

#### **Brown & Root Environmental**

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96 JUL 26 PM 3: 25

July 15, 1996

Mr. Brian Cobb
Environmental and Construction Manager
E-Z Serve Convenience Stores, Inc.
P.O. Box 922021
Houston, Texas 77292-2021

SUBJECT: Second Quarter 1996 Groundwater Monitoring (April through June) for E-Z Serve Facility No. 100877 located in Hayward, CA.

Dear Mr. Cobb:

Brown & Root Environmental (BRE) has been contracted by E-Z Serve Convenience Stores, Inc. (E-Z Serve) to perform groundwater monitoring at E-Z Serve Facility No. 100877. E-Z Serve Facility No. 100877 is located at 525 West A Street, Hayward, California. The site is currently vacant. The referenced facility was formally used for petroleum retail distribution. Site features are depicted on Figure 1.

This report summarizes field and analytical data collected during the current quarter (April, 1996- June 1996) for this facility. The activities summarized in this report were completed at the direction of Alameda County and costs incurred and documented are considered eligible for reimbursement through the UST Trust Fund.

#### MONITORING RESULTS

On June 14, 1996, BRE personnel performed the second quarter monitoring event. Depth to groundwater measurements were gauged prior to well purging and sampling. All monitoring wells were checked for free product using clear, Teflon bailers. The field protocol followed by BRE personnel during groundwater well purging and sampling is included as Appendix A. Well purging and sampling documentation logs are included as Appendix B. Documentation of purge water disposal will be forwarded to the state agency under a separate cover.

Depth to groundwater beneath the facility during this monitoring event ranged from 10.61 to 15.04 feet below land surface (bls). Depth to groundwater measurements across the study area during this quarter indicate that the groundwater table increased approximately 3 feet from the last quarter 1995 monitoring event. Free product was encountered in monitoring well MW-1A during the sampling event. Table 1 presents the groundwater elevation data.

The flow direction of the groundwater beneath the facility is to the southwest with an average hydraulic gradient of approximately 0.0009 feet per foot (ft/ft). The flow direction and gradient



have changed slightly from the first quarter monitoring event. Water table elevations and a groundwater contour map for June 14, 1996 are depicted as Figure 1.

BRE personnel collected groundwater samples from fourteen monitoring wells during this field event. Groundwater samples were transported to Centrum Analytical Laboratories, Inc., in Redlands CA, and analyzed for Total Petroleum Hydrocarbons - Gasoline range organics (TPHg) (EPA Method 8015 mod.) and total volatile organic aromatics (TVOA)(EPA Method 8020), including methyl tertiary butyl ether (MTBE).

Laboratory analysis of the groundwater samples indicated the presence of dissolved phase petroleum hydrocarbons above laboratory method detection limits (MDLs) in thirteen of the monitoring wells. Concentrations of TPHg ranged from below detection limits (MW-8, MW-12 and MW-13) to 24,000  $\mu$ g/L (MW-1), and concentrations of TVOA ranged from below detection limits (MW-12 and MW-13) to 9,510  $\mu$ g/L (MW-1). Table 2 presents the analytical testing data. The analytical data is depicted on a site plan as Figure 2. The complete analytical laboratory reports including chains of custody is included as Appendix C.

## RECOMMENDATIONS/CONCLUSIONS

BRE recommends that the results of the quarterly sampling event be forwarded to the Colorado River Water Quality Control Board for review and comment. Based upon the monitoring data collected during the second quarter, the monitoring events should continue on a quarterly basis along with free product recovery efforts for monitoring well MW-1A. Also, MW-9 should be re-installed.

If you have any questions or comments pertaining to this correspondence, please contact Mr. Arnold Lamb or the undersigned at (954) 570-5885.

Sincerely,

**BROWN & ROOT ENVIRONMENTAL** 

Thomas G. Nicotera

Hydrogeologist

Enclosures.

Distribution: (1) Addressee



(1) Ms. Madhulla Logan Alameda County Department of Health Services 1131 Harbor Bay Parkway Alameda, CA 94502

TABLE 1 **GROUNDWATER ELEVATIONS** Former E-Z Serve Facility #100877 525 West A Street, Hayward, California

(unless other wise stated all units are in feet)

Well	Date	Well Casing	Free Product	Depth to	Water Table
ID		Elevation	Thickness	Water [A]	Elevation [A]
MW-1	6/14/96	96.73	0.00	13.41	83.32
MW-2	6/14/96	98.06	0.00	15.04	83.02
MW-3	6/14/96	97.66	0.00	14.39	83.27
MW-4	6/14/96	97.10	0.00	13.92	83.18
MW-5	6/14/96	96.73	0.00	13.55	83.18
MW-6	6/14/96	97.09	0.00	13.80	83.29
MW-7	6/14/96	97.44	0.00	14.26	83.18
MW-8	6/14/96	97.61	0.00	14.06	83.55
MW-10	6/14/96	97.11	0.00	13.89	83.22
MW-11	6/14/96	92.68	0.00	10.61	82.07
MW-12	6/14/96	99.03	0.00	14.99	84.04
MW-13	6/14/96	96.80	0.00	12.91	83.89
MW-14	6/14/96	99.01	0.00	14.90	84.11
MW-1A	6/14/96	97.59	0.00	14.28	83.31

A = Measurement relative to the marked location on the top of casing.

All elevations are referenced to an arbitrary site datum.

# TABLE 2 ANALYTICAL TESTING DATA Former E-Z Serve Facility #100877 525 West A Street, Hayward, California

(unless other wise stated all units are  $\mu g/L$ )

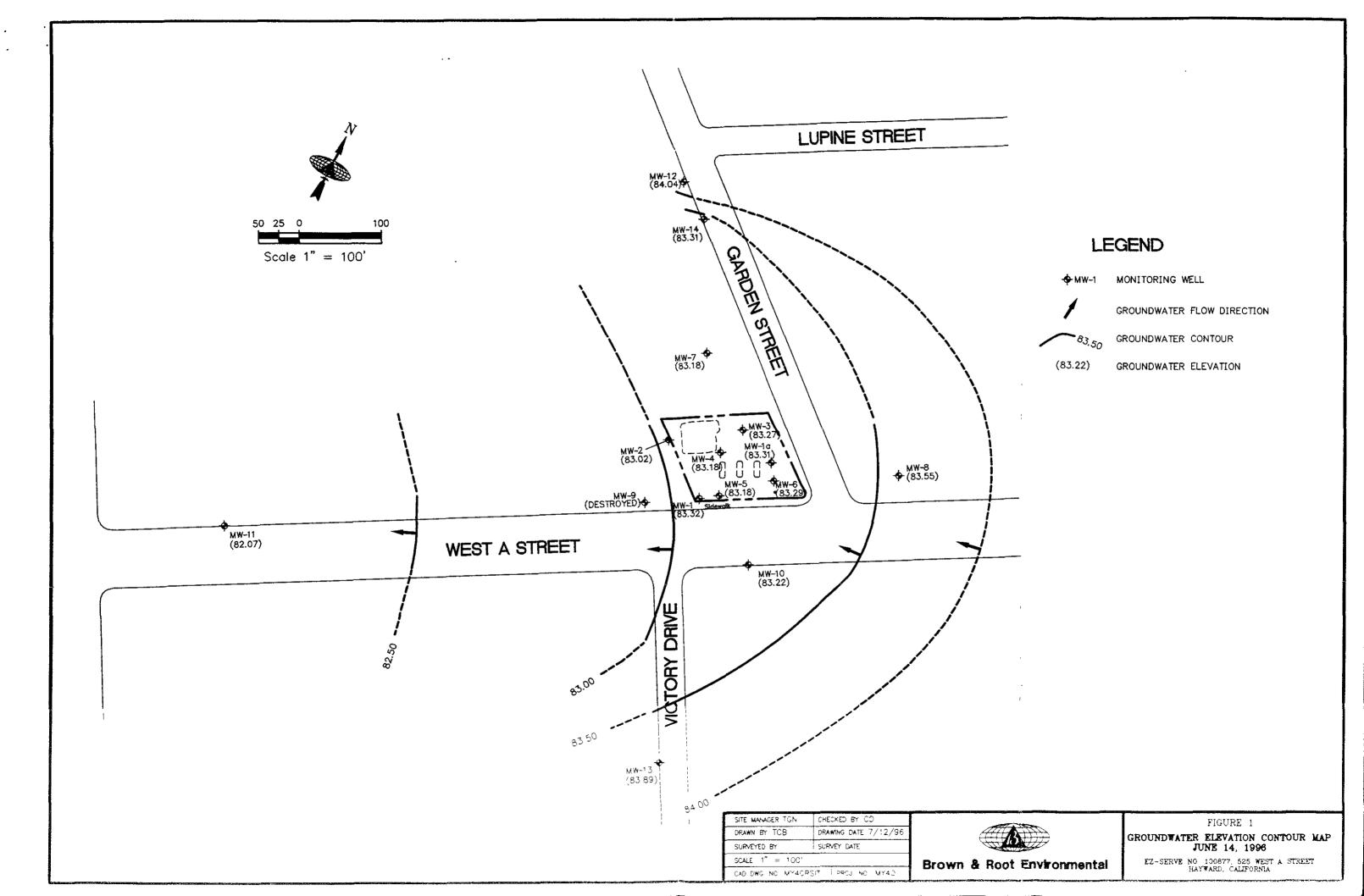
Well	Date	MTBE	Benzene	Toluene	Ethyl	Total	TPHg
ID	Sampled				benzene	Xylenes	·
MW-1	6/14/96	240	6,900	150	960	1,500	24,000
MW-2	6/14/96	430	3,300	120	1,500	3,600	23,000
MW-3	6/14/96	15	580	21	490	580	6,000
MW-4	6/14/96	720	4,100	720	690	1,800	17,000
MW-5	6/14/96	110	2,100	33	570	1,000	11,000
MW-6	6/14/96	61	800	99	1,500	730	14,000
MW-7	6/14/96	11	85	<2.0	470	200	4,400
MW-8	6/14/96	<1.0	<0.6	<2.0	4	<6.0	<500
MW-10	6/14/96	<1.0	<0.6	<2.0	120	<6.0	1,700
MW-11	6/14/96	36	570	99	3,000	3,500	21,000
MW-12	6/14/96	<1.0	<0.6	<2.0	<1.0	<6.0	<500
MW-13	6/14/96	<1.0	<0.6	<2.0	<1.0	<6.0	<500
MW-14	6/14/96	3	19	8	240	80	1,900
MW-4 DUP	6/14/96	710	3,000	720	700	1,800	17,000

