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ENVIRONMENTAL
PROTECTION

August 25, 2000

QUARTERLY GROUNDWATER MONITORING REPORT
AUGUST 2000 GROUNDWATER SAMPLING
ASE JOB NO. 3648

at
1310 Central Avenue
Alameda, California

Prepared for:
Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Prepared by:
AQUA SCIENCE ENGINEERS, INC.
208 W. El Pintado
Danville, CA 94526
(925) 820-9391

1.0 INTRODUCTION

Site Location (Site), See Figure 1

1310 Central Avenue
Alameda, CA

Responsible Party

Mr. Pritpaul Sappal
c/o Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Environmental Consulting Firm

Aqua Science Engineers, Inc. (ASE)
208 West El Pintado
Danville, CA 94526
Contact: Robert Kitay, Senior Geologist
(925) 820-9391

Agency Review

Mr. Larry Seto
Alameda County Health Care Services Agency (ACHCSA)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Mr. Chuck Headlee
California Regional Water Quality Control Board (RWQCB)
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

The following is a report detailing the methods and findings of the August 2000 quarterly groundwater sampling at the above-referenced site (*Figure 1*). This sampling was conducted as required by the ACHCSA and RWQCB. ASE has prepared this report on behalf of Mr. Nissan Saidian, owner of the property.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On August 3, 2000, ASE associate geologist Ian Reed measured the depth to water in each site groundwater monitoring well using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen with a product thickness bailer. No free-floating hydrocarbons or sheen were observed in any site monitoring well. Groundwater elevation data is presented as *Table One*.

A groundwater potentiometric surface map for August 3, 2000 is presented as *Figure 2*. Groundwater beneath the site flows to the southwest with a gradient of approximately 0.0089-feet/foot, which is consistent with previous findings but is not consistent with the hydrocarbon distribution as shown in ASE's August 22, 2000 Soil and Groundwater Assessment.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, all monitoring wells were purged of four well casing volumes of groundwater using dedicated polyethylene bailers. Petroleum hydrocarbon odors were present during the purging and sampling of monitoring wells MW-1 and MW-3. The parameters pH, temperature and conductivity were monitored during the well purging. Samples were not collected until these parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers.

All samples were decanted from the bailers into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and placed in coolers with wet ice for transport to Kiff Analytical, LLC of Davis, California under appropriate chain-of-custody documentation. Well sampling field logs are presented in *Appendix A*.

The well purge water was placed in 55-gallon steel drums, labeled, and left on-site for temporary storage.

The groundwater samples collected from all three site monitoring wells were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by EPA Method 5030/8015M, total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 3550/8015M, benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX) and fuel oxygenates by EPA Method 8020. The analytical results are presented in *Table Two* and the certified

analytical report and chain-of-custody documentation are included as *Appendix B*.

4.0 CONCLUSIONS

Groundwater samples collected from monitoring well MW-1 contained 20,000 parts per billion (ppb) TPH-G, 56 ppb benzene, 9.7 ppb toluene, 920 ethyl benzene, and 1,600 total xylenes. Groundwater samples collected from monitoring well MW-3 contained 16,000 ppb TPH-G, 1,600 ppb benzene, 29 ppb toluene, 210 ppb ethyl benzene, 53 ppb total xylenes, 1,200 ppb methyl tertiary butyl ether (MTBE), 21 tert-amyl methyl ether (TAME), and 260 ppb tert-butanol (TBA). No hydrocarbons were detected above the laboratory reporting limit in groundwater samples collected from monitoring well MW-2.

The benzene concentrations in groundwater samples collected from monitoring wells MW-1 and MW-3 exceeded the Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. The ethyl benzene concentration in monitoring well MW-1, and the MTBE concentration in groundwater samples collected from monitoring well MW-3, also exceeded DHS MCLs for drinking water.

