EXXON COMPANY, U.S.A.
P.O. BOX 4032 • CONCORD, CA 94524-2032
MARKETING DEPARTMENT

FUEL PRODUCTS•BUSINESS SERVICES
ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
SENIOR ENVIRONMENTAL ENGINEER
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November 23, 1993

Mr. Sum Arigalia
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

RE: EXXON RAS #7-3399, 2911 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Dear Mr. Arigalia:

Attached for your review and comment is a report entitled **Work Plan For Interim Remediation Investigation** for the above referenced site. This Work Plan, prepared by RESNA Industries, Inc., of San Jose, California, details a scope of work proposed to be completed at the site in the near future.

This plan will include drilling four (4) soil borings on the site, submitting selected soil samples for laboratory analysis and preparing a report which will summarize the methods, results and conclusions of this phase of investigation. It is proposed to assist with the soil delineation of the site.

If you have any questions or comments or require additional information, please contact me at the above listed phone number.

Sincerely,

FOR Marla D. Guensler
Senior Environmental Engineer

MDG/pdp

enclosures: RESNA Work Plan dated November 9, 1993

cc: w/enclosure
Mr. Jerry Killingstad - Alameda County Flood Control
Mr. Steve Cusenza - Pleasanton Public Works Department
Mr. Rick Mueller - Pleasanton Fire Department

w/o enclosure
Mr. Marc Briggs - RESNA - San Jose, CA
0031

RESNA
Working To Restore Nature

3315 Almaden Expressway, Suite 34
San Jose, CA 95118
Phone: (408) 264-7723
FAX: (408) 264-2435

WORK PLAN
for an
INTERIM REMEDIATION
INVESTIGATION

Exxon Station 7-3399
2911 Hopyard Road
Pleasanton, California

Prepared for

Exxon Company, U.S.A.
P.O. Box 4032
2300 Clayton Road
Concord, California 94520

November 9, 1993
RESNA Report 130009.03

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Working To Restore Nature

3315 Almaden Expressway, Suite 34
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WORK PLAN
for an
INTERIM REMEDIATION INVESTIGATION

Exxon Station 7-3399
2911 Hopyard Road
Pleasanton, California

for Exxon Company, U.S.A.

INTRODUCTION

As requested by Exxon Company U.S.A. (Exxon), RESNA Industries Inc. (RESNA) has prepared this Work Plan for an Interim Remediation Investigation for review and approval by the California Regional Water Quality Control Board (CRWQCB), and the Alameda County Flood Control and Water Conservation District (Zone 7). This work plan describes the project steps proposed to perform the Interim Remediation Investigation. This work will be performed according to guidelines stated in Exxon's "Phase II Environmental Investigation Scope of Work - Amendments Specific to California" and the California Regional Water Quality Control Board (CRWQCB) Tri-Regional Guidelines (CRWQCB, August 10, 1990).

The proposed work includes: drilling four soil borings (B-16 and B-19); collecting and describing soil samples from the borings; submitting selected soil samples for laboratory analysis; and preparing a report summarizing the methods, results, and conclusions of the investigation. The purpose of this investigation is to evaluate gasoline hydrocarbon concentrations in soil and removal efficiency of the operating vapor extraction system.

SITE DESCRIPTION

General

The site is located in a mainly commercial area, with scattered residential properties. The site location is shown on Plate 1, Site Vicinity Map. The locations of the existing gasoline

and used-oil underground storage tanks (USTs), service islands, and other pertinent onsite features are shown on Plate 2, Proposed Boring Locations.

PROPOSED WORK

RESNA proposes performing Steps 1 through 3, listed below, to evaluate gasoline hydrocarbon concentrations in soil and removal efficiency of the operating vapor extraction system. Field work involved with the following project steps will be performed in accordance with RESNA's Field Protocol included in Appendix A, and a site specific safety plan.

