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DATE: 9-23-98

TO: Ms. Susan Hugo

FROM: Dave Allen

NUMBER OF PAGES TO FOLLOW: 12

*****Please Phone If This Fax Is Received Incomplete*****

MESSAGE:

We will be drilling @ OLIVER Friday 9-25
@ 9a.m. Please come out if you have a
chance. Unless you have any concerns
or comments, we'll be performing the
assessment as detailed in this workplan.

Thank you,
Dave

1,2 PCA

*9/23/98
I need to include
data & photos
relative to Oliver
Kubler.
Myers
Allen*



September 22, 1998

WORKPLAN
for a
SOIL AND GROUNDWATER ASSESSMENT
for
VOLATILE ORGANIC COMPOUND SOURCE DEFINITION
in the
OUTDOOR AREAS AT THE NORTHERN END OF THE PROPERTY
at
Oliver Rubber Company Plant I
1200 65th Street
Oakland, California

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
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INTRODUCTION

This submittal outlines Aqua Science Engineers, Inc. (ASE's) workplan for a soil and groundwater assessment at Oliver Rubber Company's (OLIVER) Plant I facility located at 1200 65th Street in Oakland, California (Figure 1). The proposed site assessment activities have been designed to determine the source of the volatile organic compounds (VOCs) detected in boring BH-20 which was drilled on September 3, 1998 at the site.

BACKGROUND INFORMATION

The site has been used since the 1950's primarily as a rubber tire tread manufacturing plant. Virgin materials were combined and processed using various mixing machines, milling machines, and conveyors. The rubber product was then either extruded into strip form or molded into tire treads at Oliver's Plant II across Vallejo Street. The entire floor of the production area is reportedly a minimum of 6-inches thick. In areas surrounding large milling machines, the concrete is reportedly up to 24 to 36-inches thick. The milling machines and conveyor system sat on pedestals above shallow concrete pits. A cooling water system was incorporated within the production area to keep the machines operating at controlled temperatures. This cooling water was then recycled and reused. Chemicals were added to the cooling water to reduce the levels of scaling in the cooling tower, to reduce algae, and to control the pH.

The compound of interest used during the production of the rubber for tire treads is a heavy petroleum hydrocarbon, much like liquid tar at elevated temperatures. The product most commonly used by Oliver was RAFFEX 120. The RAFFEX 120 was stored outside the plant in a subgrade concrete vault, which was heated with steam to maintain the liquid consistency of the product. The RAFFEX was then pumped inside the building to the process area. Zinc Stearate was also used during the extrusion of the rubber product to inhibit the product from adhering to itself as it was stacked onto pallets. Various lubricating oils and greases were used in the milling and mixing machines. Spent lubricating oils and greases were drummed, profiled, and shipped off-site for recycling. Safety solvent cleaning stations were used at the facility during maintenance activities.

Beginning in January 1998 and completed during the week of March 16, 1998, the plant was decommissioned and cleaned by Mid-American Machine, Inc. and DECON Environmental Services, respectively. All plant manufacturing equipment was removed and either shipped to various Oliver plants on the east coast or scrapped as metal salvage. Pressure

washing liquids used to clean the building were collected and disposed of off-site. The scope of work for this plant closure was discussed and agreed upon by members of Oliver staff and Mr. Amir Gholami of the Alameda County Health Care Services Agency (ACHCSA) during his visit to the plant on November 20, 1997.

As the decommissioning and cleaning processes were taking place, ASE was on-site to inspect for potential integrity failures in the concrete floor and pits. Pits without obvious cracks were filled with concrete. Pits that had exit pipes or cracks near the edges of the pit were earmarked for future assessment activities to be conducted adjacent to the pits.

