- Very Screened interval + which wells to Sample of change in Ger elasate in - 5 wells & Greened 20-40' by s. - discretificate PNAs and years. 15 ? 5 B hard simply 14 PNA NOT May of the discretion.

SEMI-ANNUAL GROUNDWATER MONITORING REPORT FOR ARROW RENTALS LIVERMORE, CALIFORNIA

OCTOBER 1999

Prepared for: Don-Sul Inc. 187 North L Street Livermore, California 94607

Date Prepared: December 3, 1999

By: Environmental Sampling Services and Aquifer Sciences, Inc.







Clear Eva

Enclosed are the latest

reports.

Hope your Christmas was wonderful & have a happy New Year 2000.

Screenly Ceta

November 19, 1999 971275

Ms. Rita Sullins Don-Sul, Inc. 187 North L Street Livermore, CA 94550

Subject: Semi-Annual Groundwater Monitoring, October 1999

187 North L Street, Livermore, California

Dear Ms. Sullins:

Groundwater monitoring was conducted in October 1999 at the Arrow Rentals site, located at 187 North L Street in Livermore, California. This report presents the groundwater measurement and sampling procedures, evaluation of hydrogeologic data, and the results of laboratory analyses.

MEASUREMENT AND SAMPLING PROCEDURES

On October 5, 1999, groundwater monitoring was performed at the site by Environmental Sampling Services of Martinez, California. The locations of the groundwater monitoring wells are illustrated on Figure 1. Sampling procedures and measurements are described in the field activity report, included in Appendix A.

Prior to sampling, the depth of static groundwater was measured in all four wells (W-1s, W-3s, W-Bs, and W-Es) to the nearest 0.01 foot using an electrical water level recorder. The interface probe was washed using a Liqui-Nox® detergent solution, rinsed with potable water, and rinsed with distilled water. Groundwater elevation data for each well are listed in Table 1. The potentiometric surface corresponding to groundwater elevations measured on October 5, 1999, is shown on Figure 2.

All four wells were purged and sampled after the static water level measurements were recorded. At least three casing volumes of groundwater were removed from each well prior to sampling. Each well was purged using a submersible pump or disposable bailer. Purge water from the monitoring wells was stored in labeled 55-gallon drums, pending the analytical results.

Water quality parameters (pH, specific conductance, temperature, turbidity, color, and odor) were recorded at regular intervals during well purging. Water quality parameters for the three

wells were recorded in the sampling logs. Copies of the well sampling logs are included in Appendix A.

Groundwater samples were collected from each well using new disposable bailers. Groundwater samples were collected in clean bottles supplied by the analytical laboratory, labeled, stored on ice in a cooler, and transported under chain-of-custody protocol within 24 hours of collection to Columbia Analytical Services, a California-certified laboratory located in Santa Clara, California. A travel blank was prepared by the laboratory and accompanied the groundwater samples for quality assurance purposes.

The groundwater samples were analyzed for total petroleum hydrocarbons quantified as gasoline (TPH-gasoline) by EPA Method 8015 Modified; total petroleum hydrocarbons quantified as diesel (TPH-diesel) by EPA Method 8015 Modified with a silica gel cleanup; benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA Method 8020; and methyl tertiary butyl ether (MTBE) by EPA Method 8020 Modified. The travel blank was analyzed for gasoline by EPA Method 8015 Modified, BTEX by EPA Method 8020, and MTBE by EPA Method 8020 Modified. The sample collected from well W-1s was also analyzed for polynuclear aromatic hydrocarbons (PNAs) by EPA Method 8270.

HYDROGEOLOGIC DATA EVALUATION

Groundwater elevations in the four monitoring wells ranged from 441.47 feet in well W-Es to 446.72 feet in well W-Bs. The groundwater levels measured in October 1999 were approximately 6 feet lower than those measured in April 1999. Based upon measurements recorded on October 5, 1999, groundwater generally flows to the west-southwest under a hydraulic gradient of approximately 0.020 ft/ft (Figure 2).

RESULTS OF LABORATORY ANALYSES

Results of laboratory analyses for groundwater samples collected from the wells in October 1999 are summarized in Table 2. The laboratory report and chain-of-custody documentation are included in Appendix B.

Gasoline was detected in the groundwater samples collected from all four wells at concentrations ranging from 68 to 82,000 μ g/L. TPH-diesel was detected in the groundwater samples collected from all four wells at 88 to 60,000 μ g/L. Benzene was detected in the samples collected from wells W-1s, W-3s, and W-Bs at concentrations ranging from 290 to 5,500 μ g/L. These concentrations exceeded the Maximum Contaminant Level (MCL) of 1 μ g/L, established for benzene in drinking water. Toluene (up to 4,500 μ g/L), ethylbenzene (up to 2,500 μ g/L), and xylenes (up to 14,000 μ g/L) were detected in the samples collected from wells W-1s, W-3s, and W-Bs. The concentrations of toluene, ethylbenzene, and xylenes in wells W-1s and W-Bs

exceeded their respective MCLs. MTBE was detected in the sample collected from well W-Es at 4 µg/L. The MCL for MTBE is 5 µg/L. Although MTBE was not detected in the samples collected from wells W-1s and W-Bs, the laboratory detection limits were elevated due to high concentrations of gasoline and BTEX. Gasoline, BTEX, and MTBE were not detected in the travel blank.

The groundwater sample collected from well W-1s contained the highest levels of gasoline, diesel, and BTEX. At the request of Alameda County, the sample from well W-1s was also analyzed for PNAs. Naphthalene was detected in the sample at 510 µg/L. 2-Methylnaphthalene was detected in the sample at 280 µg/L. MCLs have not been established for naphthalene and 2-methylnaphthalene. No other PNAs were detected in the sample collected from well W-1s.

SUMMARY AND CONCLUSIONS

Table 3 presents a summary of the results of laboratory analyses performed on groundwater samples collected from wells at the site since March 1996. High levels of gasoline, diesel, BTEX, and MTBE have been consistently detected in groundwater samples collected from wells W-1s and W-Bs. Low levels of gasoline, diesel, BTEX, and MTBE have also been detected in samples collected from wells W-3s and W-Es. Fluctuations in the concentrations of gasoline, diesel, and BTEX in groundwater samples collected from these wells may be related to seasonal variations in groundwater elevations and the groundwater flow direction. The direction of groundwater flow beneath the site has varied over time from southwest to west-northwest.

RISK ASSESSMENT

At Alameda County's request, we prepared a work plan to conduct a risk assessment for the site. Eva Chu of Alameda County approved the work plan in her letter dated April 26, 1999. The risk assessment will be completed and submitted by January 23, 2000.

Please call us if you have any questions concerning this report.

Respectfully yours,

Thomas E. Neely, REA

Hydrogeologist

Attachments

Rebecca A. Sterbentz, RG, CHG, REA

REBECCA A. STERBENTA No. 4119

President

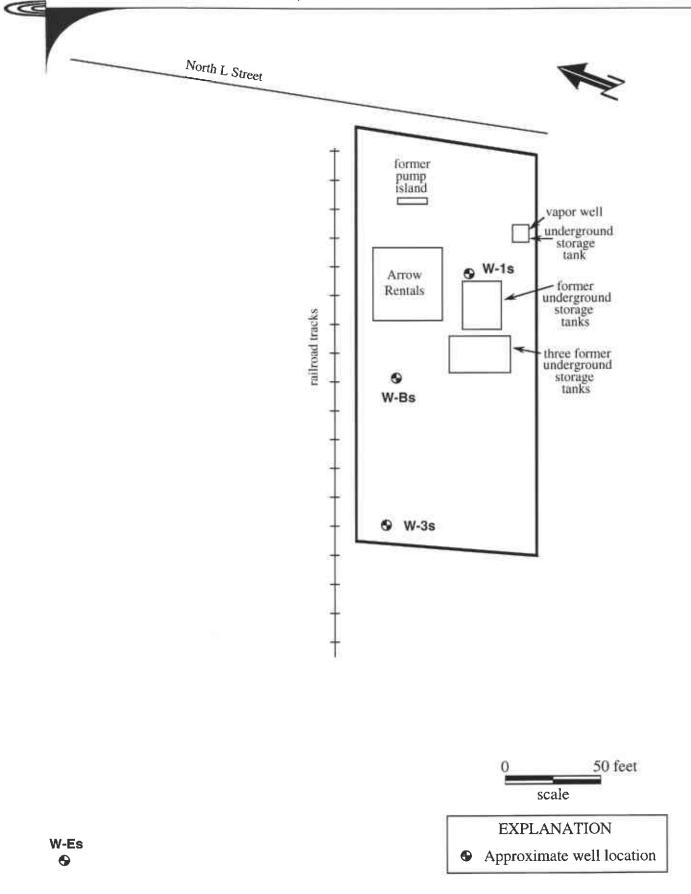


Figure 1. SITE MAP 187 North L Street, Livermore, California

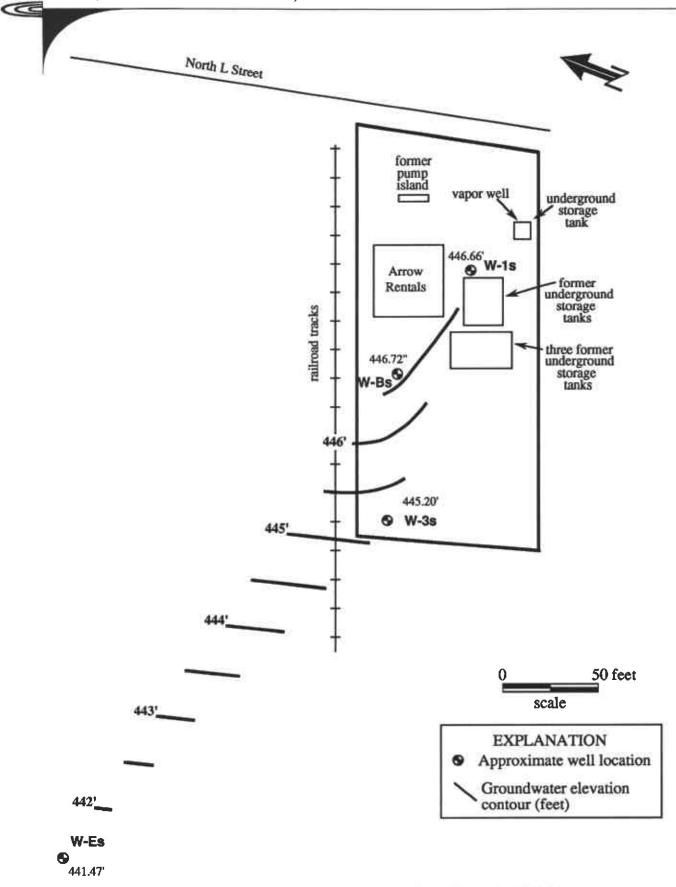


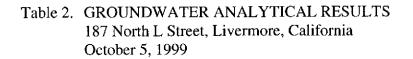
Figure 2. POTENTIOMETRIC SURFACE MAP (10/5/99) 187 North L Street, Livermore, California

Table 1. GROUNDWATER ELEVATION DATA 187 North L Street, Livermore, California October 5, 1999

Well Number	Top of Casing Elevation (feet above MSL)	Depth to Water (feet below TOC)	Water Elevation (feet above MSL)
W-1s	479.09	32.43	446.66
W-3s	476.98	31.78	445.20
W-Bs	478.82	32.10	446.72
W-Es	474.66	33.19	441.47

MSL = mean sea level (elevations based on City of Livermore datum)

TOC = top of PVC casing



Well Number	TPH- gasoline (µg/L)	TPH- diesel (µg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	Naphthalene (µg/L)	2-Methyl- naphthalene (µg/L)
W/ 1	92.000	60,000*	5,500	4,500	2,500	14,000	< 300	510	280
W-1s	82,000	,	•	,	•	,	_		
W-3s	1,500	1,000*†	290	9.5	53	9.8	< 6	NA	NA
W-Bs	38,000	7,300*	3,800	390	1,600	5,900	< 60	NA	NA
W-Es	68	88*	< 0.5	< 0.5	< 0.5	< 1.0	4	NA	NA
Travel Blank	< 50	NA	< 0.5	< 0.5	< 0.5	< 1.0	< 3	NA	NA
MDL	50-5,000	50-5,000	0.5-50	0.5-50	0.5-50	1.0-100	3-300	50	50
MCL	NE	NE	1	150	700	1,750	5	NE	NE

 $\mu g/L = micrograms per liter [parts per billion (ppb)]$

NA = not analyzed

NE = none established

TPH-gasoline = total petroleum hydrocarbons quantified as gasoline

TPH-dicsel = total petroleum hydrocarbons quantified as diesel

MTBE = methyl tertiary butyl ether

MDL = method detection limit

MCL = Maximum Contaminant Level, January 1999

^{*} The sample contained a lower boiling point mixture of hydrocarbons quantitated as diesel.

[†] The sample contained a higher boiling point hydrocarbon mixture quantitated as diesel. The chromatogram does not match the typical diesel fingerprint.

Table 3. SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER 187 North L Street, Livermore, California

Well Number	Date Sampled	TPH- gasoline (µg/L)	TPH- diesel (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (μg/L)	MTBE (μg/L)	Lead (µg/L)	Naphthalene (µg/L)	2-Methyl- naphthalene (µg/L)
W-1s	3/22/96	6,400	NA	580	470	85	1,100	< 500	NA	NA	NA
W-18 W-1s	11/22/96	170,000	NA NA	13,000	18,000	3,500	18,000	< 10,000	NA	NA	NA
W-18 W-1s	7/15/97	140,000	38,000*†	12,000	12,000	2,600	16,000	< 800	NA	NA	NA
W-18 W-18	10/29/97	650,000	180,000	14,000	19,000	7,800	35,000	< 3,000	NA	NA	NA
W-1s W-1s	4/27/98	6,700	2,200§	410	250	77	870	< 30	< 5	NA	NA
W-1s W-1s	10/23/98	99,000	18,000§	9,800	9,400	1,800	11,000	< 600	NA	NA	NA
W-1s W-1s	4/9/99	70,000	24,000	6,500	7,000	1,800	8,900	360	NA	330	ND
W-1s	10/5/99	82,000	60,000***	5,500	4,500	2,500	14,000	< 300	NA	510	280
W-3s	3/22/96	100	NA	13	6.9	5.3	14	< 5	NA	NA	NA
W-3s	11/22/96	3,200	NA	270	29.0	63.0	100	< 100	NA	NA	NA
W-3s	7/15/97	2,100	340**†	230	7	33	51	< 20	NA	NA	NA
W-3s	10/29/97	2,800	750††	630	31	71	69	< 30	NA	NA	NA
W-3s	4/27/98	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
W-3s	10/23/98	3,800	1,000§	500	28	90	37	35	NA	NA	NA
W-3s	4/9/99	980	430	240	4	37	3	< 12	NA	NA	NA
W-3s	10/5/99	1,500	1,000*** †††	290	9.5	53	9.8	< 6	NA	NA	NA
W-Bs	3/22/96	61,000	NA	9,800	8,000	2,200	11,000	< 5,000	NA	NA	NA
W-Bs	11/22/96	47,000	NA	5,100	3,100	1,400	7,800	< 2,500	NA	NA	NA
W-Bs	7/15/97	66,000	17,000‡‡‡	7,800	4,900	1,900	10,000	< 600	NA	NA	NA
W-Bs	10/29/97	44,000	27,000§§	6,000	500	1,500	6,400	380	NA	NA	NA
W-Bs	4/27/98	63,000	17,000§	6,100	5,400	1,900	9,100	< 600	NA	NA	NA
W-Bs	10/23/98	48,000	9,600§	6,700	1,200	1,500	6,200	< 300	NA	NA	NA
W-Bs	4/9/99	39,000	12,000	4,100	1,900	1,400	5,600	< 300	NA	NA	NA
W-Bs	10/5/99	38,000	7,300***	3,800	390	1,600	5,900	< 60	NA	NA	NA
W-Es	3/22/96	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 5	NA	NA	NA
W-Es	11/22/96	280	NA	24	0.6	1.8	2.2	< 5	NA	NA	NA
W-Es	10/23/98	82	69§	< 0.5	0.8	< 0.5	0.8	4	NA	NA	NA

Table 3 (continued). SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER 187 North L Street, Livermore, California

Well Number	Date Sampled	TPH- gasoline (µg/L)	TPH- diesel (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	Lead (µg/L)	Naphthalene (µg/L)	2-Methyl- naphthalene (µg/L)
W-Es	10/5/99	68	88***	< 0.5	< 0.5	< 0.5	< 1.0	4	NA	NA	NA
Travel Blank	7/15/97	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/29/97	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	4/27/98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/23/98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	4/9/99	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/5/99	< 50	NA	< 0.5	< 0.5	< 0.5	< 1.0	< 3	NA	NA	NA
MCL		NE	NE	1	150	700	1,750	5	50	NE	NE
AL		NE	NE	NE	NE	NE	NE	35	15	NE	NE

μg/L = micrograms per liter [parts per billion (ppb)]

NA = not analyzed

NE = none established

TPH-gasoline = total petroleum hydrocarbons quantified as gasoline

TPH-diesel = total petroleum hydrocarbons quantified as diesel

MTBE = methyl tertiary butyl ether

MCL = Maximum Contaminant Level, January 1999

AL = Action Level, January 1999

- * Sample contained heavy oil at 3,000 $\mu g/L$
- † The method blank contained heavy oil at 120 µg/L
- \ddagger Sample contained heavy oil at 1,600 µg/L
- § The chromatogram does not match the typical diesel pattern
- ** Sample contained heavy oil at 740 μ g/L
- †† Sample contained heavy oil at 88 µg/L
- ‡‡ Sample contained heavy oil at 490 μg/L
- §§ Sample contained heavy oil at $4,000 \mu g/L$
- *** The sample contained a lower boiling point mixture of hydrocarbons quantitated as diesel.
- ††† The sample contained a higher boiling point hydrocarbon mixture quantitated as diesel. The chromatogram does not match the typical diesel fingerprint.



