



"We Rent Most Everything"



- ① Can reduce sampling, but do
- ② RBA Tier 2

9-27-97

Dear Eva,

Enclosed is the latest testing report.

May we proceed with testing at 6 month intervals?

Please advise.

Sincerely,

Pete Sullivan

ENVIRONMENTAL
PROTECTION

97 SEP 20 PM 3:41

COPY

**FIELD ACTIVITY REPORT FOR
ARROW RENTAL
LIVERMORE, CALIFORNIA**

**QUARTER 1 GROUNDWATER SAMPLING EVENT
JULY 1997**

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

Date Prepared: September 11, 1997

By: Environmental Sampling Services
6680 Alhambra Avenue, #102
Martinez, California 94553

August 28, 1997
971275

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

Subject: Groundwater Monitoring, July 1997
187 North L Street
Livermore, CA 94550

Dear Ms. Sullins:

This report describes the results of groundwater monitoring conducted at the Arrow Rentals Site located at 187 North L Street in Livermore, California in July 1997. This report presents the results of sampling three wells and the analysis of groundwater samples collected from each well.

GROUNDWATER SAMPLING

On July 15, 1997, groundwater monitoring wells W-1s, W-3s, and W-Bs were sampled by Environmental Sampling Services of Martinez, California. The well locations are shown on Figure 1. The field activity report describing sampling activities is included in Appendix A.

Prior to sampling, the depth to 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. Between each groundwater level measurement, the interface probe was decontaminated using Alconox soap and clean water. Groundwater elevation data for each well are listed in Table 1. The potentiometric surface map, corresponding to groundwater elevations measured on July 15, 1997, is shown on Figure 2.

Any measurement for free product?

Three wells (W-1s, W-3s, and W-Bs) were purged and sampled after 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 and the groundwater samples were obtained using a 2-inch diameter submersible Grundfos pump equipped with discharge tubing dedicated to each well. The pump and each discharge hose were washed in an Alconox solution, rinsed with tap water, and rinsed with deionized water before each

use. Purge water from the monitoring wells was collected 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 the discharge tubing from the submersible pump. 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 San Jose. A travel blank was prepared by the laboratory and accompanied the groundwater samples for quality assurance purposes.

The three groundwater samples and the travel blank were analyzed for total petroleum hydrocarbons quantified as gasoline (TPH-gasoline) and diesel (TPH-diesel) by EPA Method 8015 Modified; benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA Method 8020; and methyl tertiary butyl ether (MTBE) by EPA Method 8020 Modified.

HYDROGEOLOGIC DATA EVALUATION

Groundwater elevations in the four monitoring wells range from 443.20 feet in well W-Es to 449.20 feet in well W-Bs. Based upon measurements recorded on July 15, 1997, groundwater generally flows to the west-northwest under a hydraulic gradient of 0.020 ft/ft (Figure 2).

RESULTS OF LABORATORY ANALYSES

Results of laboratory analyses for groundwater samples collected from wells W-1s, W-3s, and W-Bs in July 1997 are summarized in Table 2. The laboratory report and chain-of-custody are included in Appendix B.

TPH-diesel was detected in the groundwater samples collected from well W-1s at 38,000 $\mu\text{g/L}$, well W-Bs at 17,000 $\mu\text{g/L}$, and well W-3s at 340 $\mu\text{g/L}$. The laboratory noted that a heavy oil was also detected in the three samples at concentrations ranging from 490 to 3,000 $\mu\text{g/L}$. Gasoline was detected in all three wells at concentrations ranging from 2,100 to 140,000 $\mu\text{g/L}$. Benzene was detected in the samples collected from well W-1s (12,000 $\mu\text{g/L}$), well W-Bs (7,800 $\mu\text{g/L}$), and well W-3s (230 $\mu\text{g/L}$). These concentrations exceed the Maximum Contaminant Level (MCL) of 1 $\mu\text{g/L}$ established for benzene in drinking water. Toluene (up to 12,000 $\mu\text{g/L}$), ethylbenzene (up to 2,600 $\mu\text{g/L}$), and xylenes (up to 16,000 $\mu\text{g/L}$) were detected in the three groundwater samples. The levels of toluene, ethylbenzene, and xylenes in wells W-1s and W-Bs exceed the MCLs for these chemicals.

