ensco environmental services, inc.
a subsidiary of environmental system company

June 29, 1989

7105

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS

Alameda County Health Care Services
Department of Environmental Health
Hazardous Material Division
80 Swan Way, Suite 200
Oakland, California 94621

Attention: Mr. Storm Goranson

Subject: Final Assessment Report for Former Shell Station
7194 Amador Valley Boulevard, Dublin, California
EES Project No. 1826G

Dear Mr. Goranson:

Find enclosed a copy of our Final Assessment Report for the former Shell Station, 7194 Amador Valley Boulevard, Dublin, California.

If you have any questions please feel free to call.

Sincerely
Ensco Environmental Services, Inc.

Richard A. Garlow
Project Geologist

RAG/sw
Enclosures

ENSCO ENVIRONMENTAL SERVICES, INC.

FINAL ASSESSMENT
REPORT

FOR

FORMER SHELL STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

Shell P.O. No. MOH 237138
EES Project No. 1826G
June 1989

Corporate Offices 41674 Christy Street, Fremont, CA 94538-3114 (415) 659-0404 Fax: (415) 651-4677 Contr. Lic. No. 550205

ensco environmental services, inc.
a subsidiary of environmental system company

June 5, 1989

Shell Oil Company
1390 Willow Pass Road
Suite 900
Concord, CA 94520

Attention: Ms. Diane Lundquist

Subject: Final Assessment Report - Former Shell Station
7194 Amador Valley Boulevard, Dublin, California
Shell P.O. Number MOH 237138
EES Project Number 1826G

Dear Mr. Roller:

Ensco Environmental Services, Inc. (EES) has completed a final assessment report at the site noted above. The results of the investigation are presented in the attached report. The scope of work includes the installation of five groundwater monitoring wells, soil and groundwater sampling, chemical analyses of selected samples, and the preparation of this technical report describing our methods of investigation, field observations, results of laboratory analyses, conclusions, and reporting requirements.

We trust that the attached report suits your needs. If you have any questions concerning the report or if we may be of further service to Shell Oil Company, please call.

Sincerely,
Ensco Environmental Services, Inc.

Richard A. Garlow
Project Geologist

Lawrence D. Pavlak, C.E.G. 1187
Senior Program Geologist

RAG/LDP/sw
Attachment

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LIST OF TABLES AND FIGURES

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FINAL ASSESSMENT REPORT

FOR

FORMER SHELL STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

EXECUTIVE SUMMARY

Ensco Environmental Services, Inc. (EES) has recently completed a final assessment of the soil and groundwater contamination in the vicinity of the former Shell Station located at 7194 Amador Valley Boulevard in Dublin, California. The service station located on this property was removed and has been replaced with an Oil Changers facility. In May 1988, EES completed a soil and groundwater investigation of the former station site, which revealed contamination of the soil and groundwater by gasoline and gasoline-related compounds. At that time, Shell requested that EES determine the vertical and lateral extent of contamination. In November of 1988, EES completed a supplemental soil and groundwater investigation to determine the presence and extent of off-site contamination. This November 1988 investigation confirmed the presence of off-site contamination and brought to light the need for additional studies to determine the extent of contamination. The scope of work included a review of previous work done at the site by EES, installation of groundwater monitoring wells, and the collection of soil and groundwater samples for analysis. The findings of this investigation may be summarized as follows:

1. Five off-site exploratory borings were drilled and converted to groundwater monitoring wells. Soils samples from three of these borings did not contain detectable concentrations of total petroleum hydrocarbons as gasoline (TPHG) or as diesel (TPHD). In one boring, a TPHG concentration of 3 parts per million (ppm) was detected in the soil, however, TPHD and benzene, toluene, ethyl benzene, and total xylenes (BTEX) concentration levels were not detected. Soil samples from one

boring, for well MW-10, drilled adjacent to some out of service underground fuel tanks, contained TPHG concentrations as high as 2,600 ppm. In the groundwater there, benzene was detected at a concentration of 0.14 ppm.

2. The calculated groundwater flow direction in the area of well MW-10 is toward the subject Shell site. Monitoring well MW-10 is located approximately 5 feet southeast of the site boundary and contaminants from this location may be affecting the site.

INTRODUCTION

At Shell's request, EES has assessed the extent of off-site contamination emanating from the former Shell Station located in the City of Dublin, Alameda County California. The location of the site is shown in Figure 1. The field investigation was conducted in accordance with a scope of work approved by Shell and specified in an extension of Shell Purchase Order No. MOH 237138. This report will present the recent background of the project, the scope of work, a description of the field investigation, laboratory sample analyses, a summary of our findings and conclusions, and reporting requirements.

RECENT BACKGROUND

In November 1988, EES completed a supplemental soil and groundwater investigation at the subject site. This study concluded that TPHG and BTEX contaminants were present in the soil and groundwater in off-site locations (see Supplemental Soil and Groundwater Investigation for Shell Oil Company; Ensco Environmental Services, Inc., November 1988). As a result of these findings, Shell contracted EES to perform additional studies to determine the degree and extent of off-site contamination.

SCOPE OF WORK

The scope of work for this project included the following:

- Drilling five exploratory borings and collecting soil samples.
- Converting each of the five borings into groundwater monitoring wells.
- Surveying the locations and elevations of the well casings
- Developing the wells and sampling the groundwater.
- Submitting the soil and groundwater samples to a state-certified laboratory for analysis.
- Preparing a summary report of the investigation.

FIELD INVESTIGATION

The field investigation was performed between February 21, 1989 and February 23, 1989 and involved the drilling of five additional exploratory borings which were converted to groundwater monitoring wells (MW-8 through MW-12). The locations of these additional monitoring wells as well as previously installed monitoring wells and exploratory borings are shown on Figure 2. EES obtained the required well construction permit, which is included as Appendix B.

During the course of this off-site investigation, a former pump island was observed in front of the building southwest of the site. This building is presently used as a small market which sells food but not gasoline. Vent lines and filler openings were noted adjacent to the pump island which indicated that underground fuel storage tanks were located there. It was decided to locate a monitoring well, MW-10, on the down-gradient side of these tanks.

Dotzhpride site.

Exploratory Borings and Soil Sampling

EES's Mobile B-53 truck-mounted drill rig with 10-inch outside diameter hollow-stem augers was used to drill the five exploratory soil borings in which the monitoring wells were constructed. The borings were logged by an EES geologist with soil descriptions classified according to the Unified Soil Classification System

and Munsell Soil Color Charts. To reduce the potential for cross-contamination between borings at the site, the auger sections were steam cleaned before drilling began. Only pre-cleaned augers were used to drill each boring. Additionally, all sampling equipment was broken down into its component parts and thoroughly cleaned between each sampling.

Before drilling began, all borehole locations were hand excavated to a depth of 5 feet to prevent damage to underground utilities, as required by Shell protocol. Soil samples were taken through the hollow-stem auger at least every 5 feet, and at the bottom of the boring as determined by the EES geologist. When the desired sample depth was reached, a cleaned modified California split-spoon sampler, equipped with three clean brass liner tubes, each 6 inches long and 2 inches in diameter, were used to collect and retain the soil samples. The sampler was advanced 18 inches into the undisturbed soils ahead of the auger by striking it with a 140-pound, rig-operated hammer. In many instances, a very cohesive clay was encountered which resisted sampling attempts. When sampling was successful, after the sampler was recovered from the borehole, the bottom sample liner was retained for chemical analyses. Both ends of the liner were immediately covered with aluminum foil and a plastic cap, labeled with a unique sample number and pertinent sample information, placed in a plastic zipper seal plastic bag, entered onto a chain-of-custody form, and packed in a chilled ice chest for transport to state-certified laboratory. The remaining soil was then visually characterized and tested with a portable photoionization detector (PID) for the presence of volatile hydrocarbons.

Groundwater was encountered during drilling at depths ranging from 10 to 15 feet below the surface. Product odor and positive readings on the portable PID were noted only in the boring for MW-10 in soil samples from 6 to 6.5 feet and 10 to 10.5 feet below the surface. No odor or positive reaction on the PID was noted in the soils from the other four borings. All soil cuttings derived from the drilling operations were placed into lined steel 55-gallon drums, sampled, sealed, and placed on-site pending disposal analyses. Appendix A contains the boring logs, indicating the depths at which groundwater was encountered, and PID readings.

Groundwater Monitoring Well Construction

The monitoring wells were constructed by inserting 4-inch-diameter, schedule 40 polyvinyl chloride (PVC) blank and factory-slotted casing with a 0.020 inch slot size and flush-threaded couplings into the aforementioned borings. No solvents or cements were used during well construction. The screened interval of each monitoring well was determined in the field by the EES geologist, based upon the characteristics of the uppermost saturated zone.

After the casing was installed, clean No. 2/12 sand was poured through the auger as the auger was being removed, filling the annulus between the casing and the borehole wall to 2 feet above the top of the screened interval. An approximately 1-foot thick layer of 1/2-inch bentonite pellets was placed on top of the sand and hydrated to form a seal. Neat cement grout was then poured on top of the bentonite and brought to within 12 inches of surface grade. A steel protective vault with a locking device was placed over the well head and surrounded by a concrete seal to protect the well. The top of the protective cover was placed at grade. Construction details of each monitoring well are presented in Appendix A.

Well Development and Groundwater Sampling

After completion of well construction, each well was developed to remove fine-grained material and turbid water, and to improve the hydraulic communication with the surrounding formation. A stainless steel bailer was used to develop the wells. Each well was bailed until a minimum of five well volumes of groundwater had been removed.

Prior to groundwater sampling, the depth to groundwater was measured and the monitoring wells were checked with a clear acrylic bailer for the presence of free-floating petroleum product: none was observed. The wells were then purged of approximately four more well volumes prior to sampling. Groundwater samples were collected using a clean teflon bailer. The water sample from each well was placed into two 40 milliliter (ml) vials with teflon septa caps, labeled with a unique sample number, entered onto a chain-of-custody form, and placed in a chilled ice

chest for transport to a state-certified laboratory. Groundwater levels stabilized at 8.28 feet below the surface in well MW-8; 8.48 feet in MW-9; 8.95 feet in MW-10; 8.30 feet in MW-11; and 6.94 feet in MW-12, as indicated on the boring logs in Appendix A.

Site Survey

The elevations of the tops of the PVC well casings and the tops of the protective covers were surveyed by Ron Archer, Registered Professional Engineer, of Pleasanton, California. The elevations were recorded to the nearest 0.01 foot and the reference benchmark (stamped VL-PK-AM-VY 1977, Elevation 337.402 M.S.L.) is located in the western median of Amador Valley Boulevard at Village Parkway adjacent to the site. The property boundaries, reference points, and the locations of the monitoring wells were also surveyed. A copy of the original survey map is included in Appendix C.

SITE GEOLOGY AND HYDROGEOLOGY

The groundwater monitoring well borings were drilled to depths ranging from approximately 17 to 18 feet. The soils observed during drilling were primarily silty clays interbedded with sandy clays, clayey sands, and some sands. Generally, the more sandy beds were confined to the upper 5 to 10 feet. Fine-grained sand interbeds may represent localized lenses or stringers.

Groundwater was encountered in the borings at depths ranging from approximately 10 to 15 feet. The static water level, measured in each well on March 1, 1989, was between 6.94 and 8.95 feet below the tops of the well casings. The direction of groundwater flow west of the site appears to be east to southeast towards Village Parkway and then becomes southeast to south near the site with a groundwater flow gradient of approximately 0.02 feet per foot.

SAMPLE ANALYSES

At the request of Shell, every soil sampling interval was checked for the presence of hydrocarbons with a portable PID. If the detector did not indicate the presence of hydrocarbon vapors, the soil sample was included in a composite sample. If the detector indicated the presence of hydrocarbons, the soil sample was analyzed separately.

Soil and groundwater samples collected at the site were analyzed at Anametrix Analytical Laboratory in San Jose, California. All soil samples, both individual and composite, were analyzed for TPHG and TPHD. If the composite sample was found to contain detectable TPHG or TPHD, each individual sample in the composite was analyzed for TPHG and TPHD. Any individual sample containing detectable TPHG or TPHD was analyzed for BTEX. In addition, a composite of all retained samples from each boring was analyzed for total and organic lead. Water samples were analyzed for TPHG and BTEX. All hydrocarbon analytical methods follow California Department of Health Services (DHS) approved methods.

SUMMARY OF LABORATORY RESULTS

Soil Samples

Laboratory analyses revealed the presence of TPHG, TPHD, and BTEX in some of the soil samples from MW-10. The maximum TPHG concentration detected was 2,600 ppm. The maximum TPHD concentration detected was 70 ppm. The maximum BTEX concentrations detected were 7 ppm for benzene, 52 ppm for toluene, 44 ppm for ethyl benzene, and 210 ppm for total xylenes. See Table 1, Soil Analyses Results.

Analyses of soil samples from other borings found TPHG in the composite sample from boring MW-9 at a concentration of 3 ppm. None of the contaminants analyzed for were detected in any of the other borings.

Analyses of drummed soil boring cuttings from MW-10 revealed a maximum detected concentration of 1,400 ppm for TPHG; 140 ppm for TPHD; 30 ppm for benzene; 50 ppm for toluene; 40 ppm for ethyl benzene; and 120 ppm for total xylenes. See Table 2, Drummed Soil Analyses Results. No contaminants were detected in any of the other drummed soils.

Groundwater Samples

Of the groundwater samples submitted for laboratory analysis only one, from well MW-10, was found to contain detectable concentrations of hydrocarbon contaminants. Analyses of groundwater samples revealed the presence of TPHG and BTEX constituents in the groundwater from well MW-10 as follows: TPHG 1.0 ppm, Benzene 0.14 ppm, Toluene 0.036 ppm, Total Xylenes 0.077 ppm. Chain-of-custody forms and the laboratory analytical reports are included in Appendix D. Summaries of the soil and groundwater analyses data are presented in Table 3.

CONCLUSIONS

The soils observed during drilling consisted primarily of silty to sandy clay interbedded with clayey sand and sand to a depth of approximately 5 to 9 feet, overlying silty clays which extended to the maximum depths of the borings (17 to 18 feet). The apparent groundwater flow direction is easterly and southerly at an approximate gradient of 0.02 feet per foot.