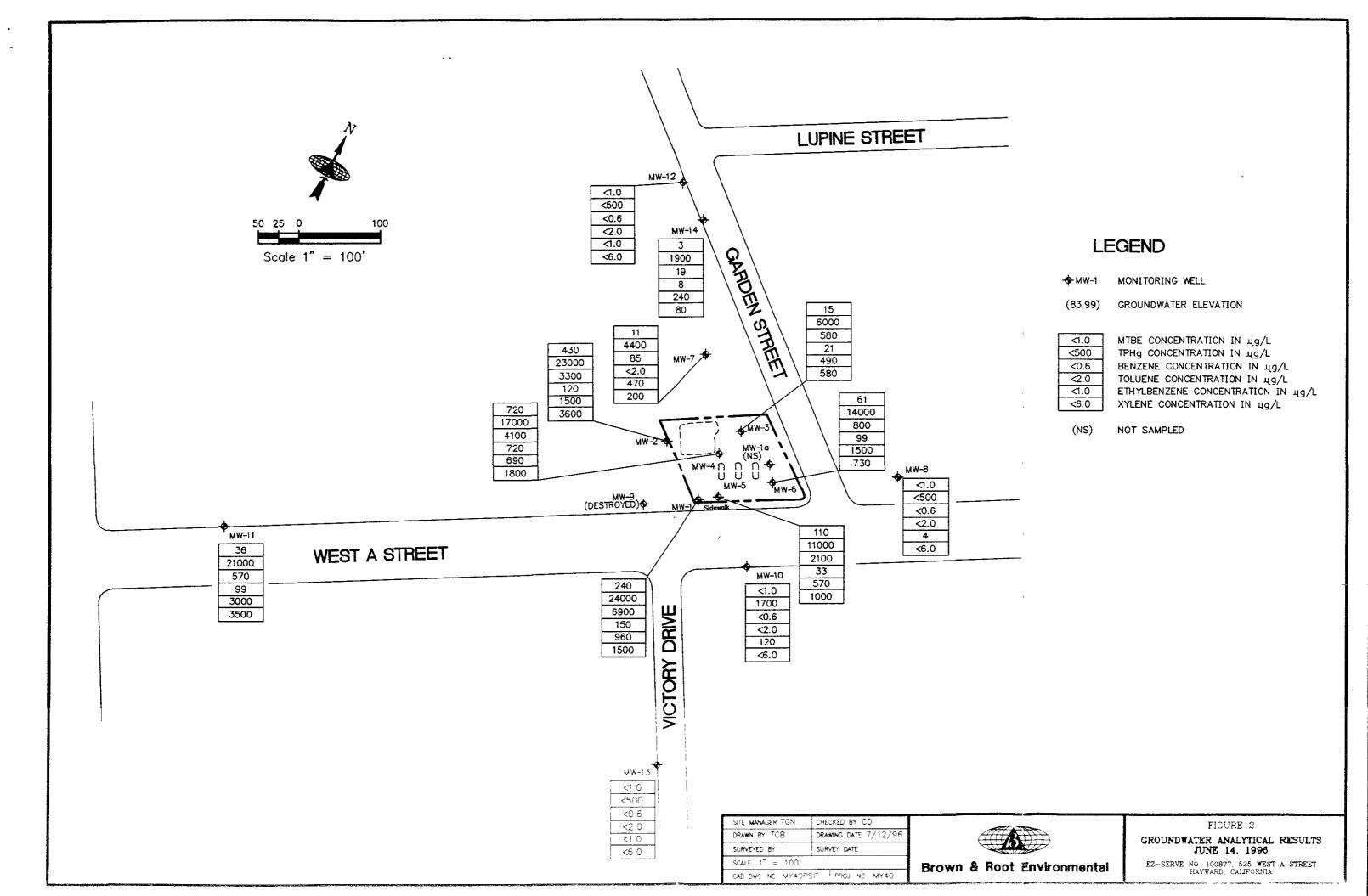
#### Notes:

μg/L = micrograms per liter

MTBE = methyl tertiary butyl ether EPA Method 8020.

TPHg = Total Petroleum Hydrocarbons - Gasoline Range Organics EPA Method 8015 mod.





#### APPENDIX A

## BRE STANDARD OPERATING PROCEDURES FOR WELL PURGING AND SAMPLING

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#### **BROWN & ROOT ENVIRONMENTAL CALIFORNIA**

#### STANDARD OPERATING PROCEDURE for GROUNDWATER SAMPLING

The purpose of this SOP is to provide a concise guideline for the proper collection of groundwater samples. Implementation of the sampling procedures has a significant effect on the quality of the analytical data.

Sampling of existing monitoring wells and newly installed monitoring wells will consist of the following seven activities:

- Measurement of depth to water level and total depth of the well ( to calculate well volume), if the total depth is not provided;
- Decontamination of sampling equipment;
- Evacuation of static water (purging);
- Measurement and recording of groundwater temperature, pH, and specific conductance;
- Collection of the sample;
- Sample preservation and;
- Sample handling and transportation to the laboratory.

## **DECONTAMINATION:**

All sampling devices and monitoring equipment must be properly decontaminated prior to Equipment decontamination must be documented in the logbook. decontamination process will consist of the following activities:

- Alconox and tap water wash;
- Tap water rinse;

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• Reagent Grade Methanol rinse (the equipment shall be thoroughly wetted with Methanol):

- Analyte-free water rinse;
- Air dry.

## WATER LEVEL MEASUREMENTS:

A complete round of water level measurements must be collected prior to any purging or sampling activities. Water level measurements, using an electronic water level indicator, should be taken to the nearest 0.01 foot. Where possible water level measurements shall be taken on the North Side of the monitoring well at the top of the casing, unless a measurement point has been previously established.

## **PURGING STATIC WATER:**

- All information concerning the purging of static water including calculations must be recorded for each well. The type of equipment used to purge the well must be described in the logbook. If a pump is utilized information concerning the pump type and flow-rate must be included in the logbook.
- When a bailer is used for purging and/or sampling activities it must be lowered gently into the well such that the formation waters are disturbed as little as possible. It is very important that the turbidity of the sample not be increased by improper purging and/or sampling techniques.
- A minimum of three well volumes of the standing water column will be purged from the well prior to the collection of samples. Monitoring well purging will continue until groundwater temperature, pH, and specific conductance has stabilized for three measurements each following the removal of one well volume. If five well are removed then, only one set of water quality measurements is required on final purge volume. No more than five wells volumes shall be removed during purging activities. Over purging the well may result in the collection of non-representative groundwater samples.
- If the well does not recover quickly enough to permit the removal of three well volumes, the well will be pumped or bailed dry and sampled immediately following sufficient recovery. Generally, bailing the well dry once is adequate. Purging will be performed utilizing a properly decontaminated stainless steel or Teflon bailer or the appropriate pump. Utilization of a submersible pump is the preferable method of purging as repeatedly lowering the bailer into the monitoring well may oxygenate the formation waters and change the chemistry of the groundwater.

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#### LANYARDS:

- Lanyards may be disposable (braided or monofilament nylon) or reusable ( stainless steel Teflon coated).
- A disposable lanyard must be changed for each monitor well. But the same lanyard may used for purging and sampling operations without decontamination between purging sampling activities.
- Reusable lanyards shall be decontaminated between monitoring wells but do not require between purging and sampling operations.
- Lanyards must never come in contact with the ground or other surface which may contaminate the lanyard.

## SAMPLE COLLECTION ORDER:

Samples shall be collected from the least to the most contaminated sampling locations within a site. This information can be obtained from historical data, the Site Manager, or OVA readings at the site.

Unless field conditions justify other sampling regimens, samples shall be collected in the following order:

- a. Volatile Organic Contaminants (VOCs)
- b. Extractable Organics [ includes Total Recoverable Petroleum Hydrocarbons (TRPH), & Grease, Pesticides and Herbicides];
- c. Total Metals:
- d. Dissolved Metals;
- e. Microbiological;
- f. Inorganics (including Nutrients, Demands and Physical Properties); and
- g Radionuclides.

## **SAMPLE PRESERVATION:**

Samples must be preserved with the appropriate preservative and maintained on ice. A laboratory certified to perform hazardous waste testing by the State of California Department of Health Services (DOHS) will dispatch prepreserved sample containers for collection of samples. It is essential that the samples be maintained at 4 degrees centigrade until delivery to the laboratory facility. A notation must be made on the Chain of Custody form (COC) as well as in the logbook concerning sample preservation.

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**SAMPLE HANDLING:** It is critical that proper custody procedures be followed throughout all phases of sample collection and handling. Some specific points of concern are as follows: The samples from a particular site must never be commingled with samples from another site. Samples from several sites must never be combined in the same sample cooler. Each sample group must also be under separate documentation (i.e., A COC must be generated for each site and for each sampling event). The Site Manager as well as the individual who releases the samples to the transporter must follow up to see if the samples were received at the laboratory facility.