MTBE was not detected in the three groundwater samples; however, the detection limits were elevated due to high concentrations of gasoline and BTEX in the samples. Gasoline, BTEX, and MTBE were not detected in the travel blank.

SUMMARY AND CONCLUSIONS

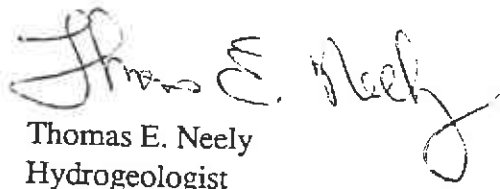
During the July 1997 sampling round, a petroleum hydrocarbon odor was evident in groundwater purged from all three wells sampled. A sheen was also noted in the purged water obtained from well W-1s.


High concentrations of gasoline, diesel, and BTEX have been consistently detected in wells W-1s, W-3s, and W-Bs. In the past, low levels of petroleum hydrocarbons have also been detected in downgradient well W-Es.

Fluctuations in the concentrations of gasoline, diesel, and BTEX in groundwater samples collected from these wells may be the result of seasonal variations in groundwater elevations.

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

Sincerely,

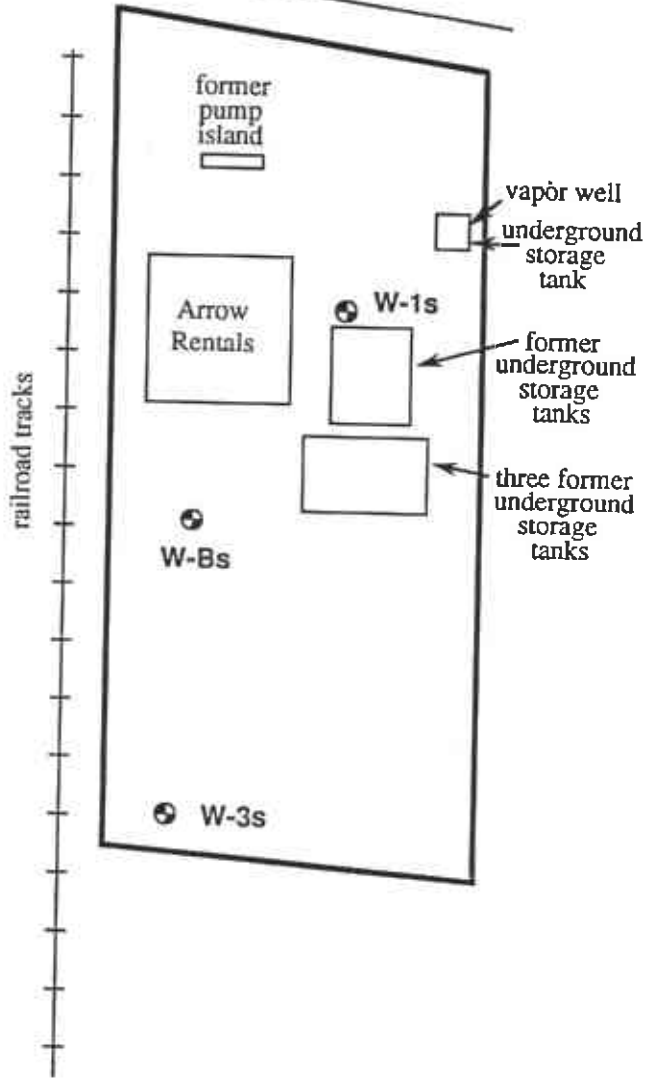

Thomas E. Neely
Hydrogeologist


Rebecca A. Sterbentz, RG, CHG, REA
President





North L Street



EXPLANATION
⊕ Approximate well location

0 50 feet
scale

W-Es
⊕

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

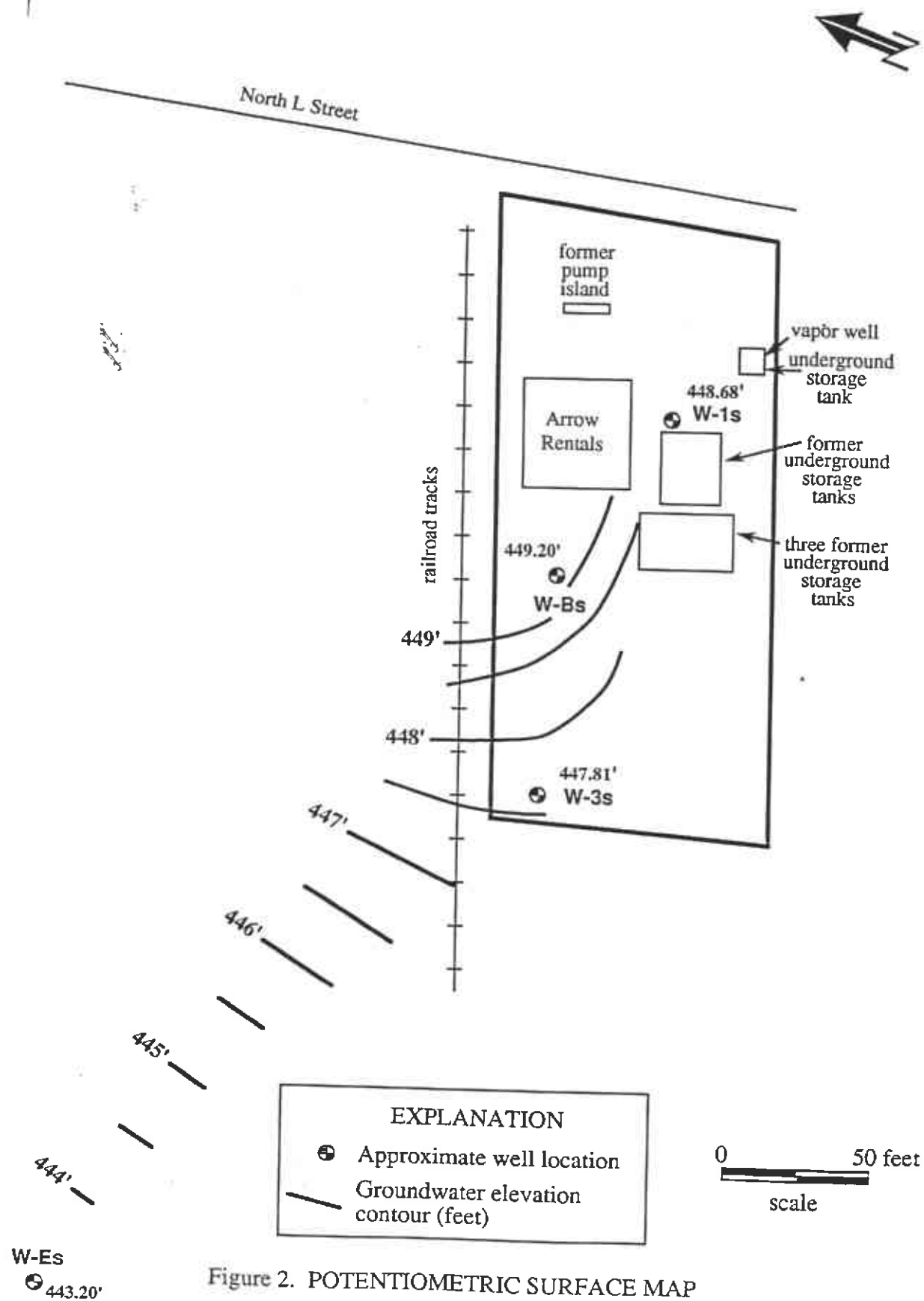


Figure 2. POTENTIOMETRIC SURFACE MAP
187 North L Street, Livermore, California

Table 1. GROUNDWATER ELEVATION DATA
 187 North L Street, Livermore, California
 July 15, 1997

