-Dichloroethene		0.5021	0.4515	0.4378	0.4950	0.4721	0.4637	0.4872	0.4637	AVRG		2.12029		0.4716	5	15	0.05	0.99	
Methylene Chloride		0.6498	0.6724	0.6280	0.7111	0.6788	0.6614	0.6807	0.6304	AVRG		1.50581		0.6641	4	15	0.05	0.99	
Carbon Disulfide		1.9216	1.7246	1.7383	2.0624	1.9352	1.9270	2.0041	1.8580	AVRG		0.52731		1.8964	6	15	0.05	0.99	
MTBE		2.1837	2.1012	1.9953	2.2019	2.0905	2.0206	2.0574	1.8900	AVRG		0.48366		2.0676	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.6081	0.5446	0.5260	0.5990	0.5739	0.5577	0.5806	0.5451	AVRG		1.76412		0.5669	5	15	0.05	0.99	
Vinyl Acetate		2.6551	2.6726	2.5121	2.5065	2.4879	2.2293	2.3030	2.1839	AVRG		0.40920		2.4438	8	15	0.05	0.99	
1,1-Dichloroethane		1.4864	1.3175	1.2966	1.4011	1.3434	1.2902	1.3038	1.2181	AVRG		0.75067		1.3321	6	15	0.10	0.99	
2-Butanone				0.6128	0.6341	0.5752	0.5815	0.5749	0.5212	AVRG		1.71443		0.5833	7	15	0.05	0.99	
2,2-Dichloropropane		1.0135	0.8749	0.8521	0.9200	0.8746	0.8414	0.8485	0.7816	AVRG		1.14180		0.8758	8	15	0.05	0.99	
cis-1,2-Dichloroethene		0.7112	0.6275	0.6009	0.6673	0.6421	0.6321	0.6499	0.6097	AVRG		1.55621		0.6426	5	15	0.05	0.99	
Chloroform		1.3318	1.2230	1.1847	1.2418	1.1897	1.1954	1.1885	1.0968	AVRG		0.82886		1.2065	5	15	0.05	0.99	
Bromochloromethane		0.3081	0.3017	0.3060	0.3377	0.3287	0.3307	0.3334	0.3090	AVRG		3.13073		0.3194	5	15	0.05	0.99	
1,1,1-Trichloroethane		0.9259	0.8768	0.8906	0.9379	0.9024	0.9121	0.9487	0.8990	AVRG		1.09688		0.9117	3	15	0.05	0.99	
1,1-Dichloropropene		0.5983	0.5491	0.5481	0.5700	0.5691	0.5715	0.5718	0.5530	AVRG		1.76565		0.5664	3	15	0.05	0.99	
Carbon Tetrachloride		0.5020	0.4536	0.4679	0.4680	0.4646	0.4785	0.4947	0.4824	AVRG		2.09878		0.4765	3	15	0.05	0.99	
1,2-Dichloroethane		0.6856	0.6580	0.6378	0.6822	0.6643	0.6476	0.6567	0.6129	AVRG		1.52526		0.6556	4	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.4803	1.4408	1.4244	1.5586	1.4760	1.4653	1.4655	1.3882	AVRG		0.68381		1.4624	3	15	0.05	0.99	
Trichloroethene		0.4000	0.3746	0.3663	0.3941	0.3795	0.3862	0.3979	0.3803	AVRG		2.59825		0.3849	3	15	0.05	0.99	
1,2-Dichloropropane		0.5126	0.4623	0.4702	0.5017	0.4759	0.4626	0.4895	0.4553	AVRG		2.08877		0.4787	4	15	0.05	0.99	
Bromodichloromethane		0.5924	0.5645	0.5417	0.5883	0.5761	0.5826	0.5972	0.5628	AVRG		1.73699		0.5757	3	15	0.05	0.99	
Dibromomethane		0.3151	0.2930	0.2848	0.3124	0.3024	0.3022	0.3061	0.2891	AVRG		3.32635		0.3006	4	15	0.05	0.99	
4-Methyl-2-Pentanone				0.7291	0.7937	0.7417	0.7420	0.7371	0.6874	AVRG		1.35410		0.7385	5	15	0.05	0.99	
cis-1,3-Dichloropropene		0.7343	0.6752	0.6777	0.7204	0.6941	0.6948	0.7067	0.6539	AVRG		1.43958		0.6946	4	15	0.05	0.99	
Toluene		1.1585	1.0210	0.9925	1.0541	1.0322	1.0261	1.0493	0.9825	AVRG		0.96199		1.0395	5	15	0.05	0.99	
trans-1,3-Dichloropropene		0.8053	0.7261	0.7283	0.7935	0.7761	0.7603	0.7703	0.7210	AVRG		1.31558		0.7601	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2481	0.2525	0.2360	0.2506	0.2461	0.2425	0.2523	0.2357	AVRG		4.07389		0.2455	3	15	0.05	0.99	
2-Hexanone				0.6098	0.6709	0.6217	0.6281	0.6219	0.5724	AVRG		1.61083		0.6208	5	15	0.05	0.99	
1,3-Dichloropropane		0.8519	0.7652	0.7529	0.8333	0.7985	0.7815	0.8030	0.7539	AVRG		1.26181		0.7925	5	15	0.05	0.99	
Tetrachloroethene		0.4126	0.3566	0.3675	0.3777	0.3795	0.3896	0.4127	0.3921	AVRG		2.59048		0.3860	5	15	0.05	0.99	
Dibromochloromethane		0.4943	0.4361	0.4244	0.4717	0.4768	0.4822	0.5103	0.4857	AVRG		2.11559		0.4727	6	15	0.05	0.99	
1,2-Dibromoethane		0.4556	0.4534	0.4247	0.4779	0.4643	0.4624	0.4856	0.4580	AVRG		2.17288		0.4602	4	15	0.05	0.99	
Chlorobenzene		1.0945	1.0625	1.0269	1.0989	1.0753	1.0676	1.1046	1.0218	AVRG		0.93544		1.0690	3	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3725	0.3805	0.3700	0.4021	0.4007	0.4008	0.4221	0.3961	AVRG		2.54390		0.3931	4	15	0.05	0.99	
Ethylbenzene		2.0997	1.9789	1.9222	2.0074	1.9390	1.9095	1.9437	1.7655	AVRG		0.51395		1.9457	5	15	0.05	0.99	
m,p-Xylenes	0.6587	0.7249	0.6502	0.6389	0.6748	0.6806	0.6806	0.7034	0.6472	AVRG		1.48533		0.6733	4	15	0.05	0.99	
o-Xylene		0.6558	0.6106	0.6157	0.6440	0.6605	0.6757	0.7090	0.6510	AVRG		1.53188		0.6528	5	15	0.05	0.99	
Styrene		1.1201	1.0724	1.0778	1.1839	1.2086	1.2149	1.2557	1.1354	AVRG		0.86310		1.1586	6	15	0.05	0.99	
Bromoform		0.2625	0.2709	0.2746	0.3108	0.3156	0.3409	0.3616	0.3449	AVRG		3.22346		0.3102	12	15	0.10	0.99	
Isopropylbenzene		4.4792	3.9714	3.9412	3.9063	3.7992	3.6815	3.7726	3.4671	AVRG		0.25791		3.8773	8	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.5198	1.4875	1.3848	1.4439	1.3683	1.2964	1.3165	1.2395	AVRG		0.72355		1.3821	7	15	0.30	0.99	
1,2,3-Trichloropropane		1.4986	1.3982	1.2850	1.3615	1.2490	1.1898	1.2009	1.1203	AVRG		0.77644		1.2879	10	15	0.05	0.99	
Propylbenzene		5.7353	4.9561	4.8531	4.7407	4.6304	4.4831	4.5749	4.1683	AVRG		0.20974		4.7677	10	15	0.05	0.99	
Bromobenzene		1.1207	0.9825	0.9736	1.0165	1.0061	0.9840	1.0105	0.9450	AVRG		0.99516		1.0049	5	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.9748	2.6967	2.6774	2.7060	2.6812	2.7115	2.8125	2.6055	AVRG		0.36587		2.7332	4	15	0.05	0.99	
2-Chlorotoluene		3.8627	3.3812	3.2724	3.2617	3.1501	3.0701	3.0869	2.8330	AVRG		0.30866		3.2398	9	15	0.05	0.99	
4-Chlorotoluene		3.3946	3.0294	2.9749	2.9391	2.8257	2.8126	2.8635	2.6428	AVRG		0.34068		2.9353	7	15	0.05	0.99	
tert-Butylbenzene		2.8203	2.5232	2.4785	2.4847	2.4852	2.5103	2.6242	2.4154	AVRG		0.39328		2.5427	5	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6653	2.4557	2.4522	2.5059	2.4880	2.5737	2.7146	2.5307	AVRG		0.39242		2.5483	4	15	0.05	0.99	
sec-Butylbenzene		4.3485	3.8569	3.9745	3.9524	3.9395	3.9671	4.0722	3.7111	AVRG		0.25140		3.9778	5	15	0.05	0.99	
para-Isopropyl Toluene		2.9584	2.6125	2.6783	2.7025	2.7157	2.8669	2.9823	2.7807	AVRG		0.35879		2.7872	5	15	0.05	0.99	
1,3-Dichlorobenzene		1.6738	1.6513	1.6074	1.6395	1.6604	1.7017	1.7685	1.6371	AVRG		0.59971		1.6675	3	15	0.05	0.99	
1,4-Dichlorobenzene		1.8189	1.6159	1.6140	1.6796	1.6819	1.6775	1.7477	1.6266	AVRG		0.59426		1.6828	4	15	0.05	0.99	
n-Butylbenzene		2.5889	2.3334	2.4046	2.4370	2.4657	2.5617	2.6904	2.4959	AVRG		0.40045		2.4972	5	15	0.05	0.99	
1,2-Dichlorobenzene		1.6240	1.5858	1.5598	1.6224	1.6157	1.6277	1.6867	1.5852	AVRG		0.61981		1.6134	2	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.1690	0.2619	0.2454	0.2484	0.2536	0.2491	0.2556	0.2413	AVRG		4.15743		0.2405	12	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.3442	0.4557	0.4776	0.5271	0.5712	0.6602			QUAD	0.38516	1.85090	-0.01055	0.5060	1.000	15	0.05	0.99	
Hexachlorobutadiene		0.3237	0.3793	0.3973	0.3822	0.4057	0.4266	0.4565	0.4236	AVRG		2.50403		0.3994	10	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	Max %RSD	Min RF	Min r <sup>2</sup>	Flg
Naphthalene			0.8467	0.8929	1.1171	1.2132	1.4662	1.6259		QUAD	1.39135	0.77187	-0.00139	1.1937	1.000	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.1930	0.3717	0.3941	0.4861	0.5296	0.6168			QUAD	0.64581	1.96943	-0.01199	0.4319	1.000	15	0.05	0.99	
Dibromofluoromethane	0.6288	0.6476	0.6240	0.6381	0.6418	0.6313	0.6306	0.6282	0.6186	AVRG		1.58197		0.6321	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5309	0.5229	0.5183	0.5179	0.5166	0.5045	0.4918	0.4888	0.4941	AVRG		1.96260		0.5095	3	15	0.05	0.99	
Toluene-d8	1.3937	1.4118	1.3929	1.3924	1.3811	1.3605	1.3509	1.3483	1.3434	AVRG		0.72727		1.3750	2	15	0.05	0.99	
Bromofluorobenzene	1.3444	1.3595	1.2953	1.2632	1.2450	1.2210	1.1706	1.1397	1.1457	AVRG		0.80468		1.2427	7	15	0.05	0.99	



Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	16	2.0000	19	5.0000	26	10.000	-12	20.000	-6	50.000	0	75.000	2	100.00	-1
Chloromethane	0.5000	39	1.0000	23	2.0000	15	5.0000	11	10.000	-3	20.000	-7	50.000	-2	75.000	5	100.00	-2
Vinyl Chloride	0.5000	22	1.0000	16	2.0000	11	5.0000	3	10.000	-9	20.000	-11	50.000	-15	75.000	-17		
Bromomethane			1.0000	21	2.0000	17	5.0000	4	10.000	-2	20.000	-11	50.000	-12	75.000	-8	100.00	-11
Chloroethane			1.0000	12	2.0000	7	5.0000	7	10.000	1	20.000	-3	50.000	-6	75.000	-6	100.00	-12
Trichlorofluoromethane			1.0000	10	2.0000	7	5.0000	6	10.000	-1	20.000	-1	50.000	-3	75.000	-6	100.00	-11
Acetone							5.0000	-6	10.000	16	20.000	-7	50.000	10	75.000	1	100.00	-14
Freon 113			0.5000	-13	2.0000	-11	5.0000	-5	10.000	5	20.000	5	50.000	4	75.000	10	100.00	6
1,1-Dichloroethene			0.5000	6	2.0000	-4	5.0000	-7	10.000	5	20.000	0	50.000	-2	75.000	3	100.00	-2
Methylene Chloride			0.5000	-2	2.0000	1	5.0000	-5	10.000	7	20.000	2	50.000	0	75.000	3	100.00	-5
Carbon Disulfide			0.5000	1	2.0000	-9	5.0000	-8	10.000	9	20.000	2	50.000	2	75.000	6	100.00	-2
MTBE			0.5000	6	2.0000	2	5.0000	-3	10.000	6	20.000	1	50.000	-2	75.000	0	100.00	-9
trans-1,2-Dichloroethene			0.5000	7	2.0000	-4	5.0000	-7	10.000	6	20.000	1	50.000	-2	75.000	2	100.00	-4
Vinyl Acetate			0.5000	9	2.0000	9	5.0000	3	10.000	3	20.000	2	50.000	-9	75.000	-6	100.00	-11
1,1-Dichloroethane			0.5000	12	2.0000	-1	5.0000	-3	10.000	5	20.000	1	50.000	-3	75.000	-2	100.00	-9
2-Butanone							5.0000	5	10.000	9	20.000	-1	50.000	0	75.000	-1	100.00	-11
2,2-Dichloropropane			0.5000	16	2.0000	0	5.0000	-3	10.000	5	20.000	0	50.000	-4	75.000	-3	100.00	-11
cis-1,2-Dichloroethene			0.5000	11	2.0000	-2	5.0000	-6	10.000	4	20.000	0	50.000	-2	75.000	1	100.00	-5
Chloroform			0.5000	10	2.0000	1	5.0000	-2	10.000	3	20.000	-1	50.000	-1	75.000	-1	100.00	-9
Bromochloromethane			0.5000	-4	2.0000	-6	5.0000	-4	10.000	6	20.000	3	50.000	4	75.000	4	100.00	-3
1,1,1-Trichloroethane			0.5000	2	2.0000	-4	5.0000	-2	10.000	3	20.000	-1	50.000	0	75.000	4	100.00	-1
1,1-Dichloropropene			0.5000	6	2.0000	-3	5.0000	-3	10.000	1	20.000	0	50.000	1	75.000	1	100.00	-2
Carbon Tetrachloride			0.5000	5	2.0000	-5	5.0000	-2	10.000	-2	20.000	-2	50.000	0	75.000	4	100.00	1
1,2-Dichloroethane			0.5000	5	2.0000	0	5.0000	-3	10.000	4	20.000	1	50.000	-1	75.000	0	100.00	-7
Benzene			0.5000	1	2.0000	-1	5.0000	-3	10.000	7	20.000	1	50.000	0	75.000	0	100.00	-5
Trichloroethene			0.5000	4	2.0000	-3	5.0000	-5	10.000	2	20.000	-1	50.000	0	75.000	3	100.00	-1
1,2-Dichloropropane			0.5000	7	2.0000	-3	5.0000	-2	10.000	5	20.000	-1	50.000	-3	75.000	2	100.00	-5
Bromodichloromethane			0.5000	3	2.0000	-2	5.0000	-6	10.000	2	20.000	0	50.000	1	75.000	4	100.00	-2
Dibromomethane			0.5000	5	2.0000	-3	5.0000	-5	10.000	4	20.000	1	50.000	1	75.000	2	100.00	-4
4-Methyl-2-Pentanone							5.0000	-1	10.000	7	20.000	0	50.000	0	75.000	0	100.00	-7
cis-1,3-Dichloropropene			0.5000	6	2.0000	-3	5.0000	-2	10.000	4	20.000	0	50.000	0	75.000	2	100.00	-6
Toluene			0.5000	11	2.0000	-2	5.0000	-5	10.000	1	20.000	-1	50.000	-1	75.000	1	100.00	-5
trans-1,3-Dichloropropene			0.5000	6	2.0000	-4	5.0000	-4	10.000	4	20.000	2	50.000	0	75.000	1	100.00	-5
1,1,2-Trichloroethane			0.5000	1	2.0000	3	5.0000	-4	10.000	2	20.000	0	50.000	-1	75.000	3	100.00	-4
2-Hexanone							5.0000	-2	10.000	8	20.000	0	50.000	1	75.000	0	100.00	-8
1,3-Dichloropropane			0.5000	7	2.0000	-3	5.0000	-5	10.000	5	20.000	1	50.000	-1	75.000	1	100.00	-5
Tetrachloroethene			0.5000	7	2.0000	-8	5.0000	-5	10.000	-2	20.000	-2	50.000	1	75.000	7	100.00	2
Dibromochloromethane			0.5000	5	2.0000	-8	5.0000	-10	10.000	0	20.000	1	50.000	2	75.000	8	100.00	3
1,2-Dibromoethane			0.5000	-1	2.0000	-1	5.0000	-8	10.000	4	20.000	1	50.000	0	75.000	6	100.00	0
Chlorobenzene			0.5000	2	2.0000	-1	5.0000	-4	10.000	3	20.000	1	50.000	0	75.000	3	100.00	-4
1,1,1,2-Tetrachloroethane			0.5000	-5	2.0000	-3	5.0000	-6	10.000	2	20.000	2	50.000	2	75.000	7	100.00	1
Ethylbenzene			0.5000	8	2.0000	2	5.0000	-1	10.000	3	20.000	0	50.000	-2	75.000	0	100.00	-9

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-2	1.0000	8	4.0000	-3	10.000	-5	20.000	0	40.000	1	100.00	1	150.00	4	200.00	-4
o-Xylene			0.5000	0	2.0000	-6	5.0000	-6	10.000	-1	20.000	1	50.000	4	75.000	9	100.00	0
Styrene			0.5000	-3	2.0000	-7	5.0000	-7	10.000	2	20.000	4	50.000	5	75.000	8	100.00	-2
Bromoform			0.5000	-15	2.0000	-13	5.0000	-11	10.000	0	20.000	2	50.000	10	75.000	17	100.00	11
Isopropylbenzene			0.5000	16	2.0000	2	5.0000	2	10.000	1	20.000	-2	50.000	-5	75.000	-3	100.00	-11
1,1,2,2-Tetrachloroethane			0.5000	10	2.0000	8	5.0000	0	10.000	4	20.000	-1	50.000	-6	75.000	-5	100.00	-10
1,2,3-Trichloropropane			0.5000	16	2.0000	9	5.0000	0	10.000	6	20.000	-3	50.000	-8	75.000	-7	100.00	-13
Propylbenzene			0.5000	20	2.0000	4	5.0000	2	10.000	-1	20.000	-3	50.000	-6	75.000	-4	100.00	-13
Bromobenzene			0.5000	12	2.0000	-2	5.0000	-3	10.000	1	20.000	0	50.000	-2	75.000	1	100.00	-6
1,3,5-Trimethylbenzene			0.5000	9	2.0000	-1	5.0000	-2	10.000	-1	20.000	-2	50.000	-1	75.000	3	100.00	-5
2-Chlorotoluene			0.5000	19	2.0000	4	5.0000	1	10.000	1	20.000	-3	50.000	-5	75.000	-5	100.00	-13
4-Chlorotoluene			0.5000	16	2.0000	3	5.0000	1	10.000	0	20.000	-4	50.000	-4	75.000	-2	100.00	-10
tert-Butylbenzene			0.5000	11	2.0000	-1	5.0000	-3	10.000	-2	20.000	-2	50.000	-1	75.000	3	100.00	-5
1,2,4-Trimethylbenzene			0.5000	5	2.0000	-4	5.0000	-4	10.000	-2	20.000	-2	50.000	1	75.000	7	100.00	-1
sec-Butylbenzene			0.5000	9	2.0000	-3	5.0000	0	10.000	-1	20.000	-1	50.000	0	75.000	2	100.00	-7
para-Isopropyl Toluene			0.5000	6	2.0000	-6	5.0000	-4	10.000	-3	20.000	-3	50.000	3	75.000	7	100.00	0
1,3-Dichlorobenzene			0.5000	0	2.0000	-1	5.0000	-4	10.000	-2	20.000	0	50.000	2	75.000	6	100.00	-2
1,4-Dichlorobenzene			0.5000	8	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	0	75.000	4	100.00	-3
n-Butylbenzene			0.5000	4	2.0000	-7	5.0000	-4	10.000	-2	20.000	-1	50.000	3	75.000	8	100.00	0
1,2-Dichlorobenzene			0.5000	1	2.0000	-2	5.0000	-3	10.000	1	20.000	0	50.000	1	75.000	5	100.00	-2
1,2-Dibromo-3-Chloropropane			0.5000	-30	2.0000	9	5.0000	2	10.000	3	20.000	5	50.000	4	75.000	6	100.00	0
1,2,4-Trichlorobenzene			0.5000	41	2.0000	3	5.0000	-5	10.000	-2	20.000	1	50.000	0				
Hexachlorobutadiene			0.5000	-19	2.0000	-5	5.0000	-1	10.000	-4	20.000	2	50.000	7	75.000	14	100.00	6
Naphthalene					2.0000	35	5.0000	-4	10.000	-2	20.000	-3	50.000	1	75.000	0		
1,2,3-Trichlorobenzene			0.5000	67	2.0000	5	5.0000	-10	10.000	-1	20.000	1	50.000	0				
Dibromofluoromethane	50.000	-1	50.000	2	50.000	-1	50.000	1	50.000	2	50.000	0	50.000	0	50.000	-1	50.000	-2
1,2-Dichloroethane-d4	50.000	4	50.000	3	50.000	2	50.000	2	50.000	1	50.000	-1	50.000	-3	50.000	-4	50.000	-3
Toluene-d8	50.000	1	50.000	3	50.000	1	50.000	1	50.000	0	50.000	-1	50.000	-2	50.000	-2	50.000	-2
Bromofluorobenzene	50.000	8	50.000	9	50.000	4	50.000	2	50.000	0	50.000	-2	50.000	-6	50.000	-8	50.000	-8

KKM 08/12/15 [Freon 12]: Corrected fronting or tailing peak integration in multiple levels.

KKM 08/12/15 [Vinyl Chloride]: Corrected fronting or tailing peak integration in multiple levels.

KKM 08/12/15 [Chloromethane]: Does not meet 8260C low point requant. High bias. Rerun hits <1.00ppb (standard RL is 1.00ppb)

KKM 08/12/15 [1,2,4-Trichlorobenzene]: Does not meet 8260C low point requant. High bias. Rerun hits <2.00ppb

KKM 08/12/15 [1,2,3-Trichlorobenzene]: Does not meet 8260C low point requant. High bias. Rerun hits <2.00ppb

KKM 08/12/15 [Naphthalene]: Does not meet 8260C low point requant. High bias. Rerun hits <5.00ppb

Analyst: KKM

Date: 08/12/15

Reviewer: LW

Date: 08/12/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor; QUAD=Quadratic regression

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495321824001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10  
Calnum : 495321824001

Name : 826GOX10  
Cal Date : 11-AUG-2015

Type : WATER

ICV 495321824017 (jhb17 11-AUG-2015) stds: S27007 (10000X), S27697 (2500X)  
ICV 495321824018 (jhb18 11-AUG-2015) stds: S27558 (10000X), S27697 (2500X),  
S27556 (10000X), S27533 (10000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	495321824017	20.00	26.11	ug/L	31	30	v+
Chloromethane	495321824017	20.00	22.77	ug/L	14	30	
Vinyl Chloride	495321824017	20.00	19.80	ug/L	-1	20	
Bromomethane	495321824017	20.00	19.74	ug/L	-1	30	
Chloroethane	495321824017	20.00	20.47	ug/L	2	30	
Trichlorofluoromethane	495321824017	20.00	21.66	ug/L	8	30	
Acetone	495321824018	25.00	23.95	ug/L	-4	40	
Freon 113	495321824018	25.00	27.80	ug/L	11	30	
1,1-Dichloroethene	495321824018	25.00	28.66	ug/L	15	20	
Methylene Chloride	495321824018	25.00	27.89	ug/L	12	30	
Carbon Disulfide	495321824018	25.00	29.46	ug/L	18	30	
MTBE	495321824018	25.00	26.68	ug/L	7	30	
trans-1,2-Dichloroethene	495321824018	25.00	27.42	ug/L	10	30	
Vinyl Acetate	495321824018	25.00	27.19	ug/L	9	40	
1,1-Dichloroethane	495321824018	25.00	26.75	ug/L	7	30	
2-Butanone	495321824018	25.00	27.47	ug/L	10	40	
2,2-Dichloropropane	495321824018	25.00	24.96	ug/L	0	30	
cis-1,2-Dichloroethene	495321824018	25.00	27.26	ug/L	9	30	
Chloroform	495321824018	25.00	26.85	ug/L	7	20	
Bromochloromethane	495321824018	25.00	28.77	ug/L	15	30	
1,1,1-Trichloroethane	495321824018	25.00	28.36	ug/L	13	30	
1,1-Dichloropropene	495321824018	25.00	26.46	ug/L	6	30	
Carbon Tetrachloride	495321824018	25.00	28.13	ug/L	13	30	
1,2-Dichloroethane	495321824018	25.00	26.74	ug/L	7	30	
Benzene	495321824018	25.00	27.89	ug/L	12	30	
Trichloroethene	495321824018	25.00	27.16	ug/L	9	30	
1,2-Dichloropropane	495321824018	25.00	26.31	ug/L	5	20	
Bromodichloromethane	495321824018	25.00	27.03	ug/L	8	30	
Dibromomethane	495321824018	25.00	26.94	ug/L	8	30	
4-Methyl-2-Pentanone	495321824018	25.00	28.65	ug/L	15	40	
cis-1,3-Dichloropropene	495321824018	25.00	26.54	ug/L	6	30	
Toluene	495321824018	25.00	27.90	ug/L	12	20	
trans-1,3-Dichloropropene	495321824018	25.00	25.22	ug/L	1	30	
1,1,2-Trichloroethane	495321824018	25.00	27.57	ug/L	10	30	
2-Hexanone	495321824018	25.00	29.60	ug/L	18	40	
1,3-Dichloropropane	495321824018	25.00	28.41	ug/L	14	30	
Tetrachloroethene	495321824018	25.00	28.13	ug/L	13	30	
Dibromochloromethane	495321824018	25.00	28.24	ug/L	13	30	
1,2-Dibromoethane	495321824018	25.00	27.66	ug/L	11	30	
Chlorobenzene	495321824018	25.00	28.61	ug/L	14	30	
1,1,1,2-Tetrachloroethane	495321824018	25.00	28.60	ug/L	14	30	
Ethylbenzene	495321824018	25.00	28.86	ug/L	15	20	
m,p-Xylenes	495321824018	50.00	57.55	ug/L	15	30	
o-Xylene	495321824018	25.00	28.96	ug/L	16	30	
Styrene	495321824018	25.00	30.02	ug/L	20	30	
Bromoform	495321824018	25.00	30.77	ug/L	23	30	!v+
Isopropylbenzene	495321824018	25.00	28.27	ug/L	13	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	495321824018	25.00	28.60	ug/L	14	30	
1,2,3-Trichloropropane	495321824018	25.00	27.37	ug/L	9	30	
Propylbenzene	495321824018	25.00	27.78	ug/L	11	30	
Bromobenzene	495321824018	25.00	28.52	ug/L	14	30	
1,3,5-Trimethylbenzene	495321824018	25.00	29.67	ug/L	19	30	
2-Chlorotoluene	495321824018	25.00	28.01	ug/L	12	30	
4-Chlorotoluene	495321824018	25.00	28.58	ug/L	14	30	
tert-Butylbenzene	495321824018	25.00	29.02	ug/L	16	30	
1,2,4-Trimethylbenzene	495321824018	25.00	28.69	ug/L	15	30	
sec-Butylbenzene	495321824018	25.00	29.08	ug/L	16	30	
para-Isopropyl Toluene	495321824018	25.00	29.24	ug/L	17	30	
1,3-Dichlorobenzene	495321824018	25.00	30.09	ug/L	20	30	
1,4-Dichlorobenzene	495321824018	25.00	29.70	ug/L	19	30	
n-Butylbenzene	495321824018	25.00	29.57	ug/L	18	30	
1,2-Dichlorobenzene	495321824018	25.00	30.13	ug/L	<b>21</b>	30	!v+
1,2-Dibromo-3-Chloropropane	495321824018	25.00	29.75	ug/L	19	30	
1,2,4-Trichlorobenzene	495321824018	25.00	30.74	ug/L	<b>23</b>	30	!v+
Hexachlorobutadiene	495321824018	25.00	30.44	ug/L	<b>22</b>	30	!v+
Naphthalene	495321824018	25.00	28.87	ug/L	15	30	
1,2,3-Trichlorobenzene	495321824018	25.00	31.72	ug/L	<b>27</b>	30	!v+

495321824017: Analyst: KKM  
495321824018: Analyst: KKM

Date: 08/12/15  
Date: 08/12/15

Reviewer: LW  
Reviewer: LW

Date: 08/12/15  
Date: 08/12/15

!=warning +=high bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271203 MSVOA Water: EPA 8260B

Inst : MSVOA14  
 Calnum : 955422499001  
 Units : ug/L

Name : 8260X14W  
 Date : 20-OCT-2015 15:49  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	njk17	955422499017		20-OCT-2015 15:49	S27004 (2000000X), S28008 (2000000X), S28355 (2000000X), S27081 (1000000X), S28246 (2500X)
L2	njk18	955422499018		20-OCT-2015 16:15	S27004 (1000000X), S28008 (1000000X), S28355 (1000000X), S27081 (500000X), S28246 (2500X)
L3	njk19	955422499019		20-OCT-2015 16:41	S27004 (500000X), S28008 (250000X), S28355 (250000X), S27081 (250000X), S28246 (2500X)
L4	njk20	955422499020		20-OCT-2015 17:08	S27004 (200000X), S28008 (100000X), S28355 (100000X), S27081 (100000X), S28246 (2500X)
L5	njk21	955422499021		20-OCT-2015 17:34	S27004 (100000X), S28008 (50000X), S28355 (50000X), S27081 (50000X), S28246 (2500X)
L6	njk22	955422499022		20-OCT-2015 18:00	S27004 (50000X), S28008 (25000X), S28355 (25000X), S27081 (25000X), S28246 (2500X)
L7	njk23	955422499023		20-OCT-2015 18:26	S27004 (20000X), S28008 (10000X), S28355 (10000X), S27081 (10000X), S28246 (2500X)
L8	njk24	955422499024		20-OCT-2015 18:53	S27004 (13330X), S28008 (6667X), S28355 (6667X), S27081 (6667X), S28246 (2500X)
L9	njk25	955422499025		20-OCT-2015 19:19	S27004 (10000X), S28008 (5000X), S28355 (5000X), S27081 (5000X), S28246 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.6837	0.6585	0.6598	0.6465	0.6233	0.6133	0.6239	0.6226	AVRG		1.55896		0.6415	4	15	0.05	0.99	
Chloromethane	0.9255	1.1154	0.9404	0.9896	0.9803	0.8971	0.9091	0.8887	0.9132	AVRG		1.05148		0.9510	7	15	0.10	0.99	
Vinyl Chloride	0.8999	1.0998	0.9717	0.9947	0.9714	0.9323	0.9560	0.9515	0.9588	AVRG		1.03020		0.9707	6	15	0.05	0.99	
Bromomethane		0.2097	0.2055	0.2338	0.2282	0.2241	0.2349	0.2304	0.2266	AVRG		4.46123		0.2242	5	15	0.05	0.99	
Chloroethane		0.6283	0.5547	0.5452	0.5234	0.5146	0.5057	0.5021	0.5021	AVRG		1.87084		0.5345	8	15	0.05	0.99	
Trichlorofluoromethane		0.9312	0.8190	0.8477	0.8279	0.8073	0.7916	0.7943	0.8005	AVRG		1.20854		0.8274	6	15	0.05	0.99	
Acetone			0.4907m	0.4211m	0.4174m	0.4203m	0.3912m	0.3730m	0.3952m	AVRG		2.40635		0.4156	9	15	0.05	0.99	
Freon 113		0.5077	0.4409	0.4305	0.4099	0.4100	0.4298	0.4276	0.4209	AVRG		2.30057		0.4347	7	15	0.05	0.99	
1,1-Dichloroethene		0.4902	0.4204	0.4204	0.4075	0.3943	0.4100	0.4093	0.4061	AVRG		2.38219		0.4198	7	15	0.05	0.99	
Methylene Chloride		0.5744	0.4944	0.5013	0.4855	0.4733	0.4934	0.4875	0.4851	AVRG		2.00255		0.4994	6	15	0.05	0.99	
Carbon Disulfide		1.6007	1.5105	1.4858	1.4361	1.3946	1.4590	1.4543	1.4486	AVRG		0.67857		1.4737	4	15	0.05	0.99	
MTBE		1.8670	1.6464	1.6428	1.6332	1.6163	1.6646	1.6531	1.6950	AVRG		0.59620		1.6773	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5631	0.4839	0.4724	0.4676	0.4501	0.4642	0.4637	0.4643	AVRG		2.08918		0.4787	7	15	0.05	0.99	
Vinyl Acetate		1.7426	1.4446	1.7048	1.5558	1.7632	1.8221	1.7386	1.9343	AVRG		0.58369		1.7132	9	15	0.05	0.99	
1,1-Dichloroethane		1.5314	1.3333	1.3266	1.3053	1.2600	1.3091	1.2960	1.3074	AVRG		0.74984		1.3336	6	15	0.10	0.99	
2-Butanone			0.5179	0.4876	0.4793	0.4796	0.4848	0.4727	0.4985	AVRG		2.04652		0.4886	3	15	0.05	0.99	
2,2-Dichloropropane		0.7631	0.6617	0.6577	0.6369	0.6165	0.6452	0.6397	0.6364	AVRG		1.52174		0.6571	7	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6344	0.5605	0.5725	0.5451	0.5320	0.5509	0.5520	0.5522	AVRG		1.77795		0.5624	6	15	0.05	0.99	
Chloroform		1.0104	0.9092	0.8810	0.8677	0.8361	0.8779	0.8764	0.8784	AVRG		1.12093		0.8921	6	15	0.05	0.99	
Bromochloromethane		0.2823	0.2653	0.2526	0.2458	0.2368	0.2408	0.2356	0.2327	AVRG		4.01645		0.2490	7	15	0.05	0.99	
1,1,1-Trichloroethane		0.8544	0.7822	0.7928	0.7752	0.7424	0.7819	0.7782	0.7817	AVRG		1.27208		0.7861	4	15	0.05	0.99	
1,1-Dichloropropene		0.5075	0.4901	0.4843	0.4655	0.4587	0.4788	0.4831	0.4826	AVRG		2.07764		0.4813	3	15	0.05	0.99	
Carbon Tetrachloride		0.4378	0.3967	0.4105	0.3905	0.3878	0.4132	0.4186	0.4157	AVRG		2.44587		0.4089	4	15	0.05	0.99	
1,2-Dichloroethane		0.6891	0.6343	0.6391	0.6267	0.6133	0.6248	0.6320	0.6346	AVRG		1.57054		0.6367	4	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.6254	1.3784	1.4119	1.3495	1.3209	1.3753	1.3789	1.3730	AVRG		0.71344		1.4017	7	15	0.05	0.99	
Trichloroethene		0.4025	0.3692	0.3582	0.3493	0.3487	0.3589	0.3589	0.3565	AVRG		2.75647		0.3628	5	15	0.05	0.99	
1,2-Dichloropropane		0.5757	0.4929	0.5244	0.4817m	0.4821m	0.4992m	0.4980m	0.4974m	AVRG		1.97465		0.5064	6	15	0.05	0.99	
Bromodichloromethane		0.4533	0.4459	0.4344	0.4366	0.4280	0.4517	0.4533	0.4556	AVRG		2.24799		0.4448	2	15	0.05	0.99	
Dibromomethane		0.2428	0.2246	0.2279	0.2128	0.2108	0.2160	0.2156	0.2186	AVRG		4.52219		0.2211	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6560	0.6384	0.6210	0.6446	0.6454	0.6358	0.6711	AVRG		1.55130		0.6446	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6089	0.5354	0.5413	0.5251	0.5310	0.5586	0.5619	0.5638	AVRG		1.80754		0.5532	5	15	0.05	0.99	
Toluene		1.9507	1.6507	1.6330	1.6277	1.5840	1.6564	1.6419	1.6301	AVRG		0.59816		1.6718	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5638	0.5265	0.5471	0.5354	0.5405	0.5648	0.5680	0.5725	AVRG		1.81051		0.5523	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.2042	0.1862	0.1868	0.1823	0.1794	0.1849	0.1829	0.1830	AVRG		5.37022		0.1862	4	15	0.05	0.99	
2-Hexanone			0.4851	0.4874	0.4896	0.4905	0.5035	0.4921	0.5175	AVRG		2.01976		0.4951	2	15	0.05	0.99	
1,3-Dichloropropane		0.6835	0.6350	0.6219	0.6187	0.6136	0.6304	0.6219	0.6312	AVRG		1.58221		0.6320	3	15	0.05	0.99	
Tetrachloroethene		0.4048	0.3665	0.3651	0.3474	0.3398	0.3565	0.3543	0.3539	AVRG		2.76980		0.3610	5	15	0.05	0.99	
Dibromochloromethane		0.4335	0.3523	0.3636	0.3677	0.3690	0.3898	0.3881	0.3917	AVRG		2.61807		0.3820	7	15	0.05	0.99	
1,2-Dibromoethane		0.4210	0.3578	0.3536	0.3543	0.3528	0.3666	0.3640	0.3675	AVRG		2.72342		0.3672	6	15	0.05	0.99	
Chlorobenzene		1.1930	1.0437	1.0547	1.0088	0.9940	1.0357	1.0309	1.0231	AVRG		0.95422		1.0480	6	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.4003	0.3408	0.3541	0.3493	0.3507	0.3662	0.3658	0.3667	AVRG		2.76439		0.3617	5	15	0.05	0.99	
Ethylbenzene		2.2020	1.9060	1.9237	1.8725	1.8465	1.9238	1.9190	1.9236	AVRG		0.51556		1.9396	6	15	0.05	0.99	
m,p-Xylenes	0.6673	0.8362	0.7342	0.7448	0.7084	0.7126	0.7401	0.7368	0.7375	AVRG		1.35991		0.7353	6	15	0.05	0.99	
o-Xylene		0.7708	0.7121	0.7417	0.7154	0.7075	0.7337	0.7320	0.7326	AVRG		1.36850		0.7307	3	15	0.05	0.99	
Styrene		1.4284	1.2162	1.2466	1.2092	1.2092	1.2606	1.2573	1.2598	AVRG		0.79308		1.2609	6	15	0.05	0.99	
Bromoform		0.2976	0.2582	0.2607	0.2546	0.2583	0.2748	0.2723	0.2843	AVRG		3.70223		0.2701	6	15	0.10	0.99	
Isopropylbenzene		3.9761	3.5450	3.6250	3.4828	3.4189	3.5304	3.5404	3.5087	AVRG		0.27945		3.5784	5	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.0367	0.8055	0.8587	0.7907	0.8097	0.8217	0.8186	0.8550	AVRG		1.17709		0.8496	9	15	0.30	0.99	
1,2,3-Trichloropropane		1.1143	0.9847	0.9773	0.9535	0.9429	0.9603	0.9452	0.9752	AVRG		1.01868		0.9817	6	15	0.05	0.99	
Propylbenzene		4.7698	4.3192	4.3657	4.2011	4.1600	4.3312	4.3185	4.3047	AVRG		0.23008		4.3463	4	15	0.05	0.99	
Bromobenzene		0.9841	0.8326	0.8466	0.8202	0.8060	0.8238	0.8190	0.8084	AVRG		1.18683		0.8426	7	15	0.05	0.99	
1,3,5-Trimethylbenzene		3.4587	3.0402	3.1055	2.9658	2.9331	3.0739	3.0886	3.0777	AVRG		0.32332		3.0929	5	15	0.05	0.99	
2-Chlorotoluene		3.2675	2.9352	2.9659	2.8163	2.7289	2.8697	2.8591	2.8589	AVRG		0.34333		2.9127	6	15	0.05	0.99	
4-Chlorotoluene		2.9939	2.6512	2.7564	2.6373	2.5811	2.6823	2.6733	2.6739	AVRG		0.36952		2.7062	5	15	0.05	0.99	
tert-Butylbenzene		2.9899	2.6374	2.6651	2.5470	2.5447	2.6403	2.6300	2.6164	AVRG		0.37610		2.6588	5	15	0.05	0.99	
1,2,4-Trimethylbenzene		3.2533	3.1263	3.1636	3.0200	2.9884	3.1369	3.1498	3.1495	AVRG		0.32016		3.1235	3	15	0.05	0.99	
sec-Butylbenzene		4.5661	3.9855	4.0250	3.8675	3.8320	4.0254	3.9857	3.9955	AVRG		0.24781		4.0353	6	15	0.05	0.99	
para-Isopropyl Toluene		3.6147	3.3196	3.3606	3.2451	3.2444	3.3996	3.3729	3.3681	AVRG		0.29712		3.3656	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.8036	1.5631	1.6145	1.5338	1.5081	1.5635	1.5542	1.5585	AVRG		0.62996		1.5874	6	15	0.05	0.99	
1,4-Dichlorobenzene		1.9904	1.6226	1.6369	1.5736	1.5443	1.5889	1.5728	1.5750	AVRG		0.61048		1.6381	9	15	0.05	0.99	
n-Butylbenzene		3.6954	3.1137	3.1369	3.0403	3.0612	3.2155	3.1986	3.2209	AVRG		0.31150		3.2103	6	15	0.05	0.99	
1,2-Dichlorobenzene		1.7139	1.5835	1.5779	1.4877	1.4738	1.5320	1.5251	1.5205	AVRG		0.64441		1.5518	5	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2906	0.2292	0.2143	0.2078	0.2173	0.2215	0.2194	0.2364	AVRG		4.35583		0.2296	11	15	0.05	0.99	
1,2,4-Trichlorobenzene		1.3164	1.1849	1.2055	1.1777	1.1526	1.2023	1.1824	1.1691	AVRG		0.83412		1.1989	4	15	0.05	0.99	
Hexachlorobutadiene		0.6213	0.5325	0.5136	0.5382	0.5470	0.5910	0.5929	0.5879	AVRG		1.76812		0.5656	7	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		3.8240	3.3505	3.4727	3.3602	3.3820	3.4978	3.4049	3.4519	AVRG		0.28835		3.4680	4	15	0.05	0.99	
1,2,3-Trichlorobenzene		1.2864	1.1793	1.2248	1.1701	1.1346	1.1732	1.1654	1.1444	AVRG		0.84406		1.1848	4	15	0.05	0.99	
Dibromofluoromethane	0.4466	0.4485	0.4526	0.4538	0.4531	0.4511	0.4533	0.4576	0.4581	AVRG		2.20877		0.4527	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.4571	0.4656	0.4693	0.4632	0.4637	0.4685	0.4625	0.4660	0.4695	AVRG		2.15041		0.4650	1	15	0.05	0.99	
Toluene-d8	1.3377	1.3408	1.3415	1.3438	1.3335	1.3520	1.3441	1.3312	1.3394	AVRG		0.74602		1.3404	0	15	0.05	0.99	
Bromofluorobenzene	1.0206	1.0203	1.0242	1.0391	1.0109	1.0120	1.0134	1.0040	1.0036	AVRG		0.98379		1.0165	1	15	0.05	0.99	



Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	7	2.0000	3	5.0000	3	10.000	1	20.000	-3	50.000	-4	75.000	-3	100.00	-3
Chloromethane	0.5000	-3	1.0000	17	2.0000	-1	5.0000	4	10.000	3	20.000	-6	50.000	-4	75.000	-7	100.00	-4
Vinyl Chloride	0.5000	-7	1.0000	13	2.0000	0	5.0000	2	10.000	0	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Bromomethane			1.0000	-6	2.0000	-8	5.0000	4	10.000	2	20.000	0	50.000	5	75.000	3	100.00	1
Chloroethane			1.0000	18	2.0000	4	5.0000	2	10.000	-2	20.000	-4	50.000	-5	75.000	-6	100.00	-6
Trichlorofluoromethane			1.0000	13	2.0000	-1	5.0000	2	10.000	0	20.000	-2	50.000	-4	75.000	-4	100.00	-3
Acetone					2.0000	18	5.0000	1	10.000	0	20.000	1	50.000	-6	75.000	-10	100.00	-5
Freon 113			0.5000	17	2.0000	1	5.0000	-1	10.000	-6	20.000	-6	50.000	-1	75.000	-2	100.00	-3
1,1-Dichloroethene			0.5000	17	2.0000	0	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-3
Methylene Chloride			0.5000	15	2.0000	-1	5.0000	0	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-3
Carbon Disulfide			0.5000	9	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-2
MTBE			0.5000	11	2.0000	-2	5.0000	-2	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	1
trans-1,2-Dichloroethene			0.5000	18	2.0000	1	5.0000	-1	10.000	-2	20.000	-6	50.000	-3	75.000	-3	100.00	-3
Vinyl Acetate			0.5000	2	2.0000	-16	5.0000	0	10.000	-9	20.000	3	50.000	6	75.000	1	100.00	13
1,1-Dichloroethane			0.5000	15	2.0000	0	5.0000	-1	10.000	-2	20.000	-6	50.000	-2	75.000	-3	100.00	-2
2-Butanone					2.0000	6	5.0000	0	10.000	-2	20.000	-2	50.000	-1	75.000	-3	100.00	2
2,2-Dichloropropane			0.5000	16	2.0000	1	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-3	100.00	-3
cis-1,2-Dichloroethene			0.5000	13	2.0000	0	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
Chloroform			0.5000	13	2.0000	2	5.0000	-1	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Bromochloromethane			0.5000	13	2.0000	7	5.0000	1	10.000	-1	20.000	-5	50.000	-3	75.000	-5	100.00	-7
1,1,1-Trichloroethane			0.5000	9	2.0000	0	5.0000	1	10.000	-1	20.000	-6	50.000	-1	75.000	-1	100.00	-1
1,1-Dichloropropene			0.5000	5	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	0	100.00	0
Carbon Tetrachloride			0.5000	7	2.0000	-3	5.0000	0	10.000	-4	20.000	-5	50.000	1	75.000	2	100.00	2
1,2-Dichloroethane			0.5000	8	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-2	75.000	-1	100.00	0
Benzene			0.5000	16	2.0000	-2	5.0000	1	10.000	-4	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Trichloroethene			0.5000	11	2.0000	2	5.0000	-1	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2-Dichloropropane			0.5000	14	2.0000	-3	5.0000	4	10.000	-5	20.000	-5	50.000	-1	75.000	-2	100.00	-2
Bromodichloromethane			0.5000	2	2.0000	0	5.0000	-2	10.000	-2	20.000	-4	50.000	2	75.000	2	100.00	2
Dibromomethane			0.5000	10	2.0000	2	5.0000	3	10.000	-4	20.000	-5	50.000	-2	75.000	-2	100.00	-1
4-Methyl-2-Pentanone					2.0000	2	5.0000	-1	10.000	-4	20.000	0	50.000	0	75.000	-1	100.00	4
cis-1,3-Dichloropropene			0.5000	10	2.0000	-3	5.0000	-2	10.000	-5	20.000	-4	50.000	1	75.000	2	100.00	2
Toluene			0.5000	17	2.0000	-1	5.0000	-2	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-2
trans-1,3-Dichloropropene			0.5000	2	2.0000	-5	5.0000	-1	10.000	-3	20.000	-2	50.000	2	75.000	3	100.00	4
1,1,2-Trichloroethane			0.5000	10	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-1	75.000	-2	100.00	-2
2-Hexanone					2.0000	-2	5.0000	-2	10.000	-1	20.000	-1	50.000	2	75.000	-1	100.00	5
1,3-Dichloropropane			0.5000	8	2.0000	0	5.0000	-2	10.000	-2	20.000	-3	50.000	0	75.000	-2	100.00	0
Tetrachloroethene			0.5000	12	2.0000	2	5.0000	1	10.000	-4	20.000	-6	50.000	-1	75.000	-2	100.00	-2
Dibromochloromethane			0.5000	13	2.0000	-8	5.0000	-5	10.000	-4	20.000	-3	50.000	2	75.000	2	100.00	3
1,2-Dibromoethane			0.5000	15	2.0000	-3	5.0000	-4	10.000	-4	20.000	-4	50.000	0	75.000	-1	100.00	0
Chlorobenzene			0.5000	14	2.0000	0	5.0000	1	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,1,1,2-Tetrachloroethane			0.5000	11	2.0000	-6	5.0000	-2	10.000	-3	20.000	-3	50.000	1	75.000	1	100.00	1
Ethylbenzene			0.5000	14	2.0000	-2	5.0000	-1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-9	1.0000	14	4.0000	0	10.000	1	20.000	-4	40.000	-3	100.00	1	150.00	0	200.00	0
o-Xylene			0.5000	5	2.0000	-3	5.0000	2	10.000	-2	20.000	-3	50.000	0	75.000	0	100.00	0
Styrene			0.5000	13	2.0000	-4	5.0000	-1	10.000	-4	20.000	-4	50.000	0	75.000	0	100.00	0
Bromoform			0.5000	10	2.0000	-4	5.0000	-3	10.000	-6	20.000	-4	50.000	2	75.000	1	100.00	5
Isopropylbenzene			0.5000	11	2.0000	-1	5.0000	1	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,1,2,2-Tetrachloroethane			0.5000	<b>22</b>	2.0000	-5	5.0000	1	10.000	-7	20.000	-5	50.000	-3	75.000	-4	100.00	1
1,2,3-Trichloropropane			0.5000	14	2.0000	0	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-4	100.00	-1
Propylbenzene			0.5000	10	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	0	75.000	-1	100.00	-1
Bromobenzene			0.5000	17	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-3	100.00	-4
1,3,5-Trimethylbenzene			0.5000	12	2.0000	-2	5.0000	0	10.000	-4	20.000	-5	50.000	-1	75.000	0	100.00	0
2-Chlorotoluene			0.5000	12	2.0000	1	5.0000	2	10.000	-3	20.000	-6	50.000	-1	75.000	-2	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	12	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2,4-Trimethylbenzene			0.5000	4	2.0000	0	5.0000	1	10.000	-3	20.000	-4	50.000	0	75.000	1	100.00	1
sec-Butylbenzene			0.5000	13	2.0000	-1	5.0000	0	10.000	-4	20.000	-5	50.000	0	75.000	-1	100.00	-1
para-Isopropyl Toluene			0.5000	7	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	1	75.000	0	100.00	0
1,3-Dichlorobenzene			0.5000	14	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
1,4-Dichlorobenzene			0.5000	<b>22</b>	2.0000	-1	5.0000	0	10.000	-4	20.000	-6	50.000	-3	75.000	-4	100.00	-4
n-Butylbenzene			0.5000	15	2.0000	-3	5.0000	-2	10.000	-5	20.000	-5	50.000	0	75.000	0	100.00	0
1,2-Dichlorobenzene			0.5000	10	2.0000	2	5.0000	2	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,2-Dibromo-3-Chloropropane			0.5000	<b>27</b>	2.0000	0	5.0000	-7	10.000	-9	20.000	-5	50.000	-4	75.000	-4	100.00	3
1,2,4-Trichlorobenzene			0.5000	10	2.0000	-1	5.0000	1	10.000	-2	20.000	-4	50.000	0	75.000	-1	100.00	-2
Hexachlorobutadiene			0.5000	10	2.0000	-6	5.0000	-9	10.000	-5	20.000	-3	50.000	5	75.000	5	100.00	4
Naphthalene			0.5000	10	2.0000	-3	5.0000	0	10.000	-3	20.000	-2	50.000	1	75.000	-2	100.00	0
1,2,3-Trichlorobenzene			0.5000	9	2.0000	0	5.0000	3	10.000	-1	20.000	-4	50.000	-1	75.000	-2	100.00	-3
Dibromofluoromethane	50.000	-1	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	0	50.000	1	50.000	1
1,2-Dichloroethane-d4	50.000	-2	50.000	0	50.000	1	50.000	0	50.000	0	50.000	1	50.000	-1	50.000	0	50.000	1
Toluene-d8	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	1	50.000	0	50.000	-1	50.000	0
Bromofluorobenzene	50.000	0	50.000	0	50.000	1	50.000	2	50.000	-1	50.000	0	50.000	0	50.000	-1	50.000	-1

MCT 10/21/15 [Acetone]: Separated from coeluting peak in multiple levels.

MCT 10/21/15 [1,2-Dichloropropane]: Corrected fronting or tailing peak integration in multiple levels.

MCT 10/21/15 [Iodomethane]: Corrected fronting or tailing peak integration in (nj25).

MCT 10/21/15 [Iodomethane]: ICV doesn't pass for Iodomethane

MCT 10/21/15 [tert-Butyl Alcohol (TBA)]: Rerun if sample hit less than 20ppb for TBA.

MCT 10/21/15 [2-Chloroethylvinylether]: Rerun if sample hit less than 5ppb for 2-Cleve.

MCT: 10/23/15 LW: 10/23/15 DJA: 10/26/15 KKM: 10/26/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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955422499001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA14  
Calnum : 955422499001

Name : 8260X14W  
Cal Date : 20-OCT-2015

ICV 955422499028 (njk28 20-OCT-2015) stds: S28219 (10000X), S28220 (10000X),  
S28167 (10000X), S28246 (2500X)

ICV 955423728006 (njl06 21-OCT-2015) stds: S27267 (10000X), S28246 (2500X)

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
Freon 12	955423728006	21-OCT-2015	20.00	20.12	ug/L	1	30	
Chloromethane	955423728006	21-OCT-2015	20.00	21.56	ug/L	8	30	
Vinyl Chloride	955423728006	21-OCT-2015	20.00	19.65	ug/L	-2	20	
Bromomethane	955423728006	21-OCT-2015	20.00	16.95	ug/L	-15	30	
Chloroethane	955423728006	21-OCT-2015	20.00	19.51	ug/L	-2	30	
Trichlorofluoromethane	955423728006	21-OCT-2015	20.00	19.08	ug/L	-5	30	
Acetone	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	40	m
Freon 113	955422499028	20-OCT-2015	25.00	20.88	ug/L	-16	30	
1,1-Dichloroethene	955422499028	20-OCT-2015	25.00	24.12	ug/L	-4	20	
Methylene Chloride	955422499028	20-OCT-2015	25.00	24.71	ug/L	-1	30	
Carbon Disulfide	955422499028	20-OCT-2015	25.00	23.73	ug/L	-5	30	
MTBE	955422499028	20-OCT-2015	25.00	24.47	ug/L	-2	30	
trans-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	22.79	ug/L	-9	30	
Vinyl Acetate	955422499028	20-OCT-2015	25.00	23.17	ug/L	-7	40	
1,1-Dichloroethane	955422499028	20-OCT-2015	25.00	24.05	ug/L	-4	30	
2-Butanone	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	40	
2,2-Dichloropropane	955422499028	20-OCT-2015	25.00	21.79	ug/L	-13	30	
cis-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	25.08	ug/L	0	30	
Chloroform	955422499028	20-OCT-2015	25.00	24.63	ug/L	-1	20	
Bromochloromethane	955422499028	20-OCT-2015	25.00	24.14	ug/L	-3	30	
1,1,1-Trichloroethane	955422499028	20-OCT-2015	25.00	25.01	ug/L	0	30	
1,1-Dichloropropene	955422499028	20-OCT-2015	25.00	21.55	ug/L	-14	30	
Carbon Tetrachloride	955422499028	20-OCT-2015	25.00	25.22	ug/L	1	30	
1,2-Dichloroethane	955422499028	20-OCT-2015	25.00	24.66	ug/L	-1	30	
Benzene	955422499028	20-OCT-2015	25.00	23.67	ug/L	-5	30	
Trichloroethene	955422499028	20-OCT-2015	25.00	25.16	ug/L	1	30	
1,2-Dichloropropane	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	20	
Bromodichloromethane	955422499028	20-OCT-2015	25.00	24.50	ug/L	-2	30	
Dibromomethane	955422499028	20-OCT-2015	25.00	23.78	ug/L	-5	30	
4-Methyl-2-Pentanone	955422499028	20-OCT-2015	25.00	25.11	ug/L	0	40	
cis-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	25.80	ug/L	3	30	
Toluene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	20	
trans-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,1,2-Trichloroethane	955422499028	20-OCT-2015	25.00	24.62	ug/L	-2	30	
2-Hexanone	955422499028	20-OCT-2015	25.00	25.90	ug/L	4	40	
1,3-Dichloropropane	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	30	
Tetrachloroethene	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Dibromochloromethane	955422499028	20-OCT-2015	25.00	24.22	ug/L	-3	30	
1,2-Dibromoethane	955422499028	20-OCT-2015	25.00	23.75	ug/L	-5	30	
Chlorobenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	23.70	ug/L	-5	30	
Ethylbenzene	955422499028	20-OCT-2015	25.00	23.87	ug/L	-5	20	
m,p-Xylenes	955422499028	20-OCT-2015	50.00	48.60	ug/L	-3	30	
o-Xylene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Styrene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Bromoform	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	30	
Isopropylbenzene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	30	

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	24.78	ug/L	-1	30	
1,2,3-Trichloropropane	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Propylbenzene	955422499028	20-OCT-2015	25.00	23.64	ug/L	-5	30	
Bromobenzene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,3,5-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
2-Chlorotoluene	955422499028	20-OCT-2015	25.00	23.98	ug/L	-4	30	
4-Chlorotoluene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
tert-Butylbenzene	955422499028	20-OCT-2015	25.00	24.03	ug/L	-4	30	
1,2,4-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.04	ug/L	-4	30	
sec-Butylbenzene	955422499028	20-OCT-2015	25.00	23.81	ug/L	-5	30	
para-Isopropyl Toluene	955422499028	20-OCT-2015	25.00	23.83	ug/L	-5	30	
1,3-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.82	ug/L	-1	30	
1,4-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.84	ug/L	-1	30	
n-Butylbenzene	955422499028	20-OCT-2015	25.00	23.56	ug/L	-6	30	
1,2-Dichlorobenzene	955422499028	20-OCT-2015	25.00	25.14	ug/L	1	30	
1,2-Dibromo-3-Chloropropane	955422499028	20-OCT-2015	25.00	23.68	ug/L	-5	30	
1,2,4-Trichlorobenzene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
Hexachlorobutadiene	955422499028	20-OCT-2015	25.00	24.32	ug/L	-3	30	
Naphthalene	955422499028	20-OCT-2015	25.00	22.90	ug/L	-8	30	
1,2,3-Trichlorobenzene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	

955422499028: DJA: 10/22/15 \* MCT: 10/23/15 LW: 10/23/15  
955423728006: Analyst: DJA Date: 10/22/15 Reviewer: LW Date: 10/22/15

m=manual integration

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : QC811624                      IDF : 1.0  
 Seqnum : 425447153004.2          File : ck604                      Time : 06-NOV-2015 14:20  
 Cal : 425383715001                Caldate : 23-SEP-2015          Caltype : WATER  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S28123 (20000X),  
 S28450 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.5033	0.6638	10.00	13.19	ug/L	32	30	0.0500	!v- c+ u ***
Chloromethane	0.4791	0.7158	10.00	14.94	ug/L	49	30	0.1000	c+ u ***
Vinyl Chloride	0.4311	0.6960	10.00	16.14	ug/L	61	20	0.0500	?LOD c+ u ***
Bromomethane	0.2497	0.4372	10.00	17.51	ug/L	75	30	0.0500	!v- c+ u ***
Chloroethane	0.2498	0.4101	10.00	16.42	ug/L	64	30	0.0500	c+ u ***
Trichlorofluoromethane	0.5295	0.7114	10.00	13.43	ug/L	34	30	0.0500	c+ u ***
Acetone	0.2162	0.2037	12.50	11.78	ug/L	-6	40	0.0500	u
Freon 113	0.4073	0.3911	12.50	12.00	ug/L	-4	30	0.0500	!v- u
1,1-Dichloroethene	0.3973	0.3977	12.50	12.51	ug/L	0	20	0.0500	u
Methylene Chloride	0.5344	0.6005	12.50	14.05	ug/L	12	30	0.0500	u
Carbon Disulfide	1.6245	1.6134	12.50	12.41	ug/L	-1	30	0.0500	u
MTBE	1.2784	1.3562	12.50	13.26	ug/L	6	30	0.0500	u
trans-1,2-Dichloroethene	0.4588	0.4781	12.50	13.03	ug/L	4	30	0.0500	u
Vinyl Acetate	0.9841	1.6126	12.50	20.48	ug/L	64	40	0.0500	c+ u ***
1,1-Dichloroethane	0.8798	1.0368	12.50	14.73	ug/L	18	30	0.1000	u
2-Butanone	0.3118	0.3180	12.50	12.75	ug/L	2	40	0.0500	u
cis-1,2-Dichloroethene	0.5338	0.6393	12.50	14.97	ug/L	20	30	0.0500	u
2,2-Dichloropropane	0.4662	0.7604	12.50	20.39	ug/L	63	30	0.0500	c+ u ***
Chloroform	0.8536	1.0238	12.50	14.99	ug/L	20	20	0.0500	u
Bromochloromethane	0.2939	0.3323	12.50	14.13	ug/L	13	30	0.0500	u
1,1,1-Trichloroethane	0.6192	0.7329	12.50	14.79	ug/L	18	30	0.0500	u
1,1-Dichloropropene	0.3433	0.3570	12.50	13.00	ug/L	4	30	0.0500	u
Carbon Tetrachloride	0.2739	0.3366	12.50	15.36	ug/L	23	30	0.0500	u
1,2-Dichloroethane	0.3622	0.4298	12.50	14.83	ug/L	19	30	0.0500	u
Benzene	0.9679	1.0679	12.50	13.79	ug/L	10	30	0.0500	u
Trichloroethene	0.2739	0.2914	12.50	13.30	ug/L	6	30	0.0500	u
1,2-Dichloropropane	0.3074	0.3279	12.50	13.33	ug/L	7	20	0.0500	u
Bromodichloromethane	0.3767	0.4172	12.50	13.85	ug/L	11	30	0.0500	u
Dibromomethane	0.2205	0.2348	12.50	13.31	ug/L	6	30	0.0500	u
4-Methyl-2-Pentanone	0.3791	0.3399	12.50	11.21	ug/L	-10	40	0.0500	u
cis-1,3-Dichloropropene	0.4320	0.5047	12.50	14.60	ug/L	17	30	0.0500	u
Toluene	0.6077	0.7302	12.50	15.02	ug/L	20	20	0.0500	u
trans-1,3-Dichloropropene	0.3965	0.4775	12.50	15.06	ug/L	20	30	0.0500	u
1,1,2-Trichloroethane	0.1597	0.1758	12.50	13.76	ug/L	10	30	0.0500	u
2-Hexanone	0.2891	0.2724	12.50	11.78	ug/L	-6	40	0.0500	u
1,3-Dichloropropane	0.4743	0.5599	12.50	14.76	ug/L	18	30	0.0500	u
Tetrachloroethene	0.2550	0.2933	12.50	14.37	ug/L	15	30	0.0500	u
Dibromochloromethane	0.3371	0.3644	12.50	13.51	ug/L	8	30	0.0500	u
1,2-Dibromoethane	0.3278	0.3397	12.50	12.96	ug/L	4	30	0.0500	u
Chlorobenzene	0.7376	0.8437	12.50	14.30	ug/L	14	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.2685	0.2992	12.50	13.93	ug/L	11	30	0.0500	u
Ethylbenzene	1.1292	1.3589	12.50	15.04	ug/L	20	20	0.0500	u
m,p-Xylenes	0.4153	0.4854	25.00	29.22	ug/L	17	30	0.0500	u
o-Xylene	0.4263	0.4744	12.50	13.91	ug/L	11	30	0.0500	u
Styrene	0.7560	0.8561	12.50	14.16	ug/L	13	30	0.0500	u
Bromoform	0.2207	0.2150	12.50	12.18	ug/L	-3	30	0.1000	u
Isopropylbenzene	2.0519	2.4980	12.50	15.22	ug/L	22	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8133	0.8819	12.50	13.56	ug/L	8	30	0.3000	u
1,2,3-Trichloropropane	0.6314	0.7756	12.50	15.36	ug/L	23	30	0.0500	u
Propylbenzene	2.4531	3.1677	12.50	16.14	ug/L	29	30	0.0500	u
Bromobenzene	0.6172	0.7138	12.50	14.46	ug/L	16	30	0.0500	u
1,3,5-Trimethylbenzene	1.6440	2.0874	12.50	15.87	ug/L	27	30	0.0500	u
2-Chlorotoluene	1.6778	2.1418	12.50	15.96	ug/L	28	30	0.0500	u
4-Chlorotoluene	1.6176	2.0629	12.50	15.94	ug/L	28	30	0.0500	u
tert-Butylbenzene	1.3736	1.6428	12.50	14.95	ug/L	20	30	0.0500	u
1,2,4-Trimethylbenzene	1.7376	2.0831	12.50	14.99	ug/L	20	30	0.0500	u
sec-Butylbenzene	2.0973	2.5243	12.50	15.04	ug/L	20	30	0.0500	u
para-Isopropyl Toluene	1.6611	2.0435	12.50	15.38	ug/L	23	30	0.0500	u
1,3-Dichlorobenzene	1.0815	1.2395	12.50	14.33	ug/L	15	30	0.0500	u
1,4-Dichlorobenzene	1.1244	1.2798	12.50	14.23	ug/L	14	30	0.0500	u
n-Butylbenzene	1.4813	1.9140	12.50	16.15	ug/L	29	30	0.0500	u
1,2-Dichlorobenzene	1.0687	1.1772	12.50	13.77	ug/L	10	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.1307	0.1201	12.50	11.49	ug/L	-8	30	0.0500	u
1,2,4-Trichlorobenzene	0.5685	0.6293	12.50	13.84	ug/L	11	30	0.0500	u
Hexachlorobutadiene	0.1797	0.2387	12.50	16.60	ug/L	33	30	0.0500	c+ u ***
Naphthalene	1.5742	1.3249	12.50	10.52	ug/L	-16	30	0.0500	u
1,2,3-Trichlorobenzene	0.5470	0.5641	12.50	12.89	ug/L	3	30	0.0500	u
Dibromofluoromethane	0.6951	0.7540	50.00	54.24	ug/L	8	30	0.0500	u
1,2-Dichloroethane-d4	0.3657	0.4221	50.00	57.71	ug/L	15	30	0.0500	u
Toluene-d8	1.1356	1.2607	50.00	55.51	ug/L	11	30	0.0500	u
Bromofluorobenzene	0.9511	1.0753	50.00	56.53	ug/L	13	30	0.0500	u

ISTD (ICAL cin24)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	497393	609710	22.58	10.36	10.37	0.01
1,4-Difluorobenzene	895161	1132694	26.54	11.53	11.52	-0.01
Chlorobenzene-d5	871710	1003763	15.15	15.60	15.60	0.00
1,4-Dichlorobenzene-d4	449342	474045	5.50	18.37	18.35	-0.02

5% spike rule CCV CCC failure

Analyst: KKM Date: 11/10/15 Reviewer: LW Date: 11/11/15

!=warning +=high bias -=low bias ?LOD=no LOD c=CCV u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09                      Run Name : QC811536                      IDF : 1.0  
 Seqnum : 485445681011.1          File : ik511                      Time : 05-NOV-2015 19:49  
 Cal : 485399877001                  Caldate : 04-OCT-2015          Caltype : WATER  
 Standards: S28219 (10000X), S28220 (10000X), S28167 (10000X), S27267 (10000X),  
 S28450 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.2840	0.3051	20.00	21.49	ug/L	7	30	0.0500	?LOD u
Chloromethane	0.3344	0.3207	20.00	19.18	ug/L	-4	30	0.1000	?LOD u
Vinyl Chloride	0.2798	0.2650	20.00	18.95	ug/L	-5	20	0.0500	?LOD u
Bromomethane	0.2401	0.2106	20.00	17.54	ug/L	-12	30	0.0500	!v- ?LOD u
Chloroethane	0.1931	0.2091	20.00	21.66	ug/L	8	30	0.0500	?LOD u
Trichlorofluoromethane	0.3791	0.3823	20.00	20.17	ug/L	1	30	0.0500	?LOD u
Acetone	0.0573	0.0476	25.00	20.74	ug/L	-17	40	0.0500	?LOD crf u ***
Freon 113	0.2182	0.1938	25.00	22.21	ug/L	-11	30	0.0500	?LOD u
1,1-Dichloroethene	0.2268	0.2142	25.00	23.62	ug/L	-6	20	0.0500	?LOD u
Methylene Chloride	0.2672	0.2763	25.00	25.86	ug/L	3	30	0.0500	?LOD u
Carbon Disulfide	0.9122	0.8049	25.00	22.06	ug/L	-12	30	0.0500	?LOD u
MTBE	0.4729	0.4672	25.00	24.70	ug/L	-1	30	0.0500	?LOD u
trans-1,2-Dichloroethene	0.2525	0.2388	25.00	23.64	ug/L	-5	30	0.0500	!v- ?LOD u
Vinyl Acetate	0.3410	0.4588	25.00	33.64	ug/L	35	40	0.0500	!v+ ?LOD u
1,1-Dichloroethane	0.4832	0.4720	25.00	24.42	ug/L	-2	30	0.1000	?LOD u
2-Butanone	0.0782	0.0769	25.00	24.58	ug/L	-2	40	0.0500	?LOD u
cis-1,2-Dichloroethene	0.2740	0.3020	25.00	27.56	ug/L	10	30	0.0500	?LOD u
2,2-Dichloropropane	0.3094	0.3580	25.00	28.93	ug/L	16	30	0.0500	?LOD u
Chloroform	0.4545	0.4790	25.00	26.35	ug/L	5	20	0.0500	?LOD u
Bromochloromethane	0.1296	0.1446	25.00	27.89	ug/L	12	30	0.0500	?LOD u
1,1,1-Trichloroethane	0.3386	0.3459	25.00	25.53	ug/L	2	30	0.0500	?LOD u
1,1-Dichloropropene	0.2812	0.2561	25.00	22.77	ug/L	-9	30	0.0500	?LOD u
Carbon Tetrachloride	0.2576	0.2662	25.00	25.83	ug/L	3	30	0.0500	?LOD u
1,2-Dichloroethane	0.2210	0.2198	25.00	24.87	ug/L	-1	30	0.0500	?LOD u
Benzene	0.7237	0.7757	25.00	26.80	ug/L	7	30	0.0500	?LOD u
Trichloroethene	0.2104	0.2236	25.00	26.56	ug/L	6	30	0.0500	?LOD u
1,2-Dichloropropane	0.2285	0.2300	25.00	25.17	ug/L	1	20	0.0500	?LOD u
Bromodichloromethane	0.2525	0.2727	25.00	27.01	ug/L	8	30	0.0500	?LOD u
Dibromomethane	0.1165	0.1285	25.00	27.57	ug/L	10	30	0.0500	?LOD u
4-Methyl-2-Pentanone	0.1380	0.1411	25.00	25.57	ug/L	2	40	0.0500	?LOD u
cis-1,3-Dichloropropene	0.2916	0.3371	25.00	28.90	ug/L	16	30	0.0500	?LOD u
Toluene	0.6986	0.6988	25.00	25.01	ug/L	0	20	0.0500	?LOD u
trans-1,3-Dichloropropene	0.3938	0.3573	25.00	22.68	ug/L	-9	30	0.0500	?LOD u
1,1,2-Trichloroethane	0.1289	0.1238	25.00	24.01	ug/L	-4	30	0.0500	?LOD u
2-Hexanone	0.1683	0.1512	25.00	22.46	ug/L	-10	40	0.0500	?LOD u
1,3-Dichloropropane	0.3871	0.3855	25.00	24.90	ug/L	0	30	0.0500	?LOD u
Tetrachloroethene	0.3342	0.3418	25.00	25.56	ug/L	2	30	0.0500	?LOD u
Dibromochloromethane	0.3211	0.3105	25.00	24.18	ug/L	-3	30	0.0500	?LOD u
1,2-Dibromoethane	0.2411	0.2386	25.00	24.74	ug/L	-1	30	0.0500	?LOD u
Chlorobenzene	0.8350	0.8516	25.00	25.50	ug/L	2	30	0.3000	?LOD u
1,1,1,2-Tetrachloroethane	0.2999	0.3124	25.00	26.04	ug/L	4	30	0.0500	?LOD u
Ethylbenzene	1.3646	1.3948	25.00	25.55	ug/L	2	20	0.0500	?LOD u
m,p-Xylenes	0.4865	0.5064	50.00	52.05	ug/L	4	30	0.0500	?LOD u
o-Xylene	0.5027	0.5094	25.00	25.33	ug/L	1	30	0.0500	?LOD u
Styrene	0.7744	0.8684	25.00	28.04	ug/L	12	30	0.0500	?LOD u
Bromoform	0.1868	0.1874	25.00	25.08	ug/L	0	30	0.1000	?LOD u
Isopropylbenzene	2.5648	2.4585	25.00	23.96	ug/L	-4	30	0.0500	?LOD u



Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.5007	0.4737	25.00	23.65	ug/L	-5	30	0.3000	?LOD u
1,2,3-Trichloropropane	0.1186	0.1091	25.00	23.01	ug/L	-8	30	0.0500	?LOD u
Propylbenzene	3.0165	2.8632	25.00	23.73	ug/L	-5	30	0.0500	?LOD u
Bromobenzene	0.7237	0.7340	25.00	25.36	ug/L	1	30	0.0500	?LOD u
1,3,5-Trimethylbenzene	1.9852	1.9867	25.00	25.02	ug/L	0	30	0.0500	?LOD u
2-Chlorotoluene	1.9852	1.9169	25.00	24.14	ug/L	-3	30	0.0500	?LOD u
4-Chlorotoluene	1.8809	1.7729	25.00	23.56	ug/L	-6	30	0.0500	?LOD u
tert-Butylbenzene	1.8257	1.7735	25.00	24.29	ug/L	-3	30	0.0500	?LOD u
1,2,4-Trimethylbenzene	1.9324	1.7860	25.00	23.11	ug/L	-8	30	0.0500	?LOD u
sec-Butylbenzene	2.6340	2.5122	25.00	23.84	ug/L	-5	30	0.0500	?LOD u
para-Isopropyl Toluene	2.0342	1.9256	25.00	23.67	ug/L	-5	30	0.0500	?LOD u
1,3-Dichlorobenzene	1.2879	1.2013	25.00	23.32	ug/L	-7	30	0.0500	?LOD u
1,4-Dichlorobenzene	1.3131	1.2435	25.00	23.67	ug/L	-5	30	0.0500	?LOD u
n-Butylbenzene	1.7685	1.5779	25.00	22.31	ug/L	-11	30	0.0500	?LOD u
1,2-Dichlorobenzene	1.2046	1.1314	25.00	23.48	ug/L	-6	30	0.0500	?LOD u
1,2-Dibromo-3-Chloropropane	0.0791	0.0665	25.00	21.02	ug/L	-16	30	0.0500	?LOD u
1,2,4-Trichlorobenzene	0.6330	0.5808	25.00	22.94	ug/L	-8	30	0.0500	?LOD u
Hexachlorobutadiene	0.3262	0.3438	25.00	26.35	ug/L	5	30	0.0500	?LOD u
Naphthalene	0.8976	0.7059	25.00	19.66	ug/L	-21	30	0.0500	?LOD u
1,2,3-Trichlorobenzene	0.5584	0.5150	25.00	23.04	ug/L	-8	30	0.0500	?LOD calc u
Dibromofluoromethane	0.4788	0.4503	50.00	47.02	ug/L	-6	30	0.0500	u
1,2-Dichloroethane-d4	0.2243	0.2255	50.00	50.27	ug/L	1	30	0.0500	u
Toluene-d8	1.6572	1.4751	50.00	44.51	ug/L	-11	30	0.0500	u
Bromofluorobenzene	0.9113	0.8657	50.00	47.50	ug/L	-5	30	0.0500	u

ISTD (ICAL ij415)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	2083098	2096644	0.65	11.04	10.99	-0.05
1,4-Difluorobenzene	2647248	2623756	-0.89	12.30	12.26	-0.04
Chlorobenzene-d5	1580001	1760953	11.45	16.67	16.63	-0.04
1,4-Dichlorobenzene-d4	844594	933352	10.51	19.11	19.07	-0.04

Analyst: MCT Date: 11/10/15 Reviewer: TEW Date: 11/11/15

!=warning +=high bias -=low bias ?LOD=no LOD calc=check quantitation crf=CCV min RF failure u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA09      Run Name : QC811912      IDF : 1.0  
 Seqnum : 485451358010.5      File : ik910      Time : 09-NOV-2015 17:36  
 Cal : 485399877001      Caldate : 04-OCT-2015      Caltype : WATER  
 Standards: S28219 (8333X), S28220 (8333X), S28167 (8333X), S27267 (8333X),  
 S28450 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.2840	0.2540	24.00	21.47	ug/L	-11	30	0.0500	?LOD u
Chloromethane	0.3344	0.3504	24.00	25.15	ug/L	5	30	0.1000	?LOD u
Vinyl Chloride	0.2798	0.3053	24.00	26.19	ug/L	9	20	0.0500	?LOD u
Bromomethane	0.2401	0.2540	24.00	25.39	ug/L	6	30	0.0500	!v- ?LOD u
Chloroethane	0.1931	0.2129	24.00	26.47	ug/L	10	30	0.0500	?LOD u
Trichlorofluoromethane	0.3791	0.4004	24.00	25.35	ug/L	6	30	0.0500	?LOD u
Acetone	0.0573	0.0461	30.00	24.14	ug/L	-20	40	0.0500	?LOD crf u ***
Freon 113	0.2182	0.2340	30.00	32.18	ug/L	7	30	0.0500	?LOD u
1,1-Dichloroethene	0.2268	0.2538	30.00	33.58	ug/L	12	20	0.0500	?LOD u
Methylene Chloride	0.2672	0.3071	30.00	34.49	ug/L	15	30	0.0500	?LOD u
Carbon Disulfide	0.9122	1.0033	30.00	33.00	ug/L	10	30	0.0500	?LOD u
MTBE	0.4729	0.4452	30.00	28.24	ug/L	-6	30	0.0500	?LOD u
trans-1,2-Dichloroethene	0.2525	0.2737	30.00	32.52	ug/L	8	30	0.0500	!v- ?LOD u
Vinyl Acetate	0.3410	0.4288	30.00	37.72	ug/L	26	40	0.0500	!v+ ?LOD u
1,1-Dichloroethane	0.4832	0.5093	30.00	31.62	ug/L	5	30	0.1000	?LOD u
2-Butanone	0.0782	0.0645	30.00	24.76	ug/L	-17	40	0.0500	?LOD u
cis-1,2-Dichloroethene	0.2740	0.3227	30.00	35.34	ug/L	18	30	0.0500	?LOD u
2,2-Dichloropropane	0.3094	0.3948	30.00	38.28	ug/L	28	30	0.0500	?LOD u
Chloroform	0.4545	0.5088	30.00	33.59	ug/L	12	20	0.0500	?LOD u
Bromochloromethane	0.1296	0.1493	30.00	34.54	ug/L	15	30	0.0500	?LOD u
1,1,1-Trichloroethane	0.3386	0.3719	30.00	32.95	ug/L	10	30	0.0500	?LOD u
1,1-Dichloropropene	0.2812	0.2655	30.00	28.33	ug/L	-6	30	0.0500	?LOD u
Carbon Tetrachloride	0.2576	0.2728	30.00	31.77	ug/L	6	30	0.0500	?LOD u
1,2-Dichloroethane	0.2210	0.2072	30.00	28.14	ug/L	-6	30	0.0500	?LOD u
Benzene	0.7237	0.8102	30.00	33.59	ug/L	12	30	0.0500	?LOD u
Trichloroethene	0.2104	0.2337	30.00	33.32	ug/L	11	30	0.0500	?LOD u
1,2-Dichloropropane	0.2285	0.2255	30.00	29.61	ug/L	-1	20	0.0500	?LOD u
Bromodichloromethane	0.2525	0.2666	30.00	31.67	ug/L	6	30	0.0500	?LOD u
Dibromomethane	0.1165	0.1177	30.00	30.32	ug/L	1	30	0.0500	?LOD u
4-Methyl-2-Pentanone	0.1380	0.1139	30.00	24.77	ug/L	-17	40	0.0500	?LOD u
cis-1,3-Dichloropropene	0.2916	0.3259	30.00	33.53	ug/L	12	30	0.0500	?LOD u
Toluene	0.6986	0.7216	30.00	30.99	ug/L	3	20	0.0500	?LOD u
trans-1,3-Dichloropropene	0.3938	0.3376	30.00	25.72	ug/L	-14	30	0.0500	?LOD u
1,1,2-Trichloroethane	0.1289	0.1157	30.00	26.92	ug/L	-10	30	0.0500	?LOD u
2-Hexanone	0.1683	0.1282	30.00	22.85	ug/L	-24	40	0.0500	?LOD u
1,3-Dichloropropane	0.3871	0.3502	30.00	27.14	ug/L	-10	30	0.0500	?LOD u
Tetrachloroethene	0.3342	0.3581	30.00	32.14	ug/L	7	30	0.0500	?LOD u
Dibromochloromethane	0.3211	0.2909	30.00	27.18	ug/L	-9	30	0.0500	?LOD u
1,2-Dibromoethane	0.2411	0.2175	30.00	27.07	ug/L	-10	30	0.0500	?LOD u
Chlorobenzene	0.8350	0.8441	30.00	30.33	ug/L	1	30	0.3000	?LOD u
1,1,1,2-Tetrachloroethane	0.2999	0.3093	30.00	30.93	ug/L	3	30	0.0500	?LOD u
Ethylbenzene	1.3646	1.4334	30.00	31.51	ug/L	5	20	0.0500	?LOD u
m,p-Xylenes	0.4865	0.5078	60.00	62.62	ug/L	4	30	0.0500	?LOD u
o-Xylene	0.5027	0.5159	30.00	30.79	ug/L	3	30	0.0500	?LOD u
Styrene	0.7744	0.8574	30.00	33.22	ug/L	11	30	0.0500	?LOD u
Bromoform	0.1868	0.1641	30.00	26.35	ug/L	-12	30	0.1000	?LOD u
Isopropylbenzene	2.5648	2.5068	30.00	29.32	ug/L	-2	30	0.0500	?LOD u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.5007	0.4327	30.00	25.93	ug/L	-14	30	0.3000	?LOD u
1,2,3-Trichloropropane	0.1186	0.0980	30.00	24.79	ug/L	-17	30	0.0500	?LOD u
Propylbenzene	3.0165	3.0048	30.00	29.88	ug/L	0	30	0.0500	?LOD u
Bromobenzene	0.7237	0.7059	30.00	29.26	ug/L	-2	30	0.0500	?LOD u
1,3,5-Trimethylbenzene	1.9852	2.0236	30.00	30.58	ug/L	2	30	0.0500	?LOD u
2-Chlorotoluene	1.9852	2.0329	30.00	30.72	ug/L	2	30	0.0500	?LOD u
4-Chlorotoluene	1.8809	1.8562	30.00	29.61	ug/L	-1	30	0.0500	?LOD u
tert-Butylbenzene	1.8257	1.7800	30.00	29.25	ug/L	-3	30	0.0500	?LOD u
1,2,4-Trimethylbenzene	1.9324	1.8142	30.00	28.16	ug/L	-6	30	0.0500	?LOD u
sec-Butylbenzene	2.6340	2.5846	30.00	29.44	ug/L	-2	30	0.0500	?LOD u
para-Isopropyl Toluene	2.0342	1.9660	30.00	28.99	ug/L	-3	30	0.0500	?LOD u
1,3-Dichlorobenzene	1.2879	1.2533	30.00	29.19	ug/L	-3	30	0.0500	?LOD u
1,4-Dichlorobenzene	1.3131	1.2381	30.00	28.29	ug/L	-6	30	0.0500	?LOD u
n-Butylbenzene	1.7685	1.6520	30.00	28.02	ug/L	-7	30	0.0500	?LOD u
1,2-Dichlorobenzene	1.2046	1.1147	30.00	27.76	ug/L	-7	30	0.0500	?LOD u
1,2-Dibromo-3-Chloropropane	0.0791	0.0575	30.00	21.79	ug/L	-27	30	0.0500	?LOD u
1,2,4-Trichlorobenzene	0.6330	0.5335	30.00	25.28	ug/L	-16	30	0.0500	?LOD u
Hexachlorobutadiene	0.3262	0.3362	30.00	30.92	ug/L	3	30	0.0500	?LOD u
Naphthalene	0.8976	0.5955	30.00	19.90	ug/L	-34	30	0.0500	?LOD c- u ***
1,2,3-Trichlorobenzene	0.5584	0.4504	30.00	24.18	ug/L	-19	30	0.0500	?LOD calc u
Dibromofluoromethane	0.4788	0.4281	50.00	44.70	ug/L	-11	30	0.0500	u
1,2-Dichloroethane-d4	0.2243	0.1804	50.00	40.20	ug/L	-20	30	0.0500	u
Toluene-d8	1.6572	1.4487	50.00	43.71	ug/L	-13	30	0.0500	u
Bromofluorobenzene	0.9113	0.8679	50.00	47.62	ug/L	-5	30	0.0500	u

ISTD (ICAL ij415)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	2083098	3316187	59.19	11.04	11.02	-0.02
1,4-Difluorobenzene	2647248	4362206	64.78	12.30	12.28	-0.02
Chlorobenzene-d5	1580001	2925504	85.16	16.67	16.65	-0.02
1,4-Dichlorobenzene-d4	844594	1564944	85.29	19.11	19.09	-0.02

Analyst: KKM Date: 11/10/15 Reviewer: TEW Date: 11/11/15

!=warning +=high bias -=low bias ?LOD=no LOD c=CCV calc=check quantitation crf=CCV min RF failure u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10 Run Name : QC811523 IDF : 1.0  
 Seqnum : 495445756006.3 File : jk506 Time : 05-NOV-2015 16:02  
 Cal : 495321824001 Caldate : 11-AUG-2015 Caltype : WATER  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S28123 (20000X),  
 S28022 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.9621	0.9759	10.00	10.72	ug/L	7	30	0.0500	u v+ ***
Chloromethane	1.3727	1.1315	10.00	8.746	ug/L	-13	30	0.1000	u
Vinyl Chloride	1.1084	0.9664	10.00	8.719	ug/L	-13	20	0.0500	u
Bromomethane	0.5666	0.4987	10.00	8.801	ug/L	-12	30	0.0500	u
Chloroethane	0.6180	0.6116	10.00	9.897	ug/L	-1	30	0.0500	u
Trichlorofluoromethane	1.1382	1.0311	10.00	9.059	ug/L	-9	30	0.0500	u
Acetone	0.4174	0.2819	12.50	8.441	ug/L	-32	40	0.0500	u
Freon 113	0.5296	0.5217	12.50	12.31	ug/L	-1	30	0.0500	u
1,1-Dichloroethene	0.4716	0.5107	12.50	13.54	ug/L	8	20	0.0500	u
Methylene Chloride	0.6641	0.7173	12.50	13.50	ug/L	8	30	0.0500	u
Carbon Disulfide	1.8964	2.0786	12.50	13.70	ug/L	10	30	0.0500	u
MTBE	2.0676	2.0185	12.50	12.20	ug/L	-2	30	0.0500	u
trans-1,2-Dichloroethene	0.5669	0.5645	12.50	12.45	ug/L	0	30	0.0500	u
Vinyl Acetate	2.4438	2.2137	12.50	11.32	ug/L	-9	40	0.0500	u
1,1-Dichloroethane	1.3321	1.3259	12.50	12.44	ug/L	0	30	0.1000	u
2-Butanone	0.5833	0.4300	12.50	9.215	ug/L	-26	40	0.0500	u
cis-1,2-Dichloroethene	0.6426	0.7203	12.50	14.01	ug/L	12	30	0.0500	u
2,2-Dichloropropane	0.8758	0.9482	12.50	13.53	ug/L	8	30	0.0500	u
Chloroform	1.2065	1.1840	12.50	12.27	ug/L	-2	20	0.0500	u
Bromochloromethane	0.3194	0.3442	12.50	13.47	ug/L	8	30	0.0500	u
1,1,1-Trichloroethane	0.9117	0.8675	12.50	11.89	ug/L	-5	30	0.0500	u
1,1-Dichloropropene	0.5664	0.5143	12.50	11.35	ug/L	-9	30	0.0500	u
Carbon Tetrachloride	0.4765	0.4357	12.50	11.43	ug/L	-9	30	0.0500	u
1,2-Dichloroethane	0.6556	0.5888	12.50	11.23	ug/L	-10	30	0.0500	u
Benzene	1.4624	1.5842	12.50	13.54	ug/L	8	30	0.0500	u
Trichloroethene	0.3849	0.3918	12.50	12.73	ug/L	2	30	0.0500	u
1,2-Dichloropropane	0.4787	0.4921	12.50	12.85	ug/L	3	20	0.0500	u
Bromodichloromethane	0.5757	0.5509	12.50	11.96	ug/L	-4	30	0.0500	u
Dibromomethane	0.3006	0.2842	12.50	11.82	ug/L	-5	30	0.0500	u
4-Methyl-2-Pentanone	0.7385	0.5506	12.50	9.320	ug/L	-25	40	0.0500	u
cis-1,3-Dichloropropene	0.6946	0.7280	12.50	13.10	ug/L	5	30	0.0500	u
Toluene	1.0395	1.0946	12.50	13.16	ug/L	5	20	0.0500	u
trans-1,3-Dichloropropene	0.7601	0.7176	12.50	11.80	ug/L	-6	30	0.0500	u
1,1,2-Trichloroethane	0.2455	0.2511	12.50	12.79	ug/L	2	30	0.0500	u
2-Hexanone	0.6208	0.4442	12.50	8.944	ug/L	-28	40	0.0500	u
1,3-Dichloropropane	0.7925	0.8332	12.50	13.14	ug/L	5	30	0.0500	u
Tetrachloroethene	0.3860	0.4322	12.50	13.99	ug/L	12	30	0.0500	u
Dibromochloromethane	0.4727	0.4785	12.50	12.65	ug/L	1	30	0.0500	u
1,2-Dibromoethane	0.4602	0.4554	12.50	12.37	ug/L	-1	30	0.0500	u
Chlorobenzene	1.0690	1.1695	12.50	13.67	ug/L	9	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3931	0.3984	12.50	12.67	ug/L	1	30	0.0500	u
Ethylbenzene	1.9457	1.9823	12.50	12.74	ug/L	2	20	0.0500	u
m,p-Xylenes	0.6733	0.6762	25.00	25.11	ug/L	0	30	0.0500	u
o-Xylene	0.6528	0.6660	12.50	12.75	ug/L	2	30	0.0500	u
Styrene	1.1586	1.1278	12.50	12.17	ug/L	-3	30	0.0500	u
Bromoform	0.3102	0.2960	12.50	11.93	ug/L	-5	30	0.1000	!v+ u
Isopropylbenzene	3.8773	4.6542	12.50	15.00	ug/L	20	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3821	1.4920	12.50	13.49	ug/L	8	30	0.3000	u
1,2,3-Trichloropropane	1.2879	1.3194	12.50	12.81	ug/L	2	30	0.0500	u
Propylbenzene	4.7677	5.0990	12.50	13.37	ug/L	7	30	0.0500	u
Bromobenzene	1.0049	1.2713	12.50	15.81	ug/L	27	30	0.0500	?LOD u
1,3,5-Trimethylbenzene	2.7332	2.7879	12.50	12.75	ug/L	2	30	0.0500	u
2-Chlorotoluene	3.2398	3.5984	12.50	13.88	ug/L	11	30	0.0500	u
4-Chlorotoluene	2.9353	3.2584	12.50	13.88	ug/L	11	30	0.0500	u
tert-Butylbenzene	2.5427	2.7586	12.50	13.56	ug/L	8	30	0.0500	u
1,2,4-Trimethylbenzene	2.5483	2.3605	12.50	11.58	ug/L	-7	30	0.0500	u
sec-Butylbenzene	3.9778	4.0997	12.50	12.88	ug/L	3	30	0.0500	u
para-Isopropyl Toluene	2.7872	2.6822	12.50	12.03	ug/L	-4	30	0.0500	u
1,3-Dichlorobenzene	1.6675	1.9684	12.50	14.76	ug/L	18	30	0.0500	u
1,4-Dichlorobenzene	1.6828	1.8758	12.50	13.93	ug/L	11	30	0.0500	u
n-Butylbenzene	2.4972	2.0855	12.50	10.44	ug/L	-16	30	0.0500	u
1,2-Dichlorobenzene	1.6134	1.8636	12.50	14.44	ug/L	16	30	0.0500	!v+ u
1,2-Dibromo-3-Chloropropane	0.2405	0.1876	12.50	9.748	ug/L	-22	30	0.0500	u
1,2,4-Trichlorobenzene	0.5060	0.4708	12.50	10.91	ug/L	-13	30	0.0500	!v+ ?LOD u
Hexachlorobutadiene	0.3994	0.4115	12.50	12.88	ug/L	3	30	0.0500	!v+ u
Naphthalene	1.1937	1.0634	12.50	11.41	ug/L	-9	30	0.0500	?LOD u
1,2,3-Trichlorobenzene	0.4319	0.3931	12.50	10.03	ug/L	-20	30	0.0500	!v+ ?LOD u
Dibromofluoromethane	0.6321	0.5980	50.00	47.30	ug/L	-5	30	0.0500	u
1,2-Dichloroethane-d4	0.5095	0.4014	50.00	39.39	ug/L	-21	30	0.0500	u
Toluene-d8	1.3750	1.3085	50.00	47.58	ug/L	-5	30	0.0500	u
Bromofluorobenzene	1.2427	1.3163	50.00	52.96	ug/L	6	30	0.0500	u

ISTD (ICAL jhb14)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1188695	1536435	29.25	11.06	11.03	-0.03
1,4-Difluorobenzene	1898539	2505836	31.99	12.23	12.21	-0.02
Chlorobenzene-d5	1613921	2041222	26.48	16.17	16.13	-0.04
1,4-Dichlorobenzene-d4	777833	759538	-2.35	18.88	18.86	-0.02

