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

APRIL 1999

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

Date Prepared: June 2, 1999

By: Environmental Sampling Services
and Aquifer Sciences, Inc.

AQUIFER SCIENCES, INC.

3680-A Mt. Diablo Blvd.
Lafayette, CA 94549
(925) 283-9098

May 25, 1999
971275

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

Subject: Semi-Annual Groundwater Monitoring, April 1999
187 North L Street, Livermore, California

Dear Ms. Sullins:

Groundwater monitoring was conducted in April 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 April 9, 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. The field activity report describing sampling activities is 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 map, corresponding to groundwater elevations measured on April 9, 1999, is shown on Figure 2.

Three of the wells (W-1s, W-3s, and W-Bs) were purged and sampled after the static water level measurements were recorded. A minimum of three casing volumes of groundwater was removed from each well prior to sampling. Each well was purged using a submersible pump. 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 three 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 447.25 feet in well W-Es to 453.14 feet in well W-1s. The groundwater levels measured in April 1999 were approximately 7 feet higher than those measured in October 1998. Based upon measurements recorded on April 9, 1999, groundwater generally flows to the west-southwest under a hydraulic gradient of approximately 0.023 ft/ft (Figure 2).

RESULTS OF LABORATORY ANALYSES

Results of laboratory analyses for groundwater samples collected from the three wells in April 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 three wells at concentrations ranging from 980 to 70,000 µg/L. TPH-diesel was detected in the groundwater samples collected from all three wells at 430 to 24,000 µg/L. Benzene was detected in the samples collected from all three wells at 240 to 6,500 µg/L. These concentrations exceeded the Maximum Contaminant Level (MCL) of 1 µg/L, established for benzene in drinking water. Toluene was detected in the samples collected from all three wells at concentrations ranging from 4 to 7,000 µg/L. The concentrations of toluene in wells W-1s and W-Bs exceeded the MCL of 150 µg/L. Ethylbenzene was detected in the samples collected from all three wells at 37 to 1,800 µg/L. The levels of

ethylbenzene in wells W-1s and W-Bs exceeded the MCL of 700 µg/L. Xylenes were detected in all three wells at concentrations ranging from 3 to 8,900 µg/L. The levels of xylenes in wells W-1s and W-Bs exceeded the MCL of 1,750 µg/L. MTBE was detected in the sample collected from well W-1s at 360 µg/L. This concentration exceeded the Action Level of 35 µg/L established for MTBE in drinking water. Although MTBE was not detected in the samples collected from well 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, BTEX, and MTBE. At the request of Alameda County, the sample from well W-1s was also analyzed for PNAs. Naphthalene was detected in the sample at 330 µg/L. Naphthalene was the only PNA detected. No MCL or AL has been established for naphthalene.

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 well W-Es. Fluctuations in the concentrations of gasoline, diesel, and BTEX in groundwater samples collected from these wells may be related to the 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 State Leaking Underground Storage Tank fund must also approve of the work plan. We will begin the tasks outlined in the risk assessment with your authorization, and concurrence from the State fund.

