

**Environmental
Sampling Services**

COPY

March 6, 2001

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

SEP 04 2001

Subject: Semi-Annual Report for October 2000


Dear Ms. Sullins:

Please find enclosed an original and two copies of the October 2000 Semi-Annual Report, generated by Aquifer Sciences and Environmental Sampling Services. This report is based on the groundwater monitoring event that occurred on October 26, 2000.

During the October sampling event, Columbia's satellite office in Canoga Park, California was used because their laboratory in San Jose had closed. After receiving the samples, Columbia informed ESS that the Canoga Park laboratory could not perform Silica Gel Clean up. Therefore, the Diesel analyses were not performed according to the DHS requirement. ESS has procured Mc Campbell Analytical of Martinez. They will be able to provide any future laboratory needs.

If you have any questions regarding this Semi-Annual Report, please contact Ms. Rebecca Sterbentz of Aquifer Sciences at (925) 283-9098.

Sincerely,


Jacqueline Lee
President

Enclosure

January 31, 2001
971275

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

Subject: Semi-Annual Groundwater Monitoring, October 2000
187 North L Street, Livermore, California

Dear Ms. Sullins:

Groundwater monitoring was conducted in October 2000 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 26, 2000, 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 26, 2000, is shown on Figure 2.

Three of the wells (W-1s, W-3s, and W-Bs) were purged and sampled after 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 55-gallon drums, pending the analytical results.

Water quality parameters (specific conductance, temperature, turbidity, color, and odor) were recorded at regular intervals during well purging. Due to instrument malfunction, pH was not

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measured. 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; benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA Method 8020; methyl tertiary butyl ether (MTBE) by EPA Method 8020 Modified. Samples W-1s and W-Bs were analyzed for fuel oxygenates by EPA Method 8260 and polynuclear aromatic hydrocarbons (PNAs) by EPA Method 8270. The travel blank was analyzed for gasoline by EPA Method 8015 Modified, BTEX by EPA Method 8020, MTBE by EPA Method 8020 Modified, and fuel oxygenates by EPA Method 8260.

HYDROGEOLOGIC DATA EVALUATION

Groundwater elevations in the four monitoring wells ranged from 442.43 feet in well W-Es to 448.14 feet in well W-Bs. The groundwater levels measured in October 2000 were approximately 5.5 feet lower than those measured in April 2000. Based upon measurements recorded on October 26, 2000, groundwater generally flows to the west-southwest. The hydraulic gradient is approximately 0.019 ft/ft (Figure 2).

RESULTS OF LABORATORY ANALYSES

Results of laboratory analyses for groundwater samples collected from the wells in October 2000 are summarized in Tables 2 and 3. 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 110 to 50,000 µg/L. TPH-diesel was detected in the groundwater samples collected from three of the wells at 120 to 1,200 µg/L. TPH-motor oil was detected at 140 µg/L in the sample from well W-3s. Benzene was detected in the samples collected from all three wells at concentrations ranging from 0.7 to 3,800 µg/L. The Maximum Contaminant Level (MCL) for benzene is 1 µg/L. Toluene (up to 1,800 µg/L), ethylbenzene (up to 1,700 µg/L), and xylenes (up to 7,600 µg/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 the

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MCLs. MTBE was detected in the sample collected from well W-Bs at 150 µg/L. The MCL for MTBE is 5 µg/L.

The sample from well W-1s contained naphthalene at 350 µg/L and 2-methylnaphthalene at 180 µg/L. Well W-Bs contained naphthalene at 260 µg/L and 2-methylnaphthalene at 88 µg/L. MCLs have not been established for naphthalene and 2-methylnaphthalene. No other PNAs were detected in the samples collected from wells W-1s and W-Bs.

The sample from wells W-1s and W-Bs were tested for fuel oxygenates. The oxygenates include ethanol, di-isopropyl ether, ethyl tertiary butyl ether, MTBE, tertiary amyl methyl ether, and tertiary butyl alcohol. No fuel oxygenates were detected in the groundwater samples.

SUMMARY AND CONCLUSIONS

Table 4 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. Lower 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.

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

Respectfully yours,



Richard P. Salopek
Hydrogeologist

Attachments



Rebecca A. Sterbentz, RG, CHG, REA
President



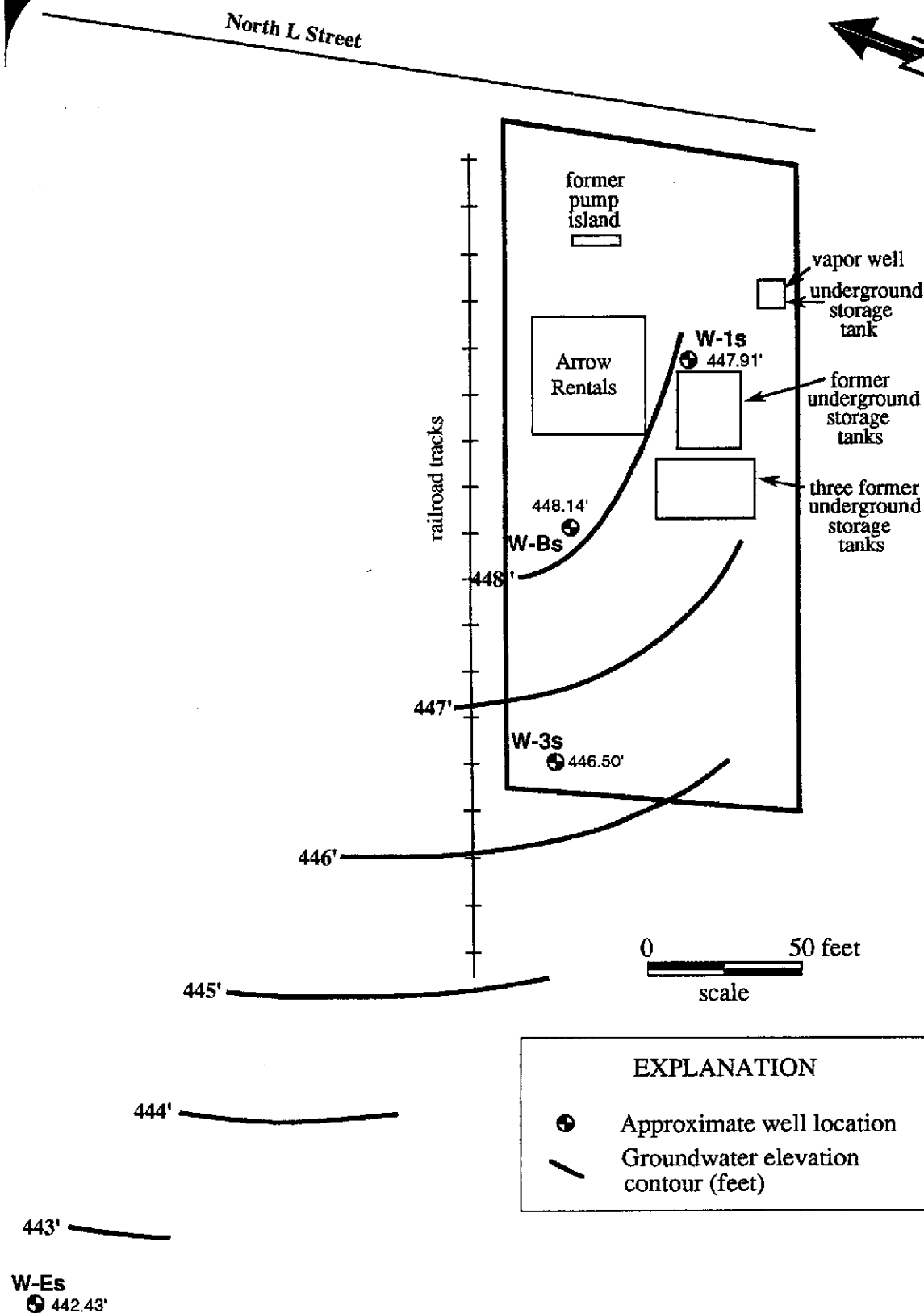


Figure 2. POTENTIOMETRIC SURFACE MAP (10/26/00)
187 North L Street, Livermore, California

Table 1. GROUNDWATER ELEVATION DATA
187 North L Street, Livermore, California
October 26, 2000

Well Number	Top of Casing Elevation (feet above MSL)	Depth to Water (feet below TOC)	Water Elevation (feet above MSL)
W-1s	479.09	31.18	447.91
W-3s	476.98	30.48	446.50
W-Bs	478.82	30.68	448.14
W-Es	474.66	32.23	442.43

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

TOC = top of well casing

Table 2. ANALYTICAL RESULTS FOR GROUNDWATER - PETROLEUM HYDROCARBONS
187 North L Street, Livermore, California
October 26, 2000

Well Number	TPH- gasoline (µg/L)	TPH- diesel (µg/L)	TPH- motor oil (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-1s	50,000	1,200	< 500	3,800	1,800	1,700	7,600	< 50	350	180
W-3s	310	120	140	83	3.5	6.4	1.2	< 5	NA	NA
W-Bs	23,000	650	< 50	2,500	210	1,100	2,600	150	260	88
W-Es	110	< 50	< 50	0.7	< 0.5	< 0.5	< 1.0	< 5	NA	NA
Travel Blank	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 1.0	< 5	NA	NA
MDL	50-5,000	50-5,000	50-5,000	0.5-50	0.5-50	0.5-50	1.0-100	3-300	5-50	5-50
MCL	NE	NE	NE	1	150	700	1,750	5	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

TPH-motor oil = total petroleum hydrocarbons quantified as motor oil

MTBE = methyl tertiary butyl ether

MDL = method detection limit

MCL = Maximum Contaminant Level, February 2000

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

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

Table 3. ANALYTICAL RESULTS FOR GROUNDWATER - FUEL OXYGENATES
 187 North L Street, Livermore, California
 October 26, 2000

Well Number	Ethanol ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	MTBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)
W-1s	< 100,000	< 200	< 200	< 200	< 200	< 1,000
W-3s	NA	NA	NA	NA	NA	NA
W-Bs	< 10,000	< 20	< 20	< 20	< 20	< 100
W-Es	NA	NA	NA	NA	NA	NA
Travel Blank	< 1,000	< 2	< 2	< 2	< 2	< 10
MDL	1,000-100,000	2-200	2-200	2-200	2-200	10-1,000
MCL	NE	NE	NE	5	NE	NE

$\mu\text{g/L}$ = micrograms per liter (parts per billion or ppb)

NA = not analyzed

NE = none established

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

MDL = method detection limit

MCL = Maximum Contaminant Level, February 2000

Table 4. SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER
187 North L Street, Livermore, California

Well Number	Date Sampled	TPH- gasoline (µg/L)	TPH- diesel (µg/L)	TPH- motor oil (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	NA	580	470	85	1,100	< 500	NA	NA	NA
W-1s	11/22/96	170,000	NA	NA	13,000	18,000	3,500	18,000	< 10,000	NA	NA	NA
W-1s	7/15/97	140,000	38,000*	3,000	12,000	12,000	2,600	16,000	< 800	NA	NA	NA
W-1s	10/29/97	650,000	180,000	1,600	14,000	19,000	7,800	35,000	< 3,000	NA	NA	NA
W-1s	4/27/98	6,700	2,200†	NA	410	250	77	870	< 30	< 5	NA	NA
W-1s	10/23/98	99,000	18,000†	NA	9,800	9,400	1,800	11,000	< 600	NA	NA	NA
W-1s	4/9/99	70,000	24,000	NA	6,500	7,000	1,800	8,900	360	NA	330	ND
W-1s	10/5/99	82,000	60,000‡	NA	5,500	4,500	2,500	14,000	< 300	NA	510	280
W-1s	4/5/00	47,000	15,000‡	NA	4,300	2,300	1,500	6,100	170	NA	330	110
W-1s	10/26/00	50,000	1,200	< 500	3,800	1,800	1,700	7,600	< 50	NA	350	180
W-3s	3/22/96	100	NA	NA	13	6.9	5.3	14	< 5	NA	NA	NA
W-3s	11/22/96	3,200	NA	NA	270	29.0	63.0	100	< 100	NA	NA	NA
W-3s	7/15/97	2,100	340*	740	230	7	33	51	< 20	NA	NA	NA
W-3s	10/29/97	2,800	750	88	630	31	71	69	< 30	NA	NA	NA
W-3s	4/27/98	< 50	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
W-3s	10/23/98	3,800	1,000†	NA	500	28	90	37	35	NA	NA	NA
W-3s	4/9/99	980	430	NA	240	4	37	3	< 12	NA	NA	NA
W-3s	10/5/99	1,500	1,000‡§	NA	290	9.5	53	9.8	< 6	NA	NA	NA
W-3s	4/5/00	810	320‡	NA	150	3.0	9.0	5.7	< 5	NA	ND	ND
W-3s	10/26/00	310	120	140	83	3.5	6.4	1.2	< 5	NA	NA	NA
W-Bs	3/22/96	61,000	NA	NA	9,800	8,000	2,200	11,000	< 5,000	NA	NA	NA
W-Bs	11/22/96	47,000	NA	NA	5,100	3,100	1,400	7,800	< 2,500	NA	NA	NA
W-Bs	7/15/97	66,000	17,000*	490	7,800	4,900	1,900	10,000	< 600	NA	NA	NA
W-Bs	10/29/97	44,000	27,000	4,000	6,000	500	1,500	6,400	380	NA	NA	NA
W-Bs	4/27/98	63,000	17,000†	NA	6,100	5,400	1,900	9,100	< 600	NA	NA	NA
W-Bs	10/23/98	48,000	9,600†	NA	6,700	1,200	1,500	6,200	< 300	NA	NA	NA
W-Bs	4/9/99	39,000	12,000	NA	4,100	1,900	1,400	5,600	< 300	NA	NA	NA
W-Bs	10/5/99	38,000	7,300‡	NA	3,800	390	1,600	5,900	< 60	NA	NA	NA
W-Bs	4/5/00	34,000	9,600‡	NA	3,500	1,200	1,400	4,700	< 150	NA	280	68

Table 4 (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)	TPH-motor oil (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-Bs	10/26/00	23,000	650	< 50	2,500	210	1,100	2,600	150	NA	260	88
W-Es	3/22/96	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 5	NA	NA	NA
W-Es	11/22/96	280	NA	NA	24	0.6	1.8	2.2	< 5	NA	NA	NA
W-Es	10/23/98	82	69†	NA	< 0.5	0.8	< 0.5	0.8	4	NA	NA	NA
W-Es	10/5/99	68	88‡	NA	< 0.5	< 0.5	< 0.5	< 1.0	4	NA	NA	NA
W-Es	10/26/00	110	< 50	< 50	0.7	< 0.5	< 0.5	< 1.0	< 5	NA	NA	NA
Travel Blank	7/15/97	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/29/97	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	4/27/98	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/23/98	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	4/9/99	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 3	NA	NA	NA
Travel Blank	10/5/99	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 1.0	< 3	NA	NA	NA
Travel Blank	4/5/00	< 50	NA	NA	1.8	< 0.5	< 0.5	< 1.0	< 5	NA	NA	NA
Travel Blank	10/26/00	< 50	NA	NA	< 0.5	< 0.5	< 0.5	< 1.0	< 5	NA	NA	NA
MCL		NE	NE	NE	1	150	700	1,750	5	50	NE	NE
AL		NE	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, February 2000

AL = Action Level, February 2000

* The method blank contained heavy oil at 120 µg/L

† The chromatogram does not match the typical diesel pattern

‡ 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.

APPENDIX A

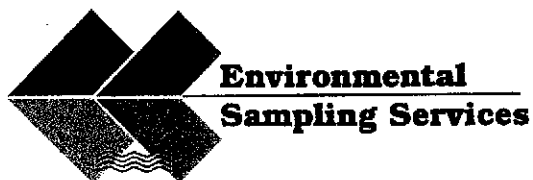
FIELD ACTIVITY REPORT

**FIELD ACTIVITY REPORT FOR
ARROW RENTALS
LIVERMORE, CALIFORNIA
SEMI-ANNUAL GROUNDWATER SAMPLING MONITORING
DECEMBER 2000**

Prepared for: Don Sul, Inc.
180 North L Street
Livermore, California 94550

Date Prepared: November 15, 2000

By: Environmental Sampling Services
PMB 102
6680 Alhambra Avenue
Martinez, California 94553-6105



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

ESS Personnel: Jacki Lee and Stephen Penman
Activity Date: October 26, 2000

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: specific conductance, turbidity, and temperature. Physical parameters such as color and odor were noted.

The pH probe malfunctioned during this sampling event.

Field Activities

Thursday, October 26, 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 wells, W-Bs and W-1s, were sampled for PNAs and Oxygenates by EPA Method 8260.


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 and 8260 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 26, 2000)	WELL DEPTH (ft., TOC)
W-1s	31.18	44.64
W-Bs	30.68	44.47
W-3s	30.48	44.76
W-Es	32.23	44.32

TOC = Top of Casing



Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET				WELL IDENTIFICATION: W-1s DATE: 10/26/2000				
Project Name: <u>Arrow Rentals - Livermore, CA</u>				Project Task: <u>Semi-Annual Groundwater Monitoring</u>				
Weather Conditions: <u>Showers!</u>								
Well Description: .75" 2" 3" 4" 5" <u>6"</u>				Well Type: <u>PVC</u> Stainless Steel Other: _____				
Is Well Secured? <u>Yes</u> No Bolt Size _____				Type of lock / Lock number: <u>Master</u>				
Observations / Comments: _____								
Purge Method: Teflon / PVC Disposable Bailer Peristaltic Pump <u>GrundFos Redi-flow</u> Other: _____								
Pump Lines: NA New / Cleaned <u>Dedicated</u> Bailer Line: <u>NA</u> New / Cleaned / Dedicated								
Method of Cleaning Pump: NA Alconox <u>Liqui-Nox Tap Water DI Rinse</u> Other: _____								
Method of Cleaning Bailer: <u>NA</u> Alconox Liqui-Nox Tap Water DI Rinse Other: _____								
Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer <u>GrundFos Redi-flow Pump</u> Other: _____								
pH Meter Serial No.: 217254 / 330089				Spec. Cond. Meter Serial No.: <u>96H0203AB</u> / AE				
Date/Time Calibrated: _____ 4 7 10 @ 25°C				Spec. Cond. Meter Calibration: <u>Self Test</u> Other: _____				
Method to Measure Water Level: Solinst Serial No.: <u>0/w Indicator</u> P.I.D. Reading: <u>NA</u> ppm @ Well Head								
Water Level at Start (DTW): <u>31.18</u> Water Level Prior To Sampling: _____								
TD = 44.64 - <u>31.18</u> (DTW) = <u>13.48</u> (ft. of water) x "K" = <u>1.6</u> (Gals./CV) x <u>4</u> (No. of CV) = <u>78.6</u> (Gals.)								
"K" = .023(.75" well) "K" = 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) <u>"K" = 1.46(6" well)</u>								
FIELD WATER QUALITY PARAMETERS								
Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (<u>uS</u>)	Turbidity	Color	Comments
10/26/00	14:12	10		19.4	381.8	33.5	<u>clear</u>	Pet. odor
	14:14	20		19.9	396.9	7.06	"	"
	14:17	30		20.1	<u>406.8</u> <u>392</u>	11.5	"	"
		40						Dye 35 gals
		50						
		60						
		70						
		80						
		After Sampling						
Total Discharge: _____ gallons Casing Volumes Removed: _____								
Method of disposal of discharged water: <u>55 Gallon Drum(s)</u> Poly Tank Treatment System Other: _____								
Date/Time Sampled: <u>10/26/00 @ 14:00</u> Analysis/No. of Bottles: EPA 8015M-TPHg (2-40mL VOCs w/HCl); BTEX, MTBE, Oxygenates (2-40mL VOCs w/HCl), TPHd (2-1 Liter Glass Ambers, NP);								
PNAs (2-1L Glass Ambers, NP). NP=Non Preserved								
QA/QC: <u>None</u> @ _____ as an Equipment Blank Blind Duplicate MS/MSD Field Blank								
Comments: _____								
Sampled By: <u>Jacki Lee / Stephen Penman</u> Signature(s): <u>[Signature]</u>								



Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET				WELL IDENTIFICATION: W-3s DATE: 10/26/2000				
Project Name: <u>Arrow Rentals - Livermore, CA</u>				Project Task: <u>Semi-Annual Groundwater Monitoring</u>				
Weather Conditions: <u>Scattered showers 60°F</u>								
Well Description: .75" 2" 3" <u>4"</u> 5" 6"				Well Type: <u>PVC</u> Stainless Steel Other: _____				
Is Well Secured? Yes / No Bolt Size <u>None</u>				Type of lock / Lock number: <u>None</u>				
Observations / Comments: <u>Bolt broken</u>								
Purge Method: Teflon / PVC Disposable Bailer Peristaltic Pump <u>Grundfos Redi-flow</u> Other: _____								
Pump Lines: NA <u>New</u> / <u>Cleaned</u> / <u>Dedicated</u>				Bailer Line: NA <u>New</u> / <u>Cleaned</u> / <u>Dedicated</u>				
Method of Cleaning Pump: NA Alconox <u>Liqui-Nox</u> Tap Water DI Rinse Other: _____								
Method of Cleaning Bailer: NA Alconox <u>Liqui-Nox</u> Tap Water DI Rinse Other: _____								
Sampling Method: Disp. Teflon Bailer <u>Disp. PVC Bailer</u> Grundfos Redi-flow Pump Other: _____								
pH Meter Serial No.: 217254 / 330089				Spec. Cond. Meter Serial No.: <u>96H0203ABY</u> AE				
Date/Time Calibrated: _____ 4 7 10 @ 25°C				Spec. Cond. Meter Calibration: <u>Self Test</u> Other: _____				
Method to Measure Water Level: Solinst Serial No.: <u>0/W Indicator</u> P.I.D. Reading: <u>NA</u> ppm @ Well Head								
Water Level at Start (DTW): <u>30.48</u> 11:52 Water Level Prior To Sampling: <u>31.44</u>								
$TD = 44.76 - 30.48 \text{ (DTW)} = 14.28 \text{ (ft. of water)} \times "K" = 9.3 \text{ (Gals./CV)} \times 4 \text{ (No. of CV)} = 37.2 \text{ (Gals.)}$ "K" = .023(.75" well) "K" = 0.163(2" well) <u>"K" = 0.653(4" well)</u> "K" = 1.02(5" well) "K" = 1.46(6" well)								
FIELD WATER QUALITY PARAMETERS								
Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS (<u>uS</u>)	Turbidity	Color	Comments
10/26/00	12:16	5		19.3	428.5	12.8	clear	NO ODOOR
	12:21	10		19.7	429.7	5.8	"	"
	12:27	15		19.9	431.9	7.2	"	"
	12:32	20		19.9	432.8	7.7	"	very slight pet. odor
	12:36	25		20.2	437.4	11.0	"	"
	12:39	30		20.3	438.7 436.9	39.8	Lt gray/tan	slightly cloudy / slight pet. odor
	12:44	35		20.3	436.4	48.6	"	"
✓	12:47	40		20.3	446.9	20.9	"	"
		After Sampling						
Total Discharge: <u>44</u> gallons				Casing Volumes Removed: <u>4.73</u>				
Method of disposal of discharged water: <u>55 Gallon Drum(s)</u> Poly Tank Treatment System Other: _____								
Date/Time Sampled: <u>10/26/00 @ 13:03</u> Analysis/No. of Bottles: EPA 8015M-TPHq/BTEX, MTBE (2-40ml-VOCs w/HCl), TPHd (2-1 Liter Glass Ambers, Non-Preserved).								
QA/QC: <u>None</u> @ _____ as an Equipment Blank Blind Duplicate MS/MSD Field Blank								
Comments: _____								
Sampled By: <u>Jacki Lee / Stephen Penman</u> Signature(s):								



Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET				WELL IDENTIFICATION: W-Bs DATE: 10/26/2000				
Project Name: <u>Arrow Rentals - Livermore, CA</u>				Project Task: <u>Semi-Annual Groundwater Monitoring</u>				
Weather Conditions: <u>Gray skies; scattered showers 65°F</u>								
Well Description: <u>.75" 2" 3" 4" 5" 6"</u>				Well Type: <u>PVC</u> Stainless Steel Other: _____				
Is Well Secured? <u>(Yes)</u> No Bolt Size _____				Type of lock / Lock number: <u>Master</u>				
Observations / Comments: _____								
Purge Method: Teflon / PVC Disposable Bailer Peristaltic Pump <u>GrundFos Redi-flow</u> Other: _____								
Pump Lines: NA <u>New</u> / Cleaned / <u>Dedicated</u> Bailer Line: <u>NA</u> New / Cleaned / Dedicated								
Method of Cleaning Pump: NA Alconox <u>Liqui-Nox</u> Tap Water DI Rinse Other: _____								
Method of Cleaning Bailer: <u>NA</u> Alconox Liqui-Nox Tap Water DI Rinse Other: _____								
Sampling Method: Disp. Teflon Bailer Disp. PVC Bailer <u>GrundFos Redi-flow Pump</u> Other: _____								
pH Meter Serial No.: 217254 / 330089				Spec. Cond. Meter Serial No.: <u>66H0203AB</u> AE				
Date/Time Calibrated: _____ 4 7 10 @ 25°C				Spec. Cond. Meter Calibration: <u>Self Test</u> Other: _____				
Method to Measure Water Level: Solinst Serial No.: <u>g/w Indicator</u> P.I.D. Reading: <u>NA</u> ppm @ Well Head								
Water Level at Start (DTW): <u>30.68 @ 11:35</u> Water Level Prior To Sampling: <u>40.48</u>								
TD = 44.47 - <u>30.68</u> (DTW) = <u>13.79</u> (ft. of water) x "K" = <u>20.1</u> (Gals./CV) x <u>4</u> (No. of CV) = <u>80.5</u> (Gals.)								
"K" = .023(.75" well) "K" = 0.163(2" well) "K" = 0.653(4" well) "K" = 1.02(5" well) <u>"K" = 1.46(6" well)</u>								
FIELD WATER QUALITY PARAMETERS								
Date	Time	Discharge (Gallons)	pH	Temp. (°C)	Specific Conductance mS <u>(US)</u>	Turbidity	Color	Comments
10/26/00	13:19	10		19.2	376.3	50.3	Gray	Pet. odor
	13:22	20		19.5	339.7	21.8	"	"
	13:25	30		19.6	359.1	42.5	"	"
	13:27	40		19.9	363.3	114.1	"	"
	13:30	50		19.5	356.7	71000	Gray	"
	13:39	60		19.6	352.9	7132	"	" went dry
	13:54	70		19.2	356.4	93	Lt tan/green	"
✓	13:58	80		19.	359.7	55.3	"	"
		After Sampling						
Total Discharge: <u>82</u> gallons								Casing Volumes Removed: <u>3.98</u>
Method of disposal of discharged water: <u>55 Gallon Drum(s)</u> Poly Tank Treatment System Other: _____								
Date/Time Sampled: <u>10/26/00 @ 14:00</u> Analysis/No. of Bottles: EPA 8015M-TPHg (2-40mL VOCs w/HCl); BTEX, MTBE, Oxygenates (2-40mL VOCs w/HCl), TPHd (2-1 Liter Glass Ambers, NP);								
PNAs (2-1L Glass Ambers, NP). NP=Non Preserved								
QA/QC: <u>None</u> @ _____ as an Equipment Blank Blind Duplicate MS/MSD Field Blank								
Comments: <u>30.68</u>								
Sampled By: <u>Jacki Lee / Stephen Penman</u> Signature(s)								



Environmental Sampling Services

WATER QUALITY SAMPLE LOG SHEET				WELL IDENTIFICATION: W-Es DATE: 10/26/2000				
Project Name: <u>Arrow Rentals - Livermore, CA</u>				Project Task: <u>Semi-Annual Groundwater Monitoring</u>				
Weather Conditions: <u>Gray skin - scattered showers 57°F</u>								
Well Description: <u>.75" (2") 3" 4" 5" 6"</u>				Well Type: <u>PVC</u> Stainless Steel Other: _____				
Is Well Secured <u>Yes</u> / No Bolt Size <u>15/16"</u>				Type of lock / Lock number: <u>Master / 199</u>				
Observations / Comments: _____								
Purge Method: Teflon <u>PVC Disposable Bailer</u> Peristaltic Pump GrundFos Redi-flow Other: _____								
Pump Lines: <u>NA</u> New / Cleaned / Dedicated				Bailer Line: <u>NA</u> <u>New</u> / Cleaned / Dedicated				
Method of Cleaning Pump: <u>NA</u> Alconox Liqui-Nox Tap Water DI Rinse Other: _____								
Method of Cleaning Bailer: <u>NA</u> Alconox Liqui-Nox Tap Water DI Rinse Other: _____								
Sampling Method: Disp. Teflon Bailer <u>Disp. PVC Bailer</u> GrundFos Redi-flow Pump Other: _____								
pH Meter Serial No.: <u>217254 / 330089</u>				Spec. Cond. Meter Serial No.: <u>96H0203AB</u> / AE				
Date/Time Calibrated: <u>10/26 6:10:30 7:10</u> @ 25°C Spec. Cond. Meter Calibration: <u>Self Test</u> Other: _____								
Method to Measure Water Level: <u>Solinst Serial No.: NA</u> P.I.D. Reading: <u>NA</u> ppm @ Well Head								
Water Level at Start (DTW): <u>32.23</u>				Water Level Prior To Sampling: <u>33.60</u>				
$TD = 44.32 - 32.23 (DTW) = 12.09$ (ft. of water) x "K" = <u>1.97</u> (Gals./CV) x <u>3</u> (No. of CV) = <u>5.9</u> (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
10/26/00	10:58	2.0		18.6	413.2	125	lt. Brn.	
	11:02	3.0		19.6	413.9	147.5	"	
	11:05	4.0		19.9	407.2	301	"	
	11:07	5.0		19.9	395.9	71000	"	
	11:09	6.0		19.6	399.9	71000	"	
	11:11	7.0		19.8	416.2	71000	"	
✓	11:13	8.0		19.8	407.2	71000	"	
		After Sampling						
Total Discharge: <u>8</u> gallons				Casing Volumes Removed: <u>4.06</u>				
Method of disposal of discharged water: <u>55 Gallon Drums</u> Poly Tank Treatment System Other: _____								
Date/Time Sampled: <u>10/26/00 @ 11:15</u> Analysis/No. of Bottles: <u>EPA 8015M-TPHg/BTEX, MTBE (2-40ml-VOCs w/HCl), TPHd (2, 1 Liter Glass Ambers, Non-Preserved).</u>								
QA/QC: <u>None</u> @ _____ as an Equipment Blank Blind Duplicate MS/MSD Field Blank								
Comments: _____								
Sampled By: <u>Jacki Lee / Stephen Penman</u> Signature(s):								

PROJECT NAME Arrow Rentals #
 PROJECT MANAGER Jacki Lee
 COMPANY/ADDRESS Environmental Sampling Services
PMB 102, 6680 Alhambra Avenue
Martinez, CA 94553-6105 PHONE (925) 372-8108
 SAMPLERS SIGNATURE [Signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	ANALYSIS REQUESTED												REMARKS
						TPH Gas/BTEX 8015/8020/602	TPH Gas/BTEX/ETEX/MTE 8015/8020/602	Diesel 8015 Modified	BTEX 802/8020	Gasoline 802/8020	Total Petroleum Hydrocarbons EPA 418.1	Halogenated Volatiles 601/8010	Volatile Organics GC/MS 624/8240/8260	Base Neutral Acid Organic GC/MS 625/8270	CAM Metals 8010/7000	EPA 8260 8015/8020/602	PNAS 8015/8020/602	
TRIP BLANK	10/26/00	10:00			2	X									X			
W-ES	10/26/00	11:15			6	X	X											
W-3S	10/26/00	13:03			6	X	X											
W-BS	10/26/00	14:00			8	X	X								X	X		
W-1S	10/26/00	14:35		4435	6	X	X								X	X		
<div>Diagonal lines indicating no analysis requested for these samples.</div>																		

RELINQUISHED BY:

RECEIVED BY:

TURNAROUND REQUIREMENTS

REPORT REQUIREMENTS

INVOICE INFORMATION:

SAMPLE RECEIPT:

Signature [Signature]
 Printed Name Jacqueline Lee
 Firm ESS

Signature _____
 Printed Name _____
 Firm _____

24 hr _____ 48 hr _____ 5 day _____
☒ Standard
 Other (Specify) _____
 Provide Verbal Preliminary Results _____

☒ I. Routine Report
☐ II. Report (includes DUP, MSD, as required, may be charged as samples)
☐ III. Data Validation Report (includes All Raw Data)
☐ RWQCB

P.O.# _____
 Bill To ESS
PMB 102
6680 Alhambra Ave
Martinez, CA 94553

Shipping VIA: _____
 Shipping #: _____
 Condition: _____
 Lab No: _____

Date/Time 10/26/00 17:00

Date/Time _____

Requested Report Date _____

RELINQUISHED BY:

RECEIVED BY:

SPECIAL INSTRUCTIONS/COMMENTS:

Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____

Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____



December 8, 2000

Jackie Lee
Environmental Sampling Services
PMB 102
6680 Alhambra Ave
Martinez, CA 94553

Re: Arrow Rentals

Dear Jackie:

Enclosed are the results of the samples submitted to our laboratory on October 27, 2000. Samples were sent to American Scientific Laboratories for partial analysis. Please find their report (# 9520) attached. For your reference, these analyses have been assigned our service request number L2003406.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A, expiration: August 31, 2002).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

L. Ross Fenstermaker
Project Chemist

LRF/md

Columbia Analytical Services, Inc.

Acronyms

8015M	California DHS LUFT Method
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
CRDL	Contract Required Detection Limit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH or DHS	Department of Health Services
ELAP	Environmental Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
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- <i>tert</i> -Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	None 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	<i>Standard Methods for the Examination of Water and Wastewater</i> , 18th Ed., 1992.
STLC	Solubility Threshold Limit Concentration
SW	<i>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</i> , SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristics Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level is 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.

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

Service Request No.: L2003406
Date Received: 10/27/00

CASE NARRATIVE

All analyses were performed in accordance with our laboratory's quality assurance program. This report contains analytical results for sample(s) designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS) and Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS).

All EPA recommended holding times have been met for analyses in this sample delivery group.

No silica gel clean-up was performed for the Hydrocarbon Scan/Fuel Characterization analysis by EPA 8015M.

Approved by: _____



Date: _____

12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

MTBE, BTEX and TPH as Gasoline

Sample Name: TRIP BLANK
Lab Code: L2003406-001
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	10/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	1	NA	10/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: 12-8-00

1522/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

MTBE, BTEX and TPH as Gasoline

Sample Name: W-ES
Lab Code: L2003406-002
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	10/30/00	0.7	
Toluene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	10/30/00	110	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	1	NA	10/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: 

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

MTBE, BTEX and TPH as Gasoline

Sample Name: W-3S
Lab Code: L2003406-003
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	10/30/00	83	
Toluene	EPA 5030	8021B	0.5	1	NA	10/30/00	3.5	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/30/00	6.4	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/30/00	1.2	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	10/30/00	310	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	1	NA	10/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: _____

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

MTBE, BTEX and TPH as Gasoline

Sample Name: W-BS
Lab Code: L2003406-004
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	10	NA	10/30/00	2500	
Toluene	EPA 5030	8021B	0.5	10	NA	10/30/00	210	
Ethylbenzene	EPA 5030	8021B	0.5	10	NA	10/30/00	1100	
Xylenes, Total	EPA 5030	8021B	1.0	10	NA	10/30/00	2600	
TPH as Gasoline	EPA 5030	8015M	50	10	NA	10/30/00	23000	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	10	NA	10/30/00	150	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

MTBE, BTEX and TPH as Gasoline

Sample Name: W-IS
Lab Code: L2003406-005
Test Notes: † / C2A

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	50	NA	10/31/00	3800	
Toluene	EPA 5030	8021B	0.5	10	NA	10/30/00	1800	
Ethylbenzene	EPA 5030	8021B	0.5	10	NA	10/30/00	1700	
Xylenes, Total	EPA 5030	8021B	1.0	10	NA	10/30/00	7600	
TPH as Gasoline	EPA 5030	8015M	50	10	NA	10/30/00	50000	
Methyl tert -Butyl Ether	EPA 5030	8021B	5	10	NA	10/30/00	<50	

†
C2A

TPH as Gasoline does not include MTBE.
MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: _____

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA


MTBE, BTEX and TPH as Gasoline

Sample Name: Method Blank
Lab Code: L201030-MB
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	10/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	1	NA	10/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: 

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA

MTBE, BTEX and TPH as Gasoline

Sample Name: Method Blank
Lab Code: L201031-MB
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	10/31/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	10/31/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	10/31/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	10/31/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	10/31/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	5	1	NA	10/31/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Hydrocarbon Scan / Fuel Characterization

Sample Name: W-ES
Lab Code: L2003406-002
Test Notes: X5

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	ND	
C23 - C32 HRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	ND	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	100	1	10/30/00	11/1/00	ND	
Fuel Characterization	EPA 3510M	8015M					NA	

DRO Diesel Range Organics
HRO Heavy Oil Range Organics
X5 Quantified with diesel fuel.



Approved By: _____ **Date:** 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Hydrocarbon Scan / Fuel Characterization

Sample Name: W-3S
Lab Code: L2003406-003
Test Notes: X5

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	120	
C23 - C32 HRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	140	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	100	1	10/30/00	11/1/00	260	
Fuel Characterization	EPA 3510M	8015M						HC1

DRO Diesel Range Organics
HRO Heavy Oil Range Organics
X5 Quantified with diesel fuel.

HC1 Chromatogram fingerprint is indicative of crude oil and gasoline.

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Hydrocarbon Scan / Fuel Characterization

Sample Name: W-BS **Units:** ug/L (ppb)
Lab Code: L2003406-004 **Basis:** NA
Test Notes: X5

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	650	
C23 - C32 HRO	EPA 3510M	8015M	50	1	10/30/00	11/1/00	ND	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	100	1	10/30/00	11/1/00	650	
Fuel Characterization	EPA 3510M	8015M						HC1

DRO Diesel Range Organics
HRO Heavy Oil Range Organics
X5 Quantified with diesel fuel.

HC1 Chromatogram fingerprint is indicative of gasoline.

Approved By:  Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Hydrocarbon Scan / Fuel Characterization

Sample Name: W-IS
Lab Code: L2003406-005
Test Notes: X5 / C2A

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	10	10/30/00	11/2/00	1200	
C23 - C32 HRO	EPA 3510M	8015M	50	10	10/30/00	11/2/00	<500	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	100	10	10/30/00	11/2/00	1200	
Fuel Characterization	EPA 3510M	8015M						HC1

DRO Diesel Range Organics
HRO Heavy Oil Range Organics
X5 Quantified with diesel fuel.
C2A MRL is elevated because of matrix interferences and because the sample required diluting.
HC1 Chromatogram fingerprint is indicative of gasoline.

Approved By: _____

Date: _____

12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA

Hydrocarbon Scan / Fuel Characterization

Sample Name: Method Blank
Lab Code: L201030-MB
Test Notes: X5

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	10/30/00	10/31/00	ND	
C23 - C32 HRO	EPA 3510M	8015M	50	1	10/30/00	10/31/00	ND	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	100	1	10/30/00	10/31/00	ND	
Fuel Characterization	EPA 3510M	8015M					NA	

DRO Diesel Range Organics
HRO Heavy Oil Range Organics
X5 Quantified with diesel fuel.

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Polynuclear Aromatic Hydrocarbons (PAHs) By GC/MS

Sample Name: W-BS
Lab Code: L2003406-004
Test Notes: C2A

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510	8270C	5	5	11/1/00	11/3/00	260	
2-Methylnaphthalene	EPA 3510	8270C	5	5	11/1/00	11/3/00	88	
Acenaphthylene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Acenaphthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Dibenzofuran	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Fluorene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Phenanthrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benz(a)anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Chrysene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(b)fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(k)fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(a)pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Indeno(1,2,3-cd)pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Dibenz(a,h)anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(g,h,i)perylene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	

C2A

MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: _____

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: L2003406
Date Collected: 10/26/00
Date Received: 10/27/00

Polynuclear Aromatic Hydrocarbons (PAHs) By GC/MS


Sample Name: W-IS
Lab Code: L2003406-005
Test Notes: C2A

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510	8270C	5	5	11/1/00	11/3/00	350	
2-Methylnaphthalene	EPA 3510	8270C	5	5	11/1/00	11/3/00	180	
Acenaphthylene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Acenaphthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Dibenzofuran	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Fluorene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Phenanthrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benz(a)anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Chrysene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(b)fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(k)fluoranthene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(a)pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Indeno(1,2,3-cd)pyrene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Dibenz(a,h)anthracene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	
Benzo(g,h,i)perylene	EPA 3510	8270C	5	5	11/1/00	11/3/00	<25	

C2A

MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: 

Date: 12-8-00

1822/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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


Service Request: L2003406
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons (PAHs) By GC/MS

Sample Name: Method Blank
Lab Code: L201101-MB
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Naphthalene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
2-Methylnaphthalene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Acenaphthylene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Acenaphthene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Dibenzofuran	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Fluorene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Phenanthrene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Anthracene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Fluoranthene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Pyrene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Benz(a)anthracene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Chrysene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Benzo(b)fluoranthene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Benzo(k)fluoranthene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Benzo(a)pyrene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Indeno(1,2,3-cd)pyrene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Dibenz(a,h)anthracene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	
Benzo(g,h,i)perylene	EPA 3510	8270C	5	1	11/1/00	11/2/00	ND	

Approved By: 

Date: 12-8-00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
MTBE, BTEX and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8021B/8015M

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery	
			4-Bromofluorobenzene	4-Bromofluorobenzene
TRIP BLANK	L2003406-001		85	97
W-ES	L2003406-002		84	95
W-3S	L2003406-003		84	96
W-BS	L2003406-004		95	109
W-IS	L2003406-005		102	127
Method Blank	L201030-MB		88	91
Method Blank	L201031-MB		82	89
Batch QC	L2003390-003MS		96	111
Batch QC	L2003390-003DMS		93	105
W-ES	L2003406-002MS		89	95
W-ES	L2003406-002DMS		90	96

CAS Acceptance Limits: 60-130 60-140

Approved By: 

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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


Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 10/30/00

Matrix Spike/Duplicate Matrix Spike Summary
MTBE, BTEX and TPH as Gasoline

Sample Name: Batch QC
Lab Code: L2003390-003MS, L2003390-003DMS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery				Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	CAS Acceptance Limits		MS	DMS		
									MS	DMS				
Benzene	EPA 5030	8021B	0.5	16.6	16.6	11.8	29.1	28.1	104	98	39-150	3		
Toluene	EPA 5030	8021B	0.5	114	114	22.2	147	143	109	106	46-148	3		
Ethylbenzene	EPA 5030	8021B	0.5	30.3	30.3	7.10	37.5	37.8	101	101	32-160	<1		
TPH as Gasoline	EPA 5030	8015M	50	2000	2000	208	2220	2090	101	94	70-140	6		

Approved By: 

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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


Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 10/31/00

Matrix Spike/Duplicate Matrix Spike Summary
MTBE, BTEX and TPH as Gasoline

Sample Name: W-ES
Lab Code: L2003406-002MS, L2003406-002DMS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Benzene	EPA 5030	8021B	0.5	16.6	16.6	0.699	16.2	16.0	93	92	39-150	1	
Toluene	EPA 5030	8021B	0.5	114	114	ND	118	117	104	103	46-148	<1	
Ethylbenzene	EPA 5030	8021B	0.5	30.3	30.3	ND	28.1	27.8	93	92	32-160	1	
TPH as Gasoline	EPA 5030	8015M	50	2000	2000	107	1900	1890	90	89	70-140	<1	

Approved By: 

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary Hydrocarbon Scan / Fuel Characterization

Prep Method: EPA 3510M
Analysis Method: 8015M

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery <i>p</i> -Terphenyl
W-ES	L2003406-002		103
W-3S	L2003406-003		98
W-BS	L2003406-004		121
W-IS	L2003406-005		79
Method Blank	L201030-MB		96
Lab Control Sample	L201030-LCS		94
Duplicate Lab Control Sample	L201030-DLCS		111

CAS Acceptance Limits:

50-140

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: 10/30/00
Date Analyzed: 10/31/00

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary
Hydrocarbon Scan / Fuel Characterization

Sample Name: Duplicate Lab Control Sample
Lab Code: L201030-LCS, L201030-DLCS
Test Notes: OG1

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	Percent Recovery								Relative Percent Difference
			True Value		Result				CAS Acceptance Limits		
			LCS	DLCS	LCS	DLCS	LCS	DLCS			
Diesel	EPA 3510M	8015M	400	400	337	328	84	82	41-136	3	

OG1

Sample quantity was insufficient to perform MS and Duplicate MS. Three separate, replicate one liter samples are required to analyze sample and spikes.

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons (PAHs) By GC/MS

Prep Method: EPA 3510
Analysis Method: 8270C

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	P e r c e n t R e c o v e r y		
			Nitrobenzene-d5	2-Fluorobiphenyl	p-Terphenyl-d14
W-BS	L2003406-004		89	102	116
W-IS	L2003406-005		75	102	81
Method Blank	L201101-MB		94	86	123
Lab Control Sample	L201101-LCS		102	91	134
Duplicate Lab Control Sample	L201101-DLCS		101	90	129

CAS Acceptance Limits: 35-114 43-116 33-141

Approved By: _____

Date: 12-8-00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: L2003406
Date Collected: NA
Date Received: NA
Date Extracted: 11/1/00
Date Analyzed: 11/2/00

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary
Polynuclear Aromatic Hydrocarbons (PAHs) By GC/MS

Sample Name: Duplicate Lab Control Sample
Lab Code: L201101-LCS, L201101-DLCS
Test Notes: OG1

Units: ug/L (ppb)
Basis: NA

Percent Recovery

Analyte	Prep Method	Analysis Method	True Value		Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
			LCS	DLCS	LCS	DLCS	LCS	DLCS			
1,4-Dichlorobenzene	EPA 3510	8270C	50.0	50.0	44.4	45.9	89	92	20-124	3	
N-Nitrosodi-n-propylamine	EPA 3510	8270C	50.0	50.0	52.7	56.3	105	113	D-230	7	
1,2,4-Trichlorobenzene	EPA 3510	8270C	50.0	50.0	40.6	41.3	81	83	44-142	2	
Acenaphthene	EPA 3510	8270C	50.0	50.0	45.0	47.1	90	94	47-145	5	
2,4-Dinitrotoluene	EPA 3510	8270C	50.0	50.0	48.5	49.4	97	99	39-139	2	
Pyrene	EPA 3510	8270C	50.0	50.0	56.6	56.3	113	113	52-115	<1	

OG1

Sample quantity was insufficient to perform MS and Duplicate MS. Three separate, replicate one liter samples are required to analyze sample and spikes.

Approved By: _____

Date: 12-8-00



6925 Canoga Avenue • Canoga Park, CA 91303 • (818) 587-5550 • Fax (818) 587-5555

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE Oct. 26, 2000 PAGE 1 OF 1

PROJECT NAME Arrow Rentals #
PROJECT MANAGER Jacki Lee
COMPANY/ADDRESS Environmental Sampling Services
PMB 102, 6680 Alhambra Avenue
Martinez, CA 94553-6105 PHONE (925) 372-8108
SAMPLERS SIGNATURE [Signature] (925) 372-6705

ANALYSIS REQUESTED

L2003406

PROJECT NAME <u>Arrow Rentals</u>					NUMBER OF CONTAINERS	ANALYSIS REQUESTED												REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
PROJECT MANAGER <u>Jacki Lee</u>						<div>TEL Gas/BTEX, MTBE 6015/8020/802 PH/8015 Modified Diesel <input checked="" type="checkbox"/> FC <input type="checkbox"/> Gasoline <input type="checkbox"/> BTEX 602/8020 Total Petroleum Hydrocarbons EPA 418.1 Halogenated Volatiles 601/8010 Volatile Organics GC/MS 624/8240/8260 Base Neutral Acid Organic GC/MS 625/8270 CAM Metals 6010/7000 EPA 8260: 1000 10 Oxygenated PNAS</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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RELINQUISHED BY:

RECEIVED BY:

TURNAROUND REQUIREMENTS

REPORT REQUIREMENTS

INVOICE INFORMATION:

SAMPLE RECEIPT:

Signature [Signature]
Printed Name Jacqueline Lee
Firm ESF

Signature [Signature]
Printed Name
Firm

24 hr ☐ 48 hr ☐ 5 day ☐
☒ Standard
Other (Specify)
Provide Verbal Preliminary Results
Requested Report Date

☒ I. Routine Report
☐ II. Report (includes DUP, MS, MSD, as required, may be charged as samples)
☐ III. Data Validation Report (includes All Raw Data)
☐ RWOCB

P.O.#
Bill To ESF
PMB 102
6680 Alhambra Ave
Martinez, CA 94553

Shipping VIA:
Shipping #:
Condition:
Lab No:

Date/Time 10/26/00 17:00

Date/Time

RELINQUISHED BY:

RECEIVED BY:

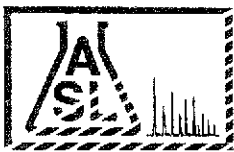
SPECIAL INSTRUCTIONS/COMMENTS:

Signature [Signature]
Printed Name
Firm

Signature [Signature]
Printed Name Erica Pineda
Firm CAS
10-27-00 11:00
via FedEx

Date/Time

Date/Time



AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services

Ordered By

Columbia Analytical Services, Inc.
6925 Canoga Ave.
Canoga Park, CA 91303

Telephone (818) 587-5550
Attn L. Ross Fenstermaker

Number of Pages 7

Date Received 11/07/2000

Date Reported 11/09/2000

Job Number	Ordered	Client
9520	11/07/2000	CAS

Project ID: L2003406

Project Name:

Enclosed are the results of analyses on 3 samples analyzed as specified on attached chain of custody.

Wendy Lu
Organics Supervisor

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

- 1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
- 2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Services

6925 Canoga Avenue • Canoga Park, CA 91303 • (818) 587-5550 • Fax (818) 587-5550

PROJECT NAME
PROJECT MANAGER
COMPANY/ADDRESS
PHONE
SAMPLERS SIGNATURE

L2003406
L. Ross FENSTERMAKER
COLUMBIA ANALYTICAL SERVICES

#

ANALYSIS REQUESTED
ASL9520

TPH Gas/BTEX
TPH/8020/802
Diesel FC
BTEX
602/8020
Total Petroleum Hydrocarbons
EPA 418.1
Halogenated Volatiles
601/8010
Volatiles Organics
GC/MS 624/8240/8260
Base Neutral Acid Organic
GC/MS 625/8270
CAM Metals 6010/7000

REMARKS

SAMPLE I.D.
DATE
TIME
LAB I.D.
SAMPLE MATRIX

TRIP BLANK
W-BS
W-IS

10/26/00
↓
↓

1000
1400
1135

WATER
↓
↓

1
2
2

59844
59845
59846

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
24 hr 48 hr 5 day
Standard
X Other (Specify)
Provide Verbal Preliminary Results
Requested Report Date

REPORT REQUIREMENTS
I. Routine Report
*** II. Report (includes DUP MS, MSD, as required, may be charged as samples)
III. Data Validation Report (includes All Raw Data)
RWQCB

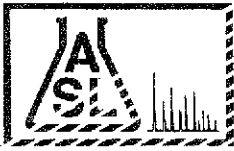
INVOICE INFORMATION:
P.O.#
Bill To

SAMPLE RECEIPT:
Shipping VIA:
Shipping #:
Condition:
Lab No:

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
TO ASL
* TBA, DIPE, ETBE, TAME, MTBE, Ethanol
** HOLDING TIME
*** REPORT BATCH MS/MSD & LCS



AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
ANALYTICAL RESULTS

Ordered By

Columbia Analytical Services, Inc.
6925 Canoga Ave
Canoga Park, CA 91303

Telephone: (818)587-5550

Attn: L.Ross Fenstermaker

Page: 2

Project ID: L2003406

Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS

Batch No: 110800-1

Our Lab I.D.		59844				
Sample ID		TripBlank				
Date Sampled		10/26/2000				
Date Extracted		11/08/2000				
Preparation Method						
Date Analyzed		11/08/2000				
Matrix		Water				
Units		ug/L				
Detection Limit Multiplier		1				
Analytes	PQL	Results				
DIPE	2	ND				
ETBE	2	ND				
Ethanol	1000	ND				
TAME	2	ND				
TBA	10	ND				
MTBE	2	ND				

Our Lab I.D.		59844				
Surrogates	Con. Limit	% Rec.				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	102				
Dibromofluoromethane	70-120	105				
Toluene-d8	70-120	100				

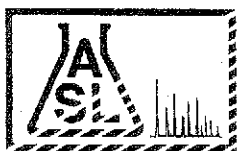
QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC				
MTBE	120	120	<1	75-120	15	80				
Benzene	106	109	2.8	75-120	15	84				
Chlorobenzene	96	100	4.1	75-120	15	82				
1,1-Dichloroethene	120	120	<1	75-120	15	89				

ND - Not Detected at The Detection Limit. MS - Matrix Spike. MSD - Matrix Spike Duplicate. SM - Sample. SMD - Sample Duplicate.

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AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
ANALYTICAL RESULTS

Page: 3
Project ID: L2003406
Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS
QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC				
(1,1-Dichloroethylene)										
Toluene (Methyl benzene)	102	105	2.9	75-120	15	80				
Trichloroethene (Trichloroethylene)	112	109	2.7	75-120	15	102				



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Environmental Testing Services

ANALYTICAL RESULTS

Ordered By

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Telephone: (818)587-5550

Attn: L.Ross Fenstermaker

Page: 4

Project ID: L2003406

Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS

Batch No: 110800-1

Our Lab ID.		59845				
Sample ID		W-BS				
Date Sampled		10/26/2000				
Date Extracted		11/08/2000				
Preparation Method						
Date Analyzed		11/08/2000				
Matrix		Water				
Units		ug/L				
Detection Limit Multiplier		10				
Analytes	PQL	Results				
DIPE	20	ND				
ETBE	20	ND				
Ethanol	10000	ND				
TAME	20	ND				
TBA	100	ND				
MTBE	20	ND				

Our Lab ID.		59845				
Surrogates	Con. Limit	% Rec.				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	97				
Dibromofluoromethane	70-120	106				
Toluene-d8	70-120	102				

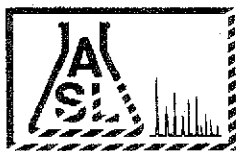
QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC				
MTBE	120	120	<1	75-120	15	80				
Benzene	106	109	2.8	75-120	15	84				
Chlorobenzene	96	100	4.1	75-120	15	82				
1,1-Dichloroethene	120	120	<1	75-120	15	89				

ND - Not Detected at The Detection Limit. MS - Matrix Spike. MSD - Matrix Spike Duplicate. SM - Sample. SMD - Sample Duplicate.

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AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
ANALYTICAL RESULTS

Page: 5
Project ID: L2003406
Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS
QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC				
(1,1-Dichloroethylene)										
Toluene (Methyl benzene)	102	105	2.9	75-120	15	80				
Trichloroethene (Trichloroethylene)	112	109	2.7	75-120	15	102				



AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
ANALYTICAL RESULTS

Ordered By

Columbia Analytical Services, Inc
6925 Canoga Ave.
Canoga Park, CA 91303

Telephone: (818)587-5550

Attn: L.Ross Fenstermaker

Page: 6

Project ID: L2003406

Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS

Batch No: 110800-1

Our Lab ID.		59846				
Sample ID		W-1S				
Date Sampled		10/26/2000				
Date Extracted		11/09/2000				
Preparation Method						
Date Analyzed		11/09/2000				
Matrix		Water				
Units		ug/L				
Detection Limit Multiplier		100				
Analytes	PQL	Results				
DIPE	200	ND				
ETBE	200	ND				
Ethanol	100000	ND				
TAME	200	ND				
TBA	1000	ND				
MTBE	200	ND				

Our Lab ID.		59846				
Surrogates	Con. Limit	% Rec.				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	99				
Dibromofluoromethane	70-120	84				
Toluene-d8	70-120	96				

QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC			
MTBE	120	120	<1	75-120	15	80			
Benzene	106	109	2.8	75-120	15	84			
Chlorobenzene	96	100	4.1	75-120	15	82			
1,1-Dichloroethene	120	120	<1	75-120	15	89			

ND - Not Detected at The Detection Limit. MS - Matrix Spike. MSD - Matrix Spike Duplicate. SM - Sample. SMD - Sample Duplicate.

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Environmental Testing Services
ANALYTICAL RESULTS

Page: 7
Project ID: L2003406
Project Name:

Job Number	Order Date	Client
9520	11/07/2000	CAS

Method: 8260B, 5 Oxygenates by GC/MS
QUALITY CONTROL REPORT

Batch No: 110800-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC				
(1,1-Dichloroethylene)										
Toluene (Methyl benzene)	102	105	2.9	75-120	15	80				
Trichloroethene (Trichloroethylene)	112	109	2.7	75-120	15	102				