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**REPORT  
ADDITIONAL MONITORING WELL INSTALLATION AND  
THIRD QUARTER 2014 GROUNDWATER MONITORING  
FORMER GROVE STREET WASH RACK SITE  
3884 MARTIN LUTHER KING JUNIOR WAY  
OAKLAND, CALIFORNIA**

*Prepared for:*

**Neil Cotter and John Coyle  
2847 Arguello Drive  
Burlingame, California 94010**

*Prepared by:*

**URS**

**URS Corporation  
One Montgomery Street, Suite 900  
San Francisco, California 94104**

September 30, 2014

## IDENTIFICATION FORM

**Document Title:**        **Second Quarter 2014 Groundwater Monitoring  
Former Grove Street Wash Rack Site  
3884 Martin Luther King Junior Way  
Oakland, California 94609**

**Organization Title:**    URS Corporation  
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## APPROVAL FORM

**Prepared for:** Neil Cotter and John Coyle  
2847 Arguello Drive  
Burlingame, California 94010

**Prepared by:** URS Corporation  
One Montgomery Street, Suite 900  
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Signature: \_\_\_\_\_ Date: September 30, 2014  
Name: Kali Futnani  
Title: Project Manager



Signature: \_\_\_\_\_ Date: September 30, 2014  
Name: Erik Skov, PG, CHG  
Title: Senior Project Geologist



September 30, 2014

Ms. Karel Detterman  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway

Subject: Responsible Party Perjury Statement for Soil and Groundwater Investigation and 3rd Quarterly Monitoring and Sampling Report (Fuel Leak Case RO000027 and Global ID # T0600102106).

Dear Ms. Detterman:

Attached for your review please find the Soil and Groundwater Investigation and 3rd Quarterly Monitoring and Sampling Report with the results of the soil and groundwater investigation at the above referenced site.

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Please contact me at 415-243-3878 or at [kali.futnani@urs.com](mailto:kali.futnani@urs.com) should you have any questions or require any clarifications.

Sincerely,  
URS CORPORATION

A handwritten signature in black ink, appearing to read 'Kali Futnani', with a horizontal line extending to the right.

Kali Futnani  
Environmental Scientist/ Project Manager

Mr. Neil and Mrs. Mary Cotter  
John and Antoinette Coyle  
2847 Arguello Drive  
Burlingame, CA 94010

September 30, 2014

Ms. Karel Detterman  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway

Subject: Responsible Party Perjury Statement for Soil and Groundwater Investigation and 3rd Quarterly Monitoring and Sampling Report (Fuel Leak Case RO000027 and Global ID # T0600102106)

Dear Ms. Detterman:

Attached for your review please find the URS Site Investigation Data Report with the results of the soil and groundwater investigation at the above referenced site.

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,

Neil and Mary Cotter

Handwritten signatures of Neil and Mary Cotter. The signature for Neil is on the left and the signature for Mary is on the right. Both signatures are written in black ink and are placed over a horizontal line.

John and Antoinette Coyle

Mr. Neil and Mrs. Mary Cotter  
John and Antoinette Coyle  
2847 Arguello Drive  
Burlingame, CA 94010

September 30, 2014

Ms. Karel Detterman  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway

Subject: Responsible Party Perjury Statement for Soil and Groundwater Investigation and 3rd Quarterly Monitoring and Sampling Report (Fuel Leak Case RO000027 and Global ID # T0600102106)

Dear Ms. Detterman:

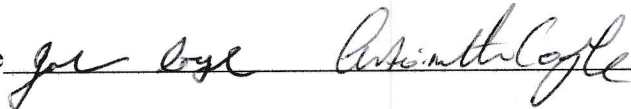
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Sincerely,

Neil and Mary Cotter \_\_\_\_\_

John and Antoinette Coyle

Handwritten signatures of John and Antoinette Coyle, written in cursive over a horizontal line.

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## **1.0 INTRODUCTION**

URS is pleased to submit this report detailing the results of additional monitoring well installation and Third Quarter 2014 groundwater monitoring at the former Grove Street Wash Rack Site located at 3884 Martin Luther King Junior Way in Oakland, California (Site). The site location is shown on Figure 1. The Third Quarter 2014 sampling is the fourth monitoring event at the Site since the initial groundwater monitoring wells were installed at the Site in July, 2013 as part of additional investigation activities required by the Alameda County Department of Environmental Health (ACDEH).

The body of this report includes a discussion of well installation activities and groundwater sampling activities, analytical results, and a comparison of previous groundwater analytical results. The report includes a summary table containing current and previous monitoring data, a groundwater elevation contour map, and a chemical concentration map showing concentrations of detected contaminants. Appendices include well purging records, analytical laboratory and data validation reports, boring logs, and chain of custody records.

## **2.0 SITE CONDITIONS**

### **2.1 SITE LOCATION AND HISTORICAL AND CURRENT USES**

The Site is in a mixed commercial and residential area in the City of Oakland, California. It occupies approximately 10,250 square feet, and is identified as Assessor's Parcel Number (APN) 012-0968-31. The property is zoned for residential use.

The Site is bordered by the following:

- North: 39th Street, followed by a retail business;
- East: the Highway 24 right-of-way, followed by the MacArthur BART station;
- South: a multi-story residential/commercial building; and
- West: Martin Luther King Junior Way (MLK Jr. Way), followed by residential and vacant properties.

The Site is the former location of the Grove Street Wash Rack and Lucky's Auto. Known historical Site uses include the following:



- A gas station operated on the Site in the 1950s and 1960s. Three underground storage tanks (USTs) from the gas station were removed on January 5, 1995.
- An auto body shop operated on the eastern portion of the Site until at least 2004.

A fuel and feed store and fuel yard operated at the adjacent parcel to the south (3860 MLK Jr. Way) from the 1930s to the 1950s. A lumber store and warehouse operated on the parcel in the 1960s, but the business closed and the buildings were demolished in 1971. The adjacent parcel was redeveloped into a multi-story residential and commercial building in 2006.

The Site is currently not in use. The former Site buildings have been removed, and only concrete pads and paved and unpaved areas remain on the Site. A large advertising billboard is located in the southwest corner of the parcel.

## **2.2 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS**

The lithology encountered beneath the Site during additional site investigation drilling activities consists predominantly of a dark brown to yellow brown gravelly silty clay to greenish-gray and yellowish brown silty clay with sand and some gravel. The primary stratigraphic units at the Site are listed below, with the approximate ranges of depth (bgs) each unit was encountered across the Site.

- 0 to 4 feet bgs: the soil typically consisted of stiff, very dark-brown silty clay.
- 4 to 15 feet bgs: yellowish brown silty clay and mottled yellowish brown and greenish-gray silty clay.
- 15 to 20 feet bgs: Yellowish brown/greenish gray/dark reddish brown lithologies consisting of silty and clayey sands and silts. Some small (typically less than 6 inch) gravel layers were also encountered.

Depth to groundwater in the five newly installed groundwater monitoring wells ranged from 14.42 to 16.89 feet below the top of the well casings. This data was used in conjunction with top of well casing elevation data to generate a groundwater elevation contour map. Based on the July 2013 groundwater elevation data, groundwater beneath the site was interpreted to flow to the west at an approximate gradient of 0.02.

## **2.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS**

The following timeline summarizes the previous environmental investigations, activities and reporting at the Site:

- 01/05/95: Tanks #1 (650-gallon), #2 (650-gallon), and #3 (500-gallon) were removed from Site. Soil samples were collected under ACDEH observation.
- 01/17/95: Tank Removal Report prepared by Scott Environmental.
- 05/10/95: ACDEH issued a letter requiring additional work to be carried out at the Site to define the extent of contamination.
- 07/17/96: Letter by H<sub>2</sub>O GEOL presents laboratory results of a stockpile sample.
- 09/10/02: State Water Resources Control Board (SWRCB) publishes a letter of Notice of Removal from the UST Clean-up Fund. No subsequent data in ACDEH files.
- 9/17/2004: URS issued an Environmental Investigation Report for the Site for Cal-EPA DTSC.
- 02/02/06: ACDEH approved the JCC Work Plan with technical comments.
- 03/10/06: JCC issued a Report of Soil and Groundwater Investigation summarizing the soil and grab groundwater results from eight boreholes for ACDEH.
- 11/12/2006: JCC Issued a Work Plan for Additional Investigation and Remediation at the Site to ACDEH.
- 04/2/2007: ACDEH issues a letter with technical comments on the JCC Work Plan.
- 04/27/2007: JCC sends plans and architect drawings for the development to ACDEH, in response to ACDEH's letter of 4/2/2007.
- 04/08/2008: ACDEH letter to Neil & Mary Cotter. Additional comments on the work plan and request for quarterly monitoring reports.
- 04/14/2008: ACDEH issues Notice of Responsibility. Lillie and Hillary Luckett are named as the primary RPs; Mary and Neil Cotter are named as RPs.
- 05/28/2008: ICES correspondence to ACDEH, informing SCDEH that ICES is the environmental consultant representing Neil Cotter for the 3884 MLK site.
- 07/24/2009: ACDEH sends letter to Neil and Mary Cotter notifying them of the change in groundwater monitoring requirements.
- 12/05/2012: ACDEH issues a request for a Site Investigation Work Plan to Neil & Mary Cotter and to Lillie and Hilary Luckett.
- 06/07/2013: CES letter to SCDEH requesting status of the work plan prepared by URS. CES is the environmental consultant retained by Meta/KKG. Meta Homes is the developer and KKG is responsible for construction management.

- 07/3/2013; URS submits Work Plan for Additional Soil and Groundwater Investigation. Scope of work includes installation of groundwater monitoring wells and additional soil borings.
- 07/8/2013: ACDEH approved URS Work Plan for Additional Soil and Groundwater Investigation.
- 07/9/2013: 7/12/13: URS conducts additional investigation.
- 09/6/2013: URS submits Draft FS/CAP to ACDEH. Document includes results from additional site investigation.
- 10/8/2013 URS submits Final FS/CAP to ACEHD.
- 10/10/2013 URS conducts groundwater monitoring event.
- 07/03/2014: URS submits October 2013 Groundwater Monitoring Report.
- 07/30/2014: URS submits Second Quarter 2014 Groundwater Monitoring Report.

A detailed discussion of the prior site investigation findings are presented in the Feasibility Study/Corrective Action Plan prepared for the Site (URS, 2013a).

### **3.0 ADDITIONAL MONITORING WELL INSTALLATION**

At the direction of the ACDEH, three additional groundwater monitoring wells (MW-6, MW-7, and MW-8) were installed on the east and west sides of Martin Luther King Junior Way (MW-6 and MW-7 on the east side and MW-8 on the west side). The purpose of the monitoring wells was to further assess potential off site migration of contaminants and to provide monitoring points for groundwater remedial performance monitoring after implementation of the approved Corrective Action Plan for the Site. The monitoring wells were installed in accordance with the procedures presented in the additional site investigation work plan (URS, 2013b). All borings were logged in accordance with the Unified Soil Classification System by a California Professional Geologist. Subsurface lithologies were consistent with those encountered during the previous monitoring well installations. Copies of the boring logs and well completion details are presented in Appendix A.

During monitoring well installation soil samples were collected from depths of nine (9) and fourteen (14) feet below ground surface (bgs). The samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX),

naphthalene, 1,2-Dichloroethane (1,2-DCA), and cis-1,2-dichloroethene (cis-1,2-DCE) using EPA Method 8260B.

Samples were collected and preserved in accordance with United States Environmental Protection Agency (U.S. EPA) Method 5035 to prevent loss of volatiles. The soil samples were collected September 4<sup>th</sup> and 5<sup>th</sup> using standard environmental protocols, and stored in coolers on ice. A chain-of-custody form was used as the sample custody and analyses specification document for all samples from the time of collection until laboratory analysis. Field duplicates were collected at a rate of 10 percent. Soil samples were submitted to TestAmerica, a California Department of Public Health (DPH)-licensed laboratory.

The results of the soil analyses are summarized in Table 1. With the exception of one TPH-g detection (520 µg/Kg) in the sample from 14 feet bgs in MW-6, all other analyte concentrations were below the laboratory level of reporting.

The analytical results for the groundwater sampling and analysis from the newly installed monitoring wells is presented in Section 4.0 below.

## **4.0 GROUNDWATER MONITORING**

Groundwater monitoring was conducted at the site on September 15, 2014. Groundwater samples were collected from eight groundwater monitoring wells. Groundwater sampling methodologies and analytical results are presented in the following sections.

### **4.1 GROUNDWATER SAMPLING AND ANALYSIS**

Groundwater sampling and analysis was conducted in accordance with the procedures presented in the additional site investigation work plan (URS, 2013b). The wells at the site were purged and sampled using low-flow sampling techniques, to ensure the sampling of representative formation water. Prior to purging and sampling, the depth to groundwater in each of the monitoring wells was measured to the nearest 0.01 foot using an electronic interface probe and recorded in a well-purging record form.

Monitoring wells were purged using a peristaltic pump. The well screen information was used to establish the depth of the pump intake tubing in the monitoring well. Typically, the pump intake was set at the approximate midpoint of the screened interval. Once the pump intake was set at the target depth, it was secured to ensure it did not move during purging.

The discharge tubing was connected to a YSI 6920 multiprobe flow-through cell. The flow-through cell was equipped with probes to monitor temperature, specific conductivity, pH, oxidation reduction potential (ORP), and dissolved oxygen (DO). Once purging was commenced, depth to groundwater was continually monitored to ensure the pump discharge rate produced a minimal drawdown of the water column. Additionally, the parameters listed above were continually monitored during the purging process and the readings were recorded on well-purging forms at approximate three minute intervals. Copies of the well purging logs are presented in Appendix B of this report.

When the field-measured parameters had sufficiently stabilized, a groundwater sample was collected. Parameters are considered stable when they vary less than  $\pm 10\%$ . Groundwater samples were collected directly from the discharge tubing from the pump. Samples were collected into laboratory-supplied 40-milliliter glass vials containing hydrochloric acid preservative. Samples were labeled with the project name, date, time of sample collection, and sample identification number, and then stored in an iced cooler prior to transport to the analytical laboratory. Sample chain-of-custody was documented from the time of collection until receipt by the laboratory.

TestAmerica, Inc. of Pleasanton, California analyzed the groundwater samples. TestAmerica, Inc. is a California Department of Public Health certified laboratory. Groundwater samples were analyzed for TPH-g, BTEX, naphthalene, 1,2-DCA, and cis-1,2-DCE using EPA Method 8260B.

Field QA/QC procedures were followed to ensure field sample quality. A laboratory-supplied trip blank accompanied the samples from the field to the laboratory and was analyzed for the same constituents (TPH-g and BTEX) as the groundwater samples. Additionally, a blind duplicate sample from one of the monitoring wells was also submitted to the laboratory for analysis.

## **4.2 GROUNDWATER ELEVATION AND FLOW DIRECTION**

Groundwater depth measurements were collected from all of the wells prior to purging. An interface probe was used to collect the depth to groundwater measurements and also check for the presence of free phase product on top of the water column. The depth measurements were used in conjunction with the top of well casing (measuring point) elevation data to generate groundwater surface elevation data. Post processing of the additional monitoring well casing elevations was not complete at the time of reporting and thus, elevation data from the newly installed monitoring wells was not available for the preparation of the groundwater elevation contour map.

Groundwater elevation data is summarized in Table 2. Groundwater elevations ranged from 57.98 to 57.10 feet above msl. The data indicate the groundwater elevations are, on average, approximately 0.85 feet lower than the previous sampling event in July 2014. The current groundwater elevation data were assessed to evaluate groundwater flow and gradient. Based on the groundwater elevation measured in September 2014, the interpreted groundwater flow direction is slightly northwest at an average approximate gradient of 0.01. A groundwater elevation contour map is presented on Figure 2. Previous groundwater elevation data from July 2014 indicated groundwater flowing to the northwest at an average gradient of approximately 0.008 (URS, 2014).

### **4.3 GROUNDWATER PHYSICAL PARAMETERS**

Groundwater physical parameters (conductivity, temperature, pH, ORP, and DO) were measured at regular intervals during the purging process. The final field parameter measurements prior to sampling are summarized in Table 3. The following are ranges of the final parameter measurements from all eight monitoring wells at the site prior to sampling: conductivity ranged from 0.861 to 1.757 mS/cm; temperature ranged from 17.4 to 21.3 °C; pH ranged between 6.15 and 6.81 pH units; ORP ranged from -49.3 to 106.1 millivolts (mV); and DO ranged from 0.05 to 5.87 mg/L. Refer to Appendix A for the specific range of parameters in each well.

### **4.4 GROUNDWATER ANALYTICAL RESULTS**

The results of the groundwater analyses are summarized in Table 4 and are shown graphically on Figure 3. TPH-g and BTEX were detected in three of the eight monitoring wells (MW-2, MW-4, and MW-6). Concentrations of TPH-g detected were 11,000 µg/L (MW-2), 22,000 µg/L (MW-4), and 300 µg/L (MW-6). Concentrations of benzene detected were 5,600 µg/L (MW-2), 2,800 µg/L (MW-4), and 5.6 µg/L (MW-6). Concentrations of toluene detected were 180 µg/L (MW-2) and 470 µg/L (MW-4). Concentrations of ethylbenzene detected were 190 µg/L (MW-2), 2,200 µg/L (MW-4), and 0.58 µg/L (MW-6). Concentrations of xylenes detected were 3,000 µg/L (MW-4) and 4.7 µg/L (MW-6). The laboratory reporting limit for xylenes was raised to 200 µg/L for MW-2 due to dilution of the sample for analysis.

At the request of ACDEH naphthalene, 1,2-DCA, and cis-1,2-DCE were added to the analyte list for the quarterly groundwater sampling program. Naphthalene was only detected in MW-4 at a concentration of 370 µg/L and 1,2-DCA was only detected in MW-1 at a concentration of 4.0 µg/L. The laboratory reporting limits for naphthalene, 1,2-DCA, and cis-1,2-DCE were raised in monitoring wells MW-2 and MW-4, as indicated in Table 4, due to dilution of the samples for analysis.

There were no detections of TPH-g, BTEX, naphthalene, 1,2-DCA, or cis-1,2-DCE in the Trip Blank. Based on the data validation, none of the data was qualified and it was determined to be usable for its intended purpose.

With the exception of ethylbenzene and xylenes in MW-6, all of the concentrations of TPH-g and BTEX detected in monitoring wells MW-2, MW-4, and MW-6 exceed their respective San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Level (ESL). Additionally, the concentration of 1,2-DCA detected in MW-1 (4.0 µg/L) and naphthalene in MW-4 (370 µg/L) exceed their respective ESL. Copies of the laboratory and data validation reports are presented in Appendix C of this report.

## **5.0 CONCLUSIONS**

The results of the soil sampling conducted during the installation of additional groundwater monitoring wells at the Site do not indicate the presence of high concentrations of contaminants of concern in offsite soil. The one detection of TPH-g (520 µg/Kg) is likely due to the presence of groundwater in the soil sample analyzed from 14 feet bgs.

The results of the groundwater monitoring to date indicate the presence of TPH-g and BTEX in the groundwater beneath the site. Based on the results of soil and groundwater investigations conducted at the Site to date, the source of the contamination is likely releases from underground storage tanks (USTs) that were previously used at the Site. A relatively low concentration of TPH-g (300 µg/L) was detected in MW-6 located in the sidewalk just outside of the Site boundary. No TPH or related constituents were detected in the other two newly installed monitoring wells (MW-7 and MW-8).

The results of the groundwater monitoring are consistent with previous analytical results. Again the concentration of benzene detected in MW-2 appears to be disproportionately high relative to the concentration of TPH-g. The reason for this is not understood as there were no laboratory quality assurance/quality control failures for the benzene analysis for MW-2 identified during validation of the laboratory data.

The next quarterly groundwater monitoring event is scheduled for the fourth quarter 2014.

## **6.0 REFERENCES**

URS, 2013a. Feasibility Study/Corrective Action Plan, Former Grove Street Wash Rack Site, 3884 Martin Luther King Junior Way, Oakland, California. October 8, 2013.

URS, 2013b. Site Investigation Work Plan, Former Grove Street Wash Rack Site, 3884 Martin Luther King Junior Way, Oakland, California. July 5, 2013.

URS, 2014. Second Quarter 2014 Groundwater Monitoring, Former Grove Street Wash Rack Site, 3884 Martin Luther King Junior Way, Oakland, California. July 30, 2014.



## TABLES

**Table 1**  
**Soil Analytical Results**  
**Former Grove Street Wash Rack Site**  
**3884 Martin Luther King Junior Way**  
**Oakland, California**

Sample ID	Date	Analyte							
		TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	1,2-DCA	cis-1,2- DCE
MW-6-9'	9/4/2014	<180	<3.6	<3.6	<3.6	<7.1	<7.1	<3.6	<3.6
MW-6-14'	9/4/2014	<b>520</b>	<3.8	<3.8	<3.8	<7.6	<7.6	<3.8	<3.8
MW-7-9'	9/4/2014	<180	<3.6	<3.6	<3.6	<7.3	<7.3	<3.6	<3.6
MW-7-14'	9/4/2014	<180	<3.6	<3.6	<3.6	<7.2	<7.2	<3.6	<3.6
MW-8-9'	9/5/2014	<180	<3.6	<3.6	<3.6	<7.2	<7.2	<3.6	<3.6
MW-8-14'	9/5/2014	<180	<3.5	<3.5	<3.5	<7.1	<7.1	<3.5	<3.5

**NOTES**

All Results Reported in µg/Kg (ppb) unless otherwise stated

Values in bold are detections above the laboratory reporting limit

1,2-DCA = 1,2-Dichloroethane

cis-1,2-DCE = cis-1,2-Dichloroethene

"<" indicates analyte not detected above the laboratory reporting limit

**Table 2**  
**Groundwater Elevation Data**  
**Former Grove Street Wash Rack Site**  
**3884 Martin Luther King Junior Way**  
**Oakland, California**

Well	Date	Well Screen (feet bgs)	Depth to Water (feet)	TOC Elevation (feet msl)	Groundwater Elevation (feet msl)
MW-1	7/18/2013	12-19	14.43	72.83	58.40
MW-1	10/23/2013	12-19	14.99	72.83	57.84
MW-1	7/10/2014	12-19	14.41	72.83	58.42
MW-1	9/15/2014	12-19	15.16	72.83	57.67
MW-2	7/18/2013	13-20	14.90	73.16	58.26
MW-2	10/23/2013	13-20	15.07	73.16	58.09
MW-2	7/10/2014	13-20	14.69	73.16	58.47
MW-2	9/15/2014	13-20	15.45	73.16	57.71
MW-3	7/18/2013	13-20	15.08	73.54	58.46
MW-3	10/23/2013	13-20	15.45	73.54	58.09
MW-3	7/10/2014	13-20	14.68	73.54	58.86
MW-3	9/15/2014	13-20	15.56	73.54	57.98
MW-4	7/18/2013	11-18	14.42	73.18	58.76
MW-4	10/23/2013	11-18	15.15	73.18	58.03
MW-4	7/10/2014	11-18	14.43	73.18	58.75
MW-4	9/15/2014	11-18	15.25	73.18	57.93
MW-5	7/18/2013	15-21	16.89	74.92	58.03
MW-5	10/23/2013	15-21	17.65	74.92	57.27
MW-5	7/10/2014	15-21	16.79	74.92	58.13
MW-5	9/15/2014	15-21	17.82	74.92	57.10
MW-6	9/15/2014	11-19	14.86	NA	NC
MW-7	9/15/2014	11-19	13.61	NA	NC
MW-8	9/15/2014	11-18	14.23	NA	NC

TOC = top of casing

bgs = below ground surface

msl = mean sea level

NA=Not Available at the time of reporting

NC=Not Calculated

**Table 3**  
**Groundwater Physical Parameters**  
**Former Grove Street Wash Rack Site**  
**3884 Martin Luther King Junior Way**  
**Oakland, California**

<b>Well</b>	<b>Date</b>	<b>Temperature (°Celsius)</b>	<b>Conductivity (mS/cm)</b>	<b>DO (mg/L)</b>	<b>pH</b>	<b>ORP (mV)</b>
MW-1	7/18/2013	20.0	1.129	5.74	6.35	63.4
MW-1	10/23/2013	19.2	1.189	1.45	6.42	-55.4
MW-1	7/10/2014	20.0	1.100	0.81	6.42	33.2
MW-1	9/15/2014	20.5	1.100	0.13	6.15	74.9
MW-2	7/18/2013	18.7	0.901	3.63	6.62	51.2
MW-2	10/23/2013	18.3	0.852	0.57	6.59	-93.4
MW-2	7/10/2014	19.3	0.878	0.51	6.72	-160.3
MW-2	9/15/2014	19.0	0.936	0.07	6.35	-49.3
MW-3	7/18/2013	18.7	0.799	5.36	6.52	71.9
MW-3	10/23/2013	18.3	1.133	1.84	6.94	213.6
MW-3	7/10/2014	19.6	1.121	1.99	7.10	54.3
MW-3	9/15/2014	18.9	1.162	0.28	6.73	97.4
MW-4	7/18/2013	20.5	1.438	4.21	6.44	25.1
MW-4	10/23/2013	20.6	1.271	0.92	6.34	-85.3
MW-4	7/10/2014	21.5	1.379	0.65	6.50	-47.9
MW-4	9/15/2014	21.2	1.463	0.05	6.25	-20.0
MW-5	7/18/2013	17.1	0.845	6.17	6.63	78.2
MW-5	10/23/2013	17.0	0.841	0.81	6.56	205.2
MW-5	7/10/2014	17.5	0.795	0.53	6.48	73.8
MW-5	9/15/2014	17.4	0.861	0.08	6.20	103.5
MW-6	9/15/2014	21.3	1.757	2.56	6.51	98.4
MW-7	9/15/2014	20.5	1.508	4.95	6.66	104.3
MW-8	9/15/2014	20.4	1.055	5.87	6.81	106.1

DO = Dissolved Oxygen

mg/L = milligrams per liter

mS/cm = milliSiemens per centimeter

mV = millivolt

ORP = Oxidation-Reduction Potential

**Table 4**  
**Groundwater Analytical Results**  
**Former Grove Street Wash Rack Site**  
**3884 Martin Luther King Junior Way**  
**Oakland, California**

Well ID	Date	Analyte							
		TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	1,2-DCA	cis-1,2- DCE
MW-1	7/18/2013	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<b>4.5</b>	<0.5
MW-1	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-10 <sup>2</sup>	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-1	7/10/2014	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-1	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<b>4.0</b>	<0.5
MW-2	7/18/2013	<b>560</b>	<b>220</b>	<b>2.9</b>	<b>4.6</b>	<b>35</b>	<1.0	<b>4.3</b>	<0.5
MW-2	10/23/2013	<b>9400</b>	<b>8200</b>	<b>200</b>	<b>120</b>	<b>380</b>	NA	NA	NA
MW-2	7/10/2014	<b>8800 J</b>	<b>4800</b>	<b>130</b>	<b>140</b>	<200	NA	NA	NA
MW-2	9/15/2014	<b>11000</b>	<b>5600</b>	<b>180</b>	<b>190</b>	<200	<200	<100	<100
MW-3	7/18/2013	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-3	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-3	7/10/2014	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-3	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
FD-1 <sup>3</sup>	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-4	7/18/2013	<b>9500</b>	<b>980</b>	<b>510</b>	<b>270</b>	<b>2600</b>	<b>180</b>	<b>0.7</b>	<0.5
MW-40 <sup>1</sup>	7/18/2013	<b>13000</b>	<b>1100</b>	<b>930</b>	<b>800</b>	<b>3500</b>	<b>180</b>	<b>0.6</b>	<0.5
MW-4	10/23/2013	<b>15000</b>	<b>1800</b>	<b>480</b>	<b>1500</b>	<b>3100</b>	NA	NA	NA
MW-4	7/10/2014	<b>25000 J</b>	<b>2500 J</b>	<b>950</b>	<b>1800 J</b>	<b>6400</b>	NA	NA	NA
MW-40 <sup>1</sup>	7/10/2014	<b>32000 J</b>	<b>3100 J</b>	<b>1100</b>	<b>2400 J</b>	<b>6100</b>	NA	NA	NA
MW-4	9/15/2014	<b>22000</b>	<b>2800</b>	<b>470</b>	<b>2200</b>	<b>3000</b>	<b>370</b>	<25	<25
MW-5	7/18/2013	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-5	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-5	7/10/2014	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-5	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-6	9/15/2014	<b>300</b>	<b>5.6</b>	<0.5	<b>0.58</b>	<b>4.7</b>	<1.0	<0.5	<0.5
MW-7	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-8	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
Trip Blank	7/18/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	7/10/2014	<50.0	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	9/15/2014	<50.0	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
	<b>ESL</b>	<b>100</b>	<b>1.0</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>6.1</b>	<b>0.5</b>	<b>6.0</b>

**NOTES**

All Results Reported in µg/L (ppb) unless otherwise stated

Values in bold are detections above the laboratory reporting limit

Shaded values exceed the ESL

ESL - San Francisco Bay Regional Water Quality Control Board - 2013 Tier 1 Environmental Screening Levels

1,2-DCA = 1,2-Dichloroethane

cis-1,2-DCE = cis-1,2-Dichloroethene

NA - Not Analyzed

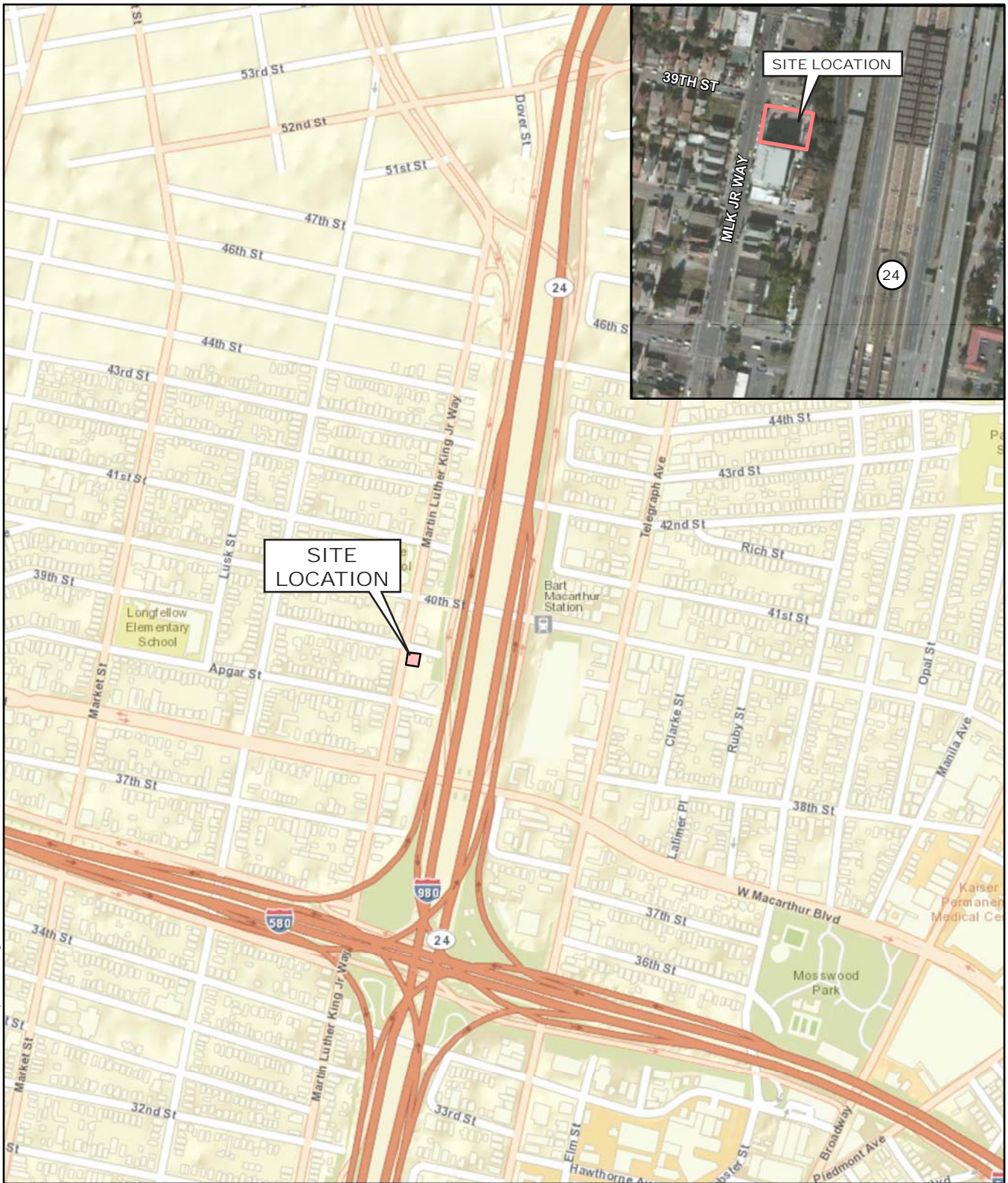
<sup>1</sup> Field duplicate of MW-4

<sup>2</sup> Field duplicate of MW-1

<sup>3</sup> Field duplicate of MW-3

## FIGURES

9/30/14 vsa/hk...T:\3884 MLK\Sept\_2014\Fig1\_site\_location.ai



Source: Esri Aerial Imagery, DeLorme, NAVTEC, 2012

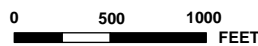
### SITE LOCATION MAP

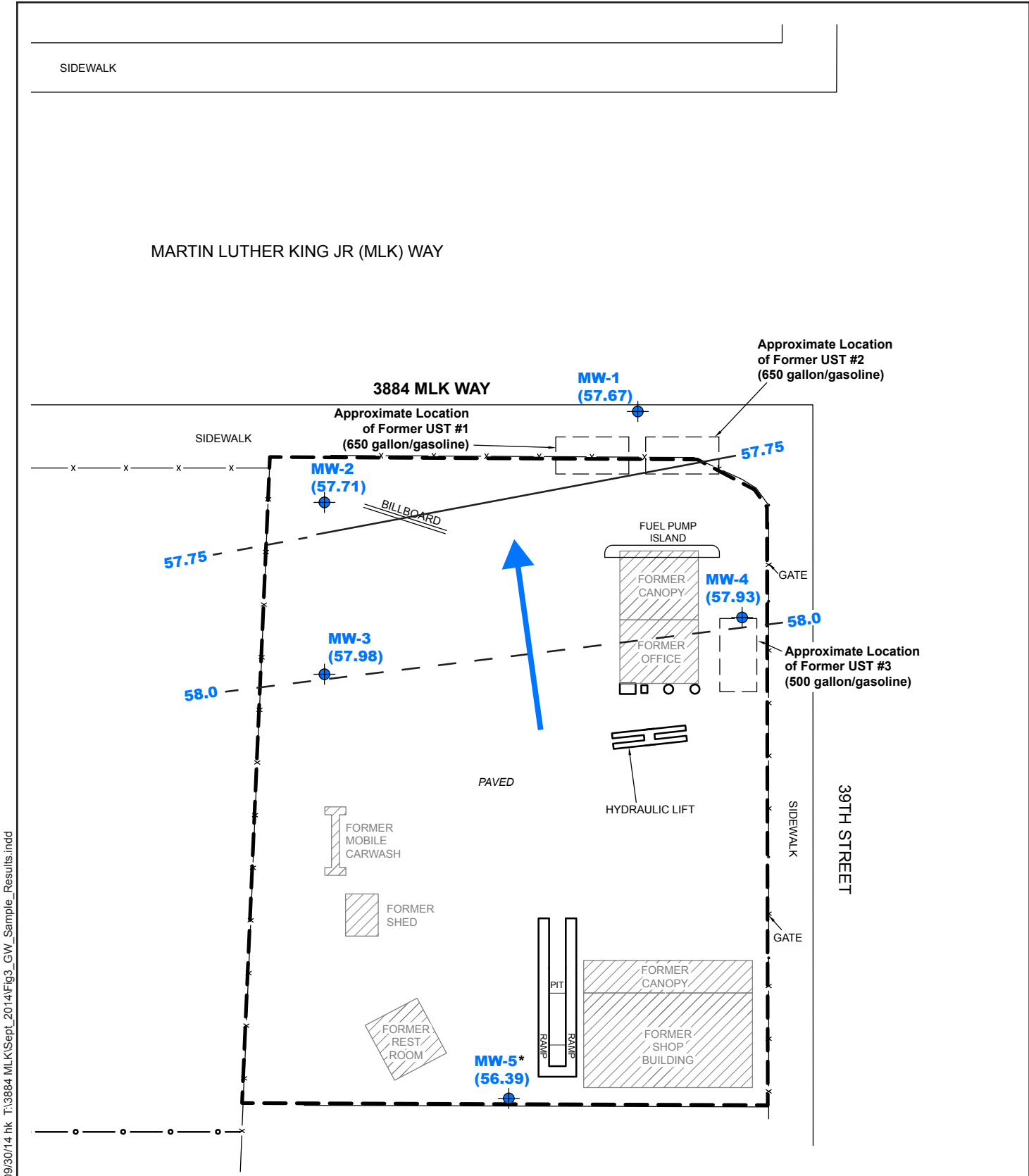
September 2014  
28068161

3884 Martin Luther King, Jr. Way  
Oakland, California



FIGURE 1





09/30/14 hk T:\3884 MLK\Sept\_2014\Fig3\_GW\_Sample\_Results.indd

- MW-1 (57.67)** Proposed Monitoring Well and Groundwater Elevation
- Interpreted Groundwater Flow Direction  
Approximate Average Gradient = 0.01

\*Elevation data not used for contouring.



**GROUNDWATER ELEVATION**  
 September 2014      3884 Martin Luther King, Jr. Way  
 28068161              Oakland, California



**FIGURE 2**



09/30/14 thk/vsa T:\3884 MLK\Sept\_2014\Fig3\_GW\_Sample\_Results.indd

Analyte	MW-8
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.50
cis-1, 2-DCE	<0.50

Analyte	MW-7
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.50
cis-1, 2-DCE	<0.50

Analyte	MW-6
TPHg	300
Benzene	5.6
Toluene	<0.50
Ethylbenzene	0.58
Xylenes	4.7
Napthalene	<1.0
1, 2-DCA	<0.50
cis-1, 2-DCE	<0.50

Analyte	MW-1
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	4.0
cis-1, 2-DCE	<0.50

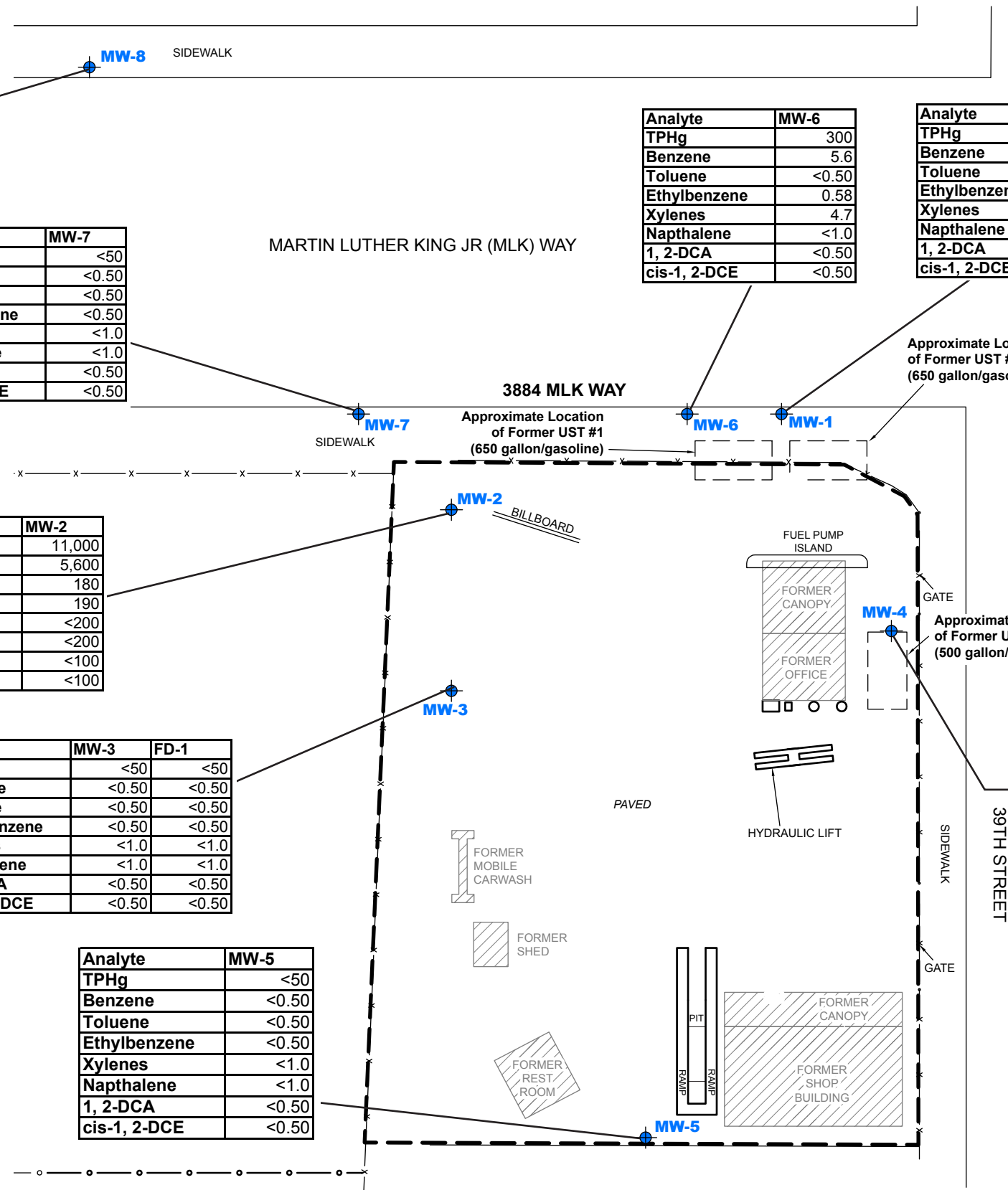
Analyte	MW-2
TPHg	11,000
Benzene	5,600
Toluene	180
Ethylbenzene	190
Xylenes	<200
Napthalene	<200
1, 2-DCA	<100
cis-1, 2-DCE	<100

Analyte	MW-3	FD-1
TPHg	<50	<50
Benzene	<0.50	<0.50
Toluene	<0.50	<0.50
Ethylbenzene	<0.50	<0.50
Xylenes	<1.0	<1.0
Napthalene	<1.0	<1.0
1, 2-DCA	<0.50	<0.50
cis-1, 2-DCE	<0.50	<0.50

Analyte	MW-5
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.50
cis-1, 2-DCE	<0.50

Analyte	MW-4
TPHg	22,00
Benzene	2,800
Toluene	470
Ethylbenzene	2,200
Xylenes	3,000
Napthalene	370
1, 2-DCA	<25
cis-1, 2-DCE	<25

- MW-1 Monitoring Well
- Site Boundary
- Chain Link Fence
- 1, 2-DCA 1, 2-Dichloroethane
- cis-1, 2-DCE cis-1, 2-Dichloroethane
- FD-1 Field Duplicate of MW-3



**GROUNDWATER ANALYTICAL RESULTS – MONITORING WELLS (µg/L) – SEPTEMBER 2014**

September 2014 3884 Martin Luther King, Jr. Way  
28068161 Oakland, California



**FIGURE 3**

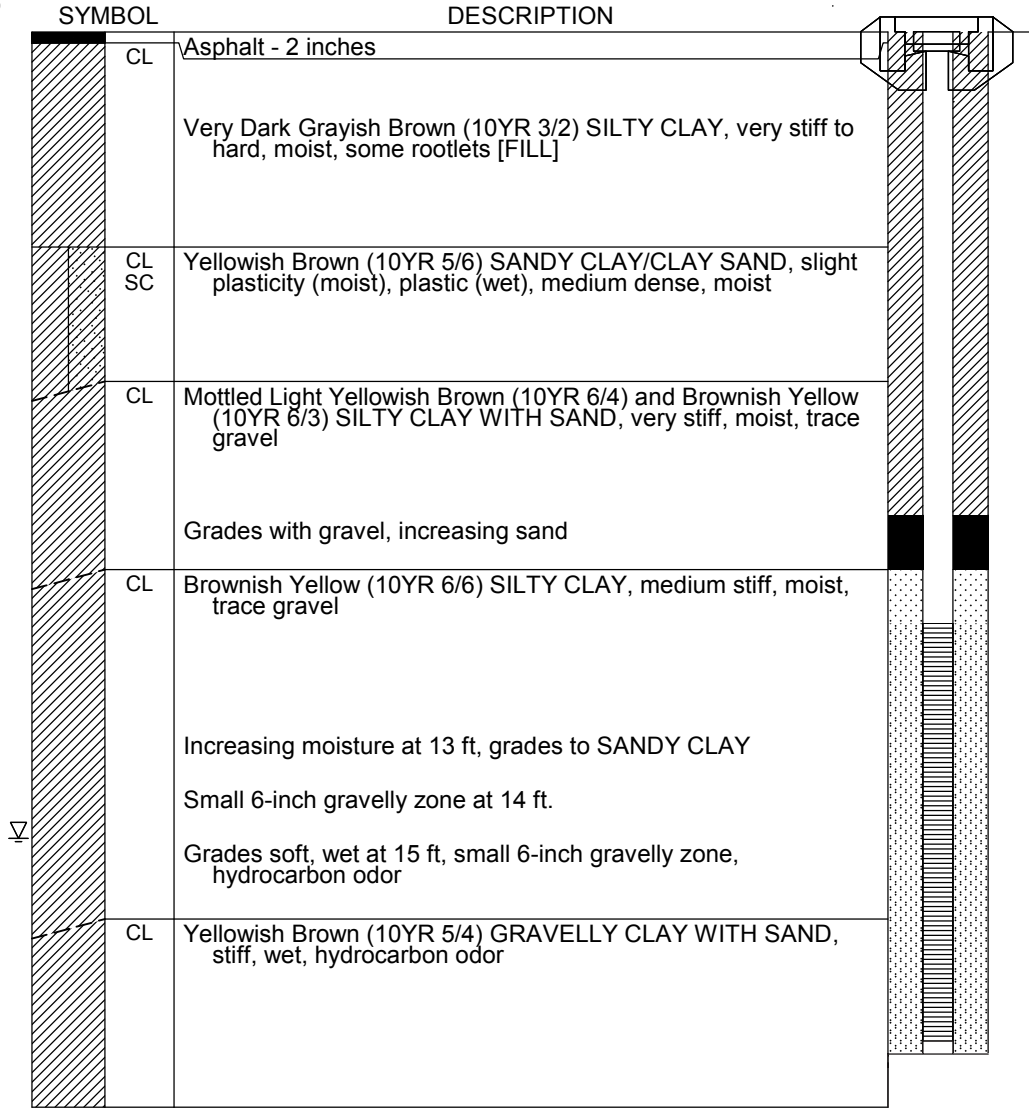
**APPENDIX A**

**BORING LOGS AND WELL COMPLETION DETAILS**

# BORING MW-6

SAMPLING		
DEPTH IN FEET	INCHES DRIVEN / RECOVERED	PID READING (parts per million)
0		
2		
4		
6	48/48	
8		
10	48/48	
12		
14	42/42	
16		9
18	42/42	
20		30
22		2
24		

SAMPLES



Note:  
1. End of boring at 20 ft. bgs.

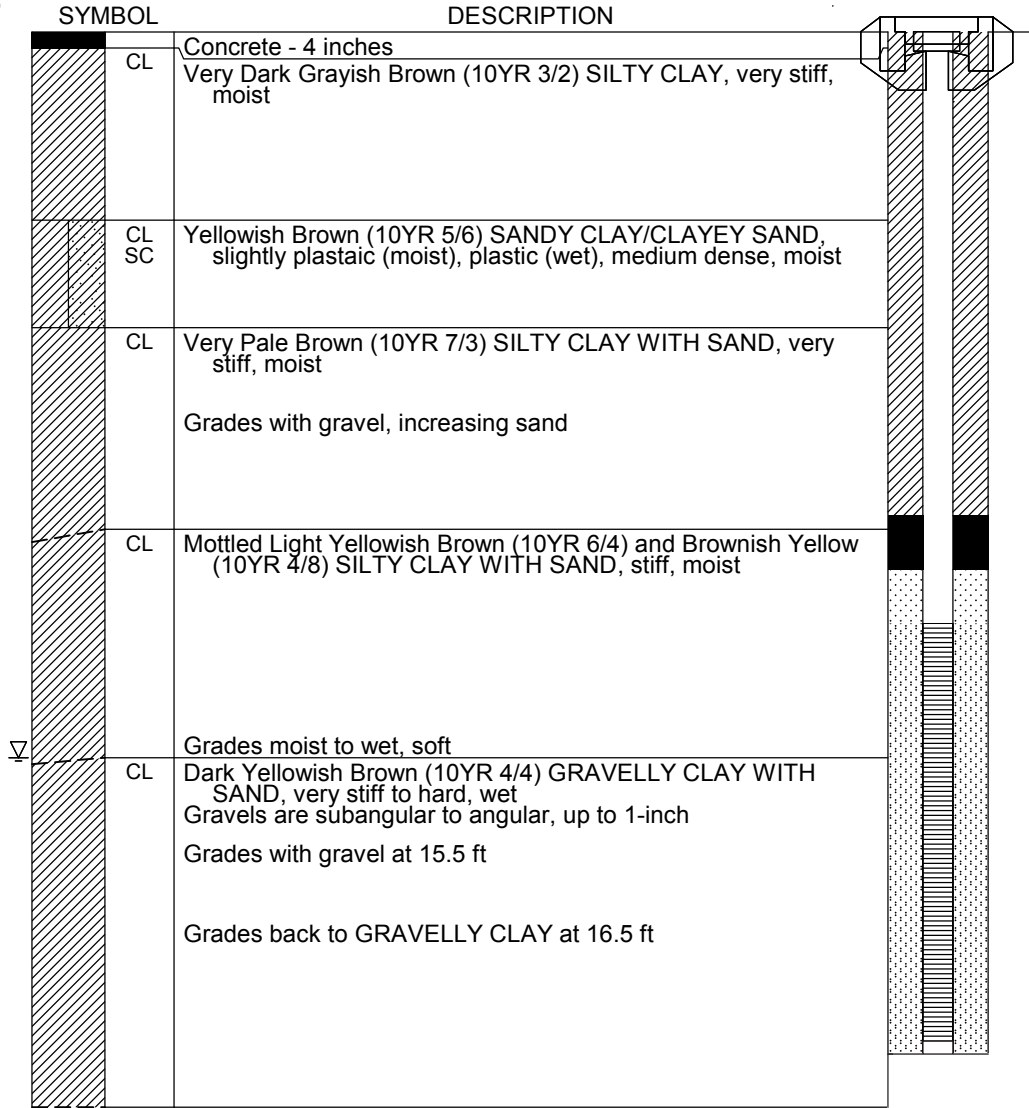
09/30/14 hk T:\Gint Project\3884\_mlk\_mws\_modified.mxd

Job No: 28068161 Pt. ID: 3884_MLK_JUL13.GPJ	<b>URS</b>	<b>3884 MLK</b>	<b>Log of Boring</b>
Date Completed: 9/4/14 Boring Depth: 20 ft.	Driller: Vapor Tech Services Drilling Method: Direct Push Technology	Location: Oakland, CA	
Top of Casing Elev: ft. Casing Depth: 19.0 ft.	Casing Type: 40 PVC Casing Diam: 2.0 in.	Screened Interval: 11-19 ft.	Slot Size: 0.010 in. Sand Pack: 2/12

# BORING MW-7

SAMPLING			
DEPTH IN FEET	INCHES DRIVEN / RECOVERED	RESISTANCE (blows per foot)	PID READING (parts per million)
0			
2			
4			
6	48/48		
8			
10	48/48		
12			
14	42/42		
16			
18			
20			
22			
24			

SAMPLES



Note:  
1. End of boring at 20 ft. bgs.

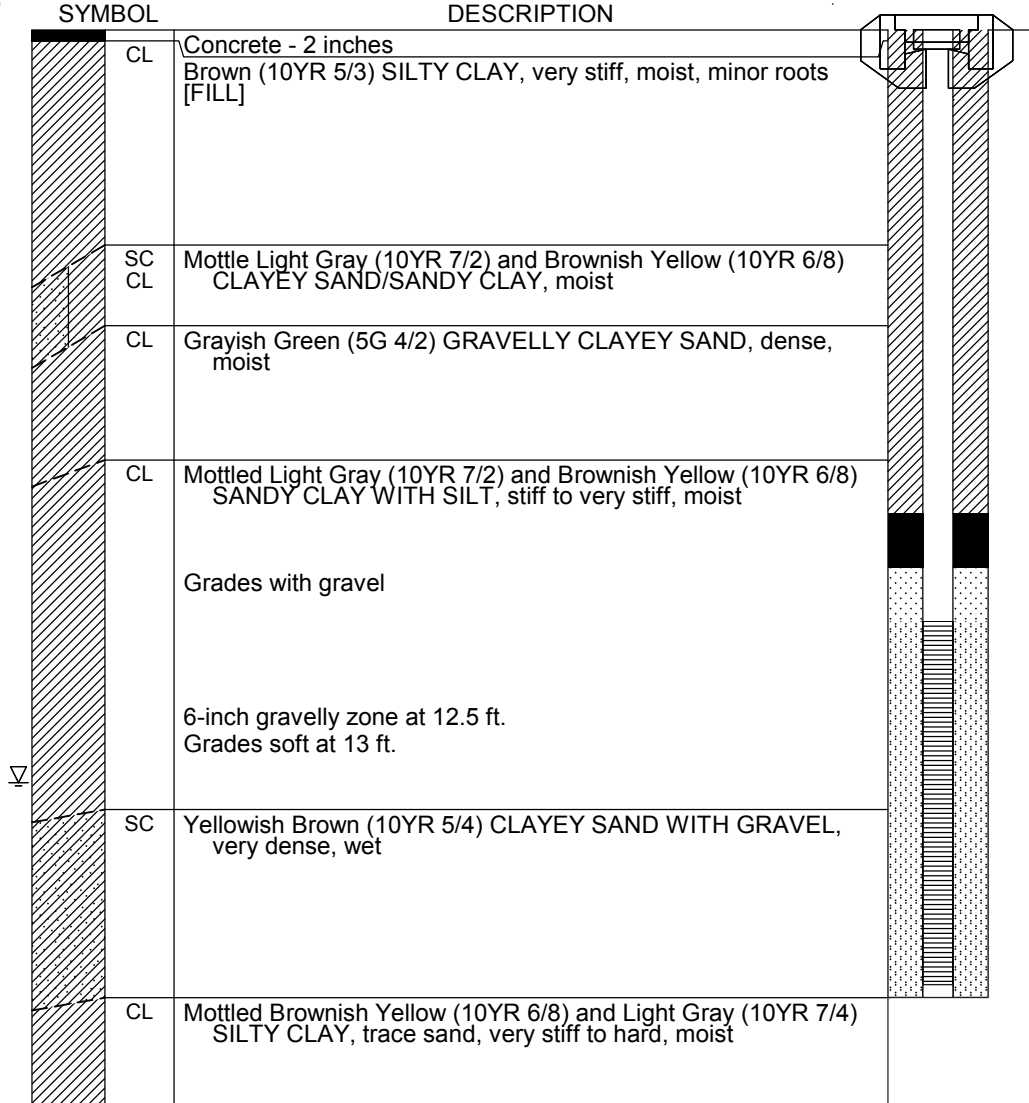
09/30/14 hk T:\Gint Project\3884\_mlk\_mws\_modified.mxd

Job No: 28068161 Pt. ID: 3884_MLK_JUL13.GPJ	<b>URS</b>	<b>3884 MLK</b>	<b>Log of Boring</b>
Date Completed: 9/4/14 Boring Depth: 20 ft.	Driller: Vapor Tech Services Drilling Method: Direct Push Technology	Location: Oakland, CA	
Top of Casing Elev: ft. Casing Depth: 19.0 ft.	Casing Type: 40 PVC Casing Diam: 2.0 in.	Screened Interval: 11-19 ft.	Slot Size: 0.010 in. Sand Pack: 2/12

# BORING MW-8

SAMPLING			
DEPTH IN FEET	INCHES DRIVEN / RECOVERED	RESISTANCE (blows per foot)	PID READING (parts per million)
0			
2			
4			
6	48/48		
8			
10	48/43		
12			
14	42/38		
16			
18	42/42		
20			
22			
24			

SAMPLES



Note:  
1. End of boring at 20 ft. bgs.

09/30/14 hk T:\Gint Project\3884\_mlk\_mws\_modified.mxd

Job No: 28068161 Pt. ID: 3884_MLK_JUL13.GPJ		<b>URS</b>		3884 MLK		<b>Log of Boring</b>	
Date Completed: 9/5/14 Boring Depth: 20 ft.		Driller: Vapor Tech Services Drilling Method: Direct Push Technology				Location: Oakland, CA	
Top of Casing Elev: ft. Casing Depth: 18.0 ft.		Casing Type: 40 PVC Casing Diam: 2.0 in.		Screened Interval: 11-18 ft.		Slot Size: 0.010 in. Sand Pack: 2/12	

**APPENDIX B**

**WELL PURGING – FIELD QUALITY MEASUREMENT FORMS**

**WELL PURGING – FIELD QUALITY MEASUREMENTS FORM**

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-5</b> Date <b>9/15/14</b> Field Personnel <b>RB/AO</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>18.53'</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
---	--

St. 1042	Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> μS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
	1045			300	0.9	17.6	853	6.13	98.5	0.64		
	1048			"	1.8	17.5	856	6.13	100.3	0.30		Clear ; No odor
	1051	18.67		"	2.7	17.5	861	6.16	101.8	<del>0.22</del> 0.22		
	1054	18.98		"	3.6	17.5	868	6.18	102.9	0.18		
	1057	19.08		"	4.5	17.4	871	6.20	102.9	0.13		
	1100	19.34		"	<del>6.45</del>	17.4	857	6.19	103.4	0.09		
	1103	19.49		"	<del>7.86</del>	17.4	861	6.20	103.5	0.08		
Total Volume Purged					6.3L							
Total Purge Time					21min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> μSiemens per cm (same as μmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

**WELL PURGING – FIELD QUALITY MEASUREMENTS FORM**

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-3</b> Date <b>9/15/14</b> Field Personnel <b>RB/AD</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>15.56'</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
---	--

St. 1125 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1128	15.88		300	0.9	18.9	1177	6.75	100.3	1.01		
1131	16.11		"	1.8	19.0	1179	6.76	99.1	1.39		Clear; Slight hydrocarbon odor
1134	16.40		"	2.7	19.0	1183	6.77	98.6	1.55		
1137	16.60		"	3.6	19.0	1181	6.76	98.1	1.08		
1140	16.88		"	4.5	19.0	1172	6.75	97.7	0.57		
1143	17.08		"	5.4	19.0	1167	6.74	97.5	0.35		MW-3 is FD-1
1146	17.33		"	6.3	19.0	1163	6.73	97.6	0.29		
1149	17.54		"	7.2	18.9	1162	6.73	97.4	0.28		
Total Volume Purged				7.2L							
Total Purge Time				24min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing



**WELL PURGING – FIELD QUALITY MEASUREMENTS FORM**

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-2</b> Date <b>9/15/14</b> Field Personnel <b>RB/AO</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>15.45'</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
---	--

A. 1212 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1215	15.60		300	0.9	18.9	926	6.43	-46.4	0.16		
1218	15.95		"	1.8	19.0	924	6.40	-48.9	0.18		clear; strong hydrocarbon odor
1221	16.08		"	2.7	19.1	937	6.37	-47.6	0.17		
1224	16.32		"	3.6	19.1	941	6.34	-47.1	0.10		
1227	16.48		"	4.5	19.1	940	6.34	-47.2	0.08		
1230	16.70		"	5.4	19.0	936	6.35	-49.3	0.07		
Total Volume Purged				5.4L							
Total Purge Time				18 min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

**WELL PURGING – FIELD QUALITY MEASUREMENTS FORM**

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-4</b> Date <b>9/15/14</b> Field Personnel <b>RB/AO</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>16.25</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
---	---

St. 1249 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> μS/cm	pH	ORP/Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1252	15.50		300	0.9	21.3	1460	6.26	-0.8	0.22		
1255	15.90		"	1.8	21.3	1443	6.27	-11.9	0.09		Clear; strong hydrocarbon odor
1258	16.18		"	2.7	21.2	1465	6.25	-14.9	0.08		
1301	16.53		"	3.6	21.2	1458	6.25	-17.3	0.07		
1304	16.89		"	4.5	21.2	1474	6.25	-18.9	0.05		
1307	17.17		"	5.4	21.2	1463	6.25	-20.0	0.05		
Total Volume Purged				5.4L							
Total Purge Time				18min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> μSiemens per cm (same as μmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

## WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-1</b> Date <b>9/15/14</b> Field Personnel <b>RB/AO</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>15.16</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
---	---

St. 1329	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1332	15.42		300	0.9	20.4	1085	6.17	72.6	0.50		
1335	15.74		"	1.8	20.5	1059	6.14	75.6	0.22		Slightly turbid; slight hydrocarbon odor
1338	15.97		"	2.7	20.5	1067	6.14	77.1	0.26		
1341	16.09		"	3.6	20.5	1077	6.15	77.4	0.23		
1344	16.24		"	4.5	20.6	1099	6.14	76.7	0.20		
1347	16.27		"	5.4	20.6	1107	6.15	75.4	0.16		
1350	16.32		"	6.3	20.5	1103	6.15	75.3	0.14		
1353	16.37		"	7.2	20.5	1100	6.15	74.9	0.13		
Total Volume Purged				7.2L							
Total Purge Time				24min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

## WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) <b>3884 MLK</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>14.93'</u>
Well Number <u>MW-6</u> Date <u>9/15/14</u>	Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b>
Field Personnel <u>RB/AO</u>	Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b>
Sampling Organization: <b>URS Corporation</b>	Purging Device; (Pump type) <b>Peristaltic</b>

st. 1432 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1435	15.25		300	0.9	21.2	1731	6.48	81.8	2.12		Slightly turbid; slight hydrocarbon odor → Water clears
1438	15.52		"	1.8	21.4	1500	6.42	84.8	1.55		
1441	15.75		"	2.7	21.4	1501	6.41	87.3	1.43		
1444	16.00		"	3.6	21.3	1541	6.46	90.3	1.62		
1447	16.35		"	4.5	21.3	1543	6.48	93.3	1.85		
1450	16.60		"	5.4	21.3	1653	6.52	95.4	2.27		
1453	16.83		"	6.3	21.3	1697	6.52	96.8	2.48		
1456	17.01		"	7.2	21.3	1757	6.51	98.4	2.56		
Total Volume Purged				7.2L							
Total Purge Time				24 min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

**WELL PURGING – FIELD QUALITY MEASUREMENTS FORM**

Location (Site/Facility Name) <b>3884 MLK</b> Well Number <b>MW-7</b> Date <b>9/15/14</b> Field Personnel <b>RB/AO</b> Sampling Organization: <b>URS Corporation</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>13.74'</u> Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b> Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b> Purging Device; (Pump type) <b>Peristaltic</b>
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St. 1515 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1618	14.02		300	0.9	20.5	1541	6.60	97.6	5.21		
1521	14.28		"	1.8	20.6	1362	6.54	99.4	4.62		Clear; No hydrocarbon odor
1524	14.55		"	2.7	20.7	1327	6.59	101.1	4.84		
1527	14.72		"	3.6	20.6	1341	6.64	102.7	5.04		
1530	15.20		"	4.5	20.6	1414	6.67	103.7	5.19		
1533	15.43		"	5.4	20.5	1508	6.66	104.3	4.95		
Total Volume Purged				5.4L							
Total Purge Time				18min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

## WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) <b>3884 MLK</b>	Depth to Water (Feet below TOC <sup>4</sup> ) <u>14.32</u>
Well Number <u>MW-8</u> Date <u>9/15/14</u>	Depth to: Top of screen <b>Unknown – Well Depth Approximately 18.5 ft</b>
Field Personnel <u>RB/AO</u>	Pump Intake at (Feet below TOC) <b>Approximately 17.0 ft</b>
Sampling Organization: <b>URS Corporation</b>	Purging Device; (Pump type) <b>Peristaltic</b>

#. 1551 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial <sup>1</sup>	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. <sup>2</sup> µS/cm	pH	ORP/ Eh <sup>3</sup> mv	DO mg/L	Turbidity NTU	Comments
1554	14.50		300	0.9	20.2	1232	6.78	101.8	5.04		
1557	14.64		"	1.8	20.4	982	6.80	104.9	5.89		Slightly turbid; No odor
1600	14.87		"	2.7	20.4	973	6.78	105.9	5.82		
1603	15.00		"	3.6	20.4	1014	6.81	106.1	5.75		
1606	15.19		"	4.5	20.4	1055	6.81	106.1	5.87		
Total Volume Purged				4.5L							
Total Purge Time				15min							

<sup>1</sup> Pump dial setting (for example: hertz, cycles/min, etc.)  
<sup>2</sup> µSiemens per cm (same as µmhos/cm) at 25 °C.  
<sup>3</sup> Oxidation reduction potential (stand-in for Eh)  
<sup>4</sup> TOC = Top of Casing

## **APPENDIX C**

### **ANALYTICAL LABORATORY AND DATA VALIDATION REPORTS**

## LEVEL III Data Validation Report

**PROJECT:** 3884 MLK, Oakland  
**LABORATORY:** Test America, Pleasanton  
**LAB NUMBER:** 720-59730  
**SAMPLES:** MW-6-9', MW-6-14', MW-7-9', MW-7-14', MW-8-9', MW-8-14'  
**MATRIX:** Soil

Analysis	Volatile Organic Compounds* and GRO (C5-C12) 8260B / CA_LUFT
Holding Time	✓
Surrogate Recovery	✓
MS/MSD	NA
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates	NA
Trip/Field/Equipment Blanks	NA
Reporting Limits	✓

\* BTEX Compounds; 1,2-Dichloroethane, cis-1,2-Dichloroethene, Naphthalene

✓ – QC criteria were met.

Notes: None

### Summary:

Based on this Level III validation, these data are usable for their intended purpose. None of these data were qualified or rejected.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Pleasanton  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-59730-1  
Client Project/Site: 3884 MLK/Oakland

For:  
URS Corporation  
One Montgomery Street  
Suite 900  
San Francisco, California 94104-4538

Attn: Mr. Erik Skov



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Authorized for release by:  
9/12/2014 12:34:16 PM

Afsaneh Salimpour, Senior Project Manager  
(925)484-1919  
[afsaneh.salimpour@testamericainc.com](mailto:afsaneh.salimpour@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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## Definitions/Glossary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

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**Job ID: 720-59730-1**

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**Laboratory: TestAmerica Pleasanton**

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**Narrative**

**Job Narrative**  
**720-59730-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/5/2014 5:01 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

**GC/MS VOA**

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



# Detection Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-6-9'**

**Lab Sample ID: 720-59730-1**

No Detections.

**Client Sample ID: MW-6-14'**

**Lab Sample ID: 720-59730-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C5-C12	520		190		ug/Kg	1		8260B/CA_LUFT MS	Total/NA

**Client Sample ID: MW-7-9'**

**Lab Sample ID: 720-59730-4**

No Detections.

**Client Sample ID: MW-7-14'**

**Lab Sample ID: 720-59730-5**

No Detections.

**Client Sample ID: MW-8-9'**

**Lab Sample ID: 720-59730-7**

No Detections.

**Client Sample ID: MW-8-14'**

**Lab Sample ID: 720-59730-8**

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-6-9'**  
**Date Collected: 09/04/14 10:40**  
**Date Received: 09/05/14 17:01**

**Lab Sample ID: 720-59730-1**  
**Matrix: Solid**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
Ethylbenzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
Toluene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
Xylenes, Total	ND		7.1		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
Gasoline Range Organics (GRO) -C5-C12	ND		180		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
Naphthalene	ND		7.1		ug/Kg		09/05/14 19:30	09/08/14 12:17	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	91		45 - 131				09/05/14 19:30	09/08/14 12:17	1
1,2-Dichloroethane-d4 (Surr)	92		60 - 140				09/05/14 19:30	09/08/14 12:17	1
Toluene-d8 (Surr)	91		58 - 140				09/05/14 19:30	09/08/14 12:17	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-6-14'**

**Lab Sample ID: 720-59730-2**

**Date Collected: 09/04/14 10:50**

**Matrix: Solid**

**Date Received: 09/05/14 17:01**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.8		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
Ethylbenzene	ND		3.8		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
Toluene	ND		3.8		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
Xylenes, Total	ND		7.6		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
<b>Gasoline Range Organics (GRO)</b>	<b>520</b>		190		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
<b>-C5-C12</b>									
1,2-Dichloroethane	ND		3.8		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
cis-1,2-Dichloroethene	ND		3.8		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
Naphthalene	ND		7.6		ug/Kg		09/05/14 19:30	09/08/14 12:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	99		45 - 131				09/05/14 19:30	09/08/14 12:47	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140				09/05/14 19:30	09/08/14 12:47	1
Toluene-d8 (Surr)	93		58 - 140				09/05/14 19:30	09/08/14 12:47	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-7-9'**  
**Date Collected: 09/04/14 13:55**  
**Date Received: 09/05/14 17:01**

**Lab Sample ID: 720-59730-4**  
**Matrix: Solid**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
Ethylbenzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
Toluene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
Xylenes, Total	ND		7.3		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		180		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
Naphthalene	ND		7.3		ug/Kg		09/05/14 19:30	09/08/14 13:16	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	89		45 - 131				09/05/14 19:30	09/08/14 13:16	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140				09/05/14 19:30	09/08/14 13:16	1
Toluene-d8 (Surr)	92		58 - 140				09/05/14 19:30	09/08/14 13:16	1



# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-7-14'**

**Lab Sample ID: 720-59730-5**

**Date Collected: 09/04/14 14:05**

**Matrix: Solid**

**Date Received: 09/05/14 17:01**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.6		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
Ethylbenzene	ND		3.6		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
Toluene	ND		3.6		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
Xylenes, Total	ND		7.2		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
Gasoline Range Organics (GRO) -C5-C12	ND		180		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
Naphthalene	ND		7.2		ug/Kg		09/05/14 18:45	09/09/14 14:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	90		45 - 131				09/05/14 18:45	09/09/14 14:29	1
1,2-Dichloroethane-d4 (Surr)	90		60 - 140				09/05/14 18:45	09/09/14 14:29	1
Toluene-d8 (Surr)	92		58 - 140				09/05/14 18:45	09/09/14 14:29	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-8-9'**  
**Date Collected: 09/05/14 11:55**  
**Date Received: 09/05/14 17:01**

**Lab Sample ID: 720-59730-7**  
**Matrix: Solid**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
Ethylbenzene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
Toluene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
Xylenes, Total	ND		7.2		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
Gasoline Range Organics (GRO) -C5-C12	ND		180		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
1,2-Dichloroethane	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
cis-1,2-Dichloroethene	ND		3.6		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
Naphthalene	ND		7.2		ug/Kg		09/05/14 19:30	09/08/14 14:14	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	89		45 - 131				09/05/14 19:30	09/08/14 14:14	1
1,2-Dichloroethane-d4 (Surr)	105		60 - 140				09/05/14 19:30	09/08/14 14:14	1
Toluene-d8 (Surr)	90		58 - 140				09/05/14 19:30	09/08/14 14:14	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Client Sample ID: MW-8-14'**

**Lab Sample ID: 720-59730-8**

**Date Collected: 09/05/14 12:05**

**Matrix: Solid**

**Date Received: 09/05/14 17:01**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.5		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
Ethylbenzene	ND		3.5		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
Toluene	ND		3.5		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
Xylenes, Total	ND		7.1		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
Gasoline Range Organics (GRO) -C5-C12	ND		180		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
1,2-Dichloroethane	ND		3.5		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
cis-1,2-Dichloroethene	ND		3.5		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
Naphthalene	ND		7.1		ug/Kg		09/05/14 19:30	09/08/14 14:43	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	88		45 - 131				09/05/14 19:30	09/08/14 14:43	1
1,2-Dichloroethane-d4 (Surr)	104		60 - 140				09/05/14 19:30	09/08/14 14:43	1
Toluene-d8 (Surr)	91		58 - 140				09/05/14 19:30	09/08/14 14:43	1

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-166324/5**

**Matrix: Solid**

**Analysis Batch: 166324**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg			09/08/14 09:43	1
Ethylbenzene	ND		5.0		ug/Kg			09/08/14 09:43	1
Toluene	ND		5.0		ug/Kg			09/08/14 09:43	1
Xylenes, Total	ND		10		ug/Kg			09/08/14 09:43	1
Gasoline Range Organics (GRO)	ND		250		ug/Kg			09/08/14 09:43	1
-C5-C12									
1,2-Dichloroethane	ND		5.0		ug/Kg			09/08/14 09:43	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			09/08/14 09:43	1
Naphthalene	ND		10		ug/Kg			09/08/14 09:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		45 - 131		09/08/14 09:43	1
1,2-Dichloroethane-d4 (Surr)	99		60 - 140		09/08/14 09:43	1
Toluene-d8 (Surr)	92		58 - 140		09/08/14 09:43	1

**Lab Sample ID: LCS 720-166324/6**

**Matrix: Solid**

**Analysis Batch: 166324**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	41.7		ug/Kg		83	70 - 130
Ethylbenzene	50.0	41.6		ug/Kg		83	80 - 137
Toluene	50.0	42.0		ug/Kg		84	80 - 128
m-Xylene & p-Xylene	50.0	43.3		ug/Kg		87	70 - 146
o-Xylene	50.0	43.4		ug/Kg		87	70 - 140
1,2-Dichloroethane	50.0	44.4		ug/Kg		89	70 - 130
cis-1,2-Dichloroethene	50.0	44.0		ug/Kg		88	70 - 138
Naphthalene	50.0	45.8		ug/Kg		92	60 - 147

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		45 - 131
1,2-Dichloroethane-d4 (Surr)	95		60 - 140
Toluene-d8 (Surr)	95		58 - 140

**Lab Sample ID: LCS 720-166324/8**

**Matrix: Solid**

**Analysis Batch: 166324**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)	1000	1000		ug/Kg		100	61 - 128
-C5-C12							

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	99		60 - 140
Toluene-d8 (Surr)	93		58 - 140

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-166324/7**

**Matrix: Solid**

**Analysis Batch: 166324**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	44.5		ug/Kg		89	70 - 130	6	20
Ethylbenzene	50.0	43.5		ug/Kg		87	80 - 137	4	20
Toluene	50.0	44.3		ug/Kg		89	80 - 128	5	20
m-Xylene & p-Xylene	50.0	45.5		ug/Kg		91	70 - 146	5	20
o-Xylene	50.0	46.6		ug/Kg		93	70 - 140	7	20
1,2-Dichloroethane	50.0	48.9		ug/Kg		98	70 - 130	10	20
cis-1,2-Dichloroethane	50.0	46.7		ug/Kg		93	70 - 138	6	20
Naphthalene	50.0	52.6		ug/Kg		105	60 - 147	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	99		60 - 140
Toluene-d8 (Surr)	94		58 - 140

**Lab Sample ID: LCSD 720-166324/9**

**Matrix: Solid**

**Analysis Batch: 166324**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	1020		ug/Kg		102	61 - 128	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		45 - 131
1,2-Dichloroethane-d4 (Surr)	97		60 - 140
Toluene-d8 (Surr)	94		58 - 140

**Lab Sample ID: MB 720-166414/9**

**Matrix: Solid**

**Analysis Batch: 166414**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg			09/09/14 11:47	1
Ethylbenzene	ND		5.0		ug/Kg			09/09/14 11:47	1
Toluene	ND		5.0		ug/Kg			09/09/14 11:47	1
Xylenes, Total	ND		10		ug/Kg			09/09/14 11:47	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg			09/09/14 11:47	1
1,2-Dichloroethane	ND		5.0		ug/Kg			09/09/14 11:47	1
cis-1,2-Dichloroethane	ND		5.0		ug/Kg			09/09/14 11:47	1
Naphthalene	ND		10		ug/Kg			09/09/14 11:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		45 - 131		09/09/14 11:47	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140		09/09/14 11:47	1
Toluene-d8 (Surr)	94		58 - 140		09/09/14 11:47	1

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-166414/10**

**Matrix: Solid**

**Analysis Batch: 166414**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	42.4		ug/Kg		85	70 - 130
Ethylbenzene	50.0	42.5		ug/Kg		85	80 - 137
Toluene	50.0	43.2		ug/Kg		86	80 - 128
m-Xylene & p-Xylene	50.0	44.1		ug/Kg		88	70 - 146
o-Xylene	50.0	44.4		ug/Kg		89	70 - 140
1,2-Dichloroethane	50.0	44.6		ug/Kg		89	70 - 130
cis-1,2-Dichloroethane	50.0	43.7		ug/Kg		87	70 - 138
Naphthalene	50.0	49.1		ug/Kg		98	60 - 147

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		45 - 131
1,2-Dichloroethane-d4 (Surr)	92		60 - 140
Toluene-d8 (Surr)	94		58 - 140

**Lab Sample ID: LCS 720-166414/7**

**Matrix: Solid**

**Analysis Batch: 166414**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	1080		ug/Kg		108	61 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	97		45 - 131
1,2-Dichloroethane-d4 (Surr)	99		60 - 140
Toluene-d8 (Surr)	95		58 - 140

**Lab Sample ID: LCSD 720-166414/11**

**Matrix: Solid**

**Analysis Batch: 166414**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	50.0	45.3		ug/Kg		91	70 - 130	7	20
Ethylbenzene	50.0	44.6		ug/Kg		89	80 - 137	5	20
Toluene	50.0	45.7		ug/Kg		91	80 - 128	6	20
m-Xylene & p-Xylene	50.0	46.4		ug/Kg		93	70 - 146	5	20
o-Xylene	50.0	46.8		ug/Kg		94	70 - 140	5	20
1,2-Dichloroethane	50.0	46.8		ug/Kg		94	70 - 130	5	20
cis-1,2-Dichloroethane	50.0	46.5		ug/Kg		93	70 - 138	6	20
Naphthalene	50.0	51.9		ug/Kg		104	60 - 147	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	93		45 - 131
1,2-Dichloroethane-d4 (Surr)	93		60 - 140
Toluene-d8 (Surr)	94		58 - 140

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-166414/8

Matrix: Solid

Analysis Batch: 166414

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	1030		ug/Kg		103	61 - 128	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	96		60 - 140
Toluene-d8 (Surr)	94		58 - 140



# QC Association Summary

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## GC/MS VOA

### Analysis Batch: 166324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59730-1	MW-6-9'	Total/NA	Solid	8260B/CA_LUFT MS	166348
720-59730-2	MW-6-14'	Total/NA	Solid	8260B/CA_LUFT MS	166348
720-59730-4	MW-7-9'	Total/NA	Solid	8260B/CA_LUFT MS	166348
720-59730-7	MW-8-9'	Total/NA	Solid	8260B/CA_LUFT MS	166348
720-59730-8	MW-8-14'	Total/NA	Solid	8260B/CA_LUFT MS	166348
LCS 720-166324/6	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-166324/8	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-166324/7	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-166324/9	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-166324/5	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

### Prep Batch: 166348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59730-1	MW-6-9'	Total/NA	Solid	5035	
720-59730-2	MW-6-14'	Total/NA	Solid	5035	
720-59730-4	MW-7-9'	Total/NA	Solid	5035	
720-59730-7	MW-8-9'	Total/NA	Solid	5035	
720-59730-8	MW-8-14'	Total/NA	Solid	5035	

### Analysis Batch: 166414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59730-5	MW-7-14'	Total/NA	Solid	8260B/CA_LUFT MS	166438
LCS 720-166414/10	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-166414/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-166414/11	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-166414/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-166414/9	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

### Prep Batch: 166438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59730-5	MW-7-14'	Total/NA	Solid	5035	



# Lab Chronicle

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Client Sample ID: MW-6-9'

Lab Sample ID: 720-59730-1

Date Collected: 09/04/14 10:40

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166348	09/05/14 19:30	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166324	09/08/14 12:17	PDR	TAL PLS

## Client Sample ID: MW-6-14'

Lab Sample ID: 720-59730-2

Date Collected: 09/04/14 10:50

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166348	09/05/14 19:30	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166324	09/08/14 12:47	PDR	TAL PLS

## Client Sample ID: MW-7-9'

Lab Sample ID: 720-59730-4

Date Collected: 09/04/14 13:55

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166348	09/05/14 19:30	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166324	09/08/14 13:16	PDR	TAL PLS

## Client Sample ID: MW-7-14'

Lab Sample ID: 720-59730-5

Date Collected: 09/04/14 14:05

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166438	09/05/14 18:45	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166414	09/09/14 14:29	PDR	TAL PLS

## Client Sample ID: MW-8-9'

Lab Sample ID: 720-59730-7

Date Collected: 09/05/14 11:55

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166348	09/05/14 19:30	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166324	09/08/14 14:14	PDR	TAL PLS

## Client Sample ID: MW-8-14'

Lab Sample ID: 720-59730-8

Date Collected: 09/05/14 12:05

Matrix: Solid

Date Received: 09/05/14 17:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			166348	09/05/14 19:30	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	166324	09/08/14 14:43	PDR	TAL PLS

TestAmerica Pleasanton

# Lab Chronicle

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

**Laboratory References:**

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

- 1
- 2
- 3
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- 5
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# Certification Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

## Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Analysis Method	Prep Method	Matrix	Analyte
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# Method Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

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Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL PLS

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**Protocol References:**

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

**Laboratory References:**

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59730-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-59730-1	MW-6-9'	Solid	09/04/14 10:40	09/05/14 17:01
720-59730-2	MW-6-14'	Solid	09/04/14 10:50	09/05/14 17:01
720-59730-4	MW-7-9'	Solid	09/04/14 13:55	09/05/14 17:01
720-59730-5	MW-7-14'	Solid	09/04/14 14:05	09/05/14 17:01
720-59730-7	MW-8-9'	Solid	09/05/14 11:55	09/05/14 17:01
720-59730-8	MW-8-14'	Solid	09/05/14 12:05	09/05/14 17:01

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- 11
- 12
- 13
- 14

TESTAMERICA San Francisco Chain of Custody  
 1220 Quarry Lane • Pleasanton CA 94566-4756  
 Phone: (925) 484-1919 • Fax: (925) 600-3002

**120-59730**

Reference #: **IS6074**

Date **9/5/14** Page **1** of **1**

**Report To**

Attn: **Eric Skov**  
 Company: **URS Corporation**  
 Address: **One Montecito St, 900**  
 Phone: **415-243-3845** Mail: **Eric.Skov@URS.com**  
 Bill To:  
 Sampled By: **ES/ES**  
 Attn: **415-243-3845**

Sample ID	Date	Time	Mat	Preserv
MW-6-9	9/4/14	1410	S	NA
MW-6-14	9/4/14	1030	S	NA
MW-6-14	9/4/14	1200	S	NA
MW-7-9	9/5/14	1255	S	NA
MW-7-14	9/5/14	1405	S	NA
MW-7-14	9/5/14	1405	S	NA
MW-7-14	9/5/14	1535	S	NA
MW-8-9	9/5/14	1155	S	NA
MW-8-9	9/5/14	1155	S	NA
MW-8-14	9/5/14	1205	S	NA
MW-8-14	9/5/14	1205	S	NA
MW-8-14	9/5/14	1300	S	NA

**Project Info**

Project Name: **3884 MLK**  
 # of Containers:  
 Project#: **28068161**  
 Head Space:  
 Temp: **2.4°C**  
 Conforms to record:  
 Credit Card#:

**Sample Receipt**

Project Name: **3884 MLK**  
 # of Containers:  
 Project#: **28068161**  
 Head Space:  
 Temp: **2.4°C**  
 Conforms to record:  
 Credit Card#:

Report:  Routine  Level 3  Level 4  EDD  State Tank  
 Fund EDI  
 Special Instructions / Comments: **\* See VCS on 8260 report for Acrylamide, 1,2-DCA and CH-1,2-DCE**  
 Global ID   
 See Terms and Conditions on reverse  
 TestAmerica SF reports 8015M from C-24 (Industry norm). Default for 8015B is C-24

Analysis Request	MW	W	W	W	W	W	Number of Containers
TPH EPA - 8260B							
Gas w/ BTX MTBE							
TEPH EPA 8015M* Silica Gel							
Diesel Motor Oil Other							
EPA 8260B Gas BTX							
5 Oxygenates DCA, EDBI Ethanol							
(HVOCS) EPA 8021 by 8260B							
* Volatile Organics GC/MS (VOCs)							
EPA 8260B 624							
Semivolatiles GC/MS							
EPA 8270 625							
Oil and Grease Petroleum (EPA 1664) Total							
Pesticides EPA 8081 608							
PCBS EPA 8092 608							
PNAs by 8270 8310							
CAM17 Metals (EPA 8010/747/7471)							
Metals: Lead LUFT RCRA							
Other:							
Low Level Metals by EPA 200.86620 (ICP-MS):							
W.E.T (STLC)							
TCLP							
Hexavalent Chromium							
pH (24h hold time for H <sub>2</sub> O)							
Spec. Cond. Alkalinity							
TSS TDS							
Anions: Cl SO <sub>4</sub> NO <sub>3</sub> F Br NO <sub>2</sub> PO <sub>4</sub>							
Hold							

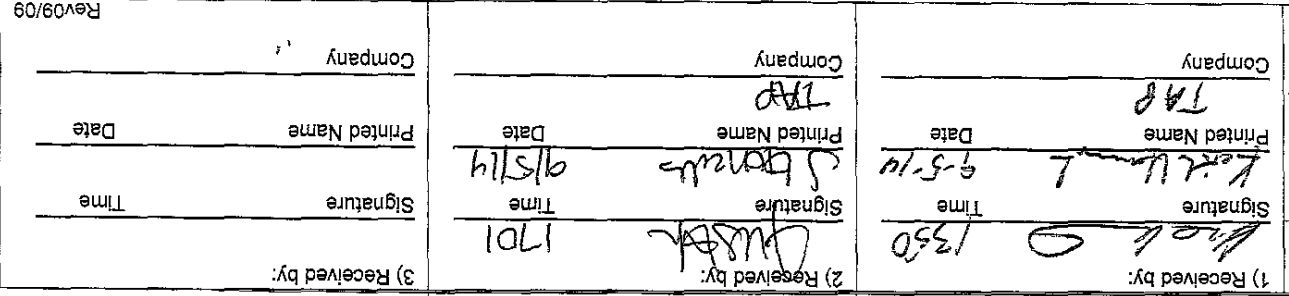
**1) Received by:** [Signature] **Company:** TAP  
**Printed Name:** [Signature] **Date:** 9-5-14  
**Signature:** [Signature] **Time:** 1350

**2) Relinquished by:** [Signature] **Company:** TAP  
**Printed Name:** [Signature] **Date:** 9-5-14  
**Signature:** [Signature] **Time:** 1701

**3) Received by:** [Signature] **Company:** TAP  
**Printed Name:** [Signature] **Date:** 9/5/14  
**Signature:** [Signature] **Time:** 1701

**3) Relinquished by:** [Signature] **Company:** TAP  
**Printed Name:** [Signature] **Date:** 9-5-14  
**Signature:** [Signature] **Time:** 1701

**3) Received by:** [Signature] **Company:** TAP  
**Printed Name:** [Signature] **Date:** 9/5/14  
**Signature:** [Signature] **Time:** 1701



## Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-59730-1

**Login Number: 59730**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Gonzales, Justinn**

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



## LEVEL III Data Validation Report

**PROJECT:** 3884 MLK, Oakland  
**LABORATORY:** Test America, Pleasanton  
**LAB NUMBER:** 720-59949  
**SAMPLES:** MW-5, MW-3, MW-2, MW-4, MW-1, MW-6, MW-7, MW-8, FD-1  
**MATRIX:** Water

Analysis	Volatile Organic Compounds* and GRO (C5-C12) 8260B / CA_LUFT
Holding Time	✓
Surrogate Recovery	✓
MS/MSD (MW-5, MW-1, MW-7)	✓
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (MW-3 and FD-1)	✓
Trip Blanks	✓
Reporting Limits	Note 1

✓ – QC criteria were met.

Notes: 1. In order to quantitate target analytes, sample MW-4 was diluted by a factor of 50, and sample MW-2 was diluted by a factor of 200. Reporting limits were increased by the same factor.

### Summary:

Based on this Level III validation, these data are usable for their intended purpose. None of these data were qualified or rejected.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Pleasanton  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-59949-1  
Client Project/Site: 3884 MLK/Oakland

For:  
URS Corporation  
One Montgomery Street  
Suite 900  
San Francisco, California 94104-4538

Attn: Mr. Erik Skov



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Authorized for release by:  
9/25/2014 12:53:40 PM

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### LINKS

Review your project  
results through  
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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

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

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

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# Definitions/Glossary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

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**Job ID: 720-59949-1**

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**Laboratory: TestAmerica Pleasanton**

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**Narrative**

**Job Narrative**  
**720-59949-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/16/2014 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

**GC/MS VOA**

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

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# Detection Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Client Sample ID: MW-5

Lab Sample ID: 720-59949-1

No Detections.

## Client Sample ID: MW-3

Lab Sample ID: 720-59949-2

No Detections.

## Client Sample ID: MW-2

Lab Sample ID: 720-59949-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5600		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	190		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Toluene	180		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	11000		10000		ug/L	200		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-4

Lab Sample ID: 720-59949-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2800		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	2200		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Naphthalene	370		50		ug/L	50		8260B/CA_LUFT MS	Total/NA
Toluene	470		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	3000		50		ug/L	50		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	22000		2500		ug/L	50		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-1

Lab Sample ID: 720-59949-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	4.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-6

Lab Sample ID: 720-59949-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.6		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	0.58		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	4.7		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	300		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-7

Lab Sample ID: 720-59949-7

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Detection Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-8**

**Lab Sample ID: 720-59949-8**

No Detections.

**Client Sample ID: FD-1**

**Lab Sample ID: 720-59949-9**

No Detections.

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 720-59949-10**

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-5**  
**Date Collected: 09/15/14 11:10**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-1**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/23/14 02:33	1
1,2-Dichloroethane	ND		0.50		ug/L			09/23/14 02:33	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/23/14 02:33	1
Ethylbenzene	ND		0.50		ug/L			09/23/14 02:33	1
Naphthalene	ND		1.0		ug/L			09/23/14 02:33	1
Toluene	ND		0.50		ug/L			09/23/14 02:33	1
Xylenes, Total	ND		1.0		ug/L			09/23/14 02:33	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/23/14 02:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130					09/23/14 02:33	1
1,2-Dichloroethane-d4 (Surr)	109		72 - 130					09/23/14 02:33	1
Toluene-d8 (Surr)	100		70 - 130					09/23/14 02:33	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-3**  
**Date Collected: 09/15/14 11:50**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-2**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/23/14 03:05	1
1,2-Dichloroethane	ND		0.50		ug/L			09/23/14 03:05	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/23/14 03:05	1
Ethylbenzene	ND		0.50		ug/L			09/23/14 03:05	1
Naphthalene	ND		1.0		ug/L			09/23/14 03:05	1
Toluene	ND		0.50		ug/L			09/23/14 03:05	1
Xylenes, Total	ND		1.0		ug/L			09/23/14 03:05	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/23/14 03:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	97		67 - 130					09/23/14 03:05	1
1,2-Dichloroethane-d4 (Surr)	109		72 - 130					09/23/14 03:05	1
Toluene-d8 (Surr)	100		70 - 130					09/23/14 03:05	1



# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-2**  
**Date Collected: 09/15/14 12:30**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-3**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>5600</b>		100		ug/L			09/23/14 03:36	200
1,2-Dichloroethane	ND		100		ug/L			09/23/14 03:36	200
cis-1,2-Dichloroethene	ND		100		ug/L			09/23/14 03:36	200
<b>Ethylbenzene</b>	<b>190</b>		100		ug/L			09/23/14 03:36	200
Naphthalene	ND		200		ug/L			09/23/14 03:36	200
<b>Toluene</b>	<b>180</b>		100		ug/L			09/23/14 03:36	200
Xylenes, Total	ND		200		ug/L			09/23/14 03:36	200
<b>Gasoline Range Organics (GRO)</b>	<b>11000</b>		10000		ug/L			09/23/14 03:36	200
<b>-C5-C12</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	95		67 - 130					09/23/14 03:36	200
1,2-Dichloroethane-d4 (Surr)	110		72 - 130					09/23/14 03:36	200
Toluene-d8 (Surr)	99		70 - 130					09/23/14 03:36	200

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-4**  
**Date Collected: 09/15/14 13:25**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-4**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>2800</b>		25		ug/L			09/24/14 04:02	50
1,2-Dichloroethane	ND		25		ug/L			09/24/14 04:02	50
cis-1,2-Dichloroethene	ND		25		ug/L			09/24/14 04:02	50
<b>Ethylbenzene</b>	<b>2200</b>		25		ug/L			09/24/14 04:02	50
<b>Naphthalene</b>	<b>370</b>		50		ug/L			09/24/14 04:02	50
<b>Toluene</b>	<b>470</b>		25		ug/L			09/24/14 04:02	50
<b>Xylenes, Total</b>	<b>3000</b>		50		ug/L			09/24/14 04:02	50
<b>Gasoline Range Organics (GRO) -C5-C12</b>	<b>22000</b>		2500		ug/L			09/24/14 04:02	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	99		67 - 130					09/24/14 04:02	50
1,2-Dichloroethane-d4 (Surr)	95		72 - 130					09/24/14 04:02	50
Toluene-d8 (Surr)	102		70 - 130					09/24/14 04:02	50

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-1**  
**Date Collected: 09/15/14 13:55**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-5**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/24/14 04:33	1
<b>1,2-Dichloroethane</b>	<b>4.0</b>		0.50		ug/L			09/24/14 04:33	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 04:33	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 04:33	1
Naphthalene	ND		1.0		ug/L			09/24/14 04:33	1
Toluene	ND		0.50		ug/L			09/24/14 04:33	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 04:33	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 04:33	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	94		67 - 130					09/24/14 04:33	1
1,2-Dichloroethane-d4 (Surr)	95		72 - 130					09/24/14 04:33	1
Toluene-d8 (Surr)	99		70 - 130					09/24/14 04:33	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-6**  
**Date Collected: 09/15/14 15:00**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-6**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>5.6</b>		0.50		ug/L			09/24/14 06:05	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 06:05	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 06:05	1
<b>Ethylbenzene</b>	<b>0.58</b>		0.50		ug/L			09/24/14 06:05	1
Naphthalene	ND		1.0		ug/L			09/24/14 06:05	1
Toluene	ND		0.50		ug/L			09/24/14 06:05	1
<b>Xylenes, Total</b>	<b>4.7</b>		1.0		ug/L			09/24/14 06:05	1
<b>Gasoline Range Organics (GRO)</b>	<b>300</b>		50		ug/L			09/24/14 06:05	1
<b>-C5-C12</b>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130					09/24/14 06:05	1
1,2-Dichloroethane-d4 (Surr)	93		72 - 130					09/24/14 06:05	1
Toluene-d8 (Surr)	102		70 - 130					09/24/14 06:05	1



# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-7**  
**Date Collected: 09/15/14 15:35**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-7**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/24/14 13:10	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 13:10	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 13:10	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 13:10	1
Naphthalene	ND		1.0		ug/L			09/24/14 13:10	1
Toluene	ND		0.50		ug/L			09/24/14 13:10	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 13:10	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 13:10	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	95		67 - 130					09/24/14 13:10	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130					09/24/14 13:10	1
Toluene-d8 (Surr)	100		70 - 130					09/24/14 13:10	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-8**  
**Date Collected: 09/15/14 16:10**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-8**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/24/14 13:42	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 13:42	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 13:42	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 13:42	1
Naphthalene	ND		1.0		ug/L			09/24/14 13:42	1
Toluene	ND		0.50		ug/L			09/24/14 13:42	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 13:42	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 13:42	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	95		67 - 130					09/24/14 13:42	1
1,2-Dichloroethane-d4 (Surr)	90		72 - 130					09/24/14 13:42	1
Toluene-d8 (Surr)	98		70 - 130					09/24/14 13:42	1



# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: FD-1**  
**Date Collected: 09/15/14 00:00**  
**Date Received: 09/16/14 16:30**

**Lab Sample ID: 720-59949-9**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/24/14 06:37	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 06:37	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 06:37	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 06:37	1
Naphthalene	ND		1.0		ug/L			09/24/14 06:37	1
Toluene	ND		0.50		ug/L			09/24/14 06:37	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 06:37	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 06:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130					09/24/14 06:37	1
1,2-Dichloroethane-d4 (Surr)	92		72 - 130					09/24/14 06:37	1
Toluene-d8 (Surr)	100		70 - 130					09/24/14 06:37	1

# Client Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 720-59949-10**

**Date Collected: 09/15/14 00:00**

**Matrix: Water**

**Date Received: 09/16/14 16:30**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/24/14 14:12	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 14:12	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 14:12	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 14:12	1
Naphthalene	ND		1.0		ug/L			09/24/14 14:12	1
Toluene	ND		0.50		ug/L			09/24/14 14:12	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 14:12	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 14:12	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	96		67 - 130					09/24/14 14:12	1
1,2-Dichloroethane-d4 (Surr)	90		72 - 130					09/24/14 14:12	1
Toluene-d8 (Surr)	99		70 - 130					09/24/14 14:12	1



# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-167379/4**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/22/14 20:16	1
1,2-Dichloroethane	ND		0.50		ug/L			09/22/14 20:16	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/22/14 20:16	1
Ethylbenzene	ND		0.50		ug/L			09/22/14 20:16	1
Naphthalene	ND		1.0		ug/L			09/22/14 20:16	1
Toluene	ND		0.50		ug/L			09/22/14 20:16	1
Xylenes, Total	ND		1.0		ug/L			09/22/14 20:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/22/14 20:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		09/22/14 20:16	1
1,2-Dichloroethane-d4 (Surr)	112		72 - 130		09/22/14 20:16	1
Toluene-d8 (Surr)	101		70 - 130		09/22/14 20:16	1

**Lab Sample ID: LCS 720-167379/5**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.2		ug/L		101	79 - 130
1,2-Dichloroethane	25.0	27.7		ug/L		111	61 - 132
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	70 - 130
Ethylbenzene	25.0	26.0		ug/L		104	80 - 120
Naphthalene	25.0	24.0		ug/L		96	70 - 130
Toluene	25.0	24.2		ug/L		97	78 - 120
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 142
o-Xylene	25.0	26.7		ug/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	110		72 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: LCS 720-167379/7**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	549		ug/L		110	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	107		72 - 130
Toluene-d8 (Surr)	101		70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-167379/6**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	25.5		ug/L		102	79 - 130	1	20
1,2-Dichloroethane	25.0	27.8		ug/L		111	61 - 132	1	20
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	70 - 130	0	20
Ethylbenzene	25.0	26.3		ug/L		105	80 - 120	1	20
Naphthalene	25.0	24.9		ug/L		100	70 - 130	4	20
Toluene	25.0	24.8		ug/L		99	78 - 120	2	20
m-Xylene & p-Xylene	25.0	26.4		ug/L		105	70 - 142	0	20
o-Xylene	25.0	26.8		ug/L		107	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		72 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 720-167379/8**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	574		ug/L		115	62 - 120	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		72 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: 720-59949-1 MS**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: MW-5**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	25.9		ug/L		104	60 - 140
1,2-Dichloroethane	ND		25.0	27.3		ug/L		109	60 - 140
cis-1,2-Dichloroethene	ND		25.0	27.5		ug/L		110	60 - 140
Ethylbenzene	ND		25.0	26.4		ug/L		106	60 - 140
Naphthalene	ND		25.0	26.1		ug/L		102	56 - 140
Toluene	ND		25.0	24.9		ug/L		100	60 - 140
m-Xylene & p-Xylene	ND		25.0	28.3		ug/L		113	60 - 140
o-Xylene	ND		25.0	27.4		ug/L		110	60 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		72 - 130
Toluene-d8 (Surr)	100		70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-59949-1 MSD**

**Matrix: Water**

**Analysis Batch: 167379**

**Client Sample ID: MW-5**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	26.1		ug/L		105	60 - 140	1	20
1,2-Dichloroethane	ND		25.0	27.4		ug/L		110	60 - 140	0	20
cis-1,2-Dichloroethene	ND		25.0	27.9		ug/L		111	60 - 140	1	20
Ethylbenzene	ND		25.0	26.5		ug/L		106	60 - 140	1	20
Naphthalene	ND		25.0	26.7		ug/L		104	56 - 140	2	20
Toluene	ND		25.0	25.4		ug/L		101	60 - 140	2	20
m-Xylene & p-Xylene	ND		25.0	27.0		ug/L		108	60 - 140	4	20
o-Xylene	ND		25.0	26.8		ug/L		107	60 - 140	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		72 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: MB 720-167479/5**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/23/14 20:19	1
1,2-Dichloroethane	ND		0.50		ug/L			09/23/14 20:19	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/23/14 20:19	1
Ethylbenzene	ND		0.50		ug/L			09/23/14 20:19	1
Naphthalene	ND		1.0		ug/L			09/23/14 20:19	1
Toluene	ND		0.50		ug/L			09/23/14 20:19	1
Xylenes, Total	ND		1.0		ug/L			09/23/14 20:19	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/23/14 20:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		67 - 130		09/23/14 20:19	1
1,2-Dichloroethane-d4 (Surr)	86		72 - 130		09/23/14 20:19	1
Toluene-d8 (Surr)	100		70 - 130		09/23/14 20:19	1

**Lab Sample ID: LCS 720-167479/6**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.4		ug/L		97	79 - 130
1,2-Dichloroethane	25.0	21.0		ug/L		84	61 - 132
cis-1,2-Dichloroethene	25.0	23.1		ug/L		93	70 - 130
Ethylbenzene	25.0	24.4		ug/L		98	80 - 120
Naphthalene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	24.3		ug/L		97	78 - 120
m-Xylene & p-Xylene	25.0	24.7		ug/L		99	70 - 142
o-Xylene	25.0	24.4		ug/L		98	70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-167479/6**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	92		67 - 130
1,2-Dichloroethane-d4 (Surr)	82		72 - 130
Toluene-d8 (Surr)	104		70 - 130

**Lab Sample ID: LCS 720-167479/8**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Gasoline Range Organics (GRO) -C5-C12	500	499		ug/L		100	62 - 120	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	84		72 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCSD 720-167479/7**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
Benzene	25.0	24.2		ug/L		97	79 - 130	1	20	
1,2-Dichloroethane	25.0	21.3		ug/L		85	61 - 132	1	20	
cis-1,2-Dichloroethane	25.0	23.0		ug/L		92	70 - 130	0	20	
Ethylbenzene	25.0	23.8		ug/L		95	80 - 120	2	20	
Naphthalene	25.0	25.5		ug/L		102	70 - 130	5	20	
Toluene	25.0	24.1		ug/L		96	78 - 120	1	20	
m-Xylene & p-Xylene	25.0	24.4		ug/L		98	70 - 142	1	20	
o-Xylene	25.0	24.3		ug/L		97	70 - 130	0	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	94		67 - 130
1,2-Dichloroethane-d4 (Surr)	82		72 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: LCSD 720-167479/9**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
Gasoline Range Organics (GRO) -C5-C12	500	496		ug/L		99	62 - 120	1	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	87		72 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-167479/9**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: 720-59949-5 MS**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: MW-1**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Benzene	ND		25.0	24.0		ug/L		96	60 - 140
1,2-Dichloroethane	4.0		25.0	29.5		ug/L		102	60 - 140
cis-1,2-Dichloroethane	ND		25.0	23.6		ug/L		94	60 - 140
Ethylbenzene	ND		25.0	23.8		ug/L		95	60 - 140
Naphthalene	ND		25.0	26.6		ug/L		107	56 - 140
Toluene	ND		25.0	23.7		ug/L		95	60 - 140
m-Xylene & p-Xylene	ND		25.0	24.2		ug/L		97	60 - 140
o-Xylene	ND		25.0	24.4		ug/L		98	60 - 140

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		72 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: 720-59949-5 MSD**

**Matrix: Water**

**Analysis Batch: 167479**

**Client Sample ID: MW-1**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Benzene	ND		25.0	24.3		ug/L		97	60 - 140	1	20
1,2-Dichloroethane	4.0		25.0	27.5		ug/L		94	60 - 140	7	20
cis-1,2-Dichloroethane	ND		25.0	23.8		ug/L		95	60 - 140	1	20
Ethylbenzene	ND		25.0	24.3		ug/L		97	60 - 140	2	20
Naphthalene	ND		25.0	26.3		ug/L		105	56 - 140	1	20
Toluene	ND		25.0	24.0		ug/L		96	60 - 140	1	20
m-Xylene & p-Xylene	ND		25.0	24.7		ug/L		99	60 - 140	2	20
o-Xylene	ND		25.0	24.9		ug/L		100	60 - 140	2	20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	90		72 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: MB 720-167514/4**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.50		ug/L			09/24/14 09:25	1
1,2-Dichloroethane	ND		0.50		ug/L			09/24/14 09:25	1

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-167514/4**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50		ug/L			09/24/14 09:25	1
Ethylbenzene	ND		0.50		ug/L			09/24/14 09:25	1
Naphthalene	ND		1.0		ug/L			09/24/14 09:25	1
Toluene	ND		0.50		ug/L			09/24/14 09:25	1
Xylenes, Total	ND		1.0		ug/L			09/24/14 09:25	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			09/24/14 09:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		67 - 130		09/24/14 09:25	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		09/24/14 09:25	1
Toluene-d8 (Surr)	99		70 - 130		09/24/14 09:25	1

**Lab Sample ID: LCS 720-167514/5**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.4		ug/L		98	79 - 130
1,2-Dichloroethane	25.0	22.6		ug/L		90	61 - 132
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
Ethylbenzene	25.0	24.5		ug/L		98	80 - 120
Naphthalene	25.0	25.8		ug/L		103	70 - 130
Toluene	25.0	24.3		ug/L		97	78 - 120
m-Xylene & p-Xylene	25.0	25.0		ug/L		100	70 - 142
o-Xylene	25.0	24.5		ug/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	87		72 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCS 720-167514/7**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	530		ug/L		106	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	90		72 - 130
Toluene-d8 (Surr)	102		70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-167514/6**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	24.8		ug/L		99	79 - 130	1	20
1,2-Dichloroethane	25.0	22.7		ug/L		91	61 - 132	1	20
cis-1,2-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	2	20
Ethylbenzene	25.0	24.8		ug/L		99	80 - 120	2	20
Naphthalene	25.0	26.1		ug/L		104	70 - 130	1	20
Toluene	25.0	24.5		ug/L		98	78 - 120	1	20
m-Xylene & p-Xylene	25.0	25.3		ug/L		101	70 - 142	1	20
o-Xylene	25.0	24.8		ug/L		99	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	83		72 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCSD 720-167514/8**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	503		ug/L		101	62 - 120	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	89		72 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: 720-59949-7 MS**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: MW-7**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	23.2		ug/L		93	60 - 140
1,2-Dichloroethane	ND		25.0	21.0		ug/L		83	60 - 140
cis-1,2-Dichloroethene	ND		25.0	22.2		ug/L		89	60 - 140
Ethylbenzene	ND		25.0	23.2		ug/L		93	60 - 140
Naphthalene	ND		25.0	23.5		ug/L		94	56 - 140
Toluene	ND		25.0	23.2		ug/L		93	60 - 140
m-Xylene & p-Xylene	ND		25.0	23.9		ug/L		96	60 - 140
o-Xylene	ND		25.0	23.4		ug/L		94	60 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	83		72 - 130
Toluene-d8 (Surr)	103		70 - 130

TestAmerica Pleasanton

# QC Sample Results

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-59949-7 MSD**

**Matrix: Water**

**Analysis Batch: 167514**

**Client Sample ID: MW-7**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	24.2		ug/L		97	60 - 140	4	20
1,2-Dichloroethane	ND		25.0	21.9		ug/L		87	60 - 140	4	20
cis-1,2-Dichloroethene	ND		25.0	22.9		ug/L		92	60 - 140	3	20
Ethylbenzene	ND		25.0	23.9		ug/L		96	60 - 140	3	20
Naphthalene	ND		25.0	26.0		ug/L		104	56 - 140	10	20
Toluene	ND		25.0	23.8		ug/L		95	60 - 140	3	20
m-Xylene & p-Xylene	ND		25.0	24.4		ug/L		98	60 - 140	2	20
o-Xylene	ND		25.0	24.3		ug/L		97	60 - 140	3	20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	83		72 - 130
Toluene-d8 (Surr)	102		70 - 130



# QC Association Summary

Client: URS Corporation  
 Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## GC/MS VOA

### Analysis Batch: 167379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59949-1	MW-5	Total/NA	Water	8260B/CA_LUFT	
720-59949-1 MS	MW-5	Total/NA	Water	MS	
720-59949-1 MSD	MW-5	Total/NA	Water	8260B/CA_LUFT	
720-59949-2	MW-3	Total/NA	Water	MS	
720-59949-3	MW-2	Total/NA	Water	8260B/CA_LUFT	
LCS 720-167379/5	Lab Control Sample	Total/NA	Water	MS	
LCS 720-167379/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
LCSD 720-167379/6	Lab Control Sample Dup	Total/NA	Water	MS	
LCSD 720-167379/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
MB 720-167379/4	Method Blank	Total/NA	Water	MS	

### Analysis Batch: 167479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59949-4	MW-4	Total/NA	Water	8260B/CA_LUFT	
720-59949-5	MW-1	Total/NA	Water	MS	
720-59949-5 MS	MW-1	Total/NA	Water	8260B/CA_LUFT	
720-59949-5 MSD	MW-1	Total/NA	Water	MS	
720-59949-6	MW-6	Total/NA	Water	8260B/CA_LUFT	
720-59949-9	FD-1	Total/NA	Water	MS	
LCS 720-167479/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
LCS 720-167479/8	Lab Control Sample	Total/NA	Water	MS	
LCSD 720-167479/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
LCSD 720-167479/9	Lab Control Sample Dup	Total/NA	Water	MS	
MB 720-167479/5	Method Blank	Total/NA	Water	8260B/CA_LUFT	

### Analysis Batch: 167514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59949-7	MW-7	Total/NA	Water	8260B/CA_LUFT	
720-59949-7 MS	MW-7	Total/NA	Water	MS	
720-59949-7 MSD	MW-7	Total/NA	Water	8260B/CA_LUFT	
720-59949-8	MW-8	Total/NA	Water	MS	

TestAmerica Pleasanton

# QC Association Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## GC/MS VOA (Continued)

### Analysis Batch: 167514 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-59949-10	TRIP BLANK	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-167514/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-167514/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-167514/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-167514/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-167514/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

# Lab Chronicle

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

**Client Sample ID: MW-5**

Date Collected: 09/15/14 11:10

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167379	09/23/14 02:33	PDR	TAL PLS

**Client Sample ID: MW-3**

Date Collected: 09/15/14 11:50

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167379	09/23/14 03:05	PDR	TAL PLS

**Client Sample ID: MW-2**

Date Collected: 09/15/14 12:30

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		200	167379	09/23/14 03:36	PDR	TAL PLS

**Client Sample ID: MW-4**

Date Collected: 09/15/14 13:25

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		50	167479	09/24/14 04:02	PDR	TAL PLS

**Client Sample ID: MW-1**

Date Collected: 09/15/14 13:55

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167479	09/24/14 04:33	PDR	TAL PLS

**Client Sample ID: MW-6**

Date Collected: 09/15/14 15:00

Date Received: 09/16/14 16:30

**Lab Sample ID: 720-59949-6**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167479	09/24/14 06:05	PDR	TAL PLS

# Lab Chronicle

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Client Sample ID: MW-7

Date Collected: 09/15/14 15:35

Date Received: 09/16/14 16:30

Lab Sample ID: 720-59949-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167514	09/24/14 13:10	LPL	TAL PLS

## Client Sample ID: MW-8

Date Collected: 09/15/14 16:10

Date Received: 09/16/14 16:30

Lab Sample ID: 720-59949-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167514	09/24/14 13:42	LPL	TAL PLS

## Client Sample ID: FD-1

Date Collected: 09/15/14 00:00

Date Received: 09/16/14 16:30

Lab Sample ID: 720-59949-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167479	09/24/14 06:37	PDR	TAL PLS

## Client Sample ID: TRIP BLANK

Date Collected: 09/15/14 00:00

Date Received: 09/16/14 16:30

Lab Sample ID: 720-59949-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	167514	09/24/14 14:12	LPL	TAL PLS

### Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Certification Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

## Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Analysis Method	Prep Method	Matrix	Analyte
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- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Method Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

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Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL PLS

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**Protocol References:**

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

**Laboratory References:**

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Sample Summary

Client: URS Corporation  
Project/Site: 3884 MLK/Oakland

TestAmerica Job ID: 720-59949-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-59949-1	MW-5	Water	09/15/14 11:10	09/16/14 16:30
720-59949-2	MW-3	Water	09/15/14 11:50	09/16/14 16:30
720-59949-3	MW-2	Water	09/15/14 12:30	09/16/14 16:30
720-59949-4	MW-4	Water	09/15/14 13:25	09/16/14 16:30
720-59949-5	MW-1	Water	09/15/14 13:55	09/16/14 16:30
720-59949-6	MW-6	Water	09/15/14 15:00	09/16/14 16:30
720-59949-7	MW-7	Water	09/15/14 15:35	09/16/14 16:30
720-59949-8	MW-8	Water	09/15/14 16:10	09/16/14 16:30
720-59949-9	FD-1	Water	09/15/14 00:00	09/16/14 16:30
720-59949-10	TRIP BLANK	Water	09/15/14 00:00	09/16/14 16:30



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody  
1220 Quarry Lane • Pleasanton CA 94566-4756  
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 150898

Date: 9/16/14 Page 1 of 1  
9/25/2014

Report To: **Eric Skoy**  
Company: **URS Corporation**  
Address: **One Montgomery, St, CA, 94504**  
Email: **ERIC.SKROY@URS.COM**  
Bill To: **28068161**  
Sampled By: **EB/AO**  
Phone: **415-243-3843**  
Attn: \_\_\_\_\_

Sample ID: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_  
Mat: \_\_\_\_\_  
Preserv: \_\_\_\_\_

## Project Info.

Project Name/#: \_\_\_\_\_  
# of Containers: **30**  
Head Space: \_\_\_\_\_  
Temp: **3.4°C**  
P.O.#: **28068161**  
Credit Card V/N: **N**  
If yes, please call with payment information ASAP

Report:  Routine  Level 3  Level 4  EDF  
Special Instructions / Comments:  Global ID  
**\*Please report Naphthalene, 1,2-DCA and CS-1,2-DCB by 8/20/13**  
See Terms and Conditions on reverse

Signature: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Company: \_\_\_\_\_  
Rev. 10/2012

Sample ID	Date	Time	Mat	Preserv	Attn:
Mid-5	9/15/14	1100	w	HCl	
Mid-3	9/15/14	1150	w	HCl	
Mid-2	9/15/14	1230	w	HCl	
Mid-4	9/15/14	1325	w	HCl	
Mid-1	9/15/14	1355	w	HCl	
Mid-6	9/15/14	1500	w	HCl	
Mid-7	9/15/14	1535	w	HCl	
Mid-8	9/15/14	1610	w	HCl	
TD-1	9/15/14	1630	w	HCl	
TD Blank					

Volatile Organics GC/MS (VOCs)  
 EPA 8260B  
HVOCs by  EPA 8260B  
EPA 8260B:  Gas  BTEX  
 5 Oxygenates  PCA  ED9  Ethanol  
**\* See Special Instructions**  
TEPH EPA 8015B  Silica Gel  
 Diesel  Motor Oil  Other \_\_\_\_\_  
SemiVolatile Organics GC/MS  
 EPA 8270C  
PNA/PAH's by  8270C  
 8270C SIM  
Oil and Grease  Petroleum  
(EPA 1604/9071)  Total  
Pesticides  EPA 8081  
 EPA 8082  
PCBS  
CAM17 Metals  
(EPA 6010/74707/471)  
Metals:  6010B  200.7  
 Lead  LUFT  DRORA  Other \_\_\_\_\_  
Metals:  6020  200 8  
(ICP-MS): \_\_\_\_\_  
 W:E:T (STL/C)  
 W:E:T (D)  TCLP  
Hex Chrom by  EPA 7186  
 or EPA 7199  
pH  9040  
 SMA500  
 Spec. Cond.  Alkalinity  
 TSS  SS  TDS  
Anions:  Cl  SO<sub>4</sub>  NO<sub>3</sub>  F  
 Br  NO<sub>2</sub>  PO<sub>4</sub>  
 Perchlorate by EPA 314.0  
COD  EPA 410.4  SMS220D  
 Turbidity  
Number of Containers: \_\_\_\_\_

## Analysis Request

1) Relinquished by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed Name: **T. S+H**  
Date: **9/16/14**  
Company: **URS**

2) Relinquished by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed Name: **T. S+H**  
Date: **9/16/14**  
Company: **URS**

1) Received by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed Name: **T. S+H**  
Date: **9/16/14**  
Company: \_\_\_\_\_

2) Received by: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Printed Name: **T. S+H**  
Date: **9/16/14**  
Company: \_\_\_\_\_

Signature: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Company: \_\_\_\_\_  
720-59949 Chain of Custody

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## Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-59949-1

**Login Number: 59949**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Gonzales, Justinn**

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

