RESNA
Working To Restore Nature

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

TRANSMITTAL

TO: Ms. M. Sunnarborg
City of Livermore
Public Works Department
3589 Pacific Avenue
Livermore, California 94550

DATE: February 26, 1993
PROJECT NUMBER: 69028.11
SUBJECT: ARCO Station 6113, 785 E. Stanley Blvd., Livermore, California.

FROM: Barbara Sieminski
TITLE: Assistant Project Geologist

WE ARE SENDING YOU:

COPIES	DATED	NO.	DESCRIPTION
1	2/26/93	69028.11	Street Encroachment Permit, Time Deposit Receipt, Permit fees for the above subject site.

THESE ARE TRANSMITTED as checked below:

[ ] For review and comment [ ] Approved as submitted [ ] Resubmit ___ copies for approval

[X] As requested [ ] Approved as noted [ ] Submit___ copies for distribution

[ ] For approval [ ] Return for corrections [ ] Return ___ corrected prints

[ ] For your files

REMARKS:

Copies: 1 to RESNA project file no. 69028.11

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February 26, 1993
0120msun
69028.11

Ms. M. Sunnarborg
City of Livermore
Public Works Department
3589 Pacific Avenue
Livermore, California 94550

Subject: Street Encroachment Permit to Install Two Monitoring Wells and Conduct Offsite Subsurface Environmental Investigation at ARCO Station 6113, located at 785 East Stanley Boulevard, Livermore, California.

Dear Ms. Sunnarborg;

On behalf of ARCO Products Company (ARCO), RESNA Industries Inc. (RESNA) is requesting a street encroachment permit to install and monitor two groundwater monitoring wells (MW-11 and MW-12) on the street adjacent to the property located at 785 East Stanley Boulevard in Livermore, California (Plate 1) as part of an ongoing offsite subsurface environmental investigation. The proposed groundwater monitoring wells will be installed within the public right of way as shown on Plate 2. After initial installation of the wells, they will be monitored on a quarterly basis to determine changes in groundwater levels, and for sampling to determine presence of any groundwater contamination.

Description of Work

Two soil borings (B-18 and B-19) will be drilled using 10-inch-diameter hollow-stem auger to the depth of approximately 75 feet below ground surface. The monitoring wells (MW-11 and MW-12) will be constructed in the borings using clean 2-inch-diameter, thread-jointed, Schedule 40 polyvinyl chloride (PVC) casing. No chemical cements, glues, or solvents will be used in well construction. Each casing bottom will be sealed with a threaded end-plug, and each casing top with a locking plug. The screened portions of the wells will be constructed of machine-slotted PVC casing with 0.020-inch-wide (typical) slots. The screened sections in each groundwater monitoring well will be placed to allow monitoring during seasonal fluctuations of groundwater levels. The annular space of each well will be backfilled with No. 3 sand, to approximately two feet above the top of the screened casing.

Street Encroachment Permit Request
ARCO Station 6113, Livermore, California

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A 1- to 2-foot-thick bentonite plug will be placed above the sand as a seal against cement entering the filter pack. The remaining annulus will be then backfilled with a slurry of water, neat cement, and bentonite to approximately one foot below the ground surface. An aluminum utility box with a PVC apron will be placed over each wellhead and set in concrete placed flush with the surrounding ground surface. Each wellhead cover will have a seal to protect the monitoring well against surface-water infiltration and requires a special wrench to open. The design discourages vandalism and reduces the possibility of accidental disturbance of the well. Typical monitoring well construction is shown on Plate 3.

The proposed monitoring wells will be an important source of information concerning soils and groundwater in the immediate area of ARCO Station 6113 located at 785 East Stanley Boulevard in Livermore, California. The estimated time of wells necessity is approximately 2 years. The installation and maintenance of the wells will remain the responsibility of ARCO. A well construction permit will be acquired from Alameda County Flood Control and Water Conservation District (ACFCWCD) prior to drilling, and an underground utility line locating company will be contracted to locate underground utilities. The City of Livermore will be allowed access to wells MW-11 and MW-12 and will have the authority to allow access to others.

