PRELIMINARY SITE INVESTIGATION REPORT

Prepared for

Anderson Lift Truck Transport
310 Bartlett Avenue
Hayward, California

Project No. 10-011

Prepared by

Alisto Engineering Group
1000 Burnett Avenue, Suite 420
Concord, California

June 9, 1992

Brady Nagle
Project Manager

Al Sevilla
Principal

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1.0 INTRODUCTION

This report presents the results and finding of the preliminary site investigation activities performed at Anderson Lift Truck Transport, located at 310 Bartlett Avenue, Hayward, California. A site vicinity map as shown is Figure 1.

The site investigation activities were conducted to: (1) assess the presence or absence of hydrocarbon constituents in the subsurface soil and groundwater at the site, and (2) address the concerns of the City of Hayward Fire Department, the Alameda County Health Agency, and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

2.0 SCOPE OF WORK

The scope of work conducted during site investigation activities included the following tasks:

- Acquisition of necessary permits for field activities.
- Drilling of three soil borings for soil sampling and installation of three groundwater monitoring wells.
- Surveying of the location and elevation of the monitoring wells.
- Development and sampling of the monitoring wells.
- Chemical analysis of soil and groundwater samples for the specified hydrocarbon constituents.
- Evaluation of soil and groundwater analytical results.
- Assessment of the nature and extent of petroleum hydrocarbon constituents in soil and groundwater, if any, including groundwater gradient and magnitude.
- Preparation of this report presenting the results and findings of the above activities.

3.0 PROJECT BACKGROUND

In May 1989, an underground fuel tank with a capacity of approximately 550 gallons was removed from the site at the location shown in Figure 2. Analysis of two soil samples collected from below the underground fuel tank detected 2,400 and 140 parts per million total petroleum hydrocarbons.

In January 1991, soil was excavated from the former fuel tank cavity to a depth of approximately 17 feet below grade. Analysis of four soil samples collected from the limits of

excavation detected up to 1.3 parts per million (ppm) total volatile petroleum hydrocarbons and up to 0.0032 ppm benzene.

4.0 FIELD METHODS AND PROCEDURES

To investigate the presence or absence of hydrocarbon constituents in the soil and groundwater at the site, Alisto Engineering installed three onsite groundwater monitoring wells, and collected soil and groundwater samples for laboratory analysis. The procedures and methods used during field activities were in accordance with the requirements of the appropriate regulatory agencies.

4.1 Soil Boring and Sampling

Prior to commencement of drilling activities, a permit for groundwater monitoring well installations was obtained from Zone 7 Water Agency. A copy of the permit is presented in Appendix A.

On April 9, 1992, Alisto Engineering supervised drilling of Soil Borings MW-1, MW-2, and MW-3. During drilling, samples were collected beginning at 5 feet below grade and terminating at between approximately 36.5 and 38 feet below grade. Drilling and soil sampling activities were performed by West Hazmat Drilling Corporation of Hayward, California, using a truck-mounted CME 75 drilling rig equipped with 8-inch-diameter hollow-stem augers. The boring logs for MW-1, MW-2, and MW-3 are presented in Appendix B, and field procedures for soil boring drilling and soil sampling are presented in Appendix C.

4.2 Groundwater Monitoring Well Construction

Groundwater Monitoring Wells MW-1, MW-2, and MW-3 were constructed in Soil Borings MW-1, MW-2, and MW-3, respectively, using 2-inch-diameter, flush-threaded, Schedule 40, PVC casing, with 0.020-inch slots. Well construction details are included with the boring logs in Appendix B, while field procedures for groundwater monitoring well installation are presented in Appendix D.

Groundwater was first encountered in the borings at a depths of between approximately 29 and 32 feet below grade, and was observed to stabilize between 22 and 23 feet below grade. Perforated well casing was installed to address the stratigraphic interval where groundwater was encountered and not to above the stabilized groundwater level. As a result:

- The wells will produce a groundwater sample more representative of that within the saturated aquifer material.
- Groundwater production from the monitoring wells should not be affected.
- The depth of the neat cement seal is maximized.

4.3 Monitoring Well Development and Sampling

Monitoring Wells MW-1, MW-2, and MW-3 were developed on April 9, 1992: the same day as well construction and prior to installation of the bentonite spacer and neat cement seal. Well development was accomplished by alternately using a surge block and pump to promote two-way groundwater flow within the well and bailer to evacuate the water and sediments. Development continued until at least 10 saturated well volumes were removed and the groundwater was relatively free of sediments after visual observation.

On April 14, 1992, Monitoring Wells MW-1, MW-2, and MW-3 were sampled for chemical analysis. Field procedures for groundwater monitoring well development and sampling are presented in Appendix E, and field procedures and observations made during groundwater sampling are presented in the water sampling forms, included as Appendix F.

4.4 Groundwater Level Monitoring and Surveying

On April 17, 1992, the top of well casing elevations of Monitoring Wells MW-1, MW-2, and MW-3 were surveyed by Elliott V. Ingram Landsurveying of Concord, California. Surveying was conducted in reference to the monument disk at the intersection of Royal Avenue and Bartlett Avenue, with an elevation of 46.32 feet above Mean Sea Level.

Depth to groundwater in each well was measured on April 14 and 29, 1992. A groundwater potentiometric surface map, based on survey data and groundwater elevations measured during the April 14, 1992 sampling event, is presented as Figure 2. Survey data and water level measurements are presented in Table 1.

5.0 SITE HYDROGEOLOGY

Groundwater was first encountered during drilling and sampling of Soil Borings MW-1, MW-2, and MW-3 at depth of between approximately 29 and 32 feet below grade and stabilized at between 22 and 23 below grade. Groundwater elevations from the three monitoring wells, as measured on April 14, 1992, were used to develop the groundwater potentiometric surface map shown as Figure 2. The general groundwater gradient direction estimated from these measurements is to the west, with an average hydraulic gradient of 0.0013 foot per foot.

6.0 ANALYTICAL METHODS

Chemical analysis of soil samples was performed by Sequoia Analytical Laboratory, and chemical analysis of groundwater samples was performed by Anametrix, Inc. Soil and groundwater samples were analyzed using standard test methods of the United States Environmental Protection Agency (EPA) and the California Department of Health Services (Cal-DHS), as discussed below.

6.1 Analysis of Soil Samples

Three soil samples were collected for chemical analysis from Soil Borings MW-1, MW-2, and MW-3 at depths of between approximately 25.5 and 26.5 feet below grade. Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) with benzene, toluene, ethylbenzene, and total xylenes (BTEX) distinction using EPA Methods 5030/8015.