## QUALITY ASSURANCE QUALITY CONTROL:

- Trip Blanks will be utilized to verify that handling and transportation activities of the empty sample containers and collected samples has not contaminated the groundwater samples. Trip blanks will be prepared and dispatched by the analyzing Laboratory. Trip blanks will accompany the empty sample containers through sampling and return shipment of samples to the Laboratory.
- Equipment Blanks will be collected, in field, to assess the completeness of decontamination procedures for precleaned equipment and field cleaned equipment. Equipment blanks will consist of pouring analyte-free water over decontaminated sampling equipment and collecting the rinsate into the appropriate prepreserved containers.
- <u>Duplicates</u> will be collected to assess the representativeness and variability inherent in the sampling process. They shall be obtained by **DUPLICATING** (simultaneously or in rapid succession) the entire sample acquisition technique that was used to obtain the first sample.

#### **DOCUMENTATION:**

Documentation is an essential part of sample collection therefore field logbook, field forms, sample labels, and COC records must be complete and accurate. At a minimum, the following information must be included in the logbook:

- Equipment used to purge the well; include pump type and flow-rate if applicable.
- Volume of water purged from the well.
- Complete description of the decontamination procedures used to clean the sampling equipment. If the equipment was pre-cleaned at the warehouse or laboratory the lot associated with this cleaning must be recorded in the logbook.

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• The source of the analyte free water utilized on site. Include any lot numbers or batch numbers in the logbook.

- Note which well was sampled using the equipment blank bailer.
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor,) as it is being sampled.
- Sample temperature, pH, and specific conductance will be recorded for each sample.
- Weather conditions (e.g., air temperature, wind conditions, recent heavy rainfall, conditions) at the time of sampling will be recorded.
- The exact time of sample collection and the person who collected the sample.
- If any field forms are utilized the forms must be referenced in the logbook. For example following should be written in the logbook to reference a form: Refer to the water quality sheets for information concerning.....

## SAMPLE IDENTIFICATION:

Sample nomenclature must be unique and must always include the date of sample collection. All samples must be identified utilizing the following format:

project #/ sample id/ date (e.g. MJ50/MW-3/122094, MJ53/INF/122094, etc.)

For example, a sample collected for project site MJ50 for monitoring well MW-3 on December 20, 1994 would have the following sample id: MJ50-MW-3-122094.

## CONTAINMENT AND DISPOSAL OF PURGE WATER:

Purge water will be collected into DOT 17-H 55 gallon drums. The drums will be transported to an appropriate treatment facility and properly disposed of. Drum removal and disposal practices shall be thoroughly documented.

## APPENDIX B

## WELL PURGING AND SAMPLING DOCUMENTATION LOGS

		21,001,211				141/40		
Site Name:	E-Z Serve			_	Job #:	MY40 6/14/96		
Location:		A Street, Hayw	ard, CA		Date: Well ID:	Mw-/		
Samplers:	T. Nicotera			<del>,,,,</del>	Mell ID:	19 W-1		
Weather:	Clear and s	unny ~80°F		-				
WATER COL	UMN INFORI	MATION (ft.) [1			<b>TOO 51</b> 45		96.73	
a. Depth to V	Vater:		13.41		TOC Elevation			
b. Total Well	Depth:		32.10		Water Table		83.32	
c. Length of	water colum	n:	18.69	-	Well Diamete	er:	φ.	
d. Well Casin	g Volume:		12.22		<b>41</b> 4-4	- voletka to a	_	
e. Well Scree			10'	[1]	All datum ar			
f. TOTAL WE	LL VOLUME		12.22	<del>-</del>	measurment the TOC.	point located	ı on	
	NO DATA.				ule 100.			
WELL PURGII a. Purge Meti				2" Grundfros Re	edi-Flow subn	nersible pump	)	
		. per well vol.):		61.10 gal.				
c. Field Wate	r Quality Mo	nitoring Equipn	nent:	pH - Cole Palme	r 5900-00, C	ond Hanna	HI8733	
d. Pump Flow		• • • •		3 gal/m				
e. Method of		r Disposal:		17-H - 55 gallor	n drums		· · · · · · · · · · · · · · · · · · ·	
		•						
Volume Removed (gal.)	Time	T°c	рН	Specific Conductance	Descriptiom	Odor	Comments	
/ S	17:44	18.5°c	6.7	903	Clear	ەس		
40	17:47	19.0 ℃	6.9	955	Clear	No		
61	17:51	19.0°C	6.8	932	CIEAR	סמ		
	1							
							<u> </u>	
Sample	17:53	18.0°C	6.8	985	Clear	~ ~ ~	<del> </del>	
							<u> </u>	
SAMPLE COL	LECTION M	ETHOD: Disposable Te	flon Bailer					
Method: Sample Conta	ologras	40 ml VOA vi						
Sample Prese		HCL and ICE 1						
Analyses:	yation.	FPA Method 8	3020 + M1	BE, EPA Method	8015 mod	TPHg		
Laboratory:		Centrum Anal	vtical Labo	ratories, Inc. loca	ted in Redlan	ds, CA		
BLOCCIULVITA			<u> </u>					
COMMENTS:							· · · · · · · · · · · · · · · · · · ·	

## GROUNDWATER SAMPLE COLLECTION RECORD

Job #: MY40

Site Name:	E-Z Serve #	100877			Job #:	MY40			
Location:		Street, Hayw	ard, CA		Date:	6/14/96			
Samplers:	T. Nicotera			<b>-</b>	Well ID:	MW-14	1		
Weather:		nny ~80°F		<b>-</b>					
				_					
WATER COLU	JMN INFORM	IATION (ft.) [	1]:		T00 Flavoria		97.59		
a. Depth to V	Vater:		14.28	-	TOC Elevation				
b. Totai Well	Depth:		28.40	Water Table Elevation: 83.3					
c. Length of	water column	<b>1:</b>	14.12		Well Diamete	)r:	2"		
d. Well Casin	g Volume:		2,30						
e. Well Scree	n Length:			[1] All datum are reletive to a measurment point located on					
f. TOTAL WE	LL VOLUME:		2.30	<b></b>		point located	i on		
	-				the TOC.				
WELL PURGII				07 0 w 45 w B	ad Flore subm	ossible pums			
a. Purge Meti	hod:			2" Grundfros R		leisible purit			
b. Purge Vol.	(@ <u>₹.३०</u> gal.	per well vol.)	:	pH - Cole Paim	5000 00 C	and - Henne	HI8733		
c. Field Wate		nitoring Equip	ment:			Oliu i laisi la	7110700		
d. Pump Flow				17-H - 55 gallo					
e. Method of	Purge Water	Disposat:		17-71 - 55 Yallo	ii drains	<del></del>			
					·	T			
Volume				Specific	Description	Odor	Comments		
Removed (gal.)	Time	T°c	pН	Conductance		yes			
4	18:27	19.5°C	7.2	986	C/048/	ye S	<del>                                     </del>		
7	18.30	19.0°C	2./	981	cloudy	ye 5	<del> </del>		
/2	18:32	/9.0°C	7.0	977	cloudy	1 /			
	<u> </u>			<del></del>					
					10000	14cT-yes			
Sample	محرمه	20 5	2.1	N5	FREE FIRE	7467 - 743			
			<u></u>						
	LECTION ME	THOD							
SAMPLE COL	TECHOR MI	Disposable To	efion Bailer						
Method:	alaasa:	40 ml VOA v							
Sample Cont		HCL and ICE							
Sample Prese	ervation:	EBA Method	8020 + M	TBE, EPA Method	1 8015 mod	TPHg			
Analyses:		Centrum Ana	lytical Labo	ratories, Inc. loca	ated in Redian	ds, CA			
Laboratory:									
COMMENTS	1.10//	had FREE	Made	TiNIT.					
COMMENTS	well .	7700	///						
			·						
<b>a</b>			_	الكاجب كالمنصب بالأشب بالمناسبة فين					

Site Name:	E-Z Serve #	1100877			Job #: MY40					
Location:		A Street, Hayw	/ard. CA	-	Date:	6/14/96				
	T. Nicotera		10107 071	<del>-</del>	Well ID:					
Samplers: Weather:		unny ~80°F		<del></del>			,			
woather.	Clour dile s	,		<del>-</del>						
WATER COL	UMN INFOR	MATION (ft.) [1	1]:	,	TOO Flavori		98.06			
a. Depth to V	Vater:		15.04		TOC Elevation		83.02			
b. Total Well	•		32.30		Water Table		4"			
c. Length of		n:	17.26	Well Diameter: 4"						
d. Well Casin	g Volume:		11.29			1-40-4-	_			
e. Well Scree			10'	[]	All datum ar					
f. TOTAL WE	ILL VOLUME		11.29	<del>-</del>	measurment	point located	a On			
WELL PURGII	NG DATA:				****					
a. Purge Meti				2" Grundfros R	edi-Flow subr	nersible pum	<u> </u>			
h. Purge Vol.	1@ //.29 gal	. per well vol.)	:	56.45 gal.						
c. Field Wate	r Quality Mo	nitoring Equipr	ment:	pH - Cole Palme		ond Hanni	HI8733			
d. Pump Flow		• • •		3 gol frain						
e. Method of		r Disposal:		17-H - 55 gallo	n drums					
		·				,				
Volume Removed (gal.)	Time	T*c	pH	Specific Conductance	Descriptiom	Odor	Comments			
/ <i>S</i>	17:21	/9.0°C	2.0	1089	CLEAK	סעק				
30	17:27	/9.0°C	7.0	1084	CLEAR	NO				
56	12:34	19.0°C	7.0	1084	CLEAR	NO				
	<del>                                     </del>									
	<del> </del>									
Sample	19:04	18.5°C	7.0	1070	clear	No	ļ			
SAMPLE COL	LECTION M	ETHOD:								
Method:		Disposable Te	fion Bailer							
Sample Conta	ainers:	40 ml VOA v	ials							
Sample Prese		HCL and ICE	to 4°c							
Analyses:		EPA Method	8020 + M	TBE, EPA Method	8015 mod	TPHg				
Laboratory:		Centrum Ana	lytical Labo	ratories, Inc. loca	ated in Redian	ds, CA				
Luboratory										
COMMENTS:							<u> </u>			

