

Augeas

Remedial Investigation Report

Jocson Auto Electric
17771 Meekland Avenue
Alameda County, California 94541

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Augeas Corporation
799 Main Street, Suite A
Half Moon Bay, CA 94019
415/ 726-7700

Jocson Auto Electric, 17771 Meekland, Alameda County, California



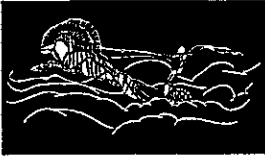
**Remedial Investigation Report
Jocson Auto Electric
17771 Meekland Avenue
Alameda County, California**

for

Mel Jocson
July 16, 1992

Prepared by
Augeas Corporation
799 Main Street, Suite A
Half Moon Bay, CA 94019

Jocson Auto Electric, 17771 Meekland, Alameda County, California



This report was prepared under the supervision of a registered professional engineer. All statements, conclusions and recommendations are based solely upon field observations and analytical test results related to the work performed by Auceas Corporation.

Site conditions are subject to change with time; therefore, our conclusions result only from the interpretation of present conditions and available site information. This report was prepared in accordance with accepted professional standards and technical procedures as certified below.

Reviewed by:

Frederick Moss

Frederick G. Moss, P.E., No. 35162
Senior Engineer

July 15, 1992

Date



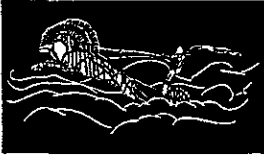
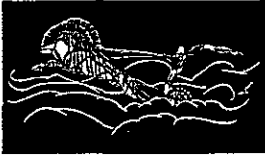


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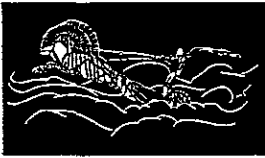
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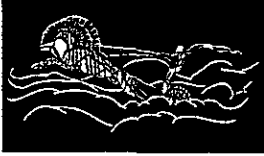
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1.0 OBJECTIVE

Augeas Corporation was retained by Mel Jocson of Jocson Auto Electric, to assess specific environmental concerns stemming from the presumed leakage or spillage of fuel from former underground storage tanks. The underground tanks were used to store gasoline at one time. The objective of this Remedial Investigation (RI) is to provide additional information on the horizontal and vertical extent of potential contamination and severity of soil and/or ground-water pollution at the site.



2.0 SUMMARY

No soil or groundwater contamination was identified during this investigation. Specific work performed during this Remedial Investigation included:

1. Preparation of a Groundwater Investigation Workplan, a site-specific Health and Safety Plan, and completion of monitoring well permits.
2. Drilling of four exploratory soil borings.
3. Installation of three groundwater monitoring wells.
4. Collection of soil samples at 5-foot intervals in the soil borings, down to groundwater. Continuous lithologic logging of each of the boreholes and the field screening of all samples collected with a 580B OVM photoionization detector (PID).
5. Development of the monitoring wells and collection of a water sample from each of the newly installed monitoring wells as well as from existing wells.
6. Analysis of soil and water samples for volatile aromatic compounds including benzene, toluene, total xylenes, and ethylbenzene (BTEX) and total petroleum hydrocarbon products (TPH) in the gasoline range.
7. Preparation of this technical report.

In summary, no soil contamination was found. Groundwater was encountered at a depth of 20 to 23 feet below the ground surface. No evidence of petroleum hydrocarbon contamination was found in the analysis of water samples collected from the three monitoring wells installed during this investigation.



3.0 INTRODUCTION

3.1 Site Background

The site is located northeast of Highway 880 near E. Lewelling Boulevard, at 17771 Meekland Avenue, Alameda County, California (Figure 1). The property was previously developed as a Sunland service station in approximately 1974. On January 3, 1991, two 3,000-gallon storage tanks, one 5,000-gallon storage tank and one 300-gallon waste oil tank, associated product piping, and surface pavements were removed. These tanks were believed to have contained regular and/or unleaded gasoline.

There are currently no underground fuel tanks on the property. The site covers an irregularly shaped area of less than one half acre, and measures approximately 250 feet by about 150 feet. One structure exists on the property, the repair bay and office area. Site features are shown on Figure 2.

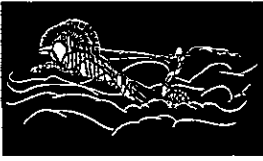
Underground fuel storage tanks were installed by Sunland Oil. The tank and product lines were inspected following its removal and were found to be intact but with minor deterioration. The soil contamination below and adjacent to the tank, discovered at the time of tank removal, was therefore believed to be caused by spillage as a result of overflow.

3.2 Geology and Hydrogeology

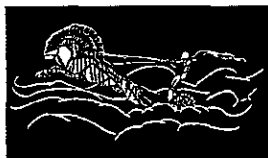
The exploratory borings drilled during this investigation encountered unconsolidated alluvial deposits consisting primarily of clay and silt with occasional layers of poorly-sorted fine sand to silty sand. More specifically, the upper 8 to 15 feet of the soil column consists of clayey silt overlying 15 to 22 feet of interbedded silty sand and silty clay.

Characteristics of the aquifers and occurrence of groundwater at the site is typical for the gently sloping plains adjacent to the flat-lying floor of the San Francisco Bay. The alluvial sediments were derived from the erosion of the adjacent Coast Range Hills and deposited in stream and estuary systems. The main part of San Francisco Bay is approximately three miles west of the site.

Jocson Auto Electric, 17771 Meekland, Alameda County, California



The elevation of the site is about 50 feet above sea level according to the U.S.G.S. topographic maps and surveyed elevations of the monitoring wells. The general slope of the ground surface is slightly toward the northeast. Groundwater was encountered in the monitoring wells at a depth of approximately 20 feet below the ground surface. The calculated local groundwater gradient is in a north to southwesterly direction as shown on Figure 4.

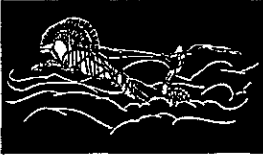


4.0 SCOPE OF WORK

4.1 Soil Borings

Four exploratory soil borings were drilled at the site on June 27, 1992. Each of the borings was drilled to a depth of 25 feet. Borehole drilling and sampling operations were accomplished using a truck mounted hollow-stem auger drill rig. Each borehole was continuously logged for the purpose of describing the vertical variations in the soil profile encountered. The lithologic log for each exploratory boring is presented in Appendix 1. Soil samples were collected at five (5) foot intervals, using a split spoon sampler fitted with three 2 x 6 inch brass tubes. The soil from one tube from each sample interval was placed into a sealed plastic bag which was allowed to reach ambient temperature. The gas collected in the headspace of the bag was then analyzed by a PID calibrated for benzene. One of the remaining brass tubes was capped and sealed, and placed on dry ice in a refrigerated container. The remaining soil samples were discarded. PID readings for each sample were recorded on the lithologic log for that boring and can be found in Appendix 1. Only the soil samples with the highest recorded PID readings were submitted to the analytical laboratory for analysis.

In accordance with County of Alameda County Department of Environmental Health and Regional Water Quality Control Board (RWQCB) practices, all soil borings were completely backfilled with a grout composed of bentonite and neat cement. In addition, all soil cuttings and discarded soil samples generated by the borehole drilling and sampling activities were contained and stored on-site for future disposal.



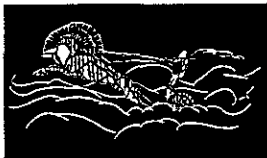
4.2 Monitoring Well Installation

Three groundwater monitoring wells were installed at the site on June 27, 1992. Augeas Corporation obtained the appropriate permits for well installation from the Alameda County Water District (Zone 7). The wells were completed to a depth of 29 feet below ground surface. Well design and completion details are presented in Appendix 2.

The initial soil boring was drilled using 6 7/8 inch ID hollow stem augers. Materials used for the construction of the groundwater monitoring well included 2-inch ID interior/exterior flush-threaded PVC Schedule 40 blank casing and well screen. Well screen perforations were precision machine slotted with a slot size 0.2 inches. Ten feet of well screen was placed at the bottom of the boring. Approximately 8 feet of well screen was located below the water table with two feet of well screen extending above the water table. Approximately 20 feet of blank casing connected the well screen to a subsurface locking Christy Box. The well was also equipped with a locking pressure cap and traffic-rated cover to avoid the potential for vandalism.

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0.002?

Following well installation, Augeas Corporation developed the monitoring wells by purging a sufficient amount of water to remove suspended material which had accumulated at the bottom of the well screen. Approximately 20 gallons of water was removed from each well and stored on-site until an analysis of the water could be obtained.



4.3 Groundwater Sampling

Water samples were collected from the wells on June 30 and July 1, 1992. Prior to sampling, the depth to water in all of the wells was gauged to the nearest hundredth of a foot using an interface probe. The wells were also visually inspected for integrity and condition of the casing and wellhead. All wells appeared to be in satisfactory condition. Prior to sampling, the monitoring wells were purged until pH, temperature, and conductivity of the purge water stabilized, or until dry. Purging data is included in Appendix 3.

Following recovery of the wells to at least 80 percent of their static water level, duplicate groundwater samples were collected using a clean Teflon hand bailer, and placed into three 40 ml vials. Prior to sampling, the bailer was completely disassembled, washed in deionized water and reassembled. Each water sample was labeled, placed into a chest of dry ice, and transported to Sequoia Analytical Laboratory in San Francisco, California under Chain-of-Custody within 24 hours of collection. Each water sample was analyzed for BTXE by EPA method 602 (purgeable aromatics) and TPH in the gasoline range.



5.0 ANALYTICAL RESULTS AND DISCUSSION

5.1 Soil Samples

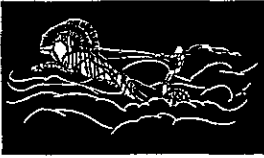
Soil samples collected from each of the monitoring wells and the single exploratory soil boring were evaluated for BTEX and TPH-g. The laboratory results are summarized and presented in Table 1. Complete analytical reports are located in Appendix 4. All samples obtained from the exploratory soil borings and submitted for analysis were collected from the depth intervals of 5 to 6.5, 10 to 11.5 and 15 to 16.5 feet. In addition to the soil borings, soil samples were collected from the monitoring well at the above depth interval and at five foot increments down to a depth of 30 feet.

Saturated conditions were encountered during the collection of a soil sample at the groundwater interface at a depth of 20 feet. The water-saturated condition of the 20-foot sample and the subsequent loss of material during the extraction of the sampler from the well, resulted in no representative soil sample being collected for chemical analysis at this depth.

5.2 Water Samples

On June 30 and July 1, 1992, Augeas Corporation collected groundwater samples from the newly installed monitoring wells. A field blank was also collected as a standard quality assurance precaution. Each sample was evaluated for TPH constituents in the gasoline range and BTEX (EPA Methodology 602). The results of these analyses are summarized in Table 2. Complete analytical reports are presented in Appendix 4.