Analyst: MCT Date: 11/10/15 Reviewer: TEW Date: 11/11/15

!=warning +=high bias ?LOD=no LOD u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10 Run Name : QC811768 IDF : 1.0  
 Seqnum : 495448497005.4 File : jk705 Time : 07-NOV-2015 13:22  
 Cal : 495321824001 Caldate : 11-AUG-2015 Caltype : WATER  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S28123 (20000X),  
 S28022 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.9621	0.9030	10.00	9.869	ug/L	-1	30	0.0500	u v+ ***
Chloromethane	1.3727	1.1544	10.00	8.931	ug/L	-11	30	0.1000	u
Vinyl Chloride	1.1084	0.9598	10.00	8.660	ug/L	-13	20	0.0500	u
Bromomethane	0.5666	0.5497	10.00	9.701	ug/L	-3	30	0.0500	u
Chloroethane	0.6180	0.6323	10.00	10.23	ug/L	2	30	0.0500	u
Trichlorofluoromethane	1.1382	1.0267	10.00	9.020	ug/L	-10	30	0.0500	u
Acetone	0.4174	0.2693	12.50	8.063	ug/L	-35	40	0.0500	u
Freon 113	0.5296	0.4722	12.50	11.14	ug/L	-11	30	0.0500	u
1,1-Dichloroethene	0.4716	0.4602	12.50	12.20	ug/L	-2	20	0.0500	u
Methylene Chloride	0.6641	0.6766	12.50	12.73	ug/L	2	30	0.0500	u
Carbon Disulfide	1.8964	1.8782	12.50	12.38	ug/L	-1	30	0.0500	u
MTBE	2.0676	1.8785	12.50	11.36	ug/L	-9	30	0.0500	u
trans-1,2-Dichloroethene	0.5669	0.5274	12.50	11.63	ug/L	-7	30	0.0500	u
Vinyl Acetate	2.4438	2.0903	12.50	10.69	ug/L	-14	40	0.0500	u
1,1-Dichloroethane	1.3321	1.2516	12.50	11.74	ug/L	-6	30	0.1000	u
2-Butanone	0.5833	0.4141	12.50	8.874	ug/L	-29	40	0.0500	u
cis-1,2-Dichloroethene	0.6426	0.6858	12.50	13.34	ug/L	7	30	0.0500	u
2,2-Dichloropropane	0.8758	0.9228	12.50	13.17	ug/L	5	30	0.0500	u
Chloroform	1.2065	1.1408	12.50	11.82	ug/L	-5	20	0.0500	u
Bromochloromethane	0.3194	0.3340	12.50	13.07	ug/L	5	30	0.0500	u
1,1,1-Trichloroethane	0.9117	0.8512	12.50	11.67	ug/L	-7	30	0.0500	u
1,1-Dichloropropene	0.5664	0.4868	12.50	10.74	ug/L	-14	30	0.0500	u
Carbon Tetrachloride	0.4765	0.4006	12.50	10.51	ug/L	-16	30	0.0500	u
1,2-Dichloroethane	0.6556	0.5707	12.50	10.88	ug/L	-13	30	0.0500	u
Benzene	1.4624	1.4967	12.50	12.79	ug/L	2	30	0.0500	u
Trichloroethene	0.3849	0.3701	12.50	12.02	ug/L	-4	30	0.0500	u
1,2-Dichloropropane	0.4787	0.4718	12.50	12.32	ug/L	-1	20	0.0500	u
Bromodichloromethane	0.5757	0.5232	12.50	11.36	ug/L	-9	30	0.0500	u
Dibromomethane	0.3006	0.2691	12.50	11.19	ug/L	-10	30	0.0500	u
4-Methyl-2-Pentanone	0.7385	0.5151	12.50	8.719	ug/L	-30	40	0.0500	u
cis-1,3-Dichloropropene	0.6946	0.6986	12.50	12.57	ug/L	1	30	0.0500	u
Toluene	1.0395	1.0342	12.50	12.44	ug/L	-1	20	0.0500	u
trans-1,3-Dichloropropene	0.7601	0.6887	12.50	11.33	ug/L	-9	30	0.0500	u
1,1,2-Trichloroethane	0.2455	0.2380	12.50	12.12	ug/L	-3	30	0.0500	u
2-Hexanone	0.6208	0.4207	12.50	8.470	ug/L	-32	40	0.0500	u
1,3-Dichloropropane	0.7925	0.7720	12.50	12.18	ug/L	-3	30	0.0500	u
Tetrachloroethene	0.3860	0.4065	12.50	13.16	ug/L	5	30	0.0500	u
Dibromochloromethane	0.4727	0.4528	12.50	11.97	ug/L	-4	30	0.0500	u
1,2-Dibromoethane	0.4602	0.4264	12.50	11.58	ug/L	-7	30	0.0500	u
Chlorobenzene	1.0690	1.0988	12.50	12.85	ug/L	3	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3931	0.3797	12.50	12.07	ug/L	-3	30	0.0500	u
Ethylbenzene	1.9457	1.8715	12.50	12.02	ug/L	-4	20	0.0500	u
m,p-Xylenes	0.6733	0.6250	25.00	23.21	ug/L	-7	30	0.0500	u
o-Xylene	0.6528	0.6183	12.50	11.84	ug/L	-5	30	0.0500	u
Styrene	1.1586	1.0297	12.50	11.11	ug/L	-11	30	0.0500	u
Bromoform	0.3102	0.2748	12.50	11.07	ug/L	-11	30	0.1000	!v+ u
Isopropylbenzene	3.8773	4.4360	12.50	14.30	ug/L	14	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3821	1.4421	12.50	13.04	ug/L	4	30	0.3000	u
1,2,3-Trichloropropane	1.2879	1.3092	12.50	12.71	ug/L	2	30	0.0500	u
Propylbenzene	4.7677	4.6934	12.50	12.31	ug/L	-2	30	0.0500	u
Bromobenzene	1.0049	1.2309	12.50	15.31	ug/L	22	30	0.0500	?LOD u
1,3,5-Trimethylbenzene	2.7332	2.5152	12.50	11.50	ug/L	-8	30	0.0500	u
2-Chlorotoluene	3.2398	3.4099	12.50	13.16	ug/L	5	30	0.0500	u
4-Chlorotoluene	2.9353	3.0717	12.50	13.08	ug/L	5	30	0.0500	u
tert-Butylbenzene	2.5427	2.5423	12.50	12.50	ug/L	0	30	0.0500	u
1,2,4-Trimethylbenzene	2.5483	2.1092	12.50	10.35	ug/L	-17	30	0.0500	u
sec-Butylbenzene	3.9778	3.7562	12.50	11.80	ug/L	-6	30	0.0500	u
para-Isopropyl Toluene	2.7872	2.3880	12.50	10.71	ug/L	-14	30	0.0500	u
1,3-Dichlorobenzene	1.6675	1.8440	12.50	13.82	ug/L	11	30	0.0500	u
1,4-Dichlorobenzene	1.6828	1.7374	12.50	12.91	ug/L	3	30	0.0500	u
n-Butylbenzene	2.4972	1.7809	12.50	8.914	ug/L	-29	30	0.0500	u
1,2-Dichlorobenzene	1.6134	1.7181	12.50	13.31	ug/L	6	30	0.0500	!v+ u
1,2-Dibromo-3-Chloropropane	0.2405	0.1799	12.50	9.352	ug/L	-25	30	0.0500	u
1,2,4-Trichlorobenzene	0.5060	0.4287	12.50	10.00	ug/L	-20	30	0.0500	!v+ ?LOD u
Hexachlorobutadiene	0.3994	0.3961	12.50	12.40	ug/L	-1	30	0.0500	!v+ u
Naphthalene	1.1937	1.0006	12.50	10.83	ug/L	-13	30	0.0500	?LOD u
1,2,3-Trichlorobenzene	0.4319	0.3478	12.50	8.981	ug/L	-28	30	0.0500	!v+ ?LOD u
Dibromofluoromethane	0.6321	0.5835	50.00	46.16	ug/L	-8	30	0.0500	u
1,2-Dichloroethane-d4	0.5095	0.4032	50.00	39.56	ug/L	-21	30	0.0500	u
Toluene-d8	1.3750	1.2949	50.00	47.09	ug/L	-6	30	0.0500	u
Bromofluorobenzene	1.2427	1.3647	50.00	54.91	ug/L	10	30	0.0500	u

ISTD (ICAL jhb14)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1188695	1509346	26.98	11.06	11.05	-0.01
1,4-Difluorobenzene	1898539	2488598	31.08	12.23	12.21	-0.02
Chlorobenzene-d5	1613921	2024482	25.44	16.17	16.14	-0.03
1,4-Dichlorobenzene-d4	777833	736375	-5.33	18.88	18.87	-0.01

Analyst: KKM Date: 11/10/15 Reviewer: TEW Date: 11/11/15

!=warning +=high bias ?LOD=no LOD u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA10                      Run Name : QC811771                      IDF : 1.0  
 Seqnum : 495448497006.4          File : jk706                      Time : 07-NOV-2015 13:53  
 Cal : 495321824001              Caldate : 11-AUG-2015          Caltype : WATER  
 Standards: S27677 (10000X), S28022 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Dibromofluoromethane	0.6321	0.5807	50.00	45.94	ug/L	-8	30	0.0500	u
1,2-Dichloroethane-d4	0.5095	0.4191	50.00	41.12	ug/L	-18	30	0.0500	u
Toluene-d8	1.3750	1.2972	50.00	47.17	ug/L	-6	30	0.0500	u
Bromofluorobenzene	1.2427	1.3741	50.00	55.28	ug/L	11	30	0.0500	u

ISTD (ICAL jhb14)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1188695	1415323	19.07	11.06	11.05	-0.01
1,4-Difluorobenzene	1898539	2288795	20.56	12.23	12.22	-0.01
Chlorobenzene-d5	1613921	1902279	17.87	16.17	16.14	-0.03
1,4-Dichlorobenzene-d4	777833	680333	-12.53	18.88	18.86	-0.02

ISTD (ICAL jhg06)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Chlorobenzene-d5 TIC	6955694	6318610	-9.16	16.16	16.14	-0.02

Analyst: KKM                      Date: 11/10/15                      Reviewer: TEW                      Date: 11/11/15

u=use



CURTIS & TOMPKINS SPIKE USER REPORT FOR 271203 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : QC811845                      IDF : 1.0  
 Seqnum : 955451069012.5              File : nk912                      Time : 09-NOV-2015 15:26  
 Cal : 955422499001                      Caldate : 20-OCT-2015  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S27267 (20000X),  
 S28449 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.6415	0.6863	10.00	10.70	ug/L	7	30	0.0500	u
Chloromethane	0.9510	1.0650	10.00	11.20	ug/L	12	30	0.1000	u
Vinyl Chloride	0.9707	0.9234	10.00	9.513	ug/L	-5	20	0.0500	u
Bromomethane	0.2242	0.3462	10.00	15.45	ug/L	54	30	0.0500	c+ u ***
Chloroethane	0.5345	0.4754	10.00	8.894	ug/L	-11	30	0.0500	u
Trichlorofluoromethane	0.8274	1.0059	10.00	12.16	ug/L	22	30	0.0500	u
Acetone	0.4156	0.3470	12.50	10.44	ug/L	-16	40	0.0500	m u
Freon 113	0.4347	0.3767	12.50	10.83	ug/L	-13	30	0.0500	u
1,1-Dichloroethene	0.4198	0.3351	12.50	9.979	ug/L	-20	20	0.0500	u
Methylene Chloride	0.4994	0.4118	12.50	10.31	ug/L	-18	30	0.0500	u
Carbon Disulfide	1.4737	1.2119	12.50	10.28	ug/L	-18	30	0.0500	u
MTBE	1.6773	1.2651	12.50	9.429	ug/L	-25	30	0.0500	u
trans-1,2-Dichloroethene	0.4787	0.3729	12.50	9.738	ug/L	-22	30	0.0500	u
Vinyl Acetate	1.7132	1.7344	12.50	12.65	ug/L	1	40	0.0500	u
1,1-Dichloroethane	1.3336	1.2014	12.50	11.26	ug/L	-10	30	0.1000	u
2-Butanone	0.4886	0.3815	12.50	9.760	ug/L	-22	40	0.0500	u
cis-1,2-Dichloroethene	0.5624	0.4487	12.50	9.971	ug/L	-20	30	0.0500	u
2,2-Dichloropropane	0.6571	0.7965	12.50	15.15	ug/L	21	30	0.0500	u
Chloroform	0.8921	0.8714	12.50	12.21	ug/L	-2	20	0.0500	u
Bromochloromethane	0.2490	0.2291	12.50	11.50	ug/L	-8	30	0.0500	u
1,1,1-Trichloroethane	0.7861	0.8804	12.50	14.00	ug/L	12	30	0.0500	u
1,1-Dichloropropene	0.4813	0.4183	12.50	10.86	ug/L	-13	30	0.0500	u
Carbon Tetrachloride	0.4089	0.6207	12.50	18.98	ug/L	52	30	0.0500	c+ u ***
1,2-Dichloroethane	0.6367	0.8457	12.50	16.60	ug/L	33	30	0.0500	c+ u ***
Benzene	1.4017	1.2912	12.50	11.51	ug/L	-8	30	0.0500	u
Trichloroethene	0.3628	0.3671	12.50	12.65	ug/L	1	30	0.0500	u
1,2-Dichloropropane	0.5064	0.4937	12.50	12.19	ug/L	-3	20	0.0500	u
Bromodichloromethane	0.4448	0.5167	12.50	14.52	ug/L	16	30	0.0500	u
Dibromomethane	0.2211	0.2313	12.50	13.07	ug/L	5	30	0.0500	u
4-Methyl-2-Pentanone	0.6446	0.6054	12.50	11.74	ug/L	-6	40	0.0500	u
cis-1,3-Dichloropropene	0.5532	0.5980	12.50	13.51	ug/L	8	30	0.0500	u
Toluene	1.6718	1.5746	12.50	11.77	ug/L	-6	20	0.0500	u
trans-1,3-Dichloropropene	0.5523	0.5534	12.50	12.52	ug/L	0	30	0.0500	u
1,1,2-Trichloroethane	0.1862	0.1751	12.50	11.75	ug/L	-6	30	0.0500	u
2-Hexanone	0.4951	0.4214	12.50	10.64	ug/L	-15	40	0.0500	u
1,3-Dichloropropane	0.6320	0.5930	12.50	11.73	ug/L	-6	30	0.0500	u
Tetrachloroethene	0.3610	0.4624	12.50	16.01	ug/L	28	30	0.0500	u
Dibromochloromethane	0.3820	0.4398	12.50	14.39	ug/L	15	30	0.0500	u
1,2-Dibromoethane	0.3672	0.3491	12.50	11.89	ug/L	-5	30	0.0500	u
Chlorobenzene	1.0480	1.0888	12.50	12.99	ug/L	4	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3617	0.4289	12.50	14.82	ug/L	19	30	0.0500	u
Ethylbenzene	1.9396	1.9054	12.50	12.28	ug/L	-2	20	0.0500	u
m,p-Xylenes	0.7353	0.7366	25.00	25.04	ug/L	0	30	0.0500	u
o-Xylene	0.7307	0.6870	12.50	11.75	ug/L	-6	30	0.0500	u
Styrene	1.2609	1.2273	12.50	12.17	ug/L	-3	30	0.0500	u
Bromoform	0.2701	0.3571	12.50	16.52	ug/L	32	30	0.1000	c+ u ***
Isopropylbenzene	3.5784	2.9461	12.50	10.29	ug/L	-18	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8496	0.6695	12.50	9.851	ug/L	-21	30	0.3000	u
1,2,3-Trichloropropane	0.9817	0.7920	12.50	10.09	ug/L	-19	30	0.0500	u
Propylbenzene	4.3463	3.5588	12.50	10.24	ug/L	-18	30	0.0500	u
Bromobenzene	0.8426	0.8536	12.50	12.66	ug/L	1	30	0.0500	u
1,3,5-Trimethylbenzene	3.0929	2.8159	12.50	11.38	ug/L	-9	30	0.0500	u
2-Chlorotoluene	2.9127	2.5923	12.50	11.12	ug/L	-11	30	0.0500	u
4-Chlorotoluene	2.7062	2.3490	12.50	10.85	ug/L	-13	30	0.0500	u
tert-Butylbenzene	2.6588	2.3662	12.50	11.12	ug/L	-11	30	0.0500	u
1,2,4-Trimethylbenzene	3.1235	2.8260	12.50	11.31	ug/L	-10	30	0.0500	u
sec-Butylbenzene	4.0353	3.4828	12.50	10.79	ug/L	-14	30	0.0500	u
para-Isopropyl Toluene	3.3656	3.0589	12.50	11.36	ug/L	-9	30	0.0500	u
1,3-Dichlorobenzene	1.5874	1.6583	12.50	13.06	ug/L	4	30	0.0500	u
1,4-Dichlorobenzene	1.6381	1.7033	12.50	13.00	ug/L	4	30	0.0500	u
n-Butylbenzene	3.2103	2.9027	12.50	11.30	ug/L	-10	30	0.0500	u
1,2-Dichlorobenzene	1.5518	1.5835	12.50	12.76	ug/L	2	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2296	0.1713	12.50	9.326	ug/L	-25	30	0.0500	u
1,2,4-Trichlorobenzene	1.1989	1.2425	12.50	12.96	ug/L	4	30	0.0500	u
Hexachlorobutadiene	0.5656	0.7878	12.50	17.41	ug/L	39	30	0.0500	c+ u ***
Naphthalene	3.4680	2.4982	12.50	9.005	ug/L	-28	30	0.0500	m u
1,2,3-Trichlorobenzene	1.1848	1.2540	12.50	13.23	ug/L	6	30	0.0500	u
Dibromofluoromethane	0.4527	0.4327	50.00	47.78	ug/L	-4	30	0.0500	u
1,2-Dichloroethane-d4	0.4650	0.5961	50.00	64.10	ug/L	28	30	0.0500	u
Toluene-d8	1.3404	1.3015	50.00	48.55	ug/L	-3	30	0.0500	u
Bromofluorobenzene	1.0165	0.8519	50.00	41.91	ug/L	-16	30	0.0500	u

ISTD (ICAL njk23)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	742664	743853	0.16	9.49	9.48	-0.01
1,4-Difluorobenzene	1178583	974731	-17.30	10.56	10.55	-0.01
Chlorobenzene-d5	1092554	949146	-13.13	14.13	14.12	-0.01
1,4-Dichlorobenzene-d4	591395	617880	4.48	16.56	16.55	-0.01

MCT 11/10/15 [Acetone]: Separated from coeluting peak. [general version]

MCT 11/10/15 [Naphthalene]: Picked or reassigned peak. [general version]

Analyst: KKM Date: 11/10/15 Reviewer: TEW Date: 11/11/15

+ = high bias c = CCV m = manual integration u = use

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 425447153

Date : 11/06/15  
 Sequence : MSVOA03 ck6

Reference : cin24  
 Analyzed : 09/24/15 02:58

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	497393	10.36	895161	11.53	871710	15.60	449342	18.37
		LOWER LIMIT	248697	9.86	447581	11.03	435855	15.10	224671	17.87
		UPPER LIMIT	994786	10.86	1790322	12.03	1743420	16.10	898684	18.87
001	IB		705626	10.36	1310316	11.52	1156991	15.60	520434	18.35
003	CCV		662017	10.37	1225295	11.53	1095270	15.61	527823	18.35
004	CCV/BS	QC811624	609710	10.37	1132694	11.52	1003763	15.60	474045	18.35
005	BSD	QC811625	615360	10.36	1140316	11.52	1016502	15.60	488844	18.35
007	BLANK	QC811626	691584	10.37	1284701	11.53	1147108	15.60	531397	18.35
008	SAMPLE	271203-001	737521	10.37	1385212	11.54	1224029	15.60	553130	18.36
009	SAMPLE	271203-002	732522	10.38	1364098	11.54	1224356	15.61	555401	18.36
010	SAMPLE	271203-003	693689	10.38	1302181	11.53	1150474	15.60	523286	18.36
011	SAMPLE	271203-004	622337	10.36	1161443	11.52	1027588	15.60	477794	18.35
012	SAMPLE	271203-005	547255	10.36	1016238	11.52	926641	15.59	437953	18.36
013	SAMPLE	271203-006	462015	10.34	880872	11.50	787924	15.60	366086	18.35
014	SAMPLE	271203-007	579439	10.37	1102422	11.52	979367	15.59	458523	18.35
015	SAMPLE	271203-008	552204	10.36	1043090	11.52	941139	15.60	438032	18.35
016	SAMPLE	271203-009	519149	10.35	979116	11.51	890474	15.60	423167	18.35
017	SAMPLE	271203-010	506806	10.35	948798	11.51	871885	15.60	405994	18.35
018	SAMPLE	271203-011	496902	10.35	938896	11.51	860196	15.59	404815	18.36
019	SAMPLE	271203-012	472041	10.35	893662	11.51	821109	15.60	388515	18.35
020	SAMPLE	271203-013	485693	10.35	911647	11.51	841288	15.60	397750	18.35
021	SAMPLE	271203-014	461110	10.35	870786	11.51	809596	15.59	386739	18.36

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 485445681

Date : 11/05/15  
 Sequence : MSVOA09 ik5

Reference : ij415  
 Analyzed : 10/05/15 01:59

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	2083098	11.04	2647248	12.30	1580001	16.67	844594	19.11
		LOWER LIMIT	1041549	10.54	1323624	11.80	790001	16.17	422297	18.61
		UPPER LIMIT	4166196	11.54	5294496	12.80	3160002	17.17	1689188	19.61
001	IB		1899108	11.00	2527050	12.27	1995618	16.64	1015452	19.08
003	CCV		1794650	10.98	2543872	12.25	1927176	16.63	935564	19.07
004	CCV		2097759	11.00	2869627	12.26	1960523	16.63	956252	19.08
007	CCV		1631197	10.98	2416017	12.25	1744054	16.63	603739	19.07
008	CCV		1939003	11.01	2676745	12.27	1847336	16.64	882586	19.08
010	CCV/LCS	QC811536	1979503	10.98	2564736	12.24	1866725	16.62	989238	19.07
011	CCV/LCS	QC811536	2096644	10.99	2623756	12.26	1760953	16.63	933352	19.07
012	IB	A/A	2139105	10.98	2646972	12.25	1718582	16.63	941739	19.07
013	BLANK	QC811405	2150016	10.99	2600441	12.25	1717288	16.63	889069	19.08
014	MSS	271236-009	1884539	10.99	2429899	12.26	1730450	16.64	906162	19.07
015	SAMPLE	271203-001	1994211	10.99	2540889	12.26	1684661	16.63	893017	19.08
016	SAMPLE	271203-003	2023778	10.99	2617028	12.25	1687062	16.64	895152	19.08
017	SAMPLE	271203-004	2031801	10.99	2506374	12.25	1657375	16.63	873337	19.08
018	SAMPLE	271203-007	1801877	10.99	2307859	12.25	1657481	16.64	898811	19.08
019	SAMPLE	271203-006	1964160	10.99	2512411	12.26	1671144	16.63	866468	19.07
020	SAMPLE	271203-012	2005673	10.99	2506942	12.25	1635614	16.64	874044	19.08
021	SAMPLE	271203-002	2019154	10.99	2613955	12.26	1694258	16.63	895235	19.08
022	SAMPLE	271203-008	1948623	10.99	2466672	12.26	1668916	16.63	883700	19.07
023	SAMPLE	271203-009	1817028	10.99	2424668	12.25	1653684	16.63	883815	19.08
024	SAMPLE	271203-011	1968490	11.00	2549109	12.26	1670254	16.63	909013	19.07
025	SAMPLE	271203-005	2006441	10.99	2583622	12.26	1699002	16.63	858757	19.08
026	SAMPLE	271203-010	1917128	10.99	2493367	12.26	1684120	16.64	878348	19.08
027	SAMPLE	271203-014	1873341	10.99	2433034	12.26	1708429	16.64	898003	19.07
028	SAMPLE	271203-013	2058919	10.99	2744321	12.26	1775669	16.64	884543	19.08
029	MS	QC811403	1990560	11.00	2650931	12.26	1745856	16.64	909342	19.07
030	MSD	QC811404	2087047	11.00	2788360	12.26	1749653	16.64	903736	19.08
031	IB		1345859	11.00	2045787	12.26	1839357	16.63	1021324	19.07
032	IB		1905338	11.00	2619683	12.26	1813255	16.64	1005093	19.08
033	IB		1909778	11.00	2534689	12.26	1851285	16.63	1038977	19.08

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 485451358

Date : 11/09/15  
 Sequence : MSVOA09 ik9

Reference : ij415  
 Analyzed : 10/05/15 01:59

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	2083098	11.04	2647248	12.30	1580001	16.67	844594	19.11
		LOWER LIMIT	1041549	10.54	1323624	11.80	790001	16.17	422297	18.61
		UPPER LIMIT	4166196	11.54	5294496	12.80	3160002	17.17	1689188	19.61
001	IB		914517 *	11.02	1192459 *	12.28	945073	16.66	502211	19.09
004	CCV		827827 *	11.02	1212994 *	12.28	895101	16.66	479296	19.09
005	CCV	QC811912	1079277	11.03	1508113	12.29	966110	16.66	502441	19.10
007	CCV	QC811912	3175222	11.00	4802752	12.26	3783794 *	16.64	1971985 *	19.08
009	CCV	QC811912	2479802	11.01	3602730	12.27	2883501	16.64	1507719	19.09
010	CCV/LCS	QC811912	3316187	11.02	4362206	12.28	2925504	16.65	1564944	19.09
011	MS	QC811403	2522326	11.03	3615815	12.29	2649915	16.66	1469164	19.09
012	MSD	QC811404	3233452	11.02	4186118	12.28	2629375	16.66	1417490	19.09
013	IB	A/A	2917429	11.02	3718832	12.29	2655812	16.66	1441906	19.10
014	IB	A/A	3153863	11.02	4000401	12.28	2629153	16.66	1393419	19.09
015	BLANK	QC811914	2876719	11.02	3551512	12.28	2573327	16.66	1358100	19.09
016	SAMPLE	271252-004	3118867	11.01	3937603	12.28	2526691	16.65	1413895	19.09
017	SAMPLE	271314-001	2771434	11.02	3590180	12.28	2552195	16.65	1386230	19.09
018	SAMPLE	271252-001	2838130	11.02	3689149	12.28	2582903	16.65	1337864	19.09
019	SAMPLE	271252-002	3074371	11.02	3865101	12.28	2382039	16.66	1333315	19.09
020	SAMPLE	271252-003	2976273	11.01	3888225	12.28	2504558	16.64	1386393	19.09
021	SAMPLE	271350-002	2985961	11.01	3737798	12.28	2456270	16.65	1370428	19.09
022	SAMPLE	271350-003	2968932	11.01	3794411	12.27	2489101	16.65	1343390	19.08
023	MSS	271350-004	2683593	11.01	3513172	12.27	2494944	16.65	1363316	19.09
024	MS	QC812021	2864469	11.01	3724261	12.27	2440057	16.65	1260736	19.09
025	MSD	QC812022	2924884	11.01	3820055	12.27	2402545	16.65	1299495	19.09

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495445756

Date : 11/05/15  
 Sequence : MSVOA10 jk5

Reference : jhb14  
 Analyzed : 08/11/15 19:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	1188695	11.06	1898539	12.23	1613921	16.17	777833	18.88
		LOWER LIMIT	594348	10.56	949270	11.73	806961	15.67	388917	18.38
		UPPER LIMIT	2377390	11.56	3797078	12.73	3227842	16.67	1555666	19.38
004	CCV		1362981	11.04	2240743	12.20	1852757	16.13	688779	18.86
005	CCV		1336844	11.04	2175598	12.21	1761450	16.14	677817	18.85
006	CCV/LCS	QC811523	1536435	11.03	2505836	12.21	2041222	16.13	759538	18.86
007	IB	A/A	1418318	11.04	2374859	12.20	1950214	16.14	611859	18.85
008	IB	A/A	1339552	11.04	2216738	12.20	1825486	16.13	575415	18.86
009	BLANK	QC811474	1274939	11.03	2105520	12.20	1758947	16.13	572119	18.85
010	MSS	271203-024	1444476	11.03	2369875	12.20	1939674	16.13	659936	18.86
011	SAMPLE	271203-025	1364432	11.03	2216987	12.20	1846891	16.13	638395	18.86
012	SAMPLE	271203-023	1351359	11.03	2221888	12.19	1828927	16.14	643917	18.85
013	SAMPLE	271331-001	1328978	11.02	2147746	12.19	1774230	16.13	625944	18.86
014	SAMPLE	271256-010	1264383	11.03	2067716	12.20	1717081	16.13	566860	18.85
015	SAMPLE	271256-011	1324007	11.02	2182408	12.19	1803099	16.13	643382	18.86
016	SAMPLE	271256-012	1312602	11.02	2180557	12.19	1780126	16.13	657690	18.86
017	SAMPLE	271256-013	1300907	11.02	2097755	12.19	1705843	16.13	589715	18.86
018	SAMPLE	271256-015	1264434	11.03	2061135	12.20	1711857	16.13	612121	18.85
019	SAMPLE	271256-016	1255351	11.03	2067641	12.19	1682096	16.14	589555	18.85
020	SAMPLE	271256-017	1236588	11.02	2019982	12.19	1688767	16.13	575355	18.85
021	SAMPLE	271256-021	1253760	11.02	2065585	12.19	1714487	16.13	611132	18.85
022	SAMPLE	271256-023	1231511	11.02	2042486	12.19	1706378	16.13	598689	18.86
023	MS	QC811472	1286518	11.02	2099870	12.19	1738674	16.13	727256	18.86
024	MSD	QC811473	1300440	11.02	2140155	12.19	1760210	16.13	726722	18.86
025	IB		1324360	11.03	2184344	12.19	1796553	16.13	639586	18.86
026	IB		1328634	11.03	2199210	12.20	1802386	16.14	627638	18.85
027	IB		1320375	11.02	2181339	12.19	1789656	16.13	629345	18.86

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495448497

Date : 11/07/15  
 Sequence : MSVOA10 jk7

Reference : jhb14  
 Analyzed : 08/11/15 19:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	1188695	11.06	1898539	12.23	1613921	16.17	777833	18.88
		LOWER LIMIT	594348	10.56	949270	11.73	806961	15.67	388917	18.38
		UPPER LIMIT	2377390	11.56	3797078	12.73	3227842	16.67	1555666	19.38
005	CCV/LCS	QC811768	1509346	11.05	2488598	12.21	2024482	16.14	736375	18.87
006	CCV/BS	QC811771	1415323	11.05	2288795	12.22	1902279	16.14	680333	18.86
007	BSD	QC811772	1353226	11.05	2188207	12.22	1839474	16.14	668643	18.87
009	BLANK	QC811770	1318483	11.06	2164534	12.22	1759507	16.15	569104	18.86
010	SAMPLE	271203-019	1290219	11.05	2125345	12.22	1737450	16.15	524727	18.86
011	SAMPLE	271238-005	1286380	11.05	2110904	12.21	1750120	16.15	530560	18.87
012	SAMPLE	271371-001	1301101	11.06	2134697	12.22	1779950	16.15	551019	18.86
013	SAMPLE	271371-002	1455591	11.05	2381168	12.22	1984198	16.15	627180	18.87
014	SAMPLE	271225-005	1446682	11.06	2378465	12.22	1966683	16.15	644188	18.87
015	SAMPLE	271248-004	1385207	11.04	2254678	12.21	1871912	16.15	632622	18.87
016	SAMPLE	271248-005	1317268	11.04	2131227	12.21	1791393	16.15	626835	18.87
017	SAMPLE	271248-007	1297698	11.05	2122367	12.22	1750340	16.15	603357	18.87
018	SAMPLE	271248-008	1244338	11.05	2013930	12.21	1656484	16.14	589537	18.87
019	SAMPLE	271225-003	1212685	11.05	1976925	12.22	1657739	16.15	610757	18.87
020	SAMPLE	271248-001	1203144	11.04	1988805	12.21	1649746	16.15	593921	18.87
021	MSS	271248-002	1233610	11.05	1987957	12.21	1670225	16.15	577648	18.87
022	SAMPLE	271248-003	1193732	11.05	1960185	12.22	1633813	16.15	582416	18.87
023	SAMPLE	271238-003	1247388	11.04	2030797	12.22	1674396	16.15	697913	18.87
024	MS	QC811785	1248747	11.04	2016320	12.21	1687427	16.15	702525	18.87
025	MSD	QC811786	1335153	11.05	2152435	12.22	1807696	16.15	726035	18.87



CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495448497

Date : 11/07/15  
 Sequence : MSVOA10 jk7

Reference : jhg06  
 Analyzed : 08/17/15 01:56

#	Type	Sample ID	CLBZD5-TIC	RT
		ICAL STD	6955694	16.16
		LOWER LIMIT	3477847	15.66
		UPPER LIMIT	13911388	16.66
006	CCV/BS	QC811771	6318610	16.14
011	SAMPLE	271238-005	5638266	16.14
012	SAMPLE	271371-001	5812348	16.15
013	SAMPLE	271371-002	6536203	16.15
023	SAMPLE	271238-003	5517424	16.15

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 955451069

Date : 11/09/15  
 Sequence : MSVOA14 nk9

Reference : njk23  
 Analyzed : 10/20/15 18:26

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	742664	9.49	1178583	10.56	1092554	14.13	591395	16.56
		LOWER LIMIT	371332	8.99	589292	10.06	546277	13.63	295698	16.06
		UPPER LIMIT	1485328	9.99	2357166	11.06	2185108	14.63	1182790	17.06
007	CCV/BS	QC811845	570122	9.48	819096	10.55	792598	14.12	493866	16.55
012	CCV/BS	QC811845	743853	9.48	974731	10.55	949146	14.12	617880	16.55
013	BSD	QC811846	747343	9.48	990877	10.55	974426	14.12	622921	16.55
015	BLANK	QC811847	675925	9.48	938139	10.56	896105	14.13	548134	16.55
016	SAMPLE	271248-009	697757	9.48	960638	10.55	914077	14.12	564788	16.55
017	SAMPLE	271212-013	685115	9.48	940265	10.56	904841	14.13	553842	16.55
018	SAMPLE	271141-006	682908	9.48	935178	10.56	898026	14.13	546575	16.56
019	SAMPLE	271203-015	658909	9.48	914071	10.56	889628	14.13	547477	16.55
020	SAMPLE	271203-016	657672	9.48	904674	10.56	880916	14.13	537553	16.55
021	SAMPLE	271423-001	666125	9.48	928048	10.56	884055	14.13	544252	16.56
022	SAMPLE	271203-017	655943	9.48	923198	10.56	880972	14.13	540581	16.56
023	SAMPLE	271203-018	661740	9.48	923804	10.56	898994	14.13	558665	16.55
024	SAMPLE	271203-020	661605	9.48	918702	10.56	883247	14.13	537689	16.55
025	SAMPLE	271203-021	667427	9.48	923459	10.56	879202	14.13	543466	16.56
026	SAMPLE	271203-022	668278	9.48	917499	10.56	889448	14.13	545061	16.55
027	SAMPLE	271225-004	663844	9.48	915123	10.56	885791	14.13	545415	16.55
028	SAMPLE	271225-001	643649	9.48	903491	10.56	864232	14.13	534900	16.56
029	SAMPLE	271225-002	661282	9.48	921985	10.56	885615	14.13	547441	16.55
030	SAMPLE	271112-005	662604	9.48	914380	10.56	883349	14.13	543281	16.56
031	SAMPLE	271212-010	666009	9.48	918183	10.56	893151	14.13	546207	16.56
032	SAMPLE	271212-012	666345	9.48	932373	10.56	896802	14.13	548898	16.56
033	SAMPLE	271215-001	652937	9.48	895321	10.56	852477	14.13	523822	16.56
034	SAMPLE	271212-011	671668	9.48	909007	10.56	871608	14.13	535219	16.56
035	SAMPLE	271248-006	667955	9.48	912089	10.56	879797	14.13	545807	16.55
036	IB		666398	9.48	915765	10.55	881403	14.13	543580	16.56

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425383715

Instrument : MSVOA03 Begun : 09/23/15 11:15  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
003	cin03	IB	15PPB			09/23/15 11:15	1.0	1 2 3 4	?t
004	cin04	TUN	BFB			09/23/15 12:19	1.0	5	
005	cin05	ICV	GAS			09/23/15 12:40	1.0	6 4	
006	cin06	ICV	GAS			09/23/15 13:23	1.0	6 4	
007	cin07	TUN	BFB			09/23/15 14:28	1.0	5	
008	cin08	CCV	15PPB			09/23/15 14:49	1.0	1 2 3 4	cc-
009	cin09	IB				09/23/15 16:15	1.0	4	
010	cin10	IB				09/23/15 16:58	1.0	4	
011	cin11	X	LOWPT			09/23/15 17:19	1.0	4	
012	cin12	X	LOWPT			09/23/15 19:06	1.0	4	
013	cin13	TUN	BFB			09/23/15 20:54	1.0	5	
014	cin14	IB				09/23/15 21:15	1.0	4	
015	cin15	IB				09/23/15 21:58	1.0	4	
016	cin16	IB				09/23/15 22:41	1.0	4	
017	cin17	IB	CALIB			09/23/15 23:02	1.0	4	
018	cin18	ICAL	.25/.5PPB			09/23/15 23:45	1.0	7 1 2 3 4	
019	cin19	ICAL	.5/1PPB			09/24/15 00:07	1.0	4 7 1 2 3	
020	cin20	ICAL	2PPB			09/24/15 00:50	1.0	7 1 2 3 4	
021	cin21	ICAL	5PPB			09/24/15 01:11	1.0	4 7 1 2 3	
022	cin22	ICAL	10PPB			09/24/15 01:54	1.0	4 7 1 2 3	
023	cin23	ICAL	20PPB			09/24/15 02:37	1.0	4 7 1 2 3	
024	cin24	ICAL	50PPB			09/24/15 02:58	1.0	4 7 1 2 3	
025	cin25	ICAL	75PPB			09/24/15 03:41	1.0	4 7 1 2 3	
026	cin26	ICAL	100PPB			09/24/15 04:24	1.0	4 7 1 2 3	
027	cin27	ICV	MIX			09/24/15 04:46	1.0	8 4 9 10	
028	cin28	ICV	GAS			09/24/15 05:29	1.0	6 4	
029	cin29	IB				09/24/15 06:11	1.0	4	

DAR 09/23/15 : started on the wrong file, no data associated with files 1,2  
 DAR 09/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 3 through 29.  
 LW 09/25/15 : Reviewed through file 6

Analyst: DAR Date: 09/23/15 Reviewer: LW Date: 09/29/15  
 Standards used: 1=S27823 2=S27893 3=S26571 4=S27973 5=S27180 6=S27007 7=S27005 8=S27858 9=S27929 10=S27930  
 Flags used: --low bias ?t=missing tune cc=CCV CCC failure  
 Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425447153

Instrument : MSVOA03 Begun : 11/06/15 12:33  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ck601	IB				11/06/15 12:33	1.0	1	?t
002	ck602	TUN	BFB			11/06/15 13:16	1.0	2	
003	ck603	CCV				11/06/15 13:59	1.0	3 4 5 6 1	cc+
004	ck604	CCV/BS	QC811624	Water	229155	11/06/15 14:20	1.0	7 8 9 10 1	spk cc+
005	ck605	BSD	QC811625	Water	229155	11/06/15 14:42	1.0	7 8 9 10 1	spk cc+
006	ck606	X	IB			11/06/15 15:25	1.0	1	
007	ck607	BLANK	QC811626	Water	229155	11/06/15 15:46	1.0	1	cc+
008	ck608	SAMPLE	271203-001	Water	229155	11/06/15 17:12	1.0	1	spk cc+
009	ck609	SAMPLE	271203-002	Water	229155	11/06/15 17:33	1.0	1	spk cc+
010	ck610	SAMPLE	271203-003	Water	229155	11/06/15 18:16	1.0	1	spk cc+
011	ck611	SAMPLE	271203-004	Water	229155	11/06/15 18:38	1.0	1	spk cc+
012	ck612	SAMPLE	271203-005	Water	229155	11/06/15 19:21	1.0	1	spk cc+
013	ck613	SAMPLE	271203-006	Water	229155	11/06/15 19:42	1.0	1	spk cc+
014	ck614	SAMPLE	271203-007	Water	229155	11/06/15 20:25	1.0	1	spk cc+
015	ck615	SAMPLE	271203-008	Water	229155	11/06/15 20:46	1.0	1	spk cc+
016	ck616	SAMPLE	271203-009	Water	229155	11/06/15 21:29	1.0	1	spk cc+ , headspace <= 1 mL
017	ck617	SAMPLE	271203-010	Water	229155	11/06/15 21:51	1.0	1	spk cc+ , headspace <= 1 mL
018	ck618	SAMPLE	271203-011	Water	229155	11/06/15 22:34	1.0	1	spk cc+
019	ck619	SAMPLE	271203-012	Water	229155	11/06/15 22:55	1.0	1	spk cc+
020	ck620	SAMPLE	271203-013	Water	229155	11/06/15 23:38	1.0	1	spk cc+ , headspace <= 1 mL
021	ck621	SAMPLE	271203-014	Water	229155	11/06/15 23:59	1.0	1	spk cc+ , headspace <= 1 mL
022	ck622	X	IB			11/07/15 00:42	1.0	1	

TEW 11/09/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

TEW 11/09/15 : Matrix spikes were not performed for this analysis in batch 229155 due to insufficient sample amount.

KKM 11/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Analyst: KKM Date: 11/10/15 Reviewer: LW Date: 11/10/15

Standards used: 1=S28450 2=S27825 3=S27004 4=S28295 5=S28087 6=S27081 7=S28219 8=S28220 9=S28167 10=S28123

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 485399877

Instrument : MSVOA09 Begun : 10/04/15 16:37  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	ij401	TUN	BFB			10/04/15 16:37	1.0	1
002	ij402	TUN	BFB			10/04/15 16:47	1.0	1
003	ij403	TUN	BFB			10/04/15 18:52	1.0	1
004	ij404	X	IB			10/04/15 19:37	1.0	2
005	ij405	IB				10/04/15 20:11	1.0	2
006	ij406	IB				10/04/15 20:46	1.0	2
007	ij407	IB				10/04/15 21:21	1.0	2
008	ij408	IB	CALIB			10/04/15 21:56	1.0	2
009	ij409	ICAL	.25/.5PPB			10/04/15 22:30	1.0	3 4 5 6 2
010	ij410	ICAL	.5/1PPB			10/04/15 23:05	1.0	2 3 4 5 6
011	ij411	ICAL	2PPB			10/04/15 23:40	1.0	3 4 5 6 2
012	ij412	ICAL	5PPB			10/05/15 00:15	1.0	2 3 4 5 6
013	ij413	ICAL	10PPB			10/05/15 00:50	1.0	2 3 4 5 6
014	ij414	ICAL	20PPB			10/05/15 01:25	1.0	2 3 4 5 6
015	ij415	ICAL	50PPB			10/05/15 01:59	1.0	2 3 4 5 6
016	ij416	ICAL	75PPB			10/05/15 02:34	1.0	2 3 4 5 6
017	ij417	ICAL	100PPB			10/05/15 03:10	1.0	2 3 4 5 6
018	ij418	ICV	GAS			10/05/15 03:45	1.0	7 2
019	ij419	ICV	MIX			10/05/15 04:20	1.0	8 9 10 2

DAR 10/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: DAR Date: 10/06/15 Reviewer: LW Date: 10/07/15

Standards used: 1=S27180 2=S28060 3=S27004 4=S28008 5=S28087 6=S27081 7=S27267 8=S28219 9=S28220 10=S27929

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 485401479

Instrument : MSVOA09 Begun : 10/05/15 19:19  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ij501	X	IB			10/05/15 19:19	1.0	1	
002	ij502	TUN	BFB			10/05/15 19:52	1.0	2	
003	ij503	ICV	MIX			10/05/15 20:22	1.0	3 1	

DAR 10/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 3.

Analyst: DAR Date: 10/06/15 Reviewer: LW Date: 10/07/15

Standards used: 1=S28060 2=S27180 3=S27929

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 485402532

Instrument : MSVOA09                                    Begun                    : 10/06/15 12:52  
 Method      : EPA 8260B                                 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	ij601	X	IB			10/06/15 12:52	1.0	1
002	ij602	TUN	BFB			10/06/15 13:23	1.0	2
003	ij603	ICV	2CLEVE			10/06/15 13:53	1.0	3 1
004	ij604	ICV	IODO			10/06/15 15:37	1.0	4 1

DAR 10/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 4.

Analyst: DAR                                    Date: 10/06/15                                    Reviewer: LW                                    Date: 10/07/15

Standards used: 1=S28060    2=S27180    3=S18173    4=S23487

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 485445681

Instrument : MSVOA09 Begun : 11/05/15 12:01  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ik501	IB				11/05/15 12:01	1.0	1	?t
002	ik502	TUN	BFB			11/05/15 12:48	1.0	2	
003	ik503	CCV				11/05/15 13:17	1.0	3 4 5 6 1	cc+ cc-
004	ik504	CCV		Water	229102	11/05/15 13:51	1.0	7 8 9 10 1	cc+
005	ik505	X		Water	229102	11/05/15 14:25	1.0	7 8 9 10 1	spk cc+
006	ik506	TUN	BFB			11/05/15 16:11	1.0	2	
007	ik507	CCV		Water	229102	11/05/15 16:41	1.0	7 8 9 10 1	cc+
008	ik508	CCV		Water	229103	11/05/15 17:15	1.0	7 8 9 10 1	cc+
009	ik509	TUN	BFB			11/05/15 18:46	1.0	2	
010	ik510	CCV/LCS	QC811536	Water	229102	11/05/15 19:14	1.0	7 8 9 10 1	cc+
011	ik511	CCV/LCS	QC811536	Water	229102	11/05/15 19:49	1.0	7 8 9 10 1	
012	ik512	IB	A/A			11/05/15 20:23	1.0	11 1	
013	ik513	BLANK	QC811405	Water	229102	11/05/15 20:58	1.0	1	
014	ik514	MSS	271236-009	Water	229102	11/05/15 21:33	1.0	1	
015	ik515	SAMPLE	271203-001	Water	229102	11/05/15 22:08	1.0	1	
016	ik516	SAMPLE	271203-003	Water	229102	11/05/15 22:43	1.0	1	
017	ik517	SAMPLE	271203-004	Water	229102	11/05/15 23:18	1.0	1	
018	ik518	SAMPLE	271203-007	Water	229102	11/05/15 23:53	1.0	1	
019	ik519	SAMPLE	271203-006	Water	229102	11/06/15 00:28	1.0	1	
020	ik520	SAMPLE	271203-012	Water	229102	11/06/15 01:03	1.0	1	
021	ik521	SAMPLE	271203-002	Water	229102	11/06/15 01:38	1.0	1	
022	ik522	SAMPLE	271203-008	Water	229102	11/06/15 02:13	1.0	1	
023	ik523	SAMPLE	271203-009	Water	229102	11/06/15 02:47	1.0	1	headspace <= 1 mL
024	ik524	SAMPLE	271203-011	Water	229102	11/06/15 03:22	1.0	1	headspace <= 1 mL
025	ik525	SAMPLE	271203-005	Water	229102	11/06/15 03:57	1.0	1	
026	ik526	SAMPLE	271203-010	Water	229102	11/06/15 04:31	1.0	1	headspace <= 1 mL
027	ik527	SAMPLE	271203-014	Water	229102	11/06/15 05:06	1.0	1	headspace <= 1 mL
028	ik528	SAMPLE	271203-013	Water	229102	11/06/15 05:40	1.0	1	headspace <= 1 mL
029	ik529	MS	QC811403	Water	229102	11/06/15 06:15	1.0	7 8 9 10 1	
030	ik530	MSD	QC811404	Water	229102	11/06/15 06:49	1.0	7 8 9 10 1	<<t
031	ik531	IB				11/06/15 07:23	1.0	1	<<t
032	ik532	IB				11/06/15 07:57	1.0	1	<<t
033	ik533	IB				11/06/15 08:32	1.0	1	<<t

DAR 11/05/15 : retuned after file 5 and 8

NJT 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 33.

Analyst: NJT Date: 11/06/15 Reviewer: LW Date: 11/06/15

Standards used: 1=S28450 2=S27825 3=S27004 4=S28295 5=S28355 6=S27081 7=S28219 8=S28220 9=S28167 10=S27267 11=S28214

Flags used: +=high bias -=low bias <<t=out of clock ?t=missing tune cc=CCV CCC failure spk=5% spike rule



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 485451358

Instrument : MSVOA09 Begun : 11/09/15 10:38  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ik901	IB				11/09/15 10:38	1.0	1	?t
002	ik902	TUN	BFB			11/09/15 11:12	1.0	2	t
003	ik903	TUN	BFB			11/09/15 11:47	1.0	2	
004	ik904	CCV				11/09/15 12:52	1.0	3 4 5 6 1	cc+
005	ik905	CCV	QC811912	Water	229226	11/09/15 13:26	1.0	7 8 9 10 1	cc+
006	ik906	TUN	BFB			11/09/15 15:08	1.0	2	
007	ik907	CCV	QC811912	Water	229226	11/09/15 15:38	1.0	7 8 9 10 1	cc+
008	ik908	TUN	BFB			11/09/15 16:25	1.0	2	
009	ik909	CCV	QC811912	Water	229226	11/09/15 17:02	1.0	7 8 9 10 1	cc+
010	ik910	CCV/LCS	QC811912	Water	229226	11/09/15 17:36	1.0	7 8 9 10 1	
011	ik911	MS	QC811403	Water	229102	11/09/15 18:26	1.0	7 8 9 10 1	
012	ik912	MSD	QC811404	Water	229102	11/09/15 19:01	1.0	7 8 9 10 1	
013	ik913	IB	A/A			11/09/15 19:36	1.0	11 1	
014	ik914	IB	A/A			11/09/15 20:10	1.0	11 1	
015	ik915	BLANK	QC811914	Water	229226	11/09/15 20:45	1.0	1	
016	ik916	SAMPLE	271252-004	Water	229226	11/09/15 21:20	1.0	1	
017	ik917	SAMPLE	271314-001	Water	229226	11/09/15 21:55	1.0	1	
018	ik918	SAMPLE	271252-001	Water	229226	11/09/15 22:30	1.0	1	
019	ik919	SAMPLE	271252-002	Water	229226	11/09/15 23:05	1.0	1	
020	ik920	SAMPLE	271252-003	Water	229226	11/09/15 23:40	1.0	1	
021	ik921	SAMPLE	271350-002	Water	229226	11/10/15 00:15	1.0	1	
022	ik922	SAMPLE	271350-003	Water	229226	11/10/15 00:50	1.0	1	
023	ik923	MSS	271350-004	Water	229226	11/10/15 01:25	1.0	1	
024	ik924	MS	QC812021	Water	229226	11/10/15 02:00	1.0	7 8 9 10 1	
025	ik925	MSD	QC812022	Water	229226	11/10/15 02:35	1.0	7 8 9 10 1	

NJT 11/10/15 : DAR adjusted tune after file 5 and 7.

NJT 11/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

Analyst:  NJT  Date:  11/10/15  Reviewer:  LW  Date:  11/10/15

Standards used: 1=S28450 2=S27825 3=S27004 4=S28295 5=S28355 6=S27081 7=S28219 8=S28220 9=S28167 10=S27267 11=S28214

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure t=tune failure



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495445756

Instrument : MSVOA10  
 Method : EPA 8260B

Begun : 11/05/15 13:16  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jk501	X	HG			11/05/15 13:16	1.0	1	
002	jk502	X	IB			11/05/15 13:46	1.0	1	
003	jk503	TUN	BFB			11/05/15 14:23	1.0	2	
004	jk504	CCV				11/05/15 14:49	1.0	3 4 5 6 1	cc+
005	jk505	CCV				11/05/15 15:31	1.0	3 4 5 6 1	cc+
006	jk506	CCV/LCS	QC811523	Water	229118	11/05/15 16:02	1.0	7 8 9 10 1	
007	jk507	IB	A/A			11/05/15 16:48	1.0	11 1	
008	jk508	IB	A/A			11/05/15 17:19	1.0	11 1	
009	jk509	BLANK	QC811474	Water	229118	11/05/15 17:50	1.0	1	
010	jk510	MSS	271203-024	Water	229118	11/05/15 18:21	1.0	1	
011	jk511	SAMPLE	271203-025	Water	229118	11/05/15 18:52	1.0	1	combined (sediment), headspace <= 1 mL
012	jk512	SAMPLE	271203-023	Water	229118	11/05/15 19:23	1.0	1	
013	jk513	SAMPLE	271331-001	Water	229118	11/05/15 19:54	1.0	1	
014	jk514	SAMPLE	271256-010	Water	229118	11/05/15 20:26	1.0	1	
015	jk515	SAMPLE	271256-011	Water	229118	11/05/15 20:57	1.0	1	
016	jk516	SAMPLE	271256-012	Water	229118	11/05/15 21:28	1.0	1	
017	jk517	SAMPLE	271256-013	Water	229118	11/05/15 22:00	1.0	1	
018	jk518	SAMPLE	271256-015	Water	229118	11/05/15 22:31	1.0	1	
019	jk519	SAMPLE	271256-016	Water	229118	11/05/15 23:02	1.0	1	
020	jk520	SAMPLE	271256-017	Water	229118	11/05/15 23:34	1.0	1	
021	jk521	SAMPLE	271256-021	Water	229118	11/06/15 00:05	1.0	1	
022	jk522	SAMPLE	271256-023	Water	229118	11/06/15 00:36	1.0	1	1:TCE=100
023	jk523	MS	QC811472	Water	229118	11/06/15 01:07	1.0	7 8 9 10 1	
024	jk524	MSD	QC811473	Water	229118	11/06/15 01:39	1.0	7 8 9 10 1	headspace <= 1 mL
025	jk525	IB				11/06/15 02:10	1.0	1	
026	jk526	IB				11/06/15 02:41	1.0	1	<<t
027	jk527	IB				11/06/15 03:12	1.0	1	<<t

KKM 11/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Analyst: KKM Date: 11/06/15 Reviewer: LW Date: 11/06/15

Standards used: 1=S28022 2=S27825 3=S27004 4=S28295 5=S28355 6=S27081 7=S28219 8=S28220 9=S28167 10=S28123 11=S28214

Flags used: +=high bias <<t=out of clock cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495448497

Instrument : MSVOA10  
 Method : EPA 8260B

Begun : 11/07/15 10:57  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jk701	X	HG			11/07/15 10:57	1.0	1	
002	jk702	X	IB			11/07/15 11:27	1.0	1	
003	jk703	TUN	BFB			11/07/15 12:10	1.0	2	
004	jk704	X	QC811768	Water	229193	11/07/15 12:35	1.0	3 4 5 6 1	spk
005	jk705	CCV/LCS	QC811768	Water	229193	11/07/15 13:22	1.0	3 4 5 6 1	
006	jk706	CCV/BS	QC811771	Water	229193	11/07/15 13:53	1.0	7 1	
007	jk707	BSD	QC811772	Water	229193	11/07/15 14:24	1.0	7 1	
008	jk708	X	IB			11/07/15 14:55	1.0	1	
009	jk709	BLANK	QC811770	Water	229193	11/07/15 15:25	1.0	1	
010	jk710	SAMPLE	271203-019	Water	229193	11/07/15 15:56	1.0	1	
011	jk711	SAMPLE	271238-005	Water	229193	11/07/15 16:27	1.0	1	headspace <= 1 mL
012	jk712	SAMPLE	271371-001	Water	229193	11/07/15 16:58	1.0	1	
013	jk713	SAMPLE	271371-002	Water	229193	11/07/15 17:29	1.0	1	
014	jk714	SAMPLE	271225-005	Water	229193	11/07/15 17:59	1.0	1	
015	jk715	SAMPLE	271248-004	Water	229193	11/07/15 18:30	1.0	1	
016	jk716	SAMPLE	271248-005	Water	229193	11/07/15 19:02	1.0	1	
017	jk717	SAMPLE	271248-007	Water	229193	11/07/15 19:33	1.0	1	
018	jk718	SAMPLE	271248-008	Water	229193	11/07/15 20:04	1.0	1	
019	jk719	SAMPLE	271225-003	Water	229193	11/07/15 20:36	3.333	1	
020	jk720	SAMPLE	271248-001	Water	229193	11/07/15 21:07	2.0	1	
021	jk721	MSS	271248-002	Water	229193	11/07/15 21:39	3.333	1	
022	jk722	SAMPLE	271248-003	Water	229193	11/07/15 22:10	2.500	1	
023	jk723	SAMPLE	271238-003	Water	229193	11/07/15 22:42	20.0	1	headspace <= 1 mL
024	jk724	MS	QC811785	Water	229193	11/07/15 23:13	3.333	3 4 5 6 1	
025	jk725	MSD	QC811786	Water	229193	11/07/15 23:44	3.333	3 4 5 6 1	
026	jk726	X	IB			11/08/15 00:16	1.0	1	

KER 11/09/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 26.

Analyst: KER Date: 11/09/15 Reviewer: LW Date: 11/09/15

Standards used: 1=S28022 2=S27825 3=S28219 4=S28220 5=S28167 6=S28123 7=S27677

Flags used: spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955422499

Instrument : MSVOA14 Begun : 10/20/15 09:39  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	njk01	TUN	BFB			10/20/15 09:39	1.0	1	t
002	njk02	TUN	BFB			10/20/15 09:51	1.0	1	t
003	njk03	TUN	BFB			10/20/15 10:48	1.0	1	
004	njk04	TUN	BFB			10/20/15 10:57	1.0	1	t
005	njk05	TUN	BFB			10/20/15 11:08	1.0	1	t
006	njk06	TUN	BFB			10/20/15 11:16	1.0	1	
007	njk07	TUN	BFB			10/20/15 11:26	1.0	1	t
008	njk08	TUN	BFB			10/20/15 11:36	1.0	1	
009	njk09	TUN	BFB			10/20/15 11:45	1.0	1	t
010	njk10	TUN	BFB			10/20/15 12:54	1.0	1	
011	njk11	TUN	BFB			10/20/15 13:20	1.0	1	
012	njk12	TUN	BFB			10/20/15 13:29	1.0	1	
013	njk13	X	LOW POINT			10/20/15 13:55	1.0	2	
014	njk14	X	IB			10/20/15 14:30	1.0	2	
015	njk15	X	IB			10/20/15 14:57	1.0	2	
016	njk16	IB	CALIBRATION			10/20/15 15:23	1.0	2	
017	njk17	ICAL				10/20/15 15:49	1.0	3 4 5 6 2	
018	njk18	ICAL				10/20/15 16:15	1.0	3 4 5 6 2	
019	njk19	ICAL				10/20/15 16:41	1.0	3 4 5 6 2	
020	njk20	ICAL				10/20/15 17:08	1.0	3 4 5 6 2	
021	njk21	ICAL				10/20/15 17:34	1.0	3 4 5 6 2	
022	njk22	ICAL				10/20/15 18:00	1.0	3 4 5 6 2	
023	njk23	ICAL				10/20/15 18:26	1.0	3 4 5 6 2	
024	njk24	ICAL				10/20/15 18:53	1.0	3 4 5 6 2	
025	njk25	ICAL				10/20/15 19:19	1.0	3 4 5 6 2	
026	njk26	ICV				10/20/15 19:45	1.0	7 2	
027	njk27	ICV				10/20/15 20:11	1.0	8 2	
028	njk28	ICV				10/20/15 20:38	1.0	9 10 11 2	
029	njk29	X	IB			10/20/15 21:04	1.0	2	
030	njk30	X	IB			10/20/15 21:30	1.0	2	

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Analyst: MCT Date: 10/21/15 Reviewer: LW Date: 10/22/15

Standards used: 1=S27180 2=S28246 3=S27004 4=S28008 5=S28355 6=S27081 7=S27267 8=S18173 9=S28219 10=S28220 11=S28167

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955423728

Instrument : MSVOA14 Begun : 10/21/15 06:08  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	njl01	X	IB			10/21/15 06:08	1.0	1	
002	njl02	X	IB			10/21/15 06:34	1.0	1	
003	njl03	X	HIGH GASES			10/21/15 09:53	1.0	1	
004	njl04	X	IB			10/21/15 10:19	1.0	1	
005	njl05	TUN	BFB			10/21/15 10:43	1.0	2	
006	njl06	ICV				10/21/15 11:07	1.0	3 1	
007	njl07	TUN	BFB			10/21/15 12:16	1.0	2	
008	njl08	CCV				10/21/15 12:39	1.0	4 5 6 7 1	
009	njl09	BS	QC809187	Water	228541	10/21/15 13:28	1.0	8 9 10 11 1	
010	njl10	BSD	QC809188	Water	228541	10/21/15 13:54	1.0	8 9 10 11 1	
011	njl11	X	IB			10/21/15 14:20	1.0	1	
012	njl12	BLANK	QC809189	Water	228541	10/21/15 14:46	1.0	1	
013	njl13	SAMPLE	270754-020	Water	228541	10/21/15 15:12	1.0	1	
014	njl14	SAMPLE	270759-004	Water	228541	10/21/15 15:38	1.0	1	
015	njl15	SAMPLE	270747-005	Water	228541	10/21/15 16:05	1.0	1	
016	njl16	SAMPLE	270759-001	Water	228541	10/21/15 16:31	1.0	1	
017	njl17	SAMPLE	270759-003	Water	228541	10/21/15 16:57	1.0	1	
018	njl18	SAMPLE	270819-025	Water	228541	10/21/15 17:23	1.0	1	
019	njl19	SAMPLE	270819-026	Water	228541	10/21/15 17:49	1.0	1	
020	njl20	SAMPLE	270819-027	Water	228541	10/21/15 18:16	1.0	1	
021	njl21	SAMPLE	270819-028	Water	228541	10/21/15 18:42	1.0	1	
022	njl22	SAMPLE	270819-029	Water	228541	10/21/15 19:08	1.0	1	
023	njl23	SAMPLE	270819-030	Water	228541	10/21/15 19:34	1.0	1	
024	njl24	SAMPLE	270819-031	Water	228541	10/21/15 20:01	1.0	1	
025	njl25	SAMPLE	270819-032	Water	228541	10/21/15 20:27	1.0	1	
026	njl26	SAMPLE	270819-033	Water	228541	10/21/15 20:53	1.0	1	
027	njl27	SAMPLE	270819-034	Water	228541	10/21/15 21:20	1.0	1	
028	njl28	SAMPLE	270747-001	Water	228541	10/21/15 21:46	1.0	1	
029	njl29	SAMPLE	270747-002	Water	228541	10/21/15 22:12	1.0	1	
030	njl30	SAMPLE	270747-003	Water	228541	10/21/15 22:39	1.0	1	high SO2
031	njl31	SAMPLE	270747-004	Water	228541	10/21/15 23:05	1.0	1	
032	njl32	SAMPLE	270759-002	Water	228541	10/21/15 23:31	25.0	1	
033	njl33	X	IB			10/21/15 23:58	1.0	1	
034	njl34	X	IB			10/22/15 00:24	1.0	1	
035	njl35	X	IB			10/22/15 00:51	1.0	1	
036	njl36	X	IB			10/22/15 01:17	1.0	1	

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 6.

DJA 10/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 36.

DJA 10/22/15 : Matrix spikes were not performed for this analysis in batch 228541 due to insufficient sample amount.

Analyst: MCT Date: 10/21/15 Reviewer: LW Date: 10/23/15

Standards used: 1=S28246 2=S27180 3=S27267 4=S27004 5=S28008 6=S28355 7=S27081 8=S28219 9=S28220 10=S28167 11=S28123

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955451069

Instrument : MSVOA14  
 Method : EPA 8260B

Begun : 11/09/15 05:49  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	nk901	X	IB			11/09/15 05:49	1.0	1	
002	nk902	X	IB			11/09/15 06:15	1.0	1	
003	nk903	TUN	BFB			11/09/15 07:21	1.0	2	t
004	nk904	TUN	BFB			11/09/15 07:37	1.0	2	t
005	nk905	TUN	BFB			11/09/15 07:55	1.0	2	t
006	nk906	TUN	BFB			11/09/15 08:12	1.0	2	
007	nk907	CCV/BS	QC811845	Water	229211	11/09/15 08:45	1.0	3 4 5 6 1	spk
008	nk908	TUN	BFB			11/09/15 14:22	1.0	2	t
009	nk909	TUN	BFB			11/09/15 14:35	1.0	2	t
010	nk910	TUN	BFB			11/09/15 14:46	1.0	2	t
011	nk911	TUN	BFB			11/09/15 14:58	1.0	2	
012	nk912	CCV/BS	QC811845	Water	229211	11/09/15 15:26	1.0	3 4 5 6 1	
013	nk913	BSD	QC811846	Water	229211	11/09/15 16:11	1.0	3 4 5 6 1	
014	nk914	X	IB			11/09/15 16:37	1.0	1	
015	nk915	BLANK	QC811847	Water	229211	11/09/15 17:03	1.0	1	
016	nk916	SAMPLE	271248-009	Water	229211	11/09/15 17:55	1.0	1	
017	nk917	SAMPLE	271212-013	Water	229211	11/09/15 18:21	1.0	1	headspace > 1 mL
018	nk918	SAMPLE	271141-006	Water	229211	11/09/15 18:47	1.0	1	
019	nk919	SAMPLE	271203-015	Water	229211	11/09/15 19:14	1.0	1	
020	nk920	SAMPLE	271203-016	Water	229211	11/09/15 19:40	1.0	1	
021	nk921	SAMPLE	271423-001	Water	229211	11/09/15 20:06	2.0	1	pH > 2
022	nk922	SAMPLE	271203-017	Water	229211	11/09/15 20:33	1.0	1	
023	nk923	SAMPLE	271203-018	Water	229211	11/09/15 20:59	1.0	1	
024	nk924	SAMPLE	271203-020	Water	229211	11/09/15 21:26	1.0	1	headspace <= 1 mL
025	nk925	SAMPLE	271203-021	Water	229211	11/09/15 21:52	1.0	1	
026	nk926	SAMPLE	271203-022	Water	229211	11/09/15 22:19	1.0	1	
027	nk927	SAMPLE	271225-004	Water	229211	11/09/15 22:45	1.0	1	foamer, pH > 2
028	nk928	SAMPLE	271225-001	Water	229211	11/09/15 23:11	4.0	1	foamer
029	nk929	SAMPLE	271225-002	Water	229211	11/09/15 23:38	4.0	1	foamer
030	nk930	SAMPLE	271112-005	Water	229211	11/10/15 00:04	10.0	1	foamer
031	nk931	SAMPLE	271212-010	Water	229211	11/10/15 00:31	1.0	1	
032	nk932	SAMPLE	271212-012	Water	229211	11/10/15 00:57	1.0	1	
033	nk933	SAMPLE	271215-001	Water	229211	11/10/15 01:23	1.0	1	
034	nk934	SAMPLE	271212-011	Water	229211	11/10/15 01:50	7.143	1	
035	nk935	SAMPLE	271248-006	Water	229211	11/10/15 02:16	5.0	1	
036	nk936	IB				11/10/15 02:43	1.0	1	

MCT 11/10/15 : Adjusted tune before file : nk905,nk908,nk910,nk911.

MCT 11/10/15 : Matrix spikes were not performed for this analysis in batch 229211 due to insufficient sample amount.

MCT 11/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

Analyst: MCT Date: 11/10/15 Reviewer: LW Date: 11/10/15

Standards used: 1=S28449 2=S27825 3=S28219 4=S28220 5=S28167 6=S27267

Flags used: spk=5% spike rule t=tune failure

# MSVOA WATER Prepsheet

Batch #: 229102  
 Prep Date: 11/5  
 Instrument: 9

Dilutions prepared & pH of dilutions checked (initials/date):  
 For Undiluted samples, pH checked (initials/date): ZR 11/6/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
51 271296-d	F	✓										
2	9 GH	✓			VA							
3	9 I	✓			VA							
4	271202-1	✓										
5	2	✓										
6	3	✓										
7	4	✓						4 B				
8	5	✓										
9	6	✓										
10	7	✓										
11	8	✓										
12	9	✓						Vial <del>9</del> Vial B 1 ml H.S.				
13	10	✓										
14	11	✓										
15	12	✓						1 B				
16	13	✓										
17	14	✓										
18												
19												
20												
21												
22												



# MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): WTF 1/15  
 For Undiluted samples, pH checked (initials/date): 2001/1/15

Batch #: 220118  
 Prep Date: 1/5/15  
 Instrument: 10

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
9 1271256 9	✓	✓						put for 4, on a lit			1/10	
2 10	✓	✓										
3 11	✓	✓										
4 12	✓	✓										
5 13	✓	✓										
6 15	✓	✓										
7 16	✓	✓										
8 17	✓	✓										
9 21	✓	✓										
10 23	✓	✓										
11 24 25 D	✓	✓					X	MS				
12 24 E	✓	✓						MS				
13 24 F	✓	✓			5A	A		MS				
14 24 GA	✓	✓			A			MS				
15 771203 25	EF	✓		iml				combined for sediment				
16												
17												
18 271331.1	B	✓						1				
19												
20												
21												
22												

# MSVOA WATER Prepsheet

Batch #: 229153

Dilutions prepared & pH of dilutions checked (initials/date):

Prep Date: 11/6/15

For Undiluted samples, pH checked (initials/date): ND/1/7

Instrument: M59 M53  
MSD 11/6/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
271203-1	D	✓				1	18	Acetone conf			11/6	
-2	J	✓				1						
-3	J	✓										
-4	B	✓										
-5	F	✓										
-6	J	✓										
-7	C	✓										
-8	F	✓										
-9	E	✓		Bubble								
-10	D	✓		0.5ml								
-11	F	✓										
-12	A	✓										
-13	E	✓		Bubble								
-14	E	✓		Bubble								

# MSVOA WATER Prepsheet

Batch #: 227193  
 Prep Date: 11/7/15  
 Instrument: MS10

Dilutions prepared & pH of dilutions checked (initials/date): NT 11/7/15  
 For Undiluted samples, pH checked (initials/date): JR 11/9/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
271225-3	B	✓			77	3X		(lower @ 2x) in vac fridge prep'd by KER 11/6				
271225-19	C	✓				1X		missed BL				
271238-5	A	✓		1ml		1		Need Gas				
271371-1	C	✓				1		↓				
↓ -2	C	✓				1		↓				
271238-3	A	✓		1ml	13	20x		DOC				
271225-5	B	✓				1X						
271248-1	E	✓			12	2x						
-2	B	✓			2	33x						
-2MS	C	✓			1A	↓		Q811785				
-2MSO	C	✓			L	↓		L 6				
-3	E	✓			11	2.5x						
-4	E	✓				1x						
-5	B	✓				1x						
-7	B	✓				↓						
-8	B	✓										

# MSVOA WATER Prepsheet

Batch #: 229211  
 Prep Date: 11/9/15  
 Instrument: MS14

Dilutions prepared & pH of dilutions checked (initials/date): NT/11/15  
 For Undiluted samples, pH checked (initials/date): gca/11/10/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$P rust
271112-5	C	✓			5	1	10x	Former j raised baseline		11/11	11/16	
271141-6	A	✓				1	1x	FB		11/11	11/11	
271212-10	B	✓				1	1x	No MB associated w/ this run		11/16	11/16	
↓ -11	C	✓			10	1	7.14x	OD				
↓ -12	B	✓				1	1x	No MS				
↓ -13	A	✓		NO		1	↓	Raised baseline TB				
271215-1	B	✓				1	1x	OD		11/11	11/16	
271203-15	E	✓				1	↓	No MB associated w/ this run				
↓ -16	F	✓				1	↓					
↓ -17	D	✓				1	↓					
↓ -18	↓	✓				1	↓					
↓ -20	↓	✓				1	↓					
↓ -21	↓	✓				1	↓					
↓ -22	↓	✓				1	↓					
271314-1	C	—				1	↓	Put on TB MS9		11/18	11/11	X
271225-1	C	✓			1	1	4x	Former No MB		11/12	11/16	
↓ -2	A	✓			7	1	↓	↓				
↓ -4	C		4			1	1x					
271248-6	B	✓			4		5x			11/17	11/19	
↓ -9	A	✓					1x	TB				
271423-1	A	7			11		2x			<del>11/17</del>	11/10	X

# MSVOA WATER Prepsheet

Batch #: 229226  
 Prep Date: 11/9/15  
 Instrument: MSA

Dilutions prepared & pH of dilutions checked (initials/date): MSA/11/9/15  
 For Undiluted samples, pH checked (initials/date): MSA/11/9/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	SP ush
1 271236-9 MS	ABC ✓	✓				1	1	MS9				
2 ↓ MSD	↓					1	1	Biotin 229102 ↓				
3 271423-1 A	A ✓	✓	7		11	2x	2x	Put onto MS14			11/10	X
4 271252-1 A	A ✓	✓				1x	1x					
5 ↓ -2	↓	✓										
6 ↓ -3	↓	✓										
7 ↓ -4	↓	✓										
8 271350-1	—							TS Put off Put off NOT 11/9/15				
9 ↓ -2	A ✓	✓										
10 ↓ -3	↓ ✓	✓										
11 ↓ -4	↓ ✓	✓										
12 -4MS BCP ✓	B ✓	✓						QC 812021 ↓ 2				
13 -4MSO ↓ ✓	O ✓	✓						Put off				
14 ↓ -5	—											
15 ↓ -6	—											
16 ↓ -7	—											
17 <del>271314</del> C ✓	C ✓	✓				1x	1x					
18												
19												
20												
21												
22												





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2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 271668
ANALYTICAL REPORT

URS Corporation
2870 Gateway Oaks Drive
Sacramento, CA 95833

Project : RWQCB PCE LUKIN
Location : RWQCB PCE LUKIN
Level : III

Table with 2 columns: Sample ID and Lab ID. Lists various sample identifiers like COMP-1-NS, PURGE-1-NS, SB-02-16-NS, etc., and their corresponding Lab IDs.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Handwritten signature of Will Rice

Signature: \_\_\_\_\_

Date: 11/25/2015

Will Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

## CASE NARRATIVE

Laboratory number: 271668  
Client: URS Corporation  
Project: RWQCB PCE LUKIN  
Location: RWQCB PCE LUKIN  
Request Date: 11/16/15  
Samples Received: 11/16/15

This data package contains sample and QC results for fourteen water samples and two soil samples, requested for the above referenced project on 11/16/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B) Water:**

PURGE-1-NS (lab # 271668-003) and PURGE-2-NS (lab # 271668-004) were diluted due to foaming.

No other analytical problems were encountered.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B) Soil:**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B) Water:**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B) Soil:**

No analytical problems were encountered.

**Volatile Organics by GC/MS (EPA 8260B) Water:**

Low response was observed for carbon disulfide in the ICV analyzed 09/11/15 03:44.

Low responses were observed for acetone and naphthalene in the CCV analyzed 11/20/15 13:39; these analytes met minimum response criteria. High responses were observed for bromomethane, 2,2-dichloropropane, and tetrachloroethene; these analytes were not detected at or above the RL in the associated samples.

High responses were observed for bromomethane and 2,2-dichloropropane in the CCV analyzed 11/24/15 15:08; these analytes were not detected at or above the RL in the associated samples.

High responses were observed for many analytes in the CCV analyzed 11/21/15 13:16.

Low response was observed for 1,2-dichloropropane in the CCV analyzed 11/24/15 18:21; this analyte met minimum response criteria. High responses were observed for bromomethane, 2,2-dichloropropane, and trichlorofluoromethane.



### CASE NARRATIVE

Laboratory number: 271668  
Client: URS Corporation  
Project: RWQCB PCE LUKIN  
Location: RWQCB PCE LUKIN  
Request Date: 11/16/15  
Samples Received: 11/16/15

#### Volatile Organics by GC/MS (EPA 8260B) Water:

High recoveries were observed for benzene and toluene in the BS for batch 229708; the associated RPDs were within limits, and these high recoveries were not associated with any reported results.

PURGE-1-NS (lab # 271668-003) and PURGE-2-NS (lab # 271668-004) were diluted due to foaming.

SB-02-24-NS (lab # 271668-006) had pH greater than 2.

SB-02-24-NS (lab # 271668-006) had multiple vials combined due to sediment.

SB-21-20-FD (lab # 271668-012) had multiple vials combined due to sediment.

No other analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B) Soil:

High response was observed for acetone in the CCV analyzed 11/19/15 13:38; this analyte was not detected at or above the RL in the associated samples.

No other analytical problems were encountered.

#### Metals (EPA 6010B) Water:

No analytical problems were encountered.

#### Metals (EPA 6010B) Soil:

No analytical problems were encountered.

#### Moisture (ASTM D2216/CLP):

No analytical problems were encountered.

## Chain of Custody

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK

271668

2870 GATEWAY OAKS - SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409766



TASK OR SUB TASK (one per form):  
RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:  
Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:  
CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
1 COMP-1-NS	11/13/15	15:00	PMS	100 24	1/2 oz Jar	SO	NONE	SW6010-PB, SW8015D, SW8015G SW8260B
2 COMP-2-NS				100 24	1/2 oz Jar	SO	NONE	SW6010-PB, SW8015D, SW8015G SW8260B
3				1.00	250 ml Poly	WG	HNO3	SW6010-PB
				2.00	1 L Amber Glass	WG	NONE	SW8015D
				3.00	40 ml VOA	WG	HCL	SW8015G
4				3.00	40 ml VOA	WG	HCL	SW8260B
				1.00	250 ml Poly	WG	HNO3	SW6010-PB
				4	Amber Glass	WG	NONE	SW8015D
5				3.00	40 ml VOA	WG	HCL	SW8015G

RELEASED BY	DATE	TIME	COOLER ID:
	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
FEDER	11/13/15	16:15	
	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
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# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

409767

TASK OR SUB TASK (one per form):

LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	GC
	DATE	TIME							
4 PURGE-2-NS	11/13/15	15:00	PWS	3.00	40 ml VOA	WG HCL		SW8260B	

RELEASED BY	DATE	TIME	COOLER ID:
[Signature]	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
Fedex	11/13/15	16:15	
[Signature]	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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C

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

409770

TASK OR SUB TASK (one per form):		LABORATORY NAME AND ADDRESS:							
RWQCB PCE LUKIN		Curtis & Tompkins, Berkeley, CA							
CONTRACT NAME:									
CHARGE NUMBER: 604432712									
SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	Q
	DATE	TIME							
SB-02-16-NS	11/13/15	0825	ms	2.00	1 L Amber Glass	WG	NONE	SW8015D	
SB-02-16-NS				3.00	40 ml VOA	WG	HCL	SW8015G	
SB-02-16-NS				3.00	40 ml VOA	WG	HCL	SW8260B	

RELEASED BY	DATE	TIME	COOLER ID:
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RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	//	:	
	//	:	

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK



271608

2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409771

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271-2

SAMPLE NUMBER	COLLECTION		SAMPLER'S INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	QC
	DATE	TIME							
SB-02-21 -NS	11/13/15	09:20	pmg	2.00	1 L Amber Glass	WG	NONE	SW8015D	
6 SB-02-24 -NS				3.00	40 ml VOA	WG	HCL	SW8015G	
SB-02-24 -NS				3.00	40 ml VOA	WG	HCL	SW8260B	

RELEASED BY	DATE	TIME	COOLER ID:
[Signature]	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
FEDER	11/13/15	16:15	
[Signature]	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
	/ /	:	

8 of 351 WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY



# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK

271608

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SACRAMENTO, CA 95833  
PH: (916) 679-2000  
FAX (916) 679-2900

B  
409774



TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:

CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						

7	SB-04-16-NS	11/12/15	0935	ams	2.00	1 L Amber Glass	WG NONE	SW8015D
	SB-04-16-NS	↓	↓		3.00	40 ml VOA	WG HCL	SW8015G
	SB-04-16-NS	↓	↓		3.00	40 ml VOA	WG HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	11/13/15	16:15	
	11/16/15	16:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

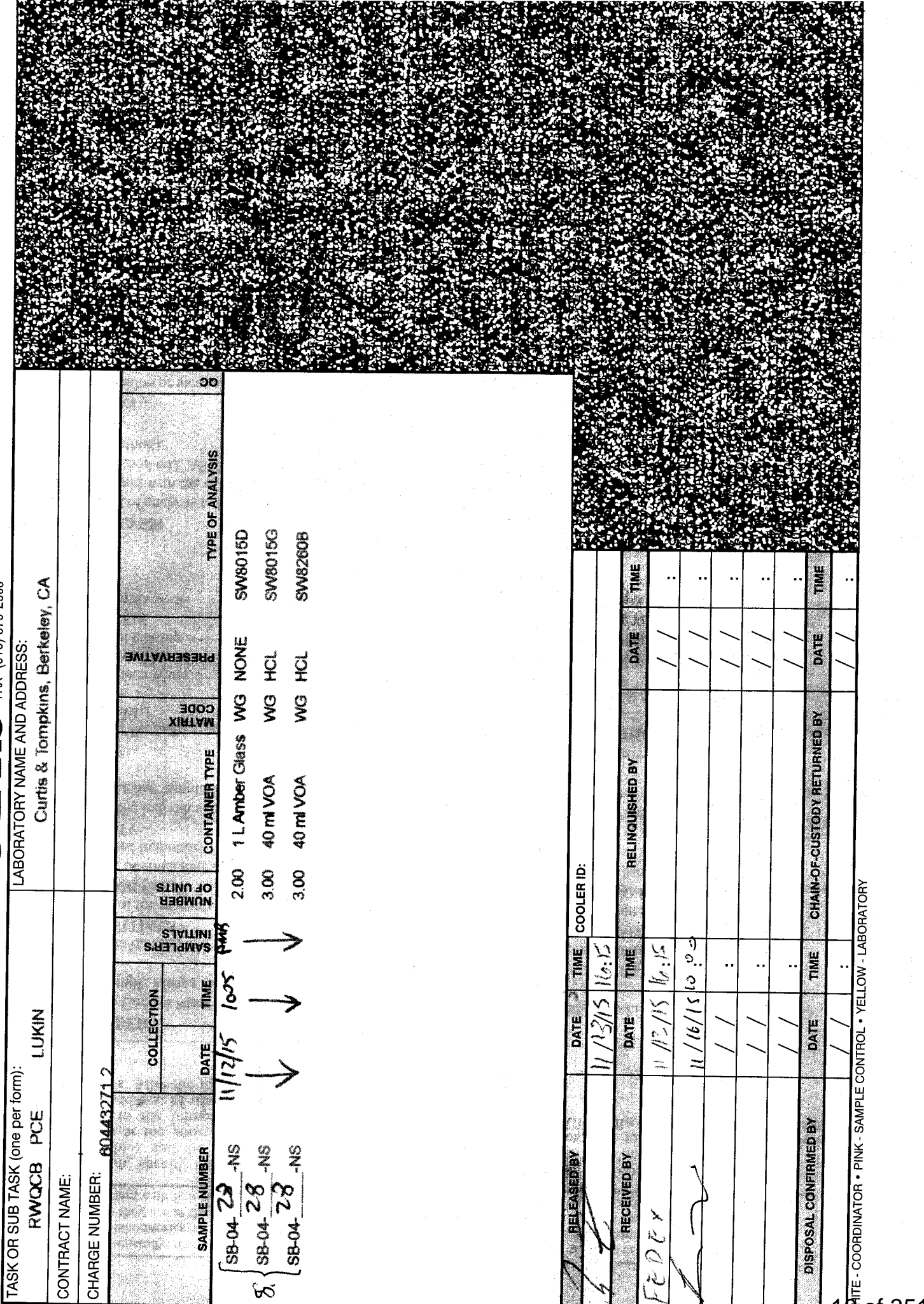
USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

A  
409775



TASK OR SUB TASK (one per form):  
 RWQCB PCE LUKIN  
 LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:  
 CHARGE NUMBER: 604432712

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-04-28-NS	11/12/15	10:05	PMS	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-04-28-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-04-28-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
[Signature]	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
FEDER	11/12/15	16:15	
[Signature]	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
	/ /	:	

WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY



# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
THIS FORM ARE ON THE BACK



2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

A  
409782

TASK OR SUB TASK (one per form): **LUKIN**

LABORATORY NAME AND ADDRESS:  
**Curtis & Tompkins, Berkeley, CA**

CONTRACT NAME: \_\_\_\_\_

CHARGE NUMBER: **60443271.2**

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-08-14-NS	11/2/15	1140	PKA	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-08-14-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-08-14-NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
FEDEX	11/13/15	16:15	
<i>[Signature]</i>	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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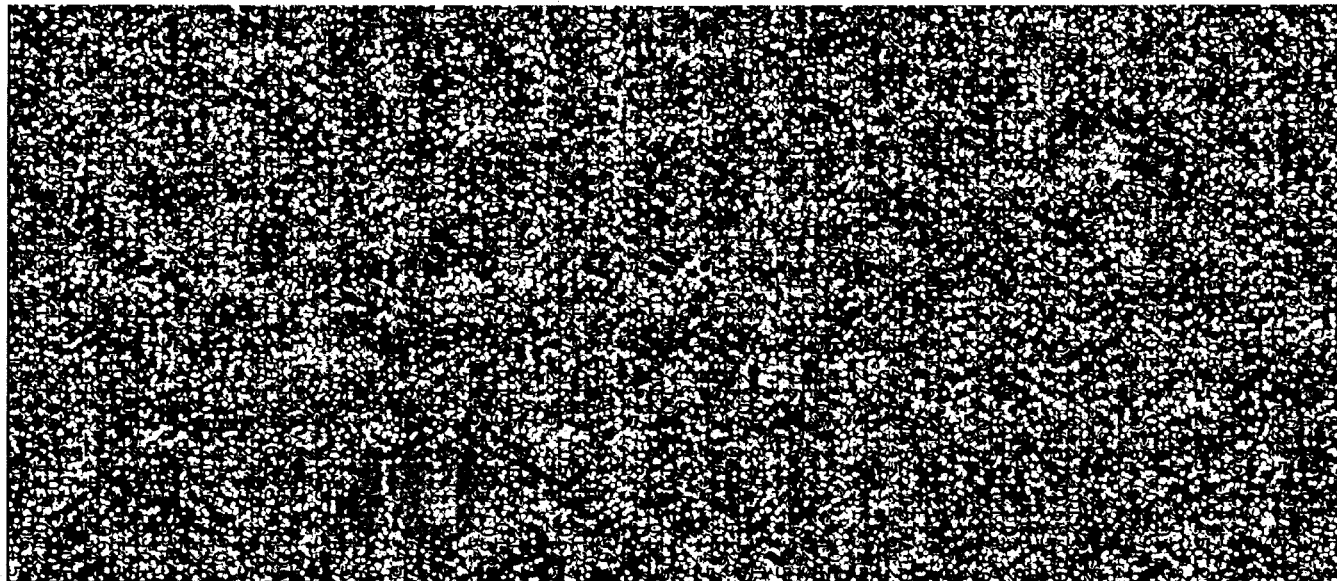
WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY

271668

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH: (916) 679-2000  
FAX: (916) 679-2900



TASK OR SUB TASK (one per form):		RWQCB PCE		LUKIN	LABORATORY NAME AND ADDRESS: Curtis & Tompkins, Berkeley, CA			
CONTRACT NUMBER: 604432712								
CHARGE NUMBER: 604432712								
SAMPLE NUMBER	COLLECTION		SAMPLER'S INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-08-28 -NS	11/12/15	12:10	RCF	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-08-28 -NS	↑	↑	↑	3.00	40 ml VOA	WG	HCL	SW8016G
SB-08-28 -NS	↑	↑	↑	3.00	40 ml VOA	WG	HCL	SW8260B
10								

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	11/12/15	16:15	
	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
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# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

409807

TASK OR SUB TASK (one per form):		LABORATORY NAME AND ADDRESS: Curtis & Tompkins, Berkeley, CA									
CONTRACT NAME:		RWQCB PCE LUKIN									
CHARGE NUMBER: 60443271.2											
SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS	COOLING		
	DATE	TIME							DATE	TIME	
SB-20-32-NS	6/19/15	1330	AMB	2.00	1 L Amber Glass	WG	NONE	SW8015D			
SB-20-32-NS				3.00	40 ml VOA	WG	HCL	SW8015G			
SB-20-32-NS				3.00	40 ml VOA	WG	HCL	SW8260B			

RELEASED BY	DATE	TIME	COOLER ID:
<i>[Signature]</i>	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
<i>[Signature]</i>	11/15/15	16:15	
	11/16/15	10:00	
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	/ /	:	
DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
	/ /	:	

# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
THE INSTRUCTIONS FOR FILLING OUT  
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2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

271668

B  
409808

TASK OR SUB TASK (one per form):  
 RWQCB PCE LUKIN  
 LABORATORY NAME AND ADDRESS:  
 Curtis & Tompkins, Berkeley, CA

CONTRACT NAME:  
 CHARGE NUMBER: 60443271.2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
12 { SB-21-20 -FD	11/2/15	1350	AMS	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-21-20 -FD				3.00	40 ml VOA	WG	HCL	SW8015G
SB-21-20 -FD				3.00	40 ml VOA	WG	HCL	SW8260B
13 { SB-21-20 -NS				2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-21-20 -NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-21-20 -NS				3.00	40 ml VOA	WG	HCL	SW8260B

RELEASED BY	DATE	TIME	COOLER ID:
Patrick Barber	11/15/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
Fed Ex	11/15/15	16:15	
	11/16/15	10:00	
	/ /	:	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
	/ /	:	

4 WHITE - COORDINATOR • PINK - SAMPLE CONTROL • YELLOW - LABORATORY



# CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN AND PRESS FIRMLY  
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THIS FORM ARE ON THE BACK



2870 GATEWAY OAKS, SUITE 300  
SACRAMENTO, CA 95833  
PH. (916) 679-2000  
FAX (916) 679-2900

409809

TASK OR SUB TASK (one per form):

RWQCB PCE LUKIN

LABORATORY NAME AND ADDRESS:

Curtis & Tompkins, Berkeley, CA

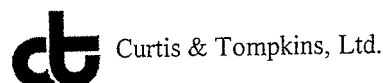
CONTRACT NAME:

CHARGE NUMBER: 60443271 2

SAMPLE NUMBER	COLLECTION		SAMPLERS INITIALS	NUMBER OF UNITS	CONTAINER TYPE	MATRIX CODE	PRESERVATIVE	TYPE OF ANALYSIS
	DATE	TIME						
SB-21-32-NS	11/12/15	1445	AmB	2.00	1 L Amber Glass	WG	NONE	SW8015D
SB-21-32-NS				3.00	40 ml VOA	WG	HCL	SW8015G
SB-21-32-NS				3.00	40 ml VOA	WG	HCL	SW8260B
SB-22-20-NS	11/13/15	1050		2	Special Amber	WG	None	SW 8015D
SB-22-32-NS		1130						
SB-22-20-NS		1050		3	40ml VOA	WG	HCL	SW8015G
SB-22-32-NS		1130						
SB-22-20-NS		1050						SW8260B
SB-22-32-NS		1130						

RELEASED BY	DATE	TIME	COOLER ID:
Patricia	11/13/15	16:15	
RECEIVED BY	DATE	TIME	RELINQUISHED BY
Fed Ex	11/13/15	16:15	
	11/16/15	10:00	
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DISPOSAL CONFIRMED BY	DATE	TIME	CHAIN-OF-CUSTODY RETURNED BY
	/ /	:	
	/ /	:	

**COOLER RECEIPT CHECKLIST**



Login # 271668 Date Received 11/16/15 Number of coolers 3  
 Client URS Project RWQCB PLE LUKIN

Date Opened 11/16 By (print) CN (sign) [Signature]  
 Date Logged in 16 By (print) SL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) Fed Ex  YES  NO  
 Shipping info 78171380 2772, 78171380 9181, 7817 25196740

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many 2 each Name \_\_\_\_\_ Date 11/13/15

2B. Were custody seals intact upon arrival?  YES  NO  N/A

3. Were custody papers dry and intact when received?  YES  NO

4. Were custody papers filled out properly (ink, signed, etc)?  YES  NO

5. Is the project identifiable from custody papers? (If so fill out top of form)  YES  NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

- Bubble Wrap  Foam blocks  Bags  None
- Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) 6.1°, 2.0°, 5.8°

Temperature blank(s) included?  Thermometer  IR Gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO   
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened?  YES  NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES  NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES  NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES  NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES  NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES  NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES  NO  N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES  NO  N/A

17. Did you document your preservative check? \_\_\_\_\_ YES  NO  N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES  NO  N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES  NO  N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES  NO  N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES  NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS**

20. 6 of 6 VOAs have bubbles > 6 mm for sample 6, 1 of 6 VOAs have bubbles > 6mm for samples 14, 15, & 16

### Detections Summary for 271668

Results for any subcontracted analyses are not included in this summary.

Client : URS Corporation  
 Project : RWQCB PCE LUKIN  
 Location : RWQCB PCE LUKIN

Client Sample ID : COMP-1-NS                      Laboratory Sample ID :                      271668-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	24	Y	1.1	mg/Kg	Dry	1.000	EPA 8015B	EPA 3550B
Lead	1.6		0.29	mg/Kg	Dry	1.000	EPA 6010B	EPA 3050B

Client Sample ID : COMP-2-NS                      Laboratory Sample ID :                      271668-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	31	Y	1.1	mg/Kg	Dry	1.000	EPA 8015B	EPA 3550B
Lead	2.1		0.27	mg/Kg	Dry	1.000	EPA 6010B	EPA 3050B

Client Sample ID : PURGE-1-NS                      Laboratory Sample ID :                      271668-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,800		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Lead	18		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : PURGE-2-NS                      Laboratory Sample ID :                      271668-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2,700		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Lead	21		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : SB-02-16-NS                      Laboratory Sample ID :                      271668-005

No Detections

Client Sample ID : SB-02-24-NS                      Laboratory Sample ID :                      271668-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	61	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Carbon Disulfide	3.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-04-16-NS                      Laboratory Sample ID :                      271668-007

No Detections

Client Sample ID : SB-04-28-NS

Laboratory Sample ID :

271668-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	52	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-08-14-NS

Laboratory Sample ID :

271668-009

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Tetrachloroethene	1.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-08-28-NS

Laboratory Sample ID :

271668-010

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	1.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-20-32-NS

Laboratory Sample ID :

271668-011

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	62	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-21-20-FD

Laboratory Sample ID :

271668-012

No Detections

Client Sample ID : SB-21-20-NS

Laboratory Sample ID :

271668-013

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	56	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	130	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SB-21-32-NS

Laboratory Sample ID :

271668-014

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Tetrachloroethene	3.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-22-20-NS

Laboratory Sample ID :

271668-015

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	62	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C



Client Sample ID : SB-22-32-NS

Laboratory Sample ID :

271668-016

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	64	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	190	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Y = Sample exhibits chromatographic pattern which does not resemble standard

Laboratory Job Number 271668

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Water

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229517
Units:	ug/L	Received:	11/16/15

Field ID: PURGE-1-NS                      Diln Fac: 5.000  
 Type: SAMPLE                                Sampled: 11/13/15  
 Lab ID: 271668-003                        Analyzed: 11/18/15

Analyte	Result	RL
Gasoline C7-C12	ND	250
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

Field ID: PURGE-2-NS                      Diln Fac: 5.000  
 Type: SAMPLE                                Sampled: 11/13/15  
 Lab ID: 271668-004                        Analyzed: 11/18/15

Analyte	Result	RL
Gasoline C7-C12	ND	250
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	80-132

Field ID: SB-02-16-NS                      Diln Fac: 1.000  
 Type: SAMPLE                                Sampled: 11/13/15  
 Lab ID: 271668-005                        Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

Field ID: SB-02-24-NS                      Diln Fac: 1.000  
 Type: SAMPLE                                Sampled: 11/13/15  
 Lab ID: 271668-006                        Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229517
Units:	ug/L	Received:	11/16/15

Field ID: SB-04-16-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-007 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-04-28-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-008 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Field ID: SB-08-14-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-009 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Field ID: SB-08-28-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-010 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229517
Units:	ug/L	Received:	11/16/15

Field ID: SB-20-32-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/13/15  
 Lab ID: 271668-011 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Field ID: SB-21-20-FD Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-012 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-21-20-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-013 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	56 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	80-132

Field ID: SB-21-32-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/12/15  
 Lab ID: 271668-014 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229517
Units:	ug/L	Received:	11/16/15

Field ID: SB-22-20-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/13/15  
 Lab ID: 271668-015 Analyzed: 11/18/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

Field ID: SB-22-32-NS Diln Fac: 1.000  
 Type: SAMPLE Sampled: 11/13/15  
 Lab ID: 271668-016 Analyzed: 11/18/15

Analyte	Result	RL
Gasoline C7-C12	64 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC813092 Analyzed: 11/17/15

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC813091	Batch#:	229517
Matrix:	Water	Analyzed:	11/17/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	946.0	95	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	SB-22-20-NS	Batch#:	229517
MSS Lab ID:	271668-015	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L	Analyzed:	11/18/15
Diln Fac:	1.000		

Type: MS Lab ID: QC813093

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	22.39	2,000	1,602	79	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	80-132

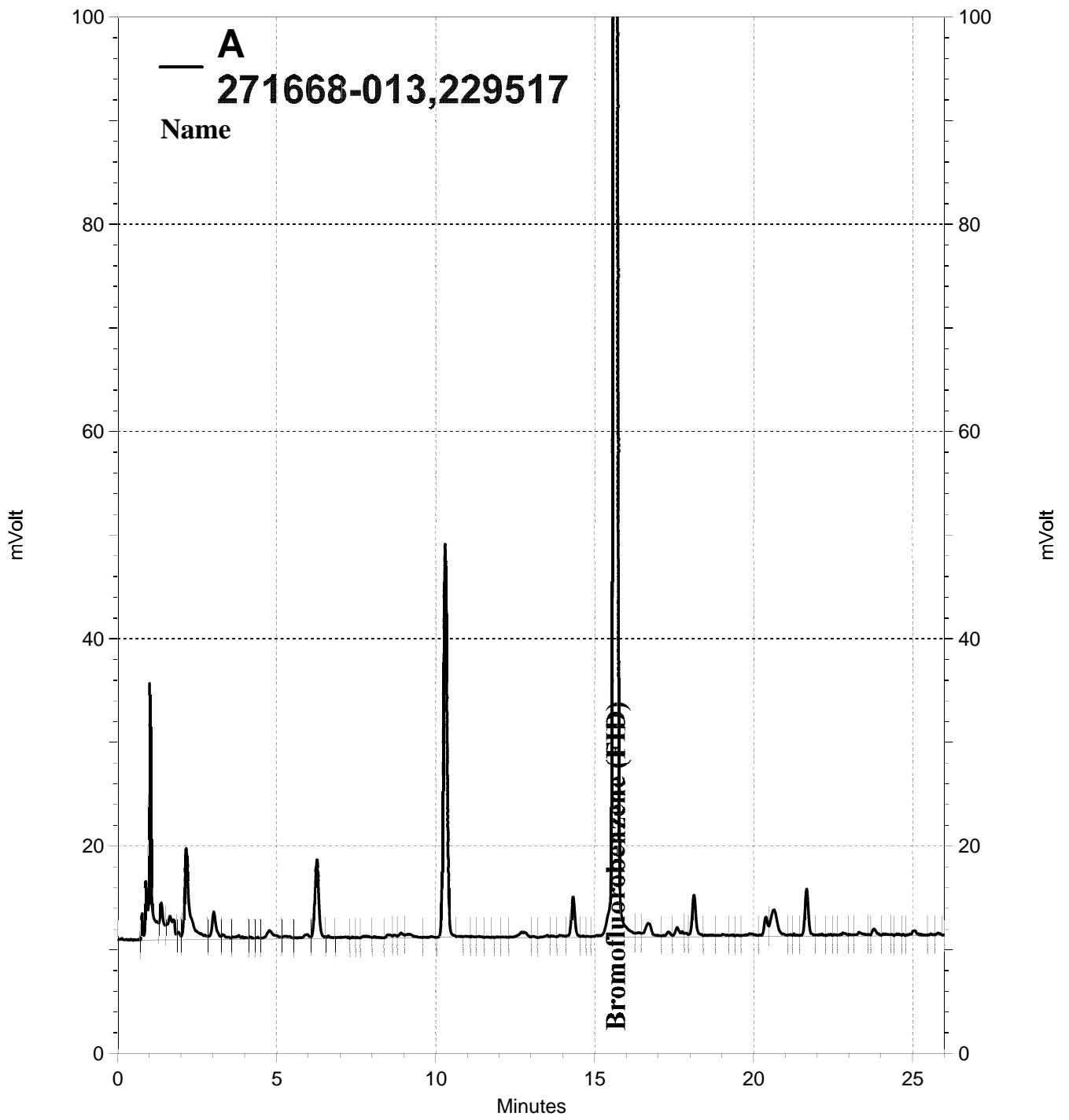
Type: MSD Lab ID: QC813094

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,593	79	76-120	1	20

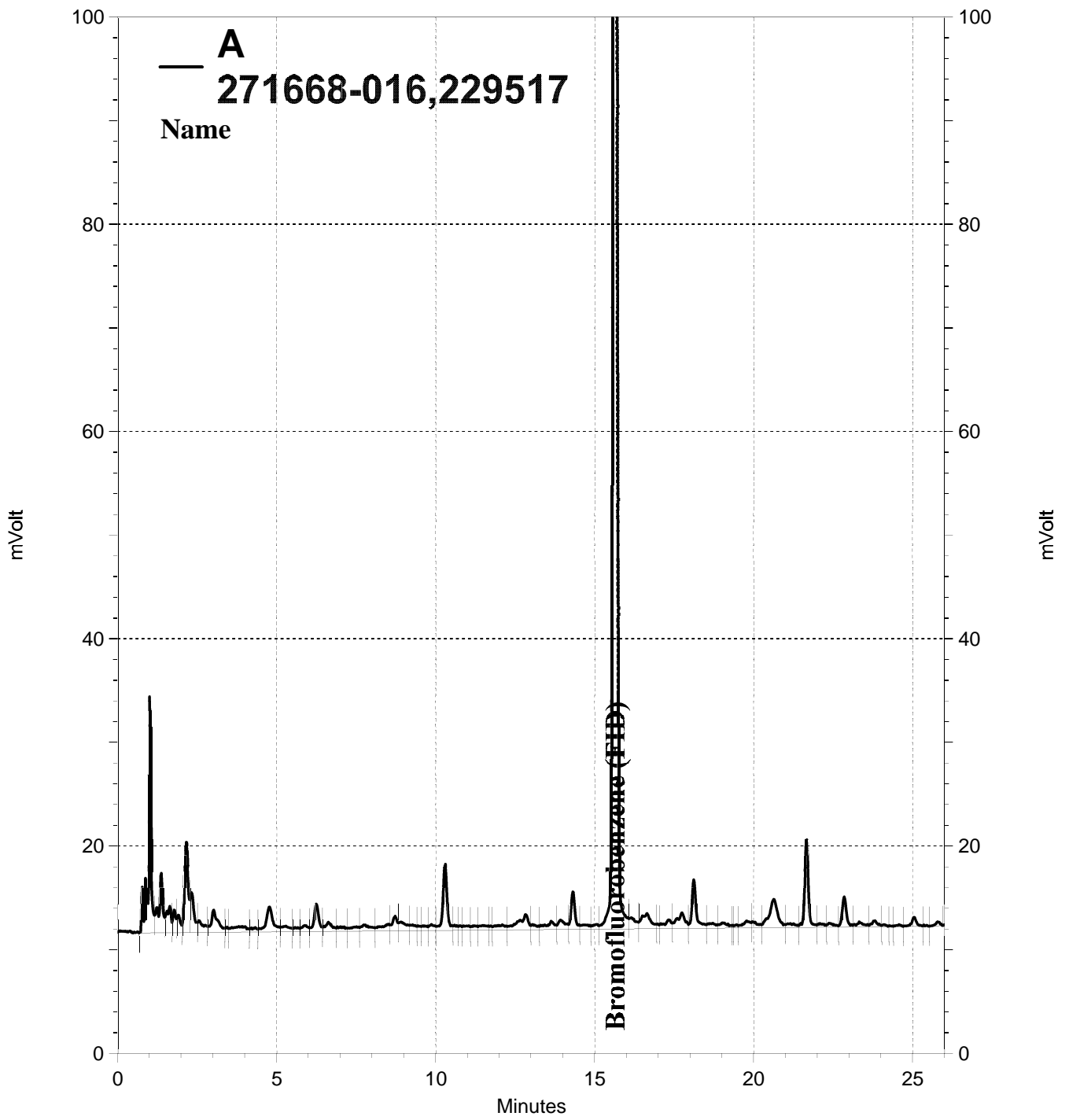
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

RPD= Relative Percent Difference

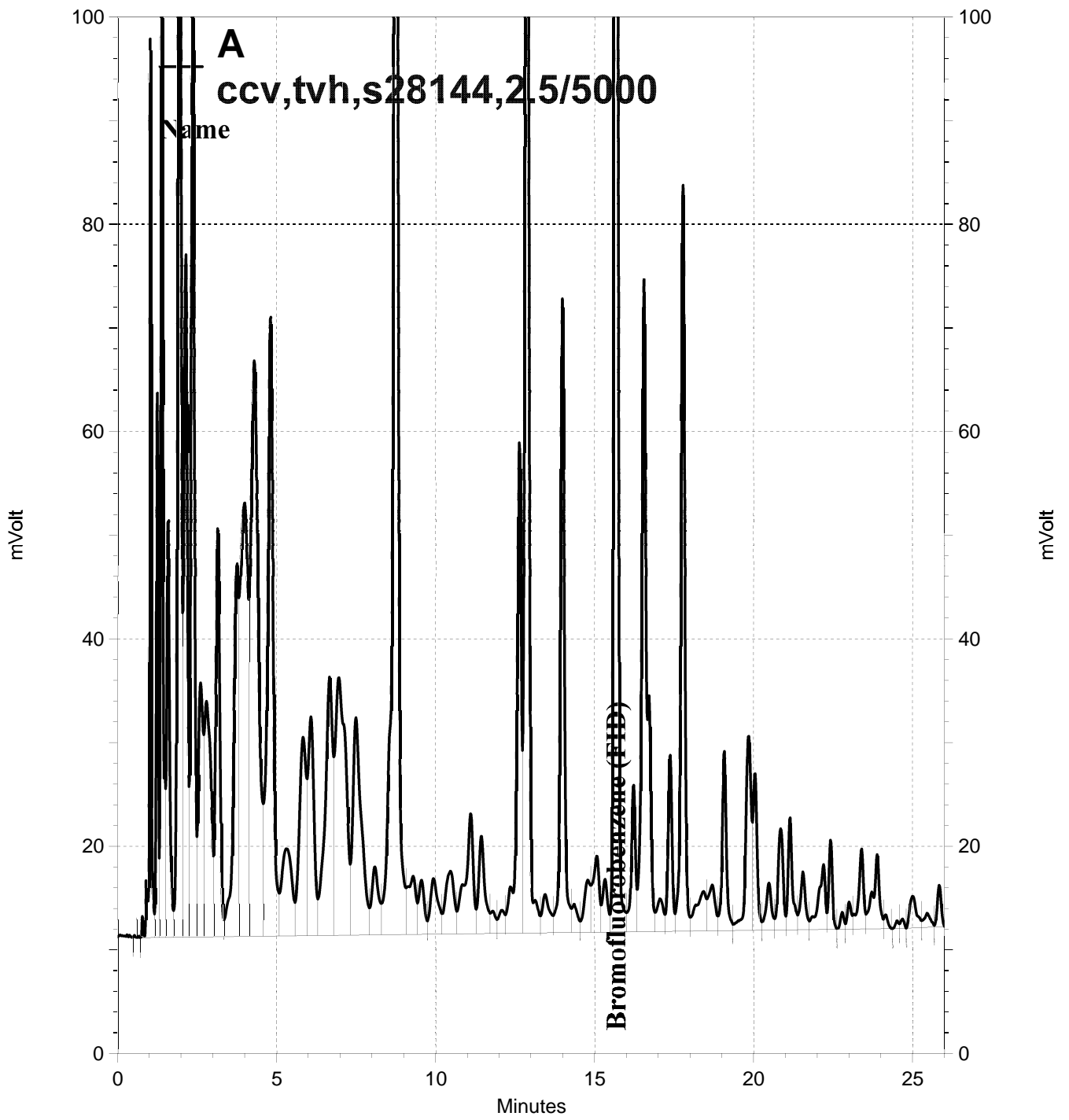




— \\Lims\gdrive\ezchrom\Projects\GC07\Data\321-025, A



— \\Lims\gdrive\ezchrom\Projects\GC07\Data\321-030, A



— \\Lims\gdrive\ezchrom\Projects\GC07\Data\321-012, A

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCVOA Water: EPA 8015B

Inst : GC07  
 Calnum : 325099925001  
 Units : ng

Name : tvh/bfb\_069  
 Date : 10-MAR-2015 19:46  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	069_011	325099925011	TVH_14	10-MAR-2015 19:46	S26765 (1000X), S26658 (5000X)
L2	069_012	325099925012	TVH_15	10-MAR-2015 20:22	S26764 (1000X), S26658 (5000X)
L3	069_013	325099925013	TVH_16	10-MAR-2015 20:58	S26763 (1000X), S26658 (5000X)
L4	069_014	325099925014	TVH_17	10-MAR-2015 21:34	S26761 (2000X), S26658 (5000X)
L5	069_015	325099925015	TVH_18	10-MAR-2015 22:11	S26761 (1000X), S26658 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	2900.5	2369.9	2305.6	2167.8	2176.1	AVRG		4.19E-4		2384.0	13	0.995	20	
Bromofluorobenzene (FID)	A	2083.0	2044.6	2051.0	2166.9	2281.1	AVRG		4.71E-4		2125.3	5	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	22	2500.0	-1	10000	-3	25000	-9	50000	-9
Bromofluorobenzene (FID)	A	900.00	-2	900.00	-4	900.00	-3	900.00	2	900.00	7

Analyst: ERR

Date: 03/11/15

Reviewer: EAH

Date: 03/11/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCVOA Water  
EPA 8015B

Inst : GC07  
Calnum : 325099925001

Name : tvh/bfb\_069  
Cal Date : 10-MAR-2015

ICV 325099925017 (069\_017 10-MAR-2015) stds: S26760 (1000X), S26658 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9097	ng	-9	15	

Analyst: ERR

Date: 03/11/15

Reviewer: EAH

Date: 03/11/15

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 GCVOA Water  
EPA 8015B

Inst : GC07                                      Run Name : QC813091                                      IDF : 1.0  
 Seqnum : 325462676012.1                      File : 321\_012                                      Time : 17-NOV-2015 14:24  
 Cal : 325099925001                              Caldate : 10-MAR-2015  
 Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	2384.0	2255.3	5000	4730	ng	-5	15	u
Bromofluorobenzene (FID)	A	2125.3	2202.3	900.0	932.6	ng	4	15	u

CAR 11/18/15 : ccv/lcs, qc813091, 229517 [general version]

Analyst: FBJ                                      Date: 11/19/15                                      Reviewer: EAH                                      Date: 11/20/15

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCVOA Water  
EPA 8015B

Inst : GC07                                      Run Name : TVH                                      IDF : 1.0  
 Seqnum : 325462676022                      File : 321\_022                                      Time : 17-NOV-2015 21:08  
 Cal : 325099925001                      Caldate : 10-MAR-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2384.0	2060.8	10000	8644	ng	-14	15	
Bromofluorobenzene (FID)	A	2125.3	2209.2	900.0	935.5	ng	4	15	

Analyst: CAR                                      Date: 11/18/15                                      Reviewer: EAH                                      Date: 11/18/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCVOA Water  
EPA 8015B

Inst : GC07 Run Name : TVH IDF : 1.0  
Seqnum : 325462676034 File : 321\_034 Time : 18-NOV-2015 04:20  
Cal : 325099925001 Caldate : 10-MAR-2015  
Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	2384.0	2071.9	5000	4346	ng	-13	15	
Bromofluorobenzene (FID)	A	2125.3	2132.8	900.0	903.2	ng	0	15	

Analyst: CAR Date: 11/18/15 Reviewer: EAH Date: 11/18/15

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 325099925

Instrument : GC07  
 Method : EPA 8015B, EPA 8021B

Begun : 03/10/15 09:25  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	069_001	X	CMARKER			03/10/15 09:25	1.0	1 2
002	069_002	CCV	BTXE			03/10/15 10:02	1.0	3 2
003	069_003	CCV	TVH			03/10/15 10:38	1.0	4 2
004	069_004	CCV	BTXE			03/10/15 11:14	1.0	3 2
005	069_005	X	IB			03/10/15 12:08	1.0	2
006	069_006	CCV	BTXE			03/10/15 13:23	1.0	3 2
007	069_007	CCV	TVH			03/10/15 14:01	1.0	4 2
008	069_008	X	CMARKER			03/10/15 14:37	1.0	1 2
009	069_009	X	IB			03/10/15 18:34	1.0	2
010	069_010	IB	CALIB			03/10/15 19:10	1.0	2
011	069_011	ICAL	TVH_14			03/10/15 19:46	1.0	5 2
012	069_012	ICAL	TVH_15			03/10/15 20:22	1.0	6 2
013	069_013	ICAL	TVH_16			03/10/15 20:58	1.0	7 2
014	069_014	ICAL	TVH_17			03/10/15 21:34	1.0	8 2
015	069_015	ICAL	TVH_18			03/10/15 22:11	1.0	8 2
016	069_016	X	IB			03/10/15 22:47	1.0	2
017	069_017	ICV	TVH			03/10/15 23:23	1.0	9 2
018	069_018	X	ICV			03/10/15 23:59	1.0	9 2
019	069_019	CMARKER	CMARK			03/11/15 00:35	1.0	1 2

ERR 03/11/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Reviewed by: ERR Date: 03/11/15

Standards used: 1=S26730 2=S26658 3=S26505 4=S26582 5=S26765 6=S26764 7=S26763 8=S26761 9=S26760

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 325462676

Instrument : GC07  
 Method : EPA 8015B, EPA 8021B

Begun : 11/17/15 07:16  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	321_001	X	CMARKER			11/17/15 07:16	1.0	1 2	
002	321_002	CCV	BTXE			11/17/15 07:53	1.0	3 2	
003	321_003	CCV	TVH			11/17/15 08:29	1.0	4 2	
004	321_004	X	IB			11/17/15 09:05	1.0	2	
005	321_005	MSS	271668-003	Water	229517	11/17/15 09:51	1.0	2	
006	321_006	MS	QC813093	Water	229517	11/17/15 10:28	1.0	4 2	
007	321_007	MSD	QC813094	Water	229517	11/17/15 11:04	1.0	4 2	
008	321_008	SAMPLE	271668-004	Water	229517	11/17/15 11:40	1.0	2	
009	321_009	X	IB			11/17/15 12:35	1.0	2	
010	321_010	X	IB			11/17/15 13:12	1.0	2	
011	321_011	X	CMARKER			11/17/15 13:48	1.0	1 2	
012	321_012	CCV/LCS	QC813091	Water	229517	11/17/15 14:24	1.0	4 2	
013	321_013	BLANK	QC813092	Water	229517	11/17/15 15:11	1.0	2	
014	321_014	SAMPLE	271668-005	Water	229517	11/17/15 16:19	1.0	2	
015	321_015	SAMPLE	271668-006	Water	229517	11/17/15 16:55	1.0	2	
016	321_016	SAMPLE	271668-007	Water	229517	11/17/15 17:31	1.0	2	
017	321_017	SAMPLE	271668-008	Water	229517	11/17/15 18:07	1.0	2	
018	321_018	SAMPLE	271668-009	Water	229517	11/17/15 18:44	1.0	2	
019	321_019	SAMPLE	271668-010	Water	229517	11/17/15 19:20	1.0	2	
020	321_020	X	TVH			11/17/15 19:56	1.0	4 2	
021	321_021	X	CMARKER			11/17/15 20:31	1.0	1 2	
022	321_022	CCV	TVH			11/17/15 21:08	1.0	4 2	
023	321_023	SAMPLE	271668-011	Water	229517	11/17/15 21:44	1.0	2	
024	321_024	SAMPLE	271668-012	Water	229517	11/17/15 22:20	1.0	2	
025	321_025	SAMPLE	271668-013	Water	229517	11/17/15 22:56	1.0	2	
026	321_026	SAMPLE	271668-014	Water	229517	11/17/15 23:32	1.0	2	
027	321_027	MSS	271668-015	Water	229517	11/18/15 00:08	1.0	2	
028	321_028	MS	QC813093	Water	229517	11/18/15 00:44	1.0	4 2	
029	321_029	MSD	QC813094	Water	229517	11/18/15 01:20	1.0	4 2	
030	321_030	SAMPLE	271668-016	Water	229517	11/18/15 01:56	1.0	2	
031	321_031	SAMPLE	271668-003	Water	229517	11/18/15 02:32	5.0	2	foamer
032	321_032	SAMPLE	271668-004	Water	229517	11/18/15 03:08	5.0	2	foamer
033	321_033	X	TVH			11/18/15 03:44	1.0	4 2	
034	321_034	CCV	TVH			11/18/15 04:20	1.0	4 2	
035	321_035	X	CMARKER			11/18/15 04:57	1.0	1 2	

CAR 11/18/15 : Foamy sample (run 5) caused FID to go out, affecting runs 5-8. Ran IBs to clean out the instrument and started sequence at CM in run 11.

CAR 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 35.

CAR 11/18/15 : X'd out CCVs in runs 20 and 33, failed low for gas analytes. See narration in runs

Reviewed by: CAR Date: 11/18/15

Standards used: 1=S27955 2=S28390 3=S27975 4=S28144

Laboratory Job Number 271668

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Soil

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	229514
Units:	mg/Kg	Sampled:	11/13/15
Basis:	dry	Received:	11/16/15
Diln Fac:	1.000	Analyzed:	11/17/15

Field ID: COMP-1-NS                      Lab ID: 271668-001  
 Type: SAMPLE                              Moisture: 12%

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

Field ID: COMP-2-NS                      Lab ID: 271668-002  
 Type: SAMPLE                              Moisture: 12%

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

Type: BLANK                                      Lab ID: QC813082

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	101	78-138

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC813081	Batch#:	229514
Matrix:	Soil	Analyzed:	11/17/15
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.074	107	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	78-138

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	271660-001	Batch#:	229514
Matrix:	Soil	Sampled:	11/13/15
Units:	mg/Kg	Received:	11/16/15
Basis:	as received	Analyzed:	11/17/15

Type: MS Lab ID: QC813083

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.2443	9.901	7.838	77	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	78-138

Type: MSD Lab ID: QC813084

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.804	7.828	77	50-120	1	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

RPD= Relative Percent Difference



**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCVOA Soil: EPA 8015B

Inst : GC04  
 Calnum : 305422905001  
 Units : ng

Name : TVH/BFB  
 Date : 20-OCT-2015 17:03  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	293_003	305422905003	TVH_14	20-OCT-2015 17:03	S27569 (1000X), S27808 (5000X)
L2	293_004	305422905004	TVH_15	20-OCT-2015 17:41	S27568 (1000X), S27808 (5000X)
L3	293_005	305422905005	TVH_16	20-OCT-2015 18:18	S27567 (1000X), S27808 (5000X)
L4	293_006	305422905006	TVH_17	20-OCT-2015 18:56	S27566 (2000X), S27808 (5000X)
L5	293_007	305422905007	TVH_18	20-OCT-2015 19:33	S27566 (1000X), S27808 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Gasoline C7-C12	A	4168.9	2981.9	2906.1	3047.8	2891.9	AVRG		3.13E-4		3199.3	17	0.995	20	
Bromofluorobenzene (FID)	A	2253.8	2257.6	2391.6	2631.2	2735.9	AVRG		4.07E-4		2454.0	9	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	30	2500.0	-7	10000	-9	25000	-5	50000	-10
Bromofluorobenzene (FID)	A	900.00	-8	900.00	-8	900.00	-3	900.00	7	900.00	11

DAR 10/21/15 : This ical does not pass G6-G10

DAR: 10/21/15 FBJ: 10/23/15 EAH: 10/23/15

Instrument amount = a0 + response \* a1 + response<sup>2</sup> \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCVOA Soil  
EPA 8015B

Inst : GC04  
Calnum : 305422905001

Name : TVH/BFB  
Cal Date : 20-OCT-2015

ICV 305422905010 (293\_010 20-OCT-2015) stds: S27613 (1000X), S27808 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9200	ng	-8	15	

Analyst: DAR

Date: 10/21/15

Reviewer: EAH

Date: 10/21/15

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 GCVOA Soil  
EPA 8015B

Inst : GC04                                      Run Name : QC813081                                      IDF : 1.0  
 Seqnum : 305462677002.3                      File : 321\_002                                      Time : 17-NOV-2015 07:54  
 Cal : 305422905001                              Caldate : 20-OCT-2015  
 Standards: S28144 (2000X), S28390 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	3199.3	3435.3	5000	5369	ng	7	15	u
Bromofluorobenzene (FID)	A	2454.0	2596.0	900.0	952.1	ng	6	15	u

CAR 11/18/15 : ccv/lcs, qc813081, 229514 [general version]

Analyst: CAR                                      Date: 11/18/15                                      Reviewer: EAH                                      Date: 11/20/15

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCVOA Soil  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 305462677010        File : 321\_010                Time : 17-NOV-2015 13:15  
 Cal : 305422905001          Caldate : 20-OCT-2015  
 Standards: S28144 (1000X), S28390 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	3199.3	3200.3	10000	10000	ng	0	15	
Bromofluorobenzene (FID)	A	2454.0	2667.1	900.0	978.1	ng	9	15	

Analyst: CAR                      Date: 11/18/15                      Reviewer: EAH                      Date: 11/18/15

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 305422905

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 10/20/15 16:25  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
002	293_002	IB	CALIB			10/20/15 16:25	1.0	1
003	293_003	ICAL	TVH_14			10/20/15 17:03	1.0	2 1
004	293_004	ICAL	TVH_15			10/20/15 17:41	1.0	3 1
005	293_005	ICAL	TVH_16			10/20/15 18:18	1.0	4 1
006	293_006	ICAL	TVH_17			10/20/15 18:56	1.0	5 1
007	293_007	ICAL	TVH_18			10/20/15 19:33	1.0	5 1
008	293_008	X	IB			10/20/15 20:11	1.0	1
009	293_009	X	ICV			10/20/15 20:49	1.0	6 1
010	293_010	ICV	TVH			10/20/15 21:26	1.0	6 1
011	293_011	CMARKER				10/20/15 22:04	1.0	7 1

DAR 10/21/15 : file 1 was an IB that did not run

DAR 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 2 through 11.

Reviewed by: DAR Date: 10/21/15

Standards used: 1=S27808 2=S27569 3=S27568 4=S27567 5=S27566 6=S27613 7=S27955

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 305462677

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 11/17/15 07:17  
 SOP Version : TVH\_BTXE\_rv22

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	321_001	X	CMARKER			11/17/15 07:17	1.0	1 2
002	321_002	CCV/LCS	QC813081	Soil	229514	11/17/15 07:54	1.0	3 2
003	321_003	BLANK	QC813082	Soil	229514	11/17/15 08:41	1.0	2
004	321_004	MSS	271660-001	Soil	229514	11/17/15 09:30	1.0	2
005	321_005	MS	QC813083	Soil	229514	11/17/15 10:07	1.0	3 2
006	321_006	MSD	QC813084	Soil	229514	11/17/15 10:45	1.0	3 2
007	321_007	SAMPLE	271660-002	Soil	229514	11/17/15 11:22	1.0	2
008	321_008	SAMPLE	271668-001	Soil	229514	11/17/15 12:00	1.0	2
009	321_009	SAMPLE	271668-002	Soil	229514	11/17/15 12:38	1.0	2
010	321_010	CCV	TVH			11/17/15 13:15	1.0	3 2
011	321_011	CCV	TVH			11/17/15 13:53	1.0	3 2
012	321_012	X	CMARKER			11/17/15 14:31	1.0	1 2
013	321_013	SAMPLE	271727-001	Soil	229514	11/17/15 19:29	1.0	2
014	321_014	SAMPLE	271727-002	Soil	229514	11/17/15 20:06	1.0	2
015	321_015	SAMPLE	271724-001	Soil	229514	11/17/15 20:44	1.0	2
016	321_016	SAMPLE	271725-001	Soil	229514	11/17/15 21:21	1.0	2
017	321_017	CCV	TVH			11/17/15 21:59	1.0	3 2
018	321_018	CCV	TVH			11/17/15 22:37	1.0	3 2
019	321_019	X	CMARKER			11/17/15 23:14	1.0	1 2

CAR 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Reviewed by: CAR Date: 11/18/15

Standards used: 1=S27955 2=S28390 3=S28144



TITLE Soil Aliquot TVH/BTXE

PROJECT

DATE

Continued from page

Sample	ID	Weight (g)	NaSO <sub>4</sub>	Comments
271592-001	A	1.05	NO	CAR 11/13/15
↓ -002	↓	0.98	↓	↓
271593-001		1.08		
271627-012	A	1.06	NO	FB) 11/16/15
↓ -013	↓	1.01	↓	↓
↓ -014	↓	1.02	↓	↓
↓ -014 MS	↓	1.01	↓	↓
↓ -014 MSD	↓	.96	↓	↓
271604-001 (Comp ABCD) E	E	1.00		
↓ -002 (Comp ABCD) E	↓	.97		
271617-001	A	1.00		
271642-001	A	.92	NO	FB) 11/16/15
↓ -002	↓	1.02	↓	↓
↓ -003	↓	1.02	↓	↓
↓ -004	↓	.99	↓	↓
↓ -005	↓	.95	↓	↓
↓ -006	↓	.98	↓	↓
271632-001	B	5.36	NO	CAR 11/16/15
↓ -004	↓	5.81	↓	↓
↓ -007	↓	6.16	↓	↓
↓ -010	↓	5.76	↓	↓
271634-001 <sup>CAR 11/16</sup> 013 Comp 1-4 A	A	0.96		
↓ -014 Comp 5-8	↓	<del>0.94</del> 0.99		
↓ -014 MS	↓	0.99		
↓ -014 MSD	↓	<del>0.99</del> 0.98		
↓ -015 Comp 9-12	↓	0.94		
271641-010 (Comp ABCD) E	E	1.02	NO	FB) 11/16/15
271667-001	A	1.08	NO	CAR 11/16/15
271660-001	A	.99	NO	FB) 11/16/15
↓ -001 MS	↓	1.01	↓	↓
↓ -001 MSD	↓	1.02	↓	↓
↓ -002	↓	.97	↓	↓
271668-001	A	1.06		
↓ -002	↓	1.01	↓	↓
271727-001	A	0.97	NO	CAR 11/17/15
↓ -002	↓	1.02	↓	↓
271724-001		1.02		
271725-001		1.02		
271721-001	A	1.07	NO	CAR 11/17/15
↓ -001 MS	↓	1.01	↓	↓
↓ -001 MSD	↓	1.08	↓	↓
271729-001	A	1.00	NO	FB) 11/18/15
↓ -001 MS	↓	1.01	↓	↓

SIGNATURE

DATE

Continued to page

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Laboratory Job Number 271668

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Water

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229591
Units:	ug/L	Received:	11/16/15
Diln Fac:	1.000	Prepared:	11/18/15

Field ID: PURGE-1-NS                      Sampled: 11/13/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-003

Analyte	Result	RL
Diesel C10-C24	1,800	50

Surrogate	%REC	Limits
o-Terphenyl	85	67-136

Field ID: PURGE-2-NS                      Sampled: 11/13/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-004

Analyte	Result	RL
Diesel C10-C24	2,700	50

Surrogate	%REC	Limits
o-Terphenyl	99	67-136

Field ID: SB-02-16-NS                      Sampled: 11/13/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-005

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	104	67-136

Field ID: SB-02-24-NS                      Sampled: 11/13/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-006

Analyte	Result	RL
Diesel C10-C24	61 Y	50

Surrogate	%REC	Limits
o-Terphenyl	109	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229591
Units:	ug/L	Received:	11/16/15
Diln Fac:	1.000	Prepared:	11/18/15

Field ID: SB-04-16-NS                      Sampled: 11/12/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-007

Analyte	Result	RL
Diesel C10-C24	ND	50
Surrogate	%REC	Limits
o-Terphenyl	99	67-136

Field ID: SB-04-28-NS                      Sampled: 11/12/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-008

Analyte	Result	RL
Diesel C10-C24	52 Y	50
Surrogate	%REC	Limits
o-Terphenyl	98	67-136

Field ID: SB-08-14-NS                      Sampled: 11/12/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-009

Analyte	Result	RL
Diesel C10-C24	ND	50
Surrogate	%REC	Limits
o-Terphenyl	105	67-136

Field ID: SB-08-28-NS                      Sampled: 11/12/15  
 Type: SAMPLE                                Analyzed: 11/19/15  
 Lab ID: 271668-010

Analyte	Result	RL
Diesel C10-C24	ND	50
Surrogate	%REC	Limits
o-Terphenyl	116	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit



Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229591
Units:	ug/L	Received:	11/16/15
Diln Fac:	1.000	Prepared:	11/18/15

Field ID:	SB-22-20-NS	Sampled:	11/13/15
Type:	SAMPLE	Analyzed:	11/20/15
Lab ID:	271668-015		

Analyte	Result	RL
Diesel C10-C24	62 Y	50

Surrogate	%REC	Limits
o-Terphenyl	107	67-136

Field ID:	SB-22-32-NS	Sampled:	11/13/15
Type:	SAMPLE	Analyzed:	11/20/15
Lab ID:	271668-016		

Analyte	Result	RL
Diesel C10-C24	190 Y	50

Surrogate	%REC	Limits
o-Terphenyl	73	67-136

Type:	BLANK	Analyzed:	11/19/15
Lab ID:	QC813398		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	102	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	229591
Units:	ug/L	Prepared:	11/18/15
Diln Fac:	1.000	Analyzed:	11/19/15

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC813399

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,001	80	60-121

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

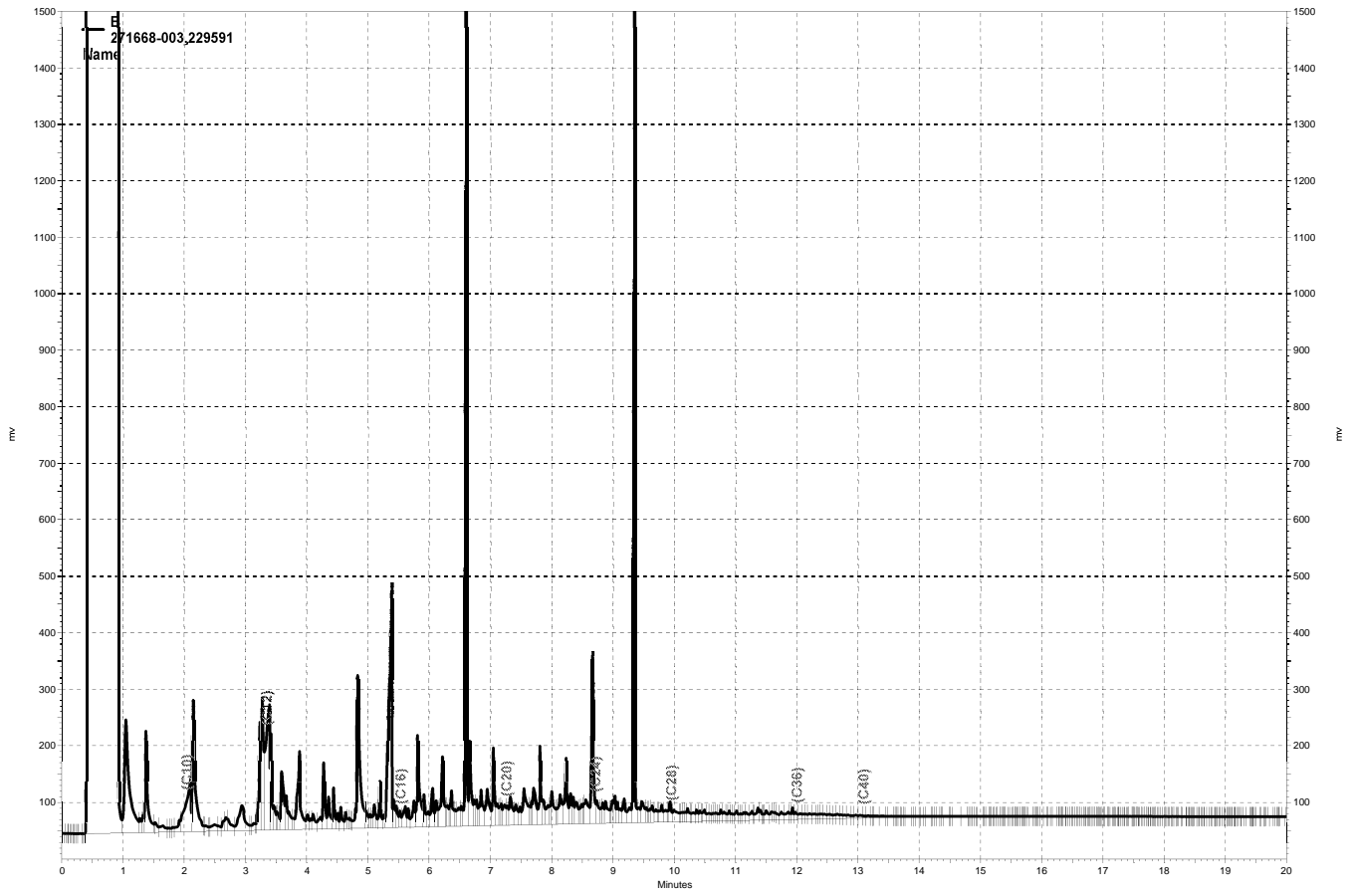
Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC813400

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,029	81	60-121	1	32

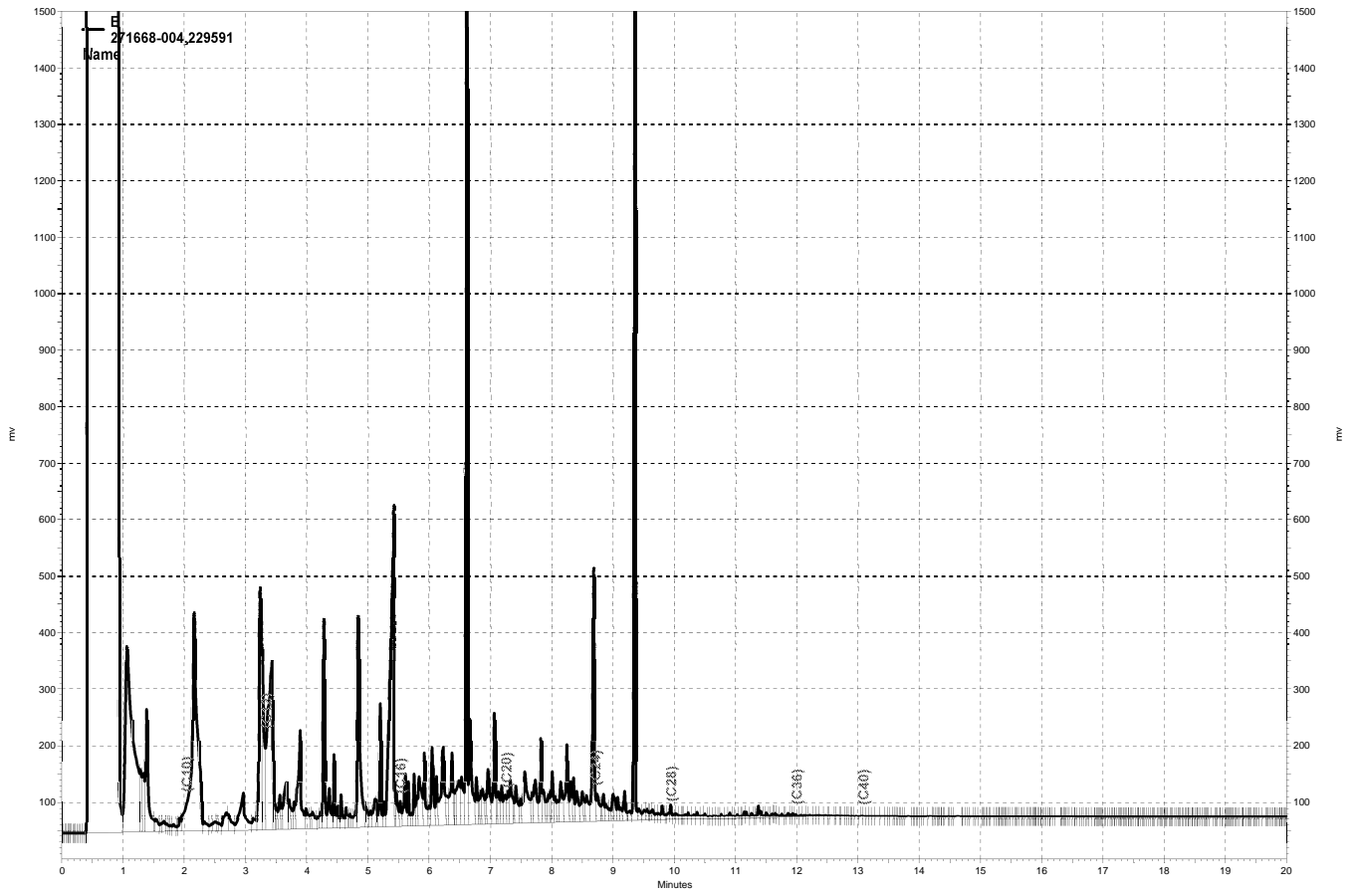
Surrogate	%REC	Limits
o-Terphenyl	97	67-136

RPD= Relative Percent Difference

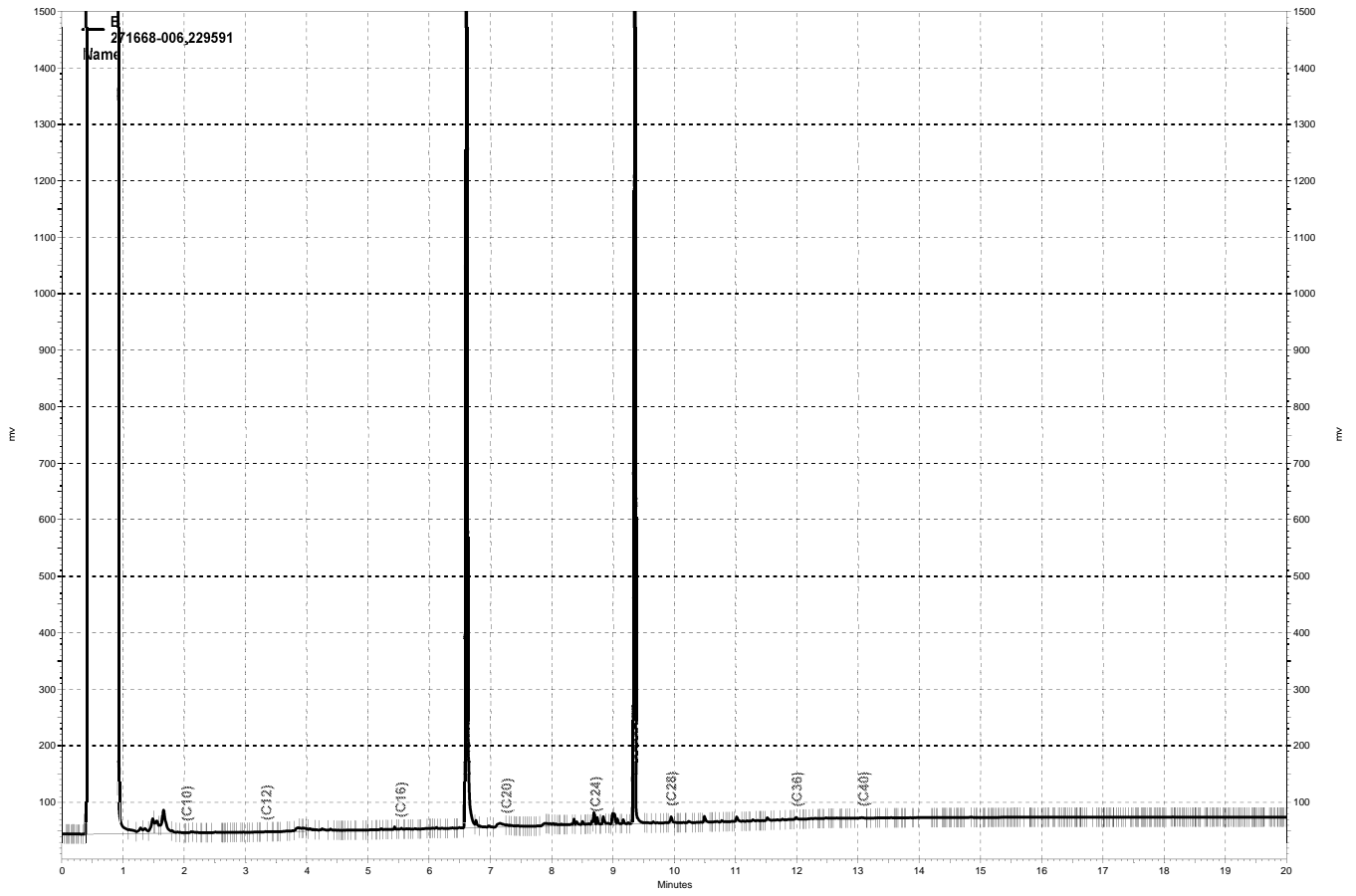


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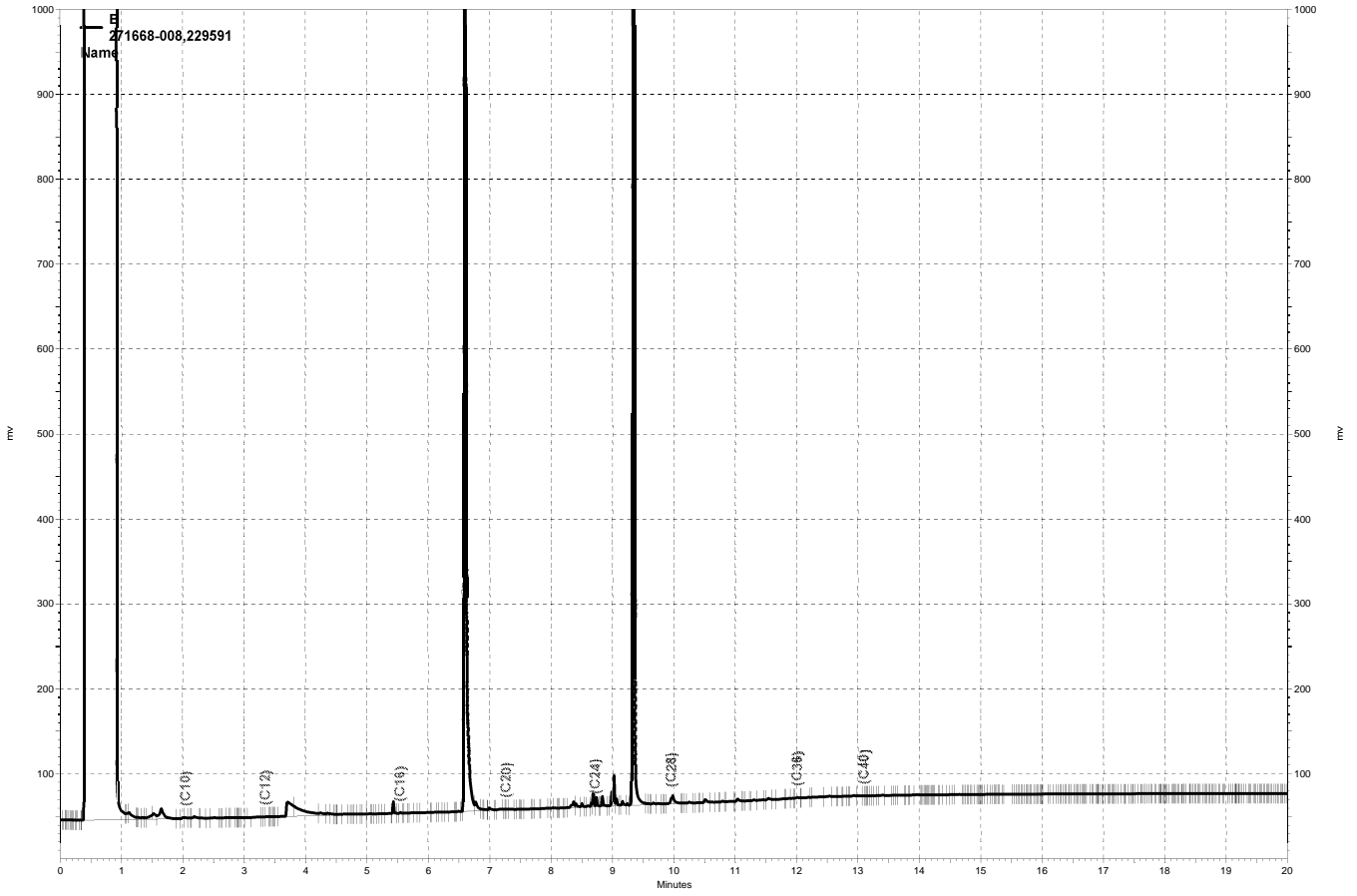




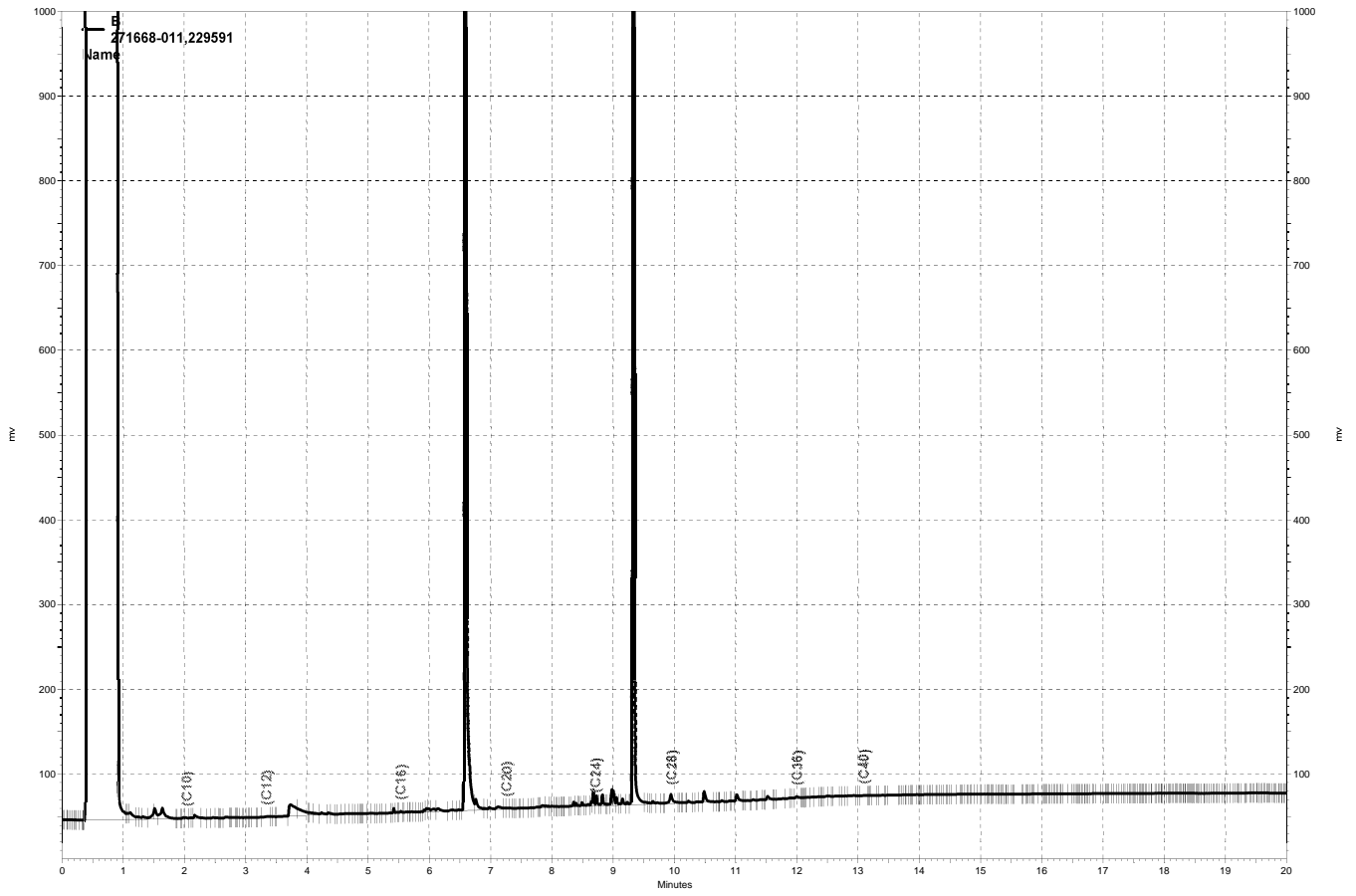
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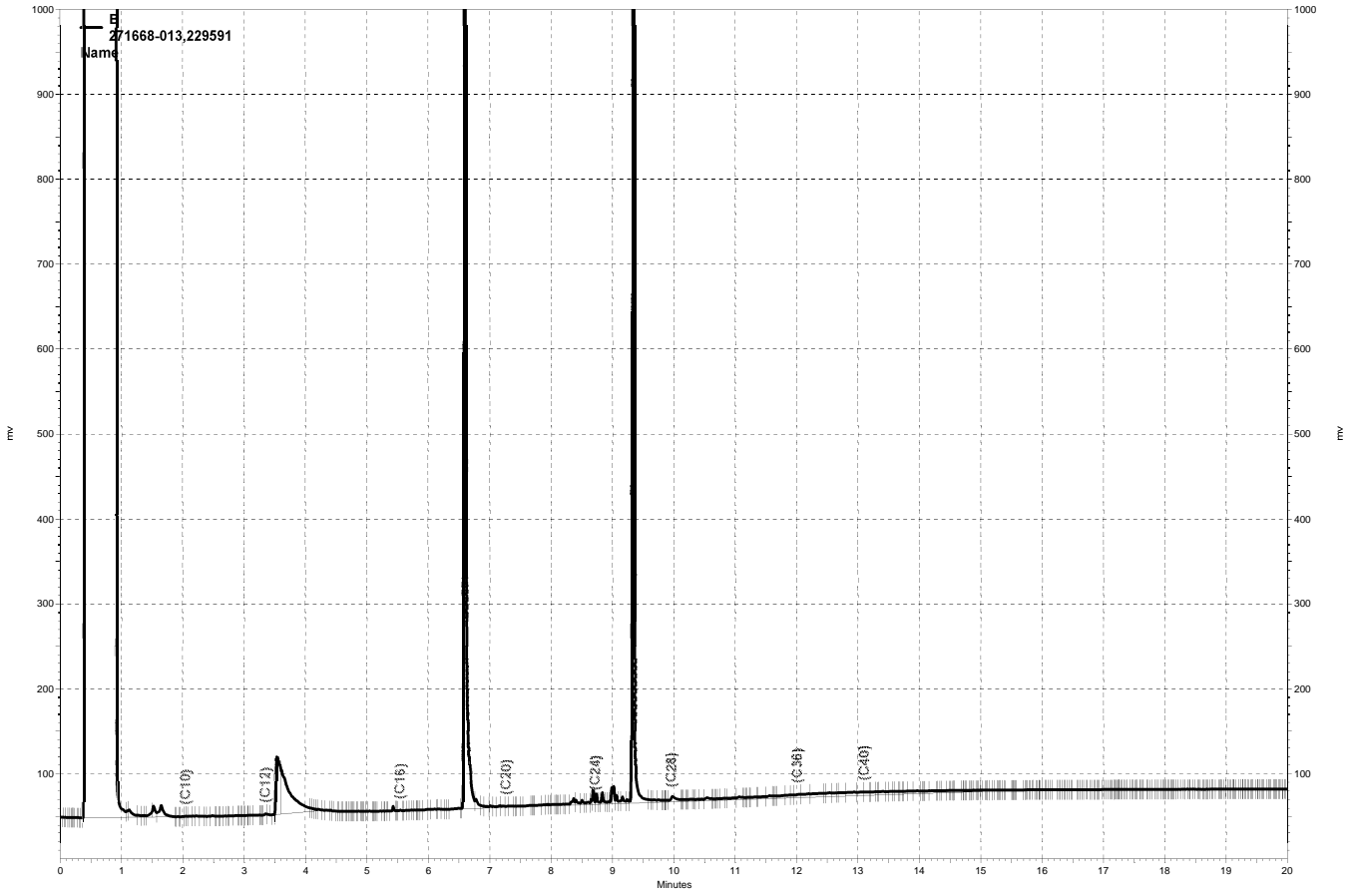
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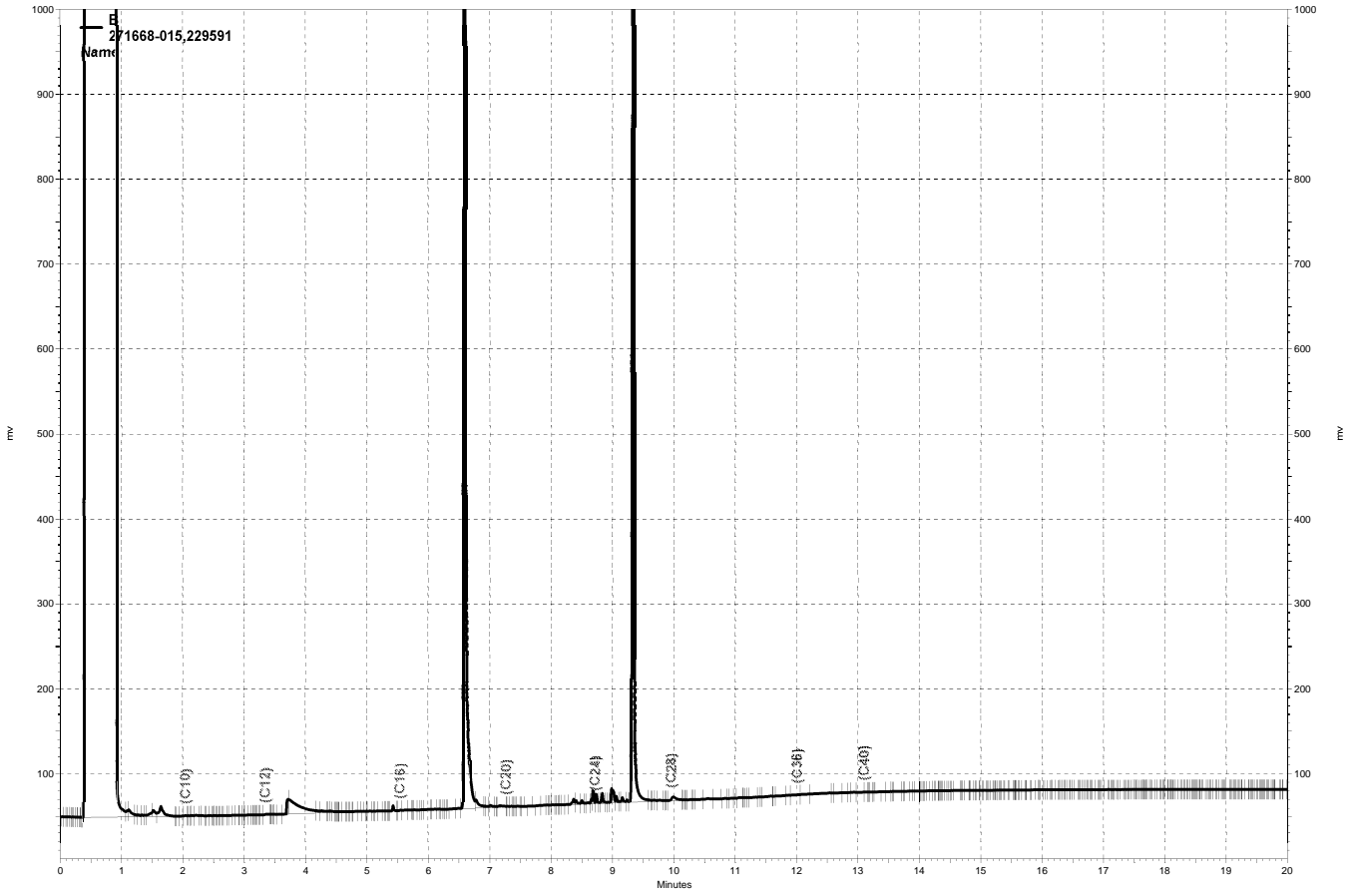
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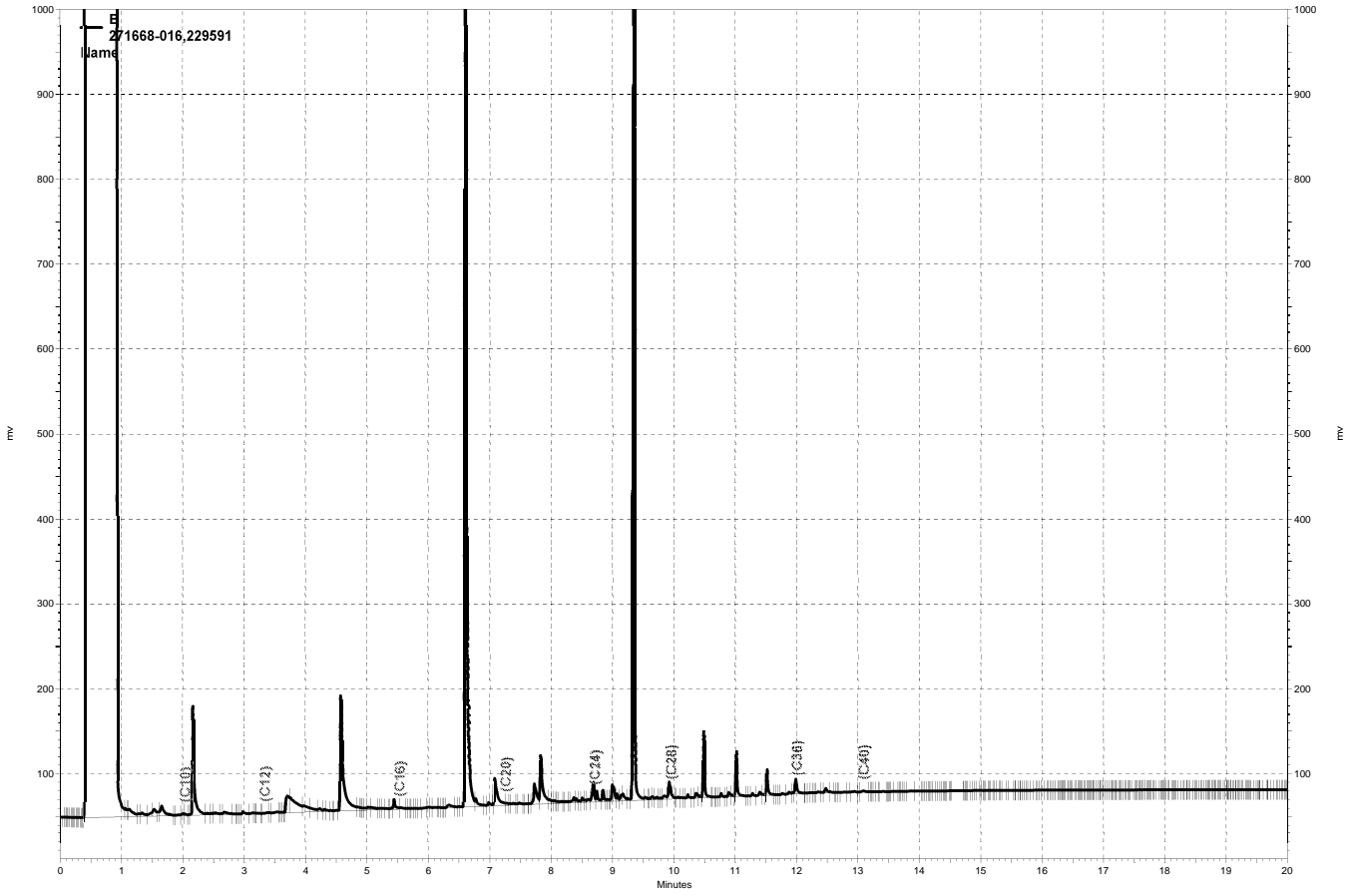
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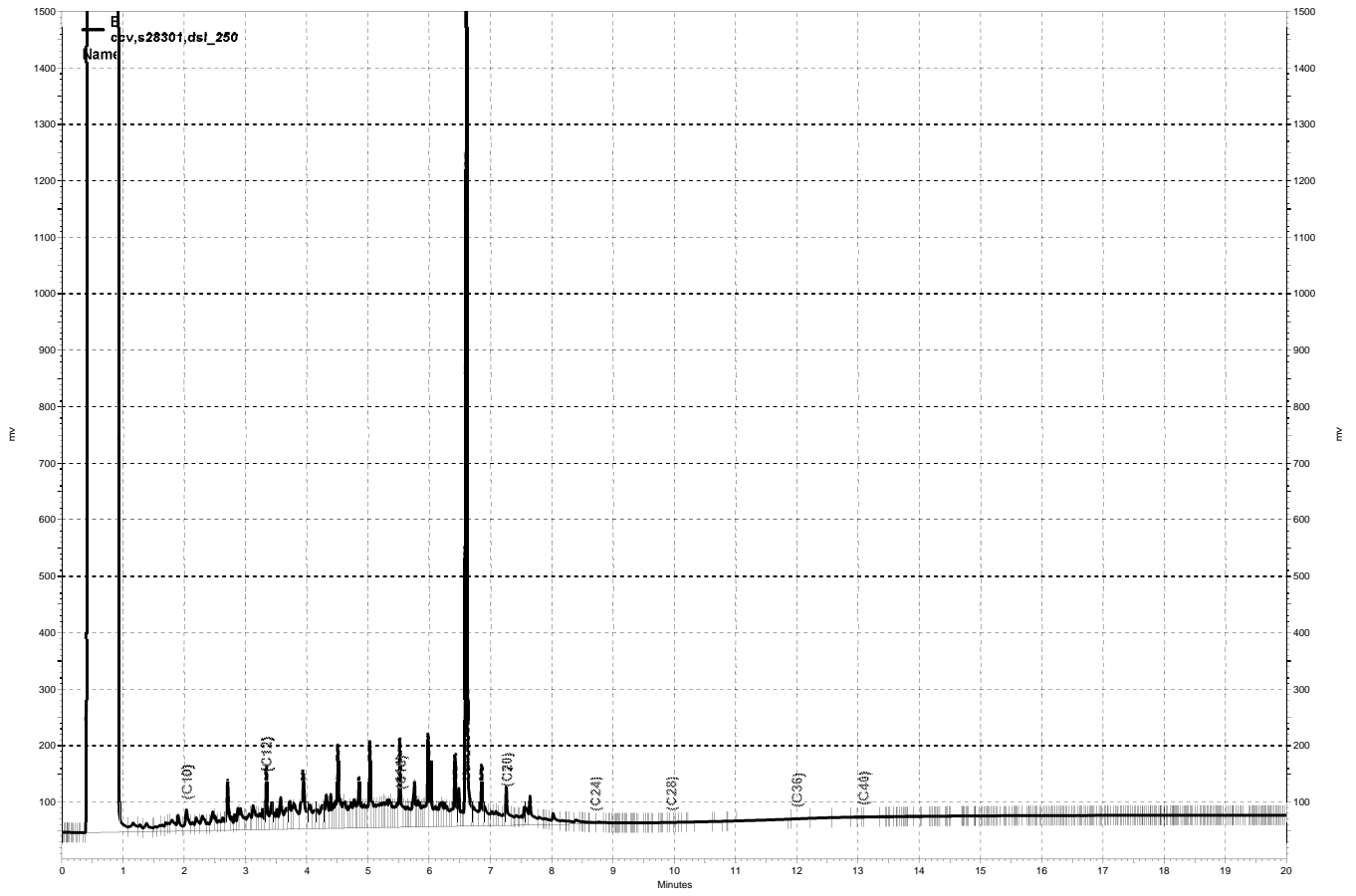
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**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 22545430001  
 Units : mg/L

Name : OTPHEX\_315  
 Date : 11-NOV-2015 18:40  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	315_009	225454300009	HEX OTP_5	11-NOV-2015 18:40	S27409
L2	315_010	225454300010	HEX OTP_10	11-NOV-2015 19:10	S27410
L3	315_011	225454300011	HEX OTP_25	11-NOV-2015 19:40	S27411
L4	315_012	225454300012	HEX OTP_50	11-NOV-2015 20:10	S27412
L5	315_013	225454300013	HEX OTP_100	11-NOV-2015 20:40	S27413
L6	315_014	225454300014	HEX OTP_200	11-NOV-2015 21:09	S27414

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	B	39195	38244	38475	36828	38474	40766	AVRG		2.59E-5		38664	3	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	B	5.0000	1	10.000	-1	25.000	0	50.000	-5	100.00	0	200.00	5

RDG 11/18/15 : Separated from coeluting peak in multiple levels.

RDG 11/18/15 : Corrected automatically drawn baseline in HEX OTP\_200 (315\_014).

Analyst: JDG

Date: 11/18/15

Reviewer: EAH

Date: 11/18/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 225454300002  
 Units : mg/L

Name : DSL\_315  
 Date : 11-NOV-2015 22:09  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	315_016	225454300016	DSL_10	11-NOV-2015 22:09	S28496
L2	315_017	225454300017	DSL_100	11-NOV-2015 22:39	S28497
L3	315_018	225454300018	DSL_500	11-NOV-2015 23:08	S28498
L4	315_019	225454300019	DSL_1000	11-NOV-2015 23:37	S28499
L5	315_020	225454300020	DSL_5000	12-NOV-2015 00:06	S28495

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	B	40438	35811	33643	33600	33118	AVRG		2.83E-5		35322	9	0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	B	10.000	14	100.00	1	500.00	-5	1000.0	-5	5000.0	-6

JDG 11/18/15 : Manually integrated fuel hump in DSL\_10 (315\_016).

JDG: 11/18/15 \* BJP: 11/19/15 EAH: 11/20/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCSV Water  
EPA 8015B

Inst : GC14B  
Calnum : 225454300002

Name : DSL\_315  
Cal Date : 11-NOV-2015

ICV 225454300022 (315\_022 12-NOV-2015) stds: S28302

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	481.4	mg/L	-4	15	

JDG: 11/18/15 \*    BJP: 11/19/15    EAH: 11/20/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 165229449002  
 Units : mg/L

Name : DSL\_159  
 Date : 08-JUN-2015 16:06  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	159b011	165229449011	DSL_10	08-JUN-2015 16:06	S27111
L2	159b012	165229449012	DSL_100	08-JUN-2015 16:34	S27112
L3	159b013	165229449013	DSL_500	08-JUN-2015 17:02	S27113
L4	159b014	165229449014	DSL_1000	08-JUN-2015 17:30	S27114
L5	159b015	165229449015	DSL_5000	08-JUN-2015 17:58	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	51297	43811	48117	51433	47837	AVRG		2.06E-5		48499	6	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	6	100.00	-10	500.00	-1	1000.0	6	5000.0	-1

JDG 06/10/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B  
Calnum : 165229449002

Name : DSL\_159  
Cal Date : 08-JUN-2015

ICV 165229449017 (159b017 08-JUN-2015) stds: S26960

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	532.7	mg/L	7	15	

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 165383482001  
 Units : mg/L

Name : OTPHEX\_266  
 Date : 23-SEP-2015 11:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	266b009	165383482009	HEXOTP_5	23-SEP-2015 11:31	S27409
L2	266b010	165383482010	HEXOTP_10	23-SEP-2015 11:59	S27410
L3	266b011	165383482011	HEXOTP_25	23-SEP-2015 12:27	S27411
L4	266b012	165383482012	HEXOTP_50	23-SEP-2015 12:54	S27412
L5	266b013	165383482013	HEXOTP_100	23-SEP-2015 13:22	S27413
L6	266b014	165383482014	HEXOTP_200	23-SEP-2015 13:49	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	50594	59399	58914	58956	59523	62187	AVRG		1.72E-5		58262	7	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	-13	10.000	2	25.000	1	50.000	1	100.00	2	200.00	7

JDG 09/23/15 [Hexacosane B]: Picked or reassigned peak in HEXOTP\_5 (266b009).

JDG 09/23/15 : Corrected automatically drawn baseline in multiple levels.

JDG 09/23/15 [Hexacosane B]: Samples requiring HEX will not be analyzed on this instrument.

Analyst: JDG

Date: 09/23/15

Reviewer: EAH

Date: 09/23/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC14B Run Name : MO\_500 IDF : 1.0  
Seqnum : 225464408033 File : 322\_033 Time : 19-NOV-2015 04:57  
Cal : 225454300001 Caldate : 11-NOV-2015  
Standards: S28475

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
o-Terphenyl	B	38664	41409	50.00	53.55	mg/L	7	15	

RDG 11/19/15 : Corrected automatically drawn baseline.

Analyst: RDG Date: 11/19/15 Reviewer: EAH Date: 11/19/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 225464408034              File : 322\_034                      Time : 19-NOV-2015 05:27  
 Standards: S28303

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	225454300002	11-NOV-2015	35322	34408	1000	974.1	mg/L	-3	15	
o-Terphenyl	B	225454300001	11-NOV-2015	38664	43036	50.00	55.65	mg/L	11	15	

RDG 11/19/15 : Corrected automatically drawn baseline.

Analyst: BJP                      Date: 11/19/15                      Reviewer: EAH                      Date: 11/19/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC14B Run Name : MO\_500 IDF : 1.0  
Seqnum : 225464408042 File : 322\_042 Time : 19-NOV-2015 16:37  
Cal : 225454300001 Caldate : 11-NOV-2015  
Standards: S28475

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
o-Terphenyl	B	38664	40823	50.00	52.79	mg/L	6	15	

RDG 11/19/15 : Corrected automatically drawn baseline.

Analyst: RDG Date: 11/19/15 Reviewer: EAH Date: 11/19/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 225464408043              File : 322\_043                      Time : 19-NOV-2015 17:06  
 Standards: S28302

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	225454300002	11-NOV-2015	35322	33877	500.0	479.6	mg/L	-4	15	
o-Terphenyl	B	225454300001	11-NOV-2015	38664	40542	50.00	52.43	mg/L	5	15	

BJP 11/19/15 : Corrected automatically drawn baseline.

Analyst: BJP                      Date: 11/19/15                      Reviewer: EAH                      Date: 11/19/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 165465751003          File : 323b003                      Time : 19-NOV-2015 11:26  
 Cal : 165383482001              Caldate : 23-SEP-2015  
 Standards: S28475

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	58262	61728	50.00	52.97	mg/L	6	15	

RDG 11/19/15 : Corrected automatically drawn baseline.

Analyst: RDG                      Date: 11/19/15                      Reviewer: EAH                      Date: 11/19/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 165465751004              File : 323b004                      Time : 19-NOV-2015 11:54  
 Standards: S28301

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	165229449002	08-JUN-2015	48499	48014	250.0	247.5	mg/L	-1	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	60420	50.00	51.85	mg/L	4	15	

RDG 11/19/15 : Corrected automatically drawn baseline.

Analyst: RDG                      Date: 11/19/15                      Reviewer: EAH                      Date: 11/19/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 165465751016              File : 323b016                      Time : 19-NOV-2015 19:19  
 Cal : 165383482001              Caldate : 23-SEP-2015  
 Standards: S28475

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	58262	63634	50.00	54.61	mg/L	9	15	

JDG 11/20/15 : Combined split peak.

Analyst: JDG                      Date: 11/20/15                      Reviewer: EAH                      Date: 11/20/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 165465751017              File : 323b017                      Time : 19-NOV-2015 19:47  
 Standards: S28302

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	165229449002	08-JUN-2015	48499	53155	500.0	548.0	mg/L	10	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	64404	50.00	55.27	mg/L	11	15	

JDG 11/20/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/20/15                      Reviewer: EAH                      Date: 11/20/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 165465751032              File : 323b032                      Time : 20-NOV-2015 02:43  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	165229449002	08-JUN-2015	48499	51140	1000	1054	mg/L	5	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	63862	50.00	54.81	mg/L	10	15	

JDG 11/20/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/20/15                      Reviewer: EAH                      Date: 11/20/15



## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165229449

Instrument : GC15B Begun : 06/08/15 08:09  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	159b001	X	IB			06/08/15 08:09	1.0	
002	159b002	X	CMARKER			06/08/15 10:43	1.0	1
003	159b003	IB	CALIB			06/08/15 12:21	1.0	
004	159b004	ICAL	HEXOTP_5			06/08/15 12:49	1.0	2
005	159b005	ICAL	HEXOTP_10			06/08/15 13:17	1.0	3
006	159b006	ICAL	HEXOTP_25			06/08/15 13:45	1.0	4
007	159b007	ICAL	HEXOTP_50			06/08/15 14:13	1.0	5
008	159b008	ICAL	HEXOTP_100			06/08/15 14:42	1.0	6
009	159b009	ICAL	HEXOTP_200			06/08/15 15:10	1.0	7
010	159b010	IB	CALIB			06/08/15 15:38	1.0	
011	159b011	ICAL	DSL_10			06/08/15 16:06	1.0	8
012	159b012	ICAL	DSL_100			06/08/15 16:34	1.0	9
013	159b013	ICAL	DSL_500			06/08/15 17:02	1.0	10
014	159b014	ICAL	DSL_1000			06/08/15 17:30	1.0	11
015	159b015	ICAL	DSL_5000			06/08/15 17:58	1.0	12
016	159b016	IB	CALIB			06/08/15 18:26	1.0	
017	159b017	ICV	DSL_500			06/08/15 18:54	1.0	13
018	159b018	X	ICV			06/08/15 19:21	1.0	13
019	159b019	IB	CALIB			06/10/15 08:01	1.0	
020	159b020	CMARKER	C8-C50			06/10/15 08:29	1.0	1
021	159b021	IB	CALIB			06/10/15 08:56	1.0	

JDG 06/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.

Standards used: 1=S27269 2=S27409 3=S27410 4=S27411 5=S27412 6=S27413 7=S27414 8=S27111 9=S27112 10=S27113 11=S27114  
 12=S27110 13=S26960

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165383482

Instrument : GC15B  
 Method : EPA 8015B

Begun : 09/23/15 07:22  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	266b001	X	IB				09/23/15 07:22	1.0	
002	266b002	X	CMARKER				09/23/15 07:49	1.0	1
003	266b003	X	MO_500				09/23/15 08:17	1.0	2
004	266b004	X	DSL_250				09/23/15 08:45	1.0	3
005	266b005	CCV	JET_250				09/23/15 09:13	1.0	4
006	266b006	CCV	MO_500				09/23/15 09:56	1.0	2
007	266b007	CCV	DSL_250				09/23/15 10:24	1.0	3
008	266b008	IB	CALIB				09/23/15 11:03	1.0	
009	266b009	ICAL	HEXOTP_5				09/23/15 11:31	1.0	5
010	266b010	ICAL	HEXOTP_10				09/23/15 11:59	1.0	6
011	266b011	ICAL	HEXOTP_25				09/23/15 12:27	1.0	7
012	266b012	ICAL	HEXOTP_50				09/23/15 12:54	1.0	8
013	266b013	ICAL	HEXOTP_100				09/23/15 13:22	1.0	9
014	266b014	ICAL	HEXOTP_200				09/23/15 13:49	1.0	10
016	266b016	X	CMARKER				09/23/15 14:45	1.0	1
017	266b017	CCV	MO_500				09/23/15 15:12	1.0	2
018	266b018	CCV	DSL_250				09/23/15 15:40	1.0	3
019	266b019	BLANK	QC804745		Water	227441	09/23/15 16:32	1.0	
020	266b020	BLANK	QC804745	S	Water	227441	09/23/15 16:59	1.0	
021	266b021	BS	QC804746		Water	227441	09/23/15 17:27	1.0	
022	266b022	BSD	QC804747		Water	227441	09/23/15 17:54	1.0	
023	266b023	BS	QC804746	S	Water	227441	09/23/15 18:22	1.0	
024	266b024	BSD	QC804747	S	Water	227441	09/23/15 18:49	1.0	
025	266b025	SAMPLE	269947-001	S	Water	227441	09/23/15 19:17	1.0	
026	266b026	SAMPLE	269947-002	S	Water	227441	09/23/15 19:45	1.0	
027	266b027	SAMPLE	269947-006	S	Water	227441	09/23/15 20:13	1.0	
028	266b028	SAMPLE	269947-007	S	Water	227441	09/23/15 20:40	1.0	
029	266b029	SAMPLE	269947-008	S	Water	227441	09/23/15 21:08	1.0	
030	266b030	SAMPLE	269947-009	S	Water	227441	09/23/15 21:36	1.0	
031	266b031	SAMPLE	269947-010	S	Water	227441	09/23/15 22:04	1.0	
032	266b032	SAMPLE	269947-011	S	Water	227441	09/23/15 22:32	1.0	
033	266b033	SAMPLE	269947-012	S	Water	227441	09/23/15 23:00	1.0	
034	266b034	SAMPLE	269947-014	S	Water	227441	09/23/15 23:27	1.0	
035	266b035	X	MO_500				09/23/15 23:55	1.0	2
036	266b036	CCV	DSL_500				09/24/15 00:23	1.0	11
037	266b037	CCV	MO_500				09/24/15 00:50	1.0	2
038	266b038	CCV	DSL_500				09/24/15 01:18	1.0	11
039	266b039	SAMPLE	269947-015	S	Water	227441	09/24/15 01:46	1.0	
040	266b040	SAMPLE	269947-016	S	Water	227441	09/24/15 02:13	1.0	
041	266b041	SAMPLE	269947-017	S	Water	227441	09/24/15 02:41	1.0	
042	266b042	SAMPLE	269947-018	S	Water	227441	09/24/15 03:09	1.0	
043	266b043	SAMPLE	269983-001	S	Water	227441	09/24/15 03:37	1.0	
044	266b044	SAMPLE	269934-001		Water	227441	09/24/15 04:04	1.0	
045	266b045	X	CMARKER				09/24/15 04:32	1.0	1
046	266b046	X	MO_500				09/24/15 05:00	1.0	2
047	266b047	CCV	DSL_1000				09/24/15 05:28	1.0	12
048	266b048	CCV	MO_500				09/24/15 05:56	1.0	2
049	266b049	CCV	DSL_1000				09/24/15 06:23	1.0	12

SFL 09/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165465751

Instrument : GC15B  
 Method : EPA 8015B

Begun : 11/19/15 10:31  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	323b001	X	IB				11/19/15 10:31	1.0	
002	323b002	X	CMARKER				11/19/15 10:58	1.0	1
003	323b003	CCV	MO_500				11/19/15 11:26	1.0	2
004	323b004	CCV	DSL_250				11/19/15 11:54	1.0	3
005	323b005	BLANK	QC813398		Water	229591	11/19/15 14:14	1.0	
006	323b006	SAMPLE	271750-001		Water	229591	11/19/15 14:41	1.0	
007	323b007	SAMPLE	271302-004	S	Water	229500	11/19/15 15:09	5.0	
008	323b008	SAMPLE	271302-019	S	Water	229500	11/19/15 15:37	5.0	
009	323b009	SAMPLE	271735-004	S	Soil	229575	11/19/15 16:04	1.0	
010	323b010	SAMPLE	271735-009	S	Soil	229575	11/19/15 16:32	1.0	
011	323b011	SAMPLE	271735-010	S	Soil	229575	11/19/15 17:00	1.0	1:HXCS=210
012	323b012	SAMPLE	271668-003		Water	229591	11/19/15 17:28	1.0	
013	323b013	SAMPLE	271668-004		Water	229591	11/19/15 17:55	1.0	
014	323b014	SAMPLE	271668-005		Water	229591	11/19/15 18:23	1.0	
015	323b015	SAMPLE	271668-006		Water	229591	11/19/15 18:51	1.0	
016	323b016	CCV	MO_500				11/19/15 19:19	1.0	2
017	323b017	CCV	DSL_500				11/19/15 19:47	1.0	4
018	323b018	X	CCV				11/19/15 20:15	1.0	2
019	323b019	X	CCV				11/19/15 20:43	1.0	4
020	323b020	SAMPLE	271668-007		Water	229591	11/19/15 21:11	1.0	
021	323b021	SAMPLE	271668-008		Water	229591	11/19/15 21:39	1.0	
022	323b022	SAMPLE	271668-009		Water	229591	11/19/15 22:07	1.0	
023	323b023	SAMPLE	271668-010		Water	229591	11/19/15 22:34	1.0	
024	323b024	SAMPLE	271668-011		Water	229591	11/19/15 23:02	1.0	
025	323b025	SAMPLE	271668-012		Water	229591	11/19/15 23:30	1.0	
026	323b026	SAMPLE	271668-013		Water	229591	11/19/15 23:57	1.0	
027	323b027	SAMPLE	271668-014		Water	229591	11/20/15 00:25	1.0	
028	323b028	SAMPLE	271668-015		Water	229591	11/20/15 00:52	1.0	
029	323b029	SAMPLE	271668-016		Water	229591	11/20/15 01:20	1.0	
030	323b030	X	CMARKER				11/20/15 01:48	1.0	1
031	323b031	X	MO_500				11/20/15 02:15	1.0	2
032	323b032	CCV	DSL_1000				11/20/15 02:43	1.0	5
033	323b033	CCV	MO_500				11/20/15 03:11	1.0	2
034	323b034	X	CCV				11/20/15 03:38	1.0	5

JDG 11/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 34.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225454300

Instrument : GC14B Begun : 11/11/15 10:54  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	315_001	X	IB			11/11/15 10:54	1.0		
002	315_002	X	IB			11/11/15 11:40	1.0		
003	315_003	X	IB			11/11/15 12:10	1.0		
004	315_004	X	IB			11/11/15 14:36	1.0		
005	315_005	X	CMARKER			11/11/15 15:06	1.0	1	
006	315_006	X	IB			11/11/15 17:11	1.0		
007	315_007	X	IB			11/11/15 17:41	1.0		
008	315_008	IB	CALIB			11/11/15 18:11	1.0		
009	315_009	ICAL	HEX OTP_5			11/11/15 18:40	1.0	2	
010	315_010	ICAL	HEX OTP_10			11/11/15 19:10	1.0	3	
011	315_011	ICAL	HEX OTP_25			11/11/15 19:40	1.0	4	
012	315_012	ICAL	HEX OTP_50			11/11/15 20:10	1.0	5	
013	315_013	ICAL	HEX OTP_100			11/11/15 20:40	1.0	6	
014	315_014	ICAL	HEX OTP_200			11/11/15 21:09	1.0	7	
015	315_015	IB	CALIB			11/11/15 21:40	1.0		
016	315_016	ICAL	DSL_10			11/11/15 22:09	1.0	8	
017	315_017	ICAL	DSL_100			11/11/15 22:39	1.0	9	
018	315_018	ICAL	DSL_500			11/11/15 23:08	1.0	10	
019	315_019	ICAL	DSL_1000			11/11/15 23:37	1.0	11	
020	315_020	ICAL	DSL_5000			11/12/15 00:06	1.0	12	
021	315_021	IB	CALIB			11/12/15 00:36	1.0		
022	315_022	ICV	DSL_500			11/12/15 01:05	1.0	13	
023	315_023	X	ICV			11/12/15 01:34	1.0	13	
024	315_024	IB	CALIB			11/12/15 02:03	1.0		
025	315_025	ICAL	MO_50			11/12/15 02:32	1.0	14	
026	315_026	ICAL	MO_250			11/12/15 03:00	1.0	15	
027	315_027	ICAL	MO_500			11/12/15 03:30	1.0	16	
028	315_028	ICAL	MO_1000			11/12/15 03:59	1.0	17	
029	315_029	ICAL	MO_2500			11/12/15 04:29	1.0	18	
030	315_030	ICAL	MO_5000			11/12/15 04:59	1.0	18	
031	315_031	IB	CALIB			11/12/15 05:29	1.0		
032	315_032	CMARKER	C8-C50			11/12/15 06:00	1.0	1	5:BUNKC:10-40=19000
033	315_033	IB	CALIB			11/12/15 06:31	1.0		

JDG 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 33.

Standards used: 1=S27935 2=S27409 3=S27410 4=S27411 5=S27412 6=S27413 7=S27414 8=S28496 9=S28497 10=S28498 11=S28499  
 12=S28495 13=S28302 14=S27679 15=S27680 16=S27681 17=S27682 18=S27678

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225464408

Instrument : GC14B  
 Method : EPA 8015B

Begun : 11/18/15 12:08  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
002	322_002	X	CMARKER				11/18/15 12:08	1.0	1	
003	322_003	CCV	MO_500				11/18/15 12:38	1.0	2	
004	322_004	CCV	DSL_250				11/18/15 13:08	1.0	3	
005	322_005	BLANK	QC813027	S	Water	229500	11/18/15 15:04	1.0		
006	322_006	BS	QC813028	S	Water	229500	11/18/15 15:33	1.0		
007	322_007	BSD	QC813029	S	Water	229500	11/18/15 16:02	1.0		
008	322_008	SAMPLE	271528-001		Water	229496	11/18/15 16:32	1.0		
009	322_009	SAMPLE	271528-003		Water	229496	11/18/15 17:01	1.0		
010	322_010	SAMPLE	271528-004		Water	229496	11/18/15 17:31	1.0		
011	322_011	MSS	271528-005		Water	229496	11/18/15 18:02	1.0		
012	322_012	SAMPLE	271528-006		Water	229496	11/18/15 18:32	1.0		
013	322_013	SAMPLE	271528-007		Water	229496	11/18/15 19:02	1.0		
014	322_014	SAMPLE	271528-008		Water	229496	11/18/15 19:33	1.0		
015	322_015	SAMPLE	271528-009		Water	229496	11/18/15 20:03	1.0		
016	322_016	SAMPLE	271528-010		Water	229496	11/18/15 20:33	1.0		
017	322_017	MSS	271528-011		Water	229496	11/18/15 21:03	1.0		
018	322_018	CCV	MO_500				11/18/15 21:33	1.0	2	
019	322_019	CCV	DSL_500				11/18/15 22:03	1.0	4	
020	322_020	X	CCV				11/18/15 22:33	1.0	2	
021	322_021	X	CCV				11/18/15 23:02	1.0	4	
022	322_022	MS	QC813014		Water	229496	11/18/15 23:32	1.0		
023	322_023	MSD	QC813015		Water	229496	11/19/15 00:01	1.0		
024	322_024	MS	QC813016		Water	229496	11/19/15 00:30	1.0		
025	322_025	MSD	QC813017		Water	229496	11/19/15 01:00	1.0		
026	322_026	SAMPLE	271499-001		Water	229442	11/19/15 01:29	1.0		
027	322_027	SAMPLE	271634-013		Soil	229547	11/19/15 01:58	1.0		
028	322_028	SAMPLE	271634-014		Soil	229547	11/19/15 02:28	1.0		
029	322_029	SAMPLE	271634-015		Soil	229547	11/19/15 02:57	1.0		
030	322_030	SAMPLE	271302-004	S	Water	229500	11/19/15 03:26	1.0		8:BUNKC:10-40=17000
031	322_031	SAMPLE	271302-019	S	Water	229500	11/19/15 03:57	1.0		8:BUNKC:10-40=24000
032	322_032	X	CMARKER				11/19/15 04:27	1.0	1	
033	322_033	CCV	MO_500				11/19/15 04:57	1.0	2	
034	322_034	CCV	DSL_1000				11/19/15 05:27	1.0	5	
035	322_035	X	CCV				11/19/15 05:57	1.0	2	
036	322_036	X	CCV				11/19/15 06:27	1.0	5	
037	322_037	BLANK	QC813398	S	Water	229591	11/19/15 13:43	1.0		
038	322_038	BS	QC813399	S	Water	229591	11/19/15 14:13	1.0		
039	322_039	BSD	QC813400	S	Water	229591	11/19/15 14:43	1.0		
040	322_040	SAMPLE	271770-001	S	Water	229591	11/19/15 15:12	1.0		
041	322_041	X	CMARKER				11/19/15 16:07	1.0	1	
042	322_042	CCV	MO_500				11/19/15 16:37	1.0	2	
043	322_043	CCV	DSL_500				11/19/15 17:06	1.0	4	
044	322_044	BLANK	QC813435	S	Soil	229599	11/19/15 17:50	1.0		
045	322_045	LCS	QC813436	S	Soil	229599	11/19/15 18:20	1.0		
046	322_046	SAMPLE	271735-011	S	Soil	229575	11/19/15 18:50	1.0		
047	322_047	SAMPLE	271735-012	S	Soil	229575	11/19/15 19:21	1.0		
048	322_048	SAMPLE	271735-013	S	Soil	229575	11/19/15 19:51	1.0		
049	322_049	SAMPLE	271735-014	S	Soil	229575	11/19/15 20:21	1.0		
050	322_050	SAMPLE	271735-015	S	Soil	229599	11/19/15 20:52	1.0		
051	322_051	SAMPLE	271735-016	S	Soil	229599	11/19/15 21:22	1.0		
052	322_052	SAMPLE	271735-017	S	Soil	229599	11/19/15 21:52	1.0		
053	322_053	SAMPLE	271735-018	S	Soil	229599	11/19/15 22:21	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 225464408

Instrument : GC14B Begun : 11/18/15 12:08  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
054	322_054	SAMPLE	271630-001	S	Water	229591	11/19/15 22:51	1.0	
055	322_055	SAMPLE	271630-002	S	Water	229591	11/19/15 23:20	1.0	
056	322_056	CCV	MO_500				11/19/15 23:50	1.0	2
057	322_057	CCV	DSL_1000				11/20/15 00:19	1.0	5

BJP 11/19/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 43.



SAMPLE PREPARATION SUMMARY

Batch # : 229591  
 Started By : ARW  
 Method : 3520C  
 Spike #1 ID : S28476

Prep Date : 18-NOV-2015 13:30  
 SOP Version : TEH\_3520\_rv15  
 Spike #2 ID : S28481

Analysis : TEH  
 Finished By : GDM  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271630-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271630-002		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271630-003		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271630-004		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
271668-003		Water	1000	5	1	0.005	7	1				TEH	
271668-004		Water	500	2.5	1	0.005	7	.5				TEH	
271668-005		Water	500	2.5	1	0.005	7	.5				TEH	
271668-006		Water	500	2.5	1	0.005	7	.5				TEH	
271668-007		Water	500	2.5	1	0.005	7	.5				TEH	
271668-008		Water	500	2.5	1	0.005	7	.5				TEH	
271668-009		Water	500	2.5	1	0.005	7	.5				TEH	
271668-010		Water	500	2.5	1	0.005	7	.5				TEH	
271668-011		Water	500	2.5	1	0.005	7	.5				TEH	
271668-012		Water	500	2.5	1	0.005	7	.5				TEH	
271668-013		Water	500	2.5	1	0.005	7	.5				TEH	
271668-014		Water	500	2.5	1	0.005	7	.5				TEH	
271668-015		Water	500	2.5	1	0.005	7	.5				TEH	
271668-016		Water	500	2.5	1	0.005	7	.5				TEH	
271750-001		Water	1070	5	1	0.004673	7	1				TEHM	
271770-001		Water	510	2.5	1	0.004902		.5			3630C	TEHM	Prepped 18-NOV-2015 15:55
QC813398	BLANK	Water	500	2.5	1	0.005		.5			3630C		
QC813399	BS	Water	500	2.5	1	0.005		.5	.5		3630C		
QC813400	BSD	Water	500	2.5	1	0.005		.5	.5		3630C		

BJP 11/19/15 : Matrix spikes were not performed for this analysis in batch 229591 due to insufficient sample amount.

EAH 11/19/15 : Reviewed for 271770.

BJP: 11/19/15      JDG: 11/20/15      EAH: 11/20/15

TEH (8015) Water Prep Log

Curtis & Tompkins, Ltd.