Well Number	Top of Casing Elevation (feet above MSL)	Depth to Water (feet below TOC)	Water Elevation (feet above MSL)
W-1s	479.09	30.41	448.68
W-3s	476.98	29.17	447.81
W-Bs	478.82	29.62	449.20
W-Es	474.66	31.46	443.20

TOC = top of PVC casing

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

Sep 13, 1995

	TPH _g	TPH _d	B	T	E	X	mtBE
W-1	660,000		65,000	78,000	6,400	36,000	ND
W-2	90		ND	ND	ND	ND	ND
W-3	27,000		5,600	290	460	280	ND
W-E	95		4	ND	ND	ND	18

Table 2. GROUNDWATER ANALYTICAL RESULTS
 187 North L Street, Livermore, California
 July 15, 1997

Well Number	TPH-gasoline (µg/L)	TPH-diesel (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
W-1s	140,000	38,000*§	12,000	12,000	2,600	16,000	< 800
W-3s	2,100	340†§	230	7	33	51	< 20
W-Bs	66,000	17,000‡§	7,800	4,900	1,900	10,000	< 600
Travel Blank	ND	NA	ND	ND	ND	ND	ND
MDL	50-10,000	50-1,000	0.5-100	0.5-100	0.5-100	0.5-100	3-600
MCL	NE	NE	1	150	700	1,750	NE
AL	NE	NE	NE	NE	NE	NE	35

TPH-gasoline = total petroleum hydrocarbons quantified as gasoline

TPH-diesel = total petroleum hydrocarbons quantified as diesel

MTBE = methyl tertiary butyl ether

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

NA = not analyzed

ND = not detected

NE = none established

MDL = method detection limit

MCL = Maximum Contaminant Level, November 1996

AL = Action Level, November 1996

* Sample contained heavy oil at 3,000 µg/L

† Sample contained heavy oil at 740 µg/L

‡ Sample contained heavy oil at 490 µg/L

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

**FIELD ACTIVITY REPORT FOR
ARROW RENTAL
LIVERMORE, CALIFORNIA**

**QUARTERLY GROUNDWATER SAMPLING EVENT
JULY 1997**

Prepared for: Don Sul, Inc.
187 North L Street
Livermore, California 94550
Date Prepared: July 17, 1997

By: Environmental Sampling Services
6680 Alhambra Avenue, #102
Martinez, California 94553

**FIELD ACTIVITY REPORT
FOR JULY 1997 GROUNDWATER MONITORING EVENT
ARROW RENTAL,
LIVERMORE, CALIFORNIA**

ESS Personnel: Jacki Lee and Steve Penman

Duration of Activities: July 15, 1997

Decontamination Procedures

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

Water Level and Total Depth Measurements

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

Field Equipment Calibration

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

Field Activities

Tuesday, July 15, 1997: Measured static water level measurements in the following wells: W-1S, W-BS, W-3S and W-E (Table 1). Purged and sampled W-1S, W-BS, and W-3S for the following analysis: EPA Method 8015M (TPH(Gasoline)/BTEX, and MTBE) and TPH (Diesel). All monitoring wells were purged with a submersible pump. Following well evacuation of three (3) casing volumes and stabilization of groundwater quality parameters, each monitoring well was sampled accordingly.

Each well was sampled with the submersible pump. Discharge flow was reduced to minimize aeration, degassing of groundwater sample. Following completion of sampling, each length of tubing was washed with a solution of Alconox® laboratory-grade detergent and potable water, rinsed with potable water, and stored in labeled plastic storage bags. The bags were left on-site for future sampling events.

The contracted laboratory, Columbia Analytical Laboratories, supplies all sample containers and packing material and performs all required analyses. All sample were properly preserved according to analysis.




**Environmental
Sampling Services**

QA/QC

Trip blanks for EPA Method 8015M were placed in the cooler containing all samples. 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.



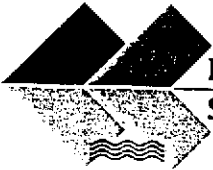
Jacqueline Lee
President

enclosure
Table 1
Water Sample Log Sheets
Chain of Custodies

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

WELL IDENTIFICATION	DEPTH TO GROUNDWATER (Measured July 15, 1997)	TOTAL WELL DEPTH
W-IS	30.41	44.64
W-BS	29.62	44.47
W-3S	29.17	44.76
W-E	31.46	NA

NA = Not Applicable



**Environmental
Sampling Services**

WELL SAMPLE LOG SHEET Well Identification: W/S Date: 7-15-97

Project Name: Arrow Rentals Client Project Number: _____
 Well Description: 2" 4" 5" 6" 8" Well Type: PVC Stainless Steel
 Is well secured? YES / NO Type of lock / lock number: Master Lock
 Observations/Comments: Well keys are @ Front Counter

Purge Method: Teflon Disposable Bailer Centrifugal pump GRUNDFOS Redi-flow pump Other: _____

Pump lines: NEW/CLEANED/DEDICATED Bailer lines: NEW / CLEANED

Method of cleaning pump: Alconox Liquidnox Tap Water DI Rinse Other: _____

Method of cleaning bailer: Alconox Liquidnox Tap Water DI Rinse Other: _____

Sampling Method: Teflon Disp. Tef. bailer Disp. PVC bailer Redi-Flow 2 pump Other: _____

pH Meter Serial Number: 330089 Specific Conductance Meter Serial Number: 9640203AE

Date(s) Calibrated: 7/15/97 (4) (7) (10) Specific Conductance Meter: _____ @ 100 umhos/cm @ _____ °C

Method to measure water level: Subst FSS #1 Specific Conductance Meter: _____ @ 1000 umhos/cm @ _____ °C

Water Level at Start (DTW): 30.41 Water Level Prior to Sampling: _____

TD = 44.64 - 30.41 (DTW) x "k" = 20.8 gallons/casing volume x 3 = 62.4 gallons for 3 casing volumes
 "k" = 0.163 (2" well) "k" = 0.633 (4" well) "k" = 1.02 (5" well) "k" = 1.46 (6" well) "k" = 2.61 (8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance ms (uS)	Turbidity (NTU's)	Color	Comments
7/15/97	13:40	10	7.04	22.5	983	Clear	None	Slight hydrocarbon odor floating product in discharge water
	13:43	20	7.01	21.1	907	"	"	Strong odor No product in water
	13:47	30	7.03	21.1	874	Low	Clear w/ TAN	"
	13:51	40	7.08	21.4	884	"	Greyish TAN	" Floating Product
	14:00	50	6.94	22.7	852	High	"	" "
	14:17	60	7.08	23.6	841	"	"	" "
	14:25	65	7.01	22.6	802	"	"	" "
7/15/97	14:33	Aft. Sampl	6.98	22.6	783	High	Slight TAN	Strong odor Floating Product

Total Discharge: 65 gallons Casing Volumes Removed: 3.2

Method of disposal of discharged water: TO labeled 55 gallon Drums

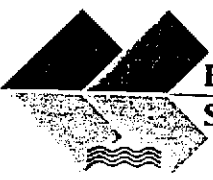
Date/Time sampled: 7/15/97 @ 14:30 Analysis: EPA 8015M (TPH, BTEX, MTBE) TPH diesel

Comments: _____

QA/QC: NONE @ _____ as Eq. Blank Duplicate MS/MSD Split

Sampled By: S. Permen / J. Lee

Environmental Sampling Services
 6680 Alhambra Ave. Martinez, CA 94553
 Tel/Fax: (510) 372-8108



**Environmental
Sampling Services**

WELL SAMPLE LOG SHEET

Well Identification: W-B5 Date: 7-15-97

Project Name: Arcum Rentals Client Project Number: _____
 Well Description: 2" 4" 5" (6") 8" Well Type: (PVC) Stainless Steel
 Is well secured? (YES) / NO Type of lock / lock number: Master Lock
 Observations/Comments: Well key is located @ front counter

Purge Method: Teflon Disposable Bailer Centrifugal pump (GRUNDFOS Redi-flow pump) Other: _____
 Pump lines: (NEW) CLEANED/DEDICATED Bailer lines: NEW / CLEANED
 Method of cleaning pump: (Alconox) Liquidnox (Tap Water) DI Rinse Other: _____
 Method of cleaning bailer: Alconox Liquidnox Tap Water DI Rinse Other: _____