The depth to groundwater in the wells ranged from approximately 19 to 20 feet below grade. This data was combined with wellhead elevation previously collected by HETI, to produce the ground water contour map shown as Figure 4. The map shows ground water gradient ranges from 35.0 to 36.0. Sampling and gauging data is included in Appendix 3.

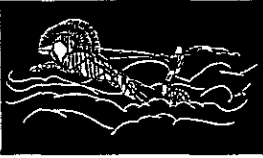


6.0 RECOMMENDATIONS

The initial goal of this preliminary investigation at the former Sunland service station was twofold: first, to determine whether a soil only, or a soil and groundwater remediation must be considered; and second, if a soil only remediation is required, to determine the lateral and vertical extent of any soil contamination. Both of these goals have been accomplished as a result of this investigation.

The chemical analysis of soil samples collected from exploratory soil borings placed in the vicinity of the former tank excavation were all below laboratory detection limits for fuel hydrocarbons. Although soil contamination was detected at the time of tank removal, all contamination was successfully removed during subsequent overexcavation activities.

Since no fuel hydrocarbon products have been found in the groundwater samples collected from MW-1, MW-2 AND MW-3 and no soil contamination was identified in the soil borings, no further soil or groundwater assessment recommended. Based upon the results of this study, Augeas Corporation requests that site closure be approved by Alameda County Department of Environmental Health.



7.0 LIMITATIONS

This report has been prepared for the exclusive use of Jocson Auto Electric with specific application to the subject site in Alameda County, California. The use of this report, its contents, or any part of it by a party, or its agents, other than the ones for whom this report is prepared, is herewith disallowed.

In part, these findings, conclusions, and recommendations are based on the best available information known or made available by Jocson Auto Electric, regulators, other consultants, laboratories, or other sources. Augeas Corporation did not participate in the performance of construction activities related to tank removal or soil excavations, or the collection, sampling and analysis of soils from the tank excavation or stockpile.

The services provided under this contract as described in this report include professional opinions and judgments based on the data collected. These services have been performed according to generally accepted practices in the environmental industry in this area. The opinions and conclusions contained in this report are based only on information obtained from:

1. Observations and measurements by our field staff.
2. Contacts and discussions with regulatory agencies, labs, site owners and others.
3. Our opinions and judgments based on information available.

The Client, Jocson Auto Electric, acknowledges that Augeas Corporation has been retained for the sole purpose of assisting the Client in evaluation of the environmental conditions at the project site. It is recognized and agreed that Augeas Corporation has assumed responsibility only for performing this

Jocson Auto Electric, 17771 Meekland, Alameda County, California



investigation and presenting this report and conclusions to the Client. The responsibility for making any further evaluation, disclosure or report to any third party or for the taking of corrective, remedial and mitigative action, shall be solely that of the Client. The Client agrees to hold Augeas Corporation harmless from any and all liability, damage, loss, cost, or expense, including attorney fees, in any way arising from the claim of any third party. Augeas Corporation agrees not to make, except to the Client or at the Client's request, any report to any third party not legally required of it.



Table 1
 Summary of Analytical Results
 Soil Samples

| Boring No. | Fuel Hydrocarbons mg/kg | Benzene $\mu\text{g}/\text{kg}$ | Toluene $\mu\text{g}/\text{kg}$ | Ethyl benzene $\mu\text{g}/\text{kg}$ | Xylenes $\mu\text{g}/\text{kg}$ |
|------------|-------------------------|---------------------------------|---------------------------------|---------------------------------------|---------------------------------|
| MW-1-10' | ND | ND | ND | ND | ND |
| 15' | ND | ND | ND | ND | ND |
| 20' | ND | ND | ND | ND | ND |
| 25' | ND | ND | ND | ND | ND |
| 30' | ND | ND | ND | ND | ND |
| MW-2-10' | ND | ND | ND | ND | ND |
| 15' | ND | ND | ND | ND | ND |
| 20' | ND | ND | ND | ND | ND |
| 25' | ND | ND | ND | ND | ND |
| 30' | ND | ND | ND | ND | ND |
| MW-3-10' | ND | ND | ND | ND | ND |
| 15' | ND | ND | ND | ND | ND |
| 20' | ND | ND | ND | ND | ND |
| 25' | ND | ND | ND | ND | ND |
| 30' | ND | ND | ND | ND | ND |
| SB-1-10' | ND | ND | ND | ND | ND |
| 15' | ND | ND | ND | ND | ND |
| 20' | ND | ND | ND | ND | ND |

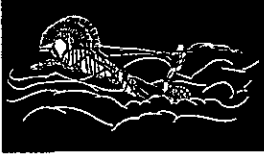


Table 2
Summary of Analytical Results
Water Samples

| Boring No. | Fuel Hydrocarbons mg/kg | Benzene $\mu\text{g}/\text{kg}$ | Toluene $\mu\text{g}/\text{kg}$ | Ethyl benzene $\mu\text{g}/\text{kg}$ | Xylenes $\mu\text{g}/\text{kg}$ |
|-------------|-------------------------|---------------------------------|---------------------------------|---------------------------------------|---------------------------------|
| MW-1 | ND | ND | ND | ND | ND |
| MW-2 | ND | ND | ND | ND | ND |
| MW-3 | ND | ND | ND | ND | ND |
| Field Blank | ND | ND | ND | ND | ND |

Table 3

Water Table Elevation Data

| Well No. | Elevation Top Casing | DTW | Date Measured | Elevation Water | Remarks/ Observations |
|----------|----------------------|-------|---------------|-----------------|-----------------------|
| MW-1 | 55.25 | 19.11 | 7/1 | 36.14 | |
| MW-2 | 54.33 | 20.02 | 7/1 | 34.31 | |
| MW-3 | 55.05 | 19.26 | 7/1 | 35.79 | |

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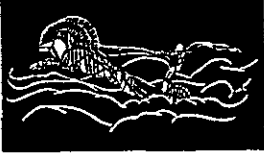
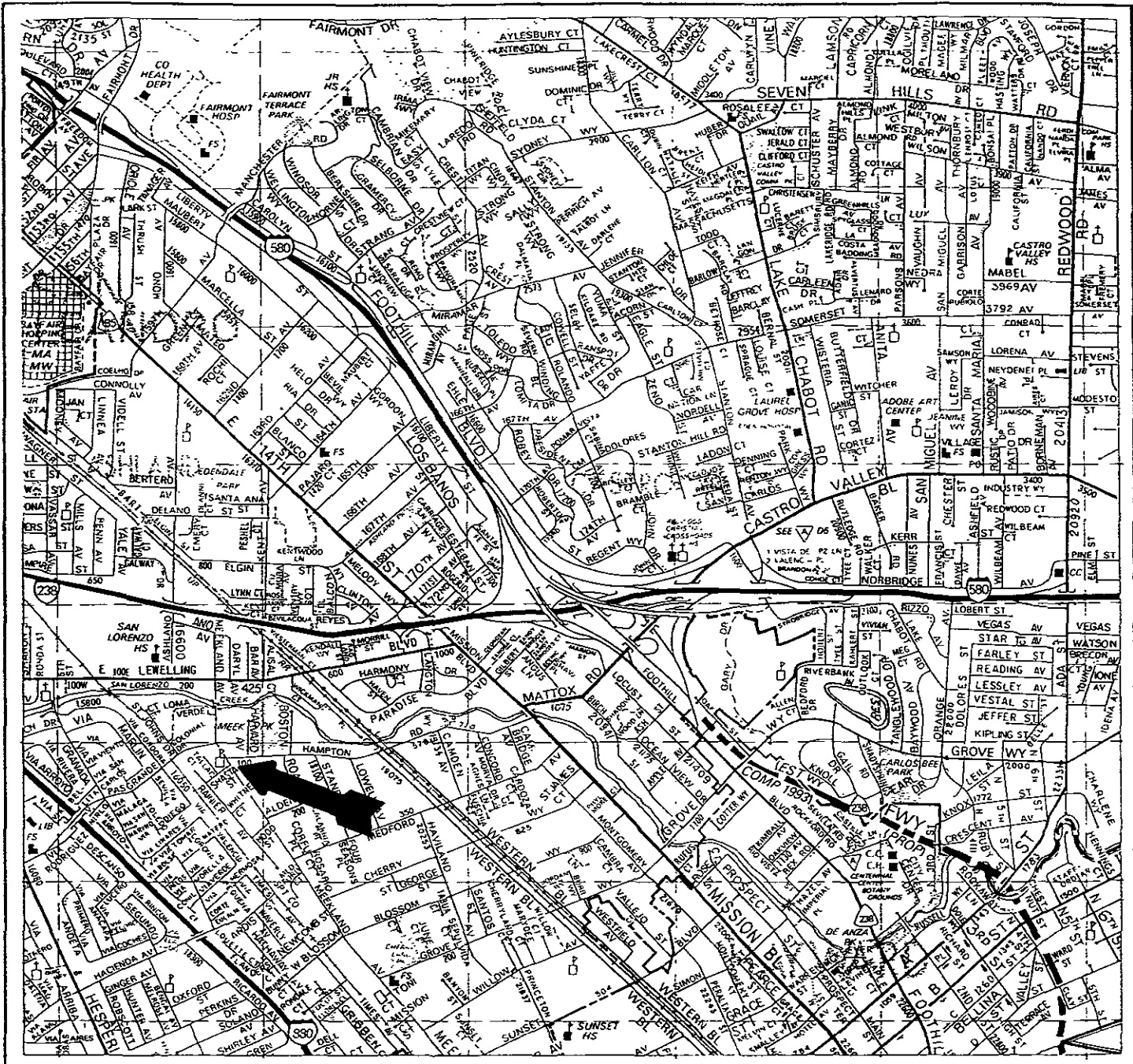


FIGURE 1
Location Map




ALAMEDA COUNTY
 1991 Thomas Guide

| | | |
|---------------------------|---|----------------------------|
| AUGEAS CORPORATION | Figure 1- Site Location Map Jocson Auto Electrical, Hayward, CA | Prepared by JF 06/03/92 |
|---------------------------|---|----------------------------|