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BK 3680

LIMS Batch No: 229591  
 LIMS Analysis: TEH/LM  
 Date Extracted: 11/16/15

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
271430-001	E	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
2	E	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
3	E	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
4	D	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
5 271608-003	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5.0	<input checked="" type="checkbox"/> $\leq 2$ pH *	
6	K	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
7	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/2" sediment
8	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
9	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
10 10	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/2"
11	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
12	H	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
13	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
14	H	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
15 15	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/2"
16	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	1/4"
271780-001	H	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5.0	<input checked="" type="checkbox"/> $\leq 2$ pH *	
20 MS 2C 87398	WA	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> WA	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
MS 399	+	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> WA	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
MS 400	+	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> WA	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	
271770-001	1	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 500	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 2.5 <input type="checkbox"/>	<input checked="" type="checkbox"/> $\leq 2$ pH	n/a @ 1:55
		<input type="checkbox"/> 500 <input type="checkbox"/>	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 2.5 <input type="checkbox"/>	<input type="checkbox"/> $\leq 2$ pH	

MS/MSD not included due to:  insufficient volume, or  other (reason)

\* Sonicated @ 1.0mL

0.5 mL of TEH\_SURR was added to all samples  
 0.5 mL of TEH\_SP was added to all spikes  
 pH of all samples adjusted to pH  $\leq 2$  with H<sub>2</sub>SO<sub>4</sub>

3520c: Samples were continually extracted about 450 mL of CH<sub>2</sub>Cl<sub>2</sub>

Extraction Start Time: 1730/1155

Extraction End Time: 0930/1155

3510c: Samples were extracted 3 times with 60 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)

Relinquished to TEH Department

Mfg & Lot# / LIMS # / Time Date/ Initials

S28476E	APM/11/18/15
S28481C	
FS15.2524	
EMSS175	
1730/1155	
0930/1155	ART 11/19/15
NA	ARW to GDM
EM2535C502	11/19/15
1.0	

[Signature] 11/18/15  
 Extraction Chemist Date

Continued from Page \_\_\_\_\_  
 Continued on Page \_\_\_\_\_

[Signature] 11/19/15  
 Reviewed by Date

Prep Chemist: GDM  
 Cleanup Date: 11/19/15

Benchbook # **BK 3729**  
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Sample #	Extraction Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
271630-001	229591	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
3		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
4		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
5 271770-001		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
MB QCB13398		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
BS 399		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
BSD 400		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
10		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
15		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
20		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
25		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
30		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	

Extracts were cleaned up using C&T assembled 1.0 g columns  
 Extracts were cleaned up using \_\_\_\_\_ g cartridges  
 Extracts were eluted with 4.0 mL CH<sub>2</sub>Cl<sub>2</sub>  
 Concentrated to volumes as noted above

Mfg & Lot # / Time / Program	Initials / Date
V14A041	GDM 11/19/15
N/A	
EMSS175	

[Signature] 11/19/15  
 Extraction Chemist / Date

Continued from page /  
 Continued on page /

[Signature] 11/19/15  
 Reviewed by / Date

Laboratory Job Number 271668

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Soil

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3550B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	11/13/15
Units:	mg/Kg	Received:	11/16/15
Basis:	dry	Prepared:	11/17/15
Diln Fac:	1.000	Analyzed:	11/18/15
Batch#:	229547		

Field ID: COMP-1-NS                      Lab ID: 271668-001  
 Type: SAMPLE                              Moisture: 12%

Analyte	Result	RL
Diesel C10-C24	24 Y	1.1

Surrogate	%REC	Limits
o-Terphenyl	116	59-140

Field ID: COMP-2-NS                      Lab ID: 271668-002  
 Type: SAMPLE                              Moisture: 12%

Analyte	Result	RL
Diesel C10-C24	31 Y	1.1

Surrogate	%REC	Limits
o-Terphenyl	122	59-140

Type: BLANK                                      Lab ID: QC813210

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
o-Terphenyl	118	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3550B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC813211	Batch#:	229547
Matrix:	Soil	Prepared:	11/17/15
Units:	mg/Kg	Analyzed:	11/18/15

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.05	48.13	96	58-137

Surrogate	%REC	Limits
o-Terphenyl	109	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3550B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	229547
MSS Lab ID:	271667-001	Sampled:	11/16/15
Matrix:	Soil	Received:	11/16/15
Units:	mg/Kg	Prepared:	11/17/15
Basis:	as received	Analyzed:	11/18/15
Diln Fac:	1.000		

Type: MS Lab ID: QC813212

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	8.170	50.24	52.22	88	46-154

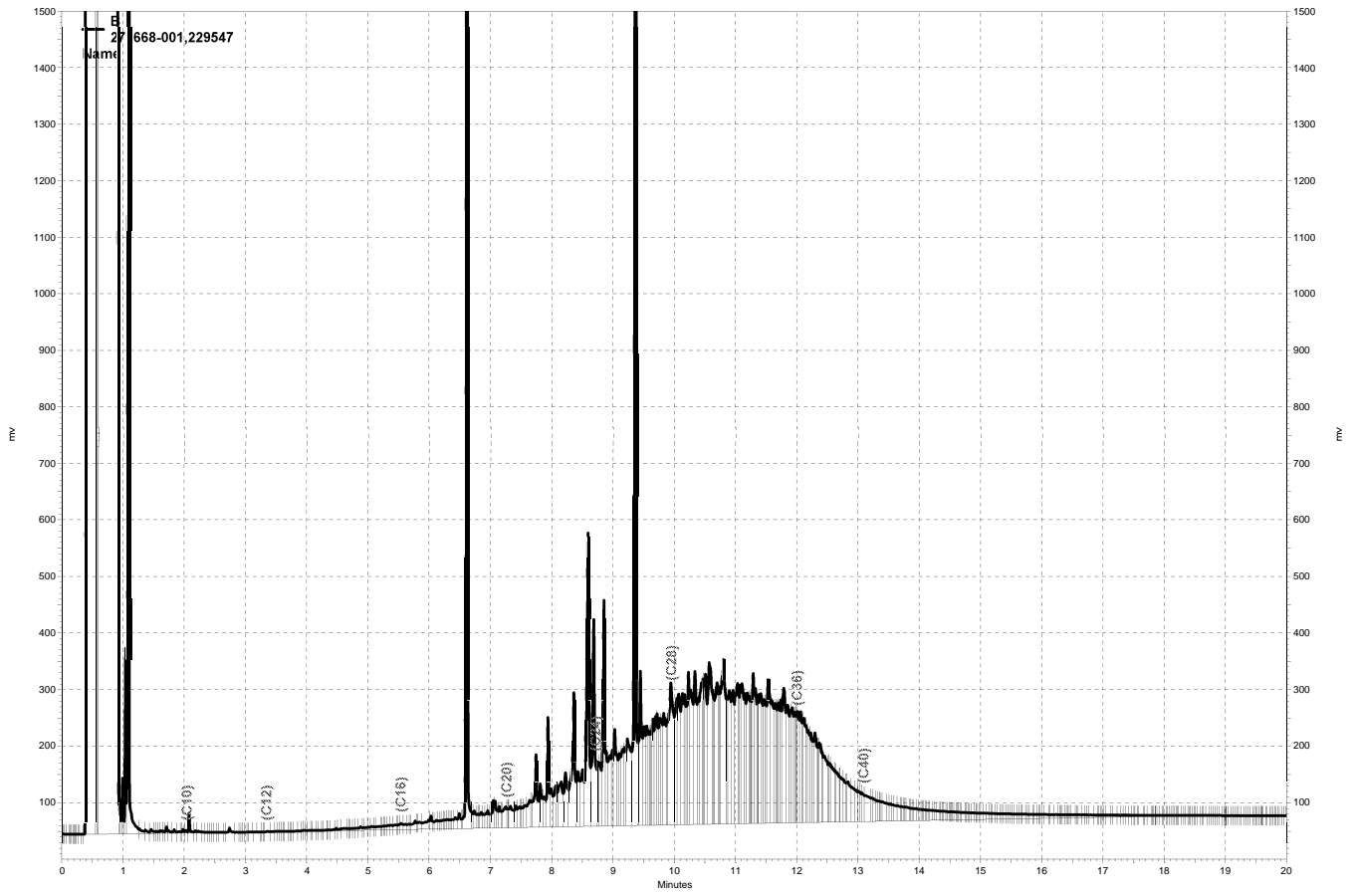
Surrogate	%REC	Limits
o-Terphenyl	116	59-140

Type: MSD Lab ID: QC813213

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.05	50.65	85	46-154	3	50

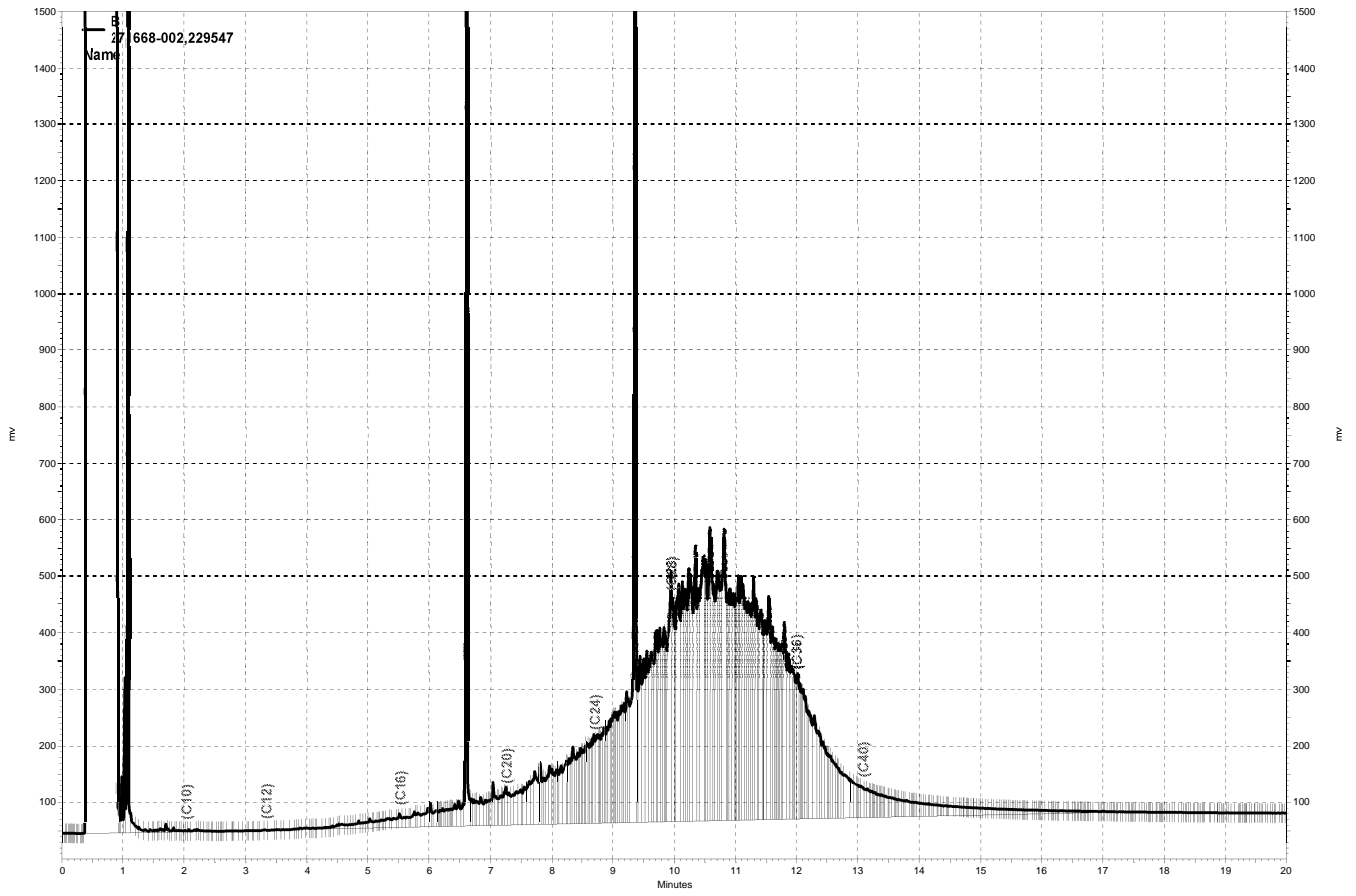
Surrogate	%REC	Limits
o-Terphenyl	111	59-140

RPD= Relative Percent Difference

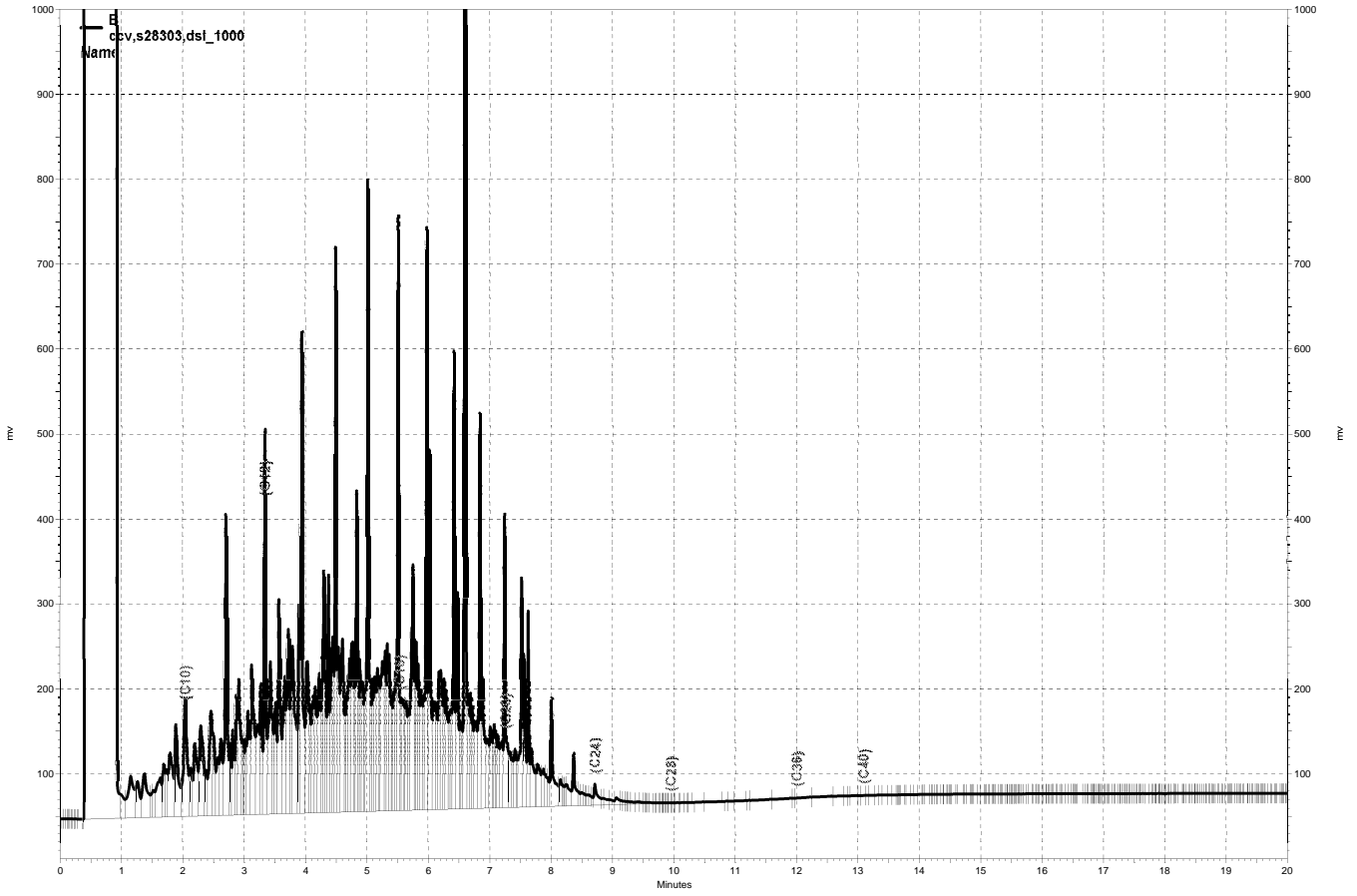


\\Lims\gdrive\ezchrom\Projects\GC15B\Data\320b109, B





\\Lims\gdrive\ezchrom\Projects\GC15B\Data\320b110, B



— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\320b082, B

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Soil: EPA 8015B

Inst : GC15B  
 Calnum : 165229449002  
 Units : mg/L

Name : DSL\_159  
 Date : 08-JUN-2015 16:06  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	159b011	165229449011	DSL_10	08-JUN-2015 16:06	S27111
L2	159b012	165229449012	DSL_100	08-JUN-2015 16:34	S27112
L3	159b013	165229449013	DSL_500	08-JUN-2015 17:02	S27113
L4	159b014	165229449014	DSL_1000	08-JUN-2015 17:30	S27114
L5	159b015	165229449015	DSL_5000	08-JUN-2015 17:58	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	51297	43811	48117	51433	47837	AVRG		2.06E-5		48499	6	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	6	100.00	-10	500.00	-1	1000.0	6	5000.0	-1

JDG 06/10/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC15B  
Calnum : 165229449002

Name : DSL\_159  
Cal Date : 08-JUN-2015

ICV 165229449017 (159b017 08-JUN-2015) stds: S26960

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	532.7	mg/L	7	15	

Analyst: JDG

Date: 06/10/15

Reviewer: EAH

Date: 06/10/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Soil: EPA 8015B

Inst : GC15B  
 Calnum : 165383482001  
 Units : mg/L

Name : OTPHEX\_266  
 Date : 23-SEP-2015 11:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	266b009	165383482009	HEXOTP_5	23-SEP-2015 11:31	S27409
L2	266b010	165383482010	HEXOTP_10	23-SEP-2015 11:59	S27410
L3	266b011	165383482011	HEXOTP_25	23-SEP-2015 12:27	S27411
L4	266b012	165383482012	HEXOTP_50	23-SEP-2015 12:54	S27412
L5	266b013	165383482013	HEXOTP_100	23-SEP-2015 13:22	S27413
L6	266b014	165383482014	HEXOTP_200	23-SEP-2015 13:49	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	50594	59399	58914	58956	59523	62187	AVRG		1.72E-5		58262	7	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	-13	10.000	2	25.000	1	50.000	1	100.00	2	200.00	7

JDG 09/23/15 [Hexacosane B]: Picked or reassigned peak in HEXOTP\_5 (266b009).

JDG 09/23/15 : Corrected automatically drawn baseline in multiple levels.

JDG 09/23/15 [Hexacosane B]: Samples requiring HEX will not be analyzed on this instrument.

Analyst: JDG

Date: 09/23/15

Reviewer: EAH

Date: 09/23/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Soil: EPA 8015B

Inst : GC17A  
 Calnum : 175247623002  
 Units : mg/L

Name : DSL\_171  
 Date : 20-JUN-2015 15:31  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	171a010	175247623010	DSL_10	20-JUN-2015 15:31	S27111
L2	171a011	175247623011	DSL_100	20-JUN-2015 15:59	S27112
L3	171a012	175247623012	DSL_500	20-JUN-2015 16:27	S27113
L4	171a013	175247623013	DSL_1000	20-JUN-2015 16:56	S27114
L5	171a014	175247623014	DSL_5000	20-JUN-2015 17:24	S27110

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
Diesel C10-C24	59139	64770	65011	65212	64156	AVRG		1.57E-5		63657	4	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	-7	100.00	2	500.00	2	1000.0	2	5000.0	1

JDG 06/22/15 : Corrected automatically drawn baseline in DSL\_10 (171a010).

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC17A  
Calnum : 175247623002

Name : DSL\_171  
Cal Date : 20-JUN-2015

ICV 175247623016 (171a016 20-JUN-2015) stds: S27446

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	495.1	mg/L	-1	15	

Analyst: JDG

Date: 06/22/15

Reviewer: EAH

Date: 06/22/15



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 GCSV Soil: EPA 8015B

Inst : GC17A  
 Calnum : 175394216001  
 Units : mg/L

Name : OTPHEX\_273  
 Date : 30-SEP-2015 19:13  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	273a003	175394216003	HEXOTP_5	30-SEP-2015 19:13	S27409
L2	273a004	175394216004	HEXOTP_10	30-SEP-2015 19:41	S27410
L3	273a005	175394216005	HEXOTP_25	30-SEP-2015 20:09	S27411
L4	273a006	175394216006	HEXOTP_50	30-SEP-2015 20:37	S27412
L5	273a007	175394216007	HEXOTP_100	30-SEP-2015 21:06	S27413
L6	273a008	175394216008	HEXOTP_200	30-SEP-2015 21:34	S27414

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	MxRSD	Flg
o-Terphenyl	71460	70831	71260	68676	69800	75121	AVRG		1.40E-5		71191	3	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
o-Terphenyl	5.0000	0	10.000	-1	25.000	0	50.000	-4	100.00	-2	200.00	6

JDG 10/01/15 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG

Date: 10/01/15

Reviewer: EAH

Date: 10/01/15

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 165461246082              File : 320b082                      Time : 18-NOV-2015 04:39  
 Standards: S28303

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	165229449002	08-JUN-2015	48499	47991	1000	989.5	mg/L	-1	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	59003	50.00	50.64	mg/L	1	15	

JDG 11/18/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/18/15                      Reviewer: EAH                      Date: 11/18/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : JP5\_250                      IDF : 1.0  
 Seqnum : 165461246089              File : 320b089                      Time : 18-NOV-2015 08:33  
 Cal : 165383482001              Caldate : 23-SEP-2015  
 Standards: S28313

Analyte	Avg		Spiked	Quant	Units	%D	Max	%D	Flags
	RF/CF	RF/CF							
o-Terphenyl	58262	61169	50.00	52.49	mg/L	5	15		

Analyst: JDG                      Date: 11/18/15                      Reviewer: EAH                      Date: 11/18/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : MO\_500 IDF : 1.0  
Seqnum : 165461246095 File : 320b095 Time : 18-NOV-2015 13:48  
Cal : 165383482001 Caldate : 23-SEP-2015  
Standards: S28475

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	58262	63569	50.00	54.55	mg/L	9	15	

BJP 11/18/15 : Corrected automatically drawn baseline.

Analyst: BJP Date: 11/18/15 Reviewer: EAH Date: 11/18/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_500 IDF : 1.0  
Seqnum : 165461246113 File : 320b113 Time : 18-NOV-2015 22:43  
Standards: S28302

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	165229449002	08-JUN-2015	48499	54313	500.0	559.9	mg/L	12	15	
o-Terphenyl	165383482001	23-SEP-2015	58262	66947	50.00	57.45	mg/L	15	15	

BJP 11/19/15 : Corrected automatically drawn baseline.

Analyst: BJP Date: 11/19/15 Reviewer: EAH Date: 11/19/15  
Page 1 of 1 165461246113

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC17A Run Name : MO\_500 IDF : 1.0  
Seqnum : 175461248095 File : 320a095 Time : 18-NOV-2015 08:52  
Cal : 175394216001 Caldate : 30-SEP-2015  
Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	72367	50.00	50.83	mg/L	2	15	

JDG 11/18/15 : Corrected automatically drawn baseline.

Analyst: JDG Date: 11/18/15 Reviewer: EAH Date: 11/18/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 175461248096              File : 320a096                      Time : 18-NOV-2015 09:20  
 Standards: S28303

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	60985	1000	958.0	mg/L	-4	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	72938	50.00	51.23	mg/L	2	15	

JDG 11/18/15 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 11/18/15                      Reviewer: EAH                      Date: 11/18/15



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC17A Run Name : MO\_500 IDF : 1.0  
 Seqnum : 175461248102 File : 320a102 Time : 18-NOV-2015 14:05  
 Cal : 175394216001 Caldate : 30-SEP-2015  
 Standards: S28150

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Flags
	RF/CF	RF/CF						
o-Terphenyl	71191	74888	50.00	52.60	mg/L	5	15	

RDG 11/18/15 : Corrected automatically drawn baseline.

Analyst: RDG Date: 11/18/15 Reviewer: EAH Date: 11/18/15  
 Page 1 of 1 175461248102

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 GCSV Soil  
EPA 8015B

Inst : GC17A                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 175461248103              File : 320a103                      Time : 18-NOV-2015 14:33  
 Standards: S28302

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	175247623002	20-JUN-2015	63657	62622	500.0	491.9	mg/L	-2	15	
o-Terphenyl	175394216001	30-SEP-2015	71191	70922	50.00	49.81	mg/L	0	15	

RDG 11/18/15 : Corrected automatically drawn baseline.

Analyst: RDG                      Date: 11/18/15                      Reviewer: EAH                      Date: 11/18/15

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165229449

Instrument : GC15B Begun : 06/08/15 08:09  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	159b001	X	IB			06/08/15 08:09	1.0	
002	159b002	X	CMARKER			06/08/15 10:43	1.0	1
003	159b003	IB	CALIB			06/08/15 12:21	1.0	
004	159b004	ICAL	HEXOTP_5			06/08/15 12:49	1.0	2
005	159b005	ICAL	HEXOTP_10			06/08/15 13:17	1.0	3
006	159b006	ICAL	HEXOTP_25			06/08/15 13:45	1.0	4
007	159b007	ICAL	HEXOTP_50			06/08/15 14:13	1.0	5
008	159b008	ICAL	HEXOTP_100			06/08/15 14:42	1.0	6
009	159b009	ICAL	HEXOTP_200			06/08/15 15:10	1.0	7
010	159b010	IB	CALIB			06/08/15 15:38	1.0	
011	159b011	ICAL	DSL_10			06/08/15 16:06	1.0	8
012	159b012	ICAL	DSL_100			06/08/15 16:34	1.0	9
013	159b013	ICAL	DSL_500			06/08/15 17:02	1.0	10
014	159b014	ICAL	DSL_1000			06/08/15 17:30	1.0	11
015	159b015	ICAL	DSL_5000			06/08/15 17:58	1.0	12
016	159b016	IB	CALIB			06/08/15 18:26	1.0	
017	159b017	ICV	DSL_500			06/08/15 18:54	1.0	13
018	159b018	X	ICV			06/08/15 19:21	1.0	13
019	159b019	IB	CALIB			06/10/15 08:01	1.0	
020	159b020	CMARKER	C8-C50			06/10/15 08:29	1.0	1
021	159b021	IB	CALIB			06/10/15 08:56	1.0	

JDG 06/10/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.

Standards used: 1=S27269 2=S27409 3=S27410 4=S27411 5=S27412 6=S27413 7=S27414 8=S27111 9=S27112 10=S27113 11=S27114  
 12=S27110 13=S26960

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165383482

Instrument : GC15B  
 Method : EPA 8015B

Begun : 09/23/15 07:22  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	266b001	X	IB				09/23/15 07:22	1.0	
002	266b002	X	CMARKER				09/23/15 07:49	1.0	1
003	266b003	X	MO_500				09/23/15 08:17	1.0	2
004	266b004	X	DSL_250				09/23/15 08:45	1.0	3
005	266b005	CCV	JET_250				09/23/15 09:13	1.0	4
006	266b006	CCV	MO_500				09/23/15 09:56	1.0	2
007	266b007	CCV	DSL_250				09/23/15 10:24	1.0	3
008	266b008	IB	CALIB				09/23/15 11:03	1.0	
009	266b009	ICAL	HEXOTP_5				09/23/15 11:31	1.0	5
010	266b010	ICAL	HEXOTP_10				09/23/15 11:59	1.0	6
011	266b011	ICAL	HEXOTP_25				09/23/15 12:27	1.0	7
012	266b012	ICAL	HEXOTP_50				09/23/15 12:54	1.0	8
013	266b013	ICAL	HEXOTP_100				09/23/15 13:22	1.0	9
014	266b014	ICAL	HEXOTP_200				09/23/15 13:49	1.0	10
016	266b016	X	CMARKER				09/23/15 14:45	1.0	1
017	266b017	CCV	MO_500				09/23/15 15:12	1.0	2
018	266b018	CCV	DSL_250				09/23/15 15:40	1.0	3
019	266b019	BLANK	QC804745		Water	227441	09/23/15 16:32	1.0	
020	266b020	BLANK	QC804745	S	Water	227441	09/23/15 16:59	1.0	
021	266b021	BS	QC804746		Water	227441	09/23/15 17:27	1.0	
022	266b022	BSD	QC804747		Water	227441	09/23/15 17:54	1.0	
023	266b023	BS	QC804746	S	Water	227441	09/23/15 18:22	1.0	
024	266b024	BSD	QC804747	S	Water	227441	09/23/15 18:49	1.0	
025	266b025	SAMPLE	269947-001	S	Water	227441	09/23/15 19:17	1.0	
026	266b026	SAMPLE	269947-002	S	Water	227441	09/23/15 19:45	1.0	
027	266b027	SAMPLE	269947-006	S	Water	227441	09/23/15 20:13	1.0	
028	266b028	SAMPLE	269947-007	S	Water	227441	09/23/15 20:40	1.0	
029	266b029	SAMPLE	269947-008	S	Water	227441	09/23/15 21:08	1.0	
030	266b030	SAMPLE	269947-009	S	Water	227441	09/23/15 21:36	1.0	
031	266b031	SAMPLE	269947-010	S	Water	227441	09/23/15 22:04	1.0	
032	266b032	SAMPLE	269947-011	S	Water	227441	09/23/15 22:32	1.0	
033	266b033	SAMPLE	269947-012	S	Water	227441	09/23/15 23:00	1.0	
034	266b034	SAMPLE	269947-014	S	Water	227441	09/23/15 23:27	1.0	
035	266b035	X	MO_500				09/23/15 23:55	1.0	2
036	266b036	CCV	DSL_500				09/24/15 00:23	1.0	11
037	266b037	CCV	MO_500				09/24/15 00:50	1.0	2
038	266b038	CCV	DSL_500				09/24/15 01:18	1.0	11
039	266b039	SAMPLE	269947-015	S	Water	227441	09/24/15 01:46	1.0	
040	266b040	SAMPLE	269947-016	S	Water	227441	09/24/15 02:13	1.0	
041	266b041	SAMPLE	269947-017	S	Water	227441	09/24/15 02:41	1.0	
042	266b042	SAMPLE	269947-018	S	Water	227441	09/24/15 03:09	1.0	
043	266b043	SAMPLE	269983-001	S	Water	227441	09/24/15 03:37	1.0	
044	266b044	SAMPLE	269934-001		Water	227441	09/24/15 04:04	1.0	
045	266b045	X	CMARKER				09/24/15 04:32	1.0	1
046	266b046	X	MO_500				09/24/15 05:00	1.0	2
047	266b047	CCV	DSL_1000				09/24/15 05:28	1.0	12
048	266b048	CCV	MO_500				09/24/15 05:56	1.0	2
049	266b049	CCV	DSL_1000				09/24/15 06:23	1.0	12

SFL 09/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165461246

Instrument : GC15B  
 Method : EPA 8015B

Begun : 11/16/15 07:26  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	320b001	X	IB				11/16/15 07:26	1.0	
002	320b002	X	CMARKER				11/16/15 07:54	1.0	1
003	320b003	CCV	MO_500				11/16/15 08:21	1.0	2
004	320b004	CCV	DSL_1000				11/16/15 08:49	1.0	3
005	320b005	BLANK	QC812797	S	Water	229442	11/16/15 12:05	1.0	
006	320b006	BS	QC812798	S	Water	229442	11/16/15 12:32	1.0	
007	320b007	BSD	QC812799	S	Water	229442	11/16/15 13:00	1.0	
008	320b008	CCV	MO_500				11/16/15 14:25	1.0	2
009	320b009	CCV	DSL_500				11/16/15 14:53	1.0	4
010	320b010	CCV	JP5_250				11/16/15 16:44	1.0	5
011	320b011	CCV	BUNK_500				11/16/15 17:12	1.0	6
012	320b012	BLANK	QC812797		Water	229442	11/16/15 17:40	1.0	
013	320b013	BLANK	QC812797	S	Water	229442	11/16/15 18:07	1.0	
014	320b014	BS	QC812798		Water	229442	11/16/15 18:35	1.0	
015	320b015	BSD	QC812799		Water	229442	11/16/15 19:03	1.0	
016	320b016	SAMPLE	271417-014		Water	229442	11/16/15 19:31	1.0	
017	320b017	SAMPLE	271429-001		Water	229442	11/16/15 19:59	1.0	
018	320b018	SAMPLE	271429-002		Water	229442	11/16/15 20:27	1.0	
019	320b019	SAMPLE	271521-001		Water	229442	11/16/15 20:54	1.0	
020	320b020	SAMPLE	271521-002		Water	229442	11/16/15 21:23	5.0	1:BUNKC:10-40=5300
021	320b021	SAMPLE	271521-003		Water	229442	11/16/15 21:50	5.0	
022	320b022	SAMPLE	271521-001	S	Water	229442	11/16/15 22:18	1.0	
023	320b023	SAMPLE	271521-002	S	Water	229442	11/16/15 22:46	1.0	8:BUNKC:10-40=22000
024	320b024	SAMPLE	271521-003	S	Water	229442	11/16/15 23:13	1.0	2:BUNKC:10-40=8700
025	320b025	SAMPLE	271118-006		Water	229010	11/16/15 23:41	1.0	
026	320b026	CCV	MO_500				11/17/15 00:08	1.0	2
027	320b027	CCV	DSL_1000				11/17/15 00:36	1.0	3
028	320b028	CCV	JP5_250				11/17/15 01:03	1.0	5
029	320b029	CCV	BUNK_500				11/17/15 01:31	1.0	6
030	320b030	X	CCV				11/17/15 01:58	1.0	2
031	320b031	X	CCV				11/17/15 02:25	1.0	3
032	320b032	X	CCV				11/17/15 02:53	1.0	5
033	320b033	X	CCV				11/17/15 03:20	1.0	6
034	320b034	SAMPLE	271484-002		Water	229442	11/17/15 03:48	1.0	
035	320b035	SAMPLE	271484-003		Water	229442	11/17/15 04:16	1.0	
036	320b036	SAMPLE	271484-004		Water	229442	11/17/15 04:44	1.0	
037	320b037	SAMPLE	271484-005		Water	229442	11/17/15 05:11	1.0	
038	320b038	SAMPLE	271484-006		Water	229442	11/17/15 05:40	1.0	
039	320b039	SAMPLE	271484-007		Water	229442	11/17/15 06:08	1.0	
040	320b040	SAMPLE	271484-008		Water	229442	11/17/15 06:36	1.0	
041	320b041	MSS	271478-014		Soil	229492	11/17/15 07:04	1.0	
042	320b042	MS	QC812997		Soil	229492	11/17/15 07:32	1.0	
043	320b043	MSD	QC812998		Soil	229492	11/17/15 08:00	1.0	
044	320b044	X	CMARKER				11/17/15 08:28	1.0	1
045	320b045	CCV	MO_500				11/17/15 08:56	1.0	2
046	320b046	CCV	DSL_500				11/17/15 09:23	1.0	4
047	320b047	SAMPLE	271627-014		Soil	229450	11/17/15 10:03	10.0	
048	320b048	X	IB				11/17/15 10:30	1.0	
049	320b049	BLANK	QC813012		Water	229496	11/17/15 10:58	1.0	
050	320b050	LCS	QC813013		Water	229496	11/17/15 11:26	1.0	
051	320b051	CCV	MO_500				11/17/15 12:51	1.0	2
052	320b052	CCV	DSL_1000				11/17/15 13:19	1.0	3

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165461246

Instrument : GC15B  
 Method : EPA 8015B

Begun : 11/16/15 07:26  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	320b053	BLANK	QC812835		Soil	229451	11/17/15 15:15	1.0	
054	320b054	LCS	QC812836		Soil	229451	11/17/15 15:43	1.0	
055	320b055	SAMPLE	271475-002		Soil	229398	11/17/15 16:10	5.0	
056	320b056	SAMPLE	271478-001		Soil	229436	11/17/15 16:39	20.0	
057	320b057	SAMPLE	271493-001		Soil	229436	11/17/15 17:06	5.0	
058	320b058	SAMPLE	271617-001		Soil	229492	11/17/15 17:34	1.0	
059	320b059	MSS	271229-001		Soil	229451	11/17/15 18:02	1.0	
060	320b060	SAMPLE	271593-001		Soil	229492	11/17/15 18:30	10.0	
061	320b061	SAMPLE	271604-001		Soil	229492	11/17/15 18:58	10.0	
062	320b062	SAMPLE	271604-002		Soil	229492	11/17/15 19:26	10.0	
063	320b063	MS	QC812995		Soil	229492	11/17/15 19:54	1.0	
064	320b064	MSD	QC812996		Soil	229492	11/17/15 20:21	1.0	
065	320b065	CCV	MO_500				11/17/15 20:49	1.0	2
066	320b066	CCV	DSL_500				11/17/15 21:17	1.0	4
067	320b067	X	CCV				11/17/15 21:45	1.0	2
068	320b068	X	CCV				11/17/15 22:13	1.0	4
069	320b069	SAMPLE	271229-004		Soil	229451	11/17/15 22:40	1.0	
070	320b070	MS	QC812837		Soil	229451	11/17/15 23:08	1.0	
071	320b071	MSD	QC812838		Soil	229451	11/17/15 23:35	1.0	
072	320b072	SAMPLE	271656-004		Water	229496	11/18/15 00:03	1.0	
073	320b073	MS	QC812999	S	Soil	229492	11/18/15 00:30	1.0	
074	320b074	MSD	QC813000	S	Soil	229492	11/18/15 00:58	1.0	2:BUNKC:10-40=7100
075	320b075	SAMPLE	271382-013		Water	229496	11/18/15 01:25	1.0	
076	320b076	SAMPLE	271417-013		Water	229496	11/18/15 01:53	1.0	
077	320b077	SAMPLE	271484-001		Water	229496	11/18/15 02:20	1.0	
078	320b078	SAMPLE	271498-001		Water	229496	11/18/15 02:48	100.0	8:BUNKC:10-40=18000
079	320b079	X	IB				11/18/15 03:15	1.0	
080	320b080	X	CMARKER				11/18/15 03:43	1.0	1
081	320b081	CCV	MO_500				11/18/15 04:11	1.0	2
082	320b082	CCV	DSL_1000				11/18/15 04:39	1.0	3
083	320b083	X	CCV				11/18/15 05:07	1.0	2
084	320b084	X	CCV				11/18/15 05:35	1.0	3
085	320b085	CHECK	MO_500				11/18/15 06:03	1.0	7
086	320b086	CHECK	DSL_250				11/18/15 06:31	1.0	8
087	320b087	CHECK	DSL_500				11/18/15 06:59	1.0	9
088	320b088	CHECK	DSL_1000				11/18/15 07:27	1.0	10
089	320b089	CCV	JP5_250				11/18/15 08:33	1.0	5
090	320b090	CCV	BUNK_500				11/18/15 09:02	1.0	6
091	320b091	BLANK	QC813210		Soil	229547	11/18/15 11:20	1.0	
092	320b092	LCS	QC813211	S	Soil	229547	11/18/15 11:48	1.0	
093	320b093	SAMPLE	271572-001		Water	229496	11/18/15 12:16	5.0	
094	320b094	SAMPLE	271382-016		Soil	229547	11/18/15 12:46	1.0	2:BUNKC:12-40=7300
095	320b095	CCV	MO_500				11/18/15 13:48	1.0	2
096	320b096	CCV	DSL_250				11/18/15 14:15	1.0	11
097	320b097	CCV	JP5_250				11/18/15 14:43	1.0	5
098	320b098	CCV	BUNK_500				11/18/15 15:11	1.0	6
099	320b099	BLANK	QC813325		Soil	229575	11/18/15 16:14	1.0	
100	320b100	LCS	QC813326		Soil	229575	11/18/15 16:41	1.0	
101	320b101	MSS	271727-001		Soil	229575	11/18/15 17:09	1.0	
102	320b102	MS	QC813327		Soil	229575	11/18/15 17:37	1.0	
103	320b103	MSD	QC813328		Soil	229575	11/18/15 18:05	1.0	
104	320b104	SAMPLE	271727-002		Soil	229575	11/18/15 18:33	1.0	



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 165461246

Instrument : GC15B Begun : 11/16/15 07:26  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
105	320b105	SAMPLE	271724-001		Soil	229575	11/18/15 19:01	1.0	
106	320b106	SAMPLE	271725-001		Soil	229575	11/18/15 19:29	5.0	
107	320b107	SAMPLE	271729-001		Soil	229575	11/18/15 19:56	1.0	
108	320b108	SAMPLE	271748-001		Soil	229575	11/18/15 20:24	1.0	
109	320b109	SAMPLE	271668-001		Soil	229547	11/18/15 20:52	1.0	
110	320b110	SAMPLE	271668-002		Soil	229547	11/18/15 21:20	1.0	
111	320b111	X	IB				11/18/15 21:48	1.0	
112	320b112	X	MO_500				11/18/15 22:15	1.0	2
113	320b113	CCV	DSL_500				11/18/15 22:43	1.0	4
114	320b114	CCV	MO_500				11/18/15 23:11	1.0	2
115	320b115	X	CCV				11/18/15 23:38	1.0	4
116	320b116	BLANK	QC813325	S	Soil	229575	11/19/15 00:06	1.0	
117	320b117	LCS	QC813326	S	Soil	229575	11/19/15 00:33	1.0	
118	320b118	SAMPLE	271660-001		Soil	229547	11/19/15 01:01	2.0	
119	320b119	SAMPLE	271735-001	S	Soil	229575	11/19/15 01:29	1.0	
120	320b120	SAMPLE	271735-002	S	Soil	229575	11/19/15 01:57	1.0	
121	320b121	SAMPLE	271735-003	S	Soil	229575	11/19/15 02:24	1.0	
122	320b122	SAMPLE	271735-004	S	Soil	229575	11/19/15 02:52	1.0	
123	320b123	X	IB				11/19/15 03:19	1.0	
124	320b124	SAMPLE	271735-005	S	Soil	229575	11/19/15 03:47	1.0	
125	320b125	SAMPLE	271735-006	S	Soil	229575	11/19/15 04:15	1.0	
126	320b126	SAMPLE	271735-007	S	Soil	229575	11/19/15 04:43	1.0	
127	320b127	SAMPLE	271735-008	S	Soil	229575	11/19/15 05:10	1.0	
128	320b128	SAMPLE	271735-009	S	Soil	229575	11/19/15 05:38	1.0	
129	320b129	X	CMARKER				11/19/15 06:06	1.0	1
130	320b130	CCV	MO_500				11/19/15 06:34	1.0	2
131	320b131	CCV	DSL_1000				11/19/15 07:02	1.0	3
132	320b132	X	CCV				11/19/15 07:30	1.0	2
133	320b133	X	CCV				11/19/15 07:58	1.0	3

JDG 11/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 9.

JDG 11/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 10 through 46.

JDG 11/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 47 through 52.

JDG 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 53 through 90.

BJP 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 91 through 98.

BJP 11/19/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 99 through 133.

Standards used: 1=S27935 2=S28475 3=S28303 4=S28302 5=S28313 6=S27338 7=S28541 8=S28537 9=S28538 10=S28539 11=S28301

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175247623

Instrument : GC17A  
 Method : EPA 8015B

Begun : 06/20/15 11:16  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	171a001	X	IB			06/20/15 11:16	1.0	
002	171a002	IB	CALIB			06/20/15 11:45	1.0	
003	171a003	ICAL	HEXOTP_5			06/20/15 12:13	1.0	1
004	171a004	ICAL	HEXOTP_10			06/20/15 12:41	1.0	2
005	171a005	ICAL	HEXOTP_25			06/20/15 13:09	1.0	3
006	171a006	ICAL	HEXOTP_50			06/20/15 13:38	1.0	4
007	171a007	ICAL	HEXOTP_100			06/20/15 14:06	1.0	5
008	171a008	ICAL	HEXOTP_200			06/20/15 14:34	1.0	6
009	171a009	IB	CALIB			06/20/15 15:02	1.0	
010	171a010	ICAL	DSL_10			06/20/15 15:31	1.0	7
011	171a011	ICAL	DSL_100			06/20/15 15:59	1.0	8
012	171a012	ICAL	DSL_500			06/20/15 16:27	1.0	9
013	171a013	ICAL	DSL_1000			06/20/15 16:56	1.0	10
014	171a014	ICAL	DSL_5000			06/20/15 17:24	1.0	11
015	171a015	IB	CALIB			06/20/15 17:52	1.0	
016	171a016	ICV	DSL_500			06/20/15 18:20	1.0	12
017	171a017	X	ICV			06/20/15 18:48	1.0	12
018	171a018	IB	CALIB			06/20/15 19:16	1.0	
019	171a019	ICAL	MO_50			06/20/15 19:44	1.0	13
020	171a020	ICAL	MO_250			06/20/15 20:13	1.0	14
021	171a021	ICAL	MO_500			06/20/15 20:41	1.0	15
022	171a022	ICAL	MO_1000			06/20/15 21:09	1.0	16
023	171a023	ICAL	MO_2500			06/20/15 21:38	1.0	17
024	171a024	ICAL	MO_5000			06/20/15 22:06	1.0	17
025	171a025	IB	CALIB			06/20/15 22:35	1.0	
026	171a026	CMARKER	C8-C50			06/20/15 23:03	1.0	18
027	171a027	IB	CALIB			06/20/15 23:32	1.0	

JDG 06/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Standards used: 1=S27409 2=S27410 3=S27411 4=S27412 5=S27413 6=S27414 7=S27111 8=S27112 9=S27113 10=S27114 11=S27110  
 12=S27446 13=S26392 14=S26393 15=S26394 16=S26395 17=S26389 18=S27269



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175461248

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/16/15 07:28  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	320a001	X	IB				11/16/15 07:28	1.0		
002	320a002	CMARKER	C8-C50				11/16/15 07:55	1.0	1	
003	320a003	CCV	MO_500				11/16/15 08:23	1.0	2	
004	320a004	CCV	DSL_1000				11/16/15 08:51	1.0	3	
005	320a005	SAMPLE	271523-001	S	Water	229442	11/16/15 12:40	1.0		
006	320a006	SAMPLE	271628-001	S	Water	229442	11/16/15 13:08	1.0		
007	320a007	SAMPLE	271628-002	S	Water	229442	11/16/15 13:36	1.0		
008	320a008	SAMPLE	271312-001	S	Soil	229252	11/16/15 14:31	10.0		
009	320a009	SAMPLE	271118-006		Water	229010	11/16/15 14:59	1.0		
010	320a010	CCV	MO_500				11/16/15 15:44	1.0	2	
011	320a011	CCV	DSL_500				11/16/15 16:12	1.0	4	
012	320a012	X	CCV				11/16/15 16:40	1.0	2	
013	320a013	X	CCV				11/16/15 17:08	1.0	4	
014	320a014	BLANK	QC812831		Soil	229450	11/16/15 17:36	1.0		
015	320a015	BLANK	QC812831	S	Soil	229450	11/16/15 18:04	1.0		
016	320a016	LCS	QC812832	S	Soil	229450	11/16/15 18:32	1.0		
017	320a017	MSS	271478-010		Soil	229450	11/16/15 19:00	1.0		
018	320a018	MS	QC812833		Soil	229450	11/16/15 19:29	1.0		
019	320a019	MSD	QC812834		Soil	229450	11/16/15 19:57	1.0		
020	320a020	SAMPLE	271478-011		Soil	229450	11/16/15 20:25	1.0		
021	320a021	SAMPLE	271478-012		Soil	229450	11/16/15 20:53	1.0		
022	320a022	SAMPLE	271478-013		Soil	229450	11/16/15 21:22	1.0		
023	320a023	SAMPLE	271513-001		Soil	229450	11/16/15 21:50	1.0		
024	320a024	SAMPLE	271574-001		Soil	229450	11/16/15 22:18	2.0		
025	320a025	SAMPLE	271519-001		Soil	229450	11/16/15 22:46	1.0		2:BUNKC:12-40=7000
026	320a026	SAMPLE	271627-001		Soil	229450	11/16/15 23:14	1.0		
027	320a027	CCV	MO_500				11/16/15 23:42	1.0	2	
028	320a028	CCV	DSL_1000				11/17/15 00:10	1.0	3	
029	320a029	X	CCV				11/17/15 00:37	1.0	2	
030	320a030	X	CCV				11/17/15 01:05	1.0	3	
031	320a031	SAMPLE	271627-002		Soil	229450	11/17/15 01:33	1.0		
032	320a032	SAMPLE	271627-003		Soil	229450	11/17/15 02:01	1.0		
033	320a033	SAMPLE	271627-004		Soil	229450	11/17/15 02:29	1.0		
034	320a034	SAMPLE	271627-005		Soil	229450	11/17/15 02:57	1.0		
035	320a035	SAMPLE	271627-006		Soil	229450	11/17/15 03:25	1.0		
036	320a036	SAMPLE	271627-012		Soil	229450	11/17/15 03:53	1.0		
037	320a037	SAMPLE	271627-013		Soil	229450	11/17/15 04:21	1.0		
038	320a038	SAMPLE	271627-014		Soil	229450	11/17/15 04:50	1.0		8:BUNKC:12-40=26000
039	320a039	SAMPLE	271514-001	S	Soil	229450	11/17/15 05:19	20.0		
040	320a040	SAMPLE	271514-002	S	Soil	229450	11/17/15 05:47	5.0		
041	320a041	X	CMARKER				11/17/15 06:15	1.0	1	
042	320a042	CCV	MO_500				11/17/15 06:43	1.0	2	
043	320a043	CCV	DSL_500				11/17/15 07:11	1.0	4	
044	320a044	BLANK	QC812993		Soil	229492	11/17/15 07:52	1.0		
045	320a045	BLANK	QC812993	S	Soil	229492	11/17/15 08:20	1.0		
046	320a046	LCS	QC812994	S	Soil	229492	11/17/15 08:48	1.0		
047	320a047	SAMPLE	271626-019		Soil	229492	11/17/15 09:17	2.0		
048	320a048	SAMPLE	271626-020		Soil	229492	11/17/15 09:45	2.0		
049	320a049	X	IB				11/17/15 10:13	1.0		
050	320a050	SAMPLE	271609-001		Water	229496	11/17/15 10:41	1.0		
051	320a051	SAMPLE	271651-001		Water	229496	11/17/15 11:09	1.0		
052	320a052	SAMPLE	271348-010	S	Soil	229370	11/17/15 11:37	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175461248

Instrument : GC17A  
 Method : EPA 8015B

Begun : 11/16/15 07:28  
 SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	320a053	MSS	271653-002	S	Soil	229492	11/17/15 12:31	1.0		
054	320a054	CCV	MO_500				11/17/15 12:59	1.0	2	
055	320a055	CCV	DSL_1000				11/17/15 13:27	1.0	3	
056	320a056	CCV	JP5_250				11/17/15 14:34	1.0	5	
057	320a057	CCV	BUNK_500				11/17/15 15:02	1.0	6	
058	320a058	BLANK	QC813012		Water	229496	11/17/15 15:30	1.0		
059	320a059	BLANK	QC813012	S	Water	229496	11/17/15 15:59	1.0		
060	320a060	LCS	QC813013	S	Water	229496	11/17/15 16:27	1.0		
061	320a061	SAMPLE	271521-002	S	Water	229442	11/17/15 16:56	5.0		
062	320a062	SAMPLE	271521-003	S	Water	229442	11/17/15 17:24	5.0		
063	320a063	SAMPLE	271572-001		Water	229496	11/17/15 17:52	1.0		2:BUNKC:10-40=8000
064	320a064	SAMPLE	271572-002		Water	229496	11/17/15 18:21	1.0		
065	320a065	SAMPLE	271572-001	S	Water	229496	11/17/15 18:49	1.0		
066	320a066	SAMPLE	271572-002	S	Water	229496	11/17/15 19:17	1.0		
067	320a067	SAMPLE	271034-004		Soil	229451	11/17/15 19:45	1.0		sh
068	320a068	SAMPLE	271034-005		Soil	229451	11/17/15 20:14	1.0		sh
069	320a069	SAMPLE	271034-006		Soil	229451	11/17/15 20:42	1.0		sh
070	320a070	SAMPLE	271034-010		Soil	229451	11/17/15 21:10	1.0		sh
071	320a071	CCV	MO_500				11/17/15 21:38	1.0	2	
072	320a072	CCV	DSL_500				11/17/15 22:06	1.0	4	
073	320a073	CCV	MO_500				11/17/15 22:35	1.0	2	
074	320a074	CCV	DSL_500				11/17/15 23:02	1.0	4	
075	320a075	CCV	JP5_250				11/17/15 23:30	1.0	5	
076	320a076	CCV	BUNK_500				11/17/15 23:58	1.0	6	
077	320a077	CCV	MO_500				11/18/15 00:26	1.0	2	
078	320a078	CCV	DSL_500				11/18/15 00:54	1.0	4	
079	320a079	CCV	MO_500				11/18/15 01:21	1.0	2	
080	320a080	CCV	DSL_500				11/18/15 01:49	1.0	4	
081	320a081	X	CCV				11/18/15 02:17	1.0	5	
082	320a082	X	CCV				11/18/15 02:45	1.0	6	
083	320a083	SAMPLE	271637-001		Soil	229492	11/18/15 03:13	1.0		11:BUNKC:10-40=1000000
084	320a084	SAMPLE	271592-001	S	Soil	229492	11/18/15 03:40	20.0		
085	320a085	SAMPLE	271642-006		Soil	229492	11/18/15 04:09	1.0		
086	320a086	SAMPLE	271575-001	S	Soil	229492	11/18/15 04:37	1.0		
087	320a087	SAMPLE	271592-002	S	Soil	229492	11/18/15 05:06	1.0		3:BUNKC:12-40=9000
088	320a088	X	IB				11/18/15 05:34	1.0		
089	320a089	SAMPLE	271612-001	S	Soil	229492	11/18/15 06:02	1.0		5:BUNKC:12-40=13000
090	320a090	SAMPLE	271526-004		Miscell.	229492	11/18/15 06:30	1.0		sh , 11:BUNKC:12-40=150000
091	320a091	SAMPLE	271554-001		Soil	229492	11/18/15 06:58	1.0		
092	320a092	SAMPLE	271554-002		Soil	229492	11/18/15 07:27	1.0		
093	320a093	MSS	271561-001		Soil	229492	11/18/15 07:55	1.0		
094	320a094	X	CMARKER				11/18/15 08:24	1.0	1	
095	320a095	CCV	MO_500				11/18/15 08:52	1.0	2	
096	320a096	CCV	DSL_1000				11/18/15 09:20	1.0	3	
097	320a097	X	MO_500				11/18/15 11:27	1.0	2	
098	320a098	MSS	271667-001		Soil	229547	11/18/15 11:55	1.0		
099	320a099	SAMPLE	271721-001		Soil	229547	11/18/15 12:23	1.0		
100	320a100	MS	QC813212		Soil	229547	11/18/15 12:59	1.0		
101	320a101	MSD	QC813213		Soil	229547	11/18/15 13:27	1.0		
102	320a102	CCV	MO_500				11/18/15 14:05	1.0	2	
103	320a103	CCV	DSL_500				11/18/15 14:33	1.0	4	
104	320a104	BLANK	QC813027		Water	229500	11/18/15 15:54	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 175461248

Instrument : GC17A Begun : 11/16/15 07:28  
 Method : EPA 8015B SOP Version : TEH\_rv18

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
105	320a105	BLANK	QC813210		Soil	229547	11/18/15 16:22	1.0	
106	320a106	SAMPLE	271589-001		Water	229500	11/18/15 16:50	1.0	
107	320a107	SAMPLE	271589-002		Water	229500	11/18/15 17:18	1.0	
108	320a108	SAMPLE	271589-003		Water	229500	11/18/15 17:46	1.0	
109	320a109	SAMPLE	271589-004		Water	229500	11/18/15 18:14	1.0	
110	320a110	SAMPLE	271589-005		Water	229500	11/18/15 18:43	1.0	
111	320a111	SAMPLE	271589-006		Water	229500	11/18/15 19:11	1.0	
112	320a112	SAMPLE	271589-007		Water	229500	11/18/15 19:39	1.0	
113	320a113	SAMPLE	271591-001		Water	229500	11/18/15 20:07	1.0	
114	320a114	SAMPLE	271597-001		Water	229500	11/18/15 20:36	1.0	
115	320a115	SAMPLE	271636-001		Water	229500	11/18/15 21:04	1.0	
116	320a116	CCV	MO_500				11/18/15 21:32	1.0	2
117	320a117	CCV	DSL_1000				11/18/15 22:00	1.0	3
118	320a118	X	CCV				11/18/15 22:28	1.0	2
120	320a120	SAMPLE	271632-012	S	Soil	229547	11/18/15 23:24	1.0	
121	320a121	SAMPLE	271632-009	S	Soil	229547	11/18/15 23:52	1.0	
122	320a122	SAMPLE	271632-006	S	Soil	229547	11/19/15 00:20	1.0	
123	320a123	SAMPLE	271632-005	S	Soil	229547	11/19/15 00:48	1.0	
124	320a124	SAMPLE	271632-003	S	Soil	229547	11/19/15 01:15	1.0	
125	320a125	SAMPLE	271632-002	S	Soil	229547	11/19/15 01:43	1.0	
126	320a126	SAMPLE	271636-003		Water	229500	11/19/15 02:11	1.0	
127	320a127	SAMPLE	271636-002		Water	229500	11/19/15 02:39	1.0	
128	320a128	SAMPLE	271660-002		Soil	229547	11/19/15 03:06	1.0	
129	320a129	SAMPLE	271611-010		Soil	229547	11/19/15 03:34	100.0	
130	320a130	X	IB				11/19/15 04:02	1.0	
131	320a131	X	CMARKER				11/19/15 04:31	1.0	1
132	320a132	CCV	MO_500				11/19/15 04:59	1.0	2
133	320a133	CCV	DSL_500				11/19/15 05:26	1.0	4
134	320a134	X	CCV				11/19/15 05:55	1.0	2
135	320a135	X	CCV				11/19/15 06:23	1.0	4

JDG 11/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 9.

BJP 11/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 10 through 11.

JDG 11/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 12 through 52.

JDG 11/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 53 through 55.

JDG 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 56 through 96.

BJP 11/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 97 through 103.

BJP 11/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 104 through 135.



SAMPLE PREPARATION SUMMARY

Batch # : 229547  
 Started By : KKL  
 Method : 3550B  
 Spike #1 ID : S28305

Prep Date : 17-NOV-2015 16:15  
 Spike #2 ID : S28476

Analysis : TEH  
 Finished By : KKL  
 Units : g  
 Spike #3 ID : S28481

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271382-016		Soil	49.92	5	1	0.1002		1				TEHM	
271611-010		Soil	49.91	5	1	0.1002		1				TEHM	
271632-002		Soil	49.89	5	1	0.1002		1			3630C	TEHM	
271632-003		Soil	50.23	5	1	0.09954		1			3630C	TEHM	
271632-005		Soil	49.78	5	1	0.1004		1			3630C	TEHM	
271632-006		Soil	49.91	5	1	0.1002		1			3630C	TEHM	
271632-009		Soil	49.88	5	1	0.1002			1		3630C	TEHM	
271632-012		Soil	49.97	5	1	0.1001			1		3630C	TEHM	
271634-013		Soil	50.26	5	1	0.09948			1			TEHM	
271634-014		Soil	50.28	5	1	0.09944			1			TEHM	
271634-015		Soil	49.98	5	1	0.1000			1			TEHM	
271660-001		Soil	50.12	5	1	0.09976			1			TEHM	
271660-002		Soil	50.08	5	1	0.09984			1			TEHM	
271667-001		Soil	50.1	5	1	0.0998			1			TEHM	
271668-001		Soil	50.23	5	1	0.09954			1			TEH	
271668-002		Soil	49.93	5	1	0.1001			1			TEH	
271721-001		Soil	49.76	5	1	0.1005			1			TEHM	
QC813210	BLANK	Soil	50.02	5	1	0.09996		1			3630C		
QC813211	LCS	Soil	49.95	5	1	0.1001		1		1	3630C		
QC813212	MS	Soil	49.76	5	1	0.1005		1		1			
QC813213	MSD	Soil	49.95	5	1	0.1001		1		1			

EAH 11/18/15 : Checked batch documents, QC runs are not signed.

BJP 11/18/15 : signed

Analyst: BJP Date: 11/18/15 Reviewer: EAH Date: 11/18/15



TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample	ID	Weight (g)	Analysis	Batch #	Scale Used	Comments		
271382-c16	Comp	49.92	TEH/M	229547	Dish 1	MIS - No Dry, Prev. Comp. 271382-c01, 2, 3 @ 50g ea. Comp 271611-c10-A-De @ 12.5g ea.		
271611-c10	↓	49.91						
271632-c02	A	49.89						
	3 ↓	50.23						
	5 A/B	49.78						
	6 A	49.91						
	9 ↓	49.88						
	12 ↓	49.97						
271634-c13	Comp	50.26						Prev. Comp. 271634-c01, 2, 3, 4 @ 40g each
	14 ↓	50.28						5, 6, 7, 8 ↓
	15 ↓	49.98						9, 10, 11, 12 ↓
271660-c01	B	50.12						
	2 ↓	50.08						
271667-c01	C	50.10			MSS			
271668-c01	↓	50.23						
	2 ↓	49.93						
271721-c01	B	49.76						
MB	N/A	50.02			FC154411			
LCS	↓	49.95			↓			
MS	↓	49.76			271667-c01			
MSD	↓	49.95			↓			

KKL 11/17/15

SIGNATURE

DATE

Continued to page

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TEH (8015) Soil Prep Log

Curtis & Tompkins, Ltd.

BK 3701

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LIMS Batch No: 229547  
 LIMS Analysis TEH/M  
 Date Extracted: 11/17/15

Extraction Method:  
 Shaker Table  
 EPA 3550 Sonication  
 \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3630 Silica Gel

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments	
271382-016	Comp	49.92	5.0			
271611-010	↓	49.91	5.0			
271632-002	A	49.87	5.0	X		
3	↓	50.23	5.0	X		
5	3	A/B	49.78	5.0	X	
6	A	49.91	5.0	X		
7	↓	49.88	5.0	X	*	
12	↓	49.97	5.0	X	*	
271634-0.3	Comp	50.26	5.0		*	
10	14	↓	50.28	5.0	*	
15	15	↓	49.98	5.0	*	
271660-001	B	50.12	5.0		*	
2	↓	50.68	5.0		*	
271667-001	C	50.10	5.0		*MS	
15	271668-001	↓	50.23	5.0	*	
2	↓	49.93	5.0		*	
271721-001	B	49.76	5.0		*	
MB QC813210	N/A	50.02	5.0	X		
LCS	1	↓	49.95	5.0	X	
20	MS	2	↓	49.76	5.0	
MSD	3	↓	49.95	5.0		
			5.0			
			5.0			
			5.0			
			5.0			

MS/MSD not included due to:  insufficient volume, or  other (reason)

APG 11/18/15

Baked, solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples  
 Samples were dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 1.0 mL of Surrogate solution was added to all samples  
 1.0 mL of Spike solution was added to all spikes

1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM55175):Acetone(lot# FC156453) was added to all

Solvent added at (time)

Sonicated 3 times w/ ≥100mL  placed on Shaker Table at:  
 taken off Shaker Table at:

Extracts filtered through baked, rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)

Relinquished to TEH Department

Mfg & Lot # / LIMS # / Time	Date/Initials
FC154411	KKL 11/17/15
↓	
5283050/5284700*	
5284219/B	
✓	
16.15	
✓	
N/A	
EM25350502	
100	
✓	

Kristin Low 11/17/15  
 Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

KLS 11/18/15  
 Reviewed by / Date



Laboratory Job Number 271668

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Water

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PURGE-1-NS	Diln Fac:	40.00
Lab ID:	271668-003	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	40	229688	11/20/15
Chloromethane	ND	40	229688	11/20/15
Vinyl Chloride	ND	20	229688	11/20/15
Bromomethane	ND	40	229688	11/20/15
Chloroethane	ND	40	229688	11/20/15
Trichlorofluoromethane	ND	40	229688	11/20/15
Acetone	ND	400	229708	11/21/15
Freon 113	ND	80	229688	11/20/15
1,1-Dichloroethene	ND	20	229688	11/20/15
Methylene Chloride	ND	400	229688	11/20/15
Carbon Disulfide	ND	20	229708	11/21/15
MTBE	ND	20	229688	11/20/15
trans-1,2-Dichloroethene	ND	20	229688	11/20/15
Vinyl Acetate	ND	400	229688	11/20/15
1,1-Dichloroethane	ND	20	229688	11/20/15
2-Butanone	ND	400	229688	11/20/15
cis-1,2-Dichloroethene	ND	20	229688	11/20/15
2,2-Dichloropropane	ND	20	229688	11/20/15
Chloroform	ND	20	229688	11/20/15
Bromochloromethane	ND	20	229688	11/20/15
1,1,1-Trichloroethane	ND	20	229688	11/20/15
1,1-Dichloropropene	ND	20	229688	11/20/15
Carbon Tetrachloride	ND	20	229688	11/20/15
1,2-Dichloroethane	ND	20	229688	11/20/15
Benzene	ND	20	229688	11/20/15
Trichloroethene	ND	20	229688	11/20/15
1,2-Dichloropropane	ND	20	229688	11/20/15
Bromodichloromethane	ND	20	229688	11/20/15
Dibromomethane	ND	20	229688	11/20/15
4-Methyl-2-Pentanone	ND	400	229688	11/20/15
cis-1,3-Dichloropropene	ND	20	229688	11/20/15
Toluene	ND	20	229688	11/20/15
trans-1,3-Dichloropropene	ND	20	229688	11/20/15
1,1,2-Trichloroethane	ND	20	229688	11/20/15
2-Hexanone	ND	400	229688	11/20/15
1,3-Dichloropropane	ND	20	229688	11/20/15
Tetrachloroethene	ND	20	229688	11/20/15
Dibromochloromethane	ND	20	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PURGE-1-NS	Diln Fac:	40.00
Lab ID:	271668-003	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	20	229688	11/20/15
Chlorobenzene	ND	20	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	20	229688	11/20/15
Ethylbenzene	ND	20	229688	11/20/15
m,p-Xylenes	ND	20	229688	11/20/15
o-Xylene	ND	20	229688	11/20/15
Styrene	ND	20	229688	11/20/15
Bromoform	ND	40	229688	11/20/15
Isopropylbenzene	ND	20	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	20	229688	11/20/15
1,2,3-Trichloropropane	ND	20	229688	11/20/15
Propylbenzene	ND	20	229688	11/20/15
Bromobenzene	ND	20	229688	11/20/15
1,3,5-Trimethylbenzene	ND	20	229688	11/20/15
2-Chlorotoluene	ND	20	229688	11/20/15
4-Chlorotoluene	ND	20	229688	11/20/15
tert-Butylbenzene	ND	20	229688	11/20/15
1,2,4-Trimethylbenzene	ND	20	229688	11/20/15
sec-Butylbenzene	ND	20	229688	11/20/15
para-Isopropyl Toluene	ND	20	229688	11/20/15
1,3-Dichlorobenzene	ND	20	229688	11/20/15
1,4-Dichlorobenzene	ND	20	229688	11/20/15
n-Butylbenzene	ND	20	229688	11/20/15
1,2-Dichlorobenzene	ND	20	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	80	229688	11/20/15
1,2,4-Trichlorobenzene	ND	20	229688	11/20/15
Hexachlorobutadiene	ND	80	229688	11/20/15
Naphthalene	ND	80	229708	11/21/15
1,2,3-Trichlorobenzene	ND	20	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	109	80-128	229688	11/20/15
1,2-Dichloroethane-d4	125	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	103	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PURGE-2-NS	Diln Fac:	33.33
Lab ID:	271668-004	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	33	229688	11/20/15
Chloromethane	ND	33	229688	11/20/15
Vinyl Chloride	ND	17	229688	11/20/15
Bromomethane	ND	33	229688	11/20/15
Chloroethane	ND	33	229688	11/20/15
Trichlorofluoromethane	ND	33	229688	11/20/15
Acetone	ND	330	229708	11/21/15
Freon 113	ND	67	229688	11/20/15
1,1-Dichloroethene	ND	17	229688	11/20/15
Methylene Chloride	ND	330	229688	11/20/15
Carbon Disulfide	ND	17	229708	11/21/15
MTBE	ND	17	229688	11/20/15
trans-1,2-Dichloroethene	ND	17	229688	11/20/15
Vinyl Acetate	ND	330	229688	11/20/15
1,1-Dichloroethane	ND	17	229688	11/20/15
2-Butanone	ND	330	229688	11/20/15
cis-1,2-Dichloroethene	ND	17	229688	11/20/15
2,2-Dichloropropane	ND	17	229688	11/20/15
Chloroform	ND	17	229688	11/20/15
Bromochloromethane	ND	17	229688	11/20/15
1,1,1-Trichloroethane	ND	17	229688	11/20/15
1,1-Dichloropropene	ND	17	229688	11/20/15
Carbon Tetrachloride	ND	17	229688	11/20/15
1,2-Dichloroethane	ND	17	229688	11/20/15
Benzene	ND	17	229688	11/20/15
Trichloroethene	ND	17	229688	11/20/15
1,2-Dichloropropane	ND	17	229688	11/20/15
Bromodichloromethane	ND	17	229688	11/20/15
Dibromomethane	ND	17	229688	11/20/15
4-Methyl-2-Pentanone	ND	330	229688	11/20/15
cis-1,3-Dichloropropene	ND	17	229688	11/20/15
Toluene	ND	17	229688	11/20/15
trans-1,3-Dichloropropene	ND	17	229688	11/20/15
1,1,2-Trichloroethane	ND	17	229688	11/20/15
2-Hexanone	ND	330	229688	11/20/15
1,3-Dichloropropane	ND	17	229688	11/20/15
Tetrachloroethene	ND	17	229688	11/20/15
Dibromochloromethane	ND	17	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	PURGE-2-NS	Diln Fac:	33.33
Lab ID:	271668-004	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	17	229688	11/20/15
Chlorobenzene	ND	17	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	17	229688	11/20/15
Ethylbenzene	ND	17	229688	11/20/15
m,p-Xylenes	ND	17	229688	11/20/15
o-Xylene	ND	17	229688	11/20/15
Styrene	ND	17	229688	11/20/15
Bromoform	ND	33	229688	11/20/15
Isopropylbenzene	ND	17	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	17	229688	11/20/15
1,2,3-Trichloropropane	ND	17	229688	11/20/15
Propylbenzene	ND	17	229688	11/20/15
Bromobenzene	ND	17	229688	11/20/15
1,3,5-Trimethylbenzene	ND	17	229688	11/20/15
2-Chlorotoluene	ND	17	229688	11/20/15
4-Chlorotoluene	ND	17	229688	11/20/15
tert-Butylbenzene	ND	17	229688	11/20/15
1,2,4-Trimethylbenzene	ND	17	229688	11/20/15
sec-Butylbenzene	ND	17	229688	11/20/15
para-Isopropyl Toluene	ND	17	229688	11/20/15
1,3-Dichlorobenzene	ND	17	229688	11/20/15
1,4-Dichlorobenzene	ND	17	229688	11/20/15
n-Butylbenzene	ND	17	229688	11/20/15
1,2-Dichlorobenzene	ND	17	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	67	229688	11/20/15
1,2,4-Trichlorobenzene	ND	17	229688	11/20/15
Hexachlorobutadiene	ND	67	229688	11/20/15
Naphthalene	ND	67	229708	11/21/15
1,2,3-Trichlorobenzene	ND	17	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	111	80-128	229688	11/20/15
1,2-Dichloroethane-d4	123	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	104	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-02-16-NS	Diln Fac:	1.000
Lab ID:	271668-005	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-02-16-NS	Diln Fac:	1.000
Lab ID:	271668-005	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	109	80-128	229688	11/20/15
1,2-Dichloroethane-d4	118	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	103	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-02-24-NS	Diln Fac:	1.000
Lab ID:	271668-006	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	3.8	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-02-24-NS	Diln Fac:	1.000
Lab ID:	271668-006	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	109	80-128	229688	11/20/15
1,2-Dichloroethane-d4	117	75-139	229688	11/20/15
Toluene-d8	111	80-120	229688	11/20/15
Bromofluorobenzene	103	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-04-16-NS	Diln Fac:	1.000
Lab ID:	271668-007	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-04-16-NS	Diln Fac:	1.000
Lab ID:	271668-007	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	109	80-128	229688	11/20/15
1,2-Dichloroethane-d4	118	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	104	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-04-28-NS	Diln Fac:	1.000
Lab ID:	271668-008	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-04-28-NS	Diln Fac:	1.000
Lab ID:	271668-008	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	110	80-128	229688	11/20/15
1,2-Dichloroethane-d4	117	75-139	229688	11/20/15
Toluene-d8	111	80-120	229688	11/20/15
Bromofluorobenzene	105	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-08-14-NS	Diln Fac:	1.000
Lab ID:	271668-009	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	1.8	0.5	229708	11/21/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-08-14-NS	Diln Fac:	1.000
Lab ID:	271668-009	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	106	80-128	229688	11/20/15
1,2-Dichloroethane-d4	121	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	102	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-08-28-NS	Diln Fac:	1.000
Lab ID:	271668-010	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	1.1	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-08-28-NS	Diln Fac:	1.000
Lab ID:	271668-010	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	108	80-128	229688	11/20/15
1,2-Dichloroethane-d4	123	75-139	229688	11/20/15
Toluene-d8	111	80-120	229688	11/20/15
Bromofluorobenzene	102	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-20-32-NS	Diln Fac:	1.000
Lab ID:	271668-011	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-20-32-NS	Diln Fac:	1.000
Lab ID:	271668-011	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	112	80-128	229688	11/20/15
1,2-Dichloroethane-d4	123	75-139	229688	11/20/15
Toluene-d8	111	80-120	229688	11/20/15
Bromofluorobenzene	104	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-20-FD	Diln Fac:	1.000
Lab ID:	271668-012	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229752	11/24/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229752	11/24/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-20-FD	Diln Fac:	1.000
Lab ID:	271668-012	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229752	11/24/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	108	80-128	229688	11/20/15
1,2-Dichloroethane-d4	122	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	102	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit



### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-20-NS	Diln Fac:	1.000
Lab ID:	271668-013	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-20-NS	Diln Fac:	1.000
Lab ID:	271668-013	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	107	80-128	229688	11/20/15
1,2-Dichloroethane-d4	126	75-139	229688	11/20/15
Toluene-d8	112	80-120	229688	11/20/15
Bromofluorobenzene	102	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-32-NS	Diln Fac:	1.000
Lab ID:	271668-014	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	3.0	0.5	229708	11/21/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-21-32-NS	Diln Fac:	1.000
Lab ID:	271668-014	Sampled:	11/12/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	112	80-128	229688	11/20/15
1,2-Dichloroethane-d4	124	75-139	229688	11/20/15
Toluene-d8	110	80-120	229688	11/20/15
Bromofluorobenzene	104	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-22-20-NS	Diln Fac:	1.000
Lab ID:	271668-015	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	1.0	229688	11/20/15
Chloromethane	ND	1.0	229688	11/20/15
Vinyl Chloride	ND	0.5	229688	11/20/15
Bromomethane	ND	1.0	229688	11/20/15
Chloroethane	ND	1.0	229688	11/20/15
Trichlorofluoromethane	ND	1.0	229688	11/20/15
Acetone	ND	10	229708	11/21/15
Freon 113	ND	2.0	229688	11/20/15
1,1-Dichloroethene	ND	0.5	229688	11/20/15
Methylene Chloride	ND	10	229688	11/20/15
Carbon Disulfide	ND	0.5	229708	11/21/15
MTBE	ND	0.5	229688	11/20/15
trans-1,2-Dichloroethene	ND	0.5	229688	11/20/15
Vinyl Acetate	ND	10	229688	11/20/15
1,1-Dichloroethane	ND	0.5	229688	11/20/15
2-Butanone	ND	10	229688	11/20/15
cis-1,2-Dichloroethene	ND	0.5	229688	11/20/15
2,2-Dichloropropane	ND	0.5	229688	11/20/15
Chloroform	ND	0.5	229688	11/20/15
Bromochloromethane	ND	0.5	229688	11/20/15
1,1,1-Trichloroethane	ND	0.5	229688	11/20/15
1,1-Dichloropropene	ND	0.5	229688	11/20/15
Carbon Tetrachloride	ND	0.5	229688	11/20/15
1,2-Dichloroethane	ND	0.5	229688	11/20/15
Benzene	ND	0.5	229688	11/20/15
Trichloroethene	ND	0.5	229688	11/20/15
1,2-Dichloropropane	ND	0.5	229688	11/20/15
Bromodichloromethane	ND	0.5	229688	11/20/15
Dibromomethane	ND	0.5	229688	11/20/15
4-Methyl-2-Pentanone	ND	10	229688	11/20/15
cis-1,3-Dichloropropene	ND	0.5	229688	11/20/15
Toluene	ND	0.5	229688	11/20/15
trans-1,3-Dichloropropene	ND	0.5	229688	11/20/15
1,1,2-Trichloroethane	ND	0.5	229688	11/20/15
2-Hexanone	ND	10	229688	11/20/15
1,3-Dichloropropane	ND	0.5	229688	11/20/15
Tetrachloroethene	ND	0.5	229688	11/20/15
Dibromochloromethane	ND	0.5	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-22-20-NS	Diln Fac:	1.000
Lab ID:	271668-015	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	0.5	229688	11/20/15
Chlorobenzene	ND	0.5	229688	11/20/15
1,1,1,2-Tetrachloroethane	ND	0.5	229688	11/20/15
Ethylbenzene	ND	0.5	229688	11/20/15
m,p-Xylenes	ND	0.5	229688	11/20/15
o-Xylene	ND	0.5	229688	11/20/15
Styrene	ND	0.5	229688	11/20/15
Bromoform	ND	1.0	229688	11/20/15
Isopropylbenzene	ND	0.5	229688	11/20/15
1,1,2,2-Tetrachloroethane	ND	0.5	229688	11/20/15
1,2,3-Trichloropropane	ND	0.5	229688	11/20/15
Propylbenzene	ND	0.5	229688	11/20/15
Bromobenzene	ND	0.5	229688	11/20/15
1,3,5-Trimethylbenzene	ND	0.5	229688	11/20/15
2-Chlorotoluene	ND	0.5	229688	11/20/15
4-Chlorotoluene	ND	0.5	229688	11/20/15
tert-Butylbenzene	ND	0.5	229688	11/20/15
1,2,4-Trimethylbenzene	ND	0.5	229688	11/20/15
sec-Butylbenzene	ND	0.5	229688	11/20/15
para-Isopropyl Toluene	ND	0.5	229688	11/20/15
1,3-Dichlorobenzene	ND	0.5	229688	11/20/15
1,4-Dichlorobenzene	ND	0.5	229688	11/20/15
n-Butylbenzene	ND	0.5	229688	11/20/15
1,2-Dichlorobenzene	ND	0.5	229688	11/20/15
1,2-Dibromo-3-Chloropropane	ND	2.0	229688	11/20/15
1,2,4-Trichlorobenzene	ND	0.5	229688	11/20/15
Hexachlorobutadiene	ND	2.0	229688	11/20/15
Naphthalene	ND	2.0	229708	11/21/15
1,2,3-Trichlorobenzene	ND	0.5	229688	11/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	110	80-128	229688	11/20/15
1,2-Dichloroethane-d4	125	75-139	229688	11/20/15
Toluene-d8	116	80-120	229688	11/20/15
Bromofluorobenzene	102	80-120	229688	11/20/15

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-22-32-NS	Batch#:	229811
Lab ID:	271668-016	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L	Analyzed:	11/24/15
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	SB-22-32-NS	Batch#:	229811
Lab ID:	271668-016	Sampled:	11/13/15
Matrix:	Water	Received:	11/16/15
Units:	ug/L	Analyzed:	11/24/15
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected

RL= Reporting Limit





**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813849	Batch#:	229688
Matrix:	Water	Analyzed:	11/20/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813849	Batch#:	229688
Matrix:	Water	Analyzed:	11/20/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	118	75-139
Toluene-d8	111	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	229708
Units:	ug/L	Analyzed:	11/21/15
Diln Fac:	1.000		

Type: BS Lab ID: QC813920

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	28.62	114	66-135
Benzene	25.00	31.26	125 *	80-123
Trichloroethene	25.00	28.79	115	80-123
Toluene	25.00	30.54	122 *	80-121
Chlorobenzene	25.00	28.83	115	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	130	75-139
Toluene-d8	109	80-120
Bromofluorobenzene	104	80-120

Type: BSD Lab ID: QC813940

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	26.61	106	66-135	7	24
Benzene	25.00	29.42	118	80-123	6	20
Trichloroethene	25.00	27.47	110	80-123	5	20
Toluene	25.00	29.23	117	80-121	4	20
Chlorobenzene	25.00	27.98	112	80-123	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	127	75-139
Toluene-d8	110	80-120
Bromofluorobenzene	102	80-120

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813921	Batch#:	229708
Matrix:	Water	Analyzed:	11/21/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813921	Batch#:	229708
Matrix:	Water	Analyzed:	11/21/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	131	75-139
Toluene-d8	107	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC814115	Batch#:	229752
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.80	102	66-135
Benzene	12.50	13.37	107	80-123
Trichloroethene	12.50	13.42	107	80-123
Toluene	12.50	12.94	104	80-121
Chlorobenzene	12.50	13.22	106	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	109	80-120
Bromofluorobenzene	99	80-120

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC814116	Batch#:	229752
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit



**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC814116	Batch#:	229752
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	116	80-128
1,2-Dichloroethane-d4	110	75-139
Toluene-d8	105	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC814353	Batch#:	229811
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.04	92	66-135
Benzene	25.00	23.48	94	80-123
Trichloroethene	25.00	23.72	95	80-123
Toluene	25.00	25.36	101	80-121
Chlorobenzene	25.00	25.10	100	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	106	80-120
Bromofluorobenzene	106	80-120

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC814354	Batch#:	229811
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC814354	Batch#:	229811
Matrix:	Water	Analyzed:	11/24/15
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	87	75-139
Toluene-d8	107	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	271802-009	Batch#:	229811
Matrix:	Water	Sampled:	11/17/15
Units:	ug/L	Received:	11/19/15

Type: MS Analyzed: 11/24/15  
 Lab ID: QC814355

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1000	25.00	28.70	115	73-129
Benzene	<0.1000	25.00	29.96	120	80-120
Trichloroethene	2.282	25.00	31.89	118	73-123
Toluene	<0.1000	25.00	29.48	118	80-120
Chlorobenzene	<0.1000	25.00	29.69	119	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	97	80-120

Type: MSD Analyzed: 11/25/15  
 Lab ID: QC814356

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	26.98	108	73-129	6	25
Benzene	25.00	26.77	107	80-120	11	20
Trichloroethene	25.00	29.29	108	73-123	8	20
Toluene	25.00	26.99	108	80-120	9	21
Chlorobenzene	25.00	27.84	111	80-120	6	24

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	96	80-120

RPD= Relative Percent Difference

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	229752
MSS Lab ID:	271732-005	Sampled:	11/12/15
Matrix:	Water	Received:	11/17/15
Units:	ug/L	Analyzed:	11/24/15
Diln Fac:	1.000		

Type: MS Lab ID: QC814385

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1117	12.50	10.79	86	73-129
Benzene	<0.1000	12.50	12.69	102	80-120
Trichloroethene	57.40	12.50	62.22	39 NM	73-123
Toluene	<0.1000	12.50	12.21	98	80-120
Chlorobenzene	<0.1000	12.50	12.76	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-128
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	109	80-120
Bromofluorobenzene	97	80-120

Type: MSD Lab ID: QC814386

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.96	96	73-129	10	25
Benzene	12.50	13.53	108	80-120	6	20
Trichloroethene	12.50	64.19	54 NM	73-123	3	20
Toluene	12.50	12.95	104	80-120	6	21
Chlorobenzene	12.50	13.63	109	80-120	7	24

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	109	80-120
Bromofluorobenzene	99	80-120

NM= Not Meaningful: Sample concentration > 4X spike concentration  
 RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0  
Seqnum : 415365033009 File : bia09 Time : 10-SEP-2015 19:26

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	25024	20.15	
75	30% - 60% of mass 95	55152	44.41	
95		124200	100.00	
96	5% - 9% of mass 95	8526	6.86	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	108741	87.55	
175	5% - 9% of mass 174	7977	7.34	
176	> 95% and < 101% of mass 174	106720	98.14	
177	5% - 9% of mass 176	6821	6.39	

Analyst: KKM Date: 09/15/15 Reviewer: LW Date: 09/16/15



CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA02                      Run Name : BFB                      IDF : 1.0  
Seqnum : 415467153007              File : bkk07                      Time : 20-NOV-2015 13:09

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	9093	21.84	
75	30% - 60% of mass 95	19883	47.76	
95		41627	100.00	
96	5% - 9% of mass 95	2873	6.90	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	37432	89.92	
175	5% - 9% of mass 174	2511	6.71	
176	> 95% and < 101% of mass 174	36213	96.74	
177	5% - 9% of mass 176	2228	6.15	

Analyst: DJA                      Date: 11/23/15                      Reviewer: LW                      Date: 11/23/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03 Run Name : BFB IDF : 1.0  
Seqnum : 425383715013 File : cin13 Time : 23-SEP-2015 20:54

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	57842	20.44	
75	30% - 60% of mass 95	128698	45.47	
95		283029	100.00	
96	5% - 9% of mass 95	19250	6.80	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	213845	75.56	
175	5% - 9% of mass 174	15834	7.40	
176	> 95% and < 101% of mass 174	205610	96.15	
177	5% - 9% of mass 176	13648	6.64	

Analyst: DAR Date: 09/24/15 Reviewer: LW Date: 09/29/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : BFB                      IDF : 1.0  
Seqnum : 425468732002              File : ck102                      Time : 21-NOV-2015 12:55

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	38064	19.74	
75	30% - 60% of mass 95	89978	46.67	
95		192789	100.00	
96	5% - 9% of mass 95	12859	6.67	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	144552	74.98	
175	5% - 9% of mass 174	10263	7.10	
176	> 95% and < 101% of mass 174	139597	96.57	
177	5% - 9% of mass 176	8886	6.37	

Analyst: DAR                      Date: 11/23/15                      Reviewer: LW                      Date: 11/23/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : BFB                      IDF : 1.0  
Seqnum : 425472906006              File : cko06                      Time : 24-NOV-2015 13:21

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	42666	19.92	
75	30% - 60% of mass 95	98861	46.16	
95		214165	100.00	
96	5% - 9% of mass 95	14276	6.67	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	182848	85.38	
175	5% - 9% of mass 174	13490	7.38	
176	> 95% and < 101% of mass 174	177493	97.07	
177	5% - 9% of mass 176	11937	6.73	

Analyst: DAR                      Date: 11/24/15                      Reviewer: LW                      Date: 11/25/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : BFB                      IDF : 1.0  
Seqnum : 955422499012              File : njk12                      Time : 20-OCT-2015 13:29

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	6135	25.97	
75	30% - 60% of mass 95	11611	49.16	
95		23619	100.00	
96	5% - 9% of mass 95	1771	7.50	
173	< 2% of mass 174	181	1.03	
174	> 50% and < 100% of mass 95	17576	74.41	
175	5% - 9% of mass 174	1199	6.82	
176	> 95% and < 101% of mass 174	17083	97.20	
177	5% - 9% of mass 176	1070	6.26	

Analyst: MCT                      Date: 10/21/15                      Reviewer: LW                      Date: 10/22/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA14 Run Name : BFB IDF : 1.0  
Seqnum : 955423728005 File : njl05 Time : 21-OCT-2015 10:43

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	9284	26.58	
75	30% - 60% of mass 95	17331	49.61	
95		34931	100.00	
96	5% - 9% of mass 95	2234	6.40	
173	< 2% of mass 174	246	1.02	
174	> 50% and < 100% of mass 95	24045	68.84	
175	5% - 9% of mass 174	1674	6.96	
176	> 95% and < 101% of mass 174	23349	97.11	
177	5% - 9% of mass 176	1688	7.23	

MCT: 10/21/15 \* DJA: 10/22/15 LW: 10/23/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA14 Run Name : BFB IDF : 1.0  
Seqnum : 955472935012 File : nk012 Time : 24-NOV-2015 16:24

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	2000	21.65	
75	30% - 60% of mass 95	4913	53.18	
95		9239	100.00	
96	5% - 9% of mass 95	573	6.20	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	6922	74.92	
175	5% - 9% of mass 174	607	8.77	
176	> 95% and < 101% of mass 174	6590	95.20	
177	5% - 9% of mass 176	555	8.42	

Analyst: DJA Date: 11/25/15 Reviewer: LW Date: 11/25/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 MSVOA Water: EPA 8260B

Inst : MSVOA02  
 Calnum : 415365033001  
 Units : ug/L

Name : 8260X02W  
 Date : 10-SEP-2015 21:57

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds				
L1	bia14	415365033014		10-SEP-2015 21:57	S27005 (2000000X),	S27823 (2000000X),	S27893 (2000000X),	S26571 (1000000X),	S28020 (5000X)
L2	bia15	415365033015		10-SEP-2015 22:42	S27005 (1000000X),	S27823 (1000000X),	S27893 (1000000X),	S26571 (500000X),	S28020 (5000X)
L3	bia16	415365033016		10-SEP-2015 23:12	S27005 (500000X),	S27823 (250000X),	S27893 (250000X),	S26571 (250000X),	S28020 (5000X)
L4	bia17	415365033017		10-SEP-2015 23:42	S27005 (200000X),	S27823 (100000X),	S27893 (100000X),	S26571 (100000X),	S28020 (5000X)
L5	bia18	415365033018		11-SEP-2015 00:13	S27005 (100000X),	S27823 (50000X),	S27893 (50000X),	S26571 (50000X),	S28020 (5000X)
L6	bia19	415365033019		11-SEP-2015 00:43	S27005 (50000X),	S27823 (25000X),	S27893 (25000X),	S26571 (25000X),	S28020 (5000X)
L7	bia20	415365033020		11-SEP-2015 01:28	S27005 (20000X),	S27823 (10000X),	S27893 (10000X),	S26571 (10000X),	S28020 (5000X)
L8	bia21	415365033021		11-SEP-2015 01:58	S27005 (13333X),	S27823 (6667X),	S27893 (6667X),	S26571 (6667X),	S28020 (5000X)
L9	bia22	415365033022		11-SEP-2015 02:29	S27005 (10000X),	S27823 (5000X),	S27893 (5000X),	S26571 (5000X),	S28020 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	X	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.8075	0.6644	0.6899	0.5523	0.5770	0.5735	0.5784	0.5918	AVRG	R		1.58896		0.6293	14	15	0.05	0.99	
Chloromethane		1.2856m	1.2693	1.1460	1.0841	0.9926	0.9690	0.9395	0.9329	AVRG	R		0.92818		1.0774	13	15	0.10	0.99	
Vinyl Chloride	0.9558	0.8906	0.8161	0.7794	0.7077	0.6595	0.6711	0.6624	0.6600	AVRG	R		1.32302		0.7558	15	15	0.05	0.99	
Bromomethane		0.2960	0.3968	0.3498	0.3625	0.3414	0.3833	0.3841	0.4000	AVRG	R		2.74543		0.3642	10	15	0.05	0.99	
Chloroethane		0.4390m	0.4417m	0.4778	0.4445	0.3998	0.3987	0.3931	0.3932	AVRG	R		2.36142		0.4235	7	15	0.05	0.99	
Trichlorofluoromethane		0.8029	0.7636	0.7779	0.6564	0.6616	0.6909	0.7117	0.7515	AVRG	R		1.37540		0.7271	8	15	0.05	0.99	
Acetone			0.3439	0.3191	0.2806	0.2970	0.2954	0.3031	0.3056	AVRG	R		3.26371		0.3064	7	15	0.05	0.99	
Freon 113		0.4810	0.4385	0.4536	0.4139	0.4261	0.5121	0.4800	0.4969	AVRG	R		2.16090		0.4628	8	15	0.05	0.99	
1,1-Dichloroethene		0.5137m	0.4717	0.4889	0.4463	0.4222	0.4491	0.4280	0.4416	AVRG	R		2.18485		0.4577	7	15	0.05	0.99	
Methylene Chloride		1.0259	0.8690	0.8033	0.7808	0.7262	0.7399	0.7256	0.7304	AVRG	R		1.24978		0.8001	13	15	0.05	0.99	
Carbon Disulfide		2.2760	2.0809	2.1257	1.9542	1.9388	2.0011	1.9278	1.9837	AVRG	R		0.49115		2.0360	6	15	0.05	0.99	
MTBE		1.5936	1.7224	1.5933	1.5828	1.5463	1.6212	1.7200	1.8096	AVRG	R		0.60656		1.6486	6	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5452m	0.5889	0.5832	0.5629	0.5396	0.5540	0.5261	0.5352	AVRG	R		1.80381		0.5544	4	15	0.05	0.99	
Vinyl Acetate		2.0955	1.9768	1.8991	1.8822	1.9290	1.9661	2.0954	2.1581	AVRG	R		0.49993		2.0003	5	15	0.05	0.99	
1,1-Dichloroethane		1.3862	1.2416	1.1709	1.1334	1.0776	1.1049	1.0709	1.0907	AVRG	R		0.86242		1.1595	9	15	0.10	0.99	
2-Butanone			0.5461	0.4741	0.4668	0.4761	0.4754	0.4960	0.4978	AVRG	R		2.03952		0.4903	6	15	0.05	0.99	
2,2-Dichloropropane		0.5873	0.6073	0.5774	0.5436	0.5548	0.6168	0.6056	0.5991	AVRG	R		1.70506		0.5865	4	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6485m	0.7433	0.6778	0.6482	0.6360	0.6440	0.6202	0.6262	AVRG	R		1.52547		0.6555	6	15	0.05	0.99	
Chloroform		1.2559	1.1078	1.1290	1.0572	1.0397	1.0469	0.9942	1.0134	AVRG	R		0.92550		1.0805	8	15	0.05	0.99	
Bromochloromethane		0.3905	0.3738	0.3796	0.3660	0.3703	0.3731	0.3820	0.3880	AVRG	R		2.64619		0.3779	2	15	0.05	0.99	
1,1,1-Trichloroethane		0.9686	0.7706	0.7486	0.7067	0.6867	0.7835	0.8160	0.8473	AVRG	R		1.26420		0.7910	11	15	0.05	0.99	
1,1-Dichloropropene		0.5332	0.4934	0.5038	0.4727	0.4592	0.4824	0.4917	0.5182	AVRG	R		2.02295		0.4943	5	15	0.05	0.99	
Carbon Tetrachloride		0.4369	0.3746	0.3764	0.3506	0.3455	0.3826	0.4095	0.4289	AVRG	R		2.57646		0.3881	9	15	0.05	0.99	
1,2-Dichloroethane		0.6833	0.5407	0.5316	0.4946	0.5058	0.5095	0.4973	0.4901	AVRG	R		1.88102		0.5316	12	15	0.05	0.99	



Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	X	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.7013	1.4907	1.5084	1.4476	1.4319	1.4659	1.4742	1.4756	AVRG	R		0.66691		1.4995	6	15	0.05	0.99	
Trichloroethene		0.4474	0.3803	0.3867	0.3702	0.3655	0.3721	0.3771	0.3908	AVRG	R		2.58895		0.3863	7	15	0.05	0.99	
1,2-Dichloropropane		0.5099	0.4735	0.4679	0.4548	0.4461	0.4479	0.4566	0.4707	AVRG	R		2.14632		0.4659	4	15	0.05	0.99	
Bromodichloromethane		0.5346	0.4949m	0.5064	0.5055	0.4971	0.5062	0.5385	0.5496	AVRG	R		1.93575		0.5166	4	15	0.05	0.99	
Dibromomethane		0.3075	0.3097m	0.3295	0.3166	0.3184	0.3030	0.2997	0.2902	AVRG	R		3.23293		0.3093	4	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6943	0.6842	0.6417	0.6740	0.6438	0.6809	0.6659	AVRG	R		1.49420		0.6693	3	15	0.05	0.99	
cis-1,3-Dichloropropene		0.7404	0.6713	0.6507	0.6419	0.6370	0.6308	0.6458	0.6525	AVRG	R		1.51792		0.6588	5	15	0.05	0.99	
Toluene		1.7548	1.6632	1.6424	1.5870	1.5614	1.5931	1.5573	1.5673	AVRG	R		0.61889		1.6158	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.6529	0.5994	0.5886	0.5771	0.5735	0.5871	0.5828	0.6032	AVRG	R		1.67904		0.5956	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2108m	0.2156m	0.2160m	0.2196	0.2138	0.2163	0.2176	0.2187	AVRG	R		4.62836		0.2161	1	15	0.05	0.99	
2-Hexanone			0.4655	0.4734	0.4459	0.4731	0.4530	0.4770	0.4776	AVRG	R		2.14364		0.4665	3	15	0.05	0.99	
1,3-Dichloropropane		0.6696	0.6602	0.6458	0.6382	0.6391	0.6463	0.6459	0.6651	AVRG	R		1.53542		0.6513	2	15	0.05	0.99	
Tetrachloroethene		0.4578	0.4032	0.4154	0.3876	0.3752	0.3989	0.3862	0.3972	AVRG	R		2.48327		0.4027	6	15	0.05	0.99	
Dibromochloromethane		0.4736	0.4633	0.4589	0.4577	0.4608	0.4694	0.4677	0.4772	AVRG	R		2.14558		0.4661	2	15	0.05	0.99	
1,2-Dibromoethane		0.5267	0.4787	0.4528	0.4418	0.4507	0.4524	0.4507	0.4549	AVRG	R		2.15701		0.4636	6	15	0.05	0.99	
Chlorobenzene		1.2388	1.1279	1.1156	1.0681	1.0651	1.0887	1.0607	1.0613	AVRG	R		0.90638		1.1033	5	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.4032	0.3832	0.3716	0.3597	0.3593	0.3635	0.3526	0.3573	AVRG	R		2.71160		0.3688	5	15	0.05	0.99	
Ethylbenzene		1.9347	1.8298	1.8125	1.7471	1.6940	1.7864	1.7310	1.7266	AVRG	R		0.56093		1.7827	4	15	0.05	0.99	
m,p-Xylenes	0.7863	0.7462	0.6715	0.6657	0.6415	0.6256	0.6483	0.6244	0.6206	AVRG	R		1.49251		0.6700	9	15	0.05	0.99	
o-Xylene		0.7236	0.6899	0.6760	0.6571	0.6380	0.6645	0.6368	0.6366	AVRG	R		1.50310		0.6653	5	15	0.05	0.99	
Styrene		1.2525	1.1974	1.1783	1.1594	1.1470	1.1798	1.1415	1.1393	AVRG	R		0.85150		1.1744	3	15	0.05	0.99	
Bromoform		0.4906	0.3788	0.3657	0.3590	0.3596	0.3667	0.3644	0.3651	AVRG	R		2.62313		0.3812	12	15	0.10	0.99	
Isopropylbenzene		3.7452	3.2976	3.2743	3.1857	2.9036	3.1731	3.0639	3.1113	AVRG	R		0.31062		3.2193	8	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.2854	1.2508	1.2429	1.2421	1.2143	1.2132	1.2188	1.2237	AVRG	R		0.80880		1.2364	2	15	0.30	0.99	
1,2,3-Trichloropropane		1.0814	0.9467m	0.9278m	0.9116m	0.8857m	0.9006m	0.8879m	0.9058m	AVRG	R		1.07421		0.9309	7	15	0.05	0.99	
Propylbenzene		4.0612	3.8385	3.7856	3.7359	3.4757	3.8113	3.6821	3.7108	AVRG	R		0.26577		3.7626	4	15	0.05	0.99	
Bromobenzene		1.0696	1.0072	1.0216	1.0049	0.9538	0.9705	0.9557	0.9536	AVRG	R		1.00796		0.9921	4	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.6552	2.3694	2.3319	2.2855	2.1459	2.3753	2.3153	2.3383	AVRG	R		0.42515		2.3521	6	15	0.05	0.99	
2-Chlorotoluene		2.9240	2.7543	2.6827	2.6245	2.4588	2.5614	2.4959	2.5016	AVRG	R		0.38089		2.6254	6	15	0.05	0.99	
4-Chlorotoluene		2.8057	2.4802	2.4266	2.4231	2.3072	2.4105	2.3588	2.3773	AVRG	R		0.40838		2.4487	6	15	0.05	0.99	
tert-Butylbenzene		2.4282	2.0505	2.0843	1.9908	1.8625	2.0852	2.0288	2.0627	AVRG	R		0.48212		2.0742	8	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.3875	2.0236	2.0896	2.1095	2.0259	2.3118	2.2726	2.3161	AVRG	R		0.45619		2.1921	7	15	0.05	0.99	
sec-Butylbenzene		3.2839	2.8800	2.9795	2.8861	2.7066	3.1205	3.0438	3.1214	AVRG	R		0.33303		3.0027	6	15	0.05	0.99	
para-Isopropyl Toluene		2.4219	2.0418	2.1063	2.1058	2.0140	2.3870	2.3386	2.4080	AVRG	R		0.44885		2.2279	8	15	0.05	0.99	
1,3-Dichlorobenzene		1.8389	1.6785	1.6442	1.6271	1.4667	1.6083	1.5819	1.5933	AVRG	R		0.61355		1.6298	6	15	0.05	0.99	
1,4-Dichlorobenzene		1.8119	1.6886	1.6318	1.6182	1.5606	1.6281	1.6028	1.6069	AVRG	R		0.60840		1.6436	5	15	0.05	0.99	
n-Butylbenzene		1.7231	1.5327	1.6837	1.6608	1.6416	2.0248	1.9991	2.0690	AVRG	R		0.55809		1.7918	12	15	0.05	0.99	
1,2-Dichlorobenzene		1.7214	1.6637	1.6229	1.6102	1.5624	1.6005	1.5768	1.5835	AVRG	R		0.61817		1.6177	3	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.2212	0.2333	0.2365	0.2247	0.2229	0.2286	0.2294	AVRG	R		4.38449		0.2281	2	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.5189	0.5567	0.6139	0.6253	0.6490	0.7562	0.7515	0.7693	AVRG	R		1.52651		0.6551	15	15	0.05	0.99	
Hexachlorobutadiene		0.3488	0.3308	0.3539	0.3440	0.3240	0.3802	0.3664	0.3746	AVRG	R		2.83421		0.3528	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	X	a0	a1	a2	Avg	r <sup>2</sup> %RSD	Max %RSD	Min RF	Min r <sup>2</sup>	Flg
Naphthalene		1.7403	1.6022	1.6760	1.6848	1.7469	1.8386	1.8907	1.8798	AVRG	R		0.56901		1.7574	6	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.4403	0.4771	0.5615	0.5827	0.6196	0.7078			QUAD	A	-0.1226	0.56822	0.002841	0.5648	1.000	15	0.05	0.99	
Dibromofluoromethane	0.5360	0.5259	0.5350	0.5339	0.5318	0.5299	0.5276	0.5170	0.5172	AVRG	R		1.89299		0.5283	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3356	0.3318	0.3331	0.3355	0.3292	0.3333	0.3189	0.3192	0.3052	AVRG	R		3.05941		0.3269	3	15	0.05	0.99	
Toluene-d8	1.1786	1.1764	1.1747	1.1844	1.1710	1.1804	1.1796	1.1809	1.1862	AVRG	R		0.84808		1.1791	0	15	0.05	0.99	
Bromofluorobenzene	1.0211	1.0213	0.9992	1.0075	1.0185	0.9880	0.9802	0.9776	0.9924	AVRG	R		0.99935		1.0006	2	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	28	2.0000	6	5.0000	10	10.000	-12	20.000	-8	50.000	-9	74.996	-8	100.00	-6
Chloromethane			1.0000	19	2.0000	18	5.0000	6	10.000	1	20.000	-8	50.000	-10	74.996	-13	100.00	-13
Vinyl Chloride	0.5000	26	1.0000	18	2.0000	8	5.0000	3	10.000	-6	20.000	-13	50.000	-11	74.996	-12	100.00	-13
Bromomethane			1.0000	-19	2.0000	9	5.0000	-4	10.000	0	20.000	-6	50.000	5	74.996	5	100.00	10
Chloroethane			1.0000	4	2.0000	4	5.0000	13	10.000	5	20.000	-6	50.000	-6	74.996	-7	100.00	-7
Trichlorofluoromethane			1.0000	10	2.0000	5	5.0000	7	10.000	-10	20.000	-9	50.000	-5	74.996	-2	100.00	3
Acetone					2.0000	12	5.0000	4	10.000	-8	20.000	-3	50.000	-4	74.996	-1	100.00	0
Freon 113			0.5000	4	2.0000	-5	5.0000	-2	10.000	-11	20.000	-8	50.000	11	74.996	4	100.00	7
1,1-Dichloroethene			0.5000	12	2.0000	3	5.0000	7	10.000	-2	20.000	-8	50.000	-2	74.996	-6	100.00	-4
Methylene Chloride			0.5000	28	2.0000	9	5.0000	0	10.000	-2	20.000	-9	50.000	-8	74.996	-9	100.00	-9
Carbon Disulfide			0.5000	12	2.0000	2	5.0000	4	10.000	-4	20.000	-5	50.000	-2	74.996	-5	100.00	-3
MTBE			0.5000	-3	2.0000	4	5.0000	-3	10.000	-4	20.000	-6	50.000	-2	74.996	4	100.00	10
trans-1,2-Dichloroethene			0.5000	-2	2.0000	6	5.0000	5	10.000	2	20.000	-3	50.000	0	74.996	-5	100.00	-3
Vinyl Acetate			0.5000	5	2.0000	-1	5.0000	-5	10.000	-6	20.000	-4	50.000	-2	74.996	5	100.00	8
1,1-Dichloroethane			0.5000	20	2.0000	7	5.0000	1	10.000	-2	20.000	-7	50.000	-5	74.996	-8	100.00	-6
2-Butanone					2.0000	11	5.0000	-3	10.000	-5	20.000	-3	50.000	-3	74.996	1	100.00	2
2,2-Dichloropropane			0.5000	0	2.0000	4	5.0000	-2	10.000	-7	20.000	-5	50.000	5	74.996	3	100.00	2
cis-1,2-Dichloroethene			0.5000	-1	2.0000	13	5.0000	3	10.000	-1	20.000	-3	50.000	-2	74.996	-5	100.00	-4
Chloroform			0.5000	16	2.0000	3	5.0000	4	10.000	-2	20.000	-4	50.000	-3	74.996	-8	100.00	-6
Bromochloromethane			0.5000	3	2.0000	-1	5.0000	0	10.000	-3	20.000	-2	50.000	-1	74.996	1	100.00	3
1,1,1-Trichloroethane			0.5000	22	2.0000	-3	5.0000	-5	10.000	-11	20.000	-13	50.000	-1	74.996	3	100.00	7
1,1-Dichloropropene			0.5000	8	2.0000	0	5.0000	2	10.000	-4	20.000	-7	50.000	-2	74.996	-1	100.00	5
Carbon Tetrachloride			0.5000	13	2.0000	-3	5.0000	-3	10.000	-10	20.000	-11	50.000	-1	74.996	6	100.00	11
1,2-Dichloroethane			0.5000	29	2.0000	2	5.0000	0	10.000	-7	20.000	-5	50.000	-4	74.996	-6	100.00	-8
Benzene			0.5000	13	2.0000	-1	5.0000	1	10.000	-3	20.000	-5	50.000	-2	74.996	-2	100.00	-2
Trichloroethene			0.5000	16	2.0000	-2	5.0000	0	10.000	-4	20.000	-5	50.000	-4	74.996	-2	100.00	1
1,2-Dichloropropane			0.5000	9	2.0000	2	5.0000	0	10.000	-2	20.000	-4	50.000	-4	74.996	-2	100.00	1
Bromodichloromethane			0.5000	3	2.0000	-4	5.0000	-2	10.000	-2	20.000	-4	50.000	-2	74.996	4	100.00	6
Dibromomethane			0.5000	-1	2.0000	0	5.0000	7	10.000	2	20.000	3	50.000	-2	74.996	-3	100.00	-6
4-Methyl-2-Pentanone					2.0000	4	5.0000	2	10.000	-4	20.000	1	50.000	-4	74.996	2	100.00	-1
cis-1,3-Dichloropropene			0.5000	12	2.0000	2	5.0000	-1	10.000	-3	20.000	-3	50.000	-4	74.996	-2	100.00	-1
Toluene			0.5000	9	2.0000	3	5.0000	2	10.000	-2	20.000	-3	50.000	-1	74.996	-4	100.00	-3
trans-1,3-Dichloropropene			0.5000	10	2.0000	1	5.0000	-1	10.000	-3	20.000	-4	50.000	-1	74.996	-2	100.00	1
1,1,2-Trichloroethane			0.5000	-2	2.0000	0	5.0000	0	10.000	2	20.000	-1	50.000	0	74.996	1	100.00	1
2-Hexanone					2.0000	0	5.0000	1	10.000	-4	20.000	1	50.000	-3	74.996	2	100.00	2
1,3-Dichloropropane			0.5000	3	2.0000	1	5.0000	-1	10.000	-2	20.000	-2	50.000	-1	74.996	-1	100.00	2
Tetrachloroethene			0.5000	14	2.0000	0	5.0000	3	10.000	-4	20.000	-7	50.000	-1	74.996	-4	100.00	-1
Dibromochloromethane			0.5000	2	2.0000	-1	5.0000	-2	10.000	-2	20.000	-1	50.000	1	74.996	0	100.00	2
1,2-Dibromoethane			0.5000	14	2.0000	3	5.0000	-2	10.000	-5	20.000	-3	50.000	-2	74.996	-3	100.00	-2
Chlorobenzene			0.5000	12	2.0000	2	5.0000	1	10.000	-3	20.000	-3	50.000	-1	74.996	-4	100.00	-4
1,1,1,2-Tetrachloroethane			0.5000	9	2.0000	4	5.0000	1	10.000	-2	20.000	-3	50.000	-1	74.996	-4	100.00	-3
Ethylbenzene			0.5000	9	2.0000	3	5.0000	2	10.000	-2	20.000	-5	50.000	0	74.996	-3	100.00	-3

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	17	1.0000	11	4.0000	0	10.000	-1	20.000	-4	40.000	-7	100.00	-3	149.99	-7	200.00	-7
o-Xylene			0.5000	9	2.0000	4	5.0000	2	10.000	-1	20.000	-4	50.000	0	74.996	-4	100.00	-4
Styrene			0.5000	7	2.0000	2	5.0000	0	10.000	-1	20.000	-2	50.000	0	74.996	-3	100.00	-3
Bromoform			0.5000	29	2.0000	-1	5.0000	-4	10.000	-6	20.000	-6	50.000	-4	74.996	-4	100.00	-4
Isopropylbenzene			0.5000	16	2.0000	2	5.0000	2	10.000	-1	20.000	-10	50.000	-1	74.996	-5	100.00	-3
1,1,2,2-Tetrachloroethane			0.5000	4	2.0000	1	5.0000	1	10.000	0	20.000	-2	50.000	-2	74.996	-1	100.00	-1
1,2,3-Trichloropropane			0.5000	16	2.0000	2	5.0000	0	10.000	-2	20.000	-5	50.000	-3	74.996	-5	100.00	-3
Propylbenzene			0.5000	8	2.0000	2	5.0000	1	10.000	-1	20.000	-8	50.000	1	74.996	-2	100.00	-1
Bromobenzene			0.5000	8	2.0000	2	5.0000	3	10.000	1	20.000	-4	50.000	-2	74.996	-4	100.00	-4
1,3,5-Trimethylbenzene			0.5000	13	2.0000	1	5.0000	-1	10.000	-3	20.000	-9	50.000	1	74.996	-2	100.00	-1
2-Chlorotoluene			0.5000	11	2.0000	5	5.0000	2	10.000	0	20.000	-6	50.000	-2	74.996	-5	100.00	-5
4-Chlorotoluene			0.5000	15	2.0000	1	5.0000	-1	10.000	-1	20.000	-6	50.000	-2	74.996	-4	100.00	-3
tert-Butylbenzene			0.5000	17	2.0000	-1	5.0000	0	10.000	-4	20.000	-10	50.000	1	74.996	-2	100.00	-1
1,2,4-Trimethylbenzene			0.5000	9	2.0000	-8	5.0000	-5	10.000	-4	20.000	-8	50.000	5	74.996	4	100.00	6
sec-Butylbenzene			0.5000	9	2.0000	-4	5.0000	-1	10.000	-4	20.000	-10	50.000	4	74.996	1	100.00	4
para-Isopropyl Toluene			0.5000	9	2.0000	-8	5.0000	-5	10.000	-5	20.000	-10	50.000	7	74.996	5	100.00	8
1,3-Dichlorobenzene			0.5000	13	2.0000	3	5.0000	1	10.000	0	20.000	-10	50.000	-1	74.996	-3	100.00	-2
1,4-Dichlorobenzene			0.5000	10	2.0000	3	5.0000	-1	10.000	-2	20.000	-5	50.000	-1	74.996	-2	100.00	-2
n-Butylbenzene			0.5000	-4	2.0000	-14	5.0000	-6	10.000	-7	20.000	-8	50.000	13	74.996	12	100.00	15
1,2-Dichlorobenzene			0.5000	6	2.0000	3	5.0000	0	10.000	0	20.000	-3	50.000	-1	74.996	-3	100.00	-2
1,2-Dibromo-3-Chloropropane					2.0000	-3	5.0000	2	10.000	4	20.000	-1	50.000	-2	74.996	0	100.00	1
1,2,4-Trichlorobenzene			0.5000	-21	2.0000	-15	5.0000	-6	10.000	-5	20.000	-1	50.000	15	74.996	15	100.00	17
Hexachlorobutadiene			0.5000	-1	2.0000	-6	5.0000	0	10.000	-3	20.000	-8	50.000	8	74.996	4	100.00	6
Naphthalene			0.5000	-1	2.0000	-9	5.0000	-5	10.000	-4	20.000	-1	50.000	5	74.996	8	100.00	7
1,2,3-Trichlorobenzene			0.5000	20	2.0000	-6	5.0000	1	10.000	0	20.000	0	50.000	0				
Dibromofluoromethane	50.000	1	50.000	0	50.000	1	50.000	1	50.000	1	50.000	0	50.000	0	50.000	-2	50.000	-2
1,2-Dichloroethane-d4	50.000	3	50.000	1	50.000	2	50.000	3	50.000	1	50.000	2	50.000	-2	50.000	-2	50.000	-7
Toluene-d8	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	1
Bromofluorobenzene	50.000	2	50.000	2	50.000	0	50.000	1	50.000	2	50.000	-1	50.000	-2	50.000	-2	50.000	-1

KKM 09/18/15 [2-Chloroethylvinylether]: Not usable from calibration

KKM 09/18/15 [Chloroethane]: Corrected automatically drawn baseline in multiple levels.

KKM 09/18/15 [Chloromethane]: Corrected automatically drawn baseline in (bia15).

KKM 09/18/15 [1,1-Dichloroethene]: Corrected automatically drawn baseline in (bia15).

KKM 09/18/15 [trans-1,2-Dichloroethene]: Corrected automatically drawn baseline in (bia15).

KKM 09/18/15 [cis-1,2-Dichloroethene]: Corrected automatically drawn baseline in (bia15).

KKM 09/18/15 [1,1,2-Trichloroethane]: Corrected automatically drawn baseline in multiple levels.

KKM 09/18/15 [Dibromomethane]: Corrected automatically drawn baseline in (bia16).

KKM 09/18/15 [Bromodichloromethane]: Corrected automatically drawn baseline in (bia16).

KKM 09/18/15 [1,2,3-Trichloropropane]: Separated from coeluting peak in multiple levels.

Analyst: KKM

Date: 09/18/15

Reviewer: LW

Date: 09/23/15

m=manual integration

X=A: Instrument response = a0 + amount \* a1 + amount^2 \* a2 (invert equation before quantitating); X=R: Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor; QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA02  
Calnum : 415365033001

Name : 8260X02W  
Cal Date : 10-SEP-2015

Type : WATER

ICV 415365033023 (bia23 11-SEP-2015) stds: S27007 (10000X), S28020 (5000X)  
ICV 415365033024 (bia24 11-SEP-2015) stds: S28013 (10000X), S27930 (10000X),  
S28020 (5000X), S27929 (10000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	415365033023	20.00	23.04	ug/L	15	30	
Chloromethane	415365033023	20.00	19.64	ug/L	-2	30	
Vinyl Chloride	415365033023	20.00	19.93	ug/L	0	20	
Bromomethane	415365033023	20.00	18.71	ug/L	-6	30	
Chloroethane	415365033023	20.00	20.60	ug/L	3	30	
Trichlorofluoromethane	415365033023	20.00	21.59	ug/L	8	30	
Acetone	415365033024	25.00	24.61	ug/L	-2	40	
Freon 113	415365033024	25.00	20.02	ug/L	-20	30	
1,1-Dichloroethene	415365033024	25.00	20.89	ug/L	-16	20	
Methylene Chloride	415365033024	25.00	22.43	ug/L	-10	30	
Carbon Disulfide	415365033024	25.00	17.36	ug/L	-31	30	v-
MTBE	415365033024	25.00	24.63	ug/L	-1	30	
trans-1,2-Dichloroethene	415365033024	25.00	21.97	ug/L	-12	30	
Vinyl Acetate	415365033024	25.00	25.36	ug/L	1	40	
1,1-Dichloroethane	415365033024	25.00	22.96	ug/L	-8	30	
2-Butanone	415365033024	25.00	24.57	ug/L	-2	40	
2,2-Dichloropropane	415365033024	25.00	21.95	ug/L	-12	30	
cis-1,2-Dichloroethene	415365033024	25.00	25.72	ug/L	3	30	
Chloroform	415365033024	25.00	24.65	ug/L	-1	20	
Bromochloromethane	415365033024	25.00	24.89	ug/L	0	30	
1,1,1-Trichloroethane	415365033024	25.00	22.68	ug/L	-9	30	m
1,1-Dichloropropene	415365033024	25.00	21.08	ug/L	-16	30	
Carbon Tetrachloride	415365033024	25.00	23.44	ug/L	-6	30	
1,2-Dichloroethane	415365033024	25.00	23.77	ug/L	-5	30	
Benzene	415365033024	25.00	24.05	ug/L	-4	30	
Trichloroethene	415365033024	25.00	23.84	ug/L	-5	30	
1,2-Dichloropropane	415365033024	25.00	22.60	ug/L	-10	20	
Bromodichloromethane	415365033024	25.00	24.11	ug/L	-4	30	
Dibromomethane	415365033024	25.00	26.18	ug/L	5	30	
4-Methyl-2-Pentanone	415365033024	25.00	25.70	ug/L	3	40	
cis-1,3-Dichloropropene	415365033024	25.00	25.10	ug/L	0	30	
Toluene	415365033024	25.00	25.18	ug/L	1	20	
trans-1,3-Dichloropropene	415365033024	25.00	23.82	ug/L	-5	30	
1,1,2-Trichloroethane	415365033024	25.00	25.75	ug/L	3	30	
2-Hexanone	415365033024	25.00	26.01	ug/L	4	40	
1,3-Dichloropropane	415365033024	25.00	26.03	ug/L	4	30	
Tetrachloroethene	415365033024	25.00	24.89	ug/L	0	30	
Dibromochloromethane	415365033024	25.00	24.51	ug/L	-2	30	
1,2-Dibromoethane	415365033024	25.00	24.54	ug/L	-2	30	
Chlorobenzene	415365033024	25.00	25.07	ug/L	0	30	
1,1,1,2-Tetrachloroethane	415365033024	25.00	24.69	ug/L	-1	30	
Ethylbenzene	415365033024	25.00	25.57	ug/L	2	20	
m,p-Xylenes	415365033024	50.00	50.02	ug/L	0	30	
o-Xylene	415365033024	25.00	25.25	ug/L	1	30	
Styrene	415365033024	25.00	25.83	ug/L	3	30	
Bromoform	415365033024	25.00	24.15	ug/L	-3	30	
Isopropylbenzene	415365033024	25.00	24.80	ug/L	-1	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	415365033024	25.00	20.62	ug/L	-18	30	
1,2,3-Trichloropropane	415365033024	25.00	25.04	ug/L	0	30	m
Propylbenzene	415365033024	25.00	25.22	ug/L	1	30	
Bromobenzene	415365033024	25.00	25.29	ug/L	1	30	
1,3,5-Trimethylbenzene	415365033024	25.00	26.04	ug/L	4	30	
2-Chlorotoluene	415365033024	25.00	25.18	ug/L	1	30	
4-Chlorotoluene	415365033024	25.00	25.27	ug/L	1	30	
tert-Butylbenzene	415365033024	25.00	25.24	ug/L	1	30	
1,2,4-Trimethylbenzene	415365033024	25.00	25.18	ug/L	1	30	
sec-Butylbenzene	415365033024	25.00	25.63	ug/L	3	30	
para-Isopropyl Toluene	415365033024	25.00	25.79	ug/L	3	30	
1,3-Dichlorobenzene	415365033024	25.00	25.12	ug/L	0	30	
1,4-Dichlorobenzene	415365033024	25.00	25.44	ug/L	2	30	
n-Butylbenzene	415365033024	25.00	26.35	ug/L	5	30	
1,2-Dichlorobenzene	415365033024	25.00	25.59	ug/L	2	30	
1,2-Dibromo-3-Chloropropane	415365033024	25.00	26.74	ug/L	7	30	
1,2,4-Trichlorobenzene	415365033024	25.00	27.32	ug/L	9	30	
Hexachlorobutadiene	415365033024	25.00	26.64	ug/L	7	30	
Naphthalene	415365033024	25.00	24.22	ug/L	-3	30	
1,2,3-Trichlorobenzene	415365033024	25.00	26.97	ug/L	8	30	

415365033023: Analyst: KKM  
415365033024: Analyst: KKM

Date: 09/18/15  
Date: 09/18/15

Reviewer: LW  
Reviewer: LW

Date: 09/23/15  
Date: 09/23/15

--low bias m=manual integration v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 MSVOA Water: EPA 8260B

Inst : MSVOA03  
 Calnum : 425383715001  
 Units : ug/L

Name : 8260GX3W  
 Date : 23-SEP-2015 23:45  
 X Axis : R

Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	cin18	425383715018	.25/.5PPB	23-SEP-2015 23:45	S27005 (2000000X), S27823 (2000000X), S27893 (2000000X), S26571 (1000000X), S27973 (5000X)
L2	cin19	425383715019	.5/1PPB	24-SEP-2015 00:07	S27973 (5000X), S27005 (1000000X), S27823 (1000000X), S27893 (1000000X), S26571 (500000X)
L3	cin20	425383715020	2PPB	24-SEP-2015 00:50	S27005 (250000X), S27823 (250000X), S27893 (250000X), S26571 (250000X), S27973 (5000X)
L4	cin21	425383715021	5PPB	24-SEP-2015 01:11	S27973 (5000X), S27005 (100000X), S27823 (100000X), S27893 (100000X), S26571 (100000X)
L5	cin22	425383715022	10PPB	24-SEP-2015 01:54	S27973 (5000X), S27005 (50000X), S27823 (50000X), S27893 (50000X), S26571 (50000X)
L6	cin23	425383715023	20PPB	24-SEP-2015 02:37	S27973 (5000X), S27005 (25000X), S27823 (25000X), S27893 (25000X), S26571 (25000X)
L7	cin24	425383715024	50PPB	24-SEP-2015 02:58	S27973 (5000X), S27005 (10000X), S27823 (10000X), S27893 (10000X), S26571 (10000X)
L8	cin25	425383715025	75PPB	24-SEP-2015 03:41	S27973 (5000X), S27005 (6667X), S27823 (6667X), S27893 (6667X), S26571 (6667X)
L9	cin26	425383715026	100PPB	24-SEP-2015 04:24	S27973 (5000X), S27005 (5000X), S27823 (5000X), S27893 (5000X), S26571 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.5073	0.5042	0.5536	0.5000	0.4829	0.5209	0.4776	0.4799	AVRG		1.98696		0.5033	5	15	0.05	0.99	
Chloromethane	0.6172	0.5010	0.4729	0.5033	0.4523	0.4609	0.4354	0.4493	0.4195	AVRG		2.08731		0.4791	12	15	0.10	0.99	
Vinyl Chloride	0.4453	0.4441	0.4176	0.4640	0.4201	0.4435	0.4268	0.4192	0.3990	AVRG		2.31981		0.4311	5	15	0.05	0.99	
Bromomethane		0.2686	0.2307	0.2588	0.2195	0.2707	0.2440	0.2657	0.2397	AVRG		4.00446		0.2497	8	15	0.05	0.99	
Chloroethane		0.2308	0.2507	0.2734	0.2496	0.2606	0.2545	0.2485	0.2303	AVRG		4.00340		0.2498	6	15	0.05	0.99	
Trichlorofluoromethane		0.5659	0.5435	0.5694	0.5102	0.5385	0.5171	0.4942	0.4973	AVRG		1.88847		0.5295	6	15	0.05	0.99	
Acetone				0.2325	0.2315	0.1969	0.2264	0.1912	0.2184	AVRG		4.62637		0.2162	8	15	0.05	0.99	
Freon 113		0.3718	0.4455	0.4375	0.4021	0.4196	0.3928	0.3958	0.3933	AVRG		2.45512		0.4073	6	15	0.05	0.99	
1,1-Dichloroethene		0.3643	0.4379	0.4324	0.3841	0.3978	0.3946	0.3846	0.3830	AVRG		2.51673		0.3973	6	15	0.05	0.99	
Methylene Chloride		0.4334	0.5674	0.5710	0.5535	0.5513	0.5366	0.5322	0.5301	AVRG		1.87109		0.5344	8	15	0.05	0.99	
Carbon Disulfide		1.4808	1.7776	1.7869	1.6096	1.6685	1.5695	1.5513	1.5520	AVRG		0.61556		1.6245	7	15	0.05	0.99	
MTBE		1.0902	1.2758	1.2877	1.3594	1.3385	1.3385	1.2805	1.2571	AVRG		0.78220		1.2784	7	15	0.05	0.99	
trans-1,2-Dichloroethene		0.4336	0.4815	0.4832	0.4548	0.4690	0.4674	0.4439	0.4370	AVRG		2.17961		0.4588	4	15	0.05	0.99	
Vinyl Acetate					0.9175	1.2091	0.9294	0.9789	0.8856	AVRG		1.01615		0.9841	13	15	0.05	0.99	
1,1-Dichloroethane		0.7873	0.9139	0.9253	0.8937	0.9286	0.8860	0.8365	0.8671	AVRG		1.13662		0.8798	6	15	0.10	0.99	
2-Butanone				0.3164	0.3487	0.3038	0.3224	0.2741	0.3056	AVRG		3.20702		0.3118	8	15	0.05	0.99	
2,2-Dichloropropane		0.4428	0.5126	0.5000	0.4702	0.4989	0.4501	0.4327	0.4223	AVRG		2.14505		0.4662	7	15	0.05	0.99	
cis-1,2-Dichloroethene		0.5046	0.5427	0.5543	0.5393	0.5465	0.5350	0.5272	0.5206	AVRG		1.87348		0.5338	3	15	0.05	0.99	
Chloroform		0.7722	0.8796	0.9134	0.8704	0.8899	0.8513	0.8343	0.8177	AVRG		1.17153		0.8536	5	15	0.05	0.99	
Bromochloromethane		0.2551	0.3001	0.3036	0.3099	0.3099	0.2980	0.2938	0.2809	AVRG		3.40237		0.2939	6	15	0.05	0.99	
1,1,1-Trichloroethane		0.5663	0.6509	0.6537	0.6186	0.6422	0.6122	0.6097	0.6002	AVRG		1.61492		0.6192	5	15	0.05	0.99	
1,1-Dichloropropene		0.3185	0.3546	0.3627	0.3404	0.3526	0.3379	0.3394	0.3403	AVRG		2.91303		0.3433	4	15	0.05	0.99	
Carbon Tetrachloride		0.1910	0.2625	0.2786	0.2745	0.2955	0.2898	0.2988	0.3002	AVRG		3.65149		0.2739	13	15	0.05	0.99	
1,2-Dichloroethane		0.3151	0.3687	0.3741	0.3759	0.3760	0.3673	0.3634	0.3571	AVRG		2.76087		0.3622	6	15	0.05	0.99	



Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		0.9027	1.0217	1.0332	0.9905	0.9987	0.9460	0.9395	0.9110	AVRG		1.03315		0.9679	5	15	0.05	0.99	
Trichloroethene		0.2360	0.2895	0.2931	0.2774	0.2805	0.2747	0.2703	0.2699	AVRG		3.65080		0.2739	6	15	0.05	0.99	
1,2-Dichloropropane		0.2724	0.3137	0.3191	0.3108	0.3167	0.3125	0.3111	0.3028	AVRG		3.25322		0.3074	5	15	0.05	0.99	
Bromodichloromethane		0.3306	0.3617	0.3856	0.3837	0.3928	0.3858	0.3883	0.3849	AVRG		2.65482		0.3767	6	15	0.05	0.99	
Dibromomethane		0.1950	0.2202	0.2252	0.2303	0.2274	0.2254	0.2214	0.2192	AVRG		4.53501		0.2205	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.3921	0.3558	0.3957	0.3697	0.3941	0.3628	0.3836	AVRG		2.63767		0.3791	4	15	0.05	0.99	
cis-1,3-Dichloropropene		0.3925	0.4264	0.4334	0.4375	0.4474	0.4445	0.4410	0.4333	AVRG		2.31478		0.4320	4	15	0.05	0.99	
Toluene		0.5795	0.6232	0.6391	0.6132	0.6314	0.5958	0.5939	0.5858	AVRG		1.64548		0.6077	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.3428	0.3780	0.3947	0.3994	0.4197	0.4171	0.4067	0.4133	AVRG		2.52230		0.3965	6	15	0.05	0.99	
1,1,2-Trichloroethane		0.1434	0.1583	0.1629	0.1610	0.1664	0.1646	0.1599	0.1610	AVRG		6.26272		0.1597	4	15	0.05	0.99	
2-Hexanone			0.3038	0.2742	0.3041	0.2758	0.3024	0.2705	0.2929	AVRG		3.45894		0.2891	5	15	0.05	0.99	
1,3-Dichloropropane		0.4315	0.4760	0.4809	0.4892	0.4929	0.4804	0.4709	0.4727	AVRG		2.10826		0.4743	4	15	0.05	0.99	
Tetrachloroethene		0.2380	0.2641	0.2650	0.2474	0.2625	0.2519	0.2536	0.2579	AVRG		3.92097		0.2550	4	15	0.05	0.99	
Dibromochloromethane		0.2743	0.3176	0.3244	0.3416	0.3551	0.3592	0.3603	0.3644	AVRG		2.96637		0.3371	9	15	0.05	0.99	
1,2-Dibromoethane		0.2950	0.3297	0.3220	0.3328	0.3340	0.3391	0.3325	0.3371	AVRG		3.05110		0.3278	4	15	0.05	0.99	
Chlorobenzene		0.6987	0.7618	0.7751	0.7366	0.7640	0.7265	0.7230	0.7153	AVRG		1.35571		0.7376	4	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.2272	0.2640	0.2740	0.2719	0.2819	0.2763	0.2764	0.2762	AVRG		3.72469		0.2685	7	15	0.05	0.99	
Ethylbenzene		1.0373	1.1807	1.2219	1.1282	1.1769	1.1048	1.0995	1.0840	AVRG		0.88561		1.1292	5	15	0.05	0.99	
m,p-Xylenes	0.3957	0.3716	0.4325	0.4563	0.4282	0.4475	0.4113	0.4040	0.3904	AVRG		2.40809		0.4153	7	15	0.05	0.99	
o-Xylene		0.3834	0.4236	0.4533	0.4312	0.4588	0.4226	0.4243	0.4130	AVRG		2.34594		0.4263	6	15	0.05	0.99	
Styrene		0.6550	0.7438	0.7920	0.7742	0.8187	0.7645	0.7573	0.7425	AVRG		1.32275		0.7560	6	15	0.05	0.99	
Bromoform		0.1833	0.1987	0.2023	0.2185	0.2286	0.2447	0.2401	0.2491	AVRG		4.53173		0.2207	11	15	0.10	0.99	
Isopropylbenzene		1.8368	2.1137	2.1934	2.0555	2.1799	2.0128	2.0239	1.9990	AVRG		0.48736		2.0519	6	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.7630	0.8180	0.7886	0.8282	0.8572	0.8327	0.8050	0.8134	AVRG		1.22963		0.8133	4	15	0.30	0.99	
1,2,3-Trichloropropane		0.6234m	0.6802m	0.6264m	0.6715m	0.6308m	0.6213m	0.5997m	0.5977m	AVRG		1.58387		0.6314	5	15	0.05	0.99	
Propylbenzene		2.3019	2.6203	2.6749	2.5161	2.6008	2.3441	2.3273	2.2390	AVRG		0.40765		2.4531	7	15	0.05	0.99	
Bromobenzene		0.5863	0.6229	0.6438	0.6300	0.6475	0.6099	0.6069	0.5900	AVRG		1.62031		0.6172	4	15	0.05	0.99	
1,3,5-Trimethylbenzene		1.4720	1.7399	1.8040	1.6729	1.7644	1.5893	1.5702	1.5395	AVRG		0.60827		1.6440	7	15	0.05	0.99	
2-Chlorotoluene		1.6069	1.7773	1.8346	1.7267	1.7758	1.6068	1.5721	1.5224	AVRG		0.59601		1.6778	7	15	0.05	0.99	
4-Chlorotoluene		1.5104	1.6756	1.7296	1.6237	1.6999	1.5731	1.5760	1.5524	AVRG		0.61820		1.6176	5	15	0.05	0.99	
tert-Butylbenzene		1.2264	1.4579	1.4495	1.3727	1.4427	1.3330	1.3558	1.3507	AVRG		0.72802		1.3736	6	15	0.05	0.99	
1,2,4-Trimethylbenzene		1.5705	1.7515	1.8465	1.7490	1.8472	1.7140	1.7179	1.7039	AVRG		0.57552		1.7376	5	15	0.05	0.99	
sec-Butylbenzene		1.8894	2.1525	2.2019	2.0955	2.2228	2.0609	2.0804	2.0751	AVRG		0.47680		2.0973	5	15	0.05	0.99	
para-Isopropyl Toluene		1.4120	1.7049	1.7409	1.6588	1.7839	1.6458	1.6673	1.6751	AVRG		0.60201		1.6611	7	15	0.05	0.99	
1,3-Dichlorobenzene		0.9972	1.0804	1.1370	1.0736	1.1394	1.0710	1.0764	1.0771	AVRG		0.92464		1.0815	4	15	0.05	0.99	
1,4-Dichlorobenzene		1.0585	1.1594	1.1754	1.1193	1.1657	1.1027	1.1081	1.1058	AVRG		0.88939		1.1244	4	15	0.05	0.99	
n-Butylbenzene		1.2135	1.5152	1.5535	1.4708	1.6166	1.4705	1.5040	1.5061	AVRG		0.67510		1.4813	8	15	0.05	0.99	
1,2-Dichlorobenzene		0.9521	1.0846	1.1053	1.0753	1.1227	1.0594	1.0740	1.0758	AVRG		0.93576		1.0687	5	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.0946	0.1392	0.1264	0.1357	0.1345	0.1419	0.1311	0.1421	AVRG		7.65201		0.1307	12	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.4087	0.5467	0.5761	0.5783	0.6209	0.5983	0.6025	0.6165	AVRG		1.75898		0.5685	12	15	0.05	0.99	
Hexachlorobutadiene		0.1243	0.1842	0.1901	0.1811	0.1986	0.1795	0.1865	0.1934	AVRG		5.56427		0.1797	13	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		1.1936	1.4158	1.4739	1.5871	1.6634	1.7487	1.6896	1.8211	AVRG		0.63526		1.5742	13	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.3778	0.5187	0.5482	0.5598	0.5948	0.5850	0.5851	0.6067	AVRG		1.82811		0.5470	14	15	0.05	0.99	
Dibromofluoromethane	0.7032	0.7017	0.7058	0.6994	0.6994	0.6962	0.6898	0.6832	0.6771	AVRG		1.43870		0.6951	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3764	0.3744	0.3779	0.3745	0.3834	0.3620	0.3534	0.3482	0.3408	AVRG		2.73469		0.3657	4	15	0.05	0.99	
Toluene-d8	1.1333	1.1252	1.1333	1.1312	1.1348	1.1381	1.1358	1.1438	1.1446	AVRG		0.88062		1.1356	1	15	0.05	0.99	
Bromofluorobenzene	0.9683	0.9632	0.9701	0.9524	0.9457	0.9539	0.9342	0.9366	0.9351	AVRG		1.05144		0.9511	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	1	2.0000	0	5.0000	10	10.000	-1	20.000	-4	50.000	3	75.000	-5	100.00	-5
Chloromethane	0.5000	29	1.0000	5	2.0000	-1	5.0000	5	10.000	-6	20.000	-4	50.000	-9	75.000	-6	100.00	-12
Vinyl Chloride	0.5000	3	1.0000	3	2.0000	-3	5.0000	8	10.000	-3	20.000	3	50.000	-1	75.000	-3	100.00	-7
Bromomethane			1.0000	8	2.0000	-8	5.0000	4	10.000	-12	20.000	8	50.000	-2	75.000	6	100.00	-4
Chloroethane			1.0000	-8	2.0000	0	5.0000	9	10.000	0	20.000	4	50.000	2	75.000	-1	100.00	-8
Trichlorofluoromethane			1.0000	7	2.0000	3	5.0000	8	10.000	-4	20.000	2	50.000	-2	75.000	-7	100.00	-6
Acetone							5.0000	8	10.000	7	20.000	-9	50.000	5	75.000	-12	100.00	1
Freon 113			0.5000	-9	2.0000	9	5.0000	7	10.000	-1	20.000	3	50.000	-4	75.000	-3	100.00	-3
1,1-Dichloroethene			0.5000	-8	2.0000	10	5.0000	9	10.000	-3	20.000	0	50.000	-1	75.000	-3	100.00	-4
Methylene Chloride			0.5000	-19	2.0000	6	5.0000	7	10.000	4	20.000	3	50.000	0	75.000	0	100.00	-1
Carbon Disulfide			0.5000	-9	2.0000	9	5.0000	10	10.000	-1	20.000	3	50.000	-3	75.000	-5	100.00	-4
MTBE			0.5000	-15	2.0000	0	5.0000	1	10.000	6	20.000	5	50.000	5	75.000	0	100.00	-2
trans-1,2-Dichloroethene			0.5000	-5	2.0000	5	5.0000	5	10.000	-1	20.000	2	50.000	2	75.000	-3	100.00	-5
Vinyl Acetate									10.000	-7	20.000	23	50.000	-6	75.000	-1	100.00	-10
1,1-Dichloroethane			0.5000	-11	2.0000	4	5.0000	5	10.000	2	20.000	6	50.000	1	75.000	-5	100.00	-1
2-Butanone							5.0000	1	10.000	12	20.000	-3	50.000	3	75.000	-12	100.00	-2
2,2-Dichloropropane			0.5000	-5	2.0000	10	5.0000	7	10.000	1	20.000	7	50.000	-3	75.000	-7	100.00	-9
cis-1,2-Dichloroethene			0.5000	-5	2.0000	2	5.0000	4	10.000	1	20.000	2	50.000	0	75.000	-1	100.00	-2
Chloroform			0.5000	-10	2.0000	3	5.0000	7	10.000	2	20.000	4	50.000	0	75.000	-2	100.00	-4
Bromochloromethane			0.5000	-13	2.0000	2	5.0000	3	10.000	5	20.000	5	50.000	1	75.000	0	100.00	-4
1,1,1-Trichloroethane			0.5000	-9	2.0000	5	5.0000	6	10.000	0	20.000	4	50.000	-1	75.000	-2	100.00	-3
1,1-Dichloropropene			0.5000	-7	2.0000	3	5.0000	6	10.000	-1	20.000	3	50.000	-2	75.000	-1	100.00	-1
Carbon Tetrachloride			0.5000	-30	2.0000	-4	5.0000	2	10.000	0	20.000	8	50.000	6	75.000	9	100.00	10
1,2-Dichloroethane			0.5000	-13	2.0000	2	5.0000	3	10.000	4	20.000	4	50.000	1	75.000	0	100.00	-1
Benzene			0.5000	-7	2.0000	6	5.0000	7	10.000	2	20.000	3	50.000	-2	75.000	-3	100.00	-6
Trichloroethene			0.5000	-14	2.0000	6	5.0000	7	10.000	1	20.000	2	50.000	0	75.000	-1	100.00	-1
1,2-Dichloropropane			0.5000	-11	2.0000	2	5.0000	4	10.000	1	20.000	3	50.000	2	75.000	1	100.00	-1
Bromodichloromethane			0.5000	-12	2.0000	-4	5.0000	2	10.000	2	20.000	4	50.000	2	75.000	3	100.00	2
Dibromomethane			0.5000	-12	2.0000	0	5.0000	2	10.000	4	20.000	3	50.000	2	75.000	0	100.00	-1
4-Methyl-2-Pentanone					2.0000	3	5.0000	-6	10.000	4	20.000	-2	50.000	4	75.000	-4	100.00	1
cis-1,3-Dichloropropene			0.5000	-9	2.0000	-1	5.0000	0	10.000	1	20.000	4	50.000	3	75.000	2	100.00	0
Toluene			0.5000	-5	2.0000	3	5.0000	5	10.000	1	20.000	4	50.000	-2	75.000	-2	100.00	-4
trans-1,3-Dichloropropene			0.5000	-14	2.0000	-5	5.0000	0	10.000	1	20.000	6	50.000	5	75.000	3	100.00	4
1,1,2-Trichloroethane			0.5000	-10	2.0000	-1	5.0000	2	10.000	1	20.000	4	50.000	3	75.000	0	100.00	1
2-Hexanone					2.0000	5	5.0000	-5	10.000	5	20.000	-5	50.000	5	75.000	-6	100.00	1
1,3-Dichloropropane			0.5000	-9	2.0000	0	5.0000	1	10.000	3	20.000	4	50.000	1	75.000	-1	100.00	0
Tetrachloroethene			0.5000	-7	2.0000	4	5.0000	4	10.000	-3	20.000	3	50.000	-1	75.000	-1	100.00	1
Dibromochloromethane			0.5000	-19	2.0000	-6	5.0000	-4	10.000	1	20.000	5	50.000	7	75.000	7	100.00	8
1,2-Dibromoethane			0.5000	-10	2.0000	1	5.0000	-2	10.000	2	20.000	2	50.000	3	75.000	1	100.00	3
Chlorobenzene			0.5000	-5	2.0000	3	5.0000	5	10.000	0	20.000	4	50.000	-2	75.000	-2	100.00	-3
1,1,1,2-Tetrachloroethane			0.5000	-15	2.0000	-2	5.0000	2	10.000	1	20.000	5	50.000	3	75.000	3	100.00	3
Ethylbenzene			0.5000	-8	2.0000	5	5.0000	8	10.000	0	20.000	4	50.000	-2	75.000	-3	100.00	-4

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-5	1.0000	-11	4.0000	4	10.000	10	20.000	3	40.000	8	100.00	-1	150.00	-3	200.00	-6
o-Xylene			0.5000	-10	2.0000	-1	5.0000	6	10.000	1	20.000	8	50.000	-1	75.000	0	100.00	-3
Styrene			0.5000	-13	2.0000	-2	5.0000	5	10.000	2	20.000	8	50.000	1	75.000	0	100.00	-2
Bromoform			0.5000	-17	2.0000	-10	5.0000	-8	10.000	-1	20.000	4	50.000	11	75.000	9	100.00	13
Isopropylbenzene			0.5000	-10	2.0000	3	5.0000	7	10.000	0	20.000	6	50.000	-2	75.000	-1	100.00	-3
1,1,2,2-Tetrachloroethane			0.5000	-6	2.0000	1	5.0000	-3	10.000	2	20.000	5	50.000	2	75.000	-1	100.00	0
1,2,3-Trichloropropane			0.5000	-1	2.0000	8	5.0000	-1	10.000	6	20.000	0	50.000	-2	75.000	-5	100.00	-5
Propylbenzene			0.5000	-6	2.0000	7	5.0000	9	10.000	3	20.000	6	50.000	-4	75.000	-5	100.00	-9
Bromobenzene			0.5000	-5	2.0000	1	5.0000	4	10.000	2	20.000	5	50.000	-1	75.000	-2	100.00	-4
1,3,5-Trimethylbenzene			0.5000	-10	2.0000	6	5.0000	10	10.000	2	20.000	7	50.000	-3	75.000	-4	100.00	-6
2-Chlorotoluene			0.5000	-4	2.0000	6	5.0000	9	10.000	3	20.000	6	50.000	-4	75.000	-6	100.00	-9
4-Chlorotoluene			0.5000	-7	2.0000	4	5.0000	7	10.000	0	20.000	5	50.000	-3	75.000	-3	100.00	-4
tert-Butylbenzene			0.5000	-11	2.0000	6	5.0000	6	10.000	0	20.000	5	50.000	-3	75.000	-1	100.00	-2
1,2,4-Trimethylbenzene			0.5000	-10	2.0000	1	5.0000	6	10.000	1	20.000	6	50.000	-1	75.000	-1	100.00	-2
sec-Butylbenzene			0.5000	-10	2.0000	3	5.0000	5	10.000	0	20.000	6	50.000	-2	75.000	-1	100.00	-1
para-Isopropyl Toluene			0.5000	-15	2.0000	3	5.0000	5	10.000	0	20.000	7	50.000	-1	75.000	0	100.00	1
1,3-Dichlorobenzene			0.5000	-8	2.0000	0	5.0000	5	10.000	-1	20.000	5	50.000	-1	75.000	0	100.00	0
1,4-Dichlorobenzene			0.5000	-6	2.0000	3	5.0000	5	10.000	0	20.000	4	50.000	-2	75.000	-1	100.00	-2
n-Butylbenzene			0.5000	-18	2.0000	2	5.0000	5	10.000	-1	20.000	9	50.000	-1	75.000	2	100.00	2
1,2-Dichlorobenzene			0.5000	-11	2.0000	1	5.0000	3	10.000	1	20.000	5	50.000	-1	75.000	1	100.00	1
1,2-Dibromo-3-Chloropropane			0.5000	<b>-28</b>	2.0000	7	5.0000	-3	10.000	4	20.000	3	50.000	9	75.000	0	100.00	9
1,2,4-Trichlorobenzene			0.5000	<b>-28</b>	2.0000	-4	5.0000	1	10.000	2	20.000	9	50.000	5	75.000	6	100.00	8
Hexachlorobutadiene			0.5000	<b>-31</b>	2.0000	2	5.0000	6	10.000	1	20.000	10	50.000	0	75.000	4	100.00	8
Naphthalene			0.5000	<b>-24</b>	2.0000	-10	5.0000	-6	10.000	1	20.000	6	50.000	11	75.000	7	100.00	16
1,2,3-Trichlorobenzene			0.5000	<b>-31</b>	2.0000	-5	5.0000	0	10.000	2	20.000	9	50.000	7	75.000	7	100.00	11
Dibromofluoromethane	50.000	1	50.000	1	50.000	2	50.000	1	50.000	1	50.000	0	50.000	-1	50.000	-2	50.000	-3
1,2-Dichloroethane-d4	50.000	3	50.000	2	50.000	3	50.000	2	50.000	5	50.000	-1	50.000	-3	50.000	-5	50.000	-7
Toluene-d8	50.000	0	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	0	50.000	1	50.000	1
Bromofluorobenzene	50.000	2	50.000	1	50.000	2	50.000	0	50.000	-1	50.000	0	50.000	-2	50.000	-2	50.000	-2

DAR 09/24/15 [1,2,3-Trichloropropane]: Separated from coeluting peak in multiple levels.

DAR 09/24/15 [tert-Butyl Alcohol (TBA)]: ICV out high, rerun all hits

DAR 09/24/15 [Ethanol]: ICV out high, rerun all hits

DAR 09/24/15 [Isopropanol]: ICV out high, rerun all hits

LW 09/30/15 [n-Hexane]: High bias at low point - ok for ND results and hits over 5 ppb.

Analyst: DAR

Date: 09/24/15

Reviewer: LW

Date: 09/30/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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425383715001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03  
Calnum : 425383715001

Name : 8260GX3W  
Cal Date : 23-SEP-2015

Type : WATER

ICV 425383715027 (cin27 24-SEP-2015) stds: S27858 (10000X), S27973 (5000X), S27929 (10000X), S27930 (10000X)

ICV 425383715028 (cin28 24-SEP-2015) stds: S27007 (10000X), S27973 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	425383715028	20.00	14.28	ug/L	-29	30	!v-
Chloromethane	425383715028	20.00	17.62	ug/L	-12	30	
Vinyl Chloride	425383715028	20.00	19.10	ug/L	-5	20	
Bromomethane	425383715028	20.00	15.33	ug/L	-23	30	!v-
Chloroethane	425383715028	20.00	19.80	ug/L	-1	30	
Trichlorofluoromethane	425383715028	20.00	18.17	ug/L	-9	30	
Acetone	425383715027	25.00	28.02	ug/L	12	40	
Freon 113	425383715027	25.00	19.83	ug/L	-21	30	!v-
1,1-Dichloroethene	425383715027	25.00	22.63	ug/L	-9	20	
Methylene Chloride	425383715027	25.00	25.05	ug/L	0	30	
Carbon Disulfide	425383715027	25.00	22.35	ug/L	-11	30	
MTBE	425383715027	25.00	26.57	ug/L	6	30	
trans-1,2-Dichloroethene	425383715027	25.00	23.18	ug/L	-7	30	
Vinyl Acetate	425383715027	25.00	22.53	ug/L	-10	40	
1,1-Dichloroethane	425383715027	25.00	24.02	ug/L	-4	30	
2-Butanone	425383715027	25.00	27.22	ug/L	9	40	
2,2-Dichloropropane	425383715027	25.00	22.23	ug/L	-11	30	
cis-1,2-Dichloroethene	425383715027	25.00	26.24	ug/L	5	30	
Chloroform	425383715027	25.00	24.70	ug/L	-1	20	
Bromochloromethane	425383715027	25.00	25.75	ug/L	3	30	
1,1,1-Trichloroethane	425383715027	25.00	23.94	ug/L	-4	30	
1,1-Dichloropropene	425383715027	25.00	20.54	ug/L	-18	30	
Carbon Tetrachloride	425383715027	25.00	24.03	ug/L	-4	30	
1,2-Dichloroethane	425383715027	25.00	23.67	ug/L	-5	30	
Benzene	425383715027	25.00	23.24	ug/L	-7	30	
Trichloroethene	425383715027	25.00	23.72	ug/L	-5	30	
1,2-Dichloropropane	425383715027	25.00	22.46	ug/L	-10	20	
Bromodichloromethane	425383715027	25.00	23.21	ug/L	-7	30	
Dibromomethane	425383715027	25.00	24.20	ug/L	-3	30	
4-Methyl-2-Pentanone	425383715027	25.00	25.33	ug/L	1	40	
cis-1,3-Dichloropropene	425383715027	25.00	24.43	ug/L	-2	30	
Toluene	425383715027	25.00	23.76	ug/L	-5	20	
trans-1,3-Dichloropropene	425383715027	25.00	24.10	ug/L	-4	30	
1,1,2-Trichloroethane	425383715027	25.00	24.58	ug/L	-2	30	
2-Hexanone	425383715027	25.00	26.81	ug/L	7	40	
1,3-Dichloropropane	425383715027	25.00	25.45	ug/L	2	30	
Tetrachloroethene	425383715027	25.00	23.37	ug/L	-7	30	
Dibromochloromethane	425383715027	25.00	24.32	ug/L	-3	30	
1,2-Dibromoethane	425383715027	25.00	24.71	ug/L	-1	30	
Chlorobenzene	425383715027	25.00	23.89	ug/L	-4	30	
1,1,1,2-Tetrachloroethane	425383715027	25.00	24.52	ug/L	-2	30	
Ethylbenzene	425383715027	25.00	23.82	ug/L	-5	20	
m,p-Xylenes	425383715027	50.00	48.79	ug/L	-2	30	
o-Xylene	425383715027	25.00	24.11	ug/L	-4	30	
Styrene	425383715027	25.00	24.97	ug/L	0	30	
Bromoform	425383715027	25.00	24.90	ug/L	0	30	
Isopropylbenzene	425383715027	25.00	23.55	ug/L	-6	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	425383715027	25.00	24.38	ug/L	-2	30	
1,2,3-Trichloropropane	425383715027	25.00	25.11	ug/L	0	30	m
Propylbenzene	425383715027	25.00	23.10	ug/L	-8	30	
Bromobenzene	425383715027	25.00	24.20	ug/L	-3	30	
1,3,5-Trimethylbenzene	425383715027	25.00	24.52	ug/L	-2	30	
2-Chlorotoluene	425383715027	25.00	23.64	ug/L	-5	30	
4-Chlorotoluene	425383715027	25.00	23.74	ug/L	-5	30	
tert-Butylbenzene	425383715027	25.00	23.56	ug/L	-6	30	
1,2,4-Trimethylbenzene	425383715027	25.00	23.73	ug/L	-5	30	
sec-Butylbenzene	425383715027	25.00	23.59	ug/L	-6	30	
para-Isopropyl Toluene	425383715027	25.00	23.76	ug/L	-5	30	
1,3-Dichlorobenzene	425383715027	25.00	23.93	ug/L	-4	30	
1,4-Dichlorobenzene	425383715027	25.00	23.59	ug/L	-6	30	
n-Butylbenzene	425383715027	25.00	23.95	ug/L	-4	30	
1,2-Dichlorobenzene	425383715027	25.00	23.91	ug/L	-4	30	
1,2-Dibromo-3-Chloropropane	425383715027	25.00	26.01	ug/L	4	30	
1,2,4-Trichlorobenzene	425383715027	25.00	25.32	ug/L	1	30	
Hexachlorobutadiene	425383715027	25.00	24.84	ug/L	-1	30	
Naphthalene	425383715027	25.00	25.34	ug/L	1	30	
1,2,3-Trichlorobenzene	425383715027	25.00	26.01	ug/L	4	30	

425383715027: Analyst: DAR

Date: 09/24/15 Reviewer: LW

Date: 09/30/15

425383715028: Analyst: DAR

Date: 09/24/15 \* Reviewer: LW

Date: 09/30/15

!=warning --low bias m=manual integration v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 MSVOA Water: EPA 8260B

Inst : MSVOA14  
 Calnum : 955422499001  
 Units : ug/L

Name : 8260X14W  
 Date : 20-OCT-2015 15:49  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	njk17	955422499017		20-OCT-2015 15:49	S27004 (2000000X), S28008 (2000000X), S28355 (2000000X), S27081 (1000000X), S28246 (2500X)
L2	njk18	955422499018		20-OCT-2015 16:15	S27004 (1000000X), S28008 (1000000X), S28355 (1000000X), S27081 (500000X), S28246 (2500X)
L3	njk19	955422499019		20-OCT-2015 16:41	S27004 (500000X), S28008 (250000X), S28355 (250000X), S27081 (250000X), S28246 (2500X)
L4	njk20	955422499020		20-OCT-2015 17:08	S27004 (200000X), S28008 (100000X), S28355 (100000X), S27081 (100000X), S28246 (2500X)
L5	njk21	955422499021		20-OCT-2015 17:34	S27004 (100000X), S28008 (50000X), S28355 (50000X), S27081 (50000X), S28246 (2500X)
L6	njk22	955422499022		20-OCT-2015 18:00	S27004 (50000X), S28008 (25000X), S28355 (25000X), S27081 (25000X), S28246 (2500X)
L7	njk23	955422499023		20-OCT-2015 18:26	S27004 (20000X), S28008 (10000X), S28355 (10000X), S27081 (10000X), S28246 (2500X)
L8	njk24	955422499024		20-OCT-2015 18:53	S27004 (13330X), S28008 (6667X), S28355 (6667X), S27081 (6667X), S28246 (2500X)
L9	njk25	955422499025		20-OCT-2015 19:19	S27004 (10000X), S28008 (5000X), S28355 (5000X), S27081 (5000X), S28246 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.6837	0.6585	0.6598	0.6465	0.6233	0.6133	0.6239	0.6226	AVRG		1.55896		0.6415	4	15	0.05	0.99	
Chloromethane	0.9255	1.1154	0.9404	0.9896	0.9803	0.8971	0.9091	0.8887	0.9132	AVRG		1.05148		0.9510	7	15	0.10	0.99	
Vinyl Chloride	0.8999	1.0998	0.9717	0.9947	0.9714	0.9323	0.9560	0.9515	0.9588	AVRG		1.03020		0.9707	6	15	0.05	0.99	
Bromomethane		0.2097	0.2055	0.2338	0.2282	0.2241	0.2349	0.2304	0.2266	AVRG		4.46123		0.2242	5	15	0.05	0.99	
Chloroethane		0.6283	0.5547	0.5452	0.5234	0.5146	0.5057	0.5021	0.5021	AVRG		1.87084		0.5345	8	15	0.05	0.99	
Trichlorofluoromethane		0.9312	0.8190	0.8477	0.8279	0.8073	0.7916	0.7943	0.8005	AVRG		1.20854		0.8274	6	15	0.05	0.99	
Acetone			0.4907m	0.4211m	0.4174m	0.4203m	0.3912m	0.3730m	0.3952m	AVRG		2.40635		0.4156	9	15	0.05	0.99	
Freon 113		0.5077	0.4409	0.4305	0.4099	0.4100	0.4298	0.4276	0.4209	AVRG		2.30057		0.4347	7	15	0.05	0.99	
1,1-Dichloroethene		0.4902	0.4204	0.4204	0.4075	0.3943	0.4100	0.4093	0.4061	AVRG		2.38219		0.4198	7	15	0.05	0.99	
Methylene Chloride		0.5744	0.4944	0.5013	0.4855	0.4733	0.4934	0.4875	0.4851	AVRG		2.00255		0.4994	6	15	0.05	0.99	
Carbon Disulfide		1.6007	1.5105	1.4858	1.4361	1.3946	1.4590	1.4543	1.4486	AVRG		0.67857		1.4737	4	15	0.05	0.99	
MTBE		1.8670	1.6464	1.6428	1.6332	1.6163	1.6646	1.6531	1.6950	AVRG		0.59620		1.6773	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5631	0.4839	0.4724	0.4676	0.4501	0.4642	0.4637	0.4643	AVRG		2.08918		0.4787	7	15	0.05	0.99	
Vinyl Acetate		1.7426	1.4446	1.7048	1.5558	1.7632	1.8221	1.7386	1.9343	AVRG		0.58369		1.7132	9	15	0.05	0.99	
1,1-Dichloroethane		1.5314	1.3333	1.3266	1.3053	1.2600	1.3091	1.2960	1.3074	AVRG		0.74984		1.3336	6	15	0.10	0.99	
2-Butanone			0.5179	0.4876	0.4793	0.4796	0.4848	0.4727	0.4985	AVRG		2.04652		0.4886	3	15	0.05	0.99	
2,2-Dichloropropane		0.7631	0.6617	0.6577	0.6369	0.6165	0.6452	0.6397	0.6364	AVRG		1.52174		0.6571	7	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6344	0.5605	0.5725	0.5451	0.5320	0.5509	0.5520	0.5522	AVRG		1.77795		0.5624	6	15	0.05	0.99	
Chloroform		1.0104	0.9092	0.8810	0.8677	0.8361	0.8779	0.8764	0.8784	AVRG		1.12093		0.8921	6	15	0.05	0.99	
Bromochloromethane		0.2823	0.2653	0.2526	0.2458	0.2368	0.2408	0.2356	0.2327	AVRG		4.01645		0.2490	7	15	0.05	0.99	
1,1,1-Trichloroethane		0.8544	0.7822	0.7928	0.7752	0.7424	0.7819	0.7782	0.7817	AVRG		1.27208		0.7861	4	15	0.05	0.99	
1,1-Dichloropropene		0.5075	0.4901	0.4843	0.4655	0.4587	0.4788	0.4831	0.4826	AVRG		2.07764		0.4813	3	15	0.05	0.99	
Carbon Tetrachloride		0.4378	0.3967	0.4105	0.3905	0.3878	0.4132	0.4186	0.4157	AVRG		2.44587		0.4089	4	15	0.05	0.99	
1,2-Dichloroethane		0.6891	0.6343	0.6391	0.6267	0.6133	0.6248	0.6320	0.6346	AVRG		1.57054		0.6367	4	15	0.05	0.99	



Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.6254	1.3784	1.4119	1.3495	1.3209	1.3753	1.3789	1.3730	AVRG		0.71344		1.4017	7	15	0.05	0.99	
Trichloroethene		0.4025	0.3692	0.3582	0.3493	0.3487	0.3589	0.3589	0.3565	AVRG		2.75647		0.3628	5	15	0.05	0.99	
1,2-Dichloropropane		0.5757	0.4929	0.5244	0.4817m	0.4821m	0.4992m	0.4980m	0.4974m	AVRG		1.97465		0.5064	6	15	0.05	0.99	
Bromodichloromethane		0.4533	0.4459	0.4344	0.4366	0.4280	0.4517	0.4533	0.4556	AVRG		2.24799		0.4448	2	15	0.05	0.99	
Dibromomethane		0.2428	0.2246	0.2279	0.2128	0.2108	0.2160	0.2156	0.2186	AVRG		4.52219		0.2211	5	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6560	0.6384	0.6210	0.6446	0.6454	0.6358	0.6711	AVRG		1.55130		0.6446	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6089	0.5354	0.5413	0.5251	0.5310	0.5586	0.5619	0.5638	AVRG		1.80754		0.5532	5	15	0.05	0.99	
Toluene		1.9507	1.6507	1.6330	1.6277	1.5840	1.6564	1.6419	1.6301	AVRG		0.59816		1.6718	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5638	0.5265	0.5471	0.5354	0.5405	0.5648	0.5680	0.5725	AVRG		1.81051		0.5523	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.2042	0.1862	0.1868	0.1823	0.1794	0.1849	0.1829	0.1830	AVRG		5.37022		0.1862	4	15	0.05	0.99	
2-Hexanone			0.4851	0.4874	0.4896	0.4905	0.5035	0.4921	0.5175	AVRG		2.01976		0.4951	2	15	0.05	0.99	
1,3-Dichloropropane		0.6835	0.6350	0.6219	0.6187	0.6136	0.6304	0.6219	0.6312	AVRG		1.58221		0.6320	3	15	0.05	0.99	
Tetrachloroethene		0.4048	0.3665	0.3651	0.3474	0.3398	0.3565	0.3543	0.3539	AVRG		2.76980		0.3610	5	15	0.05	0.99	
Dibromochloromethane		0.4335	0.3523	0.3636	0.3677	0.3690	0.3898	0.3881	0.3917	AVRG		2.61807		0.3820	7	15	0.05	0.99	
1,2-Dibromoethane		0.4210	0.3578	0.3536	0.3543	0.3528	0.3666	0.3640	0.3675	AVRG		2.72342		0.3672	6	15	0.05	0.99	
Chlorobenzene		1.1930	1.0437	1.0547	1.0088	0.9940	1.0357	1.0309	1.0231	AVRG		0.95422		1.0480	6	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.4003	0.3408	0.3541	0.3493	0.3507	0.3662	0.3658	0.3667	AVRG		2.76439		0.3617	5	15	0.05	0.99	
Ethylbenzene		2.2020	1.9060	1.9237	1.8725	1.8465	1.9238	1.9190	1.9236	AVRG		0.51556		1.9396	6	15	0.05	0.99	
m,p-Xylenes	0.6673	0.8362	0.7342	0.7448	0.7084	0.7126	0.7401	0.7368	0.7375	AVRG		1.35991		0.7353	6	15	0.05	0.99	
o-Xylene		0.7708	0.7121	0.7417	0.7154	0.7075	0.7337	0.7320	0.7326	AVRG		1.36850		0.7307	3	15	0.05	0.99	
Styrene		1.4284	1.2162	1.2466	1.2092	1.2092	1.2606	1.2573	1.2598	AVRG		0.79308		1.2609	6	15	0.05	0.99	
Bromoform		0.2976	0.2582	0.2607	0.2546	0.2583	0.2748	0.2723	0.2843	AVRG		3.70223		0.2701	6	15	0.10	0.99	
Isopropylbenzene		3.9761	3.5450	3.6250	3.4828	3.4189	3.5304	3.5404	3.5087	AVRG		0.27945		3.5784	5	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.0367	0.8055	0.8587	0.7907	0.8097	0.8217	0.8186	0.8550	AVRG		1.17709		0.8496	9	15	0.30	0.99	
1,2,3-Trichloropropane		1.1143	0.9847	0.9773	0.9535	0.9429	0.9603	0.9452	0.9752	AVRG		1.01868		0.9817	6	15	0.05	0.99	
Propylbenzene		4.7698	4.3192	4.3657	4.2011	4.1600	4.3312	4.3185	4.3047	AVRG		0.23008		4.3463	4	15	0.05	0.99	
Bromobenzene		0.9841	0.8326	0.8466	0.8202	0.8060	0.8238	0.8190	0.8084	AVRG		1.18683		0.8426	7	15	0.05	0.99	
1,3,5-Trimethylbenzene		3.4587	3.0402	3.1055	2.9658	2.9331	3.0739	3.0886	3.0777	AVRG		0.32332		3.0929	5	15	0.05	0.99	
2-Chlorotoluene		3.2675	2.9352	2.9659	2.8163	2.7289	2.8697	2.8591	2.8589	AVRG		0.34333		2.9127	6	15	0.05	0.99	
4-Chlorotoluene		2.9939	2.6512	2.7564	2.6373	2.5811	2.6823	2.6733	2.6739	AVRG		0.36952		2.7062	5	15	0.05	0.99	
tert-Butylbenzene		2.9899	2.6374	2.6651	2.5470	2.5447	2.6403	2.6300	2.6164	AVRG		0.37610		2.6588	5	15	0.05	0.99	
1,2,4-Trimethylbenzene		3.2533	3.1263	3.1636	3.0200	2.9884	3.1369	3.1498	3.1495	AVRG		0.32016		3.1235	3	15	0.05	0.99	
sec-Butylbenzene		4.5661	3.9855	4.0250	3.8675	3.8320	4.0254	3.9857	3.9955	AVRG		0.24781		4.0353	6	15	0.05	0.99	
para-Isopropyl Toluene		3.6147	3.3196	3.3606	3.2451	3.2444	3.3996	3.3729	3.3681	AVRG		0.29712		3.3656	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.8036	1.5631	1.6145	1.5338	1.5081	1.5635	1.5542	1.5585	AVRG		0.62996		1.5874	6	15	0.05	0.99	
1,4-Dichlorobenzene		1.9904	1.6226	1.6369	1.5736	1.5443	1.5889	1.5728	1.5750	AVRG		0.61048		1.6381	9	15	0.05	0.99	
n-Butylbenzene		3.6954	3.1137	3.1369	3.0403	3.0612	3.2155	3.1986	3.2209	AVRG		0.31150		3.2103	6	15	0.05	0.99	
1,2-Dichlorobenzene		1.7139	1.5835	1.5779	1.4877	1.4738	1.5320	1.5251	1.5205	AVRG		0.64441		1.5518	5	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2906	0.2292	0.2143	0.2078	0.2173	0.2215	0.2194	0.2364	AVRG		4.35583		0.2296	11	15	0.05	0.99	
1,2,4-Trichlorobenzene		1.3164	1.1849	1.2055	1.1777	1.1526	1.2023	1.1824	1.1691	AVRG		0.83412		1.1989	4	15	0.05	0.99	
Hexachlorobutadiene		0.6213	0.5325	0.5136	0.5382	0.5470	0.5910	0.5929	0.5879	AVRG		1.76812		0.5656	7	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		3.8240	3.3505	3.4727	3.3602	3.3820	3.4978	3.4049	3.4519	AVRG		0.28835		3.4680	4	15	0.05	0.99	
1,2,3-Trichlorobenzene		1.2864	1.1793	1.2248	1.1701	1.1346	1.1732	1.1654	1.1444	AVRG		0.84406		1.1848	4	15	0.05	0.99	
Dibromofluoromethane	0.4466	0.4485	0.4526	0.4538	0.4531	0.4511	0.4533	0.4576	0.4581	AVRG		2.20877		0.4527	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.4571	0.4656	0.4693	0.4632	0.4637	0.4685	0.4625	0.4660	0.4695	AVRG		2.15041		0.4650	1	15	0.05	0.99	
Toluene-d8	1.3377	1.3408	1.3415	1.3438	1.3335	1.3520	1.3441	1.3312	1.3394	AVRG		0.74602		1.3404	0	15	0.05	0.99	
Bromofluorobenzene	1.0206	1.0203	1.0242	1.0391	1.0109	1.0120	1.0134	1.0040	1.0036	AVRG		0.98379		1.0165	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	7	2.0000	3	5.0000	3	10.000	1	20.000	-3	50.000	-4	75.000	-3	100.00	-3
Chloromethane	0.5000	-3	1.0000	17	2.0000	-1	5.0000	4	10.000	3	20.000	-6	50.000	-4	75.000	-7	100.00	-4
Vinyl Chloride	0.5000	-7	1.0000	13	2.0000	0	5.0000	2	10.000	0	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Bromomethane			1.0000	-6	2.0000	-8	5.0000	4	10.000	2	20.000	0	50.000	5	75.000	3	100.00	1
Chloroethane			1.0000	18	2.0000	4	5.0000	2	10.000	-2	20.000	-4	50.000	-5	75.000	-6	100.00	-6
Trichlorofluoromethane			1.0000	13	2.0000	-1	5.0000	2	10.000	0	20.000	-2	50.000	-4	75.000	-4	100.00	-3
Acetone					2.0000	18	5.0000	1	10.000	0	20.000	1	50.000	-6	75.000	-10	100.00	-5
Freon 113			0.5000	17	2.0000	1	5.0000	-1	10.000	-6	20.000	-6	50.000	-1	75.000	-2	100.00	-3
1,1-Dichloroethene			0.5000	17	2.0000	0	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-3
Methylene Chloride			0.5000	15	2.0000	-1	5.0000	0	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-3
Carbon Disulfide			0.5000	9	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-2
MTBE			0.5000	11	2.0000	-2	5.0000	-2	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	1
trans-1,2-Dichloroethene			0.5000	18	2.0000	1	5.0000	-1	10.000	-2	20.000	-6	50.000	-3	75.000	-3	100.00	-3
Vinyl Acetate			0.5000	2	2.0000	-16	5.0000	0	10.000	-9	20.000	3	50.000	6	75.000	1	100.00	13
1,1-Dichloroethane			0.5000	15	2.0000	0	5.0000	-1	10.000	-2	20.000	-6	50.000	-2	75.000	-3	100.00	-2
2-Butanone					2.0000	6	5.0000	0	10.000	-2	20.000	-2	50.000	-1	75.000	-3	100.00	2
2,2-Dichloropropane			0.5000	16	2.0000	1	5.0000	0	10.000	-3	20.000	-6	50.000	-2	75.000	-3	100.00	-3
cis-1,2-Dichloroethene			0.5000	13	2.0000	0	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
Chloroform			0.5000	13	2.0000	2	5.0000	-1	10.000	-3	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Bromochloromethane			0.5000	13	2.0000	7	5.0000	1	10.000	-1	20.000	-5	50.000	-3	75.000	-5	100.00	-7
1,1,1-Trichloroethane			0.5000	9	2.0000	0	5.0000	1	10.000	-1	20.000	-6	50.000	-1	75.000	-1	100.00	-1
1,1-Dichloropropene			0.5000	5	2.0000	2	5.0000	1	10.000	-3	20.000	-5	50.000	-1	75.000	0	100.00	0
Carbon Tetrachloride			0.5000	7	2.0000	-3	5.0000	0	10.000	-4	20.000	-5	50.000	1	75.000	2	100.00	2
1,2-Dichloroethane			0.5000	8	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-2	75.000	-1	100.00	0
Benzene			0.5000	16	2.0000	-2	5.0000	1	10.000	-4	20.000	-6	50.000	-2	75.000	-2	100.00	-2
Trichloroethene			0.5000	11	2.0000	2	5.0000	-1	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2-Dichloropropane			0.5000	14	2.0000	-3	5.0000	4	10.000	-5	20.000	-5	50.000	-1	75.000	-2	100.00	-2
Bromodichloromethane			0.5000	2	2.0000	0	5.0000	-2	10.000	-2	20.000	-4	50.000	2	75.000	2	100.00	2
Dibromomethane			0.5000	10	2.0000	2	5.0000	3	10.000	-4	20.000	-5	50.000	-2	75.000	-2	100.00	-1
4-Methyl-2-Pentanone					2.0000	2	5.0000	-1	10.000	-4	20.000	0	50.000	0	75.000	-1	100.00	4
cis-1,3-Dichloropropene			0.5000	10	2.0000	-3	5.0000	-2	10.000	-5	20.000	-4	50.000	1	75.000	2	100.00	2
Toluene			0.5000	17	2.0000	-1	5.0000	-2	10.000	-3	20.000	-5	50.000	-1	75.000	-2	100.00	-2
trans-1,3-Dichloropropene			0.5000	2	2.0000	-5	5.0000	-1	10.000	-3	20.000	-2	50.000	2	75.000	3	100.00	4
1,1,2-Trichloroethane			0.5000	10	2.0000	0	5.0000	0	10.000	-2	20.000	-4	50.000	-1	75.000	-2	100.00	-2
2-Hexanone					2.0000	-2	5.0000	-2	10.000	-1	20.000	-1	50.000	2	75.000	-1	100.00	5
1,3-Dichloropropane			0.5000	8	2.0000	0	5.0000	-2	10.000	-2	20.000	-3	50.000	0	75.000	-2	100.00	0
Tetrachloroethene			0.5000	12	2.0000	2	5.0000	1	10.000	-4	20.000	-6	50.000	-1	75.000	-2	100.00	-2
Dibromochloromethane			0.5000	13	2.0000	-8	5.0000	-5	10.000	-4	20.000	-3	50.000	2	75.000	2	100.00	3
1,2-Dibromoethane			0.5000	15	2.0000	-3	5.0000	-4	10.000	-4	20.000	-4	50.000	0	75.000	-1	100.00	0
Chlorobenzene			0.5000	14	2.0000	0	5.0000	1	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,1,1,2-Tetrachloroethane			0.5000	11	2.0000	-6	5.0000	-2	10.000	-3	20.000	-3	50.000	1	75.000	1	100.00	1
Ethylbenzene			0.5000	14	2.0000	-2	5.0000	-1	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-9	1.0000	14	4.0000	0	10.000	1	20.000	-4	40.000	-3	100.00	1	150.00	0	200.00	0
o-Xylene			0.5000	5	2.0000	-3	5.0000	2	10.000	-2	20.000	-3	50.000	0	75.000	0	100.00	0
Styrene			0.5000	13	2.0000	-4	5.0000	-1	10.000	-4	20.000	-4	50.000	0	75.000	0	100.00	0
Bromoform			0.5000	10	2.0000	-4	5.0000	-3	10.000	-6	20.000	-4	50.000	2	75.000	1	100.00	5
Isopropylbenzene			0.5000	11	2.0000	-1	5.0000	1	10.000	-3	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,1,2,2-Tetrachloroethane			0.5000	<b>22</b>	2.0000	-5	5.0000	1	10.000	-7	20.000	-5	50.000	-3	75.000	-4	100.00	1
1,2,3-Trichloropropane			0.5000	14	2.0000	0	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-4	100.00	-1
Propylbenzene			0.5000	10	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	0	75.000	-1	100.00	-1
Bromobenzene			0.5000	17	2.0000	-1	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-3	100.00	-4
1,3,5-Trimethylbenzene			0.5000	12	2.0000	-2	5.0000	0	10.000	-4	20.000	-5	50.000	-1	75.000	0	100.00	0
2-Chlorotoluene			0.5000	12	2.0000	1	5.0000	2	10.000	-3	20.000	-6	50.000	-1	75.000	-2	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-1	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	12	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	-1	75.000	-1	100.00	-2
1,2,4-Trimethylbenzene			0.5000	4	2.0000	0	5.0000	1	10.000	-3	20.000	-4	50.000	0	75.000	1	100.00	1
sec-Butylbenzene			0.5000	13	2.0000	-1	5.0000	0	10.000	-4	20.000	-5	50.000	0	75.000	-1	100.00	-1
para-Isopropyl Toluene			0.5000	7	2.0000	-1	5.0000	0	10.000	-4	20.000	-4	50.000	1	75.000	0	100.00	0
1,3-Dichlorobenzene			0.5000	14	2.0000	-2	5.0000	2	10.000	-3	20.000	-5	50.000	-2	75.000	-2	100.00	-2
1,4-Dichlorobenzene			0.5000	<b>22</b>	2.0000	-1	5.0000	0	10.000	-4	20.000	-6	50.000	-3	75.000	-4	100.00	-4
n-Butylbenzene			0.5000	15	2.0000	-3	5.0000	-2	10.000	-5	20.000	-5	50.000	0	75.000	0	100.00	0
1,2-Dichlorobenzene			0.5000	10	2.0000	2	5.0000	2	10.000	-4	20.000	-5	50.000	-1	75.000	-2	100.00	-2
1,2-Dibromo-3-Chloropropane			0.5000	<b>27</b>	2.0000	0	5.0000	-7	10.000	-9	20.000	-5	50.000	-4	75.000	-4	100.00	3
1,2,4-Trichlorobenzene			0.5000	10	2.0000	-1	5.0000	1	10.000	-2	20.000	-4	50.000	0	75.000	-1	100.00	-2
Hexachlorobutadiene			0.5000	10	2.0000	-6	5.0000	-9	10.000	-5	20.000	-3	50.000	5	75.000	5	100.00	4
Naphthalene			0.5000	10	2.0000	-3	5.0000	0	10.000	-3	20.000	-2	50.000	1	75.000	-2	100.00	0
1,2,3-Trichlorobenzene			0.5000	9	2.0000	0	5.0000	3	10.000	-1	20.000	-4	50.000	-1	75.000	-2	100.00	-3
Dibromofluoromethane	50.000	-1	50.000	-1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	0	50.000	1	50.000	1
1,2-Dichloroethane-d4	50.000	-2	50.000	0	50.000	1	50.000	0	50.000	0	50.000	1	50.000	-1	50.000	0	50.000	1
Toluene-d8	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	1	50.000	0	50.000	-1	50.000	0
Bromofluorobenzene	50.000	0	50.000	0	50.000	1	50.000	2	50.000	-1	50.000	0	50.000	0	50.000	-1	50.000	-1

MCT 10/21/15 [Acetone]: Separated from coeluting peak in multiple levels.

MCT 10/21/15 [1,2-Dichloropropane]: Corrected fronting or tailing peak integration in multiple levels.

MCT 10/21/15 [Iodomethane]: Corrected fronting or tailing peak integration in (nj25).

MCT 10/21/15 [Iodomethane]: ICV doesn't pass for Iodomethane

MCT 10/21/15 [tert-Butyl Alcohol (TBA)]: Rerun if sample hit less than 20ppb for TBA.

MCT 10/21/15 [2-Chloroethylvinylether]: Rerun if sample hit less than 5ppb for 2-Cleve.

MCT: 10/23/15 LW: 10/23/15 DJA: 10/26/15 KKM: 10/26/15

m=manual integration

Instrument amount =  $a_0 + \text{response} * a_1 + \text{response}^2 * a_2$ ; AVRG=Average response factor

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955422499001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA14  
Calnum : 955422499001

Name : 8260X14W  
Cal Date : 20-OCT-2015

ICV 955422499028 (njk28 20-OCT-2015) stds: S28219 (10000X), S28220 (10000X), S28167 (10000X), S28246 (2500X)

ICV 955423728006 (njl06 21-OCT-2015) stds: S27267 (10000X), S28246 (2500X)

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
Freon 12	955423728006	21-OCT-2015	20.00	20.12	ug/L	1	30	
Chloromethane	955423728006	21-OCT-2015	20.00	21.56	ug/L	8	30	
Vinyl Chloride	955423728006	21-OCT-2015	20.00	19.65	ug/L	-2	20	
Bromomethane	955423728006	21-OCT-2015	20.00	16.95	ug/L	-15	30	
Chloroethane	955423728006	21-OCT-2015	20.00	19.51	ug/L	-2	30	
Trichlorofluoromethane	955423728006	21-OCT-2015	20.00	19.08	ug/L	-5	30	
Acetone	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	40	m
Freon 113	955422499028	20-OCT-2015	25.00	20.88	ug/L	-16	30	
1,1-Dichloroethene	955422499028	20-OCT-2015	25.00	24.12	ug/L	-4	20	
Methylene Chloride	955422499028	20-OCT-2015	25.00	24.71	ug/L	-1	30	
Carbon Disulfide	955422499028	20-OCT-2015	25.00	23.73	ug/L	-5	30	
MTBE	955422499028	20-OCT-2015	25.00	24.47	ug/L	-2	30	
trans-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	22.79	ug/L	-9	30	
Vinyl Acetate	955422499028	20-OCT-2015	25.00	23.17	ug/L	-7	40	
1,1-Dichloroethane	955422499028	20-OCT-2015	25.00	24.05	ug/L	-4	30	
2-Butanone	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	40	
2,2-Dichloropropane	955422499028	20-OCT-2015	25.00	21.79	ug/L	-13	30	
cis-1,2-Dichloroethene	955422499028	20-OCT-2015	25.00	25.08	ug/L	0	30	
Chloroform	955422499028	20-OCT-2015	25.00	24.63	ug/L	-1	20	
Bromochloromethane	955422499028	20-OCT-2015	25.00	24.14	ug/L	-3	30	
1,1,1-Trichloroethane	955422499028	20-OCT-2015	25.00	25.01	ug/L	0	30	
1,1-Dichloropropene	955422499028	20-OCT-2015	25.00	21.55	ug/L	-14	30	
Carbon Tetrachloride	955422499028	20-OCT-2015	25.00	25.22	ug/L	1	30	
1,2-Dichloroethane	955422499028	20-OCT-2015	25.00	24.66	ug/L	-1	30	
Benzene	955422499028	20-OCT-2015	25.00	23.67	ug/L	-5	30	
Trichloroethene	955422499028	20-OCT-2015	25.00	25.16	ug/L	1	30	
1,2-Dichloropropane	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	20	
Bromodichloromethane	955422499028	20-OCT-2015	25.00	24.50	ug/L	-2	30	
Dibromomethane	955422499028	20-OCT-2015	25.00	23.78	ug/L	-5	30	
4-Methyl-2-Pentanone	955422499028	20-OCT-2015	25.00	25.11	ug/L	0	40	
cis-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	25.80	ug/L	3	30	
Toluene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	20	
trans-1,3-Dichloropropene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,1,2-Trichloroethane	955422499028	20-OCT-2015	25.00	24.62	ug/L	-2	30	
2-Hexanone	955422499028	20-OCT-2015	25.00	25.90	ug/L	4	40	
1,3-Dichloropropane	955422499028	20-OCT-2015	25.00	25.04	ug/L	0	30	
Tetrachloroethene	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Dibromochloromethane	955422499028	20-OCT-2015	25.00	24.22	ug/L	-3	30	
1,2-Dibromoethane	955422499028	20-OCT-2015	25.00	23.75	ug/L	-5	30	
Chlorobenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	23.70	ug/L	-5	30	
Ethylbenzene	955422499028	20-OCT-2015	25.00	23.87	ug/L	-5	20	
m,p-Xylenes	955422499028	20-OCT-2015	50.00	48.60	ug/L	-3	30	
o-Xylene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Styrene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	
Bromoform	955422499028	20-OCT-2015	25.00	24.68	ug/L	-1	30	
Isopropylbenzene	955422499028	20-OCT-2015	25.00	23.93	ug/L	-4	30	

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	955422499028	20-OCT-2015	25.00	24.78	ug/L	-1	30	
1,2,3-Trichloropropane	955422499028	20-OCT-2015	25.00	24.91	ug/L	0	30	
Propylbenzene	955422499028	20-OCT-2015	25.00	23.64	ug/L	-5	30	
Bromobenzene	955422499028	20-OCT-2015	25.00	24.36	ug/L	-3	30	
1,3,5-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.70	ug/L	-1	30	
2-Chlorotoluene	955422499028	20-OCT-2015	25.00	23.98	ug/L	-4	30	
4-Chlorotoluene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
tert-Butylbenzene	955422499028	20-OCT-2015	25.00	24.03	ug/L	-4	30	
1,2,4-Trimethylbenzene	955422499028	20-OCT-2015	25.00	24.04	ug/L	-4	30	
sec-Butylbenzene	955422499028	20-OCT-2015	25.00	23.81	ug/L	-5	30	
para-Isopropyl Toluene	955422499028	20-OCT-2015	25.00	23.83	ug/L	-5	30	
1,3-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.82	ug/L	-1	30	
1,4-Dichlorobenzene	955422499028	20-OCT-2015	25.00	24.84	ug/L	-1	30	
n-Butylbenzene	955422499028	20-OCT-2015	25.00	23.56	ug/L	-6	30	
1,2-Dichlorobenzene	955422499028	20-OCT-2015	25.00	25.14	ug/L	1	30	
1,2-Dibromo-3-Chloropropane	955422499028	20-OCT-2015	25.00	23.68	ug/L	-5	30	
1,2,4-Trichlorobenzene	955422499028	20-OCT-2015	25.00	24.13	ug/L	-3	30	
Hexachlorobutadiene	955422499028	20-OCT-2015	25.00	24.32	ug/L	-3	30	
Naphthalene	955422499028	20-OCT-2015	25.00	22.90	ug/L	-8	30	
1,2,3-Trichlorobenzene	955422499028	20-OCT-2015	25.00	23.84	ug/L	-5	30	

955422499028: DJA: 10/22/15 \* MCT: 10/23/15 LW: 10/23/15  
955423728006: Analyst: DJA Date: 10/22/15 Reviewer: LW Date: 10/22/15

m=manual integration

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA02                      Run Name : QC813847                      IDF : 1.0  
 Seqnum : 415467153008.3          File : bkk08                      Time : 20-NOV-2015 13:39  
 Cal : 415365033001                  Caldate : 10-SEP-2015          Caltype : WATER  
 Standards: S28219 (20000X), S28220 (20000X), S28167 (20000X), S28123 (20000X),  
 S28490 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.6293	0.7686	10.00	12.21	ug/L	22	30	0.0500	u
Chloromethane	1.0774	1.1158	10.00	10.36	ug/L	4	30	0.1000	u
Vinyl Chloride	0.7558	0.8552	10.00	11.31	ug/L	13	20	0.0500	u
Bromomethane	0.3642	0.5622	10.00	15.44	ug/L	54	30	0.0500	c+ u ***
Chloroethane	0.4235	0.5020	10.00	11.86	ug/L	19	30	0.0500	u
Trichlorofluoromethane	0.7271	0.7821	10.00	10.76	ug/L	8	30	0.0500	u
Acetone	0.3064	0.1790	12.50	7.304	ug/L	-42	40	0.0500	c- u ***
Freon 113	0.4628	0.4570	12.50	12.34	ug/L	-1	30	0.0500	u
1,1-Dichloroethene	0.4577	0.4426	12.50	12.09	ug/L	-3	20	0.0500	u
Methylene Chloride	0.8001	0.7345	12.50	11.47	ug/L	-8	30	0.0500	u
Carbon Disulfide	2.0360	1.9671	12.50	12.08	ug/L	-3	30	0.0500	u v- ***
MTBE	1.6486	1.4176	12.50	10.75	ug/L	-14	30	0.0500	u
trans-1,2-Dichloroethene	0.5544	0.5691	12.50	12.83	ug/L	3	30	0.0500	u
Vinyl Acetate	2.0003	1.7333	12.50	10.83	ug/L	-13	40	0.0500	u
1,1-Dichloroethane	1.1595	1.1006	12.50	11.86	ug/L	-5	30	0.1000	u
2-Butanone	0.4903	0.3194	12.50	8.143	ug/L	-35	40	0.0500	u
cis-1,2-Dichloroethene	0.6555	0.7040	12.50	13.42	ug/L	7	30	0.0500	u
2,2-Dichloropropane	0.5865	0.8046	12.50	17.15	ug/L	37	30	0.0500	c+ u ***
Chloroform	1.0805	1.1443	12.50	13.24	ug/L	6	20	0.0500	u
Bromochloromethane	0.3779	0.3831	12.50	12.67	ug/L	1	30	0.0500	u
1,1,1-Trichloroethane	0.7910	0.7570	12.50	11.96	ug/L	-4	30	0.0500	u
1,1-Dichloropropene	0.4943	0.4782	12.50	12.09	ug/L	-3	30	0.0500	u
Carbon Tetrachloride	0.3881	0.4568	12.50	14.71	ug/L	18	30	0.0500	u
1,2-Dichloroethane	0.5316	0.5699	12.50	13.40	ug/L	7	30	0.0500	u
Benzene	1.4995	1.5761	12.50	13.14	ug/L	5	30	0.0500	u
Trichloroethene	0.3863	0.4153	12.50	13.44	ug/L	8	30	0.0500	u
1,2-Dichloropropane	0.4659	0.4412	12.50	11.84	ug/L	-5	20	0.0500	u
Bromodichloromethane	0.5166	0.5236	12.50	12.67	ug/L	1	30	0.0500	u
Dibromomethane	0.3093	0.3512	12.50	14.19	ug/L	14	30	0.0500	u
4-Methyl-2-Pentanone	0.6693	0.5135	12.50	9.591	ug/L	-23	40	0.0500	u
cis-1,3-Dichloropropene	0.6588	0.7182	12.50	13.63	ug/L	9	30	0.0500	u
Toluene	1.6158	1.8843	12.50	14.58	ug/L	17	20	0.0500	u
trans-1,3-Dichloropropene	0.5956	0.6458	12.50	13.55	ug/L	8	30	0.0500	u
1,1,2-Trichloroethane	0.2161	0.2410	12.50	13.94	ug/L	12	30	0.0500	u
2-Hexanone	0.4665	0.3757	12.50	10.07	ug/L	-19	40	0.0500	u
1,3-Dichloropropane	0.6513	0.7264	12.50	13.94	ug/L	12	30	0.0500	u
Tetrachloroethene	0.4027	0.5381	12.50	16.70	ug/L	34	30	0.0500	c+ u ***
Dibromochloromethane	0.4661	0.5327	12.50	14.29	ug/L	14	30	0.0500	u
1,2-Dibromoethane	0.4636	0.4995	12.50	13.47	ug/L	8	30	0.0500	u
Chlorobenzene	1.1033	1.2741	12.50	14.44	ug/L	15	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3688	0.4533	12.50	15.36	ug/L	23	30	0.0500	u
Ethylbenzene	1.7827	2.0478	12.50	14.36	ug/L	15	20	0.0500	u
m,p-Xylenes	0.6700	0.7672	25.00	28.63	ug/L	15	30	0.0500	u
o-Xylene	0.6653	0.7590	12.50	14.26	ug/L	14	30	0.0500	u
Styrene	1.1744	1.3190	12.50	14.04	ug/L	12	30	0.0500	u
Bromoform	0.3812	0.3889	12.50	12.75	ug/L	2	30	0.1000	u
Isopropylbenzene	3.2193	3.3900	12.50	13.16	ug/L	5	30	0.0500	u



Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.2364	1.1591	12.50	11.72	ug/L	-6	30	0.3000	u
1,2,3-Trichloropropane	0.9309	0.9896	12.50	13.29	ug/L	6	30	0.0500	u
Propylbenzene	3.7626	4.1023	12.50	13.63	ug/L	9	30	0.0500	u
Bromobenzene	0.9921	1.1923	12.50	15.02	ug/L	20	30	0.0500	u
1,3,5-Trimethylbenzene	2.3521	2.6860	12.50	14.27	ug/L	14	30	0.0500	u
2-Chlorotoluene	2.6254	2.8706	12.50	13.67	ug/L	9	30	0.0500	u
4-Chlorotoluene	2.4487	2.7690	12.50	14.14	ug/L	13	30	0.0500	u
tert-Butylbenzene	2.0742	2.2608	12.50	13.62	ug/L	9	30	0.0500	u
1,2,4-Trimethylbenzene	2.1921	2.4399	12.50	13.91	ug/L	11	30	0.0500	u
sec-Butylbenzene	3.0027	3.1875	12.50	13.27	ug/L	6	30	0.0500	u
para-Isopropyl Toluene	2.2279	2.5150	12.50	14.11	ug/L	13	30	0.0500	u
1,3-Dichlorobenzene	1.6298	1.9719	12.50	15.12	ug/L	21	30	0.0500	u
1,4-Dichlorobenzene	1.6436	1.9729	12.50	15.00	ug/L	20	30	0.0500	u
n-Butylbenzene	1.7918	2.0069	12.50	14.00	ug/L	12	30	0.0500	u
1,2-Dichlorobenzene	1.6177	1.8947	12.50	14.64	ug/L	17	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2281	0.1743	12.50	9.553	ug/L	-24	30	0.0500	u
1,2,4-Trichlorobenzene	0.6551	0.7459	12.50	14.23	ug/L	14	30	0.0500	u
Hexachlorobutadiene	0.3528	0.4122	12.50	14.60	ug/L	17	30	0.0500	u
Naphthalene	1.7574	1.1367	12.50	8.085	ug/L	-35	30	0.0500	c- u ***
1,2,3-Trichlorobenzene	0.5648	0.5763	12.50	12.15	ug/L	-3	30	0.0500	u
Dibromofluoromethane	0.5283	0.5758	50.00	54.50	ug/L	9	30	0.0500	u
1,2-Dichloroethane-d4	0.3269	0.3839	50.00	58.72	ug/L	17	30	0.0500	u
Toluene-d8	1.1791	1.3240	50.00	56.14	ug/L	12	30	0.0500	u
Bromofluorobenzene	1.0006	1.0021	50.00	50.07	ug/L	0	30	0.0500	u

ISTD (ICAL bia20)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	786577	800061	1.71	11.09	11.08	-0.01
1,4-Difluorobenzene	1292015	1180038	-8.67	12.31	12.29	-0.02
Chlorobenzene-d5	1307506	1126447	-13.85	16.91	16.90	-0.01
1,4-Dichlorobenzene-d4	660691	600538	-9.10	20.31	20.30	-0.01