Sampling Method: Teflon Disp. Tef. bailer Disp. PVC bailer Redi-Flow 2 pump Other: _____

pH Meter Serial Number: 330089 Specific Conductance Meter Serial Number: 9640203AE
 Date(s) Calibrated: 7/15/97 (4) (7) (10) Specific Conductance Meter: _____ @ 100 umhos/cm @ _____ °C
 Method to measure water level: Solinst-ESS 1 Specific Conductance Meter: _____ @ 1000 umhos/cm @ _____ °C
 Water Level at Start (DTW): 29.62 Water Level Prior to Sampling: 35.22

TD = 44.77 - 29.62 (DTW) x "k" = 21.7 gallons/casing volume x 3 = 65.1 gallons for 3 casing volumes
 "k" = 0.163 (2" well) "k" = 0.653 (4" well) "k" = 1.02 (5" well) "k" = 1.46 (6" well) "k" = 2.61 (8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance ms (uS)	Turbidity (NTU's)	Color	Comments
7/15/97	12:26	10	7.28	21.2	883	Clear	None	Hydrocarbon odor
	12:32	20	7.12	20.9	841	"	"	"
	12:36	30	7.09	20.7	816	"	"	"
	12:41	40	7.05	21.4	805	very low	light tan	"
	12:47	50	7.12	21.2	820	"	"	"
	12:53	60	7.09	20.9	822	"	"	"
	12:59	70	7.06	21.3	879	Clear	None	"
	13:06	80	7.07	20.9	880	"	"	"
✓	13:12	90	7.04	21.5	864	"	"	"
7/15/97	13:18	Aft. Sample	7.08	21.6	828	Clear	None	Hydrocarbon odor

Total Discharge: 91 gallons Casing Volumes Removed: _____

Method of disposal of discharged water: Labelled 55 gallon Drum
 Date/Time sampled: 7/15/97 @ 13:15 Analysis: EPA 8015M (TPH, BTEX, MTBE), TPH (Disc 1)

Comments: W-E's D = 31.46'

QA/QC: None @ _____ as Eq. Blank Duplicate MS/MSD Split

Sampled By: S. Permon / J. Lee

Environmental Sampling Services
 6680 Alhambra Ave. Martinez, CA 94553
 Tel/Fax: (510) 372-8108



**Environmental
Sampling Services**

WELL SAMPLE LOG SHEET

Well Identification: W-3S Date: 7/15/97

Project Name: Arrow Rentals

Client Project Number: _____

Well Description: 2" 4" 8" 6" 8"

Well Type: PVC Stainless Steel

Is well secured? YES / NO

Type of lock / lock number: Master Lock

Observations/Comments: Front counter has keys for well locks

Purge Method: Teflon Disposable Bailer Centrifugal pump GRUNDFOS Redi-flow pump Other: _____

Pump lines: NEW/CLEANED/DEDICATED Bailer lines: NEW / CLEANED

Method of cleaning pump: Alconox Liquidnox Tap Water DI Rinse Other: _____

Method of cleaning bailer: Alconox Liquidnox Tap Water DI Rinse Other: _____

Sampling Method: Teflon Disp. Tef. bailer Disp. PVC bailer Redi-Flow 2 pump Other: _____

pH Meter Serial Number: 330089

Specific Conductance Meter Serial Number: 96110203AE

Date(s) Calibrated: 7/15/97 (4) (7) (10)

Specific Conductance Meter: _____ @ 100 umhos/cm @ _____ °C

Method to measure water level: Joint ESS-1

Specific Conductance Meter: _____ @ 1000 umhos/cm @ _____ °C

Water Level at Start (DTW): 21.17

Water Level Prior to Sampling: _____

TD = 44.76 - 29.17 (DTW) x "k" = 10.2 gallons/casing volume x 3 = 30.6 gallons for 3 casing volumes
 "k" = 0.163 (2" well) "k" = 0.653 (4" well) "k" = 1.02 (5" well) "k" = 1.46 (6" well) "k" = 2.61 (8" well)

FIELD WATER QUALITY PARAMETERS

Date	Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance ms (uS)	Turbidity (NTU's)	Color	Comments
7/15/97	10:53	5	7.35	21.2	618	Clear	None	hydrocarbon odor
	10:57	10	7.24	21.3	630	Very low	"	
	11:07	15	7.07	22.3	671	"	LT Tan	
	11:15	20	7.13	21.0	706	Low	"	
	11:23	25	7.21	21.8	709	"	"	
	11:36	30	7.28	22.5	772	moderate	"	
	11:47	35	7.23	21.1	760	"	"	
	11:51	40	7.28	21.2	761	"	"	
7/15/97	11:57	Aft. Sample	7.26	22.1	766	moderate	LT Tan	

Total Discharge: 41.5 gallons

Casing Volumes Removed: 4.1

Method of disposal of discharged water: To labeled 55 gal drum

Date/Time sampled: 7-15-97 @ 11:55 Analysis: EPA 808M (TPH, BTEX, MTBE) TPH (Diesel)

Comments: _____

QA/QC: NONE @ _____ as Eq. Blank Duplicate MS/MSD Split

Sampled By: S. Permen / J Lee

Environmental Sampling Services
 6680 Alhambra Ave. Martinez, CA 94553
 Tel/Fax: (510) 372-8108

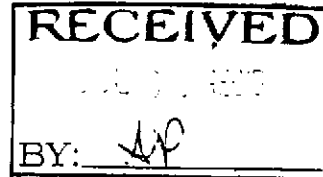
APPENDIX B
LABORATORY DATA SHEETS
AND
CHAIN-OF-CUSTODY



July 29, 1997

Service Request No.: S9701367

Mr. Steve Rowan
Environmental Sampling Services
6680 Alhambra Avenue, #102
Martinez, CA 94553



RE: Arrow Rentals

Dear Mr. Rowan:

The following pages contain analytical results for sample(s) received by the laboratory on July 15, 1997. 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 11, 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,

A handwritten signature in cursive script, appearing to read "Bernadette T. Cox".

Bernadette T. Cox
Project Chemist

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
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)

Analytical Report

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

Service Request: S9701367
Date Collected: 7/15/97
Date Received: 7/15/97

TPH as Diesel

Prep Method: EPA 3510
Analysis Method: CA-LUFT
Test Notes: C1

Units: ug/L (ppb)
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
W-3	S9701367-002	50	5	7/22/97	7/22/97	340	D1,D2
W-BS	S9701367-003	50	10	7/22/97	7/23/97	17000	D1,D3
W-IS	S9701367-004	50	20	7/22/97	7/23/97	38000	D1,D4
Method Blank	S970722-MB	50	1	7/22/97	7/22/97	ND	X

C1
D1
D2
D3
D4
X

The MRL was elevated due to high analyte concentration requiring sample dilution.
This sample contained a mixture of gasoline and diesel quantitated as diesel.
Sample contained heavy oil at 740 ppb.
Sample contained heavy oil at 490 ppb.
Sample contained heavy oil at 3000 ppb.
The method blank chromatogram contained heavy oil at 120 ppb.

Analytical Report

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

Service Request: S9701367
 Date Collected: 7/15/97
 Date Received: 7/15/97

BTEX, MTBE and TPH as Gasoline

Sample Name: Trip Blank
 Lab Code: S9701367-001
 Test Notes:

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	7/17/97	ND	
Benzene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Toluene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	1	NA	7/17/97	ND	

Analytical Report

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

Service Request: S9701367
 Date Collected: 7/15/97
 Date Received: 7/15/97

BTEX, MTBE and TPH as Gasoline

Sample Name: W-3
 Lab Code: S9701367-002
 Test Notes:

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	4	NA	7/17/97	2100	
Benzene	EPA 5030	8020	0.5	4	NA	7/17/97	230	
Toluene	EPA 5030	8020	0.5	4	NA	7/17/97	7	
Ethylbenzene	EPA 5030	8020	0.5	4	NA	7/17/97	33	
Xylenes, Total	EPA 5030	8020	0.5	4	NA	7/17/97	51	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	4	NA	7/17/97	<20	M1

M1

The MRL was elevated because of matrix interferences.

