SITE ASSESSMENT REPORT

6/3/97

2116

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

Prepared For:
MESSRS. AARON AND STANLEY WONG
2200 E. 12TH STREET
OAKLAND, CA 94606

Submitted By:
TANK PROTECT ENGINEERING
Of Northern California, Inc.
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June 3, 1997

Project Number 267

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Registered Geologist

Expiration Date 5/31/99

Jeff J. Farhoomand, M.S.
Principal Engineer

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This report has been prepared by the staff of **Tank Protect Engineering of Northern California, Inc.** under direction of an Engineer and/or Geologist whose seal(s) and/or signature(s) appear hereon.

The findings, recommendations, specifications or professional opinions are presented, within the limits prescribed by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied.

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1.0 INTRODUCTION

The subject site is located at 2345 E. 14th Street in the city of Oakland in Alameda County, California (see Figure 1) and is owned by Messrs. Aaron and Stanley Wong [(Wong), telephone number (510) 532-1672]. The site is occupied by a used car dealership known as Credit World Auto Sales. The only onsite structure is a building which includes an office and automotive service bay (see Figure 2). Previous work by others and Tank Protect Engineering of Northern California, Inc. (TPE) has documented soil and groundwater contamination apparently due to leaks or spills associated with a former underground gasoline tank complex.

This SITE ASSESSMENT REPORT (SAR) presents site history, documents soil boring procedures and provides analytical results of soil and groundwater sampling.

2.0 SITE HISTORY

The Alameda County Health Care Services Agency (ACHCSA) requested an additional groundwater investigation in a May 17, 1995 letter to Wong titled Status of Subsurface Investigation at 2345 E. 14th St., Oakland CA 94601, Former Taxi Taxi. TPE responded to ACHCSA request with a August 4, 1995 WORKPLAN FOR GROUNDWATER INVESTIGATION, 2345 E. 14TH ST., OAKLAND CA 94601 (WP). In an October 26, 1995 letter titled Comment on August 4, 1995 Workplan for Soil and Groundwater Investigation at 2345 E. 14th St., Oakland CA 94601 ACHCSA approved TPE's WP. Due to the delay in soil excavation activities, ACHCSA issued a letter October 3, 1996 titled Status of Subsurface Investigation at 2345 E. 14th St., Oakland CA 94601, Former Taxi Taxi requesting that the offsite groundwater investigation be conducted and encouraged the use of rapid site assessment techniques (ie "Geoprobe", Hydropunch").

Details on soil excavation and remediation are presented in TPE's January 10, 1997 SITE ASSESSMENT REPORT, CREDIT WORLD AUTO SALES, 2345 E. 14TH STREET, OAKLAND CA 94601.

TPE responded with a February 7, 1997 ADDENDUM TO AUGUST 4, 1995 WORKPLAN, CREDIT WORLD AUTO SALES, 2345 E. 14TH STREET, OAKLAND CA 94601 (AWP) at the request of the client and the Underground Storage Tank Fund (State Fund). The addendum changed the number and location of the soil borings and described using a rapid site assessment technique ("Geoprobe") in which to conduct the work. On February 10, 1997 ACHCSA issued a letter titled Addendum to August 4, 1995 Workplan, Credit World Auto Sales, 2345 E. 14Th Street, Oakland CA 94601 approving the AWP and relocating boring SB-2. Appendix A presents the above letters from ACHCSA.

3.0 SCOPE OF WORK

As a investigation of the vertical and horizontal extent of soil and groundwater contamination, TPE conducted the following scope of work:

- Obtained soil boring permits from the Alameda County Flood Control and Water Conservation District, Water Resources Management, Zone 7 (Zone 7).

- Obtained permission from adjacent landowners to conduct a soil boring on their property.

- Drilled 5 exploratory soil borings to the depth of groundwater (approximately 30 feet) to further investigate the horizontal and vertical extent of contamination.

- Collected soil samples from each boring at approximately 5-foot depth intervals, changes in lithology, and occurrence of apparent soil contamination for construction of a boring log and selection for chemical analysis.

- Collected a groundwater "grab" sample from each boring for chemical analysis.

- Sealed the soil borings to ground surface with neat Portland cement.

- Analyzed soil and groundwater samples for total petroleum hydrocarbons as gasoline (TPHG) and for methyl t-butyl ether, benzene, toluene, ethylbenzene and xylenes (MBTEX).

- Prepared this SAR.

Details of the proposed scope of work are presented below.

3.1 Predrilling Activities

Before commencing drilling activities, TPE obtained soil boring permits from Zone 7 (permit #97126), obtained excavation permits from the City of Oakland (Permits # X9700408 and X9700409) and notified ACHCSA, so that their representative could be present to observe the soil borings, sampling procedures and site conditions (see Appendix A). In an attempt to obtain adjacent landowners permission, ACHCSA issued a March 6, 1997 letter titled Request For Access to Install Environmental Boring/Monitoring Well on 2321 E. 14th St., Oakland CA 94601. TPE obtained verbal permission from the owner of the Mitchell Hotel (Jayanti Nathu) on April 9, 1997 to drill a soil boring SB-5 (see Appendix A). TPE notified Underground Service Alert (#96992) to minimize the potential of encountering underground utilities and objects while conducting the soil borings.

3.2 Rationale for Soil Boring Locations

Attached Figure 3 shows the locations of the soil borings proposed in the AWP. The soil borings were located to investigate the horizontal extent of groundwater contamination, both upgradient and downgradient of the existing onsite wells. Soil borings SB-1 and SB-2 were located to investigate the extent of the hydrocarbon plume in the upgradient direction. Soil borings SB-3 through SB-5 were located to investigate the extent of the hydrocarbon plume in the downgradient direction, based on quarterly groundwater gradient determinations and groundwater flow directions.

3.3 Soil Boring and Sampling Procedures

The exploratory borings were drilled to a depth of about 30 feet by the "Geoprobe" method, a rapid site assessment technique, used by State of California licensed (C-57 Water Well Driller Contractor licensed 482390) Kvilhaug Well Drilling and Pump Inc., (KWD) located in Concord, California. The Geoprobe method uses a direct push technology in drilling of the boreholes. Soil samples are collected in a large bore discrete soil sampler in acetate tubes. The tubes can be cut at a desired interval and depth for sampling and the tube ends sealed with plastic caps for laboratory analysis. All drilling equipment was steam-cleaned or washed before drilling each boring to minimize the potential of cross-contamination between borings or introducing offsite contamination to the initial boring. Representative soil samples were collected for chemical analyses in the vadose zone at approximately 5-foot depth intervals below the ground surface, at changes in lithology, and the occurrence of apparent hydrocarbon contamination by advancing a sampler, equipped with 1-inch diameter by 2 feet long acetate tube, into the undisturbed soil. The sampling equipment was cleaned before each sampling event by washing with an Alconox® solution and rinsing in tap water. Appendices B and C document TPE's protocols relative to soil sampling handling, and waste handling and decontamination procedures, respectively.

All soil borings were sealed to ground surface by tremie with neat cement.

Detailed boring logs were prepared from the acetate samples. The soils were logged according to the Unified Soil Classification System under the direction of a California Registered Geologist (see Appendix D).

Drill cuttings and rinsate were stored on site in labeled, 5-gallon, DOT 17H pails and/or 55-gallon DOT 17H drums. The labels showed contents, date stored, suspected chemical contaminant, expected date of removal, company name, contact person, and telephone number.

3.3.1 Soil Sample Selection for Chemical Analyses

The State Fund authorized five soil samples to be collected for laboratory analysis. One soil sample was collected from each boring for laboratory analysis. If no apparent hydrocarbon contamination was present in any boring, the soil sample collected within 5 feet of groundwater was retained for chemical analysis.

All vadose zone soil acetate samples were field-screened for the presence of apparent hydrocarbon soil contamination based on visible hydrocarbon stains, odors, and headspace analysis for volatile organic compounds using a Gastech, Inc., Trace-Techtor hydrocarbon vapor tester (HVT). Headspace analyses were conducted by partially filling a quart-size plastic bag with a soil sample, sealing the bag air tight, and warming the bag to promote volatilization of hydrocarbons, if any, into the air space of the bag. After allowing for volatilization, the headspace of the bag was sampled by the HVT and the response recorded in ppm. All samples showing apparent hydrocarbon contamination were retained.

Selected samples were preserved in the brass tubes by quickly covering the open ends with Teflon sheeting and capping with plastic end-caps. The tubes were labeled to show site name, project number, date and time collected, sample name and depth, and sampler name; sealed in quart-size plastic bags; and placed in an iced-cooler for transport to a California Department of Health Services (DHS) certified Entech Analytical Labs, Inc. (Entech) located in Sunnyvale, CA accompanied by chain-of-custody documentation. Appendix B documents TPE's protocol relative to sample handling procedures.

3.3.1.1 Chemical Analyses

Soil samples were analyzed for TPHG by the United States Environmental Protection Agency (EPA) Methods 8015M and for MBTEX by EPA Method 8020.

3.4 Groundwater "Grab" Sampling for Chemical Analyses

The State Fund authorized five water samples to be collected for laboratory analysis. One water sample was collected from each boring for laboratory analysis. Groundwater "grab" samples were obtained after each borehole had penetrated groundwater by inserting 3/4-inch PVC casing and using a stainless steel bailer to collect the sample from the boring. The sampling equipment was cleaned before each sampling event by washing with an Alconox® solution and rinsing in tap water. The water samples were collected in sterilized two 40-milliliter glass vials having Teflon-lined screw caps, filled with no headspace, and labeled to include: date, time, sample location, project number, and sampler name. The samples were immediately stored in an iced-cooler for transport to Entech, accompanied by chain-of-custody documentation. Appendix B documents TPE's protocol relative to sample handling procedures.

Appendices C and E document TPE's protocols relative to waste handling and decontamination procedures, and quality assurance and quality control procedures, respectively.

3.4.1 Chemical Analyses

The groundwater "grab" samples were analyzed for TPHG by EPA Method 8015M and for MBTEX by EPA Method 8020.

4.0 FINDINGS

4.1 Regional Setting

The site is located in the East Bay Plain of the Coast Range physiographic province. The surface of the Bay Plain in the general area of the site is gently sloping to the southwest and the site is at an elevation of about 27 feet above MSL. The East Bay Plain is an area comprised of flat alluvial lowlands and bay and tidal marshes lying between the bedrock hills of the Diablo Range to the east and San Francisco Bay to

the west. Geologic materials underlying the plain are classified as consolidated and unconsolidated. The consolidated materials beneath the East Bay Plain are estimated to be present at a depth of about 1,000 feet below the ground surface and are not considered to be aquifers. The unconsolidated materials, occurring from ground surface to a depth of about 1,000 feet, contain the groundwater aquifers of the East Bay Plain. These materials consist of a heterogeneous mixture of clay, silt, sand, and gravel mainly derived by erosion of the Diablo Range. According to USGS Professional Paper 943, the subject site is located on Quaternary age alluvial deposits consisting of medium-grained, unconsolidated, moderately sorted, permeable fine sand, silt, and clayey silt with a few thin beds of coarse sand.

Major groundwater-bearing materials beneath the East Bay Plain occur at depths ranging from 50 feet to 1,000 feet below ground surface. Groundwater from these aquifers is presently used mostly for irrigation and industrial purposes. Groundwater flow is generally in a direction from the Diablo Range toward San Francisco Bay.

The nearest body of surface water to the site is Brooklyn Basin Tidal Canal located about .50 miles west of the site.

4.2 Site Geology and Hydrogeology

The site hydrogeology has been interpreted from soil boring logs constructed by TPE and others and evaluation of the stabilized groundwater elevations in the 5 on-site groundwater monitoring wells (see Section 4.3 Groundwater Flow Direction and Gradient). Boring logs for soil borings SB-1 through SB-5 are presented in Appendix D. The reader is referred to California Environmental Consultants (CEC) November 21, 1988 letter report and Earth Systems Environmental, Inc.(ESE) December 23, 1991 Report for soil boring logs and well construction details of soil borings and monitoring wells constructed by others.

The locations of the cross sections are shown in Figure 4. Geologic cross sections A-A' and B-B' (Figures 5 and 6) have been constructed from boring logs and stabilized groundwater elevations to illustrate the site's stratigraphy and hydrogeologic characteristics.

Geologic cross sections A-A' and B-B' illustrate that the stratigraphy, in general, consists of the following sequence from ground surface to depth: (1) a dry, brown, aggregate base material that underlies the asphalt surface to a depth of about 1.0 foot; (2) an underlying dry, grey to black clay (sometimes brown) ranging to depths of about 7.5 to 12.0 feet; (3) an underlying damp light grey to green clay to a depth of about 17.0 feet grading into a green clayey sand; (4) an underlying water bearing light green to grey clayey sand ranging to depths of about 23.0 to 27.0; (5) an underlying, dry to moist, brown, gravelly clay ranging to depths of about 27.0 to 30.5 feet grading into a brown clayey sand; (6) an underlying, light brown, wet sand to a depth of about 32.5 feet; and (7) an underlying damp, brown, gravelly clay ranging to the total depth explored. These layers are interfingered deposits of gravel, sand, silt and clay in various combinations.

4.3 Groundwater Flow Direction and Gradient

On March 7, 1997 depth-to-groundwater was measured from the top of casing (TOC) in all wells to the nearest 0.01 foot using an electronic Keck Instrument, Inc., KIR-89 interface probe. A minimum of 3 repetitive measurements were made for each level determination to ensure accuracy. Depth-to-groundwater was subtracted from the TOC elevation, measured relative to mean sea level, to calculate the elevation of the groundwater level in each well (see attached Table 1). When floating product was present, the groundwater elevation was corrected by multiplying the floating product thickness by a density of .75 and adding the resultant value to the groundwater elevation.

Attached Figure 7 is a groundwater gradient map constructed from the data collected on March 7, 1997. Groundwater flow direction was to the north and northwest with a gradient about .020 and .035 feet per foot, respectively. Average groundwater elevations, changes in average groundwater elevations, groundwater gradients, and groundwater flow directions are tabulated in attached Table 2.

4.4 Floating Product

TPE has recorded floating product measurements for wells MW-1 and MW-2 since 1993. Table 3 summarizes the thickness of floating product measured in each well.

Floating product was not observed in any of the monitoring wells on March 7, 1997 during the quarterly monitoring event. Floating product was not observed in any of the soil borings, when the "grab" groundwater samples were collected.

Water levels were measured to be above the screen intervals of the monitoring wells during the recent quarterly monitoring event, March 1997. This may account for the lack of floating product observed in the monitoring wells (see Figures 5 and 6).

4.5 Quarterly Groundwater Monitoring

TPE has conducted quarterly groundwater monitoring from August 1993 through March 10, 1997. The reader is referred to Table 4 for a summary of TPHG and BTEX chemical concentrations detected in the wells during the quarterly monitoring events. TPHG and MBTEX concentrations have remained consistent in quarterly monitoring events. Analytical results for TPHG and benzene during the first quarterly monitoring event were used to construct chemical concentration maps (see Section 4.8 TPHG Dissolved Plume Map and Section 4.9 Benzene Dissolved Plume Map).

4.6 Results of Soil Chemical Analyses

TPHG was detected in soil samples SB-2 (16.5-17.0 feet) and SB-5 (11.5-12.0 feet) at a concentration of 3.7 part per million (ppm) and 91 ppm, respectively. Benzene, toluene and ethylbenzene were detected in soil sample SB-2 (16.5-17.0 feet) at concentrations of .012 ppm, .0071 ppm and .042 ppm, respectively. All other analytical results were nondetectable.

Results of soil chemical analyses are summarized in Table 5 and documented with certified analytical reports and chain-of-custodies in Appendix F.

4.7 Results of Groundwater "Grab" Sample Analyses

TPHG, benzene, and ethylbenzene were detected in groundwater "grab" samples SB-2W and SB-5W at concentrations of 6,100 parts per billion (ppb), 870 ppb, and 17 ppb; and 890 ppb 5.4 and 1.4 ppb, respectively. Toluene and xylenes were detected in groundwater sample SB-2W at concentrations of 35 ppb and 28 ppb, respectively. methyl t-butyl ether was detected in groundwater sample SB-5W at a concentration of 12 ppb.

Results of groundwater "grab" chemical analyses are summarized in Table 6 and documented with a certified analytical report and chain-of-custody in Appendix F.

4.8 TPHG Dissolved Groundwater Plume Map

Figure 8 presents the groundwater TPHG concentrations from the soil boring program along with the March 7 and 10, 1997 quarterly sampling results. Dissolved concentrations in excess of 50,000 ppb TPHG are present.

4.9 Benzene Dissolved Groundwater Plume Map

Figure 9 presents the groundwater benzene concentrations from the soil boring program along with the March 7 and 10 quarterly sampling results. Dissolve concentrations in excess of 5,000 ppb benzene are present.

5.0 CONCLUSIONS

TPHG was detected in soil SB-2 (16.5-17.0 feet) and SB-5 (11.5-12.0 feet) at concentrations of 3.7 ppm and 91 ppm, respectively. Some MBTEX chemicals were detected in soil sample SB-2 (16.5-17.0 feet) at low concentrations.

Groundwater sample results indicate that TPHG was detected in grab samples from SB-2 and SB-5 at concentrations of 6,100 and 890 ppb. Some or all MBTEX chemical concentrations were also detected.

Groundwater contamination has been defined to the west, north and east of the site. Groundwater contamination has not been defined to the south of the site based on the results of soil boring SB-2 and MW-3.

The present extent of floating product at the site remains unknown, due to water levels which were above well screen intervals. The recurrence of floating product in wells MW-1 and MW-2 suggests that the volume of free-phase product beneath the site has not been significantly reduced.

6.0 RECOMMENDATIONS

TPE recommends that a further soil boring program be initiated towards the south and southwest of the subject site to define the horizontal extent of groundwater contamination (see figure 10). Based upon the results of the investigation, offsite monitoring wells could be located.

TPE recommends that quarterly groundwater monitoring be continued at the site to monitor chemical concentrations and groundwater flow directions. TPE recommends that other options for free product removal should be evaluated to reduce the concentrations of dissolved benzene in the groundwater plume. The installation of a limited product recovery system, possibly including a large diameter recovery well and product storage tank. The recovery well could possibly be located near well MW-2, which has exhibited the greatest amount of floating product.

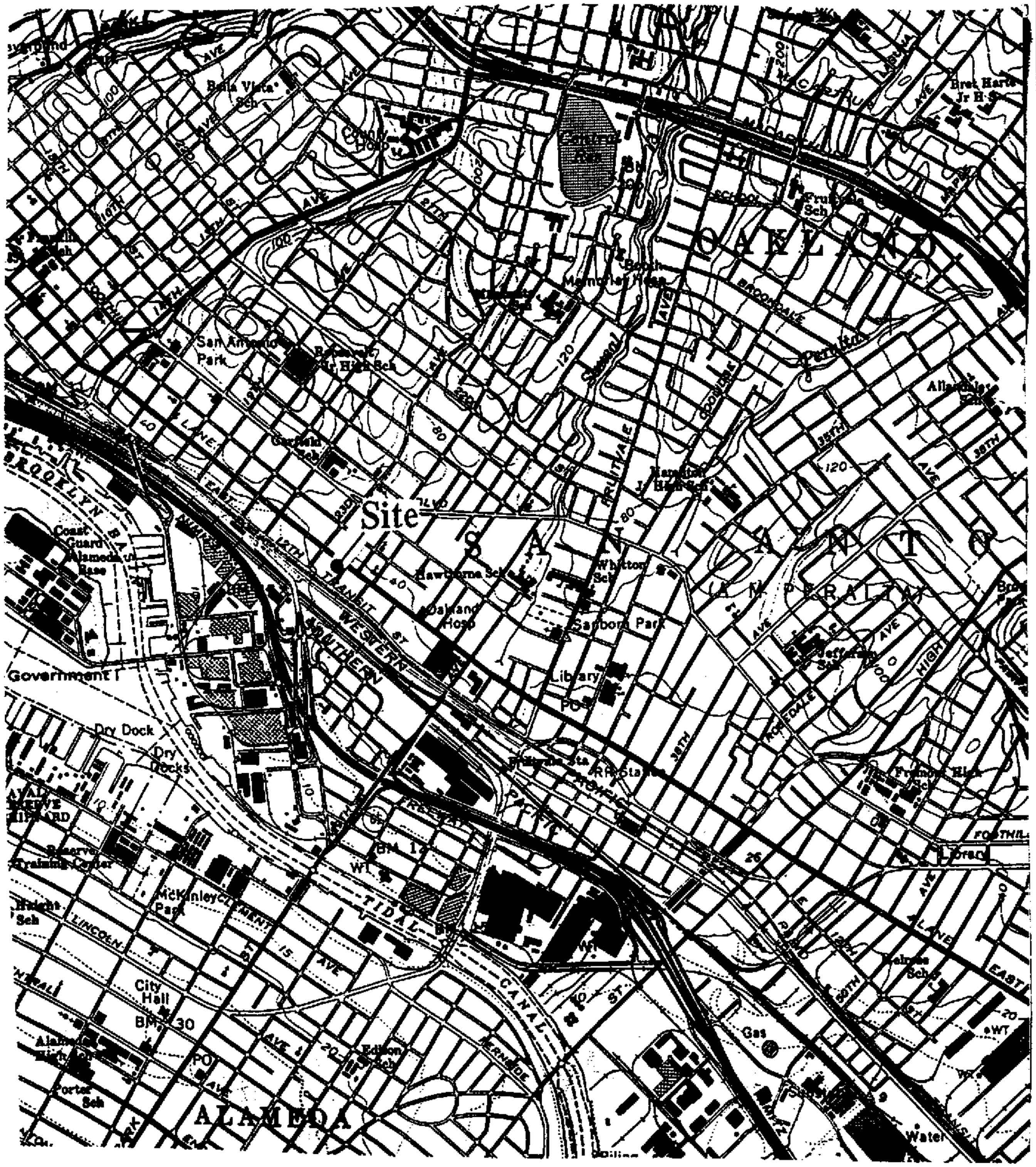
7.0 STUDY LIMITATIONS

This SAR is based on subsurface exploration, laboratory analyses of soil and groundwater samples, and subsurface geologic correlations. The chemical analytical results for the samples are considered applicable to that borehole or location from

which they were collected. The soil encountered in the borings is believed to be representative of the site; however, the soil may vary in character between observation points. The conclusions contained herein are based on the field observations, analytical data, and professional judgement which is in accordance with current standards of professional practice. Representations made of soil and groundwater conditions between sample locations are extrapolations based on professional opinions and judgements and accepted industry practice. Therefore, TPE cannot and will not provide guarantees, certifications, or warranties that the subject property is or is not free of all contaminated soil or groundwater and such assessments are provided only in order that the client may make an informed decision.

The extent of testing and data collection directly affects the statistical confidence level of all work performed. As a practical matter, to reach or even approach a 100 percent statistical confidence level would be prohibitively expensive. Therefore, if a reassessment of the subject property becomes necessary in the future, TPE will not reassess the area at its own cost. No other warranty is expressed or implied.

The findings and conclusions of this report are valid as of the present time; however, the passing of time could change the conditions of the subsurface due to natural processes or the influence of man. Accordingly, the findings of this report may be invalidated, wholly or partly, by changes beyond TPE's control. Therefore, this report should not be relied upon after an extended period of time without being reviewed by a Civil Engineer or Registered Geologist.



LEGEND

REFERENCE: USGS 7.5 MINUTE
SERIES QUADRANGLE MAP
OAKLAND EAST, CALIFORNIA
PHOTOREVISED 1980

-N-

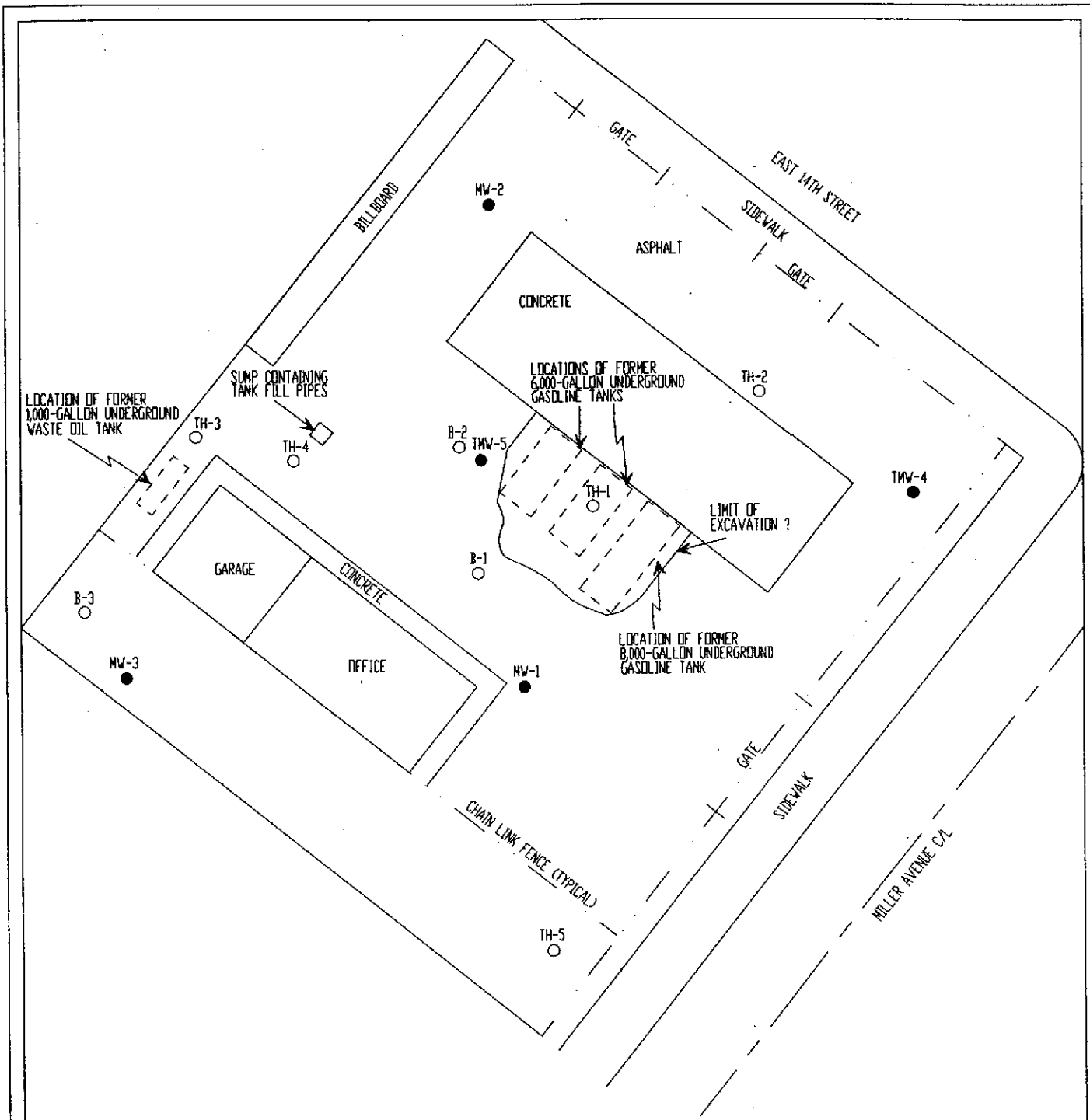
0 — 2,000
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE VICINITY MAP

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	1
FILE #	267-1N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE

MW-1 ● NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS

B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS

-N-

0 30

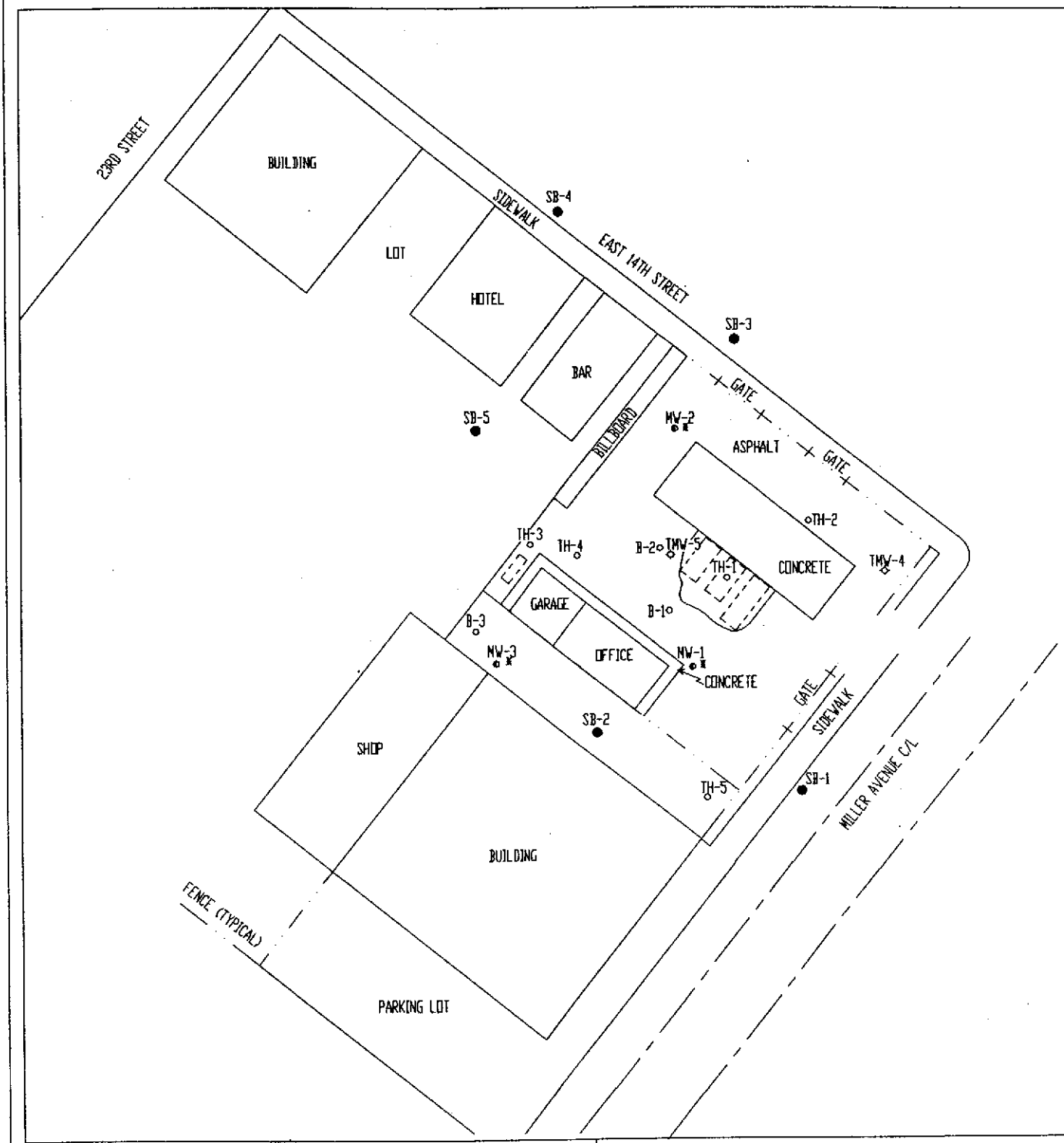
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	2
FILE #	267-2N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 ◇ NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 ◐ NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- SB-1 ● LOCATION OF SOIL BORING
- LOCATION OF FORMER UNDERGROUND STORAGE TANK

-N-

0 60

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
LOCATION OF SOIL BORINGS

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	3
FILE #	267-27N
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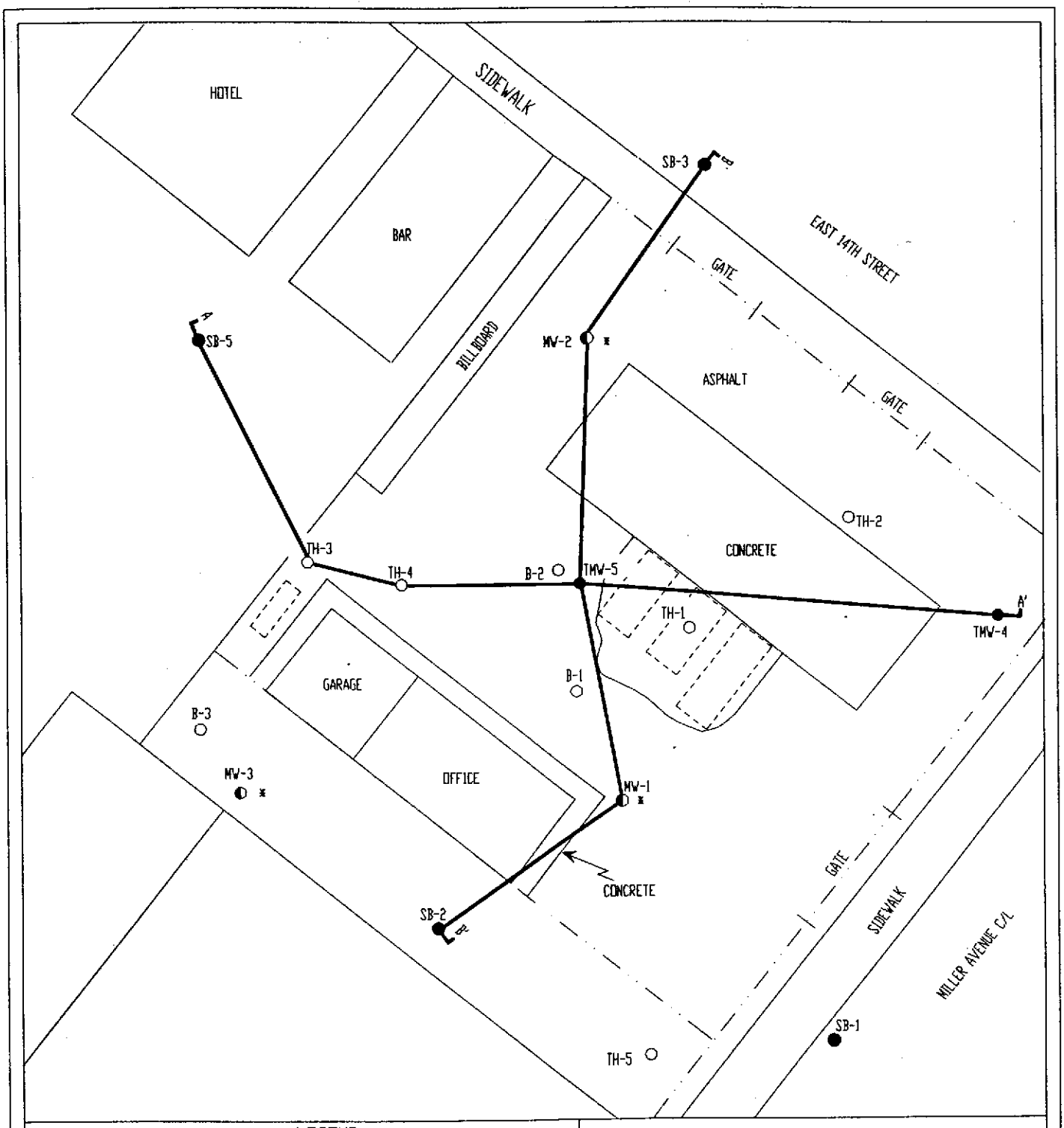
CHECKED BY	LNH



LEGEND

- TMW-4 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- A A' — LOCATION OF GEOLOGIC CROSS SECTION

-N-

0 30

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN

LOCATION OF GEOLOGIC CROSS SECTIONS A-A' AND B-B'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	4
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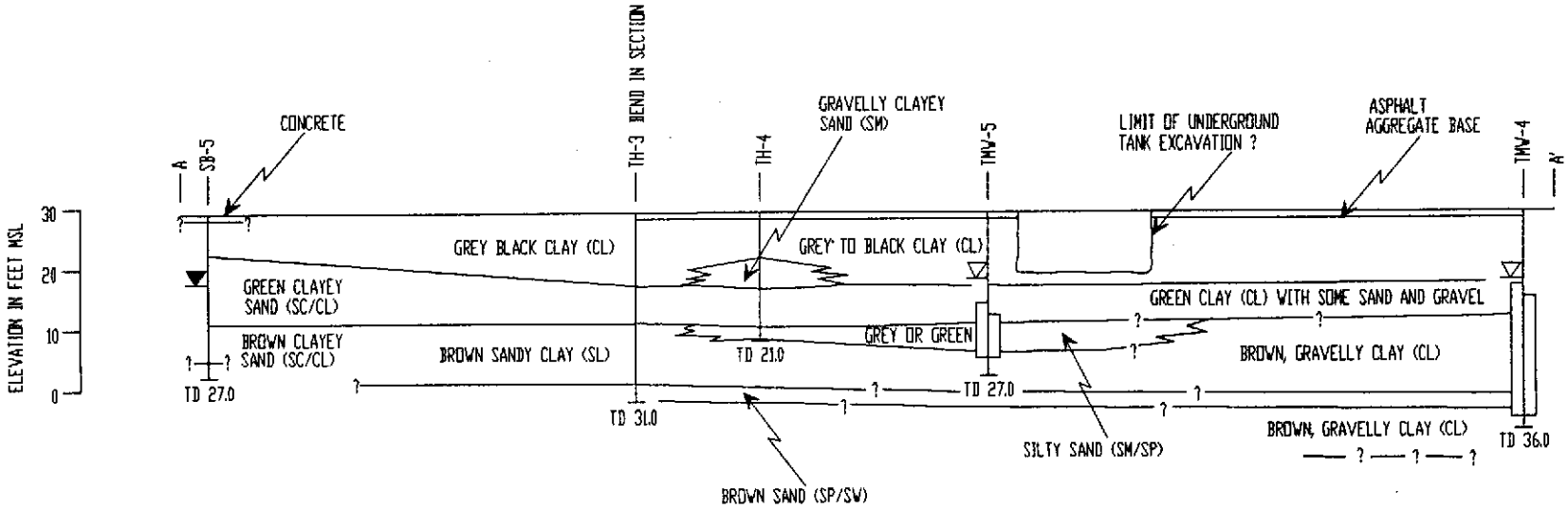
CHECKED BY	LNH



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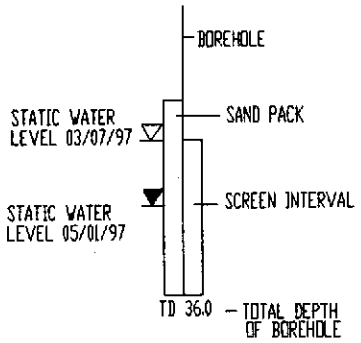

NO VERTICAL EXAGGERATION

NOTE: SEE FIGURE 4 FOR LOCATION OF CROSS SECTION

TANK PROTECT ENGINEERING

GEOLOGIC CROSS SECTION A-A'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	5
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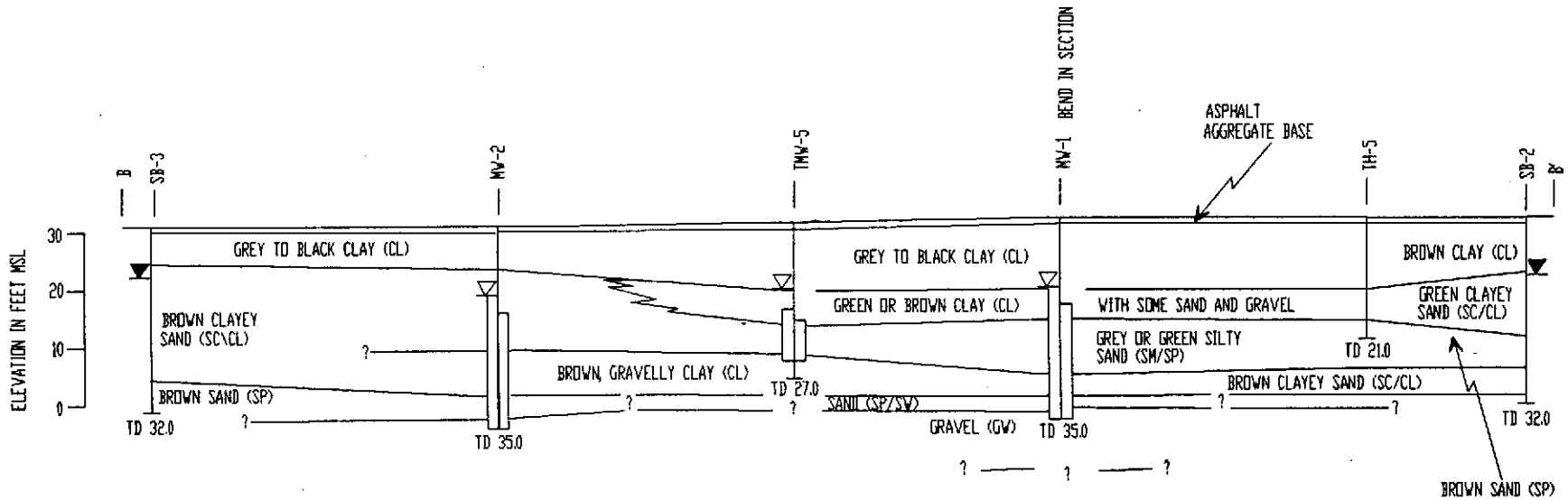
CHECKED BY	LNH



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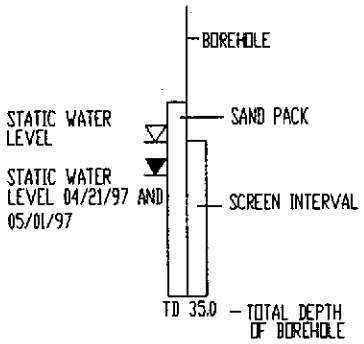

NO VERTICAL EXAGGERATION

NOTE: SEE FIGURE 4 FOR LOCATION OF CROSS SECTION

TANK PROTECT ENGINEERING

GEOLOGIC CROSS SECTION B-B'

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	6
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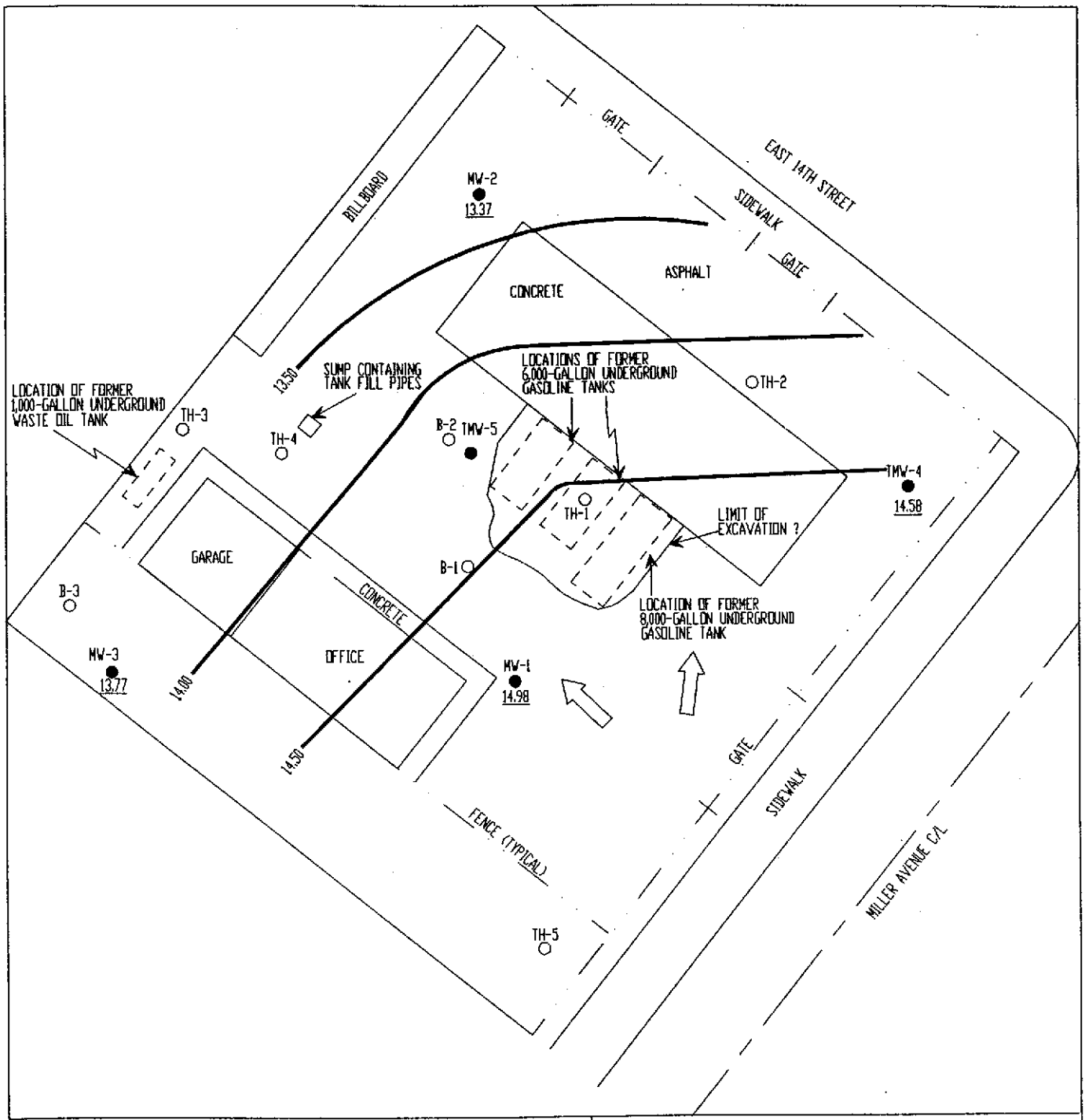
CHECKED BY	LNH



LEGEND

- TMW-4 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- 14.98 — POTENTIOMETRIC ELEVATION
- -14.50- — POTENTIOMETRIC CONTOUR
- ⇦ — GROUNDWATER FLOW DIRECTION

-N-

0 30

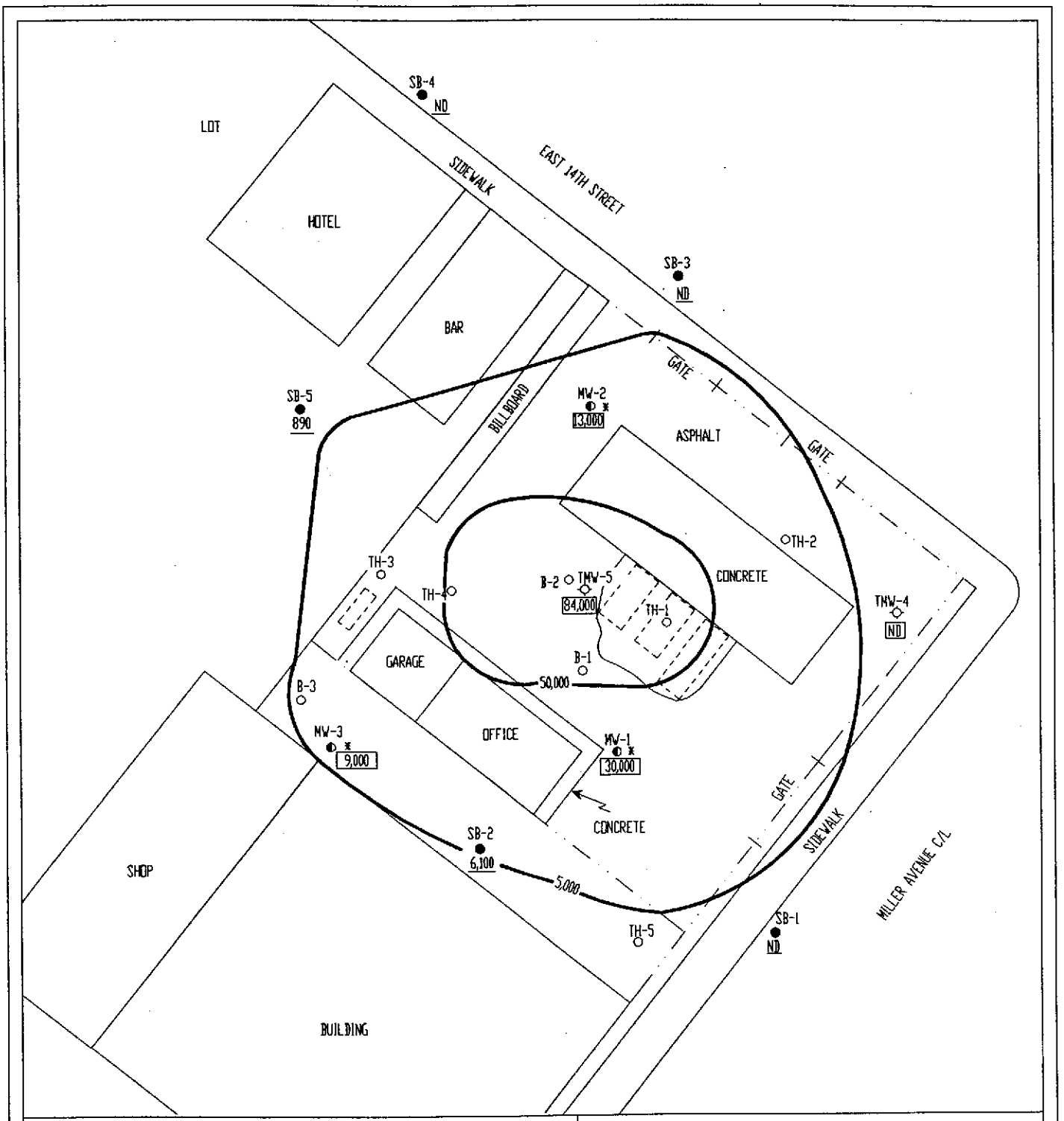
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
GROUNDWATER GRADIENT MAP (3/7/97)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	7
FILE #	267-26N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ◇	NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
MW-1 ◐	NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
SB-1 ●	LOCATION OF PROPOSED SOIL BORING
- - - -	LOCATION OF FORMER UNDERGROUND STORAGE TANK
1,700	CONCENTRATION (ppb)
5,000	ICDCONCENTRATION CONTOUR
30,000	CONCENTRATION 3/7 AND 3/10/97
ND	NON DETECTABLE

-N-

0 40

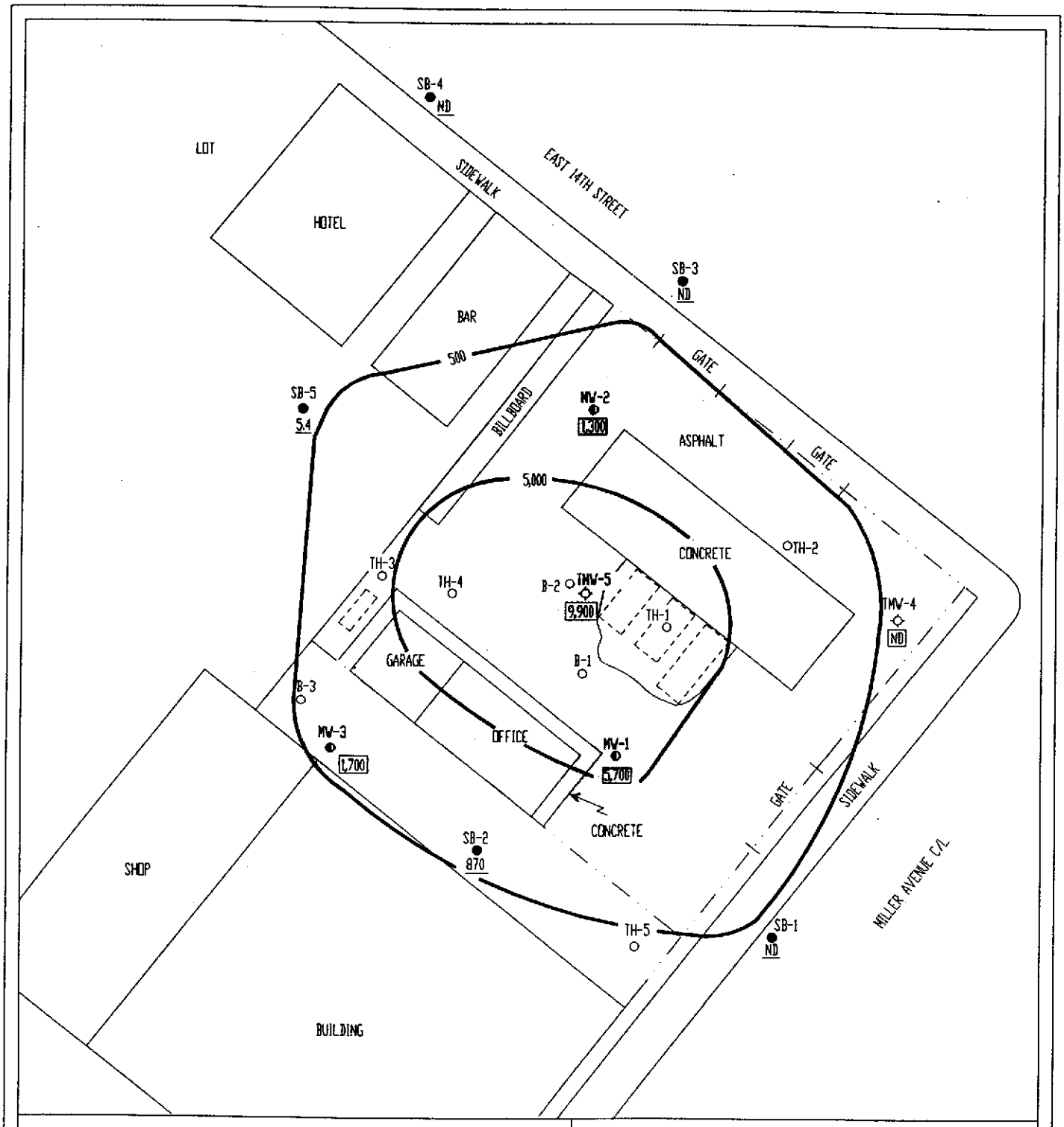
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
GROUNDWATER GASOLINE CONCENTRATION

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	8
FILE #	267-29N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

TMW-4 ◇	NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
MW-1 ◐	NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
B-1 ○	NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
SB-1 ●	LOCATION OF PROPOSED SOIL BORING
[dashed]	LOCATION OF FORMER UNDERGROUND STORAGE TANK
1,700	CONCENTRATION (ppb)
5,000	ICOCONCENTRATION CONTOUR
5,700	CONCENTRATION 3/7 AND 3/10/97
ND	NON DETECTABLE

-N-

0 40

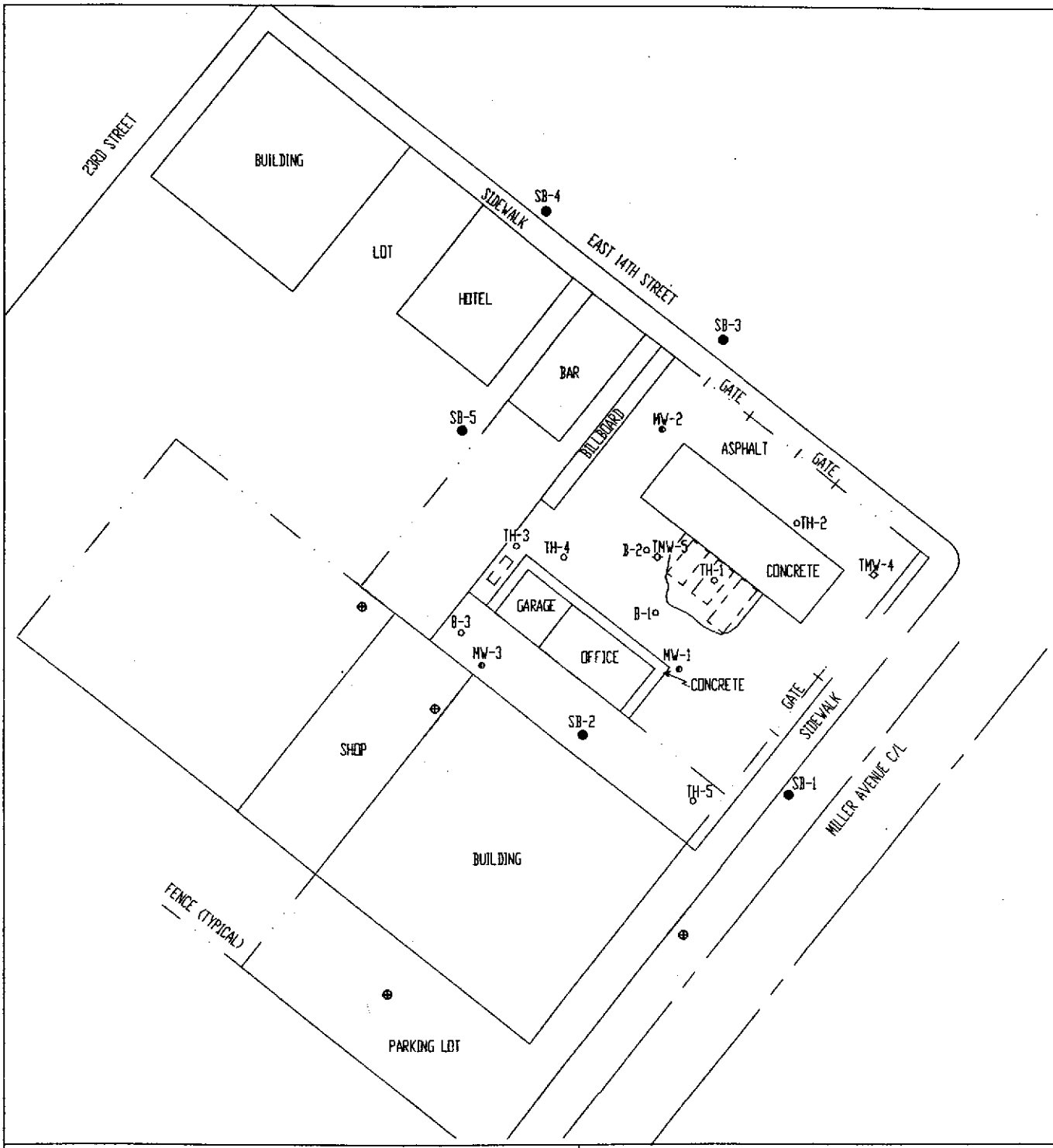
SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN: GROUNDWATER BENZENE CONCENTRATION

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	9
FILE #	267-30N
DRAWN BY	VK
CHECKED BY	LNH



LEGEND

- TMW-4 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- SB-1 — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY TPE
- LOCATION OF PROPOSED SOIL BORING
- LOCATION OF FORMER UNDERGROUND STORAGE TANK

-N-

0 60

SCALE IN FEET

TANK PROTECT ENGINEERING

SITE PLAN:
LOCATION OF PROPOSED SOIL BORINGS

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	5/21/97
FIGURE	10
FILE #	267-34N
DRAWN BY	VK
CHECKED BY	LNH

TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC[1] Elevation (Feet MSL[4])	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected[3] Groundwater Elevation (Feet MSL)
MW-1	08/23/91[5]	100.00[2]	15.42	NA[9]	84.58
	04/16/92[6]	27.33[7]	16.66	11.54	14.51[8]
	06/11/93		12.61	12.60	14.73
	08/17/93		14.40	13.63	13.50[7]
	03/31/94		12.64	ND	14.69
	06/27/94		14.32	13.16	13.88
	09/16/94		15.86	13.64	13.14
	03/31/95		11.82	9.48	17.27
	06/28/95		13.50	12.60	14.51
	09/28/95		14.27	13.96	13.29
	12/26/95		11.77	11.62	15.67
	03/22/96		10.52	10.44	16.87
	06/20/96		13.38	12.49	14.63
	09/24/96		14.60	13.40	13.63
	12/27/96		9.17	9.08	18.23
	03/06/97		12.35	ND	14.98
MW-2	08/23/91[5]	98.585[2]	13.77	NA	84.815
	04/16/92[6]	25.92[7]	15.38	12.57	12.65[8]
	06/11/93		13.185	ND[10]	12.74
	08/17/93		14.04	14.03	11.89
	03/31/94		13.61	13.07	12.72[8]
	06/27/94		14.24	13.44	12.28
	09/16/94		17.82	13.36	11.45
	03/31/95		16.72	9.28	14.78
	06/28/95		13.50	12.77	12.97
	09/28/95		14.63	14.09	11.70
	12/26/95		12.58	11.68	14.01
	03/22/96		11.46	11.31	14.57

TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC[1] Elevation (Feet MSL[4])	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected[3] Groundwater Elevation (Feet MSL)
MW-2	06/20/96		13.08	12.71	13.12
	09/30/96		16.67	12.92	12.06
	12/27/96		15.74	8.17	15.86
	03/06/97		12.55	ND	13.37
MW-3	08/23/91[5]	99.25[2]	15.07	NA	84.18
	04/16/92[6]	27.57[7]	14.14	13.98	13.55[8]
	06/11/93		14.275	ND	13.30
	08/17/93		15.77	ND	11.80
	03/31/94		14.35	ND	13.22
	06/27/94		14.77	ND	12.80
	09/16/94		15.42	15.37	12.19
	03/31/95		12.98	12.52	14.94
	06/28/95		14.20	14.15	13.41
	09/28/95		15.17	ND	12.40
	12/26/95		13.33	13.27	14.28
	03/22/96		12.81	12.77	14.79
	06/20/96		13.95	13.88	13.67
	09/24/96		14.86	14.82	12.74
	12/27/96		11.04	10.98	16.58
	03/07/97		13.80	ND	13.77
TMW-4	08/17/93	26.50[7]	13.26	ND	13.24
	03/31/94		12.40	ND	14.10
	06/27/94		12.84	ND	13.66
	09/16/94		13.58	ND	12.92
	03/31/95		10.23	ND	16.27
	06/28/95		12.21	ND	14.29
	09/28/95		13.38	ND	13.12
	12/26/95		11.32	ND	15.18

TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC[1] Elevation (Feet MSL[4])	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected[3] Groundwater Elevation (Feet MSL)
TMW-4	03/22/96		10.54	ND	15.96
	06/20/96		12.14	ND	14.36
	09/24/96		13.01	ND	13.49
	12/27/96		9.51	ND	16.99
	03/07/97		11.92	ND	14.58
TMW-5	08/17/93	26.51[7]	12.98	12.95	13.55
	03/31/94		11.39	ND	15.12
	06/27/94		12.24	ND	14.27
	09/16/94		13.02	12.97	13.53
	03/31/95		7.38	ND	19.13
	06/28/95		11.31	11.25	15.25
	09/28/95		14.42	ND	12.09
	12/26/95		10.16	10.11	16.38
	03/22/96		7.59	7.54	18.96
	06/26/96[11]		7.12	ND	NA
	09/30/96[11]		7.42	ND[10]	NA[9]
	12/27/96[11]		6.38	ND	NA
	03/07/97[11]		11.12	ND	NA

[1] TOP-OF-CASING.
[2] RELATIVE TO SITE DATUM ESTABLISHED BY ESE.
[3] ELEVATION CORRECTED FOR FLOATING PRODUCT USING 0.75 DENSITY FOR GASOLINE.
[4] MEAN SEA LEVEL.
[5] WATER LEVEL MEASUREMENTS BY ESE.
[6] WATER LEVEL MEASUREMENTS BY NKJ.
[7] TOC SURVEYED 8/10/93 BY PROFESSIONAL ENGINEER.
[8] CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING
[8] CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.
[9] NOT AVAILABLE.
[10] NOT DETECTED.
[11] WELL TOP DESTROYED DURING REMEDIATION

TABLE 2
GROUNDWATER GRADIENTS, FLOW DIRECTIONS, AND ELEVATION DATA

Date	Average Groundwater Elevation (Feet-MSL[1])	Change in Average Groundwater Elevation (Feet)	Groundwater Gradient	Groundwater Flow Direction
04/16/92	13.57	---	.021	NW
06/11/93	13.59	0.02	.026	NW
08/17/93	12.80	-0.79	.029	RADIAL
03/31/94	13.97	+1.17	.050	RADIAL
06/27/94	13.38	-0.59	.020	RADIAL
09/16/94	12.65	-0.73	.0179-.0411	RADIAL
03/31/95	16.48	+3.83	.075	RADIAL
06/28/95	14.09	-2.39	.025-.053	RADIAL
09/28/95	12.52	-1.57	.025	NW
12/26/95	15.09	+2.57	.048	RADIAL
03/22/96	16.23	+1.14	.034-.132	RADIAL
06/20/96[2]	13.95	-2.28	.016	NW
09/30/96[2]	12.98	-0.97	.019	NW
12/27/96[2]	16.41	+3.43	.024-.029	N-NW
03/07/97[2]	14.18	-2.23	.020-.035	N-NW

[1] MEAN SEA LEVEL.

[2] DOES NOT INCLUDE DATA FOR TMW-5; WELL TOP DESTROYED DURING REMEDIATION ACTIVITIES.

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC[1] (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
MW-1	04/16/92[2]	16.66	11.54	5.12
	06/11/93	12.61	12.60	0.01
	08/17/93	14.40	13.63	0.77
	03/31/94	12.64	ND	---
	06/27/94	14.32	13.16	1.16
	09/16/94	15.86	13.64	2.22
	03/31/95	11.82	9.48	2.34
	06/28/95	13.50	12.60	0.90
	09/28/95	14.27	13.96	0.31
	12/26/95	11.77	11.62	0.15
	03/22/96	10.52	10.44	0.08
	06/20/96	13.38	12.49	0.089
	09/24/96	14.60	13.40	1.20
	12/27/96	9.17	9.08	0.09
	03/06/97	12.35	ND	---
MW-2	04/16/92[2]	15.38	12.57	2.81
	06/11/93	13.185	ND[3]	---
	08/17/93	14.04	14.03	0.01
	03/31/94	13.61	13.07	0.54
	06/27/94	14.24	13.44	0.80
	09/16/94	17.82	13.36	4.46
	03/31/95	16.72	9.28	7.44
	06/28/95	13.50	12.77	0.73
	09/28/95	14.63	14.09	0.54
	12/26/95	12.58	11.68	0.90
	03/22/96	11.46	11.31	0.15
	06/20/96	13.08	12.71	0.37

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC[1] (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
MW-2	09/30/96	16.67	12.92	3.75
	12/27/96	15.74	8.17	7.57
	03/06/97	12.55	ND	---
MW-3	04/16/92[2]	14.14	13.98	0.16
	06/11/93	14.275	ND	---
	08/17/93	15.77	ND	---
	03/31/94	14.35	ND	---
	06/27/94	14.77	ND	
	09/16/94	15.42	15.37	
	03/31/95	12.98	12.52	0.46
	06/28/95	14.20	14.15	0.05
	09/28/95	15.7	ND	--
	12/26/95	13.33	13.27	0.06
	03/22/96	12.81	12.77	0.04
	06/20/96	13.95	13.88	0.07
	09/24/96	14.86	14.82	0.04
	12/27/96	11.04	10.98	0.06
	03/07/97	13.80	ND	---
TMW-4	08/17/93	13.26	ND	---
	03/31/94	12.40	ND	---
	06/27/94	12.84	ND	---
	09/16/94	13.58	ND	---
	03/31/95	10.23	ND	---
	06/28/95	12.21	ND	---
	09/28/95	13.38	ND	---
	12/26/95	11.32	ND	---
	03/22/96	10.54	ND	---
	06/20/96	12.14	ND	---

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC[1] (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
TMW-4	09/24/96	13.01	ND	---
	12/27/96	9.51	ND	---
	03/07/97	11.92	ND	---
TMW-5	08/17/93	12.98	12.95	0.03
	03/31/94	11.39	ND	---
	06/27/94	12.24	ND	---
	09/16/94	13.02	12.97	0.05
	03/31/95	7.38	ND	---
	06/28/95	11.31	11.25	0.06
	09/28/95	14.42	ND	---
	12/26/95	10.16	10.11	0.05
	03/22/96	7.59	7.54	0.05
	06/20/96[11]	7.12	ND	---
	09/30/96[11]	7.42	ND	---
	12/27/96[11]	6.38	ND	---
	03/07/97[11]	11.12	ND	---

[1] TOP-OF-CASING.
[2] RELATIVE TO SITE DATUM ESTABLISHED BY ESE.
[3] ELEVATION CORRECTED FOR FLOATING PRODUCT USING 0.75 DENSITY FOR GASOLINE.
[4] MEAN SEA LEVEL
[5] WATER LEVEL MEASUREMENTS BY ESE.
[6] WATER LEVEL MEASUREMENTS BY NKJ.
[7] TOC SURVEYED 8/10/93 BY PROFESSIONAL ENGINEER.
[8] CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.
[9] NOT AVAILABLE.
[10] NOT DETECTED.
[11] WELL TOP DESTROYED DURING REMEDIATION

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-1	08/17/93	110,000	NA[2]	270	690	730	3,100
	03/28/94	34,000	NA	4,900	1,800	1,200	4,000
	06/27/94	21,000	NA	12,000	810	760	2,500
	09/16/94	37,000	NA	7,900	2,400	1,300	3,300
	03/31/95	43,000	NA	8,100	1,900	1,000	4,200
	06/28/95	80,000	NA	7,900	3,200	1,800	7,300
	09/28/95	24,000	<1,200	4,900	470	470	1,700
	12/26/95	61,000	<1,200	12,000	4,200	1,500	5,500
	03/22/96	19,000	<2,500	6,000	47	260	<750
	06/20/96	15,000	910	2,900	100	240	98
	09/24/96	20,000	340	4,800	220	300	770
	12/27/96	24,000	<5.0	5,900	440	310	740
	03/07/97	30,000	<5.0	5,700	370	290	780
MW-2	08/17/93	49,000	NA	94	240	250	980
	03/28/94	14,000	NA	4,200	<250	910	1,400
	06/27/94	24,000	NA	4,400	72	1,100	1,700
	09/16/94	40,000	NA	2,300	250	2,000	4,100
	03/31/95	28,000	NA	4,000	<120	1,100	1,400
	06/28/95	40,000	NA	2,700	130	1,700	2,900
	09/28/95	7,500	<62	420	14	250	190
	12/26/95	22,000	<250	1,300	88	950	1,800
	03/22/96	9,800	<1,200	2,200	<120	400	<380
	06/20/96	35,000	550	770	<0.50	240	<0.50
	09/30/96	58,000	<5.0	1,600	230	2,200	4,000
	12/27/96	29,000	<5.0	2,100	<0.50	1,200	1,800
	03/07/97	13,000	<5.0	1,300	37	290	180
MW-3	08/17/93	9,600	NA	4.1	17	28	54
	03/28/94	8,400	NA	2,400	56	67	200

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Methyl t-butyl ether	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-3	06/27/94	9,900	NA	3,300	<22	<25	73
	09/16/94	16,000	NA	2,300	80	620	240
	03/31/95	16,000	NA	2,800	70	<25	920
	06/28/95	11,000	NA	2,300	32	81	240
	09/28/95	6,300	<420	1,900	<42	200	<120
	12/26/95	25,000	<250	3,800	97	94	1,600
	03/22/96	16,000	250	3,100	75	69	350
	06/20/96	8,500	220	1,400	28	140	15
	09/24/96	12,000	<5.0	2,400	87	340	110
	12/27/96	5,800	240	1,700	28	<0.50	42
	03/10/97	9,000	<5.0	1,700	<0.5	110	<0.5
TMW-4	08/17/93	150	NA	<0.50	0.8	1.4	3.7
	03/28/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	06/27/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	09/16/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	03/31/95	<50	NA	<0.50	<0.50	<0.50	<1.5
	06/28/95	<50	NA	<0.50	<0.50	<0.50	<1.5
	09/28/95	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	12/26/95	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	03/22/96	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	06/20/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/24/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/27/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
TMW-5	08/17/93	120,000	NA	340	730	790	3,600
	03/28/94	70,000	NA	23,000	1,500	4,100	15,000
	06/28/94	56,000	NA	26,000	940	5,500	26,000
	09/16/94	96,000	NA	17,000	720	3,500	12,000
	03/31/95	64,000	NA	13,000	470	2,800	6,100
	06/28/95	65,000	NA	9,000	240	2,600	5,300

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Methyl t-butyl ether	Benzene	Toluene	Ethyl-benzene	Xylenes
TMW-5	09/28/95	79,000	<1,200	17,000	1,800	2,700	7,000
	12/26/95	110,000	<1,200	11,000	800	2,300	4,500
	06/26/96	30,000	830	4,000	180	1,500	2,500
	09/30/96	6,900	<5.0	1,600	79	130	370
	12/27/96	78,000	<5.0	12,000	1,900	2,900	9,700
	03/10/97	84,000	<5.0	9,900	1,100	2,600	8,800
MW-6[3]	03/22/96	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	06/20/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/27/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
TMW-6[4]	08/17/93	<50	NA	<0.50	<0.50	<0.50	<0.50
	03/28/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	06/27/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	09/16/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	03/31/95	<50	NA	<0.50	<0.50	<0.50	<1.5
	06/28/95	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	09/28/95	<50	NA	<0.50	<0.50	<0.50	<1.5
	12/26/95	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	09/24/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/30/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50

[1] PARTS PER BILLION.
[2] NOT ANALYZED.
[3] SAME AS TMW-6 (TRIP BLANK).
[4] TRIP BLANK.

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
B-1	10/03/88	15.0	3.4	NA[4]	.310	<0.1	<0.1	.140
B-2	10/03/88	15.0	83	NA	1.6	1.1	1.8	9.6
B-3	10/03/88	15.0	NA	NA	.360	.650	.470	.850
MW-1	05/22/91	10.0	150	NA	.460	.365	.305	.960
MW-1	05/22/91	15.0	255	NA	1.505	4.255	4.015	4.270
TH-1	08/21/91	15.0	2,775	NA	1.235	1.060	1.625	5.280
TH-2	08/21/91	10.0	360	NA	<0.005	<0.005	<0.005	0.770
TH-2	08/21/91	30.0	50	NA	<0.005	<0.005	<0.005	<0.005
MW-2	08/21/91	10.0	4,320	NA	7.275	6.620	3.470	13.815
MW-2	08/21/91	15.0	160	NA	<0.005	<0.005	<0.005	<0.005
TH-3[2]	08/22/91	10.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-3[2]	08/22/91	19.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-4[2]	08/22/91	10.0	25	NA	<0.005	<0.005	<0.005	0.175
TH-4[2]	08/22/91	20.0	450	NA	<0.005	<0.005	<0.005	<0.005
MW-3[2]	08/22/91	10.0	50	NA	<0.005	<0.005	<0.005	<0.005
MW-3[2]	08/22/91	15.0	25	NA	<0.005	<0.005	<0.005	<0.005
TH-5	08/22/91	10.0	10	NA	<0.005	<0.005	<0.005	<0.005
TH-5	08/22/91	18.0	<5	NA	<0.005	<0.005	<0.005	<0.005
TMW-4	07/22/93	5.5-6.0	<.500	NA	<0.005	<0.005	<0.005	<.015
TMW-4	07/22/93	10.5-11.0	<.500	NA	<0.005	<0.005	<0.005	<.015
TMW-4	07/22/93	15.5-16.0	.940	NA	<0.005	<0.005	<0.005	<.015
TMW-5	07/23/93	5.5-6.0	2.4	NA	.026	<0.005	<0.005	.053
TMW-5	07/23/93	10.5-11.0	14	NA	.900	<0.005	1.6	<.140
TMW-5	07/23/93	15.5-16.0	16	NA	.840	<0.005	.690	1.3
VS-1	12/06/94	19.5	1.3	NA	.010	.061	.027	.190
VS-2	12/06/94	14.5	51	NA	.61	.100	1.3	.940
VS-3	12/06/94	16.5	210	NA	1.1	.300	4.5	140

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VS-4	12/06/94	14.5	20	NA	1.2	.094	.470	2.4
VS-5	12/06/94	13.5	100	NA	.440	<.150	2.2	8.5
VS-6	12/06/94	4.0	2.7	NA	.046	<0.005	<0.005	<0.015
STK1-A,B,C,D	12/06/94	2.0-2.5	5.3	NA	<.014	<.014	.023	.12
STK2-A,B,C,D	12/06/94	2.0-2.5	9.2	NA	.015	<.014	.084	.300
STK3-A,B,C,D	12/06/94	3.5-4.0	45	NA	<.140	.180	.710	4.4
STK4-A,B,C,D	12/06/94	3.0-3.5	40	NA	.380	.140	.750	2.5
STK5-A,B,C,D	12/06/94	4.0-4.5	78	NA	.200	.780	1.2	8.1
STK6-A,B	12/06/94	2.0-2.5	9.8	NA	.052	<0.015	.046	.240
VSP-1A	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-2B	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-3C	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-4D	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-5A	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-6B	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-7C	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-8D	05/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-9A	05/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP-10B	05/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-6	06/30/95	21.0	<0.5	NA	<0.005	<0.005	<0.005	<0.015
VS-7	06/30/95	14.0	50	NA	.370	.070	.990	3.3
STK7(1-4)	07/03/95	3.0-3.5	290	NA	.560	.970	3.0	11.0
STK8(1-4)	07/03/95	2.0-2.5	49	NA	.100	.100	.550	1.8
STK9(1-4)	07/03/95	2.0-2.5	78	NA	.052	.036	.520	1.6
STK10(1,2,3,4)	07/03/95	3.0-3.5	22	NA	.012	.012	.032	.089
STK11(1,2,3,4)[3]	07/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-8	07/03/95	16.0	33	NA	.036	.022	.066	.099

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VS-9	07/05/95	15.0	42	NA	.060	.036	.089	.120
VS-10	07/05/95	15.0	130	NA	.180	.085	.250	.370
VS-11	07/05/95	16.0	81	NA	.073	.086	.160	.210
VS-12	07/05/95	21.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-13	07/05/95	16.0	75	NA	.048	.040	.078	.180
VSP 1A	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 2B	07/12/95	2.0-2.5	4.0	NA	<0.005	.017	.026	.099
VSP 3C	07/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 4D	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 5A	07/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 6B	07/12/95	3.5-4.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 7C	07/12/95	1.0-1.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 8D	07/12/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VS-14	07/28/95	19.0	2.8	NA	.300	.016	.094	.140
VS-15	07/28/95	15.0	61	NA	.470	.042	1.2	.730
VS-16	07/28/95	16.0	38	NA	.400	.043	.420	.590
VS-17	07/28/95	19.0	14	NA	.120	.018	.150	.110
VS-18	07/28/95	14.0	590	NA	3.1	2.4	10	52
STK12(A-D)	07/28/95	2.0-2.5	87	NA	.260	.140	1.6	3
STK13(A-D)	07/28/95	3.0-3.5	58	NA	.210	.097	.630	2.3
VSP 11A	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 12B	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 13C	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 14D	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 15A	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 16B	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 17C	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP 18D	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 19A	10/03/95	3.0-3.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 20B	10/03/95	1.5-2.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005
VSP 21C	10/03/95	2.0-2.5	<1.0	NA	<0.005	<0.005	<0.005	<0.005
STK-1 A,B,C,D	05/24/96	2.0-3.0	170	<0.005	.110	.160	.710	2.6
VS-2D	05/24/96	18.0	140	<0.005	.170	.210	.280	1.5
VF-1	05/24/96	21.0	10	<0.005	<0.005	.0074	.0095	.037
STK-2 A,B,C,D	05/24/96	2.0-3.0	320	<0.005	.100	.095	1.2	2.1
STK-1,A,B,C,D	05/29/96	2.5-3.0	1.7	<0.005	<0.005	<0.005	.005	.017
STK-2A,B,C,D	05/29/96	2.5-3.0	140	<0.005	.013	.026	.047	.094
VS-22	05/29/96	14.0	22	<0.005	.0065	<0.005	.020	.031
VS-23	05/29/96	19.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-24	05/29/96	14.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-25	05/29/96	19.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-26	05/29/96	14.0	66	<0.005	.0063	.022	.024	.130
VS-27	05/29/96	18.0	3.9	<0.005	<0.005	<0.005	<0.005	.033
VS-28	05/29/96	12.5	450	<0.005	.170	.120	.280	.390
STK-3A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-4A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-5A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-6A,B,C,D	05/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-29	05/30/96	12.5	470	<0.005	.049	.085	.250	.760
VSP-20A	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-21B	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-22C	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-23D	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-24A	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP-25B	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-26C	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-27D	07/30/96	2.5-3.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-28A	07/30/96	3.5-4.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-29B	07/30/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-20A,B,C,D	09/16/96	2.0-2.5	44	<0.005	.075	.090	.110	.170
STK-22A,B,C,D	09/16/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
STK-23A,B,C,D	09/16/96	1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VS-30	09/16/96	15	8.2	<0.005	.040	.054	.250	.210
VS-31	09/16/96	14	110	<0.005	.280	.210	.460	.490
STK-25A,B,C,D	09/17/96	1.0	210	<0.005	.180	.098	.120	.240
STK-26A,B,C,D	09/17/96	1.0	31	<0.005	.050	.063	.084	.250
VS-32	09/17/96	12	20	<0.005	.120	.120	.130	.280
VS-33	09/17/96	12	7.5	<0.005	.019	.034	.060	.200
VS-34	09/17/96	12	52	<0.005	.190	.140	.630	.660
VS-35	09/17/96	12	29	<0.005	.023	.130	.072	.500
STK-21A,B,C,D	09/17/96	1.0	90	<0.005	.120	.084	.190	.320
STK-24A,B,C,D	09/17/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-30A	10/04/96	1.0-1.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-31B	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-32C	10/04/96	2.0-2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-33D	10/04/96	1.0-1.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-34A	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-35B	10/04/96	2.0-2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-36A	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-37B	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
VSP-38C	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 5
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
(ppm[1])

Sample ID Name	Date	Depth (Feet)	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes
VSP-39D	10/04/96	1.5-2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-1	04/21/97	26.5-27.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2	04/21/97	16.5-17.0	3.7	<0.05	0.012	0.0071	0.042	<0.005
SB-3	05/01/97	21.5-22.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-4	05/01/97	21.5-22.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5	05/01/97	11.5-12.0	91	<0.05	<0.005	<0.005	<0.005	<0.005

[1] PARTS PER MILLION.
[2] ALSO ANALYZED FOR TOTAL RECOVERABLE HYDROCARBONS BY ESE; SEE ESE 12/23/91 REPORT FOR ANALYTICAL RESULTS.
[3] ALSO ANALYZED FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL: ALL ANALYTICAL RESULTS WERE NONDECTABLE.
[4] NOT ANALYZED.

TABLE 6
SUMMARY OF GROUNDWATER "GRAB" SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Methyl t-butyl ether	Benzene	Toluene	Ethyl-benzene	Xylenes
SB-1W	04/21/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
SB-2W	04/21/97	6,100	<5.0	870	35	17	28
SB-3W	05/01/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
SB-4W	05/01/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
SB-5W	05/01/97	890	12	5.4	<0.50	1.4	<0.5

[1] PARTS PER BILLION.
[2] NOT ANALYZED.
[3] SAME AS TMW-6 (TRIP BLANK).
[4] TRIP BLANK.

APPENDIX A

- ALAMEDA COUNTY HEALTH CARE SERVICES, LETTER DATED MAY 17, 1995
- ALAMEDA COUNTY HEALTH CARE SERVICES, LETTER DATED OCTOBER 26, 1995
- ALAMEDA COUNTY HEALTH CARE SERVICES, LETTER DATED OCTOBER 3, 1996
- ALAMEDA COUNTY HEALTH CARE SERVICES, LETTER DATED FEBRUARY 10, 1997
- ALAMEDA COUNTY HEALTH CARE SERVICES, LETTER DATED MARCH 6, 1997
- CITY OF OAKLAND, EXCAVATION PERMITS
- WATER RESOURCES MANAGEMENT ZONE 7, DRILLING PERMIT APPLICATION

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

May 17, 1995
StID # 2116

Mr. Stanley Wong
2200 E. 12th St.
Oakland CA 94606

Re: Status of Subsurface Investigation at 2345 E. 14th St., Oakland CA 94601, Former Taxi Taxi

Dear Mr. Wong:

Thank you for the submission of the May 3, 1995 quarterly monitoring report for the above site. Currently, the excavated soil from the site has been treated and sampled. Upon verifying successful treatment, this soil is proposed for reuse.

The continuing detection of both floating petroleum product and high dissolved levels of gasoline in monitoring wells at this site will require immediate action. The California Underground Tank Regulations, Title 23, Division 3, Chapter 16, Section 2655 requires the removal of free product to limit the spread of such contamination into previously uncontaminated zones. Because of this, you should inform our office what steps are being done to remove free product on a regular basis. You should also update your quarterly monitoring reports with the total cumulative volume or pounds of free product which have been removed from this site.

Based on the groundwater contamination being detected, additional groundwater investigation must be performed to determine the extent of such contamination. Either temporary or permanent subsurface investigation may be performed, however, the installation of permanent monitoring wells will be required to verify the limits of the hydrocarbon plume.

It is agreed that one would expect decreasing levels of contamination in groundwater due to the excavation of the contaminated soils, but the immediate removal of free product is a priority.

You should also investigate the types of remedial actions available for this site. This is done in the form of a feasibility study which examines at least two alternatives to restore or protect the beneficial uses of the groundwater beneath this site. The alternative should also propose cleanup levels for soil and groundwater.

Your immediate comment regarding the removal of free product is requested **within 30 days or by June 19, 1995.** A work plan for additional groundwater investigation should be submitted with your next groundwater monitoring report ie June 1995. Based on the levels of groundwater contamination being found at that time, a feasibility study should be submitted. Please have your consultant mention their remedial alternatives in your next groundwater monitoring report.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

cc: J. Mrakovich, TPE, 2821 Whipple Rd., Union City, CA 94587-1233
B. Raynolds, files

add2345

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

October 26, 1995
StID # 2116

Mr. Stanley Wong
2200 E. 12th St.
Oakland, CA 94606

Re: Comment on August 4, 1995 Work Plan for Soil and Groundwater Investigation at 2345 E. 14th St., Oakland CA 94601

Dear Mr. Wong:

Our office has received and reviewed the above report as prepared by your consultant, Tank Protect Engineering. This work plan calls for the advancement of nine borings to groundwater and the sampling of both selected soil and grab groundwater samples in an attempt to verify the horizontal limits of the gasoline contamination from the former underground storage tanks. This work plan is accepted and field work may commence as soon as possible. Please note that borings SB-6 and SB-1 may not be necessary if the borings closer to the site indicate that the petroleum plume has been defined.

Based on the results of these borings you should prepare a work plan for the installation of additional well(s) to define the limits of the petroleum plume.

Please contact me at least **48 hours** prior to your field activities. I may be reached at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: L. Huckins, Tank Protect Engineering, 2821 Whipple Rd., Union City, CA 94587-1233
G. Coleman, files
wp2345

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 3, 1996
StID # 2116

Mr. Stanley Wong
2200 E. 12th St.
Oakland CA 94606

Re: Status of Subsurface Investigation at 2345 E. 14th St., Oakland CA 94601, Former Taxi Taxi

Dear Mr. Wong:

This letter serves to recount a recent conversation with Mr. Lee Huckins of Tank Protect Engineering (TPE). Among the items discussed was the continued offsite investigation at the above site. The overexcavation activities has delayed the offsite investigation proposed in TPE's August 4, 1995 workplan. I would like to inform you of the significant items of our conversation as well approve and request implementation of the offsite investigation.

At this time, no further soil excavation is requested. I am aware that soil contamination may still exist in the northern portion of the property, however, offsite investigation should be performed prior to any additional soil excavation.

Monitoring well TMW-5 was being considered for closure since it had been damaged during the excavation activities. It was decided that this well should remain since it is nearest the source of the release and could be used in future remediation.

Your consultant was requested to investigate the various options for free product removal and implement an appropriate one. Several of the monitoring wells have consistently detected free product, therefore, a removal system must be implemented as soon as possible.

In regards to the previously proposed offsite investigation, the proposal to install up to nine offsite borings is accepted by our office. Please be aware that since the August 1995 proposal date, additional boring techniques are commonly in use. Therefore, you are encouraged to use any of the rapid site assessment techniques ie Geoprobe, Hydropunch etc. In addition, you should begin your offsite investigation radially outward from the former tank pit area. The extreme borings on E. 14th St. and Miller Ave. should be done only if necessary. Based on the boring locations, permits will be required to gain drilling access. Please initiate the permit procedures as soon as possible. You should also be aware that offsite monitoring wells

will be required to determine the extent of the groundwater plume. You may want to consider installing permanent wells immediately after the initial investigation so this could be done under the same permit.

Please include a status of the above items in your future quarterly monitoring reports.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: Mr. L. Huckins, TPE, 2821 Whipple Rd., Union City, CA 94587
B. Chan, files

ssi2345

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

February 10, 1997
StID # 2116

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

Mr. Stanley Wong
2200 E. 12th St.
Oakland CA 94606

Re: Addendum to August 4, 1995 Workplan for Credit World Auto Sales, 2345 E. 14th St., Oakland CA 94601

Dear Mr. Wong,

Our office has received and reviewed the February 7, 1997 work plan addendum to the August 4, 1995 workplan previously reviewed by the County. Changes in number and locations of borings have been made from the original work plan. A total of five (5) Geoprobe borings have been proposed. Both soil and groundwater samples will be taken from each boring for chemical analysis.

Our office approves this work plan with the following conditions:

1. Please consider relocating soil boring SB-2 approximately 25' to the southwest of the proposed location. The area south of MW-1, where the original SB-2 is proposed, has been previously characterized by boring TH-5, while the area southwest of MW-1 is within the one-time downgradient direction of MW-1.

2. Though not mentioned in the addendum, please analyze the samples for TPHg, BTEX and MTBE.

3. Please contact me **at least 72 working hours prior to your field work** so I may arrange to be present if possible.

After this investigation, you should be prepared to propose the installation of additional permanent wells, if necessary, and perform a Tier 1 Human Health Risk Assessment according to ASTM RBCA methodology.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. L. Huckins, TPE Inc.,2821 Whipple Rd., Union City, CA 94587-1233

wpad2345

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 6, 1997
Certified Mailer #P 112 479 091

Mr. Jayanti Nathu
Camelot Inn
2508 I 40 East
Amarillo, TX, 79103

Re: Request for Access to Install Environmental Boring/Monitoring Well on 2321 E. 14th St., Oakland CA 94601

Dear Mr. Nathu:

Our office has been overseeing the on-going subsurface investigation of a petroleum fuel release at a site located at 2345 E. 14th St. in Oakland, California. This site is located just southeast of 2321 E. 14th St. and upgradient based on groundwater flow direction. During the course of the investigation of this site, it appears that there is a potential of petroleum groundwater contamination migrating beneath the Mitchell Hotel site. Therefore, our office has requested that Mssrs. Aaron and Stanley Wong, owners of the 2345 E. 14th St. property, install an offsite boring and/or well on the Mitchell Hotel property in order to determine the extent of the petroleum contamination in groundwater, if any. I have been informed that you have been notified of this request by Mr. Lee Huckins, consultant for Mssrs. Wong. This letter confirms the County's position that this offsite is necessary to determine the limit of the fuel release from the 2345 E. 14th St. property.

Please be advised that as the local implementing agency delegated by the Water Board to oversee the remediation of sites which have experienced fuel releases from underground tanks, the investigation and cleanup of said sites must be consistent with the provisions of Title 23, California Code of Regulations and the Porter-Cologne Water Quality Control Act (Water Code). Specific to the Water Code, Resolution No. 92-49 has been published by the State Water Resources Control Board which states the **Policies and Procedures for the Investigation of Discharges to the Water.** Within this policy the discharger, in this instance Mssrs. Wong's property, is required to extend the investigation and cleanup to **any** (bold added) location affected by the discharge or threatened discharge. The Regional Water Board has the authority to require uncooperative landowners and tenants of affected property to cooperate or, if necessary, to participate in investigation, cleanup and abatement.

Our office recommends your cooperation with Mssrs. Wong in allowing them access to the Mitchell Hotel property, specifically the rear of 2321 E. 14th St., for the purpose of installing an offsite boring or monitoring well. Should this access be denied, you may be requested to perform your investigation at your own expense. Based upon the results of the initial boring, it will be determined whether a permanent well is required.

Should you not be able to resolve this issue, our office will request your presence at a hearing in the presence of the Alameda County District Attorney's office.

Please contact me at (510) 567-6765 should you have any questions regarding this letter.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: Mssrs. Wong, 2200 E. 12th St., Oakland CA 94606
Mr. L. Huckins, Tank Protect Engineering, 2821 Whipple Rd., Union City, CA 94587-1233
Bob Chambers, Alameda County District Attorney Office
B. Chan, file
Acc2321

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

INTERNATIONAL BL

PERMIT NUMBER X97 00408	SITE ADDRESS/LOCATION 2345 ~~E 14TH ST~~
APPROX. START DATE / APPROX. END DATE	24 HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)
CONTRACTOR'S LICENSE # AND CLASS 28349 875837	CITY BUSINESS TAX #

ATTENTION:

1) State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #

2) **48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. ______________, B&PC for this reason ______________________________.

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # ______________________ Company Name ______________________

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

Signature of Permittee [signature] ☐ Agent for ☒ Contractor ☐ Owner — Date 4/15/97

DATE STREET LAST RESURFACED 1990	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☒ YES ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☒ YES ☐ NO
ISSUED BY M. Miller		DATE ISSUED 4/15/97	

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

PERMIT NUMBER X9700409	SITE ADDRESS/LOCATION 1403 MILLER AV
APPROX. START DATE / APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)
CONTRACTOR'S LICENSE # AND CLASS	CITY BUSINESS TAX #

ATTENTION: 3M161

1) State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #:

2) **48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

X _____ Date 4/15/97

Signature of Permittee ☐ Agent for ☒ Contractor ☐ Owner

DATE STREET LAST RESURFACED 1990	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☒ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☒ NO
ISSUED BY M. Miller		DATE ISSUED 4/15/97	

ZONE 7 WATER AGENCY

6997 PARKSIDE DRIVE, PLEASANTON, CALIFORNIA 94588-5127 PHONE (510) 484-2600 X236
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2345 E 14th Street Oakland, CA 94601

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Aaron & Stanley Wong
Address 2700 E. 12th Street Phone (510) 535-1672
City Oakland CA Zip 94606

APPLICANT
Name Tank Protect Engineering Fax 510-429-8089
Address 2821 Whipple Road Phone 510-429-8088
City Union City Zip 94587

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☒
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. C57 #482390

WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum Depth	_____ ft.
Casing Diameter	_____ in.		
Surface Seal Depth	_____ ft.	Number	_____

GEOTECHNICAL PROJECTS

Number of Borings	5	Maximum Depth	35 ft.
Hole Diameter	8 in.		

ESTIMATED STARTING DATE 3-6-97
ESTIMATED COMPLETION DATE 3-7-97

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Lee Ruckins Date 2-25-97

FOR OFFICE USE

PERMIT NUMBER 97126
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
(1.) A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS

Approved Wyman Hong Date 27 Feb 97
Wyman Hong

10195

APPENDIX B

SAMPLE HANDLING PROCEDURES

APPENDIX B

SAMPLE HANDLING PROCEDURES

Soil and groundwater samples will be packaged carefully to avoid breakage or contamination and will be delivered to the laboratory in an iced-cooler. The following sample packaging requirements will be followed.

- Sample bottle/sleeve lids will not be mixed. All sample lids will stay with the original containers and have custody seals affixed to them.

- Samples will be secured in coolers to maintain custody, control temperature and prevent breakage during transportation to the laboratory.

- A chain-of-custody form will be completed for all samples and accompany the sample cooler to the laboratory.

- Ice, blue ice or dry ice (dry ice will be used for preserving soil samples collected for the Alameda County Water District) will be used to cool samples during transport to the laboratory.

- Water samples will be cooled with crushed ice. In the Alameda County Water District, water samples will be buried in the crushed ice with a thermometer, and the laboratory will be requested to record thermometer temperature at the time of receipt.

- Each sample will be identified by affixing a pressure sensitive, gummed label or standardized tag on the container(s). This label will contain the site identification, sample identification number, date and time of sample collection and the collector's initials.

- Soil samples collected in brass tubes will be preserved by covering the ends with Teflon tape and capping with plastic end-caps. The tubes will

be labeled, sealed in quart size bags and placed in an iced-cooler for transport to the laboratory.

All groundwater sample containers will be precleaned and will be obtained from a State Department of Health Services certified analytical laboratory.

Sample Control/Chain-of-Custody: All field personnel will refer to this workplan to verify the methods to be employed during sample collection. All sample gathering activities will be recorded in the site file; all sample transfers will be documented in the chain-of-custody; samples will be identified with labels; all sample bottles will be custody-sealed. All information is to be recorded in waterproof ink. All TPE field personnel are personally responsible for sample collection and the care and custody of collected samples until the samples are transferred or properly dispatched.

The custody record will be completed by the field technician or professional who has been designated by the TPE project manager as being responsible for sample shipment to the appropriate laboratory. The custody record will include, among other things, the following information: site identification, name of person collecting the samples, date and time samples were collected, type of sampling conducted (composite/grab), location of sampling station, number and type of containers used and signature of the TPE person relinquishing samples to a non-TPE person with the date and time of transfer noted. The relinquishing individual will also put all the specific shipping data on the custody record.

Records will be maintained by a designated TPE field employee for each sample: site identification, sampling location, station number, date, time, sampler's name, designation of the sample as a grab or composite, notation of the type of sample (e.g., groundwater, soil boring, etc.), preservatives used, onsite measurement data and other observations or remarks.

APPENDIX C

WASTE HANDLING AND DECONTAMINATION PROCEDURES

APPENDIX C

WASTE HANDLING AND DECONTAMINATION PROCEDURES

Decontamination: Any drilling, sampling or field measurement equipment that comes into contact with soil or groundwater will be properly decontaminated prior to its use at the site and after each incident of contact with the soil or groundwater being investigated. Proper decontamination is essential to obtain samples that are representative of environmental conditions and to accurately characterize the extent of soil and groundwater contamination. Hollow-stem auger flights and the drill bit will be steam-cleaned between the drilling of each well.

All sample equipment, including the split-spoon sampler and brass tubes, will be cleaned by washing with trisodium phosphate or alconox detergent, followed by rinsing with tap water. Where required by specific regulatory guidelines, a nonphosphate detergent will be used.

Waste Handling: Waste materials generated during site characterization activities will be handled and stored as hazardous waste and will be stored on site in appropriately labeled containers. Waste materials anticipated include excavated soil, drill cuttings, development and purge water, water generated during aquifer testing, water generated during decontamination and used personnel protection equipment such as gloves and Tyvek. The site owner will be responsible for providing the storage containers and will be responsible for the disposal of the waste materials. Drill cuttings from individual borings will be stored separately in drums or covered by plastic sheeting, and the appropriate disposal procedure will be determined by the site owner or TPE following receipt of the soil sample analytical results. Drums will be labeled to show material stored, known or suggested contaminant, date stored, expected removal date, company name, contact and telephone number.

APPENDIX D

LOGS OF EXPLORATORY BORINGS

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 BORING NO. SB-1

PROJECT NAME 2345 E. 14th Street, Oakland CA PAGE 1

BY LNH DATE 4/21/97 SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							AGGREGATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Black mottled green, scattered sand, silty, dry, no odor.
1.3/2.0	10	--		5			SAND (SP): Brown, fine-grained, moist to very moist, no odor.
.50/2.0	--	--		10			
1.5/2.0	10	--		15			
							CLAYEY SAND (SC/SP): Brown, medium-grained, dry to moist, no odor.
2.0/2.0	8	--		20			
1.5/2.0	--	--		25			
2.0/2.0	2	--		30			Boring terminated at 32 feet. Boring sampled to 32 feet. No water level was obtained due to caving.
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 — BORING NO. SB-2

PROJECT NAME 2345 E. 14th Street, Oakland CA — PAGE 1

BY LNH — DATE 4/21/97 — SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							AGGREGRATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Brown, green at 11.5 feet, silty, stiff, dry to moist, hydrocarbon ordor at 11.5.
1.3/2.0	8	--		5			
2.0/2.0	46	--	▽	10			
							CLAYEY SAND (SC/CL): Green, fine to medium-grained, moist, hydrocarbon odor.
2.0/2.0	340	--		15			
2.0/2.0	8	--		20			
							SAND (SP): Brown, clayey, fine-grained, moist, no odor.
1.0/2.0	8	--		25			
							CLAYEY SAND (SC/SP): Brown, fine-grained, wet, no odor.
2.0/2.0	21	--		30			Boring terminated at 32.0 feet. Boring sampled to 32.0 feet.
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 | BORING NO. SB-3

PROJECT NAME 2345 E. 14th Street, Oakland CA | PAGE 1

BY LNH | DATE 5/1/97 | SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							COBBLESTONE: Light brown, hard
							CONCRETE
				5			CLAY (CL): Grey to black, sandy, stiff to very stiff, moist, no odor.
1.0/2.0	39	--					
			N				CLAYEY SAND (SC/CL): Brown, scattered gravel, medium-grained, dry to moist, no odor.
				10			
1.0/2.0	40	--					
				15			
1.5/2.0	16	--					
				20			
1.5/2.0	56	--					
				25			
1.5/2.0	29	--					
							SAND (SP): Brown, scattered gravel, fine-grained, moist to wet, no odor.
				30			Boring terminated at 32.0 feet. Boring sampled to 32.0 feet.
2.0/2.0	18	--					
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 — BORING NO. SB-4

PROJECT NAME 2345 E. 14th Street, Oakland CA — PAGE 1

BY LNH — DATE 5/1/97 — SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							ASPHALT
							SANDY CLAY (CL/SC): Brown motteled green, stiff, dry, no odor.
2.0/2.0	12	--		5			
			▽				
1.5/2.0	4	--		10			
							CLAYEY SAND (SC/CL): Brown, organics, fine to medium grained, dry to moist, no odor.
2.0/2.0	6	--		15			
1.5/2.0	14	--		20			
2.0/2.0	4	--		25			
							Boring terminated at 27.0 feet. Boring sampled to 27.0 feet.
				30			
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 267 | BORING NO. SB-5

PROJECT NAME 2345 E. 14th Street, Oakland CA | PAGE 1

BY LNH | DATE 5/1/97 | SURFACE ELEV. 27 FT

RECOVERY (FT/FT)	OVA (PPM)	PENETRATION (BLOWS/FT)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
							CONCRETE
							AGGREGATE BASE (GW): Brown, dry, no odor.
							CLAY (CL): Grey to black, sandy, soft, no odor.
				5			
1.0/2.0	12	--					
							CLAYEY SAND (SC/CL): Green, fine-grained, dry, hydrocarbon odor.
				10			
2.0/2.0	67	--					
				15			
2.0/2.0	6	--					CLAYEY SAND (SC/CL): Brown, fine-grained, moist, no odor.
							SANDY CLAY (CL/SC): Brown, organics, stiff, dry no odor.
				20			
2.0/2.0	11	--					
							CLAYEY SAND (SC/CL): Brown, fine-grained, wet at 27.0 feet, no odor.
				25			
2.0/2.0	6	--					
							Boring terminated at 27.0 feet. Boring sampled to 27.0 feet. A hydrocarbon sheen on the groundwater was observed.
				30			
				35			

REMARKS: Drilled using the "GeoProbe method", 2.0 inch diameter boreholes. Samples collected in 1.0-inch by 6.0-inch acetate tubes.

APPENDIX E

WASTE HANDLING AND DECONTAMINATION PROCEDURES

APPENDIX E

WASTE HANDLING AND DECONTAMINATION PROCEDURES

Decontamination: Any drilling, sampling or field measurement equipment that comes into contact with soil or groundwater will be properly decontaminated prior to its use at the site and after each incident of contact with the soil or groundwater being investigated. Proper decontamination is essential to obtain samples that are representative of environmental conditions and to accurately characterize the extent of soil and groundwater contamination. Hollow-stem auger flights and the drill bit will be steam-cleaned between the drilling of each well.

All sample equipment, including the split-spoon sampler and brass tubes, will be cleaned by washing with trisodium phosphate or alconox detergent, followed by rinsing with tap water. Where required by specific regulatory guidelines, a nonphosphate detergent will be used.

Waste Handling: Waste materials generated during site characterization activities will be handled and stored as hazardous waste and will be stored on site in appropriately labeled containers. Waste materials anticipated include excavated soil, drill cuttings, development and purge water, water generated during aquifer testing, water generated during decontamination and used personnel protection equipment such as gloves and Tyvek. The site owner will be responsible for providing the storage containers and will be responsible for the disposal of the waste materials. Drill cuttings from individual borings will be stored separately in drums or covered by plastic sheeting, and the appropriate disposal procedure will be determined by the site owner or TPE following receipt of the soil sample analytical results. Drums will be labeled to show material stored, known or suggested contaminant, date stored, expected removal date, company name, contact and telephone number.

APPENDIX F

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

APPENDIX F

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

The overall objectives of the field sampling program include generation of reliable data that will support development of a remedial action plan. Sample quality will be checked by the use of proper sampling, handling and testing methods. Additional sample quality control methods may include the use of background samples, equipment rinsate samples and trip and field blanks. Chain-of-custody forms, use of a qualified laboratory, acceptable detection limits and proper sample preservation and holding times also provide assurance of accurate analytical data.

TPE will follow a quality assurance and quality control (QA/QC) program in the field to ensure that all samples collected and field measurements taken are representative of actual field and environmental conditions and that data obtained are accurate and reproducible. These activities and laboratory QA/QC procedures are described below.

Field Samples: Additional samples may be taken in the field to evaluate both sampling and analytical methods. Three basic categories of QA/QC samples that may be collected are trip blanks, field blanks and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and laboratory analysis. They are water samples that remain with the collected samples during transportation and are analyzed along with the field samples to check for residual contamination. Analytically confirmed organic-free water will be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blanks will be numbered, packaged and sealed in the same manner as the other samples. One trip blank will be used for each sample set of less than 20 samples. At least 5% blanks will be used for sets greater than 20 samples. The trip blank is not to be opened by either the sample collectors or the handlers.

The field blank is a water sample that is taken into the field and is opened and exposed at the sampling point to detect contamination from air exposure. The water

sample is poured into appropriate containers to simulate actual sampling conditions. Contamination due to air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of trip and field blanks, and false identifying numbers will be put on the labels. Full documentation of these collection and decoy procedures will be made in the site log book.

Duplicate samples are identical sample pairs (collected in the same place and at the same time), placed in identical containers. For soils, adjacent sample liners will be analyzed. For the purpose of data reporting, one is arbitrarily designated the sample, and the other is designated as a duplicate sample. Both sets of results are reported to give an indication of the precision of sampling and analytical methods.

The laboratory's precision will be assessed without the laboratory's knowledge by labeling one of the duplicates with false identifying information. Data quality will be evaluated on the basis of the duplicate results.

Laboratory QA/QC: Execution of a strict QA/QC program is an essential ingredient in high-quality analytical results. By using accredited laboratory techniques and analytical procedures, estimates of the experimental values can be very close to the actual value of the environmental sample. The experimental value is monitored for its precision and accuracy by performing QC tests designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

The QA/QC program describes methods for performing QC tests. These methods involve analyzing method blanks, calibration standards, check standards (both independent and the United States Environmental Protection Agency-certified standards), duplicates, replicates and sample spikes. Internal QC also requires adherence to written methods, procedural documentation and the observance of good laboratory practices.

APPENDIX G

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/1/97
Date Received:	4/24/97
Date Analyzed:	4/25/97
Project #:	267042197
P.O. #:	1399
Sampled By:	Client

Certified Analytical Report

Soil Sample Analysis:

Test	*SB-1 26.5-27.0*	*SB-2 16.5-17.0*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Soil	Soil			
Sample Date	4/21/97	4/21/97			
Sample Time	1345	1000			
Lab #	D7160	D7161			
DF-Gas/BTEX	1	1			
TPH-Gas	**ND**	**3.7**	mg/kg	1.0 mg/kg	8015M
MTBE	**ND**	**ND**	mg/kg	0.05 mg/kg	8020
Benzene	**ND**	**0.012**	mg/kg	0.005 mg/kg	8020
Toluene	**ND**	**0.0071**	mg/kg	0.005 mg/kg	8020
Ethyl Benzene	**ND**	**0.042**	mg/kg	0.005 mg/kg	8020
Xylenes	**ND**	**ND**	mg/kg	0.005 mg/kg	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/1/97
Date Received:	4/24/97
Date Analyzed:	4/25-4/28/97
Project #:	267042197
P.O. #:	1399
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	*SB-1W*	*SB-2W*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Water	Water			
Sample Date	4/21/97	4/21/97			
Sample Time	1540	1103			
Lab #	D7162	D7163			
DF-Gas/BTEX	1	20			
TPH-Gas	**ND**	**6,100**	µg/liter	50.0 µg/l	8015M
MTBE	**ND**	**ND**	µg/liter	5.0 µg/l	8020
Benzene	**ND**	**870**	µg/liter	0.5 µg/l	8020
Toluene	**ND**	**35**	µg/liter	0.5 µg/l	8020
Ethyl Benzene	**ND**	**17**	µg/liter	0.5 µg/l	8020
Xylenes	**ND**	**28**	µg/liter	0.5 µg/l	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4970425
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/25/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	104	130	98	123	5.9	25	50-150
Toluene	8020	<5.0	80	ND	103	129	95	119	8.1	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	105	131	97	121	7.9	25	50-150
Xylenes	8020	<5.0	240	ND	313	130	289	120	8.0	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	940	94	890	89	5.5	25	50-150

*LCS and LCSD were analyzed for this parameter

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG2970425
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/25/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	0.0	79	99	76	95	3.9	25	50-150
Toluene	8020	<5.0	80	0.0	77	96	74	93	4.0	25	50-150
Ethyl Benzene	8020	<5.0	80	0.0	77	96	75	94	2.6	25	50-150
Xylenes	8020	<5.0	240	0.0	232	97	223	93	4.0	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	990	99	1020	102	3.0	25	50-150

*LCS and LCSD were analyzed for this parameter.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG2970428
Matrix: Soil
Units: ug/kg

Date Analyzed: 04/28/97
Quality Control Sample: D7377

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	78	98	76	95	2.6	25	50-150
Toluene	8020	<5.0	80	ND	77	96	75	94	2.6	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	76	95	74	93	2.7	25	50-150
Xylenes	8020	<5.0	240	ND	228	95	225	94	1.3	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	960	96	1000	100	4.1	25	50-150

*LCS and LCSD were analyzed for this parameter.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

TANK PROTECT ENGINEERING
of Northern California, Inc.
2821 Whipple Rd., Union City, CA 94587-1233
(510) 429-8088 ■ (800) 523-8088 ■ Fax (510) 429-8089

LAB: Entek
TURNAROUND: 15 day
P.O. #: 1399

CHAIN OF CUSTODY

PROJECT NO.: Z167042197
SITE NAME & ADDRESS: Cuas 2345 E 14th St
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Huckins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	ANALYTES REQUESTED: TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
SB-1 26.5-27.0	4/21	1314	X		26.5-27.0	1tube	✓	✓					D7160
SB-2 16.5-17.0	4/21	1000	X		16.5-17.0	1tube	✓	✓					D7161
SB-1W	4/21	1340	X	X	✓	3-40ml	✓	✓					D7162
SB-2W	4/21	1103	X	X		2-40ml	✓	✓					D7163

Relinquished by : (Signature) Lee Huckins	Date / Time 4/21/97 0830	Received by : (Signature) J Ellings	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

DATE: _____

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/6/97
Date Received:	5/2/97
Date Analyzed:	5/5/97
Project #:	267050297
P.O. #:	1404
Sampled By:	Client

Certified Analytical Report

Soil Sample Analysis:

Test	*SB-3 21.5-22*	*SB-4 21.5-22*	*SB-5 11.5-12.0*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Soil	Soil	Soil			
Sample Date	5/1/97	5/1/97	5/1/97			
Sample Time	11:23	13:52	9:10			
Lab #	D7700	D7701	D7702			
DF-Gas/BTEX	1	1	62			
TPH-Gas	**ND**	**ND**	**91**[2]	mg/kg	1.0 mg/kg	8015M
MTBE	**ND**	**ND**	**ND**	mg/kg	0.05 mg/kg	8020
Benzene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Toluene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Ethyl Benzene	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020
Xylenes	**ND**	**ND**	**ND**	mg/kg	0.005 mg/kg	8020

1. DLR=DF x PQL
2. TPH-Gas chromatogram for Lab #D7702, although within the reporting range, does not match the typical Gas pattern
3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

Date:	5/6/97
Date Received:	5/2/97
Date Analyzed:	5/5/97
Project #:	267050297
P.O. #:	1404
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	*SB-3W*	*SB-4W*	*SB-5W*	*Units*	*PQL*	*EPA Method #*
Sample Matrix	Water	Water	Water			
Sample Date	5/1/97	5/1/97	5/1/97			
Sample Time	12:20	14:00	10:25			
Lab #	D7703	D7704	D7705			
DF-Gas/BTEX	1	1	2			
TPH-Gas	**ND**	**ND**	**890**	µg/liter	50.0 µg/l	8015M
MTBE	**ND**	**ND**	**12**	µg/liter	5.0 µg/l	8020
Benzene	**ND**	**ND**	**5.4**	µg/liter	0.5 µg/l	8020
Toluene	**ND**	**ND**	**ND**	µg/liter	0.5 µg/l	8020
Ethyl Benzene	**ND**	**ND**	**1.4**	µg/liter	0.5 µg/l	8020
Xylenes	**ND**	**ND**	**ND**	µg/liter	0.5 µg/l	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4970505
Matrix: Soil
Units: ug/kg

Date Analyzed: 05/05/97
Quality Control Sample: D7720

PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<5.0	80	ND	102	**128**	98	**123**	4.0	25	50-150
Toluene	8020	<5.0	80	ND	100	**125**	96	**120**	4.1	25	50-150
Ethyl Benzene	8020	<5.0	80	ND	101	**126**	97	**121**	4.0	25	50-150
Xylenes	8020	<5.0	240	ND	302	**126**	292	**122**	3.4	25	50-150
Gasoline*	8015	<1000.00	1000	0.0	1000	**100**	980	**98**	2.0	25	50-150

*LCS and LCSD were analyzed for this parameter

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970505
Matrix: Water
Units: µg/L

Date Analyzed: 05/05/97
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP % R	SPD µg/L	SPD %R	RPD	QC LIMITS (ADVISORY) RPD	QC LIMITS (ADVISORY) %R
Benzene	8020	<0.5	25	0.0	22	**88**	23	**92**	4.4	25	50-150
Toluene	8020	<0.5	25	0.0	24	**96**	24	**96**	0.0	25	50-150
Ethyl Benzene	8020	<0.5	25	0.0	25	**100**	25	**100**	0.0	25	50-150
Xylenes	8020	<0.5	75	0.0	69	**92**	69	**92**	0.0	25	50-150
Gasoline	8015	<50.0	625	0	636	**102**	656	**105**	3.1	25	50-150

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

TANK PROTECT ENGINEERING
of Northern California, Inc.
2821 Whipple Rd., Union City, CA 94587-1233
(510) 429-8088 ■ (800) 523-8088 ■ Fax (510) 429-8089

LAB: Entech
TURNAROUND: 48 hr
P.O. #: 1404

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NO.: 267050297
SITE NAME & ADDRESS: CWAS 2345 E 14th Street Oakland
SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER: Lee Hudgins, 2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
SB-3 21.5-22	5/1	1123	X		21.5-22	1 tube	X	X					need MTBE D7700
SB-4 21.5-22	5/1	1352	X		21.5-22	1 tube	X	X					" " D7701
SB-5 11.5-12.0	5/1	910	X		11.5-12.0	1 tube	X	X					" " D7702
SB-3W	5/1	1200	X	✓		2-40ml	X	X					" " D7703
SB-4W	5/1	1420	X	✓		2-40ml	X	X					" " D7704
SB-5W	5/1	1025	X	✓		3-40ml	X	X					" " D7705

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Lee Hudgins	5/2/97 15:20				
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

DATE: _____