Chemical analyses of soil samples showed no TPHG, TPHD, or BTEX contamination in the borings for MW-8, MW-11, and MW-12. TPHG was detected in the composite soil sample from MW-9 at a concentrations of 3 ppm. Analyses of soil samples from MW-10 detected TPHG concentrations of 2,600 ppm in a sample from 6 to 6.5 feet and 1,100 ppm in a sample from 10 to 10.5 feet. Analyses of groundwater samples obtained from MW-8, MW-9, MW-11, and MW-12 detected no TPHG or BTEX. Analyses of groundwater samples from MW-10 detected TPHG at a concentration of 1.0 ppm and benzene at 0.14 ppm.

The southwestern site boundary is approximately 5 feet northeast of well MW-10. The calculated groundwater flow direction for this area is easterly, towards the Shell site. Analysis of the above data support the possibility of a leak in the underground fuel storage tanks located on the property west of the site. Groundwater flow direction would indicate that the resultant contamination may affect the former Shell site. Water samples collected from the wells placed on the down groundwater gradient side of the site did not contain detectable hydrocarbon contaminants. These results generally confirm the results of the soil gas survey performed in July, 1988 for a previous investigative phase.

REPORTING REQUIREMENTS

A copy of this report should be forwarded by the client to the following agencies in a timely manner:

Alameda County Health Care Services
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Suite 200
Oakland, California 94621
Attention: Mr. Storm Goranson

Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607
Attention: Mr. Donald Dalke

DISCLAIMER

This report has been prepared solely for the use of Shell and any reliance on this report by third parties shall be as such party's sole risk.

LIMITATIONS

The discussion and recommendations presented in this report are based on the following:

1. The exploratory test borings drilled at the site.

2. The observations of field personnel.

3. The results of laboratory analyses performed by a state-certified laboratory.

4. Our understanding of the regulations of the State of California and Alameda County and/or the City of Dublin.

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

The service performed by EES has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the Dublin area. Please note that contamination of soil and groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

EES includes in this report chemical analytical data from a state-certified laboratory. The analytical results are performed according to procedures suggested by the U.S. EPA and State of California. EES is not responsible for laboratory errors in procedure or result reporting.

TABLE 1

SOIL ANALYSES RESULTS

Shell Oil Company
7194 Amador Valley Boulevard, Dublin, California

EES Project No. 1826G

Sample Number	TPHG (ppm)	TPHD (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Total Xylenes (ppm)	Organic Lead (ppm)	Total Lead (ppm)
MW-8-1, 2, 3, 4 (Composite)	ND	ND	NA	NA	NA	NA	ND	6.50
MW-9-1, 2, 3, 4 (Composite)	3	ND	ND	ND	ND	ND	ND	6.25
MW-10	2,600	53	7	52	44	210	ND*	6.90*
MW-10-2	1,100	70	4	22	20	94	ND*	6.90*
MW-10-3	2	ND	ND	ND	ND	ND	ND*	6.90*
MW-11-1, 2 (Composite)	ND	ND	NA	NA	NA	NA	ND	9.50
MW-12-1, 2, 3 (Composite)	ND	ND	NA	NA	NA	NA	ND	7.35

ppm = parts per million
ND = None Detected at laboratory method quantitation limit
NA = Not Analyzed
* = MW-10-1, 2, and three samples composited for lead analyses

TPHG = Total Petroleum Hydrocarbons as Gasoline
TPHD = Total Petroleum Hydrocarbons as Diesel
Soil Sampling Dates = 2/12/89 through 2/23/89

Note: For detection limits, refer to laboratory reports

TABLE 2

DRUMMED SOIL ANALYSES RESULTS

Shell Oil Company
7194 Amador Valley Boulevard, Dublin, California

EES Project No. 1826G

Sample Number	TPHG (ppm)	TPHD (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Total Xylenes (ppm)	Organic Lead (ppm)	Total Lead (ppm)
Drum - 1, 2, 3 (Composite - MW-8)	ND	ND	ND	ND	ND	ND	ND	5.80
Drum - 4, 5, 6, 7 (Composite - MW-9)	ND	ND	ND	ND	ND	ND	ND	5.70
Drum - 8 (MW-10)	930	110	6	33	19	28	ND*	7.20*
Drum - 9 (MW-10)	570	140	12	16	17	46	ND*	7.20*
Drum - 10 (MW-10)	1,400	100	30	50	40	120	ND*	7.20*
Drum - 11, 12, 13 (Composite - MW-11)	ND	ND	ND	ND	ND	ND	ND	5.55
Drum - 14, 15, 16 (Composite - MW-12)	ND	ND	ND	ND	ND	ND	ND	5.80

ppm = parts per million
ND = None Detected at laboratory method quantitation limit
NA = Not Analyzed
* = Drum 8, 9, and 10 samples composited for lead analysis

TPHG = Total Petroleum Hydrocarbons as Gasoline
TPHD = Total Petroleum Hydrocarbons as Diesel
Bunsen Burner Ignitability Results on Soil from Drum-10: >115°C

Note: For detection limits, refer to laboratory reports

TABLE 3

GROUNDWATER ANALYSES RESULTS

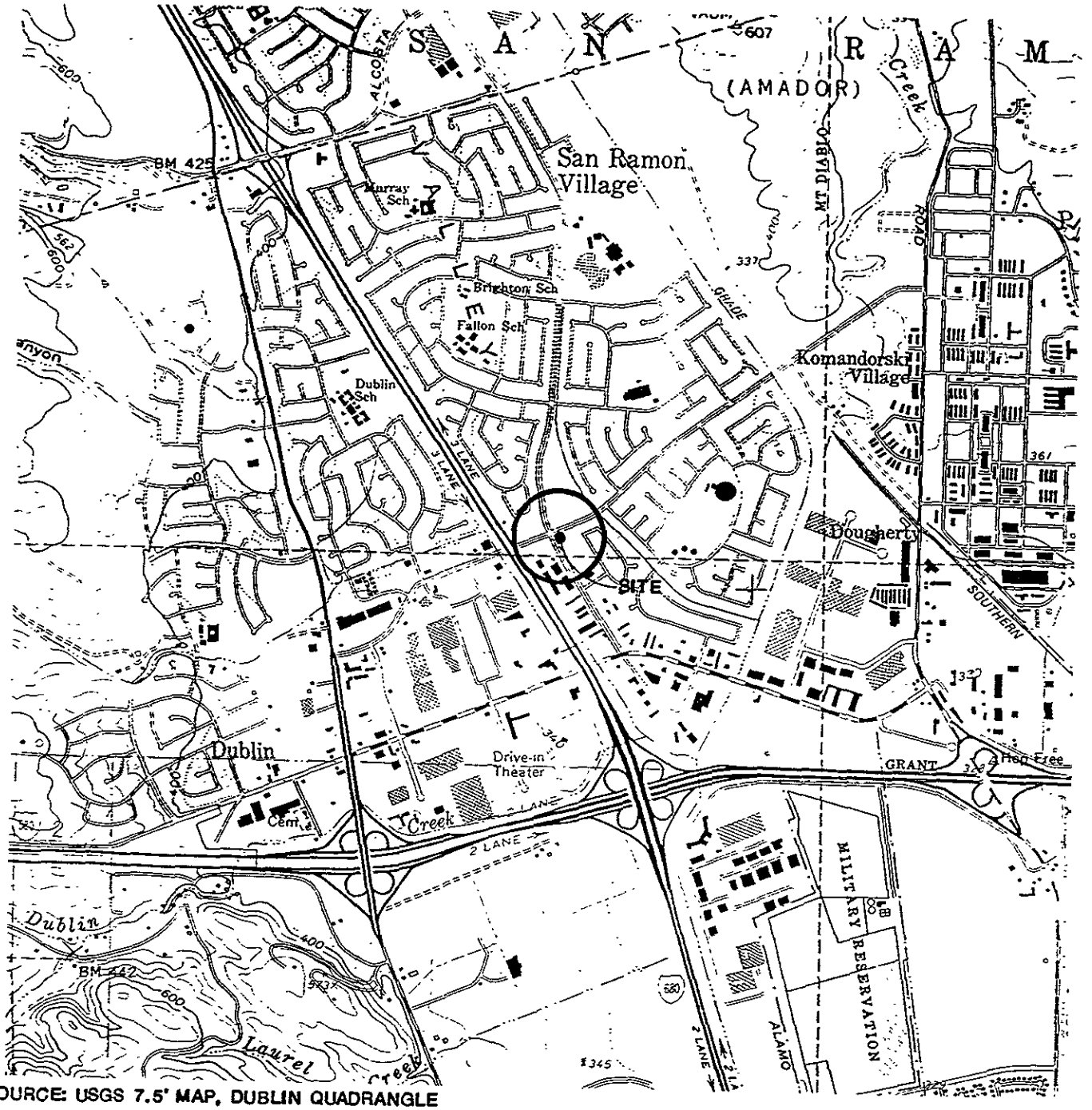
Shell Oil Company
7194 Amador Valley Boulevard, Dublin, California

EES Project No. 1826G

Well Number	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Total Xylenes (ppm)
RW-1	3.9	2.4	ND	ND	ND
MW-1	14	6.1	0.77	0.32	0.44
MW-2	0.23	0.024	0.0009	0.0092	0.018
MW-3	0.57	0.16	0.0010	0.017	0.009
MW-4	0.63	0.21	0.0062	0.034	0.007
MW-5	ND	ND	ND	ND	ND
MW-6	1.4	0.16	0.020	0.13	0.033
MW-7	ND	ND	ND	ND	ND
MW-8	ND	ND	ND	ND	ND
MW-9	ND	ND	ND	ND	ND
MW-10	1.0	0.14	0.036	ND	0.077
MW-11	ND	ND	ND	ND	ND
MW-12	ND	ND	ND	ND	ND

ppm = parts per million
ND = None Detected at laboratory method quantitation limit
TPHG = Total Petroleum Hydrocarbons as Gasoline
Sampling Dates = 3/1/89 through 3/2/89

Note: For detection limits, refer to laboratory reports



SOURCE: USGS 7.5' MAP, DUBLIN QUADRANGLE

LEGEND

SITE LOCATION

0 1

SCALE IN MILES

N

ensco environmental services, Inc.

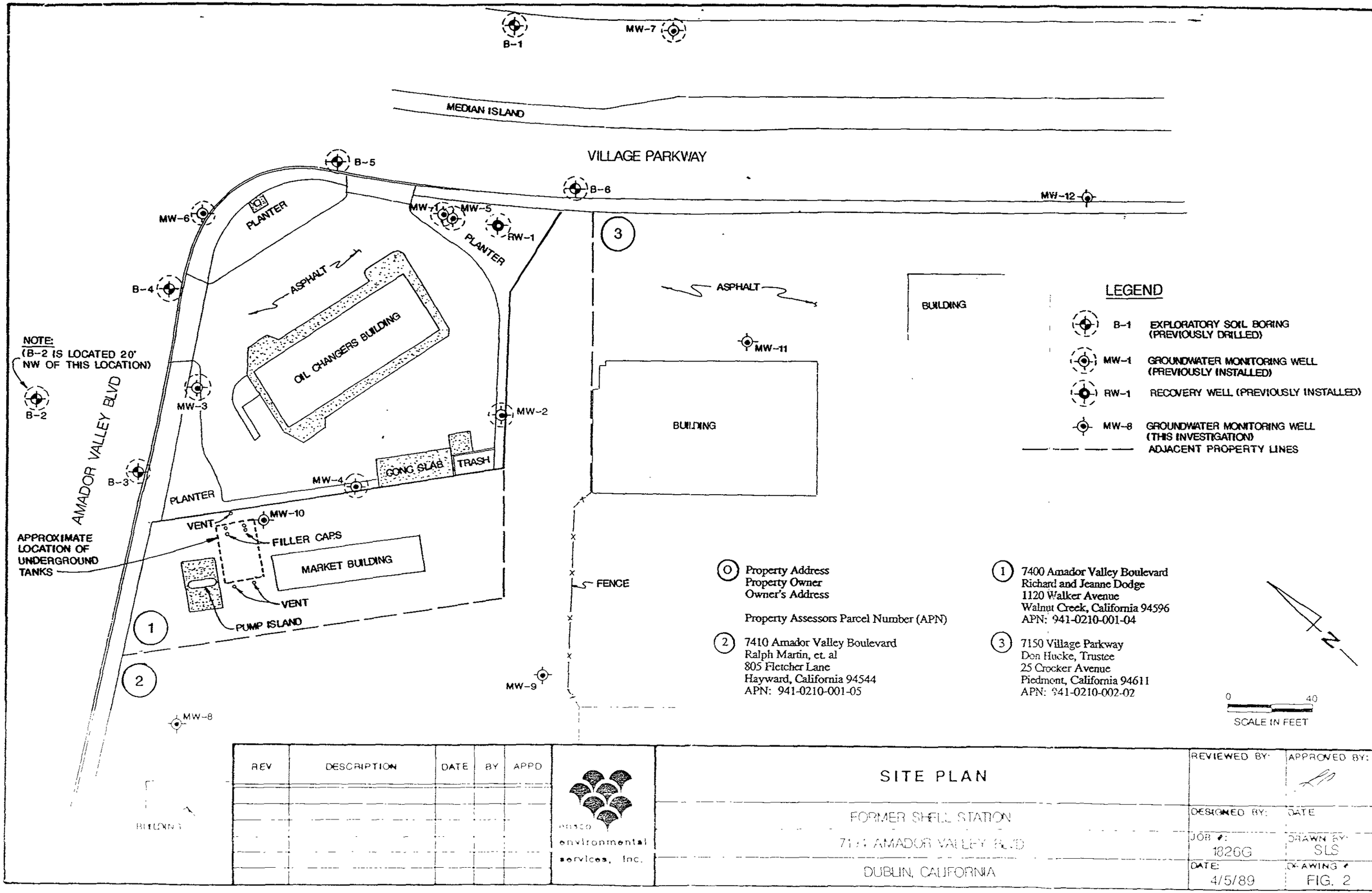
SITE LOCATION MAP

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY	APPROVED BY
RAS	AP
JOB # 1826G	DRAWN BY J.C.
DATE 4-5-89	DRAWING # FIG. 1



(0) Property Address
Property Owner
Owner's Address

Property Assessors Parcel Number (APN)

(1) 7400 Amador Valley Boulevard
Richard and Jeanne Dodge
1120 Walker Avenue
Walnut Creek, California 94596
APN: 941-0210-001-04

(2) 7410 Amador Valley Boulevard
Ralph Martin, et. al
805 Fletcher Lane
Hayward, California 94544
APN: 941-0210-001-05

(3) 7150 Village Parkway
Don Hucke, Trustee
25 Crocker Avenue
Piedmont, California 94611
APN: 941-0210-002-02

REV	DESCRIPTION	DATE	BY	APPD

environmental services, inc.