If you have any questions regarding this request, please call us at (408) 264-7723.

Sincerely,
RESNA Industries Inc.

Barbara Sieminski
Assistant Project Geologist

Joel Coffman
Project Geologist

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Street Encroachment Permit Request
ARCO Station 6113, Livermore, California

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Enclosures:
Plate 1, Site Vicinity Map
Plate 2, Proposed Boring/Monitoring Well Locations
Plate 3, Typical Monitoring Well Construction
City of Livermore, Street Encroachment Permit Application
Check No. 1003, dated 02/26/93 for $100.00 (Permit Fee)
Time Deposit Receipt dated 02/24/93 for $1,000.00

cc: Michael Whelan, ARCO Products Company
Susan Hugo, Alameda County Health Care Services Agency
Eddy So, Regional Water Quality Control Board
Dannielle Stefani, Livermore Fire Department

CITY OF LIVERMORE
Public Works Department

STREET ENCROACHMENT PERMIT APPLICATION

PERMIT TO DO WORK IN ACCORDANCE WITH CHAPTER 12.08 OF THE LIVERMORE MUNICIPAL CODE AND SPECIFICATIONS AS ADOPTED BY THE CITY OF LIVERMORE AND ANY SPECIAL REQUIREMENTS SHOWN OR LISTED HEREIN.

Applicant/Permittee:

Name: RESNA Industries Inc. for ARCO

Address: 3315 Almaden Exp., Suite 34
San Jose, CA 95118

Phone: (408) 264-7723

Permit No.: _____

Receipt No.: _____

Fee: $ _____

Bond: $ _____

PLEASE READ THIS PERMIT CAREFULLY. KEEP IT AT THE WORK SITE. TO ARRANGE FOR INSPECTION, PHONE 373-5240 AT LEAST 24 HOURS BEFORE YOU START WORK.

JOB LOCATION vicinity of ARCO Station 6113, 785 East Stanley Blvd., Livermove, CA (Plate 2)

DESCRIPTION OF WORK:
Two 10-inch diameter soil borings will be drilled and two 2-inch-diameter groundwater monitoring wells (MW-1 and MW-2) installed in borings (Plate 3). After initial installation of the wells, they will be monitored on a quarterly basis to determine changes in groundwater levels, and for sampling to determine presence of any groundwater contamination. The wells will be an important source of information concerning soil and groundwater in the immediate area of ARCO 6113.

Length of Excavation N/A l.f. Width 10" l.f. Depth 75' ft.

ATTENTION IS DIRECTED TO THE GENERAL PROVISIONS PRINTED ON THE REVERSE SIDE OF THIS PERMIT AND TO THE FOLLOWING SPECIAL REQUIREMENTS (to be filled in by Engineering Division):

Prosecution of Work: All work authorized by the permit shall be performed in a workmanlike, diligent, and expeditious manner, and must be completed to the satisfaction of the Director of Public Works.

Liability and Damages: The permittee shall be responsible for all liability imposed by law for personal injury or property damage which may arise out of the work permitted and done by permittee under this permit, or which may arise out of the failure on the part of the permittee to perform his obligations under said permit in respect to maintenance and encroachment. The permittee shall protect and indemnify the City of Livermore, its officers and employees, and save them harmless in every way from all action at law for damage or injury to persons or property that may arise out of or be occasioned in any way because of his operations as provided in this permit.

Signature of Permittee

By: Joel Coffman - for HLA

Date: 2-26-93

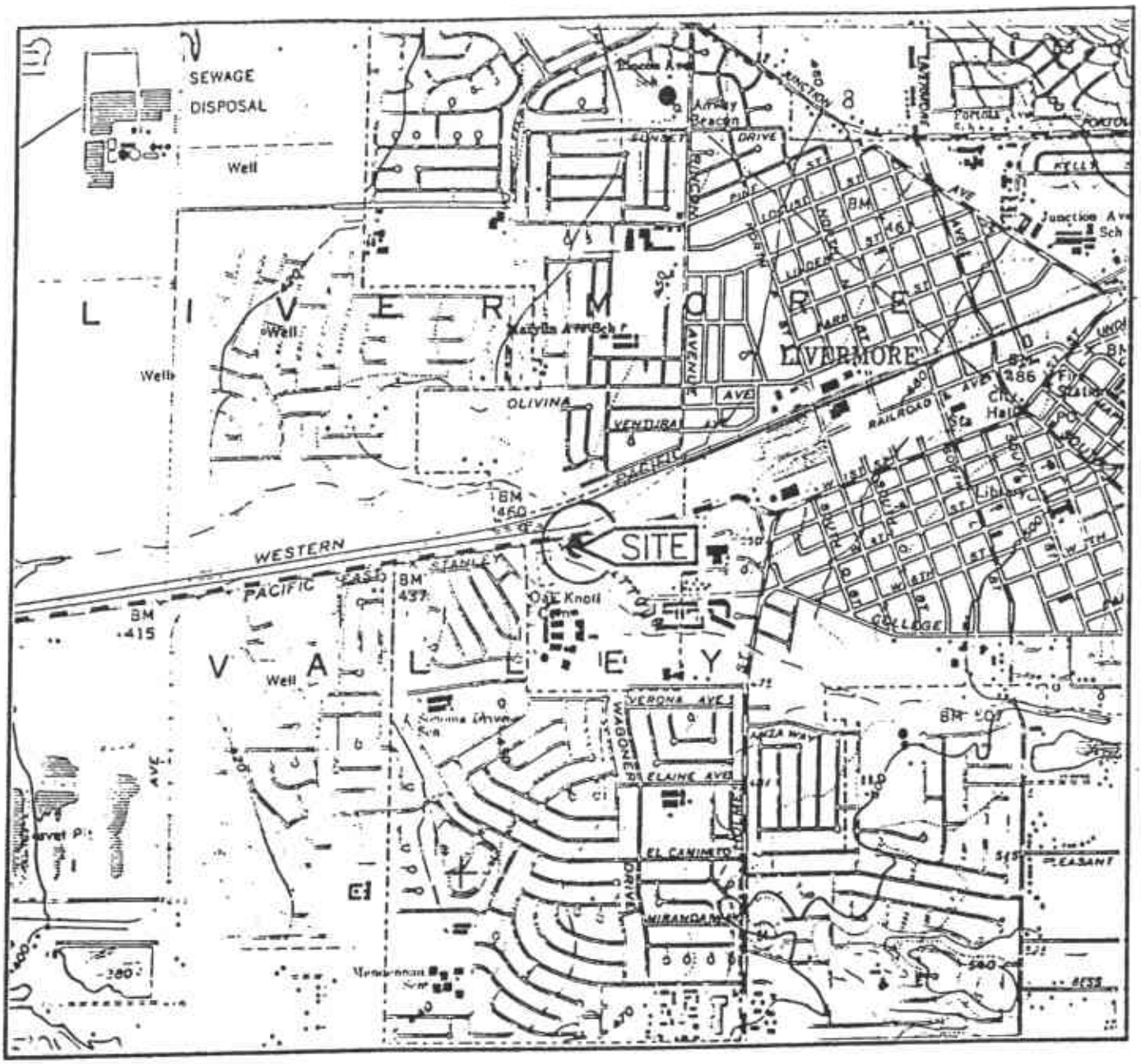
City Engineer

By: _____

Date of Issue: _____

Work Completed: _____

Inspector: _____



Base: U.S. Geological Survey
7.5-Minute Quadrangles
Livermore, California
Photorevised 1980

LEGEND

⊙ = Site Location

N

Approximate Scale

2000 1000 0 2000 4000

feet

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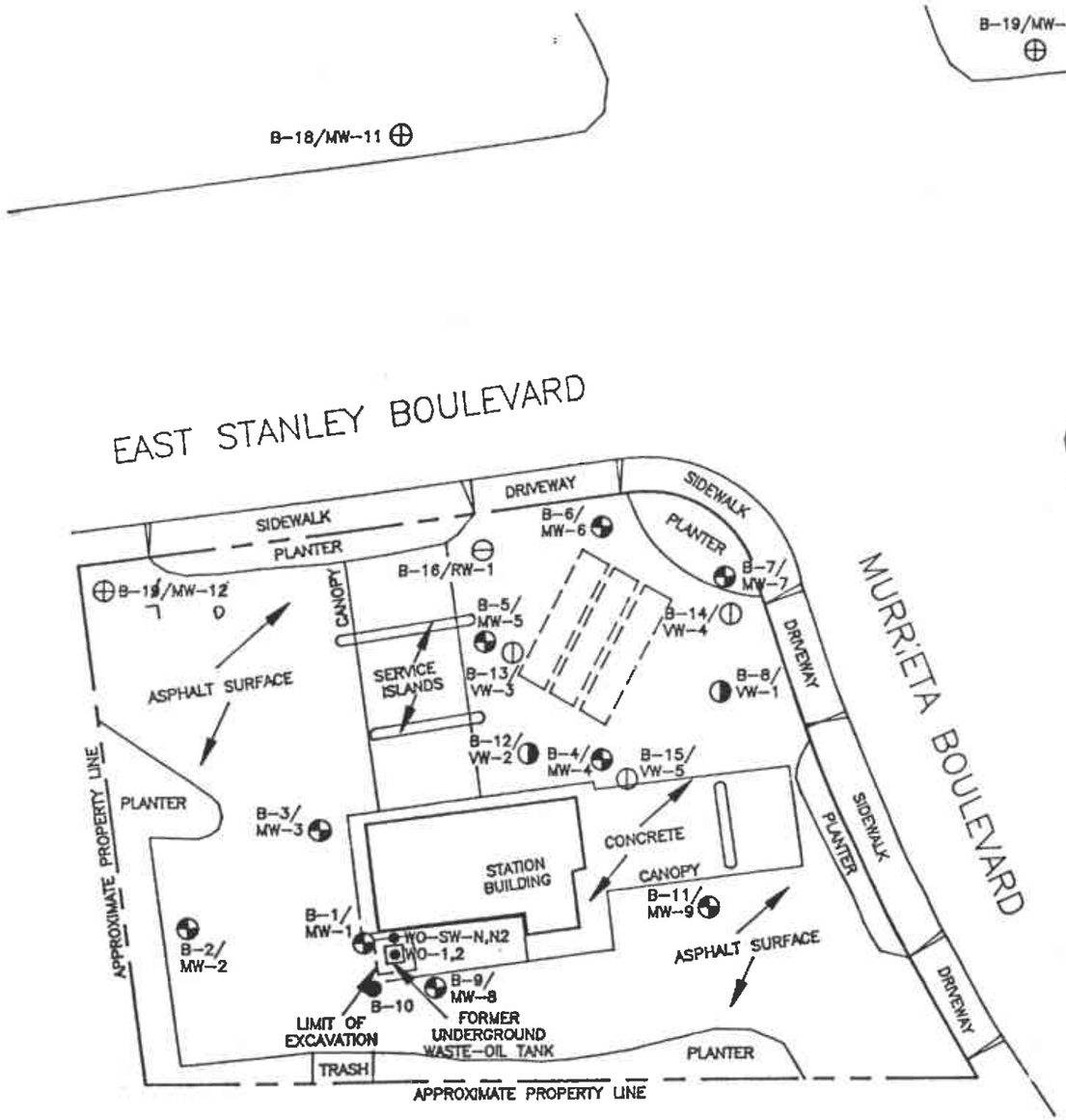
SITE VICINITY MAP
ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE
1



EXPLANATION

B-15/VW-5 = Proposed boring/vapor extraction well

B-16/RW-1 = Proposed boring/recovery well

B-19/MW-12 = Proposed boring/monitoring well

B-11/MW-9 = Boring/monitoring well (RESNA, 09/89, 02/91, and 06/92)

B-12/VW-2 = Boring/vapor extraction well (RESNA, 06/92)

B-10 = Boring (RESNA, 06/92)

WO-SW-N,N2 = Soil sample collected by Pacific (1989)

N

Approximate Scale

40 20 0 40 80

feet

Source: Modified from plan supplied by Ron Archer, Civil Engineer Inc., October 1988.

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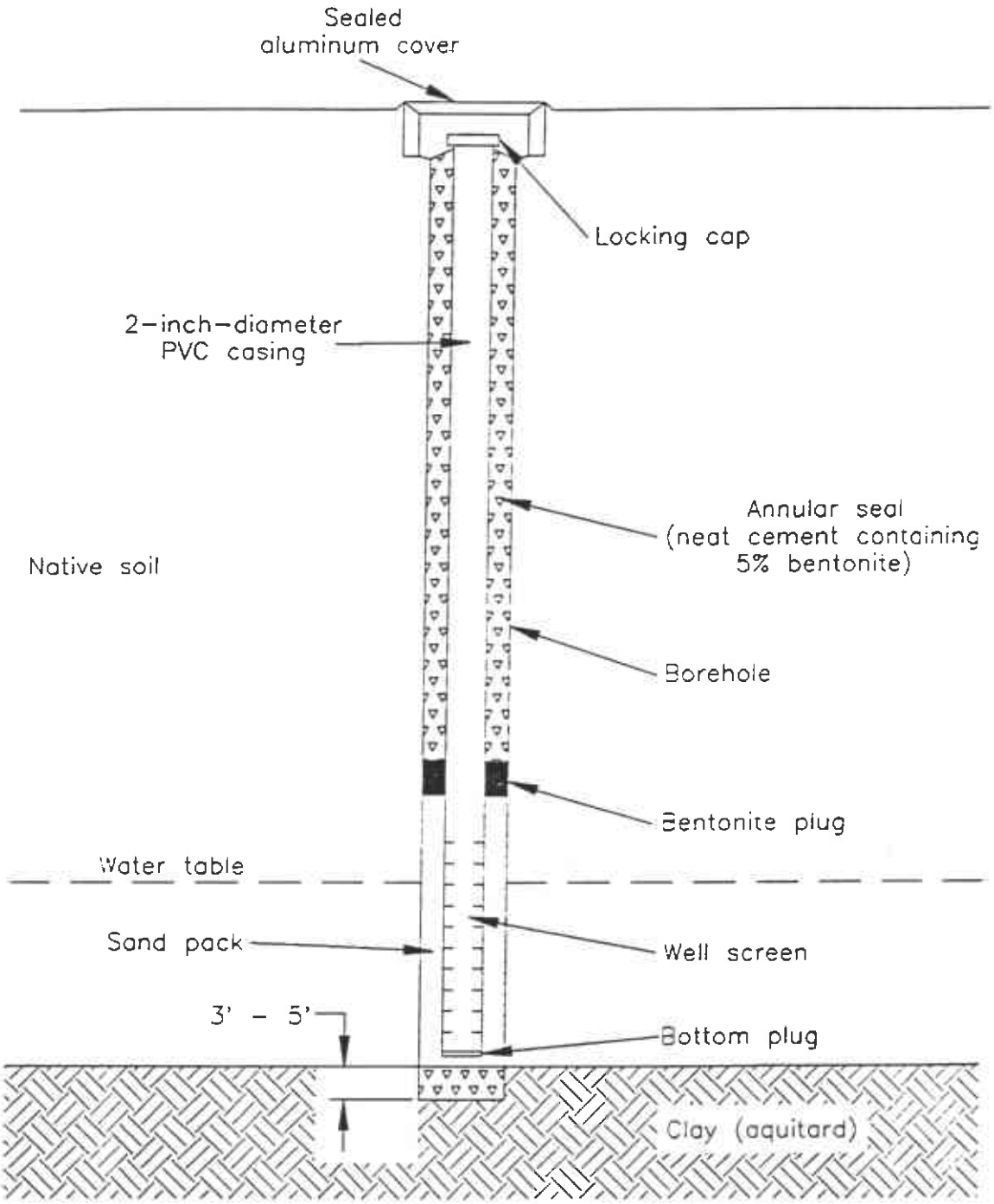
PROPOSED BORING/WELL LOCATIONS
ARCO Service Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 2

GROUNDWATER MONITORING WELL



Not to scale

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TYPICAL
MONITORING WELL CONSTRUCTION
ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE
3