Results of laboratory analysis of soil samples are presented in Table 2. The official laboratory reports and chain of custody documents are included in Appendix G.

6.2 Analysis of Groundwater Samples

Groundwater samples were collected from Monitoring Wells MW-1, MW-2, and MW-3 and analyzed for TPH-G using EPA Methods 5030/8015 and BTEX constituents using EPA Methods 5030/8020.

Results of laboratory analysis of groundwater samples are presented in Table 1. The official laboratory reports and chain of custody documentation are included in Appendix G.

7.0 FINDINGS

The findings based on the results of this preliminary site investigation are summarized below:

- The average depth to groundwater measured during the April 14, 1992 groundwater sampling event was approximately 22.5 feet below grade, corresponding to groundwater elevations of between 29.12 and 29.15 feet above Mean Sea Level. The groundwater gradient direction calculated from the April 14, 1992 groundwater measurements is generally to the west with an average hydraulic gradient of 0.0013 foot per foot onsite.

- Petroleum hydrocarbon constituents were not detected in any of the soil or groundwater samples collected from MW-1, MW-2, or MW-3 above the reported detection limits.

TABLES

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
ANDERSON LIFT TRUCK TRANSPORT
310 BARTLETT AVENUE
HAYWARD, CALIFORNIA

ALISTO PROJECT NO. 10-011

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	LAB
MW-1	04/14/92	51.97	22.82	29.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-1	04/29/92	51.97	23.13	28.84	----	----	----	----	----	----
MW-2	04/14/92	51.62	22.48	29.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-2	04/29/92	51.62	22.8	28.82	----	----	----	----	----	----
MW-3	04/14/92	51.6	22.48	29.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ANA
MW-3	04/29/92	51.6	22.79	28.81	----	----	----	----	----	----

ABBREVIATIONS:

TPH-G	Total Petroleum Hydrocarbons as Gasoline
TPH-D	Total Petroleum Hydrocarbons as Diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
ND	Not detected above reported detection limits
ANA	Anametrix, Inc.
----	Not analyzed/not applicable
(ppb)	Parts per Billion

NOTES:

(a) Top of casing elevations for all well surveyed relative to the monument disk at the intersection of Royal Avenue and Bartlett Avenue with an elevation of 46.32 feet above Mean Sea Level.

(b) Groundwater elevation in feet above Mean Sea Level.

TABLE 2 - SUMMARY OF RESULTS OF SOIL SAMPLING
ANDERSON LIFT TRUCK TRANSPORT
310 BARTLETT AVENUE, HAYWARD, CALIFORNIA

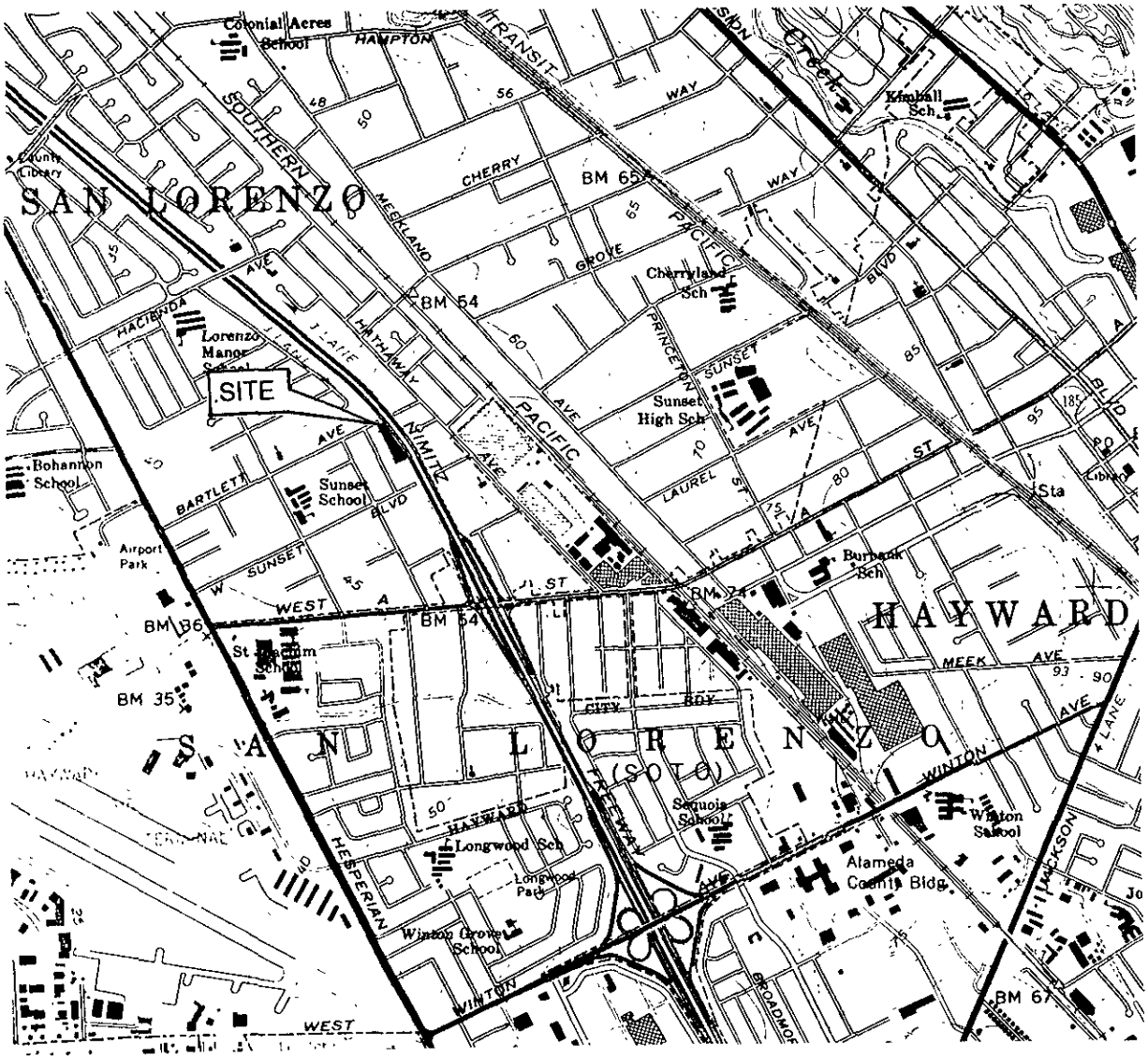
ALISTO PROJECT NO. 10-011

WELL ID	SAMPLE DEPTH (FBG)	DATE OF SAMPLING/ MONITORING	TPH-G (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	LAB
MW-1	26-26.5	4/9/92	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	SEQ
MW-2	26-26.5	4/9/92	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	SEQ
MW-3	25.5-26	4/9/92	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	SEQ

ABBREVIATIONS:

TPH-G	Total Petroleum Hydrocarbons as Gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
(ppm)	Parts per Million
ND	Not detected above reported detection limits
SEQ	:Sequoia Analytical Laboratory

FIGURES



SOURCE: USGS MAP, HAYWARD, CALIFORNIA
7.5 MINUTE SERIES, 1959, PHOTOREVISED 1980.

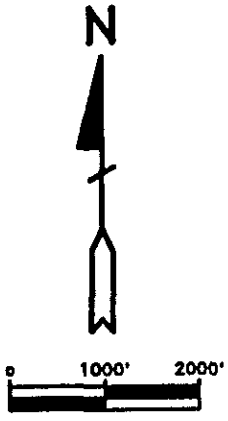


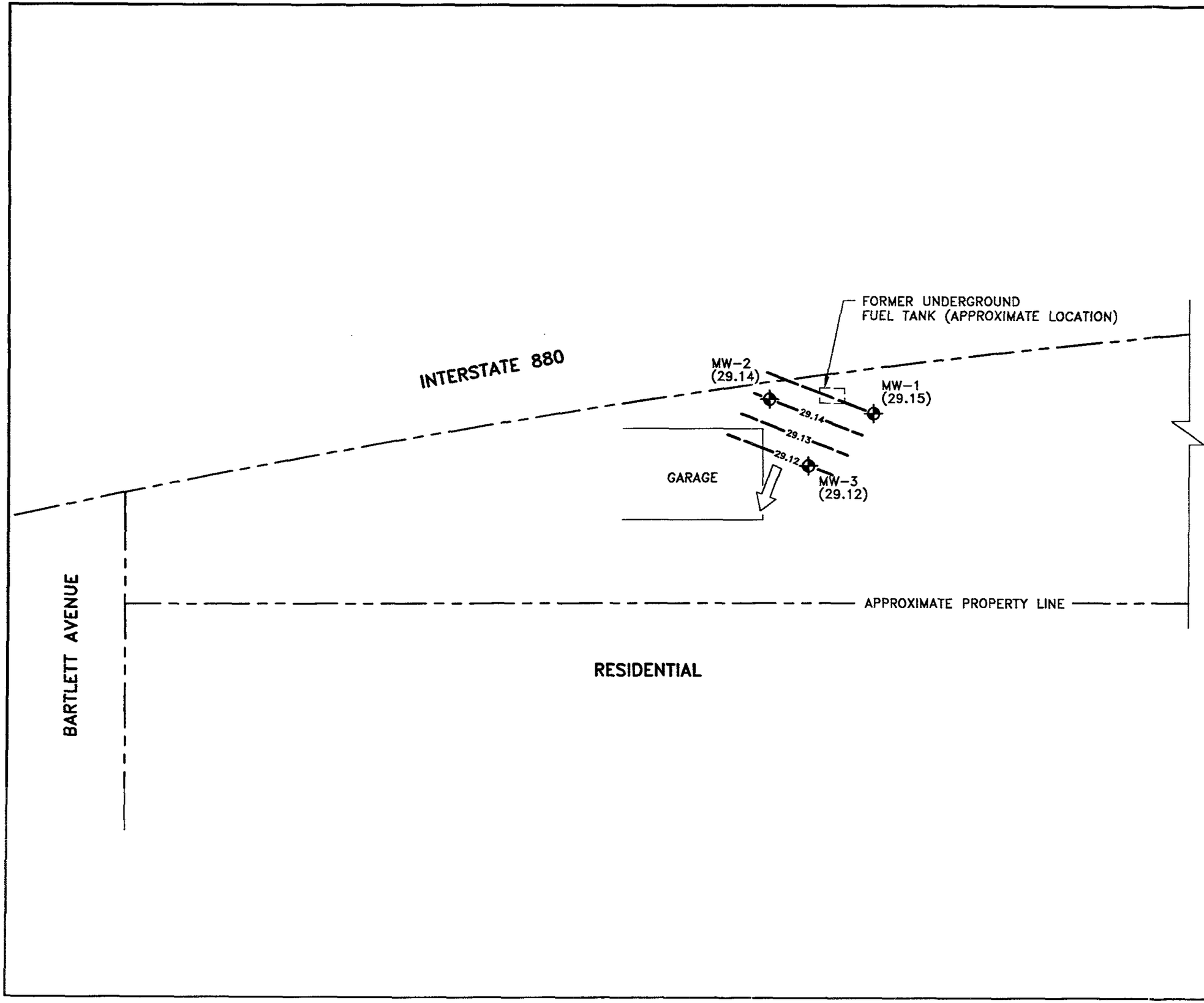
FIGURE 1

SITE VICINITY MAP

ANDERSON LIFT TRUCK TRANSPORT
310 BARTLETT AVENUE
HAYWARD, CALIFORNIA

ALISTO PROJECT NO. 10-011

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA



N

0 30' 60'

SCALE: 1" = 30'

LEGEND:

- ⌖ GROUNDWATER MONITORING WELL
- (24.15) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 29.14 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL – 1.0 FOOT)
- ⇨ CALCULATED GROUNDWATER GRADIENT DIRECTION

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP (APRIL 14, 1992)

ANDERSON LIFT TRUCK TRANSPORT
310 BARTLETT AVENUE
HAYWARD, CALIFORNIA

PROJECT NO. 10-011

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

APPENDIX A

PERMIT

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Anderson Lift Transport
810 Bartlett Ave.
Hayward CA 94541

CLIENT
Name Same as above
Address _____ Phone 785-3911
City _____ Zip _____

APPLICANT
Name Brady Nagle
Alista Engineering Group
Address 1000 Burnett #150 Phone 798-4070
City Concord Zip 94520

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	X	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other analysis
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 554979

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 40 ft.
Surface Seal Depth ~~2~~ 15 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 4/9/92
ESTIMATED COMPLETION DATE 4/10/92

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brady Nagle Date 3/30/92

FOR OFFICE USE

PERMIT NUMBER 92147
LOCATION NUMBER _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 31 Mar 92
Wyman Hong

31992

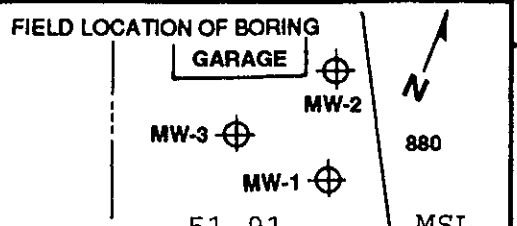
APPENDIX B

BORING LOGS

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92 BORING NO. MW-1
CLIENT Anderson Lift Truck Transport WELL NO. MW-1
LOCATION 310 Bartlett, Hayward
LOGGED BY B. Nagle APPROVED BY A. Sevilla

FIELD LOCATION OF BORING



SURFACE ELE. 51.91 DATUM MSL

DRILLING METHOD Hollow Stem Auger HOLE DIAMETER 8"
SAMPLER TYPE Split-spoon sampler
CASING INSTALLATION DATA 2" sch 40 PVC w/ 0.020" slots
DRILLER West Hazmat Drilling

WATER LEVEL	22.82				
DATE	4-14-92				
TIME	1:51				

BLOW COUNTS	PID/OVA READING	WELL CONSTRUCTION	DEPTH	SAMPLE	USCS CLASSIFICATION	DESCRIPTION
			0			
			2		CL	Silty CLAY, dark brown, damp, medium plasticity, stiff
			4			
7-13-15	0		6			
			8			
6-9-16	2	NEAT CEMENT	10		SC	Clayey SAND, brown, damp, medium dense
			12			
			14			Color change to mottled brown/ orange-brown; very moist at 15 feet
5-6-6	0		16		CL	Silty CLAY, brown, very moist, moderate plasticity, stiff
			18		SC	Sandy CLAY, brown, very moist to wet, low plasticity, stiff
			20			
5-8-12	0		22		▼	
			24		CL	Silty CLAY, light brown, moist, low plasticity, very stiff; abundant carbon granules, minor fine-grained sand
27-27-27	0	NO. 3 LONESTAR SAND	26			
			28			
			30		▽ SC	Clayey SAND, light brown, moist to wet, dense
14-19-25						
3-5-9			32		SM	

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92

CLIENT Anderson Lift Truck Transport

LOCATION 310 Bartlett, Hayward

LOGGED BY B. Nagle APPROVED BY Sevilla

BORING NO. MW-1

WELL NO. MW-1

FIELD LOCATION OF BORING

SURFACE ELE. _____ DATUM _____

DRILLING METHOD Hollow-Stem Auger HOLE DIAMETER 8"

SAMPLER TYPE Split-spoon sampler

CASING INSTALLATION DATA 2" sch 40 PVC w/0.020" slots

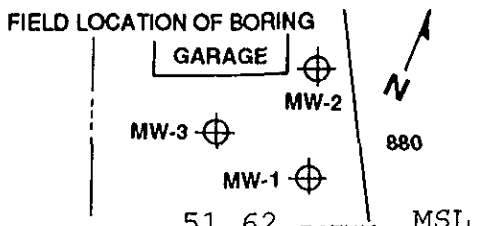
DRILLER West Hazmat Drilling

WATER LEVEL						
DATE						
TIME						

BLOW COUNTS	PID/OVA READING	WELL CONSTRUCTION	DEPTH	SAMPLE	USCS CLASSIFICATION	DESCRIPTION
			30		▽	Clayey SAND, light brown, moist to wet, dense
14-19-25					SC	
			32			
3-5-9						
			34		SM	Silty SAND, light brown, wet, medium dense
4-12-17						
			36		CL	Silty CLAY, brown, moist, very stiff
			38			
			40			Boring terminated at 37 feet below grade. Free groundwater encountered at approximately 30 feet below grade

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92 BORING NO. MW-2
CLIENT Anderson Lift Truck Transport
LOCATION 310 Bartlett, Hayward WELL NO. MW-2
LOGGED BY B. Nagle APPROVED BY A. Sevilla



SURFACE ELE. 51.62 DATUM MSL

DRILLING METHOD Hollow Stem Auger HOLE DIAMETER 8"
SAMPLER TYPE Split-spoon sampler
CASING INSTALLATION DATA 2" sch 40 PVC w/0.020" slots
DRILLER West Hazmat Drilling

WATER LEVEL	22.48				
DATE	4-14-92				
TIME	1:55				

BLOW COUNTS	PID/OVA READING	WELL CONSTRUCTION	DEPTH	SAMPLE	USCS CLASSIFICATION	DESCRIPTION
			0			4" Concrete
			2		CL	Silty CLAY, dark brown, damp, medium plasticity, stiff
			4			
6-9-12	0		6			
			8		SC	Sandy CLAY, brown, damp, low plasticity, stiff; occasional course-grained sand
4-7-9	0	NEAT CEMENT	10			
			12			
			14			
					ML	Clayey SILT, mottled light brown/
7-9-13	0		16			orange-brown, very moist to wet, low plasticity, firm
			18			Sandy CLAY, mottled brown/ orange-brown, moist, low
5-10-12	0	NO. 3 LONESTAR SAND	20		CL	plasticity, stiff
			22			
			24			
7-13-20	0		26			Clayey SAND, light brown, very
			28		SC	moist to wet, medium dense
			30			
4-7-10					CL	Silty CLAY, light brown, moist,
			32			moderate plasticity, stiff
					SC	

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92 BORING NO. MW-2

CLIENT Anderson Lift Truck Transport

LOCATION 310 Bartlett, Hayward WELL NO. MW-2

LOGGED BY B. Nagle APPROVED BY Sevilla

FIELD LOCATION OF BORING

DRILLING METHOD Hollow-Stem Auger HOLE DIAMETER 8"

SAMPLER TYPE Split spoon sampler

CASING INSTALLATION DATA 2" sch 40 PVC w/0.020" slots

SURFACE ELE. _____ DATUM _____

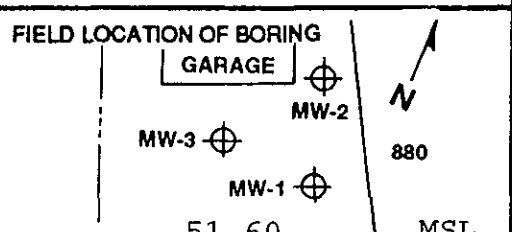
DRILLER West Hazmat Drilling

WATER LEVEL						
DATE						
TIME						

BLOW COUNTS	PID/OVA READING	WELL CONSTRUCTION	DEPTH	SAMPLE	USCS CLASSIFICATION	DESCRIPTION
					SC	Clayey SAND, light brown, very moist to wet, medium dense
4-7-10			30		CL	Silty CLAY, light brown, moist, moderate plasticity, stiff
			32			Driller felt softer drilling at 32 feet
			34		SC	Clayey SAND, brown, wet, medium dense
7-20-25	0		36		CL	Silty CLAY, brown, moist, medium plasticity, very stiff
			38			Boring terminated at 38 feet below grade. Free groundwater encountered at approximately 32 feet below grade.
			40			

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92 BORING NO. MW-3
CLIENT Anderson Lift Truck Transport
LOCATION 310 Bartlett, Hayward WELL NO. MW-3
LOGGED BY B. Nagle APPROVED BY Sevilla



SURFACE ELE. 51.60 DATUM MSL

DRILLING METHOD Hollow Stem Auger HOLE DIAMETER 8"
SAMPLER TYPE Split-spoon sampler
CASING INSTALLATION DATA 2" sch 40 PVC w/0.020" slots
DRILLER West Hazmat Drilling

WATER LEVEL	22.48				
DATE	4-14-92				
TIME	1:58				

BLOW COUNTS	PID/OVA READING	DEPTH	USCS CLASSIFICATION	DESCRIPTION
		0		4" concrete
		2	CL	Silty CLAY, dark brown, damp, medium plasticity, stiff
5-9-10	0	6		Color change to brown, abundant sand, low plasticity
		8	CL	Sandy CLAY, brown, damp, low plasticity, stiff
5-9-14	0	10		
		12		
		14	SC	Clayey SAND, brown, damp, medium dense
3-9-11	0	16		
		18		
		20		Silty CLAY, mottled brown/orange-brown, moist, medium plasticity, firm
3-4-7	0	22	CL	
		24		
		26	SC	Clayey SAND, brown, moist to wet, medium dense
8-12-20	0	28		
		30	ML	Clayey SILT, light brown, wet, low plasticity, stiff
4-9-9		32		

NEAT CEMENT
NO. 3 LONESTAR SAND

ALISTO ENGINEERING GROUP
EXPLORATORY BORING LOG

PROJECT NO. 10-011 DATE DRILLED 4/9/92 BORING NO. MW-3

CLIENT Anderson Lift Truck Transport

LOCATION 310 Bartlett, Hayward WELL NO. MW-3

LOGGED BY B. Nagle APPROVED BY Sevilla

FIELD LOCATION OF BORING

DRILLING METHOD Hollow-Stem Auger HOLE DIAMETER 8"

SAMPLER TYPE Split-spoon sampler

CASING INSTALLATION DATA 2" sch 40 PVC w/ 0.020" slots

SURFACE ELE. _____ DATUM _____

DRILLER West Hazmat Drilling

BLOW COUNTS	PID/OVA READING	WELL CONSTRUCTION	DEPTH	SAMPLE	USCS CLASSIFICATION	WATER LEVEL / DATE / TIME	DESCRIPTION
4-9-9			30		ML		Clayey SILT, light brown, wet, low plasticity, stiff
			32				
			34		SC		Clayey SAND, light brown, wet, medium dense; occasional sand stringers
4-8-9			36				
9-12-16			38		CL		Silty CLAY, light brown, moist, low plasticity, very stiff
			40				Boring terminated at 38 feet below grade. Free groundwater encountered at approximately 29 feet below grade.

APPENDIX C

FIELD PROCEDURES
FOR
SOIL BORING DRILLING AND SOIL SAMPLING

ALISTO ENGINEERING GROUP
FIELD PROCEDURES
FOR
SOIL BORING DRILLING AND SOIL SAMPLING

Soil Boring Drilling Procedures

Soil Borings MW-1, MW-2, and MW-3 were drilled using 8-inch-diameter, continuous-flight, hollow-stem augers. To avoid cross-contamination, all drilling equipment that came in contact with potentially contaminated material was decontaminated prior to and after each use by steam cleaning. All decontamination fluids were placed into properly labeled Department of Transportation approved drums for disposal.

Soil Sampling Procedures

During drilling, samples were collected beginning at 5 feet below grade and terminating at approximately 37 and 38 feet below grade. Prior to and after each use, the sampler was washed using a phosphate-free detergent followed by tap water and deionized water rinses. Soil sampling was accomplished using a California-modified split-spoon sampler lined with appropriate sized brass tubes. A 140-pound slide hammer falling thirty inches was used to advance the sampler 18 inches ahead of the hollow-stem augers into undisturbed soil, and blow counts were recorded for every six inches of penetration to evaluate the consistency of the soil.

After retrieval from the augers, the sampler was split, the sample tubes removed, and a soil sample was selected to be prepared for possible chemical analysis. The selected soil sample was retained within the brass tube, and both ends were immediately covered with Teflon sheeting and polyurethane caps. The caps were sealed with tape and labeled with the following information: Alisto Engineering project number, boring number, sample depth interval, sampler's initials, and date of collection. The soil sample was immediately placed within a water proof plastic bag and stored in an ice chest containing dry ice. Possession of the soil samples was documented from the field location to the California-certified analytical laboratory by using a chain-of-custody form presented in Appendix G.

Soil samples and, when representative, drill cuttings were described by Alisto Engineering personnel using the Unified Soil Classification System, and field estimates of soil type, color, moisture, density/consistency, and soil type were noted on the boring logs. The boring logs were reviewed by a civil engineer registered in the State of California.

APPENDIX D

FIELD PROCEDURES
FOR
GROUNDWATER MONITORING WELL INSTALLATION

ALISTO ENGINEERING GROUP
FIELD PROCEDURES
FOR
GROUNDWATER MONITORING WELL INSTALLATION

The construction of Groundwater Monitoring Wells MW-1, MW-2, and MW-3 was based on the stratigraphy and hydrology encountered in the soil borings. All well construction materials was introduced into the borings through the hollow stem augers to centralize the well casings and to minimize the possibility of native material entering the annular space of the wells.

The PVC casing was lowered into the borings, and extended from grade level to the total depth of the drilled interval. The well casing consisted of slotted casing to the bottom of the boring and addressing the water-bearing depth interval of the boring, and solid casing was installed from the top of the slotted casing to approximately six inches below grade level. The casings, fittings, screens, and other components of the well construction were steam cleaned before installation.

The annular space surrounding the screened portion was backfilled with No. 3 Lonestar sand (filter pack) to approximately two feet above the top of the screened section. The monitoring wells were then developed in accordance the procedures described in Appendix E. After well development, additional filter pack was added to the annulus to approximately two feet above the top of the screen well casing. An approximately one-foot to two-feet-thick interval of bentonite pellets was added to the annulus above the filter pack, and hydrated with approximately five gallons of deionized water to minimize intrusion of well seal into the filter pack. The remaining annulus was sealed with a neat cement grout to the surface. A traffic-rated utility box was installed around the top of the well casing, and set in concrete. An expanding, watertight well cap and lock were installed on the top of the well casing to secure the well from surface fluid and tampering. Well construction details are shown in the boring logs presented in Appendix B.

APPENDIX E

FIELD PROCEDURES FOR GROUNDWATER MONITORING WELL DEVELOPMENT AND SAMPLING

ALISTO ENGINEERING GROUP
FIELD PROCEDURES
FOR
GROUNDWATER MONITORING WELL DEVELOPMENT AND SAMPLING

Groundwater Monitoring Well Development

Groundwater Monitoring Wells MW-1, MW-2, and MW-3 were developed to consolidate and stabilize the filter packs to optimize well production and reduce the turbidity of subsequent groundwater samples. The wells were developed on the day of drilling and prior to installation of the bentonite spacer and neat cement seal. Well development was accomplished by alternately using a surge block and pump to evacuate the water and sediments. Development activities continued until the groundwater was relatively free of sediments. Well development fluids were placed into properly labeled Department of Transportation approved drums for disposal.

Groundwater Level Measurement

Prior to groundwater sampling activities, groundwater levels in each well at the site were measured from the marked survey reference point at the top of the well casing. Groundwater in each well was monitored for the presence/absence of free-floating product or sheen. The depth to groundwater was measured to an accuracy of 0.01 foot from the top of the PVC well casing using an electronic sounder.

Groundwater Monitoring Well Sampling

To ensure that the groundwater sample was representative of the aquifer, the wells were purged of three well casing volumes before sample collection. This purging was accomplished using a clean bailer or pump.

The groundwater samples were collected using a disposable bailer, and then carefully transferred into the appropriate clean, glass, laboratory supplied containers. The sampling technician wore nitrile gloves at all times during purging and well sampling. The samples were clearly labeled with the well number, site identification, date and time of sample collection, and sampler's initials, and transported in an iced cooler to a California-certified laboratory following proper preservation and chain of custody protocol.

APPENDIX F

GROUNDWATER SAMPLING FORMS

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

WELL DEVELOPMENT FORM

Project No.: 10-011 Date: 4-9-92
Well ID.: MW-1. Developed By: Dan Birch
Bottom of Well: 37.2' Well Casing Diameter: 2"
Of times well purged: TWICE Day number: ONE

Purge Method
- [x] Honda pump
- [ ] 2" purgemaster
- [ ] Jet pump
- [ ] 4" purgemaster
- [ ] Bailer
- [ ] Other

Initial Water Level / Time	Time Start Pumping	Water Level While Pumping / Time	Time Stop Pumping	Final Water Level / Time	Gallons Removed
23.18 / 1:15	1:20		1:25	27.0' / 1:25	10
23.21 / 1:35	1:35		1:50	22.81 / 2:15	25

Groundwater Parameters During Development

Gallons Removed	Time	Temp.	pH	Cond.	Mv	Turbidity
0						
Meter serial	numbers =	#	#	#	#	#

Water Disposal Method: [x] Drums [ ] Ground surface [ ] Baker Tank & No. _____ [ ] Other _____

Well stick up

From grade to top of steel = _____ From black mark to top of steel = _____

Comments: (Water condition, appearance, etc.)

37.2' - 23.18' = 14.02 x .163 = 2.28g. x 10 = 22.8 say 23 gallons,
Water clears up at end of development.

revised 3/1/90 GPS

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

WELL DEVELOPMENT FORM

Project No.: 10-011 Date: 4-9-92
Well ID.: MW-2 Developed By: DAN BIRCH
Bottom of Well: 37' Well Casing Diameter: 2"
Of times well purged: TWICE Day number: ONE

Purge Method
- [x] Honda pump
- [ ] 2" purgemaster
- [ ] Jet pump
- [ ] 4" purgemaster
- [ ] Bailer
- [ ] Other

Initial Water Level / Time	Time Start Pumping	Water Level While Pumping / Time	Time Stop Pumping	Final Water Level / Time	Gallons Removed
22.5' / 10:40	10:40	24.1'	10:50	22.5 / 10:55	10
22.5 / 11:00	11:00	24.2	11:15		30

Groundwater Parameters During Development

Gallons Removed	Time	Temp.	pH	Cond.	Mv	Turbidity
0						
Meter serial	numbers =	#	#	#	#	#

Water Disposal Method: [x] Drums [ ] Ground surface [ ] Baker Tank & No. _____ [ ] Other _____

Well stick up

From grade to top of steel = _____ From black mark to top of steel = _____

Comments: (Water condition, appearance, etc.)

37' - 22.5' = 14.5 x .163 = 2.4g x 10 Well Vol. = 24g.
Water clear at end of development.

revised 3/1/90 GPS

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

WELL DEVELOPMENT FORM

Project No.: 10-011 Date: 4-9-92
Well ID.: MW-3 Developed By: Dan Birch
Bottom of Well: 37' Well Casing Diameter: 2"
Of times well purged: Day number: ONE

Purge Method
- [x] Honda pump
- [ ] 2" purgemaster
- [ ] Jet pump
- [ ] 4" purgemaster
- [ ] Bailer
- [ ] Other

Initial Water Level / Time	Time Start Pumping	Water Level While Pumping / Time	Time Stop Pumping	Final Water Level / Time	Gallons Removed
22.58 / 3:33	3:35	23.8 / 3:43	3:50	24.1 / 3:55	25

Groundwater Parameters During Development

Gallons Removed	Time	Temp.	pH	Cond.	Mv	Turbidity
0						
Meter serial	numbers =	#	#	#	#	#

Water Disposal Method: [x] Drums [ ] Ground surface [ ] Baker Tank & No. [ ] Other

Well stick up

From grade to top of steel = _____ From black mark to top of steel = _____

Comments: (Water condition, appearance, etc.)

37' - 22.58' = 14.4 x .1632 = 2.35 x 10 = 23.5 gallons

revised 3/1/90 GPS

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

GROUND-WATER SAMPLING FORM

Well Number: MW-1

Well Type: ☒ Monitor ☐ Extraction ☐ Other:

Well Material: ☒ PVC ☐ Steel ☐ Other

Sampled By: Dan Birch

Job Number: 10-011
Location: Hayward
Date: 4-14-92

WELL PURGING

PURGE VOLUME
Casing diameter(ID in inches): ☒ 2" ☐ 4" ☐ 6" ☐ Other

Total Depth of Well (BOW) 36.68' Initial Water level: 22.82' Time: 1:51
Total Volume Purged: 10g Time Elapsed: 10
Water Level after purging: 22.84 Time: 2:33

Purge Volume:

36.68' (total depth) − 22.82' (water level) = 13.86 × .163 (Well Vol. Fac.) = 2.26 × 3 (# of vol. to purge) = 6.8 gallons (calculated purge volume)

Well Volume Factors:

Well Casing ID (inches)	(Vol. Factor)
2.0	0.1632
3.0	0.3672
4.0	0.6528
4.5	0.826
6.0	1.469

PURGE METHOD ☒ Honda Pump ☐ Bailer ☐ Dedicated Pump ☐ Other

PARAMETER EQUIPMENT CALIBRATION:

pH meter #9112 Time: 1:40 Solution pH 4.00 4.0 at 69 °C pH 10.00 ____ at ____ °C
Other solution: 7.0 - 7.0 at 69 °C
Conductivity meter # 9112 Time: 1:40

Water Level Meter # 10337

WELL SAMPLING PARAMETERS:

Gallons Removed	Time	Temp. C	pH	Cond. (umhos/cm)
0				
3	2:15	67.5	7.03	1.17
6	2:20	67.9	7.05	1.19
10	2:25	67.9	7.07	1.19

SAMPLING METHOD: Time Sampled: 2:30
☒ Disp Bailer ☐ Bladder Pump ☐ Other

COMMENTS:

Well recovered quickly.

SAMPLES COLLECTED INCLUDING QC SAMPLES			
ANALYSIS REQUIRED	No. of	Container type	Preservatives
EPA 8240			
EPA 8270			
EPA 8010/8020			
TPH-G/BTEX	3	VOA's	HCl
METALS:			
INORGANICS:			

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

GROUND-WATER SAMPLING FORM

Well Number: MW-2

Well Type: ☒ Monitor ☐ Extraction ☐ Other:

Well Material: ☒ PVC ☐ Steel ☐ Other

Sampled By: Dan Birch

Job Number: 10-011
Location: HAYWARD
Date: 4-14-92

WELL PURGING

PURGE VOLUME
Casing diameter(ID in inches): ☒ 2" ☐ 4" ☐ 6" ☐ Other

Total Depth of Well (BOW) 37.90' Initial Water level: 22.48 Time: 1:55

Total Volume Purged: 10g. Time Elapsed: 10

Water Level after purging: 22.49 Time: 3:03

Well Volume Factors:

Well Casing ID (inches)	(Vol. Factor)
2.0	0.1632
3.0	0.3672
4.0	0.6528
4.5	0.826
6.0	1.469

Purge Volume:

37.90' (total depth) − 22.48' (water level) = 15.42' × .163 (Well Vol. Fac.) = 2.51 × 3 (# of vol. to purge) = 7.55 gallons (calculated purge volume)

PURGE METHOD ☒ Honda Pump ☐ Bailer ☐ Dedicated Pump ☐ Other

PARAMETER EQUIPMENT CALIBRATION:

pH meter #9112 Time: 1:40 Solution pH 4.00 4.0 at 69 °C pH 10.00 ____ at ____ °C
Other solution: 7.0 - 7.0 at 69 °C
Conductivity meter # 9112 Time: 1:40

Water Level Meter # 10337

WELL SAMPLING PARAMETERS:

Gallons Removed	Time	Temp. °F	pH	Cond. (umhos/cm)
0				
3	2:45	65.3	6.95	1.17
6	2:50	66.1	6.98	1.25
10	2:55	66.2	6.99	1.30

SAMPLING METHOD: Time Sampled: 3:00

☒ PVC Bailer DISP. ☐ Bladder Pump ☐ Other

COMMENTS:

Well recovered quickly

SAMPLES COLLECTED INCLUDING QC SAMPLES			
ANALYSIS REQUIRED	No. of	Container type	Preservatives
EPA 8240			
EPA 8270			
EPA 8010/8020			
TPH-G/BTEX	3	VOA's	HCl
METALS:			
INORGANICS:			

BIRCH TECHNICAL SERVICES
116 LIBERTY STREET
SANTA CRUZ, CALIFORNIA
(408) 459-0718

GROUND-WATER SAMPLING FORM

Well Number: MW-3

Well Type: ☒ Monitor ☐ Extraction ☐ Other:

Well Material: ☒ PVC ☐ Steel ☐ Other

Sampled By: Dan Birch

Job Number: 10-011
Location: HAYWARD
Date: 4-14-92

WELL PURGING

PURGE VOLUME
Casing diameter(ID in inches): ☒ 2" ☐ 4" ☐ 6" ☐ Other

Well Volume Factors:

Well Casing ID (inches)	(Vol. Factor)
2.0	0.1632
3.0	0.3672
4.0	0.6528
4.5	0.826
6.0	1.469

Total Depth of Well (BOW) 38.18 Initial Water level: 22.48' Time: 1:58
Total Volume Purged: 10 g Time Elapsed:
Water Level after purging: 22.47 Time: 3:35

Purge Volume:

38.18' (total depth) − 22.48' (water level) = 15.70' × .163 (Well Vol. Fac.) = 2.56 × 3 (# of vol. to purge) = 7.7 gallons (calculated purge volume)

PURGE METHOD ☒ Honda Pump ☐ Bailer ☐ Dedicated Pump ☐ Other

PARAMETER EQUIPMENT CALIBRATION:

pH meter #9112 Time: 1:40 Solution pH 4.00 4.0 at 69 °C pH 10.00 at °C
Other solution: 7.0 - 7.0 at 69 °C
Conductivity meter # 9112 Time: 1:40

Water Level Meter # 10337

WELL SAMPLING PARAMETERS:

Gallons Removed	Time	Temp. °F	pH	Cond. (umhos/cm)
0				
2	3:17	64.2	7.25	0.95
5	3:20	62.1	7.27	0.99
7	3:22	62.3	7.26	1.03
10	3:26	62.5	7.26	1.02

SAMPLING METHOD: Time Sampled: 3:30
☒ DISP. Bailer ☐ Bladder Pump ☐ Other PVC

COMMENTS:

Well recovered quickly.

SAMPLES COLLECTED INCLUDING QC SAMPLES			
ANALYSIS REQUIRED	No. of	Container type	Preservatives
EPA 8240			
EPA 8270			
EPA 8010/8020			
TPH-G / BTEX	3	VOA's	HCl
METALS:			
INORGANICS:			

APPENDIX G

OFFICIAL LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

ALISTO ENGINEERING GROUP
FIELD PROCEDURES
FOR
CHAIN OF CUSTODY DOCUMENTATION

All samples collected were properly handled in accordance with the Cal-DHS guidelines. Each sample was properly labeled in the field, and immediately stored in coolers and preserved with blue ice for transport to a California-certified laboratory for analysis.

The official chain of custody record accompanied the samples, and included the site and sample identification, date and time of sample collection, analysis requested, and the name and signature of the sampling technician. When transferring the possession of the samples, the transferee signed and dated the chain of custody record.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alisto Engineering Group	Client Project ID:	Anderson Lift Truck Transport	Sampled:	Apr 9, 1992
1000 Burnett Ave., #150	Matrix Descript:	Soil	Received:	Apr 10, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 15, 1992
Attention: Brady Nagle	First Sample #:	204-0389	Reported:	Apr 24, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0389	MW-1 26-26.5	N.D.	N.D.	N.D.	N.D.	N.D.
204-0390	MW-2 26-26.5	N.D.	N.D.	N.D.	N.D.	N.D.
204-0391	MW-3 25.5-26	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Alisto Engineering Group
1000 Burnett Ave., #150
Concord, CA 94520
Attention: Brady Nagle

Client Project ID: Anderson Lift Truck Transport

QC Sample Group: 2040389-391

Reported: Apr 24, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	J.F.	J.F.	J.F.	J.F.
Reporting Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Date Analyzed:	Apr 15, 1992	Apr 15, 1992	Apr 15, 1992	Apr 15, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.40	0.40	0.40	1.2
Conc. Matrix Spike:	0.44	0.44	0.43	1.3
Matrix Spike % Recovery:	110	110	108	108
Conc. Matrix Spike Dup.:	0.45	0.43	0.43	1.3
Matrix Spike Duplicate % Recovery:	113	108	108	108
Relative % Difference:	2.2	2.3	0.0	0.0

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}}$	x 100

Chain of Custody

SEQUOIA ANALYTICAL
Redwood City: (415) 364-9600
Concord: (510) 686-9600
Sacramento: (916) 921-9600

Consulting Firm Name: Alisto Engineering Group	Site: Anderson Lift Truck Transport	Phase of Work:
Address: 1000 Burnett Ave. #150	Site Address: 310 Bartlett, Hayward	☐ A. Emrg. Response
City: Concord State: CA Zip Code: 94520	Engineer:	☐ B. Site Assessment
Telephone: (510) 676-4070 FAX #:	Consultant Project #: 10-011	☐ C. Remediation
Project Contact: Brady Nagle Sampled by: Brady Nagle	Sequoia's Work Order Release #:	☐ D. Monitoring
		☐ E. OGC/Claims

Turnaround Time: ☒ Standard TAT (5 - 10 Working Days)
☐ Other _____

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Description	# of Containers	Sequoia's Sample #	TPH Gas/BTEX	TPH Diesel	TRPH by I.R. EPA 418.1	Oil & Grease EPA 413.2					Comments
1. MW-1 26-26.5	4/9/92	SOIL	1	2040389	X								
2. MW-2 26-26.5	4/9/92	SOIL	1	↓ 390	X								
3. MW-2 31-31.5	4/9/92	SOIL	1										HOLD
4. MW-3 21-21.5	4/9/92	SOIL	1										HOLD
5. MW-3 25.5-26	4/9/92	SOIL	1	2040391	X								
6.													
7.													
8.													
9.													
10.													

Relinquished By: Brady Nagle	Date: 4/10/92	Time: 9:38	Received By: Kevin VanSandt	Date: 4/10/92 Time: 9:38pm
Relinquished By:	Date:	Time:	Received By:	Date: Time:
Relinquished By:	Date:	Time:	Received By:	Date: Time:

Method of Shipment _____

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. BRADY NAGLE
ALISTO ENGINEERING GROUP
1000 BURNETT AVENUE, SUITE 150
CONCORD, CA 94520

Workorder # : 9204214
Date Received : 04/14/92
Project ID : 10-011
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9204214- 1	MW-1
9204214- 2	MW-2
9204214- 3	MW-3

This report consists of 3 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Larry Kent for
Sarah Schoen, Ph.D.
Laboratory Director

04-23-92
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRADY NAGLE
ALISTO ENGINEERING GROUP
1000 BURNETT AVENUE, SUITE 150
CONCORD, CA 94520

Workorder # : 9204214
Date Received : 04/14/92
Project ID : 10-011
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9204214- 1	MW-1	WATER	04/14/92	TPHg/BTEX
9204214- 2	MW-2	WATER	04/14/92	TPHg/BTEX
9204214- 3	MW-3	WATER	04/14/92	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRADY NAGLE
ALISTO ENGINEERING GROUP
1000 BURNETT AVENUE, SUITE 150
CONCORD, CA 94520

Workorder # : 9204214
Date Received : 04/14/92
Project ID : 10-011
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Bateman 4/23/92
Department Supervisor Date

Chemist 4/23/92
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9204214
Matrix : WATER
Date Sampled : 04/14/92

Project Number : 10-011
Date Released : 04/23/92

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1 -01	Sample I.D.# MW-2 -02	Sample I.D.# MW-3 -03	Sample I.D.# 04B0417A BLANK
Benzene	0.5	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND	ND
% Surrogate Recovery		103%	97%	95%	101%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		04/17/92	04/17/92	04/17/92	04/17/92
RLMF		1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 4/23/92 Date

Supervisor 4/23/92 Date

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

9204214 #2 2815 GB

CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER	PROJECT NAME
10-011	ANDERSON TRANSP.

Send Report Attention of:	Report Due	Verbal Due
BRADY NAGEL	4/28/92	/ /

	Sample Number	Date	Time	Comp	Matrix	Station Location	Number of Cntnrs	Type of Containers	Type of Analysis: TPH-G/BTEX	Condition of Samples	Initial
1	MW-1	4/14/92	2:30		WATER		3	VOA's	X	Samples received cold,	
2	MW-2	4/14/92	3:00		WATER		3	VOA's	X	no bubbles	
3	MW-3	4/14/92	3:30		WATER		3	VOA's	X		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Daniel J. Buch	4/14/92 8:08		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by Lab:	Date/Time
		Fredh Buch	4/16/92 20:00

Remarks: NORMAL TURN AROUND

COMPANY: ALISTO ENG. SITE ISO
ADDRESS: 1000 BURNETT AVE CONCORD 94520
PHONE : 510 798-4070 FAX : 510 798 676 6841