SITE PLAN

FORMER SHELL STATION
7144 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

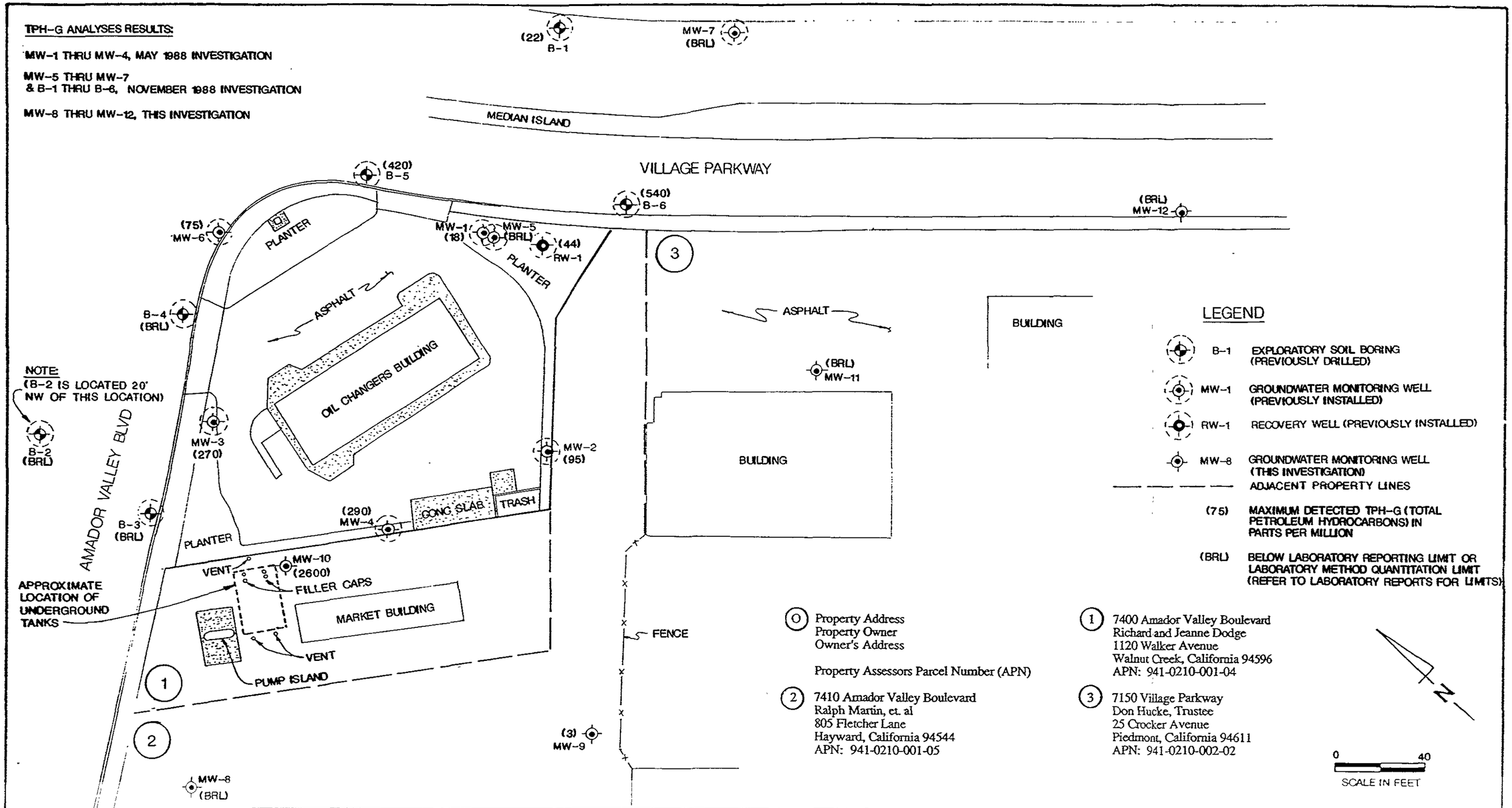
REVIEWED BY:	APPROVED BY:
DESIGNED BY:	DATE
JOB #: 1826G	DRAWN BY: SLS
DATE: 4/5/89	DRAWING #: FIG. 2

TPH-G ANALYSES RESULTS:

MW-1 THRU MW-4, MAY 1988 INVESTIGATION

MW-5 THRU MW-7
& B-1 THRU B-6, NOVEMBER 1988 INVESTIGATION

MW-8 THRU MW-12, THIS INVESTIGATION



LEGEND

B-1	EXPLORATORY SOIL BORING (PREVIOUSLY DRILLED)
MW-1	GROUNDWATER MONITORING WELL (PREVIOUSLY INSTALLED)
RW-1	RECOVERY WELL (PREVIOUSLY INSTALLED)
MW-8	GROUNDWATER MONITORING WELL (THIS INVESTIGATION)
	ADJACENT PROPERTY LINES
(75)	MAXIMUM DETECTED TPH-G (TOTAL PETROLEUM HYDROCARBONS) IN PARTS PER MILLION
(BRL)	BELOW LABORATORY REPORTING LIMIT OR LABORATORY METHOD QUANTITATION LIMIT (REFER TO LABORATORY REPORTS FOR LIMITS)

(0) Property Address
Property Owner
Owner's Address

Property Assessors Parcel Number (APN)

(1) 7400 Amador Valley Boulevard
Richard and Jeanne Dodge
1120 Walker Avenue
Walnut Creek, California 94596
APN: 941-0210-001-04

(2) 7410 Amador Valley Boulevard
Ralph Martin, et. al
805 Fletcher Lane
Hayward, California 94544
APN: 941-0210-001-05

(3) 7150 Village Parkway
Don Hucke, Trustee
25 Crocker Avenue
Piedmont, California 94611
APN: 941-0210-002-02

N

0 40
SCALE IN FEET

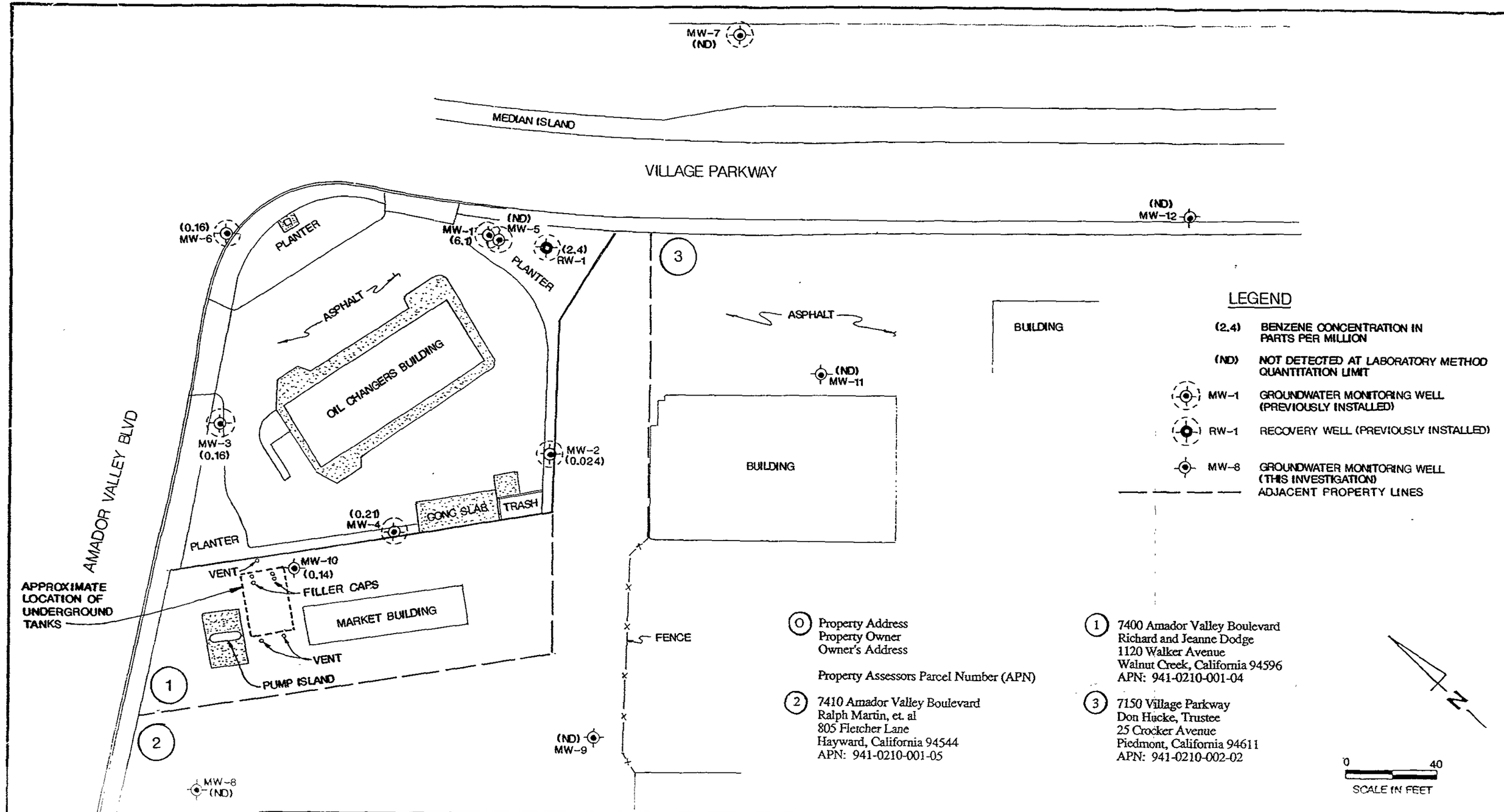
REV	DESCRIPTION	DATE	BY	APPD

ensco environmental services, Inc.

MAXIMUM TPH-G CONCENTRATION IN SOIL

FORMER SHELL STATION
7194 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
DESIGNED BY:	DATE:
JOB #: 1826G	DRAWN BY: SLS
DATE: 4/5/89	DRAWING #: FIG. 3



REV	DESCRIPTION	DATE	BY	APPD

ensco environmental services, inc.

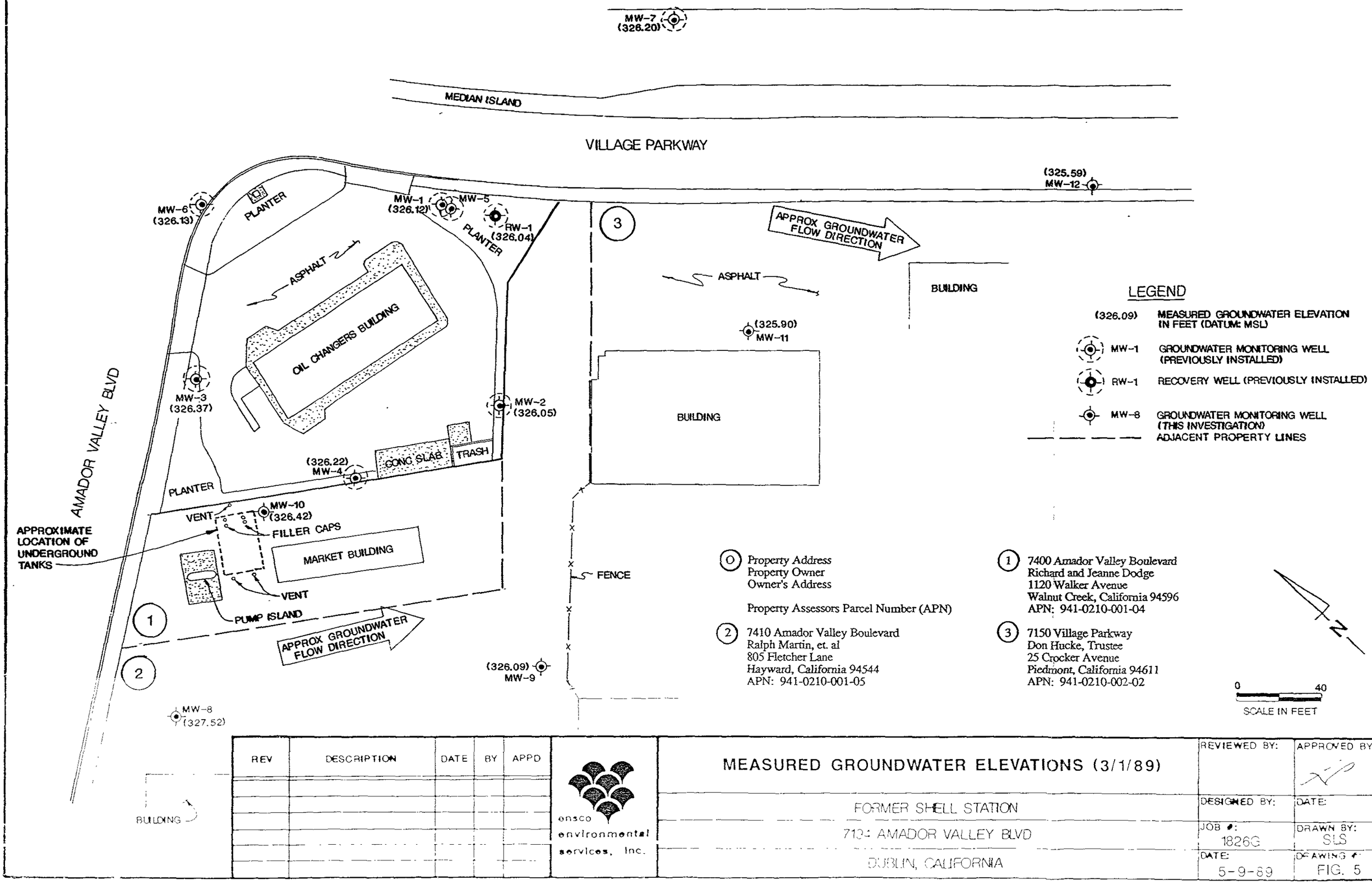
BENZENE CONCENTRATION IN GROUNDWATER (3/1/89)

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
DESIGNED BY:	DATE:
JOB #: 1826G	DRAWN BY: SLS
DATE: 5-9-89	DRAWING #: FIG. 4



REV	DESCRIPTION	DATE	BY	APPD

ensco environmental services, Inc.

MEASURED GROUNDWATER ELEVATIONS (3/1/89)

FORMER SHELL STATION
7134 AMADOR VALLEY BLVD
DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
DESIGNED BY:	DATE:
JOB #: 1826G	DRAWN BY: SLS
DATE: 5-9-89	DRAWING #: FIG. 5

APPENDIX A

EXPLORATORY BORING LOGS
AND
WELL CONSTRUCTION DETAILS

ensco environmental services, inc.

STANDARD SYMBOLS

Legend

Penetration Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs.

- No Soil Recovery
- Soil Sample Location
- first Encountered Ground Water Level
- Piezometric Ground Water Level
- Disturbed or Bag Soil Sample
- 2.5YR 6/2 Soil Color according to Munsell Soil Color Charts. (1975 Edition)

UNIFIED SOIL CLASSIFICATION SYSTEM

Compiled by B. W. Pipkin, Univ. of Southern Calif.

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than half of material is larger than no. 200 sieve size	GRAVELS More than half of coarse fraction is larger than no. 4 sieve size	Clean Gravels	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels, gravel-sand mixture, little or no fines
		Gravels with Fines	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than half of coarse fraction is smaller than no. 4 sieve size	Clean Sands	SW	Well-graded sands, gravelly sand, little or no fines
			SP	Poorly graded sands, gravelly sands, little or no fines
		Sands with Fines	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS More than half of material is smaller than no. 200 sieve size	SILTS AND CLAYS	Low Liquid Limit	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts, with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
		High Liquid Limit	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils			Pt	Peat and other highly organic soils

NOTES

1. Boundary Classification: Soils possessing characteristics of two groups are designated by combinations of group symbols. For example, GW-GC, well-graded gravel-sand mixture with clay binder.
2. All sieve sizes on this chart are U.S. Standard.
3. The terms "silt" and "clay" are used respectively to distinguish materials exhibiting lower plasticity from those with higher plasticity. The minus no. 200 sieve material is silt if the liquid limit and plasticity index plot below the "A" line on the plasticity chart (next page), and is clay if the liquid limit and plasticity index plot above the "A" line on the chart.
4. For a complete description of the Unified Soil Classification System, see "Technical Memorandum No. 3-357," prepared for Office, Chief of Engineers, by Waterways Equipment Station, Vicksburg Mississippi, March 1953 (See also Data Sheet 17.)

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: Former Shell Station
7194 Amador Valley Blvd.
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-8
DATE DRILLED: 2/21/89
LOGGED BY: R.A.G.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt 4", Baserock 8"		
2			CL	SANDY CLAY to SILTY CLAY, very dark grayish brown (2.5Y 3/2), up to 40% fine grained sands, medium plasticity, very stiff, damp to moist, no petroleum odor		
3						
4						
5			SP	SAND, gray (2.5Y 6/0 to 5/0), well sorted, fine grained sand, some clay, medium dense, moist, no petroleum odor		
6	MW-8-1	19	OH	SILTY CLAY, very dark gray to black (2.5Y 3/0 to 2/0), localized areas of fine grained sand, high plasticity, stiff, moist, no petroleum odor		0
7						
8				Groundwater level 3/1/89 - 8.28 feet	▼	
9						
10				roots, rootholes and light brown claystone fragments		
11	MW-8-2	11				0
12						
13						
14				increasing sand content — Groundwater encountered ≈ 14 feet	▽	
15	MW-8-3	8				0
16				color change to very dark grayish brown to dark grayish brown (2.5Y 4/2 to 3/2), moderate to high plasticity, stiff, moist to very moist		
17	MW-8-4	9				0
18				Bottom of boring = 17 feet		
19						
20						
21						

SUPERVISED AND APPROVED BY R G /C E G

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: Former Shell Station
7194 Amador Valley Blvd.
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-9
DATE DRILLED: 2/22/89
LOGGED BY: R.A.G.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt 4", Baserock 8"		
1–5			OH	SILTY CLAY, dark grayish brown to very dark grayish brown (2.5Y 4/2 to 3/2), moderate to high plasticity, stiff, moist, no petroleum odor		
6	MW-9-1	16				105
7–8			CL	SANDY CLAY, gray to dark gray (2.5Y 5/0 to 4/0), up to 30% fine grained sand interbedded with silty clay, medium plasticity, stiff, moist to very moist, no petroleum odor		
8				Groundwater level 3/1/89- 8.48 feet	▼	
9–10			OH	SILTY CLAY, very dark gray to dark olive gray (5Y 3/1 to 3/2), up to 15% fine grained sand, some light brown claystone fragments, root holes, high plasticity, stiff, moist, no petroleum odor		
10	MW-9-2	15				105
11–14						
15				Groundwater encountered ≈ 15 feet	▽	
15	MW-9-3	11				105
16–17						
18	MW-9-4	8	SP			105
19–21						

SUPERVISED AND APPROVED BY R G C E G

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: Former Shell Station
7194 Amador Valley Blvd.
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-10

DATE DRILLED: 2/22/89

LOGGED BY: R.A.G.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
0				Asphalt 4", Baserock 8"		
1–3			CL	SILTY CLAY, dark olive gray (5Y 4/2), some fine grained sand, moderate plasticity, medium stiff to stiff, moist, no petroleum odor		
4–5			SP	SAND, light olive gray to olive gray (5Y 6/2 to 5/2), fine grained, well sorted sand with some well rounded to subrounded coarse sand up to 1/4" across, loose, moist, strong petroleum odor		
6	MW-10-1	8				500
7–8			OH	SILTY CLAY, dark gray to very dark gray (2.5Y 4/0 to 3/0), high plasticity, stiff, moist, strong petroleum odor		
9				Groundwater level 3/1/89 - 8.95 feet	▼	
10	MW-10-2	11		Groundwater encountered ≈ 10 feet	▽	350
11–14				moisture increase to very moist, light brown claystone fragments		
15		9		color change to dark grayish brown (2.5Y 4/2), up to 15% localized fine grained sand, light brown claystone fragments, high plasticity, stiff, moist, no petroleum odor		
16	MW-10-3	9				0
17				Bottom of boring = 17 feet		
18–21						

SUPERVISED AND APPROVED BY R G /C E G

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: Former Shell Station
7194 Amador Valley Blvd.
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-12
DATE DRILLED: 2/23/89
LOGGED BY: R.A.G.

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt 4", Baserock 8"		
2			CL	SANDY CLAY, dark gray to olive gray (5Y 4/1 to 5/2), up to 40% fine grained sand, moderate plasticity, very stiff, moist to very moist, no petroleum odor		
3						
4						
5						
6	MW-12-1	22		Groundwater level 3/1/89 - 6.94 feet	▼	0
7			CL-OH	SANDY CLAY and SILTY CLAY, very dark gray to brown (5Y 3/1 to 10YR 5/3), localized sandy and silty clays, fine grained sand, isolated well rounded gravels up to 1/2" across, moderate plasticity, stiff to very stiff, moist, no petroleum odor		
8						
9						
10	MW-12-2	16	OH	SILTY CLAY, very dark gray to dark olive gray (5Y 3/1 to 3/2), isolated fine grained sands and gravels, light brown claystone fragments, high plasticity, stiff, moist, no petroleum odor		0
11						
12						
13				Groundwater encountered ≈ 13.5 feet	▽	
14						
15	MW-12-3	7		color change to dark gray to very dark gray (5Y 4/1 to 3/1) with some olive gray (5Y 4/2) mottling, disseminated fine to medium grained sand, moist to very moist, no petroleum odor		0
16						
17						
18		16		becoming very stiff, no sample recovery		
19				Bottom of boring = 18 feet		
20						
21						

SUPERVISED AND APPROVED BY R G C E G

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: Former Shell Station
7194 Amador Valley Blvd.
Dublin, CA
PROJECT NUMBER: 1826G

BORING NO. MW-11
DATE DRILLED: 2/23/89
LOGGED BY: R.A.G.

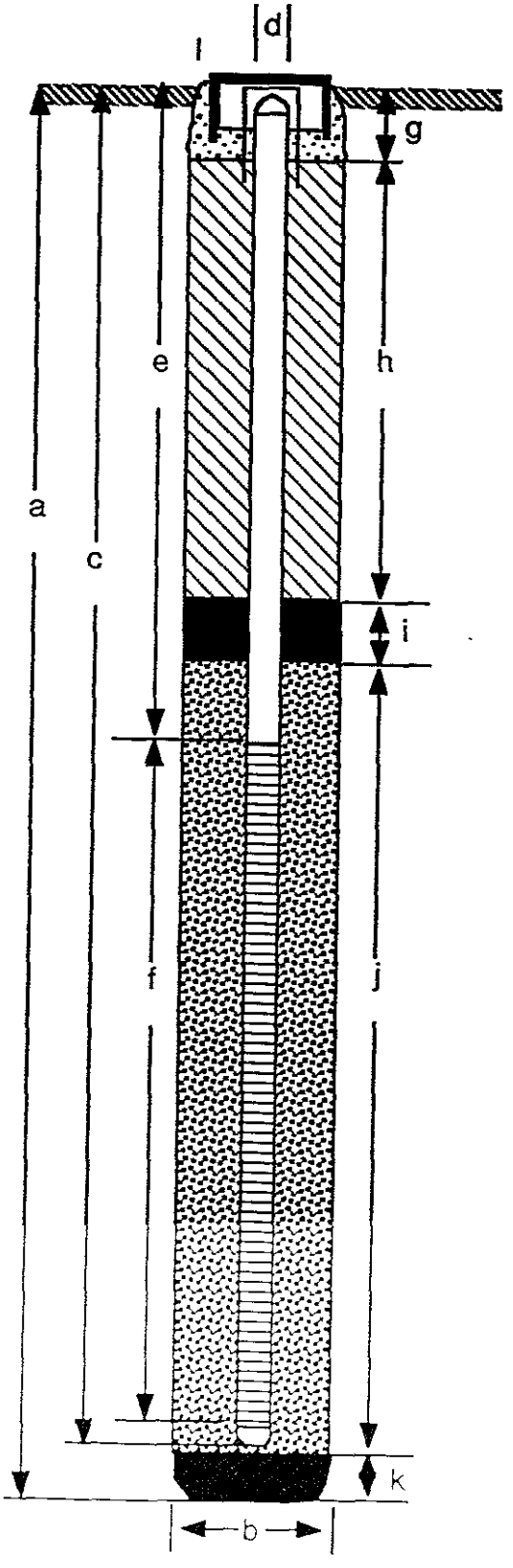
DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt 4", Baserock 8"		
2			OH	SILTY CLAY, very dark gray (2.5Y 3/0), roots, root holes, high plasticity, stiff, moist, no petroleum odor		
5			CL-SC	SANDY CLAY to CLAYEY SAND, dark gray to gray (2.5Y 4/0 to 5/0), very fine to fine grained sand, medium dense, moist, no petroleum odor		
6	MW-11-1	11				
7			OH	SILTY CLAY, very dark gray (2.5Y 3/0), roots, root holes, up to 15% fine grained sand with some coarse grained sands, high plasticity, stiff, moist, no petroleum odor		
8					▼	
				Groundwater level 3/1/89 - 8.30 feet		
10		12		no sample recovery		0
11				light brown claystone fragments isolated, well rounded gravels up to 1/2" across		
13				Groundwater encountered ≈ 14 feet	▽	
14						
15		10		color change to dark gray brown to very dark grayish brown (2.5Y 4/2 to 3/2) with some olive gray (5Y 5/2) mottling, localized fine grained sand, moderate to high plasticity, medium stiff to stiff, moist to very moist, free water in many roots holes, no petroleum odor		
17	MW-11-2	8				0
				Bottom of boring = 17 feet		
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R G /C E G

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME 7194 AMADOR VALLEY BLVD.
COUNTY ALAMEDA
WELL PERMIT NO. 89036

BORING / WELL NO. MW-8
TOP OF CASING ELEV. 335.80 ft.
GROUND SURFACE ELEV. 336.09 ft.
DATUM LOCAL



EXPLORATORY BORING

a. Total Depth 17 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 16 ft.
Material Schedule 40 PVC
d. Casing diameter 4 in.
e. Depth to top perforations 6 ft.
f. Perforated length 10 ft.
Perforated interval from 6 to 16 ft.
Perforation type Machine Slot
Perforation size 0.02 in.
g. Surface seal 1 ft.
Seal Material Concrete
h. Backfill 1 ft.
Backfill material Neat Cement Grout
i. Seal 2 ft.
Seal Material Bentonite
j. Gravel pack 12 ft.
Pack material 2/12 Sand
k. Bottom seal N/A ft.
Seal material N/A
l. Traffic Rated Vault Box With Locking Device

ensco
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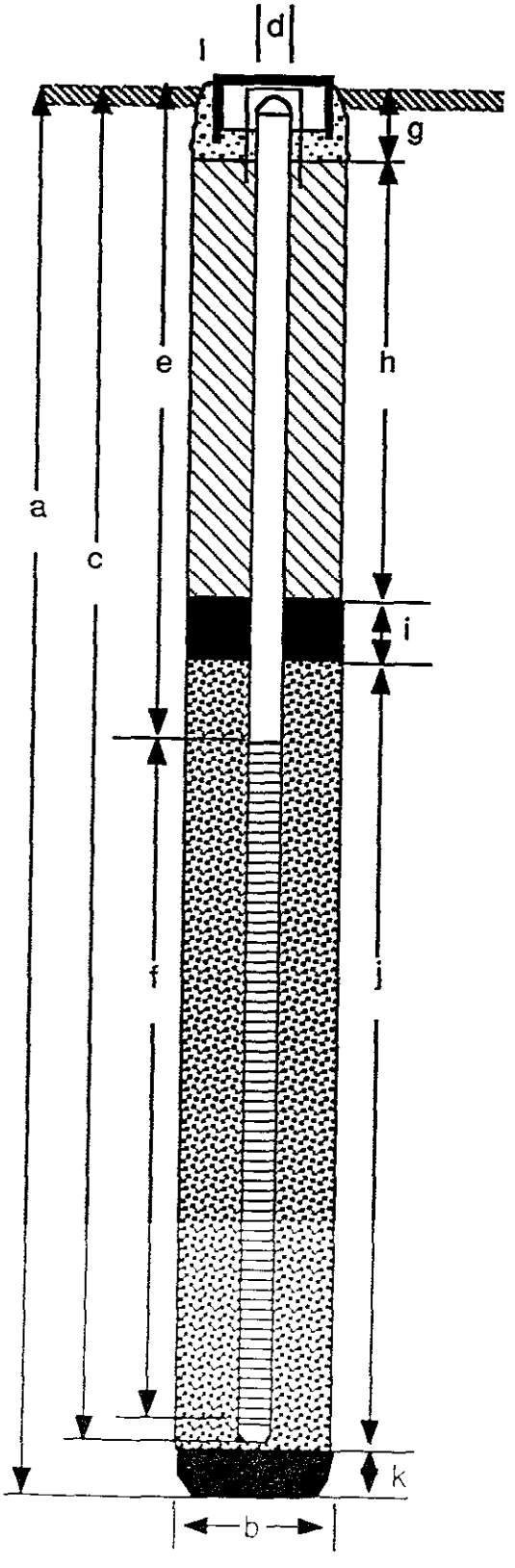
services, inc.

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME 7194 AMADOR VALLEY BLVD.
COUNTY ALAMEDA
WELL PERMIT NO. 89036

BORING / WELL NO. MW-9
TOP OF CASING ELEV. 334.57 ft.
GROUND SURFACE ELEV. 335.07 ft.
DATUM LOCAL



EXPLORATORY BORING

a. Total Depth 18 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

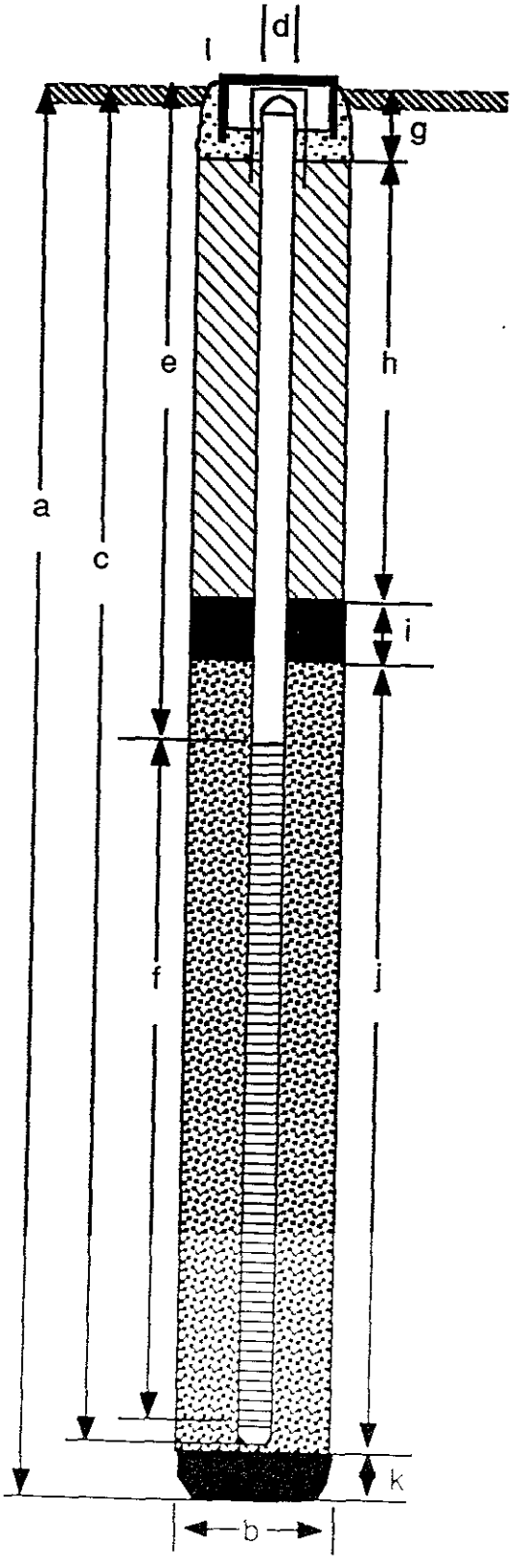
c. Casing length 18 ft.
Material Schedule 40 PVC
d. Casing diameter 4 in.
e. Depth to top perforations 8 ft.
f. Perforated length 10 ft.
Perforated interval from 8 to 18 ft.
Perforation type Machine Slot
Perforation size 0.02 in.
g. Surface seal 1 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 2 ft.
Seal Material Bentonite
j. Gravel pack 12 ft.
Pack material 2/12 Sand
k. Bottom seal N/A ft
Seal material N/A
l. Traffic Rated Vault Box With Locking Device

ensco environmental services, inc.

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME 7194 AMADOR VALLEY BLVD.
COUNTY ALAMEDA
WELL PERMIT NO. 89036

BORING / WELL NO. MW-10
TOP OF CASING ELEV. 335.37 ft.
GROUND SURFACE ELEV. 335.97 ft.
DATUM LOCAL



EXPLORATORY BORING

a. Total Depth 17 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

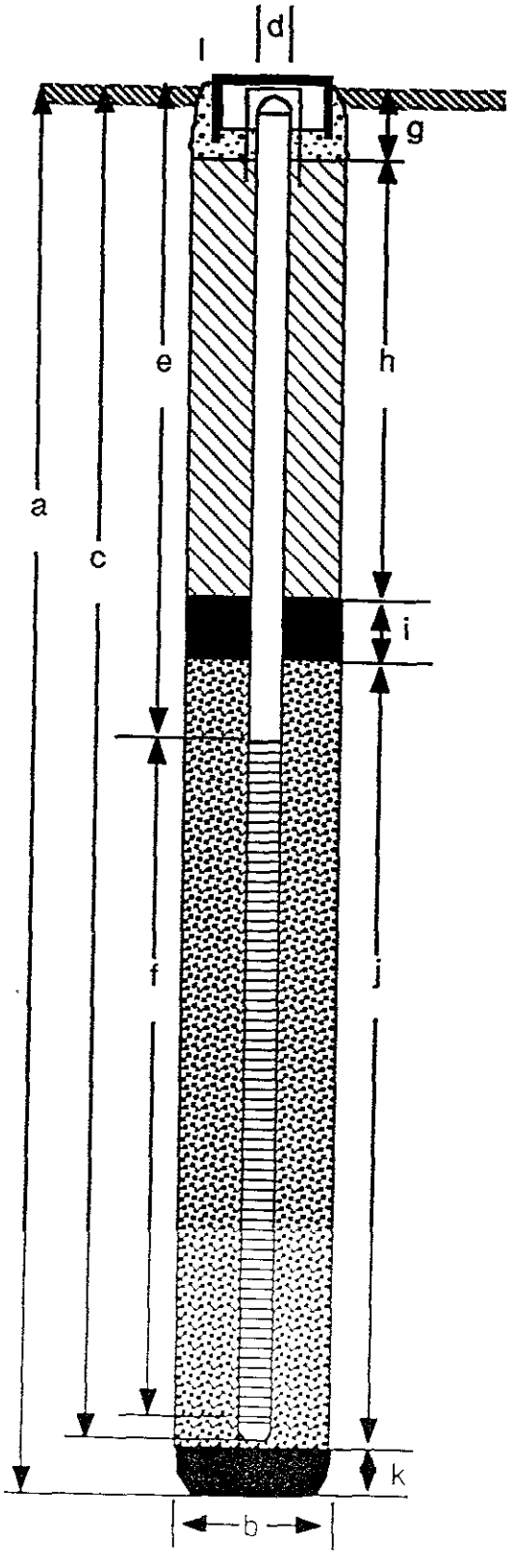
c. Casing length 17 ft.
Material Schedule 40 PVC
d. Casing diameter 4 in.
e. Depth to top perforations 7 ft.
f. Perforated length 10 ft.
Perforated interval from 7 to 17 ft.
Perforation type Machine Slot
Perforation size 0.02 in.
g. Surface seal 1 ft.
Seal Material Concrete
h. Backfill 2 ft.
Backfill material Neat Cement Grout
i. Seal 2 ft.
Seal Material Bentonite
j. Gravel pack 12 ft.
Pack material 2/12 Sand
k. Bottom seal N/A ft
Seal material N/A
l. Traffic Rated Vault Box With Locking Device

ensco environmental services, inc.

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME 7194 AMADOR VALLEY BLVD.
COUNTY ALAMEDA
WELL PERMIT NO. 89036

BORING / WELL NO. MW-11
TOP OF CASING ELEV. 334.20 ft.
GROUND SURFACE ELEV. 334.87 ft.
DATUM LOCAL



EXPLORATORY BORING

a. Total Depth 17 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

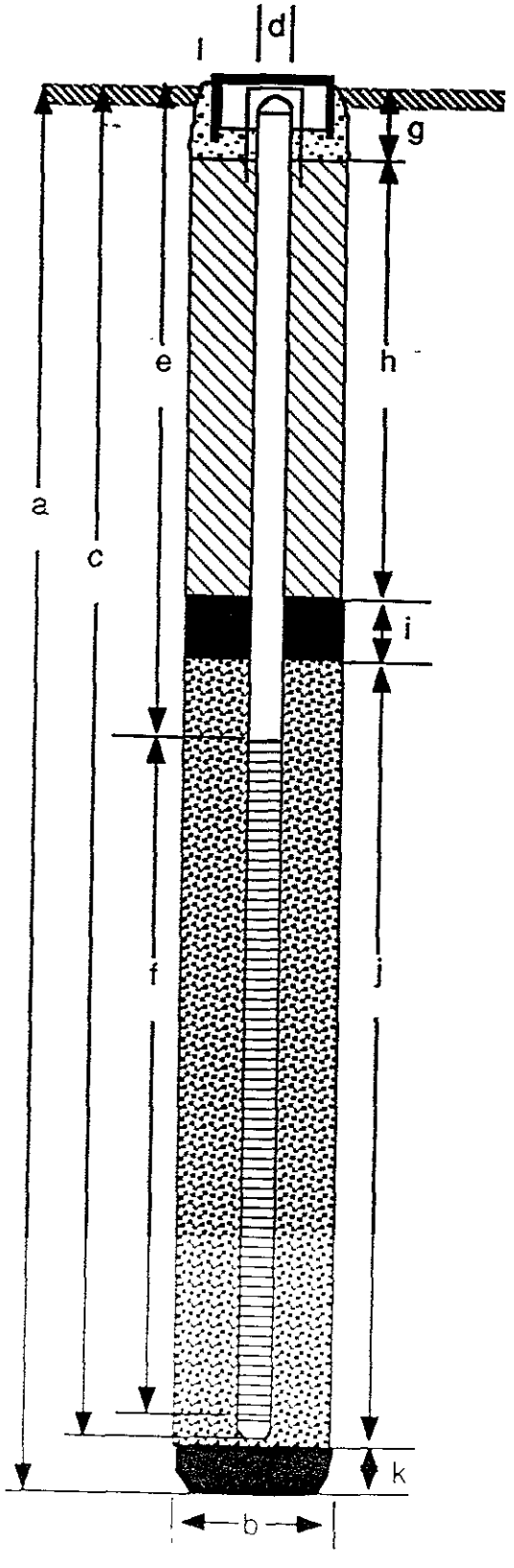
c. Casing length 17 ft.
Material Schedule 40 PVC
d. Casing diameter 4 in.
e. Depth to top perforations 7 ft.
f. Perforated length 10 ft.
Perforated interval from 7 to 17 ft.
Perforation type Machine Slot
Perforation size 0.02 in.
g. Surface seal 1 ft.
Seal Material Concrete
h. Backfill 2 ft.
Backfill material Neat Cement Grout
i. Seal 2 ft.
Seal Material Bentonite
j. Gravel pack 12 ft.
Pack material 2/12 Sand
k. Bottom seal N/A ft.
Seal material N/A
l. Traffic Rated Vault Box With Locking Device

ensco environmental services, inc.

Monitoring Well Detail

PROJECT NUMBER 1826G
PROJECT NAME 7194 AMADOR VALLEY BLVD.
COUNTY ALAMEDA
WELL PERMIT NO. 89036

BORING / WELL NO. MW-12
TOP OF CASING ELEV. 332.53 ft.
GROUND SURFACE ELEV. 332.89 ft.
DATUM LOCAL



EXPLORATORY BORING

a. Total Depth 18 ft.
b. Diameter 10 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 18 ft.
Material Schedule 40 PVC
d. Casing diameter 4 in.
e. Depth to top perforations 8 ft.
f. Perforated length 10 ft.
Perforated interval from 8 to 18 ft.
Perforation type Machine Slot
Perforation size 0.02 in.
g. Surface seal 1 ft.
Seal Material Concrete
h. Backfill 3 ft.
Backfill material Neat Cement Grout
i. Seal 2 ft.
Seal Material Bentonite
j. Gravel pack 12 ft.
Pack material 2/12 Sand
k. Bottom seal N/A ft.
Seal material N/A
l Traffic Rated Vault Box With Locking Device

ensco
environmental
services, inc.

APPENDIX B

MONITORING WELL PERMIT

Mailed: 1/23/89

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

(1) LOCATION OF PROJECT South and West of 7194 Amador Valley Blvd, Dublin, CA (Former Shell Station)

(2) CLIENT
Name Shell Oil Company
Address 1390 Willow Pass Rd Phone (415) 676-1414
City Concord Zip 94520

(3) APPLICANT
Name Easco Environmental Services (Richard Garlow)
Address 41674 Christy St. Phone (415) 459-0404
City Fremont Zip 94538

(4) DESCRIPTION OF PROJECT
Water Well Construction X Geotechnical ___
Cathodic Protection ___ Well Destruction ___

(5) PROPOSED WATER WELL USE
Domestic ___ Industrial ___ Irrigation ___
Municipal ___ Monitoring X Other ___

(6) PROPOSED CONSTRUCTION
Drilling Method:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

WELL PROJECTS
Drill Hole Diameter 11 in. Depth(s) 20 ft.
Casing Diameter 4 in. Number
Surface Seal Depth 8 ft. of Wells 5
Driller's License No. C57 - 464324

GEOTECHNICAL PROJECTS
Number ___
Diameter ___ in. Maximum Depth ___ ft.

(7) ESTIMATED STARTING DATE Feb 20, 1989
ESTIMATED COMPLETION DATE Feb 22, 1989

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

APPLICANT'S SIGNATURE [signature] Date ___

FOR OFFICE USE

PERMIT NUMBER 89036
LOCATION NUMBER ___

Approved [signature] Date 24 Jan 89
Todd N. Wendler

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. Notify this office (484-2600) at least one day prior to starting work on permitted work and before placing well seals.
3. 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 bore hole logs and location sketch for geotechnical projects. Permitted work is completed when the last surface seal is placed or the last boring is completed.
4. 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, or equivalent.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic, irrigation, and monitoring wells unless a lesser depth is specially approved.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material.

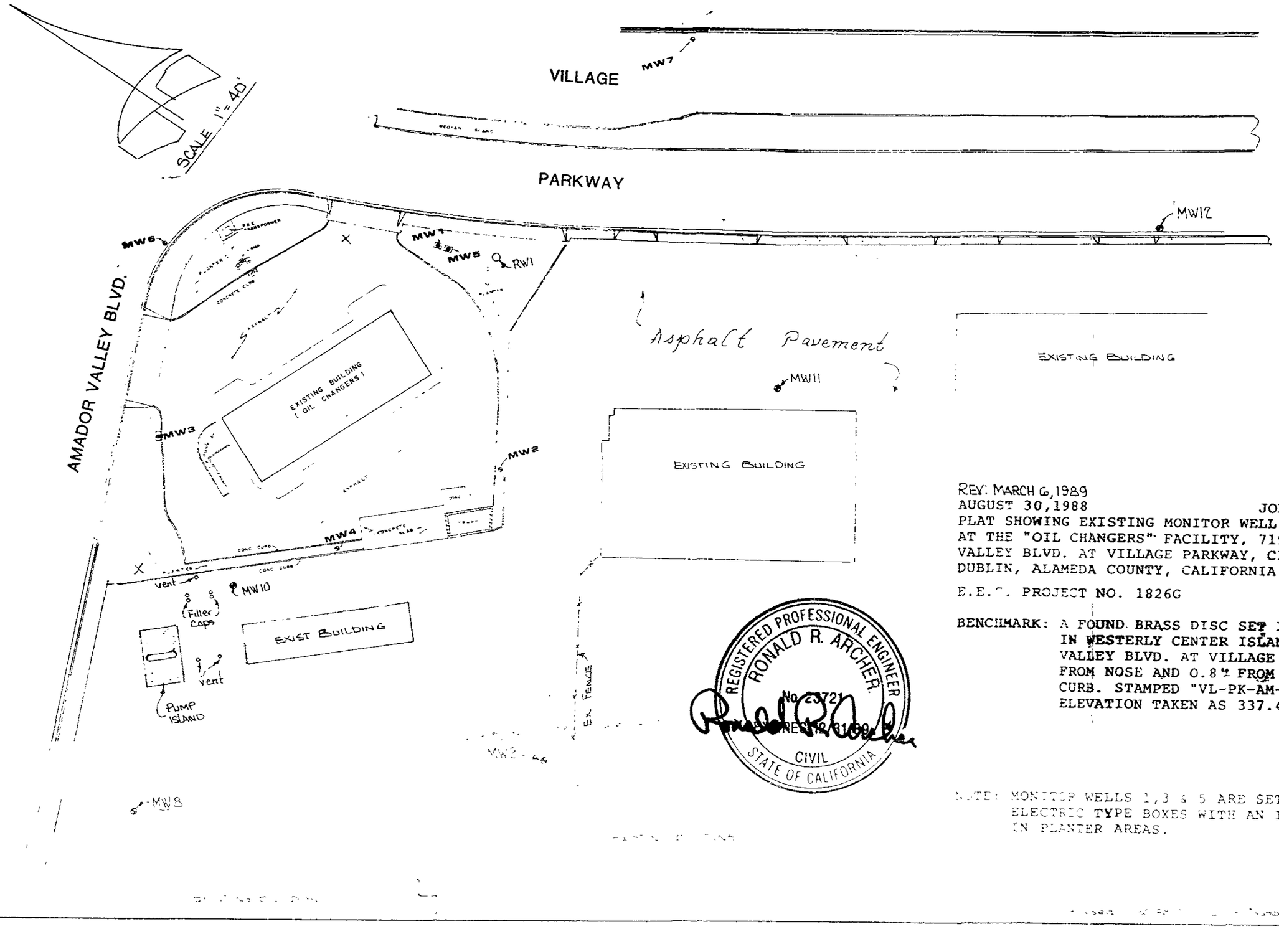
D. CATHODIC. Fill hole above anode zone with concrete placed by tremie, or equivalent.

E. WELL DESTRUCTION. See attached.

91987

APPENDIX C

SURVEYOR'S MAP



REV: MARCH 6, 1989
AUGUST 30, 1988 JOB NO. 1457

PLAT SHOWING EXISTING MONITOR WELL LOCATIONS AT THE "OIL CHANGERS" FACILITY, 7194 AMADOR VALLEY BLVD. AT VILLAGE PARKWAY, CITY OF DUBLIN, ALAMEDA COUNTY, CALIFORNIA.

E.E.C. PROJECT NO. 1826G

BENCHMARK: A FOUND BRASS DISC SET IN CONCRETE IN WESTERLY CENTER ISLAND OF AMADOR VALLEY BLVD. AT VILLAGE PARKWAY, 15' FROM NOSE AND 0.8' FROM NORTHERLY CURB. STAMPED "VL-PK-AM-VY 1977". ELEVATION TAKEN AS 337.402 M.L.S.

NOTE: MONITOR WELLS 1, 3 & 5 ARE SET INSIDE OF ELECTRIC TYPE BOXES WITH AN IRON GRATE IN PLANTER AREAS.

RON ARCHER
CIVIL ENGINEER, INC.
CONSULTING • PLANNING • DESIGN • SURVEYING

4133 Mohr Ave., Suite E • Pleasanton, CA 94566
(415) 462-9372

REGISTERED PROFESSIONAL ENGINEER
RONALD R. ARCHER
No. 24372
CIVIL
STATE OF CALIFORNIA

REVISED MARCH 6, 1989
AUGUST 30, 1988

JOB NO. 1457

ELEVATIONS OF EXISTING MONITOR WELLS LOCATED AT THE "OIL CHANGERS" FACILITY, 7194 AMADOR VALLEY BOULEVARD AT VILLAGE PARKWAY , CITY OF DUBLIN, ALAMEDA COUNTY, CALIFORNIA.

E.E.S. PROJECT NO. 1826G

BENCHMARK: A FOUND BRASS DISC SET IN CONCRETE IN WESTERLY CENTER ISLAND OF AMADOR VALLEY BLVD. AT VILLAGE PARKWAY, 15' FROM NOSE AND 0.8' FROM NORTHERLY CURB. STAMPED "VL-PK-AM-VY 1977". ELEVATION TAKEN AS 337.402 M.S.L.

MONITOR WELL DATA TABLE

WELL DESIGNATION	ELEVATION	DESCRIPTION
MW1	334.83	TOP OF PVC CASING
	335.30	TOP LOCKING COVER
MW2	336.96	TOP OF PVC CASING
	337.24	TOP LOCKING COVER
MW3	336.96	TOP OF PVC CASING
	337.66	TOP LOCKING COVER
MW4	337.14	TOP OF PVC CASING
	337.48	TOP LOCKING COVER
MW5	334.96	TOP OF PVC CASING
	335.07	TOP LOCKING COVER
MW6	335.42	TOP OF PVC CASING
	335.64	TOP LOCKING COVER
	336.03	TOP OF BOX
MW7	333.23	TOP OF PVC CASING
	333 57	TOP LOCKING COVER
	333.72	TOP OF BOX

MONITOR WELL DATA TABLE

WELL DESIGNATION	ELEVATION	DESCRIPTION
MW8	335.80	TOP OF PVC CASING
	335.91	TOP LOCKING COVER
	336.09	TOP OF BOX
MW9	334.57	TOP OF PVC CASING
	334.68	TOP LOCKING COVER
	335.07	TOP OF BOX
MW10	335.37	TOP OF PVC CASING
	335.51	TOP LOCKING COVER
	335.97	TOP OF BOX
MW11	334.20	TOP OF PVC CASING
	334.43	TOP LOCKING COVER
	334.87	TOP OF BOX
MW12	332.53	TOP OF PVC CASING
	332.67	TOP LOCKING COVER
	332.89	TOP OF BOX
RW1 (RECOVERY WELL)	336.19	TOP OF PVC CASING

NOTE: CHART REVISED ON 11/30/88 TO SWITCH WELL DESIGNATION NUMBERS BETWEEN MW6 & MW7.

APPENDIX D

CERTIFIED ANALYTICAL REPORTS AND CHAINS-OF-CUSTODY

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Kent Parrish
Ensco Environmental Services
41674 Christy Street
Fremont, CA 94538-3114

March 02, 1989
Anametrix W.O.#: 8902157
Date Received : 02/24/89
Purchase Order#: 12495

Dear Mr. Parrish:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS and QUALITY ASSURANCE.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Sarah Schoen, Ph.D.
GC Manager

SRS/lm

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Ensco Environmental Services
Address : 41674 Christy Street

City : Fremont, CA 94538-3114
Attn. : Kent Parrish

Anametrix W.O.#: 0902157
Date Received : 02/24/89
Purchase Order#: 12495
Project No. : 1826G
Date Released : 03/03/89

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8902157-01	1826G DRUM 1/2/3	SOIL	02/21/89	ORGPB		02/24/89	AA1
8902157-02	1826G D-4/5/6/7	SOIL	02/22/89	ORGPB		02/24/89	AA1
8902157-06	1826G D-11/12/13	SOIL	02/23/89	ORGPB		02/24/89	AA1
8902157-07	1826G D-14/15/16	SOIL	02/23/89	ORGPB		02/24/89	AA1
8902157-08	1826G D-8/9/10	SOIL	02/22/89	ORGPB		02/24/89	AA1
8902157-01	1826G DRUM 1/2/3	SOIL	02/21/89	TTLPB		02/24/89	AA1
8902157-02	1826G D-4/5/6/7	SOIL	02/22/89	TTLPB		02/24/89	AA1
8902157-06	1826G D-11/12/13	SOIL	02/23/89	TTLPB		02/24/89	AA1
8902157-07	1826G D-14/15/16	SOIL	02/23/89	TTLPB		02/24/89	AA1
8902157-08	1826G D-8/9/10	SOIL	02/22/89	TTLPB		02/24/89	AA1
QUALITY ASSURANCE (QA)							
OMB022489	METHOD BLANK	SOIL	N/A	ORGPB		02/24/89	AA1
MB021389	METHOD BLANK	SOIL	N/A	TTLPB		02/24/89	AA1

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G DRUM 1/2/3
Matrix : SOIL
Date Sampled : 02/21/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-01
Analyst : MN
Supervisor : R~
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-4/5/6/7
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-02
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-8/9/10
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-08
Analyst : MN
Supervisor : MR
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-11/12/13
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-06
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-14/15/16
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-07
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G DRUM 1/2/3
Matrix : SOIL
Date Sampled : 02/21/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-01
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	5.80

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-4/5/6/7
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-02
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	5.70

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amaddor Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-8/9/10
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-08
Analyst : MW
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	7.20

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-11/12/13
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-06
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	5.55

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-14/15/16
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : 8902157-07
Analyst : MN
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	5.80

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD BLANK
Matrix : SOIL
Date Sampled : N/A
Date Prepared: 02/24/89
Date Analyzed: 02/24/89

Anametrix ID : OMB022489
Analyst : MN
Supervisor : R^
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.05	ND

ND : Not detected at or above the practical quantitation limit for the limit.

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD BLANK
Matrix : SOIL
Date Sampled : N/A
Date Prepared: 02/13/89
Date Analyzed: 02/24/89

Anametrix ID : MB021389
Analyst : MW
Supervisor : RM
Date released: 03/03/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	0.05	ND

ND : Not detected at or above the practical quantitation limit for the limit.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Ensco Environmental Services
Address : 41674 Christy Street

City : Fremont, CA 94538-3114
Attn. : Kent Parrish

Anametrix W.O.#: 8902157
Date Received : 02/24/89
Purchase Order#: 12495
Project No. : 1826G
Date Released : 03/02/89

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8902157-01	1826G DRUM 1/2/3	SOIL	02/21/89	TPH	02/24/89	02/28/89	N/A
8902157-02	1826G D-4/5/6/7	SOIL	02/22/89	TPH	02/24/89	02/28/89	N/A
8902157-03	1826G D-8	SOIL	02/22/89	TPH	02/24/89	02/28/89	N/A
8902157-04	1826G D-9	SOIL	02/22/89	TPH	02/24/89	02/28/89	N/A
8902157-05	1826G D-10	SOIL	02/22/89	TPH	02/24/89	02/28/89	N/A
8902157-06	1826G D-11/12/13	SOIL	02/23/89	TPH	02/24/89	02/28/89	N/A
8902157-07	1826G D-14/15/16	SOIL	02/23/89	TPH	02/24/89	02/28/89	N/A

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G DRUM 1/2/3
Matrix : SOIL
Date sampled : 02/21/89
Date anl.TPHg: 02/24/89
Date ext.TPHd: 02/24/89
Date anl.TPHd: 02/28/89

Anametrix I.D. : 8902157-01
Analyst :
Supervisor :
Date released : 03/02/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G D-4/5/6/7	Anametrix I.D.	: 8902157-02
Matrix	: SOIL	Analyst	: aw
Date sampled	: 02/22/89	Supervisor	: RS
Date anl.TPHg	: 02/24/89	Date released	: 03/02/89
Date ext.TPHd	: 02/24/89	Date ext. TOG	: N/A
Date anl.TPHd	: 02/28/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-8
Matrix : SOIL
Date sampled : 02/22/89
Date anl.TPHg: 02/24/89
Date ext.TPHd: 02/24/89
Date anl.TPHd: 02/28/89

Anametrix I.D. : 8902157-03
Analyst :
Supervisor :
Date released : 03/02/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	2	6
108-88-3	Toluene	2	33
100-41-4	Ethylbenzene	2	19
1330-20-7	Total Xylenes	2	28
	TPH as Gasoline	20	930
	TPH as Diesel	10	110

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G D-9	Anametrix I.D.	: 8902157-04
Matrix	: SOIL	Analyst	:
Date sampled	: 02/22/89	Supervisor	:
Date anl.TPHg	: 02/24/89	Date released	: 03/02/89
Date ext.TPHd	: 02/24/89	Date ext. TOG	: N/A
Date anl.TPHd	: 02/28/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.8	12
108-88-3	Toluene	0.8	16
100-41-4	Ethylbenzene	0.8	17
1330-20-7	Total Xylenes	0.8	46
	TPH as Gasoline	8	570
	TPH as Diesel	10	140

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
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Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-10
Matrix : SOIL
Date sampled : 02/22/89
Date anl.TPHg: 02/24/89
Date ext.TPHd: 02/24/89
Date anl.TPHd: 02/28/89

Anametrix I.D. : 8902157-05
Analyst :
Supervisor :
Date released : 03/02/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	2	30
108-88-3	Toluene	2	50
100-41-4	Ethylbenzene	2	40
1330-20-7	Total Xylenes	2	120
	TPH as Gasoline	20	1400
	TPH as Diesel	10	100

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
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Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G D-11/12/13
Matrix : SOIL
Date sampled : 02/23/89
Date anl.TPHg: 02/24/89
Date ext.TPHd: 02/24/89
Date anl.TPHd: 02/28/89

Anametrix I.D. : 8902157-06
Analyst :
Supervisor :
Date released : 03/02/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G D-14/15/16	Anametrix I.D.	: 8902157-07
Matrix	: SOIL	Analyst	:
Date sampled	: 02/23/89	Supervisor	:
Date anl.TPHg	: 02/24/89	Date released	: 03/02/89
Date ext.TPHd	: 02/24/89	Date ext. TOG	: N/A
Date anl.TPHd	: 02/28/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Kent Parrish
Ensco Environmental Services
41674 Christy Street
Fremont, CA 94538

March 10, 1989
Anametrix W.O.#: 8902158
Date Received : 02/24/89
Purchase Order#: 12495
Site: Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

Dear Mr. Parrish:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS and QUALITY ASSURANCE.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Sarah Schoen

Sarah Schoen Ph.D.
GC Manager

SRS/lm

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Ensco Environmental Services
Address : 41674 Christy Street
City : Fremont, CA 94538
Attn. : Kent Parrish

Anametrix W.O.#: 8902158
Date Received : 02/24/89
Purchase Order#: 12495
Project No. : 1826G
Date Released : 03/10/89

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8902158-01	1826G MW-8-1/2/3/	SOIL	02/21/89	TPH	02/28/89	03/02/89	N/A
8902158-02	1826G MW-9-1/2/3/	SOIL	02/22/89	TPH	02/28/89	03/02/89	N/A
8902158-03	1826G MW-10-1	SOIL	02/22/89	TPH	02/28/89	03/02/89	N/A
8902158-04	1826G MW-10-2	SOIL	02/22/89	TPH	02/28/89	03/02/89	N/A
8902158-05	1826G MW-10-3	SOIL	02/22/89	TPH	02/28/89	03/02/89	N/A
8902158-06	1826G MW-11-1/2	SOIL	02/23/89	TPH	02/28/89	03/02/89	N/A
8902158-07	1826G MW-12-1/2/3	SOIL	02/23/89	TPH	02/28/89	03/02/89	N/A
8902158-01	1826G MW-8-1/2/3	SOIL	02/21/89	ORGPb		03/01/89	AA1
8902158-02	1826G MW-9-1/2/3/	SOIL	02/22/89	ORGPb		03/01/89	AA1
8902158-06	1826G MW-11-1/2	SOIL	02/23/89	ORGPb		03/01/89	AA1
8902158-07	1826G MW-12-1/2/3	SOIL	02/23/89	ORGPb		03/01/89	AA1
8902158-08	1826G MW-10-1/2/3	SOIL	02/22/89	ORGPb		03/01/89	AA1
8902158-01	1826G MW-8-1/2/3/	SOIL	02/21/89	TTLPb		03/01/89	AA1
8902158-02	1826G MW-9-1/2/3/	SOIL	02/22/89	TTLPb		03/01/89	AA1
8902158-06	1826G MW-11-1/2	SOIL	02/23/89	TTLPb		03/01/89	AA1
8902158-07	1826G MW-12-1/2/3	SOIL	02/23/89	TTLPb		03/01/89	AA1
8902158-08	1826G MW-10-1/2/3	SOIL	02/22/89	TTLPb		03/01/89	AA1
QUALITY ASSURANCE (QA)							
OMB022889	METHOD BLANK	SOIL	N/A	ORGPb		03/01/89	AA1
MB022789	METHOD BLANK	SOIL	N/A	TTLPb		03/01/89	AA1

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-8-1/2/3/4	Anametrix I.D.	: 8902158-01
Matrix	: SOIL	Analyst	: TC
Date sampled	: 02/21/89	Supervisor	: [illegible]
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-9-1/2/3/4	Anametrix I.D.	: 8902158-02
Matrix	: SOIL	Analyst	: JC
Date sampled	: 02/22/89	Supervisor	: [illegible]
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	3
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-10-1	Anametrix I.D.	: 8902158-03
Matrix	: SOIL	Analyst	: JC
Date sampled	: 02/22/89	Supervisor	: RT
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	2	7
108-88-3	Toluene	2	52
100-41-4	Ethylbenzene	2	44
1330-20-7	Total Xylenes	2	210
	TPH as Gasoline	20	2600
	TPH as Diesel	10	53

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-10-2	Anametrix I.D.	: 8902158-04
Matrix	: SOIL	Analyst	: JC
Date sampled	: 02/22/89	Supervisor	: [illegible]
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	2	4
108-88-3	Toluene	2	22
100-41-4	Ethylbenzene	2	20
1330-20-7	Total Xylenes	2	94
	TPH as Gasoline	20	1100
	TPH as Diesel	10	70

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-10-3	Anametrix I.D.	: 8902158-05
Matrix	: SOIL	Analyst	: TC
Date sampled	: 02/22/89	Supervisor	: BS
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.1	ND
108-88-3	Toluene	0.1	ND
100-41-4	Ethylbenzene	0.1	ND
1330-20-7	Total Xylenes	0.1	ND
	TPH as Gasoline	1	2
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-11-1/2	Anametrix I.D.	: 8902158-06
Matrix	: SOIL	Analyst	: TC
Date sampled	: 02/23/89	Supervisor	: [illegible]
Date anl.TPHg	: 02/27/89	Date released	: 03/10/89
Date ext.TPHd	: 02/28/89	Date ext. TOG	: N/A
Date anl.TPHd	: 03/02/89	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-12-1/2/3
Matrix : SOIL
Date sampled : 02/23/89
Date anl.TPHg: 02/27/89
Date ext.TPHd: 02/28/89
Date anl.TPHd: 03/02/89

Anametrix I.D. : 8902158-07
Analyst : TC
Supervisor : RJ
Date released : 03/10/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
	TPH as Gasoline	1	ND
	TPH as Diesel	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-8-1/2/3/4
Matrix : SOIL
Date Sampled : 02/21/89
Date Prepared: 03/01/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-01
Analyst : MK
Supervisor : RJ
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-9-1/2/3/4
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 03/01/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-02
Analyst : M·K
Supervisor : R~
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-10-1/2/3
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 03/01/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-08
Analyst : M.K
Supervisor : R
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-11-1/2
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 03/01/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-06
Analyst : M·K
Supervisor : R~
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-12-1/2/3
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 03/01/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-07
Analyst : M.K
Supervisor : R
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - ORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD BLANK
Matrix : SOIL
Date Sampled : N/A
Date Prepared: 02/28/89
Date Analyzed: 03/01/89

Anametrix ID : OMB022889
Analyst : MK
Supervisor : RB
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
LUFT	Organic Lead (Pb)	0.2	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-8-1/2/3/4
Matrix : SOIL
Date Sampled : 02/21/89
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-01
Analyst : M.K
Supervisor : R~
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	6.50

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-9-1/2/3/4
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-02
Analyst : M.K.
Supervisor :
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	6.25

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador VAlley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-10-1/2/3/4
Matrix : SOIL
Date Sampled : 02/22/89
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-08
Analyst : MK
Supervisor :
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	6.90

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-11-1/2
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-06
Analyst : MK
Supervisor :
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	9.50

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-12-1/2/3
Matrix : SOIL
Date Sampled : 02/23/89
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : 8902158-07
Analyst : A.K
Supervisor : [illegible]
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	2.5	7.35

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - INORGANIC LEAD
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD BLANK
Matrix : SOIL
Date Sampled : N/A
Date Prepared: 02/27/89
Date Analyzed: 03/01/89

Anametrix ID : MB022789
Analyst : [illegible]
Supervisor : [illegible]
Date released: 03/10/89
Instrument ID: AA1

METHOD NO.	COMPOUNDS	Detection Limit (ppm)	Amount Found (ppm)
7420	Total Lead (Pb)	0.05	ND

ND : Not detected at or above the practical quantitation limit for the limit.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Kent Parrish
Ensco Enviornmental Services
41674 Christy Street
Fremont, CA 94538-3114

March 13, 1989
Anametrix W.O.#: 8903025
Date Received : 03/03/89
Purchase Order#: 12538
Site: Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

Dear Mr. Parrish:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Sarah Schoen, Ph.D.
GC Manager

SRS/lm

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Ensco Enviornmental Services
Address : 41674 Christy Street
City : Fremont, CA 94538-3114
Attn. : Kent Parrish

Anametrix W.O.#: 8903025
Date Received : 03/03/89
Purchase Order#: 12538
Project No. : 1826G
Date Released : 03/13/89

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8903025-01	1826G MW-2	WATER	03/02/89	TPH		03/03/89	N/A
8903025-02	1826G MW-7	WATER	03/02/89	TPH		03/03/89	N/A
8903025-03	1826G MW-4	WATER	03/02/89	TPH		03/03/89	N/A
8903025-04	1826G MW-3	WATER	03/02/89	TPH		03/03/89	N/A
8903025-05	1826G MW-6	WATER	03/02/89	TPH		03/03/89	N/A
8903025-06	1826G MW-1	WATER	03/02/89	TPH		03/07/89	N/A
8903025-07	1826G MW-5	WATER	03/02/89	TPH		03/03/89	N/A
8903025-08	1826G RW-1	WATER	03/02/89	TPH		03/07/89	N/A

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-1	Anametrix I.D.	: 8903025-06
Matrix	: WATER	Analyst	: JC
Date sampled	: 03/02/89	Supervisor	: MS
Date anl.TPHg	: 03/07/89	Date released	: 03/13/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.01	6.1
108-88-3	Toluene	0.01	0.77
100-41-4	Ethylbenzene	0.01	0.32
1330-20-7	Total Xylenes	0.02	0.44
	TVH as Gasoline	1	14

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-2	Anametrix I.D.	: 8903025-01
Matrix	: WATER	Analyst	: JC
Date sampled	: 03/02/89	Supervisor	: BS
Date anl.TPHg	: 03/03/89	Date released	: 03/13/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	0.024
108-88-3	Toluene	0.0005	0.0009
100-41-4	Ethylbenzene	0.0005	0.0092
1330-20-7	Total Xylenes	0.001	0.018
	TVH as Gasoline	0.05	0.23

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-3	Anametrix I.D.	: 8903025-04
Matrix	: WATER	Analyst	: JC
Date sampled	: 03/02/89	Supervisor	:
Date anl.TPHg	: 03/03/89	Date released	: 03/13/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	0.16
108-88-3	Toluene	0.0005	0.0010
100-41-4	Ethylbenzene	0.0005	0.017
1330-20-7	Total Xylenes	0.001	0.009
	TVH as Gasoline	0.05	0.57

ND - Not detected at or above the practical quantitation limit for the method.

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1826G MW-4	Anametrix I.D.	: 8903025-03
Matrix	: WATER	Analyst	: JC
Date sampled	: 03/02/89	Supervisor	: [illegible]
Date anl.TPHg	: 03/03/89	Date released	: 03/13/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	0.21
108-88-3	Toluene	0.0005	0.0062
100-41-4	Ethylbenzene	0.0005	0.034
1330-20-7	Total Xylenes	0.001	0.007
	TVH as Gasoline	0.05	0.63

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-5
Matrix : WATER
Date sampled : 03/02/89
Date anl.TPHg: 03/03/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903025-07
Analyst : JC
Supervisor : BJ
Date released : 03/13/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TVH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-6
Matrix : WATER
Date sampled : 03/02/89
Date anl.TPHg: 03/03/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903025-05
Analyst : TC
Supervisor : DS
Date released : 03/13/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	0.16
108-88-3	Toluene	0.0005	0.020
100-41-4	Ethylbenzene	0.0005	0.13
1330-20-7	Total Xylenes	0.001	0.033
	TVH as Gasoline	0.05	1.4

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-7
Matrix : WATER
Date sampled : 03/02/89
Date anl.TPHg: 03/03/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903025-02
Analyst : JC
Supervisor : DHS
Date released : 03/13/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TVH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G RW-1
Matrix : WATER
Date sampled : 03/02/89
Date anl.TPHg: 03/07/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903025-08
Analyst : TC
Supervisor : DS
Date released : 03/13/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.005	2.4
108-88-3	Toluene	0.005	ND
100-41-4	Ethylbenzene	0.005	ND
1330-20-7	Total Xylenes	0.01	ND
	TVH as Gasoline	0.5	3.9

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil
7194 Amador Valley Blvd.
Dublin, CA

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Kent Parrish
Ensco Environmental Services
41674 Christy Street
Fremont, CA 94538-3114

March 09, 1989
Anametrix W.O.#: 8903014
Date Received : 03/02/89
Purchase Order#: 12538
Site: Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA
Ensco Proj.# 1826G

Dear Mr. Parrish:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Sarah Schoen

Sarah Schoen, Ph.D.
GC Manager

SRS/dg

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Ensco Environmental Services
Address : 41674 Christy Street

City : Fremont, CA 94538-3114
Attn. : Kent Parrish

Anametrix W.O.#: 8903014
Date Received : 03/02/89
Purchase Order#: 12538
Project No. : 1826G
Date Released : 03/09/89

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8903014-01	1826G BB-1	WATER	03/01/89	TPHg		03/02/89	N/A
8903014-02	1826G BB-2	WATER	03/01/89	TPHg		03/02/89	N/A
8902014-03	1826G MW-11	WATER	03/01/89	TPHg		03/02/89	N/A
8903014-04	1826G MW-12	WATER	03/01/89	TPHg		03/02/89	N/A
8903014-05	1826G MW-10	WATER	03/01/89	TPHg		03/02/89	N/A
8903014-06	1826G MW-9	WATER	03/01/89	TPHg		03/02/89	N/A
8903014-07	1826G MW-8	WATER	03/01/89	TPHg		03/02/89	N/A

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G BB-1
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-01
Analyst : TC
Supervisor : MJ
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G BB-2
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-02
Analyst : JC
Supervisor : BMJ
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-8
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-07
Analyst : TC
Supervisor : SJ
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-9
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-06
Analyst : TC
Supervisor : BJ
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-10
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-05
Analyst : TC
Supervisor : MJ
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	0.14
108-88-3	Toluene	0.0005	0.036
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	0.077
	TPH as Gasoline	0.05	1.0

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-11
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8902014-03
Analyst : TC
Supervisor : [illegible]
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1826G MW-12
Matrix : WATER
Date sampled : 03/01/89
Date anl.TPHg: 03/02/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8903014-04
Analyst : IC
Supervisor : [signature]
Date released : 03/09/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ppm)	Amount Found (ppm)
71-43-2	Benzene	0.0005	ND
108-88-3	Toluene	0.0005	ND
100-41-4	Ethylbenzene	0.0005	ND
1330-20-7	Total Xylenes	0.001	ND
	TPH as Gasoline	0.05	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Shell Oil Company
7194 Amador Valley Blvd.
Dublin, CA

SML

McINTOSH LABORATORIES

2292 TRADE ZONE BLVD. SAN JOSE, CALIFORNIA 95131 (408)946-3935

Date Reported: 3/8/89
Date Received: 3/3/89
Date sampled : 3/2/89
Sampled by : Client

: Anametrix, Inc.
: 1761 Concourse Drive, Suite E
: San Jose, Calif. 95131
: Attn: N. Sylvia

Sample Identification: SML/4246 - SP03025 - 7194 Amador Valley Blvd
Dublin - MW-2

Parameter	Methodology Reference	Analytical Results Milligrams/liter
Aluminum (Al)	EPA 202.1/7020	:
Arsenic (As)	EPA 206.3/7061	:
Antimony (Sb)	EPA 204.1/7040	:
Barium (Ba)	EPA 208.1/7080	:
Boron (B)	EPA 212.3	:
Cadmium (Cd)	EPA 213.1/7130	:
Chromium (Cr+6)	EPA 7196	:
Chromium (Cr)	EPA 218.1/7190	:
Copper (Cu)	EPA 220.1/7210	:
Cyanide (CN)	EPA 335.1/9010	:
Fluoride (F)	EPA 340.2	:
Lead (Pb)	EPA 239.1/7420	:
Manganese (Mn)	EPA 243.1/7460	:
Mercury (Hg)	EPA 245.1/7470	:
Nickel (Ni)	EPA 249.1/7520	:
Ammonia (N)	EPA 350.2	:
Nitrogen (TKN)	EPA 351.3	:
Phenolics	EPA 420.1/9066	:
Selenium (Se)	EPA 270.3/7741	:
Silver (Ag)	EPA 272.1/7760	:

SEQUOIA ANALYTICAL

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

RECEIVED

Ensco Environmental Services	Client Project ID:	#1826G, Shell Oil, Dublin, PO#13399	Sampled:	Apr 26, 1989
41674 Christy Street	Sample Descript:	Soil	Received:	Apr 27, 1989
Fremont, CA 94538			Extracted:	Apr 27, 1989
Attention: Steve Costello	Lab Number:	904-2948	Analyzed:	Apr 27, 1989
			Reported:	Apr 28, 1989

LABORATORY ANALYSIS

Analyte	Detection Limit	Sample Results
Ignitability, Bunsen burner	N.A.	>115°C

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

CHAIN OF CUSTODY RECORD

2 day turn around

PROJECT NO: 1826

PROJECT NAME: Shell Oil
7194 Amador Valley Blvd, Dublin

SAMPLER'S (Signature)

NO	DATE	TIME	DRIVE	GRAB	STATION AND LOCATION	TPH Gasoline	BTEX *	Total Lead	Organic Lead	TPH Diesel	REMARKS
Drum 1	2/21/89				Soil Cuttings from Boring MW-8	COMP		COMP	COMP	COMP	Composite *
Drum 2	"				"	"		"	"	"	" *
Drum 3	"				"	"		"	"	"	" *
D-4	2/22/89				Soil Cuttings from Boring MW-9	COMP		COMP	COMP	COMP	Composite *
D 5	"				"	"		"	"	"	" *
D 6	"				"	"		"	"	"	" *
D-7	"				"	"		"	"	"	" *
D 8	2/22/89				Soil Cuttings from Boring MW-10	X		COMP	COMP	X	Individual Sample *
D 9	"				"	X		"	"	X	Individual Sample *
D 10	"				"	X		"	"	X	Individual Sample *
D-11	2/23/89				Soil Cuttings from Boring MW-11	COMP		COMP	COMP	COMP	Composite *
D-12	"				"	"		"	"	"	" *
D 13	"				"	"		"	"	"	" *
D 14	2/23/89				Soil Cuttings from Boring MW-12	COMP		COMP	COMP	COMP	Composite *
D 15	"				"	"		"	"	"	" *
D 16	"				"	"		"	"	"	" *

RELINQUISHED BY	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY
RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY
					2/24/89	9:45	Tghi Memarduth

REMARKS: * Any Composite with TPH G or D greater than 100ppm shall have each individual sample analyzed for TPH G and D. Any sample with TPH G or D greater than 100ppm analyze for BTEX. Analyze each composite for total and organic lead.

TPH G = TPH Gasoline, TPH D = TPH Diesel

ensco environmental services, inc.
41674 Christy Street
Fremont, CA 94538-3114
(415) 659-0404
Fax: (415) 651-4677
Contr. Lic. No. 464324

FORM DATED 1-28-87

Data to: Richard Carlow

5 day turn around

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
1826 G	Shell Oil, 7194 Amador Valley Blvd, Dublin

SAMPLERS (Signature): [signature]

NO.	DATE	TIME	DRIVE	GRAB	STATION AND LOCATION	TPH Gasoline	BTEX *	Total Lead	Organic Lead	TPH Diesel	REMARKS
✓ MW-8-1	2/21/89		✓		Soil 6'-6½'	comp.		comp.	comp.	comp	Composite #8*
✓ MW-8-2	↓		↓		Soil 11'-11½'	↓		↓	↓	↓	Composite #8*
✓ MW-8-3	↓		↓		Soil 15'-15½'	↓		↓	↓	↓	Composite #8*
✓ MW-8-4	↓		↓		Soil 16½'-17'	↓		↓	↓	↓	Composite #8*
✓ MW-9-1	2/22/89		✓		Soil 6'-6½'	comp		comp	comp	comp	Composite #9*
✓ MW-9-2	↓		↓		Soil 10'-10½'	↓		↓	↓	↓	Composite #9*
✓ MW-9-3	↓		↓		Soil 15'-15½'	↓		↓	↓	↓	Composite #9*
✓ MW-9-4	↓		↓		Soil 17½'-18'	↓		↓	↓	↓	Composite #9*
✓ MW-10-1	2/22/89		✓		Soil 6-6½'	X		comp	comp	X	Individual Sample*
✓ MW-10-2	↓		↓		Soil 10-10½'	X		↓	↓	X	Individual Sample*
✓ MW-10-3	↓		↓		Soil 16-16½'	X		↓	↓	X	Individual Sample*
✓ MW-11-1	2/23/89		✓		Soil 6'-6½'	comp		comp	comp	comp	Composite #11*
✓ MW-11-2	↓		↓		Soil 16½'-17'	↓		↓	↓	↓	Composite #11*
✓ MW-12-1	2/23/89		✓		Soil 6'-6½'	comp		comp	comp	comp	Composite #12*
✓ MW-12-2	↓		↓		Soil 10'-10½'	↓		↓	↓	↓	Composite #12*
✓ MW-12-3	↓		↓		Soil 15-15½'	↓		↓	↓	↓	Composite #12*

RELINQUISHED BY	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY
[signature]							
RELINQUISHED BY	DATE	TIME	RECEIVED BY: TPH G & D	RELINQUISHED BY: TPH G and D	2/24/89	9:45	RECEIVED BY LABORATORY: [signature]

*REMARKS: Any composite with DETECTABLE ~~TPHG~~ shall have each individual sample analyzed for ~~TPHG~~. If any individual sample has DETECTABLE ~~TPHG~~, analyze for BTEX. Each boring shall have a composite of samples tested for total and organic lead.
TPHG = TPH gasoline, TPHD = TPH diesel

ensco environmental services, inc.
41674 Christy Street
Fremont, CA 94538-3114
(415) 659-0404
Fax: (415) 651-4677
Contr. Lic. No. 464324

FORM DATED 1-28-87

Data to: Richard Garlow

Anametrix

CHAIN OF CUSTODY RECORD

P.O.# 12538

PROJECT NO	PROJECT NAME
1826G	Shell Dublin 7194 Amador Valley Blvd

SAMPLERS (Signature): John Monroe + Borrego

TEST REQUESTED: TPHG/BTEX; TDS

48 hr TAT

NO	DATE	TIME	COMP	GRAB	STATION AND LOCATION	TPHG/BTEX	TDS	REMARKS
BB-1	3/1/89	11:26			2 pres VOA	X		
BB-2		11:29			"	X		
MW-11		12:45p			"	X		
MW-12		1:02p			"	X		
MW-10		1:36p			"	X		
MW-7		2:17p			"	X		
MW-8		3:22			"	X		

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY
					3-2-89	12:15	Taghi Memarzadeh

REMARKS: Put station address on all pages of report, all reports in ppm

For Kent Parrish

DISTRIBUTION

FORM DATED 1-28-87

ensco environmental services, inc.
41674 Christy Street
Fremont, CA 94538-3114
(415) 659-0404
Fax: (415) 651-4677
Contr Lic No 464324

CHAIN OF CUSTODY RECORD

P.O.# 12538

PROJECT NO: 18266 | PROJECT NAME: Shell Dublin

SAMPLERS (Signature): John Monroe & Borrego

NO	DATE	TIME	DRIVE	CORE	STATION AND LOCATION
MW-2	3/3/89	10:02			3 pres VOA, 1 amber liter
MW-7	"	10:07			2 pres Voa's Each
MW-4		10:58			"
MW-3		11:08			"
MW-6		12:07p			"
MW-1		12:20p			"
MW-5		2:15p			"
RW-1		3:20p			"

TEST REQUESTED

TPHG/BTEX	TOG
X	X
X	
X	
X	
X	
X	
X	

48 TAT

REMARKS

RELINQUISHED BY	DATE	TIME	RECEIVED BY
RELINQUISHED BY	DATE	TIME	RECEIVED BY

RELINQUISHED BY	DATE	TIME	RECEIVED BY
RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY
	3-3-89	11:00	Tughi Memarsadeh

REMARKS for station address on all pages of report, all reports in ppm

Report to Kent Parrish

DISTRIBUTION

FORM DATED 1-28-87

ensco environmental services, inc.
41674 Christy Street
Fremont, CA 94538-3114
(415) 659-0404
Fax (415) 651-4677
Contr Lic No 464324

SHELL STATUS LOG

Project Number 1826G
7194 Amador Valley Boulevard
Dublin, California

Date Mailed	Report Dated	Description
5/25/88		Initial Soil and Groundwater Investigation
		Report to Diane Lundquist
11/30/88		Supplemental Soil and Groundwater Investigation
		Report to Diane Lundquist
3/17/89		March Quarterly Groundwater Sampling Report
		to Diane Lundquist
6/16/89	6/12/89	June Quarterly Report-Groundwater Sampling
		and Analysis to Alamo Mortgage Corporation
6/16/89	6/5/89	Final Assessment Report to
		Alamo Mortgage Corportation, Walnut Creek, CA
6/30/89	6/5/89	Final Assessment Report
		Alameda Co. Health Care Svcs-Storm Goranson
		Reg.Water Quality Control Brd.-Donald Dalke
6/30/89	6/12/89	June Quarterly Report-Groundwater Sampling
		Alameda Co.Health Care Svcs-Craig Mayfield
		Reg.Water Quality Control Brd.-Donald Dalke
		Alameda Co. Health Care Svcs-Storm Goranson