Task 1: After acquiring the proper Alameda County Zone 7 Water Agency Drilling Permit, drill four borings at the following locations: two (B-16 and B-17) in the vicinity of groundwater monitoring well MW-9 (where TPHg was detected in the soil at a concentration of 6,200 parts per million [ppm] at a depth of 38 feet), one (B-18) in the vicinity of groundwater monitoring well MW-4 (where TPHg was detected in the soil at a concentration of 695 ppm at a depth of 19-½ feet), and one (B-19) in the vicinity of groundwater monitoring well MW-2 (where separate phase hydrocarbons were previously observed in the groundwater). Soil samples from the borings will be submitted for laboratory analysis for the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) Methods 5030/8020M, and total petroleum hydrocarbons as gasoline (TPHg) using EPA Methods 5030/8015M. The exploratory borings will be drilled to a maximum depth of 55 feet below the ground surface (to first encountered groundwater, which is approximately at a depth of 55 feet). Soil samples collected from the borings during drilling will be subjectively analyzed in the field by a RESNA geologist for the presence of gasoline hydrocarbon, using visual observations and an organic vapor meter (OVM).

Selected soil samples collected from each boring will be delivered with chain of custody records to an Exxon approved state-certified contract laboratory.

Task 2: Upon completion of the field portion of the subsurface investigation, RESNA will prepare an Interim Remediation Investigation Report summarizing our methods, data, findings, and conclusions.

Task 3: RESNA will arrange for proper disposal of the soil cuttings and water.

SCHEDULE OF OPERATIONS

A preliminary time schedule to perform steps 1 through 3 is shown on Plate 3, Preliminary Time Schedule. This time schedule is an estimate in weeks and is subject to change should circumstances dictate. Exxon and the appropriate regulatory agencies will be informed should there be delays and the Preliminary Time Schedule cannot be met. Initiation of this investigation is dependent on gaining regulatory approval of this Work Plan and incorporation of any changes requested by regulatory agencies. RESNA can initiate work at the site within 1 to 2 weeks after receiving authorization to proceed. **If Exxon has not received regulatory approval of this work plan within 60 days, they will proceed as stated in Title 23, Article 11, Chapter 16, Sections 2722 (b)(5) and 2726 (c).**

PROJECT STAFF

Mr. James L. Nelson, Certified Engineering Geologist in the State of California, will be in overall charge of hydrogeologic facets, and Mr. Jerry Wilski will be in overall charge of engineering facets of this project. Mr. Dave Higgins, Project Manager, will provide supervision of field and office operations of the project. Mr. Marc A. Briggs, Project Geologist, will be responsible for the day-to-day field and office operations of the project. RESNA employs a staff of geologists, engineers, and technicians who will assist with the project.

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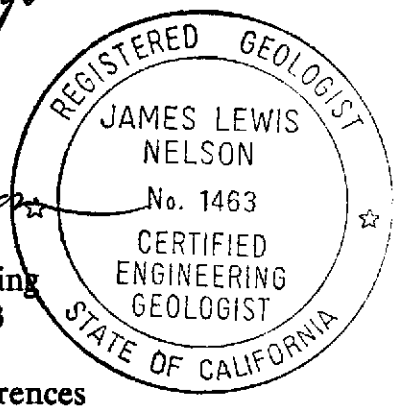
If you have any questions or comments regarding this Work Plan, please call (408) 264-7723.

Sincerely,
RESNA Industries Inc.

Marc A. Briggs
Project Manager



James L. Nelson
Certified Engineering
Geologist No. 1463

Enclosures: References
Plate 1: Site Vicinity Map
Plate 2: Proposed Boring Locations
Plate 3: Preliminary Time Schedule
Appendix A: Field Protocol

REFERENCES

Applied GeoSystems. April 22, 1988. Report, Soil Vapor Investigation, Drilling of Soil Borings, and Installation of Groundwater Monitoring Wells. Job 18034-1.

Applied GeoSystems. July 15, 1988. Report, Phase II Drilling of Soil Borings, Installation of Groundwater Monitoring Wells, and Aquifer Testing. Job 18034-2.

Applied GeoSystems. August 17, 1988. Report, Installation of Temporary Recovery Well, Periodic Monitoring, and Remediation of Groundwater. Job 18034-2A.

Applied GeoSystems. August 22, 1988. Report, Removal of Underground Gasoline Storage Tanks and Excavation of Hydrocarbon-Contaminated Soils. Job 18034-3.

Applied GeoSystems. September 23, 1988. Letter Report, Aeration of Excavated Soil. Job 18034-3A.

Applied GeoSystems. September 30, 1989. Progress Report on Groundwater and Soil-Vapor Extraction and Treatment. Job 18034-4.

Applied GeoSystems. December 1, 1989. Progress Report, Delineation and Remediation of Hydrocarbons in Soil and Groundwater. Job 18034-7.

Applied GeoSystems. February 1, 1990. Progress Report on Monitoring and Remediation Activities. Job 18034-7.

Applied GeoSystems. April 5, 1990. Soil Characterization Report, Delineation of Hydrocarbons in Soil and Groundwater. Job 18034-7.

California Department of Health Services, October, 1990. Title 22, California Administrative Code, Section 64444.5.

RESNA Industries Inc. June 18, 1992. Letter Report, Groundwater Monitoring, FirstQuarter 1992. Job 18034.15.

RESNA Industries Inc. July 20, 1992. Letter Report, Groundwater Monitoring, Second Quarter 1992. Job 18034.15.

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REFERENCES
(Continued)

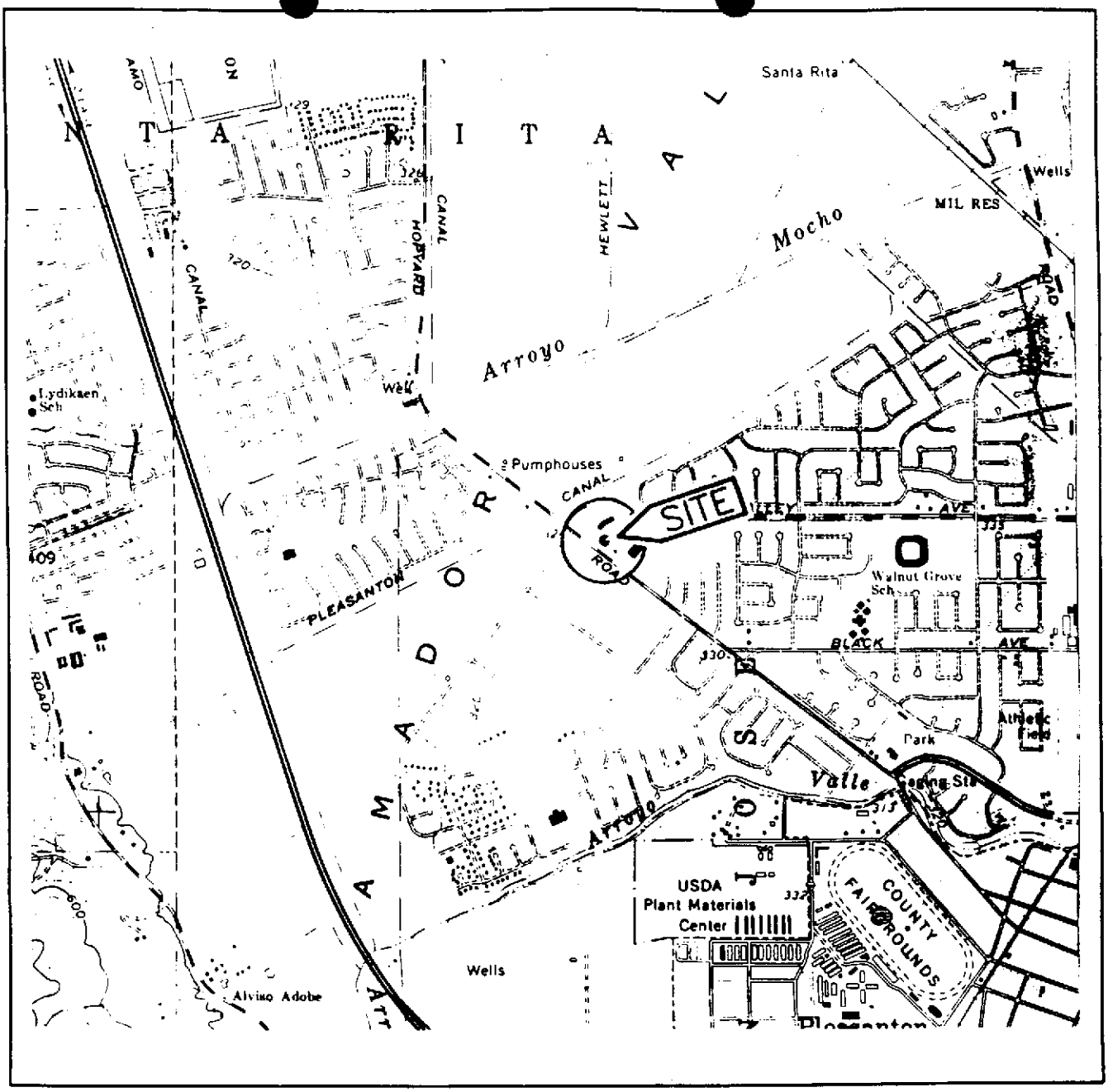
RESNA Industries Inc. December 1, 1992. Letter Report, Groundwater Monitoring, Third Quarter 1992. Job 18034.15.

RESNA Industries Inc. December 3, 1992. Proposal to Change the Monitoring Schedule Job 62035.01.

RESNA Industries Inc. February 1, 1993. Letter Report, Groundwater Monitoring, Fourth Quarter 1992. Job 18034.15.

RESNA Industries Inc. May 11, 1993. Letter Report, Groundwater Monitoring, First Quarter 1993. Job 130009.01.

RESNA Industries Inc. August 2, 1993. Letter Report, Groundwater Monitoring, Second Quarter 1993. Job 130009.01.



Source: U.S. Geological Survey
7.5–Minute Quadrangle
Dublin, California
Photorevised 1980

N

Approximate Scale
2000 1000 0 2000
feet

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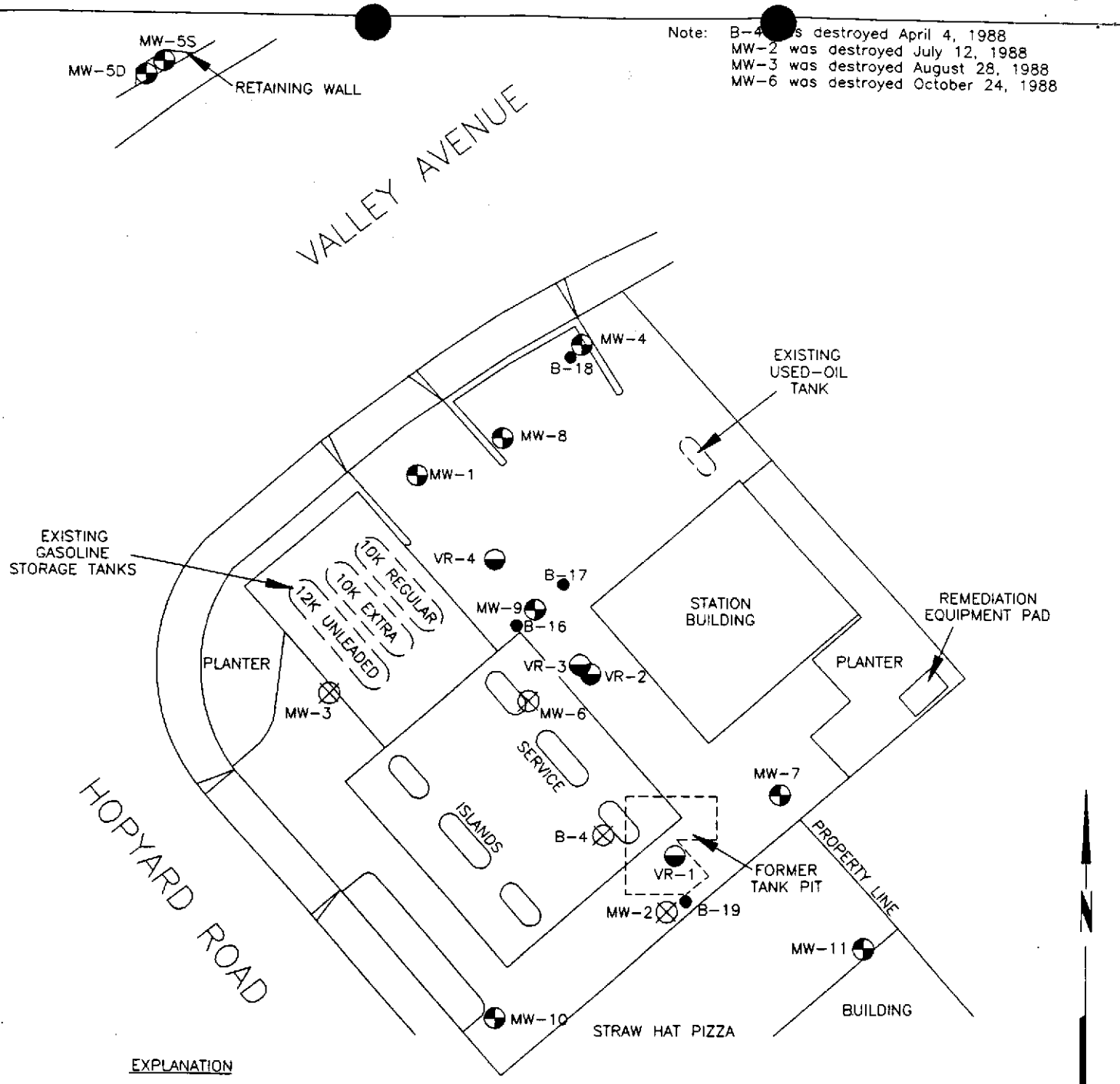
SITE VICINITY MAP
Exxon Station 7-3399
2991 Hopyard Road
Pleasanton, California

