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REPORT
FIRST QUARTER 2015 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 Corporation
One Montgomery Street, Suite 900
San Francisco, California 94104

April 14, 2015

IDENTIFICATION FORM

Document Title: **First Quarter 2015 Groundwater Monitoring**
Former Grove Street Wash Rack Site
3884 Martin Luther King Junior Way
Oakland, California 94609

Organization Title: URS Corporation
Address: One Montgomery Street, Suite 900
San Francisco, California 94104

Project Manager: Kali Futnani
Title: Project Manager
Telephone: (415) 243-3878

APPROVAL FORM

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

Signature: _____ Date: April 14, 2015
Name: Kali Futnani
Title: Project Manager

Signature: _____ Date: April 14, 2015
Name: Erik Skov, PG, CHG
Title: Senior Project Geologist

REGISTERED GEOLOGIST
ERIK SKOV
No. 7470
Expires 10/31/16
STATE OF CALIFORNIA

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

May 1, 2015

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

Subject: Responsible Party Perjury Statement for 1st 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 Mary Cotter 5/4/2015

John and Antoinette Coyle 5/4/2015

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Sincerely,
URS CORPORATION

Kali Futnani
Environmental Scientist/ Project Manager

TABLE OF CONTENTS

Page

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

URS is pleased to submit this report detailing the results of the First Quarter 2015 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 First Quarter 2015 sampling is the sixth 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 the 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 issues 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.

- 07/3/2013; 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.
- 10/82013 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.
- 09/30/2014: URS submits Additional Well Installation and Third Quarter 2014 Groundwater monitoring Report.
- 01/30/2015: URS submits Fourth 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 GROUNDWATER MONITORING

Groundwater monitoring was conducted at the site on March 31, 2015. Groundwater samples were collected from eight groundwater monitoring wells. Groundwater sampling methodologies and analytical results are presented in the following sections.

3.1 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 in conjunction with the depth to water 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 water column in each of the wells. 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 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 after disconnecting from the flow-through cell. 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-g), benzene, ethylbenzene, toluene, and xylenes (BTEX), naphthalene, 1,2-Dicloroethane (1,2-DCA), and cis-1,2-Dichloroethene (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.

3.2 GROUNDWATER ELEVATION AND FLOW DIRECTION

Groundwater depth measurements were collected from all of the wells prior to purging. The well caps were removed from all of the wells and the wells were allowed to sit open for approximately 30 minutes, after which a depth to groundwater measurement was taken in each of the wells. 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.

Groundwater elevation data is summarized in Table 1. Groundwater elevations ranged from 59.50 to 58.44 feet above msl. The data indicate the groundwater elevations are, on average, approximately 1.1 feet lower than the previous sampling event. This is likely due to the lack of rainfall during January and February. 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 west at an average approximate gradient of 0.007. A groundwater elevation contour map is presented on Figure 2.

3.3 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 2. The following are ranges of the final parameter measurements from all eight monitoring wells at the site prior to sampling: conductivity ranged from 0.723 to 1.757 mS/cm; temperature ranged from 17.3 to 19.8 °C; pH ranged between 6.12 and 6.89 standard pH units; ORP ranged from -113.4 to 460.5 millivolts (mV); and DO ranged from 0.07 to 3.48 mg/L. Refer to Appendix A for the specific range of parameters in each well.

3.4 GROUNDWATER ANALYTICAL RESULTS

The results of the groundwater analyses are summarized in Table 3 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 10,000 µg/L (MW-2), 32,000 µg/L (MW-4), and 2,000 µg/L (MW-6). Concentrations of benzene detected were 5,900 µg/L (MW-2), 3,100 µg/L (MW-4), and 150 µg/L (MW-6). Concentrations of toluene detected were 160 µg/L (MW-2), 730 µg/L (MW-4), and 1.4 µg/L (MW-6). Concentrations of ethylbenzene detected were 230µg/L (MW-2), 2.900 µg/L (MW-4), and 53 µg/L (MW-6). Concentrations of xylenes detected were 150 µg/L (MW-2), 8,100 µg/L (MW-4), and 3.5 µg/L (MW-6).

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 detected in MW-4 at a concentration of 530 µg/L. 1,2-DCA was detected in MW-1 at a concentration of 1.8 µg/L. cis-1,2 DCE was not detected above the laboratory level of reporting in any of the wells sampled. However, it should be noted that the laboratory level of reporting for these compounds was raised in monitoring wells MW-2 and MW-4 as the sample had to be diluted based on the high concentration of other hydrocarbon constituents present in the sample.

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.

All of the concentrations of TPH-g, benzene, and ethylbenzene 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). The concentrations of toluene and xylenes in wells MW-2 and MW-4 exceed their ESL. Additionally, the concentration of 1,2-DCA detected in monitoring well MW-1 and the concentration of naphthalene in MW-4 exceed their respective ESL. However, as indicated previously, the laboratory level of reporting for these compounds was raised due to sample dilution. The data indicates an overall increase in the TPH-g and BTEX concentrations in wells MW-2, MW-4, and MW-6. 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. Consistent with previous monitoring events, concentrations of TPH-g and BTEX were detected in MW-2, MW-4, and MW-6. In addition (also consistent with previous investigations), 1,2-DCA was detected in MW-1 and naphthalene was detected in MW-4. No TPH or related constituents were detected in any of the other five monitoring wells.

The results of the groundwater monitoring indicate an across the board increase in petroleum hydrocarbon and BTEX concentrations. This is likely due to the drop in water levels observed in the wells and the relatively short screen length of the wells. 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 second quarter 2015. However, remedial activities at the site are pending and this monitoring event may be postponed. If so, quarterly monitoring will be continued after remedial actions are completed to monitor the efficacy of the remediation, as required by the ACEHD.

5.0 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. Additional Monitoring Well Installation and Third Quarter 2014 Groundwater Monitoring, Former Grove Street Wash Rack Site, 3884 Martin Luther King Junior Way, Oakland, California. September 30, 2014.

TABLES

Table 1
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-1	1/9/2015	12-19	12.14	72.83	60.69
MW-1	3/31/2015	12-19	13.57	72.83	59.26
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-2	1/9/2015	13-20	13.82	73.16	59.34
MW-2	3/31/2015	13-20	14.08	73.16	59.08
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-3	1/9/2015	13-20	13.32	73.54	60.22
MW-3	3/31/2015	13-20	14.25	73.54	59.29
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-4	1/9/2015	11-18	12.91	73.18	60.27
MW-4	3/31/2015	11-18	13.68	73.18	59.50
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-5	1/9/2015	15-21	14.78	74.91	60.13
MW-5	3/31/2015	15-21	15.48	74.91	59.43
MW-6	9/15/2014	11-19	14.86	72.43	57.57
MW-6	1/9/2015	11-19	11.39	72.43	61.04
MW-6	3/31/2015	11-19	13.26	72.43	59.17
MW-7	9/15/2014	11-19	13.61	71.46	57.85
MW-7	1/9/2015	11-19	11.27	71.46	60.19
MW-7	3/31/2015	11-19	11.93	71.46	59.53
MW-8	9/15/2014	11-18	14.23	70.75	56.52
MW-8	1/9/2015	11-18	10.3	70.75	60.45
MW-8	3/31/2015	11-18	12.31	70.75	58.44

TOC = top of casing msl = mean sea level NC=Not Calculated
bgs = below ground surface NM=Not Measured

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-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-1	1/9/2015	20.3	1.077	0.27	6.55	-24.9
MW-1	3/31/2015	19.5	1.021	0.91	6.12	61.9
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-2	1/9/2015	19.1	0.959	0.47	6.79	-59.5
MW-2	3/31/2015	18.2	0.934	0.13	6.38	-113.4
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-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-3	1/9/2015	18.9	1.147	5.3	7.11	334.8
MW-3	3/31/2015	18.2	1.113	3.48	6.71	435.5
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-4	1/9/2015	20.1	1.424	0.17	6.74	-59.3
MW-4	3/31/2015	19.6	1.386	0.14	6.29	-48.5
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-5	1/9/2015	17.6	0.864	0.30	6.49	256.4
MW-5	3/31/2015	17.3	0.842	0.12	6.12	460.5
MW-6	9/15/2014	21.3	1.757	2.56	6.51	98.4
MW-6	1/9/2015	20.1	1.716	0.77	7.01	-7.9
MW-6	3/31/2015	19.8	1.569	0.07	6.47	-72.6

Table 2

Groundwater Physical Parameters

Former Grove Street Wash Rack Site

3884 Martin Luther King Junior Way

Oakland, California

MW-7	9/15/2014	20.5	1.508	4.95	6.66	104.3
MW-7	1/9/2015	19.5	1.377	3.14	7.26	115.5
MW-7	3/31/2015	19.2	1.277	0.85	6.74	118.6
MW-8	9/15/2014	20.4	1.055	5.87	6.81	106.1
MW-8	1/9/2015	19.9	0.813	2.39	9.20	92.9
MW-8	3/31/2015	19.4	0.723	1.03	6.89	155.7

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**	**Naphthalene**	**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	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-10[2]	10/23/2013	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-1	7/10/2014	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-1	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	**4.0**	<0.5
MW-1	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	**3.1**	<0.5
MW-1	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	**1.8**	<0.5
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**	NA	NA	NA
MW-2	7/10/2014	**8800 J**	**4800**	**130**	**140**	<200	NA	NA	NA
MW-2	9/15/2014	**11000**	**5600**	**180**	**190**	<200	<200	<100	<100
MW-2	1/9/2015	**7600**	**4200**	**110**	**130**	**98**	**17**	**2.2**	<0.5
FD-1[4]	1/9/2015	**6600**	**3600**	**99**	**110**	**90**	**15**	**2.3**	<0.5
MW-2	3/31/2015	**10000**	**5900**	**160**	**230**	**150**	<100	<50	<50
MW-3	7/18/2013	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-3	10/23/2013	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-3	7/10/2014	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-3	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
FD-1[3]	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-3	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-3	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-4	7/18/2013	**9500**	**980**	**510**	**270**	**2600**	**180**	**0.7**	<0.5
MW-40[1]	7/18/2013	**13000**	**1100**	**930**	**800**	**3500**	**180**	**0.6**	<0.5
MW-4	10/23/2013	**15000**	**1800**	**480**	**1500**	**3100**	NA	NA	NA
MW-4	7/10/2014	**25000 J**	**2500 J**	**950**	**1800 J**	**6400**	NA	NA	NA
MW-40[1]	7/10/2014	**32000 J**	**3100 J**	**1100**	**2400 J**	**6100**	NA	NA	NA
MW-4	9/15/2014	**22000**	**2800**	**470**	**2200**	**3000**	**370**	<25	<25
MW-4	1/9/2015	**21000**	**1900**	**180**	**1800**	**3600**	**290**	**0.67**	<0.5
MW-4	3/31/2015	**32000**	**3100**	**730**	**2900**	**8100**	**530**	<50	<50
MW-5	7/18/2013	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-5	10/23/2013	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-5	7/10/2014	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
MW-5	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-5	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-5	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-6	9/15/2014	**300**	**5.6**	<0.5	**0.6**	**4.7**	<1.0	<0.5	<0.5
MW-6	1/9/2015	**160**	**10**	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-6	3/31/2015	**2000**	**150**	**1.4**	**48**	**2.9**	<1.0	<0.5	<0.5
MW-60[4]	3/31/2015	**2100**	**160**	**1.5**	**53**	**3.5**	<1.0	<0.5	<0.5

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

MW-7	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-7	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-7	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-8	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-8	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
MW-8	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
Trip Blank	7/18/2013	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	10/23/2013	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	7/10/2014	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA
Trip Blank	9/15/2014	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
Trip Blank	1/9/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
Trip Blank	3/31/2015	<50	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5
	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

1,2-DCA = 1,2-Dichloroethane

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

NA - Not Analyzed

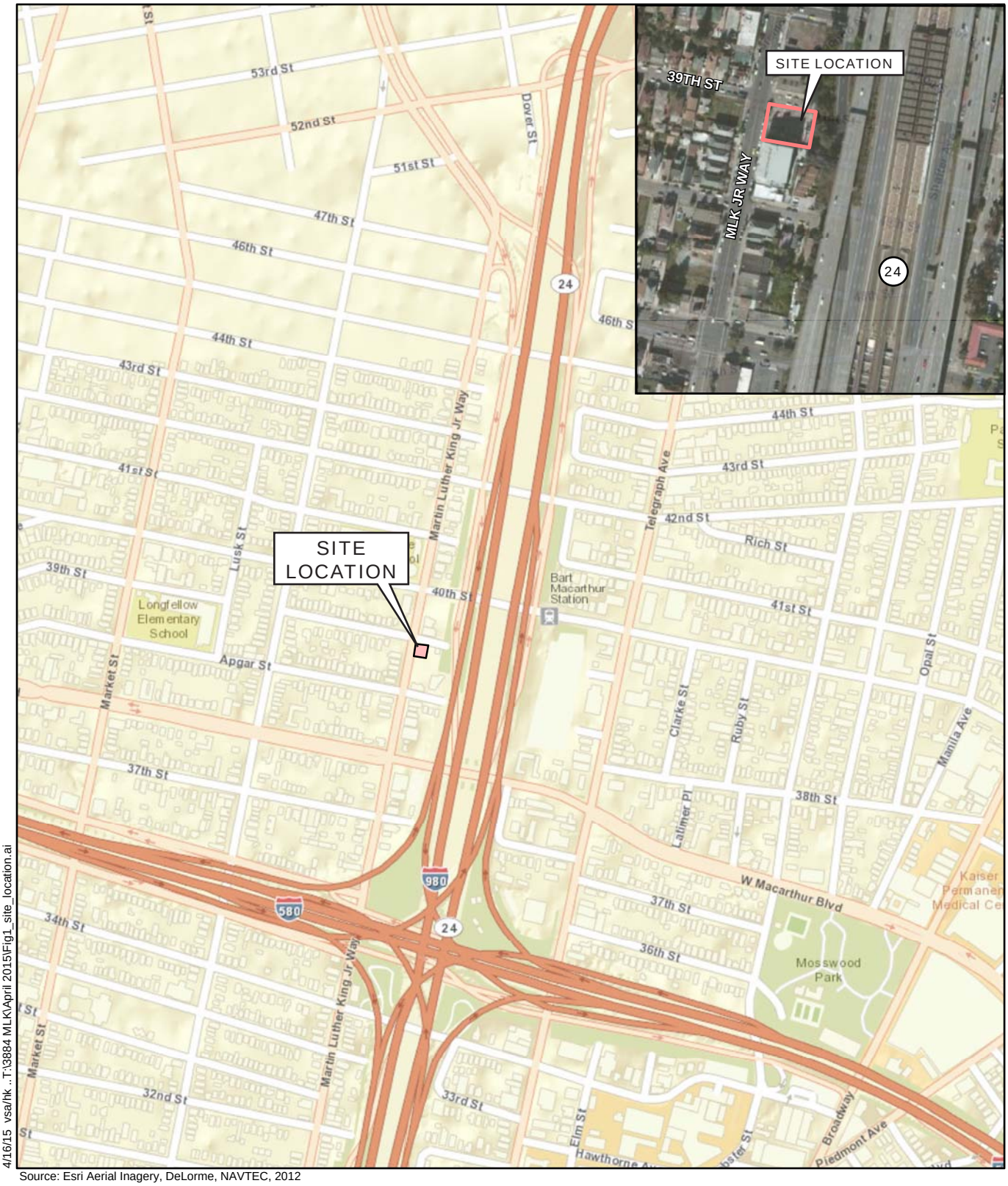
[1] Field duplicate of MW-4

[2] Field duplicate of MW-1

[3] Field duplicate of MW-3

[4] Field duplicate of MW-6

FIGURES



4/16/15 vsa/hk ..T:\3884 MLK\April 2015\Fig1_site_location.ai

Source: Esri Aerial Inagery, DeLorme, NAVTEC, 2012

0 500 1000 FEET

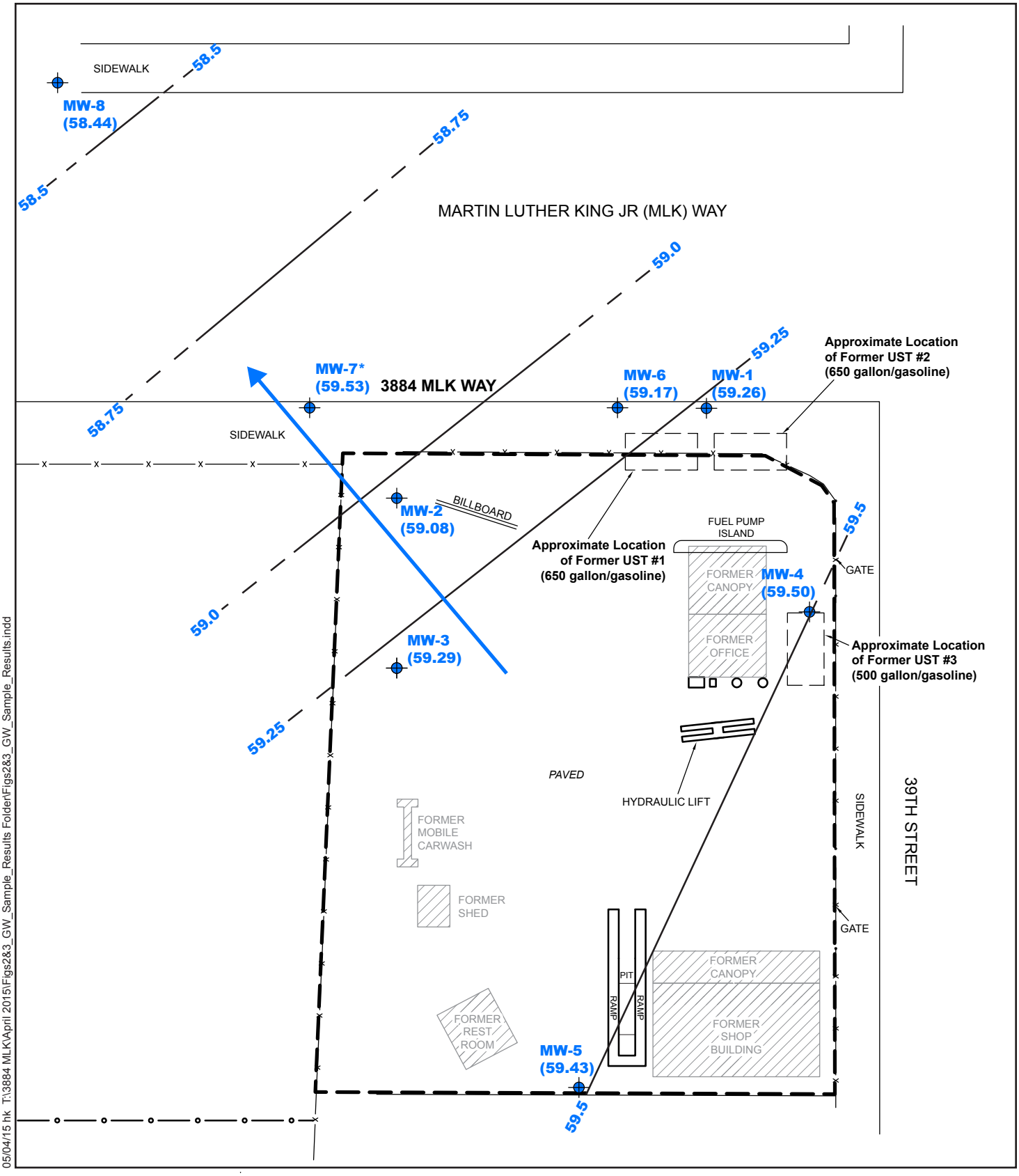
SITE LOCATION MAP

April 2015
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

URS

FIGURE 1



05/04/15 hk T:\3884 MLK\April 2015\Figs2&3_GW_Sample_Results FolderFigs2&3_GW_Sample_Results.indd

MW-1 (59.26) — Monitoring Well and Groundwater Elevation – January 2015

Interpreted Groundwater Flow Direction
Approximate Average Gradient = 0.007

*Well data not used for contouring.

0 25 FEET

GROUNDWATER ELEVATION

April 2015
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

URS

FIGURE 2

Analyte	MW-8
TPHG	<50.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

MW-8

SIDEWALK

Analyte	MW-6
TPHG	2000
Benzene	150
Toluene	1.4
Ethylbenzene	48
Xylenes	2.9
Napthalene	<1.0
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

Analyte	MW-1
TPHG	<50.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	1.8
cis-1, 2-DCA	<0.5

MARTIN LUTHER KING JR (MLK) WAY

Analyte	MW-7
TPHG	<50.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

3884 MLK WAY

Approximate Location of Former UST #2 (650 gallon/gasoline)

MW-7

SIDEWALK

Approximate Location of Former UST #1 (650 gallon/gasoline)

MW-6

MW-1

MW-2

BILLBOARD

Analyte	MW-2
TPHG	10000
Benzene	5900
Toluene	160
Ethylbenzene	230
Xylenes	150
Napthalene	<100
1, 2-DCA	<50
cis-1, 2-DCA	<50

FUEL PUMP ISLAND

FORMER CANOPY

GATE

MW-4

Approximate Location of Former UST #3 (500 gallon/gasoline)

FORMER OFFICE

MW-3

Analyte	MW-3
