PACIFIC
ENVIRONMENTAL
GROUP, INC.

Date 4/5/89

Project 330-06.05

To: Ms. Robin Ross
APPLIED GEOSYSTEMS
43255 Mission Blvd.
Fremont, CA 94538

We have enclosed

Copies	Description
X	Summary Report for ARCO Service Station
	No. 0608, located at 17601 Hesperian Blvd.,
	San Lorenzo, California.

For your
X Use
____ Approval
____ Information

Comments: Please find the enclosed Summary Report for ARCO Service Station No. 0608. If there are any questions, please do not hesitate to call.

John Baldwin

cc: Kyle Christie, ARCO

1601 Civic Center Drive, Suite 202, Santa Clara, California 95050, (408) 984-6536

07/14/89
(01)

PACIFIC
ENVIRONMENTAL
GROUP, INC.

SUMMARY REPORT
April-June Quarter, 1989

Project No. 330-06.05
July 11, 1989

ARCO Service Station No. 0608
17601 Hesperian Boulevard
San Lorenzo, California

Alameda County

BACKGROUND

ARCO Service Station No. 0608 is located at the southern corner of the intersection of Hesperian Boulevard and Hacienda Avenue, San Lorenzo, California (see Figures 1 and 2). Following is a brief chronological summary of this past quarter's investigative activities for the site:

- March 1989, interpretation of data from the February 1989 soil vapor survey performed on and off-site. The soil gas survey indicates that hydrocarbons may extend off-site to the west-southwest of the ARCO station. The investigation and results will be reported in the technical workplan described below.

- March 1989, water samples were collected from Wells MW-3 to MW-5. Well MW-1 was dry. Well MW-2 was destroyed during tank pull activities. Water samples were analyzed for gasoline, benzene, toluene, ethylbenzene and xylene compounds. Laboratory analysis of the water samples detected gasoline concentrations ranging from 1,300 parts per billion (ppb) to 150,000 ppb (see Table 1 and Figure 3).

- June 1989, initiated preparation of a work plan for further soil and groundwater assessment at the site. It includes a report on the soil gas survey, and recommends well installation on and off-site to document the extent of hydrocarbons in the groundwater. Proposed well locations are based on the soil gas survey.

STATUS SUMMARY: SITE INVESTIGATION

- Currently the soil and groundwater conditions are not fully assessed, although a soil gas survey conducted in February 1989 indicates that a hydrocarbon plume may extend downgradient of the site.

QUARTERLY GROUNDWATER MONITORING

- The existing wells (A-1 to A-5) have been on a quarterly sampling program since March 1989. The laboratory results are presented in Table 1.

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STATUS SUMMARY: REMEDIATION

- No change from last quarter. No groundwater remediation is planned for the July-September quarter.

ANTICIPATED WORK FOR THE JULY-SEPTEMBER QUARTER

- Completion of a work plan proposing additional soil and groundwater investigative activities.
- The second set of quarterly sampling results will be transmitted.

TABLE 1

APRIL-JUNE, 1989 QUARTERLY GROUNDWATER MONITORING RESULTS

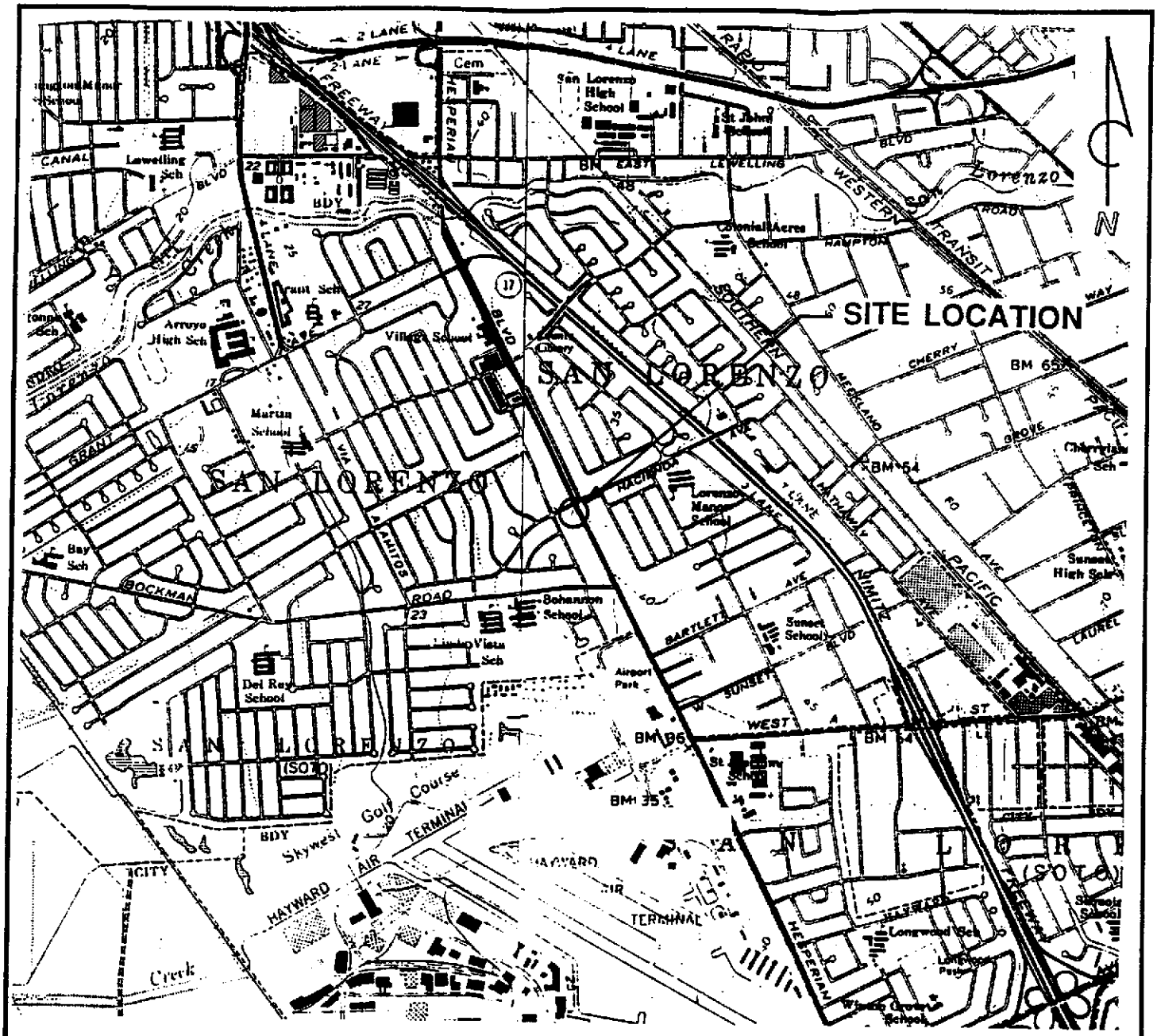
ARCO Service Station No. 0608

Low Boiling Hydrocarbons
Sampling Date: 3-7-89

Well No.	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl benzene (ppb)	Xylenes (ppb)
MW-1	N/A	N/A	N/A	N/A	N/A
MW-2	N/A	N/A	N/A	N/A	N/A
MW-3	150,000	4,600	5,200	5,600	13,000
MW-4	84,000	2,400	3,400	2,500	7,600
MW-5	1,300	340	<10	140	50

Note: ppb = parts per billion
N/A= Not applicable

Well MW-1 was dry.
Well MW-2 is destroyed.



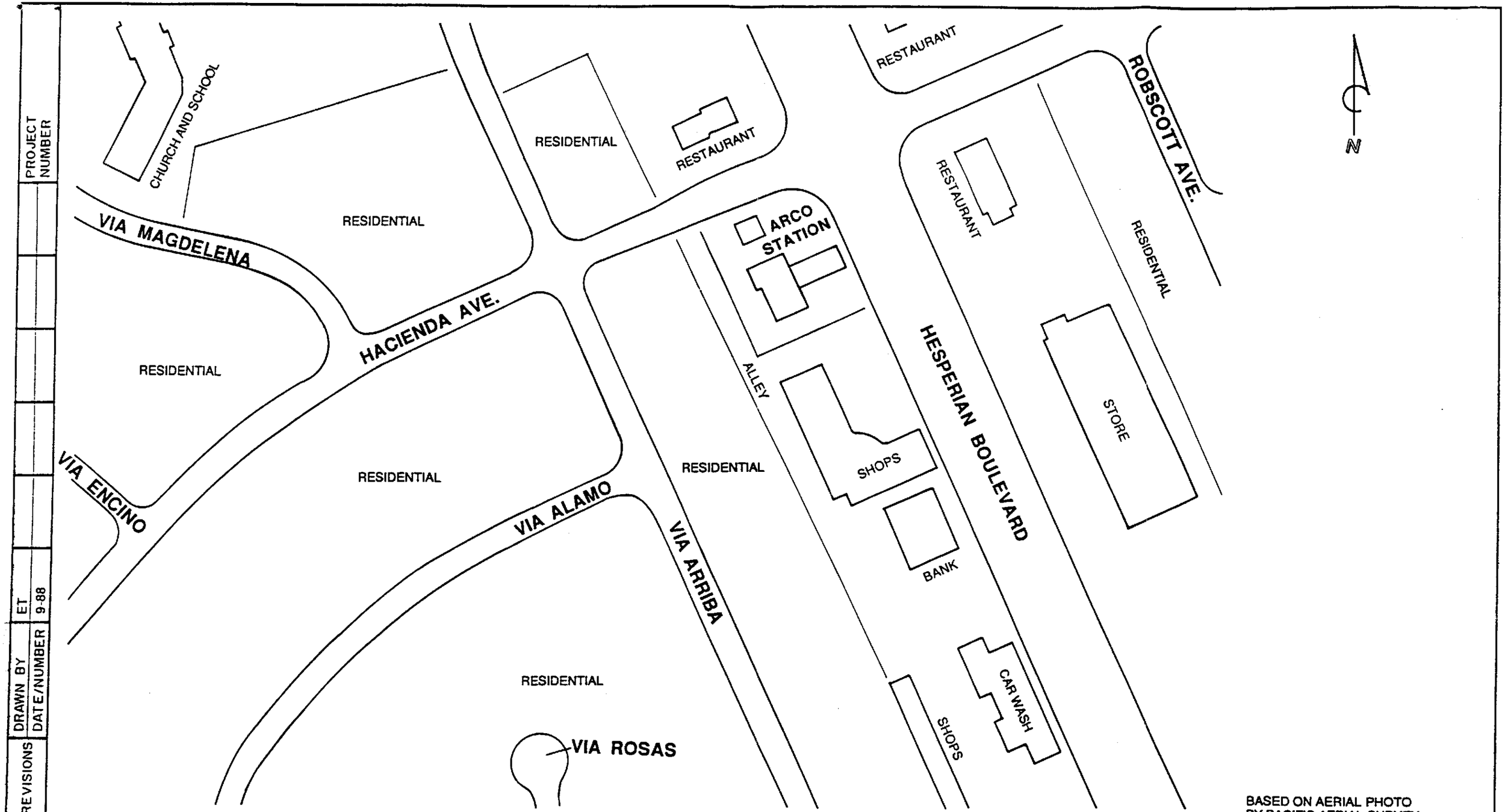
QUADRANGLE LOCATIONS

REFERENCE:
USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: HAYWARD, CALIFORNIA
DATED: 1959 REVISED: 1980
TITLED: SAN LEANDRO, CALIFORNIA
DATED: 1959 REVISED: 1980

SCALE

2000 0 2000 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.	**ARCO SERVICE STATION #0608** 17601 Hesperian Boulevard San Lorenzo, California	FIGURE: 1
	SITE LOCATION MAP	PROJECT: 330-06.05



BASED ON AERIAL PHOTO
BY PACIFIC AERIAL SURVEY

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE

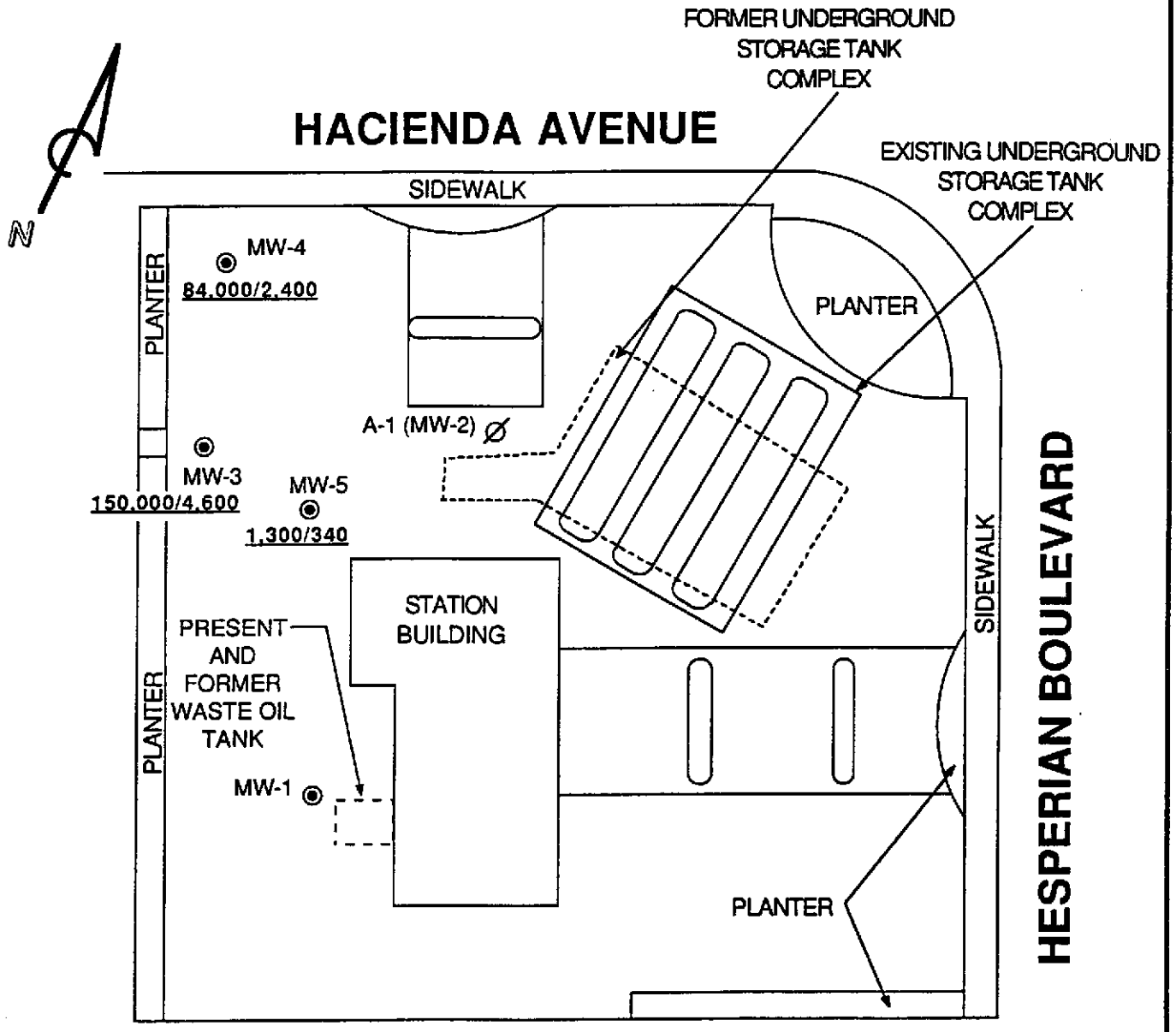
100 0 100 FEET

ARCO STATION #0608
17601 Hesperian Boulevard
San Lorenzo, California

EXTENDED SITE MAP

FIGURE : 2

PROJECT: 330-06.05



LEGEND

MW-3 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

A-1 (MW-2) ⌀ DESTROYED MONITORING WELL LOCATION AND DESIGNATION

1,300/340 DISSOLVED GASOLINE CONCENTRATION/ BENZENE CONCENTRATION IN PARTS PER BILLION (ppb), 3-7-89

APPROXIMATE DIRECTION OF REGIONAL GROUNDWATER FLOW

SCALE

0 30 60 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.	**ARCO STATION #0608** 17601 Hesperian Boulevard San Lorenzo, California	FIGURE: **3**
	GASOLINE AND BENZENE CONCENTRATION MAP	PROJECT: 330-06.05

SUMMARY REPORT

ARCO Service Station No. 0608
17601 Hesperian Boulevard
San Lorenzo, California

Alameda County

BACKGROUND

ARCO Service Station No. 0608 is located at the southern corner of the intersection of Hesperian Boulevard and Hacienda Avenue, San Lorenzo, California (see Figures 1 and 2). Following is a brief chronological summary of past investigative activities for the site:

- November, 1985 Emcon Associates issued a report to ARCO detailing the findings of five soil borings, with one boring being converted to monitoring Well A-1 (see Figure 3). Groundwater was noted at 12 feet. Gasoline concentrations in the soil samples obtained near the fuel tanks ranged from 590 ppm to 2,800 ppm. Soil samples obtained near the waste oil tank ranged from 9,500 ppm to 10,000 ppm waste oil. A water sample collected from Well A-1 contained 32,000 ppb gasoline. Logs indicated soil is predominantly sandy clay and silty clay interbedded with sand lenses.

- October, 1987 the regular leaded fuel tank failed a Petro-tite test.

- November, 1987 the regular leaded fuel tank failed a second test.

- November, 1987 the soil near the eastern portion of the tank complex was examined through surface excavation. Soil samples from trenches revealed total volatile hydrocarbons (TVO) ranging from non-detected to 420 ppm.

- January, 1988 Well A-1 was sampled (renamed MW-2). Gasoline was detected at 33,000 ppb. Depth to water was approximately 11 feet.

- January, 1988 two additional wells (MW-3 and MW-4) were documented at the site. The wells are constructed of 8-inch diameter PVC casing. No floating product noted in either well.

- January, 1988 four soil borings were drilled, with two being converted to monitoring wells (MW-1 and MW-5). MW-1 was placed adjacent to the waste oil tank. MW-5 was placed in the inferred downgradient direction (southwest) from the fuel tanks.

Gasoline concentrations in the groundwater samples obtained from MW-1 to MW-5 ranged from a low of 300 ppb in MW-1 to a high of 62,000 ppb in MW-4 .

- June, 1988 four underground fuel tanks and one waste oil tank were removed. Soil samples obtained beneath the fuel tanks ranged from 7 ppm to 2,800 ppm gasoline. Floating product was observed in the tank excavation. MW-1 and MW-2 were destroyed during tank replacement activities. New tanks were placed in an expanded excavation within the original tank complex. Excavated soil was aerated to below 100 ppm gasoline and hauled off to a Class III landfill. Excavated waste oil soil was hauled off to a Class I landfill facility in Kettleman Hills, California.

- September, 1988 1/16-inch of floating product was noted in MW-4.

- February, 1989 a soil gas survey was performed on and off-site. The soil gas survey indicates that hydrocarbons may extend off-site to the west-southwest of the ARCO station.

STATUS SUMMARY: SITE INVESTIGATION

- Currently the soil and groundwater conditions are not fully assessed, although a recent soil gas survey indicates that a hydrocarbon plume may extend downgradient of the site.

QUARTERLY GROUNDWATER MONITORING

- The existing and any additional groundwater monitoring wells installed this quarter will be placed on a quarterly sampling program, beginning March, 1989.

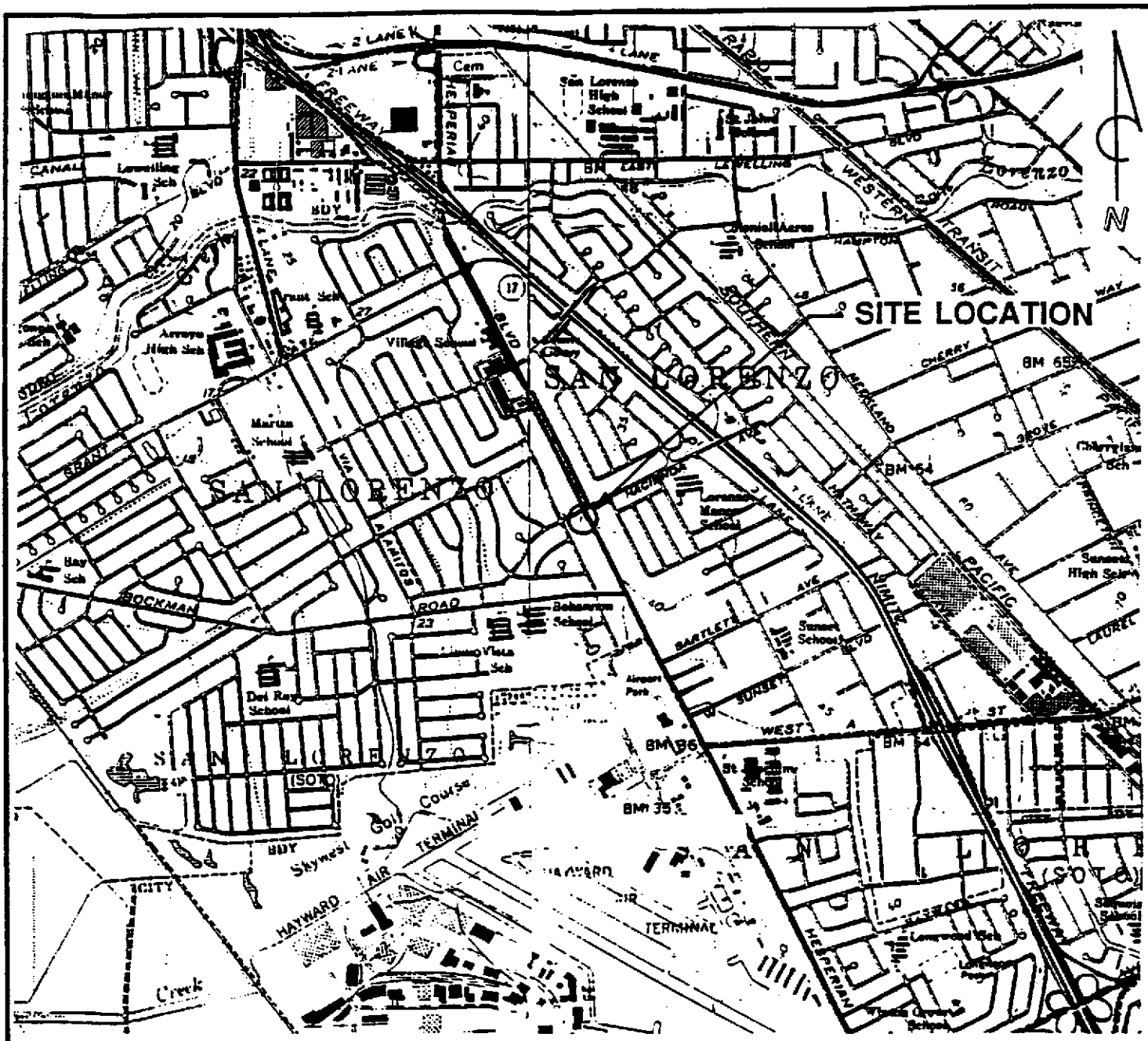
STATUS SUMMARY: REMEDIATION

- No groundwater remediation has taken place to date. Soil from the original gasoline tank complex was aerated and hauled off-site, and the soils from the waste oil tank excavation were disposed of at a Class I facility. Further assessment of groundwater conditions downgradient of the site is scheduled to be conducted prior to implementation of a groundwater remedial program. No groundwater remediation is planned for the April-June quarter.

ANTICIPATED WORK FOR THE APRIL-JUNE QUARTER

- Based on the February, 1989 soil gas survey, additional wells and exploratory soil borings will be installed at the site. Wells are proposed on-site and off-site to verify the extent of hydrocarbons in the groundwater as indicated by the soil gas survey.

- A report will be issued for the first set of quarterly sampling results.



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SCALE

2000 0 2000 FEET

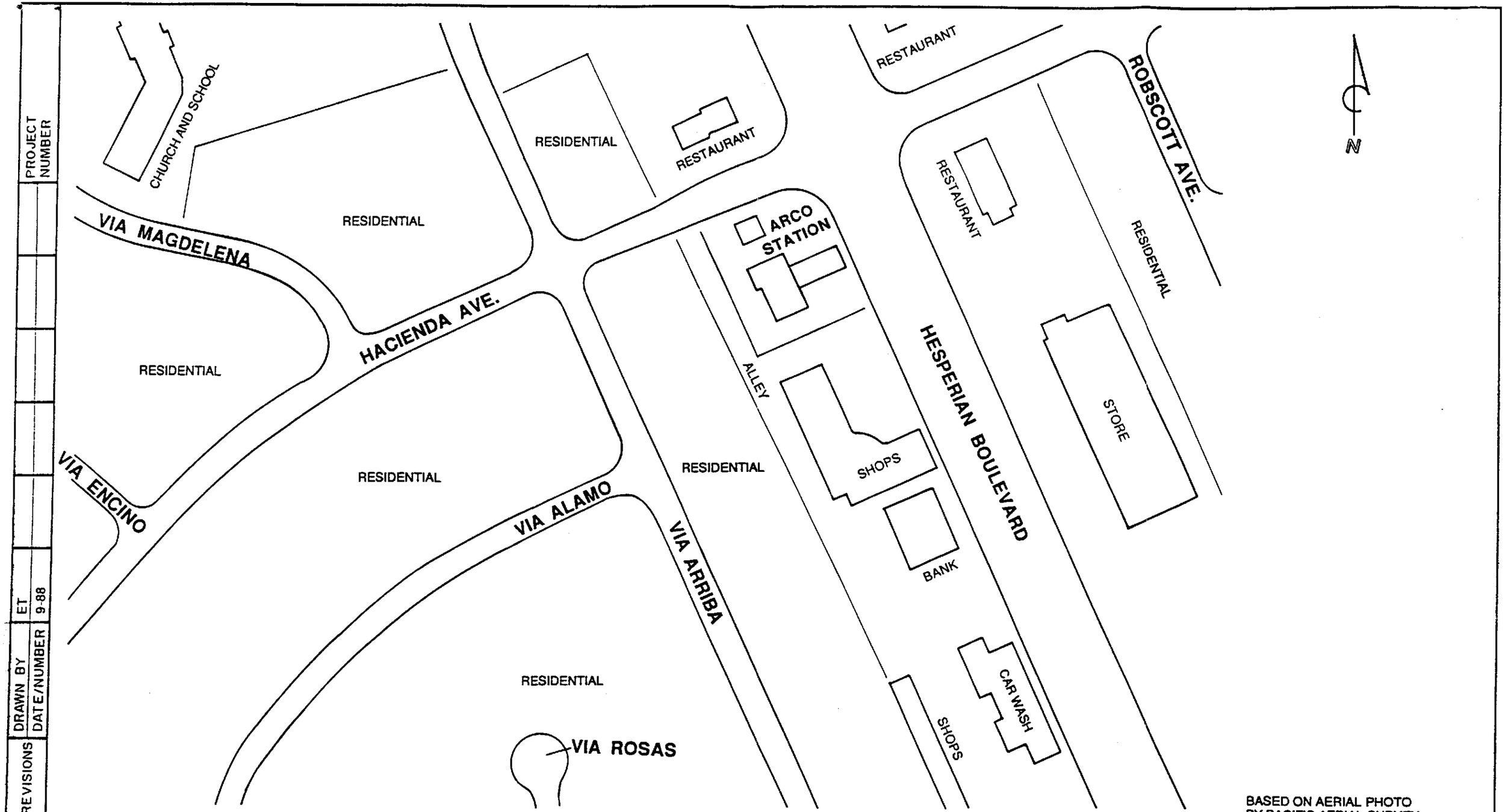
PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO SERVICE STATION #0608
17601 Hesperian Boulevard
San Lorenzo, California

SITE LOCATION MAP

FIGURE: 1

PROJECT: 330-06.05



BASED ON AERIAL PHOTO
BY PACIFIC AERIAL SURVEY

PACIFIC ENVIRONMENTAL GROUP, INC.

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100 0 100 FEET

ARCO STATION #0608
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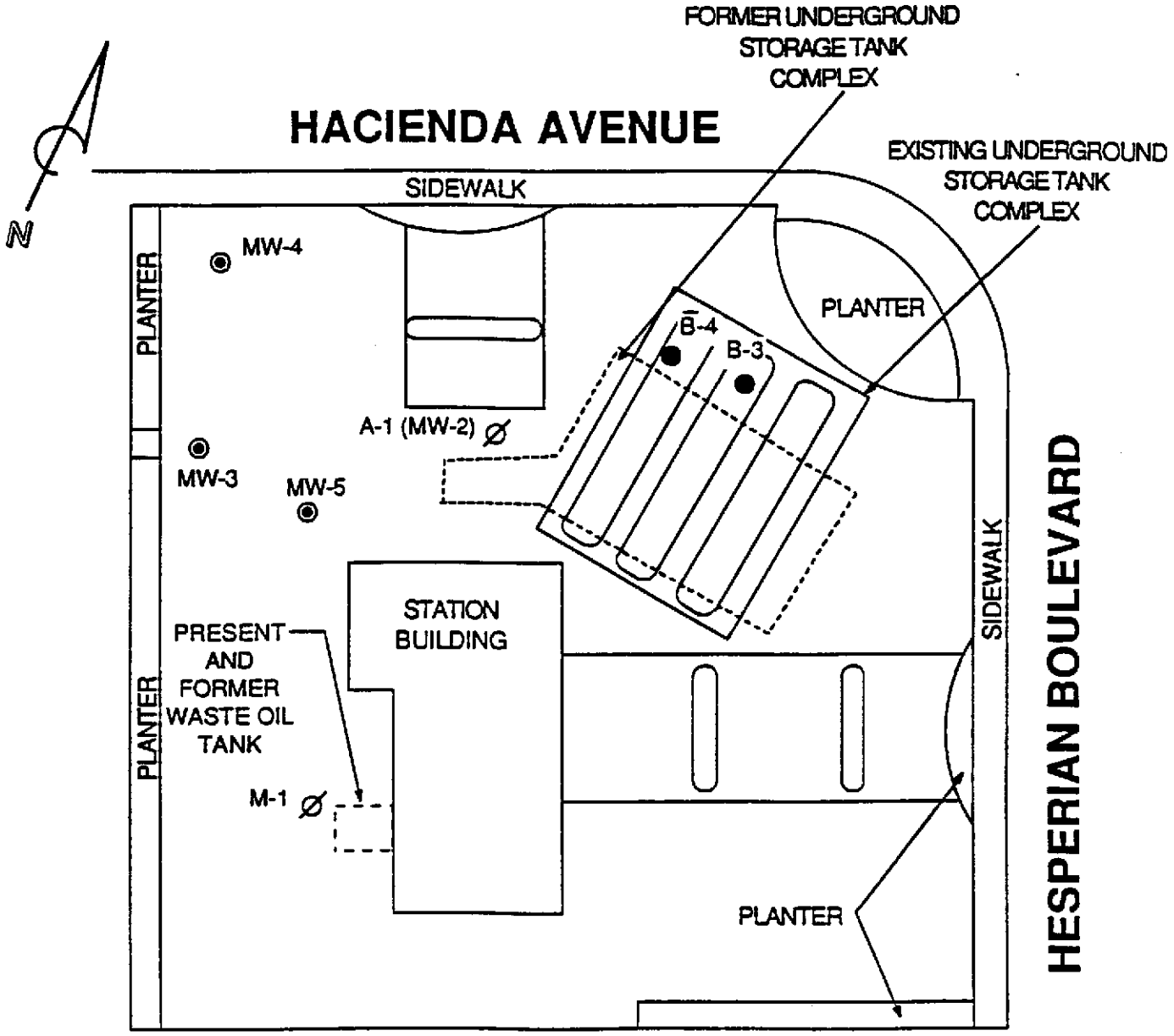
EXTENDED SITE MAP

FIGURE : 2

PROJECT: 330-06.05



LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

A-1 (MW-2) ⌀ DESTROYED MONITORING WELL LOCATION AND DESIGNATION

B-3 ● SOIL BORING LOCATION AND DESIGNATION

APPROXIMATE DIRECTION OF REGIONAL GROUNDWATER FLOW

SCALE

0 30 60 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO STATION #0608
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SITE MAP

FIGURE: 3
PROJECT: 330-06.05