Analytical Report

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

Service Request: S9701367
Date Collected: 7/15/97
Date Received: 7/15/97

BTEX, MTBE and TPH as Gasoline

Sample Name: W-BS
Lab Code: S9701367-003
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	200	NA	7/17/97	66000	
Benzene	EPA 5030	8020	0.5	200	NA	7/17/97	7800	
Toluene	EPA 5030	8020	0.5	200	NA	7/17/97	4900	
Ethylbenzene	EPA 5030	8020	0.5	200	NA	7/17/97	1900	
Xylenes, Total	EPA 5030	8020	0.5	200	NA	7/17/97	10000	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	200	NA	7/17/97	<600	CI

CI

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

Analytical Report

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

Service Request: S9701367
 Date Collected: 7/15/97
 Date Received: 7/15/97

BTEX, MTBE and TPH as Gasoline

Sample Name: W-IS
 Lab Code: S9701367-004
 Test Notes:

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA:LUFT	50	200	NA	7/17/97	140,000	
Benzene	EPA 5030	8020	0.5	200	NA	7/17/97	12000	
Toluene	EPA 5030	8020	0.5	200	NA	7/17/97	12000	
Ethylbenzene	EPA 5030	8020	0.5	200	NA	7/17/97	2600	
Xylenes, Total	EPA 5030	8020	0.5	200	NA	7/17/97	16000	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	200	NA	7/17/97	<800	M1

M1 The MRL was elevated because of matrix interferences.

Analytical Report

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

Service Request: S9701367
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S970717-WB1
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	7/17/97	ND	
Benzene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Toluene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	7/17/97	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	1	NA	7/17/97	ND	

QA/QC Report

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

Service Request: S9701367
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-3	S9701367-002		100
W-BS	S9701367-003		59
W-IS	S9701367-004		56
Method Blank	S970722-MB		103

CAS Acceptance Limits: 50-140

QA/QC Report

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

Service Request: S9701367
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	a,a,a-Trifluorotoluene
Trip Blank	S9701367-001		101	96
W-3	S9701367-002		90	110
W-BS	S9701367-003		96	96
W-IS	S9701367-004		97	105
Method Blank	S970717-WB1		100	92

CAS Acceptance Limits: 69-116 69-116



CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

VOA EXT F

SERVICE REQUEST NO. 59701367

P.O.#

PAGE 1 OF 1

2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

PROJECT NAME Arrow Rentals #
 PROJECT MGR. Steve Brown / Jacki Lee
 COMPANY Environmental Sampling Services
 ADDRESS 6680 Alhambra Avenue, # 102
Martinez, Ca 94553 PHONE (510) 312-3108
 FAX (510) 372-3108
 SAMPLER'S SIGNATURE [Signature]

NUMBER OF CONTAINERS	ANALYSIS REQUESTED																REMARKS
	PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO ₃	NP	H ₂ SO ₄	H ₂ SO ₄	H ₂ SO ₄	NaOH		
	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 T	TPH as Gas/BTEX 602/8020 T	DHS LUFT / 8020	TPH as Diesel/HBHC 603/8030	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO ₄ , F, TDS, TSS	NH ₃ -N, COD, Total-P, TKN, TOC	Total Organic Carbon	Total Phenols	Cyanide		
2		X	X														
4		X	X														
4		X	X														
4		X	X														

RELINQUISHED BY:
[Signature]
 Signature
Stephen Brown
 Printed Name
Environmental Sampling Services
 Firm
7/15/97 0. 1445
 Date/Time

RECEIVED BY:
[Signature]
 Signature
John Chabrin
 Printed Name
ES
 Firm
7/15/97 2:47 pm
 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
 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

SAMPLE RECEIPT: Condition _____ Custody Seals _____
 SPECIAL INSTRUCTIONS/COMMENTS: - per Jacki Lee, analyze & report as diesel only 07/24/97 BTC
 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
R8 R20/S
 Storage