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

Respectfully yours,

Thomas E. Neely, REA
Hydrogeologist

Rebecca A. Sterbentz, RG, CHG, RE
President

REGISTERED GEOLOGIST
REBECCA A. STERBENTZ
No. 4119
STATE OF CALIFORNIA

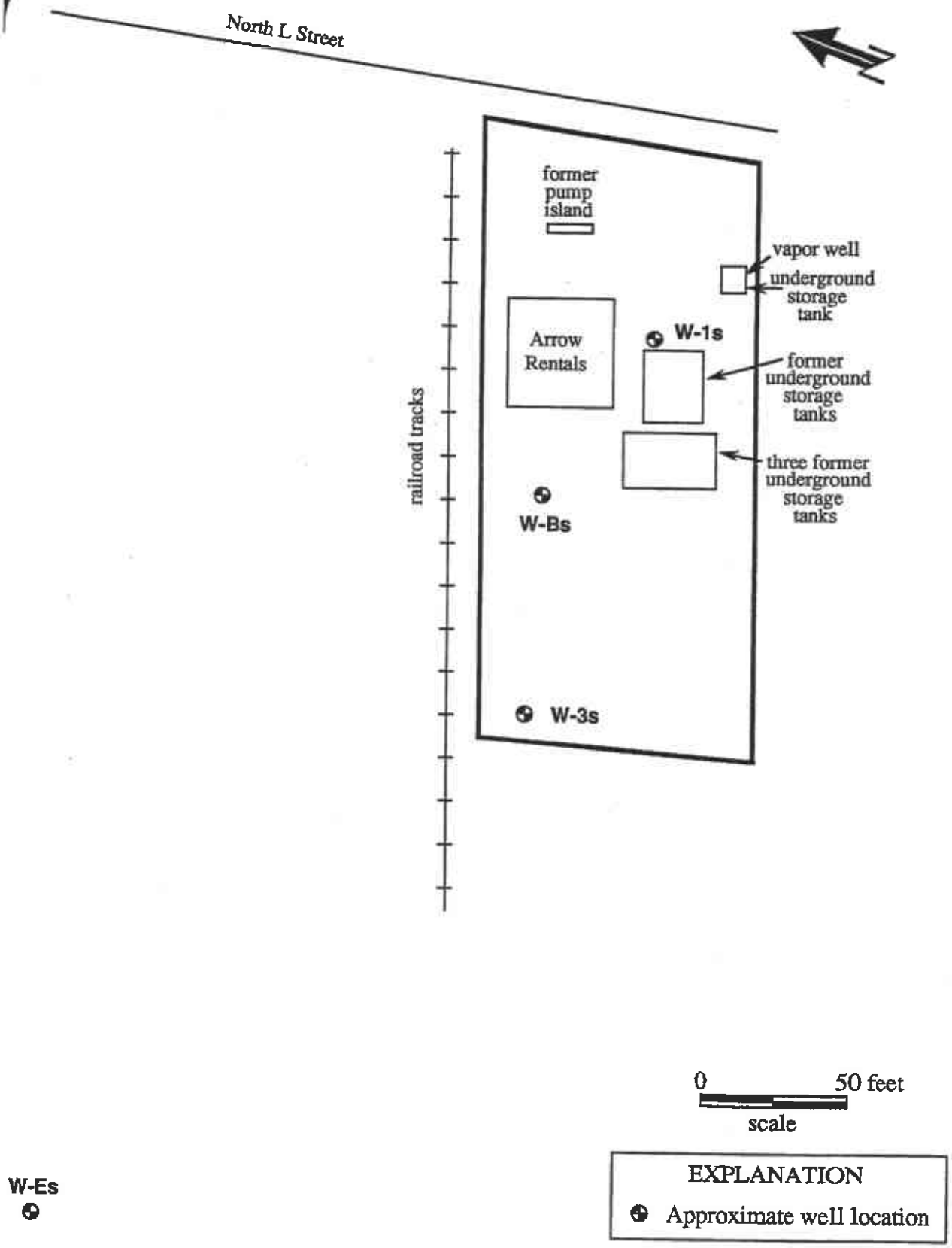

Figure 1. SITE MAP
187 North L Street, Livermore, California

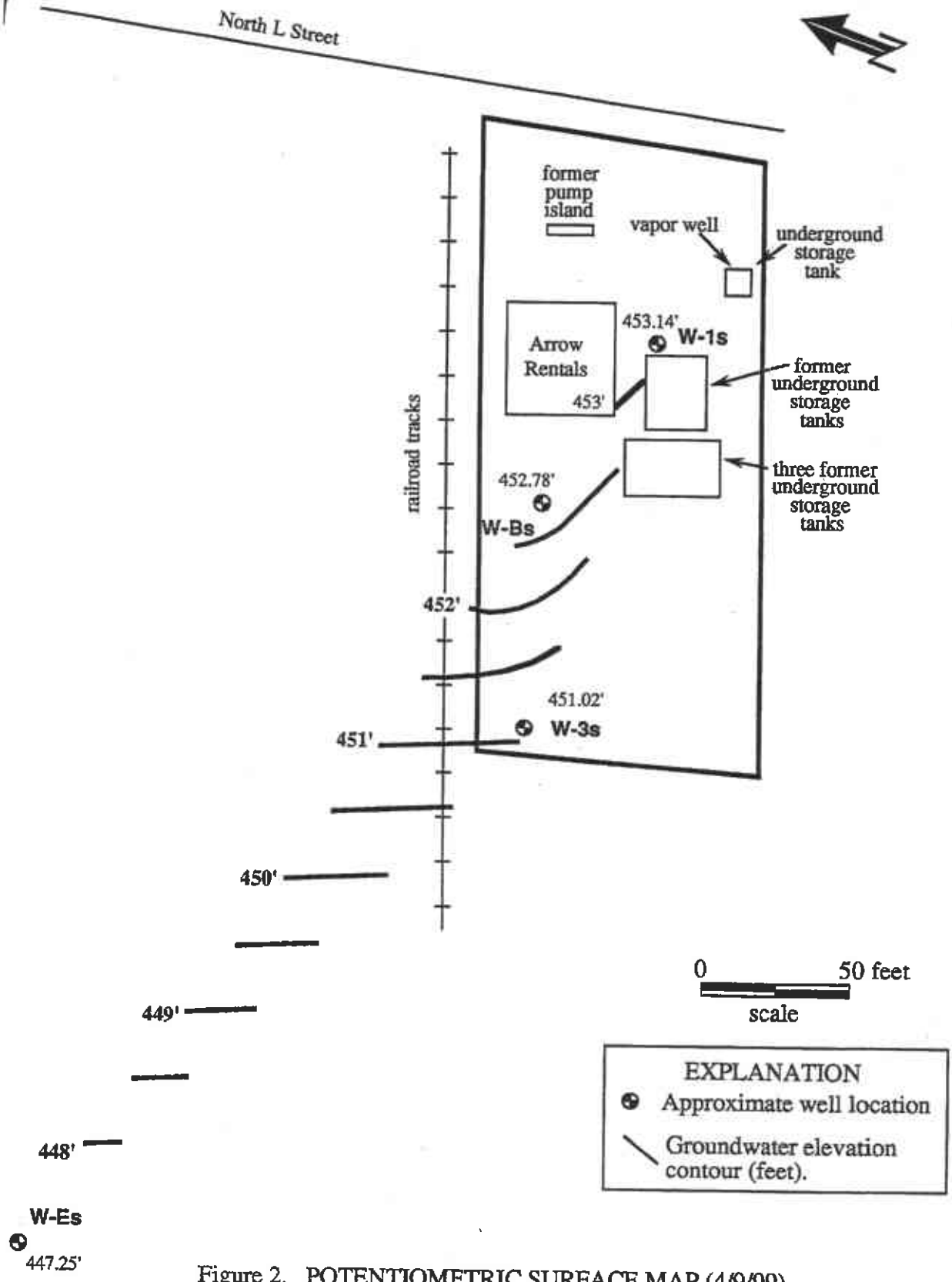

Figure 2. POTENTIOMETRIC SURFACE MAP (4/9/99)
187 North L Street, Livermore, California

Table 1. GROUNDWATER ELEVATION DATA
187 North L Street, Livermore, California
April 9, 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	25.95	453.14
W-3s	476.98	25.96	451.02
W-Bs	478.82	26.04	452.78
W-Es	474.66	27.41	447.25

MSL = mean sea level (elevations based on City of Livermore datum)
TOC = top of PVC casing

Table 2. GROUNDWATER ANALYTICAL RESULTS
187 North L Street, Livermore, California
April 9, 1999

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)
W-1s	70,000	24,000	6,500	7,000	1,800	8,900	360	330
W-3s	980	430	240	4	37	3	<12	NA
W-Bs	39,000	12,000	4,100	1,900	1,400	5,600	< 300	NA
Travel Blank	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA
MDL	50-10,000	50-200	0.5-100	0.5-100	0.5-100	0.5-100	3-600	5
MCL	NE	NE	1	150	700	1,750	NE	NE
AL	NE	NE	NE	NE	NE	NE	35	NE

µg/L = micrograms per liter [parts per billion (ppb)]
NA = not analyzed
NE = none established
NS = not sampled
MTBE = methyl tertiary butyl ether
TPH-gasoline = total petroleum hydrocarbons quantified as gasoline
TPH-diesel = total petroleum hydrocarbons quantified as diesel
MDL = method detection limit
MCL = Maximum Contaminant Level, November 1996
AL = Action Level, November 1996

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)
W-1s	3/22/96	6,400	NA	580	470	85	1,100	< 500	NA	NA
W-1s	11/22/96	170,000	NA	13,000	18,000	3,500	18,000	< 10,000	NA	NA
W-1s	7/15/97	140,000	38,000*†	12,000	12,000	2,600	16,000	< 800	NA	NA
W-1s	10/29/97	650,000	180,000‡	14,000	19,000	7,800	35,000	< 3,000	NA	NA
W-1s	4/27/98	6,700	2,200§	410	250	77	870	< 30	< 5	NA
W-1s	10/23/98	99,000	18,000§	9,800	9,400	1,800	11,000	< 600	NA	NA
W-1s	4/9/99	70,000	24,000	6,500	7,000	1,800	8,900	360	NA	330
W-3s	3/22/96	100	NA	13	6.9	5.3	14	< 5	NA	NA
W-3s	11/22/96	3,200	NA	270	29.0	63.0	100	< 100	NA	NA
W-3s	7/15/97	2,100	340**†	230	7	33	51	< 20	NA	NA
W-3s	10/29/97	2,800	750††	630	31	71	69	< 30	NA	NA
W-3s	4/27/98	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
W-3s	10/23/98	3,800	1,000§	500	28	90	37	35	NA	NA
W-3s	4/9/99	980	430	240	4	37	3	<12	NA	NA
W-Bs	3/22/96	61,000	NA	9,800	8,000	2,200	11,000	< 5,000	NA	NA
W-Bs	11/22/96	47,000	NA	5,100	3,100	1,400	7,800	< 2,500	NA	NA
W-Bs	7/15/97	66,000	17,000‡‡†	7,800	4,900	1,900	10,000	< 600	NA	NA
W-Bs	10/29/97	44,000	27,000§§	6,000	500	1,500	6,400	380	NA	NA
W-Bs	4/27/98	63,000	17,000§	6,100	5,400	1,900	9,100	< 600	NA	NA
W-Bs	10/23/98	48,000	9,600§	6,700	1,200	1,500	6,200	< 300	NA	NA
W-Bs	4/9/99	39,000	12,000	4,100	1,900	1,400	5,600	< 300	NA	NA
W-Es	3/22/96	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 5	NA	NA
W-Es	11/22/96	280	NA	24	0.6	1.8	2.2	< 5	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)
W-Es	10/23/98	82	69§	< 0.5	0.8	< 0.5	0.8	4	NA	NA
Travel Blank	7/15/97	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
Travel Blank	10/29/97	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
Travel Blank	4/27/98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
Travel Blank	10/23/98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
Travel Blank	4/9/99	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA
MCL		NE	NE	1	150	700	1,750	NE	50	?
AL		NE	NE	NE	NE	NE	NE	35	15	?

µg/L = micrograms per liter [parts per billion (ppb)]
NA = not analyzed
NE = none established
MTBE = methyl tertiary butyl ether
TPH-gasoline = total petroleum hydrocarbons quantified as gasoline
TPH-diesel = total petroleum hydrocarbons quantified as diesel
MCL = Maximum Contaminant Level, November 1996
AL = Action Level, November 1996
* Sample contained heavy oil at 3,000 µg/L
† The method blank contained heavy oil at 120 µg/L
‡ Sample contained heavy oil at 1,600 µg/L
§ The chromatogram does not match the typical diesel pattern
** Sample contained heavy oil at 740 µg/L
†† Sample contained heavy oil at 88 µg/L
‡‡ Sample contained heavy oil at 490 µg/L
§§ Sample contained heavy oil at 4,000 µg/L

APPENDIX A

FIELD ACTIVITY REPORT

Environmental
Sampling Services

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

ESS Personnel: Jacki Lee and Steve Penman
Duration of Activities: April 9, 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' calibration and operating procedures. Field measurements included: pH, specific conductance, turbidity, and temperature.

Field Activities

Friday, April 9, 1998: 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.

Environmental
Sampling Services

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

Environmental
Sampling Services

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

WELL IDENTIFICATION	DEPTH TO GROUNDWATER (ft., TOC) (Measured April 9, 1999)	WELL DEPTH (ft., TOC)
W-1s	25.95	44.64
W-Bs	26.04	44.47
W-3s	25.96	44.76
W-Es	27.41	44.32

TOC = Top of well casing

Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION: **W-1s** DATE: 4/9/99

Project Name: Arrow Rentals Livermore, CA — Client Project Number: NA

Well Description: .75" 2" 3" 4" 5" (6") — Well Type: (PVC) Stainless Steel Other: _____

Is Well Secured? Yes / No Bolt Size 15/16" — Type of lock / Lock number: Master

Observations / Comments: _____

Purge Method: Teflon / PVC Disposable Bailer 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: Well Water Rinse

Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer GrundFos Redi-flow Pump Other: _____

pH Meter Serial No.: 217254 / (30089) — Spec. Cond. Meter Serial No.: (96H0203AB) AE

Date/Time Calibrated: 4/9@ 12:30 (4 7 10) @ 25°C — Spec.Cond. Meter Calibration: (Self Test) Other: _____

Method to Measure Water Level: Solinst Serial No.: ESS 2 — P.I.D. Reading: NA ppm @ Well Head

Water Level at Start (DTW): 25.95 — Water Level Prior To Sampling: _____

TD = 44.64 - 25.95 (DTW) = 18.69 (ft.of water) x "K" = 27.2 (Gals./CV) x 81.8 (No. of CV) = _____ (Gals.)

"K" = .023(.75" well) "K"= 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) ("K" = 1.46(6" well))

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity	Color	Comments
4/9/99	1445	10	6.84	20.4	1159	5.0	lt yell	Strong Pet Odor
	1447	20	6.86	20.3	1158	3.6	" "	
	1448	30	6.87	20.1	1153	4.4	" "	
	1450	40	6.87	20.2	1156	13.1	" "	
	1453	50	6.88	20.0	1151	230	gray	Blk foil droplets Dry@50g
	1459	60	6.89	20.2	1088	300	lt gray	
	15:11	70	6.94	20.3	1070	92	lt yell.	
	15:23	~~82~~ Before Sampling	6.97	20.1	1083	71.4	"	
↓	15:31	After Sampling	6.94	20.2	1096	129	very lt. gray	

Total Discharge: 85 gallons — Casing Volumes Removed: 3.1

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: _____

Date/Time Sampled: 4/9/99 @ 15:25 — Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (2-40ml-VOCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved), PNA (2 1L ambers, non preserved)

QA/QC: NONE @ — as an Equipment Blank Blind Duplicate MS/MSD Field Blank

Comments: WEs % = 27.41'

Sampled By: Jacki Lee / Stephen Penman Signature(s): _____

Environmental Sampling Services
6680 Alhambra Ave., #102, Martinez, CA 94553 Phone/Fax: (925) 372.8108
www.Envsampling.com

Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION: W-Bs DATE: 4/9/99

Project Name: Arrow Rentals Livermore, CA — Client Project Number: NA

Well Description: .75" 2" 3" 4" 5" (6") — Well Type: (PVC) Stainless Steel Other: _____

Is Well Secured? (Yes) / No Bolt Size 15/16" — Type of lock / Lock number: Master

Observations / Comments: _____

Purge Method: Teflon / PVC Disposable Bailer 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: Well Water Rinse

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: 4/9 @ 12:30 (4) (7) (10) @ 25°C — Spec.Cond. Meter Calibration: (Self Test) Other: _____

Method to Measure Water Level: Solinst Serial No.: ESS & — P.I.D. Reading: NA ppm @ Well Head

Water Level at Start (DTW): 26.04 — Water Level Prior To Sampling: _____

TD = 44.47 - 26.04 (DTW) = 18.43 (ft.of water) x "K" = 26.9 (Gals./CV) x 3 (No. of CV) = 80.7 (Gals.)

"K" = .023(.75" well) "K"= 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) ("K" = 1.46(6" well))

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity	Color	Comments
4/9/99	13:56	20	6.94	19.3	989	84.4	lt yell.	Pet. Odor Dry @ 24g.
↓	14:02	30	6.88	20.4	974	57.1	"	" Dry @ 29g
	14:12	40	6.81	20.3	975	25.0	"	" Dry @ 45g.
	14:23	50	6.80	20.4	951	20.1	"	"
	14:27	60	6.77	20.1	944	15.0	"	"
	14:31	70	6.78	20.6	942	9.0	"	"
↓	14:35	81	6.82	20.3	919	8.9	"	"
4/9/99	14:41	After Sampling	6.87	20.4	938	9.0	"	"

Total Discharge: ~~85~~ 85 gallons — Casing Volumes Removed: ~~3.01~~ 3.15

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: _____

Date/Time Sampled: 4/9/99 @ 14:37 — Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (3-40ml-VOCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved)

QA/QC: NONE @ ——— as an Equipment Blank Blind Duplicate MS/MSD Field Blank

Comments: _____

Sampled By: Jacki Lee / Stephen Penman Signature(s): _____

Environmental Sampling Services
6680 Alhambra Ave., #102, Martinez, CA 94553 Phone/Fax: (925) 372.8108
www.Envsampling.com

Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET	WELL IDENTIFICATION: W-3s DATE: 4/9/99

Project Name: Arrow Rentals Livermore, CA — Client Project Number: NA

Well Description: .75" 2" 3" (4") 5" 6" — Well Type: (PVC) Stainless Steel Other: _____

Is Well Secured? (Yes) / No Bolt Size 15/16" — Type of lock / Lock number: Master

Observations / Comments: _____

Purge Method: Teflon (PVC Disposable Bailer) 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: 4/9 @ 12:30 (4) (7) (10) @ 25°C — Spec.Cond. Meter Calibration: (Self Test) Other: _____

Method to Measure Water Level: Solinst Serial No.: ESS 2 — P.I.D. Reading: NA ppm @ Well Head

Water Level at Start (DTW): 25.96 — Water Level Prior To Sampling: 26.26

TD = 44.76 - 25.96 (DTW) = 18.8 (ft.of water) x "K" = 12.3 (Gals./CV) x 3 (No. of CV) = 36.9 (Gals.)

"K" = .023(.75" well) "K"= 0.163(2" well) ("K" = 0.653(4" well)) "K" = 1.02(5" well) "K" = 1.46(6" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (uS)	Turbidity	Color	Comments
4/9/99	12:56	10	7.00	18.3	1009	388	Brown	Oily Sheen on water
	13:00	15	7.02	18.6	1013	692	"	
	13:03	20	7.03	19.1	1015	681	"	
	13:07	25	7.05	18.9	1022	785	"	
	13:10	30	7.04	19.2	1018	674	"	
	13:14	35	7.03	19.3	1020	648	"	
	13:17	40	7.01	19.3	1016	486	Light Brown	
	13:23	After Sampling		19.2	1020	188	Light Brown	oily sheen on water

Total Discharge: 41 gallons — Casing Volumes Removed: 3.3

Method of disposal of discharged water: (55 Gallon Drum(s)) Poly Tank Treatment System Other: _____

Date/Time Sampled: 4/9/99 @ 13:20 — Analysis/No. of Bottles: EPA 8015M-TPHg/BTEX, MTBE (3-40ml-VOCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved)

QA/QC: ____ @ ____ as an Equipment Blank Blind Duplicate MS/MSD Field Blank

Comments: _____

Sampled By: Jacki Lee / Stephen Penman Signature(s): _____

Environmental Sampling Services
5680 Alhambra Ave., #102, Martinez, CA 94553 Phone/Fax: (925) 372.8108
www.Envsampling.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services, Inc.
An Employee-Owned Company
3334 Victor Court • Santa Clara, CA 95054
(408) 748-9700 • FAX (408) 748-9860

SERVICE REQUEST NO. _____ P.O.# _____ PAGE 1 OF 1

PROJECT NAME Arrow Rentals #

PROJECT MGR. Stephen Penman / Jacki Lee

COMPANY Environmental Sampling, Svcs.

ADDRESS 6680 Alhambra Ave #102

Martinez, CA 94553 PHONE (925) 372-8108

FAX (925) 372-6705

SAMPLER'S SIGNATURE _____

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	Volatile Organics BY GCMS 624 ☐ 8240 ☐ 8260 ☐	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐ 8021 ☐	TPH as Gas/BTEX ☐ TPH as Gas/BTEX/MTBE ☐	TPH as Diesel ☐ HBHC ☐	Base/Neu/Acid Organics / GCMS 625 ☐ 8270 ☐	Pesticides & PCBs 608/8082 ☐ Pesticides only 8081 ☐ PCBs 8082 ☐	TRPH - 418.1 ☐ Oil and Grease Method	Metals Indicate below Total ☐ Dissolved ☐	pH, Cond., Cl, SO_4, F, TDS, TSS Alk., NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, TOC NO_3 / NO_2, Phenols (circle)	Cyanide	PNAs							REMARKS
						HCl	HCl	HCl	NP	NP	NP	HCl	HNO_3	NP	H_2SO_4	NaOH	☐								
Trip Blank	04/08/99	1200		WTR	2			X																	
W-3s	04/08/99	13:20		WTR	4			X	X																
W-B6	04/08/99	14:37		WTR	4			X	X																
W-1s	04/08/99	15:25		WTR	6			X	X									X							
*Perform Silica Gel Clean-Up on water sample extracts prior to analysis of TRPH!																									

RELINQUISHED BY:
Signature _____
Printed Name Jacqueline Lee
Firm Env. Sampl. Svcs.
Date/Time April 9, 1999; 15:41

RECEIVED BY:
Signature _____
Printed Name _____
Firm _____
Date/Time 4/9/99 15:41

RELINQUISHED BY:
Signature _____
Printed Name _____
Firm _____
Date/Time _____

RECEIVED BY:
Signature _____
Printed Name _____
Firm _____
Date/Time _____

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
X Standard (10 working days)
Results Due _____

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:
Signature _____
Printed Name _____
Firm _____
Date/Time _____

RECEIVED BY:
Signature _____
Printed Name _____
Firm _____
Date/Time _____

Shipped Via/Tracking # _____

SAMPLE RECEIPT: Condition _____ Custody Seals _____

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

Storage:

APPENDIX B

LABORATORY REPORT

AND

CHAIN-OF-CUSTODY DOCUMENTATION

Columbia Analytical Services, Inc.
An Employee-Owned Company

April 22, 1999 Service Request No.: S9901175

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

RE: Arrow Rentals

Dear Ms. Lee:

The following pages contain analytical results for sample(s) received by the laboratory on April 9, 1999. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 15, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Bernadette T. Cox

Bernadette T. Cox
Project Chemist

COLUMBIA ANALYTICAL SERVICES, Inc.

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.
LCS	Laboratory Control Sample
LUFT	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)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

Polynuclear Aromatic Hydrocarbons

Sample Name:	W-1S	Units:	ug/L (ppb)
Lab Code:	S9901175-004	Basis:	NA
Test Notes:	C1		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510	8270C	5	10	4/10/99	4/13/99	330	
Acenaphthylene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Acenaphthene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Fluorene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Phenanthrene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Anthracene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Fluoranthene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Pyrene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Benz(a)anthracene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Chrysene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Benzo(b)fluoranthene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Benzo(k)fluoranthene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Benzo(a)pyrene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Indeno(1,2,3-cd)pyrene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Dibenz(a,h)anthracene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
Benzo(g,h,i)perylene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	
2-Methylnaphthalene	EPA 3510	8270C	5	10	4/10/99	4/13/99	<50	

C1 The MRL was elevated due to high analyte concentration requiring sample dilution.

1S2p/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S990410-WB1	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Acenaphthylene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Acenaphthene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Fluorene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Phenanthrene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Anthracene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Fluoranthene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Pyrene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Benz(a)anthracene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Chrysene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Benzo(b)fluoranthene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Benzo(k)fluoranthene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Benzo(a)pyrene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Indeno(1,2,3-cd)pyrene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Dibenz(a,h)anthracene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
Benzo(g,h,i)perylene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	
2-Methylnaphthalene	EPA 3510	8270C	5	1	4/10/99	4/16/99	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

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-3S	S9901175-002	50	1	4/20/99	4/21/99	430	D4
W-BS	S9901175-003	50	5	4/20/99	4/22/99	12000	D4
W-1S	S9901175-004	50	10	4/20/99	4/22/99	24000	D4
Method Blank	S990420-WB1	50	1	4/20/99	4/21/99	ND	

D4 The sample contains a lower boiling point mixture of hydrocarbons and diesel quantitated as diesel.

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

BTEX, MTBE and TPH as Gasoline

Sample Name:	Trip Blank	Units:	ug/L (ppb)
Lab Code:	S9901175-001	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	4/18/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	4/18/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	4/18/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	4/18/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	4/18/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	4/18/99	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

BTEX, MTBE and TPH as Gasoline

Sample Name:	W-3S	Units:	ug/L (ppb)
Lab Code:	S9901175-002	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	4	NA	4/19/99	980	
Benzene	EPA 5030	8020	0.5	4	NA	4/19/99	240	
Toluene	EPA 5030	8020	0.5	4	NA	4/19/99	4	
Ethylbenzene	EPA 5030	8020	0.5	4	NA	4/19/99	37	
Xylenes, Total	EPA 5030	8020	0.5	4	NA	4/19/99	3	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	4	NA	4/19/99	<12	C1

C1 The MRL was elevated due to high analyte concentration requiring sample dilution.

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

BTEX, MTBE and TPH as Gasoline

Sample Name:	W-BS	Units:	ug/L (ppb)
Lab Code:	S9901175-003	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	4/18/99	39000	
Benzene	EPA 5030	8020	0.5	100	NA	4/18/99	4100	
Toluene	EPA 5030	8020	0.5	100	NA	4/18/99	1900	
Ethylbenzene	EPA 5030	8020	0.5	100	NA	4/18/99	1400	
Xylenes, Total	EPA 5030	8020	0.5	100	NA	4/18/99	5600	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	100	NA	4/18/99	<300	C1

C1 The MRL was elevated due to high analyte concentration requiring sample dilution.