In April 1998, nine (9) soil borings were drilled inside the building to depths ranging from 2.5-feet below ground surface (bgs) to 6-feet bgs. Selected soil samples were analyzed for RAFFEX, oil & grease (O&G), and zinc. Low levels of RAFFEX were identified in the soil samples ranging from 3.1 parts per million (ppm) to 40 ppm. 260 ppm O&G was identified in one soil boring; O&G was not detected in the remaining borings at concentrations greater than the detection limit. 18 ppm zinc was identified in the only soil boring for which zinc was analyzed. Three (3) soil borings were drilled outside the building in respect to the former RAFFEX tank vault. One of these borings (BH-10) was drilled to 3-feet bgs near the piping manifold; only 7.5 ppm RAFFEX was identified in this soil sample. The other two borings were drilled outside approximately 8-feet west (downgradient) of the former vault (BH-11 & BH-12), near the railroad tracks/spurs. These borings were drilled to a total depth of approximately 12-feet bgs in order to collect grab groundwater samples. Soil samples collected from these two borings contained 74 ppm and 20 ppm RAFFEX. The grab groundwater samples contained 1.2 ppm and 4.6 ppm RAFFEX in the water. Analytical results from these previous investigations are tabulated in Tables One through Three. Complete details of the pit inspections and sampling activities conducted in April 1998 can be found in the ASE report titled "Report of Soil and Groundwater Assessment, ASE Job No. 3231", dated April 30, 1998.

In July 1998, ASE drilled five soil borings in the railroad tracks/spur area downgradient of the former RAFFEX tank vault. The only VOC concentration detected in the soil during this assessment was 0.0076 ppm 1,1-dichloroethene in the soil sample collected from 15.5-feet bgs in boring BH-14. No SVOCs were detected in any of the soil samples analyzed. Only very low concentrations of VOCs, below California Department of Toxic Substances Control (DTSC) maximum contaminant levels (MCLs) for drinking water, were detected in the groundwater samples collected

during this assessment. The highest phenol concentration was 11 ppb which exceeded the DTSC recommended action level (RAL) of 5 ppb. However, the DTSC RAL is based on an odor and taste threshold in chlorinated tap water systems, not risk to human health. The US EPA health advisory concentration for phenol in drinking water is 4,000 ppb, which is well above the highest concentration of phenol detected at the site.

In September 1998, ASE drilled four soil borings at the site. Three of these borings were located inside the building and one of the borings was drilled outside the building near the former RAFFEX tank vault. Only 0.0065 ppm ethylbenzene was detected in the soil sample collected from 3.5-foot bgs in boring BH-18, and 0.29 ppm phenol was detected in the soil sample collected from 9.5-foot bgs in boring BH-21. No other VOCs or SVOCs were detected in any of the remaining soil samples analyzed. Neither the ethylbenzene nor the phenol concentration detected exceeded the United States Environmental Protection Agency (US EPA) Region IX preliminary remediation goal (PRG) for residential soil. Groundwater samples collected from boring BH-20, near the former RAFFEX vault, contained 260 ppb 1,1-dichlorobenzene, 99 ppb 1,1,1-trichloroethane, 11 ppb 1,1-dichloroethane and 9.4 ppb butyl benzyl phthalate. No other VOCs or SVOCs were detected in groundwater samples collected from boring BH-20, and no VOCs or SVOCs were detected in groundwater samples collected from borings BH-18, BH-19 and BH-21. Based on these results, Ms. Hugo requested that an additional assessment be performed to determine the source of the VOCs identified in the groundwater sample collected from boring BH-20 and to collect additional data that may be needed to perform a future risk assessment.

On September 21, 1998, ASE and OLIVER representatives visited the State of California, Environmental Protection Agency (EPA), Department of Toxic Substances Control (DTSC), Region 2 offices in Berkeley, CA to review the files of the Myers Drum, Oakland facility, a potential and suspected upgradient/offsite source of VOC contamination in groundwater. The Myers Drum site, located at 6549 San Pablo Avenue, is an apparent Superfund Site overseen by the DTSC. According to reports reviewed by ASE and OLIVER, this facility was a steel drum reconditioning plant for many years. The facility received drums containing a wide variety of wastes, including hazardous wastes, and then cleaned and reconditioned the drums for resale. The facility apparently contains (or contained) 11 sumps, 2 USTs and a dispenser. According to reports within the file, the site soils are contaminated with heavy metals, various VOCs and SVOCs. The groundwater at that site is also contaminated with VOCs. The VOCs

detected at the Myers site include vinyl chloride, 1,1-DCA, 1,2-DCE, 1,2-DCA, TCE and benzene. These compounds are very similar to those found on the OLIVER property. The groundwater gradient maps provided within the Myers' reports show groundwater flowing westward toward the OLIVER site. It is ASE's opinion, after extensive review of the Myers Drum file, that Myers Drum is a possible source of VOC contamination in groundwater at the OLIVER site. It is possible that the compounds identified within the property lines of the OLIVER facility are the result of breakdown compounds leaving the Myers site which is directly upgradient of the OLIVER site.

The boring locations, as depicted on Figure 2, have been strategically placed in an attempt to identify the source of VOCs identified in borehole BH-20, located in the rear area of the OLIVER site. The borings have been placed to determine if the VOCs are emanating from an offsite source, likely Myers Drum, or from an unknown onsite source in the rear of the property.

PROPOSED SCOPE OF WORK (SOW)

Based on the afore-mentioned information, ASE's proposed SOW is as follows:

- 1) Obtain a subsurface drilling permit from the Alameda County Public Works Agency (ACPWA).
- 2) Using a Geoprobe hydraulic sampling rig, drill six (6) 25-foot deep soil borings as shown on Figure 2, three along property lines to assess whether groundwater contamination is entering the site from upgradient sources, two in outside areas to determine whether there is an on-site source in the outside area, and one boring to confirm the previous results from boring BH-20. If time and permission permits, soil borings may be drilled across Vallejo Street in the grassy area of the sidewalk at the end of the Myers Drum site. One soil sample will be collected from the borings in the center of the outside areas. No soil samples will be collected from the borings located at the property lines. Groundwater samples will be collected from all six borings for analysis.
- 3) Analyze one soil sample from each of the three soil borings away from the property lines for VOCs by EPA Method 8240.
- 4) Analyze each groundwater sample for VOCs by EPA Method 8240.

- 5) Backfill the borings with neat cement.
- 6) Prepare a report detailing the methods and findings of the assessment activities. The report will include tabulated analytical results, drawings, and recommendations for further work, if necessary.

Selected details of the assessment are presented below.

TASK 1 - OBTAIN NECESSARY PERMITS

ASE will obtain a drilling permit from the ACPWA. ASE will also notify Underground Service Alert (USA) to have underground utility lines marked in the site vicinity.

TASK 2 - DRILL SOIL BORINGS AT THE SITE AND COLLECT SOIL AND GROUNDWATER SAMPLES FROM THE BORINGS

ASE will drill six (6) soil borings on-site at the locations shown on Figure 2. Two soil borings will be drilled along the Vallejo Street property line and one boring will be drilled along the 66th Street property line. These three borings will be used to assess whether groundwater contamination may be entering the site from upgradient sources. In addition, one boring will be drilled near boring BH-20 to confirm the analytical results from this boring from a previous assessment. Two additional borings will be drilled in central areas of the outside portion of the property to determine whether there may be a source of contamination on site in these areas. The drilling will be directed by a qualified ASE geologist.

Undisturbed soil samples will be collected from the top of the subsurface soil to 4-foot bgs in each boring within the interior center of the yard area to investigate for an onsite source of the VOCs. This soil sample will be trimmed, sealed with Teflon tape and plastic caps, secured with duct tape, labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person collecting the sample. The samples will be placed into an ice chest containing wet ice for delivery under chain of custody to a CAL-EPA certified analytical laboratory.

Following the collection of the soil samples from the interior yard borings, the borings will be immediately advanced to approximately 25-foot bgs for the collection of groundwater samples. These borings will not be logged and soil samples will not be collected from any boring beneath 4-feet for either lithologic description or analysis. The reason for the reduced

sampling is (a) contamination from an off-site source would likely only be found in the groundwater, (b) ASE already has extensive soil lithology data regarding site, and (c) to allow for all six borings to be completed in one field day.

A groundwater sample will also be collected from each boring. Drilling will be halted at the water table and a Powerpunch or similar type device will be utilized to collect groundwater samples from the borings. The groundwater samples will be contained in 40-ml volatile organic analysis (VOA) vials without headspace and preserved with hydrochloric acid. All samples will be labeled with the site location, sample designation, date and time the samples were collected, and the initials of the person collecting the samples. The samples will then be cooled in an ice chest with wet ice for transport to a state-certified analytical laboratory under chain-of-custody.

All sampling equipment will be cleaned in buckets with brushes and a TSP or Alconox solution, then rinsed twice with tap water. Rinsates will be contained on-site in 55-gallon steel drums for future disposal by the client.

TASK 3 - ANALYZE THE SOIL SAMPLES FROM THE THREE BORINGS DRILLED AWAY FROM THE PROPERTY LINES

The soil sample collected from 4-foot bgs in each boring drilled away from the property lines will be analyzed at a CAL-EPA certified environmental laboratory for VOCs by EPA Method 8240. Soil samples will not be collected from borings drilled at the property lines since these borings have been strategically located to determine if groundwater contamination exists from an upgradient source; therefore it is unlikely that a soil contamination source would be present.

Since only very low concentrations of butyl benzyl phthalate and phenol were detected in soil and groundwater samples collected during previous assessments, concentrations well below levels of health concerns, no SVOCs will be analyzed during this assessment.

TASK 4 - ANALYZE THE GROUNDWATER SAMPLES

Groundwater samples collected from each boring will be analyzed at a CAL-EPA certified environmental laboratory for VOCs by EPA Method 8240. Since only very low concentrations of butyl benzyl phthalate and phenol were detected in soil and groundwater samples collected during

previous assessments, concentrations well below levels of health concerns, no SVOCs will be analyzed during this assessment.

TASK 5 - BACKFILL THE BORINGS WITH NEAT CEMENT

Following collection of the groundwater samples, the boreholes will be backfilled with neat cement placed by tremie pipe.

TASK 6 - PREPARE A SUBSURFACE ASSESSMENT REPORT

ASE will prepare a report outlining the methods and findings of this assessment. The report will be submitted under the seal of state registered civil engineer or geologist. This report will include a summary of all work completed during this assessment including tabulated soil and groundwater analytical results, conclusions and recommendations. Copies of the analytical report and chain of custody will be included as appendices.

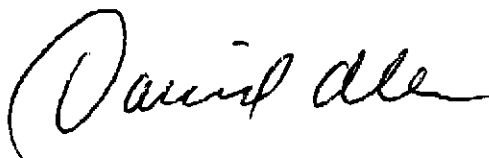
SCHEDULE

ASE plans to begin field activities immediately upon approval of this workplan by the ACHCSA. Drilling is scheduled for September 25, 1998.

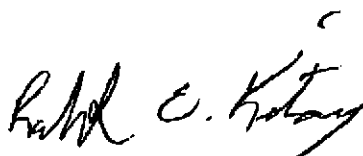
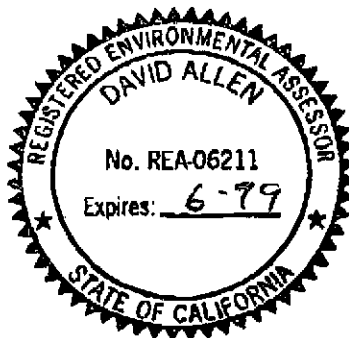
Should you have any questions or comments, please call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



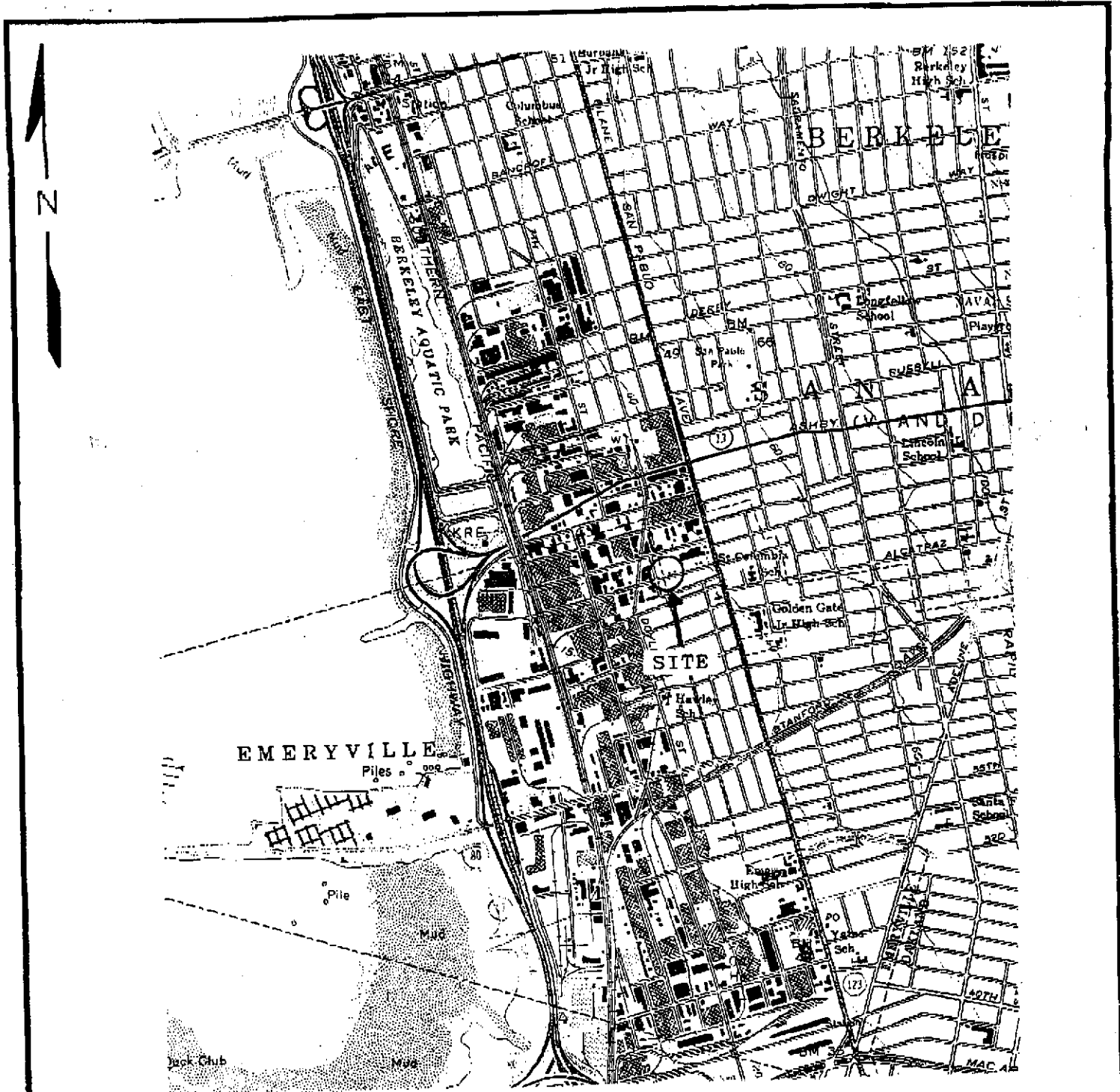
David Allen, R.E.A.
Senior Project Manager



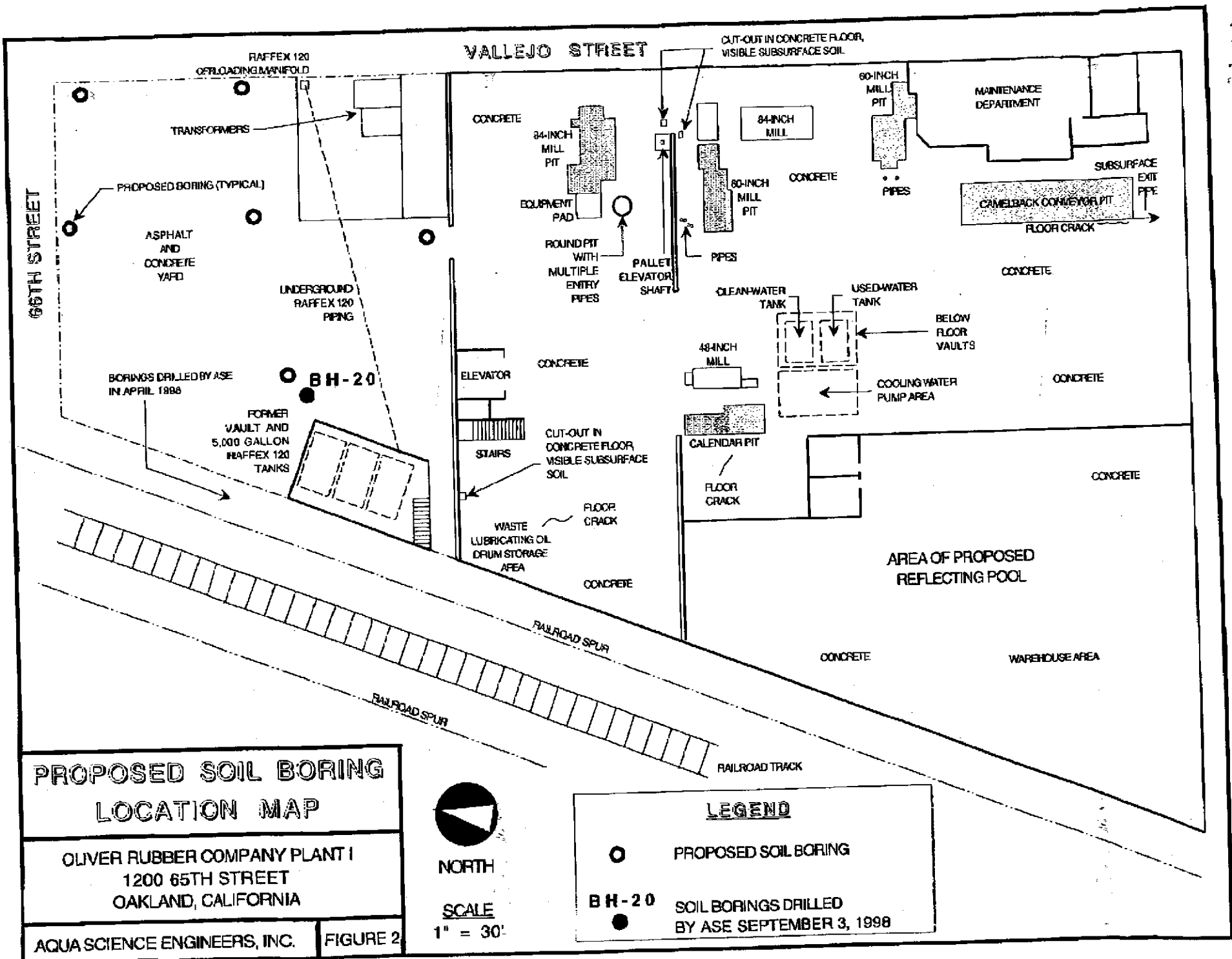
Robert E. Kitay, R.G., R.E.A.
Senior Geologist



cc: Ms. Susan Hugo, ACHCSA
Mr. Tom Palmer, Standard Products Company
Mr. David Kuhre, Oliver



SITE LOCATION MAP	
OLIVER RUBBER COMPANY PLANT I 1200 65TH STREET OAKLAND, CALIFORNIA	
Aqua Science Engineers	Figure 1



**PROPOSED SOIL BORING
LOCATION MAP**

OLIVER RUBBER COMPANY PLANT I
1200 65TH STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. **FIGURE 2**



NORTH

SCALE
1" = 30'

LEGEND

- PROPOSED SOIL BORING
- BH-20** ● SOIL BORINGS DRILLED BY ASE SEPTEMBER 3, 1998