5.0 RECOMMENDATIONS

ASE has recently completed an additional soil and groundwater investigation at the site. Conclusions and recommendations are outlined in ASE's report of Soil and Groundwater Assessment, dated August 22, 2000.

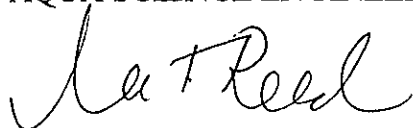
6.0 REPORT LIMITATIONS

The results of this report represent the conditions at the time of the groundwater sampling, at the specific locations where the groundwater samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting from sources other than the former underground storage tanks and associated plumbing at the site, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of independent CAL-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Ian T. Reed
Associate Geologist



Robert E. Kitay, R.G., R.E.A.
Senior Geologist

Attachments: Table One and Two
 Figures 1 and 2
 Appendices A and B

cc: Mr. Nissan Saidian
 Mr. Larry Seto, ACHCSA
 Mr. Chuck Headlee, RWQCB, San Francisco Bay Region

TABLES

TABLE ONE
GROUNDWATER ELEVATION DATA

Well	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-1	9/6/99	26.85	5.16	21.69
	5/16/00		3.24	23.61
	8/3/00		4.15	22.70
MW-2	9/6/99	27.18	5.56	21.62
	5/16/00		3.52	23.66
	8/3/00		4.44	22.74
MW-3	9/6/00	25.30	4.02	21.28
	5/16/00		2.06	23.24
	8/3/00		3.20	22.10

TABLE TWO

Summary of Chemical Analysis of GROUNDWATER Samples

Petroleum Hydrocarbons

All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
<u>MW-1</u>										
9/6/99	5,700	8,700	170	59	22	85	20,000	NA	NA	NA
5/16/00	20,000	<7,500	38	6.3	740	1,600	<5.0	<5.0	<5.0	<5.0
8/3/00	20,000	<6,000	56	9.7	920	1,600	<0.5	<0.5	<5.0	<0.5
<u>MW-2</u>										
9/6/99	6,000	70	1,300	92	50	400	6,800	NA	NA	NA
5/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0
8/3/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
<u>MW-3</u>										
9/6/99	43,000	870	860	70	<0.5	65	120,000	NA	NA	NA
5/16/00	17,000	<5,000	2,800	60	380	190	990	9.1	350	<5.0
8/3/00	16,000	<2,000	1,600	29	210	53	1,200	21	260	<2.0
DHS MCL	NE	NE	1	150	700	1,750	10	NE	NE	VARIES

Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

DHS MCL is the California Department of Health Services maximum contaminant level for drinking water.

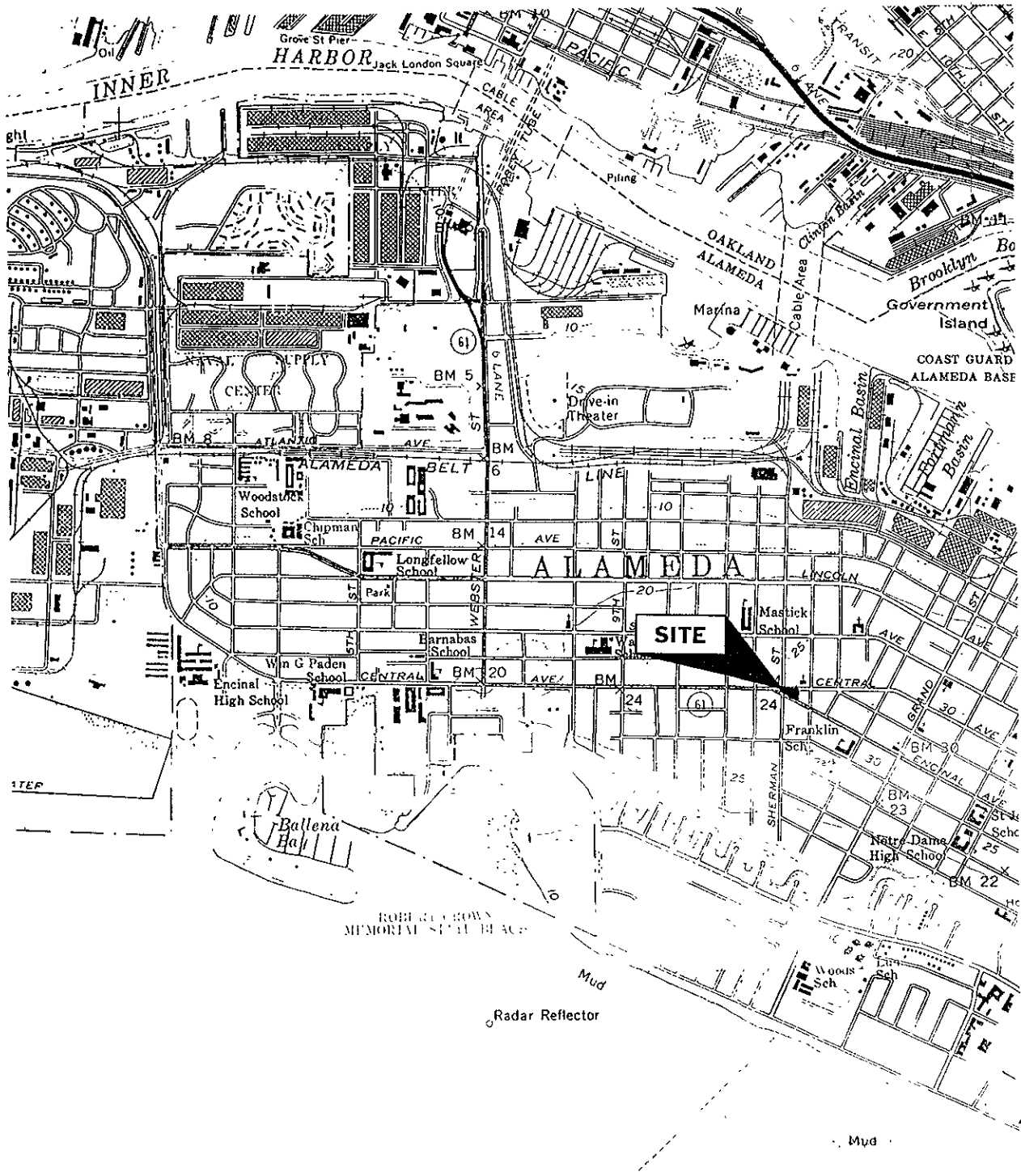
NA = Samples Not Analyzed for this compound.

NE = DHS MCLs are not established.

Non-detectable concentrations are noted by the less than symbol (<) followed by the detection limit.

Detectable concentrations are in bold.