TPHG	<50.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

PAVED

HYDRAULIC LIFT

FORMER MOBILE CARWASH

FORMER SHED

SIDEWALK

39TH STREET

Analyte	MW-4
TPHG	32000
Benzene	3100
Toluene	730
Ethylbenzene	2900
Xylenes	8100
Napthalene	530
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

GATE

Analyte	MW-5
TPHG	<50.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
Napthalene	<1.0
1, 2-DCA	<0.5
cis-1, 2-DCA	<0.5

PIT

RAMP

RAMP

FORMER CANOPY

FORMER SHOP BUILDING

FORMER REST ROOM

MW-5

MW-1 Monitoring Well

Site Boundary

x Chain Link Fence

1, 2-DCA 1, 2-Dichloroethane

cis-1, 2-DCE cis-1, 2-Dichloroethane

FD-1 Field Duplicate of MW-2

0 25 FEET

GROUNDWATER ANALYTICAL RESULTS – MONITORING WELLS (µg/L) – JANUARY 2015

April 2015
28068161

3884 Martin Luther King, Jr. Way
Oakland, California

URS

FIGURE 3

04/16/15 hk/vsa T:\3884 MLK\April 2015\Figs2&3_GW_Sample_Results Folder\Figs2&3_GW_Sample_Results.indd

Appendix A

Well Purging – Field Quality Measurement Forms

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-1 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 13.57'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

4x 1237 Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1240	13.99		400	1.2	19.6	1011	6.13	104.3	1.35		Clear; slight hydrocarbon odor
1243	14.40		"	2.4	19.6	1014	6.12	105.2	1.30		
1246	14.65		"	3.6	19.5	1019	6.12	102.4	1.37		
1249	14.86		"	4.8	19.5	1021	6.12	88.4	1.32		
1252	15.13		"	6.0	19.5	1020	6.12	69.8	1.07		
1255	15.29		"	7.2	19.5	1020	6.12	67.3	0.99		
1258	15.42		"	8.4	19.5	1021	6.12	61.9	0.91		
											Sampled @ 1300
	Total Volume Purged			8.4L							
	Total Purge Time			18 min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-2 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 13.76'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

~~1057~~ Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1058	14.32		400	1.2	18.2	939	6.39	-7.3	1.13		Clear; Moderate
1101	14.63		"	2.4	18.2	934	6.38	-38.8	1.27		Hydrocarbon & Sulfur
1104	14.87		"	3.6	18.2	933	6.37	-56.6	1.00		odor
1107	15.14		"	4.8	18.1	936	6.36	-72.3	0.70		
1110	15.32		"	6.0	18.1	943	6.35	-75.0	0.55		
1113	15.60		"	7.2	18.1	946	6.33	-75.0	0.40		
1116	15.91		"	8.4	18.1	944	6.31	-78.3	0.32		
1119	16.14		"	9.6	18.2	936	6.31	-85.6	0.26		
1122	16.48		"	10.8	18.2	933	6.31	-92.9	0.22		
1125	16.62		"	12.0	18.2	931	6.34	-106.7	0.19		~~Sampled @ 1128~~
1128	16.80		"	13.2	18.2	931	6.36	-113.9	0.16		
1131	17.00		"	14.4	18.2	934	6.38	-119.4	0.13		
											Sampled @ 1133
	Total Volume Purged			14.4							
	Total Purge Time			36min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-3 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 14.10
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

1021 start Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1024	14.61		400	1.2	18.4	1098	6.66	441.2	2.99		Clear; NO odor
1027	14.98		"	2.4	18.2	1095	6.67	439.8	3.22		
1030	15.35		"	3.6	18.2	1101	6.69	438.6	3.47		
1033	~~15~~ 15.64		"	4.8	18.2	1113	6.70	437.0	3.55		
1036	16.03		"	6.0	18.2	1113	6.71	433.5	3.48		Sampled @ 1037
	Total Volume Purged			6.0							
	Total Purge Time			15 min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-4 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 13.66'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

1152 Clock ST Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1155	14.02		400	1.2	19.6	1405	6.31	-37.8	0.34		Clear; Moderate Hydrocarbon odor
1158	14.41		"	2.4	19.5	1397	6.33	-44.8	0.22		
1201	14.68		"	3.6	19.5	1393	6.33	-46.8	0.13		
1204	14.95		"	4.8	19.5	1391	6.33	-44.2	0.12		
1207	~~15.05~~	15.45	"	6.0	19.6	1388	6.30	-44.4	0.13		
1210	15.63		"	7.2	19.6	1386	6.29	-48.5	0.14		Sampled @ 1212
	Total Volume Purged										
	Total Purge Time										

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-5 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 15.48
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

931 start Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
934	15.98		400	1.2	17.2	852	6.06	482.9	2.03		Clear; No odor
937	16.30		"	2.4	17.1	855	6.08	477.9	0.99		
940	16.55		"	3.6	17.1	855	6.10	474.9	0.52		
943	16.81		"	4.8	17.2	863	6.11	472.7	0.31		
946	17.08		"	6.0	17.2	860	6.11	470.5	0.22		
949	17.27		"	7.2	17.2	849	6.12	468.1	0.19		
952	17.51		"	8.4	17.2	845	6.13	466.0	0.16		
955	17.67		"	9.6	17.2	835	6.12	464.2	0.14		
958	17.80		"	10.8	17.2	840	6.12	462.2	0.13		Sampled @ 1001
1001	17.91		"	12.0	17.3	842	6.12	460.5	0.12		
	Total Volume Purged			12.0							
	Total Purge Time			30 min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-6 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 13.29'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

1324 SX Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1327	13.80		400	1.2	19.7	1585	6.47	-38.5	0.35		Clear; slight Hydrocarbon odor
1330	14.20		"	2.4	19.6	1470	6.50	-49.5	0.19		
1333	14.51		"	3.6	19.6	1441	6.48	-24.5	0.23		
1336	14.81		"	4.8	19.6	1472	6.47	-20.1	0.15		
1339	15.17		"	6.0	19.6	1500	6.48	-20.9	0.13		
1342	15.58		"	7.2	19.7	1540	6.47	-37.9	0.10		
1345	15.90		"	8.4	19.7	1539	6.47	-49.6	0.07		
1348	16.22		"	9.6	19.8	1571	6.46	-68.9	0.07		Sampled @ 1352
1351	16.50		"	10.8	19.8	1669	6.47	-72.6	0.07		
											MW-60 is FD
	Total Volume Purged			10.8							
	Total Purge Time			27 min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-7 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 11.99'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

1420 ST Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
1423	12.39		400	1.2	19.1	1292	6.80	106.2	3.24		clear ; slight hydrocarbon odor
1426	12.69		"	2.4	19.0	1285	6.81	111.5	3.08		
1429	12.95		"	3.6	19.0	1271	6.79	116.5	2.78		
1432	13.34		"	4.8	19.1	1259	6.78	118.0	2.20		
1435	13.64		"	6.0	19.1	1259	6.77	119.2	1.77		
1438	14.00		"	7.2	19.1	1263	6.77	119.7	1.50		
1441	14.30		"	8.4	19.2	1268	6.76	119.6	1.28		
1444	14.67		"	9.6	19.2	1275	6.75	118.5	1.00		
1447	15.01		"	10.8	19.2	1277	6.75	120.1	0.90		
1450	15.45		"	12.0	19.2	1279	6.74	118.6	0.85		
											Sampled @ 1452
	Total Volume Purged			12.0							
	Total Purge Time			30min							

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

WELL PURGING – FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) **3884 MLK**
Well Number MW-8 Date 3/31/15
Field Personnel RB
Sampling Organization: **URS Corporation**

Depth to Water (Feet below TOC[4]) 12.28'
Depth to: Top of screen **Unknown – Well Depth Approximately 18.5 ft**
Pump Intake at (Feet below TOC) **Approximately 17.0 ft**
Purging Device; (Pump type) **Peristaltic**

SA
1529

~~1519~~ 1522 ST Clock Time 24 Hr	Water Depth below MP ft	Pump Dial [1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. [2] µS/cm	pH	ORP/ Eh [3] mv	DO mg/L	Turbidity NTU	Comments
~~1522~~					19.6	758	7.05	182.1	1.58		Clear; No odor
1532			400	1.2	19.5	750	7.01	192.8	1.61		" "
1535			"	2.4	19.4	737	6.99	183.2	1.48		
1538	12.35		"	3.6	19.4	727	6.92	170.5	1.21		
1541	12.48		"	4.8	19.4	727	6.90	165.9	1.12		
1544	12.64		"	6.0	19.4	723	6.89	155.7	1.03		
											Sampled @ 1547
	Total Volume Purged			6.0							
	Total Purge Time			15min							

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

Appendix B

Analytical Laboratory and Data Validation Report

LEVEL III Data Validation Report

PROJECT: MLK

LABORATORY: Test Americas – Pleasanton, CA

LAB NUMBER: 720-63873

SAMPLES: MW-5, MW-3, MW-2, MW-4, MW-1, MW-6, MW-7, MW-8, MW-60, TB

MATRIX: Water

Analysis	**BTEX; GRO*; 1,2-DCA, cis-1,2-DCE 8260B / CA_LUFT MS**
Holding Time	✓
Surrogate Recovery	✓
MS/MSD (MW-5)	✓
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (MW-6 and MW-60)	✓
Trip Blanks	✓
Reporting Limits	Note 1

* GRO C5-C12

✓ – QC criteria were met.

Notes: 1. Samples MW-2 and MW-4 were diluted by factors of 100 in order to quantitate target analytes. Reporting limits were increased by the same factor as the dilution.

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

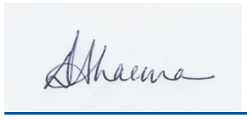
ANALYTICAL REPORT

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

TestAmerica Job ID: 720-63873-1
Client Project/Site: 28068161

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

Attn: Mr. Erik Skov



Authorized for release by:
4/7/2015 5:25:05 PM
Dimple Sharma, Senior Project Manager
dimple.sharma@testamericainc.com

Designee for

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
afsaneh.salimpour@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.

Table of Contents

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
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)

Job ID: 720-63873-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-63873-1

Comments
No additional comments.

Receipt
The samples were received on 4/1/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 0.7° C.

Except:

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed.

Turn around time not specified on the COC.

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: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-5 — Lab Sample ID: 720-63873-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 720-63873-2

No Detections.

Client Sample ID: MW-2 — Lab Sample ID: 720-63873-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5900		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	230		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Toluene	160		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	150		100		ug/L	100		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	10000		5000		ug/L	100		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 720-63873-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3100		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	2900		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Naphthalene	530		100		ug/L	100		8260B/CA_LUFT MS	Total/NA
Toluene	730		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	8100		100		ug/L	100		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	32000		5000		ug/L	100		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 720-63873-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	1.8		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 720-63873-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	150		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	48		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.4		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	2.9		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	2000		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-7 — Lab Sample ID: 720-63873-7

No Detections.

Client Sample ID: MW-8 — Lab Sample ID: 720-63873-8

No Detections.

Client Sample ID: MW-60 — Lab Sample ID: 720-63873-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	160		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	53		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.5		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	3.5		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	2100		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: TB — Lab Sample ID: 720-63873-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-5
Date Collected: 03/31/15 10:01
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-1
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			04/04/15 14:56	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 14:56	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 14:56	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 14:56	1
Naphthalene	ND		1.0		ug/L			04/04/15 14:56	1
Toluene	ND		0.50		ug/L			04/04/15 14:56	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 14:56	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*67 - 130*		*04/04/15 14:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 130*		*04/04/15 14:56*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/04/15 14:56*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-3
Date Collected: 03/31/15 10:37
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-2
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			04/04/15 16:25	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 16:25	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 16:25	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 16:25	1
Naphthalene	ND		1.0		ug/L			04/04/15 16:25	1
Toluene	ND		0.50		ug/L			04/04/15 16:25	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 16:25	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*		*67 - 130*		*04/04/15 16:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*72 - 130*		*04/04/15 16:25*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/04/15 16:25*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-2
Date Collected: 03/31/15 11:33
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5900**		50		ug/L			04/04/15 16:54	100
1,2-Dichloroethane	ND		50		ug/L			04/04/15 16:54	100
cis-1,2-Dichloroethene	ND		50		ug/L			04/04/15 16:54	100
Ethylbenzene	**230**		50		ug/L			04/04/15 16:54	100
Naphthalene	ND		100		ug/L			04/04/15 16:54	100
Toluene	**160**		50		ug/L			04/04/15 16:54	100
Xylenes, Total	**150**		100		ug/L			04/04/15 16:54	100
Gasoline Range Organics (GRO) -C5-C12	**10000**		5000		ug/L			04/04/15 16:54	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*67 - 130*		*04/04/15 16:54*	*100*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 130*		*04/04/15 16:54*	*100*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/04/15 16:54*	*100*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-4
Date Collected: 03/31/15 12:12
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3100**		50		ug/L			04/04/15 17:24	100
1,2-Dichloroethane	ND		50		ug/L			04/04/15 17:24	100
cis-1,2-Dichloroethene	ND		50		ug/L			04/04/15 17:24	100
Ethylbenzene	**2900**		50		ug/L			04/04/15 17:24	100
Naphthalene	**530**		100		ug/L			04/04/15 17:24	100
Toluene	**730**		50		ug/L			04/04/15 17:24	100
Xylenes, Total	**8100**		100		ug/L			04/04/15 17:24	100
Gasoline Range Organics (GRO) -C5-C12	**32000**		5000		ug/L			04/04/15 17:24	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*112*		*67 - 130*		*04/04/15 17:24*	*100*
1,2-Dichloroethane-d4 (Surr)	*113*		*72 - 130*		*04/04/15 17:24*	*100*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/04/15 17:24*	*100*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-1
Date Collected: 03/31/15 13:00
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-5
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			04/04/15 17:54	1
1,2-Dichloroethane	**1.8**		0.50		ug/L			04/04/15 17:54	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 17:54	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 17:54	1
Naphthalene	ND		1.0		ug/L			04/04/15 17:54	1
Toluene	ND		0.50		ug/L			04/04/15 17:54	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 17:54	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*67 - 130*		*04/04/15 17:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*72 - 130*		*04/04/15 17:54*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/04/15 17:54*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-6
Date Collected: 03/31/15 13:52
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**150**		0.50		ug/L			04/04/15 18:24	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 18:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 18:24	1
Ethylbenzene	**48**		0.50		ug/L			04/04/15 18:24	1
Naphthalene	ND		1.0		ug/L			04/04/15 18:24	1
Toluene	**1.4**		0.50		ug/L			04/04/15 18:24	1
Xylenes, Total	**2.9**		1.0		ug/L			04/04/15 18:24	1
Gasoline Range Organics (GRO) -C5-C12	**2000**		50		ug/L			04/04/15 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*		*67 - 130*		*04/04/15 18:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*72 - 130*		*04/04/15 18:24*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/04/15 18:24*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-7
Date Collected: 03/31/15 14:52
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-7
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			04/04/15 18:54	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 18:54	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 18:54	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 18:54	1
Naphthalene	ND		1.0		ug/L			04/04/15 18:54	1
Toluene	ND		0.50		ug/L			04/04/15 18:54	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 18:54	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*		*67 - 130*		*04/04/15 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*72 - 130*		*04/04/15 18:54*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/04/15 18:54*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-8
Date Collected: 03/31/15 15:47
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-8
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			04/04/15 19:24	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 19:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 19:24	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 19:24	1
Naphthalene	ND		1.0		ug/L			04/04/15 19:24	1
Toluene	ND		0.50		ug/L			04/04/15 19:24	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 19:24	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*		*67 - 130*		*04/04/15 19:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*72 - 130*		*04/04/15 19:24*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/04/15 19:24*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-60
Date Collected: 03/31/15 00:00
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**160**		0.50		ug/L			04/04/15 19:54	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 19:54	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 19:54	1
Ethylbenzene	**53**		0.50		ug/L			04/04/15 19:54	1
Naphthalene	ND		1.0		ug/L			04/04/15 19:54	1
Toluene	**1.5**		0.50		ug/L			04/04/15 19:54	1
Xylenes, Total	**3.5**		1.0		ug/L			04/04/15 19:54	1
Gasoline Range Organics (GRO) -C5-C12	**2100**		50		ug/L			04/04/15 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*129*		*67 - 130*		*04/04/15 19:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*		*04/04/15 19:54*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/04/15 19:54*	*1*

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: TB
Date Collected: 03/31/15 00:00
Date Received: 04/01/15 15:00

Lab Sample ID: 720-63873-10
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			04/04/15 14:27	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 14:27	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 14:27	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 14:27	1
Naphthalene	ND		1.0		ug/L			04/04/15 14:27	1
Toluene	ND		0.50		ug/L			04/04/15 14:27	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 14:27	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*		*67 - 130*		*04/04/15 14:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 130*		*04/04/15 14:27*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/04/15 14:27*	*1*

Surrogate Summary

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-63873-1	MW-5	113	111	102
720-63873-1 MS	MW-5	105	110	103
720-63873-1 MSD	MW-5	106	109	104
720-63873-2	MW-3	114	115	103
720-63873-3	MW-2	113	111	103
720-63873-4	MW-4	112	113	102
720-63873-5	MW-1	113	116	102
720-63873-6	MW-6	117	113	104
720-63873-7	MW-7	116	114	102
720-63873-8	MW-8	115	112	101
720-63873-9	MW-60	129	109	104
720-63873-10	TB	115	111	103
LCS 720-179040/6	Lab Control Sample	115	108	104
LCS 720-179040/8	Lab Control Sample	116	114	104
LCSD 720-179040/7	Lab Control Sample Dup	106	109	105
LCSD 720-179040/9	Lab Control Sample Dup	119	113	102
MB 720-179040/5	Method Blank	116	111	103

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

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

Lab Sample ID: MB 720-179040/5
Matrix: Water
Analysis Batch: 179040

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			04/04/15 10:29	1
1,2-Dichloroethane	ND		0.50		ug/L			04/04/15 10:29	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/04/15 10:29	1
Ethylbenzene	ND		0.50		ug/L			04/04/15 10:29	1
Naphthalene	ND		1.0		ug/L			04/04/15 10:29	1
Toluene	ND		0.50		ug/L			04/04/15 10:29	1
Xylenes, Total	ND		1.0		ug/L			04/04/15 10:29	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/04/15 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*		*67 - 130*		*04/04/15 10:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*72 - 130*		*04/04/15 10:29*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/04/15 10:29*	*1*

Lab Sample ID: LCS 720-179040/6
Matrix: Water
Analysis Batch: 179040

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	26.4		ug/L		106	79 - 130
1,2-Dichloroethane	25.0	27.2		ug/L		109	61 - 132
cis-1,2-Dichloroethene	25.0	26.4		ug/L		106	70 - 130
Ethylbenzene	25.0	27.6		ug/L		110	80 - 120
Naphthalene	25.0	26.7		ug/L		107	70 - 130
Toluene	25.0	27.3		ug/L		109	78 - 120
m-Xylene & p-Xylene	25.0	29.1		ug/L		116	70 - 142
o-Xylene	25.0	29.1		ug/L		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCS 720-179040/8
Matrix: Water
Analysis Batch: 179040

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	563		ug/L		113	62 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*116*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*114*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

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

Lab Sample ID: LCSD 720-179040/7
Matrix: Water
Analysis Batch: 179040

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	26.5		ug/L		106	79 - 130	0	20
1,2-Dichloroethane	25.0	27.4		ug/L		110	61 - 132	1	20
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	70 - 130	1	20
Ethylbenzene	25.0	25.5		ug/L		102	80 - 120	8	20
Naphthalene	25.0	27.9		ug/L		111	70 - 130	4	20
Toluene	25.0	25.4		ug/L		102	78 - 120	7	20
m-Xylene & p-Xylene	25.0	26.9		ug/L		108	70 - 142	8	20
o-Xylene	25.0	26.7		ug/L		107	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 720-179040/9
Matrix: Water
Analysis Batch: 179040

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	558		ug/L		112	62 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*119*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*113*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 720-63873-1 MS
Matrix: Water
Analysis Batch: 179040

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	26.5		ug/L		106	60 - 140
1,2-Dichloroethane	ND		25.0	27.8		ug/L		111	60 - 140
cis-1,2-Dichloroethene	ND		25.0	26.6		ug/L		106	60 - 140
Ethylbenzene	ND		25.0	25.3		ug/L		101	60 - 140
Naphthalene	ND		25.0	27.6		ug/L		110	56 - 140
Toluene	ND		25.0	25.2		ug/L		101	60 - 140
m-Xylene & p-Xylene	ND		25.0	26.6		ug/L		106	60 - 140
o-Xylene	ND		25.0	26.8		ug/L		107	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

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

Lab Sample ID: 720-63873-1 MSD
Matrix: Water
Analysis Batch: 179040

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	26.8		ug/L		107	60 - 140	1	20
1,2-Dichloroethane	ND		25.0	28.3		ug/L		113	60 - 140	2	20
cis-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	60 - 140	1	20
Ethylbenzene	ND		25.0	25.8		ug/L		103	60 - 140	2	20
Naphthalene	ND		25.0	28.4		ug/L		114	56 - 140	3	20
Toluene	ND		25.0	25.6		ug/L		103	60 - 140	2	20
m-Xylene & p-Xylene	ND		25.0	27.1		ug/L		109	60 - 140	2	20
o-Xylene	ND		25.0	27.2		ug/L		109	60 - 140	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

GC/MS VOA

Analysis Batch: 179040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-63873-1	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-1 MS	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-1 MSD	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-2	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-3	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-4	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-5	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-6	MW-6	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-7	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-8	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-9	MW-60	Total/NA	Water	8260B/CA_LUFT MS	
720-63873-10	TB	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-179040/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-179040/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-179040/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-179040/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-179040/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Lab Chronicle

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-5
Lab Sample ID: 720-63873-1
Date Collected: 03/31/15 10:01
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 14:56	LPL	TAL PLS

Client Sample ID: MW-3
Lab Sample ID: 720-63873-2
Date Collected: 03/31/15 10:37
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 16:25	LPL	TAL PLS

Client Sample ID: MW-2
Lab Sample ID: 720-63873-3
Date Collected: 03/31/15 11:33
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		100	179040	04/04/15 16:54	LPL	TAL PLS

Client Sample ID: MW-4
Lab Sample ID: 720-63873-4
Date Collected: 03/31/15 12:12
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		100	179040	04/04/15 17:24	LPL	TAL PLS

Client Sample ID: MW-1
Lab Sample ID: 720-63873-5
Date Collected: 03/31/15 13:00
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 17:54	LPL	TAL PLS

Client Sample ID: MW-6
Lab Sample ID: 720-63873-6
Date Collected: 03/31/15 13:52
Matrix: Water
Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 18:24	LPL	TAL PLS

Lab Chronicle

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

Client Sample ID: MW-7

Lab Sample ID: 720-63873-7

Date Collected: 03/31/15 14:52

Matrix: Water

Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 18:54	LPL	TAL PLS

Client Sample ID: MW-8

Lab Sample ID: 720-63873-8

Date Collected: 03/31/15 15:47

Matrix: Water

Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 19:24	LPL	TAL PLS

Client Sample ID: MW-60

Lab Sample ID: 720-63873-9

Date Collected: 03/31/15 00:00

Matrix: Water

Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 19:54	LPL	TAL PLS

Client Sample ID: TB

Lab Sample ID: 720-63873-10

Date Collected: 03/31/15 00:00

Matrix: Water

Date Received: 04/01/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	179040	04/04/15 14:27	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: 28068161

TestAmerica Job ID: 720-63873-1

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

Method Summary

Client: URS Corporation
Project/Site: 28068161

TestAmerica Job ID: 720-63873-1

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: 28068161

TestAmerica Job ID: 720-63873-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-63873-1	MW-5	Water	03/31/15 10:01	04/01/15 15:00
720-63873-2	MW-3	Water	03/31/15 10:37	04/01/15 15:00
720-63873-3	MW-2	Water	03/31/15 11:33	04/01/15 15:00
720-63873-4	MW-4	Water	03/31/15 12:12	04/01/15 15:00
720-63873-5	MW-1	Water	03/31/15 13:00	04/01/15 15:00
720-63873-6	MW-6	Water	03/31/15 13:52	04/01/15 15:00
720-63873-7	MW-7	Water	03/31/15 14:52	04/01/15 15:00
720-63873-8	MW-8	Water	03/31/15 15:47	04/01/15 15:00
720-63873-9	MW-60	Water	03/31/15 00:00	04/01/15 15:00
720-63873-10	TB	Water	03/31/15 00:00	04/01/15 15:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-63873

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

Reference #: 160226

Date 3/31/15 Page 1 of 1

4/7/2015

Report To

Attn: Erik Skov
Company: AECOM
Address: One MontGomery, SF, CA, 94104
Email:
Bill To: 28068161
Sampled By: ZB
Attn:
Phone: 415-243-3845

Analysis Request

Sample ID	Date	Time	Mat rix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	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 (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides PCBs ☐ EPA 8081 ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐200.7 ☐ Lead ☐ LUFT ☐RCRA ☐ Other:___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS):___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity			Number of Containers
MW-5	3/31/15	1001	W	HCl			X																			3
MW-3	3/31/15	1037					X																			
MW-2		1133					X																			
MW-4		1212					X																			
MW-1		1300					X																			
MW-6		1352					X																			
MW-7		1452					X																			
MW-8		1547					X																			
MW-60							X																			
TB							X																			2

720-63873 Chain of Custody

Page 27 of 28

Project Info.

Project Name/ #: 28068161
PO#: 28068161
Credit Card Y/N: N

Sample Receipt

of Containers: 29
Head Space:
Temp: 0.7°c

If yes, please call with payment information ASAP

TAT	10 Day	5 Day	4 Day	3 Day	2 Day	1 Day	Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID ____
#Please report Naphthalene, 1,2-DCA and Cis-1,2-DCE by 8260B

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature]	Signature: [signature]	Signature:
Time: 1730	Time: 1500	Time:
Printed Name: Ryan Brinigas	Printed Name: Sam Banqueriqo	Printed Name:
Date: 3/31/15	Date: 4-1-15	Date:
Company: AECOM	Company: TA	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature]	Signature: [signature]	Signature:
Time: 1150	Time: 1500	Time:
Printed Name: Sam Banqueriqo	Printed Name: J Gonzales	Printed Name:
Date: 4/1/15	Date: 4/1/15	Date:
Company: TA	Company: TAP	Company:

Rev.11/2014

Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-63873-1

Login Number: 63873

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.	False	
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	