GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRA SEARCH INC.
1580 NORTH FOURTH STREET, SAN JOSE, CALIFORNIA 95112-4676, (408) 453-1180

92 FEB 21 PM 3:11

SOIL AND GROUNDWATER INVESTIGATION

on

3826 Depot Road
Hayward, California 94545

For

J & M, Inc.
Post Office Box 128
Hayward, California 94543

12/10/91

Project Number E6301.001

December 16, 1991

11840 DUBLIN BOULEVARD, DUBLIN, CALIFORNIA 94568, (415) 833-9297
2349 NORTH WATNEY WAY, BLDG. A, FAIRFIELD, CALIFORNIA 94533, (707) 422-3292

TABLE OF CONTENTS

SOIL AND GROUNDWATER INVESTIGATION

1. INTRODUCTION

1.1 PURPOSE AND SCOPE OF WORK

This Report summarizes an initial subsurface investigation of a portion of the Site to determine if petroleum hydrocarbons contamination is present in the area of previous underground fuel storage tank ("UST"). The investigation included the following scope of services:

a) Drilling three (3) borings near a prior UST excavation, collecting soil samples from the three borings, and converting the three borings into three groundwater monitor wells;

b) Collecting surface soil samples from six boring locations within and near the area where the previously removed UST's were torch-cut and washed;

c) Collecting water samples from each of the three monitor wells; three consecutive monthly sampling events were initially proposed, however, only two, approximately two month apart sampling events were accomplished;

d) Analyzing collected soil and groundwater samples for petroleum hydrocarbons contamination; and

e) Preparing this report.

The work performed in this investigation was in accordance with the Soil and Groundwater Investigation Work Plan that was reviewed and accepted by the Alameda County Health Care Services Agency ("ACHCSA"), Department of Environmental Health, Hazardous Material Program, as indicated in their letter of April 4, 1991.

1.2 SITE LOCATION

The property is located at 3826 Depot Road, Hayward, California 94545 ("Site") (see Figure 1 - "Vicinity Map" and Figure 2 - "Monitor Wells and Soil Borings Locations"). The Site is adjacent to a pallet storage business (to the southwest), St. Francis Electric vehicle storage yard (to the east), and an apparent wrecking junk yard (to the west). A State of California Water Resources Control Board Underground storage Tank Program Facility/Site Information and/or Permit Application was signed by the landowner on April 16, 1990. A State of California Water Resources Control Board Underground Storage Tank Program Tank Permit Application Information was signed by the landowner on August 16, 1990, for each existing and removed tank on the Site.

The Site is located approximately 1.1-miles east of the nominal tideline of the San Francisco Bay and approximately 1.25-miles south of the Hayward Airport, Hayward, California. Businesses within the vicinity of the Site are a mixture of older industrial-type businesses currently being renovated or demolished and replaced with offices and commercial business.

1.3 SITE CONTACT

The following can be contacted for further information regarding this report:

Landowner:	Manuel Marques, Jr.
Representative:	Leo Neu
Company:	J&M, Inc.
License:	Gen. Eng. Contractor 94-1419318
Address:	3826 Depot Road, Hayward, CA 94543
Telephone:	(415) 782-3434
Consultant:	TERRASEARCH, INC.
Project Manager:	Richard C. Kent, CEG 4231
Onsite Safety Coordinator:	Neddal Ali-Adeeb, Staff Engineer
Address:	11840 Dublin Blvd., Dublin, CA 94568
Telephone:	(415) 833-9297

2. PREVIOUS WORK

a) Tank Removal

Two (2) UST's previously stored diesel and were apparently excavated in June 1990 by personnel of J&M, Inc. No records or manifests apparently exist regarding the excavation and tank removal operations. Both tanks were hauled to the southern portion of the Site and apparently rinsed and cleaned with water which discharged to the surface.

The 4,000-gallon tank was apparently torch cut into pieces and hauled off-Site. At the time of the field work for this investigation, approximately one-half of the right-side of the 7,000-gallon UST remains on-Site. The remainder of the 7,000 gallon UST was apparently torch cut and hauled off-Site. No apparent manifests exist for hauling the tank pieces off-Site. The condition of the tanks at the time of removal is unknown and no apparent records exist.

b. Waste Removal

Apparently all product waste and cleaning waste fluid was placed on the ground surface during cleaning operations after removing Tanks #1 and #2 (diesel) from the excavations. Subsequently on August 20, 1990, laboratory samplers collected seven (7) soil samples at approximately two (2)-inches depth from two (2) areas where the tanks were torch cut and washed (see Figure 2 - "Monitor Wells and Soil Borings Location"). Analysis of samples composited from each of two (2) areas where Tanks #1 and #2 were washed indicated 230 ppm and 190 ppm of total petroleum hydrocarbons as diesel ("TPHd"). An off-site soil sample was collected in the driveway west of the Site (apparent runoff area) and an analysis indicated 110 ppm of TPHd. In addition, typical gasoline constituents BTXE were detected in these composite soil samples up to 1.2 ppm.

c. Previous Subsurface Work

Four (4) soil and one (1) groundwater samples were collected by others on August 20, 1990 and analyzed for TPHd and BTXE from the previous location of removed Tanks #1 and #2 (diesel) per the Notice of Violation dated July 25,1990. Detectable levels of diesel

and gasoline constituents were found in the soil and water samples. The water sample was collected as a surface sample from the re-excavated tank locations, at approximately six (6)-feet depth below grade.

3. METHODS AND PROCEDURES

3.1 SOIL BORINGS

3.1.1 Rationale For Location

One (1) soil sample was collected above the water table from 0-0.5-feet depth from each of six (6) surface borings B-1, B-2, B-3, B-4, B-5, and B-6. The shallow boring locations are shown on Figure 2 - "Monitor Wells and Soil Borings Locations". The purpose of the shallow soil borings was to collect soil samples for analysis of TPH as diesel and gasoline, and gasoline constituents BTXE. The borings were drilled in locations where previous soil contamination was detected above 100 ppm near where the tanks were washed and torch cut. TPHg and BTXE analyses were performed because these constituents were detected in the soil and groundwater from where the tanks were excavated.

3.1.2 Logs

Soil Sample Field Logs for borings B-1, B-2, B-3, B-4, B-5, and B-6 are included in Appendix A - "Geologic Logs." Materials encountered during drilling essentially included very dense, highly compacted clayey gravel and sand, which constituted the gravel-packed surface of the storage yard.

3.2 WELL INSTALLATION

3.2.1 Rationale For Location

Three (3) groundwater monitor wells were installed at locations shown on Figure 2- "Monitor Wells and Soil Boring Locations." The depth of each monitor well was approximately fifteen (15)-feet. The purpose of installing three (3) groundwater monitor wells was to collect soil and water samples for analysis of TPH as diesel and gasoline, and

gasoline constituents BTXE as directed by ACHCSA, and estimate groundwater gradients. The locations of the wells were upgradient (one well) and downgradient (two wells) to the previous diesel tank excavation. The locations were selected by assuming the groundwater gradient to be toward the Bay. Soil samples were collected at a maximum of five (5)-foot intervals from the surface or at significant changes in lithology.

A Groundwater Protection Ordinance Permit to install the monitor wells was obtained from the Alameda County Flood Control and Water Conservation District, Zone 7 Water Resources Management (see Appendix E).

3.2.2 Logs

The Geologic Log for Monitor Wells MW-1, MW-2, and MW-3, which were installed on April 19, 1991, are included in Appendix A. Materials encountered during drilling essentially included silty clay, grading at depth to silty sandy clay, which in turn grades to sandy clay to clayey fine sand near the bottom of the boring. The apparent "aquifer" is essentially composed of silty clayey fine sand, grading upward to silty sandy clay. Water was encountered during drilling at approximately a 10 feet depth in MW-2 and MW-3 and 8 feet depth in MW-1.

3.2.3 Well Installation Procedures

An as-built well installation sketch for each of the three wells is included in Appendix B. Each sketch refers to such well parameters as, first encounter of water, well screen sizes and intervals, filter pack size and interval, composition and location of annual seal, drilling method, depth and diameter of borehole and casing, date drilled, and construction materials.

In all three wells, the monitor well screen was installed from depths of 5 to 14.5 feet, which includes the zone of first water encounter at approximately 8 to 10 feet. The screen and blank well casing were constructed of four (4)-inch diameter Schedule 10, polyvinyl chloride ("PVC") flush coupled, threaded pipe. The screen was slotted at a machine cut of 0.010-inch width. The filter pack consists of clean, graded #2-1/2 Capis Luster Sand. Upon boring to a depth of approximately 15 to 16 feet, the well casing, consisting of a threaded end cap on a 10-foot section of screen in turn threaded to fit to about 5 feet of blank casing, was assembled and lower to total depth. The filter pack was placed (by measuring with a weighted tape measure) into the annular space to about 4-feet depth (approximately one

foot above the well screen). An aquifer seal of bentonite pellets was placed from approximately 4-feet to 3-feet depth. A surface seal of Portland type I-II cement was placed from 3-feet to the surface. A lockable, water tight well cover was installed on the well casing and a vault traffic box was cemented around the well at the surface.

3.2.4 Well Development Procedures

Monitor Wells MW-1 and MW-3 were developed on April 22, 1991, and MW-2 was developed on April 23, 1991, both days at least seventy-two (72) hours after installation when it was determined that the seals had stabilized and cured. The purpose of development was to clean the well and restore as much as possible the natural hydraulic properties adjacent to the filter pack and clear the pack of the fine material that may impede water flow into the well. Development was by surging and bailing and/or pumping with a submersible pump. Well development proceeded until the water quality parameters had stabilized and/or the maximum extent possible of water clarity was achieved. Water parameters measured during development included pH, specific conductance and temperature.

3.3 DISPOSAL OF MATERIAL

Excess water from development purging and sampling was immediately placed in 55-gallon barrels and temporarily stored on-Site. Each barrel was labeled with information including date filled, source, matrix type, known or suspected contaminant, barrel owner, owner contact name and telephone number.

Excess soil from drilling was immediately placed in 55-gallon barrels and temporarily stored on-Site. Each barrel was labeled with information including date filled, source, matrix type, known or suspected contaminant, barrel owner, owner contact name, and telephone number.

The landowner is responsible for proper disposal of the barrels.

Non-disposable drilling and sampling equipment, including augers, were cleaned with steam or triple rinsed with Alconox detergent solution and air dried. Waste cleaning water was placed in 55-gallon barrels, labeled, and retained on Site for proper disposal by the landowner.

3.4 SOIL SAMPLING

Soil samples from the six shallow borings, B-1, B-2, B-3, B-4, B-5, and B-6 were collected using hand operated drilling and sampling equipment. A four-inch diameter hand auger was used to drill to approximately two to three inches below grade at each of the six boring locations shown in Figure 2 - "Monitor Wells and Soil Borings Locations". The samples were collected in a clean 4 inches by 2 inches diameter brass liner using a core soil sampler driven by a hand operated "up and down" hammer.

Relatively undisturbed soil samples from borings MW-1, MW-2, and MW-3 were collected during drilling per ASTM D-1568 by a clean drive sampler with three (3) inside 2-inch by 6-inch brass sample retainers. The drilling sampler was driven 18-inches with a 140-pound hammer falling about 30 inches. The hammer blows for each 6-inches of driven material were recorded and used to describe the general consistency or density of the soil sample. Soil was extruded from one retainer, examined, and classified.

The sample retainer to be analyzed contained no headspace and both ends were immediately covered with aluminum foil, capped with a polyethylene lid, taped with aluminum coated fibre tape, labeled with sample number, date, and time collected, requested analysis, and placed in a closed ice chest containing 'blu-ice' for delivery to California Department of Health Services certified Sequoia Analytical Laboratory No. 1210. All samples were accompanied by a chain-of-custody and request for analysis form which was signed and dated at the time of transferring possession of the samples by each person authorized to turn over and receive the samples (See Appendix D).

3.5 GROUNDWATER SAMPLING

Groundwater samples for analysis of gasoline fuel, and BTEX were collected in 40-ml glass volatile organic analysis ("VOA") vials with Teflon septums as specified by the RWQCB and EPA. All sample containers were new (except containing a preservative prepared by the laboratory). Closure of each sample container was accomplished with a plastic screw cap onto a Teflon faced septum which is used to seal the sample without headspace. Water samples for diesel analysis were collected in amber glass liter bottles. Sample containers were labeled with self-adhesive labels containing the project number and

name, data and time of collection, location, and sampler initials. Sample vials and bottles were filled to overflow to remove entrapped air, and then inverted and tapped to test for air bubbles.

Samples were collected following development and purging of each monitor well after pH, conductivity and temperature stabilized. The instrument to measure well parameters was tripe rinsed to prevent cross-contamination. At least four well volumes were removed during purging. Each well was allowed to recover to at least 80% of its static water level, as measured prior to purging, before collecting samples. The water samples from each well were collected with a disposable bailer for each well. The samples were accompanied from the field to laboratory by a chain-of-custody and request analysis which was signed and dated at the time of transferring possession of the samples by each person authorized to turn over and receive the samples (see Appendix D). A laboratory prepared travel blank accompanied samples from the field.

4. RESULTS

4.1 LAB ANALYSIS - SOIL

Laboratory reports are included in Appendix C. Analytical procedures followed those outlined in "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, Tri-Regional Recommendations" by the North Coast, San Francisco Bay, and Central Valley California Regional Water Quality Control Boards as supported by the "Leaking Underground Fuel Tank ("LUFT") Field Manual" by the State Water Resources Control Board.

Gasoline is a mixture of over 200 petroleum derived chemicals plus a few synthetic products that are added to improve fuel performance. The majority of gasoline hydrocarbon components include 4 to 12 carbons. Gasoline was reported as Total Petroleum Hydrocarbons to detect aliphatic (straight chain hydrocarbons) and aromatic (hydrocarbons with more than one benzene ring) constituents with low to medium boiling points. Gasoline can also be reported as volatile or purgeable hydrocarbons. Soil samples for gasoline analysis were prepared using EPA Method 5030 - Purge and Trap. The sample was analyzed using a GC-FID (gas chromatograph with a flame ionization detector) according to DHS-LUFT recommended procedures which are similar to EPA Method 8015 (Purgeable

Non-Halogenated Volatile Organics). The chromatograph of the sample was compared to a type chromatograph for gasoline as part of the laboratory quality control and assurance. The required practical detection limit was 1.0 parts per million ("ppm").

Diesel consists primarily of straight chain hydrocarbons (alkenes and alkanes) with 10 to 23 carbons and were detected as Total Petroleum Fuel Hydrocarbons constituents with high boiling points including possible small amounts of aromatic hydrocarbons such as benzene. Diesel can also be reported as semi-volatile or extractable hydrocarbons. Soil samples for diesel analysis were prepared using EPA Method 3550-Sonification. The sample was analyzed using a GC-FID (gas chromatograph with a flame ionization detector) according to DHS-LUFT recommended procedures which are similar to EPA Method 8015 (Purgeable Non-Hologenated Volatile Organics). The chromatograph of the sample was compared to a type chromatograph for diesel as part of the laboratory quality control and assurance. The required practical detection limit was 1.0 parts per million ("ppm").

BTXE are highly mobile, typical gasoline compounds with 6, 7, 8, and 9 carbons, respectively. Soil samples were prepared using EPA Method 5030 - Purge and Trap. The sample was analyzed using GC-FID (gas chromatograph with a flame ionization detector) according to EPA Method 8020 (Aromatic Volatile Organics) or EPA Method 8015 (Purgeable Non-Halogenated Volatile Organics). The required practical detection limit was 5.0 parts per billion ("ppb").

TABLE 1 - SUMMARY OF SOIL ANALYSIS
parts per million ("ppm")

Boring No.	Sample No.	Depth (foot)	TPHg	TPHd	B	T	X	E
B-1	B-1	0.2	1.8	23	0.040	0.060	0.020	0.021
B-2	B-2	0.2	N.D.	23	N.D.	0.026	N.D.	N.D.
B-3	B-3	0.2	N.D.	18	N.D.	0.018	N.D.	N.D.
B-4	B-4	0.2	N.D.	23	N.D.	0.0070	N.D.	N.D.
B-5	B-5	0.2	N.D.	30	N.D.	0.055	N.D.	N.D.
B-6	B-6	0.2	N.D.	3.8	N.D.	N.D.	N.D.	N.D.
MW-1	MW1-1	7	N.D.	N.D.	N.D.	0.018	N.D.	N.D.
	MW1-2	11	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	MW2-1	5	N.D.	N.D.	N.D.	0.0090	N.D.	N.D.
	MW2-2	10	N.D.	N.D.	N.D.	0.0090	N.D.	N.D.
MW-3	MW3-1	5	N.D.	N.D.	N.D.	0.0070	N.D.	N.D.
	MW3-2	10	N.D.	N.D.	N.D.	0.018	N.D.	N.D.

4.2 LAB ANALYSIS - WATER

Analytical procedures followed those outlined in "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, Tri-Regional Recommendations" by the North Coast, San Francisco Bay, and Central Valley California Regional Water Quality Control Boards as supported by the "Leaking Underground Fuel Tank ("LUFT") Field Manual" by the State Water Resources Control Board.

The water samples for gasoline analysis were prepared using EPA Method 5030 - Purge and Trap. The samples were analyzed using a GC-FID (gas chromatograph with a flame ionization detector) according to DHS-LUFT recommended procedures which are similar to EPA Method 8020 (Aromatic Volatile Organics) or EPA Method 8015 (Purgeable Non-Halogenated Volatile Organics). The chromatographs of the samples were compared to a type chromatograph for gasoline as part of the laboratory quality control and assurance. The required practical detection limit was 30.0 ppb.

Each water sample for diesel analysis was prepared using EPA Method 3510-Separatory Funnel Extraction. Each sample was analyzed using a DHS method by GC-PID (gas chromatograph with a photoionization detector). The chromatograph of the sample was compared to a type chromatograph for diesel as part of the laboratory quality control and assurance. The required practical detection limit was 50.0 ppb. 7

Each water sample for BTXE analysis was prepared using EPA Method 5030-Purge and Trap. The sample was analyzed using a GC-FID (gas chromatograph with a flame ionization detector) according to EPA Method 8015 (Purgeable Non-Halogenated Volatile Organics). The required practical detection limit was 0.30 ppb.

TABLE 1 - SUMMARY OF GROUNDWATER ANALYSIS
parts per billion ("ppb")

Date	Well No.	Sample No.	TPHg	TPHd	B	T	X	E
4-22-91	MW-1	MW1-W1	N.D	N.D	N.D	N.D.	N.D.	N.D.
	MW-2	MW2-W1	N.D	N.D	N.D	N.D.	N.D.	N.D.
	MW-3	MW3-W1	N.D	N.D	N.D	N.D.	N.D.	N.D.
7-1-91	MW-1	MW1-W12	N.D	N.D	N.D	N.D.	N.D.	N.D.
		MW1-W22	N.D	N.D	N.D	N.D.	N.D.	N.D.
	MW-2	MW2-W12	N.D	N.D	N.D	N.D.	N.D.	N.D.
		MW2-W22	N.D	N.D	N.D	N.D.	N.D.	N.D.
	MW-3	MW3-W12	N.D	N.D	N.D	N.D.	N.D.	N.D.
		MW3-W22	N.D	N.D	N.D	N.D.	N.D.	N.D.

5. INTERPRETATION OF DATA

Analyses of soil samples B-1, B-2, B-3, B-4, B-5, and B-6 collected from six different, near surface locations within and near the area where the previously removed UST's were torch-cut and washed shows the presence of trace concentrations of gasoline and its constituents in only one sample, B-1, and the presence of only trace concentrations of diesel and toluene in all of the samples.

Analysis of the soil samples from the three monitor wells near the previous removed UST shows no detectable concentrations of gasoline, diesel, benzene, xylenes, and ethylbenzene, and only very small trace concentrations of toluene in samples MW1-1, MW2-1, MW2-2, MW3-1, and MW3-2.

Detected concentration of TPHg, TPHd, and BTXE in all soil samples are well below the State "Action Level" of 100 ppm.

Analyses of all water samples, from the three monitor wells around the previous removed UST, from two consecutive sampling events shows no detectable concentrations of any petroleum hydrocarbons as gasoline, diesel, benzene, toluene, xylenes, or ethylbenzene.

6. CONCLUSIONS

The significant petroleum hydrocarbons contamination that resulted from the washing and torch cutting of the previously removed UST and was detected in the soil samples analyses of August 20, 1990, appears to have undergone considerable natural degradation down to insignificant trace levels. Degradation under similar circumstances typically occurs due to the accumulative effects of aeration, sunlight, and microbial activities. According to the analytical results discussed above, the level of contamination remaining within and near the area where the previously removed UST's have been washed and torch cut does not appear to warrant further action and/or remediation.

Three groundwater monitor wells were installed at three different locations near the previous pit of the removed underground storage tanks of June 1990. Groundwater samples from each of the three wells were collected on two consecutive occasions, approximately two months apart. The groundwater samples from the two consecutive sampling events were analyzed for TPHg, TPHd, and BTXE. None of the samples analyzed in either sampling events showed any detectable concentrations of TPHg, TPHd, or BTXE.

According to the groundwater sampling and analyses results discussed above, the first encountered groundwater in the vicinity of the removed UST's of June 1990 does not appear to have been significantly affected by petroleum products from the said tanks. However, quarterly monitoring of wells MW-1, MW-2, and MW-3 would be necessary to account for

the effects that seasonal or tidal influences may have on the groundwater conditions below the Site

7. LIMITATIONS

This investigation is restricted to an investigation involving the closure of underground storage tanks previously containing known or suspected products which have been identified to us either by the property owner(s), historical records, or previous investigations. This report specifically excludes an environmental assessment for radon or other radioactive materials, as well as asbestos and related materials.

This report should not be construed as presenting a value to the site nor the condition as to construction capabilities. The recommendations and opinions expressed herein and findings obtained were prepared in a manner generally exercised by members of the profession under similar conditions at the time services were rendered. In the event of changes in future development plans as we understand them at the time of this report, the conclusions and recommendations made herein shall be invalid until we have been given the opportunity to review and modify this report in writing. Final approval of environmental investigations and remediation is authorized only by appropriate governmental agencies.

Should you have any questions relating to the contents of this report or should you require additional information, please contact our office at your convenience.

Sincerely,
TERRASEARCH, INC.

Reviewed by:

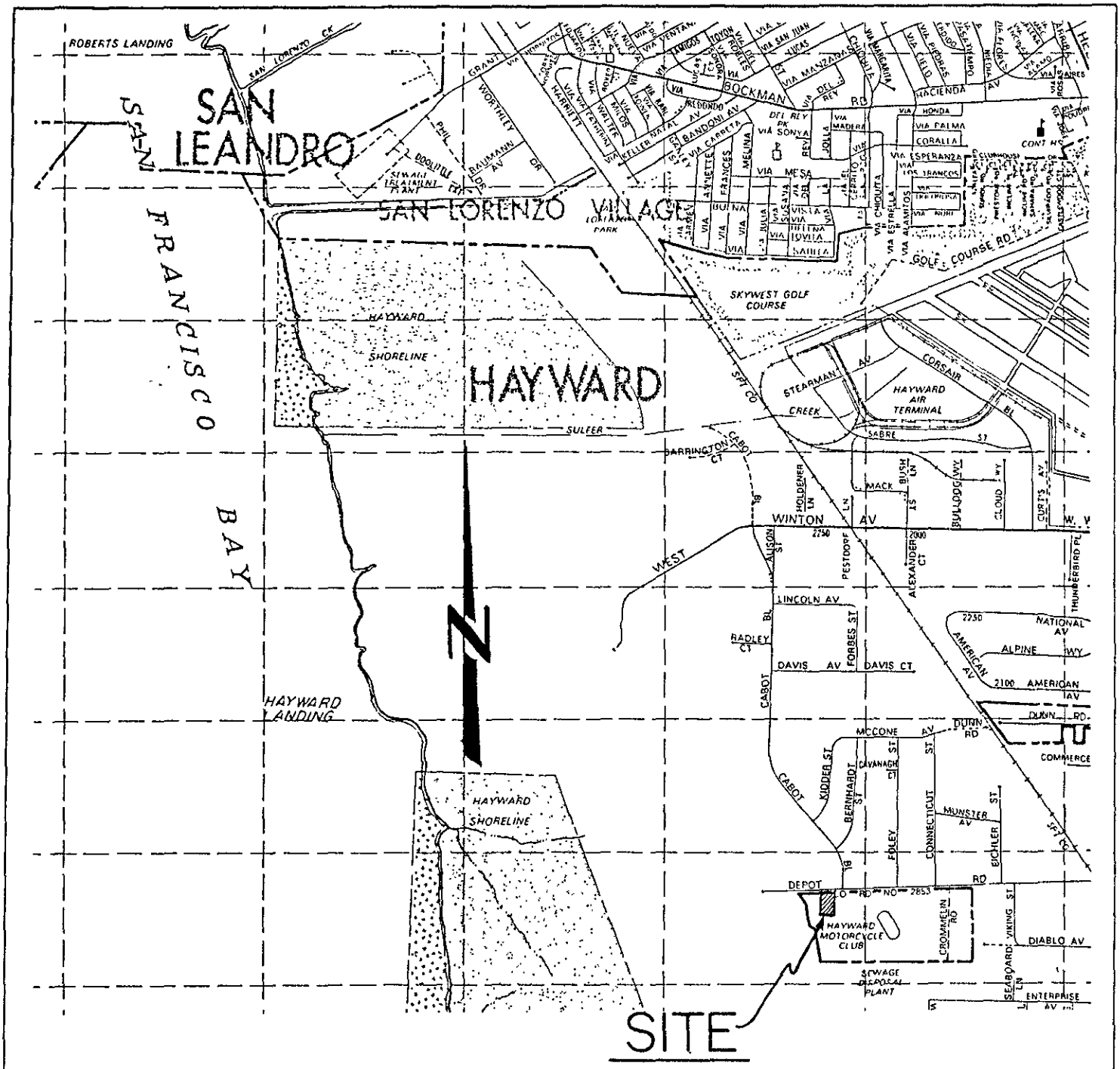
Tom S. Makdissy

Tom S. Makdissy, G.E.
Principal Engineer

Neddal Ali-Adeeb
Staff Engineer

Copies: 3 to J&M, Inc.

Environ:e6301001.gw1

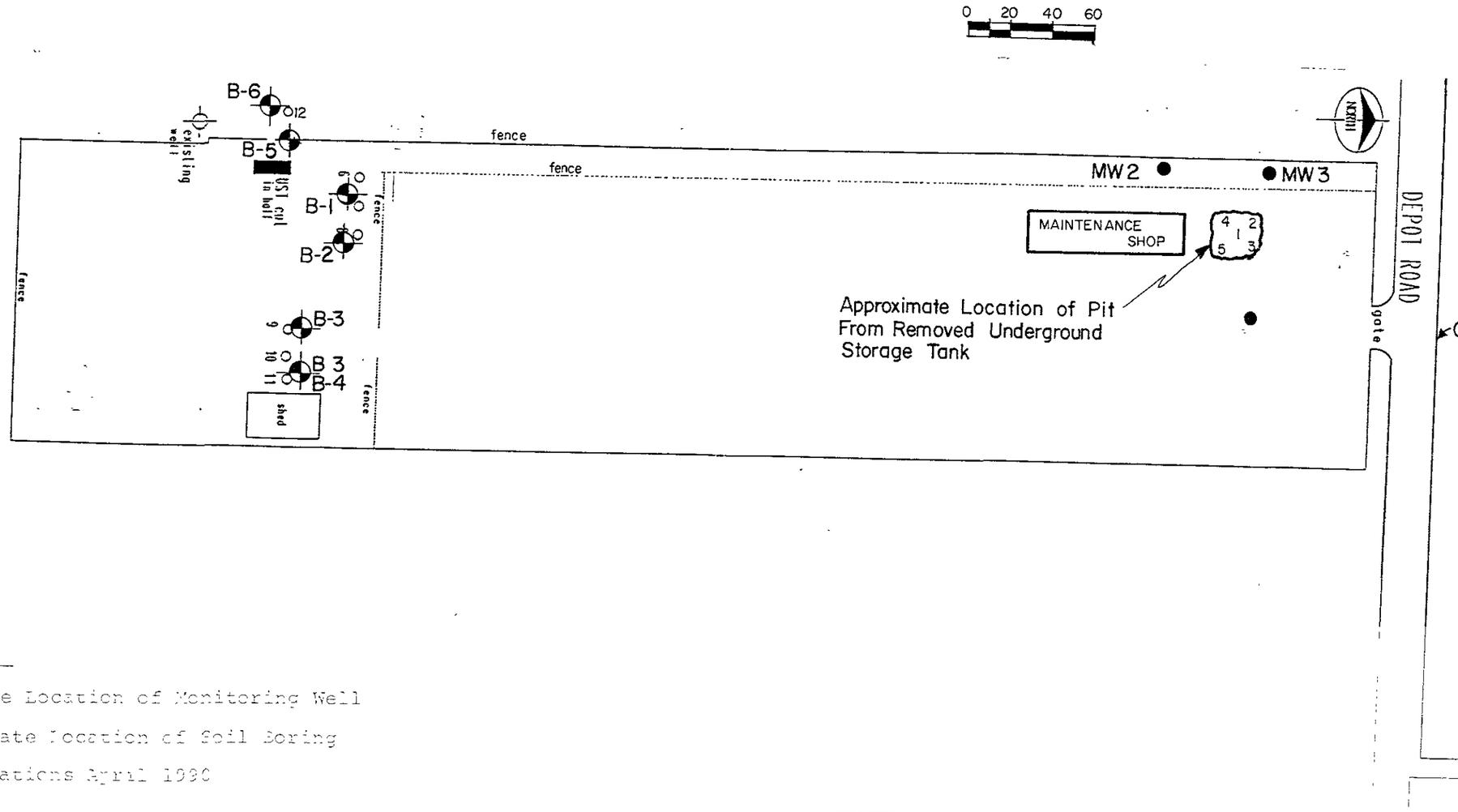


SCALE: 1" = 2200'

BASE: Thomas Bros. Maps

TERRASEARCH INC.

FIGURE NO. 1 SITE LOCATION MAP



LEGEND

● = Approximate Location of Monitoring Well

⊕ = Approximate Location of Soil Boring

○ = Sample Locations April 1990

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FIGURE NO. 2 Monitoring Wells and Soil Borings Locations

APPENDIX A

Geologic Log

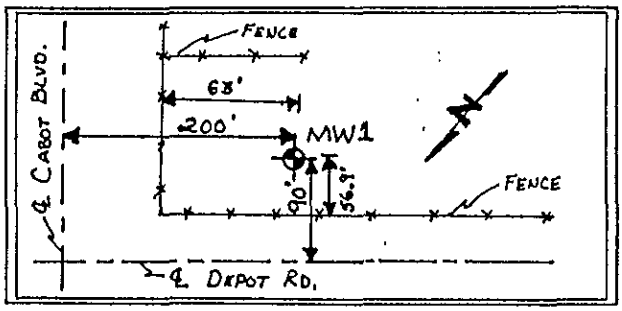
Soil Sample Field Log

TERRASEARCH, INC. (ENVIRONMENTAL)
Dublin, San Jose and Fairfield, California

GEOLOGIC LOG

SHEET 1 of 1

LOCATION SKETCH MAP:



Project No./Name: E6301.001 Soil & Groundwater Investigation	CLIENT: J & M, Inc.
Project Location: 3826 Depot Rd, Hayward, CA	Drill Hole No.: MW1
Drilling Co./Foreman: HEW Drilling/Anibal	Geologist: Neddal Ali-Adeeb
Drilling Method/C57/Rig: 10" HSA/CME55'	Sampling Method(s): 2" I.D. modified Calif. Sampler w/140# 30" drop

Drilling Start Date/Time: 4/19/91/0915	Drilling End Date/Time: 4/19/91/1000	Elevation:	Total Depth: 16-1/2'	Surface Conditions: AC pavement, level dipping W-SW	Samples: 3 soil; 55-gal bbls: 2
Depth 1st Water Date/Time: 8' 4/19/91 8:35	Geophys. Logs:	Sec-Tws-Rng	Laboratory: #1210 Sequoia Analytical	C-O-C Number: E6301910419	

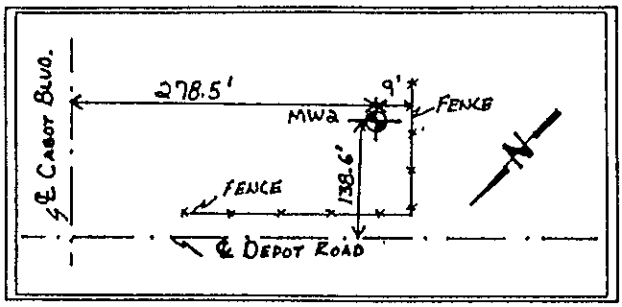
DEPTH (feet)	SAMPLE NO.	SPT	Time	HC Odor	USCS CLASS	NAME	DENSITY	COLOR	MOISTURE	REMARKS
1					SC-GC	Clayey Sand/ Clayey Grav.	very dense	orange brown	moist	4"AC baserock
2										
3										
4										
5										
6										
7	MW1-1	2 5 6	0925	none	CL-CH	Silty CLAY	very stiff	black-dark brown grey	moist	w/small Clay nodules, high plasticity
8										
9										
10										
11	MW1-2	1 2 5	0937	none	CH	Silty CLAY	very stiff/ hard	dark brown grey	very moist	uniform w/ streaks of lighter brown grey
12										
13										
14										
15										
16										
17	MW1-3	1 1 2	0955	none	CL-SC	Sandy CLAY to Clayey SAND	stiff to loose	orange-yellow brown	saturated	Sand is fine/ uniform
18										
19										
20										

TERRASEARCH, INC. (ENVIRONMENTAL)
Dublin, San Jose and Fairfield, California

GEOLOGIC LOG

SHEET 1 of 1

LOCATION SKETCH MAP:



Project No./Name:	CLIENT:
E6301.001 Soil & Groundwater Investigation	J & M, Inc.
Project Location: Depot Road, Hayward, CA	Drill Hole No.: MW2
Drilling Co./Foreman: HEW Drilling/Anibal	Geologist: Neddal Ali-Adeeb
Drilling Method/C57/Rig: 10" H&A/CME55	Sampling Method(s): 2" Modified Calif. Sampler 140#/30" drop

Drilling Start Date/Time:	Drilling End Date/Time:	Elevation:	Total Depth:	Surface Conditions:	Samples:
4/19/91/11:20	4/19/91/12:00		15'	4" of Class II AB flat, dipping NW	3 soil 55-gal bbls: 2
Depth 1st Water Date/Time:	**Geophys. Logs:**	**Sec-Tws-Rng**	**Laboratory:** #1210 Sequoia Analytical	**C-O-C Number:**	
10'/4-19-91/11:50	none			D6301910419	

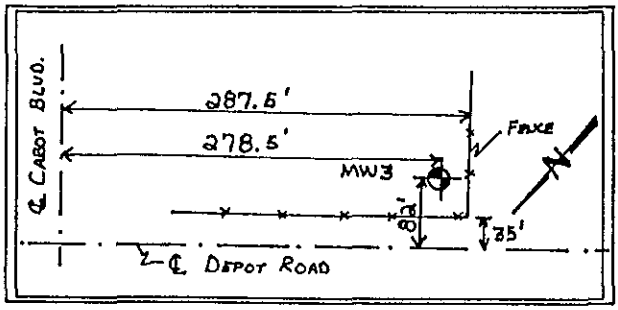
DEPTH (feet)	SAMPLE NO.	SPT	Time	HC Odor	USCS CLASS	NAME	DENSITY	COLOR	MOISTURE	REMARKS
1										12" Class II AB Gravel
2										
3										
4										
5	MW2-1	3 4 8	11:30	none	CH	Silty CLAY	very stiff-hard	black to dark br. grey	moist	uniform, approx. 5% fine Sand w/ some 1/4" Clay nodules
6										
7										
8										
9										
10	MW2-2	3 5 5	11:40	none	CH	Silty CLAY	hard	brown grey	moist	uniform, approx. 5% fine Sand, 15-20% fine Sand
11					CL	Grading Sandy CLAY	medium stiff	brown grey	moist	
12										
13										
14										
15	MW2-3	4 6 7	11:50	none	CL	Sandy CLAY	medium stiff	brown to yellow grey	very moist	15-20% fine Sand
16										
17										
18										
19										
20										

TERRASEARCH, INC. (ENVIRONMENTAL)
Dublin, San Jose and Fairfield, California

GEOLOGIC LOG

SHEET 1 of 1

LOCATION SKETCH MAP:



Project No./Name:	CLIENT:
E6301.001 Soil & Groundwater Investigation	J & M, Inc.
Project Location: Depot Road, Hayward, CA	Drill Hole No.: MW3
Drilling Co./Foreman: H & W Drilling/Anibal	Geologist: Neddal Ali-Adeeb
Drilling Method/C57/Rig: 10" H & A/CME55	Sampling Method(s): 2" I.D. Mod. Calif. Sampler w/140" hammer w/ 30" drop

Drilling Start Date/Time:	Drilling End Date/Time:	Elevation:	Total Depth:	Surface Conditions:	Samples:
4/19/91/13:15	4/19/91/13:50		15'	Gravel surface level dipping NW	3 soil 55-gal bbls: 2
Depth 1st Water Date/Time: 10' 4/19/91 13:45	Geophys. Logs:	Sec-Tws-Rng	Laboratory: #1210 Sequoia Analytical	C-O-C Number: E6301910419	

DEPTH (feet)	SAMPLE NO.	SPT	Time	HC Odor	USCS CLASS	NAME	DENSITY	COLOR	MOISTURE	REMARKS
1										12" Class II AB Gravel
2										
3										
4										
5	MW3-1	3 4 6	1325	none	CH	Silty CLAY	very stiff-hard	dark brown grey	moist	uniform w/some clay nodules
6										
7										
8										
9										
10	MW3-2	3 5 8	1340	none	CH	Silty CLAY	hard	brown grey	moist	uniform
11										
12										
13										
14										
15	MW3-3	2 3 4	1350	none	CL-SC	Sandy CLAY-Clayey SAND	medium stiff-medium dense	orange to yellow brown	saturated	uniform fine Sand
16										
17										
18										
19										
20										

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO. B-1
Time Sample Collected: 1050	
COC and RFA Number: E6301910425	

Sample Location:
Approximately 24.7 feet east of the western fence of the Site and approximately 15.5 feet south of the fence within the Site. Sample was collected from approximately 2 to 3 inches below the surface to 6 to 7 inches below surface.

Sample Collection Method:
Drilled down to 2 to 3 inches below surface using a 4-inch diameter hand auger. Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sample.

Physical Characteristics:

USCS Classification: GC
Description: Clayey Gravel
Odor: None
Color: Yellow to orange brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO: B-2
Time Sample Collected: 1035	
COC and RFA Number: E6301910425	

Sample Location:
Approximately 48.2 feet east of the western fence of the property and approximately 17.5 feet south of the fence within the property. Sample was collected from approximately 2 to 3 inches below surface to 6 to 7 inches below surface.

Sample Collection Method:
Drilled down to 2 to 3 inches below surface using a 4-inch diameter hand auger. Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sampler.

Physical Characteristics:

USCS Classification: GC
Description: Clayey Gravel
Odor: None
Color: yellow to orange brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO: B-3
Time Sample Collected: 1200	
COC and RFA Number: E6301910425	

Sample Location:
Approximately 10 feet south and 30 feet west of the northwest corner of the metal shed in the southern one-half of the site. Concrete was encountered at approximately 6 to 7 inches below surface. Sample was collected from approximately 1 inch below surface to approximately 7 inches below surface at that location.

Sample Collection Method:
Drilled down to 2 to 3 inches below surface using a 4-inch diameter hand auger. Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sample.

Physical Characteristics:

USCS Classification: SC-GC
Description: Clayey Sand to Clayey Gravel
Odor: Slight hydrocarbon odor
Color: Brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO. B-4
Time Sample Collected: 1145	
COC and RFA Number: E6301910425	

Sample Location:
Ten feet south and 10 feet west of the northwest corner of the metal shed in the southern one-half of the Site. Concrete was encountered approximately 4 inches below surface. Sample was collected from approximately one-fourth inches below surface to 4 inches below surface in two adjacent borings.

Sample Collection Method:
Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sampler.

Physical Characteristics:

USCS Classification: GC
Description: Brown Clayey GRAVEL
Odor: Slight hydrocarbon odor
Color: Brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO. B-5
Time Sample Collected: 1220	
COC and RFA Number: E6301910425	

Sample Location:
Approximately 45 feet north of the existing well outside the western fence of the south one-half of the property, and 1.5 feet east of the fence inside the site.

Sample Collection Method:
Drilled down to 2 to 3 inches below surface using a 4-inch diameter hand auger. Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sampler.

Physical Characteristics:

USCS Classification: CL-SC
Description: Sandy Clay to Clayey Sand
Odor: None
Color: Dark brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

SOIL SAMPLE FIELD LOG

Terrasearch, Inc.

Project Number: E6301.001
Project Name: Soil & Groundwater Invest.
Project Location: 3826 Depot Road, Hayward
Client: J & M, Inc.

DATE: Thursday 4/25/91	SAMPLE NO. B-6
Time Sample Collected: 1230	
COC and RFA Number: E6301910425	

Sample Location:
Approximately 40 feet north of the existing well on the outside of the southern one-half of the Site and approximately 17 feet west of the western fence of the Site. Sample was collected from approximately 2 to 3 inches below surface to 6 to 7 inches below surface.

Sample Collection Method:
Drilled down to 2 to 3 inches below surface using a 4-inch diameter hand auger. Collected sample using a hand operated core sampler with 2x4 inch brass liner. The sampler was driven into the soil with its hand operated up-and-down hammer. The sampler was washed and triple-rinsed w/Alconox and fitted with a new liner before each sampler.

Physical Characteristics:

USCS Classification: GC
Description: Clayey Gravel
Odor: None
Color: Red brown

Analysis Requested:
Total petroleum hydrocarbons as gasoline with benzene, toluene, xylenes, and ethylbenzene distinctions, and total petroleum hydrocarbons as diesel.

Comments:

APPENDIX B

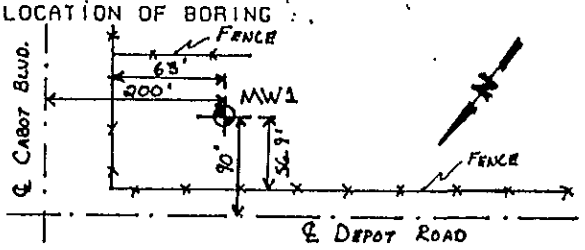
As-Built Well Sketches

TERRA SEARCH INC.

AS-BUILT WELL SKETCH

SHEET 1 OF 1

LOCATION OF BORING



SURFACE CONDITIONS:

PROJECT INFORMATION
NO.: E6301.001
NAME: Soil & Geologic Invest.
LOCATION: Depot Road, Hayward

CLIENT: J & M Construction
WELL NO. MW1
INSTALLED DATE/TIME
START 4/19/91 1010
END 4/19/91 1445

DRILLING CO./FOREMAN: HEW Drilling/ Anibal
DRILLING METHOD/RIG MODEL: 10" HSA CME55
GEOPHYS. LOGS: None

ELEVATION -
DATUM - top of pavement
TOTAL DEPTH - 15'
SEC - TOWNSHP - RANGE

1ST GROUNDWATER DATE TIME: 8' 4/19/91 @ 0935
GEOLOGIST: Neddal Ali-Adeeb

DEVELOPMENT METHOD

TYPE OF WELL (circle): (MONITOR) DOMESTIC PUMP TEST VAPOR OBSERVATION OTHER INJECTION

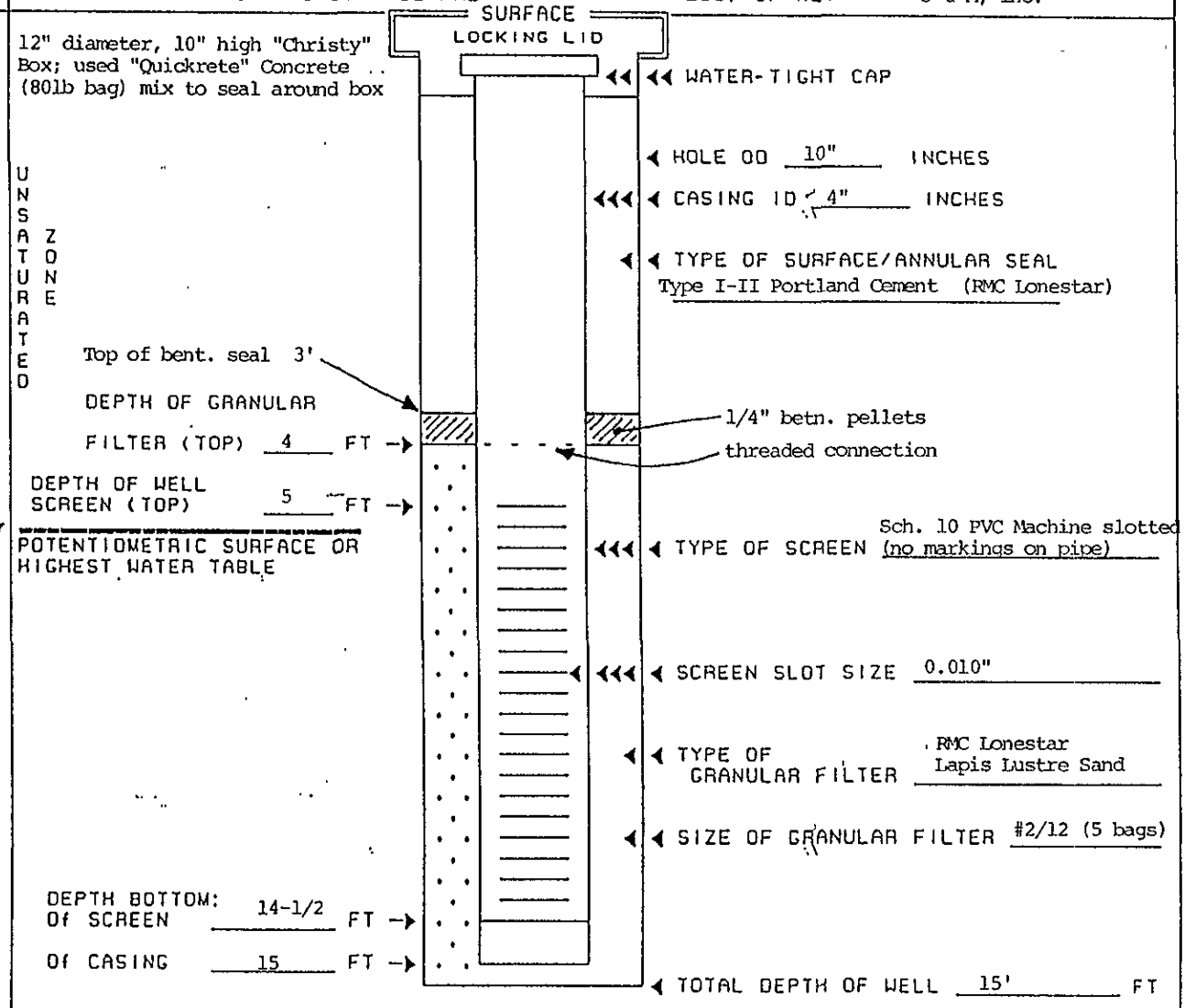
CASING VOLUME

REMARKS:
ACFCWCD - Zone 7
Permit No. 91183

GEN. STRAT

SLOPING SURFACE PAD

PADLOCK ID. NO. - 2007
LOC. OF KEY - J & M, Inc.

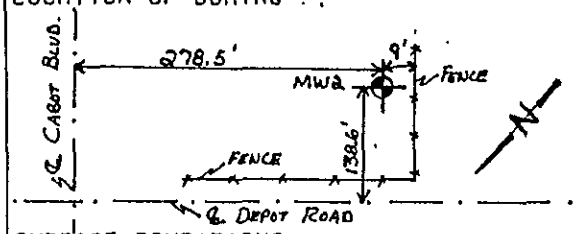


TERRA SEARCH INC.

AS-BUILT WELL SKETCH

SHEET 1 OF 1

LOCATION OF BORING :



SURFACE CONDITIONS:

PROJECT INFORMATION
NO.: E6301.001
NAME: Soil & Groundwater Invest.
LOCATION: Depot Road, Hayward

CLIENT: J & M, Inc.
WELL NO. MW2
INSTALLED DATE/TIME
START 4/19/91 1210
END 4/19/91 1445

DRILLING CO./FOREMAN
HEW Drilling / Anibal

DRILLING METHOD/RIG MODEL
10"HSA/CME55

ELEVATION -
DATUM - Top of pavement
TOTAL DEPTH - 15'

1ST GROUNDWATER DATE TIME
10' 4/19/91 @ 11:50

GEOLOGIST
Neddal Ali-Adeeb

GEOPHYS. LOGS: None

SEC - TOWNSHP - RANGE

DEVELOPMENT METHOD

TYPE OF WELL (circle)
(MONITOR) PUMP TEST OBSERVATION INJECTION
DOMESTIC VAPOR OTHER _____

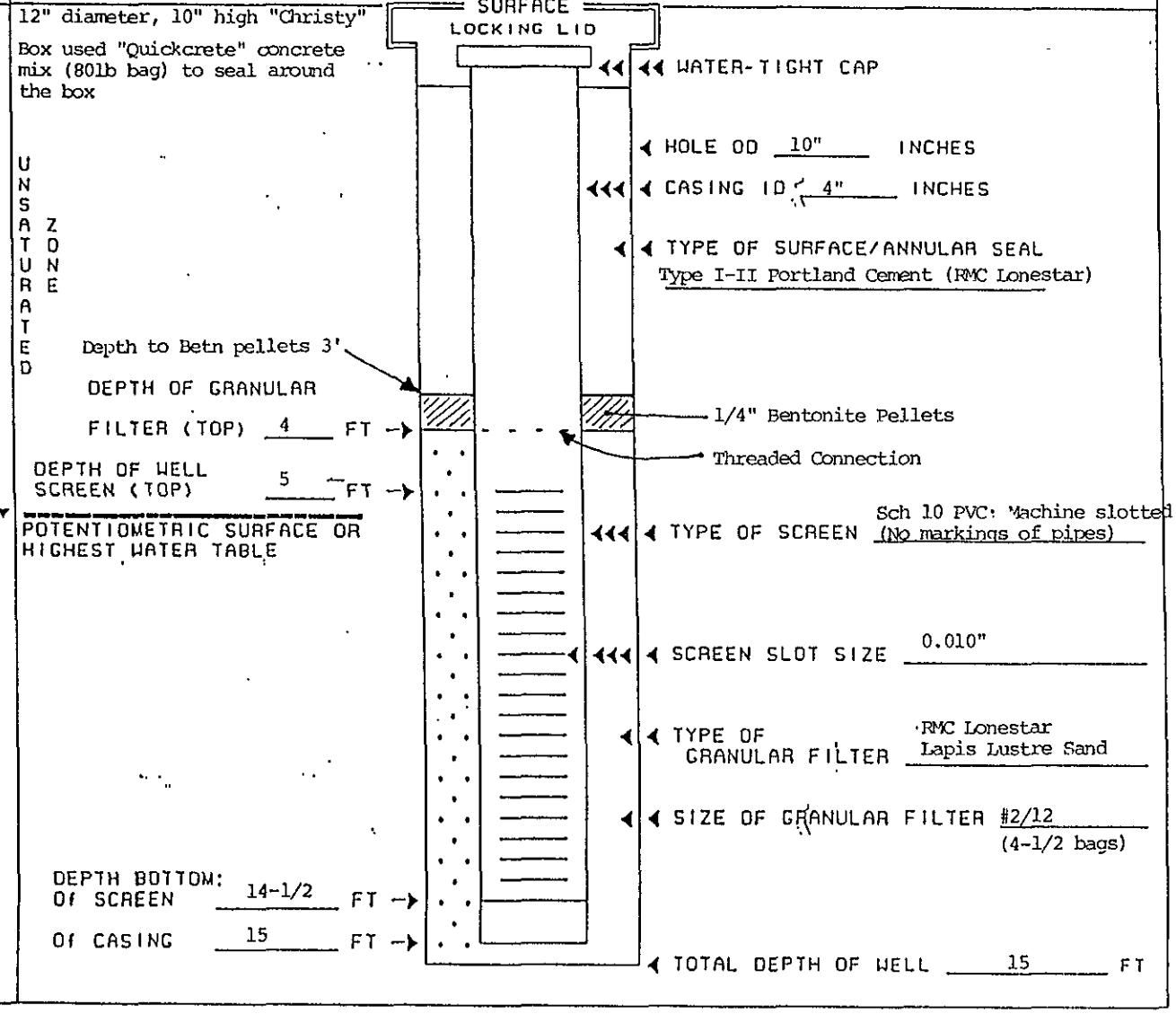
CASING VOLUME

REMARKS:
ACFSWCD - Zone 7
Permit No. 91183

GEN. STRAT

SLOPING SURFACE PAD

PADLOCK ID. NO. - 2007
LOC. OF KEY - J & M, Inc.

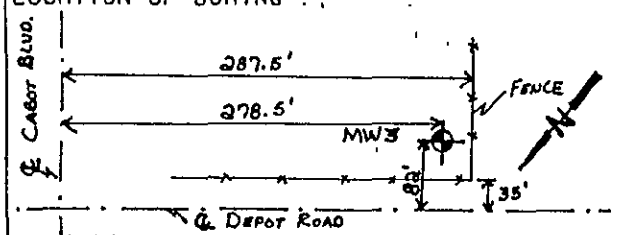


TERRA SEARCH inc.

AS-BUILT WELL SKETCH

SHEET 1 OF 1

LOCATION OF BORING :



SURFACE CONDITIONS:

PROJECT INFORMATION
NO.: E6301.001
NAME: Soil & Groundwater Invest.
LOCATION: Depot Road, Hayward

CLIENT: J & M Inc.

WELL NO. MW3

INSTALLED DATE/TIME
START 4/19/91 1400
END 4/19/91 1445

DRILLING CO./FOREMAN
HEW Drilling/Anibal

ELEVATION -
DATUM - Top of pavement
TOTAL DEPTH - 15'

DRILLING METHOD/RIG MODEL
10" HSA/CME55

SEC - TOWNSHP - RANGE

1ST GROUNDWATER DATE TIME
10' 4/19/91 13:45

GEOLOGIST
Neddal Ali-Adeeb

GEOPHYS. LOGS:

DEVELOPMENT METHOD

TYPE OF WELL (circle)
(MONITOR) PUMP TEST OBSERVATION INJECTION
DOMESTIC VAPOR OTHER _____

CASING VOLUME

REMARKS:
ACFCWCD - Zone 7
Permit No. 91183

GEN. STRAT

SLOPING SURFACE PAD

PADLOCK ID. NO. - 2007
LOC. OF KEY - J & M, Inc.

12" diameter, 10" high "Christy" Box. Used "Quickrete" concrete mix (80 lb bag) to seal around the box

SURFACE LOCKING LID

WATER-TIGHT CAP

HOLE OD 10" INCHES

CASING ID 4" INCHES

TYPE OF SURFACE/ANNULAR SEAL
Type I-II Portland Cement (RMC Lonestar)

UNSATURATED ZONE

Depth to Betn pellets 3'

DEPTH OF GRANULAR FILTER (TOP) 4 FT

1/4" Bentonite pellets

threaded connection

DEPTH OF WELL SCREEN (TOP) 5 FT

POTENTIOMETRIC SURFACE OR HIGHEST WATER TABLE

TYPE OF SCREEN Sch. 10 PVC machine slotted (no markings on pipes)

SCREEN SLOT SIZE 0.010"

TYPE OF GRANULAR FILTER RMC Lonestar Lapis Lustre Sand

SIZE OF GRANULAR FILTER #2/12 (5 bags)

DEPTH BOTTOM:
OF SCREEN 14-1/2 FT
OF CASING 15 FT

TOTAL DEPTH OF WELL 15' FT

APPENDIX C

Laboratory Reports

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301-001, Depot Rd., Hayward	Sampled:	Apr 19, 1991
11840 Dublin Blvd.	Matrix Descript:	Soil	Received:	Apr 19, 1991
Dublin, CA 94568	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 30, 1991
Attention: Richard Kent	First Sample #:	104-3505	Reported:	May 7, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
104-3505	MW1 - 1	N.D.	N.D.	0.018	N.D.	N.D.
104-3506	MW1 - 2	N.D.	N.D.	N.D.	N.D.	N.D.
104-3507	MW2 - 1	N.D.	N.D.	0.0090	N.D.	N.D.
104-3508	MW2 - 2	N.D.	N.D.	0.0090	N.D.	N.D.
104-3509	MW3 - 1	N.D.	N.D.	0.0070	N.D.	N.D.
104-3510	MW3 - 2	N.D.	N.D.	0.018	N.D.	N.D.
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301-001, Depot Rd., Hayward	Sampled:	Apr 19, 1991
11840 Dublin Blvd.	Matrix Descript:	Soil	Received:	Apr 19, 1991
Dublin, CA 94568	Analysis Method:	EPA 3550/8015	Extracted:	Apr 24, 1991
Attention: Richard Kent	First Sample #:	104-3505	Analyzed:	Apr 24, 1991
			Reported:	May 7, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
104-3505	MW1 - 1	N.D.
104-3506	MW1 - 2	N.D.
104-3507	MW2 - 1	N.D.
104-3508	MW2 - 2	N.D.
104-3509	MW3 - 1	N.D.
104-3510	MW3 - 2	N.D.

Detection Limits:	**1.0**

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Richard Kent

Client Project ID: E6301-001, Depot Rd., Hayward
QC Sample Group: 104-3505
Reported: May 7, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Donohue	C. Donohue	C. Donohue	C. Donohue
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Apr 30, 1991	Apr 30, 1991	Apr 30, 1991	Apr 30, 1991
QC Sample #:	GBLK 043091	GBLK 043091	GBLK 043091	GBLK 043091
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	80	86	87	260
Matrix Spike % Recovery:	80	86	87	87
Conc. Matrix Spike Dup.:	7.9	86	87	260
Matrix Spike Duplicate % Recovery:	79	86	87	87
Relative % Difference:	1.3	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}}$	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Richard Kent

Client Project ID: E6301-001, Depot Rd., Hayward

QC Sample Group: 104-3505

Reported: May 7, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
Method:	EPA 8015
Analyst:	R. Lee
Reporting Units:	ng
Date Analyzed:	Apr 24, 1991
QC Sample #:	DBLK 042491
Sample Conc.:	N.D.
Spike Conc. Added:	900
Conc. Matrix Spike:	750
Matrix Spike % Recovery:	83
Conc. Matrix Spike Dup.:	720
Matrix Spike Duplicate % Recovery:	80
Relative % Difference:	4.1

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

Please Note:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:
Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: [illegible]
Project Name: [illegible]
Project No.: [illegible]
Samplers: [illegible]
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical
Telephone: 415-364-9600 FAX: 415-364-9233
Address: 680 Chesapeake Dr. Redwood City, CA 94063
Certificate No.: 1210 Contact: [illegible]

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [illegible] (TI) 4/19/91 1535 Received By: [illegible] 4/19/91 1535

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-1	Boring MW1 @ 5'	4/19/91/0925	Soil	Brass liner 2"x4"	None	TPHg w/BTEX ; ~~TPHd~~ TPHd	1043505	15-day turnaround
MW1-2	Boring MW1 @ 10'	4/19/91/0937	Soil	Brass liner 2"x4"	None.	TPHg w/BTEX ; ~~TPHd~~ TPHd	↓ 06	↓
MW1-3	Boring MW1 @ 15'	4/19/91/0955	"	"	"	HOLD		
MW2-1	Boring MW2 @ 5'	4/19/91/1130	"	"	"	TPHg w/BTEX ; ~~TPHd~~ TPHd	1043507	
MW2-2	Boring MW2 @ 10'	4/19/91/1140	"	"	"	TPHg w/BTEX ; ~~TPHd~~ TPHd	↓ 08	
MW2-3	Boring MW2 @ 15'	4/19/91/1150	"	"	"	HOLD		
MW3-1	Boring MW3 @ 5'	4/19/91/1325	"	"	"	TPHg w/BTEX, ~~TPHd~~ TPHd	1043509	
MW3-2	Boring MW3 @ 10'	4/19/91/1340	"	"	"	TPHg w/BTEX; TPHd	↓ 10	
MW3-3	Boring MW3 @ 15'	4/19/91/1350	"	"	"	HOLD		↓

White-Terrasearch Project File Yellow-Terrasearch Field File Pink - Laboratory Copy

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301-001, Depot Rd., Hayward	Sampled:	Apr 25, 1991
11840 Dublin Blvd.	Matrix Descript:	Soil	Received:	Apr 25, 1991
Dublin, CA 94568	Analysis Method:	EPA 3550/8015	Extracted:	Apr 29, 1991
Attention: Richard Kent	First Sample #:	104-4228	Analyzed:	Apr 29, 1991
			Reported:	May 7, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
104-4228	B-1	13
104-4229	B-2	23
104-4230	B-3	18
104-4231	B-4	23
104-4232	B-5	30
104-4233	B-6	3.8

Detection Limits:	**1.0**

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301-001, Depot Rd., Hayward	Sampled:	Apr 25, 1991
11840 Dublin Blvd.	Matrix Descript:	Soil	Received:	Apr 25, 1991
Dublin, CA 94568	Analysis Method:	EPA 5030/8015/8020	Analyzed:	May 2, 1991
Attention: Richard Kent	First Sample #:	104-4228	Reported:	May 7, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
104-4228	B-1	1.8	0.040	0.060	0.021	0.020
104-4229	B-2	N.D.	N.D.	0.026	N.D.	N.D.
104-4230	B-3	N.D.	N.D.	0.018	N.D.	N.D.
104-4231	B-4	N.D.	N.D.	0.0070	N.D.	N.D.
104-4232	B-5	N.D.	N.D.	0.055	N.D.	N.D.
104-4233	B-6	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Richard Kent

Client Project ID: E6301-001, Depot Rd., Hayward

QC Sample Group: 104-4228

Reported: May 7, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8015	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	R. Lee	L. Gonzales	L. Gonzales	L. Gonzales	L. Gonzales
Reporting Units:	ng	ng	ng	ng	ng
Date Analyzed:	Apr 29, 1991	May 2, 1991	May 2, 1991	May 2, 1991	May 2, 1991
QC Sample #:	DBLK 042991A	GBLK 040291	GBLK 040291	GBLK 040291	GBLK 040291
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	900	100	100	100	300
Conc. Matrix Spike:	850	78	76	73	230
Matrix Spike % Recovery:	94	78	76	73	77
Conc. Matrix Spike Dup.:	810	86	87	84	250
Matrix Spike Duplicate % Recovery:	90	86	87	84	83
Relative % Difference:	4.8	9.8	13	14	8.3

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

COPY

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: E6301910425
Project Name: Depot R1., Hayward
Project No.: E6301-001
Samplers: Neddal Mi-Ateeb
Carrier/Airbill No.: ——

LABORATORY NAME: Sequoia Analytical
Address: 680 Chesapeake Dr., Redwood City, CA 94063
Telephone: 415-364-9600 FAX: 415-364-9233
Certificate No.: 1210 Contact: Marli McBirney

SIGNATURES (Name, Company, Date and Time):

Relinquished By: [illegible] (TI), 4/25/91, 1355 Received By: Deirdre Newcomb 4/25/91 1358

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
B-1	Boring B-1 @ 2'	4/25/91 / 1050	Soil	Brass Liner 4"x2"	blue-ice	TPHg w/BTEX	1044228	Normal turnaround LUFT
						TPHd by GCFID (3550)	~~25~~ 1	Normal Turnaround LUFT
B-2	Boring B-2 @ 2'	4/25/91 / 1035	"	"	"	Same as B-1	29	
B-3	Boring B-3 @ 1'	4/25/91 / ~~1050~~ 1200	"	"	"	" " "	30	
B-4	Boring B-4 @ 2½'	4/25/91 / 1145	"	"	"	" " "	31	
B-5	Boring B-5 @ 2'	4/25/91 / 1220	"	"	"	" " "	32	
B-6	Boring B-6 @ 2'	4/25/91 / 1250	"	"	"	" " "	33	

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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
1580 North 4th Street
San Jose, CA 95112
Attention: Richard Kent

Client Project ID: #E6301-001

QC Sample Group: 104-3752

Reported: May 8, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8015	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	M.Ramos	S.Hoffmannn	S.Hoffmannn	S.Hoffmannn	S.Hoffmannn
Reporting Units:	µg/L	ng	ng	ng	ng
Date Analyzed:	Apr 26, 1991	Apr 24, 1991	Apr 24, 1991	Apr 24, 1991	Apr 24, 1991
QC Sample #:	Matrix	GBLK042491	GBLK042491	GBLK042491	GBLK042491
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	900	100	100	100	300
Conc. Matrix Spike:	710	97	97	96	290
Matrix Spike % Recovery:	79	97	97	96	97
Conc. Matrix Spike Dup.:	790	100	100	100	300
Matrix Spike Duplicate % Recovery:	88	100	100	100	100
Relative % Difference:	11	3.0	3.0	4.1	3.4

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	#E6301-001	Sampled:	Apr 23, 1991
1580 North 4th Street	Matrix Descript:	Water	Received:	Apr 23, 1991
San Jose, CA 95112	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 24, 1991
Attention: Richard Kent	First Sample #:	104-3755	Reported:	May 8, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
104-3755	MW1-W1	N.D.	N.D.	N.D.	N.D.	N.D.
104-3756	MW2-W1	N.D.	N.D.	N.D.	N.D.	N.D.
104-3757	MW3-W1	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	#E6301-001	Sampled:	Apr 23, 1991
1580 North 4th Street	Matrix Descript:	Water	Received:	Apr 23, 1991
San Jose, CA 95112	Analysis Method:	EPA 3510/8015	Extracted:	Apr 24, 1991
Attention: Richard Kent	First Sample #:	104-3752	Analyzed:	Apr 26, 1991
			Reported:	May 8, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons µg/L (ppb)
104-3752	MW1-W1	N.D.
104-3753	MW2-W1	N.D.
104-3754	MW3-W1	N.D.

Detection Limits:	50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

COPY

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: EG3019104 22
Project Name: Soil/GW Investigation
Project No.: EG301.001
Samplers: Adeeb / Kinderwater
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical
Address: 680 Chesapeake Dr, Redwood City, CA 94063
Telephone: 415-364-9600 FAX: 415-364-9233
Certificate No.: 1210 Contact: Marli McBirney

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [illegible] (TTI) 4/23/91, 1530 Received By: [illegible] 4/23/91 1530

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-W1	Hayward	4/22/91	Water	1 liter	no	TPH-diesel by GCFID	1043752	normal turn. LUFT
MW1-W2	Hayward	4/22/91	Water	40 ml	yes HCl	TPH-g / BTEX	55	normal turn. LUFT
MW2-W2	Hayward	4/23/91 11:09	water	40 ml	yes HCl	TPH-g / BTEX	56	normal turn. LUFT
MW2-W1	Hayward	4/23/91 11:07	water	1 liter	no	TPH-diesel by GCFID	53	normal turn. LUFT
MW3-W2	Hayward	4/23/91 13:40	water	40 ml	yes HCl	TPH-g / BTEX	57	normal turn. LUFT
MW3-W1	Hayward	4/23/91 13:42	water	1 liter	no	TPH-diesel by GCFID	54	normal turn. LUFT
Rinseate Sample	Hayward	4/23/91 14:20	water	40 ml	yes HCl	Hold for verification analysis		Hold

White-Terrasearch Project File Yellow-Terrasearch Field File Pink - Laboratory Copy

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301.001	Sampled:	Jul 1, 1991
1580 North 4th Street	Matrix Descript:	Water	Received:	Jul 1, 1991
San Jose, CA 95112	Analysis Method:	EPA 5030/8015/8020	Analyzed:	7/3 & 7/8/91
Attention: Neddal Ali-Adeeb	First Sample #:	107-0384 B	Reported:	Jul 17, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
107-0384	MW1-W12	N.D.	N.D.	N.D.	N.D.	N.D.
107-0385	MW2-W12	N.D.	N.D.	N.D.	N.D.	N.D.
107-0386	MW3-W12	N.D.	N.D.	N.D.	N.D.	N.D.
107-0387	Travel Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.	Client Project ID:	E6301.001	Sampled:	Jul 1, 1991
1580 North 4th Street	Matrix Descript:	Water	Received:	Jul 1, 1991
San Jose, CA 95112	Analysis Method:	EPA 3510/8015	Extracted:	Jul 8, 1991
Attention: Neddal Ali-Adeeb	First Sample #:	107-0384 A	Analyzed:	Jul 9, 1991
			Reported:	Jul 17, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons µg/L (ppb)
107-0384	MW1-W12	N.D.
107-0385	MW2-W12	N.D.
107-0386	MW3-W12	N.D.

Detection Limits:	50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
1580 North 4th Street
San Jose, CA 95112
Attention: Neddal Ali-Adeeb

Client Project ID: E6301.001
Q.C. Sample Group: 1070384-5
Reported: Jul 17, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L. Laikhtman	L. Laikhtman	L. Laikhtman	L. Laikhtman
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 8, 1991	Jul 8, 1991	Jul 8, 1991	Jul 8, 1991
QC Sample #:	GBLK070891	GBLK070891	GBLK070891	GBLK070891
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	98	98	96	290
Matrix Spike % Recovery:	98	98	96	97
Conc. Matrix Spike Dup.:	98	97	96	290
Matrix Spike Duplicate % Recovery:	98	97	96	97
Relative % Difference:	0.0	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
1580 North 4th Street
San Jose, CA 95112
Attention: Neddal Ali-Adeeb

Client Project ID: E6301.001

Q.C. Sample Group: 1070386-7

Reported: Jul 17, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L. Laikhtman	L. Laikhtman	L. Laikhtman	L. Laikhtman
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 3, 1991	Jul 3, 1991	Jul 3, 1991	Jul 3, 1991
QC Sample #:	BLK070391	BLK070391	BLK070391	BLK070391
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	100	100	99	300
Matrix Spike % Recovery:	100	100	99	100
Conc. Matrix Spike Dup.:	100	100	100	300
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	0.0	0.0	1.0	0.0

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Terrasearch, Inc.
1580 North 4th Street
San Jose, CA 95112
Attention: Neddal Ali-Adeeb

Client Project ID: E6301.001

Q.C. Sample Group: 1070384-6

Reported: Jul 17, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
Method:	EPA 8015
Analyst:	R. Lee
Reporting Units:	ng
Date Analyzed:	Jul 9, 1991
QC Sample #:	DBLK070891
Sample Conc.:	N.D.
Spike Conc. Added:	950
Conc. Matrix Spike:	770
Matrix Spike % Recovery:	81
Conc. Matrix Spike Dup.:	800
Matrix Spike Duplicate % Recovery:	84
Relative % Difference:	3.8

SEQUOIA ANALYTICAL

Maile McBirney Springer
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

COPY

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
~~1500 N. Fourth Street~~ 11840 Dublin Blvd
~~San Jose, California 95112-4676~~ Dublin, CA 94568
~~(408) 453-1189~~ Attn: R. Kent
415-833-9297

Sheet 1 of 1

C-O-C Control No.: EW3019/0701
Project Name: Soil & GW. Invest.
Project No.: E6301.001
Samplers: Nedal Ali-Adeeb
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical
Address: 680 Chesapeake Dr., Redwood City, CA 94063
Telephone: 415-364-9600 FAX: 415-364-9233
Certificate No.: 1210 Contact: Marilj McBirney

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [signature] 7/1/91 1650 Received By: K. Neil

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-W12	Hayward	7/1/91 1235	water	40 ml	HCl	TPH-g / BTEX	1070384 B	Normal turn. LUFT
MW1-W22	Hayward	7/1/91 1235	water	1 liter	None	TPH-d	6 A	Normal turn. LUFT
MW2-W12	Hayward	7/1/91 1430	water	40 ml	HCl	TPH-g / BTEX	85 B	Normal turn LUFT
MW2-W22	Hayward	7/1/91 1430	water	1 liter	None	TPH-d	1 A	Normal turn. LUFT
MW3-W12	Hayward	7/1/91 1540	water	40 ml	HCl	TPH-g / BTEX	86 B	Normal turn LUFT
MW3-W22	Hayward	7/1/91 1540	water	1 liter	None	TPH-d	1 A	Normal turn LUFT
							57	

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APPENDIX D

Chain of Custody Records/Request for Analysis

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: E6301910422
Project Name: Sa, I & GW Investig Area
Project No.: E6301.001
Samplers: Adeeb / Kinderwater
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical Telephone: 415-364-9600 FAX: 415-364-9233
Address: 680 Chesapeake Dr, Redwood City, CA 94063 Certificate No.: 1210 Contact: Mairi McBirney.

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [illegible] (TTI), 4/23/91, 1530 Received By: Rick Newcomb 4/23/91 1530

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-W1	Hayward	4/22/91	Water	1 liter	no	TPH-diesel by GC FID		normal turn. LUFT
MW1-W2	Hayward	4/22/91	Water	40 ml	yes HCl	TPH-g / BTEX		normal turn. LUFT
MW2-W2	Hayward	4/23/91 11:09	water	40 ml	yes HCl	TPH-g / BTEX		normal turn. LUFT
MW2-W1	Hayward	4/23/91 11:07	water	1 liter	no	TPH-diesel by GC FID		normal turn. LUFT
MW3-W2	Hayward	4/23/91 13:40	water	40 ml	yes HCl	TPH-g / BTEX		normal turn. LUFT
MW3-W1	Hayward	4/23/91 13:42	water	1 liter	no	TPH-diesel by GC FID		normal turn. LUFT
Rinseate Sample	Hayward	4/23/91 14:20	water	40 ml	yes HCl	Hold for verification analysis		Hold

White-Terrasearch Project File Yellow-Terrasearch Field File Pink - Laboratory Copy

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: G6301910425
Project Name: Depot R1., Hayward
Project No.: G6301-001
Samplers: Neddal Ali-Adeeb
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical Telephone: 415-364-9600 FAX: 415-364-9233
Address: 680 Chesapeake Dr., Redwood City, CA 94063 Certificate No.: 1210 Contact: Marli McBirney

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [redacted] (TI), 4/25/91, 1355 Received By: Deirdre Newcomb 4/25/91 1355

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
B-1	Boring B-1 @ 2'	4/25/91 / 1050	Soil	Brass Liner 4"x2"	blue-ice	TPHg w/BTEX		Normal turnaround LUFT
						TPHd by GCFID (3550)		Normal Turnaround LUFT
B-2	Boring B-2 @ 2'	4/25/91 / 1035	"	"	"	same as B-1		
B-3	Boring B-3 @ 1'	4/25/91 / 1200	"	"	"	" " "		
B-4	Boring B-4 @ 2½'	4/25/91 / 1145	"	"	"	" " "		
B-5	Boring B-5 @ 2'	4/25/91 / 1220	"	"	"	" " "		
B-6	Boring B-6 @ 2'	4/25/91 / 1250	"	"	"	" " "		

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CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
1580 N. Fourth Street
San Jose, California 95112-4676
(408) 453-1180

Sheet 1 of 1

C-O-C Control No.: E6301910419
Project Name: ~~Sol~~ Depot Rd., Hayward
Project No.: E6301.011
Samplers: Nedal Ali-Adeeb
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical
Telephone: 415-364-9600 FAX: 415-364-9233
Address: 680 Chesapeake Dr., Redwood City, CA 94063
Certificate No.: 1210 Contact: Mai. McBurney

SIGNATURES (Name, Company, Date and Time):
Relinquished By: (TT) 4/19/91 ; 1555 Received By: 4/19/91 1555

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-1	Boring MW1 @ 5'	4/19/91/0925	Soil	Brass liner 2"x4"	None	TPHg w/BTEX ; ~~TPHg~~ TPHd		15-day turnaround
MW1-2	Boring MW1 @ 10'	4/19/91/0937	Soil	Brass liner 2"x4"	None	TPHg w/BTEX ; ~~TPHg~~ TPHd		
MW1-3	Boring MW1 @ 15'	4/19/91/0955	"	"	"	HOLD		
MW2-1	Boring MW2 @ 5'	4/19/91/1130	"	"	"	TPHg w/BTEX ; ~~TPHg~~ TPHd		
MW2-2	Boring MW2 @ 10'	4/19/91/1140	"	"	"	TPHg w/BTEX ; ~~TPHg~~ TPHd		
MW2-3	Boring MW2 @ 15'	4/19/91/1158	"	"	"	HOLD		
MW3-1	Boring MW3 @ 5'	4/19/91/1325	"	"	"	TPHg w/BTEX, ~~TPHg~~ TPHd		
MW3-2	Boring MW3 @ 10'	4/19/91/1340	"	"	"	TPHg w/BTEX; TPHd		
MW3-3	Boring MW3 @ 15'	4/19/91/1358	"	"	"	HOLD		

White-Terrasearch Project File Yellow-Terrasearch Field File Pink - Laboratory Copy

CHAIN-OF-CUSTODY RECORD

Send Report and Invoice To:

Terrasearch, Inc. (Environmental)
~~1590 N. Fourth Street~~ 11840 Dublin Blvd
~~San Jose, California 95112-4676~~ Dublin, CA 94568
~~(408) 453-1180~~ Attn: R. Kent
415-833-9297

Sheet 1 of 1

C-O-C Control No.: EG30191071
Project Name: Sc. I&CW Invest.
Project No.: EG301.001
Samplers: Nedal Ali-Adeeb
Carrier/Airbill No.: —

LABORATORY NAME: Sequoia Analytical
Address: 680 Chesapeake Dr., Redwood City, CA 94063
Telephone: 415-364-9600 FAX: 415-364-9233
Certificate No.: 1210 Contact: Marilyn McBirney

SIGNATURES (Name, Company, Date and Time):
Relinquished By: [signature] 7/1/91 1650 Received By: K. Nicol

REQUEST FOR ANALYSIS

Sample No.	Sample Location	Date/Time Collected	Sample Type	Container Type/Size	Preservative	REQUESTED ANALYSIS	Detection Limit	Comment
MW1-W12	Hayward	7/1/91 1235	water	40 ml	HCl	TPH-g / BTEX		Normal turn. LUFT
MW1-W22	Hayward	7/1/91 1235	water	1 liter	None	TPH-d		Normal turn LUFT
MW2-W12	Hayward	7/1/91 1430	water	40 ml	HCl	TPH-g / BTEX		Normal turn LUFT
MW2-W22	Hayward	7/1/91 1430	water	1 liter	None	TPH-d		Normal turn. LUFT
MW3-W12	Hayward	7/1/91 1540	water	40 ml	HCl	TPH-g / BTEX		Normal turn LUFT
MW3-W22	Hayward	7/1/91 1540	water	1 liter	None	TPH-d		Normal turn LUFT

White-Terrasearch Project File Yellow-Terrasearch Field File Pink - Laboratory Copy

APPENDIX E

Well Permits

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3826 Depot Road Hayward

CLIENT
Name J + M, Inc.
Address 3826 Depot Road Phone 782-3434
City Hayward Zip 94543

APPLICANT
Name Richard Kent, R.G. Terrasearch
Address 11840 Dublin Blvd Phone 415-833-9297
City Dublin Zip 94568

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	X	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 604987

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 15 ft.
Surface Seal Depth 3 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 4-16-91
ESTIMATED COMPLETION DATE 4-16-91

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

APPLICANT'S SIGNATURE [signature] Date 4/4/91

FOR OFFICE USE

PERMIT NUMBER 91183
LOCATION NUMBER ___

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 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 Wyman Hong Date 5 Apr 91
Wyman Hong

121989