

MPDS
SERVICES, INCORPORATED

January 19, 1994

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Mr. Scott Seery

RE: Unocal Service Station #3292
15008 E. 14th Street
San Leandro, California

ALCO
HAZMAT
94 JAN 21 AM 10:49

Dear Mr. Seery:

Per the request of the Project Manager, Mr. Edward C. Ralston of Unocal Corporation, enclosed please find our report (MPDS-UN3292-01) dated December 30, 1993, for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2311.

Sincerely,

MPDS Services, Inc.


Deanna L. Harding
Technical Assistant

/dlh

Enclosure

cc: Mr. Edward C. Ralston

DAVIS, MALM & D'AGOSTINE

A PROFESSIONAL CORPORATION

ONE BOSTON PLACE
BOSTON, MASSACHUSETTS 02108-4470

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December 13, 1993

VIA FEDERAL EXPRESS

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

Re: Unocal/Mobil/Chevron/Phillips Stations
East 14th Street at 150th Avenue
San Leandro, California

Dear Mr. Seery:

I am writing in response to your letter to me dated November 19, 1993. As I indicated in messages that I left for you, Shadrall Associates is willing to provide access to Chevron in order for Chevron to conduct the assessment activities outlined in your letter. Shadrall Associates has a relatively simply access agreement which it would want to negotiate with Chevron. I suggest that representatives of Chevron contact me directly in order to complete such an agreement. As requested in your letter, I have enclosed a copy of an assessment report prepared by Law Environmental, Inc. dated November 14, 1990 regarding Shadrall Associates' property.

If you need further information or have any questions, please call me.

Very truly yours,



Paul L. Feldman

PLF/cm
Enclosures

cc: Kenneth Loughran (w/o encl.)
Frank P. Conrad, Esq. (w/o encl.)

51 SAN LEANDRO



LAW ENVIRONMENTAL, INC.

4000 CIVIC CENTER DRIVE, SUITE 305
SAN RAFAEL, CALIFORNIA 94903-4152
415-499-1422
FAX 415-499-8419

November 14, 1990

Donald F. Gaube
Tri Equity Properties
111 Deerwood Place, Suite 175
San Ramon, California 94583

Subject: Phase II Site Assessment Report
Liquor Barn - San Leandro, CA
Law Environmental Project No. 31-0525

Dear Mr. Gaube:

Law Environmental, Inc. is pleased to present to Tri Equity Properties (Tri Equity) this report describing the Phase II Environmental Site Assessment conducted at the property currently occupied by Liquor Barn at 15035 E. 14th Street in San Leandro, California (Figure 1). The Phase II site assessment consisted of the installation of three shallow ground-water monitoring wells, and limited chemical analyses of ground-water samples from the three wells. The assessment was performed in general accordance with our Proposal No. 31-0034 dated September 6, 1990, which was accepted and approved by you on October 19, 1990. A letter presenting preliminary findings was submitted to Tri Equity on October 29, 1990.

INTRODUCTION

The property is located in a commercial area and consists of a Liquor Barn retail outlet and a large parking lot. The site is generally level at an elevation of approximately 35 feet above the National Geodetic Vertical Datum of 1929. The site's environmental setting was



Donald F. Gaube
November 14, 1990
Page 2

discussed in Law Associates' Report of Preliminary Environmental Site Assessment and Asbestos Survey dated September 7, 1990. The property has been used for retail operation since its original development from agricultural use in the late 1940's. It was initially used by Safeway and later Liquor Barn, the present occupant. There has been no reported significant use of hazardous materials on the property nor have underground storage tanks been used. The review of regulatory lists and the site visit by Law Associates indicated the presence of a number of potential sources of contamination in the general site area. These potential sources include:

- Chevron - Southwest, adjacent
- Jiffy Lube - Southwest, across Hesperian
- Quality Tune-up - West, across 150th
- Former Mobil - Northwest, across 150th and 14th
- Unocal - Northwest, across 14th

Ground-water contamination by petroleum compounds has been documented at the Chevron station, (Weiss Associates reports dated November 7, 1988 and April 11, 1990), and the former Mobil Station (Subsurface Consultants reports dated April 27, 1988 and April 13, 1989). A gasoline station has been present at the Unocal site since 1947 according to the Law Associates report.

OBJECTIVE

The objective of the Phase II assessment was to assess the possible presence of ground-water contamination beneath the subject property prior to Tri Equity assuming the lease on the property.

PHASE II FIELD ACTIVITIES

Prior to drilling, well locations were checked for the presence of underground utility lines by a subsurface utility locator. Well installation permit number 90636 was obtained from the Alameda County Flood Control and Water Conservation District (Appendix A). Spectrum Exploration Inc. (license no. C57-512268) was subcontracted to drill and install the three wells. Right of entry for well installation and sampling was obtained by Tri Equity.

Three ground-water monitoring wells, MW-1, MW-2, and MW-3 were installed at the site to an approximate total depth of 21 feet below ground surface. The locations of the ground-water monitoring wells are shown on Figure 2. Locations were selected to provide ground-water samples representative of the shallow ground-water beneath the site, to evaluate the ground-water gradient, and to allow access for the drilling equipment.



The wells were installed on October 24, 1990, using 8-inch diameter hollow-stem augers. Soil samples were taken from ground surface to total depth with a five-foot long continuous core barrel. The soil cores were described and soil types classified according to the United Soil Classification System. Soil samples were collected at a minimum of 5 foot intervals and analyzed in the field with a portable photoionization detector. Augers and sampling equipment were cleaned and decontaminated between borings in order to reduce the possibility of cross-contamination between borings.

The wells were constructed of flush-threaded 2-inch diameter schedule 40 PVC. Wells were screened from approximately 11 feet to 20 feet below ground surface. Water-washed fine sand was placed around the 0.02-inch slotted well screen to a depth of 2 feet above the top of the screened casing. A bentonite seal was placed to a depth of at least 2 feet above the top of the sandpack and hydrated immediately after emplacement. The remaining open annulus above the bentonite seal was filled with a cement-bentonite grout. A traffic-rated concrete vault box was installed at the surface and set in concrete. The wells were secured with a watertight locking cap, locked, and labeled for identification. Well construction details are given on Table 1 and on the boring logs in Appendix B.

The wells were developed and sampled on October 25, 1990. Well development consisted of bailing at least three borehole volumes (casing and sandpack) of ground water. Water levels in the three wells were measured with an electric depth sounder before development and allowed to recover to near original levels before sampling. The elevation and location of the wells were surveyed by a Law Environmental civil engineer. A ground-water monitoring well (MW-6) on the Chevron property was used as a benchmark for the survey. The top of casing elevation for monitoring well MW-6 (36.92 ft MSL) was reported in the Weiss Associates report of April 11, 1990.

After ground-water levels had recovered from development, the wells were purged again prior to sampling. Ground-water pH and conductivity were measured prior to sampling. Samples were placed in laboratory provided containers and stored on ice. Ground-water samples were slightly turbid due to the clay and silt content of the shallow aquifer beneath the site. Samples were submitted to BC Analytical with Chain-of-Custody documentation.

Soil generated during drilling, and ground water purged during development and sampling were placed in labelled drums and stored at the site.

GEOLOGY AND GEOHYDROLOGY

The shallow soils sampled beneath the property are composed of clay, sand, sandy clay and clayey sand. Boring logs are provided in Appendix B.



Ground-water levels for MW-1, MW-2, and MW-3, measured on October 25, 1990 before development, were 13.94, 13.62 and 13.88 feet below top of casing, respectively. Two additional sets of ground-water level measurements, taken after well installation and before sampling, showed similar results. The ground-water flow direction estimated from the measured water levels was found to be slightly west of south with a calculated gradient of approximately 0.0004 feet per foot. Because of the relatively flat ground-water gradient and the relatively close spacing of the three wells, the calculated gradient and flow direction may change due to seasonal ground-water effects or with the collection of additional data. The measured ground-water elevations and estimated flow direction are shown on Figure 3.

ANALYTICAL RESULTS

The ground-water samples from MW-1, MW-2 and MW-3, were analyzed for volatile organic compounds and for Total Petroleum Hydrocarbons as gasoline (TPH/G). Analytical results and the chain-of-custody form are presented in Appendix C. The results are also shown on Figure 3.

Table 1 presents a summary of ground-water analytical results. Petroleum hydrocarbons were detected in ground-water samples from all three wells. Concentrations of TPH/G were 390, 2,600, and 11,000 ug/l for MW-1, MW-2, and MW-3, respectively. Benzene, toluene and xylenes were detected in MW-3 at concentrations of 540, 1,200, and 17 ug/l, respectively. Ethylbenzene was detected in MW-1 at a concentration of 1 ug/l.

Field analysis of soil samples taken during drilling was conducted with a portable photoionization detector (PID). This field method provides a qualitative indication of the presence of volatile compounds such as hydrocarbons in soils. Most measurements were at near background levels, less than 10 ppm. Soil samples taken from beneath the water table in MW-3 showed elevated concentrations at 14.5 and 19 feet below ground surface. The PID readings for each well are presented on the boring logs in Appendix B.

CONCLUSIONS

Analysis of ground-water samples from three monitoring wells installed at 15035 East 14th Street in San Leandro, California, has confirmed the presence of petroleum contaminants in the shallow aquifer. TPH/G concentrations were detected in all three wells with the highest concentrations in well MW-3 in the northern portion of the property. Well MW-3, also contained relatively high concentrations of benzene and toluene. An off-site source for the contaminants is indicated by our knowledge of past land use (agricultural and retail), by the presence of the highest contaminant concentrations in an upgradient well near the property boundary (MW-3), and by the lack noticeable contamination in shallow soils. ▽

Donald F. Gaube
November 14, 1990
Page 5



The observed land use in the site area indicates the presence of a number of potential off-site source areas, including two existing gasoline stations (Chevron and Unocal) and one former gasoline station (Mobil). Soil remediation has been performed at the Mobil station and the structures have been removed and replaced by a retail center. Sample analyses have confirmed the presence of petroleum contaminants in ground-water at Chevron and Mobil; sample results are not available for Unocal.

The estimated ground-water gradient and relative concentrations in the wells indicate that the primary source area is to the north of the subject property. The Unocal and former Mobil stations are the only identified, potential or actual sources of hydrocarbon contamination in the vicinity of the subject property in that direction. We understand that the underground storage tanks at the Unocal station are to be replaced in the near future; analysis of required samples during tank removal should clarify the potential for contamination at the station.

The reported concentrations of benzene in MW-3 is well above state and federal regulatory action levels.

We appreciate the opportunity to provide consulting services to Tri Equity. If you have any questions please call us at (415) 499-1422.

Sincerely,

Paul C. Burbage

for Keith Bowers
Project Geologist

Thomas C. Holmes

Thomas C. Holmes, R.G. 4693
Principal Geologist

cc: Rick Bruzzone - Crosby, Heafey, Roach, and May

TABLE 1

SUMMARY OF WELL CONSTRUCTION DETAILS

Tri Equity Properties, San Leandro, California
 Law Environmental Job No. 31-0525

| <u>WELL</u> | <u>MW-1</u> | <u>MW-2</u> | <u>MW-3</u> |
|---------------------------|---------------|---------------|---------------|
| Installation Date | 10/24/90 | 10/24/90 | 10/24/90 |
| Total Depth of Boring | 25.5 ft. | 21.0 ft. | 21.0 ft. |
| Total Depth of Well | 21.0 ft. | 21.0 ft. | 21.0 ft. |
| Screened Interval | 11.0-20.7 ft. | 11.0-20.7 ft. | 11.0-20.7 ft. |
| Casing Diameter | 2 in. | 2 in. | 2 in. |
| Top of Casing Elevation* | 35.77 ft. | 35.44 ft. | 35.81 ft. |
| Depth to Water (10/25/90) | 13.95 ft. | 13.63 ft. | 13.89 ft. |
| Ground-Water Elevation | 21.82 ft. | 21.81 ft. | 21.92 ft. |

* Chevron monitoring well MW-G (elevation 36.92 ft. MSL) used as benchmark.
 Elevation reported in Weiss Associates report of April 11, 1990.

Survey performed by Law Environmental

TABLE 2

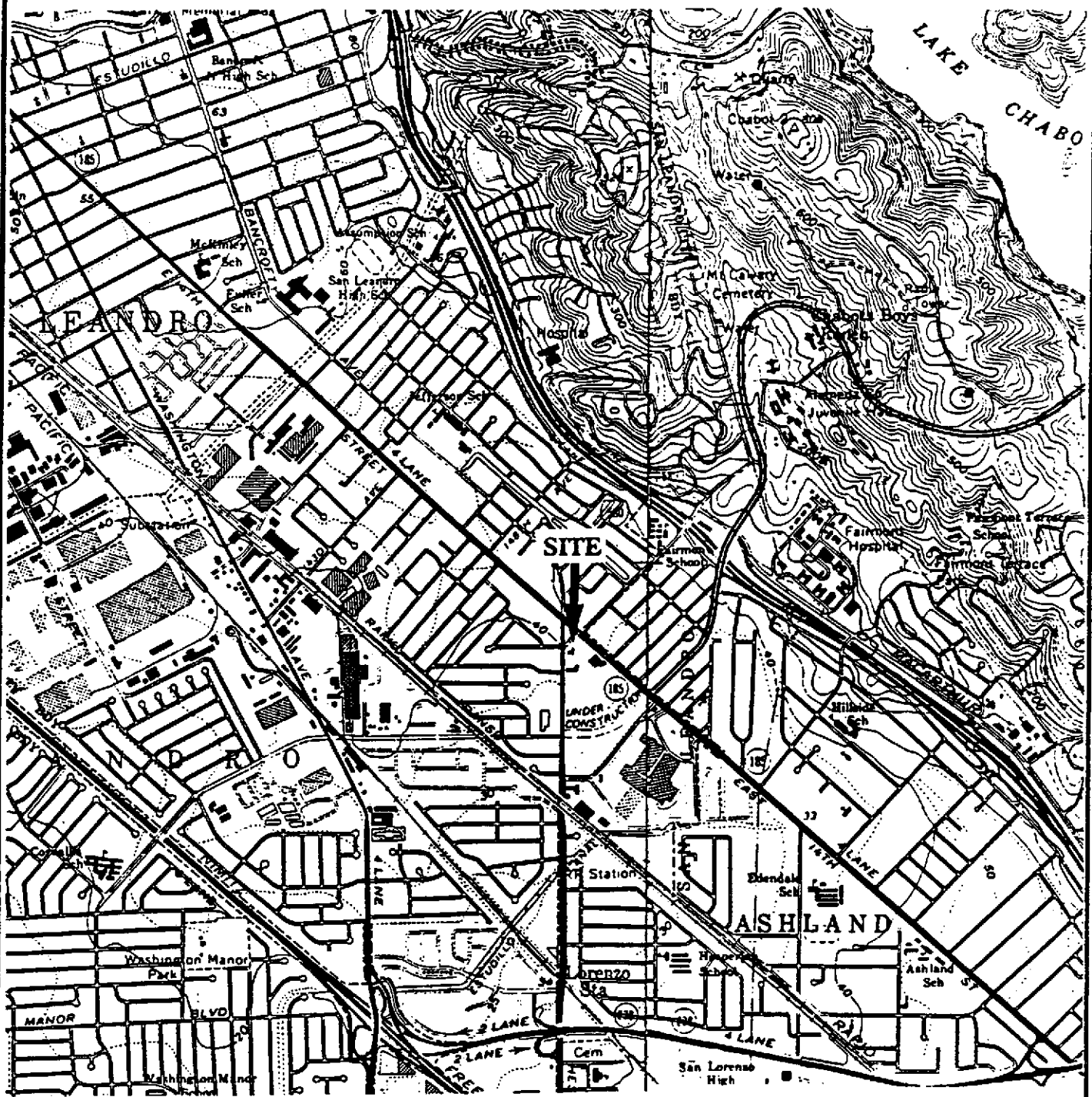
SUMMARY OF ANALYTICAL RESULTS

Tri Equity Properties, San Leandro, California
 Law Environmental Job No. 31-0525

| | <u>MW-1</u> | <u>MW-2</u> | <u>MW-3</u> |
|----------------|-------------|-------------|-------------|
| TPH/G (ug/l)* | 390 | 2,600 | 11,000 |
| Benzene (ug/l) | < 1 | < 1 | 540 |
| Toluene (ug/l) | < 1 | < 1 | 1,200 |
| Ethybenzene | 1 | < 1 | < 1 |
| Xylenes (ug/l) | < 1 | < 1 | 17 |

* TPH/G denotes total petroleum hydrocarbons as gasoline

Complete results of laboratory analyses are included in Appendix C.



SOURCE: U.S.G.S. TOPOGRAPHIC MAP
SAN LEANDRO, CALIFORNIA
(1959, PHOTOREVISED 1980)



TRI EQUITY
PROPERTIES
SAN LEANDRO, CA.



LAW ENVIRONMENTAL,
INC.

SITE LOCATION MAP
15035 E. 14TH STREET

JOB NO. 31-0525 FIGURE 1



150 TH AVENUE

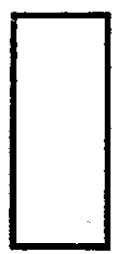
EAST 14 TH STREET (HWY 185)

RESTAURANT

MW-3

11,000 ppb TPH
540 ppb benzene
1200 ppb toluene
17 ppb xylene

HESPARIAN BLVD.



CHEVRON

MW-6

MW-6?

LIQUOR BARN

MW-1

390 ppb TPH
1 ppb Ethylbenzene

2600 ppb TPH

MW-2

LEGEND

MONITORING WELL



NOTE: ALL BUILDING LOCATIONS AND SIZES ARE APPROXIMATE.

SOURCE: LAW ENVIRONMENTAL FIELD SKETCH

STRIP MALL

TRI EQUITY PROPERTIES
SAN LEANDRO, CA.

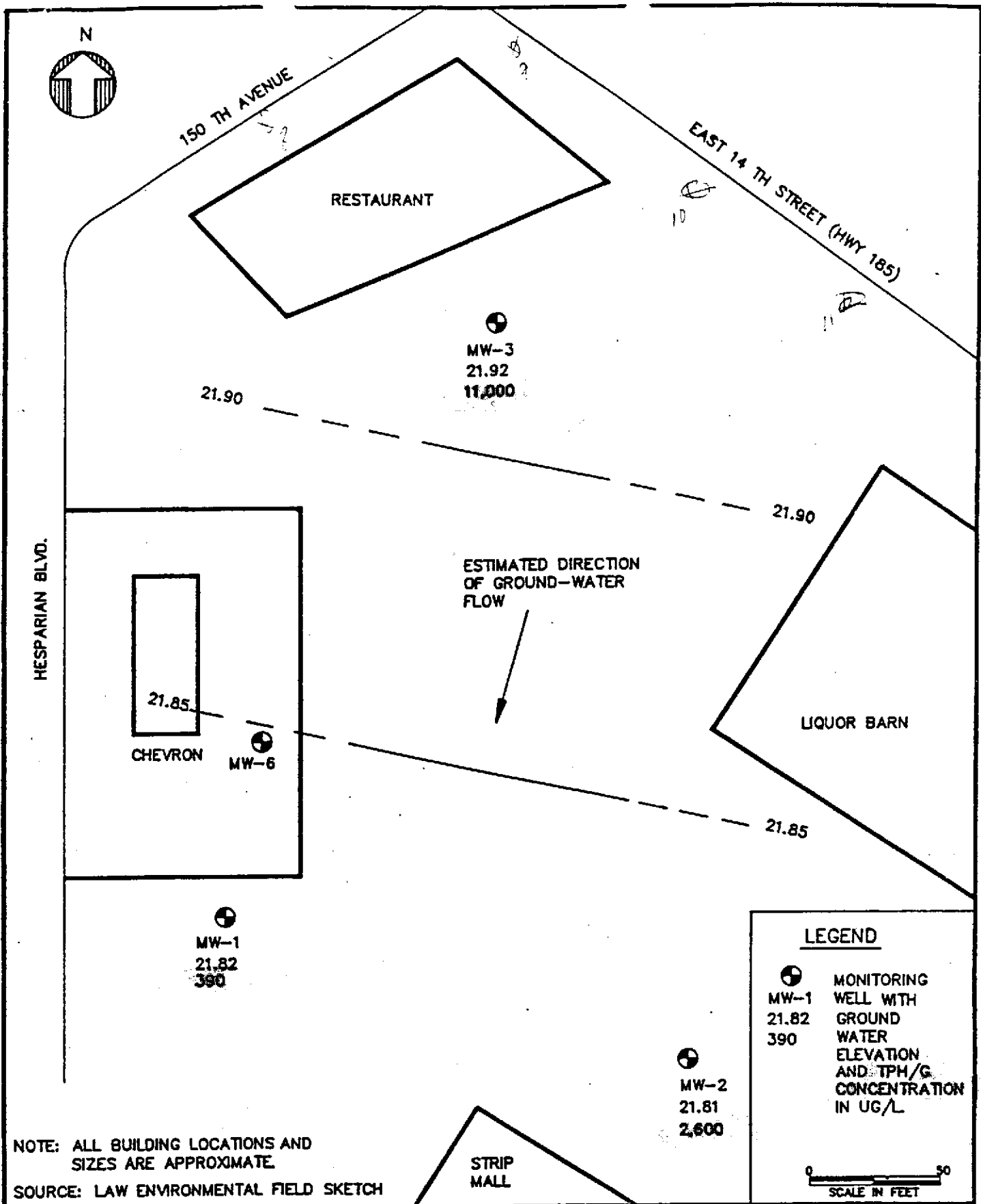


LAW ENVIRONMENTAL, INC.

SITE PLAN

JOB NO. 31-0525

FIGURE 2



TRI EQUITY
 PROPERTIES
 SAN LEANDRO, CA



ESTIMATED
 GROUND-WATER
 GRADIENT

JOB NO. 31-0525 FIGURE 3

APPENDIX A
WELL PERMIT



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94568 (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Highway 185 and 150th Ave San Leandro, CA

PERMIT NUMBER 90636 LOCATION NUMBER

CLIENT Name Tri Equity Properties Address 111 Deerwood Phone City San Ramon Zip 94583

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name KEITH BOWERS LAW ENVIRONMENTAL Address 4000 Civic Center #305 Phone 415-499-1422 City San Rafael Zip 94903

TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring Well Destruction

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation

DRILLING METHOD: Mud Rotary Air Rotary Auger Cable Other

DRILLER'S LICENSE NO. C57-512268

WELL PROJECTS Drill Hole Diameter 8 in. Maximum Casing Diameter 2 in. Depth 20 ft. Surface Seal Depth 10 ft. Number 3

GEOTECHNICAL PROJECTS Number of Borings Hole Diameter Maximum Depth

ESTIMATED STARTING DATE 10/24/90 ESTIMATED COMPLETION DATE 10/24/90

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

APPLICANT'S SIGNATURE Keith Bowers Date 10/19/90 (KEITH BOWERS)

- 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 WELLS, INCLUDING PIEZOMETERS 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. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. C. 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. D. CATHODIC. Fill hole above anode zone with concrete placed by tremie. E. WELL DESTRUCTION. See attached.

Approved Todd N. Wendler Date 22 Oct 90

APPENDIX B
BORING LOGS

BORING LOG FOR MW-1

DATUM ELEVATION: 35.77ft
HEIGHT OF RISER: -0.6ft

ELEVATION (FEET) DEPTH (FEET)

DESCRIPTION

WELL DIAGRAM

PID READING (ppm)

0 5 10 15 20 25 30 35 40 45 50

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM | PID READING (ppm) |
|------------------|--------------|---|--------------|-------------------|
| 36.4 | 0.5 | ASPHALT and BASEROCK | [Pattern] | • |
| | 1.5 | CLAYEY SAND [SC]; tan to light brown; 10-25% low plasticity fines; 70-85% fine to coarse sand (f:m:c=2:4:1); trace-5% fine gravel; loose; dry; no petroleum odor; possible fill. | [Pattern] | • |
| 31.4 | | SANDY CLAY [CL]; black; 60-75% low plasticity fines; 25-40% fine to medium sand (f:m=4:1); stiff; dry; no petroleum odor. | [Pattern] | • |
| | 7.0 | CLAYEY SAND [SC]; yellow to light brown; 20-40% low plasticity fines; 60-80% fine to medium sand (f:m=4:1); medium dense; damp; no petroleum odor. | [Pattern] | • |
| 26.4 | 9.5 | SANDY CLAY [CL]; light gray; 60-80% low plasticity fines; 20-40% fine to medium sand (f:m=5:1); stiff; moist; slight petroleum odor. @ 11.5 ft.: 70-90% low to medium plasticity fines; 10-30% fine to medium sand (f:m=3:1); stiff; moist; slight petroleum odor. | [Pattern] | • |
| 21.4 | | | [Pattern] | • |
| | 17.0 | SAND [SP]; dark olive brown; trace-5% low plasticity fines; 95-100% fine to coarse sand (f:m:c=1:1:3); loose; wet; slight petroleum odor. | [Pattern] | • |
| 16.4 | 19.5 | CLAY TO SANDY CLAY [CL]; dark olive brown; 85-95% med plasticity fines; 5-15% fine to medium sand (f:m=4:1); stiff; wet; slight petroleum odor. @ 22 ft.: stiff; wet; no petroleum odor. | [Pattern] | • |
| 11.4 | 25.5 | Boring terminated at 25.5 feet | [Pattern] | • |
| 6.4 | | | [Pattern] | • |
| 1.4 | | | [Pattern] | • |
| -3.6 | | | [Pattern] | • |

REMARKS:

- 1) Boring advanced with 8-inch hollow stem augers. Boring was backfilled to 21.0 feet with bentonite pellets.
- 2) A 2-inch PVC monitoring well was installed. The well was developed by hand bailing and sampled on October 25, 1990.
- 3) Chevron monitoring well MW-6 was used as a benchmark to survey top of casing elevation.

DRILLED BY: SPECT.
LOGGED BY: PCB
CHECKED BY: TCH

BORING NUMBER: MW-1
DATE STARTED: 10/24/90
DATE COMPLETED: 10/24/90
JOB NUMBER: 31-0525



BORING LOG FOR MW-3

DATUM ELEVATION: 35.81F
HEIGHT OF RISER: -0.42F

| ELEVATION (FEET) | DEPTH (FEET) | DESCRIPTION | WELL DIAGRAM | PID READING (ppm) |
|------------------|--------------|---|--------------|-------------------|
| 36.2 | 0.5 | ASPHALT and BASEROCK | ● | |
| | 3.0 | CLAYEY SAND [SC]; yellow brown to olive; 20-35% low plasticity fines; 65-80% fine to medium sand; brick fragments (<0.5in); loose; damp; no petroleum odor; possible fill. | ● | |
| 31.2 | | SANDY CLAY [CL]; black; 60-75% low to medium plasticity fines; 25-40% fine to medium sand (f:m=3:1); very stiff; damp; no petroleum odor. | ● | |
| | 5.5 | at 5.5 ft.: olive; 55-70% low plasticity fines; 30-45% fine to medium sand (f:m=4:1); stiff; damp; no petroleum odor. | ● | |
| 26.2 | 9.0 | CLAY TO SANDY CLAY [CL]; dark gray to olive; 85-95% low to medium plasticity fines; 5-15% fine to medium sand (f:m=4:1); stiff; damp; no petroleum odor. | ● | |
| | 10.5 | SANDY CLAY [CL]; dark gray to olive; 60-80% low to medium plasticity fines; 20-40% fine to medium sand (f:m=3:1); stiff; moist; slight petroleum odor | ● | |
| 21.2 | 14.5 | CLAY TO SANDY CLAY [CL]; olive; 85-95% medium plasticity fines; 5-15% fine to medium sand (f:m=2:1); very stiff; damp; slight petroleum odor. | ● | |
| | 18.0 | SANDY CLAY [CL]; light gray to olive; 60-75% low plasticity fines; 25-40% fine to medium sand (f:m=3:1); stiff; wet; strong petroleum odor; petroleum sheen on ground water | ● | |
| 16.2 | 21.0 | Boring terminated at 21.0 feet | ● | |
| 11.2 | | | ● | |
| 6.2 | | | ● | |
| 1.2 | | | ● | |
| -3.8 | | | ● | |

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) A 2-inch PVC monitoring well was installed. The well was developed by hand bailing and sampled on October 25, 1990.
- 3) Chevron monitoring well MW-6 was used as a benchmark to survey top of casing elevation.

DRILLED BY: SPECT.
LOGGED BY: PCB
CHECKED BY: TCH

BORING NUMBER: MW-3
DATE STARTED: 10/24/90
DATE COMPLETED: 10/24/90
JOB NUMBER: 31-0525



APPENDIX C

GROUND-WATER LABORATORY ANALYSIS

Analytical Report

LOG NO: E90-10-615

Received: 25 OCT 90

Reported: 26 OCT 90

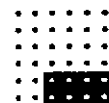
Mr. Paul Burbage
Law Environmental
4000 Civic Center Drive, Suite 305
San Rafael, California 94903-4152

Project: 31-0525.03

REPORT OF ANALYTICAL RESULTS

Page 1

| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED | | |
|-----------------------------------|--|--------------|----------|----------|
| 10-615-1 | MW-1 | 25 OCT 90 | | |
| 10-615-2 | MW-2 | 25 OCT 90 | | |
| 10-615-3 | MW-3 | 25 OCT 90 | | |
| PARAMETER | | 10-615-1 | 10-615-2 | 10-615-3 |
| TPH - Volatile Hydrocarbons | | 10.26.90 | 10.26.90 | 10.26.90 |
| Date Analyzed | | 1 | 50 | 100 |
| Dilution Factor, Times | | 390 | 2600 | 11000 |
| C4 to C12 Hydrocarbons, ug/L | | --- | --- | --- |
| Other TPH - Volatile Hydrocarbons | | --- | --- | --- |



Analytical Report

LOG NO: E90-10-615

Received: 25 OCT 90
Reported: 26 OCT 90

Mr. Paul Burbage
Law Enviromental
4000 Civic Center Drive, Suite 305
San Rafael, California 94903-4152

Project: 31-0525.03

REPORT OF ANALYTICAL RESULTS

Page 4

| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED | | |
|---------------------------|--|--------------|----------|-----------|
| 10-615-1 | MW-1 | | | 25 OCT 90 |
| 10-615-2 | MW-2 | | | 25 OCT 90 |
| 10-615-3 | MW-3 | | | 25 OCT 90 |
| PARAMETER | | 10-615-1 | 10-615-2 | 10-615-3 |
| C7-C13 Hydrocarbons, ug/L | | 600 | 4000 | --- |

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Analytical Report

LOG NO: E90-10-615

Received: 25 OCT 90

Reported: 26 OCT 90

Mr. Paul Burbage
Law Environmental
4000 Civic Center Drive, Suite 305
San Rafael, California 94903-4152

Project: 31-0525.03

REPORT OF ANALYTICAL RESULTS

Page 2

| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED | | |
|---------------------------------|--|--------------|----------|----------|
| 10-615-1 | MW-1 | 25 OCT 90 | | |
| 10-615-2 | MW-2 | 25 OCT 90 | | |
| 10-615-3 | MW-3 | 25 OCT 90 | | |
| PARAMETER | | 10-615-1 | 10-615-2 | 10-615-3 |
| Purgeable Priority Pollutants | | | | |
| Date Analyzed | | 10.25.90 | 10.25.90 | 10.25.90 |
| Date Extracted | | 10.25.90 | 10.25.90 | 10.25.90 |
| Dilution Factor, Times | | 1 | 1 | 10 |
| 1,1,1-Trichloroethane, ug/L | | <1 | <1 | <10 |
| 1,1,2,2-Tetrachloroethane, ug/L | | <1 | <1 | <10 |
| 1,1,2-Trichloroethane, ug/L | | <1 | <1 | <10 |
| 1,1-Dichloroethane, ug/L | | <1 | <1 | <10 |
| 1,1-Dichloroethene, ug/L | | <1 | <1 | <10 |
| 1,2-Dichloroethane, ug/L | | <1 | <1 | <10 |
| 1,2-Dichlorobenzene, ug/L | | <1 | <1 | <10 |
| 1,2-Dichloropropane, ug/L | | <1 | <1 | <10 |
| 1,3-Dichlorobenzene, ug/L | | <1 | <1 | <10 |
| 1,4-Dichlorobenzene, ug/L | | <1 | <1 | <10 |
| 2-Chloroethylvinylether, ug/L | | <1 | <1 | <10 |
| 2-Hexanone, ug/L | | <1 | <1 | <10 |
| 4-Methyl-2-Pentanone, ug/L | | <1 | <1 | <10 |
| Acetone, ug/L | | <10 | <10 | <100 |
| Acrolein, ug/L | | <10 | <10 | <100 |
| Acrylonitrile, ug/L | | <10 | <10 | <100 |
| Bromodichloromethane, ug/L | | <1 | <1 | <10 |
| Bromomethane, ug/L | | <1 | <1 | <10 |
| Benzene, ug/L | | <1 | <1 | 540 |
| Bromoform, ug/L | | <1 | <1 | <10 |
| Chlorobenzene, ug/L | | <1 | <1 | <10 |

Analytical Report

LOG NO: E90-10-615

Received: 25 OCT 90

Reported: 26 OCT 90

Mr. Paul Burbage
 Law Environmental
 4000 Civic Center Drive, Suite 305
 San Rafael, California 94903-4152

Project: 31-0525.03

REPORT OF ANALYTICAL RESULTS

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| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED | | |
|---------------------------------|--|--------------|----------|----------|
| 10-615-1 | MW-1 | 25 OCT 90 | | |
| 10-615-2 | MW-2 | 25 OCT 90 | | |
| 10-615-3 | MW-3 | 25 OCT 90 | | |
| PARAMETER | | 10-615-1 | 10-615-2 | 10-615-3 |
| Carbon Tetrachloride, ug/L | | <1 | <1 | <10 |
| Chloroethane, ug/L | | <1 | <1 | <10 |
| Chloroform, ug/L | | <1 | <1 | <10 |
| Chloromethane, ug/L | | <1 | <1 | <10 |
| Carbon Disulfide, ug/L | | <1 | <1 | <10 |
| Dibromochloromethane, ug/L | | <1 | <1 | <10 |
| Ethylbenzene, ug/L | | 1 | <1 | <10 |
| Freon 113, ug/L | | <1 | <1 | <10 |
| Methyl ethyl ketone, ug/L | | <20 | <20 | <200 |
| Methylene chloride, ug/L | | <5 | <5 | <50 |
| Styrene, ug/L | | <1 | <1 | <10 |
| Trichloroethene, ug/L | | <1 | <1 | <10 |
| Trichlorofluoromethane, ug/L | | <1 | <1 | <10 |
| Toluene, ug/L | | <1 | <1 | 1200 |
| Tetrachloroethene, ug/L | | <1 | <1 | <10 |
| Vinyl acetate, ug/L | | <1 | <1 | <10 |
| Vinyl chloride, ug/L | | <1 | <1 | <10 |
| Total Xylene Isomers, ug/L | | <1 | <1 | 17 |
| cis-1,2-Dichloroethene, ug/L | | <1 | <1 | <10 |
| cis-1,3-Dichloropropene, ug/L | | <1 | <1 | <10 |
| trans-1,2-Dichloroethene, ug/L | | <1 | <1 | <10 |
| trans-1,3-Dichloropropene, ug/L | | <1 | <1 | <10 |
| Semi-Quantified Results ** | | | | |
| C6-C13 Hydrocarbons, ug/L | | --- | --- | 10000 |

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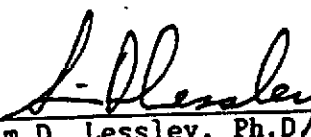
REPORT OF ANALYTICAL RESULTS

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| LOG NO | SAMPLE DESCRIPTION, SOIL SAMPLES | DATE SAMPLED |
|----------|----------------------------------|--------------|
| 10-615-4 | TE-1 | 25 OCT 90 |

| | |
|---------------------------|----------|
| PARAMETER | 10-615-4 |
| Sample Held, Not Analyzed | HELD |

Results were transmitted by facsimile to Keith Bowers on 10.26.90. T. Blake


Sim D. Lessley, Ph.D., Laboratory Director