PLATE
1



EXPLANATION

MW-11 = Monitoring well (RESNA, April, May, and July 1988; October 1989)

VR-4 = Vapor recovery well (RESNA, October 1989)

MW-6 = Destroyed well

B-19 = Proposed soil boring

Approximate Scale

40 20 0 40 80

feet

Source: Surveyed by Ron Archer, Civil Engineer, July 27, 1989. Revised January 22, 1990.

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PROPOSED BORING LOCATIONS
Exxon Station 7-3399
2991 Hopyard Road
Pleasanton, California

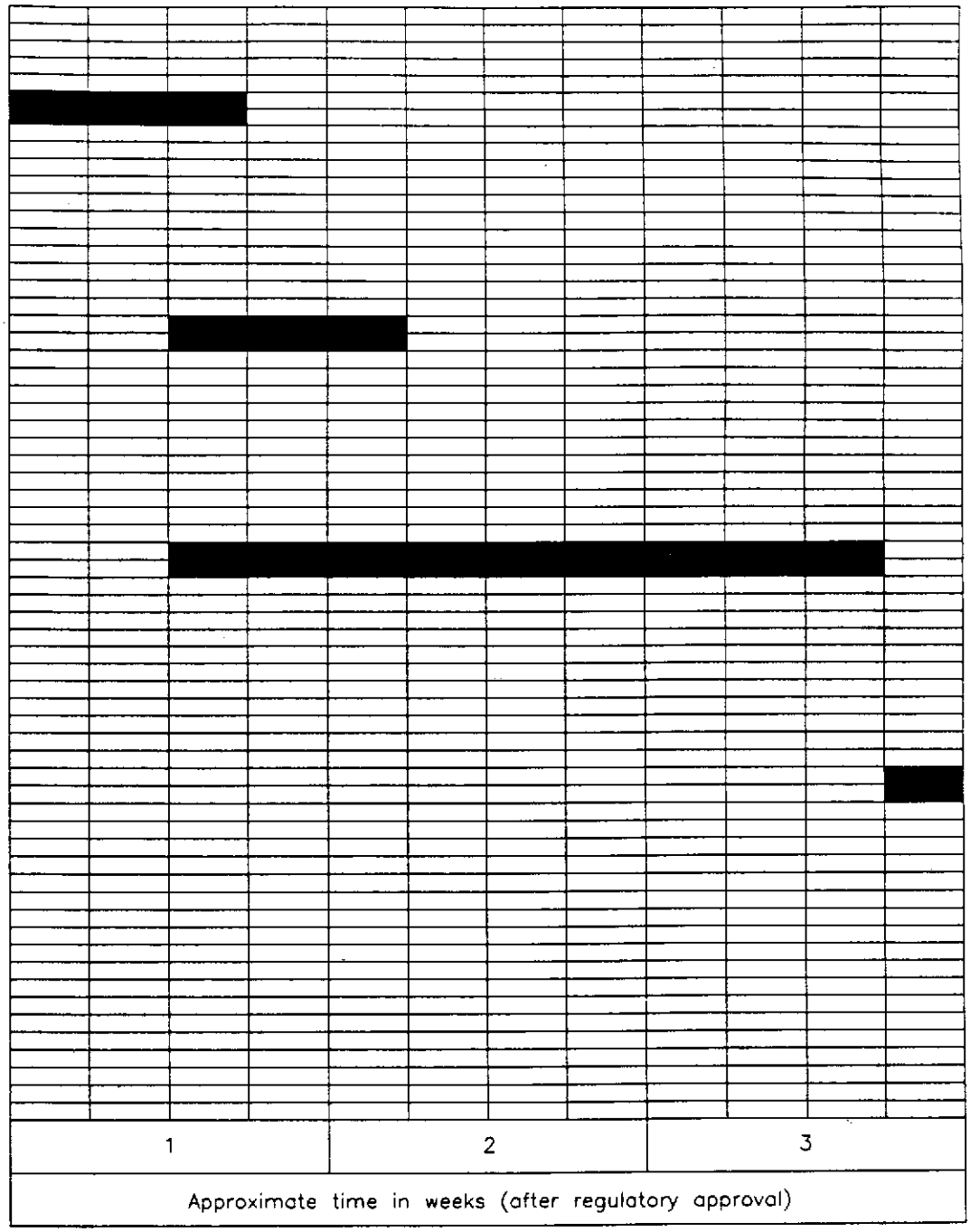
PLATE 2

1) Obtain drilling permits from Zone 7.

1a) Drill 4 borings and submit soil samples to laboratory for analyses.

2) Prepare an Interim Remediation Investigation Report.

3) Arrange disposal of soil and water.



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PRELIMINARY TIME SCHEDULE
Exxon Station 7-3399
2991 Hopyard Road
Pleasanton, California

PLATE
3

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APPENDIX A

FIELD PROTOCOL

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FIELD PROTOCOL

The following presents RESNA Industries' field protocol for a typical site investigation involving gasoline hydrocarbon-impacted soil and/or groundwater.

Site Safety Plan

The Site Safety Plan describes the safety requirements for the evaluation of gasoline hydrocarbons in soil, groundwater, and the vadose-zone at the site. The site Safety Plan is applicable to personnel of RESNA Industries and its subcontractors. RESNA Industries personnel and subcontractors of RESNA Industries scheduled to perform the work at the site are briefed on the contents of the Site Safety Plan before work begins. A copy of the Site Safety Plan is available for reference by appropriate parties during the work. A site Safety Officer is assigned to the project.

Soil Borings

Prior to the drilling of borings and construction of monitoring wells, permits are acquired from the appropriate regulatory agency. In addition to the above-mentioned permits, encroachment permits from the City or State are acquired if drilling of borings offsite on City or State property is necessary. Copies of the permits are included in the appendix of the project report. Prior to drilling, Underground Service Alert (USA) is notified of our intent to drill, and known underground utility lines and structures are approximately marked.

The borings are drilled by a truck-mounted drill rig equipped with 8- or 10-inch-diameter, solid-stem or hollow-stem augers. Other methods such as rotary or casing hammer may be used if special conditions are encountered. The augers, sampling equipment and other equipment that comes into contact with the soil are steam-cleaned prior to drilling each boring to minimize the possibility of cross-contamination. Sampling equipment is cleaned with a trisodium phosphate solution and rinsed with clean water between samples. After drilling the borings, monitoring wells are constructed in the borings, or neat-cement grout with bentonite is used to backfill the borings to the ground surface.

Borings for groundwater monitoring wells are drilled to a depth of no more than 20 feet below the depth at which a saturated zone is first encountered, or a short distance into a stratum beneath the saturated zone which is of sufficient texture, moisture, and consistency to be judged as a perching layer by the field geologist, whichever is shallower. Drilling into a deeper aquifer below the shallowest aquifer is begun only after a conductor casing is properly installed and allowed to set, to seal the shallow aquifer.

Soil Sampling in Borings

Soil samples are collected at no greater than 5-foot intervals from the ground surface to the total depth of the borings. The soil samples are collected by advancing the boring to a point immediately above the sampling depth, and then driving a California-modified, split-spoon sampler containing brass sleeves through the hollow center of the auger into the soil. (A standard penetrometer, which does not contain liners, may be used to collect samples when laboratory analysis for volatile components is not an issue. The sampler and brass sleeves are laboratory-cleaned, steam-cleaned, or washed thoroughly with Alconox® and water, prior to each use. The sampler is driven with a standard 140-pound hammer repeatedly dropped 30 inches. The number of blows to drive the sampler each successive six inches are counted and recorded to evaluate the relative consistency of the soil. When necessary, the sampler may be pushed by the drill rig hydraulics. In this case, the pressure exerted (in pounds per square inch) is recorded.

The samples selected for laboratory analysis are removed from the sampler and quickly sealed in their brass sleeves with aluminum foil, plastic caps, and plastic zip-lock bags or aluminized duct tape. The samples are then labeled, promptly placed in iced storage using block ice or crushed ice, and delivered to a laboratory certified by the State of California to perform the analyses requested.

One of the samples in brass sleeves not selected for laboratory analysis at each sampling interval is tested in the field using an OVM that is field calibrated at the beginning of each day it is used. This testing is performed by inserting the intake probe of the OVM into the headspace in the plastic bag containing the soil sample as described in the Drill Cuttings section above. The OVM readings are presented in Logs of Borings included in the project report.

Logging of Borings

A geologist is present to log the soil cuttings and samples using the Unified Soil Classification System. Samples not selected for chemical analysis, and the soil in the sampler shoe, are extruded in the field for inspection. Logs include texture, color, moisture, plasticity, consistency, blow counts, and any other characteristics noted. Logs also include subjective evidence for the presence of gasoline hydrocarbons, such as soil staining, noticeable or obvious product odor, and OVM readings.

Drill Cuttings

Drill cuttings subjectively evaluated as containing gasoline hydrocarbons at levels greater than 100 parts per million (ppm) are separated from those subjectively evaluated as

containing gasoline hydrocarbons at levels less than 100 ppm. Evaluation is based either on subjective evidence of soil discoloration, or on measurements made using a field calibrated OVM. Readings are taken by placing a soil sample into a ziplock-type plastic bag and allowing volatilization to occur. The intake probe of the OVM is then inserted into the headspace created in the plastic bag immediately after opening it. The drill cuttings from the borings are placed in labeled 55-gallon drums approved by the Department of Transportation, or on plastic at the site, and covered with plastic. The cuttings remain the responsibility of the client. Upon receipt of the laboratory analyses, the drill cutting will be properly disposed.

Sampling of Stockpiled Soil

One composite soil sample is collected for each 50 cubic yards of stockpiled soil, and for each individual stockpile composed of less than 50 cubic yards. Composite soil samples are obtained by first evaluating relatively high, average, and low areas of hydrocarbon concentration by digging approximately one to two feet into the stockpile and placing the intake probe of a field calibrated OVM against the surface of the soil; and then collecting one sample from the "high" reading area, and three samples from the "average" areas. Samples are collected by removing the top one to two feet of soil, then driving laboratory-cleaned brass sleeves into the soil. The samples are sealed in the sleeves using aluminum foil, plastic caps, and plastic zip-lock bags or aluminized duct tape; labeled; and promptly placed in iced storage for transport to the laboratory, where compositing is performed.

Sample Labeling and Handling

Sample containers are labeled in the field with the job number, unique sample location, depth, and date, and promptly placed in iced storage for transport to the laboratory. A Chain of Custody Record is initiated by the field geologist and updated throughout handling of the samples, and accompanies the samples to a laboratory certified by the State of California for the analyses requested. Samples are transported to the laboratory promptly to help ensure that recommended sample holding times are not exceeded. Samples are properly disposed of after their useful life has expired.