Jocson Auto Electric, 17771 Meekland, Alameda County, California

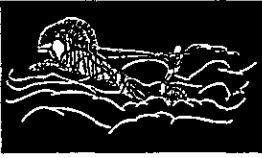
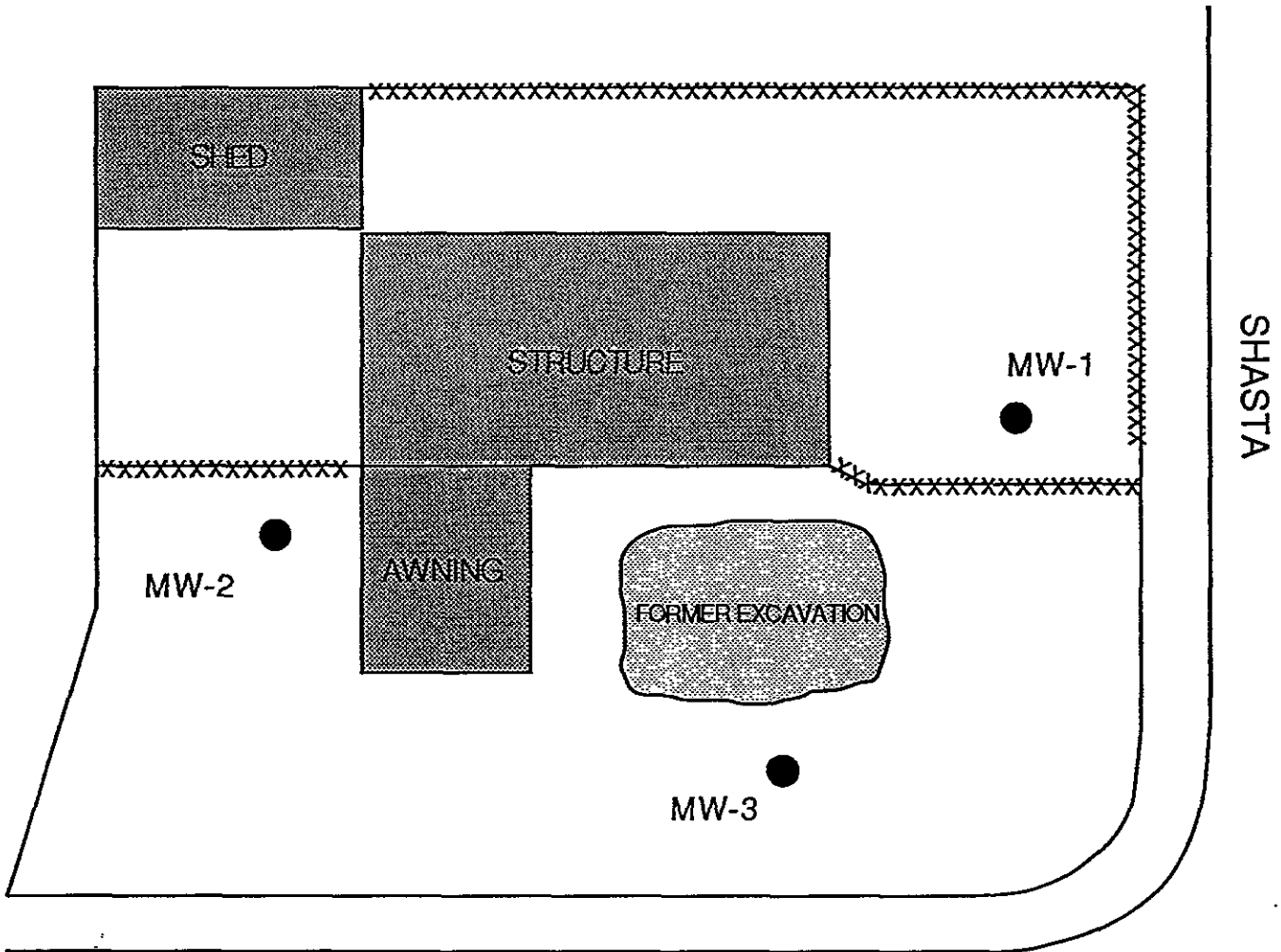


FIGURE 2
General Site Map



MEEKLAND AVENUE

SHASTA



| | | |
|----------------------------------|--|------------------------|
| <p>AUGEAS CORPORATION</p> | <p>Figure 2- General Site Map</p> | <p>Prepared by: JF</p> |
| | <p>17771 Meekland Ave, Hayward, California</p> | <p>07/17/92</p> |

Jocson Auto Electric, 17771 Meekland, Alameda County, California

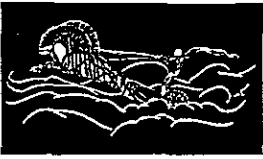
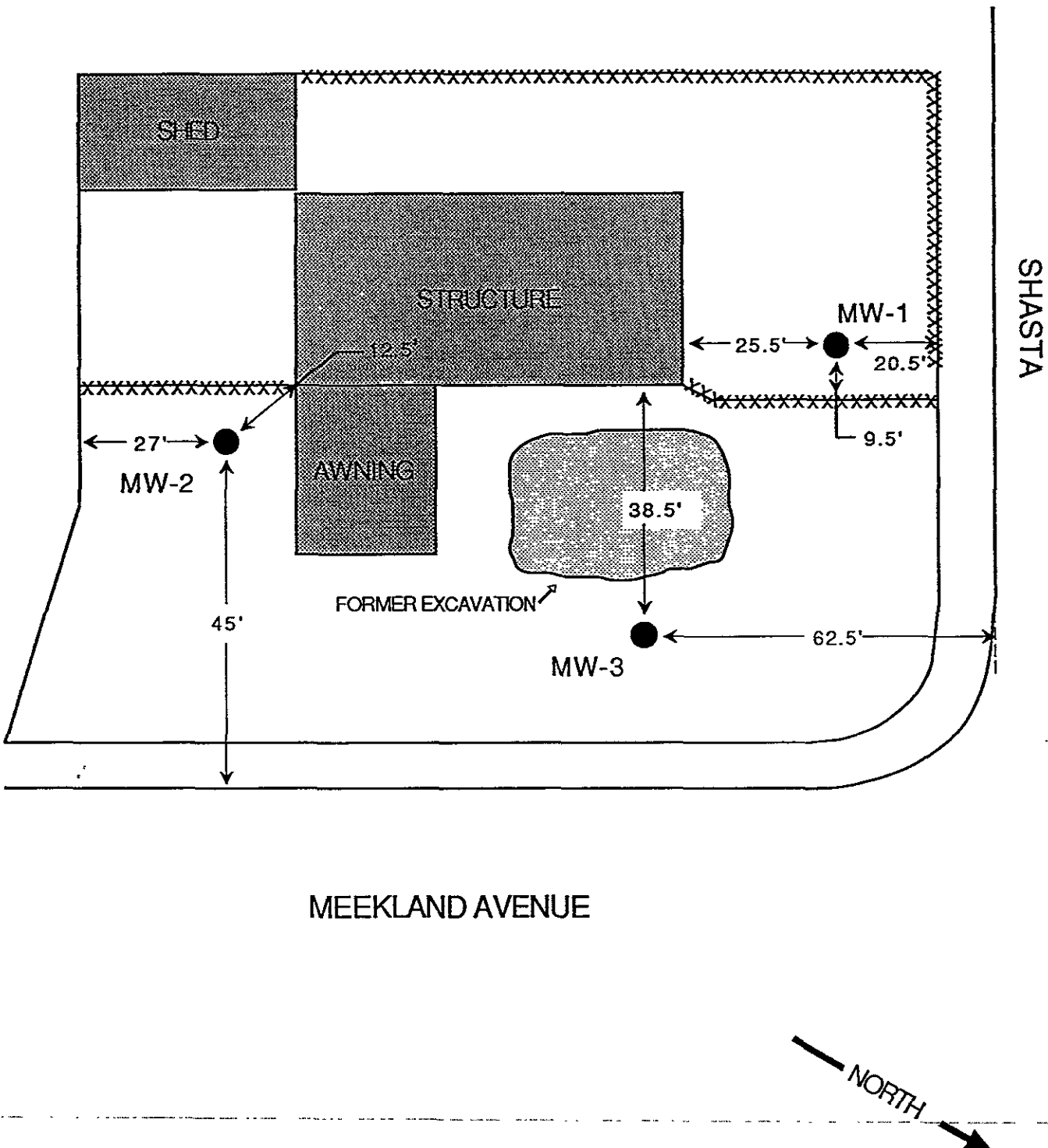


FIGURE 3
Boring and Monitoring Well Location Map



MEEKLAND AVENUE

SHASTA



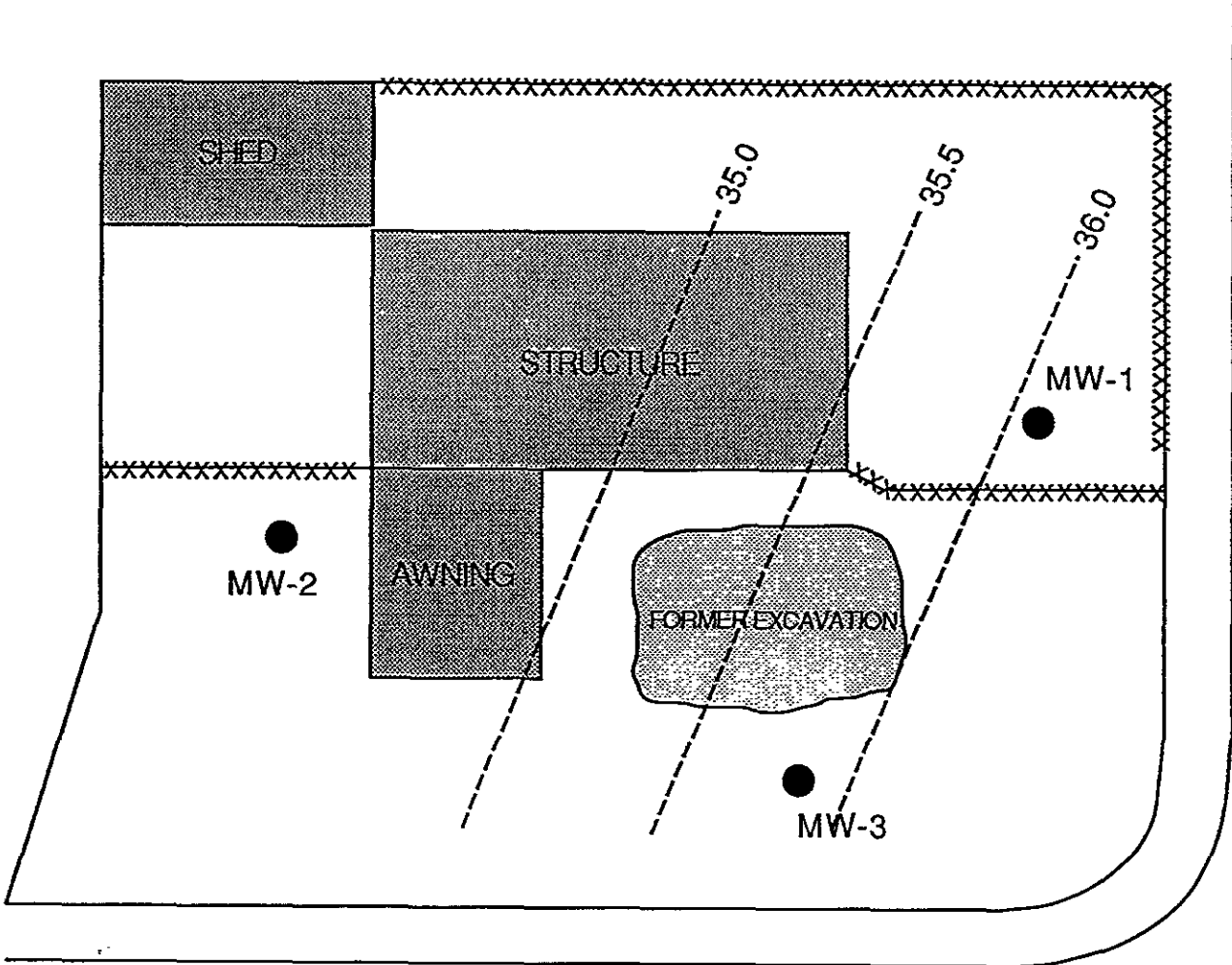
| | | |
|-------------------------------|---|-----------------|
| AUGEAS CORPORATION | Figure 3- Boring and Monitoring Well Location Map | Prepared by: JF |
| | 17771 Meekland Ave, Hayward, California | 07/17/92 |

Jocson Auto Electric, 17771 Meekland, Alameda County, California



FIGURE 4
Groundwater Gradient Map

SHASTA



MEEKLAND AVENUE

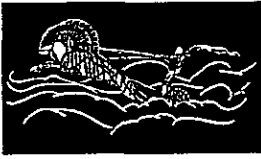


**AUGEAS
CORPORATION**

Figure 4-Groundwater Gradient Map
17771 Meekland Ave, Hayward, California

Prepared by: JF
07/17/92

Jocson Auto Electric, 17771 Meekland, Alameda County, California



APPENDIX 1

Lithologic Logs - Soil Borings

LOG OF BORING MW-1

JOB NO. MJ 0592

CLIENT: JOCSON AUTO ELECTRIC

Date Drilled: 06/27/92

Well Casing Top Elevation:

Casing Diameter: 2"

Filter Pack Type: sand

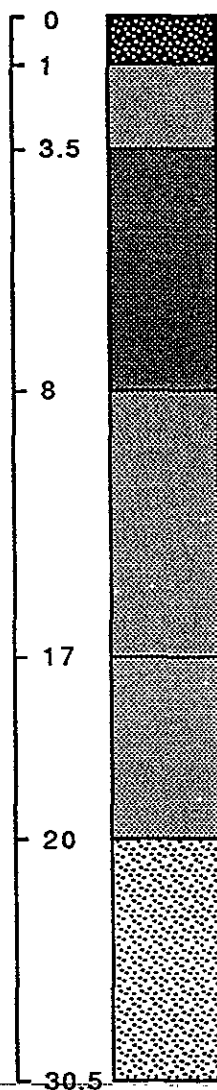
Grout Type: cement/bentonite

Screen Size: 0.020

Boring Diameter: 6 7/8"

| SAMPLER TYPE | SAMPLING RESISTANCE BLOWS/FT. | SAMPLE DEPTH | SOIL CLASSIFICATION |
|--------------|----------------------------------|--------------|---------------------|
| | | | |
| SS | 2/5/6 | 5' | ML |
| | | | |
| SS | 5/10/17 | 10' | CL |
| SS | 4/4/4 | 15' | CL |
| | | | |
| SS | 2/4/6 | 20' | ML |
| SS | 1/3/6 | 25' | CL |
| SS | 1/2/3 | 30' | CL |

DEPTH IN FEET



SOIL DESCRIPTION

0
1
3.5
8
17
20
30.5

Asphalt and base rock

Light brown clayey silt. Dry with no odor

Dark grey clayey SILT. Dry with no odor

Orange brown SILT with dark grey CLAY layers. Dry with no odor.

Light brown sandy SILT. Moist and soft. No odor.

Light grey-brown silty CLAY. Layers of brown silt. Damp with no odor.

Total depth 30.5'

BORING LOGGED BY: F.M.

AUGEAS CORPORATION

TITLE:

MW-1 Boring Log

DRAWN BY:

JF

DATE:

07/02/92

PROJECT NO.

MJ0592

LOG OF BORING MW-2

JOB NO. MJ 0592

CLIENT: JOCSON AUTO ELECTRIC

Date Drilled: 06/27/92

Well Casing Top Elevation:

Casing Diameter: 2"

Filter Pack Type: sand

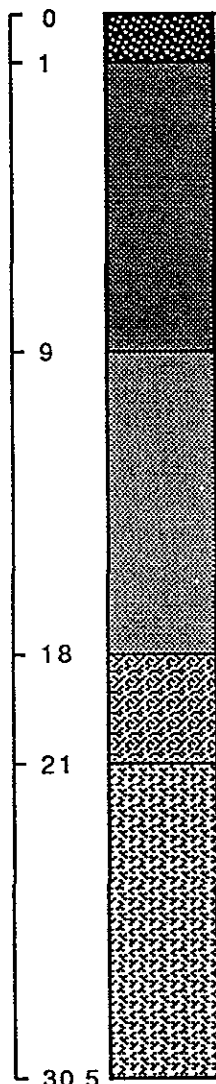
Grout Type: cement/bentonite

Screen Size: 0.020

Boring Diameter: 6 7/8"

| SAMPLER TYPE | SAMPLING RESISTANCE BLOWS/FT. | SAMPLE DEPTH | SOIL CLASSIFICATION |
|--------------|----------------------------------|--------------|---------------------|
| SS | 2/4/6 | 5' | ML |
| | | | |
| SS | 3/12/15 | 10' | ML |
| | | | |
| SS | 2/3/4 | 15' | ML |
| SS | 1/2/3 | 20' | SM |
| | | | |
| | | | |
| SS | 2/2/4 | 25' | ML |
| SS | 3/3/4 | 30' | ML |

DEPTH IN FEET



SOIL DESCRIPTION

Asphalt and road base gravel.

Dark grey clayey SILT. Dry with no odor.

Orange brown clayey SILT. Dry with no odor. Pebbles. Layers of dark grey silty clay up to 8" thick.

Moist at approximately 14'
Sandy silt beginning at approximately 15'

Light brown clayey SAND. Wet with no odor.

Light grey-brown clayey SILT. Damp to moist. Thin 6" layers of sandy silt: light brown and wet.

Total depth 30.5'

BORING LOGGED BY: F.M.

AUGEAS CORPORATION

TITLE:

MW-2 Boring Log

DRAWN BY:
JF

DATE:
07/02/92

PROJECT NO.
MJ0592

LOG OF BORING MW-3

JOB NO. MJ 0592

CLIENT: JOCSON AUTO ELECTRIC

Date Drilled: 06/27/92

Well Casing Top Elevation:

Casing Diameter: 2"

Filter Pack Type: sand

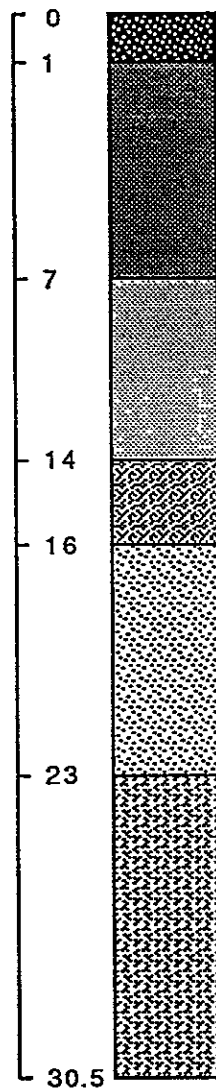
Grout Type: cement/bentonite

Screen Size: 0.020

Boring Diameter: 6 7/8"

| SAMPLER TYPE | SAMPLING RESISTANCE BLOWS/FT. | SAMPLE DEPTH | SOIL CLASSIFICATION |
|--------------|----------------------------------|--------------|---------------------|
| SS | 2/5/6 | 5' | ML |
| | | | |
| SS | 7/11/12 | 10' | ML |
| SS | 3/5/6 | 15' | SM |
| | | | |
| SS | 2/4/5 | 20' | CL |
| | | | |
| | | | |
| SS | 2/3/3 | 25' | ML |
| SS | 4/2/6 | 30' | ML |

DEPTH IN FEET



SOIL DESCRIPTION

Asphalt

Dark grey clayey SILT. Dry with no odor

Light brown clayey SILT. Dry with no odor. Stiff.

Light brown silty SAND. Wet with no odor.

Grey brown silty CLAY. Moist and firm with no odor.

Light brown clayey SILT.

Total depth 30.5'

BORING LOGGED BY: F.M.

AUGEAS CORPORATION

TITLE:

MW-3 Boring Log

DRAWN BY:

JF

DATE:

07/02/92

PROJECT NO.

MJ0592

LOG OF BORING SB-1

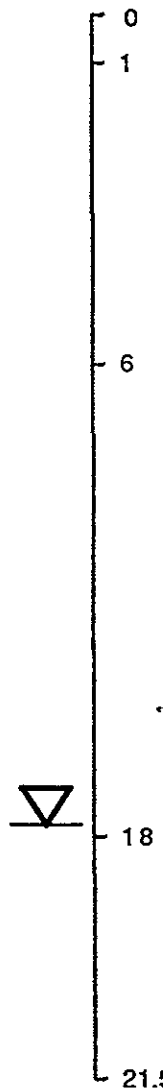
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CLIENT: JOCSON AUTO ELECTRIC

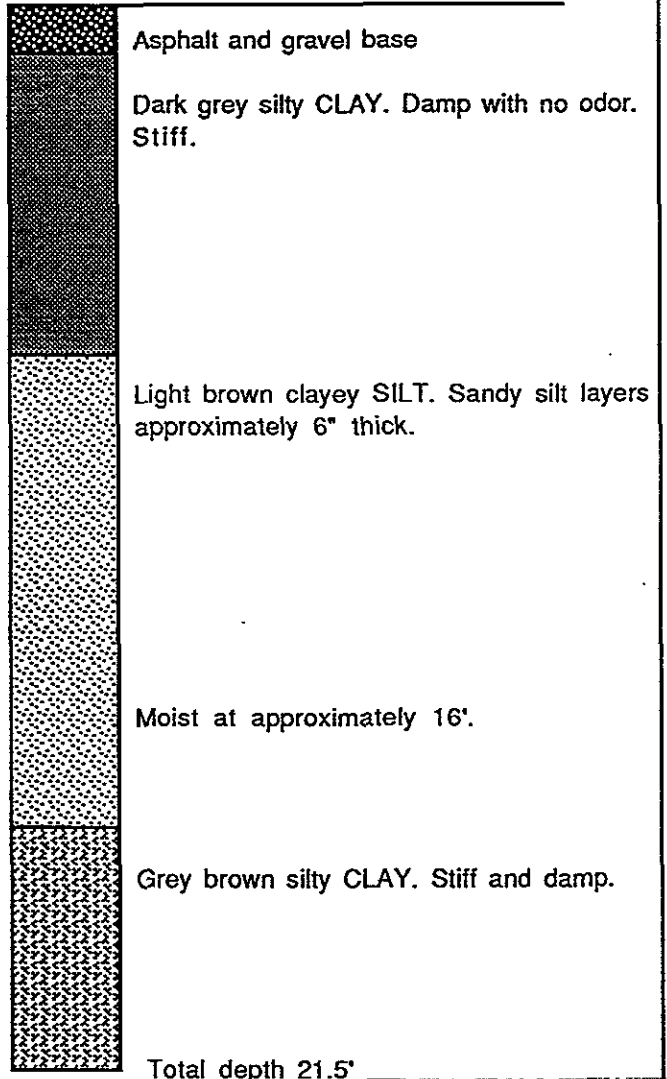
Date Drilled: 06/27/92

| SAMPLER TYPE | SAMPLING RESISTANCE BLOWS/FT. | SAMPLE DEPTH | SOIL CLASSIFICATION |
|--------------|----------------------------------|--------------|---------------------|
| | | | |
| SS | 1/4/5 | 5' | CL |
| | | | |
| SS | 5/11/12 | 10' | ML |
| SS | 2/4/5 | 15' | ML |
| | | | |
| | | | |
| SS | 4/7/8 | 20' | CL |
| | | | |

DEPTH IN FEET



SOIL DESCRIPTION



Asphalt and gravel base

Dark grey silty CLAY. Damp with no odor. Stiff.

Light brown clayey SILT. Sandy silt layers approximately 6" thick.

Moist at approximately 16'.

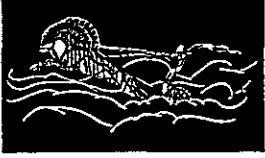
Grey brown silty CLAY. Stiff and damp.

Total depth 21.5'

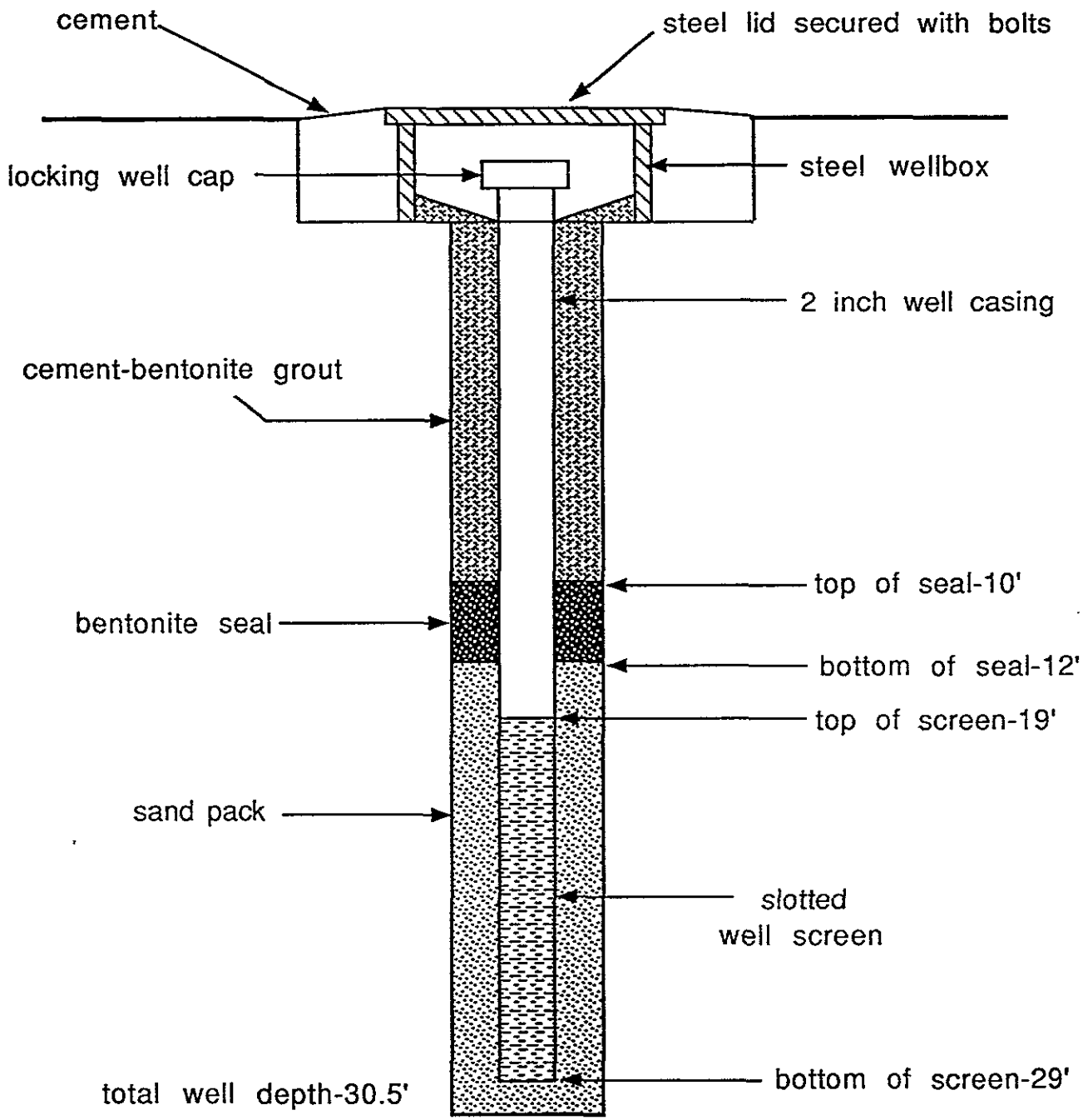
BORING LOGGED BY: F.M.

| | | |
|---------------------------|-------------------|-----------------------|
| AUGEAS CORPORATION | | |
| TITLE: SB-1 Boring Log | | |
| DRAWN BY: JF | DATE: 07/02/92 | PROJECT NO. MJ0592 |

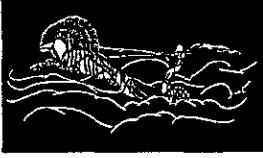
Jocson Auto Electric, 17771 Meekland, Alameda County, California



APPENDIX 2 Well Completion Details



| | | |
|---------------------------|----------|-------------|
| AUGEAS CORPORATION | | |
| TITLE: | | |
| DRAWN BY: | DATE: | PROJECT NO. |
| JF | 07/02/92 | MJ0592 |



Appendix 3 Field Logs - Groundwater Sampling



Augeas Corporation Groundwater Sampling Field Log

Project Name/ No: Jocson Lab I.D.: _____
 Client: _____ Date: 6-30-92
 Project Manager: P. Garrison Sample Location I.D.: MW-3
 Sampler: Jocson / SFE Start Time: 1645
 Casing Diameter: 2 inch 6x 3 inch _____ 4 inch _____ 6 inch _____ Other: _____
 Sample Depth (feet): 19.27
 Depth of Well (feet): 28.80 Calculated Purge Vol. (gal.) 1.58
 Depth to Water (feet): 19.14 Actual Purge Vol. (gal.) 1.59

Development 205 gals

Field Measurements

| Time | Cum | Volume (gal.) | pH (units) | E.C. (umhos/cm) | Temperature Degrees C | Color (visual) | Other |
|-------|------|---------------|------------|-----------------|-----------------------|----------------|-------|
| 17:00 | Ø | 1.59 | 6.53 | 950 | 19.2 | Turbid Brown | |
| 17:50 | 1.59 | 1.59 | 6.54 | 650 | 19.5 | Turbid | |
| 17:53 | 3.18 | 1.59 | 6.55 | 800 | 19.4 | Turbid | |
| 17:57 | 4.77 | 1.59 | 6.58 | 800 | 19.4 | Turbid | |
| 18:01 | 6.36 | | 6.59 | 800 | 19.4 | Turbid | |

Purge Method

2" Bladder Pump Bailer (Teflon) ^{Stainless} Well Wizard Dedicated
 Submersible Pump Centrifugal Pump Dipper Other
 Pneumatic Displacement Pump

Sample Method

2" Bladder Pump Bailer (Teflon) ^{Disposable} Well Wizard Dedicated
 Surface Sampler Dipper Fultz Pump Other

Well Integrity: Well Head - good SEAL Needs to be re-grouted well lock

Remarks: Sample Time: 18:07

Signature: [Signature]

Conversion Factors

Volumes Per Unit Length Selected Well Casing Diameters

| Well Casing I.D. (inches) | Volume Per Unit Length | | | |
|---------------------------|------------------------|-------------|--------|--------|
| | Gal/ft | Cubic Ft/ft | L/M | L/Ft |
| 1.5 | 0.0918 | 0.0123 | 1.140 | 0.3475 |
| 2.0 | 0.1632 | 0.0218 | 2.027 | 0.6178 |
| 3.0 | 0.3672 | 0.0491 | 4.560 | 1.3900 |
| 4.0 | 0.6528 | 0.0873 | 8.107 | 2.4710 |
| 6.0 | 1.4690 | 0.1963 | 18.240 | 5.5600 |

| To Convert | Into | Multiply |
|--------------|--------------|----------|
| Ft. of Water | Lbs/sq.in. | 0.4335 |
| Lbs/Sq. inch | Ft. of Water | 2.3070 |
| Cubic feet | Gallons | 7.4800 |
| Gallons | Liters | 3.7850 |
| Feet | Meters | 0.30048 |
| Inches | Centimeters | 2.5400 |



Augeas Corporation Groundwater Sampling Field Log

Project Name/ No: _____
 Client: _____
 Project Manager: Dorcas Corporation
 Sampler: JB Starbuck
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____
 Sample Depth (feet): 19.96
 Depth of Well (feet): 28.76
 Depth to Water (feet): 20.01

Lab I.D.: _____
 Date: 6-30-92
 Sample Location I.D.: MU12
 Start Time: 16:10
 Calculated Purge Vol. (gal.) 1.43
 Actual Purge Vol. (gal.) 1.32

Sampled 16.7 gal

Field Measurements

| Time | Cum | Volume (gal.) | pH (units) | E.C. (umhos/cm) | Temperature Degrees C | Color (visual) | Other |
|------|------|---------------|------------|-----------------|-----------------------|----------------|-------|
| 1825 | 0 | 1.32 | 6.30 | 900 | 19.0 | Turbid Brown | |
| 1827 | 1.32 | 1.32 | 6.49 | 900 | 18.9 | Turbid | |
| 1833 | 2.64 | 1.32 | 6.59 | 950 | 19.1 | Turbid | |
| 1836 | 3.96 | 1.32 | 6.60 | 950 | 19.1 | Turbid | |
| 1839 | 5.28 | | 6.59 | 950 | 19.1 | Turbid | |

Purge Method

2" Bladder Pump Bailer (Teflon) ^{Standard Steel} Well Wizard Dedicated
 Submersible Pump Centrifugal Pump Dipper Other
 Pneumatic Displacement Pump

Sample Method

2" Bladder Pump Bailer (Teflon) ^{Disposable} Well Wizard Dedicated
 Surface Sampler Dipper Fultz Pump Other

Well Integrity: Well Head - good Seal needs more work Lock
 Remarks: _____

Signature: STZ
Sample time: 1842

Conversion Factors

Volumes Per Unit Length Selected Well Casing Diameters

| Well Casing L.D. (inches) | Volume Per Unit Length | | | |
|---------------------------|------------------------|-------------|--------|--------|
| | Gal/ft | Cubic Ft/ft | L/M | L/Ft |
| 1.5 | 0.0918 | 0.0123 | 1.140 | 0.3475 |
| 2.0 | 0.1632 | 0.0218 | 2.027 | 0.6178 |
| 3.0 | 0.3672 | 0.0491 | 4.560 | 1.3900 |
| 4.0 | 0.6528 | 0.0873 | 8.107 | 2.4710 |
| 6.0 | 1.4690 | 0.1963 | 18.240 | 5.5600 |

| To Convert | Into | Multiply |
|--------------|--------------|----------|
| Ft. of Water | Lbs/sq.in. | 0.4335 |
| Lbs/Sq. inch | Ft. of Water | 2.3070 |
| Cubic feet | Gallons | 7.4800 |
| Gallons | Liters | 3.7850 |
| Feet | Meters | 0.30048 |
| Inches | Centimeters | 2.5400 |



Augeas Corporation Groundwater Sampling Field Log

Project Name/ No: _____ Lab I.D.: _____
 Client: _____ Date: 6-30-92
 Project Manager: R. LANNISON Sample Location I.D.: AW-1
 Sampler: DR. Jason Friend Start Time: _____
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____
 Sample Depth (feet): _____
 Depth of Well (feet): _____ Calculated Purge Vol. (gal.) _____
 Depth to Water (feet): _____ Actual Purge Vol. (gal.) _____

Field Measurements

| Time | Cum | Volume (gal.) | pH (units) | E.C. (umhos/cm) | Temperature Degrees C | Color (visual) | Other |
|------------------|-------|------------------|---------------|--------------------|--------------------------|-------------------|-------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| No Access | | | | | | | |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

Purge Method

_____ 2" Bladder Pump Bailer ^{Stainless} (Teflon) _____ Well Wizard _____ Dedicated
 _____ Submersible Pump _____ Centrifugal Pump _____ Dipper _____ Other
 _____ Pneumatic Displacement Pump _____

Sample Method

_____ 2" Bladder Pump Bailer ^{Disposable} (Teflon) _____ Well Wizard _____ Dedicated
 _____ Surface Sampler _____ Dipper _____ Fultz Pump _____ Other

Well Integrity: _____

Remarks: _____

Sample Time:

Signature: [Signature]

Volumes Per Unit Length Selected Well Casing Diameters

| Well Casing I.D. (inches) | Volume Per Unit Length | | | |
|------------------------------|------------------------|----------------|--------|--------|
| | Gal/ft | Cubic Ft/ft | L/M | L/Ft |
| 1.5 | 0.0918 | 0.0123 | 1.140 | 0.3475 |
| 2.0 | 0.1632 | 0.0218 | 2.027 | 0.6178 |
| 3.0 | 0.3672 | 0.0491 | 4.560 | 1.3900 |
| 4.0 | 0.6528 | 0.0873 | 8.107 | 2.4710 |
| 6.0 | 1.4690 | 0.1963 | 18.240 | 5.5600 |

Conversion Factors

| To Convert | Into | Multiply |
|--------------|--------------|----------|
| Ft. of Water | Lbs/sq.in. | 0.4335 |
| Lbs/Sq. inch | Ft. of Water | 2.3070 |
| Cubic feet | Gallons | 7.4800 |
| Gallons | Liters | 3.7850 |
| Feet | Meters | 0.30048 |
| Inches | Centimeters | 2.5400 |



Augeas Corporation Groundwater Sampling Field Log

Project Name/ No: _____ Lab I.D.: _____
 Client: _____ Date: 7-1-92
 Project Manager: _____ Sample Location I.D.: MW-1
 Sampler: Steve French Start Time: 1045
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____
 Sample Depth (feet): 20.72
 Depth of Well (feet): 19.70 Calculated Purge Vol. (gal.) 1.37
 Depth to Water (feet): 19.11 Actual Purge Vol. (gal.) 1.32

Field Measurements

| Time | Cum | Volume (gal.) | pH (units) | E.C. (umhos/cm) | Temperature Degrees C | Color (visual) | Other |
|------|------|---------------|------------|-----------------|-----------------------|----------------|-------|
| 1150 | 0 | 1.32 | 6.05 | 900 | 21.3 | Turbid Brown | |
| 1154 | 1.32 | 1.32 | 6.39 | 900 | 19.9 | Turbid | |
| 1159 | 2.64 | 1.32 | 6.56 | 850 | 19.9 | Turbid | |
| 1201 | 3.96 | 1.32 | 6.56 | 850 | 19.8 | Turbid | |
| 1204 | 5.28 | | 6.56 | 850 | 19.8 | Turbid | |

Purge Method

2" Bladder Pump Bailer (Teflon) ^{Stainless Steel} _____ Well Wizard _____ Dedicated
 Submersible Pump _____ Centrifugal Pump _____ Dipper _____ Other
 Pneumatic Displacement Pump _____

Sample Method

2" Bladder Pump Bailer (Teflon) ^{Disposable} _____ Well Wizard _____ Dedicated
 Surface Sampler _____ Dipper _____ Fultz Pump _____ Other

Well Integrity: Well head - good casing needs more grout 2008
 Remarks: Sample Time: 1208 Equipment Dispute: MW-1A
 Signature: [Signature] Time: 1211

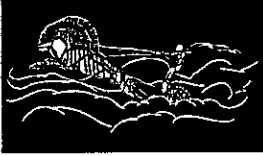
Volumes Per Unit Length Selected Well Casing Diameters

| Well Casing LD. (inches) | Volume Per Unit Length | | | |
|--------------------------|------------------------|-------------|--------|--------|
| | Gal/ft | Cubic Ft/ft | L/M | L/Ft |
| 1.5 | 0.0918 | 0.0123 | 1.140 | 0.3475 |
| 2.0 | 0.1632 | 0.0218 | 2.027 | 0.6178 |
| 3.0 | 0.3672 | 0.0491 | 4.560 | 1.3900 |
| 4.0 | 0.6528 | 0.0873 | 8.107 | 2.4710 |
| 6.0 | 1.4690 | 0.1963 | 18.240 | 5.5600 |

Conversion Factors

| To Convert | Into | Multiply |
|--------------|--------------|----------|
| Ft. of Water | Lbs/sq.in. | 0.4335 |
| Lbs/Sq. inch | Ft. of Water | 2.3070 |
| Cubic feet | Gallons | 7.4800 |
| Gallons | Liters | 3.7850 |
| Feet | Meters | 0.30048 |
| Inches | Centimeters | 2.5400 |

*7-1-92 MW 2 Depth 20.07' MW 3 19.26



Appendix 4 Detailed Analytical Reports

CHROMALAB, INC.

5 DAYS TURNAROUND

Environmental Laboratory (1094)

July 6, 1992

ChromaLab File No.: 0692262

AUGEAS CORP.

Attn: Jason French

RE: Eighteen soil samples for Gas/BTEX analysis

Project Name: JOCSON AUTO, HAYWARD

Date Sampled: June 27, 1992

Date Submitted: June 27, 1992

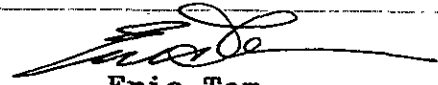
Date Analyzed: July 2, 1992

RESULTS:

| Sample I.D. | Gasoline (mg/Kg) | Benzene (ug/Kg) | Toluene (ug/Kg) | Ethyl Benzene (ug/Kg) | Total Xylenes (ug/Kg) |
|---------------------|------------------|-----------------|-----------------|-----------------------|-----------------------|
| MW-1/10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-1/15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-1/20' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-1/25' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-1/30' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-2/10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-2/15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-2/20' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-2/25' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-2/30' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-3/10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-3/15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-3/20' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-3/25' | N.D. | N.D. | N.D. | N.D. | N.D. |
| MW-3/30' | N.D. | N.D. | N.D. | N.D. | N.D. |
| SB-1/10' | N.D. | N.D. | N.D. | N.D. | N.D. |
| SB-1/15' | N.D. | N.D. | N.D. | N.D. | N.D. |
| SB-1/20' | N.D. | N.D. | N.D. | N.D. | N.D. |
| BLANK | N.D. | N.D. | N.D. | N.D. | N.D. |
| SPIKE RECOVERY | 85% | 108% | 105% | 102% | 101% |
| DUP. SPIKE RECOVERY | 92% | 85% | 98% | 96% | 95% |
| DETECTION LIMIT | 1.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| METHOD OF ANALYSIS | 5030/8015 | 8020 | 8020 | 8020 | 8020 |

ChromaLab, Inc.


Billy Thach
Analytical Chemist


Eric Tam
Laboratory Director



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

WYNNE STEVENSON
(408) 782-8154
(408) 782-6308

(650) 937-7600
(650)

| | | |
|--|--|---|
| Augeas Corporation 799 Main Street, Suite A Half Moon Bay, CA 94019 Attention: Rosanna Garrison | Client Project ID: Jocson Sample Matrix: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 206-5425 | Sampled: Jun 30, 1992 Received: Jun 30, 1992 Reported: Jul 13, 1992 |
|--|--|---|

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Analyte | Reporting Limit µg/L | Sample I.D. 206-5425 MW -3 | Sample I.D. 206-5426 MW - 2 |
|------------------------|-------------------------|----------------------------------|-----------------------------------|
| Purgeable Hydrocarbons | 50 | N.D. | N.D. |
| Benzene | 0.50 | N.D. | N.D. |
| Toluene | 0.50 | N.D. | N.D. |
| Ethyl Benzene | 0.50 | N.D. | N.D. |
| Total Xylenes | 0.50 | N.D. | N.D. |
| Chromatogram Pattern: | | -- | -- |

Quality Control Data

| | | |
|---|--------|--------|
| Report Limit Multiplication Factor: | 1.0 | 1.0 |
| Date Analyzed: | 7/2/92 | 7/2/92 |
| Instrument Identification: | GCHP 2 | GCHP2 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | 109 | 115 |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Andrea J. Fulcher

Andrea Fulcher
Project Manager



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| | | |
|-----------------------------|-------------------------------------|------------------------|
| Augeas Corporation | Client Project ID: Jocson | Sampled: Jun 30, 1992 |
| 799 Main Street, Suite A | Sample Matrix: Water | Received: Jun 30, 1992 |
| Half Moon Bay, CA 94019 | Analysis Method: EPA 3510/3520/8015 | Reported: Jul 13, 1992 |
| Attention: Rosanna Garrison | First Sample #: 206-5425 | |

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

| Analyte | Reporting Limit µg/L | Sample I.D. 206-5425 MW-3 | Sample I.D. 206-5426 MW-2 | Sample I.D. | Sample I.D. | Sample I.D. | Sample I.D. |
|--------------------------|-------------------------|---------------------------------|---------------------------------|-------------|-------------|-------------|-------------|
| Extractable Hydrocarbons | 50 | N.D. | N.D. | | | | |
| Chromatogram Pattern: | | -- | -- | | | | |

Quality Control Data

| | | |
|-------------------------------------|--------------|--------------|
| Report Limit Multiplication Factor: | 1.0 | 1.0 |
| Date Extracted: | 7/2/92 | 7/2/92 |
| Date Analyzed: | 7/2/92 | 7/2/92 |
| Instrument Identification: | GCHP 5 Inj.B | GCHP 5 Inj.B |

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Andrea Fulcher
Project Manager



SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

Augeas Corporation
799 Main Street, Suite A
Half Moon Bay, CA 94019
Attention: Rosanna Garrison

Client Project ID: Jocson

QC Sample Group: 2065425 - 2065426

Reported: Jul 13, 1992

QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---------|---------|---------|---------------|---------|
|---------|---------|---------|---------------|---------|

| | | | | |
|------------------|-------------|-------------|-------------|-------------|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Analyst: | M. Nipp | M. Nipp | M. Nipp | M. Nipp |
| Reporting Units: | µg/L | µg/L | µg/L | µg/L |
| Date Analyzed: | Jul 2, 1992 | Jul 2, 1992 | Jul 2, 1992 | Jul 2, 1992 |
| QC Sample #: | GBLK070292 | GBLK070292 | GBLK070292 | GBLK070292 |

| | | | | |
|------------------------------------|------|------|------|------|
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Spike Conc. Added: | 10 | 10 | 10 | 30 |
| Conc. Matrix Spike: | 9.3 | 9.3 | 9.2 | 28 |
| Matrix Spike % Recovery: | 93 | 93 | 92 | 93 |
| Conc. Matrix Spike Dup.: | 10 | 10 | 10 | 30 |
| Matrix Spike Duplicate % Recovery: | 100 | 100 | 100 | 100 |
| Relative % Difference: | 7.3 | 7.3 | 8.3 | 6.9 |

SEQUOIA ANALYTICAL

Andrea S. Fulcher
Andrea Fulcher
Project Manager

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



SEQUOIA ANALYTICAL

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Augeas Corporation

Client Project ID: Jocson

799 Main Street, Suite A

Half Moon Bay, CA 94019

Attention: Rosanna Garrison

QC Sample Group: 2065425-2065426

Reported: Jul 13, 1992

QUALITY CONTROL DATA REPORT

ANALYTE

Diesel

Method: 3350/8015

Analyst: R. Lee

Reporting Units: µg/L

Date Analyzed: Jul 2, 1992

QC Sample #: DBLK070192

Sample Conc.: N.D.

Spike Conc.
Added: 300

Conc. Matrix
Spike: 200

Matrix Spike
% Recovery: 67

Conc. Matrix
Spike Dup.: 240

Matrix Spike
Duplicate
% Recovery: 80

Relative
% Difference: 18

SEQUOIA ANALYTICAL

Andrea J. Fulcher
Andrea Fulcher
Project Manager

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



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| | | |
|-----------------------------|-------------------------------------|------------------------|
| Augeas Corporation | Client Project ID: Jocson | Sampled: Jul 1, 1992 |
| 799 Main Street, Suite A | Sample Matrix: Water | Received: Jul 1, 1992 |
| Half Moon Bay, CA 94019 | Analysis Method: EPA 3510/3520/8015 | Reported: Jul 15, 1992 |
| Attention: Rosanna Garrison | First Sample #: 207-0231 | |

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

| Analyte | Reporting Limit µg/L | Sample I.D. 207-0231 MW - 1 | Sample I.D. | Sample I.D. | Sample I.D. | Sample I.D. | Sample I.D. |
|---------|-------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|
|---------|-------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|

| | | | | | | | |
|--------------------------|----|------|--|--|--|--|--|
| Extractable Hydrocarbons | 50 | N.D. | | | | | |
|--------------------------|----|------|--|--|--|--|--|

Chromatogram Pattern: --

Quality Control Data

| | |
|-------------------------------------|--------|
| Report Limit Multiplication Factor: | 1.0 |
| Date Extracted: | 7/6/92 |
| Date Analyzed: | 7/6/92 |
| Instrument Identification: | GCHP 5 |

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Andrea Fulcher
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|-----------------------------|-------------------------------------|------------------------|
| Augas Corporation | Client Project ID: Jocson | Sampled: Jul 1, 1992 |
| 799 Main Street, Suite A | Sample Matrix: Water | Received: Jul 1, 1992 |
| Half Moon Bay, CA 94019 | Analysis Method: EPA 5030/8015/8020 | Reported: Jul 15, 1992 |
| Attention: Rosanna Garrison | First Sample #: 207-0231 | |

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Analyte | Reporting Limit µg/L | Sample I.D. 207-0231 MW - 1 | Sample I.D. 207-0232 MW - 1A |
|------------------------|-------------------------|-----------------------------------|------------------------------------|
| Purgeable Hydrocarbons | 50 | N.D. | N.D. |
| Benzene | 0.50 | N.D. | N.D. |
| Toluene | 0.50 | N.D. | N.D. |
| Ethyl Benzene | 0.50 | N.D. | N.D. |
| Total Xylenes | 0.50 | N.D. | N.D. |
| Chromatogram Pattern: | | -- | -- |

Quality Control Data

| | | |
|---|--------|--------|
| Report Limit Multiplication Factor: | 1.0 | 1.0 |
| Date Analyzed: | 7/6/92 | 7/6/92 |
| Instrument Identification: | GCHP 3 | GCHP 3 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | 90 | 92 |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Andrea S. Fulcher
Andrea Fulcher
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Augeas Corporation
799 Main Street, Suite A
Half Moon Bay, CA 94019
Attention: Rosanna Garrison

Client Project ID: Jocson

QC Sample Group: 207-0232

Reported: Jul 15, 1992

QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---------|---------|---------|---------------|---------|
|---------|---------|---------|---------------|---------|

| | | | | |
|------------------|-------------|-------------|-------------|-------------|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Analyst: | M. Nipp | M. Nipp | M. Nipp | M. Nipp |
| Reporting Units: | µg/L | µg/L | µg/L | µg/L |
| Date Analyzed: | Jul 6, 1992 | Jul 6, 1992 | Jul 6, 1992 | Jul 6, 1992 |
| QC Sample #: | GBLK070692 | GBLK070692 | GBLK070692 | GBLK070692 |

Sample Conc.: N.D. N.D. N.D. N.D.

Spike Conc. Added: 10 10 10 30

Conc. Matrix Spike: 9.6 9.4 9.5 29

Matrix Spike % Recovery: 96 94 95 97

Conc. Matrix Spike Dup.: 10 10 10 30

Matrix Spike Duplicate % Recovery: 100 100 100 100

Relative % Difference: 4.1 6.2 5.1 3.4

SEQUOIA ANALYTICAL

Andrea Fulcher
Andrea Fulcher
Project Manager

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



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(415) 364-9600 • FAX (415) 364-9233

Augeas Corporation
799 Main Street, Suite A
Half Moon Bay, CA 94019
Attention: Rosanna Garrison

Client Project ID: Jocson

QC Sample Group: 207-0231

Reported: Jul 15, 1992

QUALITY CONTROL DATA REPORT

ANALYTE

Diesel

Method: 3550/8015
Analyst: M. Tran
Reporting Units: µg/L
Date Analyzed: Jul 7, 1992
QC Sample #: DBLK070692

Sample Conc.: N.D.

Spike Conc.
Added: 300

Conc. Matrix
Spike: 240

Matrix Spike
% Recovery: 80

Conc. Matrix
Spike Dup.: 260

Matrix Spike
Duplicate
% Recovery: 87

Relative
% Difference: 8.0

SEQUOIA ANALYTICAL

Andrea J. Fulcher
Andrea Fulcher
Project Manager

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



SEQUOIA ANALYTICAL

State-Certified Laboratory for Analysis of Water,
Soil, and Hazardous Materials

COPY

CHAIN OF CUSTODY REPORT

| CLIENT: AUGER'S CORPORATION | | | | REPORT TO: | | | | TURNAROUND TIME: | | | | | |
|---------------------------------------|--------------------|----------------------|----------------|--|------------------|-----------------------|------------|---|--------|--------------------------|--|----------------|---------|
| ADDRESS: 799 MAIN ST. SUITE A | | | | BILLING TO: | | | | STANDARD | | 8 HR. | | | |
| HALF MOON BAY CA 94019 | | | | | | | | 24 HR. | 48 HR. | 72 HR. | | | |
| PHONE: 415 726-7121 | | | | PO# / BILLING REFERENCE: JACSON H2O | | | | 5 DAY | 10 DAY | 15 DAY | | | |
| PROJECT NAME/SITE: JACSON | | | | ANALYSIS REQUESTED | | | | REMARKS | | | | SAMPLE NUMBER | |
| SAMPLER: JACSON FRENCH | | DATE: 6-30-92 | | | | | | | | | | | |
| SAMPLE ID# / STATION | SAMPLE DESCRIPTION | NUMBER OF CONT. | TYPE CONT. | SAMPLING TIME/DATE | TPH _B | TPH ₉ /PTX | DELT/GRASE | | | | | | |
| MW-3 | WATER | 6 | 4 VOA 2 Amb | 63092 1807 | X | X | X | | | | | Hold OIL/GRASE | 2065405 |
| MW-2 | WATER | 6 | 4 VOA 2 Amb | 1842 | X | X | X | | | | | Hold OIL/GRASE | 2065406 |
| RELINQUISHED BY: Jacson French | | | | DATE: 6-30-92 | | TIME: 8:00 | | RECEIVED BY: | | | | TRAVEL TIME: | |
| RELINQUISHED BY: | | | | DATE: | | TIME: | | RECEIVED BY: | | | | ON SITE TIME: | |
| RELINQUISHED BY: | | | | DATE: | | TIME: | | RECEIVED IN LAB BY: MW 6/30 8/11 | | | | OTHER: | |
| | | | | | | | | | | WERE SAMPLES PRESERVED ? | | YES | NO |
| | | | | | | | | | | IN GOOD CONDITION? | | | |

CHROMALAB, INC.

2239 Omega Road, #1 • San Ramon, California 94583
415/831-1788 • Facsimile 415/831-8798

Chain of Custody

DATE 6/27/92 PAGE 1 OF 3

| PROJ. MGR. <u>Jason French</u> | | | | | ANALYSIS REPORT | | | | | | | | | | | | | NUMBER OF CONTAINERS |
|--|------|---------|--------|---------|-----------------------------------|--|-------------------------------------|--|---------------------------------------|-----------------------------------|--|-----------------------------------|--------------------------------|-------------------------|------------------------|-------------------------|--------------------------------|----------------------|
| COMPANY <u>AUGEAS CORP.</u> | | | | | TPH - Gasoline (EPA 5030) | TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020) | TPH - Diesel (EPA 3510, 3550, 8015) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270) | TOTAL OIL & GREASE (EPA 5520 D&F) | PESTICIDES/PCB (EPA 608, 8080) | PHENOLS (EPA 604, 8040) | METALS: Cd, Cr, Pb, Zn | CAM METALS (18) w/Cr VI | PRIORITY POLLUTANT METALS (13) | |
| ADDRESS <u>#799 Main St. - Suite A</u> <u>Half Moon Bay</u> | | | | | | | | | | | | | | | | | | |
| SAMPLERS (SIGNATURE) <u>Jason French</u> | | | | | (PHONE NO.) <u>(415) 726-7700</u> | | | | | | | | | | | | | |
| SAMPLE ID. | DATE | TIME | MATRIX | LAB ID. | | | | | | | | | | | | | | |
| MW-2/5' | 6/27 | 10:30AM | SOIL | | | | | | | | | | | | | | | 1 |
| MW-2/10' | | | | | X | | | | | | | | | | | | | 1 |
| MW-2/15' | | | | | X | | | | | | | | | | | | | 1 |
| MW-2/20' | | | | | X | | | | | | | | | | | | | 1 |
| MW-2/25' | | Noon | | | X | | | | | | | | | | | | | 1 |
| MW-2/30' | | | | | X | | | | | | | | | | | | | 1 |
| MW-3/5' | | | | | X | | | | | | | | | | | | | 1 |
| MW-3/10' | | | | | X | | | | | | | | | | | | | 1 |
| MW-3/15' | | 2:00 PM | | | X | | | | | | | | | | | | | 1 |

CHROMALAB FILE # 692262
ORDER # 6886

| PROJECT INFORMATION | | | SAMPLE RECEIPT | | | RELINQUISHED BY | | RELINQUISHED BY | | RELINQUISHED BY | |
|---|---------------------------|----------|----------------------------|-----------|----------------|------------------|----------------|-----------------|--------------------------|-----------------|----------------|
| PROJECT NAME: <u>Jocson Auto</u> | TOTAL NO. OF CONTAINERS | <u>9</u> | CHAIN OF CUSTODY SEALS | | | (SIGNATURE) | (TIME) | (SIGNATURE) | (TIME) | (SIGNATURE) | (TIME) |
| PROJECT NUMBER: <u>Hayward</u> | REC'D GOOD CONDITION/COLD | | CONFORMS TO RECORD | | | <u>Fred Moss</u> | <u>5:00 PM</u> | | | | |
| SHIPPING ID. NO. | LAB NO. | | VIA: <u>hand delivered</u> | | | (PRINTED NAME) | (DATE) | (PRINTED NAME) | (DATE) | (PRINTED NAME) | (DATE) |
| SPECIAL INSTRUCTIONS/COMMENTS: <u>Hold analysis on 5' deep samples - will call</u> | | | RECEIVED BY | | 1. | RECEIVED BY | | 2. | RECEIVED BY (LABORATORY) | | 3. |
| | | | (SIGNATURE) | (TIME) | (SIGNATURE) | (TIME) | (SIGNATURE) | (TIME) | (SIGNATURE) | (TIME) | (SIGNATURE) |
| | | | (PRINTED NAME) | (DATE) | (PRINTED NAME) | (DATE) | (PRINTED NAME) | (DATE) | (PRINTED NAME) | (DATE) | (PRINTED NAME) |
| | | | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) | (COMPANY) |

1700
Yiu Keung Tam 6/27/92
CHROMALAB (LAB)

CHROMALAB, INC.

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 6/27/92 PAGE 2 OF 3

| PROJ. MGR. <u>Jason French</u> | | | | | ANALYSIS REPORT | | | | | | | | | | | | | | | | | | | | | | |
|---|------|---------|--------|---------|------------------------------------|--|---------------------------------------|--|--|---|--|--------------------------------------|-----------------------------------|----------------------------|---|----------------------------|-----------------|-----------------------------------|----------------------------|--|--|--|--|--|----------------------|--|---|
| COMPANY <u>AUGEAS</u> | | | | | TPH - Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 8015) wBTEX (EPA 602, 8020) | TPH - Diesel (EPA 3510/3550, 8015) | PURGEABLE AROMATICS BTX (EPA 802, 8020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520 E&F) | PESTICIDES/PCB (EPA 608, 8080) | PHENOLS (EPA 604, 8040) | TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1) | METALS: Cd, Cr, Pb, Zn, Ni | CAM METALS (17) | PRIORITY POLLUTANT METALS (13) | EXTRACTION (TCLP, STLC) | | | | | | NUMBER OF CONTAINERS | | |
| ADDRESS <u>799 Main St - Suite A</u> <u>Half Moon Bay</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLERS (SIGNATURE) <u>Fred Moss</u> (PHONE NO.) <u>(415) 726-7700</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE ID. | DATE | TIME | MATRIX | LAB ID. | | | | | | | | | | | | | | | | | | | | | | | |
| MW-1/5' | 6/27 | 8:30A | SOIL | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| MW-1/10' | | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| MW-1/15' | | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| MW-1/20' | | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| MW-1/25' | | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| MW-1/30' | | 10:08AM | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| SB-1/5' | | 2:00PM | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| SB-1/10' | | | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| SB-1/15' | | 2:30PM | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |

| PROJECT INFORMATION | | | SAMPLE RECEIPT | | | RELINQUISHED BY 1. | | | RELINQUISHED BY 2. | | | RELINQUISHED BY 3. | | | |
|-------------------------------------|-------------------------------------|--|--|--|--|--------------------|---|--|--------------------|--|--|--------------------|--|--|--|
| PROJECT NAME: <u>Jocson Auto</u> | TOTAL NO. OF CONTAINERS <u>9</u> | | CHAIN OF CUSTODY SEALS REC'D GOOD CONDITION/COLD CONFORMS TO RECORD LAB NO. | RELINQUISHED BY (SIGNATURE) <u>Fred Moss</u> (TIME) _____ (DATE) <u>6/27/92</u> (PRINTED NAME) <u>Fred Moss</u> (COMPANY) <u>Augeas</u> | | | RELINQUISHED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | RELINQUISHED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | | | |
| PROJECT NUMBER: <u>Hayward</u> | | | | RECEIVED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | RECEIVED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | RECEIVED BY (LABORATORY) (SIGNATURE) <u>3:25 1700</u> (TIME) _____ (DATE) <u>6/27/92</u> (PRINTED NAME) <u>You Keung Tam</u> (LAB) <u>CHROMALAB</u> | | | | | |
| SHIPPING ID. NO. | | | | SPECIAL INSTRUCTIONS/COMMENTS: <u>Hold analysis on 5' deep samples - will call</u> | | | RECEIVED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | RECEIVED BY (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (COMPANY) _____ | | | RECEIVED BY (LABORATORY) (SIGNATURE) _____ (TIME) _____ (DATE) _____ (PRINTED NAME) _____ (LAB) _____ | | |
| VIA: <u>hand delivered</u> | | | | | | | | | | | | | | | |

Client with...
 reported together
 w/ the project
 received the CD
 before. ~~to~~



SEQUOIA ANALYTICAL
 State-Certified Laboratory for Analysis of Water,
 Soil, and Hazardous Materials

COPY

CHAIN OF CUSTODY REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------|--------------------|----------------------|-----------------------|------------------------|--|-------------------|--|--|-------------------------------------|--------|--------|-------|---------------|----------------|--|--|--|--|--|--|----------|----------|----------|--|--|--|--|--|--|--|--|--|--|--|--|----------|----------|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| CLIENT: <u>Socson Auto Augear Corp.</u> | | | | | REPORT TO: | | | | | TURNAROUND TIME: <u>STANDARD</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADDRESS: <u>177 799 Main St., Ste A</u> <u>Half Moon Bay Half Moon Bay</u> | | | | | BILLING TO: | | | | | 24 HR. | 48 HR. | 72 HR. | 8 HR. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PHONE: <u>(415) 726-7700</u> | | | | | POB/BILLING REFERENCE: | | | | | 5 DAY | 10 DAY | 15 DAY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT NAME/SITE: <u>Socson Auto</u> | | | | | ANALYSIS REQUESTED | | | | | REMARKS | | | | | SAMPLE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLER: <u>John Ford</u> | | | DATE: | | | | | | | | | | | | | | <table border="1"> <tr> <td><u>X</u></td> <td><u>X</u></td> <td><u>X</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>X</u></td> <td><u>X</u></td> <td><u>X</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | <u>X</u> | <u>X</u> | <u>X</u> | | | | | | | | | | | | | <u>X</u> | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | |
| <u>X</u> | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>X</u> | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE ID#/ STATION | SAMPLE DESCRIPTION | NUMBER OF CONT. | TYPE CONT. | SAMPLING TIME/DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>MW1</u> | <u>WATER</u> | <u>1</u> | <u>4VDA 2.1L</u> | <u>7/17/12 08</u> | | | | | | | | | | | <u>2070231</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>MW1A</u> | <u>WATER</u> | <u>2</u> | <u>2VDA</u> | <u>12/11</u> | | | | | | | | | | | <u>2070232</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELINQUISHED BY: <u>John Ford</u> | | | | | DATE: <u>7-1-92</u> | | TIME: <u>3:45</u> | | RECEIVED BY: | | | | | TRAVEL TIME: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELINQUISHED BY: | | | | | DATE: | | TIME: | | RECEIVED BY: | | | | | ON SITE TIME: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELINQUISHED BY: | | | | | DATE: | | TIME: | | RECEIVED IN LAB BY: <u>Shufan 7-1/1545</u> | | | | | OTHER: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | WERE SAMPLES: | | YES | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | PRESERVED ? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | IN GOOD CONDITION? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |