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3:16 pm, Jan 02, 2008

Alameda County
Environmental Health

December 26, 2007

Mr. Barney Chan Division of Environmental Protection Department of Environmental Health Alameda County Health Agency 11131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502

Re: Fourth Quarter 2007 Groundwater Monitoring at Former Celis' Alliance Fuel Station Site, 4000 San Pablo Avenue, Emeryville, California

Dear Mr. Chan,

On behalf of the City of Emeryville Redevelopment Agency (the City), URS Corporation (URS) is pleased to submit this *Fourth Quarter 2007 Groundwater Monitoring Report* for the evaluation of petroleum hydrocarbon contamination from the former Celis' Alliance Fuel Station. The former Celis Alliance Fuel Station is located at the 40th Street Right-of-Way between San Pablo Avenue and Adeline Street. The work was performed in general accordance with the URS *Monitoring Well Installation Work Plan* dated December 15, 2006.

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

Please feel free to contact us at (510) 874-3080 if you have any questions or comments.

Sincerely,

URS Corporation

Leonard P. Niles, P.G., C.H.G.

Senior Geologist

George Muehleck, P.G.

Project Manager/Senior Hydrogeologist



December 26, 2007

Mr. Barney Chan Division of Environmental Protection Department of Environmental Health Alameda County Health Agency 1131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502

Reference: Alameda County Fuel Leak Case RO0000453

Subject: Fourth Quarter 2007 Groundwater Monitoring at Former Celis' Alliance

Service Station, 4000 San Pablo Avenue, Emeryville, California

Dear Mr. Chan:

On behalf of the City of Emeryville Redevelopment Agency (the City), URS Corporation (URS) is pleased to submit this *Fourth Quarter 2007 Groundwater Monitoring Report* to Alameda County Environmental Health (ACEH) for the Former Celis' Alliance Service Station, located at the intersection of San Pablo Avenue and 40th Street in Emeryville, California (Figure 1). The work was performed in general accordance with the URS *Monitoring Well Installation Work Plan* dated December 15, 2006, prepared in response to the ACEH letter dated October 12, 2006.

Background

As described in the URS *Monitoring Well Installation* report dated August 29, 2007, five new groundwater monitoring wells, URS-MW-1 through URS-MW-5, were installed in June and July 2007 to evaluate the upgradient and downgradient areal extent of petroleum hydrocarbons originating from the former leaking underground fuel storage tanks (USTs) located at the former Celis' Alliance Service Station site (Figure 2). The initial groundwater monitoring event was performed on July 10, 2007. These new wells are to be monitored quarterly by URS for a period of one year, as proposed in the *Monitoring Well Installation Work Plan* (URS, 2006). The previously existing downgradient monitoring well LF-MW-4 was also included in the URS monitoring program. The previously existing URS well WCEW-1, located within the former Celis site, is to be included in the adjacent Oak Walk Redevelopment site groundwater



Mr. Barney Chan December 26, 2007 Page 2 of 6

monitoring program, and has not been monitored since 2004. The URS former Celis Site monitoring program was to be coordinated with the adjacent Oak Walk and SNK site monitoring programs, but those have been delayed due to current redevelopment and are not anticipated to begin until late 2008. Celis' site monitoring well construction and groundwater elevation data is included in Table 1.

Groundwater Monitoring Program - Scope of Work

- The groundwater monitoring program includes quarterly sampling and reporting for one year of the five newly installed wells (URS-MW-1, URS-MW-2, URS-MW-3, URS-MW-4 and URS-MW-5) and one existing well (LF-MW-4). Former Celis' well WCEW-1 will be included as part of the Oak Walk Post Remediation Monitoring Program. Monitoring well locations are shown in Figure 2. Groundwater monitoring activities will be coordinated with those at the adjacent SNK and Oak Walk sites as well as with the former Dunne Paint Company aka Green City Development, and the former ONE site, as possible when those programs commence. Specific details of the groundwater monitoring program scope of work are outlined below:
- Prior to purging, static groundwater levels are measured to the nearest 0.01 feet in each of the six wells.
- The volume of water in each well is calculated, and a minimum of three casing volumes of water are removed from each well. The purged water is measured for pH, temperature, specific conductance, and dissolved oxygen, which is recorded in field logs. The wells are allowed to recover to within 80 percent of the initial static water level whenever possible prior to sampling. All purge and sampling equipment used at each well is new and disposable requiring no decontamination prior to use.
- Purge and decontamination water is stored in 55-gallon DOT drums, which are labeled and transported offsite to the City of Emeryville Corporation Yard, for temporary storage pending final disposal option selection.
- Filled sample bottles are labeled, packaged, and stored in an iced cooler with a trip blank and will be delivered under chain-of-custody protocol to a state certified analytical laboratory for the analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), five fuel oxygenates including methyl tertiary butyl ether (MTBE), tert-butyl alcohol (TBA), isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE) and methyl tert-amyl ether (TAME), Total Volatile Hydrocarbons as gasoline (TVH-g), Total Volatile Hydrocarbons as mineral spirits (TVH-ms) and Total Extractable Hydrocarbons as diesel (TEH-d).



Mr. Barney Chan December 26, 2007 Page 3 of 6

Field Activities

The Fourth Quarter 2007 groundwater monitoring event was performed at the former Celis' site on October 31, 2007 by URS subcontractor Blaine Tech Services, Inc. (BTS). Depth to water and groundwater elevation measurements are included in Table 1. Light non-aqueous phase liquid hydrocarbons (LNAPLs) were not encountered in any well. Three casing volumes of water were purged from each well without dewatering, and sampling was conducted after recovery to 80% of initial static water level. Groundwater monitoring field logs are included in Attachment A. Samples were transported to Curtis & Tompkins, Ltd. analytical laboratory in Berkeley, California. The chain of custody document is included in Attachment B.

Hydrogeologic Conditions

Static depth to groundwater in the monitoring wells ranged from 6.20 to 8.86 feet below top-of-casing (TOC). Water levels were slightly higher than in the previous July 2007 monitoring event, with the exception of URS-MW-5. Groundwater elevation data indicates that the direction of groundwater flow is to the west-northwest at a gradient of 0.016 feet per foot, which is consistent with the previous monitoring event. Groundwater elevation data is presented in Table 1, and a groundwater elevation contour map is presented as Figure 3.

Analytical Results

The analytical results for the groundwater samples are summarized below. Table 2 includes a summary of analytical results for all of the compounds analyzed. The complete laboratory reports and chain of custodies are included in Attachment B.

Total Petroleum Hydrocarbons

TVH-g were detected above the laboratory reporting limits (RLs) in groundwater samples collected from wells URS-MW-1, URS-MW-5 and LF-MW-4 at 270 micrograms per liter (μg/L), 2,500 μg/L and 780 μg/L, respectively. TVH-ms were detected above the RLs in groundwater samples collected from wells URS-MW-1, URS-MW-5 and LF-MW-4 at 150 μg/L, 1,400 μg/L and 450 μg/L, respectively. TEH-d were detected above the RLs in groundwater samples collected from wells URS-MW-1, URS-MW-2, URS-MW-3, URS-MW-4, URS-MW-5 and LF-MW-4 at 670 μg/L, 180 μg/L, 50 μg/L, 170 μg/L, 1,400 μg/L and 3,400 μg/L, respectively. Laboratory chromatographic patterns did not match standards for gasoline and diesel, respectively, for detections of TVH-g in URS-MW-1, and TEH-d in all wells sampled. Groundwater iso-concentration contour maps depicting TVH-g, TVH-ms, and TEH-d



Mr. Barney Chan December 26, 2007 Page 4 of 6

concentrations are presented as Figures 4, 5 and 6, respectively. Since monitoring has not yet been coordinated with adjacent sites, data in these maps has been updated only for the Celis' site.

BTEX and MTBE

The only BTEX compounds detected above the RLs were in groundwater samples from URS-MW-2 (toluene at 4.4 μ g/L and total xylenes at 5.1 μ g/L), URS-MW-5 (benzene at 3.9 μ g/L and ethylbenzene at 270 μ g/L), and LF-MW-4 (benzene at 1.3 μ g/L, ethylbenzene at 15 μ g/L and total xylenes at 1.1 μ g/L). MTBE was detected above the RLs in groundwater samples from wells URS-MW-1 (1.3 μ g/L), URS-MW-2 (160 μ g/L), URS-MW-4 (7.2 μ g/L), URS-MW-5 (47 μ g/L) and LF-MW-4 (5.7 μ g/L). MTBE was not detected above the RLs in groundwater samples from well URS-MW-3. No other fuel oxygenate compounds were detected above the RLs in any groundwater samples analyzed. Groundwater iso-concentration contour maps depicting benzene and MTBE concentrations are presented as Figures 7 and 8, respectively. Since monitoring has not yet been coordinated with adjacent sites, data in these maps has been updated only for the Celis' site.

QA/QC

The analytical results were subject to a quality assurance (QA) evaluation that included review of sample hold times, trip blanks (TB), method blanks (MB), laboratory control spikes (LCS) and laboratory control spike duplicates (LCSD), matrix spikes (MS) and matrix spike duplicates (MSD), blank spikes (BS) and blank spike duplicates (BSD), and surrogate spikes. All reported MBs, LCS/LCSD recoveries, MS/MSD recoveries, and surrogate spike recoveries were within laboratory quality control limits, except for the following: Low surrogate recovery was observed for bromofluorobenzene (FID) in URS-MW-2 due to matrix interference; the corresponding trifluorotoluene (FID) surrogate recovery was within limits and the low surrogate recovery was confirmed by re-analysis. Low response was observed for TBA in the CCV analyzed 11/8/07; this analyte met minimum response criteria ans affected data was qualified with a "b". Low recovery was observed for TBA in the MS for batch 131453 (parent sample was not a project sample, and the LCS and associated RPD were within limits). No other analytical QA/QC problems were encountered. COC documentation was found to be complete and consistent. All samples were analyzed within the method specified holding time. Based on the data quality evaluation, no systematic problems were detected and the overall data objectives for sample contamination, precision, accuracy, and sample integrity were met. These analytical data are of acceptable quality and may be used for their intended purposes.



Mr. Barney Chan December 26, 2007 Page 5 of 6

Observations

Depth to groundwater was slightly higher in the Fourth Quarter 2007 monitoring event than during the initial Third Quarter 2007 event with the exception of well URS-MW-5; groundwater gradient and flow direction were generally consistent. Analytical results of the groundwater samples collected during this event, compared with the previous Third Quarter 2007 event, indicated an increase in TVH-g concentrations in URS-MW-5 and LF-MW-4, and a decrease in TVHg concentrations in URS-MW-1. TVH-ms concentrations increased in samples from wells URS-MW-5 and LF-MW-4, and decreased in URS-MW-1. concentrations increased in samples collected from wells URS-MW-1, URS-MW-3, URS-MW-4, URS-MW-5, and LF-MW-4 during this event, and decreased in URS-MW-2. Benzene concentrations increased in URS-MW-5 and decreased in LF-MW-4. Toluene was detected for the first time during this monitoring program in URS-MW-2. Ethylbenzene concentrations increased in wells URS-MW-5 and LF-MW-4. Total xylene concentrations increased in LF-MW-4 and were detected for the first time in well URS-MW-2. MTBE concentrations increased in well URS-MW-2 and decreased in wells URS-MW-1, URS-MW-3, URS-MW-4, URS-MW-5, and LF-MW-4. TBA was not detected in any samples collected during this event, although RLs were elevated for samples collected from wells URS-MW-2 and URS-MW-5, which contained TBA during the previous event.

Generally, petroleum hydrocarbon concentrations have remained stable or declined since the previous quarterly event in all wells with the exception of URS-MW-5 and LF-MW-4, where concentrations of TVH-g, TVH-ms, and TEH-d have increased significantly. Three of the analytes detected in groundwater samples exceeded San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for residential sites where groundwater is not a potential drinking water resource (RWQCB, 2005, Tables B and D). The ESL of 500 μg/L for TVH-g was exceeded by samples from URS-MW-5 (at 2,500 μg/L) and LF-MW-4 (780 μg/L). The ESL of 640 μg/L for TEH-d was exceeded by samples from URS-MW-1 (670 μg/L), URS-MW-5 (1,400 μg/L), and LF-MW-4 (3,400 μg/L). The ESL of 640 μg/L for TVH-ms was exceeded by the sample from URS-MW-5 (at 1,400 μg/L).

Recommendations

URS proposes to continue the Celis' monitoring program only through December 2008 as requested by ACEH. When possible to coordinate monitoring events with the adjacent sites, the groundwater monitoring reports will integrate data from the Celis', the Former San Francisco Bread Company, the SNK and the Oak Walk sites to produce regional groundwater flow and contaminant distribution figures. Groundwater monitoring data and monitoring



Mr. Barney Chan December 26, 2007 Page 6 of 6

reports will be shared with those responsible for the adjacent SNK and Oak Walk sites as well as with the former Dunne Paint Company aka Green City Development, and the former ONE site.

Please feel free to contact the undersigned at (510) 874-3080 if you have any questions or

comments.

Sincerely,

URS Corporation

George Muehleck P.G.

Project Manager / Senior Hydrogeologist

Leonard P. Niles, P.G, C.H.G.

Senior Geologist

Ignacio Dayrit, City of Emeryville

Xinggang Tong, OTG EnviroEngineering Solutions, Inc.

Dai Watkins, San Joaquin Company

Tables:

cc:

Table 1 Well Construction and Groundwater Analytical Data

Table 2 Groundwater Analytical Results

Figures:

Figure 1 Site Location Map

Figure 2 Monitoring Well Locations

Figure 3 Groundwater Elevation Contour Map, October 31, 2007

Figure 4 Distribution of Gasoline Range Petroleum Hydrocarbons in Shallow

Groundwater on October 31, 2007

Figure 5 Distribution of Mineral Spirit Petroleum Hydrocarbons in Shallow Groundwater

on October 31, 2007

Figure 6 Distribution of Diesel Range Range Petroleum Hydrocarbons in Shallow

Groundwater on October 31, 2007

Figure 7 Distribution of Benzene in Shallow Groundwater on October 31, 2007

Figure 8 Distribution of MTBE in Shallow Groundwater on October 31, 2007

Attachments:

Attachment A Groundwater Monitoring Field Logs

Attachment B Laboratory Analytical Reports and Chain of Custody Document

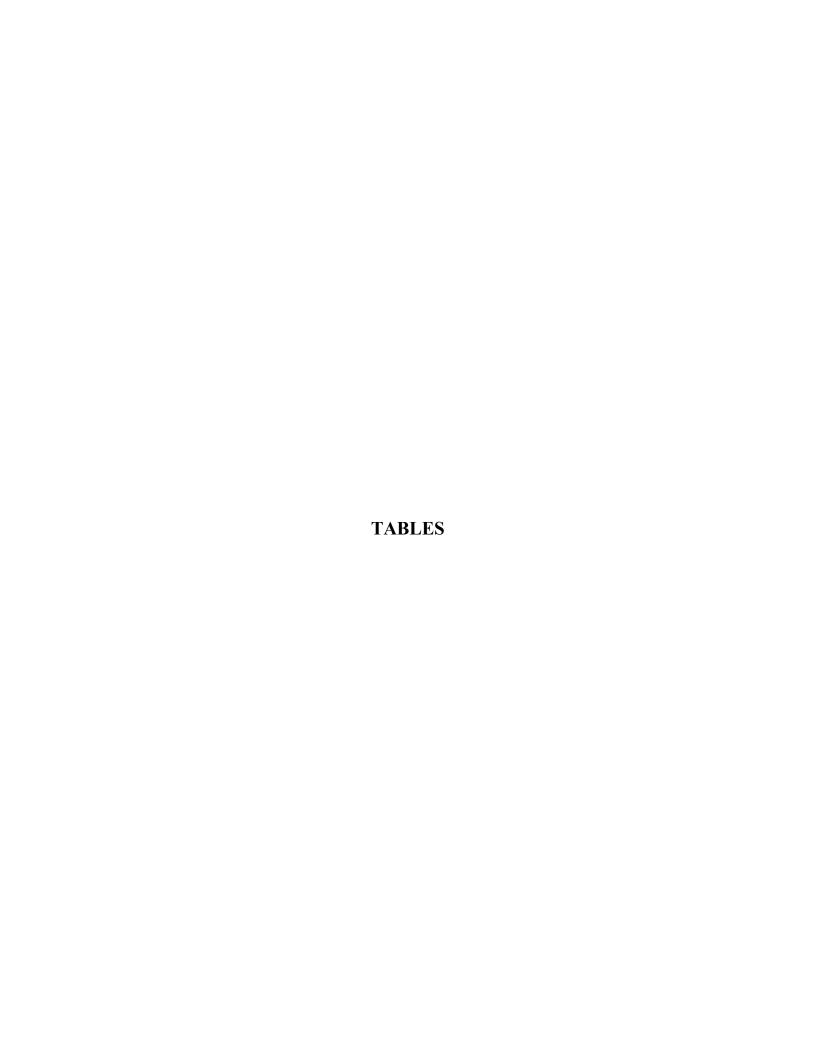


Table 1
Well Construction and Groundwater Elevation Data
Former Celis-Alliance Fuel Station, Emeryville, California

Well ID	Casing	Casing Diameter (inches)	Total Depth	Interval	Sand Pack Interval	Elevation*	TOC Elevation (feet MSL)	Monitoring Date		LNAPL Thickness	Depth to Water	Groundwater Elevation (feet MSL)
	Type				(feet bgs)				(feet)	(feet)	(feet)	,
URS-MW-1	sch 40 PVC	2	20	5-20	4-20	42.40	42.21	7/10/2007			8.90	33.31
								10/31/2007			8.86	33.35
URS-MW-2	sch 40 PVC	2	20	5-20	4-20	41.18	40.83	7/10/2007			7.89	32.94
								10/31/2007			7.70	33.13
URS-MW-3	sch 40 PVC	2	20	8-20	7-20	40.86	40.54	7/10/2007			8.16	32.38
								10/31/2007			7.36	33.18
URS-MW-4	sch 40 PVC	2	20	5-20	4-20	41.72	41.41	7/10/2007			8.58	32.83
								10/31/2007			8.35	33.06
URS-MW-5	sch 40 PVC	2	20	5-20	4-20	44.30	43.93	7/10/2007			6.00	37.93
								10/31/2007			6.20	37.73
LF-MW-4	sch 40 PVC	2	18	NA	NA	41.46	40.76	7/10/2007			8.30	32.46
								10/31/2007			8.17	32.59
								13,01,2007			0.17	02.00

Notes:

bgs: Below Ground Surface

*: Surveyed at vault box lid

MSL: Mean Sea Level as surveyed to NAVD 88 datum

TOC: Top of PVC Casing

---: Not detected or measured

Table 2
Groundwater Analytical Results
Former Celis-Alliance Fuel Station, Emeryville, California

					Analy	tical Resu	lts (μg/L)		
Sample ID	Date	TVH-g	TVH-ms	TEH-d	Benzene	Toluene		Xylenes	Oxygenates
URS-MW-1	7/10/2007	960 H Y	550	580 H L Y	<0.5	<0.5	<0.5	<0.5	1.7 MTBE
	10/31/2007	270 Y	150	670 Y	<0.5	<0.5	<0.5	<0.5	1.3 MTBE
URS-MW-2	7/10/2007	<50	<50	240 H Y	<0.5	<0.5	<0.5	<0.5	18 TBA, 140 MTBE
	10/31/2007	<50	<50	180 Y	<1.3	4.4	<1.3	5.1	160 MTBE
URS-MW-3	7/10/2007	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	1.3 MTBE
	10/31/2007	<50	<50	50 Y	<0.5	<0.5	<0.5	<0.5	ND
URS-MW-4	7/10/2007	<50	<50	110 Y	<0.5	<0.5	<0.5	<0.5	82 MTBE
		<50	<50	170 Y	<0.5	<0.5	<0.5	<0.5	7.2 MTBE
URS-MW-5	7/10/2007	270	160 Y	820 H Y	0.6	<0.5	22	<0.5	11 TBA, 99 MTBE
	10/31/2007	2,500	1,400	1,400 Y	3.9	<2.0	270	<2.0	47 MTBE
LF-MW-4	7/10/2007	450	260 Y	620 L Y	3.5	<0.5	11	1.8	6.2 MTBE
	10/31/2007	780	450	3,400 Y	1.3	<0.5	15	1.1	5.7 MTBE
RWQCB ESLs (residential) ¹	500	640	640	46	130	290	100	18,000 TBA, 1,800 MTBE

Notes:

μg/L: micrograms per liter

TVH-g: Total Volatile Hydrocarbons as Gasoline, range C7-C12, by EPA 8015B

TVH-ms: Total Volatile Hydrocarbons as Mineral Spirits, range C7-C12, by EPA 8015B

TEH-d: Total Extractable Hydrocarbons as Diesel, range C10-C24, by EPA 8015B

BTEX (benzene, toluene, ethylbenzene and total xylenes) by EPA 8260B

Oxygenates: Includes Methyl tert-Butyl Ether (MTBE), tert-Butyl Alcohol (TBA), Isopropyl Ether (DIPE), Ethyl tert-Butyl Ether (ETBE), Methyl tert-Amyl Ether (TAME), 1,2-Dichloroethane (1,2-DCA), and 1,2-Dibromoethane (1,2-DBA), by EPA 8260B

<: Not Detected at listed reporting limit

ND: Not Detected at analyte-specific reporting limit

H: Heavier hydrocarbons contributed to the quantitation

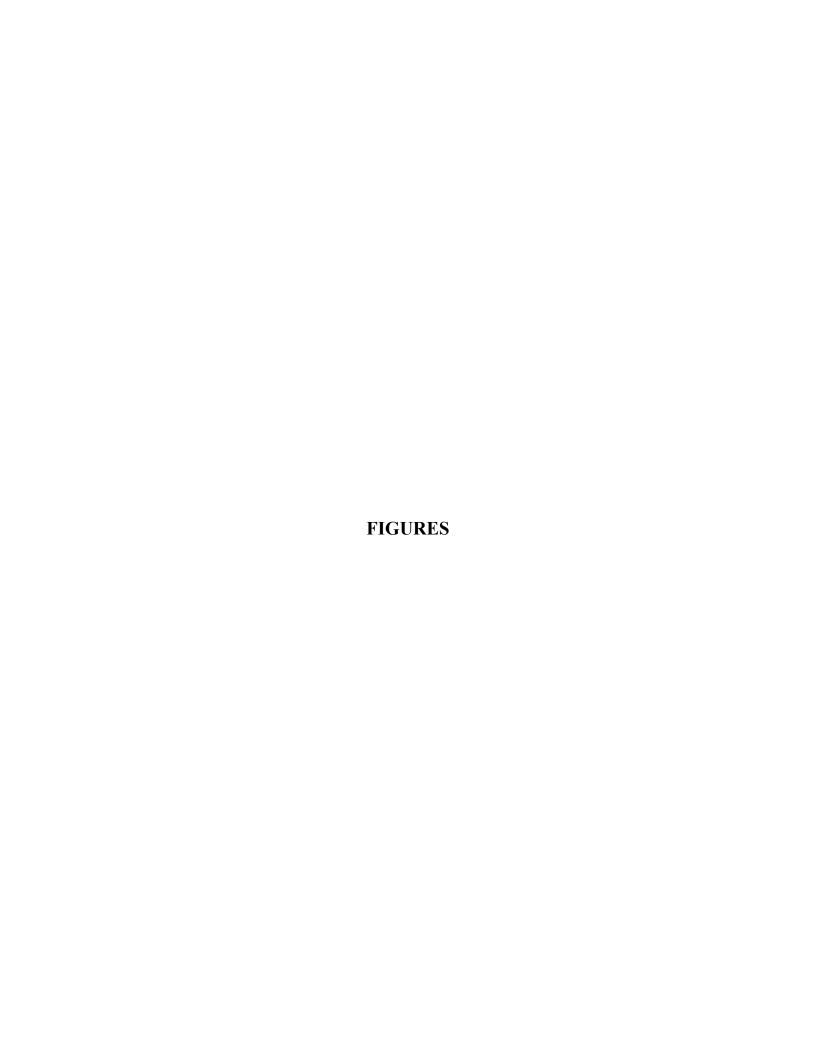
L: Lighter hydrocarbons contributed to the quantitation

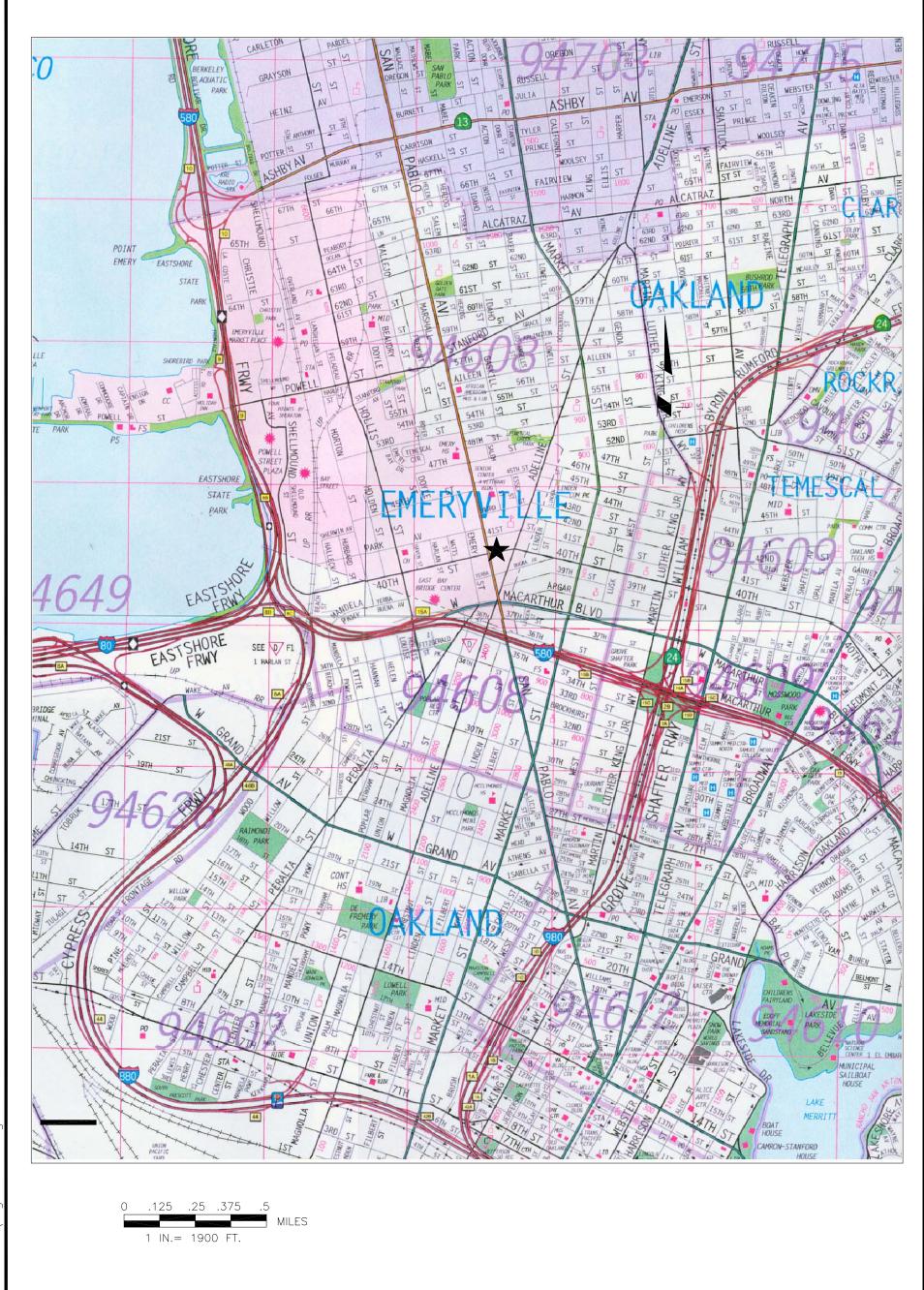
Y: Sample exhibits chromatographic pattern which does not resemble standard

RWQCB ESLs: San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, Interim Final - February 2005.

¹Table B for residential land use where groundwater is not a potential drinking water resource.

Detections are in bold, ESL exceedences are shaded.





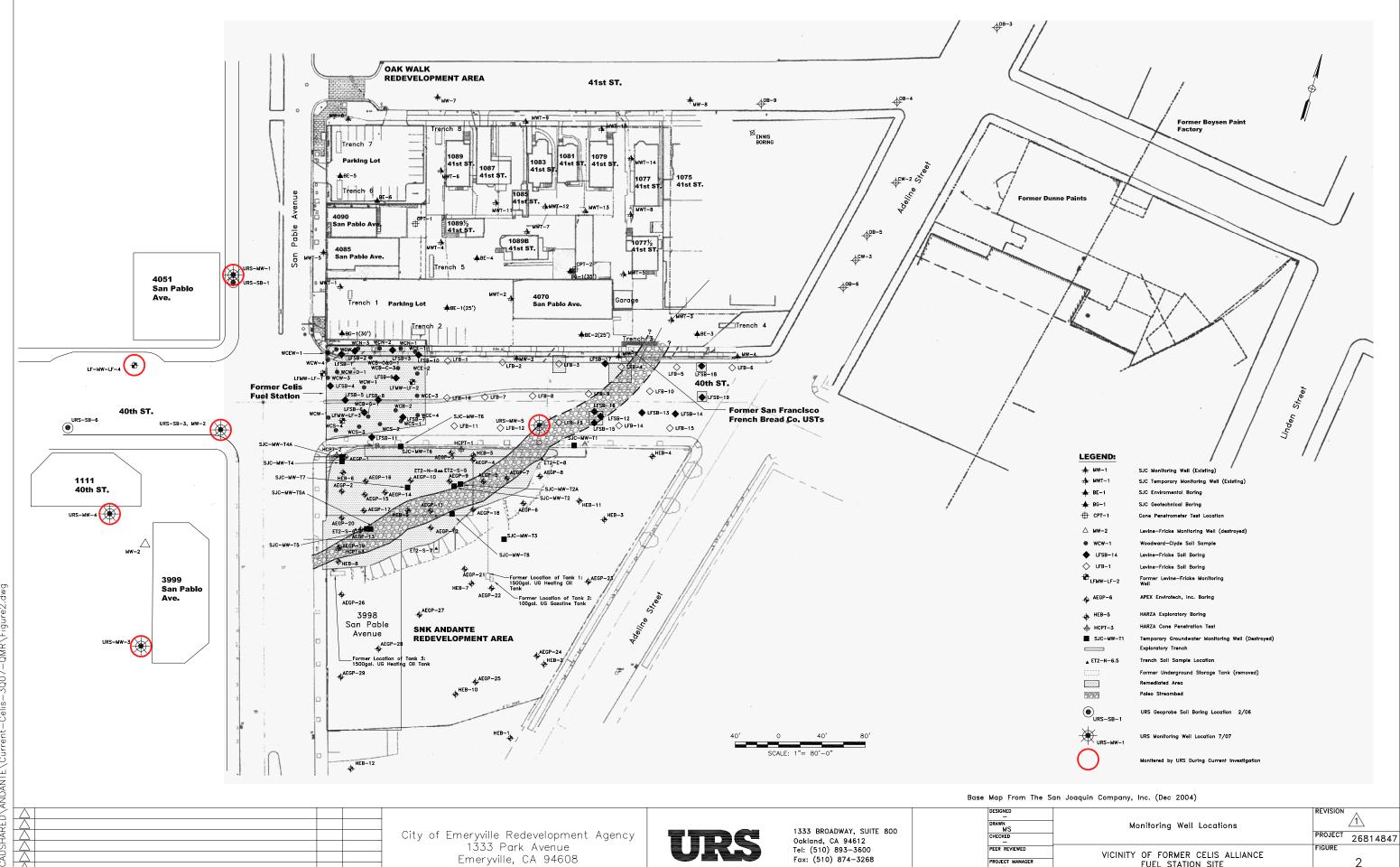
1333 BROADWAY, SUITE 800 Oakland, Ca 94612 Tel: (510) 893-3600 Fax: (510) 874-3268



26814847

City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, CA 94608 SITE LOCATION MAP

Former Celis Alliance Fuel Station Site 4000 SAN PABLO AVENUE EMERYVILLE, Ca



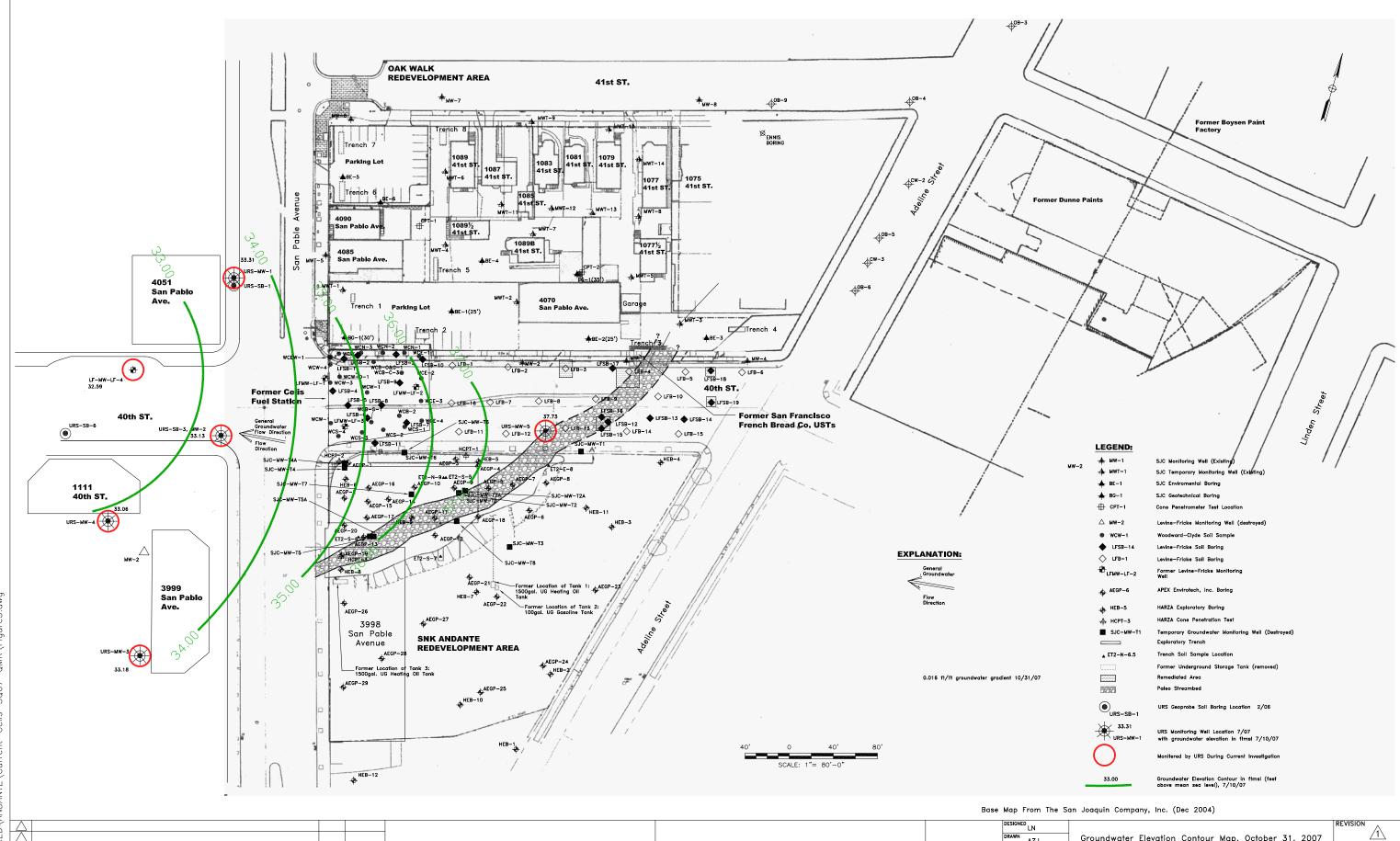
Emeryville, CA 94608

VICINITY OF FORMER CELIS ALLIANCE

FUEL STATION SITE 4000 SAN PABLO AVE, EMERYVILLE, CA.

DESCRIPTION OF REVISION

BY DATE



DESCRIPTION OF REVISION

BY DATE

City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, CA 94608

1333 BROADWAY, SUITE 800 Oakland, CA 94612 Tel: (510) 893-3600 Fax: (510) 874-3268

Groundwater Elevation Contour Map, October 31, 2007 AZJ VICINITY OF FORMER CELIS ALLIANCE FUEL STATION SITE DATE 8-3-07

PROJECT 26814847 FIGURE 3 4000 SAN PABLO AVE, EMERYVILLE, CA.



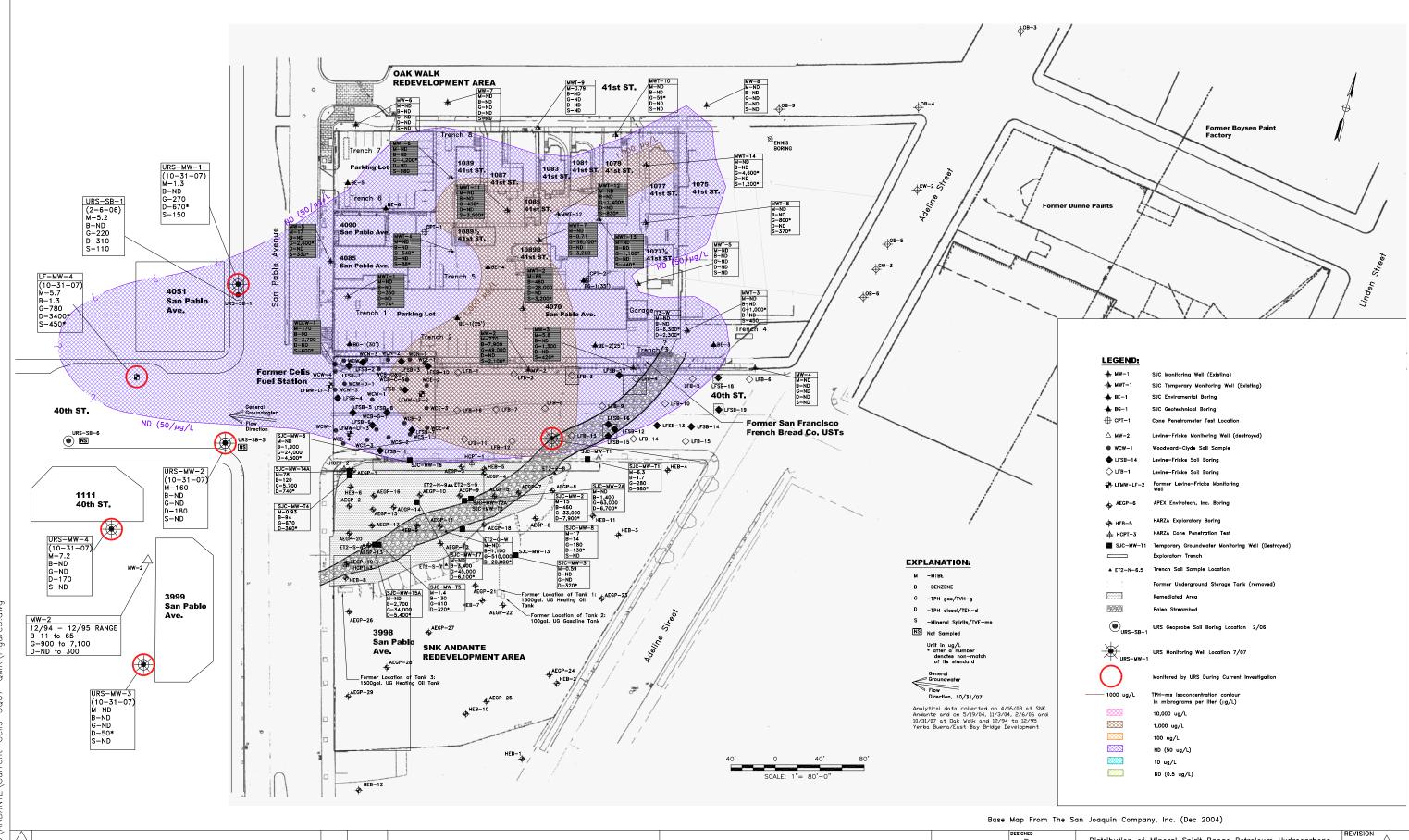
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DESCRIPTION OF REVISION

BY DATE

1333 Park Avenue Emeryville, Ca. 94608

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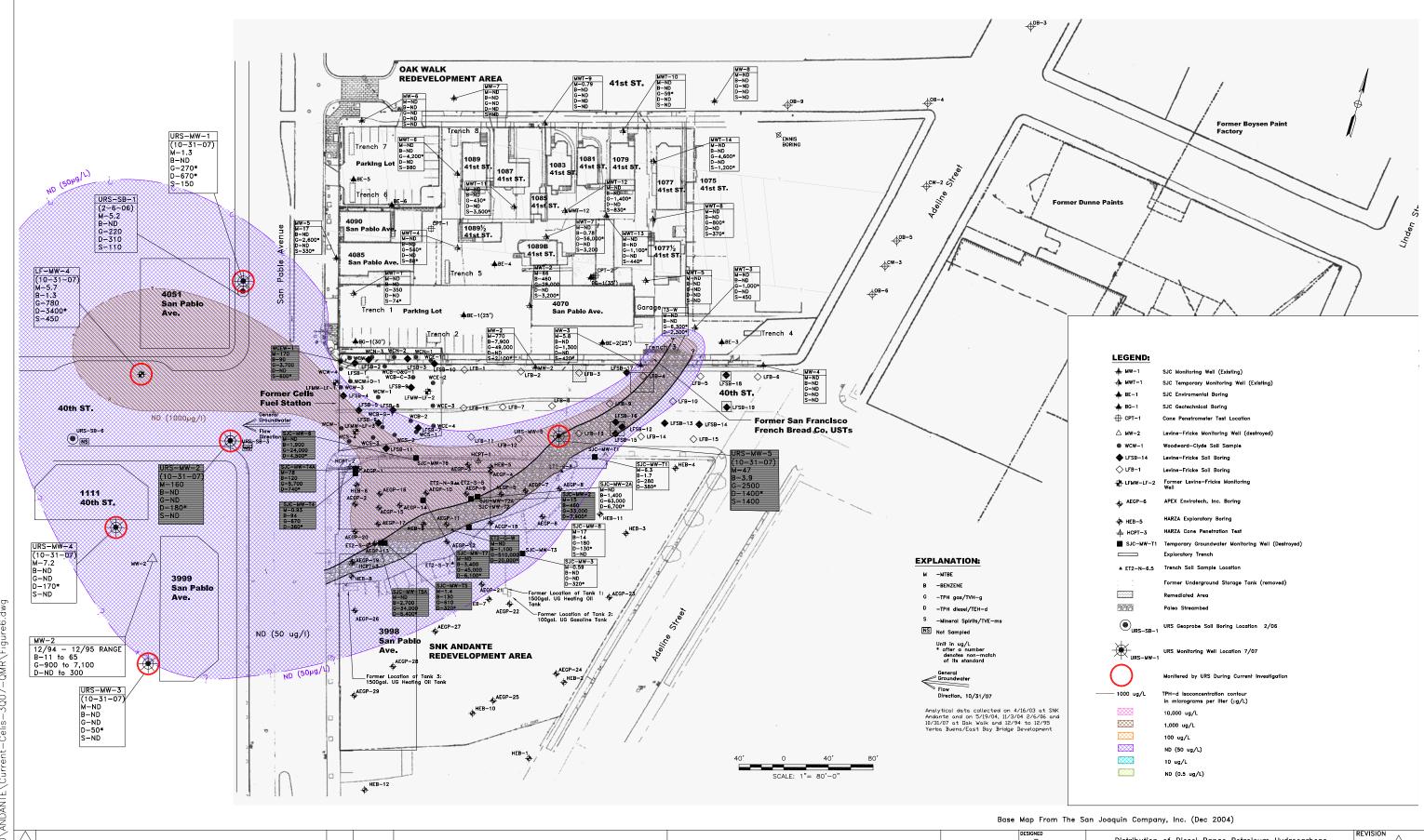
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City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, Ca. 94608

URS

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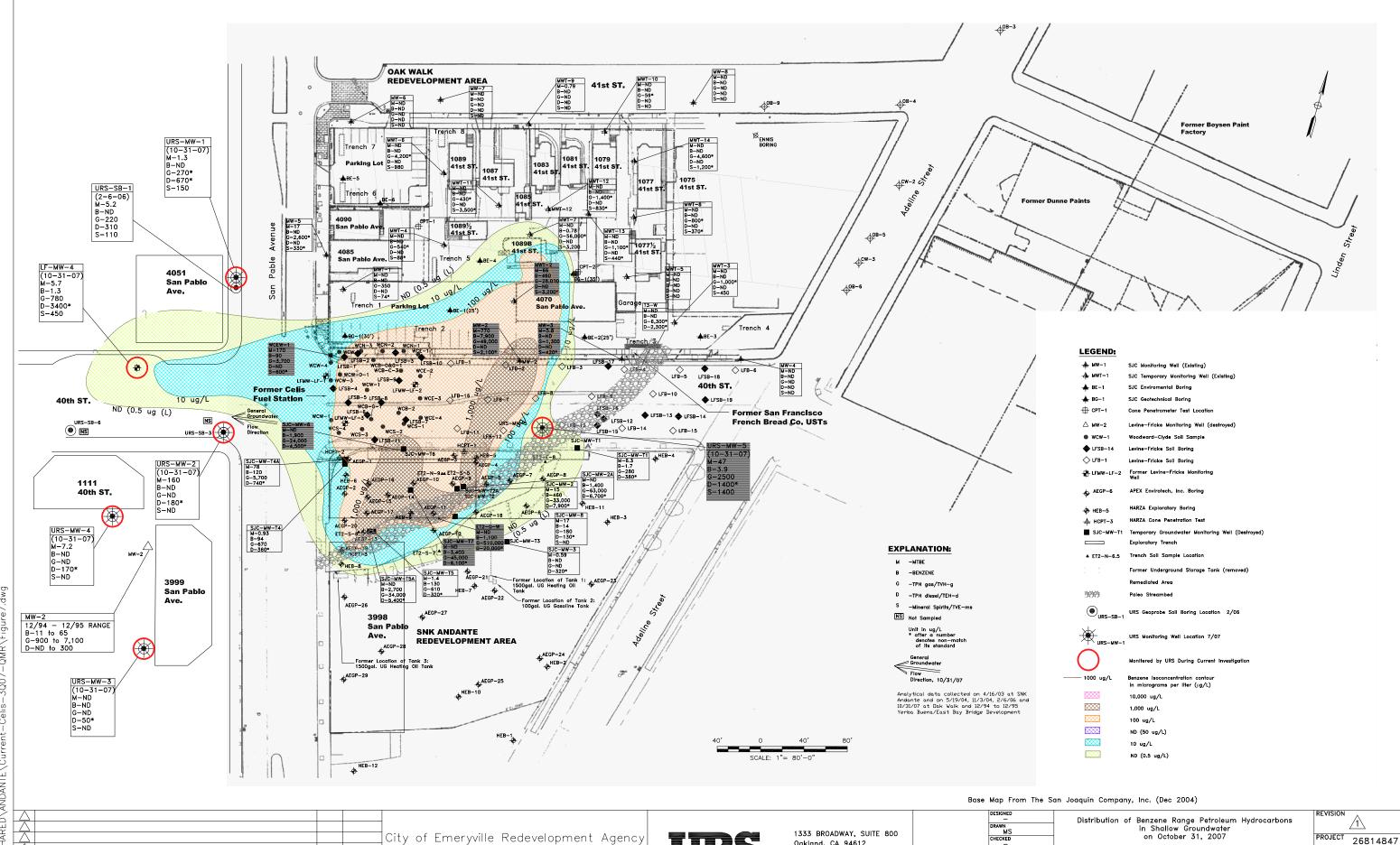
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City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, Ca. 94608

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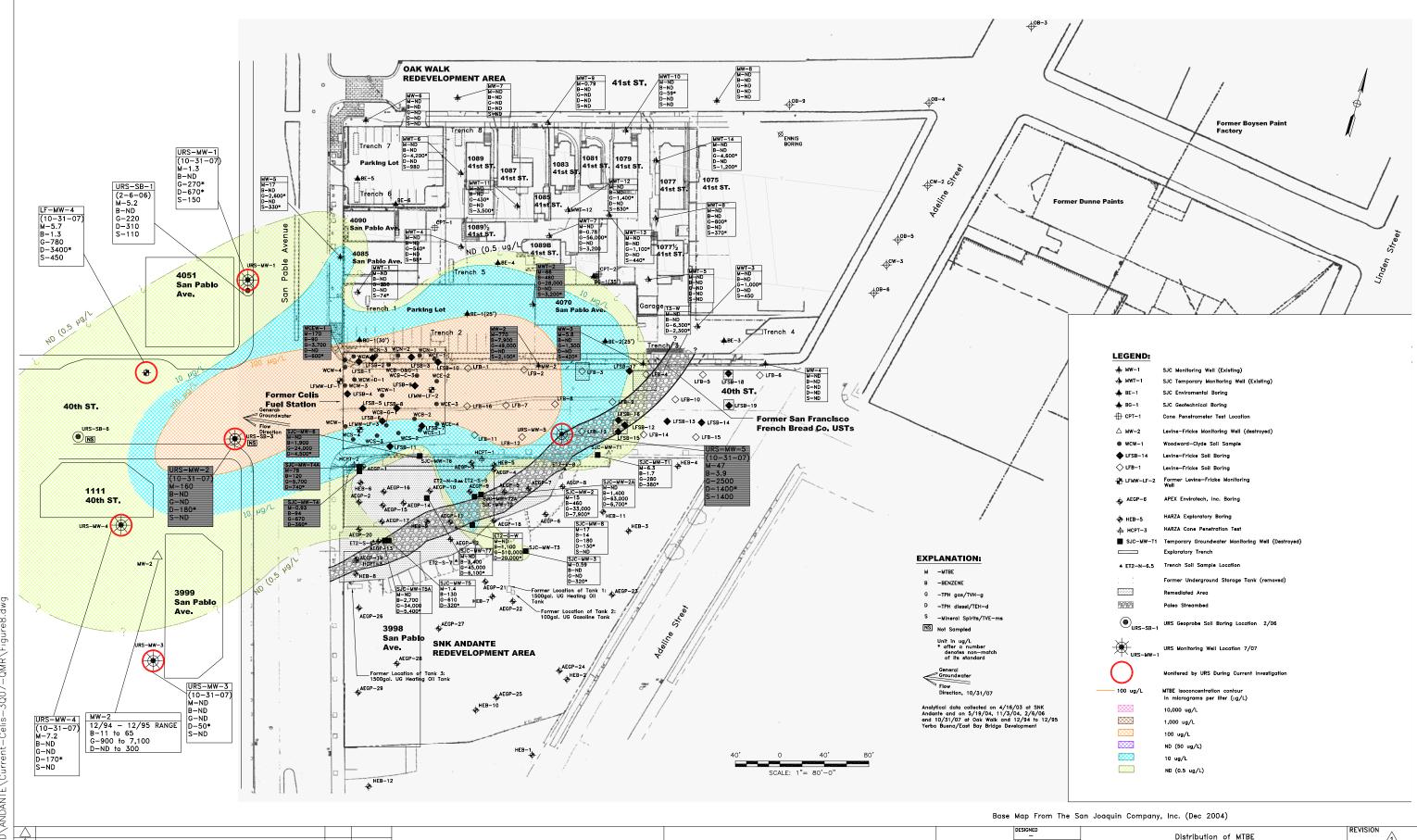
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DESCRIPTION OF REVISION

BY DATE

City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, Ca. 94608

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DESCRIPTION OF REVISION

BY DATE

City of Emeryville Redevelopment Agency 1333 Park Avenue Emeryville, Ca. 94608 URS

p From The S	an Joaquin Company, Inc. (Dec 2004)	
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R REVIEWED JECT MANAGER	VICINITY OF FORMER CELIS ALLIANCE FUEL STATION SITE 4000 SAN PABLO AVE, EMERYVILLE , CA.	FIGURE 8

ATTACHMENT A

Groundwater Monitoring Field Logs

WELLHEAD INSPECTION CHECKLIST

Date	107	Client	<u>u</u>	15				
Date 10/31 Site Address 1	4000 San	Pablo 1	he. 1	may ve	le (A			***************************************
Job Number	071031-DR	<u> </u>			hnician	DA		
Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
URS-MW-1							×	
URS-MW-2	X							
425-MW-3	X							
URS-MW-4	X							
URS-MW-S LF-MW-4	X							
LF-MW-4	X							
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WELL GAUGING DATA

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Well ID	Time	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	70C	Notes
	امدها	2					0 0.1	16.15	7	
URS_MW_1	1010	,					8.86	19.60		
425-MW-2 425-MW-3		-								
LARS-MW-2	0903	2					7.70	19.66		
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LF-MW-4	1090						0 · ' '	18.14	V	
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WELL MONITORING DATA SHEL I

Project #:	0710	31-DA		Client	•	urs					
Sampler:	DA	·		Date:	10/31	les .					
Well I.D.:	URS-MI	v-2		Well Diameter: (2) 3 4 6 8							
Total Well	Depth (TI)): 19.	66	Depth	Depth to Water (DTW): 7.70						
Depth to Fr	ee Produc	t:		Thick	Thickness of Free Product (feet):						
Referenced	to:	PVS	Grade	D.O. N	D.O. Meter (if req'd): YSI HACH						
DTW with	80% Rech	arge [(F	Ieight of Water	Colum	n x 0.20) + DTW]:	10	.09			
Purge Method: Bailer Waterra Sampling Method: Bailer Disposable Bailer Peristaltic Disposable Bailer Positive Air Displacement Extraction Pump Electric Submersible Other Other:											
1 Case Volume	Gals.) XSpeci	5 fied Volum	$\frac{1}{10000000000000000000000000000000000$	_ Gals. olume	Well Diamete 1" 2" 3"	0.04 0.16 0.37	Well I 4" 6" Other	Diameter Multiplier 0.65 1.47 radius² * 0.163			
Time	Temp	pН	Cond.	1	bidity ΓUs)	Gals. Rem	oved	Observations			
0910	18.81	5.9	1014	21	OCC	1-9		cloudy			
09 13	20.0	6.2	1084) f	000	3-8		"			
0916	20.3	6.2	1102	710	occ .	5.7		11			
Did well dev	water?	Yes (No)	Gallons	s actually	y evacuate	d:	5.7			
Sampling Da	ate: 10/31/	7	Sampling Time	e: 097	25	Depth to V	Water	: 8.84 Traffic			
Sample I.D.:	: URS-MU	v-Z		Labora	tory:	Kiff CalSo	cience	Other (+7)			
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena	ites (5)	Other: 5	u C				
EB I.D. (if a	pplicable)	•	@ Time	Duplica	ate I.D. (if applicab	ole):				
Analyzed for	nalyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:										
D.O. (if req'o	d): Pro	e-purge:		mg/L	Po	ost-purge		mg/L			
O.R.P. (if re	q'd): Pre	e-purge:		mV	Po	ost-purge:		mV			

WELL MONITORING DATA SHEET

						
Project #:	071031-	Dri		Client:	4115	
Sampler:	Da			Date: 10/3		
Well I.D.:	URS_MW			Well Diameter		6 8
Total Well	Depth (TD)): 19.6	,0	Depth to Wate	er (DTW): 8.	86
Depth to Fr	ee Product	t:		Thickness of F	Free Product (fe	et):
Referenced	to:	PVO	Grade	D.O. Meter (if	req'd):	YSV HACH
DTW with	80% Rech	arge [(H	leight of Water	· Column x 0.20) + DTW]: /	1.01
Purge Method:	Bailer XDisposable Ba Positive Air I Electric Subra	Displaceme		Waterra Peristaltic ction Pump	Sampling Method: Other:	⚠ Disposable Bailer Extraction Port Dedicated Tubing
1.7 (Case Volume	Gals.) XSpeci	3 ified Volum	$\frac{1}{10000000000000000000000000000000000$	Gals. Solume	1er Multiplier Well 1 0.04 4" 0.16 6" 0.37 Other	Diameter Multiplier 0.65 1.47 r radius² * 0.163
Time	Temp (°F or 🗘)	рН	Cond. (mS or (LS)	Turbidity (NTUs)	Gals. Removed	Observations
1016	18.9	7.1	627	71000	1.7	clendy
1020	19.2	6.7	602	71000	3.4	11
1024	19.2	6.7	598	71000	5.1	1,
-						
Did well dev	water?	Yes (No	Gallons actuall	y evacuated:	5.1
Sampling D	ate: 10/31/	107	Sampling Time	e: 035	Depth to Water	er: 8.92 Inffe
Sample I.D.	: URS-N	nw-1		Laboratory:	Kiff CalScience	e Other C+7
Analyzed fo	or: TPH-G	BTEX		Oxygenates (5)	Other: Se. (CoC
EB I.D. (if a	pplicable)	•	@ Time	Duplicate I.D. ((if applicable):	
Analyzed fo	or: TPH-G	BTEX]	MTBE TPH-D	Oxygenates (5)	Other:	
D.O. (if req'	d): Pro	e-purge:		mg/L R	ost-purge:	2.4 mg/ _L
O.R.P. (if re	q'd): Pro	e-purge:		mV Po	ost-purge:	mV

WELL MONITORING DATA SHEEΓ

Project #:	07103	1- DRI		Client:	4ns	
Sampler:	Da.			Date: 10	131/07	
Well I.D.:	URS-MW	.،		Well Diame	ter: ② 3 4	6 8
Total Well	Depth (TI)): 1°	7.87	Depth to Wa	ater (DTW): 7.	36
Depth to Fr	ee Produc	t:		Thickness o	f Free Product (fe	eet):
Referenced	to:	FVE	Grade	D.O. Meter	(if req'd):	YSD HACH
DTW with	80% Rech	arge [(F	Height of Water	Column x 0.	20) + DTW]: 9	.86
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	Displaceme	ent Extrac Other	Waterra Peristaltic ction Pump	Sampling Method Other	术 Disposable Bailer Extraction Port Dedicated Tubing
1 Case Volume	Gals.) X Speci	3 ified Volun	$\frac{1}{\text{nes}} = \frac{6.0}{\text{Calculated Vo}}$	_ Gals.	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47
Time	Temp (°F or C)	pH 7.6	Cond. (mS or (μS))	Turbidity (NTUs)	Gals. Removed	Observations
1.			282	71000	2.0	Cloudy
1244	70.6	7.2	215	71000	4.0	1
1248	20.8	7.2	209	71000	6.8	1
Did well dev	water?	Yes (No	Gallons actu	ally evacuated:	(0
Sampling Da	ate: 10/31/	0)	Sampling Time	e: /320	Depth to Wate	er: 9.86 washed ter 80%
Sample I.D.:	: URS-Mi	w-3		Laboratory:	Kiff CalScienc	
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: Sec (C.C
EB I.D. (if a	pplicable)		@ Time	Duplicate I.D	O. (if applicable):	
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	
D.O. (if req'o	d): Pro	e-purge:	and the second s	mg/L	Rost-purge:	1.2 mg/L
O.R.P. (if re	q'd): Pro	e-purge:		mV	Post-purge:	mV

WELL MONITORING DATA SHELL

Project #:	071031-1	DRI		Client: ι	MAS	
Sampler:	DN			Date: 10/3	1/07	
Well I.D.:	URS-M	w.L)		Well Diameter	r: (2) 3 4	6 8
Total Well	Depth (TE)): 14.8	18	Depth to Wate	er (DTW): 8	.35
Depth to Fr	ee Product	t:		Thickness of F	Free Product (fe	eet):
Referenced	to:	PVC	Grade	D.O. Meter (if	req'd):	YS HACH
DTW with	80% Rech	arge [(F	Height of Water	Column x 0.20) + DTW]: /	10.66
•	Bailer Disposable B Positive Air I Electric Subn	Displaceme			Sampling Method Other:	XDisposable Bailer Extraction Port Dedicated Tubing
1 Case Volume	Gals.) XSpeci	3 fied Volum	mes S.C	Gals. Olume Well Diameter 1" 2" 3"	er Multiplier Well 1 0.04 4" 0.16 6" 0.37 Other	Diameter Multiplier 0.65 1.47 r radius² * 0.163
Time	Temp (°F or °C)	pН	Cond. (mS or us)	Turbidity (NTUs)	Gals. Removed	Observations
1156	20,4	7.0	535	71000	1.8	clandy
1200	20.6	6.6	533	7/006	3,6	17
1204	20.6	6.5	538	71000	5.4	1,
Did well dev	water?	Yes (No	Gallons actuall	y evacuated:	5.4
Sampling Da	ate: 10/31/	c 7	Sampling Time	e: 12 3 5	Depth to Wate	or: 10.66 worlder
Sample I.D.:	: URS - M	w-L		Laboratory:	Kiff CalScience	e Other CFT
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: See (
EB I.D. (if a	pplicable)		@ Time	Duplicate I.D. ((if applicable):	
Analyzed for	r: TPH-G	BTEX		Oxygenates (5)	Other:	
D.O. (if req'o	d): Pro	e-purge:		mg/L Po	ost-purgo:	" ^{mg} /L
O.R.P. (if re	q'd): Pro	e-purge:		mV Po	ost-purge:	mV

WELL MONITORING DATA SHEET

Project #:	071031	Da 1		Client: (UNS	
Sampler:	DR			Date: /0/3	31/07	
Well I.D.: L	ANS-Mw	-5		Well Diame		6 8
Total Well	Depth (TI)): [9.6)	Depth to Wa	ater (DTW): 6.	20
Depth to Fr	ee Produc	t:		Thickness o	f Free Product (fe	eet):
Referenced	to:	EVE	Grade	D.O. Meter	(if req'd):	HACH
DTW with	80% Rech	arge [(F	Height of Water	Column x 0.	20) + DTW]: 8	.89
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	Displaceme	ent Extrac Other	Waterra Peristaltic ction Pump Well Dia	Sampling Method Other	Disposable Bailer Extraction Port Dedicated Tubing
2.2 (C) 1 Case Volume		3 ified Volum	mes Calculated Vo	Gals. 1"	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47
Time	Temp (°F or 🕢)	pH	Cond. (mS or \(\mu \text{S}\)	Turbidity (NTUs)	Gals. Removed	
09413	19.5	6.3	1368	71000	2.2	Electory
0946	19.4	6.2	1403	7 (600	4.4	Į (
0950	19.4	6.2	1405	>1100	6.6	
Did well dev	water?	Yes (No.	Gallons actu	ally evacuated:	6.6
Sampling Da	ate: 10/31/		Sampling Time		Depth to Wate	Too offer a
Sample I.D.:				Laboratory:	Kiff CalScience	e Othe C+7
Analyzed for			MTBE TPH-D	Oxygenates (5)	Other: See C	CC
EB I.D. (if a	pplicable)	•	@ Time	Duplicate Ι.Γ	D. (if applicable):	
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	
D.O. (if req'o	d): Pr	e-purge:		mg/L	Post-purge:	7. mg/L
O.R.P. (if re	q'd): Pro	e-purge:		mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #:	271031-DP	11		Client: UK	<i>\$</i>			
Sampler:		1/ Dal			31/07			
Well I.D.:	LF-Mu	1-4				6 8		
Total Well	Depth (TI)): 8	7.14	Depth to Water (DTW): \$.17 Thickness of Free Product (feet): D.O. Meter (if req'd):				
Depth to Fr	ee Produc	t:		Thickness of I	Free Product (fe	eet):		
Referenced	to:	eve	Grade	D.O. Meter (if	req'd):	√S≯ HACH		
DTW with	80% Rech	arge [(F	leight of Water	Column x 0.20) + DTW]:	10.16		
-	Bailer Disposable B Positive Air I Electric Subn	Displaceme		Peristaltic ction Pump	Other	≯Disposable Bailer Extraction Port Dedicated Tubing		
l Case Volume	Gals.) X	3 ified Volum	mes Calculated Vo		0.04 4" 0.16 6"	0.65 1.47		
Time	Temp	pН	Cond. (mS or µ S)	Turbidity (NTUs)	Gals. Removed	Observations		
1050	19.1	6.6	662	71000	1.6	cloudy		
1053	19.7	6.4	657	71000	3.2	LJ '		
1056	30-0	6.4	657	71000	4.8	11		
					· 			
·								
Did well dev	water?	Yes	No	Gallons actuall	y evacuated:	1.8		
Sampling Da	ate: 10/31	107	Sampling Time	e: 1105	Depth to Wate	er: 8.23		
Sample I.D.:	: LF-,	MW-4		Laboratory:	Kiff CalScience	e Other FF		
Analyzed for	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: See	Cc		
EB I.D. (if a	pplicable)		@ Time	Duplicate I.D. ((if applicable):			
Analyzed for	r: TPH-G	BTEX		Oxygenates (5)	Other:			
D.O. (if req'o	d): Pr	e-purge:		mg/ _L P	ost-purge:	2.2 nig/L		
O.R.P. (if re	q'd): Pro	e-purge:		mV P	ost-purge:	mV		

TEST EQUIPMENT CALIBRATION LOG

	071031-Du1	CALIBRATED TO: CALIBRATED COR WITHIN 10%: TEMP CONTINUE CORRECTION	6.52							
	PROJECT NUMBER	EQUIPMENT READING		200	7.58 52 52					
	MOSECI MAINE GOOD Son Pable that I thury with Ch.	DATE/TIME OF STANDARDS TEST USED	200/18/01	10/31/67 (0,0) 3000					:	
	ME 2090 Va	EQUIPMENT D	06 E 1424 AJ 10/31/67					ì		
DRO IECT NAME	TOOPEOU IN		451 550 A Do meter	Mason C	Hach Turbid, mitor 46500-00					

-	٠,				
Cl	3	03	٦í	٠,	
3-1	1	<u>ا</u> ب	11		

URS

Site Address: 4000 SanPablo Aven Emergaille

STATUS OF DRUM(S) UPON	ARRIVAL				
Date	7/5/02	7/10/07	10/31/07		
Number of drum(s) empty:					
Number of drum(s) 1/4 full:					
Number of drum(s) 1/2 full:					
Number of drum(s) 3/4 full:					
Number of drum(s) full:	3	9			
Total drum(s) on site:	4	9	2 Non BTS		
Are the drum(s) properly labeled?	Y	X	Y		
Drum ID & Contents:	Soil install	prizersoil	Pinge 1/20		
If any drum(s) are partially or totally filled, what is the first use date:					

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.
- -If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- -All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON	DEPARTI	JRE			
Date	3/5/07	7/10/07	10/3/67		
Number of drums empty:					
Number of drum(s) 1/4 full:					
Number of drum(s) 1/2 full:			1		
Number of drum(s) 3/4 full:		J			
Number of drum(s) full:	9	9			
Total drum(s) on site:	9	10	3 (B)		
Are the drum(s) properly labeled?	7	У			
Drum ID & Contents:	soil Quetas	Soil gwall	Pirge 1/20		

LOCATION OF DRUM(S)

Describe location of drum(s): Coppyard - City of Eway ville

FINAL STATUS					
Number of new drum(s) left on site this event	2				
Date of inspection:	74/6/04	7/10/07	10/31/07		
Drum(s) labelled properly:	Y	Y	1		
Logged by BTS Field Tech:	PU	5V/	ma		
Office reviewed by:	W	16			

ATTACHMENT B

Laboratory Analytical Reports and Chain of Custody Document



	Total Vo	latile Hydrocarbo	ons
Lab #:	198859	Location:	Celis-Emeryville
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	26814847.06000	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	131222
Units:	ug/L	Sampled:	10/31/07
Diln Fac:	1.000	Received:	10/31/07

Field ID: URS-MW-2 Lab ID: 198859-001 Type: SAMPLE Analyzed: 11/01/07

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 50

 Mineral Spirits C7-C12
 ND
 50

Surrogate %REC Limits
Trifluorotoluene (FID) 87 73-134
Bromofluorobenzene (FID) 73 * 77-140

Field ID: URS-MW-5 Lab ID: 198859-002 Type: SAMPLE Analyzed: 11/01/07

 Analyte
 Result
 RL

 Gasoline C7-C12
 2,500
 50

 Mineral Spirits C7-C12
 1,400
 50

Surrogate %REC Limits
Trifluorotoluene (FID) 105 73-134
Bromofluorobenzene (FID) 87 77-140

Field ID: URS-MW-1 Lab ID: 198859-003 Type: SAMPLE Analyzed: 11/01/07

 Analyte
 Result
 RL

 Gasoline C7-C12
 270 Y
 50

 Mineral Spirits C7-C12
 150
 50

Surrogate %REC Limits
Trifluorotoluene (FID) 92 73-134
Bromofluorobenzene (FID) 116 77-140

Field ID: LF-MW-4 Lab ID: 198859-004 Type: SAMPLE Analyzed: 11/01/07

 Analyte
 Result
 RL

 Gasoline C7-C12
 780
 50

 Mineral Spirits C7-C12
 450
 50

Surrogate%RECLimitsTrifluorotoluene (FID)12973-134Bromofluorobenzene (FID)11877-140

Page 1 of 2

^{*=} Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



Total Volatile Hydrocarbons Celis-Emeryville EPA 5030B Lab #: 198859 Location: Client: URS Corporation Prep: EPA 8015B 131222 26814847.06000 Project#: Analysis: Matrix: Water Batch#: 10/31/07 Units: ug/L Sampled: Diln Fac: 1.000 Received: 10/31/07

Field ID: URS-MW-4 Lab ID: 198859-005 Type: SAMPLE Analyzed: 11/02/07

Analyte	Result	RL	
Gasoline C7-C12	ND	50	
Mineral Spirits C7-C12	ND	50	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	101	73-134	
Bromofluorobenzene (FID)	93	77-140	

Field ID: URS-MW-3 Lab ID: 198859-006 Type: SAMPLE Analyzed: 11/02/07

Analyte	Result	RL	
Gasoline C7-C12	ND	50	
Mineral Spirits C7-C12	ND	50	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	89	73-134
Bromofluorobenzene (FID)	77	77-140

Type: BLANK Analyzed: 11/01/07 Lab ID: QC413358

Analyte	Result	RL	
Gasoline C7-C12	ND	50	
Mineral Spirits C7-C12	ND	50	

	Surrogate	%REC	Limits
Trifluor	rotoluene (FID)	94	73-134
Bromoflu	uorobenzenė (FID)	77	77-140

ND= Not Detected

RL= Reporting Limit

Page 2 of 2

^{*=} Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard



Batch QC Report

	Total Vo	platile Hydrocarbo	ons	
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC413359	Batch#:	131222	
Matrix:	Water	Analyzed:	11/01/07	
Units:	ug/L			

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	888.4	89	79-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	73-134
Bromofluorobenzene (FID)	94	77-140

Page 1 of 1 3.0



Batch QC Report

	Total Vo	platile Hydrocarbo	ons
Lab #:	198859	Location:	Celis-Emeryville
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	26814847.06000	Analysis:	EPA 8015B
Field ID:	URS-MW-2	Batch#:	131222
MSS Lab ID:	198859-001	Sampled:	10/31/07
Matrix:	Water	Received:	10/31/07
Units:	ug/L	Analyzed:	11/01/07
Diln Fac:	1.000		

Type: MS

Lab ID: QC413360

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	31.23	2,000	1,785	88	72-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	73-134
Bromofluorobenzene (FID)	93	77-140

Type: MSD Lab ID: QC413361

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,778	87	72-120	0	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	106	73-134
Bromofluorobenzene (FID)	99	77-140

e 1 of 1 4.0



Total Extractable Hydrocarbons Lab #: 198859 Location: Celis-Emeryville EPA 3520C Client: Prep: URS Corporation <u> 26814847.06000</u> Project#: Analysis: EPA 8015B Sampled: 10/31/07 Matrix: Water 10/31/07 Units: ug/L Received: Diln Fac: 1.000 11/03/07 Prepared: Batch#: 131293 Analyzed: 11/06/07

Field ID: URS-MW-2 Lab ID: 198859-001

Type: SAMPLE

Analyte Result RI.
Diesel C10-C24 180 Y 50

Field ID: URS-MW-5 Lab ID: 198859-002 Type: SAMPLE

 Analyte
 Result
 RI.

 Diesel C10-C24
 1,400 Y
 50

Surrogate %REC Limits
Hexacosane 100 61-133

Field ID: URS-MW-1 Lab ID: 198859-003

Type: SAMPLE

 Analyte
 Result
 RI.

 Diesel C10-C24
 670 Y
 50

Surrogate %REC Limits
Hexacosane 101 61-133

Field ID: LF-MW-4 Lab ID: 198859-004

Type: SAMPLE

 Analyte
 Result
 RL

 Diesel C10-C24
 3,400 Y
 50

Surrogate %REC Limits
Hexacosane 95 61-133

Field ID: URS-MW-4 Lab ID: 198859-005

Type: SAMPLE

Analyte Result RI.

Diesel C10-C24 170 Y 50

Surrogate %REC Limits

Surrogate %REC Limits
Hexacosane 94 61-133

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

5.0



	Total Ext	ractable Hydrocar	rbons	
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 3520C	
Project#:	26814847.06000	Analysis:	EPA 8015B	
Matrix:	Water	Sampled:	10/31/07	
Units:	ug/L	Received:	10/31/07	
Diln Fac:	1.000	Prepared:	11/03/07	
Batch#:	131293	Analyzed:	11/06/07	

Field ID: URS-MW-3 Lab ID: 198859-006

SAMPLE Type:

Analyte	Result	RL	
Diesel C10-C24	50 Y	50	

Gurrogato	%REC	Timita	
Surrogate	OKEC	Limits	
Hexacosane	96	61-133	

Type: BLANK Lab ID: QC413619

λnaluto	Pogul+	DT	
Analyte	Kesuic	RLi	
Diamal 010 004	NTD	ΓΛ	
Diesei Ciu-C24	ND	50	

Surrogate	%REC	Limits	
Hevacogane	127	61_133	

 $\mbox{Y= Sample}$ exhibits chromatographic pattern which does not resemble standard $\mbox{ND= Not Detected}$ $\mbox{RL= Reporting Limit}$

Page 2 of 2

5.0



	Total Ext	ractable Hydrocar	rbons
Lab #:	198859	Location:	Celis-Emeryville
Client:	URS Corporation	Prep:	EPA 3520C
Project#:	26814847.06000	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	131293
Units:	ug/L	Prepared:	11/03/07
Diln Fac:	1.000	Analyzed:	11/06/07

Type: BS Cleanup Method: EPA 3630C

Lab ID: QC413620

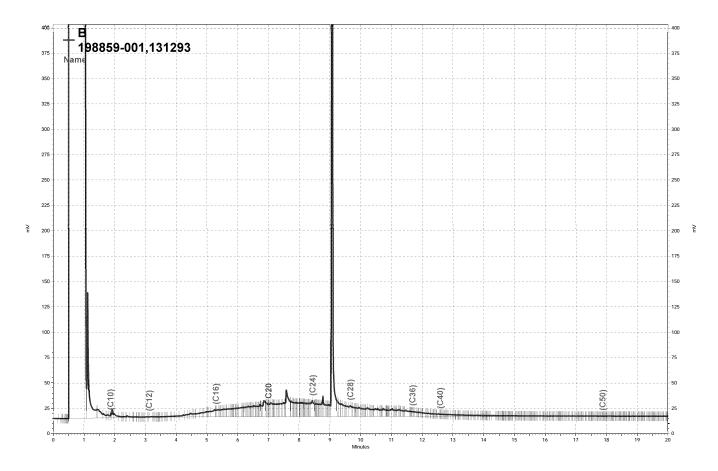
Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,795	72	58-128

S	%REC	Surrogate	Limits
acosane	89	acosane	61-133

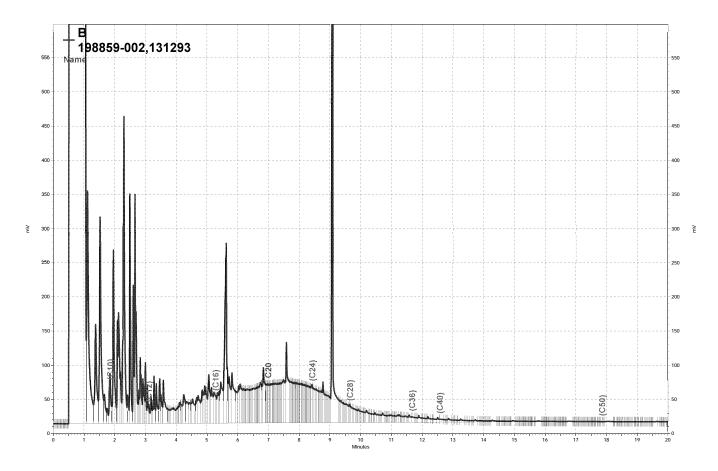
Type: BSD Cleanup Method: EPA 3630C

Lab ID: QC413621

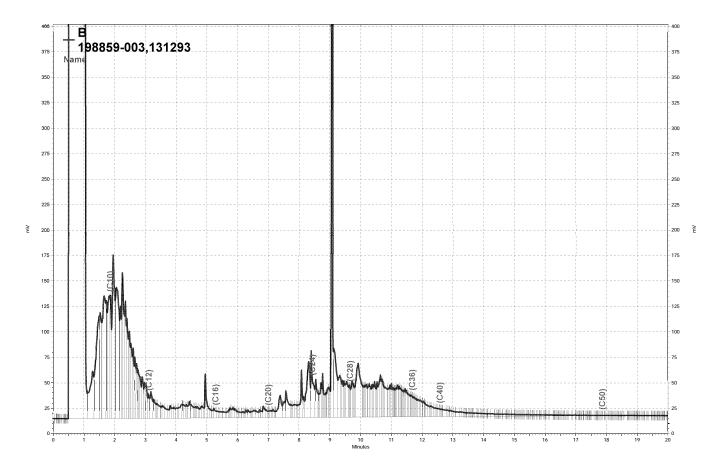
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,992	80	58-128	10	29



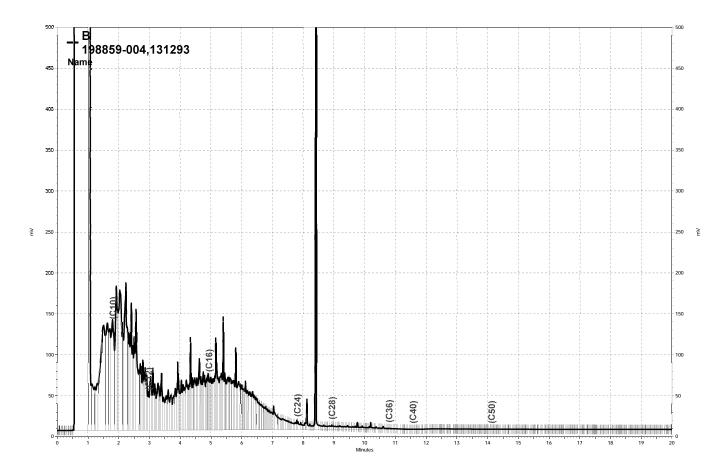
\Lims\gdrive\ezchrom\Projects\GC14B\Data\308b039, B



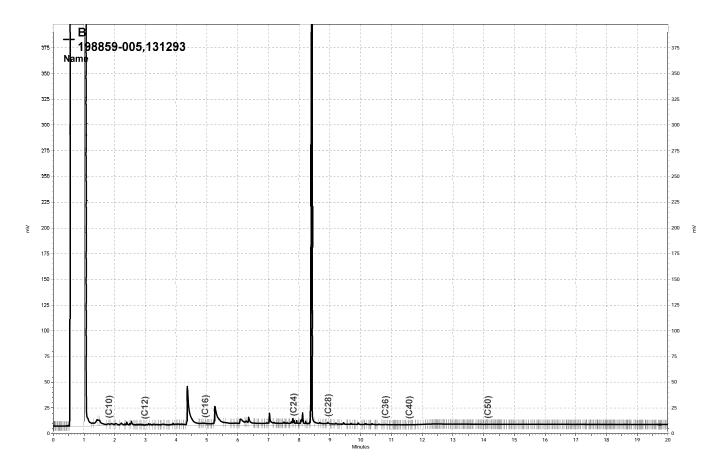
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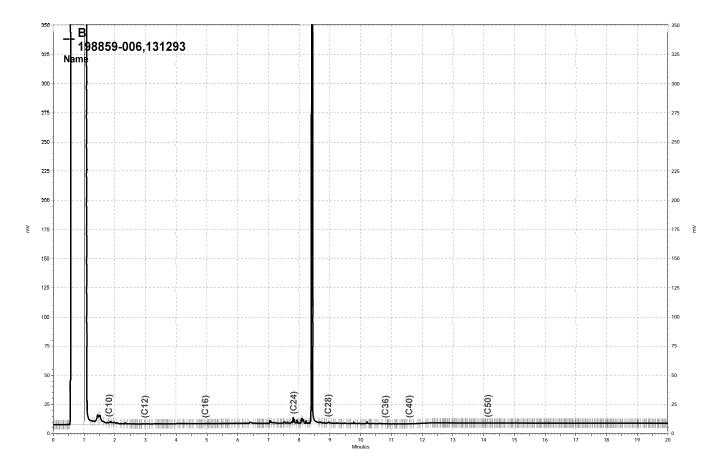
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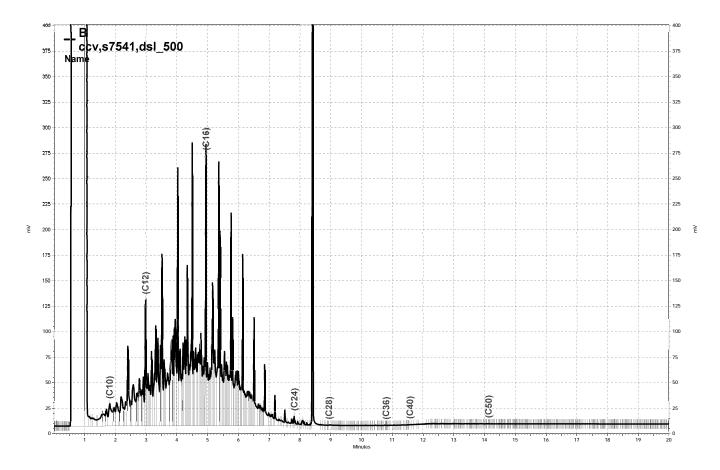
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\Lims\gdrive\ezchrom\Projects\GC15B\Data\308b044, B



\Lims\gdrive\ezchrom\Projects\GC15B\Data\308b038, B



	втх	E & Oxygenates	
Lab #:	198859	Location:	Celis-Emeryville
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	26814847.06000	Analysis:	EPA 8260B
Field ID:	URS-MW-2	Batch#:	131356
Lab ID:	198859-001	Sampled:	10/31/07
Matrix:	Water	Received:	10/31/07
Units:	ug/L	Analyzed:	11/06/07
Diln Fac:	2.500		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	25
MTBE	160	1.3
Isopropyl Ether (DIPE)	ND	1.3
Ethyl tert-Butyl Ether (ETBE)	ND	1.3
1,2-Dichloroethane	ND	1.3
Benzene	ND	1.3
Methyl tert-Amyl Ether (TAME)	ND	1.3
Toluene	4.4	1.3
1,2-Dibromoethane	ND	1.3
Ethylbenzene	ND	1.3
m,p-Xylenes	3.7	1.3
o-Xylene	1.4	1.3

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-122
1,2-Dichloroethane-d4	105	74-137
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

Page 1 of 1 9.0



	втх	Œ & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Field ID:	URS-MW-5	Batch#:	131453	
Lab ID:	198859-002	Sampled:	10/31/07	
Matrix:	Water	Received:	10/31/07	
Units:	ug/L	Analyzed:	11/08/07	
Diln Fac:	4.000			

Analyte	Result	t RL
tert-Butyl Alcohol (TBA)	ND	40
MTBE	47	2.0
Isopropyl Ether (DIPE)	ND	2.0
Ethyl tert-Butyl Ether (ETBE)	ND	2.0
1,2-Dichloroethane	ND	2.0
Benzene	3	.9 2.0
Methyl tert-Amyl Ether (TAME)	ND	2.0
Toluene	ND	2.0
1,2-Dibromoethane	ND	2.0
Ethylbenzene	270	2.0
m,p-Xylenes	ND	2.0
o-Xylene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-122
1,2-Dichloroethane-d4	103	74-137
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120



	втх	E & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Field ID:	URS-MW-1	Batch#:	131331	
Lab ID:	198859-003	Sampled:	10/31/07	
Matrix:	Water	Received:	10/31/07	
Units:	ug/L	Analyzed:	11/06/07	
Diln Fac:	1.000			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	1.3	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-122
1,2-Dichloroethane-d4	110	74-137
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120



	втх	Œ & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Field ID:	LF-MW-4	Batch#:	131331	
Lab ID:	198859-004	Sampled:	10/31/07	
Matrix:	Water	Received:	10/31/07	
Units:	ug/L	Analyzed:	11/06/07	
Diln Fac:	1.000			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	5.7	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	1.3	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	15	0.5	
m,p-Xylenes	1.1	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	108	74-137
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

Page 1 of 1 12.0



	втх	E & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Field ID:	URS-MW-4	Batch#:	131331	
Lab ID:	198859-005	Sampled:	10/31/07	
Matrix:	Water	Received:	10/31/07	
Units:	ug/L	Analyzed:	11/06/07	
Diln Fac:	1.000			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	7.2	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-122
1,2-Dichloroethane-d4	104	74-137
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120



	втх	E & Oxygenates	
Lab #:	198859	Location:	Celis-Emeryville
Client:	URS Corporation	Prep:	EPA 5030B
Project#:	26814847.06000	Analysis:	EPA 8260B
Field ID:	URS-MW-3	Batch#:	131331
Lab ID:	198859-006	Sampled:	10/31/07
Matrix:	Water	Received:	10/31/07
Units:	ug/L	Analyzed:	11/06/07
Diln Fac:	1.000		

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	ND	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-122
1,2-Dichloroethane-d4	106	74-137
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

Page 1 of 1 14.0



		BTXE & Oxygenates	
Lab #: Client: Project#:	198859 URS Corporation 26814847.06000	Location: Prep: Analysis:	Celis-Emeryville EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batcĥ#: Analyzed:	131331 11/05/07

Type: BS Lab ID: QC413784

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	58.52	94	59-149
MTBE	12.50	10.94	88	60-130
Isopropyl Ether (DIPE)	12.50	11.05	88	59-120
Ethyl tert-Butyl Ether (ETBE)	12.50	10.90	87	65-134
1,2-Dichloroethane	12.50	12.11	97	76-121
Benzene	12.50	12.34	99	80-120
Methyl tert-Amyl Ether (TAME)	12.50	12.32	99	67-132
Toluene	12.50	12.05	96	80-122
1,2-Dibromoethane	12.50	12.59	101	80-120
Ethylbenzene	12.50	12.47	100	80-127
m,p-Xylenes	25.00	24.67	99	80-130
o-Xylene	12.50	11.97	96	80-126

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-122	
1,2-Dichloroethane-d4	102	74-137	
Toluene-d8	100	80-120	
Bromofluorobenzene	100	80-120	

Type: BSD Lab ID: QC413785

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	57.67	92	59-149	1	20
MTBE	12.50	10.95	88	60-130	0	20
Isopropyl Ether (DIPE)	12.50	10.49	84	59-120	5	20
Ethyl tert-Butyl Ether (ETBE)	12.50	10.78	86	65-134	1	20
1,2-Dichloroethane	12.50	11.79	94	76-121	3	20
Benzene	12.50	11.54	92	80-120	7	20
Methyl tert-Amyl Ether (TAME)	12.50	11.85	95	67-132	4	20
Toluene	12.50	11.73	94	80-122	3	20
1,2-Dibromoethane	12.50	12.34	99	80-120	2	20
Ethylbenzene	12.50	12.20	98	80-127	2	20
m,p-Xylenes	25.00	24.38	98	80-130	1	20
o-Xylene	12.50	11.68	93	80-126	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-122
1,2-Dichloroethane-d4	100	74-137
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120



16.0

Batch QC Report

		BTXE & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC413832	Batch#:	131331	
Matrix:	Water	Analyzed:	11/05/07	
Units:	ug/L			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	ND	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	107	74-137
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

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	В	TXE & Oxygenates		
Lab #:	198859	Location:	Celis-Emeryville	
Client:	URS Corporation	Prep:	EPA 5030B	
Project#:	26814847.06000	Analysis:	EPA 8260B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC413881	Batch#:	131356	
Matrix:	Water	Analyzed:	11/06/07	
Units:	ug/L			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	ND	0.5	
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
Toluene	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	108	74-137
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120



		BTXE & Oxygenates		
Lab #: Client: Project#:	198859 URS Corporation 26814847.06000	Location: Prep: Analysis:	Celis-Emeryville EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	131356 11/06/07	

Type: BS Lab ID: QC413882

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	63.17	101	59-149
MTBE	12.50	11.24	90	60-130
Isopropyl Ether (DIPE)	12.50	11.27	90	59-120
Ethyl tert-Butyl Ether (ETBE)	12.50	11.35	91	65-134
1,2-Dichloroethane	12.50	12.23	98	76-121
Benzene	12.50	12.39	99	80-120
Methyl tert-Amyl Ether (TAME)	12.50	12.25	98	67-132
Toluene	12.50	12.11	97	80-122
1,2-Dibromoethane	12.50	12.15	97	80-120
Ethylbenzene	12.50	12.34	99	80-127
m,p-Xylenes	25.00	24.44	98	80-130
o-Xylene	12.50	11.99	96	80-126

	Surrogate	%REC	Limits	
Dibro	omofluoromethane	100	80-122	
1,2-I	Dichloroethane-d4	105	74-137	
Tolue	ene-d8	100	80-120	
Bromo	ofluorobenzene	101	80-120	

Type: BSD Lab ID: QC413883

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	61.65	99	59-149	2	20
MTBE	12.50	11.16	89	60-130	1	20
Isopropyl Ether (DIPE)	12.50	11.47	92	59-120	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.31	90	65-134	0	20
1,2-Dichloroethane	12.50	12.31	98	76-121	1	20
Benzene	12.50	12.27	98	80-120	1	20
Methyl tert-Amyl Ether (TAME)	12.50	12.18	97	67-132	1	20
Toluene	12.50	11.81	95	80-122	2	20
1,2-Dibromoethane	12.50	12.17	97	80-120	0	20
Ethylbenzene	12.50	12.14	97	80-127	2	20
m,p-Xylenes	25.00	23.63	95	80-130	3	20
o-Xylene	12.50	11.45	92	80-126	5	20

Surrogate	%REC	Limits	
Dibromofluoromethane	99	80-122	
1,2-Dichloroethane-d4	104	74-137	
Toluene-d8	101	80-120	
Bromofluorobenzene	100	80-120	

		0	038801			
	1680 ROGERS AVENUE	COND	CONDUCT ANALYSIS TO DETECT	TO DETECT	P	Cur
	SAN JOSE, CALIFORNIA 95112-1105				ALL ANAL	ALL ANALYSES MUST MEE
	FAX (408) 573-7771				LIMITS SE	LIMITS SET BY CALIFORNI
ERVICES, INC.	PHONE (408) 573-0555					□ EPA
						=

RINE SAN JOSE, CALIFORNIA 95112-1105	ENUE	8	DUCT ANALYS	CONDUCT ANALYSIS TO DETECT	LAB Curtis & Tompkins DHS DHS AND DETECTION	Curtis & Tompkins MEET SPECIFICATIONS AND	DHS #
	1777-1	.,,			LIMITS SET BY CALIFORNIA DHS AND	HS AND	
LECH SERVICES, INC. PHONE (408) 573-0555	-0555				□ EPA	☐ RWQCB REGION	NO
CHAIN OF CUSTODY BTS # 07 1031- DK1	s				OTHER		
CLIENT URS Corporation					SPECIAL INSTRUCTIONS		
SITE 4000 San Pablo Ave.					Invoice and Report to: URS Corp.	URS Corp.	
Emeryville, CA					Attn: Leonard Niles		
MATEIV	SITE				Project # 26814847.06000	00	
	CAH-8	em-HVI	THE-q (SITATI STATILG	OF INCOME	# SAMPLE #
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4RS-MW-1 1035 WE 7	×	×	*				
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URS-MW-4 1235 W 7	×	\	×				
URS-MW-3 V 1720 W 7	^	×	×				
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							Y.
SAMPLING DATE TIME SAMPLING COMPLETED DA 16/11/61 1345 PERFORMED BY	Royna		-		RESULTS NEEDED NO LATER THAN Stands	Standard TAT	
RELEASED BY	DATE 16/31/	62	TIME 1345	RECEIVED BY	Z.	DATE 107	١.
RELEASED BY	DATE		TIME	RECEIVED BY		DATE	TIME
RELEASED BY	DATE		TIME	RECEIVED BY		рате	TIME
SHIPPED VIA	DATE SENT	LN:	TIME SENT	COOLER#			
	_						

on ice, intact