FIGURES

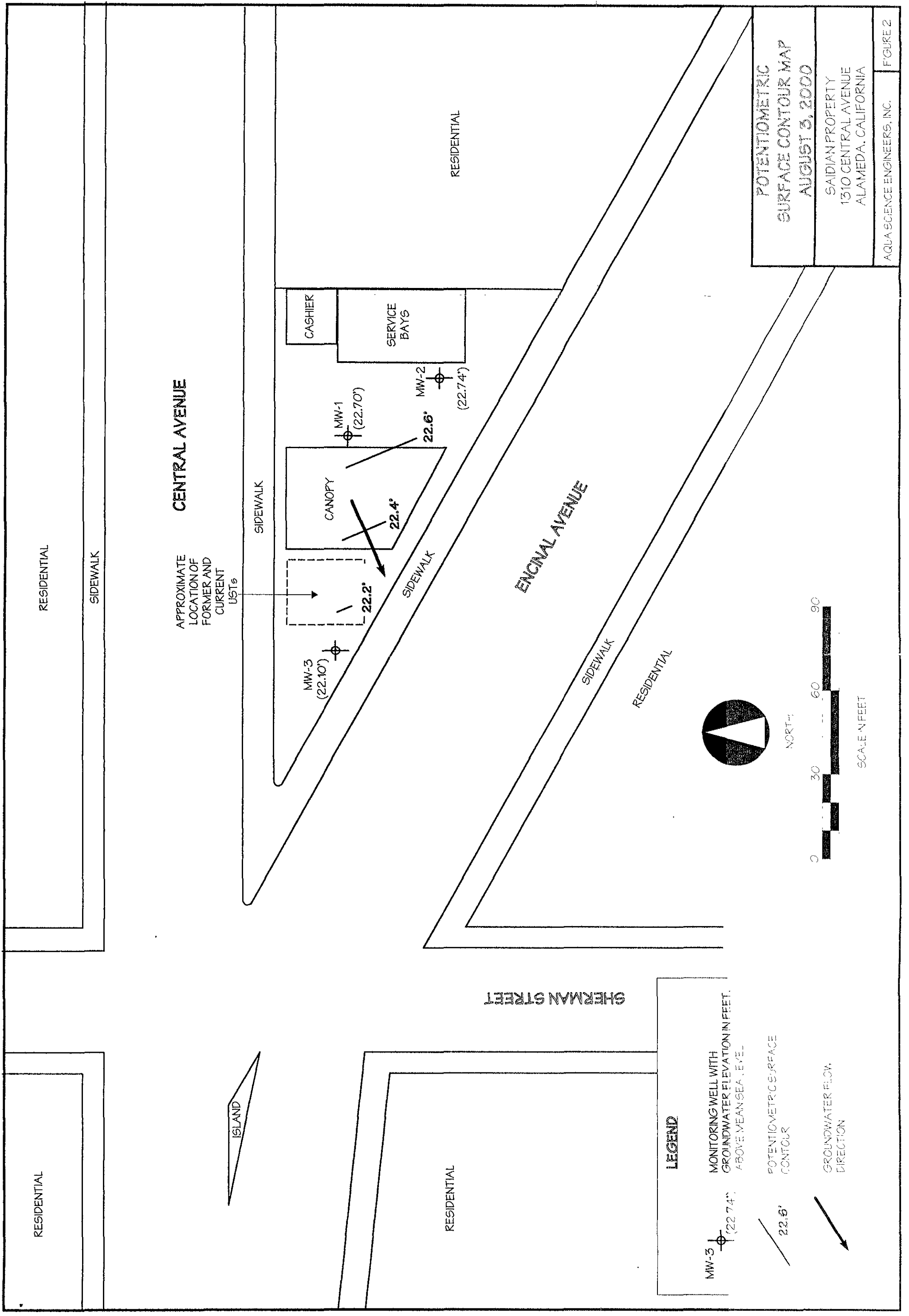


NORTH

LOCATION MAP

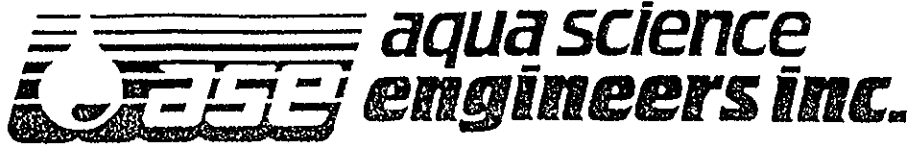
SAIDIAN PROPERTY
 1310 CENTRAL AVENUE
 ALAMEDA, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure 1



APPENDIX A

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Project Name and Address: Alaska Gas
 Job #: 3648 Date of sampling: 8/3/00
 Well Name: MW-1 Sampled by: ITF
 Total depth of well (feet): 18' Well diameter (inches): 2'
 Depth to water before sampling (feet): 4.15
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 13.85
 Number of gallons per well casing volume (gallons): 235
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 9.4
 Equipment used to purge the well: air
 Time Evacuation Began: 1040 Time Evacuation Finished: 1100
 Approximate volume of groundwater purged: 0
 Did the well go dry?: No After how many gallons: -
 Time samples were collected: 1105
 Depth to water at time of sampling: 4.89
 Percent recovery at time of sampling: 70
 Samples collected with: air
 Sample color: gray Odor: _____
 Description of sediment in sample: fine sand

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>71.0</u>	<u>6.82</u>	<u>820</u>
<u>2</u>	<u>71.0</u>	<u>6.81</u>	<u>810</u>
<u>3</u>	<u>71.6</u>	<u>6.82</u>	<u>810</u>
<u>4</u>	<u>71.0</u>	<u>6.81</u>	<u>810</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-1</u>	<u>5</u>	<u>40ml VOA</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

2000 W. 51st Ave. Oroville, California 94526 • 925.820.2201 • 925.827.1852



WELL SAMPLING FIELD LOG

Project Name and Address: Alaska Gas
 Job #: 3648 Date of sampling: 8/3/00
 Well Name: MW-2 Sampled by: JR
 Total depth of well (feet): 18' Well diameter (inches): 2"
 Depth to water before sampling (feet): 4' 4"
 Thickness of floating product if any: —
 Depth of well casing in water (feet): 13.56
 Number of gallons per well casing volume (gallons): 23
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 9.2
 Equipment used to purge the well: dat. sampler
 Time Evacuation Began: 1010 Time Evacuation Finished: 1030
 Approximate volume of groundwater purged: 0.5
 Did the well go dry?: NO After how many gallons: —
 Time samples were collected: 1035
 Depth to water at time of sampling: 5.20
 Percent recovery at time of sampling: 86%
 Samples collected with: dat. sampler
 Sample color: brown / clear Odor: None
 Description of sediment in sample: fine silt & v. f. sand

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	69.9	5.19	670
2	68.8	5.02	660
3	69.8	5.10	660
4	68.9	5.09	660

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-2	5	40ml VOA	✓	✓	



WELL SAMPLING FIELD LOG

Project Name and Address: Alaska Gov
 Job #: 3648 Date of sampling: 8/3/00
 Well Name: MW-3 Sampled by: ITR
 Total depth of well (feet): 18' Well diameter (inches): 2"
 Depth to water before sampling (feet): 3.20'
 Thickness of floating product if any: —
 Depth of well casing in water (feet): 14.8
 Number of gallons per well casing volume (gallons): 2.5
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 10
 Equipment used to purge the well: ded bailer
 Time Evacuation Began: 0940 Time Evacuation Finished: 0950
 Approximate volume of groundwater purged: 10
 Did the well go dry?: NO After how many gallons: —
 Time samples were collected: 1000
 Depth to water at time of sampling: 4.01
 Percent recovery at time of sampling: 80%
 Samples collected with: ded. bailer
 Sample color: gray Odor: Slight HC odor
 Description of sediment in sample: f. silt and v. sand

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>69.0</u>	<u>7.32</u>	<u>620</u>
<u>2</u>	<u>68.9</u>	<u>7.31</u>	<u>660</u>
<u>3</u>	<u>68.9</u>	<u>7.30</u>	<u>650</u>
<u>4</u>	<u>69.8</u>	<u>7.32</u>	<u>640</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-3</u>	<u>5</u>	<u>40ml - VOA</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 17325

Date : 08/16/2000

Ian Reed
Aqua Science Engineers, Inc.
208 W. El Pintado Road
Danville, CA 94526

Subject : 3 Water Samples
Project Name : Nissan-Alameda
Project Number : 3648

Dear Mr. Reed,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff", is written over a faint, light-colored signature line.

Joel Kiff



Report Number : 17325

Date : 08/16/2000

Project Name : Nissan-Alameda

Project Number : 3648

Sample : MW-1

Matrix : Water

Sample Date :08/03/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	56	0.50	ug/L	EPA 8260B	08/11/2000
Toluene	9.7	0.50	ug/L	EPA 8260B	08/11/2000
Ethylbenzene	920	5.0	ug/L	EPA 8260B	08/16/2000
Total Xylenes	1600	5.0	ug/L	EPA 8260B	08/16/2000
TPH as Diesel	< 6000	6000	ug/L	M EPA 8015	08/12/2000
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	08/11/2000
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	08/11/2000
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	08/11/2000
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	08/11/2000
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	08/11/2000
TPH as Gasoline	20000	500	ug/L	EPA 8260B	08/16/2000
Toluene - d8 (Surr)	96.9		% Recovery	EPA 8260B	08/11/2000
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	08/11/2000

Approved By: Joel Kiff



Report Number : 17325

Date : 08/16/2000

Project Name : Nissan-Alameda

Project Number : 3648

Sample : MW-2

Matrix : Water

Sample Date :08/03/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Toluene	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
TPH as Diesel	< 50	50	ug/L	M EPA 8015	08/12/2000
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	08/16/2000
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	08/16/2000
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	08/16/2000
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	08/16/2000
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	08/16/2000

Approved By: Joel Kiff



Report Number : 17325

Date : 08/16/2000

Project Name : Nissan-Alameda

Project Number : 3648

Sample : MW-3

Matrix : Water

Sample Date :08/03/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1600	5.0	ug/L	EPA 8260B	08/11/2000
Toluene	29	2.0	ug/L	EPA 8260B	08/08/2000
Ethylbenzene	210	2.0	ug/L	EPA 8260B	08/08/2000
Total Xylenes	53	2.0	ug/L	EPA 8260B	08/08/2000
TPH as Diesel	< 2000	2000	ug/L	M EPA 8015	08/12/2000
Methyl-t-butyl ether (MTBE)	1200	2.0	ug/L	EPA 8260B	08/08/2000
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	08/08/2000
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	08/08/2000
Tert-amyl methyl ether (TAME)	21	2.0	ug/L	EPA 8260B	08/08/2000
Tert-Butanol	260	20	ug/L	EPA 8260B	08/08/2000
TPH as Gasoline	16000	200	ug/L	EPA 8260B	08/08/2000
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	08/08/2000
4-Bromofluorobenzene (Surr)	98.3		% Recovery	EPA 8260B	08/08/2000

Approved By: Joel Kiff



Report Number : 17325

Date : 08/16/2000

Subject : 3 Water Samples

Project Name : Nissan-Alameda

Project Number : 3648

Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from gasoline-range hydrocarbons for the following samples:

MW-1

MW-3

Approved By: Joel Kiff

17325

Aqua Science Engineers, Inc.
 208 W. El Pintado Road
 Danville, CA 94526
 (925) 820-9391
 FAX (925) 837-4853

Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE) John Reed (PHONE NO.) (925) 820-9391

PROJECT NAME Nisson - Alameda JOB NO. 3648
 ADDRESS 1310 Central Ave, Alameda CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:
5-day TAT

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / HVOC'S (EPA 8260)	COMPOSITE
1 MW-1	8/3		water	5		X												X		
MW-2	8/3		water	5		X												X		
MW-3	8/3		water	5		X												X		

RELINQUISHED BY: <u>John Reed</u> 1645 (signature) (time)	RECEIVED BY: _____ (signature) (time)	RELINQUISHED BY: _____ (signature) (time)	RECEIVED BY LABORATORY: <u>A. Reyes</u> 1650 (signature) (time)	COMMENTS: TURN AROUND TIME <u>STANDARD</u> 24hr 48hr 72hr OTHER:
<u>John Reed</u> (printed name) (date)	_____ (printed name) (date)	_____ (printed name) (date)	<u>A. Reyes</u> 8/4/00 (printed name) (date)	
Company- <u>ASE</u>	Company- _____	Company- _____	Company- <u>K. G</u>	