Site Name: Location:		100877			Job #:	MY40			
Location:	E 25 Most	A Street, Hayw	ard. CA	•	Date:	6/14/96			
	T. Nicotera		u.u, u.	-	Weil ID:	MW-3			
Samplers: Weather:		unny ~80°F		•					
TTOALLIOI.	Oldar drid 5	<b></b>		-					
WATER COL	UMN INFOR	MATION (ft.) [1	l]: _				97//		
a. Depth to V			14.39 32.10 17.71	-	TOC Elevation: 97.66				
b. Total Well	Depth:		32.10	Water Table Elevation: 83.27 Well Diameter: 4"					
c. Length of	water colum	กะ	17.7/	•	Well Diamet	er:			
d. Well Casin			11.58		All datum ar	!!!!!			
e. Well Scree		•	/6 ′	_ [1]					
f. TOTAL WE	ELL VOLUME	<b>:</b> .	11.58	-	the TOC.	point located	i Oit		
WELL PURGI	NG DATA:								
a. Purge Met				2" Grundfros R		nersible pump	)		
b. Purge Vol.	(@//.58 gal	. per well vol.):	:	57.90 gal	<i>.</i>				
c. Field Wate	r Quality Mo	nitoring Equipr	nent:	pH - Cole Paime		ond Hanna	HI8733		
d. Pump Flov				3 gol/min					
e. Method of		r Disposai:		17-H - 55 gallo	n drums				
					المستون المستون		<del></del>		
	1				ł				
Volume				Specific	l <sub>-</sub>	24.5			
Removed (gal.)	Time	T°c	pН	Conductance	Description	Odor	Comments		
5	16:59	19.5°c	2.1	976	C/PAR	ه کبر			
-	17:04	19.5°c	2./	980	Clear	<i>N</i> 0	<u> </u>		
30			6.9	980	CLEAR	סע			
30 55-	17:09	19.0°C	0.7	7.7.0		<del>-  </del>			
22		/9,0° €	8.7	780					
55	17:09								
Sample		/9.0° C	2.0	965	Clear	No			
55	17:09								
Sample	19:05	18.5 ° C							
55	19:05	/8.5 ° C ETHOD:	2.0						
Sample SAMPLE CO	/ 7:09	/8.5° c  ETHOD: Disposable Te	2.0 eflon Bailer						
Sample SAMPLE CO Method: Sample Cont	/ 7:09  / 9:05  LLECTION Mainers:	/8.5° c  ETHOD: Disposable Tele 40 ml VOA vi	2.0 efton Bailer						
Sample SAMPLE CO	/ 7:09  / 9:05  LLECTION Mainers:	IN SOCIONAL DISPOSABLE TO MI VOA VI HCL and ICE	2.0 eflon Bailer ials to 4°c	965	Clear	No			
Sample SAMPLE CO Method: Sample Cont Sample Prese	/ 7:09  / 9:05  LLECTION Mainers:	ETHOD: Disposable Te 40 ml VOA vi HCL and ICE EPA Method	2.0 eflon Bailer ials to 4°c 8020 + MT	965 BE, EPA Method	C/e #R 8015 mod.	N <sub>3</sub>			
Sample SAMPLE CO	/ 7:09  / 9:05  LLECTION Mainers:	ETHOD: Disposable Te 40 ml VOA vi HCL and ICE EPA Method	2.0 eflon Bailer ials to 4°c 8020 + MT	965	C/e #R 8015 mod.	N <sub>3</sub>			
Sample SAMPLE CO Method: Sample Cont Sample Prese Analyses: Laboratory:	/ 7:09  / 9:05  LLECTION Mainers: ervation:	Disposable To 40 ml VOA vi HCL and ICE EPA Method Centrum Anal	ofion Bailer ials to 4°c 8020 + MT	BE, EPA Method	C/e #R 8015 mod.	N <sub>3</sub>			
Sample  SAMPLE CO Method: Sample Cont Sample Prese Analyses:	/ 7:09  / 9:05  LLECTION Mainers: ervation:	Disposable To 40 ml VOA vi HCL and ICE EPA Method Centrum Anal	2.0 eflon Bailer ials to 4°c 8020 + MT	BE, EPA Method	C/e #R 8015 mod.	N <sub>3</sub>			
Sample SAMPLE CO Method: Sample Cont Sample Prese Analyses: Laboratory:	/ 7:09  / 9:05  LLECTION Mainers: ervation:	Disposable To 40 ml VOA vi HCL and ICE EPA Method Centrum Anal	ofion Bailer ials to 4°c 8020 + MT	BE, EPA Method	C/e #R 8015 mod.	N <sub>3</sub>			
Sample SAMPLE CO Method: Sample Cont Sample Prese Analyses: Laboratory:	/ 7:09  / 9:05  LLECTION Mainers: ervation:	Disposable To 40 ml VOA vi HCL and ICE EPA Method Centrum Anal	ofion Bailer ials to 4°c 8020 + MT	BE, EPA Method	C/e #R 8015 mod.	N <sub>3</sub>			

		4400077		Job #: MY40					
Site Name:	E-Z Serve A		erd CA	Date: 6/14/96					
Location:	525 West /	A Street, Hayw	aru, CA		Well ID:	MW-4	<u> </u>		
Samplers:	T. Nicotera	A. Lamb		_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		······································		
Weather:	Clear and s	unny ~80°F		_					
WATER COLI	UMN INFORI	MATION (ft.) [1			TOC Florestics	••	97.10		
a. Depth to V	Vater:		13.92		TOC Elevation	فسنون بالأراب والمرابع			
b. Total Well	Depth:		32.11	Water Table Elevation: 83.18 Well Diameter: 4"					
c. Length of	water colum	n:	18.19	Well Diameter: 4"					
d. Well Casin	g Volume:		11.90	,,	. 411	lethie to	_		
e. Well Scree	n Length:		10'	[1] All datum are reletive to a measurment point located on					
f. TOTAL WE	FF AOFAWE	<b>i:</b> .	//.90	_	the TOC.	politi locate	u 011		
WELL PURGI	NG DATA:								
a. Purge Met				2" Grundfros R		ersible pum	Р		
b. Purge Vol.	(@ //9° gal	l, per well vol.):	:	59.50	<u> </u>	and Uses	- LII0722		
c. Field Wate	r Quality Mo	onitoring Equipa	nent:	pH - Cole Palme		onu. • mann	a /110/33		
d. Pump Flov	v Rate:			3 gal fui	·	<del></del>			
e. Method of	Purge Wate	r Disposal:		17-H - 65 gallo	n drums				
Volume				Specific	Description	Odor	Comments		
Removed (gal.)	Time	T*c	ρН	Conductance	Descriptiom		Consideres		
15	1801	18.5°C	6.9	698	c/04dy_	No			
40	18:03	18.5°C	6.9	(037	cloudy	04			
65	18:09	18.5 °C	6.9	1047	cloudy	NO .			
			<u> </u>		. ( // //	100			
Sample	19:32	18.5°c	6.9	10//	cloudy	~~	_		
SAMPLE CO	LLECTION N	IETHOD: Disposable Te	fion Reiler						
Method:									
Sample Cont		40 ml VOA v					······································		
Sample Prese	ervation:	HCL and ICE	9020 ± 14	TBE, EPA Method	1 8015 mod	TPHa			
Analyses:		EPA Method	beloof tobe	ratories, Inc. loca	ated in Rediano	is. CA			
Laboratory:		Centrum Ana	IYUCAI LADO	ratories, mo. 100			······································		
COMMENTS	:								
						<u></u>			

f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:  2" Grundfro.  6/.90 g pH - Cole Pa	ilmer 5900-00, C	Elevation: ar: a reletive to point locate nersible pum	d on					
Samplers: T. Nicotera\A. Lamb  Weather: Clear and sunny ~80°F  WATER COLUMN INFORMATION (ft.) [1]:  a. Depth to Water: /3.55 b. Total Well Depth: 32.48 c. Length of water column: /8.93 d. Well Casing Volume: /2.38 e. Well Screen Length: /0' f. TOTAL WELL VOLUME: /2.38  WELL PURGING DATA: a. Purge Method: b. Purge Vol. (@/2.38 gal. per well vol.): /6/.90 get /2.38 d. Pump Flow Rate: 3 self-ce	TOC Elevation Water Table Well Diameter  [1] All datum are measurment the TOC.  8 Redi-Flow submedular Imer 5900-00, Communication	on: Elevation: er: e reletive to point locate	e d on p					
WATER COLUMN INFORMATION (ft.) [1]:  a. Depth to Water: /3.55 b. Total Well Depth: 32.48 c. Length of water column: /8.93 d. Well Casing Volume: /2.38 e. Well Screen Length: /o' f. TOTAL WELL VOLUME: /2.38  WELL PURGING DATA: a. Purge Method: b. Purge Vol. (@/2.38 gal. per well vol.): c. Field Water Quality Monitoring Equipment: 9H - Cole Part of the Cole Part	Water Table Well Diamete [1] All datum are measurment the TOC.  8 Redi-Flow subn mimer 5900-00, C	on: Elevation: er: e reletive to point locate	e d on p					
WATER COLUMN INFORMATION (ft.) [1]:  a. Depth to Water:  b. Total Well Depth:  c. Length of water column:  d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	Water Table Well Diamete [1] All datum are measurment the TOC.  8 Redi-Flow subn mimer 5900-00, C	Elevation: ar: a reletive to point locate nersible pum	e d on p					
a. Depth to Water:  b. Total Well Depth:  c. Length of water column:  d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	Water Table Well Diamete  [1] All datum are measurment the TOC.  8 Redi-Flow subn	Elevation: ar: a reletive to point locate nersible pum	e d on p					
d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	Water Table Well Diamete  [1] All datum are measurment the TOC.  8 Redi-Flow subn	Elevation: ar: a reletive to point locate nersible pum	e d on p					
d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	Well Diamete [1] All datum are measurment the TOC.  s Redi-Flow subnumer 5900-00, Communication and the Tock su	er: e reletive to point locate nersible pum	e d on p					
d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	[1] All datum are measurment the TOC.  B Redi-Flow submitted in the TOC	e reletive to point locate nersible pum	e d on p					
d. Well Casing Volume:  e. Well Screen Length:  f. TOTAL WELL VOLUME:  WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	measurment the TOC. s Redi-Flow subn limer 5900-00, C	point locate	d on					
f. TOTAL WELL VOLUME:    1.38	measurment the TOC. s Redi-Flow subn limer 5900-00, C	point locate	d on					
f. TOTAL WELL VOLUME:    1.38	the TOC.  8 Redi-Flow subnular  Limer 5900-00, C	nersible pum	<b>D</b>					
WELL PURGING DATA:  a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:  2" Grundfrom 6/.90 g pH - Cole Pa	s Redi-Flow subn							
a. Purge Method:  b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:  2* Grundfrom 6/.90 g pH - Cole Pa	ما۔ Ilmer 5900-00, 0 سند							
b. Purge Vol. (@/2.38 gal. per well vol.):  c. Field Water Quality Monitoring Equipment:  d. Pump Flow Rate:	ما۔ Ilmer 5900-00, 0 سند							
c. Field Water Quality Monitoring Equipment:  pH - Cole Pa d. Pump Flow Rate:	ilmer 5900-00, C	Cond Hann	HI8733					
d. Pump Flow Rate:	in							
Q. Fullip Flow flato.								
e. Method of Purge Water Disposar.								
Volume Specific PH Conductance	_ Descriptiom	Odor	Comments					
Kembyed (de.)	Cleak	No						
10 15:59 19.5°C 6.9 10.18	clear	כעק						
30 /6:06 /9.5°c 6.9 /000	CLEAR	100						
60 16:10 195°C 6.6 999	2784							
Sample 18:50 19.0°c 6.8 987	clege	No						
Sample /8:50 /9.0°c 6.8 78/								
SAMPLE COLLECTION METHOD:  Method:  Sample Containers:  Sample Preservation:  Analyses: Laboratory:  Comments:  Disposable Teflon Bailer  40 ml VOA vials  HCL and ICE to 4°c  EPA Method 8020 + MTBE,	Disposable Teflon Bailer 40 ml VOA vials							
			<u> </u>					

525 West A	Street, Hayw	ard, CA	<del>-</del> -	Job #: MY40 Date: 6/14/96 Well ID:			
Clear and su	nny ~80°F		- -				
Vater: Depth: water column g Volume: n Length: iLL VOLUME: NG DATA: hod: (@//-9/2 gal. r Quality Mody Rate:	per well vol.):	13.80 32.10 18.30 11.97 10' 11.92	Water Table Elevation: \$3.29 Well Diameter: 4"  [1] All datum are reletive to a measurment point located on the TOC.  2" Grundfros Redi-Flow submersible pump  59.85 gal- pH - Cole Paimer 5900-00, Cond Hanna Hi8733				
		На	Specific Conductance	Descriptiom	Odor	Comments	
			/02/	clear	NO		
			1001	clear	No		
16:25	19.5°c	6.6	1007	clear	٥٨		
19:17	19.0°c	6.7	1004	Clear	No		
ainers: ervation:	Disposable Te 40 ml VOA vi HCL and ICE	als to 4°c 8020 + M1	TBE, EPA Method ratories, Inc. loca	l 8015 mod ated in Rediand	TPHg is, CA		
	Time  /6:/9 /9:/7	T. Nicotera\A. Lamb  Clear and sunny ~80°F  UMN INFORMATION (ft.) [1 Vater: Depth: water column: g Volume: in Length: ELL VOLUME:  NG DATA: hod: (@//-9/ gal. per well vol.): r Quality Monitoring Equiprov Rate: Purge Water Disposal:  Time	T. Nicotera\A. Lamb  Clear and sunny -80°F  UMN INFORMATION (ft.) [1]:  Vater: /3.8 °  Depth: 32./°  water column: 18.3°  g Volume: //.7?  ILL VOLUME: //.2?  NG DATA:  hod:  (@//.?? gal. per well vol.):  r Quality Monitoring Equipment:  v Rate:  Purge Water Disposal:  Time T°c pH  /6:/? 20.0°c 6.2  /6:25 /9.5°c 6.6  /9:/? /9.5°c 6.7  LECTION METHOD:  Disposable Teflon Bailer  ainers: 40 ml VOA vials  HCL and ICE to 4°c  EPA Method 8020 + Mi  Centrum Analytical Labo	525 West A Street, Hayward, CA T. Nicotera\A. Lamb Clear and sunny ~80°F  UMN INFORMATION (ft.) [1]: Vater: /38° Depth: 32./° water column: /8.3° g Volume: //.97 n Length: /° iLL VOLUME: //.97  NG DATA: hod: 2" Grundfros R 59.85 gall pH - Cole Palme 3 17-H - 55 gallo  Time T°c pH Gonductance  /6:/9 20.0°C 6.2 /02/ /6:23 /9.5°c 6.6 /009  LECTION METHOD: Disposable Tefton Bailer ainers: 40 ml VOA vials ervation: Disposable Tefton Bailer ainers: 40 ml VOA vials ervation: Disposable Tefton Bailer EPA Method 8020 + MTBE, EPA Method Centrum Analytical Laboratories, Inc. local	E-2 Serve with A Street, Hayward, CA  T. Nicoteral A. Lamb  Clear and sunny -80°F  UMN INFORMATION (ft.) [1]:  Vater: /3.8°  Depth: 32.4°  water column:   18.3°  g Volume:   1/.97  In Length:   1/.97  In Length:   1/.97  In Length:   1/.97  In Quality Monitoring Equipment:   17.4°  In Quality Monitoring Equipment:   17.4°  In Reserve to the conductance   17.4°  In Cole Palmer 5900-00, C   17.4°  In Conductance   17.4°  In Cole Palmer 5900-00, C   17.4°  In Cole Palme	E-2 Serve #1 Dost?  E25 West A Street, Hayward, CA T. Nicotera\A. Lamb  Clear and sunny -80°F  UMN INFORMATION (ft.) [1]:  Vater: /3.8°  Depth: 32./°  Water Table Elevation:  Well Diameter:  Well Diameter:	

		100077			Job #:	MY40		
Site Name:	E-Z Serve #		ord CA	Date: 6/14/96				
Location:	525 West A	Street, Hayw	aru, CA	•	Well ID:	MW-7		
Samplers:	T. Nicotera\	A, Lamb		-	***************************************			
Weather:	Clear and su	inny ~80°F		-				
WATER COL	JMN INFORM	IATION (ft.) [1	1:		TOC Florentin		97.44	
a. Depth to V	Vater:	-	14.26	_	TOC Elevatio			
b. Total Well	Depth:	•	30.06		Water Table		83.18	
c. Length of		n: _	15.80		Well Diamete	Fi	2"	
d. Well Casin			2.58			maladiya ta i	_	
e. Well Scree	n Length:	_	/0′	[7] 	All datum are			
f. TOTAL WE			2.58	-	measurment the TOC.	boint locared	u Off	
WELL PURGI	NG DATA:							
a. Purge Met				2" Grundfros R	edi-Flow subm	ersible pum	Р	
a. Furge Met		per well vol.):		12.90 gal.				
D. Furge vol.	r Ouglitz Mai	nitoring Equipa	nent:	pH - Cole Paime	er 5900-00, C	ond Hanna	a HI8733	
d. Pump Flov	· Deter	acoming adapt.		1 cal-/mi				
<ul><li>a. Pump riov</li><li>e. Method of</li></ul>	y nato. Durae Water	Dienosal:		17-H - 55 gallo	n drums			
e. Method of	Luige Mater	Disposan						
Volume				Specific	Descriptiom	Odor	Comments	
Removed (gal.)	Time	T°c	pН	Conductance	CLEAR	No	-	
3	13:40	19.5°C	6.7	1036	CIEAR	No		
5	14:08	195°C	6.7	1069		مر		
10	14:15	19.5°c	6.7	1039	CLEAR	<del>                                     </del>		
				10.10	CleAR	NO		
Sample	14:21	19.5°C	6.7	1018	LIEAK	<del> </del>		
SAMPLE CO	L ECTION M	ETHOD:						
	LLECTION MI	Disposable Te	fion Bailer					
Method:	-1	40 ml VOA vi						
Sample Cont		HCL and ICE	to 4°c					
Sample Prese	at Agrinii:	EDA Method	8020 + MT	TBE, EPA Method	8015 mod	TPHg		
Analyses:		Centrum Anal	vtical Labo	ratories, Inc. loc	ated in Redian	ds, CA		
Laboratory:		California Vital	,,					
COMMENTS	:							

Site Name:	E-Z Serve	1100877		Job #: <u>MY40</u>					
Location:		A Street, Hayw	ard, CA	-	Date:	6/14/96			
Samplers:	T. Nicotera			-	Well ID:	MW-8			
Weather:	Clear and a	unny -80°F		_					
				_					
WATER COL	UMN INFORI	MATION (ft.) [1	]:		TOC Elevation		97.61		
a. Depth to \	Nater:		14.06	-	Water Table				
b. Total Well	Depth:	•	32.15	-			<u>83.55</u> 2"		
c. Length of		n:	18.09	Well Diameter: 2"					
d. Well Casir		•	2.95	- 141	All datum er	reletive to s	•		
e. Well Scree	-		10'	[1] All datum are reletive to a measurment point located on					
f. TOTAL WE	ELL VOLUME		2.95	measurment point located on the TOC.					
WELL PURGI	NG DATA:					** *			
a. Purge Met	thod:			2" Grundfros R		nersible pump	)		
b. Purge Vol.	. (@2.95 gal	. per well vol.):	;	14.75 gal		1 - 4 - 4			
c. Field Wate	or Quality Mo	onitoring Equipa	nent:	pH - Cole Palme		ond Hanna	HI8/33		
d. Pump Flov	v Rate:			1 gol./m					
e. Method of	Purge Wate	r Disposal:		17年 - 55 gallo	n arums				
						<del></del>	1		
Volume			-44	Specific	Description	Odor	Comments		
Removed (gal.)		T°c	pH	Conductance	cloudy	NO			
3	14:51	20.7°C	6.9	1089	Cleak	ه م	*		
۶	14:53	20.8 ℃	6.9		CRAR	3 14			
15	15:00	20.8°C	6.9	1085	- C/( //				
	1-0-0	70 800	6.9	10 64	clear	ه س			
Sample	15:08	20.8°C	8./						
SAMPLE CO Method: Sample Cont Sample Pres Analyses: Laboratory:	tainers:	Disposable Te 40 ml VOA vi HCL and ICE	als to 4°c 8020 + MT	BE, EPA Method	8015 mod.	TPHg ds, CA			
COMMENTS									
COMMENTS									

Site Name:	E-Z Serve	#100877			Job #:	MY40				
Location:		A Street, Hayw	ard, CA	-	Date:	6/14/96				
Samplers:	T. Nicotera			-	Well ID: ハルーノロ					
Weather:		sunny ~80°F		-						
				<del></del>						
WATER COL	UMN INFOR	MATION (ft.) [1					a 5 //			
a. Depth to V	Vater:		13.89	_	TOC Elevati		97.11			
b. Total Well	Depth:		31.80	Water Table Elevation: 83.22						
c. Length of	water colun	nn:	17.91							
d. Well Casin	g Volume:		2.92							
e. Well Scree	n Length:		10'	[1] All datum are reletive to a						
f. TOTAL WE	ELL VOLUM	<b>E:</b> .	2.92	-		point locate	d on			
					the TOC.					
WELL PURGI	NG DATA:			_						
a. Purge Met				2" Grundfros R	edi-Flow sub	nersible pum	Р			
b. Purge Vol.	. (@ <i>.<u>२.१</u>∡</i> ga	i. per well vol.):	•	14.60 gal-						
c. Field Wate	r Quality M	onitoring Equipr	nent:	pH - Cole Palm		Cond Hann	a HI8733			
d. Pump Flov	v Rate:			1 gal/mi						
e. Method of	Purge Wate	er Disposat:		17-H - 55 gallo	n drums					
					المسترين في ا					
<u> </u>			22211111111111111111111111111111111111							
Volume				Specific						
Removed (gal.)	Time	T°c	pH	Conductance	Descriptiom	Odor	Comments			
/	11:51	21.5 °C	6.9	827	CLEAK	ه سر				
5	11:55	21.0°c	6-8	811	clear	ه سر				
10	11:57	21.0°c	6.8	808	Clear	סמק				
					<u> </u>					
<del></del>					<u> </u>					
Sample	12:03	ے° 20.5	6.9	805	cleAR	NO				
			<u> </u>			•	, , ,, ,			
SAMPLE COL	LECTION M	ETHOD:								
Method:		Disposable Te	flon Bailer				,			
Sample Cont	ainers:	40 ml VOA vi	als							
Sample Prese	rvation:	HCL and ICE t	0 4°C				····			
Analyses:		EPA Method 8	3020 + MT	BE, EPA Method	8015 mod.	TPHg				
Laboratory:		Centrum Anal	ytical Labor	atories, Inc. loca	ted in Redian	ds, CA				
COMMENTS:										
	<del></del>									
							!			
<u> </u>										
	<del></del>									

0' 11	5 7 Comin #	400077			Job #:	MY40	
Site Name:	E-Z Serve #100877 525 West A Street, Hayward, CA T. Nicotera\A. Lamb			•	Date:	6/14/96	
Location:				•	1		
Samplers: Weather:		unny ~80°F		•		_MW-11	
Wattiel.	Cital and s	y <u></u>	<u> </u>	•			
		/ATION (ft.) [1	1:		TOC Elevation	20.	92.68
a. Depth to V		-	10.61	•	Water Table		82.07
b. Total Well		-	25.00	•	Well Diamet		27.07
c. Length of v		n:	14.37	•	TTOII DIGITION	<b>01.</b>	
d. Well Casin		-	14.39 2.35 10'		All datum as	e reletive to a	
e. Well Scree		-		. "		point located	
f. TOTAL WE	rr Aorawé	<b>.</b> .	2.35	•	the TOC.	point locator	. •
					ui# 100.		
WELL PURGI				2" Grundfros R	edi-Flow sub	nersible pumo	)
a. Purge Meti	nod:	ولا المرد المريد مم		11.75 gal.	00111011 000	The state of the s	
b. Purge Vol.	(@- <u>₹ - 52</u> gal.	per well vol.):	nent:	pH - Cole Palme	ar 5900-00. (	Cond Hanna	HI8733
		nitoring Equipn	iloitt.	1 gol. /min			
d. Pump Flow e. Method of		· Dienoeal:		17-H - 55 gallo			The state of the s
e. Method of	Luide saure	Disposar.				······································	)
Volume			_ti	Specific	Description	Odor	Comments
Removed (gel.)	Tlme	T°c	pH	Conductance		N0	
4	11:17	21.5°c	6.6	/2.27	CLEAR		
7	11:18	21.0°C	6.6	1079	clear	NO	
10	11:31	20.95°C	6.6	1002	Clear	1 /0	
							<u> </u>
				994	CleAR	פע	<u> </u>
Sample	11:27	20.500	6.6	7.79	-/ -/ -/ -		
SAMPLE COLLECTION METHOD:  Method: Sample Containers: Sample Preservation: Analyses: Laboratory:  COMMENTS:  Disposable Teflon Bailer 40 ml VOA vials HCL and ICE to 4°c EPA Method 8020 + MT Centrum Analytical Labor				BE, EPA Method atories, Inc. loca	8015 mod. · ited in Redian	TPHg ds, CA	

Site Name:	E-Z Serve	¥100877		Job #: MY40				
Location:	525 West A Street, Hayward, CA			_	Date:	6/14/96	<u>, , , , , , , , , , , , , , , , , , , </u>	
Samplers:	T. Nicotera\A. Lamb			•	Well ID:	MW-12	2	
Weather:	Clear and sunny ~80°F			<b>-</b>		_		
		MATION (ft.) [1	]:		TOC Elevation	ın'	99.03	
a. Depth to V			14.99	-	Water Table		84 04	
b. Total Well		•	30.00	-	Well Diamete		84.04	
c. Length of		ın:	15.01	-	Mell Diamere	3f •		
d. Well Casin	_	•	2.45	- (41	All datum are	- reletive to		
e. Well Scree			10"	- [1]	measument			
f. TOTAL WE	IL VOLUME		2.45	-	the TOC.	point locate	<i>a</i> 011	
WELL PURGI				2" Grundfros Re	di-Elow euhm	persible numi	,	
a. Purge Met	hod:	والمروالمرور المراور		12.25 gal		(a. a.a.a paili		
b. Purge Vol.	(@ <u>&lt; .9</u> 3 gal	, per well vol.):		pH - Cole Palme	. 5900-00 C	ond Hanna	HI8733	
		nitoring Equipn	nent:	/ gal/mi				
d. Pump Flov		. <b>D</b>		17-H - 55 gailor				
e. Method of	Purge Wate	r Disposal:		17-H - 55 gailo	I Grania		,	
						1	-,-	
Volume Removed (gal.)	Time	T°c	рH	Specific Conductance	Descriptiom	Odor	Comments	
	12:31	22.5°C	2.1	200	cloudy	No		
<u> </u>	12:35	72.0°c	7.0	690	cloudy	No		
/6	12.38	21.7°c	7.0	201	Clear	No		
	1 77.57							
	·							
Sample	12:43	20.7°C	7.0	703	clear	No		
							<u> </u>	
SAMPLE COLLECTION METHOD:  Method: Disposable Teflon B.  Sample Containers: 40 mi VOA vials  Sample Preservation: HCL and ICE to 4°c  Analyses: EPA Method 8020  Centrum Analytical			als to 4°c 3020 + MT	- MTBE, EPA Method 8015 mod TPHg aboratories, Inc. located in Redlands, CA				
COMMENTS							· · · · · · · · · · · · · · · · · · ·	
							<u> </u>	

	E 7 O	100077			Job #:	MY40		
Site Name:	E-Z Serve #100877 525 West A Street, Hayward, CA T. Nicotera\A. Lamb			Date: 6/14/96 Well ID: μω-/3				
Location:								
Samplers:								
Weather:	Clear and sunny ~80°F			-				
MATER COL	HIMN INFORK	MATION (ft.) [1	1:					
a. Depth to \			12.91		<b>TOC Elevatio</b>	n:	96.80	
b. Total Well		-	30.00	-	Water Table	Elevation:	83.89	
	water columi	- -	17.09	•	Well Diamete	r:	2*	
d. Well Casir		" <b>-</b>	2.79	•				
e. Well Scree		•	101	<b>-</b> [1]	All datum are	reletive to	<b>.</b>	
	ELL VOLUME:		2.29	•	measurment			
I. IOIAL W	ELL AOLOMÍ.	' . <del>-</del>	<u> </u>	•	the TOC.	•		
WELL PURGI	ING DATA							
a. Purge Met				2" Grundfros R	edi-Flow subm	ersible pump		
a. Purge Met	(100. (ම 2.79 asl	per well vol.):		13.95 844				
p. Purge Vol.	، ر <u>سم ۲۰</u> ۶۰ gai. مع Ouglity Mo	nitoring Equipm	nent:	pH - Cole Palme	r 5900-00, C	ond Hanna	HI8733	
d. Pump Flov		Intolnia adailan		1 gal. Juin			'	
	f Purge Water	Disposal:		17-H - 55 gallo	n drums			
e. Method O	I Laida Marci	Disposa			التاجميد وسنته النفاد والمعاولين والمعاولين والمعاولين والمعاولين والمعاولين والمعاولين والمعاولين والمعاولين			
Volume			4.	Specific	Description	Odor	Comments	
Volume Removed (gal.)	Time	T°c_	рН	Conductance	Descriptiom	Odor	Comments	
	1 Time / 0:07	21.5°c	7.0	Conductance	clear	No	Comments	
Removed (gal.)		21.5°c 20.5°c	7.0 7.0	Conductance	Clear Clear	NO NO	Comments	
Removed (gal.)	10:07	21.5°c	7.0	Conductance	clear	No	Comments	
Removed (gal.)	10:07	21.5°c 20.5°c	7.0 7.0	Conductance	Clear Clear	NO NO	Comments	
Removed (gal.)  S  (O  /S	10:07	2/.5°c 20.5°c 20.5°c	7.0 2-0 7.0	(104 99/ 978	Clear Clear Clear	NO NO	Comments	
Removed (gal.)	10:07	21.5°c 20.5°c	7.0 7.0	Conductance	Clear Clear	NO NO	Comments	
Removed (gal.)  S  10  15	10:07 10:12 10:17	2/.5°c 20.5°c 20.5°c	7.0 2-0 7.0	(104 99/ 978	Clear Clear Clear	NO NO	Comments	
Sample SAMPLE CO Method: Sample Cont	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi	ス/・グ・c マの、グ・C マの、グ・C ス/・ク・C THOD: Disposable Te 40 ml VOA vi	7.0 2.0 7.0 7./ flon Bailer	(104 99/ 978	Clear Clear Clear	NO NO	Comments	
Sample  SAMPLE CO Method: Sample Cont Sample Pres	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi	スハジャ マの、ジェ マの、ジェ マルのキュ Disposable Te 40 ml VOA via HCL and ICE to	7.0 2.0 7.1 flon Bailer	Conductance (1/04 99/ 978 978	Clear Clear Clear	NO NO NO	Comments	
Sample  SAMPLE CO Method: Sample Cont Sample Pres	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (/ 0 4 9 9/ 9 9/ 9 78  9 66  BE, EPA Method	clear clear clear	No No No	Comments	
Sample Sample Cont Sample Prese Analyses:	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (1/04 99/ 978 978	clear clear clear	No No No	Comments	
Sample  Sample  Sample Cont Sample Cont Sample Pres Analyses: Laboratory:	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi tainers: ervation:	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (/ 0 4 9 9/ 9 9/ 9 78  9 66  BE, EPA Method	clear clear clear	No No No	Comments	
Sample  Sample  Sample Cont Sample Cont Sample Pres Analyses: Laboratory:	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi tainers: ervation:	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (/ 0 4 9 9/ 9 9/ 9 78  9 66  BE, EPA Method	clear clear clear	No No No	Comments	
Removed (gal.)  S  10  15  Sample	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi tainers: ervation:	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (/ 0 4 9 9/ 9 9/ 9 78  9 66  BE, EPA Method	clear clear clear	No No No	Comments	
Sample  Sample  Sample Cont Sample Cont Sample Pres Analyses: Laboratory:	/ 0:07 / 0:12 / 0:12 //:00 LLECTION Mi tainers: ervation:	スハジャ スの、Sで スの、Sで スルの・で マルの・で Disposable Te 40 ml VOA via HCL and ICE t	7.0 2.0 7.0 7.1 flon Bailer als 0 4°c	Conductance (/ 0 4 9 9/ 9 9/ 9 78  9 66  BE, EPA Method	clear clear clear	No No No	Comments	

Site Name:	E-Z Serve #100877 525 West A Street, Hayward, CA			Job #: MY40				
Location:				_	Date:	6/14/96		
Samplers:	T. Nicotera		•	Well ID: <u> </u>				
Weather:	Clear and s	unny ~80°F		•				
WATER COLU	JMN INFOR	MATION (ft.) [1	1):				08 /	
a. Depth to W	/ater:		14.96 30.00 15.10 2.45	•	TOC Elevation		99.01	
b. Total Well			30,00	-	Water Table		84.11	
c. Length of v	water colum	n:	15.10		Well Diamete	er:	2"	
d. Well Casing			2.45	•				
e. Well Screet	n Length:		10'	[1]	All datum are			
f. TOTAL WE	LL VOLUME	• .	2.45	•	measurment the TOC.	point located	on	
WELL PURGIN				2" Grundfros Re	odi. Elour euhm	nareible numr		
a. Purge Meth	nod:					ioraibio parri		
		. per well vol.):		pH - Cole Palme	r 5900-00 C	ond Hanna	HI8733	
		nitoring Equipa	nent:	1 gal min	31 0000 007 0			
d. Pump Flow		. Diamandı		17-H - 55 gallor	n drums			
e. Method of	Purge water	r Disposat:		17-11 - 00 ganor	T G. G. T. G.			
Volume		T°c	pH	Specific Conductance	Descriptiom	Odor	Comments	
Removed (gal.)	Time	20.5°C	6.9	1049	CLEAR	No		
<u>2</u> S	13:16	20.0°C	6.9	92/	clear	פ אין		
	13:18				CLEAR	NO		
	.211	20000	4.9	983		, ,		
10	13:21	20.0°C	6.9	983				
	13:21	20.0°C	6.9	9,83				
(0						No		
	13:21 13:25	20.0°c 20.0°c	6.9	983	Cleak			
(0	/3:25 LECTION Miners: rvation:	20.0°C  ETHOD: Disposable Te 40 ml VOA vi HCL and ICE t EPA Method 8	6.9 flon Bailer als to 4°c 3020 + MTI		c/e4K 8015 mod	<i>№</i> o		
Sample SAMPLE COL Method: Sample Conta Sample Preser Analyses: Laboratory:	/3:25 LECTION Miners: rvation:	20.0°C  ETHOD: Disposable Te 40 ml VOA vi HCL and ICE t EPA Method 8	6.9 flon Bailer als to 4°c 3020 + MTI	874 BE, EPA Method	c/e4K 8015 mod	<i>№</i> o		

#### APPENDIX C

## LABORATORY ANALYTICAL REPORT AND CHAIN OF CUSTODY

## Centrum Analytical Laboratories, Inc.

NIFIED HAZARDOUS WASTE TESTING LABORATORY . CHEMICAL AND BIOLOGICAL ANALYSES

Client: Brown & Root

455 Fairway Dr., Ste. 200 Deerfield Beach, FL 33441 Date Sampled: Date Received:

06/14/96

Job Number:

06/18/96 10313

Project: EZ Serve #10877

#### **CASE NARRATIVE**

The following information applies to samples which were received on 06/18/96:

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested.

Report approved by:

Robert R. Clark, Ph.D. Laboratory Director

**ELAP # 1184** 

DL: Detection Limit -- The lowest level at which the compound can reliably be detected under normal laboratory conditions,

ND: Not Detected - The compound was analyzed for but was not found to be present at or above the detection limit.

NA: Not Analyzed -- Per client request, this analyte was not on the list of compounds to be analyzed for.



## Modified 8015 - Total Volatile Hydrocarbons as Gasoline

Client:

Brown & Root

Project:

EZ Serve #10877

Job No.:

10313

Matrix: Analyst: Water GB Date Sampled:

06/14/96

Date Received:

06/18/96

Date Analyzed:

06/21-24/96

Batch Number: 015GW0915

	Detection	Petroleum Hydrocarbons as	
	Limit	Gasoline	~
Sample ID	mg/L	mg/L	<del></del>
Method Blank	0.50	ND	
MW13/877	0.50	ND	
MW11/877	0.50	21	
MW10/877	0.50	1.7	
MW12/877	0.50	ND	
MW14/877	0.50	1.9	
MW7/877	0.50	4.4	
MW8/877	0.50	ND	
MW5/877	0.50	11	
MW6/877	0.50	14	
MW3/877	0.50	6.0	
MW2/877	0.50	23	
MW1/877	0.50	24	
MW4/877	0.50	17	
DUP/877	0.50	17	
TB/877	0.50	ND	
EQ/877	0.50	ND	
			,

## QC Sample Report - EPA 8015M Gasoline

Matrix: Water

Batch #: 8015GW0915

#### **Batch Accuracy Results**

Sample ID: Laboratory Cont	trol Sample	e		
Analyte	Spike Concentration mg/L	% Recovery LCS	Acceptance Limits % Recovery	Pass/Fail
Gasoline	5.0	87	42 - 122	Pass

Analytical Notes:	

#### **Batch Precision Results**

MS/MSD Sample ID: Laboratory Control Sample

Gasoline	4.36	4.42	1%	24%	Pass
Analyte	Spike Sample Recovery mg/L	Spike Duplicate Recovery mg/L	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass/Fail

Ana	lytica	i Not	es:	 	
l					
l .				 	
	<b>v</b>				

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate



#### EPA 8020 - BTEX and MtBE

Client:

Brown & Root

Project:

EZ Serve #10877

Job No.:

10313

Matrix: Analyst: Water

GB

Date Sampled:

06/14/96

Date Received:

06/18/96

Date Analyzed:

06/21-24/96

Batch Number:

8020W1076

	Methyl-tert Butyl Ether	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (BFB)
Detection Limit:	0.001	0.0006	0.002	0.001	0.006	Limit: >50%
Sample ID	mg/L	mg/L	mg/L	mg/L	mg/L	
Method Blank	ND	ND	ND	ND	ND	94 %
MW13/877	ND	ND	ND	ND	ND	92 %
MW11/877	0.036	0.57	0.099	3.0	3.5	86 %
MW10/877	ND	ND	ND	0.12	ND	84 %
MW12/877	ND	ND	ND	ND	ND	<b>83</b> ; <b>%</b>
MW14/877	0.003	0.019	0.008	0.24	080.0	86 %
MW7/877	0.011	0.085	ND	0.47	0.20	89 %
MW8/877	ND	ND	ND	0.004	ND	79 %
MW5/877	0.11	2.1	0.033	0.57	1.0	82 %
MW6/877	0.061	0.80	0.099	1.5	0.73	90 %
MW3/877	0.015	0.58	0.021	0.49	0.58	88 '%
MW2/877	0.43	3.3	0.12	1.5	3.6	93 %
MW1/877	0.24	6.9	0.15	0.96	1.5	91 %
MW4/877	0.72	4.1	0.72	0.69	1.8	89 %
DUP/877	0.71	3.0	0.72	0.70	1.8	91 %
TB/877	ND	ND	ND	ND	ND	105 %
EQ/877	ND	ND	ND	ND	ND	93 %



#### QC Sample Report - EPA 8020

Matrix: Water

Batch #: 8020W1076

#### **Batch Accuracy Results**

Sample ID: Laboratory Control Sample

Analyte	Spike Concentration mg/L	% Recovery LCS	Acceptance Limits % Recovery	Pass/Fail
Benzene	0.02	106	70 - 130	Pass
Toluene	0.02	99	70 - 130	Pass
Ethyl Benzene	0.02	107	70 - 130	Pass
m-, p-Xylene	0.04	102	70 - 130	Pass
o-Xylene	0.02	101	70 - 130	Pass

Analytical Notes:	

#### **Batch Precision Results**

MS/MSD Sample ID: Laboratory Control Sample

Analyte	Spike Sample Recovery mg/L	Spike Duplicate Recovery mg/L	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass/Fail
Benzene	0,106	0.114	7%	25%	Pass
Toluene	0.099	0.108	9%	25%	Pass
Ethyl Benzene	0.107	0.111	4%	25%	Pass
m-, p-Xylene	0.102	0.112	9%	25%	Pass
o-Xylene	0.101	0.110	9%	25%	Pass

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate

290 TENNESSEE STREET REDLANDS, CA 92373

(909) 798-9336 • (800) 798-9336 FAX (909) 793-1559

#### **Chain of Custody Record**

Centrum Job # /03/3

Page / of Z

													Analy	/868	Requ	este	ed _				<u> </u>
M $  E$					Project Na EZ	roject Name:  EZ Serve #100877  hone: Fax: 64) 570-5885 (954) 570-5974					Lea	Ges/BTEX			\$		8	e E			Turn-around time
Project Manager: Phone: (954) 570-5							Fax:			Bs Pest		Ges			RCR		₹	ō	78E		□ 24 Hr. RUSH*
Hrnold C. LAMB (954) 570-5							885 (954) 570-5974 Fairnay Dr., Sv. 7 200 Beach, FL 33441				Scr		- [	83	<u>e</u>	- 1	Conductivity	ž	2		☐ 48 Hr. RUSH*
Client Name: Address: 455 (Company) Brown (, Root Deerfield						455	Fairway Dr., Suite 200			8	3	8		23	3		Ę	ş	3		Normal TAT *Requires prior approval,
Company)	310WV	1 4,1400	7		Deerf	ielo !	Beach, FL 33441		0 8240	흏	300	Ē	₽		용		TSS (	윤			additional charges apply
Centrum ID (Lab use only)		imple ID d appear on re	port) g	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	GCMS: 8260	5080: Pesticides PCBs Pest/PCB	8015M: Diesel Fuel Screen	8015M: Gasoline 5020	418.1 (TRPH)	Semivolatiles: 8270 625	Metals: TTLC(CAM)	Lead Only	म का मध	Flashpoint Fluoride Hex Chrome	8030		Remarks/ Special Instructions
1	MWI	3/877	•	14/46	j1:00	GW	EZ SErve #100877	3-U0A5				X							X		
2	MWI	1/877	الم	14/46	11/27	6W						X							X		
ろ	MWI	0   877	6	14/96	12:03	6-W						X					_		X	_	
4	MWI	<u> 4877</u>	16	14/46	12:43	GW						X							X		
_5_	MWI	4/877	<u> </u>	14/46	13:25	GW						X.							X		
	mw7	1877		2/14/46	14:21	GW				<u> </u>		X		$A \rightarrow A \rightarrow$							
7	MW	3/877	4	14/46	15:08	EW						X					<u> </u>	_	X		
8	MWS	1877	<u> </u>	14/46	18-50	GW				-	<u> </u>	X		_					X		
<u> </u>	MWb	877		14/46	14:17	ow		\_	-	-		ŢŽ	_		-			-	X		
10	MW3	1877	l	14/46	1405	GW	<u> </u>	1 1			1_	X					<u> </u>		IXI		
Relinquished	by: (Sample	's Signature	"	-	Date 6/17/46	Time /845	Relinquished by:		Det	be	Пm	a \							ersonn	el:	Sample Disposal
Received by:		~ ry			Date	Time	Received by:			te .	Πm	•	Samples chilled? A Yes D No Custody seels? D Yes D No							☐ Client will pick up	
The delivery	of sample	s and the s	ignatur	re on this	chain of cu	stody form	Relinquished by:	·	Det	te	Tim	•	All	semp	le cont	aktor	rs Inta	ct?	Yes [		☐ Return to client
constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.							•			iek	177	720	ים	Couri	<b>*</b> X	UPS/	☐ Lab disposal fee \$5				
Laboratory	Notes:				•													_ <del></del>			Sample Locator No.
																					Voa

290 TENNESSEE STREET REDLANDS, CA 92373

(909) 798-9336 • (800) 798-9336 FAX (909) 793-1559

#### **Chain of Custody Record**

											Analy	ses	Requ	este	d					
	nold LAMb		Project Name: EZ SERVÉ #100877 Phone: Fax: (4) 570-5885 (954) 570-5974 Address: 455 Fairway Drive, Suite 200 Deer field Beach, FL 33441						sel Fuel Screen	toline 8020 Gas/BTEX		Sentivolatiles: 8270 625 Metals: TTLC(CAM) PP RCRA			pH TDS TSS Conductivity COD	Fashpoint Fluoride Hex Chrome	20+MIBE		 	
Centrum ID (Lab use only)	Sample ID (As It should appear on report)	Date	Time sampled	Sample matrix	Site location	Containers: # and type	GCMS: 8260	5080: Pest	8015M: Diesel	8015M: Gesoline	418.1 (TRPH)	Semivolatiles:	Metals: TT	Lead Only	T SOT HO	Flashpoint	802		s	Remarks/ Special Instructions
11	MW2/877	6/14/46	19:04	GW	EZ Serve \$100877	-3 VONS				X			$\Box$				X			
12	MW1 877	14/41	16:53	G-W				$\perp$		X			$\dashv$	-			X		_	
13	MW4/877	6/14/96	19:32	GW			_			X				_			X		- 0	I'd received
14	DU11877	6/11/46	_	GW		1-	_	$\perp$		X							X		_	ly received I voa
15	TB 877	_		W		1-UDA	ŀ			ļ.							X	<del>                                     </del>		
16	EU/877	6/14/46	10:56	W		1-UDA	-			X							X			<u> </u>
										$\vdash$									-	
				<u> </u>					-										-	<del> </del>
									-								$\top$			
Relinquished	by: (Sampler's Signature)		Date 6/1/46	Time /p:Y5	Relinquished by:		Det	<b>:</b>	Time	•	To be completed by laboratory personnel:									Sample Disposal
Received by:	The same of the sa		Time	Received by:			Oute Ti		Time		Samples chilled? Yes I N Custody seals? I Yes I N								Client will pick up	
The delivery	of samples and the signal	ture on this	chain of cu	Relinquished by:		Def	te	Tim	•	Alt	All sample containers intact?								Return to client	
constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.								E/15h		ว็วอ	Courter & UPS/Fed Ex Hend carried								,	Lab disposal fee \$5
Laboratory	Notes:	-			100000	··•			-											Sample Locator No.
														Voc						