FIELD ACTIVITY REPORT FOR SEMI-ANNUAL GROUNDWATER MONITORING EVENT ARROW RENTALS, LIVERMORE, CALIFORNIA

ESS Personnel: Jacki Lee and Stephen Penman

Activity Date: October 5, 1999

Decontamination Procedures

All downhole equipment was cleaned with a solution of Liqui-Nox® laboratory-grade detergent and potable water, rinsed with potable water, followed by a final rinse with distilled water.

Water Level Measurements

A total of four (4) monitoring wells were measured for static water level. All readings were performed with Solinst® electrical water level indicator (Table 1). Water level measurements were referenced to the surveyor's mark (a black mark on the top of well casing).

Field Equipment Calibration

All field measurements were performed in accordance with the instruments' operating and calibration procedures. Field measurements included: pH, specific conductance, turbidity, and temperature.

Field Activities

Friday, October 5, 1999: Well evacuation and monitoring of groundwater quality parameters for three (3) monitoring wells were performed. A minimum removal of three casing volumes and stabilization of water quality parameters were required prior to sampling. All wells were sampled for the following analyses: EPA Method 8015M (TPH (Gasoline)/BTEX, and MTBE) and TPH (Diesel). Monitoring well, W-1s, which reported the highest amount of diesel, was sampled for PNAs.

All wells were sampled with disposable bailers. Columbia Analytical Laboratories supplied all sample containers and packing material and performed all required analyses. All samples were properly preserved according to analysis.



QA/QC

Trip blanks for EPA Method 8015M were supplied and remained in the cooler containing all sample containers. No other QA/QC samples were required nor requested.

All work was performed under satisfactory workmanship and according to the Alameda County Health and Care Services' directive, dated October 8, 1997 and March 15, 1999.

Jacqueline Lee President

Attachment Table 1 Water Sample Log Sheets Chain of Custody



TABLE 1: SUMMARY OF WATER LEVEL MEASUREMENTS ARROW RENTALS LIVERMORE, CALIFORNIA

WELL IDENTIFICATION	DEPTH TO GROUNDWATER (ft., TOC) (Measured October 5, 1999)	WELL DEPTH (ft., TOC)
W-1s	32.43	44.64
W-Bs	32.10	44.47
W-3s	31.78	44.76
W-Es	33.19	44.32

TOC = Top of Casing



WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: W-Es DATE: 10/5/99													
Project Name: Arrow Rentals - Livermore, CA Project Task: Semi-Annual Groundwater Monitoring													
Well Description: .75" 2" 3" 4" 5" 6" Well Type: PVC Stainless Steel Other: Is Well Secured Yes No Bolt Size													
ls Well S	ecured 🐔	Yes No Bolt	Size _ /5	/16"	Type of lock	/ Lock nun	nber: <u>Masi</u>	<u>~</u>					
		mments:											
Purge Method: Teflon (PVC Disposable Baile) Peristaltic Pump GrundFos Redi-flow Other: Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated													
Method of Cleaning Pump: NA Alconox Liqui-Nox Tap Water DI Rinse Other:													
Method of Cleaning Bailer NA Alconox Liqui-Nox Tap Water DI Rinse Other:													
Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer GrundFos Redi-flow Pump Other:													
pH Meter Serial No.: 217254 / 330089 Spec. Cond. Meter Serial No.: 96H0203AB AE													
Date/Time Calibrated: 45 C P. Colors Serial No.: 45 C Spec. Cond. Meter Calibration: Self Test Other:													
								▲					
Water Le	vel at Sta	art (DTW):	<u> 33.19</u>	Wate	er Level Prior	To Sampli	ng: 36. '	<u>57</u>					
TD = 44.3	<u> 2</u> - 33.19	(DTW) = 11.13	(ft.of wa	ter) x "K" =	1.8 (Gais./C	(V) x <u>3</u>	(No. of CV)	= 5.4 (Gals.)					
"k" =	.023(.75" \	well) ('K''= 0.10						" = 1.46(6" well)					
	40.00		FIELD V	VATER Q	UALITY PARA	AMETERS							
Date	Time	Discharge	pΗ	Temp.	Specific Conductance	Turbidity	Color	Comments					
Date	7 111110	(Gallons)	β.,	(°C)	mS (uS)	' and any	00.0.						
10/5/00	10:30	G.1	7.28	20.1	850	203	it. Brown						
10/5/99	10.00	*.0	1.50	20.1	950	* 03		Fun Sods					
1 10:32 2.0 7.25 19.9 815 1247 "													
10/3/99	10:32		7.25					Funt State					
10/5/99	10:32	0.c 0.s	7.25 7.27	19.9	815 805	1247)I	Pitt Pages					
10/3/99	10:32 10:35 10:37	9.C 9.E 9.P	7.25 7.27 7.27	19.9 19.8 19.7	815 805 800	1247 748	ji te	11					
10/3/99	10:32 10:35 10:37 10:40	2.0 3.0 4.0 5.0	7.25 7.27 7.27 7.30	19.9 19.8 19.7	815 805 800 798	1247 748 344 414)1 tc	11 20 20 20 20 20 20 20 20 20 20 20 20 20					
10/3/99	10:35 10:35 10:37 10:40 10:43	2.0 3.0 4.0 5.0 6.0	7.27 7.27 7.27 7.30 7.32	19.9 19.8 19.7 19.6 20.1	815 805 800 798 784	1247 748 344 414 560)1 ts \$1	11 20 20 20 20 20 20 20 20 20 20 20 20 20					
10/3/99	10:32 10:35 10:37 10:40 10:43	2.0 3.0 4.0 5.0 6.0	7.25 7.27 7.27 7.30 7.32 7.34	19.9 19.8 19.7 19.6 20.1	815 805 800 798 784 768	1247 748 344 414 560 472)1 tt	Pint Pages					
10/3/99	10:32 10:35 10:37 10:40 10:43 10:46 10:49	2.0 4.0 5.0 6.0 7.0	7.25 7.27 7.27 7.30 7.32 7.34 7.33	19.9 19.8 19.7 19.6 20.1 19.7	815 800 798 784 768	1247 748 344 414 560 472 439)1 14 14 15	11 11 11 11 11 11 11 11 11 11 11 11 11					
	10:32 10:35 10:37 10:40 10:43 10:46 10:49	2.0 3.0 4.0 5.0 6.0 7.0 8.0 After Sampling	7.25 7.27 7.27 7.30 7.32 7.34 7.33	19.9 19.8 19.7 19.6 20.1	815 800 798 784 768 768	1247 748 344 414 560 472 439	11 16 16 16 16 16 16 16 16 16 16 16 16 1	11					
Total Dis	10:35 10:35 10:37 10:40 10:46 10:46 10:49 10:58	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling	7.25 7.27 7.27 7.30 7.32 7.34 7.35 7.39	19.9 19.8 19.7 19.6 20.1 19.7 19.7	815 800 798 784 768 768 771 Casing Volun	1247 748 344 414 560 472 439 402	11 14 14 14 14 14 14 14 14 14 14 14 14 1	11 11 11 11 11 11 11 11 11 11 11 11 11					
Total Dis Method o	10:35 10:35 10:40 10:40 10:46 10:49 10:58 charge:_of disposa	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling	7.25 7.27 7.27 7.30 7.32 7.34 7.35 7.39	19.9 19.8 19.7 19.6 20.1 19.7 20.4	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly	1247 748 344 414 560 472 439 402 nes Remov	ii ii ii ii ved:	11 11 11 11 11 11 11 11 11 11 11 11 11					
Total Dis Method of Date/Tim	10:35 10:35 10:37 10:40 10:43 10:46 10:49 10:58 charge:_ of disposa	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling	7.27 7.27 7.30 7.32 7.34 7.35 7.39 Illons water: (N:50	19.9 19.8 19.7 19.6 20.1 19.7 20.4 55 Gallon Analysis	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly	1247 748 344 414 560 472 439 402 nes Remov	ii ii ii ii ved:	11 11 11 11 11 11 11 11 11 11 11 11 11					
Total Dis Method of Date/Tim VOCs w/	10:35 10:35 10:37 10:40 10:43 10:46 10:49 10:58 charge:_ of disposa	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling 9.5 ga al of discharged ed: 10/5/79 @	7.27 7.27 7.30 7.32 7.34 7.35 7.37 1.35 0 water: (A:50 Glass Am	19.9 19.8 19.7 19.6 20.1 19.7 20.4 55 Gallon Analysis bers, Non-	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly	1247 748 344 414 560 472 439 402 nes Remov Tank Tre	ved:	** ** ** ** ** ** ** ** ** **					
Total Dis Method of Date/Tim VOCs w/	10:35 10:35 10:37 10:40 10:40 10:46 10:49 10:58 charge: _ of disposa ne Sample HCI), TPI	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling 9.5 ga al of discharged ed: 10/5/79 @	7.27 7.27 7.30 7.32 7.34 7.35 7.37 1.35 0 water: (A:50 Glass Am	19.9 19.8 19.7 19.6 20.1 19.7 20.4 55 Gallon Analysis bers, Non-	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly /No. of Bottles Preserved).	1247 748 344 414 560 472 439 402 nes Remov Tank Tre	ved:	** ** ** ** ** ** ** ** ** **					
Total Dis Method of Date/Tim VOCs w/ QA/QC:	10:35 10:35 10:37 10:40 10:40 10:46 10:49 10:58 charge: _ of disposa ne Sample HCI), TPI	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling 9.5 ga al of discharged ed: 10/5/79 @	7.27 7.27 7.30 7.32 7.34 7.35 7.37 1.35 0 water: (A:50 Glass Am	19.9 19.8 19.7 19.6 20.1 19.7 20.4 55 Gallon Analysis bers, Non-	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly /No. of Bottles Preserved).	1247 748 344 414 560 472 439 402 nes Remov Tank Tre	ved:	** ** ** ** ** ** ** ** ** **					
Total Dis Method of Date/Tim VOCs w/ QA/QC: Commer	10:35 10:35 10:37 10:40 10:40 10:49 10:58 charge: of disposa ne Sample (HCI), TPI None	3.0 4.0 5.0 6.0 7.0 8.0 After Sampling 9.5 ga al of discharged ed: 10/5/79 @	7.27 7.27 7.30 7.32 7.34 7.34 7.35 Water: (W:50 Glass Am	19.9 19.8 19.7 19.6 20.1 19.7 20.4 55 Gallon Analysis bers, Non- Equipmen	815 800 798 784 768 768 771 Casing Volum Drum(s) Poly /No. of Bottles Preserved). t Blank Blind	1247 748 344 414 560 472 439 402 nes Remov Tank Tre	ved:	** ** ** ** ** ** ** ** ** **					



WATER QUALITY SAMPLE LOG SHEET WELL IDENTIFICATION: W-3s DATE: 10/5/99																			
Project Name: Arrow Rentals - Livermore, CA Well Description: .75" 2" 3" (4") 5" 6" Well Type: PVC Stainless Steel Other:																			
			.75" 2" 3" 🍳																
			res / No Bolt			Type of lock /			<u>e</u>										
			mments: Bett																
Purge Method: Teflon (PVC Disposable Baile) Peristaltic Pump GrundFos Redi-flow Other: Pump Lines: NA New / Cleaned / Dedicated Bailer Line: NA New / Cleaned / Dedicated																			
•																			
Method of Cleaning Pump: NA Alconox Liqui-Nox Tap Water DI Rinse Other: Method of Cleaning Bailer: NA Alconox Liqui-Nox Tap Water DI Rinse Other:																			
Method of Cleaning Bailer: NA Alconox Liqui-Nox Tap Water DI Rinse Other: Sampling Method: Disp. Teflor Bailer Disp. BVC Bailer GrundFos Redi-flow Pump. Other:																			
	Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer GrundFos Redi-flow Pump Other:																		
pH Meter Serial No.: 217254 / 330089 Spec. Cond. Meter Serial No.: 96H0203AB /AE																			
Date/Time Calibrated: 195 e N: 100 0 @ 25°C Spec.Cond. Meter Calibration: Self Test Other: Method to Measure Water Level: Solinst Serial No.: EST* P.I.D. Reading: NA_ppm @ Well Head																			
1									_										
			nt (DTW):																
TD :	= <u>44.7(</u> ''''' –	6 - 31.78 022/ 75" v	(DTW) = /2.91 well) = "W" - 0.16	ft.of Wa פוסעי "מא	ater) x "K" =	9.4.5 (Gals./C	V) X <u></u>	(No. of CV) 5" well) "K	= 25.1 (Gals.) " = 1.46(6" well)										
-	K	.U23(.73 V	veli) K = 0. R			UALITY PARA			1.40(0 11011)										
┢						Specific			_										
D	ate	Time	Discharge (Gallons)	рН	Temp. (ºC)		Turbidity	Color	Comments										
	-			7.4		(Gallons) (°C) mS (LS)													
10/5/99 15:27 4.0 7.12 20.7 859 41.4 Clear suspended arguin material																			
10	/5/99			7.10	19.9	857	43.2	Closr											
10	/5/99	11:34	8.0	7.10					SUSPENDED OF MICHAELE										
10	/5/99	11:34 11:34	8.0 12.0	7.10 7.11	19.9	857 875	43.2 39.6	14	suspended or mic maken										
10	/5/99	11:43 11:43	8.0 12.0 16.9	7.10 7.11 7.11	19.9 20.1 19.9	857 875 860	43.2 39.6 36.1	14	suspended organic dealerm)										
10		11:22 11:48 11:43 11:24	8.0 12.0 16.9 20.0	7.10 7.11 7.11 7.14	19.9 20.1 19.9 20.0	857 875 860 877	43.2 39.6 36.1 30.5	14	Suspended organic eradicum										
10		15:09 11:22 11:48 11:43 11:34	8.0 12.0 16.0 20.0 24.0	7.10 7.11 7.11 7.11 7.12	19.9 20.1 19.9 20.0 19.9	857 875 860 877 871	43.2 39.6 36.1 30.5 30.9	14	SUSSIGNATION OF THE PROPERTY O										
10		11:22 11:48 11:43 11:24	8.0 12.0 16.9 20.0	7.10 7.11 7.11 7.14	19.9 20.1 19.9 20.0	857 875 860 877	43.2 39.6 36.1 30.5	14	\$45(\$\partial \partial \										
		11:34 11:43 11:48 12:02 12:03	8.0 12.0 16.9 20.0 24.0 26.0	7.10 7.11 7.11 7.12 7.10	19.9 20.1 19.9 20.0 19.9	857 875 860 877 871 864	43.2 39.6 36.1 30.5 30.9	14	5.15(44) de de constitut de con										
		11:34 11:43 11:48 12:03 12:03 12:12	8.0 12.0 16.9 20.0 24.0 26.0	7.10 7.11 7.14 7.12 7.10	19.9 20.1 19.9 20.0 19.9	857 875 860 877 871 864	43.2 39.6 36.1 30.5 30.9 39.5	11 11 11 11	5.55(44) de de constitute de c										
Tot	al Dis	11:34 11:43 11:48 11:55 12:06 12:10 12:12 charge:	8.0 16.0 20.0 24.0 26.0 After Sampling	7.10 7.11 7.11 7.12 7.10 7.12	19.9 20.1 19.9 20.0 19.9 19.7	857 875 860 877 871 864 890 Casing Volum	43.2 39.6 36.1 30.5 30.9 39.6 32.6	11 11 11 11 11 11 11 11 11 11 ved:	5.15(44) de de expensión de entre en										
Tot	al Dis	11:34 11:43 11:48 12:03 12:04 12:12 charge:_	8.0 12.0 16.0 20.0 24.0 26.0 After Sampling 26.0 ga	7.10 7.11 7.14 7.12 7.10 7.12	19.9 20.1 19.9 20.0 19.3 19.3	857 875 860 877 871 864 890 Casing Volum Drum(s) Poly	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove	ved: 3:	Subject And Supplies And										
Tot Me	al Dis	11:34 11:43 11:48 11:55 12:06 12:10 12:12 charge:_ of disposa	8.0 12.0 16.0 20.0 24.0 26.0 After Sampling 26.0 ga	7.10 7.11 7.11 7.12 7.10 7.12 Ilons water:(19.9 20.0 19.9 20.0 19.3 19.7 20.5	857 875 860 871 871 864 890 Casing Volum Drum(s) Poly	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove	ved: 3:	5.15(44) de de expensión de entre en										
Tot Me Dat VO	al Dis thod of e/Tim Cs w/	II:34 II:43 II:48 II:55 I2:06 I2:12 charge:_ of disposa ie Sample HCI), TPI	8.0 16.0 20.0 24.0 24.0 26.0 After Sampling 26.0 ga of discharged ed: 45/99 @.	7.10 7.11 7.14 7.12 7.10 7.12 Ilons water:(19.9 20.1 19.9 20.0 19.3 19.3 20.5 20.5 Analysis	857 875 860 877 871 864 890 Casing Volum Drum(s) Poly No. of Bottles Preserved).	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove Tank Tre	ved: 3;	Stem Other:										
Tot Me Dat VO	al Dis thod of e/Tim Cs w/	11:34 11:43 11:48 11:55 12:00 12:10 12:12 charge: of disposa ie Sample HCI), TPI	8.0 16.0 20.0 24.0 24.0 26.0 After Sampling 26.0 ga of discharged ed: 45/99 @.	7.10 7.11 7.14 7.12 7.10 7.12 Ilons water:(19.9 20.1 19.9 20.0 19.3 19.3 20.5 20.5 Analysis	857 875 860 877 871 864 890 Casing Volum Drum(s) Poly No. of Bottles Preserved).	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove Tank Tre	ved: 3;	Stem Other:										
Tot Me Dat VO	al Dis thod of e/Tim Cs w/	II:34 II:43 II:48 II:55 I2:06 I2:12 charge:_ of disposa ie Sample HCI), TPI	8.0 16.0 20.0 24.0 24.0 26.0 After Sampling 26.0 ga of discharged ed: 45/99 @.	7.10 7.11 7.14 7.12 7.10 7.12 Ilons water:(19.9 20.1 19.9 20.0 19.3 19.3 20.5 20.5 Analysis	857 875 860 877 871 864 890 Casing Volum Drum(s) Poly No. of Bottles Preserved).	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove Tank Tre	ved: 3;	Stem Other:										
Tot Me Dat VO QA	al Dis thod of e/Tim Cs w// /QC:_ mmen	11:34 11:43 11:48 11:55 12:06 12:12 charge: of disposa ie Sample HCI), TPI	8.0 16.0 20.0 24.0 24.0 26.0 After Sampling 26.0 ga of discharged ed: 45/99 @.	7.10 7.11 7.14 7.12 7.10 7.12 Ilons water:(12:08 Glass Am	19.9 20.0 19.9 20.0 19.3 19.3 20.5 55 Gallon Analysis bers, Non- Equipmen	857 875 860 877 871 864 890 Casing Volum Drum(9) Poly /No. of Bottles -Preserved).	43.2 39.6 36.1 30.5 30.9 39.5 32.6 nes Remove Tank Tre	ved: 3;	Stem Other:										



WATER	QUALIT	Y SAMPLE L	OG SH	EET	WELL IDEN	TIFICATI	ON: W-B	s DATE: 10/5/99
Project N	ame: <u>Arr</u>	ow Rentals - Li	vermore	<u>e, CA</u>	Project Task:	Semi-Ann	nual Ground	dwater Monitoring
	-	. <u>75</u> " 2" 3" 4			• • •			Other:
is Well S	ecured?	es No Bolt	Size		Type of lock /	Lock nun	nber:	
Observat	ions / Co	mments:						<u></u>
		flon / PVC Dis						
Pump Lin	es: NA	New / Cleaned	/Dedica	ated	Bailer Line: N	A New/	Cleaned / D	Dedicated
		g Pump: NA A						
Method o	f Cleanin	g Bailer (NA) A	Alconox	Liqui-Nox	Tap Water D	I Rinse O	ther:	
Sampling	Method:	Disp. Teflon E	Bailer 🕻	isp. PVC I	Bailer GrundF	os Redi-f	low Pump	Other:
								10203AB (AE)
Date/Tim	e Calibra	ted: 1/25 C.10:00	@ 700	0 @ 25℃	Spec.Cond. M	leter Calib	ration: Sel	f Test Other:
Method to	Measur	e Water Level:	Solinst	Serial No.	: <u>ESS ++ (</u>	_ P.I.D. R	eading: <u>N</u>	A ppm @ Well Head
		art (DTW):						
								= 54.3 (Gals.)
"k" = .	.023(.75" v							" = 1.46(6" well)
			FIELD \	WATER Q	UALITY PARA	METERS		
Date	Time	Discharge (Gallons)	pН	Temp. (°C)	Specific Conductance mS uS	Turbidity	Color	Comments
10/5/99	12:34	10	6.99	21.0	755 us	20.9	none	fet. oder
	12:36	20	6.90	20.2	887	15.5	**	40
	12:41	30	6.94	20.6	289	31.2	afoud.	•
	12:44	40	6.92	20.4	907	>1000	Ut grav	Pet. ador Dryo 42 gals.
	14:10	<i>5</i> 0	6.93	20.0	987	29.2		Pet, oder
	14:12	<i>5</i> 5	6.90	20.2	884	20.3	Se .	Act. Odor
—	1700		0.10	20.2		40.5		161, 663
							•	
19/5/19	(4:25	After Sampling	6.97	20.1	873	600	it gray/a	1dv.
Total Dis			lons		Casing Volum	es Remo	ved:	3.03
		l of discharged		55 Gallon				stem Other:
	-	a 1						BTEX, MTBE (2-40ml-
		Hd (2, 1 Liter G						
QA/QC:	NONE		as an	Equipmen	t Blank Blind	Duplicate	MS/MSE) Field Blank
Commen	ts:							
					🕡 🗝	4	D	
Sampled	By: Jack	ki Lee / Stephe	<u>n Penma</u>	<u>an</u> Signat	ture(s):		-4	



Well Description: .75" 2" 3" 4" 5" 6" Well Type: PVC Stainless Steel Other:	WA.	TER	QUALIT	Y SAMPLE L	.OG SH	EET	MELL IDEN.	TIFICATI	ON: W-1:	s DATE: 10/5/99					
Type of lock / Lock number: Masky (ast observations / Comments: Urge Method: Teflon / PVC Disposable Bailer Peristaltic Pump GrundFos Redi-flow) Other: Lump Lines: NA New (Cleaned) Dedicated Bailer Line: Na	Project Name: Arrow Rentals - Livermore CA Project Task: Semi-Annual Groundwater Monitoring														
Discharge Method: Teflon / PVC Disposable Bailer Peristaltic Pump GnundFos Redi-flow) Other: Pump Lines: NA New / Cleaned			_		_	-, -				_					
trump Lines: NA New Cleaned Dedicated Bailer Peristaltic Pump GrundFos Redi-flow Other:						// v	rype of lock	LOCK NUM	nuer: _#/35 /	V LOG.					
Bailer Line: NA (Vew) Cleaned / Dedicated Method of Cleaning Pump: NA Alconox (Iqui-Nox Tap Water DI Rinss) Other: Method of Cleaning Bailer: (NA Alconox Liqui-Nox Tap Water DI Rinss) Other: Method of Cleaning Bailer: (NA Alconox Liqui-Nox Tap Water DI Rinss) Other: Method of Cleaning Bailer: (NA Alconox Liqui-Nox Tap Water DI Rinss) Other: Method of Cleaning Bailer: (NA Alconox Liqui-Nox Tap Water DI Rinss) Other: Method of Cleaning Bailer: (NA Alconox Liqui-Nox Tap Water DI Rinss) Other: Method to Method: Disp. Teffon Bailer Disp. PVC Bailer) GrundFos Redi-flow Pump Other: Method to Measure Water Level: \$30089		Purge Method: Teflon / PVC Disposable Bailer Peristaltic Pump GrundFos Redi-flow Other:													
Method of Cleaning Pump: NA Alconox	Pump Lines: NA New / Cleaned Dedicated Bailer Line: NA New Cleaned / Dedicated														
Alconox Liqui-Nox Tap Water DI Rinse Other:	Method of Cleaning Pump: NA Alconox Liqui-Nox Tap Water DI Rinse Other:														
Specific Conductance Process P	Method of Cleaning Bailer: NA Alconox Liqui-Nox Tap Water DI Rinse Other:														
Meter Serial No.: 217254	Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer GrundFos Redi-flow Pump Other:														
Action Calibrated:	pH Meter Serial No.: 217254 / 330089 Spec. Cond. Meter Serial No.: 96H0203AB (AE)														
Method to Measure Water Level: Solinst Serial No.:	Date/Time Calibrated: 1960 (1960) (1960) (25°C Spec.Cond. Meter Calibration: (Self Test) Other:														
D = 44.64	Meth	Method to Measure Water Level: Solinst Serial No.: Experiment P.I.D. Reading: NA_ppm @ Well Head													
Time	Wat	er Le	vel at Sta	art (DTW): <u>3</u>	2.43	Wat	er Level Prior	To Sampli	ing:	38.951					
Date Time Discharge (Gallons) pH Temp. (°C) Conductance ms us Turbidity Color Comments	TD =	44.64	4 23.43	(DTW) = <u>/2.1</u>	(ft.of wa	ater) x "K" =	17.8 (Gals./C	ک x (V) x	(No. of CV)	= 5.5.4 (Gals.)					
Date Time Discharge (Gallons) DH Temp. (°C) Conductance ms us Turbidity Color Comments	<u> </u>	"K" = .	023(.75" v	vell) "K"= 0.1						, = 1.40(b" Well)					
Date Time Discharge Callons Discharge Callons Discharge Callons Discharge Callons Discharge Callons Discharge			ı		LIELD !	WAIEKW		IVIEIERS	, T						
13:01 20 7.01 20.7 914 14.0 14.0 15:05 30 6.94 21.0 919 68.0 44.0 15:05 14:02 40 6.93 21.0 948 41.2 44.0 14.0	Dá	ate	Time		pН		Conductance	Turbidity	Color	Comments					
13:05 30 6.94 21.0 919 68.0 41 48.2 11 48.0	1		ı ———		1		4.1.4		I	1					
13:05 30 6.94 21.0 919 68.0 45 68.0 69.0 6.93 21.0 948 48.2 45 68.0	10/	5/99	12:58	10	6.96	રા.ર	993	4.7	MAC	Pet. Oder					
/4:04 50 6.86 20.6 127 71000 Lt gray Pst. Ods Drye 50g. /4:52 54 6.93 20.9 92.7 70.4 " " " " " " " " " " " " " " " " " " "	10/	5/99	1 - 1		3.01					86					
// // / / / / / / / / / / / / / / / /	10/	5/99	13:01	¥0	3.01	20.7	914	14.0	Menes Ut grey	" Dry @ 31.5g.					
/s/m /s:05 After Sampling 6.91 20.9 921 70.4 Total Discharge: 54 gallons Casing Volumes Removed: 3.0 Method of disposal of discharged water 55 Gallon Drum(s) Poly Tank Treatment System Other:	10/	5/99	13:01	26 30	7.01 6.94	20.7 21.0	914	14.0	Menes Ut grey	" Dry @ 31.5g.					
Casing Volumes Removed: 3.0 Method of disposal of discharged water: 55 Gallon Drumo) Poly Tank Treatment System Other: Date/Time Sampled: 75 99 @ 15:00 Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml- OCS w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I- Lamber */P - PNA DA/QC: NONE @ as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	10/	5/99	13:01 13:05 14:02	26 30 40	7.01 6.94 6.93	20.7 21.0 21.0	914 919 948	14.0 68.0 41.2	the gray/c	" Dry @ 31.5 g. dy Pet. Odor					
Casing Volumes Removed: 3.0 Method of disposal of discharged water: 55 Gallon Drumo) Poly Tank Treatment System Other: Date/Time Sampled: 75 99 @ 15:00 Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml- /OCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I- Lamber */P - PNA DA/QC: NONE @ as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	10/	5/99	13:01 13:05 14:02 14:04	26 30 40 50	7.01 6.94 6.93 6.86	20.7 21.0 21.0 20.6	914 919 948 927	14.0 68.0 41.2 71000	the gray/c	" Dry @ 31.5 g. dy Pet. Odor					
Casing Volumes Removed: 3.0 Method of disposal of discharged water: 55 Gallon Drumo) Poly Tank Treatment System Other: Date/Time Sampled: 75 99 @ 15:00 Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml- /OCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I- Lamber */P - PNA DA/QC: NONE @ as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	10/9	5/99	13:01 13:05 14:02 14:04	26 30 40 50	7.01 6.94 6.93 6.86	20.7 21.0 21.0 20.6	914 919 948 927	14.0 68.0 41.2 71000	the gray/c	" Dry @ 31.5 g. dy Pet. Odor					
Casing Volumes Removed: 3.0 Method of disposal of discharged water 55 Gallon Drumo) Poly Tank Treatment System Other: Date/Time Sampled: 75/99 @ 15:00 Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml- OCS w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I-ILamber */P - PNA DA/QC: NONE @ as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	10/9	5/99	13:01 13:05 14:02 14:04	26 30 40 50	7.01 6.94 6.93 6.86	20.7 21.0 21.0 20.6	914 919 948 927	14.0 68.0 41.2 71000	the gray/c	" Dry @ 31.5g.					
Method of disposal of discharged water 55 Gallon Drumo) Poly Tank Treatment System Other: Date/Time Sampled: 15:00 Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml- /OCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I-ILamber */P - PNA DA/QC: NONE @ as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:			13:01 (3:05 14:02 14:04 14:52	26 30 40 50 54	7.01 6.94 6.93 6.86 6.93	20.7 21.0 21.0 20.6 20.9	914 919 948 927 927	14.0 68.0 41.2 71000	the gray/c	" Dry @ 31.5g.					
/OCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved); I- Lamber */P-PNA QA/QC: NONE @as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	10/5	/m	13:01 (3:05 14:02 14:04 14:52	30 40 50 54 After Sampling	6.94 6.93 6.86 6.93	20.7 21.0 21.0 20.6 20.9	914 919 948 927 927	14.5 68.5 48.2 71000 70.4	th gray/e th gray/e	" Dry @ 31.5 g. dy fet. odor Pet. odor Drye sog. "					
QA/QC: NONE @as an Equipment Blank Blind Duplicate MS/MSD Field Blank Comments:	I®/5 Tota	An Dischool o	/3:05 /4:02 /4:04 /4:52 (5:09 charge:_	30 40 50 54 After Sampling 54 ga of discharged	6.94 6.93 6.86 6.93	20.7 21.0 21.0 20.6 20.9	914 919 948 927 927 911 Casing Volum Drum(s) Poly	14.5 68.5 41.2 71000 70.4	th gray/c th gray/c th gray/c th gray/c	Dry @ 31.5 g. dy fet. oder Pet. oder Dry@ sog. n stem Other:					
Comments:	Total	Al Dischod o	/3:05 /4:02 /4:04 /4:52 /5:05 charge:_ of disposa	After Sampling 54 gal of discharged ed: 196 199 @	6.94 6.93 6.86 6.93 6.91	20.7 21.0 21.0 20.6 20.9 20.9	914 919 948 127 927 911 Casing Volum Drums) Poly	14.5 68.5 41.2 71000 70.4 nes Remov Tank Tre	th gray/c. th gray/c. th gray/c. th gray/c. ved: 3.C. eatment Sys	The 31.5g. The 31.5g. The color Pet. Oder Drye sog. The color of the color Stem Other: BTEX, MTBE (2-40ml-					
	Total	In Dischod o	/3:05 /4:02 /4:04 /4:52 (5:09 charge: of disposa the Sample HCI), TPH	After Sampling 54 gal of discharged ed: 57,14	7.01 6.94 6.93 6.86 6.93 d.91 allons d water (15:00	20.7 21.0 20.6 20.9 20.9 20.7 Analysis	914 919 948 127 92.1 Quit Casing Volum Drums) Poly No. of Bottles Preserved); [14.5 68.0 41.2 71000 70.4 nes Remor Tank Tre	th gray/e th gray/e th gray/e th gray/e ved: 3.0 eatment Sys 15M-TPHg/f	Thry 31.5g. Thy 631.5g. The oder Drye sog.					
Sampled By: Jacki Lee / Stephen Penman Signature(s):	Tota Meti Date VOC	al Dischod o	/3:05 /4:02 /4:04 /4:52 /5:09 charge:	After Sampling 54 gal of discharged ed: 57,14	7.01 6.94 6.93 6.86 6.93 d.91 allons d water (15:00	20.7 21.0 20.6 20.9 20.9 20.7 Analysis	914 919 948 127 92.1 Quit Casing Volum Drums) Poly No. of Bottles Preserved); [14.5 68.0 41.2 71000 70.4 nes Remor Tank Tre	th gray/e th gray/e th gray/e th gray/e ved: 3.0 eatment Sys 15M-TPHg/f	Thry 31.5g. Thy 631.5g. The oder Drye sog.					
Sampled By: Jacki Lee / Stephen Penman Signature(s):	Tota Meti Date VOC	al Dischod o	/3:05 /4:02 /4:04 /4:52 /5:09 charge:	After Sampling 54 gal of discharged ed: 57,14	7.01 6.94 6.93 6.86 6.93 d.91 allons d water (15:00	20.7 21.0 20.6 20.9 20.9 20.7 Analysis	914 919 948 127 92.1 Quit Casing Volum Drums) Poly No. of Bottles Preserved); [14.5 68.0 41.2 71000 70.4 nes Remor Tank Tre	th gray/e th gray/e th gray/e th gray/e ved: 3.0 eatment Sys 15M-TPHg/f	They 31.5g. They 31.5g. They of 31.5g. They					
	Tota Meti Date VOC QA/	al Dise hod o e/Tim Cs w/l QC:	/3:05 /4:02 /4:04 /4:52 /5:09 charge: of disposa the Sample HCI), TPI NONE	After Sampling 54 gal of discharged ed: 45 49 Hd (2, 1 Liter G	6.94 6.93 6.86 6.93 6.91 allons water 15:00	20.7 21.0 21.0 20.6 20.9 20.9 55 Gallon Analysis	914 919 948 127 921 911 Casing Volum Drums) Poly s/No. of Bottles -Preserved); I	14.5 68.0 41.2 71000 70.4 nes Remor Tank Tre	th gray/e th gray/e th gray/e th gray/e ved: 3.0 eatment Sys 15M-TPHg/f	They 31.5g. They 31.5g. They of 31.5g. They					



CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Services" 2059 Junction Avenue • San	k. Jose, CA 95	5131 • (408) <i>4</i>	137-2400 • FAX (40	8) 437-93	56		SERV	ICE F	REQU	EST N	10					Р.	.O.#_					PA	GE_	OF
PROJECT NAME ACC	100 P	evals	#						,	,					ALY						,	, _	1.01	
			acki Lee					VATIVE /	\neg		/ HCI /	NP /	NP /	/ NP /	HCI	HCI /		$\overline{}$	H ₂ SO ₄	H2S04	/H2SO4	/ NaOH	<u>/NP /</u>	_/_/_
PROJECT MGR. Steph						RS			1 Vole	se /	* -/					$/\!/$. /					
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APPENDIX B

LABORATORY REPORT

AND

CHAIN-OF-CUSTODY DOCUMENTATION



Service Request No.: <u>S9903077</u>

October 15, 1999

Ms. Jackie Lee

Environmental Sampling Services 6680 Alhambra Ave., #22 Martinez, CA 94553

ivialunez, CA 9433

RE:

Arrow Rentals

Dear Ms. Lee:

Enclosed are the results of the sample(s) submitted to our laboratory on October 5, 1999. All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply to the sample(s) analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Signature of this CAS Analytical Report confirms that pages 2 through 14, following, have been thoroughly reviewed and approved for release.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 2352, expiration: January 31, 2001).

If you have any questions, please call me at (408) 748-9700.

madette Troncales

Respectfully submitted,

Columbia Analytical Services, Inc.

Bernadette Troncales Project Chemist

Acronyms

A2LA American Association for Laboratory Accreditation

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

BTEX Benzene, Toluene, Ethylbenzene, Xylenes

CAM California Assessment Metals
CARB California Air Resources Board

CAS Number Chemical Abstract Service registry Number

CFC Chlorofluorocarbon
CFU Colony-Forming Unit
COD Chemical Oxygen Demand

DEC Department of Environmental Conservation
DEQ Department of Environmental Quality
DHS Department of Health Services
DLCS Duplicate Laboratory Control Sample

DMS Duplicate Matrix Spike
DOE Department of Ecology
DOH Department of Health

EPA U. S. Environmental Protection Agency

ELAP Environmental Laboratory Accreditation Program

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

ICP Inductively Coupled Plasma atomic emission spectrometry

ICV Initial Calibration Verification sample

J Estimated concentration. The value is less than the MRL, but greater than or equal to

the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.

LUFT Laboratory Control Sample
Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MCL Maximum Contaminant Level. The highest permissible concentration of a

substance allowed in drinking water as established by the U. S. EPA.

MDL Method Detection Limit
MPN Most Probable Number
MRL Method Reporting Limit

MS Matrix Spike

MTBE Methyl tert-Butyl Ether
NA Not Applicable
NAN Not Analyzed
NC Not Calculated

NCASI National Council of the paper industry for Air and Stream Improvement

ND Not Detected at or above the method reporting/detection limit (MRL/MDL)

NIOSH National Institute for Occupational Safety and Health

NTU Nephelometric Turbidity Units

ppb Parts Per Billion**ppm** Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992

STLC Solubility Threshold Limit Concentration

SW Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846,

3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristic Leaching Procedure

TDS Total Dissolved Solids

TPH Total Petroleum Hydrocarbons

tr Trace level. The concentration of an analyte that is less than the PQL but greater than or equal

to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.

TRPH Total Recoverable Petroleum Hydrocarbons

TSS Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volatile Organic Analyte(s) Page 2 ACRONLST.DOC 7/14/95

Analytical Report

Client: Project:

Environmental Sampling Services

10/06/99

10/06/99

10

10

10/07/99

10/07/99

Service Request: S9903077 Date Collected: 10/05/99

Sample Matrix:

Arrow Rentals Water

Date Received: 10/05/99

Polynuclear Aromatic Hydrocarbons

Sample Name:

W-1S

Units: ug/L (ppb)

Lab Code:

S9903077-005

EPA 3510C

EPA 3510C

Basis: NA

<50

280

Test Notes:

Benzo(g,h,i)perylene

2-Methylnaphthalene

C1

Analysis Dilution Date Date Result Prep Analyte Method Method MRL Factor Extracted Analyzed Result Notes 10/06/99 10/07/99 510 Naphthalene 8270C 10 EPA 3510C 5 Acenaphthylene **EPA 3510C** 8270C 5 10 10/06/99 10/07/99 < 50 10/07/99 <50 10/06/99 5 10 Acenaphthene EPA 3510C 8270C 5 EPA 3510C 8270C 10 10/06/99 10/07/99 <50 Fluorene <50 10/06/99 10/07/99 Phenanthrene **EPA 3510C** 8270C 10 5 <50 10 10/06/99 10/07/99 **EPA 3510C** 8270C Anthracene 8270C <50 5 10 10/06/99 10/07/99 Fluoranthene EPA 3510C 5 10/06/99 10/07/99 <50 Ругепе **EPA 3510C** 8270C 10 5 10/06/99 10/07/99 <50 EPA 3510C 10 Benz(a)anthracene 8270C 5 10/06/99 10/07/99 <50 EPA 3510C 8270C 10 Chrysene 5 10/06/99 10/07/99 <50 10 Benzo(b)fluoranthene EPA 3510C 8270C 8270C Benzo(k)fluoranthene EPA 3510C 5 10 10/06/99 10/07/99 < 50 <50 Benzo(a)pyrene Indeno(1,2,3-cd)pyrene 10/06/99 10/07/99 EPA 3510C 8270C 5 5 5 10 EPA 3510C 10/06/99 10/07/99 <50 10 8270C Dibenz(a,h)anthracene 10/06/99 10/07/99 <50 **EPA 3510C** 8270C 10

5

5

8270C

8270C

Cl	The MRL was elevated due to	high analyte concentration requiring sample dilution.
Approved By:	gri	Date: 10/15/99
100 1000007	·	

Analytical Report

Client: Project: **Environmental Sampling Services**

Sample Matrix:

Arrow Rentals

Water

Service Request: S9903077 Date Collected: NA

Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Lab Code: Test Notes:

Method Blank S991006-WB1 Units: ug/L (ppb)

Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Acenaphthylene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Acenaphthene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Fluorene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Phenanthrene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Anthracene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Fluoranthene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Pyrene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Benz(a)anthracene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Chrysene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Benzo(b)fluoranthene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Benzo(k)fluoranthene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Benzo(a)pyrene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Indeno(1,2,3-cd)pyrene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Dibenz(a,h)anthracene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
Benzo(g,h,i)perylene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	
2-Methylnaphthalene	EPA 3510C	8270C	5	1	10/06/99	10/07/99	ND	

Approved By:	M	Date:	10/15/99
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1S2p/020597p

QA/QC Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: NA

Date Received: NA Date Extracted: NA

Date Analyzed: NA

Surrogate Recovery Summary

Polynuclear Aromatic Hydrocarbons

Prep Method: Analysis Method: 8270C

EPA 3510C

Units: PERCENT

Basis: NA

		Test		Perc	e n t	R e c	overy	
Sample Name	Lab Code	Notes	2FPHL	PHL	NBZ	2FBPH	246TBPHL	TPH
W-1S	S9903077-005		NA	NA	65	55	NA	48
Method Blank	S991006-WB1		NA	NA	79	82	NA	94

CAS Acceptance Limits:

21-100

10-94

35-114

43-116

10-123

33-141

2FPHL

PHL

Phenol-D6

NBZ 2FBPH Nitrobenzene-D5 2-Fluorobiphenyl

2-Fluorophenol

246TBPHL

2,4,6-Tribromophenol

TPH

Terphenyl-D14

Date: 10/15/99 Approved By:

SUR6/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix: Water

Service Request: S9903077 Date Collected: 10/5/99

Date Received: 10/5/99

TPH as Diesel

Prep Method:

EPA 3510

Units: ug/L (ppb)

Analysis Method:

CA/LUFT

Basis: NA

Test Notes:

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
W-ES	S9903077-002	50	1	10/07/99	10/14/99	88	D4
W-3S	S9903077-003	50	1	10/07/99	10/14/99	1000	D4 & D2
W-BS	S9903077-004	50	1	10/07/99	10/14/99	7300	D4
W-IS	S9903077-005	50	100	10/07/99	10/14/99	60000	D4
Method Blank	S991007-WB1	50	1	10/07/99	10/13/99	ND	

D2

The sample contains a higher boiling point hydrocarbon mixture quantitated diesel. The

chromatogram does not match the typical diesel fingerprint.

D4

The sample contains a lower boiling point mixture of hydrocarbons and quantitated as diesel.

___ Date: 10/15/99 Approved By: _____

1A/020597p

QA/QC Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: NA Date Received: NA

Date Extracted: NA Date Analyzed: NA

Surrogate Recovery Summary TPH as Diesel

Prep Method: Analysis Method: CA/LUFT

EPA 3510

Units: PERCENT

Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery p-Terphenyl
W-ES	S9903077-002		69
W-3S	S9903077-003		58
W-BS	S9903077-004		68
W-1S	S9903077-005		63
Method Blank	S991007-WB1		69

CAS Acceptance Limits:

41-140

Approved By:

_____ Date: 10/15/99

SUR1/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: 10/05/99

Date Received: 10/05/99

BTEX, MTBE and TPH as Gasoline

Sample Name:

Trip Blank

Lab Code:

S9903077-001

Units: ug/L (ppb)

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	10/14/99	ND	
Benzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/14/99	ND	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	1	NA	10/14/99	ND	

approved By:	M	Date:	10/15/99
T1		_	,

1522/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077 **Date Collected:** 10/05/99

Date Received: 10/05/99

BTEX, MTBE and TPH as Gasoline

Sample Name:

W-ES

Lab Code:

S9903077-002

Units: ug/L (ppb)

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	10/14/99	68	
Benzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/14/99	ND	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	1	NA	10/14/99	4	

approved By:	M	Date:	10/	15/99	
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1S22/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: 10/05/99

Date Received: 10/05/99

BTEX, MTBE and TPH as Gasoline

Sample Name:

W-3S

S9903077-003

Units: ug/L (ppb)

Basis: NA

Lab Code: Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	2	NA	10/14/99	1500	
Benzene	EPA 5030	8021B	0.5	2	NA	10/14/99	290	
Toluene	EPA 5030	8021B	0.5	2	NA	10/14/99	9.5	
Ethylbenzene	EPA 5030	8021B	0.5	2	NA	10/14/99	53	
Xylenes, Total	EPA 5030	8021B	1.0	2	NA	10/14/99	9.8	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	2	NA	10/14/99	<6	C1

C1

The MRL was elevated due to high analyte concentration requiring sample dilution.

1S22/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: 10/05/99

Date Received: 10/05/99

BTEX, MTBE and TPH as Gasoline

Sample Name:

W-BS

Lab Code:

S9903077-004

Units: ug/L (ppb)

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	100	NA	10/14/99	38000	
Benzene	EPA 5030	8021B	0.5	100	NA	10/14/99	3800	
Toluene	EPA 5030	8021B	0.5	100	NA	10/14/99	390	
Ethylbenzene	EPA 5030	8021B	0.5	100	NA	10/14/99	1600	
Xylenes, Total	EPA 5030	8021B	1.0	100	NA	10/14/99	5900	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	20	NA	10/14/99	<60	C1

C1

The MRL was elevated due to high analyte concentration requiring sample dilution.

______Date: 10 15/99 Approved By:

LS22/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Sample Matrix:

Arrow Rentals

Water

Service Request: \$9903077 Date Collected: 10/05/99

Date Received: 10/05/99

BTEX, MTBE and TPH as Gasoline

Sample Name:

W-1S

Lab Code: Test Notes:

S9903077-005

Units: ug/L (ppb)

Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	100	NA	10/14/99	82000	
Benzene	EPA 5030	8021B	0.5	100	NA	10/14/99	5500	
Toluene	EPA 5030	8021B	0.5	100	NA	10/14/99	4500	
Ethylbenzene	EPA 5030	8021B	0.5	100	NA	10/14/99	2500	
Xylenes, Total	EPA 5030	8021B	1.0	100	NA	10/14/99	14000	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	100	NA	10/14/99	<300	C1

C1

The MRL was elevated due to high analyte concentration requiring sample dilution.

approved By:	AT.	Date:	10/15/99	
spproved by				-

1S22/020597p

Analytical Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: NA

Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name:

Method Blank

Lab Code:

S991014-WB3

Units: ug/L (ppb)

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	10/14/99	ND	
Benzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/14/99	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/14/99	ND	
Methyl tert -Butyl Ether	EPA 5030	8021B	3	1	NA	10/14/99	ND	

approved By:	M	_ Date:	10	/ L	5/99	ĵ
~PP						

1S22/020597p

QA/QC Report

Client:

Environmental Sampling Services

Project:

Arrow Rentals

Sample Matrix:

Water

Service Request: S9903077

Date Collected: NA

Date Collected: NA

Date Received: NA

Date Extracted: NA

Date Analyzed: NA

Surrogate Recovery Summary BTEX, MTBE and TPH as Gasoline

Prep Method: Analysis Method:

EPA 5030

FA 3030

8021B CA/LUFT

Units: PERCENT

Basis: NA

Sample Name	Lab Code	Test Notes	Percent 4-Bromofluorobenzene	Recovery a,a,a-Trifluorotoluene
1				
Trip Blank	S9903077-001		93	101
W-ES	S9903077-002		94	102
W-3S	S9903077-003		82	136
W-BS	S9903077-004		90	112
W-1S	S9903077-005		90	114
Method Blank	S991014-WB3		96	101

CAS Acceptance Limits:

69-116

72-139

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	006	17/1/20
Approved By:	(1/1/)	Date: [U] [5] 47
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SUR2/020397p



CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356							SERVICE REQUEST NO. 59903077 P.O.#											_ PAC	3E	OF				
PROJECT NAME Arrow Rentals #									7					,	ALYS			_			Lond			
PROJECT MGR. Stephe			jacki Lee		_		PRESER'			HCI	HC! /	NP /	NP /	NP /	HCI /	HCI /	HNO3	$\overline{}$	H ₂ SO ₄ /	H ₂ SO ₄	/H ₂ SO ₄ /	NaOH/	<u> </u>	-/-/-
COMPANY Environmental Sampling Services				- $ $	ERS					 					$/\!/$	8 70								
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ADDRESS PMB 102 6680 Althoriting Avenue					NO.		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Solar Control	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		0.0	/s	/	Meth	1088	(1. g)	in State		/ ,	/ /	/ /	/ /	′//	
Martinez CA 94553-6105PHON(925)3.72-8108				님		188 J	98.4 88.4	88	Selft	<u> </u>	స్ట్ /	5/	\ e. \ .	နို ငြ			ပ္တံ /	\ _{&} /				/		
SAMPLER'S SIGNATURE			_	BER (0						\g/ \	£ / 5			≥/S S)>:		(/ d	ر الق	ş / <	,				
SAMPLE I.D.	DATE	TIME	LAB SAMPLE ME I.D. MATRIX		LE	NUMBER OF		E PER S	TPH as G. (28020 Volailie)	1 02/04/2016X	Base/New/		Han.	Oil and C	Metals (total	A P	<u>`</u> \$₹ \$		Total P.	Syanie			/ ,	REMARKS
Trip Blank	10/5/99	10:15	\bigcirc	wate		2			X															
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- le			rià Fel	$Q_{-} _{-}$							<u> </u>							1 day _	2 da	av	3 day	I. Routine Report		
Signature		Signature	Brian toll	ا ا	Signatu						Signa							5 day _			,		MS	ort (includes MS. D, as required, may be
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F0/5/99 16:00		Firm 16/5		, 00	Firm	•	Firm Standard (10 working days									_		•	cludes All Raw Data) /PQLs/Trace #					
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SPEC					SPECIA	AL IN	STRL	JCTIO	NS/C	OMME	ENTS:	terfo	m ·	Silic	k Ge	l Cle	an-U	PP	700	+ 0+	i s in a	naly	S & C	f TPHd
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