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	4/9/99
Sample Matrix:	Water	**Date Received:**	4/9/99

BTEX, MTBE and TPH as Gasoline

Sample Name:	W-1S	Units:	ug/L (ppb)
Lab Code:	S9901175-004	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	4/20/99	70000	
Benzene	EPA 5030	8020	0.5	100	NA	4/20/99	6500	
Toluene	EPA 5030	8020	0.5	100	NA	4/20/99	7000	
Ethylbenzene	EPA 5030	8020	0.5	100	NA	4/20/99	1800	
Xylenes, Total	EPA 5030	8020	0.5	100	NA	4/20/99	8900	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	100	NA	4/20/99	360	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S990417-WB1	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	4/17/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	4/17/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	4/17/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	4/17/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	4/17/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	4/17/99	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Environmental Sampling Services	**Service Request:**	S9901175
Project:	Arrow Rentals	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S990419-WB1	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	4/19/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	4/19/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	4/19/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	4/19/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	4/19/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	4/19/99	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Environmental Sampling Services
Project: Arrow Rentals
Sample Matrix: Water

Service Request: S9901175
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Prep Method: EPA 3510
Analysis Method: 8270C

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 2FP	PHL	NBZ	FBP	TBP	TPH
W-1S	S9901175-004		NA	NA	35	68	NA	61
Method Blank	S990410-WB1		NA	NA	90	74	NA	95
CAS Acceptance Limits:			21-100	10-94	35-114	43-116	10-123	33-141

2FP	2-Fluorophenol
PHL	Phenol-D6
NBZ	Nitrobenzene-D5
FBP	2-Fluorobiphenyl
TBP	2,4,6-Tribromophenol
TPH	Terphenyl-D14

SUR6/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Environmental Sampling Services
Project: Arrow Rentals
Sample Matrix: Water

Service Request: S9901175
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
TPH as Diesel

Prep Method: EPA 3510
Analysis Method: CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery p-Terphenyl
W-3S	S9901175-002		64
W-BS	S9901175-003		88
W-1S	S9901175-004		80
Method Blank	S990420-WB1		64

CAS Acceptance Limits: 41-140

SUR1/020597p

QA/QC Report

Client: Environmental Sampling Services
Project: Arrow Rentals
Sample Matrix: Water

Service Request: S9901175
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8020 CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
Trip Blank	S9901175-001		98	98
W-3S	S9901175-002		100	87
W-BS	S9901175-003		97	101
W-1S	S9901175-004		97	104
Method Blank	S990417-WB1		98	104
Method Blank	S990419-WB1		98	96
CAS Acceptance Limits:			69-116	69-116

SUR2/020397p

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services, Inc.
An Employee-Owned Company
3334 Victor Court • Santa Clara, CA 95054
(408) 748-9700 • FAX (408) 748-9860

SERVICE REQUEST NO. S9901175 P.O.# _____ PAGE 1 OF 1

PROJECT NAME Arrow Rentals #
PROJECT MGR. Stephen Penman / Jacki Lee
COMPANY Environmental Sampling Svcs.
ADDRESS 6680 Alhambra Ave #102
Martinez, CA 94553 PHONE (925) 372-8108
FAX (925) 372-6705
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	Volatile Organics BY GCMS 624 ☐ 8240 ☐ 8260 ☐	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐ 8021 ☐	TPH as Gas/BTEX ☐ TPH as Gas/BTEX/MTBE ☐	TPH as Diesel ☐ HBHC ☐	Base/Neu/Acid Organics / GCMS 625 ☐ 8270 ☐	Pesticides & PCBs 608/8082 ☐ Pesticides only 8081 ☐ PCBs 8082 ☐	TRPH - 418.1 ☐ Oil and Grease Method	Metals Indicate below Total ☐ Dissolved ☐	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, TOC NO_3/NO_2, Phenols (circle)	Cyanide	PNAs						REMARKS
						HCl	HCl	HCl	NP	NP	NP	HCl	HNO_3	NP	H_2SO_4	NaOH	NP							
Trip Blank	04/09/99	1200	(1)	WTR	2			X																
W-3s	04/09/99	13:20	(2)	WTR	4			X	X															
W-Bs	04/09/99	14:37	(3)	WTR	4			X	X															
W-1s	04/09/99	15:25	(4)	WTR	6			X	X									X						
*Perform Silica Gel Clean-Up on water sample extracts prior to analysis of TPHd!!																								

RELINQUISHED BY:
Signature
Jacqueline Lee
Printed Name
Env. Sampl. Svcs.
Firm
April 9, 1999; 15:41
Date/Time

RECEIVED BY:
Brian Fuller
Signature
Brian Fuller
Printed Name
CAS
Firm
4/9/99 15:41
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
X Standard (10 working days)
Results Due _____

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

Shipped Via/Tracking #

SAMPLE RECEIPT: Condition _____ Custody Seals _____

SPECIAL INSTRUCTIONS/COMMENTS: DUE: 4/23/99 R11 D3 R8 D3

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

Storage: