Canonie Environmental

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October 15, 1993

91-153-06

Mr. Scott Seery
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

Request for Site Closure
Former Underground Storage Tank Site
16211 East 14th Street
San Leandro, California

Dear Mr. Seery:

This request for site closure has been prepared by Canonie Environmental Services Corp. (Canonie) for the Garcia Enterprises, Inc., site at 16211 East 14th Street in San Leandro, California. This request summarizes work performed in accordance with work plans approved by the Alameda County Health Care Services Agency, Department of Environmental Health (County) for underground storage tank removal, investigation, and remedial activities at the facility.

SITE DESCRIPTION AND BACKGROUND

The Garcia Enterprises, Inc., site is located in San Leandro near the intersection of East 14th Street and 162nd Avenue (Figure 1). A car wash was active at the site from approximately 1954 through 1964. In conjunction with the car wash, two 10,000-gallon underground storage tanks (USTs) were formerly located at the site as shown on Figure 2. Both tanks were of steel single-wall construction. Although the specific contents of each UST was not documented, the USTs contained either gasoline or diesel fuel. The current tenant of the property is Town and Country Liquors.

Canonie performed UST removal activities at the Garcia Enterprises, Inc., site in accordance with an Underground Storage Tank Closure Plan approved by the County and the Eden Consolidated Fire Protection District. UST removal activities were

reported to the County in a submittal entitled "Underground Storage Tank Closure Report" (Canonie, September 1991). Subsequent to removal activities, Canonie conducted a Preliminary Site Assessment (PSA) in accordance with guidance directives of the state Water Resources Control Board and a work plan approved by the County. These investigative activities were reported in a submittal entitled "Preliminary Site Assessment Report" (Canonie, November 1992). Presently, continued monitoring of the site's three ground water monitoring wells is the only activity required by the County. The UST remediation activities are discussed further herein.

PREVIOUS SITE ACTIVITIES

Underground Storage Tank Removal

UST removal was performed by Canonie personnel on July 17, 1991. The two USTs, along with two service island pumps and associated piping, were inerted, removed, and transported under manifest by Erickson, Inc., to their Richmond Facility for recycling. The tanks, while having visible corrosion, did not have any visible holes. Approximately 54 cubic yards of soil that was suspected to be contaminated were removed from the excavation and temporarily stockpiled at the site. After completing the excavation, a total of four verification soil samples were collected from the excavation sidewalls at depths of approximately 9 to 10 feet (no bottom samples were collected because ground water was accumulating in the open excavation). One soil sample was collected from beneath the former pump island, and three soil samples were collected beneath the removed product piping.

The soil samples were analyzed for total petroleum hydrocarbons-diesel range (TPH-D) and total petroleum hydrocarbons-gasoline range (TPH-G) by EPA Method 8015 modified, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020, and organic lead by LUFT Method. One verification soil sample (from the northeast tank excavation sidewall) indicated a TPH-D concentration of 15 parts per million (ppm), and the soil sample collected beneath the former service pump location indicated benzene present at 0.16 ppm and toluene present at 0.217 ppm. These were the only detectable concentrations indicated for all analytes tested for the verification soil samples.

Soil samples were also collected from the excavated soil stockpile to profile the soil for disposal. The stockpile was subsequently transported and disposed as non-hazardous at a Class III landfill.

As previously mentioned, ground water was encountered in the excavation at a depth of approximately 10.5 feet. Two water samples were collected during tank removal activities; one water sample was taken from the water that accumulated in the tank removal excavation and one water sample was taken from water that was pumped

from the excavation to a Baker™. The water samples were analyzed for TPH-D, TPH-G by EPA Method 8015 modified, BTEX by EPA Method 602, and total lead by EPA Method 239.2. The water grab sample obtained from the open excavation indicated the presence of TPH-D at 0.43 ppm, TPH-G at 3.4 ppm, benzene at 0.033 ppm, toluene at 0.084 ppm, ethylbenzene at 0.02 ppm, xylene at 0.13 ppm, and total lead at 0.021 ppm. Benzene was the only analyte found in excess of primary drinking water standards (maximum contaminant levels, 0.001 ppm for benzene) in the water sample retrieved directly from the excavation. It should be noted that this water had mixed with soil disturbed during excavation operations and is not representative of ground water quality. The water sample taken from the Baker™ Tank indicated concentrations of all analytes below primary drinking water standards. The presence of detectable concentrations of petroleum hydrocarbons in the water sample collected from the open excavation prompted the agency request to perform an investigation (PSA) to determine the potential impact to ground water.

A summary of the chemical analyses and certified analytical reports for sampling performed during tank removal activities may be referenced in a report entitled "Underground Storage Tank Closure Report" (Canonie, September 1991).

PRELIMINARY SITE ASSESSMENT ACTIVITIES

The PSA was conducted to investigate the potential impact to shallow ground water in the vicinity of the former location of the USTs. Field work for the PSA was performed during September 1992 and involved the installation, subsequent development, and sampling of three ground water monitoring wells surrounding the former tank area (Figure 3). Canonie used a truck-mounted flight auger rig with hollow stem augers and a split spoon sampler. During drilling and well installation, a Canonie geologist supervised the drilling subcontractor, logged the soil samples and drill cuttings, and obtained samples for chemical analyses.

Two soil samples were collected at each well location. The soil samples were analyzed for TPH-G, TPH-D, and BTEX. All soil samples indicated nondetectable concentrations for all analytes.

Following construction and development of the monitoring wells, the initial sampling was conducted on September 11, 1992. Prior to sampling, a Teflon™ bailer was used to purge the wells. No free product or odor was observed during sampling activities. Water samples were collected in triplicate in 40-milliliter volatile organic analysis (VOA) bottles and 1-liter amber glass containers for analysis for TPH-G, TPH-D, and BTEX. The results of this initial sampling indicated minor concentrations of benzene in the ground water with concentrations of 0.0026 and 0.0029 ppm in Monitoring Wells MW-1 and MW-3, respectively. The only other hydrocarbon detected in the ground water was TPH-D at a concentration of 0.055 ppm for the MW-3 sample. All other analytes indicated nondetectable concentrations.

A composite water sample was collected and analyzed for TPH-D, TPH-G, and BTEX to profile well development water, well purge water, and steam-cleaning water for disposal. Following receipt of analytical results, the water was disposed of as non-hazardous at Gibson-Pilot. Similarly, a composite soil sample from the drilling cuttings was collected and analyzed for petroleum hydrocarbons and BTEX. The soil cuttings were disposed of as nonhazardous at a Class III disposal facility.

A summary of the chemical analyses and certified analytical reports for sampling performed, the boring logs, and monitoring well construction details may be referenced in a report entitled "Preliminary Site Assessment Report" (Canonie, November 1992).

GROUND WATER MONITORING

Ground water monitoring has continued on a quarterly basis at the site. The most recent sampling round was completed in September 1993 and represents the third quarterly event. Including the sampling completed for the PSA, four ground water monitoring events, or one year of monitoring, have been performed. A summary of water level measurements and measuring point elevations is presented in Table 1, and a summary of analytical results is presented in Table 2.

The original measurement of the ground water gradient indicated a southwesterly flow direction. The three measurements since have indicated a flow direction fluctuating towards the northwest. Due to these observed flow direction fluctuations, between the flow towards the southwest and northwest, Wells MW-1 and MW-3 have both been upgradient and downgradient during different observations. Well MW-2 has consistently been downgradient. The flow direction indicated by latest measurements (September 1993) is shown on Figure 3.

As shown in Table 2, all wells have consistently indicated nondetectable concentrations of toluene, ethylbenzene, and xylenes. TPH-D concentrations have ranged from nondetectable to 0.160 ppm, TPH-G concentrations have ranged from nondetectable to 0.380, and benzene concentrations have ranged from nondetectable to 0.0029 ppm.

FINDINGS AND RECOMMENDATIONS

The verification soil samples collected during tank removal activities indicated that the extent of petroleum-affected soil had been excavated. Further, the soil samples collected during the PSA from the monitoring well locations immediately adjacent to the former tank excavation confirmed this because all samples indicated nondetectable concentrations for all analytes. These results document that all potential sources of contaminants have been effectively removed.

No analytical trends have been noted in the ground water monitoring program that would indicate that contaminant migration is significantly impacting the quality of the shallow ground water. Continued ground water monitoring is not recommended for the following reasons:

- Benzene, which may be considered as the primary chemical of concern, has historically been detected at minor concentrations and has not consistently been detected at concentrations above primary drinking water standards in any of the site's three ground water monitoring wells.

- The water bearing zone being monitored is a limited lens at approximately 10 feet below ground surface. Public water supply for the area is water imported by the East Bay Municipal Utilities District. In accordance with a representative of Alameda County Public Works Department, agricultural or domestic wells in the area are typically screened in zones approximately 200 to 500 feet deep.

- The chromatogram patterns reported by the laboratory for detected concentrations of total petroleum hydrocarbons have consistently been reported as discrete peaks (non-diesel or gasoline mix). This indicates the total petroleum hydrocarbon concentrations detected may not have originated from the former tank area.

The data collected during the investigative activities indicate that the former UST site has not significantly affected the limited water bearing zone underlying the site, and it is not likely to adversely affect human health or the environment in the future. Canonie recommends closure of this former UST site.

If the County concurs with this recommendation, please send written approval so that the ground water monitoring program may be discontinued. If you have any questions concerning this request for closure, please contact me or David Poole at (510) 463-9117.

Respectfully submitted,

James W. Babcock, Ph.D.
Project Manager

JWB/hmt

cc: A. Garcia, Garcia Enterprises, Inc.

TABLE 1

GROUND WATER ELEVATIONS
GARCIA ENTERPRISES, INC. SITE

Well Number	Date Sampled	Units in Feet		
		Well Elevation TOC (NGVD)	Depth-to-Ground Water From TOC	Ground Water Elevation
MW-1	9/11/92	34.75	8.58	26.17
	3/04/93		6.90	27.85
	6/22/93		7.80	26.95
	9/9/93		8.12	26.63
MW-2	9/11/92	35.26	9.13	26.13
	3/04/93		7.27	27.99
	6/22/93		8.30	26.96
	9/9/93		8.66	26.60
MW-3	9/11/92	35.19	9.04	26.15
	3/04/93		7.03	28.16
	6/22/93		8.15	27.04
	9/9/93		8.52	26.67

Notes:

TOC denotes top of casing.
NGVD denotes National Geodetic Vertical Datum.

TABLE 2

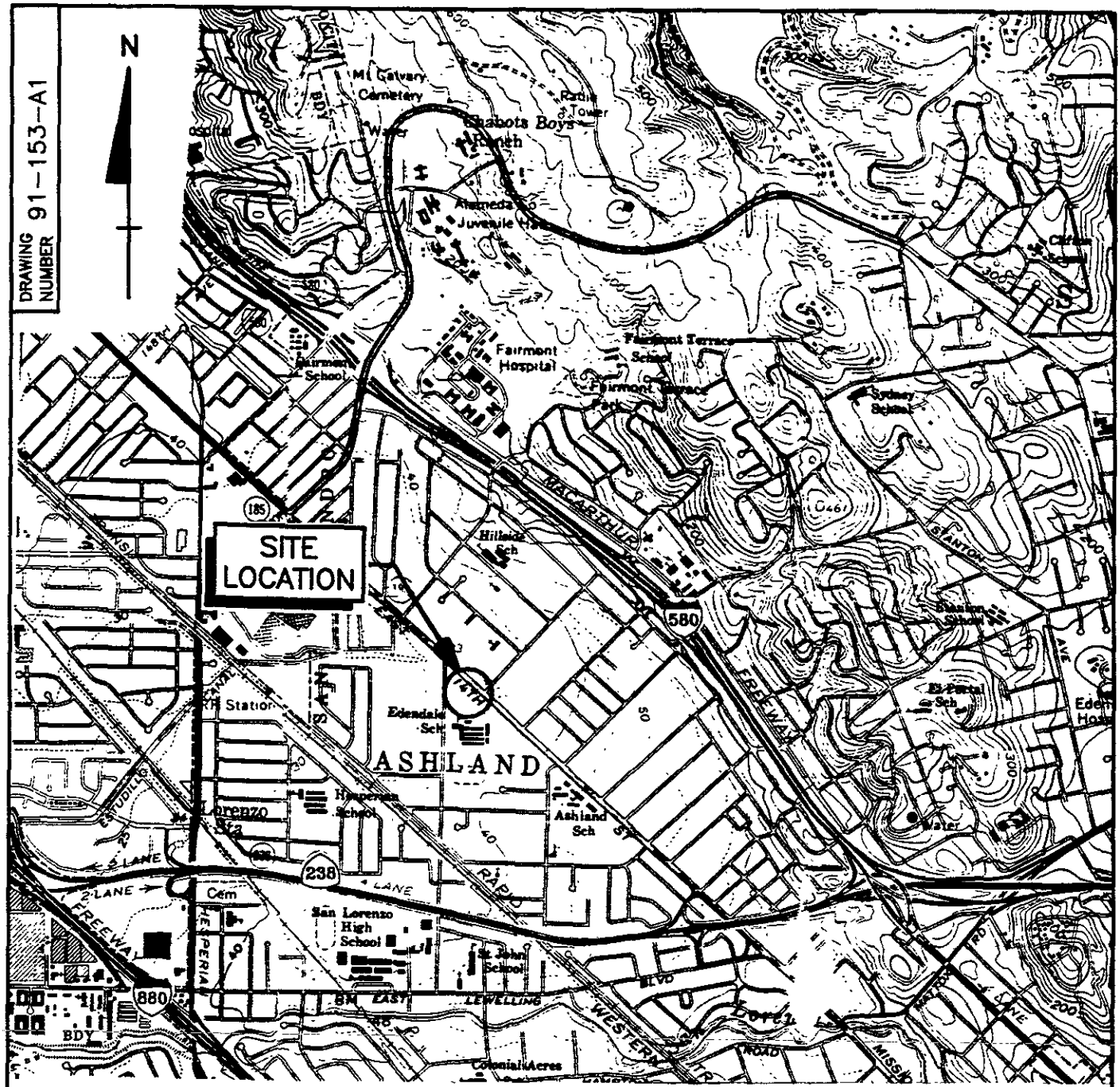
SUMMARY OF CHEMICAL ANALYSES
GARCIA ENTERPRISES, INC. SITE

Sample Identification	Date Sampled	TPH-D (ppm)	TPH-G (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)
MW-1	9/11/92	ND	ND	0.0026	ND	ND	ND
MW-1	3/4/93	0.110	0.170	ND	ND	ND	ND
MW-1	6/22/93	0.160	0.170	0.0012	ND	ND	ND
MW-1	9/9/93	0.065	0.210	0.00086	ND	ND	ND
MW-2	9/11/92	ND	ND	ND	ND	ND	ND
MW-2	3/4/93	ND	ND	ND	ND	ND	ND
MW-2	6/22/93	0.098	0.360	0.0027	ND	ND	ND
MW-2	9/9/93	ND	0.380	0.0016	ND	ND	ND
MW-3	9/11/92	ND	0.055	0.0029	ND	ND	ND
MW-3	3/4/93	0.085	0.14	ND	ND	ND	ND
MW-3	6/22/93	ND	0.140	0.0015	ND	ND	ND
MW-3	9/9/93	0.120	0.140	0.00095	ND	ND	ND

Notes:

1) ND indicates none detected at method detection limits.
2) NT denotes not tested.
3) TPH-D denotes total petroleum hydrocarbons - diesel range.
4) TPH-G denotes total petroleum hydrocarbons - gasoline range.

DRAWING NUMBER 91-153-A1



CALIFORNIA

QUADRANGLE LOCATION

SCALE

2000 0 2000 FEET

SITE LOCATION MAP
GARCIA ENTERPRISES SITE
SAN LEANDRO, CALIFORNIA

PREPARED FOR

GARCIA ENTERPRISES, INC.
SAN LEANDRO, CALIFORNIA

REFERENCES:

USGS 7.5 MIN TOPOGRAPHIC MAP
TITLED: HAYWARD & SAN LEANDRO, CALIFORNIA
DATED: 1959 (REV. 1980)

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
3	10-22-92	ISSUED FOR REPORT	VZC		

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DATE: 6-24-91	FIGURE 1	DRAWING NUMBER 91-153-A1
SCALE: AS SHOWN		

DRAWING NUMBER 91-153-B10

N

EAST FOURTEENTH STREET

PUMP ISLAND EXCAVATION

PIPE TRENCH

APPROXIMATE LIMITS OF UNDERGROUND STORAGE TANK EXCAVATION

OVERHANG

TANK VENTS

ASPHALT

TOWN AND COUNTRY LIQUORS

LEGEND:

PROPERTY LINE

APPROXIMATE LIMITS OF EXCAVATION

SCALE

30 0 30 FEET

SITE PLAN
GARCIA ENTERPRISES SITE
SAN LEANDRO, CALIFORNIA

PREPARED FOR

GARCIA ENTERJPRISES, INC.
SAN LEANDRO, CALIFORNIA

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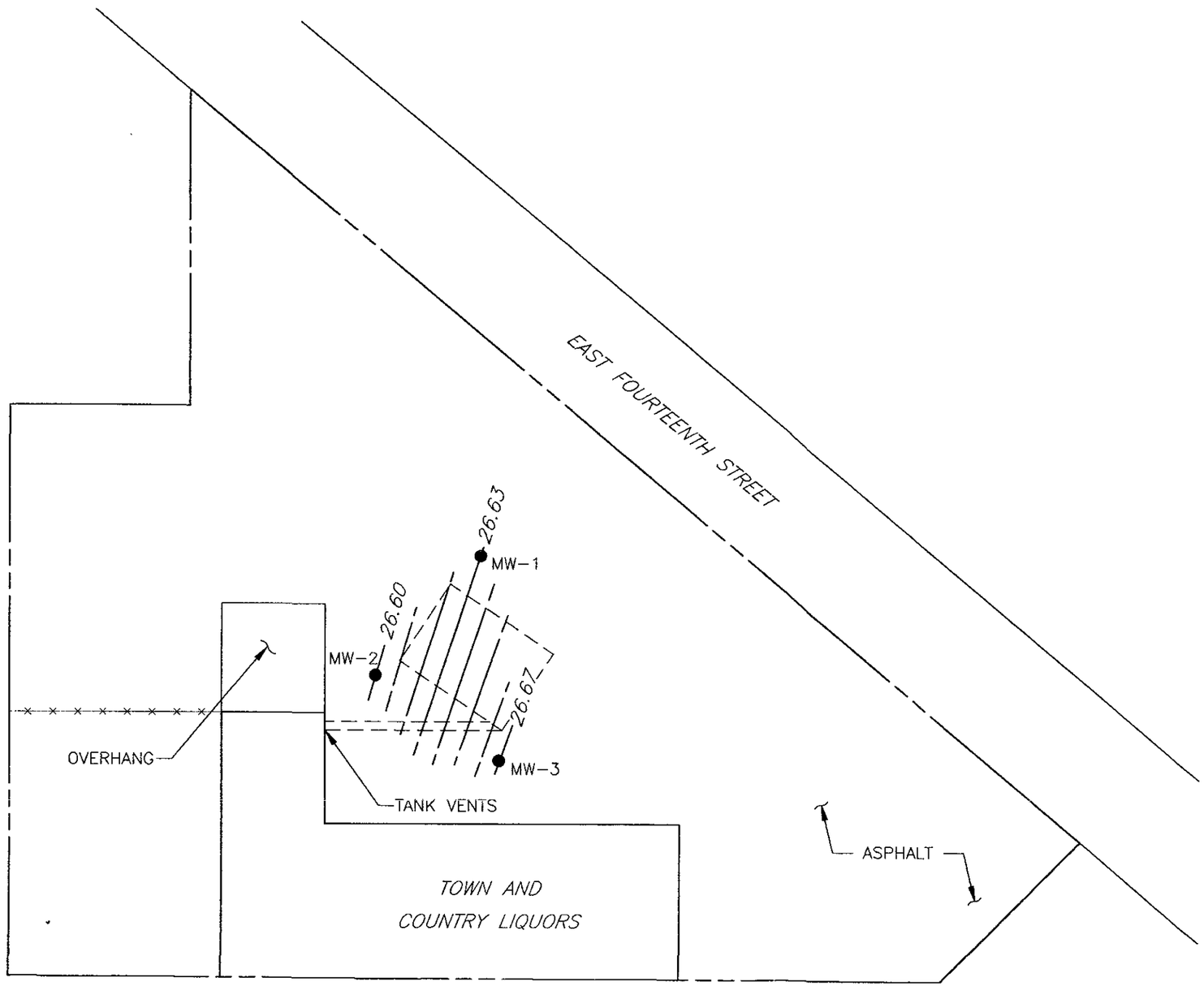
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	10-15-93	ISSUED FOR REPORT	JLW	[illegible]	JWB

DATE: 10-12-93 SCALE: AS SHOWN	FIGURE 2	DRAWING NUMBER 91-153-B10

DRAWING NUMBER 91-153-B9

N



LEGEND:

- PROPERTY LINE
- APPROXIMATE LIMITS OF FORMER TANK EXCAVATION
- MW-1 — MONITORING WELL LOCATION
- 26.60 — GROUND WATER CONTOUR, FEET ABOVE MEAN SEA LEVEL (MSL) SEPTEMBER 9, 1993

NOTES:

1. GROUND WATER CONTOURS ARE DASHED WHERE INFERRED.

SCALE

30 0 30 FEET

MONITORING WELL LOCATIONS
GARCIA ENTERPRISE SITE
SAN LEANDRO, CALIFORNIA

PREPARED FOR

GARCIA ENTERPRISES, INC.
SAN LEANDRO, CALIFORNIA

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No	DATE	ISSUE / REVISION	DWN BY	CK'D BY	APP'D BY
1	9-28-93	ISSUED FOR REPORT	VZC	[illegible]	[illegible]

DATE 9-23-93	FIGURE 3	DRAWING NUMBER 91-153-B9
SCALE AS SHOWN		