OCTOBER 2013 GROUNDWATER SAMPLING

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

July 2014

IDENTIFICATION FORM

Document Title: **October 2013 Groundwater Sampling**
Former Grove Street Wash Rack Site
3884 Martin Luther King Junior Way
Oakland, California 94609

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San Francisco, California 94104

Project Manager: Kali Futnani
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Signature: _____ Date: July 3, 2014
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Title: Senior Project Geologist

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

June 26, 2014

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

Subject: Responsible Party Perjury Statement for 3rd Quarter Monitoring and Sampling Report, Former Grove Street Wash Rack Site, 3884 Martin Luther King Jr. Way Oakland, California (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

John and Antoinette Coyle

July 3, 2014

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

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Please contact me at 415-243-3878 or at kali.futnani@urs.com should you have any questions or require any clarifications.

Sincerely,
URS CORPORATION

Kali Futnani
Environmental Scientist/ Project Manager

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1.0 INTRODUCTION

URS is pleased to submit this report detailing the results of the October 2013 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 October 2013 groundwater monitoring is the second monitoring event at the Site since the groundwater monitoring wells were installed 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 sampling activities, current analytical results, and a comparison to 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 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 a 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_2O 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.
- 07/8/2013: 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.

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

3.0 GROUNDWATER MONITORING

Groundwater monitoring was conducted at the site on October 23, 2013. Groundwater samples were collected from five on-site groundwater monitoring wells. Groundwater sampling methodologies and analytical results are presented in the following sections.

3.1 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater monitoring 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 556 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 A 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 ± 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 Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX) 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.

3.2 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. The groundwater elevation data is summarized in Table 1. As indicated, groundwater elevations ranged from 57.27 to 58.09 feet above msl. The data indicate the groundwater elevations are, on average, approximately 0.5 feet lower than the previous sampling event in July 2013. The current groundwater elevation data were assessed to evaluate groundwater flow and gradient. However, the data appear to be anomalous and a clear groundwater flow pattern (elevation contour) could not be interpreted from the data. The monitoring well locations and associated groundwater elevations are shown on Figure 3. Previous groundwater elevation data indicated groundwater is flowing to the west at an average gradient of approximately 0.02 (URS, 2013).

3.3 GROUNDWATER PHYSICAL PARAMETERS

Groundwater physical parameters (conductivity, temperature, pH, ORP, and DO) were measured at regular intervals during the purging process. The following are ranges of final field parameter measurements prior to sampling from all five monitoring wells at the site: conductivity ranged from 0.841 to 1.271 mS/cm; temperature ranged from 17.0 to 20.6 °C; pH ranged between 6.34

and 6.94 pH units; ORP ranged from -93.4 to 213.6 millivolts (mV); and DO ranged from 0.57 to 1.84 mg/L. Refer to Appendix A for the specific range of parameters in each well.

3.4 GROUNDWATER ANALYTICAL RESULTS

The results of the analyses are summarized in Table 1 and are shown graphically on Figure 2. TPH-g and BTEX were detected in two of the five monitoring wells (MW-2 and MW-4) located at the Site. This is consistent with the detections from the July 2013 sampling. Concentrations of TPH-g detected were 9,400 µg/L (MW-2) and 15,000 µg/L (MW-4). Concentrations of benzene detected were 8,200 µg/L (MW-2) and 1,800 µg/L (MW-4). Concentrations of toluene detected were 200 µg/L (MW-2) and 480 µg/L (MW-4). Concentrations of ethylbenzene detected were 120 µg/L (MW-2) and 1,500 µg/L (MW-4). Concentrations of xylenes detected were 380 µg/L (MW-2) and 3,100. There were no detections of TPH-g or BTEX in the Trip Blank.

All of the concentration of TPH-g and BTEX detected in monitoring wells MW-2 and MW-4 exceed their respective San Francisco Bay Regional water quality control Board Tier 1 Environmental Screening Level. Additionally, as shown in Table 1, the concentrations of TPH-g and BTEX in monitoring well MW-2 have increased by one to two orders of magnitude since the initial sampling of MW-2 in July, 2013. It should also be noted that the concentration of benzene detected in MW-2 is 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 identified during validation of the laboratory data. Copies of the laboratory and data validation reports are presented in Appendix B of this report.

4.0 CONCLUSIONS

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. There is no data to indicate that contaminated groundwater has migrated offsite. However ACEH is requiring the installation of three offsite wells to assess the extent of groundwater contamination. These wells will be installed in early August and added to the routine groundwater monitoring program for the Site.

5.0 REFERENCES

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

TABLES

Table 1
Groundwater Elevation
Former Grove Street Wash Rack Site
October 2013

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-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-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-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-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

TOC = top of casing
bgs = below ground surface
msl = mean sea level

Table 2
Groundwater Physical Parameters
Former Grove Street Wash Rack Site
3884 Martin Luther King Junior Way
Oakland, California

Well	Date	Temperature (^{o}Celsius)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
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-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-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-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-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

DO = Dissolved Oxygen
mg/L = milligrams per liter
mS/cm = milliSiemens per centimeter
mV = millivolt
ORP = Oxidation-Reduction Potential

Table 3
Groundwater Analytical Results
Former Grove Street Wash Rack Site
3884 Martin Luther King Junior Way
Oakland, California

		Analyte							
Well ID	**Date**	**TPH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**Napthalene**	**1,2-DCA**	**cis-1,2- DCE**
MW-1	7/18/2013	<50	<0.5	<0.5	<0.5	<1.0	<1.0	**4.5**	<0.5
MW-1	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NS	NS	NS
MW-10[2]	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NS	NS	NS
MW-2	7/18/2013	**560**	**220**	**2.9**	**4.6**	**35**	<1.0	**4.3**	<0.5
MW-2	10/23/2013	**9400**	**8200**	**200**	**120**	**380**	NS	NS	NS
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	NS	NS	NS
MW-4	7/18/2013	**9500**	**980**	**510**	**270**	**2600**	**180**	**0.7**	<0.50
MW-40[1]	7/18/2013	**13000**	**1100**	**930**	**800**	**3500**	**180**	**0.6**	<0.50
MW-4	10/23/2013	**15000**	**1800**	**480**	**1500**	**3100**	NS	NS	NS
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	NS	NS	NS
Trip Blank	7/18/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NS	NS	NS
Trip Blank	10/23/2013	<50.0	<0.5	<0.5	<0.5	<1.0	NS	NS	NS
	ESL	100	1.0	40	30	20	6.1	0.5	6.0

NOTES

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

Values in bold are detections above the laboratory reporting limit

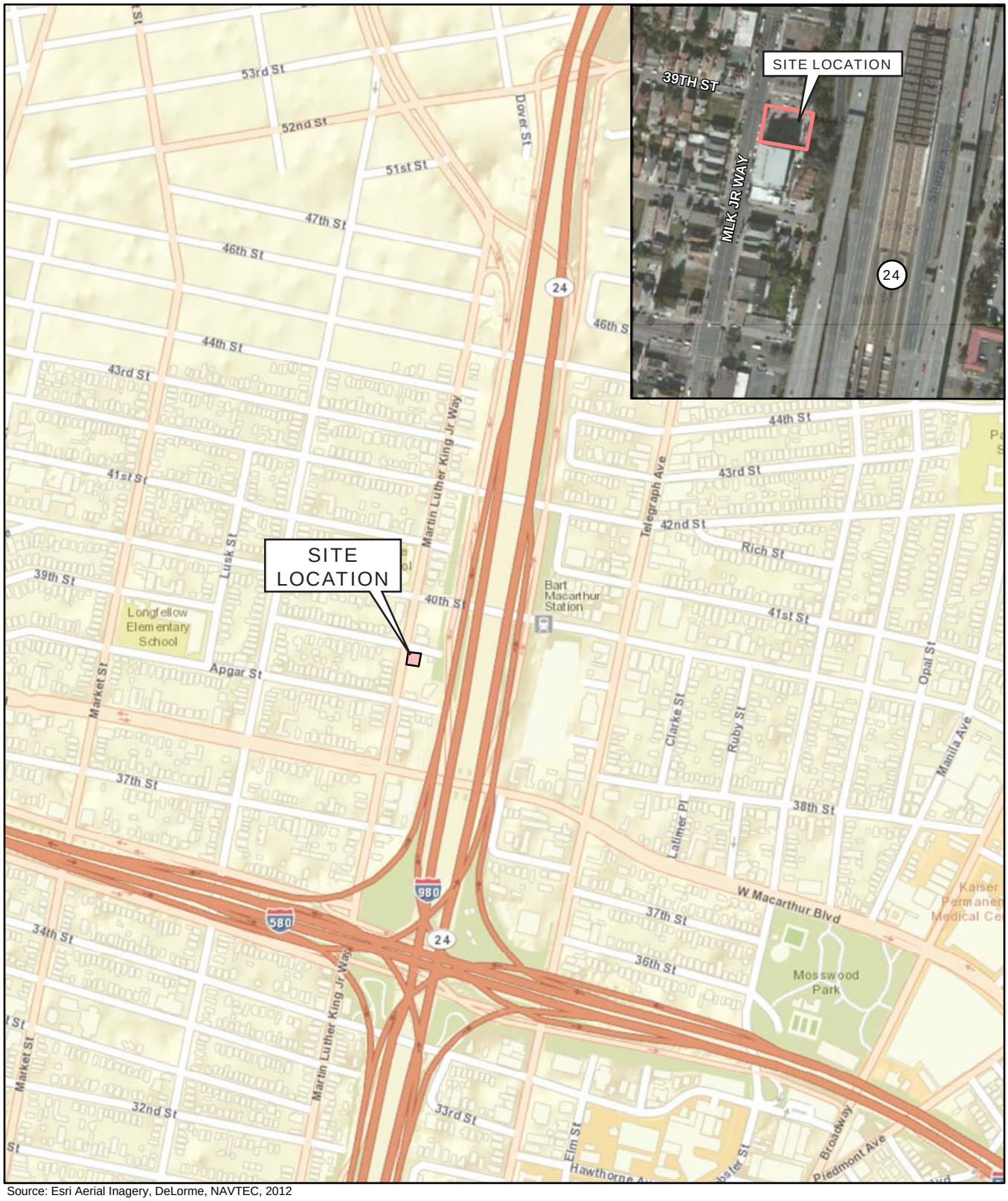
Shaded values exceed the ESL

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

[1] Field duplicate of MW-4

[2] Field duplicate of MW-1

FIGURES



11/25/13 vsa ..T:\3884 MLK\NOV_2013\Fig1_site_location.ai

Source: Esri Aerial Imagery, DeLorme, NAVTEC, 2012

0 500 1000 FEET

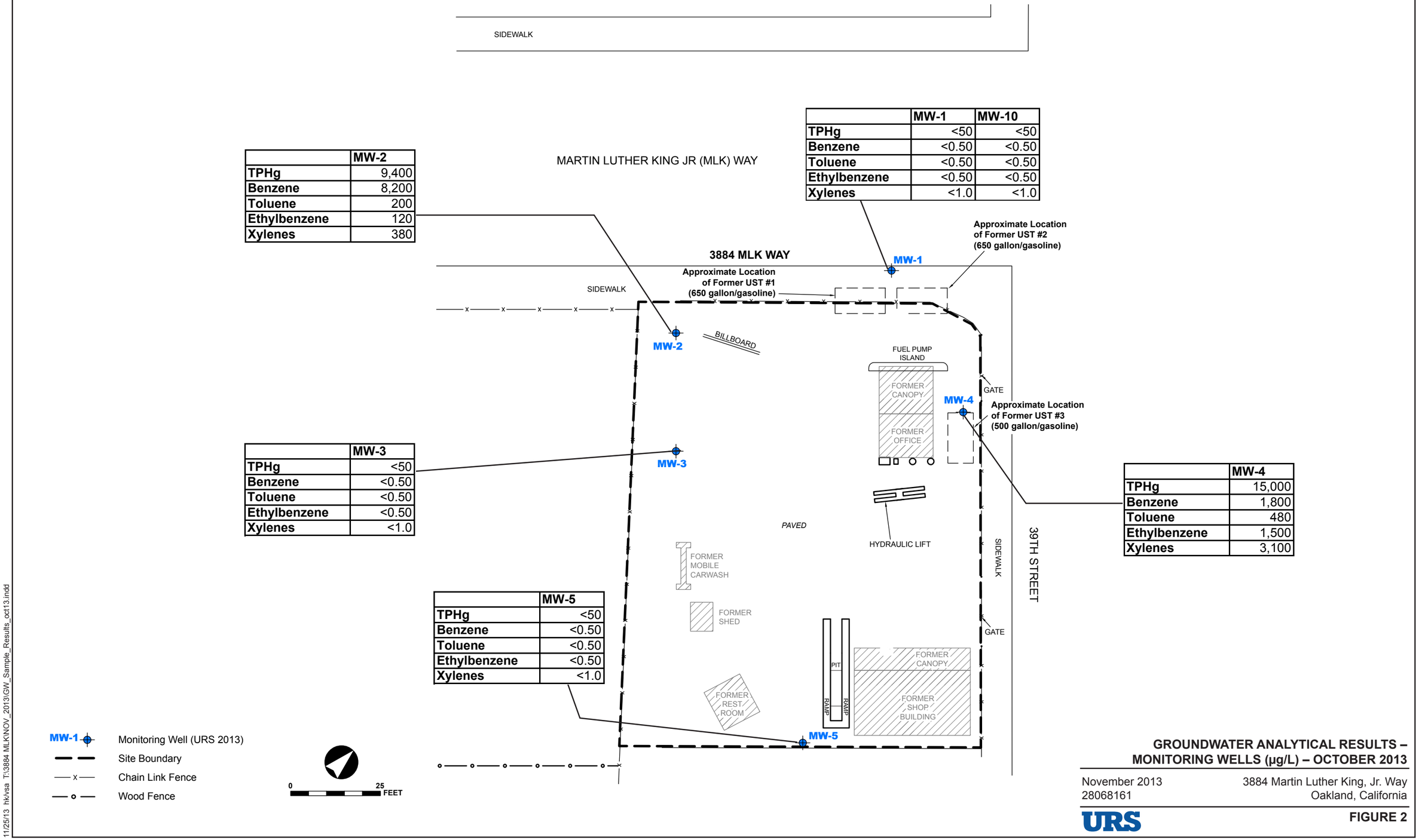
SITE LOCATION MAP

November 2013
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

URS

FIGURE 1



	MW-1	MW-10
TPHg	<50	<50
Benzene	<0.50	<0.50
Toluene	<0.50	<0.50
Ethylbenzene	<0.50	<0.50
Xylenes	<1.0	<1.0

	MW-2
TPHg	9,400
Benzene	8,200
Toluene	200
Ethylbenzene	120
Xylenes	380

	MW-3
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0

	MW-4
TPHg	15,000
Benzene	1,800
Toluene	480
Ethylbenzene	1,500
Xylenes	3,100

	MW-5
TPHg	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0

GROUNDWATER ANALYTICAL RESULTS – MONITORING WELLS (µg/L) – OCTOBER 2013

November 2013
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

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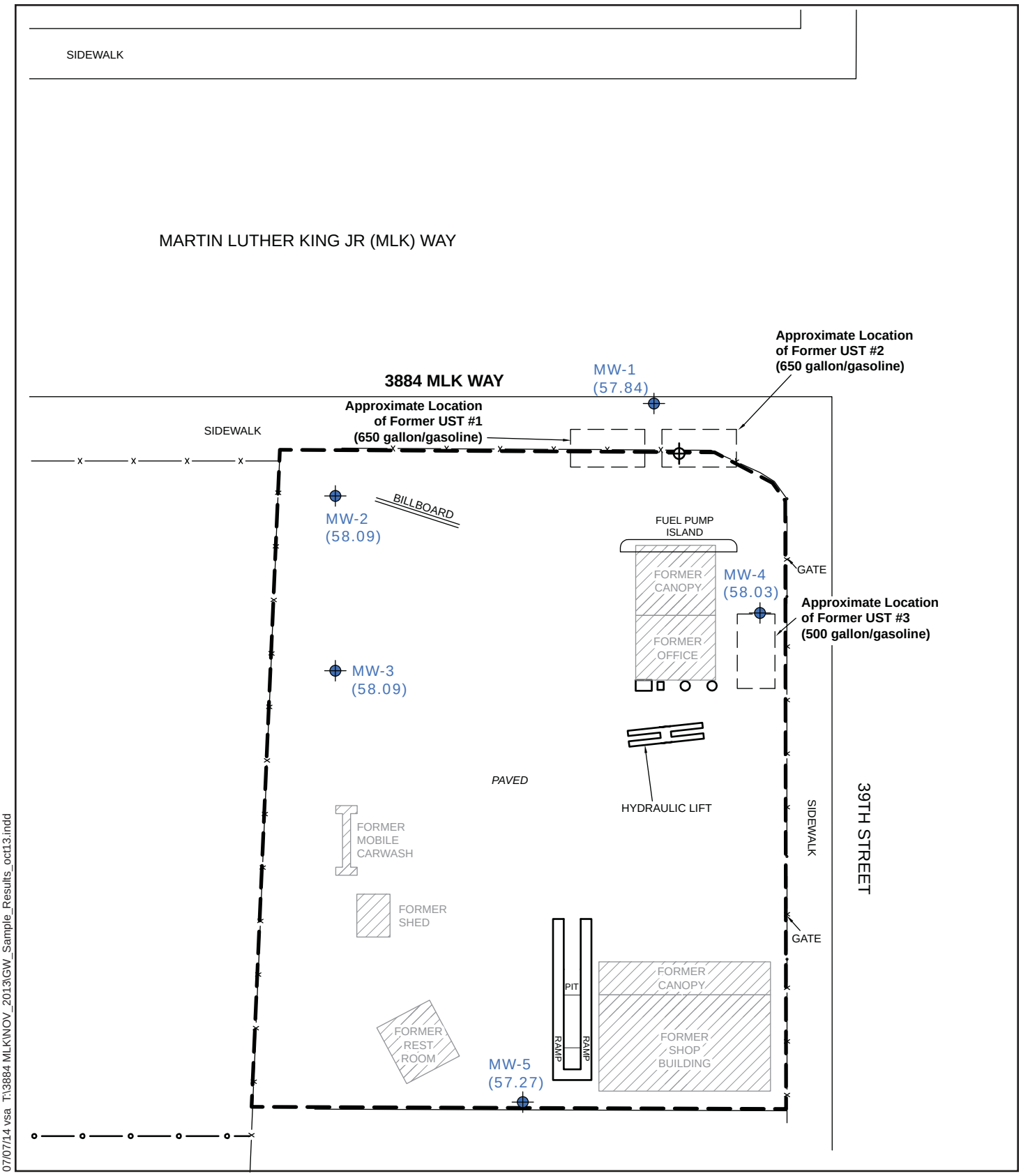
FIGURE 2

11/25/13 hk/vsa T:\3884 MLK\NOV_2013\GW_Sample_Results_oct113.indd



MW-1 (57.84) Proposed Monitoring Well and Groundwater Elevation

0 25 FEET

GROUNDWATER ELEVATION

November 2013
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

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FIGURE 3

APPENDIX A

WELL PURGE LOGS

URS
1 Montgomery Street, Suite 900
San Francisco, CA 94104
415.896.5858 Fax 415.882.9261

GROUNDWATER SAMPLING LOG

SITE NAME AND ADDRESS	JOB NUMBER	DATE	WELL #
3885 MLK	28068161	10/23/13	MW-5

PERSONNEL CONDUCTING SAMPLING

METER USED ☐ YSI6920 ☐ YSI3500 ☐ MP2 ☒ OTHER: YSI 650

WELL / WATER STATUS

PID READING: Not taken

DEPTH TO WATER (FROM TOP OF PVC): 17.65

WATER CONDITION (Color & Odor, Oil Sheen, Etc.): Clear no odor

REMARKS: (Weather/Area? Ground surface/Nearby activities/Etc.) Well in good condition, weather: overcast Approx 60°F

)

FIELD READINGS

METHOD: ☑ LOW FLOW ☐ PURGING

TOTAL PURGED (GAL): _____ TOTAL PURGE TIME (MIN): _____

TIME	WATER LEVEL (feet)	PURGE RATE (mL/min)	VOLUME PURGED (mL)	TEMP. (C)	pH	CONDUCTIVITY (uS)	TURBIDITY (NTU)	D.O. (mg/L)	REDOX POTENTIAL (mV)
0856	17.65	PUMP START			NO				
0901	18.01	~~6.55~~	350	17.12	6.55	822	0.3	0.87	198.0
0904	18.24	50mL/min	500	17.08	6.52	825	0.8	0.79	202.0
0907	18.33	50mL/m	650	16.99	6.54	833	1.5	0.80	205.4
0911	18.35	50mL/m	850	16.97	6.55	840	1.3	0.81	206.3
0915	18.33	50mL/min	1050	16.99	6.56	841	1.2	0.81	205.2

SAMPLE

TIME SAMPLE TAKEN: 0920

SAMPLE ID: MW-5

ANALYSES REQUESTED: 8260B

URS
1 Montgomery Street, Suite 900
San Francisco, CA 94104
415.896.5858 Fax 415.882.9261

GROUNDWATER SAMPLING LOG

SITE NAME AND ADDRESS	JOB NUMBER	DATE	WELL #
3885 MLK	28068161	10/23/13	MW-1

PERSONNEL CONDUCTING SAMPLING

METER USED ☐ YSI6920 ☐ YSI3500 ☐ MP2 ☒ OTHER: YSI 650

WELL / WATER STATUS

PID READING: none taken

DEPTH TO WATER (FROM TOP OF PVC): 14.99

WATER CONDITION (Color & Odor, Oil Sheen, Etc.): Turbid & then Clear; Very little oder

REMARKS: (Weather/Area? Ground surface/Nearby activities/Etc.)
Well in good Condition; weather Clearing overcast Approx 70°F

FIELD READINGS

METHOD: ☒ LOW FLOW ☐ PURGING

TOTAL PURGED (GAL): _____ TOTAL PURGE TIME (MIN): _____

TIME	WATER LEVEL (feet)	PURGE RATE (mL/min)	VOLUME PURGED (mL)	TEMP. (C)	pH	CONDUCT-IVITY (uS)	TURBIDITY (NTU)	D.O. (mg/L)	REDOX POTENTIAL (mV)
1216	15.37	70ml/m	~~70~~ 70	19.54	6.49	1221	~~49~~ 49.4	2.13	-99.4
1220	15.45	50ml/m	280	19.50	6.45	1226	331.0	1.53	-96.3
1226	15.58	50ml/m	580	19.45	6.44	1204	136.0	1.47	-76.3
1231	15.66	50ml/m	830	19.32	6.44	1182	111.9	1.48	-73.2
1240	15.78	50ml/m	1280	19.23	6.43	1196	41.2	1.48	-64.1
1245	15.84	50ml/m	1530	19.19	6.43	1189	28.6	1.45	-65.4
1248	15.86	50ml/m	1680	19.14	6.42	1180	14.1	1.43	-60.0
1251	15.88	50ml/m	1830	19.16	6.42	1189	13.3	1.45	-55.4

SAMPLE

~~TIME SAMPLE TAKEN~~ / ~~SAMPLE ID~~	ANALYSES REQUESTED
Sample ID: MW-1, MW-10 / Time Sample taken: 1300	8260B, Dup (MW-10) collected

URS
1 Montgomery Street, Suite 900
San Francisco, CA 94104
415.896.5858 Fax 415.882.9261

GROUNDWATER SAMPLING LOG

SITE NAME AND ADDRESS	JOB NUMBER	DATE	WELL #
3885 Mlk	28068161	10/23/13	MW-2

PERSONNEL CONDUCTING SAMPLING

METER USED ☐ YSI6920 ☐ YSI3500 ☐ MP2 ☐ OTHER : YSI 650

WELL / WATER STATUS

PID READING: None Taken

DEPTH TO WATER (FROM TOP OF PVC): 15.07'

WATER CONDITION (Color & Odor, Oil Sheen, Etc.): Clear. No odor

REMARKS: (Weather/Area? Ground surface/Nearby activities/Etc.): Well in good condition. Weather: Overcast Approx 60°F

FIELD READINGS

METHOD: ☐ LOW FLOW ☐ PURGING

TOTAL PURGED (GAL) _____ TOTAL PURGE TIME (MIN) _____

TIME	WATER LEVEL (feet)	PURGE RATE (mL/min)	VOLUME PURGED (mL)	TEMP. (C)	pH	CONDUCT-IVITY (uS)	TURBIDITY (NTU)	D.O. (mg/L)	REDOX POTENTIAL (mV)
1019	15.45	50 mL/m	—	17.92	6.57	814	1.5	0.98	14.0
1023	15.74	50 mL/m	200	18.12	6.56	819	1.9	0.71	-5.3
1027	15.90	50 mL/m	400	18.20	6.55	831	2.1	0.64	-24.4
1031	16.05	40 ml/m	600	18.25	6.54	831	1.7	0.61	-36.7
1036	16.25	40 ml/m	800	18.22	6.54	832	1.6	0.60	-58.0
1041	16.33	40 ml/m	1000	18.23	6.54	833	1.8	0.59	-59.3
1045	16.45	40 ml/m	1160	18.22	6.55	834	2.0	0.59	-74.8
1050	16.60	40 ml/m	1360	18.20	6.56	836	2.1	0.58	-83.6
1057	16.76	40 ml/m	1640	18.27	6.58	846	2.3	0.57	-91.3
1100	16.84	40 mL/m	1760	18.26	6.59	852	2.3	0.57	-93.4

SAMPLE

TIME SAMPLE TAKEN: 1105

SAMPLE ID: MW-2

ANALYSES REQUESTED: 8260B

URS
1 Montgomery Street, Suite 900
San Francisco, CA 94104
415.896.5858 Fax 415.882.9261

GROUNDWATER SAMPLING LOG

SITE NAME AND ADDRESS	JOB NUMBER	DATE	WELL #
3885 MLK	28068161	10/23/0	MW-4

PERSONNEL CONDUCTING SAMPLING

METER USED ☐ YSI6920 ☐ YSI3500 ☐ MP2 ☒ OTHER: YSI 650

WELL / WATER STATUS

PID READING: none taken

DEPTH TO WATER (FROM TOP OF PVC): 15.15'

WATER CONDITION (Color & Odor, Oil Sheen, Etc.): Clear. Hydrocarbon odor (Strong)

REMARKS: (Weather/Area? Ground surface/Nearby activities/Etc.)
Well in good condition; weather overcast Approx 65°F

FIELD READINGS

METHOD: ☐ LOW FLOW ☐ PURGING

TOTAL PURGED (GAL): _____ TOTAL PURGE TIME (MIN): _____

TIME	WATER LEVEL (feet)	PURGE RATE (mL/min)	VOLUME PURGED (mL)	TEMP. (C)	pH	CONDUCT-IVITY (uS)	TURBIDITY (NTU)	D.O. (mg/L)	REDOX POTENTIAL (mV)
1128	15.45	120mL/m	—	20.69	6.41	1250	2.2	1.37	-109.0
1133	15.70	50mL/m		20.56	6.38	1241	2.2	0.92	-115.3
1137	15.80	50mL/m.n		20.52	6.35	1238	1.3	0.93	-107.3
1141	15.95	50mL/m		20.57	6.35	1249	0.1	0.93	-105.7
1145	16.02	50mL/m		20.56	6.34	1271	0.2	0.92	-85.3

SAMPLE

TIME SAMPLE TAKEN	ANALYSES REQUESTED
1150	8260B and 8260B MS/MSD
SAMPLE ID: ~~MW-2~~ MW-4	~~DUP~~

URS
1 Montgomery Street, Suite 900
San Francisco, CA 94104
415.896.5858 Fax 415.882.9261

GROUNDWATER SAMPLING LOG

SITE NAME AND ADDRESS	JOB NUMBER	DATE	WELL #
3885 MLK	28068161	10/8/13	MW-3

PERSONNEL CONDUCTING SAMPLING

METER USED ☐ YSI6920 ☐ YSI3500 ☐ MP2 ☒ OTHER: YSI 650

WELL / WATER STATUS

PID READING: Not taken

DEPTH TO WATER (FROM TOP OF PVC): 13.45

WATER CONDITION (Color & Odor, Oil Sheen, Etc.): Clear, no odor.

REMARKS: (Weather/Area? Ground surface/Nearby activities/Etc.) Well in good condition. Weather: Overcast approx. 60°F

)

FIELD READINGS

METHOD: ☒ LOW FLOW ☐ PURGING

TOTAL PURGED (GAL) _____ TOTAL PURGE TIME (MIN) _____

TIME	WATER LEVEL (feet)	PURGE RATE (mL/min)	VOLUME PURGED (mL)	TEMP. (C)	pH	CONDUCT-IVITY (uS)	TURBIDITY (NTU)	D.O. (mg/L)	REDOX POTENTIAL (mV)
0938	16.65	40 mL/m	40	18.24	6.93	1127	0.7	2.34	218.4
0941	16.81	"	180	18.18	6.93	1128	0.6	1.81	217.0
0943	16.84	50 mL/m	220	18.18	6.92	1128	0.2	1.81	216.0
0948	16.36	50 mL/m	470	18.22	6.93	1126	0.3	1.87	~~214.1~~
0952	16.41	50 mL/m	670	18.27	6.94	1130	0.1	1.88	214.0
0955	16.56	50 mL/m	820	18.26	6.94	1133	0.7	1.84	213.6

SAMPLE

TIME SAMPLE TAKEN: 1005

SAMPLE ID: MW-3

ANALYSES REQUESTED: 8260B

APPENDIX B

ANALYTICAL AND DATA VALIDATION REPORTS

LEVEL III Data Validation Report

PROJECT: MLK/Oakland

LABORATORY: Test America – Pleasanton, CA

LAB NUMBER: 720-53268

SAMPLES: MW-5, MW-3, MW-4, MW-2, MW-1, MW-10, Trip Blank

MATRIX: Water

Analysis	BTEX + Gasoline Range (C5-C12) 8260B
Holding Time	✓
Surrogate Recovery	v
MS/MSD (WM-4)	✓
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (MW-1 and MW-10)	✓
Trip Blanks	✓
Reporting Limits	Note 1

✓ – QC criteria were met.

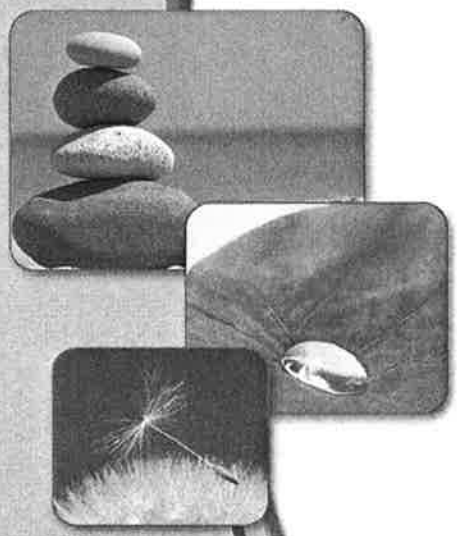
Notes: 1. In order to quantitate target analytes, the following dilutions were required:

Sample	Dilution 1	Dilution 2	Analyte for Dilution 2
MW-4	20	--	--
MW-2	5	40 (200)	Benzene

In all cases, the reporting limits were increased by the same factor as the dilution. The reported concentrations exceeded the elevated reporting limits.

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: 720-53268-1
Client Project/Site: 3884 MLK/Oakland

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

Attn: Mr. Des Garner

Authorized for release by:
10/30/2013 9:25:20 AM

Afsaneh Salimpour, Project Manager I
(925)484-1919
afsaneh.salimpour@testamericainc.com

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 720-53268-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
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: 720-53268-1

Job ID: 720-53268-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-53268-1

Comments
No additional comments.

Receipt
The samples were received on 10/23/2013 6:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

GC/MS VOA
No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: TRIPBLANK — Lab Sample ID: 720-53268-1

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 720-53268-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 720-53268-3

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 720-53268-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1800		10		ug/L	20		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	1500		10		ug/L	20		8260B/CA_LUFT MS	Total/NA
Toluene	480		10		ug/L	20		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	3100		20		ug/L	20		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	15000		1000		ug/L	20		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 720-53268-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8200		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	120		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Toluene	200		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	380		5.0		ug/L	5		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	9400		250		ug/L	5		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 720-53268-6

No Detections.

Client Sample ID: MW-10 — Lab Sample ID: 720-53268-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: TRIPBLANK
Date Collected: 10/23/13 00:00
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-1
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			10/26/13 16:51	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 16:51	1
Toluene	ND		0.50		ug/L			10/26/13 16:51	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 16:51	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*10/26/13 16:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*72 - 130*		*10/26/13 16:51*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*10/26/13 16:51*	*1*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-5
Date Collected: 10/23/13 09:20
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-2
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			10/26/13 14:33	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 14:33	1
Toluene	ND		0.50		ug/L			10/26/13 14:33	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 14:33	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*67 - 130*		*10/26/13 14:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*72 - 130*		*10/26/13 14:33*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*10/26/13 14:33*	*1*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-3
Date Collected: 10/23/13 10:05
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-3
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			10/26/13 15:01	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 15:01	1
Toluene	ND		0.50		ug/L			10/26/13 15:01	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 15:01	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*10/26/13 15:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*72 - 130*		*10/26/13 15:01*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*10/26/13 15:01*	*1*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-4
Date Collected: 10/23/13 11:50
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1800**		10		ug/L			10/26/13 14:05	20
Ethylbenzene	**1500**		10		ug/L			10/26/13 14:05	20
Toluene	**480**		10		ug/L			10/26/13 14:05	20
Xylenes, Total	**3100**		20		ug/L			10/26/13 14:05	20
Gasoline Range Organics (GRO) -C5-C12	**15000**		1000		ug/L			10/26/13 14:05	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*67 - 130*		*10/26/13 14:05*	*20*
1,2-Dichloroethane-d4 (Surr)	*82*		*72 - 130*		*10/26/13 14:05*	*20*
Toluene-d8 (Surr)	*95*		*70 - 130*		*10/26/13 14:05*	*20*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-2
Date Collected: 10/23/13 11:05
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8200**		100		ug/L			10/28/13 16:25	200
Ethylbenzene	**120**		2.5		ug/L			10/26/13 15:28	5
Toluene	**200**		2.5		ug/L			10/26/13 15:28	5
Xylenes, Total	**380**		5.0		ug/L			10/26/13 15:28	5
Gasoline Range Organics (GRO) -C5-C12	**9400**		250		ug/L			10/26/13 15:28	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*10/26/13 15:28*	*5*
4-Bromofluorobenzene	*101*		*67 - 130*		*10/28/13 16:25*	*200*
1,2-Dichloroethane-d4 (Surr)	*85*		*72 - 130*		*10/26/13 15:28*	*5*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 130*		*10/28/13 16:25*	*200*
Toluene-d8 (Surr)	*95*		*70 - 130*		*10/26/13 15:28*	*5*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/28/13 16:25*	*200*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-1
Date Collected: 10/23/13 13:00
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-6
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			10/28/13 15:57	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 15:56	1
Toluene	ND		0.50		ug/L			10/26/13 15:56	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 15:56	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*10/26/13 15:56*	*1*
4-Bromofluorobenzene	*96*		*67 - 130*		*10/28/13 15:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*72 - 130*		*10/26/13 15:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 130*		*10/28/13 15:57*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*10/26/13 15:56*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/28/13 15:57*	*1*

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-10
Date Collected: 10/23/13 13:00
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-7
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			10/26/13 16:23	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 16:23	1
Toluene	ND		0.50		ug/L			10/26/13 16:23	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 16:23	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*10/26/13 16:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*72 - 130*		*10/26/13 16:23*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*10/26/13 16:23*	*1*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-147106/4
Matrix: Water
Analysis Batch: 147106

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			10/26/13 09:29	1
Ethylbenzene	ND		0.50		ug/L			10/26/13 09:29	1
Toluene	ND		0.50		ug/L			10/26/13 09:29	1
Xylenes, Total	ND		1.0		ug/L			10/26/13 09:29	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/26/13 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*10/26/13 09:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*		*10/26/13 09:29*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*10/26/13 09:29*	*1*

Lab Sample ID: LCS 720-147106/10
Matrix: Water
Analysis Batch: 147106

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	451		ug/L		90	62 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCS 720-147106/5
Matrix: Water
Analysis Batch: 147106

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	23.1		ug/L		92	79 - 130
Ethylbenzene	25.0	23.4		ug/L		94	80 - 120
Toluene	25.0	23.9		ug/L		95	78 - 120
m-Xylene & p-Xylene	50.0	47.5		ug/L		95	70 - 142
o-Xylene	25.0	25.0		ug/L		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*89*		*72 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 720-147106/11
Matrix: Water
Analysis Batch: 147106

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	442		ug/L		88	62 - 120	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-147106/11
Matrix: Water
Analysis Batch: 147106

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	91		72 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: LCSD 720-147106/6
Matrix: Water
Analysis Batch: 147106

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	22.8		ug/L		91	79 - 130	1	20
Ethylbenzene	25.0	23.1		ug/L		93	80 - 120	1	20
Toluene	25.0	23.5		ug/L		94	78 - 120	1	20
m-Xylene & p-Xylene	50.0	46.8		ug/L		94	70 - 142	1	20
o-Xylene	25.0	24.9		ug/L		99	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	88		72 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: 720-53268-4 MS
Matrix: Water
Analysis Batch: 147106

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1800		500	2430		ug/L		123	60 - 140
Ethylbenzene	1500		500	2030	E	ug/L		115	60 - 140
Toluene	480		500	979		ug/L		100	60 - 140
m-Xylene & p-Xylene	2800		1000	3960		ug/L		115	60 - 140
o-Xylene	280		500	804		ug/L		104	60 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	94		67 - 130
1,2-Dichloroethane-d4 (Surr)	82		72 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: 720-53268-4 MSD
Matrix: Water
Analysis Batch: 147106

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	1800		500	2330		ug/L		102	60 - 140	4	20
Ethylbenzene	1500		500	1890		ug/L		86	60 - 140	7	20
Toluene	480		500	957		ug/L		95	60 - 140	2	20
m-Xylene & p-Xylene	2800		1000	3600		ug/L		79	60 - 140	10	20
o-Xylene	280		500	772		ug/L		98	60 - 140	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-53268-4 MSD
Matrix: Water
Analysis Batch: 147106

Client Sample ID: MW-4
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	93		67 - 130
1,2-Dichloroethane-d4 (Surr)	80		72 - 130
Toluene-d8 (Surr)	95		70 - 130

Lab Sample ID: MB 720-147141/5
Matrix: Water
Analysis Batch: 147141

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			10/28/13 09:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		10/28/13 09:38	1
1,2-Dichloroethane-d4 (Surr)	105		72 - 130		10/28/13 09:38	1
Toluene-d8 (Surr)	100		70 - 130		10/28/13 09:38	1

Lab Sample ID: LCS 720-147141/10
Matrix: Water
Analysis Batch: 147141

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	23.2		ug/L		93	79 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	94		72 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-147141/11
Matrix: Water
Analysis Batch: 147141

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	24.4		ug/L		98	79 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		72 - 130
Toluene-d8 (Surr)	102		70 - 130

QC Association Summary

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

TestAmerica Job ID: 720-53268-1

GC/MS VOA

Analysis Batch: 147106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53268-1	TRIPBLANK	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-2	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-3	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-4	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-4 MS	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-4 MSD	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-5	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-6	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-7	MW-10	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-147106/10	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-147106/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-147106/11	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-147106/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-147106/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 147141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53268-5	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-53268-6	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-147141/10	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-147141/11	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-147141/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Lab Chronicle

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: TRIPBLANK — **Lab Sample ID: 720-53268-1**
Date Collected: 10/23/13 00:00 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	147106	10/26/13 16:51	ASC	TAL PLS

Client Sample ID: MW-5 — **Lab Sample ID: 720-53268-2**
Date Collected: 10/23/13 09:20 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	147106	10/26/13 14:33	ASC	TAL PLS

Client Sample ID: MW-3 — **Lab Sample ID: 720-53268-3**
Date Collected: 10/23/13 10:05 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	147106	10/26/13 15:01	ASC	TAL PLS

Client Sample ID: MW-4 — **Lab Sample ID: 720-53268-4**
Date Collected: 10/23/13 11:50 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		20	147106	10/26/13 14:05	ASC	TAL PLS

Client Sample ID: MW-2 — **Lab Sample ID: 720-53268-5**
Date Collected: 10/23/13 11:05 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	147106	10/26/13 15:28	ASC	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		200	147141	10/28/13 16:25	ASC	TAL PLS

Client Sample ID: MW-1 — **Lab Sample ID: 720-53268-6**
Date Collected: 10/23/13 13:00 — Matrix: Water
Date Received: 10/23/13 18:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	147106	10/26/13 15:56	ASC	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147141	10/28/13 15:57	ASC	TAL PLS

Lab Chronicle

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

TestAmerica Job ID: 720-53268-1

Client Sample ID: MW-10
Date Collected: 10/23/13 13:00
Date Received: 10/23/13 18:50

Lab Sample ID: 720-53268-7
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	147106	10/26/13 16:23	ASC	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: 720-53268-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

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

TestAmerica Job ID: 720-53268-1

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

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: 720-53268-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-53268-1	TRIPBLANK	Water	10/23/13 00:00	10/23/13 18:50
720-53268-2	MW-5	Water	10/23/13 09:20	10/23/13 18:50
720-53268-3	MW-3	Water	10/23/13 10:05	10/23/13 18:50
720-53268-4	MW-4	Water	10/23/13 11:50	10/23/13 18:50
720-53268-5	MW-2	Water	10/23/13 11:05	10/23/13 18:50
720-53268-6	MW-1	Water	10/23/13 13:00	10/23/13 18:50
720-53268-7	MW-10	Water	10/23/13 13:00	10/23/13 18:50

TestAmerica Pleasanton
1220 Quarry Lane

Pleasanton, CA 94566
phone 925.484 1919 fax 925.600 3002

Chain of Custody Record

720-53268

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
149574
TestAmerica Laboratories, Inc.

10/30/2013

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other UST Fund

Client Contact	Project Manager: Des Garner	Site Contact: Erik Skov	Date: 10/23/13	COC No:
URS Corporation	Tel/Fax: 415 243-3805	Lab Contact: Afsaneh	Carrier:	1 of 1 COCs
One Montgomery Street, Suite 900	**Analysis Turnaround Time**			For Lab Use Only:
San Francisco, CA, 94104	Calendar (C) or Work Days (W)			Walk-in Client:
(415) 896-5858	TAT if different from Below			Lab Sampling:
(415) 882-9261	☐ 2 weeks			
Project Name: 3884 MLK	☑ 1 week			Job / SDG No.:
Site:	☐ 2 days			
P O # 28068161	☐ 1 day			Sampler:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y / N)	Composite = C / Grab = G	8260B (see special instructions)	PAHs 8270C (SIM)	MS / MSD	CAM 17 Metals EPA 6010B	Sample Specific Notes:
Trip Blank	—	—	VOA	W	2	N		X				
MW-5	10/23/13	0920	VOA	W	3	N		X				
MW-3	10/23/13	1005	VOA	W	3	N		X				
MW-4	10/23/13	1150	VOA	W	3	N		X		X		
MW-2	10/23/13	1105	VOA	W	3	N		X				
MW-1	10/23/13	1300	VOA	W	3	N		X				
MW-10	10/23/13	1300	VOA	W	3	N		X				

720-53268 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: 8260B - Analyze and report TPH-gasoline/BTEX/~~Naphthalene/1,2-DCA/cis-1,2-DCE~~

1.8°C

Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time
	URS	10/23/13		TASF	10-23-13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company	Date/Time
	TASF	10-23-13 1850		TAP	10/23/13 1850
Relinquished by	Company	Date/Time:	Received in Laboratory by:	Company.	Date/Time

Form No. CA-C-WI-002, Rev. 4, dated 10/25/2012

Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-53268-1

Login Number: 53268
List Number: 1
Creator: Gonzales, Justinn

List Source: TestAmerica Pleasanton

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?	False	
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	