Analyst: KKM Date: 11/25/15 Reviewer: TEW Date: 11/25/15

+ = high bias - = low bias c = CCV u = use v = ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03 IDF : 1.0  
 Seqnum : 425468732003 File : ck103 Time : 21-NOV-2015 13:16  
 Cal : 425383715001 Caldate : 23-SEP-2015 Caltype : WATER  
 Standards: S27005 (16670X), S28295 (16670X), S28355 (16670X), S27081 (16670X),  
 S28450 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.5033	0.8485	30.00	50.58	ug/L	69	30	0.0500	!v- c+ ***
Chloromethane	0.4791	0.6711	30.00	42.02	ug/L	40	30	0.1000	c+ ***
Vinyl Chloride	0.4311	0.7053	30.00	49.08	ug/L	64	20	0.0500	c+ ***
Bromomethane	0.2497	0.3906	30.00	46.93	ug/L	56	30	0.0500	!v- c+ ***
Chloroethane	0.2498	0.3995	30.00	47.98	ug/L	60	30	0.0500	c+ ***
Trichlorofluoromethane	0.5295	0.8535	30.00	48.35	ug/L	61	30	0.0500	c+ ***
Acetone	0.2162	0.1763	30.00	24.47	ug/L	-18	40	0.0500	
Freon 113	0.4073	0.5017	30.00	36.95	ug/L	23	30	0.0500	!c+ !v-
1,1-Dichloroethene	0.3973	0.4267	30.00	32.22	ug/L	7	20	0.0500	
Methylene Chloride	0.5344	0.5939	30.00	33.34	ug/L	11	30	0.0500	
Carbon Disulfide	1.6245	1.8954	30.00	35.00	ug/L	17	30	0.0500	
MTBE	1.2784	1.3769	30.00	32.31	ug/L	8	30	0.0500	
trans-1,2-Dichloroethene	0.4588	0.5045	30.00	32.99	ug/L	10	30	0.0500	
Vinyl Acetate	0.9841	1.4457	30.00	44.07	ug/L	47	40	0.0500	c+ ***
1,1-Dichloroethane	0.8798	1.0026	30.00	34.19	ug/L	14	30	0.1000	
2-Butanone	0.3118	0.2829	30.00	27.21	ug/L	-9	40	0.0500	
2,2-Dichloropropane	0.4662	0.8021	30.00	51.61	ug/L	72	30	0.0500	c+ ***
cis-1,2-Dichloroethene	0.5338	0.6100	30.00	34.29	ug/L	14	30	0.0500	
Chloroform	0.8536	1.0180	30.00	35.78	ug/L	19	20	0.0500	
Bromochloromethane	0.2939	0.3454	30.00	35.26	ug/L	18	30	0.0500	
1,1,1-Trichloroethane	0.6192	0.7332	30.00	35.52	ug/L	18	30	0.0500	
1,1-Dichloropropene	0.3433	0.4412	30.00	38.55	ug/L	29	30	0.0500	!c+
Carbon Tetrachloride	0.2739	0.3738	30.00	40.95	ug/L	37	30	0.0500	c+ ***
1,2-Dichloroethane	0.3622	0.4578	30.00	37.92	ug/L	26	30	0.0500	!c+
Benzene	0.9679	1.1607	30.00	35.98	ug/L	20	30	0.0500	
Trichloroethene	0.2739	0.2940	30.00	32.20	ug/L	7	30	0.0500	
1,2-Dichloropropane	0.3074	0.3271	30.00	31.92	ug/L	6	20	0.0500	
Bromodichloromethane	0.3767	0.4531	30.00	36.09	ug/L	20	30	0.0500	
Dibromomethane	0.2205	0.2449	30.00	33.31	ug/L	11	30	0.0500	
4-Methyl-2-Pentanone	0.3791	0.3521	30.00	27.86	ug/L	-7	40	0.0500	
cis-1,3-Dichloropropene	0.4320	0.5243	30.00	36.41	ug/L	21	30	0.0500	!c+
Toluene	0.6077	0.7271	30.00	35.89	ug/L	20	20	0.0500	
trans-1,3-Dichloropropene	0.3965	0.4843	30.00	36.64	ug/L	22	30	0.0500	!c+
1,1,2-Trichloroethane	0.1597	0.1703	30.00	31.99	ug/L	7	30	0.0500	
2-Hexanone	0.2891	0.2453	30.00	25.46	ug/L	-15	40	0.0500	
1,3-Dichloropropane	0.4743	0.5534	30.00	35.00	ug/L	17	30	0.0500	
Tetrachloroethene	0.2550	0.3050	30.00	35.87	ug/L	20	30	0.0500	
Dibromochloromethane	0.3371	0.3854	30.00	34.29	ug/L	14	30	0.0500	
1,2-Dibromoethane	0.3278	0.3385	30.00	30.98	ug/L	3	30	0.0500	
Chlorobenzene	0.7376	0.8041	30.00	32.70	ug/L	9	30	0.3000	
1,1,1,2-Tetrachloroethane	0.2685	0.3354	30.00	37.48	ug/L	25	30	0.0500	!c+
Ethylbenzene	1.1292	1.4136	30.00	37.56	ug/L	25	20	0.0500	c+ ***
m,p-Xylenes	0.4153	0.4879	60.00	70.49	ug/L	17	30	0.0500	
o-Xylene	0.4263	0.4888	30.00	34.40	ug/L	15	30	0.0500	
Styrene	0.7560	0.8688	30.00	34.48	ug/L	15	30	0.0500	
Bromoform	0.2207	0.2482	30.00	33.74	ug/L	12	30	0.1000	
Isopropylbenzene	2.0519	2.1364	30.00	31.24	ug/L	4	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8133	0.7597	30.00	28.02	ug/L	-7	30	0.3000	
1,2,3-Trichloropropane	0.6314	0.6899	30.00	32.78	ug/L	9	30	0.0500	
Propylbenzene	2.4531	2.7252	30.00	33.33	ug/L	11	30	0.0500	
Bromobenzene	0.6172	0.6660	30.00	32.38	ug/L	8	30	0.0500	
1,3,5-Trimethylbenzene	1.6440	1.8038	30.00	32.92	ug/L	10	30	0.0500	
2-Chlorotoluene	1.6778	1.9076	30.00	34.11	ug/L	14	30	0.0500	
4-Chlorotoluene	1.6176	1.8836	30.00	34.93	ug/L	16	30	0.0500	
tert-Butylbenzene	1.3736	1.4869	30.00	32.48	ug/L	8	30	0.0500	
1,2,4-Trimethylbenzene	1.7376	1.9233	30.00	33.21	ug/L	11	30	0.0500	
sec-Butylbenzene	2.0973	2.2763	30.00	32.56	ug/L	9	30	0.0500	
para-Isopropyl Toluene	1.6611	1.9276	30.00	34.81	ug/L	16	30	0.0500	
1,3-Dichlorobenzene	1.0815	1.2179	30.00	33.78	ug/L	13	30	0.0500	
1,4-Dichlorobenzene	1.1244	1.2108	30.00	32.31	ug/L	8	30	0.0500	
n-Butylbenzene	1.4813	1.8059	30.00	36.58	ug/L	22	30	0.0500	!c+
1,2-Dichlorobenzene	1.0687	1.1588	30.00	32.53	ug/L	8	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.1307	0.1300	30.00	29.84	ug/L	-1	30	0.0500	
1,2,4-Trichlorobenzene	0.5685	0.6310	30.00	33.30	ug/L	11	30	0.0500	
Hexachlorobutadiene	0.1797	0.2614	30.00	43.63	ug/L	45	30	0.0500	c+ ***
Naphthalene	1.5742	1.5350	30.00	29.25	ug/L	-2	30	0.0500	
1,2,3-Trichlorobenzene	0.5470	0.5853	30.00	32.10	ug/L	7	30	0.0500	
Dibromofluoromethane	0.6951	0.7323	50.00	52.68	ug/L	5	30	0.0500	
1,2-Dichloroethane-d4	0.3657	0.4598	50.00	62.86	ug/L	26	30	0.0500	!c+
Toluene-d8	1.1356	1.2499	50.00	55.04	ug/L	10	30	0.0500	
Bromofluorobenzene	0.9511	0.9684	50.00	50.91	ug/L	2	30	0.0500	

ISTD (ICAL cin24)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	497393	431294	-13.29	10.36	10.36	0.00
1,4-Difluorobenzene	895161	743905	-16.90	11.53	11.52	-0.01
Chlorobenzene-d5	871710	716255	-17.83	15.60	15.59	-0.01
1,4-Dichlorobenzene-d4	449342	410586	-8.63	18.37	18.36	-0.01

DAR 11/23/15 : single analyte reruns

CCV CCC failure

Analyst: DAR Date: 11/23/15 Reviewer: LW Date: 11/23/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : QC814058                      IDF : 1.0  
 Seqnum : 425468732007.1          File : ckl07                      Time : 21-NOV-2015 15:38  
 Cal : 425383715001              Caldate : 23-SEP-2015          Caltype : WATER  
 Standards: S28214 (100000X), S28450 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Dibromofluoromethane	0.6951	0.7422	50.00	53.39	ug/L	7	30	0.0500	u
1,2-Dichloroethane-d4	0.3657	0.4834	50.00	66.10	ug/L	<b>32</b>	30	0.0500	c+ u
Toluene-d8	1.1356	1.2235	50.00	53.87	ug/L	8	30	0.0500	u
Bromofluorobenzene	0.9511	1.0006	50.00	52.60	ug/L	5	30	0.0500	u

ISTD (ICAL cin24)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	497393	374595	-24.69	10.36	10.34	-0.02
1,4-Difluorobenzene	895161	666178	-25.58	11.53	11.50	-0.03
Chlorobenzene-d5	871710	654887	-24.87	15.60	15.58	-0.02
1,4-Dichlorobenzene-d4	449342	362067	-19.42	18.37	18.35	-0.02

ISTD (ICAL ckl06)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	365079	374595	2.61	10.34	10.34	0.00

DAR 11/23/15 : both round to 9.47 [general version]

Analyst: KKM                      Date: 11/25/15                      Reviewer: TEW                      Date: 11/25/15

+ = high bias    c = CCV    u = use

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA03                      Run Name : QC814353                      IDF : 1.0  
 Seqnum : 425472906009.7          File : cko09                      Time : 24-NOV-2015 15:08  
 Cal : 425383715001                Caldate : 23-SEP-2015          Caltype : WATER  
 Standards: S28219 (10000X), S28220 (10000X), S28167 (10000X), S28123 (10000X),  
 S28450 (5000X)

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
Freon 12	0.5033	0.4423	20.00	17.58	ug/L	-12	30	0.0500	!v- u
Chloromethane	0.4791	0.5114	20.00	21.35	ug/L	7	30	0.1000	u
Vinyl Chloride	0.4311	0.4999	20.00	23.19	ug/L	16	20	0.0500	?LOD u
Bromomethane	0.2497	0.3625	20.00	29.03	ug/L	45	30	0.0500	!v- c+ u ***
Chloroethane	0.2498	0.3074	20.00	24.61	ug/L	23	30	0.0500	u
Trichlorofluoromethane	0.5295	0.5162	20.00	19.50	ug/L	-3	30	0.0500	u
Acetone	0.2162	0.1456	25.00	16.84	ug/L	-33	40	0.0500	u
Freon 113	0.4073	0.3638	25.00	22.33	ug/L	-11	30	0.0500	!v- u
1,1-Dichloroethene	0.3973	0.3662	25.00	23.04	ug/L	-8	20	0.0500	u
Methylene Chloride	0.5344	0.5146	25.00	24.07	ug/L	-4	30	0.0500	u
Carbon Disulfide	1.6245	1.3882	25.00	21.36	ug/L	-15	30	0.0500	u
MTBE	1.2784	1.2197	25.00	23.85	ug/L	-5	30	0.0500	u
trans-1,2-Dichloroethene	0.4588	0.4230	25.00	23.05	ug/L	-8	30	0.0500	u
Vinyl Acetate	0.9841	1.2894	25.00	32.76	ug/L	31	40	0.0500	u
1,1-Dichloroethane	0.8798	0.8058	25.00	22.90	ug/L	-8	30	0.1000	u
2-Butanone	0.3118	0.2319	25.00	18.59	ug/L	-26	40	0.0500	u
cis-1,2-Dichloroethene	0.5338	0.5747	25.00	26.92	ug/L	8	30	0.0500	u
2,2-Dichloropropane	0.4662	0.6420	25.00	34.43	ug/L	38	30	0.0500	c+ u ***
Chloroform	0.8536	0.8913	25.00	26.10	ug/L	4	20	0.0500	u
Bromochloromethane	0.2939	0.3268	25.00	27.80	ug/L	11	30	0.0500	u
1,1,1-Trichloroethane	0.6192	0.6744	25.00	27.23	ug/L	9	30	0.0500	u
1,1-Dichloropropene	0.3433	0.3053	25.00	22.23	ug/L	-11	30	0.0500	u
Carbon Tetrachloride	0.2739	0.3316	25.00	30.27	ug/L	21	30	0.0500	u
1,2-Dichloroethane	0.3622	0.3977	25.00	27.45	ug/L	10	30	0.0500	u
Benzene	0.9679	0.9089	25.00	23.48	ug/L	-6	30	0.0500	u
Trichloroethene	0.2739	0.2599	25.00	23.72	ug/L	-5	30	0.0500	u
1,2-Dichloropropane	0.3074	0.2644	25.00	21.50	ug/L	-14	20	0.0500	u
Bromodichloromethane	0.3767	0.3807	25.00	25.27	ug/L	1	30	0.0500	u
Dibromomethane	0.2205	0.2244	25.00	25.44	ug/L	2	30	0.0500	u
4-Methyl-2-Pentanone	0.3791	0.2839	25.00	18.72	ug/L	-25	40	0.0500	u
cis-1,3-Dichloropropene	0.4320	0.4421	25.00	25.58	ug/L	2	30	0.0500	u
Toluene	0.6077	0.6164	25.00	25.36	ug/L	1	20	0.0500	u
trans-1,3-Dichloropropene	0.3965	0.4218	25.00	26.60	ug/L	6	30	0.0500	u
1,1,2-Trichloroethane	0.1597	0.1538	25.00	24.08	ug/L	-4	30	0.0500	u
2-Hexanone	0.2891	0.2220	25.00	19.20	ug/L	-23	40	0.0500	u
1,3-Dichloropropane	0.4743	0.4795	25.00	25.27	ug/L	1	30	0.0500	u
Tetrachloroethene	0.2550	0.2666	25.00	26.13	ug/L	5	30	0.0500	u
Dibromochloromethane	0.3371	0.3531	25.00	26.19	ug/L	5	30	0.0500	u
1,2-Dibromoethane	0.3278	0.3232	25.00	24.65	ug/L	-1	30	0.0500	u
Chlorobenzene	0.7376	0.7405	25.00	25.10	ug/L	0	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.2685	0.2745	25.00	25.56	ug/L	2	30	0.0500	u
Ethylbenzene	1.1292	1.1236	25.00	24.88	ug/L	0	20	0.0500	u
m,p-Xylenes	0.4153	0.4260	50.00	51.29	ug/L	3	30	0.0500	u
o-Xylene	0.4263	0.4143	25.00	24.30	ug/L	-3	30	0.0500	u
Styrene	0.7560	0.7303	25.00	24.15	ug/L	-3	30	0.0500	u
Bromoform	0.2207	0.2113	25.00	23.93	ug/L	-4	30	0.1000	u
Isopropylbenzene	2.0519	2.1760	25.00	26.51	ug/L	6	30	0.0500	u

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
1,1,2,2-Tetrachloroethane	0.8133	0.7808	25.00	24.00	ug/L	-4	30	0.3000	u
1,2,3-Trichloropropane	0.6314	0.6748	25.00	26.72	ug/L	7	30	0.0500	u
Propylbenzene	2.4531	2.5723	25.00	26.22	ug/L	5	30	0.0500	u
Bromobenzene	0.6172	0.6440	25.00	26.09	ug/L	4	30	0.0500	u
1,3,5-Trimethylbenzene	1.6440	1.7983	25.00	27.35	ug/L	9	30	0.0500	u
2-Chlorotoluene	1.6778	1.7792	25.00	26.51	ug/L	6	30	0.0500	u
4-Chlorotoluene	1.6176	1.6720	25.00	25.84	ug/L	3	30	0.0500	u
tert-Butylbenzene	1.3736	1.3953	25.00	25.40	ug/L	2	30	0.0500	u
1,2,4-Trimethylbenzene	1.7376	1.7713	25.00	25.49	ug/L	2	30	0.0500	u
sec-Butylbenzene	2.0973	2.0976	25.00	25.00	ug/L	0	30	0.0500	u
para-Isopropyl Toluene	1.6611	1.7068	25.00	25.69	ug/L	3	30	0.0500	u
1,3-Dichlorobenzene	1.0815	1.0201	25.00	23.58	ug/L	-6	30	0.0500	u
1,4-Dichlorobenzene	1.1244	1.0666	25.00	23.72	ug/L	-5	30	0.0500	u
n-Butylbenzene	1.4813	1.5817	25.00	26.69	ug/L	7	30	0.0500	u
1,2-Dichlorobenzene	1.0687	0.9783	25.00	22.89	ug/L	-8	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.1307	0.1255	25.00	24.00	ug/L	-4	30	0.0500	u
1,2,4-Trichlorobenzene	0.5685	0.5503	25.00	24.20	ug/L	-3	30	0.0500	u
Hexachlorobutadiene	0.1797	0.1904	25.00	26.49	ug/L	6	30	0.0500	u
Naphthalene	1.5742	1.2825	25.00	20.37	ug/L	-19	30	0.0500	u
1,2,3-Trichlorobenzene	0.5470	0.4945	25.00	22.60	ug/L	-10	30	0.0500	u
Dibromofluoromethane	0.6951	0.7484	50.00	53.84	ug/L	8	30	0.0500	u
1,2-Dichloroethane-d4	0.3657	0.3889	50.00	53.17	ug/L	6	30	0.0500	u
Toluene-d8	1.1356	1.2011	50.00	52.88	ug/L	6	30	0.0500	u
Bromofluorobenzene	0.9511	1.0110	50.00	53.15	ug/L	6	30	0.0500	u

ISTD (ICAL cin24)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	497393	627952	26.25	10.36	10.35	-0.01
1,4-Difluorobenzene	895161	1122289	25.37	11.53	11.51	-0.02
Chlorobenzene-d5	871710	1014875	16.42	15.60	15.60	0.00
1,4-Dichlorobenzene-d4	449342	472498	5.15	18.37	18.36	-0.01

Analyst: KKM Date: 11/25/15 Reviewer: TEW Date: 11/25/15

!=warning +=high bias -=low bias ?LOD=no LOD c=CCV u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 MSVOA Water  
EPA 8260B

Inst : MSVOA14                      Run Name : QC814115                      IDF : 1.0  
 Seqnum : 955472935014.4            File : nk014                      Time : 24-NOV-2015 18:21  
 Cal : 955422499001                  Caldate : 20-OCT-2015  
 Standards: S28489 (20000X), S28220 (20000X), S28167 (20000X), S27267 (20000X),  
 S28449 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.6415	0.7963	10.00	12.41	ug/L	24	30	0.0500	u
Chloromethane	0.9510	0.7630	10.00	8.022	ug/L	-20	30	0.1000	u
Vinyl Chloride	0.9707	0.9010	10.00	9.282	ug/L	-7	20	0.0500	u
Bromomethane	0.2242	0.4043	10.00	18.04	ug/L	80	30	0.0500	c+ u ***
Chloroethane	0.5345	0.4550	10.00	8.512	ug/L	-15	30	0.0500	u
Trichlorofluoromethane	0.8274	1.0806	10.00	13.06	ug/L	31	30	0.0500	c+ u ***
Acetone	0.4156	0.3722	12.50	11.20	ug/L	-10	40	0.0500	u
Freon 113	0.4347	0.4571	12.50	13.15	ug/L	5	30	0.0500	u
1,1-Dichloroethene	0.4198	0.4298	12.50	12.80	ug/L	2	20	0.0500	u
Methylene Chloride	0.4994	0.5252	12.50	13.15	ug/L	5	30	0.0500	u
Carbon Disulfide	1.4737	1.6050	12.50	13.61	ug/L	9	30	0.0500	u
MTBE	1.6773	1.6905	12.50	12.60	ug/L	1	30	0.0500	u
trans-1,2-Dichloroethene	0.4787	0.4659	12.50	12.17	ug/L	-3	30	0.0500	u
Vinyl Acetate	1.7132	1.5000	12.50	10.94	ug/L	-12	40	0.0500	u
1,1-Dichloroethane	1.3336	1.0573	12.50	9.910	ug/L	-21	30	0.1000	u
2-Butanone	0.4886	0.3276	12.50	8.380	ug/L	-33	40	0.0500	u
cis-1,2-Dichloroethene	0.5624	0.5818	12.50	12.93	ug/L	3	30	0.0500	u
2,2-Dichloropropane	0.6571	0.9364	12.50	17.81	ug/L	42	30	0.0500	c+ u ***
Chloroform	0.8921	1.0128	12.50	14.19	ug/L	14	20	0.0500	u
Bromochloromethane	0.2490	0.2472	12.50	12.41	ug/L	-1	30	0.0500	u
1,1,1-Trichloroethane	0.7861	0.9326	12.50	14.83	ug/L	19	30	0.0500	u
1,1-Dichloropropene	0.4813	0.4779	12.50	12.41	ug/L	-1	30	0.0500	u
Carbon Tetrachloride	0.4089	0.5281	12.50	16.15	ug/L	29	30	0.0500	u
1,2-Dichloroethane	0.6367	0.5720	12.50	11.23	ug/L	-10	30	0.0500	u
Benzene	1.4017	1.4988	12.50	13.37	ug/L	7	30	0.0500	u
Trichloroethene	0.3628	0.3894	12.50	13.42	ug/L	7	30	0.0500	u
1,2-Dichloropropane	0.5064	0.3915	12.50	9.664	ug/L	-23	20	0.0500	c- u ***
Bromodichloromethane	0.4448	0.5133	12.50	14.42	ug/L	15	30	0.0500	u
Dibromomethane	0.2211	0.2308	12.50	13.05	ug/L	4	30	0.0500	u
4-Methyl-2-Pentanone	0.6446	0.4473	12.50	8.674	ug/L	-31	40	0.0500	u
cis-1,3-Dichloropropene	0.5532	0.6821	12.50	15.41	ug/L	23	30	0.0500	u
Toluene	1.6718	1.7308	12.50	12.94	ug/L	4	20	0.0500	u
trans-1,3-Dichloropropene	0.5523	0.6324	12.50	14.31	ug/L	15	30	0.0500	u
1,1,2-Trichloroethane	0.1862	0.1957	12.50	13.13	ug/L	5	30	0.0500	u
2-Hexanone	0.4951	0.3385	12.50	8.545	ug/L	-32	40	0.0500	u
1,3-Dichloropropane	0.6320	0.6934	12.50	13.71	ug/L	10	30	0.0500	u
Tetrachloroethene	0.3610	0.4022	12.50	13.93	ug/L	11	30	0.0500	u
Dibromochloromethane	0.3820	0.4102	12.50	13.43	ug/L	7	30	0.0500	u
1,2-Dibromoethane	0.3672	0.3603	12.50	12.27	ug/L	-2	30	0.0500	u
Chlorobenzene	1.0480	1.1083	12.50	13.22	ug/L	6	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.3617	0.3941	12.50	13.62	ug/L	9	30	0.0500	u
Ethylbenzene	1.9396	2.0118	12.50	12.97	ug/L	4	20	0.0500	u
m,p-Xylenes	0.7353	0.7596	25.00	25.83	ug/L	3	30	0.0500	u
o-Xylene	0.7307	0.7061	12.50	12.08	ug/L	-3	30	0.0500	u
Styrene	1.2609	1.2620	12.50	12.51	ug/L	0	30	0.0500	u
Bromoform	0.2701	0.2990	12.50	13.84	ug/L	11	30	0.1000	u
Isopropylbenzene	3.5784	3.3698	12.50	11.77	ug/L	-6	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8496	0.8977	12.50	13.21	ug/L	6	30	0.3000	u
1,2,3-Trichloropropane	0.9817	0.9639	12.50	12.27	ug/L	-2	30	0.0500	u
Propylbenzene	4.3463	4.2376	12.50	12.19	ug/L	-3	30	0.0500	u
Bromobenzene	0.8426	0.8311	12.50	12.33	ug/L	-1	30	0.0500	u
1,3,5-Trimethylbenzene	3.0929	3.0463	12.50	12.31	ug/L	-2	30	0.0500	u
2-Chlorotoluene	2.9127	2.8540	12.50	12.25	ug/L	-2	30	0.0500	u
4-Chlorotoluene	2.7062	2.6653	12.50	12.31	ug/L	-2	30	0.0500	u
tert-Butylbenzene	2.6588	2.5561	12.50	12.02	ug/L	-4	30	0.0500	u
1,2,4-Trimethylbenzene	3.1235	3.0607	12.50	12.25	ug/L	-2	30	0.0500	u
sec-Butylbenzene	4.0353	3.9539	12.50	12.25	ug/L	-2	30	0.0500	u
para-Isopropyl Toluene	3.3656	3.3643	12.50	12.49	ug/L	0	30	0.0500	u
1,3-Dichlorobenzene	1.5874	1.6939	12.50	13.34	ug/L	7	30	0.0500	u
1,4-Dichlorobenzene	1.6381	1.7101	12.50	13.05	ug/L	4	30	0.0500	u
n-Butylbenzene	3.2103	3.3910	12.50	13.20	ug/L	6	30	0.0500	u
1,2-Dichlorobenzene	1.5518	1.5932	12.50	12.83	ug/L	3	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2296	0.2043	12.50	11.12	ug/L	-11	30	0.0500	u
1,2,4-Trichlorobenzene	1.1989	1.2055	12.50	12.57	ug/L	1	30	0.0500	u
Hexachlorobutadiene	0.5656	0.6699	12.50	14.81	ug/L	18	30	0.0500	u
Naphthalene	3.4680	2.8062	12.50	10.11	ug/L	-19	30	0.0500	u
1,2,3-Trichlorobenzene	1.1848	1.1651	12.50	12.29	ug/L	-2	30	0.0500	u
Dibromofluoromethane	0.4527	0.5104	50.00	56.37	ug/L	13	30	0.0500	u
1,2-Dichloroethane-d4	0.4650	0.4907	50.00	52.76	ug/L	6	30	0.0500	u
Toluene-d8	1.3404	1.4587	50.00	54.41	ug/L	9	30	0.0500	u
Bromofluorobenzene	1.0165	1.0042	50.00	49.40	ug/L	-1	30	0.0500	u

ISTD (ICAL njk23)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	742664	580566	-21.83	9.49	9.47	-0.02
1,4-Difluorobenzene	1178583	887005	-24.74	10.56	10.55	-0.01
Chlorobenzene-d5	1092554	839042	-23.20	14.13	14.12	-0.01
1,4-Dichlorobenzene-d4	591395	486931	-17.66	16.56	16.55	-0.01

CCV CCC failure

Analyst: KKM Date: 11/25/15 Reviewer: TEW Date: 11/25/15

+ = high bias - = low bias c = CCV u = use



## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415467153

Date : 11/20/15  
 Sequence : MSVOA02 bkk

Reference : bia20  
 Analyzed : 09/11/15 01:28

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	786577	11.09	1292015	12.31	1307506	16.91	660691	20.31
		LOWER LIMIT	393289	10.59	646008	11.81	653753	16.41	330346	19.81
		UPPER LIMIT	1573154	11.59	2584030	12.81	2615012	17.41	1321382	20.81
008	CCV/BS	QC813847	800061	11.08	1180038	12.29	1126447	16.90	600538	20.30
009	BSD	QC813848	828398	11.08	1221675	12.29	1177547	16.90	620714	20.30
012	BLANK	QC813849	792605	11.08	1172228	12.29	1117493	16.90	570371	20.30
013	SAMPLE	271668-005	790348	11.08	1160836	12.30	1096076	16.90	565817	20.30
014	SAMPLE	271668-006	769127	11.08	1137989	12.29	1097586	16.90	562525	20.30
015	SAMPLE	271668-007	770111	11.09	1139526	12.29	1085437	16.90	552962	20.30
016	SAMPLE	271668-008	761987	11.08	1129872	12.29	1070394	16.90	530029	20.31
017	SAMPLE	271668-009	732934	11.08	1058423	12.29	1009223	16.90	524700	20.30
018	SAMPLE	271668-010	715375	11.08	1044697	12.29	992004	16.90	517115	20.30
019	SAMPLE	271668-011	705664	11.08	1050213	12.30	993323	16.90	509715	20.30
020	SAMPLE	271668-012	688946	11.07	1015017	12.29	971148	16.90	503921	20.30
021	SAMPLE	271668-013	675738	11.08	982651	12.30	946710	16.90	492420	20.30
022	SAMPLE	271668-014	689690	11.08	1020351	12.29	945636	16.90	484174	20.30
023	SAMPLE	271668-015	671354	11.08	986679	12.29	889837	16.90	481727	20.30
024	SAMPLE	271668-004	668869	11.08	978700	12.29	925572	16.90	481825	20.30
025	SAMPLE	271668-003	663569	11.08	973906	12.29	915133	16.90	476170	20.30

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 425468732

Date : 11/21/15  
 Sequence : MSVOA03 ckl

Reference : cin24  
 Analyzed : 09/24/15 02:58

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	497393	10.36	895161	11.53	871710	15.60	449342	18.37
		LOWER LIMIT	248697	9.86	447581	11.03	435855	15.10	224671	17.87
		UPPER LIMIT	994786	10.86	1790322	12.03	1743420	16.10	898684	18.87
001	IB		433836	10.34	757259	11.49	729525	15.59	404639	18.35
003	CCV		431294	10.36	743905	11.52	716255	15.59	410586	18.36
004	BS	QC813920	382084	10.35	678720	11.51	655957	15.59	377037	18.36
005	BSD	QC813940	376395	10.34	677307	11.51	664780	15.59	401810	18.36
007	CCV/LCS	QC814058	374595	10.34	666178	11.50	654887	15.58	362067	18.35
008	BLANK	QC813921	372409	10.34	673770	11.50	665993	15.59	363668	18.35
009	SAMPLE	271668-005	407323	10.35	732297	11.50	707084	15.60	383488	18.37
010	SAMPLE	271668-006	400483	10.34	720898	11.50	694790	15.59	376842	18.35
011	SAMPLE	271668-007	396616	10.34	704388	11.49	686201	15.59	374389	18.34
012	SAMPLE	271668-008	375573	10.34	676006	11.50	650623	15.59	356584	18.35
013	SAMPLE	271668-009	348751	10.34	626864	11.49	619195	15.58	336035	18.35
014	SAMPLE	271668-010	324534	10.32	566556	11.48	571306	15.59	315076	18.35
015	SAMPLE	271668-011	314964	10.33	547054	11.49	553432	15.59	311245	18.35
016	SAMPLE	271668-012	306455	10.32	519318	11.48	502576	15.59	275770	18.35
017	SAMPLE	271668-013	326204	10.33	584772	11.49	579153	15.58	318526	18.35
018	SAMPLE	271668-014	325091	10.33	576480	11.49	572374	15.59	314335	18.35
019	SAMPLE	271668-015	314486	10.33	565258	11.49	560999	15.59	310165	18.35
020	SAMPLE	271827-001	330013	10.33	573421	11.49	565444	15.59	303551	18.35
021	SAMPLE	271668-003	316696	10.33	572319	11.49	561007	15.58	304174	18.35
022	SAMPLE	271668-004	310925	10.33	551898	11.49	547658	15.58	299605	18.35

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 425468732

Date : 11/21/15  
 Sequence : MSVOA03 ckl

Reference : ckl06  
 Analyzed : 11/21/15 15:16

#	Type	Sample ID	PFLBZ	RT
		ICAL STD	365079	10.34
		LOWER LIMIT	182540	9.84
		UPPER LIMIT	730158	10.84
007	CCV/LCS	QC814058	374595	10.34
020	SAMPLE	271827-001	330013	10.33

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 425472906

Date : 11/24/15  
 Sequence : MSVOA03 cko

Reference : cin24  
 Analyzed : 09/24/15 02:58

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	497393	10.36	895161	11.53	871710	15.60	449342	18.37
		LOWER LIMIT	248697	9.86	447581	11.03	435855	15.10	224671	17.87
		UPPER LIMIT	994786	10.86	1790322	12.03	1743420	16.10	898684	18.87
001	IB		662083	10.35	1129075	11.51	1065126	15.59	554578	18.36
003	CCV		587580	10.35	998534	11.51	956495	15.60	525955	18.36
005	CCV		649057	10.36	1143689	11.52	1072747	15.60	551300	18.36
007	CCV		650891	10.35	1123378	11.51	1082495	15.60	560129	18.36
008	CCV	QC814353	657214	10.35	1154611	11.52	1072668	15.60	510032	18.36
009	CCV/LCS	QC814353	627952	10.35	1122289	11.51	1014875	15.60	472498	18.36
010	IB		602832	10.35	1098294	11.51	988962	15.59	445279	18.36
011	BLANK	QC814354	620144	10.35	1113575	11.52	990892	15.60	438378	18.36
012	MSS	271802-009	583235	10.34	1056626	11.51	986680	15.59	461767	18.36
013	SAMPLE	271802-004	589238	10.35	1066550	11.50	980937	15.59	472869	18.36
014	SAMPLE	271802-005	554294	10.35	1000333	11.50	933562	15.59	451238	18.36
015	SAMPLE	271802-006	542425	10.35	976349	11.51	914672	15.59	444629	18.36
016	SAMPLE	271802-007	520194	10.34	938049	11.50	881540	15.59	435198	18.35
017	SAMPLE	271802-008	487965	10.34	872570	11.50	827344	15.59	405840	18.36
018	SAMPLE	271802-010	456812	10.34	820890	11.50	786257	15.59	391407	18.36
019	SAMPLE	271802-011	454234	10.34	834815	11.50	776039	15.60	383308	18.36
020	SAMPLE	271668-016	440121	10.33	797721	11.49	768313	15.59	379749	18.35
021	SAMPLE	271676-002	435968	10.33	789491	11.49	759508	15.59	375065	18.35
022	SAMPLE	271676-004	419817	10.33	753583	11.49	727045	15.59	356319	18.36
023	SAMPLE	271676-001	440410	10.34	792129	11.50	761769	15.59	380785	18.36
024	SAMPLE	271636-001	440704	10.34	792768	11.50	761814	15.59	391264	18.36
025	SAMPLE	271783-008	436675	10.34	794813	11.50	755737	15.59	391561	18.36
026	MS	QC814355	437898	10.34	776502	11.50	748176	15.60	394107	18.36
027	MSD	QC814356	454735	10.34	799232	11.50	780260	15.60	422513	18.36
028	IB		457215	10.34	818953	11.50	782394	15.60	387262	18.36
029	IB		455203	10.34	808674	11.50	782301	15.60	386530	18.36
030	LOD	250531-014	433076	10.34	782837	11.50	753836	15.59	374350	18.35

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 955472935

Date : 11/24/15  
 Sequence : MSVOA14 nk0

Reference : njk23  
 Analyzed : 10/20/15 18:26

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	742664	9.49	1178583	10.56	1092554	14.13	591395	16.56
		LOWER LIMIT	371332	8.99	589292	10.06	546277	13.63	295698	16.06
		UPPER LIMIT	1485328	9.99	2357166	11.06	2185108	14.63	1182790	17.06
014	CCV/LCS	QC814115	580566	9.47	887005	10.55	839042	14.12	486931	16.55
016	BLANK	QC814116	531278	9.47	834743	10.55	808864	14.13	442686	16.55
017	SAMPLE	271732-004	523643	9.48	833269	10.56	778239	14.13	426734	16.55
018	MSS	271732-005	520156	9.48	827223	10.56	769760	14.13	423556	16.55
019	SAMPLE	271668-012	512037	9.48	817901	10.56	764885	14.13	426549	16.55
020	SAMPLE	271636-002	519676	9.48	827379	10.56	759394	14.13	423783	16.55
021	BLANK	QC814384	505652	9.48	815525	10.56	752709	14.13	415070	16.55
022	SAMPLE	271732-003	507021	9.48	807199	10.56	752297	14.13	416720	16.55
023	MS	QC814385	537079	9.48	826262	10.56	783931	14.13	460811	16.55
024	MSD	QC814386	536554	9.48	819095	10.56	784442	14.13	461919	16.55
025	IB		510202	9.48	816954	10.55	766323	14.13	427295	16.55
026	IB		560467	9.48	890001	10.55	831324	14.13	452988	16.55
027	IB		540259	9.48	868781	10.55	805762	14.13	443029	16.55

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415365033

Instrument : MSVOA02 Begun : 09/10/15 11:53  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bia01	IB				09/10/15 11:53	1.0	1	?t
002	bia02	IB				09/10/15 12:23	1.0	1	?t
003	bia03	IB	LOW POINT			09/10/15 13:38	1.0	1	?t
004	bia04	IB	LOW POINT			09/10/15 15:24	1.0	1	?t
005	bia05	IB	LOW POINT			09/10/15 16:55	1.0	1	?t
006	bia06	X	LOW POINT			09/10/15 18:10	1.0	1	
007	bia07	TUN	BFB			09/10/15 18:56	1.0	2	
008	bia08	TUN	BFB			09/10/15 19:11	1.0	2	
009	bia09	TUN	BFB			09/10/15 19:26	1.0	2	
010	bia10	X	IB			09/10/15 19:56	1.0	1	
011	bia11	X	IB			09/10/15 20:26	1.0	1	
012	bia12	X	IB			09/10/15 20:56	1.0	1	
013	bia13	IB	CALIB			09/10/15 21:27	1.0	1	
014	bia14	ICAL		Water		09/10/15 21:57	1.0	3 4 5 6 1	
015	bia15	ICAL		Water		09/10/15 22:42	1.0	3 4 5 6 1	
016	bia16	ICAL		Water		09/10/15 23:12	1.0	3 4 5 6 1	
017	bia17	ICAL		Water		09/10/15 23:42	1.0	3 4 5 6 1	
018	bia18	ICAL		Water		09/11/15 00:13	1.0	3 4 5 6 1	
019	bia19	ICAL		Water		09/11/15 00:43	1.0	3 4 5 6 1	
020	bia20	ICAL		Water		09/11/15 01:28	1.0	3 4 5 6 1	
021	bia21	ICAL		Water		09/11/15 01:58	1.0	3 4 5 6 1	
022	bia22	ICAL		Water		09/11/15 02:29	1.0	3 4 5 6 1	
023	bia23	ICV	GASES	Water		09/11/15 02:59	1.0	7 1	
024	bia24	ICV		Water		09/11/15 03:44	1.0	8 9 1 10	
025	bia25	IB				09/11/15 04:14	1.0	1	
026	bia26	IB				09/11/15 04:44	1.0	1	

KKM 09/15/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 26.

Analyst: KKM Date: 09/15/15 Reviewer: LW Date: 09/16/15

Standards used: 1=S28020 2=S27180 3=S27005 4=S27823 5=S27893 6=S26571 7=S27007 8=S28013 9=S27930 10=S27929

Flags used: ?t=missing tune

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415467153

Instrument : MSVOA02  
 Method : EPA 8260B

Begun : 11/20/15 09:53  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bkk01	X	HG			11/20/15 09:53	1.0	1	
002	bkk02	X	IB			11/20/15 10:23	1.0	1	
003	bkk03	TUN	BFB			11/20/15 11:08	1.0	2	
004	bkk04	X	QC813847	Water	229688	11/20/15 11:39	1.0	3 4 5 6 1	spk cc+
005	bkk05	TUN	BFB			11/20/15 12:09	1.0	2	
006	bkk06	X	QC813847	Water	229688	11/20/15 12:39	1.0	3 4 5 6 1	cc+
007	bkk07	TUN	BFB			11/20/15 13:09	1.0	2	
008	bkk08	CCV/BS	QC813847	Water	229688	11/20/15 13:39	1.0	3 4 5 6 1	
009	bkk09	BSD	QC813848	Water	229688	11/20/15 14:25	1.0	3 4 5 6 1	
010	bkk10	ICAL	A/A			11/20/15 15:10	1.0	1 7	
011	bkk11	X	A/A	Water	229688	11/20/15 15:40	1.0	1 7	
012	bkk12	BLANK	QC813849	Water	229688	11/20/15 16:10	1.0	1	
013	bkk13	SAMPLE	271668-005	Water	229688	11/20/15 16:41	1.0	1	
014	bkk14	SAMPLE	271668-006	Water	229688	11/20/15 17:11	1.0	1	combined (sediment), headspace <= 1 mL
015	bkk15	SAMPLE	271668-007	Water	229688	11/20/15 17:56	1.0	1	
016	bkk16	SAMPLE	271668-008	Water	229688	11/20/15 18:26	1.0	1	
017	bkk17	SAMPLE	271668-009	Water	229688	11/20/15 18:56	1.0	1	
018	bkk18	SAMPLE	271668-010	Water	229688	11/20/15 19:27	1.0	1	
019	bkk19	SAMPLE	271668-011	Water	229688	11/20/15 19:57	1.0	1	
020	bkk20	SAMPLE	271668-012	Water	229688	11/20/15 20:42	1.0	1	combined (sediment)
021	bkk21	SAMPLE	271668-013	Water	229688	11/20/15 21:12	1.0	1	
022	bkk22	SAMPLE	271668-014	Water	229688	11/20/15 21:43	1.0	1	
023	bkk23	SAMPLE	271668-015	Water	229688	11/20/15 22:13	1.0	1	
024	bkk24	SAMPLE	271668-004	Water	229688	11/20/15 22:43	33.33	1	foamer
025	bkk25	SAMPLE	271668-003	Water	229688	11/20/15 23:28	40.0	1	foamer
026	bkk26	X	IB			11/20/15 23:58	1.0	1	
027	bkk27	X	IB			11/21/15 00:29	1.0	1	

DJA 11/23/15 : retuned after files 3 and 6

DJA 11/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

DJA 11/23/15 : Matrix spikes were not performed for this analysis in batch 229688 due to insufficient sample amount.

Analyst: DJA Date: 11/23/15 Reviewer: LW Date: 11/23/15

Standards used: 1=S28490 2=S27825 3=S28219 4=S28220 5=S28167 6=S28123 7=S28214

Flags used: +=high bias cc=CCV CCC failure spk=5% spike rule



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425383715

Instrument : MSVOA03 Begun : 09/23/15 11:15  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
003	cin03	IB	15PPB			09/23/15 11:15	1.0	1 2 3 4	?t
004	cin04	TUN	BFB			09/23/15 12:19	1.0	5	
005	cin05	ICV	GAS			09/23/15 12:40	1.0	6 4	
006	cin06	ICV	GAS			09/23/15 13:23	1.0	6 4	
007	cin07	TUN	BFB			09/23/15 14:28	1.0	5	
008	cin08	CCV	15PPB			09/23/15 14:49	1.0	1 2 3 4	cc-
009	cin09	IB				09/23/15 16:15	1.0	4	
010	cin10	IB				09/23/15 16:58	1.0	4	
011	cin11	X	LOWPT			09/23/15 17:19	1.0	4	
012	cin12	X	LOWPT			09/23/15 19:06	1.0	4	
013	cin13	TUN	BFB			09/23/15 20:54	1.0	5	
014	cin14	IB				09/23/15 21:15	1.0	4	
015	cin15	IB				09/23/15 21:58	1.0	4	
016	cin16	IB				09/23/15 22:41	1.0	4	
017	cin17	IB	CALIB			09/23/15 23:02	1.0	4	
018	cin18	ICAL	.25/.5PPB			09/23/15 23:45	1.0	7 1 2 3 4	
019	cin19	ICAL	.5/1PPB			09/24/15 00:07	1.0	4 7 1 2 3	
020	cin20	ICAL	2PPB			09/24/15 00:50	1.0	7 1 2 3 4	
021	cin21	ICAL	5PPB			09/24/15 01:11	1.0	4 7 1 2 3	
022	cin22	ICAL	10PPB			09/24/15 01:54	1.0	4 7 1 2 3	
023	cin23	ICAL	20PPB			09/24/15 02:37	1.0	4 7 1 2 3	
024	cin24	ICAL	50PPB			09/24/15 02:58	1.0	4 7 1 2 3	
025	cin25	ICAL	75PPB			09/24/15 03:41	1.0	4 7 1 2 3	
026	cin26	ICAL	100PPB			09/24/15 04:24	1.0	4 7 1 2 3	
027	cin27	ICV	MIX			09/24/15 04:46	1.0	8 4 9 10	
028	cin28	ICV	GAS			09/24/15 05:29	1.0	6 4	
029	cin29	IB				09/24/15 06:11	1.0	4	

DAR 09/23/15 : started on the wrong file, no data associated with files 1,2  
 DAR 09/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 3 through 29.  
 LW 09/25/15 : Reviewed through file 6

Analyst: DAR Date: 09/23/15 Reviewer: LW Date: 09/29/15  
 Standards used: 1=S27823 2=S27893 3=S26571 4=S27973 5=S27180 6=S27007 7=S27005 8=S27858 9=S27929 10=S27930  
 Flags used: --low bias ?t=missing tune cc=CCV CCC failure  
 Page 1 of 1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425468732

Instrument : MSVOA03  
 Method : EPA 8260B

Begun : 11/21/15 12:12  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ck101	IB				11/21/15 12:12	1.0	1	?t
002	ck102	TUN	BFB			11/21/15 12:55	1.0	2	
003	ck103	CCV				11/21/15 13:16	1.0	3 4 5 6 1	cc+
004	ck104	BS	QC813920	Water	229708	11/21/15 13:59	1.0	7 8 9 10 1	spk cc+
005	ck105	BSD	QC813940	Water	229708	11/21/15 14:33	1.0	7 8 9 10 1	spk cc+
006	ck106	ICAL	A/A	Water	229708	11/21/15 15:16	1.0	11 1	
007	ck107	CCV/LCS	QC814058	Water	229708	11/21/15 15:38	1.0	11 1	
008	ck108	BLANK	QC813921	Water	229708	11/21/15 16:21	1.0	1	
009	ck109	SAMPLE	271668-005	Water	229708	11/21/15 17:04	1.0	1	spk
010	ck110	SAMPLE	271668-006	Water	229708	11/21/15 17:25	1.0	1	spk , headspace <= 1 mL, pH > 2
011	ck111	SAMPLE	271668-007	Water	229708	11/21/15 18:08	1.0	1	spk
012	ck112	SAMPLE	271668-008	Water	229708	11/21/15 18:29	1.0	1	spk
013	ck113	SAMPLE	271668-009	Water	229708	11/21/15 19:12	1.0	1	spk
014	ck114	SAMPLE	271668-010	Water	229708	11/21/15 19:34	1.0	1	spk
015	ck115	SAMPLE	271668-011	Water	229708	11/21/15 20:17	1.0	1	spk
016	ck116	SAMPLE	271668-012	Water	229708	11/21/15 20:38	1.0	1	spk
017	ck117	SAMPLE	271668-013	Water	229708	11/21/15 21:21	1.0	1	spk
018	ck118	SAMPLE	271668-014	Water	229708	11/21/15 21:42	1.0	1	spk
019	ck119	SAMPLE	271668-015	Water	229708	11/21/15 22:25	1.0	1	spk
020	ck120	SAMPLE	271827-001	Water	229708	11/21/15 22:47	2.0	1	spk , foamer, pH > 2
021	ck121	SAMPLE	271668-003	Water	229708	11/21/15 23:30	40.0	1	spk , foamer
022	ck122	SAMPLE	271668-004	Water	229708	11/21/15 23:51	33.33	1	spk , foamer
023	ck123	X	IB			11/22/15 00:34	1.0	1	

DAR 11/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 23.

DAR 11/23/15 : Matrix spikes were not performed for this analysis in batch 229708 due to insufficient sample amount.

Analyst: DAR Date: 11/23/15 Reviewer: LW Date: 11/23/15

Standards used: 1=S28450 2=S27825 3=S27005 4=S28295 5=S28355 6=S27081 7=S28219 8=S28220 9=S28167 10=S28123 11=S28214

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425472906

Instrument : MSVOA03 Begun : 11/24/15 00:04  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	cko01	IB				11/24/15 09:46	1.0	1	?t
002	cko02	TUN	BFB			11/24/15 10:07	1.0	2	
003	cko03	CCV				11/24/15 10:50	1.0	3 4 5 6 1	cc+
004	cko04	TUN	BFB			11/24/15 12:16	1.0	2	
005	cko05	CCV				11/24/15 12:38	1.0	3 4 5 6 1	cc+
006	cko06	TUN	BFB			11/24/15 13:21	1.0	2	
007	cko07	CCV				11/24/15 14:03	1.0	3 4 5 6 1	cc+
008	cko08	CCV	QC814353	Water	229811	11/24/15 14:25	1.0	7 8 9 10 1	cc+
009	cko09	CCV/LCS	QC814353	Water	229811	11/24/15 15:08	1.0	7 8 9 10 1	
010	cko10	IB				11/24/15 15:29	1.0	1	
011	cko11	BLANK	QC814354	Water	229811	11/24/15 15:51	1.0	1	
012	cko12	MSS	271802-009	Water	229811	11/24/15 16:34	1.0	1	
013	cko13	SAMPLE	271802-004	Water	229811	11/24/15 16:55	1.0	1	
014	cko14	SAMPLE	271802-005	Water	229811	11/24/15 17:38	1.0	1	
015	cko15	SAMPLE	271802-006	Water	229811	11/24/15 17:59	1.0	1	
016	cko16	SAMPLE	271802-007	Water	229811	11/24/15 18:42	1.0	1	
017	cko17	SAMPLE	271802-008	Water	229811	11/24/15 19:04	1.0	1	
018	cko18	SAMPLE	271802-010	Water	229811	11/24/15 19:47	1.0	1	
019	cko19	SAMPLE	271802-011	Water	229811	11/24/15 20:08	1.0	1	
020	cko20	SAMPLE	271668-016	Water	229811	11/24/15 20:51	1.0	1	
021	cko21	SAMPLE	271676-002	Water	229811	11/24/15 21:12	1.0	1	
022	cko22	SAMPLE	271676-004	Water	229811	11/24/15 21:55	200.0	1	
023	cko23	SAMPLE	271676-001	Water	229811	11/24/15 22:17	5.0	1	
024	cko24	SAMPLE	271636-001	Water	229811	11/24/15 23:00	50.0	1	
025	cko25	SAMPLE	271783-008	Water	229811	11/24/15 23:21	200.0	1	
026	cko26	MS	QC814355	Water	229811	11/24/15 00:04	1.0	7 8 11 10 1	
027	cko27	MSD	QC814356	Water	229811	11/25/15 00:25	1.0	7 8 11 10 1	
028	cko28	IB				11/25/15 01:08	1.0	1	
029	cko29	IB				11/25/15 01:30	1.0	1	<<t
030	cko30	LOD	250531-014	Water	229811	11/25/15 02:13	1.0	6 1	<<t

DAR 11/24/15 : adjusted tune after file 3 and 5

DAR 11/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Analyst: DAR Date: 11/25/15 Reviewer: LW Date: 11/25/15

Standards used: 1=S28450 2=S27825 3=S27005 4=S28295 5=S28355 6=S27081 7=S28219 8=S28220 9=S28167 10=S28123 11=S28593

Flags used: +=high bias <<t=out of clock ?t=missing tune cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955422499

Instrument : MSVOA14 Begun : 10/20/15 09:39  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	njk01	TUN	BFB			10/20/15 09:39	1.0	1	t
002	njk02	TUN	BFB			10/20/15 09:51	1.0	1	t
003	njk03	TUN	BFB			10/20/15 10:48	1.0	1	
004	njk04	TUN	BFB			10/20/15 10:57	1.0	1	t
005	njk05	TUN	BFB			10/20/15 11:08	1.0	1	t
006	njk06	TUN	BFB			10/20/15 11:16	1.0	1	
007	njk07	TUN	BFB			10/20/15 11:26	1.0	1	t
008	njk08	TUN	BFB			10/20/15 11:36	1.0	1	
009	njk09	TUN	BFB			10/20/15 11:45	1.0	1	t
010	njk10	TUN	BFB			10/20/15 12:54	1.0	1	
011	njk11	TUN	BFB			10/20/15 13:20	1.0	1	
012	njk12	TUN	BFB			10/20/15 13:29	1.0	1	
013	njk13	X	LOW POINT			10/20/15 13:55	1.0	2	
014	njk14	X	IB			10/20/15 14:30	1.0	2	
015	njk15	X	IB			10/20/15 14:57	1.0	2	
016	njk16	IB	CALIBRATION			10/20/15 15:23	1.0	2	
017	njk17	ICAL				10/20/15 15:49	1.0	3 4 5 6 2	
018	njk18	ICAL				10/20/15 16:15	1.0	3 4 5 6 2	
019	njk19	ICAL				10/20/15 16:41	1.0	3 4 5 6 2	
020	njk20	ICAL				10/20/15 17:08	1.0	3 4 5 6 2	
021	njk21	ICAL				10/20/15 17:34	1.0	3 4 5 6 2	
022	njk22	ICAL				10/20/15 18:00	1.0	3 4 5 6 2	
023	njk23	ICAL				10/20/15 18:26	1.0	3 4 5 6 2	
024	njk24	ICAL				10/20/15 18:53	1.0	3 4 5 6 2	
025	njk25	ICAL				10/20/15 19:19	1.0	3 4 5 6 2	
026	njk26	ICV				10/20/15 19:45	1.0	7 2	
027	njk27	ICV				10/20/15 20:11	1.0	8 2	
028	njk28	ICV				10/20/15 20:38	1.0	9 10 11 2	
029	njk29	X	IB			10/20/15 21:04	1.0	2	
030	njk30	X	IB			10/20/15 21:30	1.0	2	

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Analyst: MCT Date: 10/21/15 Reviewer: LW Date: 10/22/15

Standards used: 1=S27180 2=S28246 3=S27004 4=S28008 5=S28355 6=S27081 7=S27267 8=S18173 9=S28219 10=S28220 11=S28167

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955423728

Instrument : MSVOA14 Begun : 10/21/15 06:08  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	njl01	X	IB			10/21/15 06:08	1.0	1	
002	njl02	X	IB			10/21/15 06:34	1.0	1	
003	njl03	X	HIGH GASES			10/21/15 09:53	1.0	1	
004	njl04	X	IB			10/21/15 10:19	1.0	1	
005	njl05	TUN	BFB			10/21/15 10:43	1.0	2	
006	njl06	ICV				10/21/15 11:07	1.0	3 1	
007	njl07	TUN	BFB			10/21/15 12:16	1.0	2	
008	njl08	CCV				10/21/15 12:39	1.0	4 5 6 7 1	
009	njl09	BS	QC809187	Water	228541	10/21/15 13:28	1.0	8 9 10 11 1	
010	njl10	BSD	QC809188	Water	228541	10/21/15 13:54	1.0	8 9 10 11 1	
011	njl11	X	IB			10/21/15 14:20	1.0	1	
012	njl12	BLANK	QC809189	Water	228541	10/21/15 14:46	1.0	1	
013	njl13	SAMPLE	270754-020	Water	228541	10/21/15 15:12	1.0	1	
014	njl14	SAMPLE	270759-004	Water	228541	10/21/15 15:38	1.0	1	
015	njl15	SAMPLE	270747-005	Water	228541	10/21/15 16:05	1.0	1	
016	njl16	SAMPLE	270759-001	Water	228541	10/21/15 16:31	1.0	1	
017	njl17	SAMPLE	270759-003	Water	228541	10/21/15 16:57	1.0	1	
018	njl18	SAMPLE	270819-025	Water	228541	10/21/15 17:23	1.0	1	
019	njl19	SAMPLE	270819-026	Water	228541	10/21/15 17:49	1.0	1	
020	njl20	SAMPLE	270819-027	Water	228541	10/21/15 18:16	1.0	1	
021	njl21	SAMPLE	270819-028	Water	228541	10/21/15 18:42	1.0	1	
022	njl22	SAMPLE	270819-029	Water	228541	10/21/15 19:08	1.0	1	
023	njl23	SAMPLE	270819-030	Water	228541	10/21/15 19:34	1.0	1	
024	njl24	SAMPLE	270819-031	Water	228541	10/21/15 20:01	1.0	1	
025	njl25	SAMPLE	270819-032	Water	228541	10/21/15 20:27	1.0	1	
026	njl26	SAMPLE	270819-033	Water	228541	10/21/15 20:53	1.0	1	
027	njl27	SAMPLE	270819-034	Water	228541	10/21/15 21:20	1.0	1	
028	njl28	SAMPLE	270747-001	Water	228541	10/21/15 21:46	1.0	1	
029	njl29	SAMPLE	270747-002	Water	228541	10/21/15 22:12	1.0	1	
030	njl30	SAMPLE	270747-003	Water	228541	10/21/15 22:39	1.0	1	high SO2
031	njl31	SAMPLE	270747-004	Water	228541	10/21/15 23:05	1.0	1	
032	njl32	SAMPLE	270759-002	Water	228541	10/21/15 23:31	25.0	1	
033	njl33	X	IB			10/21/15 23:58	1.0	1	
034	njl34	X	IB			10/22/15 00:24	1.0	1	
035	njl35	X	IB			10/22/15 00:51	1.0	1	
036	njl36	X	IB			10/22/15 01:17	1.0	1	

MCT 10/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 6.

DJA 10/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 36.

DJA 10/22/15 : Matrix spikes were not performed for this analysis in batch 228541 due to insufficient sample amount.

Analyst: MCT Date: 10/21/15 Reviewer: LW Date: 10/23/15

Standards used: 1=S28246 2=S27180 3=S27267 4=S27004 5=S28008 6=S28355 7=S27081 8=S28219 9=S28220 10=S28167 11=S28123

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 955472935

Instrument : MSVOA14  
 Method : EPA 8260B

Begun : 11/24/15 10:15  
 SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	nk001	X	IB			11/24/15 10:15	1.0	1	
002	nk002	X	IB			11/24/15 10:41	1.0	1	
003	nk003	TUN	BFB			11/24/15 11:16	1.0	2	t
004	nk004	TUN	BFB			11/24/15 11:51	1.0	2	t
005	nk005	TUN	BFB			11/24/15 12:07	1.0	2	
006	nk006	X	QC814115	Water	229752	11/24/15 12:37	1.0	3 4 5 6 1	spk cc-
007	nk007	TUN	BFB			11/24/15 13:07	1.0	2	
008	nk008	X	QC814115	Water	229752	11/24/15 13:33	1.0	3 4 5 6 1	spk cc-
009	nk009	TUN	BFB			11/24/15 14:12	1.0	2	
010	nk010	X	QC814115	Water	229752	11/24/15 14:46	1.0	3 4 5 6 1	spk cc-
011	nk011	TUN	BFB			11/24/15 15:51	1.0	2	t
012	nk012	TUN	BFB			11/24/15 16:24	1.0	2	
013	nk013	X	QC814115	Water	229752	11/24/15 17:03	1.0	3 4 5 6 1	spk cc-
014	nk014	CCV/LCS	QC814115	Water	229752	11/24/15 18:21	1.0	3 4 5 6 1	cc-
015	nk015	X	IB			11/24/15 18:47	1.0	1	
016	nk016	BLANK	QC814116	Water	229752	11/24/15 19:13	1.0	1	cc-
017	nk017	SAMPLE	271732-004	Water	229752	11/24/15 19:40	1.0	1	cc-
018	nk018	MSS	271732-005	Water	229752	11/24/15 20:06	1.0	1	cc-
019	nk019	SAMPLE	271668-012	Water	229752	11/24/15 20:33	1.0	1	cc- , combined (sediment), headspace <= 1 mL
020	nk020	SAMPLE	271636-002	Water	229752	11/24/15 20:59	200.0	1	cc-
021	nk021	BLANK	QC814384	TCLP Leachate	229752	11/24/15 21:26	10.0	1	cc-
022	nk022	SAMPLE	271732-003	TCLP Leachate	229752	11/24/15 21:52	10.0	1	cc-
023	nk023	MS	QC814385	Water	229752	11/24/15 22:18	1.0	3 7 8 9 1	cc-
024	nk024	MSD	QC814386	Water	229752	11/24/15 22:45	1.0	3 7 8 9 1	cc- , headspace <= 1 mL
025	nk025	IB				11/24/15 23:11	1.0	1	
026	nk026	IB				11/24/15 23:38	1.0	1	
027	nk027	IB				11/25/15 00:04	1.0	1	

DJA 11/25/15 : retuned after runs 4, 6, 8, and 10

DJA 11/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Analyst: DJA Date: 11/25/15 Reviewer: LW Date: 11/25/15

Standards used: 1=S28449 2=S27825 3=S28489 4=S28220 5=S28167 6=S27267 7=S28592 8=S28593 9=S28451

Flags used: --low bias cc=CCV CCC failure spk=5% spike rule t=tune failure

# MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): DJ 1/12  
 For Undiluted samples, pH checked (initials/date): Dec 11/15

Batch #: 201688  
 Prep Date: 11/12/15  
 Instrument: MS

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	USP
271668-3	C	✓			3		40x	foamy				
-4	C	✓			4		33x	↓				
-5	C	✓					1x					
-6	CD	✓		<1ml				sediment				
-7	E	✓										
-8	C	✓										
-9		✓										
-10		✓										
-11	↓	✓										
-12	UF	✓						sediment				
-13	C	✓										
-14	D	✓										
-15	B	✓										

all

# MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): NT 11/21/15  
 For Undiluted samples, pH checked (initials/date): gsk 11/23/15

Batch #: 229202  
 Prep Date: 11/21/15  
 Instrument: MS3

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
1	271668-5	E	✓			1	1X	Acetone + naph c-, CS <sub>2</sub> v-				
2				2.5X < 1ml		1		CS <sub>2</sub> v- w/ lit				
3						1		CS <sub>2</sub> v-				
4						1		+ PCE c+ w/ lit				
5						1		CS <sub>2</sub> v- w/ lit				
6						1						
7						1						
8						1						
9						1						
10						1						
11						1						
12						1						
13						1						
14	271827-1	D	✓		9	2x		Form				
15												
16												
17												
18												
19												
20												
21												
22												

*Punctured but did not sample due high sediment at 11/21*





Date/initial & Sample Log #	Fluid PH	Tare wt. (g) before	Tare wt. (g) after	Sample wt. (g)	Vessel #	Pressure initial	Pressure final	Comments
11/17/15 Jia		Prepped 4 Lit TCLP Fluid with 80 mL of NaOH MED EMD Lot # 44280523 & 22.8 mL of Acetic Acid MED EMD Lot # 53097.						
11/20/15 Jia								
Prep 01 K	PH H <sub>2</sub> O	—	—	—	—	—	—	
271732-3 (A)	—	—	TCLP FILTRATION		—	—	—	
11/24/15 Jia								
P. Blank	4.97	—	—	—	—	2 20	18	
271899-1 B	√	85.47	110.49	85.48	25.01	4 22	20	aliased 271637-1B
		Temp min = 21°C		Start time = 13:25 Jia 11/24/15				
		" max = 23°C		Stop time = 05:30 Jia 11/25/15				

Continued on Page

Read and Understood By

Signed

Date

Signed

Date



Laboratory Job Number 271668

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Soil

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	COMP-1-NS	Diln Fac:	0.9579
Lab ID:	271668-001	Batch#:	229633
Matrix:	Soil	Sampled:	11/13/15
Units:	ug/Kg	Received:	11/16/15
Basis:	dry	Analyzed:	11/19/15

Moisture: 12%

Analyte	Result	RL
Freon 12	ND	11
Chloromethane	ND	11
Vinyl Chloride	ND	11
Bromomethane	ND	11
Chloroethane	ND	11
Trichlorofluoromethane	ND	5.4
Acetone	ND	22
Freon 113	ND	5.4
1,1-Dichloroethene	ND	5.4
Methylene Chloride	ND	22
Carbon Disulfide	ND	5.4
MTBE	ND	5.4
trans-1,2-Dichloroethene	ND	5.4
Vinyl Acetate	ND	54
1,1-Dichloroethane	ND	5.4
2-Butanone	ND	11
cis-1,2-Dichloroethene	ND	5.4
2,2-Dichloropropane	ND	5.4
Chloroform	ND	5.4
Bromochloromethane	ND	5.4
1,1,1-Trichloroethane	ND	5.4
1,1-Dichloropropene	ND	5.4
Carbon Tetrachloride	ND	5.4
1,2-Dichloroethane	ND	5.4
Benzene	ND	5.4
Trichloroethene	ND	5.4
1,2-Dichloropropane	ND	5.4
Bromodichloromethane	ND	5.4
Dibromomethane	ND	5.4
4-Methyl-2-Pentanone	ND	11
cis-1,3-Dichloropropene	ND	5.4
Toluene	ND	5.4
trans-1,3-Dichloropropene	ND	5.4
1,1,2-Trichloroethane	ND	5.4
2-Hexanone	ND	11
1,3-Dichloropropane	ND	5.4
Tetrachloroethene	ND	5.4
Dibromochloromethane	ND	5.4
1,2-Dibromoethane	ND	5.4
Chlorobenzene	ND	5.4
1,1,1,2-Tetrachloroethane	ND	5.4
Ethylbenzene	ND	5.4
m,p-Xylenes	ND	5.4
o-Xylene	ND	5.4
Styrene	ND	5.4
Bromoform	ND	5.4
Isopropylbenzene	ND	5.4
1,1,2,2-Tetrachloroethane	ND	5.4
1,2,3-Trichloropropane	ND	5.4
Propylbenzene	ND	5.4
Bromobenzene	ND	5.4
1,3,5-Trimethylbenzene	ND	5.4

ND= Not Detected  
 RL= Reporting Limit

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	COMP-1-NS	Diln Fac:	0.9579
Lab ID:	271668-001	Batch#:	229633
Matrix:	Soil	Sampled:	11/13/15
Units:	ug/Kg	Received:	11/16/15
Basis:	dry	Analyzed:	11/19/15

Analyte	Result	RL
2-Chlorotoluene	ND	5.4
4-Chlorotoluene	ND	5.4
tert-Butylbenzene	ND	5.4
1,2,4-Trimethylbenzene	ND	5.4
sec-Butylbenzene	ND	5.4
para-Isopropyl Toluene	ND	5.4
1,3-Dichlorobenzene	ND	5.4
1,4-Dichlorobenzene	ND	5.4
n-Butylbenzene	ND	5.4
1,2-Dichlorobenzene	ND	5.4
1,2-Dibromo-3-Chloropropane	ND	5.4
1,2,4-Trichlorobenzene	ND	5.4
Hexachlorobutadiene	ND	5.4
Naphthalene	ND	5.4
1,2,3-Trichlorobenzene	ND	5.4

Surrogate	%REC	Limits
Dibromofluoromethane	110	78-134
1,2-Dichloroethane-d4	129	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	COMP-2-NS	Diln Fac:	0.9452
Lab ID:	271668-002	Batch#:	229633
Matrix:	Soil	Sampled:	11/13/15
Units:	ug/Kg	Received:	11/16/15
Basis:	dry	Analyzed:	11/19/15

Moisture: 12%

Analyte	Result	RL
Freon 12	ND	11
Chloromethane	ND	11
Vinyl Chloride	ND	11
Bromomethane	ND	11
Chloroethane	ND	11
Trichlorofluoromethane	ND	5.4
Acetone	ND	21
Freon 113	ND	5.4
1,1-Dichloroethene	ND	5.4
Methylene Chloride	ND	21
Carbon Disulfide	ND	5.4
MTBE	ND	5.4
trans-1,2-Dichloroethene	ND	5.4
Vinyl Acetate	ND	54
1,1-Dichloroethane	ND	5.4
2-Butanone	ND	11
cis-1,2-Dichloroethene	ND	5.4
2,2-Dichloropropane	ND	5.4
Chloroform	ND	5.4
Bromochloromethane	ND	5.4
1,1,1-Trichloroethane	ND	5.4
1,1-Dichloropropene	ND	5.4
Carbon Tetrachloride	ND	5.4
1,2-Dichloroethane	ND	5.4
Benzene	ND	5.4
Trichloroethene	ND	5.4
1,2-Dichloropropane	ND	5.4
Bromodichloromethane	ND	5.4
Dibromomethane	ND	5.4
4-Methyl-2-Pentanone	ND	11
cis-1,3-Dichloropropene	ND	5.4
Toluene	ND	5.4
trans-1,3-Dichloropropene	ND	5.4
1,1,2-Trichloroethane	ND	5.4
2-Hexanone	ND	11
1,3-Dichloropropane	ND	5.4
Tetrachloroethene	ND	5.4
Dibromochloromethane	ND	5.4
1,2-Dibromoethane	ND	5.4
Chlorobenzene	ND	5.4
1,1,1,2-Tetrachloroethane	ND	5.4
Ethylbenzene	ND	5.4
m,p-Xylenes	ND	5.4
o-Xylene	ND	5.4
Styrene	ND	5.4
Bromoform	ND	5.4
Isopropylbenzene	ND	5.4
1,1,2,2-Tetrachloroethane	ND	5.4
1,2,3-Trichloropropane	ND	5.4
Propylbenzene	ND	5.4
Bromobenzene	ND	5.4
1,3,5-Trimethylbenzene	ND	5.4

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Organics by GC/MS**

Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	COMP-2-NS	Diln Fac:	0.9452
Lab ID:	271668-002	Batch#:	229633
Matrix:	Soil	Sampled:	11/13/15
Units:	ug/Kg	Received:	11/16/15
Basis:	dry	Analyzed:	11/19/15

Analyte	Result	RL
2-Chlorotoluene	ND	5.4
4-Chlorotoluene	ND	5.4
tert-Butylbenzene	ND	5.4
1,2,4-Trimethylbenzene	ND	5.4
sec-Butylbenzene	ND	5.4
para-Isopropyl Toluene	ND	5.4
1,3-Dichlorobenzene	ND	5.4
1,4-Dichlorobenzene	ND	5.4
n-Butylbenzene	ND	5.4
1,2-Dichlorobenzene	ND	5.4
1,2-Dibromo-3-Chloropropane	ND	5.4
1,2,4-Trichlorobenzene	ND	5.4
Hexachlorobutadiene	ND	5.4
Naphthalene	ND	5.4
1,2,3-Trichlorobenzene	ND	5.4

Surrogate	%REC	Limits
Dibromofluoromethane	113	78-134
1,2-Dichloroethane-d4	127	80-138
Toluene-d8	102	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2



## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC813583	Batch#:	229633
Matrix:	Soil	Analyzed:	11/19/15
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.61	94	70-134
Benzene	25.00	26.98	108	80-123
Trichloroethene	25.00	25.28	101	80-128
Toluene	25.00	26.57	106	80-120
Chlorobenzene	25.00	26.11	104	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	121	80-138
Toluene-d8	106	80-120
Bromofluorobenzene	105	78-123

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813584	Batch#:	229633
Matrix:	Soil	Analyzed:	11/19/15
Units:	ug/Kg		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>Purgeable Organics by GC/MS</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC813584	Batch#:	229633
Matrix:	Soil	Analyzed:	11/19/15
Units:	ug/Kg		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	110	78-134
1,2-Dichloroethane-d4	124	80-138
Toluene-d8	102	80-120
Bromofluorobenzene	104	78-123

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 8260B
Field ID:	COMP-1-NS	Basis:	dry
MSS Lab ID:	271668-001	Batch#:	229633
Matrix:	Soil	Sampled:	11/13/15
Units:	ug/Kg	Received:	11/16/15

Type: MS Diln Fac: 0.9311  
 Lab ID: QC813625 Analyzed: 11/19/15  
 Moisture: 12%

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.4790	52.90	52.30	99	56-133
Benzene	<0.4749	52.90	58.94	111	57-120
Trichloroethene	<0.4562	52.90	55.20	104	49-145
Toluene	<0.3449	52.90	55.62	105	51-120
Chlorobenzene	<0.4302	52.90	51.95	98	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	109	78-134
1,2-Dichloroethane-d4	128	80-138
Toluene-d8	106	80-120
Bromofluorobenzene	108	78-123

Type: MSD Diln Fac: 0.9416  
 Lab ID: QC813626 Analyzed: 11/20/15  
 Moisture: 12%

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	53.50	49.24	92	56-133	7	46
Benzene	53.50	54.01	101	57-120	10	44
Trichloroethene	53.50	51.99	97	49-145	7	46
Toluene	53.50	50.28	94	51-120	11	47
Chlorobenzene	53.50	44.31	83	47-120	17	50

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-134
1,2-Dichloroethane-d4	124	80-138
Toluene-d8	104	80-120
Bromofluorobenzene	107	78-123

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : BFB                      IDF : 1.0  
Seqnum : 885385165011              File : lio11                      Time : 24-SEP-2015 17:04

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	4033	18.21	
75	30% - 60% of mass 95	11031	49.81	
95		22147	100.00	
96	5% - 9% of mass 95	1507	6.80	
173	< 2% of mass 174	137	0.67	
174	> 50% and < 100% of mass 95	20509	92.60	
175	5% - 9% of mass 174	1495	7.29	
176	> 95% and < 101% of mass 174	20112	98.06	
177	5% - 9% of mass 176	1444	7.18	

Analyst: SJD                      Date: 09/25/15                      Reviewer: LW                      Date: 09/28/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : BFB                      IDF : 1.0  
Seqnum : 885386806002              File : lip02                      Time : 25-SEP-2015 15:10

Standards: S27180

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	4765	18.55	
75	30% - 60% of mass 95	12859	50.06	
95		25688	100.00	
96	5% - 9% of mass 95	1560	6.07	
173	< 2% of mass 174	155	0.66	
174	> 50% and < 100% of mass 95	23381	91.02	
175	5% - 9% of mass 174	1711	7.32	
176	> 95% and < 101% of mass 174	22736	97.24	
177	5% - 9% of mass 176	1564	6.88	

Analyst: SJD                      Date: 09/25/15                      Reviewer: LW                      Date: 09/28/15

CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : BFB                      IDF : 1.0  
Seqnum : 885465851002              File : lkj02                      Time : 19-NOV-2015 12:36

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	2966	20.44	
75	30% - 60% of mass 95	7698	53.06	
95		14509	100.00	
96	5% - 9% of mass 95	1177	8.11	
173	< 2% of mass 174	85	0.70	
174	> 50% and < 100% of mass 95	12076	83.23	
175	5% - 9% of mass 174	895	7.41	
176	> 95% and < 101% of mass 174	11758	97.37	
177	5% - 9% of mass 176	949	8.07	

Analyst:   NJT                        Date:   11/19/15                        Reviewer:   LW                        Date:   11/20/15



CURTIS & TOMPKINS BFB TUNE FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : BFB                      IDF : 1.0  
Seqnum : 885467264002              File : lkk02                      Time : 20-NOV-2015 12:07

Standards: S27825

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	3282	21.09	
75	30% - 60% of mass 95	8155	52.41	
95		15561	100.00	
96	5% - 9% of mass 95	1034	6.64	
173	< 2% of mass 174	250	1.88	
174	> 50% and < 100% of mass 95	13331	85.67	
175	5% - 9% of mass 174	984	7.38	
176	> 95% and < 101% of mass 174	13164	98.75	
177	5% - 9% of mass 176	997	7.57	

Analyst:   NJT                        Date:   11/20/15                        Reviewer:   LW                        Date:   11/20/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 MSVOA Soil: EPA 8260B

Inst : MSVOA12  
 Calnum : 885385165001  
 Units : ug/L

Date : 24-SEP-2015 18:38  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	lio14	885385165014	2.5PPB	24-SEP-2015 18:38	S28008 (20000X), S28087 (20000X), S26571 (20000X), S28020 (5000X)
L2	lio15	885385165015	5PPB	24-SEP-2015 19:11	S28008 (10000X), S28087 (10000X), S26571 (10000X), S28020 (5000X)
L3	lio16	885385165016	10PPB	24-SEP-2015 19:45	S28008 (50000X), S28087 (50000X), S26571 (50000X), S28020 (5000X)
L4	lio17	885385165017	20PPB	24-SEP-2015 20:18	S28008 (25000X), S28087 (25000X), S26571 (25000X), S28020 (5000X)
L5	lio18	885385165018	50PPB	24-SEP-2015 20:52	S28008 (10000X), S28087 (10000X), S26571 (10000X), S28020 (5000X)
L6	lio19	885385165019	60PPB	24-SEP-2015 21:25	S28008 (8333X), S28087 (8333X), S26571 (8333X), S28020 (5000X)
L7	lio20	885385165020	75PPB	24-SEP-2015 21:58	S28008 (6667X), S28087 (6667X), S26571 (6667X), S28020 (5000X)
L8	lio21	885385165021	100PPB	24-SEP-2015 22:32	S28008 (5000X), S28087 (5000X), S26571 (5000X), S28020 (5000X)
L9	lio22	885385165022	200PPB	24-SEP-2015 23:05	S28008 (2500X), S28087 (2500X), S26571 (2500X), S28020 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.7834m	0.8017m	0.7915m	0.6786m	0.7617m	0.7482m	0.7638m	0.7656m	AVRG		1.31266		0.7618	5	15	0.05	0.99	
Chloromethane		0.8217	0.6965	0.6872	0.6460	0.6824	0.7116	0.7083	0.6923	AVRG		1.41693		0.7058	7	15	0.10	0.99	
Vinyl Chloride		0.7206	0.6552	0.6583	0.5971	0.6474	0.6649	0.6670	0.6517	AVRG		1.52028		0.6578	5	15	0.05	0.99	
Bromomethane		0.2979	0.2650m	0.2678	0.2875	0.3089	0.3230	0.3275	0.3481	AVRG		3.29792		0.3032	10	15	0.05	0.99	
Chloroethane		0.4042	0.3601	0.3665	0.3426	0.3561	0.3706	0.3743	0.3628	AVRG		2.72368		0.3672	5	15	0.05	0.99	
Trichlorofluoromethane		0.8659	0.8415	0.8686	0.7960	0.8669	0.8661	0.8841	0.8842	AVRG		1.16393		0.8592	3	15	0.05	0.99	
Acetone			0.2078	0.1798	0.1739	0.1818	0.1819	0.1872	0.1770	AVRG		5.42914		0.1842	6	15	0.05	0.99	
Freon 113		0.4019	0.4169	0.4093	0.3901	0.3469	0.4163	0.4515	0.4221	AVRG		2.45770		0.4069	7	15	0.05	0.99	
1,1-Dichloroethene		0.4337	0.3947	0.3791	0.3812	0.3836	0.4013	0.4232	0.4153	AVRG		2.49058		0.4015	5	15	0.05	0.99	
Methylene Chloride		0.5429	0.4936	0.4716	0.4607	0.4880	0.4823	0.5031	0.4881	AVRG		2.03549		0.4913	5	15	0.05	0.99	
Carbon Disulfide		1.4630	1.3984	1.3299	1.3170	1.3546	1.3890	1.4563	1.3996	AVRG		0.72022		1.3885	4	15	0.05	0.99	
MTBE		1.5659	1.4789	1.4289	1.4145	1.4917	1.4946	1.5405	1.5176	AVRG		0.67043		1.4916	3	15	0.05	0.99	
trans-1,2-Dichloroethene		0.4845	0.4657	0.4439	0.4284	0.4460	0.4423	0.4535	0.4449	AVRG		2.21651		0.4512	4	15	0.05	0.99	
Vinyl Acetate		0.9729	0.9708	0.9583	0.9492	0.9717	1.0036	1.0368	1.0422	AVRG		1.01197		0.9882	4	15	0.05	0.99	
1,1-Dichloroethane		0.9125	0.8597	0.8225	0.8024	0.8533	0.8522	0.8791	0.8674	AVRG		1.16803		0.8561	4	15	0.10	0.99	
2-Butanone		0.3150	0.3006	0.2682	0.2764	0.2845	0.2877	0.2936	0.2789	AVRG		3.47109		0.2881	5	15	0.05	0.99	
2,2-Dichloropropane		0.8206	0.7774	0.7322	0.7144	0.7155	0.7484	0.7693	0.7184	AVRG		1.33418		0.7495	5	15	0.05	0.99	
cis-1,2-Dichloroethene		0.5613	0.5126	0.4925	0.4861	0.5159	0.5108	0.5220	0.4968	AVRG		1.95222		0.5122	5	15	0.05	0.99	
Chloroform		0.8762	0.8421	0.8067	0.7942	0.8397	0.8429	0.8531	0.8229	AVRG		1.19802		0.8347	3	15	0.05	0.99	
Bromochloromethane		0.2685	0.2488	0.2424	0.2406	0.2502	0.2465	0.2530	0.2465	AVRG		4.00706		0.2496	3	15	0.05	0.99	
1,1,1-Trichloroethane		0.7879	0.7806	0.7489	0.7320	0.7191	0.7673	0.7929	0.7534	AVRG		1.31535		0.7603	4	15	0.05	0.99	
1,1-Dichloropropene		0.4889	0.4898	0.4791	0.4520	0.4362	0.4748	0.4968	0.4602	AVRG		2.11759		0.4722	4	15	0.05	0.99	
Carbon Tetrachloride		0.5086	0.4974	0.4902	0.4859	0.4458	0.4893	0.5164	0.4849	AVRG		2.04159		0.4898	4	15	0.05	0.99	
1,2-Dichloroethane		0.5028	0.4862	0.4631	0.4570	0.4709	0.4741	0.4911	0.4638	AVRG		2.10023		0.4761	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.4868	1.4268	1.3624	1.3388	1.3872	1.3855	1.4384	1.3632	AVRG		0.71497		1.3987	3	15	0.05	0.99	
Trichloroethene		0.3720	0.3641	0.3507	0.3455	0.3468	0.3577	0.3708	0.3507	AVRG		2.79880		0.3573	3	15	0.05	0.99	
1,2-Dichloropropane		0.3646	0.3539	0.3311	0.3276	0.3438	0.3436	0.3581	0.3484	AVRG		2.88692		0.3464	4	15	0.05	0.99	
Bromodichloromethane		0.4911	0.4684	0.4571	0.4564	0.4772	0.4771	0.4905	0.4755	AVRG		2.10892		0.4742	3	15	0.05	0.99	
Dibromomethane		0.2155	0.2073	0.1987	0.1990	0.2072	0.2072	0.2124	0.2049	AVRG		4.84206		0.2065	3	15	0.05	0.99	
4-Methyl-2-Pentanone		0.4300	0.4041	0.3930	0.4050	0.4157	0.4211	0.4356	0.4260	AVRG		2.40209		0.4163	4	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6123	0.5940	0.5631	0.5655	0.5906	0.5889	0.6078	0.5867	AVRG		1.69896		0.5886	3	15	0.05	0.99	
Toluene		1.7172	1.6867	1.5974	1.5770	1.5801	1.6197	1.6538	1.5815	AVRG		0.61476		1.6267	3	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5912	0.5797	0.5554	0.5465	0.5627	0.5637	0.5767	0.5551	AVRG		1.76564		0.5664	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.1794	0.1786	0.1694	0.1685	0.1737	0.1736	0.1777	0.1717	AVRG		5.74495		0.1741	2	15	0.05	0.99	
2-Hexanone		0.3468	0.3261	0.3088	0.3200	0.3260	0.3267	0.3311	0.3231	AVRG		3.06687		0.3261	3	15	0.05	0.99	
1,3-Dichloropropane		0.5703	0.5648	0.5386	0.5355	0.5514	0.5527	0.5634	0.5467	AVRG		1.80859		0.5529	2	15	0.05	0.99	
Tetrachloroethene		0.4342	0.4371	0.4198	0.4147	0.3782	0.4196	0.4370	0.4142	AVRG		2.38464		0.4194	5	15	0.05	0.99	
Dibromochloromethane		0.4015	0.4074	0.3945	0.4022	0.4132	0.4145	0.4244	0.4139	AVRG		2.44543		0.4089	2	15	0.05	0.99	
1,2-Dibromoethane		0.3460	0.3366	0.3305	0.3314	0.3397	0.3412	0.3468	0.3402	AVRG		2.94932		0.3391	2	15	0.05	0.99	
Chlorobenzene		1.1582	1.1363	1.0864	1.0923	1.0965	1.1179	1.1418	1.1094	AVRG		0.89496		1.1174	2	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.4001	0.4084	0.3909	0.3933	0.3970	0.4021	0.4119	0.4042	AVRG		2.49389		0.4010	2	15	0.05	0.99	
Ethylbenzene		1.9728	1.9596	1.8684	1.8554	1.8003	1.9332	1.9927	1.9300	AVRG		0.52245		1.9140	3	15	0.05	0.99	
m,p-Xylenes	0.8431	0.7814	0.7874	0.7455	0.7455	0.7302	0.7732	0.7964	0.7763	AVRG		1.28959		0.7754	4	15	0.05	0.99	
o-Xylene		0.7951	0.7857	0.7549	0.7606	0.7503	0.7943	0.8106	0.8028	AVRG		1.27910		0.7818	3	15	0.05	0.99	
Styrene		1.3008	1.3179	1.2760	1.2978	1.2951	1.3480	1.3815	1.3665	AVRG		0.75590		1.3229	3	15	0.05	0.99	
Bromoform		0.3279	0.3227	0.3095	0.3258	0.3290	0.3375	0.3452	0.3476	AVRG		3.02422		0.3307	4	15	0.10	0.99	
Isopropylbenzene		3.0906	3.0359	2.9219	2.8114	2.6728	2.9523	3.0907	2.9529	AVRG		0.34001		2.9411	5	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.7352	0.7041	0.6871	0.6842	0.6919	0.7059	0.7225	0.7023	AVRG		1.42012		0.7042	2	15	0.30	0.99	
1,2,3-Trichloropropane		0.7394	0.6949	0.6677	0.6652	0.6728	0.6827	0.7015	0.6684	AVRG		1.45655		0.6866	4	15	0.05	0.99	
Propylbenzene		3.6765	3.6655	3.5092	3.3425	3.1727	3.5180	3.6606	3.4981	AVRG		0.28528		3.5054	5	15	0.05	0.99	
Bromobenzene		0.8335	0.8178	0.7783	0.7688	0.7688	0.7827	0.8014	0.7660	AVRG		1.26634		0.7897	3	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.8379	2.8279	2.7178	2.6075	2.5051	2.7208	2.8273	2.7138	AVRG		0.36768		2.7198	4	15	0.05	0.99	
2-Chlorotoluene		2.4756	2.4419	2.3231	2.2659	2.2326	2.3521	2.4151	2.3219	AVRG		0.42490		2.3535	4	15	0.05	0.99	
4-Chlorotoluene		2.2906	2.2451	2.1546	2.1050	2.0705	2.1619	2.2139	2.1343	AVRG		0.46041		2.1720	3	15	0.05	0.99	
tert-Butylbenzene		2.4705	2.4745	2.4230	2.3094	2.1569	2.4217	2.5404	2.4576	AVRG		0.41550		2.4067	5	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.9578	3.0092	2.8729	2.7697	2.7217	2.8707	2.9600	2.8528	AVRG		0.34760		2.8768	3	15	0.05	0.99	
sec-Butylbenzene		3.6106	3.6432	3.5422	3.3297	3.0570	3.5493	3.7374	3.5960	AVRG		0.28505		3.5082	6	15	0.05	0.99	
para-Isopropyl Toluene		3.2148	3.2497	3.1755	3.0181	2.8075	3.1687	3.3165	3.2023	AVRG		0.31805		3.1441	5	15	0.05	0.99	
1,3-Dichlorobenzene		1.6746	1.6501	1.5846	1.5525	1.5309	1.5840	1.6215	1.5605	AVRG		0.62702		1.5949	3	15	0.05	0.99	
1,4-Dichlorobenzene		1.6854	1.6739	1.6061	1.5839	1.5613	1.6084	1.6433	1.5830	AVRG		0.61798		1.6182	3	15	0.05	0.99	
n-Butylbenzene		2.9444	2.9670	2.8937	2.7065	2.4719	2.8195	2.9561	2.8173	AVRG		0.35435		2.8220	6	15	0.05	0.99	
1,2-Dichlorobenzene		1.6262	1.6207	1.5704	1.5555	1.5424	1.5816	1.6196	1.5523	AVRG		0.63147		1.5836	2	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2536	0.2283	0.1982	0.2008	0.2055	0.2028	0.2104	0.1965	AVRG		4.71708		0.2120	9	15	0.05	0.99	
1,2,4-Trichlorobenzene		1.3743	1.3440	1.2765	1.2150	1.1837	1.2030	1.2234	1.1449	AVRG		0.80283		1.2456	6	15	0.05	0.99	
Hexachlorobutadiene		0.8238	0.8095	0.7915	0.7210	0.6425	0.7350	0.7827	0.7307	AVRG		1.32525		0.7546	8	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Naphthalene		3.3652	3.2994	3.1785	3.1378	3.1395	3.1725	3.2526	3.0687	AVRG		0.31233		3.2018	3	15	0.05	0.99	
1,2,3-Trichlorobenzene		1.3453	1.3230	1.2667	1.2074	1.1835	1.2082	1.2347	1.1480	AVRG		0.80671		1.2396	5	15	0.05	0.99	
Dibromofluoromethane	0.3990	0.3958	0.4013	0.4069	0.3913	0.3984	0.4061	0.4052	0.4079	AVRG		2.49173		0.4013	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3414	0.3335	0.3342	0.3386	0.3310	0.3330	0.3388	0.3456	0.3417	AVRG		2.96280		0.3375	1	15	0.05	0.99	
Trifluorotoluene		0.6788	0.6763	0.6518	0.6427	0.5817	0.6564	0.6893	0.6502	AVRG		1.53043		0.6534	5	15	0.05	0.99	
Toluene-d8	1.2585	1.2576	1.2739	1.2636	1.2495	1.2449	1.2457	1.2526	1.2358	AVRG		0.79772		1.2536	1	15	0.05	0.99	
Bromofluorobenzene	0.7870	0.7977	0.7918	0.7940	0.7678	0.7718	0.7765	0.7831	0.7713	AVRG		1.27821		0.7823	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			5.0000	3	10.000	5	20.000	4	50.000	-11	60.000	0	75.000	-2	100.00	0	200.00	0
Chloromethane			5.0000	16	10.000	-1	20.000	-3	50.000	-8	60.000	-3	75.000	1	100.00	0	200.00	-2
Vinyl Chloride			5.0000	10	10.000	0	20.000	0	50.000	-9	60.000	-2	75.000	1	100.00	1	200.00	-1
Bromomethane			5.0000	-2	10.000	-13	20.000	-12	50.000	-5	60.000	2	75.000	7	100.00	8	200.00	15
Chloroethane			5.0000	10	10.000	-2	20.000	0	50.000	-7	60.000	-3	75.000	1	100.00	2	200.00	-1
Trichlorofluoromethane			5.0000	1	10.000	-2	20.000	1	50.000	-7	60.000	1	75.000	1	100.00	3	200.00	3
Acetone					10.000	13	20.000	-2	50.000	-6	60.000	-1	75.000	-1	100.00	2	200.00	-4
Freon 113			5.0000	-1	10.000	2	20.000	1	50.000	-4	60.000	-15	75.000	2	100.00	11	200.00	4
1,1-Dichloroethene			5.0000	8	10.000	-2	20.000	-6	50.000	-5	60.000	-4	75.000	0	100.00	5	200.00	3
Methylene Chloride			5.0000	10	10.000	0	20.000	-4	50.000	-6	60.000	-1	75.000	-2	100.00	2	200.00	-1
Carbon Disulfide			5.0000	5	10.000	1	20.000	-4	50.000	-5	60.000	-2	75.000	0	100.00	5	200.00	1
MTBE			5.0000	5	10.000	-1	20.000	-4	50.000	-5	60.000	0	75.000	0	100.00	3	200.00	2
trans-1,2-Dichloroethene			5.0000	7	10.000	3	20.000	-2	50.000	-5	60.000	-1	75.000	-2	100.00	1	200.00	-1
Vinyl Acetate			5.0000	-2	10.000	-2	20.000	-3	50.000	-4	60.000	-2	75.000	2	100.00	5	200.00	5
1,1-Dichloroethane			5.0000	7	10.000	0	20.000	-4	50.000	-6	60.000	0	75.000	0	100.00	3	200.00	1
2-Butanone			5.0000	9	10.000	4	20.000	-7	50.000	-4	60.000	-1	75.000	0	100.00	2	200.00	-3
2,2-Dichloropropane			5.0000	9	10.000	4	20.000	-2	50.000	-5	60.000	-5	75.000	0	100.00	3	200.00	-4
cis-1,2-Dichloroethene			5.0000	10	10.000	0	20.000	-4	50.000	-5	60.000	1	75.000	0	100.00	2	200.00	-3
Chloroform			5.0000	5	10.000	1	20.000	-3	50.000	-5	60.000	1	75.000	1	100.00	2	200.00	-1
Bromochloromethane			5.0000	8	10.000	0	20.000	-3	50.000	-4	60.000	0	75.000	-1	100.00	1	200.00	-1
1,1,1-Trichloroethane			5.0000	4	10.000	3	20.000	-1	50.000	-4	60.000	-5	75.000	1	100.00	4	200.00	-1
1,1-Dichloropropene			5.0000	4	10.000	4	20.000	1	50.000	-4	60.000	-8	75.000	1	100.00	5	200.00	-3
Carbon Tetrachloride			5.0000	4	10.000	2	20.000	0	50.000	-1	60.000	-9	75.000	0	100.00	5	200.00	-1
1,2-Dichloroethane			5.0000	6	10.000	2	20.000	-3	50.000	-4	60.000	-1	75.000	0	100.00	3	200.00	-3
Benzene			5.0000	6	10.000	2	20.000	-3	50.000	-4	60.000	-1	75.000	-1	100.00	3	200.00	-3
Trichloroethene			5.0000	4	10.000	2	20.000	-2	50.000	-3	60.000	-3	75.000	0	100.00	4	200.00	-2
1,2-Dichloropropane			5.0000	5	10.000	2	20.000	-4	50.000	-5	60.000	-1	75.000	-1	100.00	3	200.00	1
Bromodichloromethane			5.0000	4	10.000	-1	20.000	-4	50.000	-4	60.000	1	75.000	1	100.00	3	200.00	0
Dibromomethane			5.0000	4	10.000	0	20.000	-4	50.000	-4	60.000	0	75.000	0	100.00	3	200.00	-1
4-Methyl-2-Pentanone			5.0000	3	10.000	-3	20.000	-6	50.000	-3	60.000	0	75.000	1	100.00	5	200.00	2
cis-1,3-Dichloropropene			5.0000	4	10.000	1	20.000	-4	50.000	-4	60.000	0	75.000	0	100.00	3	200.00	0
Toluene			5.0000	6	10.000	4	20.000	-2	50.000	-3	60.000	-3	75.000	0	100.00	2	200.00	-3
trans-1,3-Dichloropropene			5.0000	4	10.000	2	20.000	-2	50.000	-4	60.000	-1	75.000	0	100.00	2	200.00	-2
1,1,2-Trichloroethane			5.0000	3	10.000	3	20.000	-3	50.000	-3	60.000	0	75.000	0	100.00	2	200.00	-1
2-Hexanone			5.0000	6	10.000	0	20.000	-5	50.000	-2	60.000	0	75.000	0	100.00	2	200.00	-1
1,3-Dichloropropane			5.0000	3	10.000	2	20.000	-3	50.000	-3	60.000	0	75.000	0	100.00	2	200.00	-1
Tetrachloroethene			5.0000	4	10.000	4	20.000	0	50.000	-1	60.000	-10	75.000	0	100.00	4	200.00	-1
Dibromochloromethane			5.0000	-2	10.000	0	20.000	-4	50.000	-2	60.000	1	75.000	1	100.00	4	200.00	1
1,2-Dibromoethane			5.0000	2	10.000	-1	20.000	-3	50.000	-2	60.000	0	75.000	1	100.00	2	200.00	0
Chlorobenzene			5.0000	4	10.000	2	20.000	-3	50.000	-2	60.000	-2	75.000	0	100.00	2	200.00	-1
1,1,1,2-Tetrachloroethane			5.0000	0	10.000	2	20.000	-3	50.000	-2	60.000	-1	75.000	0	100.00	3	200.00	1
Ethylbenzene			5.0000	3	10.000	2	20.000	-2	50.000	-3	60.000	-6	75.000	1	100.00	4	200.00	1

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	5.0000	9	10.000	1	20.000	2	40.000	-4	100.00	-4	120.00	-6	150.00	0	200.00	3	400.00	0
o-Xylene			5.0000	2	10.000	1	20.000	-3	50.000	-3	60.000	-4	75.000	2	100.00	4	200.00	3
Styrene			5.0000	-2	10.000	0	20.000	-4	50.000	-2	60.000	-2	75.000	2	100.00	4	200.00	3
Bromoform			5.0000	-1	10.000	-2	20.000	-6	50.000	-1	60.000	0	75.000	2	100.00	4	200.00	5
Isopropylbenzene			5.0000	5	10.000	3	20.000	-1	50.000	-4	60.000	-9	75.000	0	100.00	5	200.00	0
1,1,2,2-Tetrachloroethane			5.0000	4	10.000	0	20.000	-2	50.000	-3	60.000	-2	75.000	0	100.00	3	200.00	0
1,2,3-Trichloropropane			5.0000	8	10.000	1	20.000	-3	50.000	-3	60.000	-2	75.000	-1	100.00	2	200.00	-3
Propylbenzene			5.0000	5	10.000	5	20.000	0	50.000	-5	60.000	-9	75.000	0	100.00	4	200.00	0
Bromobenzene			5.0000	6	10.000	4	20.000	-1	50.000	-3	60.000	-3	75.000	-1	100.00	1	200.00	-3
1,3,5-Trimethylbenzene			5.0000	4	10.000	4	20.000	0	50.000	-4	60.000	-8	75.000	0	100.00	4	200.00	0
2-Chlorotoluene			5.0000	5	10.000	4	20.000	-1	50.000	-4	60.000	-5	75.000	0	100.00	3	200.00	-1
4-Chlorotoluene			5.0000	5	10.000	3	20.000	-1	50.000	-3	60.000	-5	75.000	0	100.00	2	200.00	-2
tert-Butylbenzene			5.0000	3	10.000	3	20.000	1	50.000	-4	60.000	-10	75.000	1	100.00	6	200.00	2
1,2,4-Trimethylbenzene			5.0000	3	10.000	5	20.000	0	50.000	-4	60.000	-5	75.000	0	100.00	3	200.00	-1
sec-Butylbenzene			5.0000	3	10.000	4	20.000	1	50.000	-5	60.000	-13	75.000	1	100.00	7	200.00	3
para-Isopropyl Toluene			5.0000	2	10.000	3	20.000	1	50.000	-4	60.000	-11	75.000	1	100.00	5	200.00	2
1,3-Dichlorobenzene			5.0000	5	10.000	3	20.000	-1	50.000	-3	60.000	-4	75.000	-1	100.00	2	200.00	-2
1,4-Dichlorobenzene			5.0000	4	10.000	3	20.000	-1	50.000	-2	60.000	-4	75.000	-1	100.00	2	200.00	-2
n-Butylbenzene			5.0000	4	10.000	5	20.000	3	50.000	-4	60.000	-12	75.000	0	100.00	5	200.00	0
1,2-Dichlorobenzene			5.0000	3	10.000	2	20.000	-1	50.000	-2	60.000	-3	75.000	0	100.00	2	200.00	-2
1,2-Dibromo-3-Chloropropane			5.0000	20	10.000	8	20.000	-7	50.000	-5	60.000	-3	75.000	-4	100.00	-1	200.00	-7
1,2,4-Trichlorobenzene			5.0000	10	10.000	8	20.000	2	50.000	-2	60.000	-5	75.000	-3	100.00	-2	200.00	-8
Hexachlorobutadiene			5.0000	9	10.000	7	20.000	5	50.000	-4	60.000	-15	75.000	-3	100.00	4	200.00	-3
Naphthalene			5.0000	5	10.000	3	20.000	-1	50.000	-2	60.000	-2	75.000	-1	100.00	2	200.00	-4
1,2,3-Trichlorobenzene			5.0000	9	10.000	7	20.000	2	50.000	-3	60.000	-5	75.000	-3	100.00	0	200.00	-7
Dibromofluoromethane	50.000	-1	50.000	-1	50.000	0	50.000	1	50.000	-2	50.000	-1	50.000	1	50.000	1	50.000	2
1,2-Dichloroethane-d4	50.000	1	50.000	-1	50.000	-1	50.000	0	50.000	-2	50.000	-1	50.000	0	50.000	2	50.000	1
Trifluorotoluene			5.0000	4	10.000	4	20.000	0	50.000	-2	60.000	-11	75.000	0	100.00	5	200.00	0
Toluene-d8	50.000	0	50.000	0	50.000	2	50.000	1	50.000	0	50.000	-1	50.000	-1	50.000	0	50.000	-1
Bromofluorobenzene	50.000	1	50.000	2	50.000	1	50.000	1	50.000	-2	50.000	-1	50.000	-1	50.000	0	50.000	-1

SJD 09/25/15 [Freon 12]: Corrected automatically drawn baseline in all levels.

SJD 09/25/15 [Bromomethane]: Corrected automatically drawn baseline in 10PPB (lio16).

Analyst: SJD

Date: 09/25/15

Reviewer: LW

Date: 09/28/15

m=manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12  
Calnum : 885385165001

Cal Date : 24-SEP-2015

ICV 885386806004 (lip04 25-SEP-2015) stds: S27929 (10000X), S27930 (10000X),  
S28013 (10000X), S27267 (10000X), S28020 (5000X)

Analyte	Spiked	Quant	Units	%D	Max	Flags
Freon 12	20.00	14.98	ug/L	-25	30	!v- m
Chloromethane	20.00	18.36	ug/L	-8	30	
Vinyl Chloride	20.00	18.30	ug/L	-8	20	
Bromomethane	20.00	19.11	ug/L	-4	30	
Chloroethane	20.00	18.77	ug/L	-6	30	
Trichlorofluoromethane	20.00	18.08	ug/L	-10	30	
Acetone	25.00	34.69	ug/L	39	40	!v+
Freon 113	25.00	20.07	ug/L	-20	30	
1,1-Dichloroethene	25.00	20.72	ug/L	-17	20	
Methylene Chloride	25.00	22.55	ug/L	-10	30	
Carbon Disulfide	25.00	19.71	ug/L	-21	30	!v-
MTBE	25.00	22.08	ug/L	-12	30	
trans-1,2-Dichloroethene	25.00	21.57	ug/L	-14	30	
Vinyl Acetate	25.00	25.34	ug/L	1	40	
1,1-Dichloroethane	25.00	23.15	ug/L	-7	30	
2-Butanone	25.00	28.77	ug/L	15	40	
2,2-Dichloropropane	25.00	25.42	ug/L	2	30	
cis-1,2-Dichloroethene	25.00	25.02	ug/L	0	30	
Chloroform	25.00	24.15	ug/L	-3	20	
Bromochloromethane	25.00	22.86	ug/L	-9	30	
1,1,1-Trichloroethane	25.00	25.00	ug/L	0	30	
1,1-Dichloropropene	25.00	22.55	ug/L	-10	30	
Carbon Tetrachloride	25.00	25.48	ug/L	2	30	
1,2-Dichloroethane	25.00	23.33	ug/L	-7	30	
Benzene	25.00	24.09	ug/L	-4	30	
Trichloroethene	25.00	25.00	ug/L	0	30	
1,2-Dichloropropane	25.00	23.84	ug/L	-5	20	
Bromodichloromethane	25.00	23.33	ug/L	-7	30	
Dibromomethane	25.00	23.90	ug/L	-4	30	
4-Methyl-2-Pentanone	25.00	25.61	ug/L	2	40	
cis-1,3-Dichloropropene	25.00	24.89	ug/L	0	30	
Toluene	25.00	25.27	ug/L	1	20	
trans-1,3-Dichloropropene	25.00	24.06	ug/L	-4	30	
1,1,2-Trichloroethane	25.00	23.82	ug/L	-5	30	
2-Hexanone	25.00	27.67	ug/L	11	40	
1,3-Dichloropropane	25.00	25.14	ug/L	1	30	
Tetrachloroethene	25.00	26.62	ug/L	6	30	
Dibromochloromethane	25.00	23.54	ug/L	-6	30	
1,2-Dibromoethane	25.00	23.98	ug/L	-4	30	
Chlorobenzene	25.00	24.78	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	25.00	24.67	ug/L	-1	30	
Ethylbenzene	25.00	25.64	ug/L	3	20	
m,p-Xylenes	50.00	50.90	ug/L	2	30	
o-Xylene	25.00	24.57	ug/L	-2	30	
Styrene	25.00	24.87	ug/L	-1	30	
Bromoform	25.00	23.95	ug/L	-4	30	
Isopropylbenzene	25.00	25.94	ug/L	4	30	
1,1,2,2-Tetrachloroethane	25.00	25.51	ug/L	2	30	

Analyte	Spiked	Quant	Units	%D	Max	Flags
1,2,3-Trichloropropane	25.00	26.20	ug/L	5	30	
Propylbenzene	25.00	26.06	ug/L	4	30	
Bromobenzene	25.00	24.92	ug/L	0	30	
1,3,5-Trimethylbenzene	25.00	26.85	ug/L	7	30	
2-Chlorotoluene	25.00	25.95	ug/L	4	30	
4-Chlorotoluene	25.00	26.11	ug/L	4	30	
tert-Butylbenzene	25.00	26.16	ug/L	5	30	
1,2,4-Trimethylbenzene	25.00	25.79	ug/L	3	30	
sec-Butylbenzene	25.00	26.62	ug/L	6	30	
para-Isopropyl Toluene	25.00	26.95	ug/L	8	30	
1,3-Dichlorobenzene	25.00	26.02	ug/L	4	30	
1,4-Dichlorobenzene	25.00	26.25	ug/L	5	30	
n-Butylbenzene	25.00	28.14	ug/L	13	30	
1,2-Dichlorobenzene	25.00	25.41	ug/L	2	30	
1,2-Dibromo-3-Chloropropane	25.00	25.21	ug/L	1	30	
1,2,4-Trichlorobenzene	25.00	27.75	ug/L	11	30	
Hexachlorobutadiene	25.00	29.14	ug/L	17	30	
Naphthalene	25.00	24.08	ug/L	-4	30	
1,2,3-Trichlorobenzene	25.00	26.51	ug/L	6	30	

Analyst: SJD Date: 09/25/15 Reviewer: LW Date: 09/28/15

!=warning +=high bias -=low bias m=manual integration v=ICV



CURTIS & TOMPKINS SPIKE USER REPORT FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : QC813583                      IDF : 1.0  
 Seqnum : 885465851004.4            File : lkj04                      Time : 19-NOV-2015 13:38  
 Cal : 885385165001                  Caldate : 24-SEP-2015  
 Standards: S28489 (10000X), S28220 (10000X), S28167 (10000X), S28123 (10000X),  
 S28421 (5000X)

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
Freon 12	0.7618	0.6224	20.00	16.34	ug/L	-18	30	0.0500	!v- m u
Chloromethane	0.7058	0.7581	20.00	21.48	ug/L	7	30	0.1000	u
Vinyl Chloride	0.6578	0.6546	20.00	19.90	ug/L	0	20	0.0500	u
Bromomethane	0.3032	0.3929	20.00	25.92	ug/L	30	30	0.0500	u
Chloroethane	0.3672	0.4232	20.00	23.05	ug/L	15	30	0.0500	u
Trichlorofluoromethane	0.8592	0.8779	20.00	20.44	ug/L	2	30	0.0500	u
Acetone	0.1842	0.2850	25.00	38.69	ug/L	55	40	0.0500	!v+ c+ u ***
Freon 113	0.4069	0.3792	25.00	23.30	ug/L	-7	30	0.0500	u
1,1-Dichloroethene	0.4015	0.3792	25.00	23.61	ug/L	-6	20	0.0500	u
Methylene Chloride	0.4913	0.5295	25.00	26.95	ug/L	8	30	0.0500	u
Carbon Disulfide	1.3885	1.4069	25.00	25.33	ug/L	1	30	0.0500	!v- u
MTBE	1.4916	1.3981	25.00	23.43	ug/L	-6	30	0.0500	u
trans-1,2-Dichloroethene	0.4512	0.4260	25.00	23.61	ug/L	-6	30	0.0500	u
Vinyl Acetate	0.9882	1.2730	25.00	32.20	ug/L	29	40	0.0500	u
1,1-Dichloroethane	0.8561	0.9679	25.00	28.26	ug/L	13	30	0.1000	u
2-Butanone	0.2881	0.3262	25.00	28.31	ug/L	13	40	0.0500	u
cis-1,2-Dichloroethene	0.5122	0.5521	25.00	26.95	ug/L	8	30	0.0500	u
2,2-Dichloropropane	0.7495	0.9319	25.00	31.08	ug/L	24	30	0.0500	u
Chloroform	0.8347	0.9429	25.00	28.24	ug/L	13	20	0.0500	u
Bromochloromethane	0.2496	0.2553	25.00	25.57	ug/L	2	30	0.0500	u
1,1,1-Trichloroethane	0.7603	0.8628	25.00	28.37	ug/L	13	30	0.0500	u
1,1-Dichloropropene	0.4722	0.4195	25.00	22.21	ug/L	-11	30	0.0500	u
Carbon Tetrachloride	0.4898	0.5536	25.00	28.25	ug/L	13	30	0.0500	u
1,2-Dichloroethane	0.4761	0.5390	25.00	28.30	ug/L	13	30	0.0500	u
Benzene	1.3987	1.5092	25.00	26.98	ug/L	8	30	0.0500	u
Trichloroethene	0.3573	0.3614	25.00	25.28	ug/L	1	30	0.0500	u
1,2-Dichloropropane	0.3464	0.3671	25.00	26.50	ug/L	6	20	0.0500	u
Bromodichloromethane	0.4742	0.5034	25.00	26.54	ug/L	6	30	0.0500	u
Dibromomethane	0.2065	0.2130	25.00	25.78	ug/L	3	30	0.0500	u
4-Methyl-2-Pentanone	0.4163	0.4051	25.00	24.33	ug/L	-3	40	0.0500	u
cis-1,3-Dichloropropene	0.5886	0.6465	25.00	27.46	ug/L	10	30	0.0500	u
Toluene	1.6267	1.7288	25.00	26.57	ug/L	6	20	0.0500	u
trans-1,3-Dichloropropene	0.5664	0.5693	25.00	25.13	ug/L	1	30	0.0500	u
1,1,2-Trichloroethane	0.1741	0.1774	25.00	25.48	ug/L	2	30	0.0500	u
2-Hexanone	0.3261	0.2970	25.00	22.77	ug/L	-9	40	0.0500	u
1,3-Dichloropropane	0.5529	0.6100	25.00	27.58	ug/L	10	30	0.0500	u
Tetrachloroethene	0.4194	0.4373	25.00	26.07	ug/L	4	30	0.0500	u
Dibromochloromethane	0.4089	0.3919	25.00	23.96	ug/L	-4	30	0.0500	u
1,2-Dibromoethane	0.3391	0.3144	25.00	23.18	ug/L	-7	30	0.0500	u
Chlorobenzene	1.1174	1.1671	25.00	26.11	ug/L	4	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.4010	0.4132	25.00	25.76	ug/L	3	30	0.0500	u
Ethylbenzene	1.9140	2.0659	25.00	26.98	ug/L	8	20	0.0500	u
m,p-Xylenes	0.7754	0.8324	50.00	53.67	ug/L	7	30	0.0500	u
o-Xylene	0.7818	0.7837	25.00	25.06	ug/L	0	30	0.0500	u
Styrene	1.3229	1.3800	25.00	26.08	ug/L	4	30	0.0500	u
Bromoform	0.3307	0.3130	25.00	23.67	ug/L	-5	30	0.1000	u
Isopropylbenzene	2.9411	3.2643	25.00	27.75	ug/L	11	30	0.0500	u

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
1,1,2,2-Tetrachloroethane	0.7042	0.7806	25.00	27.71	ug/L	11	30	0.3000	u
1,2,3-Trichloropropane	0.6866	0.7956	25.00	28.97	ug/L	16	30	0.0500	u
Propylbenzene	3.5054	4.1204	25.00	29.39	ug/L	18	30	0.0500	u
Bromobenzene	0.7897	0.8550	25.00	27.07	ug/L	8	30	0.0500	u
1,3,5-Trimethylbenzene	2.7198	3.2542	25.00	29.91	ug/L	20	30	0.0500	u
2-Chlorotoluene	2.3535	2.8190	25.00	29.94	ug/L	20	30	0.0500	u
4-Chlorotoluene	2.1720	2.5915	25.00	29.83	ug/L	19	30	0.0500	u
tert-Butylbenzene	2.4067	2.6623	25.00	27.65	ug/L	11	30	0.0500	u
1,2,4-Trimethylbenzene	2.8768	3.0984	25.00	26.93	ug/L	8	30	0.0500	u
sec-Butylbenzene	3.5082	4.0206	25.00	28.65	ug/L	15	30	0.0500	u
para-Isopropyl Toluene	3.1441	3.5568	25.00	28.28	ug/L	13	30	0.0500	u
1,3-Dichlorobenzene	1.5949	1.7820	25.00	27.93	ug/L	12	30	0.0500	u
1,4-Dichlorobenzene	1.6182	1.8300	25.00	28.27	ug/L	13	30	0.0500	u
n-Butylbenzene	2.8220	3.2369	25.00	28.67	ug/L	15	30	0.0500	u
1,2-Dichlorobenzene	1.5836	1.7093	25.00	26.98	ug/L	8	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2120	0.2208	25.00	26.04	ug/L	4	30	0.0500	u
1,2,4-Trichlorobenzene	1.2456	1.3290	25.00	26.67	ug/L	7	30	0.0500	u
Hexachlorobutadiene	0.7546	0.9637	25.00	31.93	ug/L	28	30	0.0500	u
Naphthalene	3.2018	2.2290	25.00	17.40	ug/L	-30	30	0.0500	u
1,2,3-Trichlorobenzene	1.2396	1.2650	25.00	25.51	ug/L	2	30	0.0500	u
Dibromofluoromethane	0.4013	0.4294	50.00	53.49	ug/L	7	30	0.0500	u
1,2-Dichloroethane-d4	0.3375	0.4088	50.00	60.56	ug/L	21	30	0.0500	u
Toluene-d8	1.2536	1.3284	50.00	52.98	ug/L	6	30	0.0500	u
Bromofluorobenzene	0.7823	0.8245	50.00	52.69	ug/L	5	30	0.0500	u

ISTD (ICAL liol8)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	305612	232053	-24.07	10.31	10.29	-0.02
1,4-Difluorobenzene	415531	319032	-23.22	11.17	11.16	-0.01
Chlorobenzene-d5	403015	318804	-20.90	14.07	14.05	-0.02
1,4-Dichlorobenzene-d4	281429	205499	-26.98	16.18	16.16	-0.02

NJT 11/19/15 [Freon 12]: Corrected fronting or tailing peak integration.  
[general version]

Analyst: NJT Date: 11/20/15 Reviewer: TEW Date: 11/20/15

!=warning +=high bias -=low bias c=CCV m>manual integration u=use v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 MSVOA Soil  
EPA 8260B

Inst : MSVOA12                      Run Name : 30PPB                      IDF : 1.0  
 Seqnum : 885467264003              File : lkk03                      Time : 20-NOV-2015 12:34  
 Cal : 885385165001                  Caldate : 24-SEP-2015  
 Standards: S28295 (16670X), S28355 (16670X), S27081 (16670X), S28421 (5000X)

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
Freon 12	0.7618	0.4287	30.00	16.88	ug/L	-44	30	0.0500	!v- c- m ***
Chloromethane	0.7058	0.7114	30.00	30.24	ug/L	1	30	0.1000	
Vinyl Chloride	0.6578	0.6161	30.00	28.10	ug/L	-6	20	0.0500	
Bromomethane	0.3032	0.3191	30.00	31.57	ug/L	5	30	0.0500	
Chloroethane	0.3672	0.3971	30.00	32.44	ug/L	8	30	0.0500	
Trichlorofluoromethane	0.8592	0.8913	30.00	31.12	ug/L	4	30	0.0500	
Acetone	0.1842	0.2998	30.00	48.83	ug/L	63	40	0.0500	!v+ c+ ***
Freon 113	0.4069	0.4852	30.00	35.77	ug/L	19	30	0.0500	
1,1-Dichloroethene	0.4015	0.4083	30.00	30.51	ug/L	2	20	0.0500	
Methylene Chloride	0.4913	0.5134	30.00	31.35	ug/L	4	30	0.0500	
Carbon Disulfide	1.3885	1.6230	30.00	35.07	ug/L	17	30	0.0500	!v-
MTBE	1.4916	1.6206	30.00	32.59	ug/L	9	30	0.0500	
trans-1,2-Dichloroethene	0.4512	0.4660	30.00	30.99	ug/L	3	30	0.0500	
Vinyl Acetate	0.9882	1.0604	30.00	32.19	ug/L	7	40	0.0500	
1,1-Dichloroethane	0.8561	0.9164	30.00	32.11	ug/L	7	30	0.1000	
2-Butanone	0.2881	0.3161	30.00	32.92	ug/L	10	40	0.0500	
2,2-Dichloropropane	0.7495	0.8890	30.00	35.58	ug/L	19	30	0.0500	
cis-1,2-Dichloroethene	0.5122	0.5098	30.00	29.86	ug/L	0	30	0.0500	
Chloroform	0.8347	0.9149	30.00	32.88	ug/L	10	20	0.0500	
Bromochloromethane	0.2496	0.2578	30.00	30.99	ug/L	3	30	0.0500	
1,1,1-Trichloroethane	0.7603	0.8598	30.00	33.93	ug/L	13	30	0.0500	
1,1-Dichloropropene	0.4722	0.5087	30.00	32.31	ug/L	8	30	0.0500	
Carbon Tetrachloride	0.4898	0.5635	30.00	34.51	ug/L	15	30	0.0500	
1,2-Dichloroethane	0.4761	0.5549	30.00	34.96	ug/L	17	30	0.0500	
Benzene	1.3987	1.5482	30.00	33.21	ug/L	11	30	0.0500	
Trichloroethene	0.3573	0.3596	30.00	30.19	ug/L	1	30	0.0500	
1,2-Dichloropropane	0.3464	0.3587	30.00	31.07	ug/L	4	20	0.0500	
Bromodichloromethane	0.4742	0.5030	30.00	31.82	ug/L	6	30	0.0500	
Dibromomethane	0.2065	0.2192	30.00	31.84	ug/L	6	30	0.0500	
4-Methyl-2-Pentanone	0.4163	0.4392	30.00	31.65	ug/L	5	40	0.0500	
cis-1,3-Dichloropropene	0.5886	0.6064	30.00	30.90	ug/L	3	30	0.0500	
Toluene	1.6267	1.7593	30.00	32.45	ug/L	8	20	0.0500	
trans-1,3-Dichloropropene	0.5664	0.5741	30.00	30.41	ug/L	1	30	0.0500	
1,1,2-Trichloroethane	0.1741	0.1759	30.00	30.32	ug/L	1	30	0.0500	
2-Hexanone	0.3261	0.3226	30.00	29.68	ug/L	-1	40	0.0500	
1,3-Dichloropropane	0.5529	0.6035	30.00	32.75	ug/L	9	30	0.0500	
Tetrachloroethene	0.4194	0.4281	30.00	30.63	ug/L	2	30	0.0500	
Dibromochloromethane	0.4089	0.3964	30.00	29.08	ug/L	-3	30	0.0500	
1,2-Dibromoethane	0.3391	0.3308	30.00	29.27	ug/L	-2	30	0.0500	
Chlorobenzene	1.1174	1.1261	30.00	30.23	ug/L	1	30	0.3000	
1,1,1,2-Tetrachloroethane	0.4010	0.4175	30.00	31.24	ug/L	4	30	0.0500	
Ethylbenzene	1.9140	2.0750	30.00	32.52	ug/L	8	20	0.0500	
m,p-Xylenes	0.7754	0.8343	60.00	64.56	ug/L	8	30	0.0500	
o-Xylene	0.7818	0.7874	30.00	30.21	ug/L	1	30	0.0500	
Styrene	1.3229	1.3839	30.00	31.38	ug/L	5	30	0.0500	
Bromoform	0.3307	0.3109	30.00	28.21	ug/L	-6	30	0.1000	
Isopropylbenzene	2.9411	3.3450	30.00	34.12	ug/L	14	30	0.0500	
1,1,2,2-Tetrachloroethane	0.7042	0.7644	30.00	32.57	ug/L	9	30	0.3000	

Analyte	Avg		Spiked	Quant	Units	%D	Max %D	Min RF	Flags
	RF/CF	RF/CF							
1,2,3-Trichloropropane	0.6866	0.8119	30.00	35.48	ug/L	18	30	0.0500	
Propylbenzene	3.5054	4.2680	30.00	36.53	ug/L	<b>22</b>	30	0.0500	!c+
Bromobenzene	0.7897	0.8688	30.00	33.00	ug/L	10	30	0.0500	
1,3,5-Trimethylbenzene	2.7198	3.2039	30.00	35.34	ug/L	18	30	0.0500	
2-Chlorotoluene	2.3535	2.8534	30.00	36.37	ug/L	<b>21</b>	30	0.0500	!c+
4-Chlorotoluene	2.1720	2.6325	30.00	36.36	ug/L	<b>21</b>	30	0.0500	!c+
tert-Butylbenzene	2.4067	2.6709	30.00	33.29	ug/L	11	30	0.0500	
1,2,4-Trimethylbenzene	2.8768	3.1441	30.00	32.79	ug/L	9	30	0.0500	
sec-Butylbenzene	3.5082	4.0572	30.00	34.69	ug/L	16	30	0.0500	
para-Isopropyl Toluene	3.1441	3.6177	30.00	34.52	ug/L	15	30	0.0500	
1,3-Dichlorobenzene	1.5949	1.7315	30.00	32.57	ug/L	9	30	0.0500	
1,4-Dichlorobenzene	1.6182	1.7734	30.00	32.88	ug/L	10	30	0.0500	
n-Butylbenzene	2.8220	3.2207	30.00	34.24	ug/L	14	30	0.0500	
1,2-Dichlorobenzene	1.5836	1.6504	30.00	31.27	ug/L	4	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2120	0.2340	30.00	33.11	ug/L	10	30	0.0500	
1,2,4-Trichlorobenzene	1.2456	1.3594	30.00	32.74	ug/L	9	30	0.0500	
Hexachlorobutadiene	0.7546	0.9292	30.00	36.94	ug/L	<b>23</b>	30	0.0500	!c+
Naphthalene	3.2018	2.4371	30.00	22.84	ug/L	<b>-24</b>	30	0.0500	!c-
1,2,3-Trichlorobenzene	1.2396	1.3051	30.00	31.59	ug/L	5	30	0.0500	
Dibromofluoromethane	0.4013	0.4188	50.00	52.18	ug/L	4	30	0.0500	
1,2-Dichloroethane-d4	0.3375	0.4191	50.00	62.09	ug/L	<b>24</b>	30	0.0500	!c+
Trifluorotoluene	0.6534	0.6909	30.00	31.72	ug/L	6	30	0.0500	
Toluene-d8	1.2536	1.3119	50.00	52.33	ug/L	5	30	0.0500	
Bromofluorobenzene	0.7823	0.8395	50.00	53.65	ug/L	7	30	0.0500	

ISTD (ICAL liol8)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	305612	216962	-29.01	10.31	10.30	-0.01
1,4-Difluorobenzene	415531	301924	-27.34	11.17	11.16	-0.01
Chlorobenzene-d5	403015	299627	-25.65	14.07	14.05	-0.02
1,4-Dichlorobenzene-d4	281429	187301	-33.45	16.18	16.16	-0.02

NJT 11/20/15 [Freon 12]: Combined split peak.

Analyst: NJT Date: 11/20/15 Reviewer: LW Date: 11/20/15

!=warning +=high bias -=low bias c=CCV m>manual integration v=ICV

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 885465851

Date : 11/19/15  
 Sequence : MSVOA12 lkj

Reference : lio18  
 Analyzed : 09/24/15 20:52

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	305612	10.31	415531	11.17	403015	14.07	281429	16.18
		LOWER LIMIT	152806	9.81	207766	10.67	201508	13.57	140715	15.68
		UPPER LIMIT	611224	10.81	831062	11.67	806030	14.57	562858	16.68
003	CCV	30PPB	244554	10.29	337700	11.16	341299	14.06	221079	16.16
004	CCV/LCS	QC813583	232053	10.29	319032	11.16	318804	14.05	205499	16.16
006	BLANK	QC813584	213690	10.29	298039	11.16	296815	14.05	192547	16.16
007	SAMPLE	271634-013	212773	10.29	298022	11.16	295732	14.05	190946	16.16
008	SAMPLE	271634-015	222723	10.30	307186	11.16	307911	14.05	199954	16.16
009	SAMPLE	271639-001	195718	10.30	284309	11.16	249504	14.05	74558 *	16.16
010	MSS	271668-001	215343	10.29	298988	11.16	304278	14.06	200178	16.16
011	SAMPLE	271668-002	208939	10.29	296676	11.16	297298	14.05	198154	16.16
012	SAMPLE	271743-002	203831	10.30	301116	11.16	304052	14.06	192997	16.16
013	SAMPLE	271743-003	224284	10.30	330095	11.16	331247	14.06	208255	16.16
014	SAMPLE	271743-004	211237	10.30	312742	11.16	312848	14.05	197442	16.16
015	SAMPLE	271660-001	234945	10.30	321872	11.16	324035	14.06	209002	16.16
016	SAMPLE	271660-002	204621	10.30	307201	11.16	305627	14.05	192719	16.16
017	SAMPLE	271745-010	217251	10.30	313802	11.16	313307	14.05	195560	16.16
018	SAMPLE	271745-011	223906	10.29	298972	11.16	305253	14.05	199513	16.16
019	MS	QC813625	234685	10.30	325910	11.16	330904	14.05	206963	16.16

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 885467264

Date : 11/20/15  
 Sequence : MSVOA12 lkk

Reference : lio18  
 Analyzed : 09/24/15 20:52

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	305612	10.31	415531	11.17	403015	14.07	281429	16.18
		LOWER LIMIT	152806	9.81	207766	10.67	201508	13.57	140715	15.68
		UPPER LIMIT	611224	10.81	831062	11.67	806030	14.57	562858	16.68
003	CCV	30PPB	216962	10.30	301924	11.16	299627	14.05	187301	16.16
004	BS	QC813808	228108	10.29	317196	11.16	313459	14.05	200369	16.16
005	MSD	QC813626	229610	10.29	321011	11.16	322158	14.05	205428	16.16
006	BSD	QC813809	232640	10.30	320184	11.16	316530	14.06	204766	16.16

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 885385165

Instrument : MSVOA12 Begun : 09/24/15 11:24  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	lio01	IB				09/24/15 11:24	1.0	1	?t
002	lio02	TUN	BFB			09/24/15 11:55	1.0	2	
003	lio03	TUN	BFB			09/24/15 12:09	1.0	2	
004	lio04	TUN	BFB			09/24/15 12:19	1.0	2	
005	lio05	TUN	BFB			09/24/15 12:30	1.0	2	
006	lio06	TUN	BFB			09/24/15 13:04	1.0	2	
007	lio07	X	2.5PPB STD			09/24/15 13:23	1.0	1	
008	lio08	TUN	BFB			09/24/15 14:56	1.0	2	
009	lio09	TUN	BFB			09/24/15 15:27	1.0	2	
010	lio10	TUN	BFB			09/24/15 16:03	1.0	2	
011	lio11	TUN	BFB			09/24/15 17:04	1.0	2	
012	lio12	IB				09/24/15 17:32	1.0	1	
013	lio13	IB	CALIB			09/24/15 18:05	1.0	1	
014	lio14	ICAL	2.5PPB			09/24/15 18:38	1.0	3 4 5 1	
015	lio15	ICAL	5PPB			09/24/15 19:11	1.0	3 4 5 1	
016	lio16	ICAL	10PPB			09/24/15 19:45	1.0	3 4 5 1	
017	lio17	ICAL	20PPB			09/24/15 20:18	1.0	3 4 5 1	
018	lio18	ICAL	50PPB			09/24/15 20:52	1.0	3 4 5 1	
019	lio19	ICAL	60PPB			09/24/15 21:25	1.0	3 4 5 1	
020	lio20	ICAL	75PPB			09/24/15 21:58	1.0	3 4 5 1	
021	lio21	ICAL	100PPB			09/24/15 22:32	1.0	3 4 5 1	
022	lio22	ICAL	200PPB			09/24/15 23:05	1.0	3 4 5 1	
023	lio23	ICV				09/24/15 23:39	1.0	6 1	
024	lio24	ICV				09/25/15 00:13	1.0	7 8 9 1	

SJD 09/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

Analyst: SJD Date: 09/25/15 Reviewer: LW Date: 09/28/15

Standards used: 1=S28020 2=S27180 3=S28008 4=S28087 5=S26571 6=S27267 7=S27929 8=S27930 9=S28013

Flags used: ?t=missing tune



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 885386806

Instrument : MSVOA12 Begun : 09/25/15 14:46  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	lip01	IB					09/25/15 14:46	1.0	1	?t
002	lip02	TUN	BFB				09/25/15 15:10	1.0	2	
003	lip03	ICV					09/25/15 15:51	1.0	3 4 5 1	
004	lip04	ICV					09/25/15 16:48	1.0	3 4 5 6 1	
005	lip05	CCV					09/25/15 17:38	1.0	3 4 5 6 1	
006	lip06	BLANK	QC805367		Soil	227607	09/25/15 18:34	1.0	1	
007	lip07	LOD	221187-028		Soil	227607	09/25/15 19:07	1.0	7 8 9 1	
008	lip08	LOD	221187-028		Soil	227607	09/25/15 19:40	1.0	7 8 9 1	
009	lip09	LOD	221187-028		Soil	227607	09/25/15 20:13	1.0	7 8 9 1	
010	lip10	LOD	221187-028		Soil	227607	09/25/15 20:47	1.0	7 8 9 1	
011	lip11	LOD	214074-030	M	Soil	227607	09/25/15 21:20	50.0	7 8 9 1	
012	lip12	LOD	214074-030	M	Soil	227607	09/25/15 21:54	50.0	7 8 9 1	
013	lip13	LOD	214074-030	M	Soil	227607	09/25/15 22:27	50.0	7 8 9 1	
014	lip14	LOQ	267988-007	M	Soil	227607	09/25/15 23:00	50.0	7 8 9 1	
015	lip15	X	IB				09/25/15 23:34	1.0	1	
016	lip16	X	IB				09/26/15 00:07	1.0	1	
017	lip17	X	IB				09/26/15 00:41	1.0	1	
018	lip18	X	IB				09/26/15 01:14	1.0	1	
019	lip19	X	IB				09/26/15 01:48	1.0	1	

SJD 09/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 4.

KKM 09/28/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 5 through 19.

LW 09/29/15 : Prepblank for the MeOH LODs is file gip30

Analyst: KKM Date: 09/28/15 Reviewer: LW Date: 09/30/15

Standards used: 1=S28020 2=S27180 3=S27929 4=S27930 5=S28013 6=S27267 7=S26571 8=S28008 9=S28087

Flags used: ?t=missing tune







Laboratory Job Number 271668

ANALYTICAL REPORT

Metals

Matrix: Water

Lead			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3010A
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	229631
Matrix:	Water	Sampled:	11/13/15
Units:	ug/L	Received:	11/16/15
Diln Fac:	1.000	Prepared:	11/19/15

Field ID	Type	Lab ID	Result	RL	Analyzed
PURGE-1-NS	SAMPLE	271668-003	18	5.0	11/23/15
PURGE-2-NS	SAMPLE	271668-004	21	5.0	11/23/15
	BLANK	QC813574	ND	5.0	11/20/15

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Lead</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3010A
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	229631
Field ID:	ZZZZZZZZZZ	Sampled:	11/05/15
MSS Lab ID:	271369-001	Received:	11/06/15
Matrix:	Water	Prepared:	11/19/15
Units:	ug/L	Analyzed:	11/20/15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC813575		100.0	91.63	92	80-120		
BSD	QC813576		100.0	90.86	91	80-120	1	20
MS	QC813577	<1.000	100.0	82.63	83	67-120		
MSD	QC813578		100.0	82.92	83	67-120	0	23

RPD= Relative Percent Difference

## Batch QC Report

Lead			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3010A
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Units:	ug/L
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	229631
MSS Lab ID:	271369-001	Sampled:	11/05/15
Lab ID:	QC813579	Received:	11/06/15
Matrix:	Water	Analyzed:	11/20/15

MSS Result	MSS RL	Result	RL	% Diff	Lim
ND	5.000	ND	25.00	NC	10

NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit



## Batch QC Report

Lead			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3010A
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Units:	ug/L
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	Post Digest Spike	Batch#:	229631
MSS Lab ID:	271369-001	Sampled:	11/05/15
Lab ID:	QC813580	Received:	11/06/15
Matrix:	Water	Analyzed:	11/20/15

MSS Result	Spiked	Result	%REC	Limits
<1.000	100.0	81.98	82	75-125

REPORTING SUMMARY FOR 271668 METALS Water  
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	P B	
271668-003	MET08	11/23/15 13:23	1.0	+	
271668-004	MET08	11/23/15 13:27	1.0	+	
QC813574	MET09	11/20/15 09:05	1.0	+	
QC813575	MET09	11/20/15 08:52	1.0	+	
QC813576	MET09	11/20/15 08:56	1.0	+	
QC813577	MET09	11/20/15 09:10	1.0	+	
QC813578	MET09	11/20/15 09:14	1.0	+	
QC813579	MET09	11/20/15 09:19	5.0	+	
QC813580	MET09	11/20/15 09:24	1.0	+	

ICP Data

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met09_sn_	ICALBLK				11/20/15 04:39	1.0		
002	met09_sn_	ICAL	L1			11/20/15 04:44	1.0	1	
003	met09_sn_	ICAL	L2			11/20/15 04:49	1.0	2	
004	met09_sn_	ICAL	L3			11/20/15 04:53	1.0	3	
005	met09_sn_	ICAL	L4			11/20/15 04:57	1.0	4	
006	met09_sn_	ICAL	L5			11/20/15 05:04	1.0	5	
007	met09_sn_	ICV				11/20/15 05:11	1.0	6	
008	met09_sn_	XCRI				11/20/15 05:21	1.0	7	
009	met09_sn_	CRI				11/20/15 05:30	1.0	7	
010	met09_sn_	ICB				11/20/15 05:34	1.0		
011	met09_sn_	ICSA				11/20/15 05:40	1.0	8	10:AL=480000
012	met09_sn_	ICSAB				11/20/15 06:02	1.0	9	5:AL=490000
013	met09_sn_	XBLANK	QC813574	Water	229631	11/20/15 07:55	1.0		
014	met09_sn_	XBS	QC813575	Water	229631	11/20/15 08:00	1.0		
015	met09_sn_	XBSD	QC813576	Water	229631	11/20/15 08:05	1.0		
016	met09_sn_	XMSS	271369-001	Water	229631	11/20/15 08:10	1.0		2:CA=220000
017	met09_sn_	XMS	QC813577	Water	229631	11/20/15 08:15	1.0		
018	met09_sn_	XMSD	QC813578	Water	229631	11/20/15 08:20	1.0		
019	met09_sn_	XSER	QC813579	Water	229631	11/20/15 08:26	5.0		
020	met09_sn_	CCV				11/20/15 08:36	1.0	10	
021	met09_sn_	XCCB				11/20/15 08:43	1.0		
022	met09_sn_	CCB				11/20/15 08:47	1.0		
023	met09_sn_	BS	QC813575	Water	229631	11/20/15 08:52	1.0		
024	met09_sn_	BSD	QC813576	Water	229631	11/20/15 08:56	1.0		
025	met09_sn_	MSS	271369-001	Water	229631	11/20/15 09:00	1.0		2:CA=210000
026	met09_sn_	BLANK	QC813574	Water	229631	11/20/15 09:05	1.0		
027	met09_sn_	MS	QC813577	Water	229631	11/20/15 09:10	1.0		
028	met09_sn_	MSD	QC813578	Water	229631	11/20/15 09:14	1.0		1:CA=220000
029	met09_sn_	SER	QC813579	Water	229631	11/20/15 09:19	5.0		
030	met09_sn_	PDS	QC813580	Water	229631	11/20/15 09:24	1.0	11 12 13	1:CA=220000
031	met09_sn_	CCV				11/20/15 09:28	1.0	10	
032	met09_sn_	XCCB				11/20/15 09:35	1.0		
033	met09_sn_	CCB				11/20/15 09:39	1.0		
034	met09_sn_	BLANK	QC813234	TCLP Leachate	229551	11/20/15 10:21	10.0		1:NA=130000
035	met09_sn_	PDS	QC813240	TCLP Leachate	229551	11/20/15 10:26	10.0	11 12 13	
036	met09_sn_	SAMPLE	271712-001	TCLP Leachate	229551	11/20/15 10:30	10.0		1:NA=120000
037	met09_sn_	SAMPLE	271712-002	TCLP Leachate	229551	11/20/15 10:35	10.0		1:NA=110000
038	met09_sn_	SAMPLE	271712-003	TCLP Leachate	229551	11/20/15 10:39	10.0		1:NA=120000
039	met09_sn_	SAMPLE	271531-001	Miscell.	229557	11/20/15 10:44	1.0		2:FE=1300000
040	met09_sn_	X	RINSE			11/20/15 10:51	1.0		
041	met09_sn_	SAMPLE	271548-001	Miscell.	229557	11/20/15 10:56	1.0		
042	met09_sn_	SAMPLE	271549-001	Miscell.	229557	11/20/15 11:00	1.0		
043	met09_sn_	MSS	271369-001	Water	229631	11/20/15 11:05	1.0		2:CA=210000
044	met09_sn_	CCV				11/20/15 11:11	1.0	10	
045	met09_sn_	XCCB				11/20/15 11:17	1.0		
046	met09_sn_	CCB				11/20/15 11:21	1.0		
047	met09_sn_	X	RINSE			11/20/15 11:27	1.0		
048	met09_sn_	SAMPLE	271626-019	Soil	229593	11/20/15 11:32	100.0		
049	met09_sn_	SAMPLE	271626-020	Soil	229593	11/20/15 11:36	100.0		
050	met09_sn_	SAMPLE	271626-019	Soil	229593	11/20/15 11:40	1.0		5:FE=330000
051	met09_sn_	SAMPLE	271626-020	Soil	229593	11/20/15 11:47	1.0		5:FE=540000
052	met09_sn_	SAMPLE	271800-001	Water	229631	11/20/15 11:53	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met09_sn_	MSS	271668-001	Soil	229593	11/20/15 11:57	1.0		3:FE=200000
054	met09_sn_	SAMPLE	271668-002	Soil	229593	11/20/15 12:04	1.0		4:FE=490000
055	met09_sn_	SAMPLE	271729-001	Soil	229593	11/20/15 12:11	1.0		6:CA=1400000
056	met09_sn_	CCV				11/20/15 12:18	1.0	10	
057	met09_sn_	CCB				11/20/15 12:25	1.0		
058	met09_sn_	SAMPLE	271626-019	WET Leachate	229654	11/20/15 12:48	10.0		1:NA=130000
059	met09_sn_	SAMPLE	271626-020	WET Leachate	229654	11/20/15 12:52	10.0		1:NA=130000
060	met09_sn_	SAMPLE	271800-001	Water	229631	11/20/15 12:56	1.0		
061	met09_sn_	SAMPLE	271678-001	WET Leachate	229654	11/20/15 13:00	10.0		1:NA=130000
062	met09_sn_	SAMPLE	271678-002	WET Leachate	229654	11/20/15 13:05	10.0		1:NA=140000
063	met09_sn_	SAMPLE	271678-003	WET Leachate	229654	11/20/15 13:09	10.0		1:NA=150000
064	met09_sn_	SAMPLE	271678-004	WET Leachate	229654	11/20/15 13:13	10.0		1:NA=140000
065	met09_sn_	SAMPLE	271678-005	WET Leachate	229654	11/20/15 13:17	10.0		1:NA=150000
066	met09_sn_	SAMPLE	271679-001	WET Leachate	229654	11/20/15 13:21	10.0		1:NA=140000
067	met09_sn_	SAMPLE	271679-002	WET Leachate	229654	11/20/15 13:26	10.0		1:NA=150000
068	met09_sn_	CCV				11/20/15 13:30	1.0	10	
069	met09_sn_	XCCB				11/20/15 13:37	1.0		
070	met09_sn_	CCB				11/20/15 13:41	1.0		
071	met09_sn_	SAMPLE	271679-003	WET Leachate	229654	11/20/15 13:46	10.0		1:NA=140000
072	met09_sn_	SAMPLE	271679-004	WET Leachate	229654	11/20/15 13:50	10.0		1:NA=120000
073	met09_sn_	SAMPLE	271679-005	WET Leachate	229654	11/20/15 13:54	10.0		1:NA=140000
074	met09_sn_	SAMPLE	271679-006	WET Leachate	229654	11/20/15 13:58	10.0		1:NA=150000
075	met09_sn_	?SAMPLE	271724-001		229654	11/20/15 14:02	10.0		
076	met09_sn_	?SAMPLE	271725-001		229654	11/20/15 14:07	10.0		
077	met09_sn_	SAMPLE	271369-002	Water	229631	11/20/15 14:11	1.0		4:CA=450000
078	met09_sn_	SAMPLE	271369-003	Water	229631	11/20/15 14:16	1.0		3:CA=230000
079	met09_sn_	SAMPLE	271604-001	Soil	229537	11/20/15 14:20	1.0		4:CA=280000
080	met09_sn_	SAMPLE	271604-002	Soil	229537	11/20/15 14:27	1.0		4:CA=440000
081	met09_sn_	CCV				11/20/15 14:34	1.0	10	
082	met09_sn_	CCB				11/20/15 14:41	1.0		
083	met09_sn_	SAMPLE	271369-004	Water	229631	11/20/15 14:46	1.0		2:CA=240000
084	met09_sn_	SAMPLE	271604-002	Soil	229537	11/20/15 14:57	100.0		
085	met09_sn_	SAMPLE	271465-002	Water	229383	11/20/15 15:01	1.0		
086	met09_sn_	CCV				11/20/15 15:06	1.0	10	
087	met09_sn_	CCB				11/20/15 15:13	1.0		
088	met09_sn_	SAMPLE	271465-002	Water	229383	11/20/15 15:58	1.0		
089	met09_sn_	X	RINSE			11/20/15 16:02	1.0		
090	met09_sn_	MSS	271522-001	Filtrate	229486	11/20/15 16:07	100.0		
091	met09_sn_	MS	QC812975	Filtrate	229486	11/20/15 16:12	1.0		1:NA=340000
092	met09_sn_	MSD	QC812976	Filtrate	229486	11/20/15 16:16	1.0		1:NA=340000
093	met09_sn_	SAMPLE	271645-001	WET Leachate	229605	11/20/15 16:20	10.0		1:NA=130000
094	met09_sn_	SAMPLE	271333-002	Filtrate	229348	11/20/15 16:24	100.0		
095	met09_sn_	BLANK	QC812414	Filtrate	229348	11/20/15 16:30	1.0		
096	met09_sn_	BS	QC812415	Filtrate	229348	11/20/15 16:35	1.0		
097	met09_sn_	BSD	QC812416	Filtrate	229348	11/20/15 16:39	1.0		
098	met09_sn_	CCV				11/20/15 16:43	1.0	10	
099	met09_sn_	CCB				11/20/15 16:50	1.0		
100	met09_sn_	CCB				11/20/15 16:54	1.0		
101	met09_sn_	MSS	271333-004	Filtrate	229348	11/20/15 16:59	1.0		3:MG=500000
102	met09_sn_	X	RINSE			11/20/15 17:07	1.0		
103	met09_sn_	MS	QC812417	Filtrate	229348	11/20/15 17:12	1.0		3:MG=500000
104	met09_sn_	X	RINSE			11/20/15 17:19	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met09_sn_	MSD	QC812418	Filtrate	229348	11/20/15 17:24	1.0		3:MG=490000
106	met09_sn_	X	RINSE			11/20/15 17:32	1.0		
107	met09_sn_	SAMPLE	271333-002	Filtrate	229348	11/20/15 17:37	1.0		
108	met09_sn_	X	RINSE			11/20/15 17:45	1.0		
109	met09_sn_	SAMPLE	271333-003	Filtrate	229348	11/20/15 17:50	1.0		
110	met09_sn_	X	RINSE			11/20/15 17:57	1.0		
111	met09_sn_	CCV				11/20/15 18:02	1.0	10	
112	met09_sn_	CCB				11/20/15 18:09	1.0		
113	met09_sn_	CCB				11/20/15 18:13	1.0		
114	met09_sn_	SAMPLE	271333-005	Filtrate	229348	11/20/15 18:18	1.0		4:MG=690000
115	met09_sn_	X	RINSE			11/20/15 18:26	1.0		
116	met09_sn_	SAMPLE	271333-006	Filtrate	229348	11/20/15 18:31	1.0		2:MG=810000
117	met09_sn_	X	RINSE			11/20/15 18:40	1.0		
118	met09_sn_	SAMPLE	271333-007	Filtrate	229348	11/20/15 18:45	1.0		4:MG=740000
119	met09_sn_	X	RINSE			11/20/15 18:54	1.0		

CRT 11/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 87.

Standards used: 1=S28440 2=S28094 3=S28095 4=S28096 5=S28099 6=S28098 7=S28441 8=S28103 9=S28104 10=S28097 11=S28385  
 12=S28386 13=S27470

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95466839

Date : 11/20/15  
 Sequence : MET09 11/20/15

Reference : met09\_sn\_  
 Analyzed : 11/20/15 04:44

#	Type	Sample ID	Y A
		ICAL STD	2551789
		LOWER LIMIT	765537
		UPPER LIMIT	5103578
010	ICB		2529766
011	ICSA		2157462
012	ICSAB		2179542
020	CCV		2501443
022	CCB		2560609
023	BS	QC813575	2552718
024	BSD	QC813576	2581492
025	MSS	271369-001	2339241
026	BLANK	QC813574	2603081
027	MS	QC813577	2338703
028	MSD	QC813578	2338023
029	SER	QC813579	2546862
030	PDS	QC813580	2362590
031	CCV		2543993
033	CCB		2601026
034	BLANK	QC813234	2466082
035	PDS	QC813240	2495008
036	SAMPLE	271712-001	2424725
037	SAMPLE	271712-002	2427895
038	SAMPLE	271712-003	2460085
039	SAMPLE	271531-001	2391792
041	SAMPLE	271548-001	2638134
042	SAMPLE	271549-001	2677824
043	MSS	271369-001	2390981
044	CCV		2574857
046	CCB		2609657
048	SAMPLE	271626-019	2571652
049	SAMPLE	271626-020	2585874
050	SAMPLE	271626-019	2587202
051	SAMPLE	271626-020	2611015
052	SAMPLE	271800-001	2120653
053	MSS	271668-001	2709101
054	SAMPLE	271668-002	2481350
055	SAMPLE	271729-001	2406821
056	CCV		2541917
057	CCB		2679556
058	SAMPLE	271626-019	2461813
059	SAMPLE	271626-020	2521878
060	SAMPLE	271800-001	2478916
061	SAMPLE	271678-001	2558977
062	SAMPLE	271678-002	2504429
063	SAMPLE	271678-003	2450371
064	SAMPLE	271678-004	2475777
065	SAMPLE	271678-005	2519713
066	SAMPLE	271679-001	2546723
067	SAMPLE	271679-002	2503618
068	CCV		2577363
070	CCB		2683568

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95466839

Date : 11/20/15  
 Sequence : MET09 11/20/15

Reference : met09\_sn\_  
 Analyzed : 11/20/15 04:44

#	Type	Sample ID	Y A
071	SAMPLE	271679-003	2550430
072	SAMPLE	271679-004	2563288
073	SAMPLE	271679-005	2487202
074	SAMPLE	271679-006	2457930
077	SAMPLE	271369-002	2252177
078	SAMPLE	271369-003	2360759
079	SAMPLE	271604-001	2522233
080	SAMPLE	271604-002	2503700
081	CCV		2596113
082	CCB		2676417
083	SAMPLE	271369-004	2463496
084	SAMPLE	271604-002	2540756
085	SAMPLE	271465-002	9684264 *
086	CCV		2493630
087	CCB		2612095
088	SAMPLE	271465-002	2625391
090	MSS	271522-001	2663942
091	MS	QC812975	2408180
092	MSD	QC812976	2453099
093	SAMPLE	271645-001	2484558
094	SAMPLE	271333-002	2631338
095	BLANK	QC812414	2683977
096	BS	QC812415	2604674
097	BSD	QC812416	2604893
098	CCV		2537785
099	CCB		2623564
100	CCB		2634302
101	MSS	271333-004	2069200
103	MS	QC812417	1906373
105	MSD	QC812418	2044285
107	SAMPLE	271333-002	2335763
109	SAMPLE	271333-003	2350404
111	CCV		2510689
112	CCB		2610163
113	CCB		10172985 *
114	SAMPLE	271333-005	1897294
116	SAMPLE	271333-006	1768904
118	SAMPLE	271333-007	1855774



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 METALS Water: EPA 6010B

Inst : MET09  
 Calnum : 95466839001  
 Units : ug/L

Date : 20-NOV-2015 04:39  
 X Axis : R

Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met09_sn_95466839002		L1	20-NOV-2015 04:44	S28440
L2	met09_sn_95466839003		L2	20-NOV-2015 04:49	S28094
L3	met09_sn_95466839004		L3	20-NOV-2015 04:53	S28095
L4	met09_sn_95466839005		L4	20-NOV-2015 04:57	S28096
L5	met09_sn_95466839006		L5	20-NOV-2015 05:04	S28099

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Lead	A	46.800	48.630	48.870	49.154		LOR0	0.00000	0.02035		48.363	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Lead	A	5.0000	-5	100.00	-1	1000.0	-1	10000	0		

JDB 11/20/15 [Potassium R]: Do not report K from this seq

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 METALS Water  
EPA 6010B

Inst : MET09

Calnum : 95466839001

Cal Date : 20-NOV-2015

ICV 95466839007 (20-NOV-2015) stds: S28098

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Lead	A	5000	4806	ug/L	-4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Water  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95466839010 File : met09\_sn\_ Time : 20-NOV-2015 05:34  
 Cal : 95466839001 Caldate : 20-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2529766	-0.86

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 271668 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839011      File : met09\_sn\_      IDF : 1.0  
 Cal : 95466839001      Caldate : 20-NOV-2015      Time : 20-NOV-2015 05:40  
 Standards: S28103

Analyte	Ch	Quant	IQL	Units	Flags
Lead	A	[-0.5498]	5.000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	18650	ug/L	93
Copper	A	20000	21050	ug/L	105
Manganese	A	20000	18260	ug/L	91
Nickel	A	20000	16960	ug/L	85
Vanadium	A	20000	19860	ug/L	99
Aluminum	R	500000	481800	ug/L	96
Calcium	R	500000	447900	ug/L	90
Iron	R	200000	176900	ug/L	88
Magnesium	R	500000	453000	ug/L	91
Titanium	R	20000	21450	ug/L	107

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2157462	-15.45

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 271668 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839012  
 Cal : 95466839001  
 Standards: S28104

File : met09\_sn\_  
 Caldate : 20-NOV-2015

IDF : 1.0  
 Time : 20-NOV-2015 06:02

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	1000	871.0	ug/L	-13	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2179542	-14.59

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839020  
 Cal : 95466839001  
 Standards: S28097

IDF : 1.0  
 Time : 20-NOV-2015 08:36

File : met09\_sn\_  
 Caldate : 20-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.363	47.526	5000	4835	ug/L	-3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2501443	-1.97



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839031  
 Cal : 95466839001  
 Standards: S28097

IDF : 1.0  
 Time : 20-NOV-2015 09:28

File : met09\_sn\_  
 Caldate : 20-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.363	46.638	5000	4744	ug/L	-5	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2543993	-0.31



CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Water  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95466839033 File : met09\_sn\_ Time : 20-NOV-2015 09:39  
 Cal : 95466839001 Caldate : 20-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2601026	1.93

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 85471580

Instrument : MET08  
 Method : EPA 6010B

Begun : 11/23/15 11:40  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				11/23/15 11:40	1.0		
002	met08_sn_6010	ICAL	L1			11/23/15 11:44	1.0	1	
003	met08_sn_6010	ICAL	L2			11/23/15 11:47	1.0	2	
004	met08_sn_6010	ICAL	L3			11/23/15 11:49	1.0	3	
005	met08_sn_6010	ICAL	L4			11/23/15 11:52	1.0	4	
006	met08_sn_6010	ICAL	L5			11/23/15 11:55	1.0	5	
007	met08_sn_6010	ICV				11/23/15 11:57	1.0	6	
008	met08_sn_6010	X				11/23/15 12:13	1.0	6	
009	met08_sn_6010	CRI				11/23/15 12:19	1.0	7	
010	met08_sn_6010	ICB				11/23/15 12:26	1.0		
011	met08_sn_6010	ICSA				11/23/15 12:30	1.0	8	10:AL=550000
012	met08_sn_6010	ICSAB				11/23/15 13:14	1.0	9	
013	met08_sn_6010	SAMPLE	271668-003	Water	229631	11/23/15 13:23	1.0		
014	met08_sn_6010	SAMPLE	271668-004	Water	229631	11/23/15 13:27	1.0		1:NA=260000
015	met08_sn_6010	SAMPLE	271760-001	Water	229631	11/23/15 13:30	1.0		
016	met08_sn_6010	X	RINSE			11/23/15 13:33	1.0		
017	met08_sn_6010	SAMPLE	271340-003	Filtrate	229652	11/23/15 13:37	1.0		3:CA=240000
018	met08_sn_6010	SAMPLE	271340-010	Filtrate	229652	11/23/15 13:40	1.0		3:CA=280000
019	met08_sn_6010	SAMPLE	271340-012	Filtrate	229652	11/23/15 13:43	1.0		3:CA=250000
020	met08_sn_6010	X	RINSE			11/23/15 13:47	1.0		
021	met08_sn_6010	SAMPLE	271631-001	Filtrate	229652	11/23/15 13:50	1.0		2:NA=280000
022	met08_sn_6010	SAMPLE	271631-002	Filtrate	229652	11/23/15 13:54	1.0		1:NA=210000
023	met08_sn_6010	CCV				11/23/15 13:57	1.0	10	
024	met08_sn_6010	CCB				11/23/15 14:00	1.0		
025	met08_sn_6010	SAMPLE	271631-003	Filtrate	229652	11/23/15 14:03	1.0		1:NA=110000
026	met08_sn_6010	SAMPLE	271631-004	Filtrate	229652	11/23/15 14:07	1.0		2:NA=190000
027	met08_sn_6010	SAMPLE	271631-005	Filtrate	229652	11/23/15 14:10	100.0		
028	met08_sn_6010	SAMPLE	271631-006	Filtrate	229652	11/23/15 14:13	100.0		
029	met08_sn_6010	X	RINSE			11/23/15 14:17	1.0		
030	met08_sn_6010	SAMPLE	271795-025	Soil	229684	11/23/15 14:20	1.0		4:FE=430000
031	met08_sn_6010	SAMPLE	271795-026	Soil	229684	11/23/15 14:22	1.0		4:FE=360000
032	met08_sn_6010	SAMPLE	271795-027	Soil	229684	11/23/15 14:24	1.0		5:FE=420000
033	met08_sn_6010	SAMPLE	271795-028	Soil	229684	11/23/15 14:26	1.0		4:FE=380000
034	met08_sn_6010	SAMPLE	271795-029	Soil	229684	11/23/15 14:29	1.0		4:FE=450000
035	met08_sn_6010	CCV				11/23/15 14:31	1.0	10	
036	met08_sn_6010	CCB				11/23/15 14:34	1.0		
037	met08_sn_6010	SAMPLE	271795-030	Soil	229684	11/23/15 14:37	1.0		2:FE=240000
038	met08_sn_6010	X	RINSE			11/23/15 14:40	1.0		
039	met08_sn_6010	BLANK	QC813477	Wipe	229608	11/23/15 14:43	1.0		
040	met08_sn_6010	BS	QC813478	Wipe	229608	11/23/15 14:47	1.0		6:FE=110000
041	met08_sn_6010	BSD	QC813479	Wipe	229608	11/23/15 14:51	1.0		6:FE=110000
042	met08_sn_6010	SAMPLE	271658-001	Wipe	229608	11/23/15 14:55	1.0		
043	met08_sn_6010	SAMPLE	271658-002	Wipe	229608	11/23/15 14:57	1.0		
044	met08_sn_6010	SAMPLE	271658-003	Wipe	229608	11/23/15 14:59	1.0		
045	met08_sn_6010	SAMPLE	271658-004	Wipe	229608	11/23/15 15:02	1.0		
046	met08_sn_6010	SAMPLE	271658-005	Wipe	229608	11/23/15 15:04	1.0		
047	met08_sn_6010	CCV				11/23/15 15:06	1.0	10	
048	met08_sn_6010	CCB				11/23/15 15:10	1.0		
049	met08_sn_6010	SAMPLE	271658-006	Wipe	229608	11/23/15 15:18	1.0		
050	met08_sn_6010	SAMPLE	271658-007	Wipe	229608	11/23/15 15:21	1.0		
051	met08_sn_6010	X	RINSE			11/23/15 15:25	1.0		
052	met08_sn_6010	BLANK	QC813880	Filtrate	229695	11/23/15 15:28	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 85471580

Instrument : MET08  
 Method : EPA 6010B

Begun : 11/23/15 11:40  
 SOP Version : icp\_metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	met08_sn_6010	BS	QC813881	Filtrate	229695	11/23/15 15:32	1.0	
054	met08_sn_6010	BSD	QC813882	Filtrate	229695	11/23/15 15:34	1.0	
055	met08_sn_6010	MSS	271369-001	Filtrate	229695	11/23/15 15:36	1.0	2:CA=210000
056	met08_sn_6010	MS	QC813883	Filtrate	229695	11/23/15 15:40	1.0	1:CA=220000
057	met08_sn_6010	MSD	QC813884	Filtrate	229695	11/23/15 15:42	1.0	1:CA=220000
058	met08_sn_6010	SER	QC813885	Filtrate	229695	11/23/15 15:44	5.0	
059	met08_sn_6010	XCCV				11/23/15 15:48	1.0	10
060	met08_sn_6010	CCV				11/23/15 15:54	1.0	10
061	met08_sn_6010	CCB				11/23/15 15:57	1.0	
062	met08_sn_6010	SAMPLE	271333-007	Filtrate	229348	11/23/15 16:01	1.0	3:MG=850000
063	met08_sn_6010	X	RINSE			11/23/15 16:05	1.0	
064	met08_sn_6010	SAMPLE	271333-006	Filtrate	229348	11/23/15 16:08	1.0	2:MG=930000
065	met08_sn_6010	X	RINSE			11/23/15 16:12	1.0	
066	met08_sn_6010	PDS	QC813886	Filtrate	229695	11/23/15 16:16	1.0	11 12 13
067	met08_sn_6010	SAMPLE	271303-001	Filtrate	229695	11/23/15 16:18	1.0	2:MG=620000
068	met08_sn_6010	X	RINSE			11/23/15 16:23	1.0	
069	met08_sn_6010	SAMPLE	271303-002	Filtrate	229695	11/23/15 16:26	1.0	3:MG=990000
070	met08_sn_6010	X	RINSE			11/23/15 16:30	1.0	
071	met08_sn_6010	X	RINSE			11/23/15 16:34	1.0	
072	met08_sn_6010	CCV				11/23/15 16:37	1.0	10
073	met08_sn_6010	CCB				11/23/15 16:40	1.0	
074	met08_sn_6010	CCV				11/23/15 16:46	1.0	10
075	met08_sn_6010	CCB				11/23/15 16:49	1.0	

JDB 11/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs ??? through ???.

NCD 11/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 61.

Standards used: 1=S28440 2=S28094 3=S28095 4=S28096 5=S28099 6=S28098 7=S28441 8=S28103 9=S28104 10=S28097 11=S28385  
 12=S28386 13=S27470

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 85471580

Date : 11/23/15  
 Sequence : MET08 11/23/15

Reference : met08\_sn\_6010  
 Analyzed : 11/23/15 11:44

#	Type	Sample ID	Y A
		ICAL STD	15578159
		LOWER LIMIT	4673448
		UPPER LIMIT	31156318
010	ICB		15631192
011	ICSA		13443947
012	ICSAB		13453469
013	SAMPLE	271668-003	14533512
014	SAMPLE	271668-004	14259209
017	SAMPLE	271340-003	14322938
018	SAMPLE	271340-010	14128874
019	SAMPLE	271340-012	14174817
021	SAMPLE	271631-001	14076054
022	SAMPLE	271631-002	14569834
023	CCV		15036718
024	CCB		15668298
025	SAMPLE	271631-003	14816101
026	SAMPLE	271631-004	13758590
027	SAMPLE	271631-005	15627040
028	SAMPLE	271631-006	15671053
030	SAMPLE	271795-025	14356681
031	SAMPLE	271795-026	14384484
032	SAMPLE	271795-027	14521646
033	SAMPLE	271795-028	14720236
034	SAMPLE	271795-029	14281246
035	CCV		15172065
036	CCB		15566329
037	SAMPLE	271795-030	14952650
039	BLANK	QC813477	15998758
040	BS	QC813478	14519613
041	BSD	QC813479	14435913
042	SAMPLE	271658-001	15168946
043	SAMPLE	271658-002	14919089
044	SAMPLE	271658-003	15146381
045	SAMPLE	271658-004	15105757
046	SAMPLE	271658-005	15204636
047	CCV		15070604
048	CCB		15761780
049	SAMPLE	271658-006	15223589
050	SAMPLE	271658-007	15113420
052	BLANK	QC813880	15713327
053	BS	QC813881	15232002
054	BSD	QC813882	15414422
055	MSS	271369-001	14016960
056	MS	QC813883	14084161
057	MSD	QC813884	14073364
058	SER	QC813885	14847549
060	CCV		14727576
061	CCB		15451312
062	SAMPLE	271333-007	11045275
064	SAMPLE	271333-006	10734375
066	PDS	QC813886	13859515

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 85471580

Date : 11/23/15  
 Sequence : MET08 11/23/15

Reference : met08\_sn\_6010  
 Analyzed : 11/23/15 11:44

#	Type	Sample ID	Y A
067	SAMPLE	271303-001	11451595
069	SAMPLE	271303-002	11097094
072	CCV		14395599
073	CCB		15159997
074	CCV		15141925
075	CCB		15186171

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 METALS Water: EPA 6010B

Inst : MET08  
 Calnum : 85471580001  
 Units : ug/L

Date : 23-NOV-2015 11:40  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met08_sn_6010	85471580002	L1	23-NOV-2015 11:44	S28440
L2	met08_sn_6010	85471580003	L2	23-NOV-2015 11:47	S28094
L3	met08_sn_6010	85471580004	L3	23-NOV-2015 11:49	S28095
L4	met08_sn_6010	85471580005	L4	23-NOV-2015 11:52	S28096
L5	met08_sn_6010	85471580006	L5	23-NOV-2015 11:55	S28099

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Lead	A	24.040	27.147	26.570	27.855		LOR0	0.00000	0.03592		26.403	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Lead	A	5.0000	-14	100.00	-2	1000.0	-5	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 METALS Water  
EPA 6010B

Inst : MET08

Calnum : 85471580001

Cal Date : 23-NOV-2015

ICV 85471580007 (23-NOV-2015) stds: S28098

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Lead	A	5000	4883	ug/L	-2	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 85471580010 File : met08\_sn\_6010 Time : 23-NOV-2015 12:26  
 Cal : 85471580001 Caldate : 23-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	4.000	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	15578159	15631192	0.34



CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 271668 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 85471580011 File : met08\_sn\_6010  
 Cal : 85471580001 Caldate : 23-NOV-2015  
 Standards: S28103

IDF : 1.0  
 Time : 23-NOV-2015 12:30

Analyte	Ch	Quant	IQL	Units	Flags
Lead	A	[-0.5592]	5.000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19810	ug/L	99
Copper	A	20000	21370	ug/L	107
Manganese	A	20000	18960	ug/L	95
Nickel	A	20000	18380	ug/L	92
Vanadium	A	20000	20690	ug/L	103
Aluminum	R	500000	551200	ug/L	110
Calcium	R	500000	524300	ug/L	105
Iron	R	200000	206100	ug/L	103
Magnesium	R	500000	538900	ug/L	108
Titanium	R	20000	21880	ug/L	109

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	15578159	13443947	-13.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 271668 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 85471580012  
 Cal : 85471580001  
 Standards: S28104  
 File : met08\_sn\_6010  
 Caldate : 23-NOV-2015  
 IDF : 1.0  
 Time : 23-NOV-2015 13:14

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	1000	844.6	ug/L	-16	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	15578159	13453469	-13.64

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 85471580023 File : met08\_sn\_6010 Time : 23-NOV-2015 13:57  
 Cal : 85471580001 Caldate : 23-NOV-2015  
 Standards: S28097

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	26.403	26.073	5000	4682	ug/L	-6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	15578159	15036718	-3.48

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 85471580024 File : met08\_sn\_6010 Time : 23-NOV-2015 14:00  
 Cal : 85471580001 Caldate : 23-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	4.000	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	15578159	15668298	0.58

SAMPLE PREPARATION SUMMARY

Batch # : 229631  
 Started By : RFC  
 Method : 3010A  
 Spike #1 ID : S28385

Prep Date : 19-NOV-2015 11:15  
 Spike #2 ID : S28386

Analysis : ICP  
 Finished By : RFC  
 Units : mL  
 Spike #3 ID : S27470

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271369-001		Water	50	50	1	1.0						6010	
271369-002		Water	50	50	1	1.0						6010	
271369-003		Water	50	50	1	1.0						6010	
271369-004		Water	50	50	1	1.0						6010	
271369-005		Water	50	50	1	1.0						6010	
271369-006		Water	50	50	1	1.0						6010	
271369-007		Water	50	50	1	1.0						6010	
271369-008		Water	50	50	1	1.0						6010	
271369-009		Water	50	50	1	1.0						6010	
271369-010		Water	50	50	1	1.0						6010	
271369-011		Water	50	50	1	1.0						6010	
271369-012		Water	50	50	1	1.0						6010	
271668-003		Water	50	50	1	1.0						6010	
271668-004		Water	50	50	1	1.0						6010	
271760-001		Water	50	50	1	1.0						HARDNESS	
271800-001		Water	50	50	1	1.0						6010	Prepped 19-NOV-2015 17:35
QC813574	BLANK	Water	50	50	1	1.0							
QC813575	BS	Water	50	50	1	1.0		.5	.5	.5			
QC813576	BSD	Water	50	50	1	1.0		.5	.5	.5			
QC813577	MS	Water	50	50	1	1.0		.5	.5	.5			
QC813578	MSD	Water	50	50	1	1.0		.5	.5	.5			
QC813579	SER	Water	50	50	1	1.0							
QC813580	PDS	Water	50	50	1	1.0							

Analyst: CRT

Date: 11/20/15

Reviewer: PRW

Date: 11/20/15

Water Digestion for ICP

Curtis & Tompkins, Ltd.

LIMS Batch #: 229631  
 Digested by: RFC  
 Date Digested: 11/19/15

Digestion Method  
 EPA 3010a for ICP  
 EPA 200.7

BK3746  
 Page 27

Lvl	Sample #	Container ID	Sample (mL)	Volume	Final Volume (mL)	Filtered?	ID	Comments
	BLANK		50	50	50	✓	QC813574	
	BS		50	50	50	✓		
	BSD		50	50	50	✓		
	MS		50	50	50	✓		
	MSD		50	50	50	✓		
III	271269-001	J	50	50	50	✓		MSS
	-002		50	50	50	✓		
	-003		50	50	50	✓		
	-004		50	50	50	✓		
	-005		50	50	50	✓		
	-006		50	50	50	✓		
	-007		50	50	50	✓		
	-008		50	50	50	✓		
	-009		50	50	50	✓		
	-010		50	50	50	✓		
	-011		50	50	50	✓		
	-012		50	50	50	✓		
	271668-003	G	50	50	50	✓		
	-004		50	50	50	✓		
	271760-001	D	50	50	50	✓		
20	271800-001	G	50	50	50	✓		
	IL		50	50	50	✓		
	ADDED @ 17:35 11/19/15							

0.50	ml of spike solution (Std1) was added to all spikes	528385	528386	527470	95°	A20	11:15	DTB17003	FS415050	18:30	MHT1969435	ICP
0.50	ml of spike solution (Std2) was added to all spikes											
0.50	ml of spike solution (Std3) was added to all spikes											
Digestion Temperature (°C), Block and Probe Location												
Digestion begun at (time)												
Conc. HNO3 or 1:1 HNO3												
Conc. HCl or 1:1 HCl												
digestion ended at (time)												
filtered thru Whatman # 541												
Relinquished to ICP group												

Prep Chemist / Date  
 11/19/15  
 Continued from page 2  
 Continued on page 3  
 Reviewed Online / See LIMS

Laboratory Job Number 271668

ANALYTICAL REPORT

Metals

Matrix: Soil

Lead			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3050B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	229593
Matrix:	Soil	Sampled:	11/13/15
Units:	mg/Kg	Received:	11/16/15
Basis:	dry	Prepared:	11/18/15
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Moisture	Analyzed
COMP-1-NS	SAMPLE	271668-001	1.6	0.29	12%	11/20/15
COMP-2-NS	SAMPLE	271668-002	2.1	0.27	12%	11/20/15
	BLANK	QC813406	ND	0.25		11/19/15

ND= Not Detected  
 RL= Reporting Limit



**Batch QC Report**

<b>Lead</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3050B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Diln Fac:	5.000
Field ID:	COMP-1-NS	Batch#:	229593
MSS Lab ID:	271668-001	Sampled:	11/13/15
Matrix:	Soil	Received:	11/16/15
Units:	mg/Kg	Prepared:	11/18/15
Basis:	dry	Analyzed:	11/19/15

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
BS	QC813407		50.00	47.00	94	80-120			
BSD	QC813408		50.00	45.45	91	80-120		3	20
MS	QC813409	1.643	56.82	52.87	90	53-125	12%		
MSD	QC813410		54.63	52.34	93	53-125	12%	3	42

RPD= Relative Percent Difference

**Batch QC Report**

<b>Lead</b>			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3050B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Basis:	dry
Field ID:	COMP-1-NS	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	229593
MSS Lab ID:	271668-001	Sampled:	11/13/15
Lab ID:	QC813411	Received:	11/16/15
Matrix:	Soil	Analyzed:	11/19/15
Units:	mg/Kg		

<b>MSS Result</b>	<b>MSS RL</b>	<b>Result</b>	<b>RL</b>	<b>Moisture %</b>	<b>Diff</b>	<b>Lim</b>
1.643	0.2929	1.464 J	1.464	12%	NC	10

J= Estimated value  
 NC= Not Calculated  
 RL= Reporting Limit

## Batch QC Report

Lead			
Lab #:	271668	Location:	RWQCB PCE LUKIN
Client:	URS Corporation	Prep:	EPA 3050B
Project#:	RWQCB PCE LUKIN	Analysis:	EPA 6010B
Analyte:	Lead	Basis:	dry
Field ID:	COMP-1-NS	Diln Fac:	1.000
Type:	Post Digest Spike	Batch#:	229593
MSS Lab ID:	271668-001	Sampled:	11/13/15
Lab ID:	QC813412	Received:	11/16/15
Matrix:	Soil	Analyzed:	11/19/15
Units:	mg/Kg		

MSS Result	Spiked	Result	%REC	Limits	Moisture
1.643	5.858	6.668	86	75-125	12%

REPORTING SUMMARY FOR 271668 METALS Soil  
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	P B	
271668-001	MET09	11/19/15 21:43	1.0		
271668-001	MET09	11/20/15 11:57	1.0	+	
271668-002	MET08	11/20/15 10:07	1.0		
271668-002	MET09	11/20/15 12:04	1.0	+	
QC813406	MET09	11/19/15 20:37	1.0	+	
QC813407	MET09	11/19/15 21:34	5.0	+	
QC813408	MET09	11/19/15 21:39	5.0	+	
QC813409	MET09	11/19/15 21:49	5.0	+	
QC813410	MET09	11/19/15 21:57	5.0	+	
QC813411	MET09	11/19/15 22:05	5.0	+	
QC813412	MET09	11/19/15 22:09	1.0	+	

ICP Data

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95465436

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/19/15 05:16  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met09_sn_	ICALBLK				11/19/15 05:16	1.0		
002	met09_sn_	ICAL	L1			11/19/15 05:21	1.0	1	
003	met09_sn_	ICAL	L2			11/19/15 05:27	1.0	2	
004	met09_sn_	ICAL	L3			11/19/15 05:31	1.0	3	
005	met09_sn_	ICAL	L4			11/19/15 05:35	1.0	4	
006	met09_sn_	ICAL	L5			11/19/15 05:42	1.0	5	
007	met09_sn_	XICV				11/19/15 05:48	1.0	6	
008	met09_sn_	ICV				11/19/15 06:00	1.0	6	
009	met09_sn_	XCRI				11/19/15 06:08	1.0	7	
010	met09_sn_	CRI				11/19/15 06:14	1.0	7	
011	met09_sn_	ICB				11/19/15 06:19	1.0		
012	met09_sn_	ICSA				11/19/15 06:26	1.0	8	10:AL=490000
013	met09_sn_	ICSAB				11/19/15 08:42	1.0	9	5:AL=490000
014	met09_sn_	BLANK	QC813487	Water	229610	11/19/15 09:02	1.0		
015	met09_sn_	BS	QC813488	Water	229610	11/19/15 09:07	1.0		
016	met09_sn_	BSD	QC813489	Water	229610	11/19/15 09:12	1.0		
017	met09_sn_	MSS	271752-001	Water	229610	11/19/15 09:16	1.0		2:NA=140000
018	met09_sn_	MS	QC813490	Water	229610	11/19/15 09:21	1.0		1:NA=150000
019	met09_sn_	MSD	QC813491	Water	229610	11/19/15 09:25	1.0		1:NA=150000
020	met09_sn_	SER	QC813492	Water	229610	11/19/15 09:29	5.0		
021	met09_sn_	PDS	QC813493	Water	229610	11/19/15 09:34	1.0	10 11 12	1:NA=140000
022	met09_sn_	SAMPLE	271768-002	Water	229610	11/19/15 09:38	1.0		1:K=320000
023	met09_sn_	SAMPLE	271770-001	Water	229610	11/19/15 09:46	1.0		1:SR=1500
024	met09_sn_	CCV				11/19/15 09:51	1.0	13	
025	met09_sn_	CCB				11/19/15 09:58	1.0		
026	met09_sn_	SAMPLE	271727-001	Soil	229558	11/19/15 10:03	1.0		6:CA=750000
027	met09_sn_	SAMPLE	271727-002	Soil	229558	11/19/15 10:10	1.0		6:FE=590000
028	met09_sn_	SAMPLE	271727-003	Soil	229558	11/19/15 10:17	1.0		6:CA=470000
029	met09_sn_	SAMPLE	271554-001	Soil	229501	11/19/15 10:28	1.0		3:FE=270000
030	met09_sn_	SAMPLE	271554-002	Soil	229501	11/19/15 10:34	1.0		3:FE=270000
031	met09_sn_	SAMPLE	271554-001	Soil	229501	11/19/15 10:41	1.0		3:FE=260000
032	met09_sn_	SAMPLE	271554-002	Soil	229501	11/19/15 10:48	1.0		3:FE=270000
033	met09_sn_	X	RINSE			11/19/15 10:55	1.0		
034	met09_sn_	BLANK	QC813462	TCLP Leachate	229604	11/19/15 11:00	10.0		1:NA=130000
035	met09_sn_	XCCV				11/19/15 11:05	1.0	13	
036	met09_sn_	CCV				11/19/15 11:11	1.0	13	
037	met09_sn_	CCB				11/19/15 11:18	1.0		
038	met09_sn_	BS	QC813463	TCLP Leachate	229604	11/19/15 11:23	1.0		
039	met09_sn_	BSD	QC813464	TCLP Leachate	229604	11/19/15 11:27	1.0		
040	met09_sn_	SAMPLE	271553-001	TCLP Leachate	229604	11/19/15 11:31	10.0		1:NA=130000
041	met09_sn_	X	RINSE			11/19/15 11:37	1.0		
042	met09_sn_	BLANK	QC813469	WET Leachate	229605	11/19/15 11:42	10.0		1:NA=110000
043	met09_sn_	BS	QC813470	WET Leachate	229605	11/19/15 11:47	1.0		
044	met09_sn_	BSD	QC813471	WET Leachate	229605	11/19/15 11:51	1.0		
045	met09_sn_	MSS	271604-001	WET Leachate	229605	11/19/15 11:55	10.0		1:NA=110000
046	met09_sn_	MS	QC813472	WET Leachate	229605	11/19/15 11:59	10.0		
047	met09_sn_	MSD	QC813473	WET Leachate	229605	11/19/15 12:03	10.0		
048	met09_sn_	CCV				11/19/15 12:07	1.0	13	
049	met09_sn_	CCB				11/19/15 12:14	1.0		
050	met09_sn_	SAMPLE	271643-001	WET Leachate	229605	11/19/15 12:19	10.0		1:NA=120000
051	met09_sn_	SAMPLE	271655-001	WET Leachate	229605	11/19/15 12:24	10.0		1:NA=110000
052	met09_sn_	SAMPLE	271655-002	WET Leachate	229605	11/19/15 12:28	10.0		1:NA=120000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95465436

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/19/15 05:16  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met09_sn_	SAMPLE	271655-003	WET Leachate	229605	11/19/15 12:32	10.0		1:NA=130000
054	met09_sn_	SAMPLE	271655-004	WET Leachate	229605	11/19/15 12:36	10.0		1:NA=120000
055	met09_sn_	SAMPLE	271655-005	WET Leachate	229605	11/19/15 12:40	10.0		1:NA=130000
056	met09_sn_	SAMPLE	271655-006	WET Leachate	229605	11/19/15 12:45	10.0		1:NA=120000
057	met09_sn_	SAMPLE	271655-007	WET Leachate	229605	11/19/15 12:49	10.0		1:NA=120000
058	met09_sn_	SAMPLE	271663-001	WET Leachate	229605	11/19/15 12:53	10.0		1:NA=110000
059	met09_sn_	SAMPLE	271663-002	WET Leachate	229605	11/19/15 12:57	10.0		
060	met09_sn_	CCV				11/19/15 13:01	1.0	13	
061	met09_sn_	CCB				11/19/15 13:08	1.0		
062	met09_sn_	SAMPLE	271786-001	WET Leachate	229605	11/19/15 13:13	10.0		
063	met09_sn_	X	RINSE			11/19/15 13:17	1.0		
064	met09_sn_	BLANK	QC813413	Soil	229595	11/19/15 13:22	1.0		
065	met09_sn_	BS	QC813414	Soil	229595	11/19/15 13:27	10.0		
066	met09_sn_	BSD	QC813415	Soil	229595	11/19/15 13:32	10.0		
067	met09_sn_	MSS	271382-016	Soil	229595	11/19/15 13:36	1.0		5:CA=2500000
068	met09_sn_	MS	QC813416	Soil	229595	11/19/15 13:43	10.0		1:CA=530000
069	met09_sn_	MSD	QC813417	Soil	229595	11/19/15 13:51	10.0		1:CA=470000
070	met09_sn_	CCV				11/19/15 13:58	1.0	13	
071	met09_sn_	CCB				11/19/15 14:05	1.0		
072	met09_sn_	BLANK	QC812966	Water	229485	11/19/15 14:27	1.0		
073	met09_sn_	BS	QC812967	Water	229485	11/19/15 14:32	1.0		
074	met09_sn_	BSD	QC812968	Water	229485	11/19/15 14:36	1.0		
075	met09_sn_	MSS	271382-013	Water	229485	11/19/15 14:40	1.0		3:MG=190000
076	met09_sn_	X	RINSE			11/19/15 14:49	1.0		
077	met09_sn_	MSS	271382-013	Water	229485	11/19/15 14:54	100.0		
078	met09_sn_	MS	QC812969	Water	229485	11/19/15 14:59	1.0		3:MG=210000
079	met09_sn_	MSD	QC812970	Water	229485	11/19/15 15:07	1.0		3:MG=210000
080	met09_sn_	SAMPLE	271414-001	Water	229485	11/19/15 15:14	1.0		2:CA=530000
081	met09_sn_	SAMPLE	271414-002	Water	229485	11/19/15 15:19	1.0		
082	met09_sn_	CCV				11/19/15 15:23	1.0	13	
083	met09_sn_	CCB				11/19/15 15:30	1.0		
084	met09_sn_	SAMPLE	271665-001	WET Leachate	229605	11/19/15 15:35	10.0		
085	met09_sn_	SAMPLE	271558-001	Water	229485	11/19/15 15:39	1.0		5:MG=860000
086	met09_sn_	SAMPLE	271579-002	Water	229485	11/19/15 15:47	1.0		
087	met09_sn_	SAMPLE	271597-001	Water	229485	11/19/15 15:51	1.0		
088	met09_sn_	SAMPLE	271605-001	Water	229485	11/19/15 15:55	1.0		
089	met09_sn_	SAMPLE	271605-002	Water	229485	11/19/15 16:00	1.0		
090	met09_sn_	SAMPLE	271605-003	Water	229485	11/19/15 16:05	1.0		
091	met09_sn_	X	RINSE			11/19/15 16:10	1.0		
092	met09_sn_	SAMPLE	271417-003	Water	229382	11/19/15 16:15	1.0		
093	met09_sn_	SAMPLE	271417-004	Water	229382	11/19/15 16:19	1.0		
094	met09_sn_	CCV				11/19/15 16:24	1.0	13	
095	met09_sn_	CCB				11/19/15 16:30	1.0		
096	met09_sn_	CCB				11/19/15 16:34	1.0		
097	met09_sn_	SAMPLE	271417-006	Water	229382	11/19/15 16:40	1.0		
098	met09_sn_	SAMPLE	271417-007	Water	229382	11/19/15 16:44	1.0		
099	met09_sn_	SAMPLE	271417-008	Water	229382	11/19/15 16:49	1.0		
100	met09_sn_	SAMPLE	271417-009	Water	229382	11/19/15 16:53	1.0		
101	met09_sn_	SAMPLE	271417-010	Water	229382	11/19/15 16:58	1.0		3:MG=320000
102	met09_sn_	SAMPLE	271417-011	Water	229382	11/19/15 17:06	1.0		
103	met09_sn_	SAMPLE	271417-013	Water	229382	11/19/15 17:10	1.0		
104	met09_sn_	BS	QC812973	Filtrate	229486	11/19/15 17:14	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95465436

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/19/15 05:16  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
105	met09_sn_	BSD	QC812974	Filtrate	229486	11/19/15 17:18	1.0	
106	met09_sn_	SAMPLE	271417-014	Water	229382	11/19/15 17:22	1.0	
107	met09_sn_	CCV				11/19/15 17:26	1.0	13
108	met09_sn_	CCB				11/19/15 17:33	1.0	
109	met09_sn_	X	RINSE			11/19/15 17:38	1.0	
110	met09_sn_	BLANK	QC811363	Water	229090	11/19/15 17:43	1.0	
111	met09_sn_	SAMPLE	271158-002	Water	229090	11/19/15 17:49	5.0	1:ZN=150000
112	met09_sn_	X	RINSE			11/19/15 17:57	1.0	
113	met09_sn_	SAMPLE	271158-003	Water	229090	11/19/15 18:02	5.0	1:ZN=150000
114	met09_sn_	X	RINSE			11/19/15 18:11	1.0	
115	met09_sn_	SAMPLE	271158-004	Water	229090	11/19/15 18:16	5.0	1:ZN=150000
116	met09_sn_	X	RINSE			11/19/15 18:25	1.0	
117	met09_sn_	SAMPLE	271366-001	Water	229432	11/19/15 18:30	1.0	
118	met09_sn_	X	RINSE			11/19/15 18:34	1.0	
119	met09_sn_	CCV				11/19/15 18:39	1.0	13
120	met09_sn_	CCB				11/19/15 18:46	1.0	
121	met09_sn_	CCB				11/19/15 18:50	1.0	
122	met09_sn_	SAMPLE	271492-001	Soil	229435	11/19/15 18:55	1.0	
123	met09_sn_	MSS	271465-001	Water	229383	11/19/15 19:02	1.0	
124	met09_sn_	SAMPLE	271465-002	Water	229383	11/19/15 19:07	1.0	
125	met09_sn_	SAMPLE	271465-003	Water	229383	11/19/15 19:11	1.0	
126	met09_sn_	SAMPLE	271465-004	Water	229383	11/19/15 19:16	1.0	
127	met09_sn_	SAMPLE	271465-005	Water	229383	11/19/15 19:20	1.0	
128	met09_sn_	SAMPLE	271465-006	Water	229383	11/19/15 19:24	1.0	
129	met09_sn_	SAMPLE	271465-007	Water	229383	11/19/15 19:28	1.0	
130	met09_sn_	SAMPLE	271465-008	Water	229383	11/19/15 19:32	1.0	
131	met09_sn_	SAMPLE	271465-009	Water	229383	11/19/15 19:37	1.0	
132	met09_sn_	CCV				11/19/15 19:41	1.0	13
133	met09_sn_	CCB				11/19/15 19:48	1.0	
134	met09_sn_	SAMPLE	271465-010	Water	229383	11/19/15 19:53	1.0	
135	met09_sn_	SAMPLE	271465-011	Water	229383	11/19/15 19:57	1.0	
136	met09_sn_	SAMPLE	271465-012	Water	229383	11/19/15 20:01	1.0	
137	met09_sn_	SAMPLE	271465-013	Water	229383	11/19/15 20:06	1.0	
138	met09_sn_	SAMPLE	271465-014	Water	229383	11/19/15 20:11	1.0	
139	met09_sn_	SAMPLE	271465-018	Water	229383	11/19/15 20:15	1.0	
140	met09_sn_	SAMPLE	271366-001	Water	229432	11/19/15 20:21	1.0	
141	met09_sn_	SAMPLE	271492-001	Soil	229435	11/19/15 20:25	1.0	
142	met09_sn_	X	RINSE			11/19/15 20:32	1.0	
143	met09_sn_	BLANK	QC813406	Soil	229593	11/19/15 20:37	1.0	
144	met09_sn_	CCV				11/19/15 21:22	1.0	13
145	met09_sn_	CCB				11/19/15 21:28	1.0	
146	met09_sn_	BS	QC813407	Soil	229593	11/19/15 21:34	5.0	
147	met09_sn_	BSD	QC813408	Soil	229593	11/19/15 21:39	5.0	
148	met09_sn_	MSS	271668-001	Soil	229593	11/19/15 21:43	1.0	3:FE=200000
149	met09_sn_	MS	QC813409	Soil	229593	11/19/15 21:49	5.0	
150	met09_sn_	MSD	QC813410	Soil	229593	11/19/15 21:57	5.0	
151	met09_sn_	SER	QC813411	Soil	229593	11/19/15 22:05	5.0	
152	met09_sn_	PDS	QC813412	Soil	229593	11/19/15 22:09	1.0	10 11 12 3:FE=200000
153	met09_sn_	SAMPLE	271626-007	Soil	229593	11/19/15 22:16	1.0	3:FE=430000
154	met09_sn_	SAMPLE	271626-009	Soil	229593	11/19/15 22:23	1.0	3:FE=320000
155	met09_sn_	SAMPLE	271626-011	Soil	229593	11/19/15 22:29	1.0	3:FE=230000
156	met09_sn_	CCV				11/19/15 22:36	1.0	13



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95465436

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/19/15 05:16  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
157	met09_sn_	CCB				11/19/15 22:43	1.0	
158	met09_sn_	SAMPLE	271626-012	Soil	229593	11/19/15 22:48	1.0	2:FE=270000
159	met09_sn_	SAMPLE	271626-013	Soil	229593	11/19/15 22:55	1.0	2:FE=340000
160	met09_sn_	SAMPLE	271626-014	Soil	229593	11/19/15 23:02	1.0	5:FE=330000
161	met09_sn_	SAMPLE	271626-015	Soil	229593	11/19/15 23:08	1.0	3:FE=400000
162	met09_sn_	SAMPLE	271626-016	Soil	229593	11/19/15 23:15	1.0	4:FE=270000
163	met09_sn_	SAMPLE	271626-017	Soil	229593	11/19/15 23:22	1.0	5:FE=310000
164	met09_sn_	SAMPLE	271626-018	Soil	229593	11/19/15 23:29	1.0	3:FE=390000
165	met09_sn_	SAMPLE	271626-019	Soil	229593	11/19/15 23:36	1.0	5:FE=320000
166	met09_sn_	SAMPLE	271626-020	Soil	229593	11/19/15 23:42	1.0	5:FE=530000
167	met09_sn_	SAMPLE	271642-006	Soil	229593	11/19/15 23:49	1.0	5:FE=400000
168	met09_sn_	CCV				11/19/15 23:56	1.0	13
169	met09_sn_	CCB				11/20/15 00:03	1.0	
170	met09_sn_	SAMPLE	271729-001	Soil	229593	11/20/15 00:08	1.0	5:CA=1400000
171	met09_sn_	XSAMPLE	271729-001	Soil	229593	11/20/15 00:15	1.0	
172	met09_sn_	X	RINSE			11/20/15 00:20	1.0	
173	met09_sn_	SAMPLE	271604-001	TCLP Leachate	229551	11/20/15 00:25	10.0	1:NA=170000
174	met09_sn_	MS	QC813237	TCLP Leachate	229551	11/20/15 00:29	10.0	
175	met09_sn_	MSD	QC813238	TCLP Leachate	229551	11/20/15 00:33	10.0	
176	met09_sn_	SER	QC813239	TCLP Leachate	229551	11/20/15 00:37	50.0	
177	met09_sn_	SAMPLE	271604-002	TCLP Leachate	229551	11/20/15 00:47	10.0	1:NA=180000
178	met09_sn_	SAMPLE	271678-004	TCLP Leachate	229551	11/20/15 00:52	10.0	1:NA=170000
179	met09_sn_	CCV				11/20/15 00:56	1.0	13
180	met09_sn_	CCB				11/20/15 01:03	1.0	
181	met09_sn_	CCB				11/20/15 01:07	1.0	
182	met09_sn_	SAMPLE	271678-005	TCLP Leachate	229551	11/20/15 01:12	10.0	1:NA=180000
183	met09_sn_	SAMPLE	271679-001	TCLP Leachate	229551	11/20/15 01:16	10.0	1:NA=170000
184	met09_sn_	SAMPLE	271679-004	TCLP Leachate	229551	11/20/15 01:20	10.0	1:NA=170000
185	met09_sn_	?SAMPLE	271667-001		229551	11/20/15 01:26	10.0	
186	met09_sn_	?SAMPLE	271724-001		229551	11/20/15 01:31	10.0	
187	met09_sn_	?SAMPLE	271725-001		229551	11/20/15 01:36	10.0	
188	met09_sn_	SAMPLE	271604-002	WET Leachate	229605	11/20/15 01:41	10.0	1:NA=170000
189	met09_sn_	SAMPLE	271645-001	WET Leachate	229605	11/20/15 01:45	10.0	1:NA=170000
190	met09_sn_	SAMPLE	271384-003	Filtrate	229486	11/20/15 01:50	100.0	
191	met09_sn_	MSS	271522-001	Filtrate	229486	11/20/15 01:54	100.0	
192	met09_sn_	CCV				11/20/15 01:59	1.0	13
193	met09_sn_	CCB				11/20/15 02:06	1.0	
194	met09_sn_	MS	QC812975	Filtrate	229486	11/20/15 02:11	1.0	
195	met09_sn_	MSD	QC812976	Filtrate	229486	11/20/15 02:15	1.0	
196	met09_sn_	SAMPLE	271586-001	Filtrate	229486	11/20/15 02:19	1.0	
197	met09_sn_	SAMPLE	271586-002	Filtrate	229486	11/20/15 02:24	1.0	
198	met09_sn_	SAMPLE	271384-003	Filtrate	229486	11/20/15 02:28	1.0	4:MG=590000
199	met09_sn_	X	RINSE			11/20/15 02:36	1.0	
200	met09_sn_	X	RINSE			11/20/15 02:41	1.0	
201	met09_sn_	X	RINSE			11/20/15 02:46	1.0	
202	met09_sn_	CCV				11/20/15 02:51	1.0	13
203	met09_sn_	XCCB				11/20/15 02:57	1.0	
204	met09_sn_	CCB				11/20/15 03:01	1.0	

NCD 11/19/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 61.



CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95465436

Date : 11/19/15  
 Sequence : MET09 11/19/15

Reference : met09\_sn\_  
 Analyzed : 11/19/15 05:21

#	Type	Sample ID	Y A
		ICAL STD	2326467
		LOWER LIMIT	697940
		UPPER LIMIT	4652935
011	ICB		2306670
012	ICSA		2035933
013	ICSAB		2005597
014	BLANK	QC813487	2439664
015	BS	QC813488	2398034
016	BSD	QC813489	2371420
017	MSS	271752-001	2225243
018	MS	QC813490	2245670
019	MSD	QC813491	2268699
020	SER	QC813492	2307713
021	PDS	QC813493	2238967
022	SAMPLE	271768-002	2236489
023	SAMPLE	271770-001	2226775
024	CCV		2362732
025	CCB		2389310
026	SAMPLE	271727-001	2309413
027	SAMPLE	271727-002	2458057
028	SAMPLE	271727-003	2361755
029	SAMPLE	271554-001	2476893
030	SAMPLE	271554-002	2467017
031	SAMPLE	271554-001	2493347
032	SAMPLE	271554-002	2447537
034	BLANK	QC813462	2291751
036	CCV		2349060
037	CCB		2481995
038	BS	QC813463	2367748
039	BSD	QC813464	2380948
040	SAMPLE	271553-001	2340253
042	BLANK	QC813469	2303111
043	BS	QC813470	2353909
044	BSD	QC813471	2421693
045	MSS	271604-001	2292983
046	MS	QC813472	2340290
047	MSD	QC813473	2315456
048	CCV		2352505
049	CCB		2418645
050	SAMPLE	271643-001	2331652
051	SAMPLE	271655-001	2381663
052	SAMPLE	271655-002	2370030
053	SAMPLE	271655-003	2357933
054	SAMPLE	271655-004	2307689
055	SAMPLE	271655-005	2336324
056	SAMPLE	271655-006	2384190
057	SAMPLE	271655-007	2377808
058	SAMPLE	271663-001	2338529
059	SAMPLE	271663-002	2407983
060	CCV		2391288
061	CCB		2480327

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95465436

Date : 11/19/15  
 Sequence : MET09 11/19/15

Reference : met09\_sn\_  
 Analyzed : 11/19/15 05:21

#	Type	Sample ID	Y A
062	SAMPLE	271786-001	2365721
064	BLANK	QC813413	2448605
065	BS	QC813414	2420250
066	BSD	QC813415	2423890
067	MSS	271382-016	2151057
068	MS	QC813416	2298299
069	MSD	QC813417	2303344
070	CCV		2429514
071	CCB		2496965
072	BLANK	QC812966	2529966
073	BS	QC812967	2467868
074	BSD	QC812968	2451851
075	MSS	271382-013	2112236
077	MSS	271382-013	2479131
078	MS	QC812969	2132915
079	MSD	QC812970	2149929
082	CCV		2452702
083	CCB		2429548
084	SAMPLE	271665-001	2311910
085	SAMPLE	271558-001	1607976
087	SAMPLE	271597-001	2453795
088	SAMPLE	271605-001	2410878
089	SAMPLE	271605-002	2406381
090	SAMPLE	271605-003	2428134
092	SAMPLE	271417-003	2485423
093	SAMPLE	271417-004	2549121
094	CCV		2466175
095	CCB		2537370
096	CCB		2513952
097	SAMPLE	271417-006	2561805
098	SAMPLE	271417-007	2548576
099	SAMPLE	271417-008	2542772
100	SAMPLE	271417-009	2578957
101	SAMPLE	271417-010	1974890
102	SAMPLE	271417-011	2522467
103	SAMPLE	271417-013	2523680
104	BS	QC812973	2470572
105	BSD	QC812974	2473646
106	SAMPLE	271417-014	2537614
107	CCV		2423321
108	CCB		2519693
110	BLANK	QC811363	2517220
111	SAMPLE	271158-002	2553652
113	SAMPLE	271158-003	2586658
115	SAMPLE	271158-004	2591637
117	SAMPLE	271366-001	2393888
119	CCV		2482518
120	CCB		2549447
121	CCB		2561253
122	SAMPLE	271492-001	2545608
123	MSS	271465-001	2603527
124	SAMPLE	271465-002	2615990

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95465436

Date : 11/19/15  
 Sequence : MET09 11/19/15

Reference : met09\_sn\_  
 Analyzed : 11/19/15 05:21

#	Type	Sample ID	Y A
125	SAMPLE	271465-003	2564632
126	SAMPLE	271465-004	2499092
127	SAMPLE	271465-005	2575188
128	SAMPLE	271465-006	2603126
129	SAMPLE	271465-007	2562378
130	SAMPLE	271465-008	2568553
131	SAMPLE	271465-009	2517729
132	CCV		2420680
133	CCB		2478954
134	SAMPLE	271465-010	2579499
135	SAMPLE	271465-011	2577846
136	SAMPLE	271465-012	2504551
137	SAMPLE	271465-013	2558234
138	SAMPLE	271465-014	2546132
139	SAMPLE	271465-018	2548695
140	SAMPLE	271366-001	2369705
141	SAMPLE	271492-001	2537713
143	BLANK	QC813406	2563858
144	CCV		2389840
145	CCB		2467352
146	BS	QC813407	2386123
147	BSD	QC813408	2408675
148	MSS	271668-001	2454036
149	MS	QC813409	2399315
150	MSD	QC813410	2405786
151	SER	QC813411	2471569
152	PDS	QC813412	2461181
153	SAMPLE	271626-007	2702743
154	SAMPLE	271626-009	2596235
155	SAMPLE	271626-011	2500399
156	CCV		2434584
157	CCB		2558703
158	SAMPLE	271626-012	2668219
159	SAMPLE	271626-013	2748884
160	SAMPLE	271626-014	2643439
161	SAMPLE	271626-015	2474089
162	SAMPLE	271626-016	2560051
163	SAMPLE	271626-017	2621521
164	SAMPLE	271626-018	2647455
165	SAMPLE	271626-019	2502831
166	SAMPLE	271626-020	2497034
167	SAMPLE	271642-006	2683178
168	CCV		2465716
169	CCB		2518993
170	SAMPLE	271729-001	2255926
173	SAMPLE	271604-001	2372339
174	MS	QC813237	2340763
175	MSD	QC813238	2411679
176	SER	QC813239	2509465
177	SAMPLE	271604-002	2422323
178	SAMPLE	271678-004	2428594
179	CCV		2425993

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95465436

Date : 11/19/15  
 Sequence : MET09 11/19/15

Reference : met09\_sn\_  
 Analyzed : 11/19/15 05:21

#	Type	Sample ID	Y A
180	CCB		2535400
181	CCB		2493058
182	SAMPLE	271678-005	2385956
183	SAMPLE	271679-001	2418721
184	SAMPLE	271679-004	2385358
188	SAMPLE	271604-002	2380347
189	SAMPLE	271645-001	2401491
190	SAMPLE	271384-003	2477048
191	MSS	271522-001	2526541
192	CCV		2438745
193	CCB		2519169
194	MS	QC812975	2303102
195	MSD	QC812976	2349168
196	SAMPLE	271586-001	2419156
197	SAMPLE	271586-002	2420848
198	SAMPLE	271384-003	1785700
202	CCV		2408812
204	CCB		2524742

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 METALS Soil: EPA 6010B

Inst : MET09  
 Calnum : 95465436001  
 Units : ug/L

Date : 19-NOV-2015 05:16  
 X Axis : R

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met09_sn_95465436002		L1	19-NOV-2015 05:21	S28440
L2	met09_sn_95465436003		L2	19-NOV-2015 05:27	S28094
L3	met09_sn_95465436004		L3	19-NOV-2015 05:31	S28095
L4	met09_sn_95465436005		L4	19-NOV-2015 05:35	S28096
L5	met09_sn_95465436006		L5	19-NOV-2015 05:42	S28099

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Lead	A	49.740	47.719	48.413	47.347		LOR0	0.00000	0.02112		48.305	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Lead	A	5.0000	5	100.00	1	1000.0	2	10000	0		

NCD 11/19/15 : Do not report K from this cal

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
Calnum : 95465436001

Cal Date : 19-NOV-2015

ICV 95465436008 (19-NOV-2015) stds: S28098

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Lead	A	5000	4828	ug/L	-3	10	



CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95465436011 File : met09\_sn\_ Time : 19-NOV-2015 06:19  
 Cal : 95465436001 Caldate : 19-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2306670	-0.85

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95465436012  
 Cal : 95465436001  
 Standards: S28103

IDF : 1.0  
 Time : 19-NOV-2015 06:26

File : met09\_sn\_  
 Caldate : 19-NOV-2015

Analyte	Ch	Quant	IQL	Units	Flags
Lead	A	[-2.543]	5.000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	18940	ug/L	95
Copper	A	20000	21300	ug/L	106
Manganese	A	20000	18660	ug/L	93
Nickel	A	20000	17190	ug/L	86
Vanadium	A	20000	19900	ug/L	100
Aluminum	R	500000	486300	ug/L	97
Calcium	R	500000	463300	ug/L	93
Iron	R	200000	182500	ug/L	91
Magnesium	R	500000	468300	ug/L	94
Titanium	R	20000	21370	ug/L	107

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2035933	-12.49

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95465436013  
 Cal : 95465436001  
 Standards: S28104

File : met09\_sn\_  
 Caldate : 19-NOV-2015

IDF : 1.0  
 Time : 19-NOV-2015 08:42

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	1000	922.4	ug/L	-8	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2005597	-13.79

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95465436132  
 Cal : 95465436001  
 Standards: S28097

IDF : 1.0  
 Time : 19-NOV-2015 19:41

File : met09\_sn\_  
 Caldate : 19-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.305	46.632	5000	4923	ug/L	-2	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2420680	4.05

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95465436133 File : met09\_sn\_ Time : 19-NOV-2015 19:48  
 Cal : 95465436001 Caldate : 19-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2478954	6.55

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95465436144  
 Cal : 95465436001  
 Standards: S28097

IDF : 1.0  
 Time : 19-NOV-2015 21:22

File : met09\_sn\_  
 Caldate : 19-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.305	45.243	5000	4777	ug/L	-4	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2389840	2.72

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95465436145 File : met09\_sn\_ Time : 19-NOV-2015 21:28  
 Cal : 95465436001 Caldate : 19-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2467352	6.06

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95465436156  
 Cal : 95465436001  
 Standards: S28097

IDF : 1.0  
 Time : 19-NOV-2015 22:36

File : met09\_sn\_  
 Caldate : 19-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.305	44.287	5000	4676	ug/L	-6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2434584	4.65



CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95465436157 File : met09\_sn\_ Time : 19-NOV-2015 22:43  
 Cal : 95465436001 Caldate : 19-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2326467	2558703	9.98

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met09_sn_	ICALBLK				11/20/15 04:39	1.0		
002	met09_sn_	ICAL	L1			11/20/15 04:44	1.0	1	
003	met09_sn_	ICAL	L2			11/20/15 04:49	1.0	2	
004	met09_sn_	ICAL	L3			11/20/15 04:53	1.0	3	
005	met09_sn_	ICAL	L4			11/20/15 04:57	1.0	4	
006	met09_sn_	ICAL	L5			11/20/15 05:04	1.0	5	
007	met09_sn_	ICV				11/20/15 05:11	1.0	6	
008	met09_sn_	XCRI				11/20/15 05:21	1.0	7	
009	met09_sn_	CRI				11/20/15 05:30	1.0	7	
010	met09_sn_	ICB				11/20/15 05:34	1.0		
011	met09_sn_	ICSA				11/20/15 05:40	1.0	8	10:AL=480000
012	met09_sn_	ICSAB				11/20/15 06:02	1.0	9	5:AL=490000
013	met09_sn_	XBLANK	QC813574	Water	229631	11/20/15 07:55	1.0		
014	met09_sn_	XBS	QC813575	Water	229631	11/20/15 08:00	1.0		
015	met09_sn_	XBSD	QC813576	Water	229631	11/20/15 08:05	1.0		
016	met09_sn_	XMSS	271369-001	Water	229631	11/20/15 08:10	1.0		2:CA=220000
017	met09_sn_	XMS	QC813577	Water	229631	11/20/15 08:15	1.0		
018	met09_sn_	XMSD	QC813578	Water	229631	11/20/15 08:20	1.0		
019	met09_sn_	XSER	QC813579	Water	229631	11/20/15 08:26	5.0		
020	met09_sn_	CCV				11/20/15 08:36	1.0	10	
021	met09_sn_	XCCB				11/20/15 08:43	1.0		
022	met09_sn_	CCB				11/20/15 08:47	1.0		
023	met09_sn_	BS	QC813575	Water	229631	11/20/15 08:52	1.0		
024	met09_sn_	BSD	QC813576	Water	229631	11/20/15 08:56	1.0		
025	met09_sn_	MSS	271369-001	Water	229631	11/20/15 09:00	1.0		2:CA=210000
026	met09_sn_	BLANK	QC813574	Water	229631	11/20/15 09:05	1.0		
027	met09_sn_	MS	QC813577	Water	229631	11/20/15 09:10	1.0		
028	met09_sn_	MSD	QC813578	Water	229631	11/20/15 09:14	1.0		1:CA=220000
029	met09_sn_	SER	QC813579	Water	229631	11/20/15 09:19	5.0		
030	met09_sn_	PDS	QC813580	Water	229631	11/20/15 09:24	1.0	11 12 13	1:CA=220000
031	met09_sn_	CCV				11/20/15 09:28	1.0	10	
032	met09_sn_	XCCB				11/20/15 09:35	1.0		
033	met09_sn_	CCB				11/20/15 09:39	1.0		
034	met09_sn_	BLANK	QC813234	TCLP Leachate	229551	11/20/15 10:21	10.0		1:NA=130000
035	met09_sn_	PDS	QC813240	TCLP Leachate	229551	11/20/15 10:26	10.0	11 12 13	
036	met09_sn_	SAMPLE	271712-001	TCLP Leachate	229551	11/20/15 10:30	10.0		1:NA=120000
037	met09_sn_	SAMPLE	271712-002	TCLP Leachate	229551	11/20/15 10:35	10.0		1:NA=110000
038	met09_sn_	SAMPLE	271712-003	TCLP Leachate	229551	11/20/15 10:39	10.0		1:NA=120000
039	met09_sn_	SAMPLE	271531-001	Miscell.	229557	11/20/15 10:44	1.0		2:FE=1300000
040	met09_sn_	X	RINSE			11/20/15 10:51	1.0		
041	met09_sn_	SAMPLE	271548-001	Miscell.	229557	11/20/15 10:56	1.0		
042	met09_sn_	SAMPLE	271549-001	Miscell.	229557	11/20/15 11:00	1.0		
043	met09_sn_	MSS	271369-001	Water	229631	11/20/15 11:05	1.0		2:CA=210000
044	met09_sn_	CCV				11/20/15 11:11	1.0	10	
045	met09_sn_	XCCB				11/20/15 11:17	1.0		
046	met09_sn_	CCB				11/20/15 11:21	1.0		
047	met09_sn_	X	RINSE			11/20/15 11:27	1.0		
048	met09_sn_	SAMPLE	271626-019	Soil	229593	11/20/15 11:32	100.0		
049	met09_sn_	SAMPLE	271626-020	Soil	229593	11/20/15 11:36	100.0		
050	met09_sn_	SAMPLE	271626-019	Soil	229593	11/20/15 11:40	1.0		5:FE=330000
051	met09_sn_	SAMPLE	271626-020	Soil	229593	11/20/15 11:47	1.0		5:FE=540000
052	met09_sn_	SAMPLE	271800-001	Water	229631	11/20/15 11:53	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met09_sn_	MSS	271668-001	Soil	229593	11/20/15 11:57	1.0		3:FE=200000
054	met09_sn_	SAMPLE	271668-002	Soil	229593	11/20/15 12:04	1.0		4:FE=490000
055	met09_sn_	SAMPLE	271729-001	Soil	229593	11/20/15 12:11	1.0		6:CA=1400000
056	met09_sn_	CCV				11/20/15 12:18	1.0	10	
057	met09_sn_	CCB				11/20/15 12:25	1.0		
058	met09_sn_	SAMPLE	271626-019	WET Leachate	229654	11/20/15 12:48	10.0		1:NA=130000
059	met09_sn_	SAMPLE	271626-020	WET Leachate	229654	11/20/15 12:52	10.0		1:NA=130000
060	met09_sn_	SAMPLE	271800-001	Water	229631	11/20/15 12:56	1.0		
061	met09_sn_	SAMPLE	271678-001	WET Leachate	229654	11/20/15 13:00	10.0		1:NA=130000
062	met09_sn_	SAMPLE	271678-002	WET Leachate	229654	11/20/15 13:05	10.0		1:NA=140000
063	met09_sn_	SAMPLE	271678-003	WET Leachate	229654	11/20/15 13:09	10.0		1:NA=150000
064	met09_sn_	SAMPLE	271678-004	WET Leachate	229654	11/20/15 13:13	10.0		1:NA=140000
065	met09_sn_	SAMPLE	271678-005	WET Leachate	229654	11/20/15 13:17	10.0		1:NA=150000
066	met09_sn_	SAMPLE	271679-001	WET Leachate	229654	11/20/15 13:21	10.0		1:NA=140000
067	met09_sn_	SAMPLE	271679-002	WET Leachate	229654	11/20/15 13:26	10.0		1:NA=150000
068	met09_sn_	CCV				11/20/15 13:30	1.0	10	
069	met09_sn_	XCCB				11/20/15 13:37	1.0		
070	met09_sn_	CCB				11/20/15 13:41	1.0		
071	met09_sn_	SAMPLE	271679-003	WET Leachate	229654	11/20/15 13:46	10.0		1:NA=140000
072	met09_sn_	SAMPLE	271679-004	WET Leachate	229654	11/20/15 13:50	10.0		1:NA=120000
073	met09_sn_	SAMPLE	271679-005	WET Leachate	229654	11/20/15 13:54	10.0		1:NA=140000
074	met09_sn_	SAMPLE	271679-006	WET Leachate	229654	11/20/15 13:58	10.0		1:NA=150000
075	met09_sn_	?SAMPLE	271724-001		229654	11/20/15 14:02	10.0		
076	met09_sn_	?SAMPLE	271725-001		229654	11/20/15 14:07	10.0		
077	met09_sn_	SAMPLE	271369-002	Water	229631	11/20/15 14:11	1.0		4:CA=450000
078	met09_sn_	SAMPLE	271369-003	Water	229631	11/20/15 14:16	1.0		3:CA=230000
079	met09_sn_	SAMPLE	271604-001	Soil	229537	11/20/15 14:20	1.0		4:CA=280000
080	met09_sn_	SAMPLE	271604-002	Soil	229537	11/20/15 14:27	1.0		4:CA=440000
081	met09_sn_	CCV				11/20/15 14:34	1.0	10	
082	met09_sn_	CCB				11/20/15 14:41	1.0		
083	met09_sn_	SAMPLE	271369-004	Water	229631	11/20/15 14:46	1.0		2:CA=240000
084	met09_sn_	SAMPLE	271604-002	Soil	229537	11/20/15 14:57	100.0		
085	met09_sn_	SAMPLE	271465-002	Water	229383	11/20/15 15:01	1.0		
086	met09_sn_	CCV				11/20/15 15:06	1.0	10	
087	met09_sn_	CCB				11/20/15 15:13	1.0		
088	met09_sn_	SAMPLE	271465-002	Water	229383	11/20/15 15:58	1.0		
089	met09_sn_	X	RINSE			11/20/15 16:02	1.0		
090	met09_sn_	MSS	271522-001	Filtrate	229486	11/20/15 16:07	100.0		
091	met09_sn_	MS	QC812975	Filtrate	229486	11/20/15 16:12	1.0		1:NA=340000
092	met09_sn_	MSD	QC812976	Filtrate	229486	11/20/15 16:16	1.0		1:NA=340000
093	met09_sn_	SAMPLE	271645-001	WET Leachate	229605	11/20/15 16:20	10.0		1:NA=130000
094	met09_sn_	SAMPLE	271333-002	Filtrate	229348	11/20/15 16:24	100.0		
095	met09_sn_	BLANK	QC812414	Filtrate	229348	11/20/15 16:30	1.0		
096	met09_sn_	BS	QC812415	Filtrate	229348	11/20/15 16:35	1.0		
097	met09_sn_	BSD	QC812416	Filtrate	229348	11/20/15 16:39	1.0		
098	met09_sn_	CCV				11/20/15 16:43	1.0	10	
099	met09_sn_	CCB				11/20/15 16:50	1.0		
100	met09_sn_	CCB				11/20/15 16:54	1.0		
101	met09_sn_	MSS	271333-004	Filtrate	229348	11/20/15 16:59	1.0		3:MG=500000
102	met09_sn_	X	RINSE			11/20/15 17:07	1.0		
103	met09_sn_	MS	QC812417	Filtrate	229348	11/20/15 17:12	1.0		3:MG=500000
104	met09_sn_	X	RINSE			11/20/15 17:19	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 95466839

Instrument : MET09  
 Method : EPA 6010B

Begun : 11/20/15 04:39  
 SOP Version : icp metals\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met09_sn_	MSD	QC812418	Filtrate	229348	11/20/15 17:24	1.0		3:MG=490000
106	met09_sn_	X	RINSE			11/20/15 17:32	1.0		
107	met09_sn_	SAMPLE	271333-002	Filtrate	229348	11/20/15 17:37	1.0		
108	met09_sn_	X	RINSE			11/20/15 17:45	1.0		
109	met09_sn_	SAMPLE	271333-003	Filtrate	229348	11/20/15 17:50	1.0		
110	met09_sn_	X	RINSE			11/20/15 17:57	1.0		
111	met09_sn_	CCV				11/20/15 18:02	1.0	10	
112	met09_sn_	CCB				11/20/15 18:09	1.0		
113	met09_sn_	CCB				11/20/15 18:13	1.0		
114	met09_sn_	SAMPLE	271333-005	Filtrate	229348	11/20/15 18:18	1.0		4:MG=690000
115	met09_sn_	X	RINSE			11/20/15 18:26	1.0		
116	met09_sn_	SAMPLE	271333-006	Filtrate	229348	11/20/15 18:31	1.0		2:MG=810000
117	met09_sn_	X	RINSE			11/20/15 18:40	1.0		
118	met09_sn_	SAMPLE	271333-007	Filtrate	229348	11/20/15 18:45	1.0		4:MG=740000
119	met09_sn_	X	RINSE			11/20/15 18:54	1.0		

CRT 11/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 87.

Standards used: 1=S28440 2=S28094 3=S28095 4=S28096 5=S28099 6=S28098 7=S28441 8=S28103 9=S28104 10=S28097 11=S28385  
 12=S28386 13=S27470

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95466839

Date : 11/20/15  
 Sequence : MET09 11/20/15

Reference : met09\_sn\_  
 Analyzed : 11/20/15 04:44

#	Type	Sample ID	Y A
		ICAL STD	2551789
		LOWER LIMIT	765537
		UPPER LIMIT	5103578
010	ICB		2529766
011	ICSA		2157462
012	ICSAB		2179542
020	CCV		2501443
022	CCB		2560609
023	BS	QC813575	2552718
024	BSD	QC813576	2581492
025	MSS	271369-001	2339241
026	BLANK	QC813574	2603081
027	MS	QC813577	2338703
028	MSD	QC813578	2338023
029	SER	QC813579	2546862
030	PDS	QC813580	2362590
031	CCV		2543993
033	CCB		2601026
034	BLANK	QC813234	2466082
035	PDS	QC813240	2495008
036	SAMPLE	271712-001	2424725
037	SAMPLE	271712-002	2427895
038	SAMPLE	271712-003	2460085
039	SAMPLE	271531-001	2391792
041	SAMPLE	271548-001	2638134
042	SAMPLE	271549-001	2677824
043	MSS	271369-001	2390981
044	CCV		2574857
046	CCB		2609657
048	SAMPLE	271626-019	2571652
049	SAMPLE	271626-020	2585874
050	SAMPLE	271626-019	2587202
051	SAMPLE	271626-020	2611015
052	SAMPLE	271800-001	2120653
053	MSS	271668-001	2709101
054	SAMPLE	271668-002	2481350
055	SAMPLE	271729-001	2406821
056	CCV		2541917
057	CCB		2679556
058	SAMPLE	271626-019	2461813
059	SAMPLE	271626-020	2521878
060	SAMPLE	271800-001	2478916
061	SAMPLE	271678-001	2558977
062	SAMPLE	271678-002	2504429
063	SAMPLE	271678-003	2450371
064	SAMPLE	271678-004	2475777
065	SAMPLE	271678-005	2519713
066	SAMPLE	271679-001	2546723
067	SAMPLE	271679-002	2503618
068	CCV		2577363
070	CCB		2683568

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 95466839

Date : 11/20/15  
 Sequence : MET09 11/20/15

Reference : met09\_sn\_  
 Analyzed : 11/20/15 04:44

#	Type	Sample ID	Y A
071	SAMPLE	271679-003	2550430
072	SAMPLE	271679-004	2563288
073	SAMPLE	271679-005	2487202
074	SAMPLE	271679-006	2457930
077	SAMPLE	271369-002	2252177
078	SAMPLE	271369-003	2360759
079	SAMPLE	271604-001	2522233
080	SAMPLE	271604-002	2503700
081	CCV		2596113
082	CCB		2676417
083	SAMPLE	271369-004	2463496
084	SAMPLE	271604-002	2540756
085	SAMPLE	271465-002	9684264 *
086	CCV		2493630
087	CCB		2612095
088	SAMPLE	271465-002	2625391
090	MSS	271522-001	2663942
091	MS	QC812975	2408180
092	MSD	QC812976	2453099
093	SAMPLE	271645-001	2484558
094	SAMPLE	271333-002	2631338
095	BLANK	QC812414	2683977
096	BS	QC812415	2604674
097	BSD	QC812416	2604893
098	CCV		2537785
099	CCB		2623564
100	CCB		2634302
101	MSS	271333-004	2069200
103	MS	QC812417	1906373
105	MSD	QC812418	2044285
107	SAMPLE	271333-002	2335763
109	SAMPLE	271333-003	2350404
111	CCV		2510689
112	CCB		2610163
113	CCB		10172985 *
114	SAMPLE	271333-005	1897294
116	SAMPLE	271333-006	1768904
118	SAMPLE	271333-007	1855774

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 271668 METALS Soil: EPA 6010B

Inst : MET09  
 Calnum : 95466839001  
 Units : ug/L

Date : 20-NOV-2015 04:39  
 X Axis : R

Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met09_sn_95466839002		L1	20-NOV-2015 04:44	S28440
L2	met09_sn_95466839003		L2	20-NOV-2015 04:49	S28094
L3	met09_sn_95466839004		L3	20-NOV-2015 04:53	S28095
L4	met09_sn_95466839005		L4	20-NOV-2015 04:57	S28096
L5	met09_sn_95466839006		L5	20-NOV-2015 05:04	S28099

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2 %RSD	MnR^2	Flg
Lead	A	46.800	48.630	48.870	49.154		LOR0	0.00000	0.02035		48.363	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Lead	A	5.0000	-5	100.00	-1	1000.0	-1	10000	0		

JDB 11/20/15 [Potassium R]: Do not report K from this seq

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09

Calnum : 95466839001

Cal Date : 20-NOV-2015

ICV 95466839007 (20-NOV-2015) stds: S28098

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Lead	A	5000	4806	ug/L	-4	10	



CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95466839010 File : met09\_sn\_ Time : 20-NOV-2015 05:34  
 Cal : 95466839001 Caldate : 20-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2529766	-0.86

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839011      File : met09\_sn\_      IDF : 1.0  
 Cal : 95466839001      Caldate : 20-NOV-2015      Time : 20-NOV-2015 05:40  
 Standards: S28103

Analyte	Ch	Quant	IQL	Units	Flags
Lead	A	[-0.5498]	5.000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	18650	ug/L	93
Copper	A	20000	21050	ug/L	105
Manganese	A	20000	18260	ug/L	91
Nickel	A	20000	16960	ug/L	85
Vanadium	A	20000	19860	ug/L	99
Aluminum	R	500000	481800	ug/L	96
Calcium	R	500000	447900	ug/L	90
Iron	R	200000	176900	ug/L	88
Magnesium	R	500000	453000	ug/L	91
Titanium	R	20000	21450	ug/L	107

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2157462	-15.45

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839012  
 Cal : 95466839001  
 Standards: S28104  
 File : met09\_sn\_  
 Caldate : 20-NOV-2015  
 IDF : 1.0  
 Time : 20-NOV-2015 06:02

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	1000	871.0	ug/L	-13	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2179542	-14.59

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839044  
 Cal : 95466839001  
 Standards: S28097

IDF : 1.0  
 Time : 20-NOV-2015 11:11

File : met09\_sn\_  
 Caldate : 20-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.363	46.433	5000	4723	ug/L	-6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2574857	0.90

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95466839046 File : met09\_sn\_ Time : 20-NOV-2015 11:21  
 Cal : 95466839001 Caldate : 20-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2609657	2.27

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 95466839056  
 Cal : 95466839001  
 Standards: S28097

IDF : 1.0  
 Time : 20-NOV-2015 12:18

File : met09\_sn\_  
 Caldate : 20-NOV-2015

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Lead	A	48.363	46.378	5000	4718	ug/L	-6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2541917	-0.39

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 271668 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 95466839057 File : met09\_sn\_ Time : 20-NOV-2015 12:25  
 Cal : 95466839001 Caldate : 20-NOV-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Lead	A	ND	5.000	2.500	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2551789	2679556	5.01

SAMPLE PREPARATION SUMMARY

Batch # : 229593  
 Started By : RFC  
 Method : 3050B  
 Spike #1 ID : S26660

Prep Date : 18-NOV-2015 14:05  
 Spike #2 ID : S26661

Analysis : ICP  
 Finished By : RFC  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
271626-007		Soil	1.09	50	1	45.87						6010	
271626-009		Soil	.93	50	1	53.76						6010	
271626-011		Soil	1.1	50	1	45.45						6010	
271626-012		Soil	1.03	50	1	48.54						6010	
271626-013		Soil	1.03	50	1	48.54						6010	
271626-014		Soil	1.01	50	1	49.50						6010	
271626-015		Soil	.96	50	1	52.08						6010	
271626-016		Soil	1.03	50	1	48.54						6010	
271626-017		Soil	1.02	50	1	49.02						6010	
271626-018		Soil	1.07	50	1	46.73						6010	
271626-019		Soil	1.07	50	1	46.73						6010	
271626-020		Soil	1.03	50	1	48.54						6010	
271642-006		Soil	.92	50	1	54.35						6010	
271668-001		Soil	.97	50	1	51.55						6010	
271668-002		Soil	1.07	50	1	46.73						6010	
271729-001		Soil	.96	50	1	52.08						6010	
QC813406	BLANK	Soil	1	50	1	50.0							
QC813407	BS	Soil	1	50	1	50.0	.5	.5					
QC813408	BSD	Soil	1	50	1	50.0	.5	.5					
QC813409	MS	Soil	1	50	1	50.0	.5	.5					
QC813410	MSD	Soil	1.04	50	1	48.08	.5	.5					
QC813411	SER	Soil	.97	50	1	51.55							
QC813412	PDS	Soil	.97	50	1	51.55							

Analyst: CRT

Date: 11/20/15

Reviewer: JDB

Date: 11/20/15



Soil Digestion for ICP & ICP-MS

Curtis & Tompkins, Ltd.

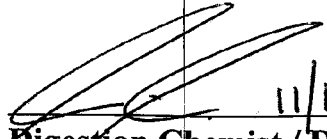
LIMS Batch #: 229593  
 Date Digested: 11/18/15  
 Digested by: RFC

Scale Used  Metals Prep  
 Digestion Method  EPA 3050b

BK3738  
 Page 68

Lvl.	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID	Comments
	BLANK		0	50	Y	QC813406	
	BS		0	50			-407
	BSD		0	50			-408
	MS		1.00	50			-409
5	MSD		1.04	50			-410
II	271626-007	B	1.09	50			
	-009	B	0.93	50			
	-011	B	1.10	50			
	-012	B	1.03	50			
10	-013	B	1.03	50			
	-014	B	1.01	50			
	-015	B	0.96	50			
	-016	B	1.03	50			
	-017	B	1.02	50			
15	-018	B	1.07	50			
	-019	A	1.07	50			COMP 271626-001-003@4K
	-020	A	1.03	50			-004-006 ↓
	271642-006	B	0.92	50			
III	271668-001	B	0.97	50			MSS
20	-002	B	1.07	50			
II	271729-001	B	0.96	50			
				50			
				50			
				50			
				50			

Digestion tubes, lot#	SCP228141	Initials / Dat	RFC 11/18/15
0.50 mL of spike solution (Std1) was added to all spikes	S26660		
0.50 mL of spike solution (Std2) was added to all spikes	S26661		
Digestion Temperature (°C), Block and Probe Location	93° C19		
Digestion begun at (time)	14:05		
1:1 HNO3	JTB113071		
concentrated HNO3	JTB113071		
3mL 30% hydrogen peroxide	FS152097		
concentrated HCl	FS4115050		
Digestion ended at (time)	17:20		
<input type="checkbox"/> filtered	WHAT9669435		
Relinquished to ICP group	ICP		

  
 11/18/15  
 Digestion Chemist / Date

Continued from page 0  
 Continued on page \_\_\_\_\_

Reviewed Online / See LIMS

Laboratory Job Number 271668

ANALYTICAL REPORT

Wet Chemistry

Matrix: Soil

Percent Moisture Summary Report

Batch: 229509  
 Date: 11/16/15  
 Method: CLP SOW 390  
 Analyst: MFV

Sample	Tare (g)	Wet (g)	Dry (g)	Percent Solids	Percent Moisture
271612-001	11.3113	18.3317	17.9630	95	5
271653-002	11.0603	17.0841	16.4815	90	10
271668-001	10.9009	17.4576	16.6765	88	12
271668-002	11.3714	16.9195	16.2624	88	12
271672-001	11.3006	16.8257	16.0787	86	14
271672-002	11.1507	17.8865	16.9131	86	14
271672-003	11.0013	16.8839	15.9416	84	16
271672-004	11.3655	18.5978	17.4822	85	15
271672-005	11.4510	17.8031	17.0781	89	11
271672-006	11.3502	18.0474	17.2276	88	12
271672-007	10.8404	17.5912	16.1270	78	22
271672-008	11.3129	17.2007	16.0624	81	19
271672-009	11.0345	19.1703	17.9362	85	15
271672-010	11.3590	16.4399	15.7286	86	14
271672-011	11.3150	18.1234	17.2177	87	13
271672-012	10.9578	17.1046	16.4416	89	11
QC813069	11.3522	17.2809	16.5534	88	12
of 271653-002			RPD:	2.6%	20.4%
QC813070	11.3149	17.4995	16.6556	86	14
of 271668-002			RPD:	2.1%	14.1%

Moisture LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 229509  
 Date: 11-16-15

Page: 44  
 Benchbook#: BK 3723  
 Scale Used  
 Leachates Analytical

Sample # / Letter	Dish #	Dish Weight (g)	Sample + Dish Wt (g)	Final Weight (g)	*Comments
BLK	18	11.1999	∅	11.1994	
271612-001 D	95	11.3113	18.3317	17.9630	
271653-002 N	40	11.0003	17.0841	16.4815	
271668-001 B	21	10.9009	17.4576	16.6765	
5 ↓ -002 B	93	11.3714	16.9195	16.2624	
271672-001 A	27	11.3006	16.8257	16.0787	
↑ -002	48	11.1507	17.8865	16.9131	
-003	3	11.0013	16.8839	15.9416	
-004	94	11.3655	18.5978	17.4822	
10 -005	29	11.4510	17.8031	17.0781	
-006	41	11.3502	18.0474	17.2276	
-007	90	10.8404	17.5912	16.1270	
-008	87	11.3129	17.2007	16.0624	
-009	73	11.0345	19.1703	17.9362	
15 -010	30	11.3590	16.4399	15.7286	
-011	88	11.3150	18.1234	17.2177	
↓ -012 ↓	7	10.9578	17.1046	16.4416	
271653-002 N	74	11.3522	17.2809	16.5834	Sdwp QC 813069
271668-002 B	12	11.3149	17.4995	16.6556	↓ QC 813070
20					

Date/ Time IN: 11-16-15 2200  
 Temp (C) IN: 104  
 Date/ Time OUT: 11-17-15 13:00  
 Temp (C) OUT: 104

*[Signature]* 11-16-15  
 Extraction Chemist Date

Reviewed Online / See LIMS

PROJECT

FE 163 METTLER

Notebook No. BK 2394

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Continued From Page

ARD  
10/29

DATE	ANALYST	0.2000	100.0000	SET#
10-26-15	MV	0.2001	100.0001	9907
10-27-15	MV	0.2000	100.0001	9907
10-28-15	ARD	0.2001	100.0000	9907
10-29-15	MV	0.2001	100.0000	9907
10-30-15	ARD	0.2000	99.9998	9907
10-31-15	MV	0.2000	99.9999	9907
11-1-15	VV	0.2001	99.9990	#9907
11-3-15	MV	0.2000	99.9998	9907
11-4-15	ARD	0.2001	100.0002	9907
11-5-15	MV	0.2001	100.0000	9907
11-6-15	MV	0.2000	100.0001	9907
11-7-15	MV	0.2000	100.0001	9907
11-9-15	MV	0.2001	100.0002	9907
11-10-15	MV	0.2001	100.0001	9907
11-12-15	MV	0.2000	100.0000	9907
11-16-15	MV	0.2000	99.9991	9907
11-17-15	ARD	0.2001	100.0000	9907

Continued on Page

Read and Understood By

Signed

Date

Signed

Date



**BABCOCK Laboratories, Inc.**  
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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 1 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

**Sample Identification**

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
B5K0213-01	516 RB 6026 Hanzel - N ---ROUTINE---	Liquid	10/30/15 12:40	Lisa Dernbach/	11/03/15 09:20	FedEx
B5K0213-02	516 RB 6027 MW - 4B ---ROUTINE---	Liquid	10/30/15 14:00	Lisa Dernbach/	11/03/15 09:20	FedEx
B5K0213-03	516 RB 6028 MW - 4A ---ROUTINE---	Liquid	10/30/15 13:45	Lisa Dernbach/	11/03/15 09:20	FedEx
B5K0213-04	516 RB 6029 EW - 4B ---ROUTINE---	Liquid	10/30/15 14:25	Lisa Dernbach/	11/03/15 09:20	FedEx
B5K0213-05	516 RB 6030 EW - 4A ---ROUTINE---	Liquid	10/30/15 14:45	Lisa Dernbach/	11/03/15 09:20	FedEx



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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 2 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Report Date: 09-Nov-2015

Work Order Number: B5K0213

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

B5K0213-01

Sample Description Matrix Sampled Date/Time Received Date/Time
516 RB 6026 Hanzel - N Liquid 10/30/15 12:40 11/03/15 9:20

Table with 9 columns: Analyte(s), Result, RDL, MDL, Units, Method, Analysis Date, Analyst, Flag. Rows include Diesel Range Organics by EPA 8015, Gasoline Range Organics by EPA 8015, and Volatile Organic Compounds by EPA 8260B.



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 3 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

## B5K0213-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
516 RB 6026 Hanzel - N	Liquid	10/30/15 12:40	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Acrolein	ND	10	1.1	ug/L	EPA 8260B	11/04/15 20:11	jes	
Acrylonitrile	ND	10	1.2	ug/L	EPA 8260B	11/04/15 20:11	jes	
Benzene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 20:11	jes	
Bromobenzene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:11	jes	
Bromochloromethane	ND	0.50	0.33	ug/L	EPA 8260B	11/04/15 20:11	jes	
Bromodichloromethane	ND	0.50	0.11	ug/L	EPA 8260B	11/04/15 20:11	jes	
Bromoform	ND	1.0	0.50	ug/L	EPA 8260B	11/04/15 20:11	jes	
Bromomethane	ND	0.50	0.48	ug/L	EPA 8260B	11/04/15 20:11	jes	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:11	jes	
Chlorobenzene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 20:11	jes	
Chloroethane	ND	0.50	0.35	ug/L	EPA 8260B	11/04/15 20:11	jes	
Chloroform	ND	0.50	0.46	ug/L	EPA 8260B	11/04/15 20:11	jes	
Chloromethane	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:11	jes	
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 20:11	jes	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	EPA 8260B	11/04/15 20:11	jes	
Dibromochloromethane	ND	0.50	0.37	ug/L	EPA 8260B	11/04/15 20:11	jes	
Dibromomethane	ND	0.50	0.16	ug/L	EPA 8260B	11/04/15 20:11	jes	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 20:11	jes	
Ethylbenzene	ND	0.50	0.26	ug/L	EPA 8260B	11/04/15 20:11	jes	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 20:11	jes	
Isopropylbenzene	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:11	jes	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	EPA 8260B	11/04/15 20:11	jes	
Methylene Chloride	ND	3.0	0.15	ug/L	EPA 8260B	11/04/15 20:11	jes	
Naphthalene	ND	0.50	0.44	ug/L	EPA 8260B	11/04/15 20:11	jes	
n-Butylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:11	jes	
n-Propylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:11	jes	
sec-Butylbenzene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 20:11	jes	
Styrene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:11	jes	
tert-Butylbenzene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 20:11	jes	
Tetrachloroethene	1.9	0.50	0.23	ug/L	EPA 8260B	11/04/15 20:11	jes	
Toluene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:11	jes	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	EPA 8260B	11/04/15 20:11	jes	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	EPA 8260B	11/04/15 20:11	jes	





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Client Name: Regional WQCB, Lahontan Tahoe Office  
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Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 4 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-01**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6026 Hanzel - N	Liquid	10/30/15 12:40	11/03/15 9:20

<u>Analyte(s)</u>	<u>Result</u>	<u>RDL</u>	<u>MDL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>Flag</u>
Volatile Organic Compounds by EPA 8260B								
Trichloroethene	ND	0.50	0.25	ug/L	EPA 8260B	11/04/15 20:11	jes	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	EPA 8260B	11/04/15 20:11	jes	
Vinyl Chloride	ND	0.50	0.13	ug/L	EPA 8260B	11/04/15 20:11	jes	
Xylenes (m+p)	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:11	jes	
Xylenes (ortho)	ND	0.50	0.41	ug/L	EPA 8260B	11/04/15 20:11	jes	
Diisopropyl ether	ND	3.0	0.30	ug/L	EPA 8260B	11/04/15 20:11	jes	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	EPA 8260B	11/04/15 20:11	jes	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	EPA 8260B	11/04/15 20:11	jes	
Tert-butyl alcohol	ND	50	2.1	ug/L	EPA 8260B	11/04/15 20:11	jes	
Surrogate: 1,2-Dichloroethane-d4	96.9	% 80-120			EPA 8260B	11/04/15 20:11	jes	
Surrogate: Bromofluorobenzene	97.2	% 80-120			EPA 8260B	11/04/15 20:11	jes	
Surrogate: Toluene-d8	92.5	% 80-120			EPA 8260B	11/04/15 20:11	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
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Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 5 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

Report Date: 09-Nov-2015

**Work Order Number: B5K0213**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6027 MW - 4B	Liquid	10/30/15 14:00	11/03/15 9:20

<b>Analyte(s)</b>	<b>Result</b>	<b>RDL</b>	<b>MDL</b>	<b>Units</b>	<b>Method</b>	<b>Analysis Date</b>	<b>Analyst</b>	<b>Flag</b>
<b>Diesel Range Organics by EPA 8015</b>								
DRO (C10-C28)	ND	5.0	0.78	mg/L	EPA 8015B	11/05/15 18:55	jhr	
ORO (C29-C44)	ND	5.0	2.2	mg/L	EPA 8015B	11/05/15 18:55	jhr	
Surrogate: <i>o</i> -Terphenyl	94.3	% 45-127			EPA 8015B	11/05/15 18:55	jhr	
Surrogate: <i>n</i> -Triacontane	83.8	% 41-118			EPA 8015B	11/05/15 18:55	jhr	
<b>Gasoline Range Organics by EPA 8015</b>								
Gasoline Range Organics	0.081	0.050	0.024	mg/L	EPA 8015B	11/03/15 22:16	jes	NHCno
Surrogate: <i>a,a,a</i> -Trifluorotoluene	69.1	% 10-110			EPA 8015B	11/03/15 22:16	jes	
<b>Volatile Organic Compounds by EPA 8260B</b>								
1,1,1,2-Tetrachloroethane	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1,1-Trichloroethane	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1,2-Trichloroethane	ND	0.50	0.31	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1-Dichloroethane	ND	0.50	0.098	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,1-Dichloropropene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2,3-Trichlorobenzene	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2,3-Trichloropropane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2,4-Trichlorobenzene	ND	0.50	0.34	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2,4-Trimethylbenzene	ND	0.50	0.093	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2-Dichlorobenzene	ND	0.50	0.20	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2-Dichloroethane	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,2-Dichloropropane	ND	0.50	0.19	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,3,5-Trimethylbenzene	ND	0.50	0.079	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,3-Dichlorobenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,3-Dichloropropane	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:41	jes	
1,4-Dichlorobenzene	ND	0.50	0.072	ug/L	EPA 8260B	11/04/15 20:41	jes	
2,2-Dichloropropane	ND	0.50	0.49	ug/L	EPA 8260B	11/04/15 20:41	jes	
2-Butanone(MEK)	ND	3.0	1.2	ug/L	EPA 8260B	11/04/15 20:41	jes	
2-Chlorotoluene	ND	0.50	0.092	ug/L	EPA 8260B	11/04/15 20:41	jes	
4-Chlorotoluene	ND	0.50	0.095	ug/L	EPA 8260B	11/04/15 20:41	jes	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	0.95	ug/L	EPA 8260B	11/04/15 20:41	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 6 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6027 MW - 4B	Liquid	10/30/15 14:00	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Acrolein	ND	10	1.1	ug/L	EPA 8260B	11/04/15 20:41	jes	
Acrylonitrile	ND	10	1.2	ug/L	EPA 8260B	11/04/15 20:41	jes	
Benzene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 20:41	jes	
Bromobenzene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:41	jes	
Bromochloromethane	ND	0.50	0.33	ug/L	EPA 8260B	11/04/15 20:41	jes	
Bromodichloromethane	ND	0.50	0.11	ug/L	EPA 8260B	11/04/15 20:41	jes	
Bromoform	ND	1.0	0.50	ug/L	EPA 8260B	11/04/15 20:41	jes	
Bromomethane	ND	0.50	0.48	ug/L	EPA 8260B	11/04/15 20:41	jes	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:41	jes	
Chlorobenzene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 20:41	jes	
Chloroethane	ND	0.50	0.35	ug/L	EPA 8260B	11/04/15 20:41	jes	
Chloroform	ND	0.50	0.46	ug/L	EPA 8260B	11/04/15 20:41	jes	
Chloromethane	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:41	jes	
cis-1,2-Dichloroethene	2.1	0.50	0.18	ug/L	EPA 8260B	11/04/15 20:41	jes	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	EPA 8260B	11/04/15 20:41	jes	
Dibromochloromethane	ND	0.50	0.37	ug/L	EPA 8260B	11/04/15 20:41	jes	
Dibromomethane	ND	0.50	0.16	ug/L	EPA 8260B	11/04/15 20:41	jes	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 20:41	jes	
Ethylbenzene	ND	0.50	0.26	ug/L	EPA 8260B	11/04/15 20:41	jes	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 20:41	jes	
Isopropylbenzene	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:41	jes	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	EPA 8260B	11/04/15 20:41	jes	
Methylene Chloride	ND	3.0	0.15	ug/L	EPA 8260B	11/04/15 20:41	jes	
Naphthalene	ND	0.50	0.44	ug/L	EPA 8260B	11/04/15 20:41	jes	
n-Butylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:41	jes	
n-Propylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 20:41	jes	
sec-Butylbenzene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 20:41	jes	
Styrene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:41	jes	
tert-Butylbenzene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 20:41	jes	
Tetrachloroethene	150	5.0	2.3	ug/L	EPA 8260B	11/07/15 10:49	eec	
Toluene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 20:41	jes	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	EPA 8260B	11/04/15 20:41	jes	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	EPA 8260B	11/04/15 20:41	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 7 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

**B5K0213-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6027 MW - 4B	Liquid	10/30/15 14:00	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Trichloroethene	5.4	0.50	0.25	ug/L	EPA 8260B	11/04/15 20:41	jes	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	EPA 8260B	11/04/15 20:41	jes	
Vinyl Chloride	ND	0.50	0.13	ug/L	EPA 8260B	11/04/15 20:41	jes	
Xylenes (m+p)	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 20:41	jes	
Xylenes (ortho)	ND	0.50	0.41	ug/L	EPA 8260B	11/04/15 20:41	jes	
Diisopropyl ether	ND	3.0	0.30	ug/L	EPA 8260B	11/04/15 20:41	jes	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	EPA 8260B	11/04/15 20:41	jes	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	EPA 8260B	11/04/15 20:41	jes	
Tert-butyl alcohol	ND	50	2.1	ug/L	EPA 8260B	11/04/15 20:41	jes	
Surrogate: 1,2-Dichloroethane-d4	95.8	% 80-120			EPA 8260B	11/07/15 10:49	eec	
Surrogate: 1,2-Dichloroethane-d4	96.0	% 80-120			EPA 8260B	11/04/15 20:41	jes	
Surrogate: Bromofluorobenzene	96.8	% 80-120			EPA 8260B	11/07/15 10:49	eec	
Surrogate: Bromofluorobenzene	98.3	% 80-120			EPA 8260B	11/04/15 20:41	jes	
Surrogate: Toluene-d8	90.9	% 80-120			EPA 8260B	11/07/15 10:49	eec	
Surrogate: Toluene-d8	90.7	% 80-120			EPA 8260B	11/04/15 20:41	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 8 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

## B5K0213-03

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
516 RB 6028 MW - 4A	Liquid	10/30/15 13:45	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Diesel Range Organics by EPA 8015								
DRO (C10-C28)	ND	5.0	0.78	mg/L	EPA 8015B	11/05/15 19:19	jhr	
ORO (C29-C44)	ND	5.0	2.2	mg/L	EPA 8015B	11/05/15 19:19	jhr	
Surrogate: o-Terphenyl	72.8	% 45-127			EPA 8015B	11/05/15 19:19	jhr	
Surrogate: n-Triacontane	66.5	% 41-118			EPA 8015B	11/05/15 19:19	jhr	
Gasoline Range Organics by EPA 8015								
Gasoline Range Organics	0.024	0.050	0.024	mg/L	EPA 8015B	11/03/15 22:49	jes	J
Surrogate: a,a,a-Trifluorotoluene	59.0	% 10-110			EPA 8015B	11/03/15 22:49	jes	
Volatile Organic Compounds by EPA 8260B								
1,1,1,2-Tetrachloroethane	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1,1-Trichloroethane	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1,2-Trichloroethane	ND	0.50	0.31	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1-Dichloroethane	ND	0.50	0.098	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,1-Dichloropropene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2,3-Trichlorobenzene	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2,3-Trichloropropane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2,4-Trichlorobenzene	ND	0.50	0.34	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2,4-Trimethylbenzene	ND	0.50	0.093	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2-Dichlorobenzene	ND	0.50	0.20	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2-Dichloroethane	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,2-Dichloropropane	ND	0.50	0.19	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,3,5-Trimethylbenzene	ND	0.50	0.079	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,3-Dichlorobenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,3-Dichloropropane	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:11	jes	
1,4-Dichlorobenzene	ND	0.50	0.072	ug/L	EPA 8260B	11/04/15 21:11	jes	
2,2-Dichloropropane	ND	0.50	0.49	ug/L	EPA 8260B	11/04/15 21:11	jes	
2-Butanone(MEK)	ND	3.0	1.2	ug/L	EPA 8260B	11/04/15 21:11	jes	
2-Chlorotoluene	ND	0.50	0.092	ug/L	EPA 8260B	11/04/15 21:11	jes	
4-Chlorotoluene	ND	0.50	0.095	ug/L	EPA 8260B	11/04/15 21:11	jes	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	0.95	ug/L	EPA 8260B	11/04/15 21:11	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 9 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

## B5K0213-03

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
516 RB 6028 MW - 4A	Liquid	10/30/15 13:45	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Acrolein	ND	10	1.1	ug/L	EPA 8260B	11/04/15 21:11	jes	
Acrylonitrile	ND	10	1.2	ug/L	EPA 8260B	11/04/15 21:11	jes	
Benzene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:11	jes	
Bromobenzene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:11	jes	
Bromochloromethane	ND	0.50	0.33	ug/L	EPA 8260B	11/04/15 21:11	jes	
Bromodichloromethane	ND	0.50	0.11	ug/L	EPA 8260B	11/04/15 21:11	jes	
Bromoform	ND	1.0	0.50	ug/L	EPA 8260B	11/04/15 21:11	jes	
Bromomethane	ND	0.50	0.48	ug/L	EPA 8260B	11/04/15 21:11	jes	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:11	jes	
Chlorobenzene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 21:11	jes	
Chloroethane	ND	0.50	0.35	ug/L	EPA 8260B	11/04/15 21:11	jes	
Chloroform	ND	0.50	0.46	ug/L	EPA 8260B	11/04/15 21:11	jes	
Chloromethane	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:11	jes	
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 21:11	jes	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	EPA 8260B	11/04/15 21:11	jes	
Dibromochloromethane	ND	0.50	0.37	ug/L	EPA 8260B	11/04/15 21:11	jes	
Dibromomethane	ND	0.50	0.16	ug/L	EPA 8260B	11/04/15 21:11	jes	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 21:11	jes	
Ethylbenzene	ND	0.50	0.26	ug/L	EPA 8260B	11/04/15 21:11	jes	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:11	jes	
Isopropylbenzene	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:11	jes	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	EPA 8260B	11/04/15 21:11	jes	
Methylene Chloride	ND	3.0	0.15	ug/L	EPA 8260B	11/04/15 21:11	jes	
Naphthalene	ND	0.50	0.44	ug/L	EPA 8260B	11/04/15 21:11	jes	
n-Butylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:11	jes	
n-Propylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:11	jes	
sec-Butylbenzene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:11	jes	
Styrene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:11	jes	
tert-Butylbenzene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:11	jes	
Tetrachloroethene	14	0.50	0.23	ug/L	EPA 8260B	11/04/15 21:11	jes	
Toluene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:11	jes	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	EPA 8260B	11/04/15 21:11	jes	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	EPA 8260B	11/04/15 21:11	jes	





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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 10 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-03**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6028 MW - 4A	Liquid	10/30/15 13:45	11/03/15 9:20

<b>Analyte(s)</b>	<b>Result</b>	<b>RDL</b>	<b>MDL</b>	<b>Units</b>	<b>Method</b>	<b>Analysis Date</b>	<b>Analyst</b>	<b>Flag</b>
Volatile Organic Compounds by EPA 8260B								
Trichloroethene	0.46	0.50	0.25	ug/L	EPA 8260B	11/04/15 21:11	jes	J
Trichlorofluoromethane	ND	5.0	0.16	ug/L	EPA 8260B	11/04/15 21:11	jes	
Vinyl Chloride	ND	0.50	0.13	ug/L	EPA 8260B	11/04/15 21:11	jes	
Xylenes (m+p)	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:11	jes	
Xylenes (ortho)	ND	0.50	0.41	ug/L	EPA 8260B	11/04/15 21:11	jes	
Diisopropyl ether	ND	3.0	0.30	ug/L	EPA 8260B	11/04/15 21:11	jes	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	EPA 8260B	11/04/15 21:11	jes	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	EPA 8260B	11/04/15 21:11	jes	
Tert-butyl alcohol	ND	50	2.1	ug/L	EPA 8260B	11/04/15 21:11	jes	
Surrogate: 1,2-Dichloroethane-d4	97.5	% 80-120			EPA 8260B	11/04/15 21:11	jes	
Surrogate: Bromofluorobenzene	99.4	% 80-120			EPA 8260B	11/04/15 21:11	jes	
Surrogate: Toluene-d8	91.0	% 80-120			EPA 8260B	11/04/15 21:11	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 11 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

Report Date: 09-Nov-2015

Work Order Number: **B5K0213**

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

## B5K0213-04

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
516 RB 6029 EW - 4B	Liquid	10/30/15 14:25	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
<b>Diesel Range Organics by EPA 8015</b>								
DRO (C10-C28)	ND	5.0	0.78	mg/L	EPA 8015B	11/05/15 19:43	jhr	
ORO (C29-C44)	ND	5.0	2.2	mg/L	EPA 8015B	11/05/15 19:43	jhr	
Surrogate: <i>o</i> -Terphenyl	94.8	% 45-127			EPA 8015B	11/05/15 19:43	jhr	
Surrogate: <i>n</i> -Triacontane	81.3	% 41-118			EPA 8015B	11/05/15 19:43	jhr	
<b>Gasoline Range Organics by EPA 8015</b>								
Gasoline Range Organics	ND	0.050	0.024	mg/L	EPA 8015B	11/03/15 23:23	jes	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	55.7	% 10-110			EPA 8015B	11/03/15 23:23	jes	
<b>Volatile Organic Compounds by EPA 8260B</b>								
1,1,1,2-Tetrachloroethane	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1,1-Trichloroethane	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1,2-Trichloroethane	ND	0.50	0.31	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1-Dichloroethane	ND	0.50	0.098	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,1-Dichloropropene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2,3-Trichlorobenzene	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2,3-Trichloropropane	ND	0.50	0.29	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2,4-Trichlorobenzene	ND	0.50	0.34	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2,4-Trimethylbenzene	ND	0.50	0.093	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2-Dichlorobenzene	ND	0.50	0.20	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2-Dichloroethane	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,2-Dichloropropane	ND	0.50	0.19	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,3,5-Trimethylbenzene	ND	0.50	0.079	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,3-Dichlorobenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,3-Dichloropropane	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:41	jes	
1,4-Dichlorobenzene	ND	0.50	0.072	ug/L	EPA 8260B	11/04/15 21:41	jes	
2,2-Dichloropropane	ND	0.50	0.49	ug/L	EPA 8260B	11/04/15 21:41	jes	
2-Butanone(MEK)	1.2	3.0	1.2	ug/L	EPA 8260B	11/04/15 21:41	jes	J
2-Chlorotoluene	ND	0.50	0.092	ug/L	EPA 8260B	11/04/15 21:41	jes	
4-Chlorotoluene	ND	0.50	0.095	ug/L	EPA 8260B	11/04/15 21:41	jes	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	0.95	ug/L	EPA 8260B	11/04/15 21:41	jes	





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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 12 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-04**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6029 EW - 4B	Liquid	10/30/15 14:25	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Acrolein	ND	10	1.1	ug/L	EPA 8260B	11/04/15 21:41	jes	
Acrylonitrile	ND	10	1.2	ug/L	EPA 8260B	11/04/15 21:41	jes	
Benzene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 21:41	jes	
Bromobenzene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:41	jes	
Bromochloromethane	ND	0.50	0.33	ug/L	EPA 8260B	11/04/15 21:41	jes	
Bromodichloromethane	ND	0.50	0.11	ug/L	EPA 8260B	11/04/15 21:41	jes	
Bromoform	ND	1.0	0.50	ug/L	EPA 8260B	11/04/15 21:41	jes	
Bromomethane	ND	0.50	0.48	ug/L	EPA 8260B	11/04/15 21:41	jes	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:41	jes	
Chlorobenzene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 21:41	jes	
Chloroethane	ND	0.50	0.35	ug/L	EPA 8260B	11/04/15 21:41	jes	
Chloroform	ND	0.50	0.46	ug/L	EPA 8260B	11/04/15 21:41	jes	
Chloromethane	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:41	jes	
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 21:41	jes	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	EPA 8260B	11/04/15 21:41	jes	
Dibromochloromethane	ND	0.50	0.37	ug/L	EPA 8260B	11/04/15 21:41	jes	
Dibromomethane	ND	0.50	0.16	ug/L	EPA 8260B	11/04/15 21:41	jes	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 21:41	jes	
Ethylbenzene	ND	0.50	0.26	ug/L	EPA 8260B	11/04/15 21:41	jes	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:41	jes	
Isopropylbenzene	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:41	jes	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	EPA 8260B	11/04/15 21:41	jes	
Methylene Chloride	ND	3.0	0.15	ug/L	EPA 8260B	11/04/15 21:41	jes	
Naphthalene	ND	0.50	0.44	ug/L	EPA 8260B	11/04/15 21:41	jes	
n-Butylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:41	jes	
n-Propylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 21:41	jes	
sec-Butylbenzene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 21:41	jes	
Styrene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:41	jes	
tert-Butylbenzene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 21:41	jes	
Tetrachloroethene	0.49	0.50	0.23	ug/L	EPA 8260B	11/04/15 21:41	jes	J
Toluene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 21:41	jes	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	EPA 8260B	11/04/15 21:41	jes	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	EPA 8260B	11/04/15 21:41	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 13 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

**B5K0213-04**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6029 EW - 4B	Liquid	10/30/15 14:25	11/03/15 9:20

<u>Analyte(s)</u>	<u>Result</u>	<u>RDL</u>	<u>MDL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>Flag</u>
Volatile Organic Compounds by EPA 8260B								
Trichloroethene	ND	0.50	0.25	ug/L	EPA 8260B	11/04/15 21:41	jes	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	EPA 8260B	11/04/15 21:41	jes	
Vinyl Chloride	ND	0.50	0.13	ug/L	EPA 8260B	11/04/15 21:41	jes	
Xylenes (m+p)	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 21:41	jes	
Xylenes (ortho)	ND	0.50	0.41	ug/L	EPA 8260B	11/04/15 21:41	jes	
Diisopropyl ether	ND	3.0	0.30	ug/L	EPA 8260B	11/04/15 21:41	jes	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	EPA 8260B	11/04/15 21:41	jes	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	EPA 8260B	11/04/15 21:41	jes	
Tert-butyl alcohol	ND	50	2.1	ug/L	EPA 8260B	11/04/15 21:41	jes	
Surrogate: 1,2-Dichloroethane-d4	99.6	% 80-120			EPA 8260B	11/04/15 21:41	jes	
Surrogate: Bromofluorobenzene	95.8	% 80-120			EPA 8260B	11/04/15 21:41	jes	
Surrogate: Toluene-d8	93.0	% 80-120			EPA 8260B	11/04/15 21:41	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 14 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Report Date: 09-Nov-2015

Work Order Number: B5K0213

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

B5K0213-05

Sample Description: 516 RB 6030 EW - 4A
Matrix: Liquid
Sampled Date/Time: 10/30/15 14:45
Received Date/Time: 11/03/15 9:20

Table with columns: Analyte(s), Result, RDL, MDL, Units, Method, Analysis Date, Analyst, Flag. Rows include Diesel Range Organics by EPA 8015, Gasoline Range Organics by EPA 8015, and Volatile Organic Compounds by EPA 8260B.



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 15 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

### Laboratory Reference Number

## B5K0213-05

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
516 RB 6030 EW - 4A	Liquid	10/30/15 14:45	11/03/15 9:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 8260B								
Acrolein	ND	10	1.1	ug/L	EPA 8260B	11/04/15 22:12	jes	
Acrylonitrile	ND	10	1.2	ug/L	EPA 8260B	11/04/15 22:12	jes	
Benzene	ND	0.50	0.14	ug/L	EPA 8260B	11/04/15 22:12	jes	
Bromobenzene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 22:12	jes	
Bromochloromethane	ND	0.50	0.33	ug/L	EPA 8260B	11/04/15 22:12	jes	
Bromodichloromethane	ND	0.50	0.11	ug/L	EPA 8260B	11/04/15 22:12	jes	
Bromoform	ND	1.0	0.50	ug/L	EPA 8260B	11/04/15 22:12	jes	
Bromomethane	ND	0.50	0.48	ug/L	EPA 8260B	11/04/15 22:12	jes	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 22:12	jes	
Chlorobenzene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 22:12	jes	
Chloroethane	ND	0.50	0.35	ug/L	EPA 8260B	11/04/15 22:12	jes	
Chloroform	ND	0.50	0.46	ug/L	EPA 8260B	11/04/15 22:12	jes	
Chloromethane	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 22:12	jes	
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 22:12	jes	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	EPA 8260B	11/04/15 22:12	jes	
Dibromochloromethane	ND	0.50	0.37	ug/L	EPA 8260B	11/04/15 22:12	jes	
Dibromomethane	ND	0.50	0.16	ug/L	EPA 8260B	11/04/15 22:12	jes	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	EPA 8260B	11/04/15 22:12	jes	
Ethylbenzene	ND	0.50	0.26	ug/L	EPA 8260B	11/04/15 22:12	jes	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 22:12	jes	
Isopropylbenzene	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 22:12	jes	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	EPA 8260B	11/04/15 22:12	jes	
Methylene Chloride	ND	3.0	0.15	ug/L	EPA 8260B	11/04/15 22:12	jes	
Naphthalene	ND	0.50	0.44	ug/L	EPA 8260B	11/04/15 22:12	jes	
n-Butylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 22:12	jes	
n-Propylbenzene	ND	0.50	0.15	ug/L	EPA 8260B	11/04/15 22:12	jes	
sec-Butylbenzene	ND	0.50	0.12	ug/L	EPA 8260B	11/04/15 22:12	jes	
Styrene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 22:12	jes	
tert-Butylbenzene	ND	0.50	0.21	ug/L	EPA 8260B	11/04/15 22:12	jes	
Tetrachloroethene	ND	0.50	0.23	ug/L	EPA 8260B	11/04/15 22:12	jes	
Toluene	ND	0.50	0.22	ug/L	EPA 8260B	11/04/15 22:12	jes	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	EPA 8260B	11/04/15 22:12	jes	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	EPA 8260B	11/04/15 22:12	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 16 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**B5K0213-05**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
516 RB 6030 EW - 4A	Liquid	10/30/15 14:45	11/03/15 9:20

<u>Analyte(s)</u>	<u>Result</u>	<u>RDL</u>	<u>MDL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>Flag</u>
Volatile Organic Compounds by EPA 8260B								
Trichloroethene	ND	0.50	0.25	ug/L	EPA 8260B	11/04/15 22:12	jes	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	EPA 8260B	11/04/15 22:12	jes	
Vinyl Chloride	ND	0.50	0.13	ug/L	EPA 8260B	11/04/15 22:12	jes	
Xylenes (m+p)	ND	0.50	0.36	ug/L	EPA 8260B	11/04/15 22:12	jes	
Xylenes (ortho)	ND	0.50	0.41	ug/L	EPA 8260B	11/04/15 22:12	jes	
Diisopropyl ether	ND	3.0	0.30	ug/L	EPA 8260B	11/04/15 22:12	jes	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	EPA 8260B	11/04/15 22:12	jes	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	EPA 8260B	11/04/15 22:12	jes	
Tert-butyl alcohol	ND	50	2.1	ug/L	EPA 8260B	11/04/15 22:12	jes	
Surrogate: 1,2-Dichloroethane-d4	97.4	% 80-120			EPA 8260B	11/04/15 22:12	jes	
Surrogate: Bromofluorobenzene	98.1	% 80-120			EPA 8260B	11/04/15 22:12	jes	
Surrogate: Toluene-d8	92.5	% 80-120			EPA 8260B	11/04/15 22:12	jes	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 17 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Diesel Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Flag
<b>Batch 5K04106 - Microextraction</b>										
<b>Blank (5K04106-BLK1)</b>					Prepared & Analyzed: 11/05/15					
DRO (C10-C28)	ND	5.0	0.78	mg/L						
ORO (C29-C44)	ND	5.0	2.2	mg/L						
Surrogate: o-Terphenyl	2.1			mg/L	2.14	96.0	45-127			
Surrogate: n-Triacontane	1.1			mg/L	1.57	71.1	41-118			
<b>LCS (5K04106-BS1)</b>					Prepared: 11/05/15 Analyzed: 11/06/15					
DRO (C10-C28)	28.9	5.0	0.78	mg/L	28.6	101	47-124			
ORO (C29-C44)	27.5	5.0	2.2	mg/L	28.6	96.2	50-119			
Surrogate: o-Terphenyl	2.2			mg/L	2.14	101	45-127			
Surrogate: n-Triacontane	1.6			mg/L	1.57	104	41-118			
<b>LCS Dup (5K04106-BSD1)</b>					Prepared & Analyzed: 11/05/15					
DRO (C10-C28)	27.6	5.0	0.78	mg/L	28.6	96.6	47-124	4.54	20	
ORO (C29-C44)	27.0	5.0	2.2	mg/L	28.6	94.4	50-119	1.91	20	
Surrogate: o-Terphenyl	2.0			mg/L	2.14	95.5	45-127			
Surrogate: n-Triacontane	1.6			mg/L	1.57	102	41-118			
<b>Matrix Spike (5K04106-MS1)</b>					Source: B5J2621-01 Prepared & Analyzed: 11/05/15					Q_nes
DRO (C10-C28)	27.9	5.0	0.78	mg/L	28.6	ND	97.6	41-117		
ORO (C29-C44)	27.4	5.0	2.2	mg/L	28.6	ND	95.9	43-111		
Surrogate: o-Terphenyl	2.0			mg/L	2.14	94.3	45-127			
Surrogate: n-Triacontane	1.6			mg/L	1.57	100	41-118			



# BABCOCK Laboratories, Inc.

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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 18 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Gasoline Range Organics by EPA 8015 - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K03086 - Purge and Trap</b>										
<b>Blank (5K03086-BLK1)</b>				Prepared & Analyzed: 11/03/15						
Gasoline Range Organics	ND	0.050	0.024	mg/L						
Surrogate: a,a,a-Trifluorotoluene	0.13			mg/L	0.215		59.0		10-110	
<b>LCS (5K03086-BS1)</b>				Prepared & Analyzed: 11/03/15						
Gasoline Range Organics	2.69	0.050	0.024	mg/L	2.32		116		69-145	
Surrogate: a,a,a-Trifluorotoluene	0.23			mg/L	0.215		106		10-110	
<b>LCS Dup (5K03086-BSD1)</b>				Prepared & Analyzed: 11/03/15						
Gasoline Range Organics	2.64	0.050	0.024	mg/L	2.32		114	69-145	2.02	40
Surrogate: a,a,a-Trifluorotoluene	0.23			mg/L	0.215		108		10-110	
<b>Matrix Spike (5K03086-MS1)</b>				Source: B5J2621-01 Prepared & Analyzed: 11/03/15						
Gasoline Range Organics	2.50	0.050	0.024	mg/L	2.50	ND	100	63-140		
Surrogate: a,a,a-Trifluorotoluene	0.23			mg/L	0.215		105		10-110	
<b>Matrix Spike Dup (5K03086-MSD1)</b>				Source: B5J2621-01 Prepared & Analyzed: 11/03/15						
Gasoline Range Organics	2.32	0.050	0.024	mg/L	2.50	ND	93.0	63-140	7.23	40
Surrogate: a,a,a-Trifluorotoluene	0.22			mg/L	0.215		104		10-110	





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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 19 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

**Volatile Organic Compounds by EPA 8260B - Batch Quality Control**

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Flag
<b>Batch 5K04104 - Purge and Trap</b>										
<b>Blank (5K04104-BLK1)</b>					Prepared & Analyzed: 11/04/15					
1,1,1,2-Tetrachloroethane	ND	0.50	0.14	ug/L						
1,1,1-Trichloroethane	ND	0.50	0.12	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/L						
1,1,2-Trichloroethane	ND	0.50	0.31	ug/L						
1,1-Dichloroethane	ND	0.50	0.098	ug/L						
1,1-Dichloroethene	ND	0.50	0.12	ug/L						
1,1-Dichloropropene	ND	0.50	0.14	ug/L						
1,2,3-Trichlorobenzene	ND	0.50	0.29	ug/L						
1,2,3-Trichloropropane	ND	0.50	0.29	ug/L						
1,2,4-Trichlorobenzene	ND	0.50	0.34	ug/L						
1,2,4-Trimethylbenzene	ND	0.50	0.093	ug/L						
1,2-Dichlorobenzene	ND	0.50	0.20	ug/L						
1,2-Dichloroethane	ND	0.50	0.21	ug/L						
1,2-Dichloropropane	ND	0.50	0.19	ug/L						
1,3,5-Trimethylbenzene	ND	0.50	0.079	ug/L						
1,3-Dichlorobenzene	ND	0.50	0.15	ug/L						
1,3-Dichloropropane	ND	0.50	0.22	ug/L						
1,4-Dichlorobenzene	ND	0.50	0.072	ug/L						
2,2-Dichloropropane	ND	0.50	0.49	ug/L						
2-Butanone(MEK)	ND	3.0	1.2	ug/L						
2-Chlorotoluene	ND	0.50	0.092	ug/L						
4-Chlorotoluene	ND	0.50	0.095	ug/L						
4-Methyl-2-Pentanone(MIBK)	ND	5.0	0.95	ug/L						
Acrolein	ND	10	1.1	ug/L						
Acrylonitrile	ND	10	1.2	ug/L						
Benzene	ND	0.50	0.14	ug/L						
Bromobenzene	ND	0.50	0.22	ug/L						
Bromochloromethane	ND	0.50	0.33	ug/L						
Bromodichloromethane	ND	0.50	0.11	ug/L						
Bromoform	ND	1.0	0.50	ug/L						
Bromomethane	ND	0.50	0.48	ug/L						
Carbon Tetrachloride	ND	0.50	0.15	ug/L						
Chlorobenzene	ND	0.50	0.23	ug/L						
Chloroethane	ND	0.50	0.35	ug/L						
Chloroform	ND	0.50	0.46	ug/L						
Chloromethane	ND	0.50	0.36	ug/L						





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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 20 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K04104 - Purge and Trap</b>										
<b>Blank (5K04104-BLK1)</b>					Prepared & Analyzed: 11/04/15					
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L						
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L						
Dibromochloromethane	ND	0.50	0.37	ug/L						
Dibromomethane	ND	0.50	0.16	ug/L						
Dichlorodifluoromethane	ND	0.50	0.18	ug/L						
Ethylbenzene	ND	0.50	0.26	ug/L						
Hexachlorobutadiene	ND	0.50	0.21	ug/L						
Isopropylbenzene	ND	0.50	0.36	ug/L						
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L						
Methylene Chloride	ND	3.0	0.15	ug/L						
Naphthalene	ND	0.50	0.44	ug/L						
n-Butylbenzene	ND	0.50	0.15	ug/L						
n-Propylbenzene	ND	0.50	0.15	ug/L						
sec-Butylbenzene	ND	0.50	0.12	ug/L						
Styrene	ND	0.50	0.22	ug/L						
tert-Butylbenzene	ND	0.50	0.21	ug/L						
Tetrachloroethene	ND	0.50	0.23	ug/L						
Toluene	ND	0.50	0.22	ug/L						
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L						
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L						
Trichloroethene	ND	0.50	0.25	ug/L						
Trichlorofluoromethane	ND	5.0	0.16	ug/L						
Vinyl Chloride	ND	0.50	0.13	ug/L						
Xylenes (m+p)	ND	0.50	0.36	ug/L						
Xylenes (ortho)	ND	0.50	0.41	ug/L						
Diisopropyl ether	ND	3.0	0.30	ug/L						
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L						
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L						
Tert-butyl alcohol	ND	50	2.1	ug/L						
Surrogate: 1,2-Dichloroethane-d4	9.72			ug/L	10.0		97.2		80-120	
Surrogate: Bromofluorobenzene	9.73			ug/L	10.0		97.3		80-120	
Surrogate: Toluene-d8	9.33			ug/L	10.0		93.3		80-120	



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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 21 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Table with columns: Analyte(s), Result, RDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Flag. Includes sections for Batch 5K04104 - Purge and Trap, LCS (5K04104-BS1), and LCS Dup (5K04104-BSD1).



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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 22 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Table with columns: Analyte(s), Result, RDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Flag. Includes sections for Batch 5K04104 - Purge and Trap, LCS Dup (5K04104-BSD1), Duplicate (5K04104-DUP1), and Source: B5K0161-03.



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 23 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K04104 - Purge and Trap</b>									
<b>Duplicate (5K04104-DUP1)</b>		<b>Source: B5K0161-03</b>		Prepared: 11/04/15		Analyzed: 11/05/15			
Bromodichloromethane	ND	0.50	0.11	ug/L	ND			40	
Bromoform	ND	1.0	0.50	ug/L	ND			40	
Bromomethane	ND	0.50	0.48	ug/L	ND			40	
Carbon Tetrachloride	ND	0.50	0.15	ug/L	ND			40	
Chlorobenzene	ND	0.50	0.23	ug/L	ND			40	
Chloroethane	ND	0.50	0.35	ug/L	ND			40	
Chloroform	ND	0.50	0.46	ug/L	ND			40	
Chloromethane	ND	0.50	0.36	ug/L	ND			40	
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	ND			40	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	ND			40	
Dibromochloromethane	ND	0.50	0.37	ug/L	ND			40	
Dibromomethane	ND	0.50	0.16	ug/L	ND			40	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	ND			40	
Ethylbenzene	ND	0.50	0.26	ug/L	ND			40	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	ND			40	
Isopropylbenzene	ND	0.50	0.36	ug/L	ND			40	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	ND			40	
Methylene Chloride	ND	3.0	0.15	ug/L	ND			40	
Naphthalene	ND	0.50	0.44	ug/L	ND			40	
n-Butylbenzene	ND	0.50	0.15	ug/L	ND			40	
n-Propylbenzene	ND	0.50	0.15	ug/L	ND			40	
sec-Butylbenzene	ND	0.50	0.12	ug/L	ND			40	
Styrene	ND	0.50	0.22	ug/L	ND			40	
tert-Butylbenzene	ND	0.50	0.21	ug/L	ND			40	
Tetrachloroethene	ND	0.50	0.23	ug/L	ND			40	
Toluene	ND	0.50	0.22	ug/L	ND			40	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	ND			40	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	ND			40	
Trichloroethene	ND	0.50	0.25	ug/L	ND			40	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	ND			40	
Vinyl Chloride	ND	0.50	0.13	ug/L	ND			40	
Xylenes (m+p)	ND	0.50	0.36	ug/L	ND			40	
Xylenes (ortho)	ND	0.50	0.41	ug/L	ND			40	
Diisopropyl ether	ND	3.0	0.30	ug/L	ND			40	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	ND			40	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	ND			40	



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Client Name: Regional WQCB, Lahontan Tahoe Office  
 Contact: Rebecca Phillips  
 Address: 2501 Lake Tahoe Boulevard  
 Lake Tahoe, CA 96150

Analytical Report: Page 24 of 31  
 Project Name: CRWQCB -IFB #15-025-160  
 Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

**Volatile Organic Compounds by EPA 8260B - Batch Quality Control**

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K04104 - Purge and Trap</b>										
<b>Duplicate (5K04104-DUP1)</b>		<b>Source: B5K0161-03</b>		Prepared: 11/04/15		Analyzed: 11/05/15				
Tert-butyl alcohol	ND	50	2.1	ug/L	ND				40	
Surrogate: 1,2-Dichloroethane-d4	9.64			ug/L	10.0	96.4	80-120			
Surrogate: Bromofluorobenzene	9.72			ug/L	10.0	97.2	80-120			
Surrogate: Toluene-d8	9.28			ug/L	10.0	92.8	80-120			
<b>Matrix Spike (5K04104-MS1)</b>		<b>Source: B5K0302-01</b>		Prepared & Analyzed: 11/04/15						
1,1-Dichloroethane	24.3	0.50	0.098	ug/L	25.0	ND	97.4	70-130		
1,1-Dichloroethene	24.7	0.50	0.12	ug/L	25.0	ND	99.0	70-130		
1,4-Dichlorobenzene	26.0	0.50	0.072	ug/L	25.0	ND	104	70-130		
Benzene	25.1	0.50	0.14	ug/L	25.0	ND	100	70-130		
Bromodichloromethane	24.0	0.50	0.11	ug/L	25.0	ND	96.0	70-130		
Bromoform	23.8	1.0	0.50	ug/L	25.0	ND	95.1	70-130		
Chloroform	25.7	0.50	0.46	ug/L	25.0	ND	103	70-130		
Dibromochloromethane	25.7	0.50	0.37	ug/L	25.0	ND	103	70-130		
Ethylbenzene	27.4	0.50	0.26	ug/L	25.0	ND	110	70-130		
Methyl tert Butyl Ether	22.0	5.0	0.43	ug/L	25.0	ND	88.1	70-130		
Tetrachloroethene	28.2	0.50	0.23	ug/L	25.0	ND	113	70-130		
Toluene	25.5	0.50	0.22	ug/L	25.0	ND	102	70-130		
Trichloroethene	26.2	0.50	0.25	ug/L	25.0	ND	105	70-130		
Vinyl Chloride	29.3	0.50	0.13	ug/L	25.0	ND	117	70-130		
Xylenes (m+p)	54.0	0.50	0.36	ug/L	50.0	ND	108	70-130		
Xylenes (ortho)	27.2	0.50	0.41	ug/L	25.0	ND	109	70-130		
Surrogate: 1,2-Dichloroethane-d4	9.09			ug/L	10.0	90.9	80-120			
Surrogate: Bromofluorobenzene	9.53			ug/L	10.0	95.3	80-120			
Surrogate: Toluene-d8	9.44			ug/L	10.0	94.4	80-120			
<b>Batch 5K06034 - Purge and Trap</b>										
<b>Blank (5K06034-BLK1)</b>		Prepared: 11/06/15 Analyzed: 11/07/15								
1,1,1,2-Tetrachloroethane	ND	0.50	0.14	ug/L						
1,1,1-Trichloroethane	ND	0.50	0.12	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/L						
1,1,2-Trichloroethane	ND	0.50	0.31	ug/L						
1,1-Dichloroethane	ND	0.50	0.098	ug/L						
1,1-Dichloroethene	ND	0.50	0.12	ug/L						



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 25 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

**Volatile Organic Compounds by EPA 8260B - Batch Quality Control**

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Flag
<b>Batch 5K06034 - Purge and Trap</b>										
<b>Blank (5K06034-BLK1)</b>					Prepared: 11/06/15 Analyzed: 11/07/15					
1,1-Dichloropropene	ND	0.50	0.14	ug/L						
1,2,3-Trichlorobenzene	ND	0.50	0.29	ug/L						
1,2,3-Trichloropropane	ND	0.50	0.29	ug/L						
1,2,4-Trichlorobenzene	ND	0.50	0.34	ug/L						
1,2,4-Trimethylbenzene	ND	0.50	0.093	ug/L						
1,2-Dichlorobenzene	ND	0.50	0.20	ug/L						
1,2-Dichloroethane	ND	0.50	0.21	ug/L						
1,2-Dichloropropane	ND	0.50	0.19	ug/L						
1,3,5-Trimethylbenzene	ND	0.50	0.079	ug/L						
1,3-Dichlorobenzene	ND	0.50	0.15	ug/L						
1,3-Dichloropropane	ND	0.50	0.22	ug/L						
1,4-Dichlorobenzene	ND	0.50	0.072	ug/L						
2,2-Dichloropropane	ND	0.50	0.49	ug/L						
2-Butanone(MEK)	ND	3.0	1.2	ug/L						
2-Chlorotoluene	ND	0.50	0.092	ug/L						
4-Chlorotoluene	ND	0.50	0.095	ug/L						
4-Methyl-2-Pentanone(MIBK)	ND	5.0	0.95	ug/L						
Acrolein	ND	10	1.1	ug/L						
Acrylonitrile	ND	10	1.2	ug/L						
Benzene	ND	0.50	0.14	ug/L						
Bromobenzene	ND	0.50	0.22	ug/L						
Bromochloromethane	ND	0.50	0.33	ug/L						
Bromodichloromethane	ND	0.50	0.11	ug/L						
Bromoform	ND	1.0	0.50	ug/L						
Bromomethane	ND	0.50	0.48	ug/L						
Carbon Tetrachloride	ND	0.50	0.15	ug/L						
Chlorobenzene	ND	0.50	0.23	ug/L						
Chloroethane	ND	0.50	0.35	ug/L						
Chloroform	ND	0.50	0.46	ug/L						
Chloromethane	ND	0.50	0.36	ug/L						
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L						
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L						
Dibromochloromethane	ND	0.50	0.37	ug/L						
Dibromomethane	ND	0.50	0.16	ug/L						
Dichlorodifluoromethane	ND	0.50	0.18	ug/L						
Ethylbenzene	ND	0.50	0.26	ug/L						



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 26 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K06034 - Purge and Trap</b>										
<b>Blank (5K06034-BLK1)</b>					Prepared: 11/06/15 Analyzed: 11/07/15					
Hexachlorobutadiene	ND	0.50	0.21	ug/L						
Isopropylbenzene	ND	0.50	0.36	ug/L						
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L						
Methylene Chloride	ND	3.0	0.15	ug/L						
Naphthalene	ND	0.50	0.44	ug/L						
n-Butylbenzene	ND	0.50	0.15	ug/L						
n-Propylbenzene	ND	0.50	0.15	ug/L						
sec-Butylbenzene	ND	0.50	0.12	ug/L						
Styrene	ND	0.50	0.22	ug/L						
tert-Butylbenzene	ND	0.50	0.21	ug/L						
Tetrachloroethene	ND	0.50	0.23	ug/L						
Toluene	ND	0.50	0.22	ug/L						
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L						
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L						
Trichloroethene	ND	0.50	0.25	ug/L						
Trichlorofluoromethane	ND	5.0	0.16	ug/L						
Vinyl Chloride	ND	0.50	0.13	ug/L						
Xylenes (m+p)	ND	0.50	0.36	ug/L						
Xylenes (ortho)	ND	0.50	0.41	ug/L						
Diisopropyl ether	ND	3.0	0.30	ug/L						
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L						
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L						
Tert-butyl alcohol	ND	50	2.1	ug/L						
<i>Surrogate:</i>	9.25			ug/L	10.0		92.5		80-120	
<i>1,2-Dichloroethane-d4</i>										
<i>Surrogate:</i>	9.72			ug/L	10.0		97.2		80-120	
<i>Bromofluorobenzene</i>										
<i>Surrogate: Toluene-d8</i>	9.30			ug/L	10.0		93.0		80-120	
<b>LCS (5K06034-BS1)</b>					Prepared: 11/06/15 Analyzed: 11/07/15					
1,1-Dichloroethane	25.6	0.50	0.098	ug/L	25.0		102		70-130	
1,1-Dichloroethene	26.4	0.50	0.12	ug/L	25.0		106		70-130	
1,4-Dichlorobenzene	26.2	0.50	0.072	ug/L	25.0		105		70-130	
Benzene	26.5	0.50	0.14	ug/L	25.0		106		70-130	
Bromodichloromethane	24.5	0.50	0.11	ug/L	25.0		98.1		70-130	
Bromoform	22.8	1.0	0.50	ug/L	25.0		91.0		70-130	
Chloroform	26.4	0.50	0.46	ug/L	25.0		106		70-130	





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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 27 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Table with columns: Analyte(s), Result, RDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Flag. Includes sections for Batch 5K06034 - Purge and Trap, LCS (5K06034-BS1), and LCS Dup (5K06034-BSD1).





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Client Name: Regional WQCB, Lahontan Tahoe Office
Contact: Rebecca Phillips
Address: 2501 Lake Tahoe Boulevard
Lake Tahoe, CA 96150

Analytical Report: Page 28 of 31
Project Name: CRWQCB -IFB #15-025-160
Project Number: South Y PCE - Eloise Ave.

Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Table with columns: Analyte(s), Result, RDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Flag. Includes a list of compounds like 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, etc., with their respective results and RDL values.



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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 29 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

### Work Order Number: B5K0213

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K06034 - Purge and Trap</b>										
<b>Duplicate (5K06034-DUP1)</b>		<b>Source: B5K0441-02</b>		Prepared: 11/06/15		Analyzed: 11/07/15				
cis-1,2-Dichloroethene	ND	0.50	0.18	ug/L	ND				40	
cis-1,3-Dichloropropene	ND	0.50	0.30	ug/L	ND				40	
Dibromochloromethane	16.7	0.50	0.37	ug/L	15.9			5.16	40	
Dibromomethane	ND	0.50	0.16	ug/L	ND				40	
Dichlorodifluoromethane	ND	0.50	0.18	ug/L	ND				40	
Ethylbenzene	ND	0.50	0.26	ug/L	ND				40	
Hexachlorobutadiene	ND	0.50	0.21	ug/L	ND				40	
Isopropylbenzene	ND	0.50	0.36	ug/L	ND				40	
Methyl tert Butyl Ether	ND	5.0	0.43	ug/L	ND				40	
Methylene Chloride	ND	3.0	0.15	ug/L	ND				40	
Naphthalene	ND	0.50	0.44	ug/L	ND				40	
n-Butylbenzene	ND	0.50	0.15	ug/L	ND				40	
n-Propylbenzene	ND	0.50	0.15	ug/L	ND				40	
sec-Butylbenzene	ND	0.50	0.12	ug/L	ND				40	
Styrene	ND	0.50	0.22	ug/L	ND				40	
tert-Butylbenzene	ND	0.50	0.21	ug/L	ND				40	
Tetrachloroethene	ND	0.50	0.23	ug/L	ND				40	
Toluene	ND	0.50	0.22	ug/L	ND				40	
trans-1,2-Dichloroethene	ND	0.50	0.10	ug/L	ND				40	
trans-1,3-Dichloropropene	ND	0.50	0.24	ug/L	ND				40	
Trichloroethene	ND	0.50	0.25	ug/L	ND				40	
Trichlorofluoromethane	ND	5.0	0.16	ug/L	ND				40	
Vinyl Chloride	ND	0.50	0.13	ug/L	ND				40	
Xylenes (m+p)	ND	0.50	0.36	ug/L	ND				40	
Xylenes (ortho)	ND	0.50	0.41	ug/L	ND				40	
Diisopropyl ether	ND	3.0	0.30	ug/L	ND				40	
Ethyl tert-butyl ether	ND	3.0	0.29	ug/L	ND				40	
tert-Amyl Methyl Ether	ND	3.0	0.37	ug/L	ND				40	
Tert-butyl alcohol	ND	50	2.1	ug/L	ND				40	
Surrogate: 1,2-Dichloroethane-d4	9.52			ug/L	10.0	95.2	80-120			
Surrogate: Bromofluorobenzene	9.19			ug/L	10.0	91.9	80-120			
Surrogate: Toluene-d8	9.17			ug/L	10.0	91.7	80-120			



# BABCOCK Laboratories, Inc.

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Client Name: Regional WQCB, Lahontan Tahoe Office  
Contact: Rebecca Phillips  
Address: 2501 Lake Tahoe Boulevard  
Lake Tahoe, CA 96150

Analytical Report: Page 30 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Volatile Organic Compounds by EPA 8260B - Batch Quality Control

Analyte(s)	Result	RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch 5K06034 - Purge and Trap</b>										
<b>Matrix Spike (5K06034-MS1)</b>			<b>Source: B5K0670-01</b>		Prepared: 11/06/15		Analyzed: 11/07/15			
1,1-Dichloroethane	26.8	0.50	0.098	ug/L	25.0	ND	107	70-130		
1,1-Dichloroethene	29.0	0.50	0.12	ug/L	25.0	ND	116	70-130		
1,4-Dichlorobenzene	27.6	0.50	0.072	ug/L	25.0	ND	111	70-130		
Benzene	28.1	0.50	0.14	ug/L	25.0	ND	113	70-130		
Bromodichloromethane	25.6	0.50	0.11	ug/L	25.0	0.270	101	70-130		
Bromoform	23.5	1.0	0.50	ug/L	25.0	ND	94.2	70-130		
Chloroform	28.8	0.50	0.46	ug/L	25.0	1.12	111	70-130		
Dibromochloromethane	26.9	0.50	0.37	ug/L	25.0	ND	107	70-130		
Ethylbenzene	29.5	0.50	0.26	ug/L	25.0	ND	118	70-130		
Methyl tert Butyl Ether	22.4	5.0	0.43	ug/L	25.0	ND	89.7	70-130		
Tetrachloroethene	31.0	0.50	0.23	ug/L	25.0	ND	124	70-130		
Toluene	27.9	0.50	0.22	ug/L	25.0	ND	112	70-130		
Trichloroethene	29.1	0.50	0.25	ug/L	25.0	ND	117	70-130		
Vinyl Chloride	26.9	0.50	0.13	ug/L	25.0	ND	108	70-130		
Xylenes (m+p)	58.6	0.50	0.36	ug/L	50.0	ND	117	70-130		
Xylenes (ortho)	29.3	0.50	0.41	ug/L	25.0	ND	117	70-130		
<i>Surrogate:</i>	<i>8.69</i>			ug/L	<i>10.0</i>		<i>86.9</i>	<i>80-120</i>		
<i>1,2-Dichloroethane-d4</i>										
<i>Surrogate:</i>	<i>9.49</i>			ug/L	<i>10.0</i>		<i>94.9</i>	<i>80-120</i>		
<i>Bromofluorobenzene</i>										
<i>Surrogate: Toluene-d8</i>	<i>9.55</i>			ug/L	<i>10.0</i>		<i>95.5</i>	<i>80-120</i>		



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Analytical Report: Page 31 of 31  
Project Name: CRWQCB -IFB #15-025-160  
Project Number: South Y PCE - Eloise Ave.

**Work Order Number: B5K0213**

Report Date: 09-Nov-2015

Received on Ice (Y/N): Yes Temp: 5 °C

## Notes and Definitions

- J Estimated value
- NHCno The sample chromatographic pattern does NOT resemble the fuel standard used for quantitation.
- Q\_nes Insufficient sample for the sample duplicate and/or MS/MSD analysis.
- ND: Analyte NOT DETECTED at or above the Method Detection Limit (**if MDL is reported**), otherwise at or above the Reportable Detection Limit (RDL)
- NR: Not Reported
- RDL: Reportable Detection Limit
- MDL: Method Detection Limit
- \* / " : NELAP does not offer accreditation for this analyte/method/matrix combination

## Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted. Babcock Laboratories and its officers and employees assume no responsibility and make no warranty, express or implied, for uses or interpretations made by any recipients, intended or unintended, of this report.

Digitally signed by: Cindy Waddell  
DN: CN = Cindy Waddell C = US O = Babcock  
Laboratories OU = Project Manager Assistant  
Date: 2015.11.09 16:46:34 -07'00'

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LACSD No., 10119



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6100 Quail Valley Court Riverside, CA 92507  
(951) 653-3351 • FAX (951) 653-1662

### Chain of Custody & Sample Information Record

Client: Lahontan RWQCB Contact: Lisa Dernbach Fax No. \_\_\_\_\_

Phone No. (530) 542-5424 email: lisa.dernbach@waterboards.ca.gov

Project Name: South Y PCE Turn Around Time: Routine \*72 Hour Rush \*48 Hour Rush \*24 Hour Rush

Project Location: Eloise Ave By: \_\_\_\_\_ \*Additional Charges Apply

\*Lab TAT Approval: \_\_\_\_\_

Sample ID	Date	Time	# of Containers & Preservatives										Sample Type	Analysis Requested	Matrix	Notes		
			Unpreserved	H <sub>2</sub> O <sub>2</sub>	HCl	HNO <sub>3</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	NaOH	HNO <sub>3</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>					MCA	
516 RB 6026	10/30/15	12:40p	1	3														
516 RB 6027		2:00p																
516 RB 6028		1:45p																
516 RB 6029		2:25p																
516 RB 6030		2:45p																

Name: Lisa Dernbach  
Employer: Lahontan RWQCB  
Signature: Lisa Dernbach

Relinquished By (sign) Lisa Dernbach Date / Time 11/2/15 1:55p

Print Name / Company FedEx Received By (sign) Angie Brown

Lab No. B5K0213 Logged in By/Date: NOV 03 2015 AB

Temperature: 5 °C  Cooler Blank Signature/Date: \_\_\_\_\_

Sample Integrity Upon Receipt/Acceptance Criteria

Sample(s) Submitted on Ice?  Yes  No

Custody Seal(s) Intact?  Yes  No

Sample(s) Intact?  Yes  No

Sample meets laboratory acceptance criteria?  Yes  No

Permission to continue:  Yes  No

Deviation/Notes: \_\_\_\_\_

Signature/Date: \_\_\_\_\_

Rev. 3/09

Page 1 of 1

Client Name: Regional WQCB, Lahontan Tahoe Office  
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Analytical Report: Page 1 of 1  
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