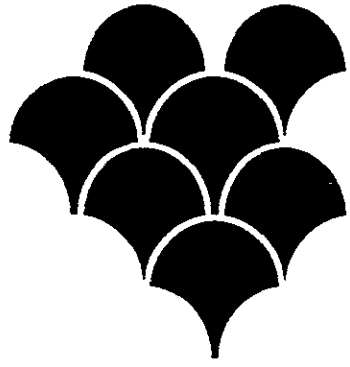

ensco
environmental
services, inc.

SEPTEMBER QUARTERLY REPORT
GROUNDWATER SAMPLING
AND ANALYSIS

FOR

FORMER SHELL STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN , CALIFORNIA

Project No. 1826G
September 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

September 25, 1989

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

Attention: Ms. Diane Lundquist

Subject: September Quarterly Report
Groundwater Sampling and Analysis
Former Shell Station, 7194 Amador Valley Boulevard, Dublin, California
EES Project No. 1826G

Dear Ms. Lundquist:

This report presents the result of groundwater sampling and analyses performed at the subject site since the June 1989 quarterly report. It includes all current and past analytical data acquired during this ongoing investigation.

If you have any questions, please call.

Sincerely,
Ensco Environmental Services, Inc.

Cynthia R. Virostko
Staff Geologist

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

CRV/LDP/sw
Enclosure

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

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October 2, 1989

Alameda County Health Care Services
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Suite 200
Oakland, CA 94621-1439

Attention: Mr. Storm Goranson

Subject: Former Shell Oil Company Site
7194 Amador Valley Boulevard, Dublin, California
September Quarterly Report
Groundwater Sampling and Analysis
Project Number 1826G

Dear Mr. Goranson:

Ensco Environmental Services, Inc. (EES) is please to send you the September Quarterly Report for the above referenced site. Please call if you have any questions.

Sincerely,

Cynthia R. Virostko

Cynthia R. Virostko
Staff Geologist

cc: Reuben H. Chow
Diane Lundquist

CONTENTS

CONTENTS

Table

Figures

Appendices

SEPTEMBER QUARTERLY REPORT
GROUNDWATER SAMPLING AND ANALYSIS

FOR

FORMER SHELL STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

INTRODUCTION

This report presents the results of groundwater monitoring by Ensco Environmental Services, Inc. (EES) at the former Shell Station located 72194 Amador Valley Boulevard, in the City of Dublin, Alameda County, California (see Figure 1). EES has been collecting groundwater samples for laboratory analysis at this site since May 1988. This EES quarterly report includes all groundwater sampling data acquired at the site since the issuance of the June 1989 quarterly report. The program objectives are listed below.

- Plot the groundwater contour surface and inferred flow direction.
- Investigate for the presence of a petroleum hydrocarbon plume and its concentrations.
- . Compare current and past data.

The existence and degree of hydrocarbon contamination is determined by (1) checking for the presence of free-floating petroleum product in the groundwater monitoring wells and measuring its thickness and (2) performing laboratory analyses on groundwater samples to determine concentrations of total petroleum hydrocarbons as gasoline (TPHG), and specific concentrations of benzene, toluene, ethyl benzene, and total xylenes (BTEX)

BACKGROUND

EES, at the request of Shell Oil Company (Shell), is continuing the investigation of hydrocarbon contamination in the soil and groundwater beneath the former Shell Station located at 7194 Amador Valley Boulevard, Dublin, California. EES completed a preliminary investigation at this site in April 1988 which confirmed the presence of hydrocarbon contamination in the soil and groundwater beneath the site. This was followed by an EES supplemental investigation completed in November 1988, which found soil and groundwater contamination beyond the site boundaries. In June 1988, a final assessment report was completed which determined limits of the contamination downgradient from the site.

This report details the results of the continuing groundwater monitoring and sampling phase of this investigation. EES installed groundwater monitoring wells MW-1 through MW-4 within the site boundaries between May 4 and May 9, 1988. Groundwater monitoring wells MW-5, MW-6, MW-7, and recovery well RW-1 were installed as part of the supplemental off-site field investigation conducted between July 19 and August 12, 1988. MW-5 is screened at a deeper interval than the other wells to monitor the lower depths of the affected aquifer. EES installed five additional off-site monitoring wells (MW-8 through MW-12) between February 21 and 23, 1989, and sampled the groundwater from these wells beginning in March 1989. The locations of these wells are shown on the Site Plan (Figure 2).

FIELD INVESTIGATION

The field data obtained for this report was collected on May 31 - June 1, 1989; June 28 - 29, 1989; and August 8 - 9, 1989. Regularly scheduled monitoring for July was cancelled due to a series of aquifer tests performed on-site. These field tests consisted of (a) measuring groundwater background fluctuations on July 20 - 27, 1989 (b) a step-drawdown test on July 31, 1989, and (c) a pump and recovery test on July 1 - 4, 1989. A detailed description of these tests can be found in a separate EES report entitled "Shallow Groundwater Aquifer Pump Test At Former Shell Oil Service Station, 7194 Amador Valley Boulevard, Dublin, California, September 1989."

Groundwater Sampling

EES measured the depth to groundwater in each well with an electronic sounder and checked for the presence of floating product with a clear acrylic bailer. No floating product was observed; however, a petroleum product odor was detected in monitoring wells MW-1, MW-3, MW-6, MW-10, and recovery well RW-1. A minimum of four well-casing volumes of water were removed from each well before sampling. Groundwater samples were then collected following the procedures outlined in our groundwater sampling protocol (Appendix A). All groundwater purged from each well was placed in properly labeled drums at the site, then transported by a licensed hauler to a recycling facility.

HYDROGEOLOGY

An average apparent groundwater gradient was calculated for each month, resulting in the following: 0.0021 feet per foot trending to the southeast in May, 0.0025 feet per foot trending to the southeast in June, and 0.0029 feet per foot trending to the south in August. The change in direction of the apparent groundwater gradient for August appeared to occur after the pump test was conducted earlier that month.

The groundwater elevations measured at the site ranged from 325.7 to 326.6, 325.5 to 326.4, and 325.8 to 326.4 feet above mean sea level for the months of May, June, and August, respectively. Groundwater elevations recorded during all current and past monitoring is shown in Table 1. EES has prepared groundwater elevation contour maps based upon water depth data collected from the monitoring wells (Figures 11 through 13).

LABORATORY ANALYSIS

The groundwater samples were analyzed by National Environmental Testing, Inc. (NET), a Shell-approved, state-certified laboratory in Pleasanton, California. The laboratory analyzed the groundwater samples for TPHG and BTEX using Environmental Protection Agency (EPA) Methods 8015/5030 and 602

SUMMARY OF ANALYTICAL RESULTS

Laboratory analyses revealed TPHG and BTEX concentrations in groundwater samples from monitoring wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-10, and recovery well RW-1. Monitoring well MW-2 contained no detectable concentrations of toluene, however, TPHG, benzene, ethyl benzene, and xylenes concentrations were found. A summary of all current and past sampling results are presented in Table 1. Appendix B contains the laboratory reports and chain-of-custody records.

EES has developed logarithmic graphical representations of all current and past data to show the variations in concentrations of TPHG and BTEX with respect to time. These graphs are presented as Figures 3 through 10. (Note: There are no graphical representations for MW-8, MW-9, MW-11, and MW-12 because those wells had no detectable concentrations of TPHG or BTEX.)

LONG-TERM MONITORING

EES will continue monthly monitoring of monitoring wells MW-1 through MW-12 and recovery well RW-1. This monitoring will include: (1) depth-to-water measurements; (2) field checks for odor, sheen, or floating petroleum product; and (3) collection of groundwater samples for analysis by a Shell-approved, state-certified laboratory. The samples will be tested for the presence of TPHG and BTEX. EES will issue the next quarterly groundwater sampling report in December 1989.

CONCLUSIONS

1. Average apparent groundwater gradients for May, June, and July were 0.0021, 0.0025, and 0.0029 feet per foot, respectively. Groundwater elevations at the site ranged from 325.5 to 326.4 feet above mean sea level during the last quarter.

2. Laboratory analyses revealed TPHG and BTEX in the groundwater samples from wells MW-1, MW-3, MW-4, MW-6, MW-10, and recovery well RW-1. Monitoring well MW-2 contained concentrations of TPHG, benzene, ethyl benzene, and

xylenes. No TPHG or BTEX were detected in groundwater samples collected from MW-7, MW-8, MW-9, MW-11, or MW-12.

3. EES will continue with the current monitoring schedule. The next quarterly groundwater monitoring report, to be issued in December 1989, will include monthly depth, flow direction, gradient, and quality data derived from monitoring wells MW-1 through MW-12, and recovery well RW-1.

REPORTING REQUIREMENTS

A copy of this report should be forwarded to the following agencies:

Alameda County Flood Control and
Water Conservation District, (Zone 7)
5997 Parkside Drive
Pleasanton, California 94566
Attention: Mr. Craig Mayfield
Water Resources Engineer

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

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

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
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-1	05/09/88	0.44	0.12	0.05	NA	0.12	8.72	334.83
	08/26/88	200	4.4	0.26	0.3	0.45	9.15	
	10/05/88	17	6.7	0.36	0.21	0.73	8.54	
	11/22/88	8	3.9	0.83	0.25	0.34	9.31	
	12/09/88	11	0.79	0.036	0.0073	0.068	9.33	
	01/13/89	8.8	3.8	0.11	0.33	0.09	NA	
	02/10/89	18	4.7	0.4	0.66	0.19	8.51	
	03/02/89	14	6.1	0.77	0.32	0.44	8.71	
	04/04/89	11	4.8	0.77	0.27	0.78	7.93	
	05/01/89	11	2.8	0.88	0.41	0.78	8.43	
	06/01/89	ND	ND	ND	ND	ND	8.56	
	06/29/89	4.7	0.31	0.16	0.075	0.26	8.60	
	08/09/89	12	1.3	0.62	0.83	0.68	8.43	
MW-2	05/09/88	BRL	BRL	BRL	NA	BRL	10.85	336.96
	08/26/88	1.7	0.23	0.016	0.087	0.12	11.29	
	10/05/88	0.2	0.02	0.0023	0.0083	0.012	10.83	
	11/22/88	0.8	0.093	0.0016	0.0043	0.06	11.42	
	12/09/88	0.27	0.045	0.0036	0.0072	0.014	11.45	
	01/13/89	0.18	0.026	0.0023	0.017	0.007	NA	
	02/10/89	0.32	0.043	0.0017	0.034	0.015	10.74	
	03/02/89	0.23	0.024	0.0009	0.0092	0.018	10.91	
	04/04/89	0.23	0.053	0.0023	0.0071	0.02	10.06	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (continued)
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-2	05/01/89	ND	0.0027	ND	ND	ND	10.58	
(Cont.)	05/31/89	0.12	0.014	ND	0.0039	0.0076	10.73	
	06/28/89	ND	0.0041	ND	ND	ND	10.90	
	08/08/89	0.088	0.0039	ND	ND	ND	10.78	
MW-3	05/09/88	0.076	0.01	0.0044	NA	0.015	10.59	336.96
	08/26/88	5.2	0.17	0.006	0.032	0.054	11.10	
	10/05/88	0.26	0.1	0.0027	0.0058	0.007	10.43	
	11/22/88	0.18	0.075	0.0014	0.0081	0.004	11.16	
	12/09/88	0.16	0.005	0.0059	ND	ND	11.24	
	01/13/89	0.16	0.036	0.0012	0.003	0.002	NA	
	02/10/89	0.3	0.083	ND	0.0086	0.008	10.43	
	03/02/89	0.57	0.16	0.001	0.017	0.009	10.59	
	04/04/89	0.15	0.064	0.0008	0.0027	0.006	9.45	
	05/01/89	0.13	0.048	0.0012	0.0034	0.002	10.20	
	06/01/89	ND	ND	ND	ND	ND	10.40	
	06/28/89	0.09	0.068	0.0007	ND	0.0051	10.60	
	08/09/89	0.15	0.023	0.0053	0.0026	ND	10.64	
MW-4	05/09/88	0.29	0.076	0.033	NA	0.15	10.88	337.14
	08/26/88	2.1	0.64	0.041	0.11	0.16	11.34	
	10/05/88	0.45	0.11	0.0063	0.016	0.02	10.87	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (continued)
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-4	11/22/88	0.5	0.11	0.004	0.02	0.027	11.41	
(Cont.)	12/09/88	0.26	0.92	0.0075	0.0059	0.011	11.46	
	01/13/89	0.99	0.2	0.0065	0.046	0.014	NA	
	02/10/89	0.29	0.09	0.0036	0.0088	0.009	10.78	
	03/02/89	0.63	0.21	0.0062	0.034	0.007	10.92	
	04/04/89	0.64	0.34	0.013	0.025	0.04	10.04	
	05/01/89	0.1	0.065	0.002	0.003	0.004	10.52	
	05/31/89	0.06	ND	ND	ND	ND	10.62	
	06/28/89	0.11	0.062	0.0013	ND	0.0048	11.00	
	08/09/89	0.16	0.11	0.0020	0.0064	ND	10.92	
MW-5	08/26/88	0.21	0.006	0.004	0.009	0.019	9.10	334.96
	10/05/88	7.5	2.7	BRL	0.11	0.59	9.95	
	11/22/88	0.15	0.021	0.026	0.003	0.002	8.93	
	12/09/88	0.24	0.037	0.0022	0.0067	0.0077	10.48	
	01/13/89	0.08	0.0016	ND	0.0077	0.002	NA	
	02/10/89	0.06	ND	ND	ND	ND	10.35	
	03/02/89	ND	ND	ND	ND	ND	8.50	
	04/05/89	ND	ND	ND	ND	ND	7.72	
	05/01/89	ND	0.0013	ND	ND	ND	8.21	
	06/01/89	ND	ND	ND	ND	ND	8.40	
	06/29/89	ND	ND	ND	ND	ND	8.65	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (continued)
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-5 (Cont.)	08/09/89	0.089	0.0085	0.0018	0.0015	0.0022	8.76	
MW-6	08/26/88	15	0.39	0.39	0.67	1.7	9.69	335.42
	10/05/88	2.7	0.13	0.038	0.96	0.22	9.27	
	11/22/88	NA	NA	NA	NA	NA	9.77	
	12/09/88	0.54	0.062	0.003	0.026	0.005	9.85	
	01/13/89	0.98	0.16	0.022	0.12	0.029	NA	
	02/10/89	1.9	0.29	0.024	0.093	0.048	9.10	
	03/02/89	1.4	0.16	0.02	0.13	0.033	9.29	
	04/04/89	1.2	0.22	0.027	0.074	0.069	8.48	
	05/01/89	0.79	0.12	0.011	0.025	0.017	8.90	
	06/01/89	1.2	0.049	0.049	0.069	0.030	9.16	
	06/29/89	0.94	0.13	0.015	0.069	0.035	9.30	
	08/09/89	1.4	0.28	0.039	0.17	0.064	9.30	
MW-7	08/26/88	ND	0.0008	ND	ND	ND	7.94	333.23
	10/05/88	ND	ND	ND	ND	ND	7.54	
	11/22/88	0.7	0.041	0.009	0.001	0.02	NA	
	12/09/88	ND	ND	ND	ND	0.0006	7.53	
	01/13/89	ND	ND	ND	ND	ND	NA	
	02/10/89	ND	ND	ND	ND	ND	6.62	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (Continued)
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-7	03/02/89	ND	ND	ND	ND	ND	7.03	
(cont.)	04/05/89	ND	ND	ND	ND	ND	6.80	
	05/01/89	ND	ND	ND	ND	ND	6.53	
	05/31/89	ND	ND	ND	ND	ND	6.93	
	06/28/89	ND	ND	ND	ND	ND	6.85	
	08/09/89	ND	ND	ND	ND	ND	6.67	
MW-8	03/01/89	ND	ND	ND	ND	ND	8.28	335.8
	04/04/89	ND	ND	ND	ND	ND	7.31	
	05/01/89	ND	ND	ND	ND	ND	8.97	
	05/31/89	ND	ND	ND	ND	ND	9.17	
	06/28/89	ND	ND	ND	ND	ND	9.40	
	08/08/89	ND	ND	ND	ND	ND	9.42	
MW-9	03/01/89	ND	ND	ND	ND	ND	8.48	334.57
	04/04/89	ND	ND	ND	ND	ND	7.69	
	05/01/89	ND	ND	ND	ND	ND	8.20	
	05/31/89	ND	ND	ND	ND	ND	8.72	
	06/28/89	ND	ND	ND	ND	ND	9.00	
	08/08/89	ND	ND	ND	ND	ND	8.53	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (Continued)
GROUNDWATER ANALYSIS DATA

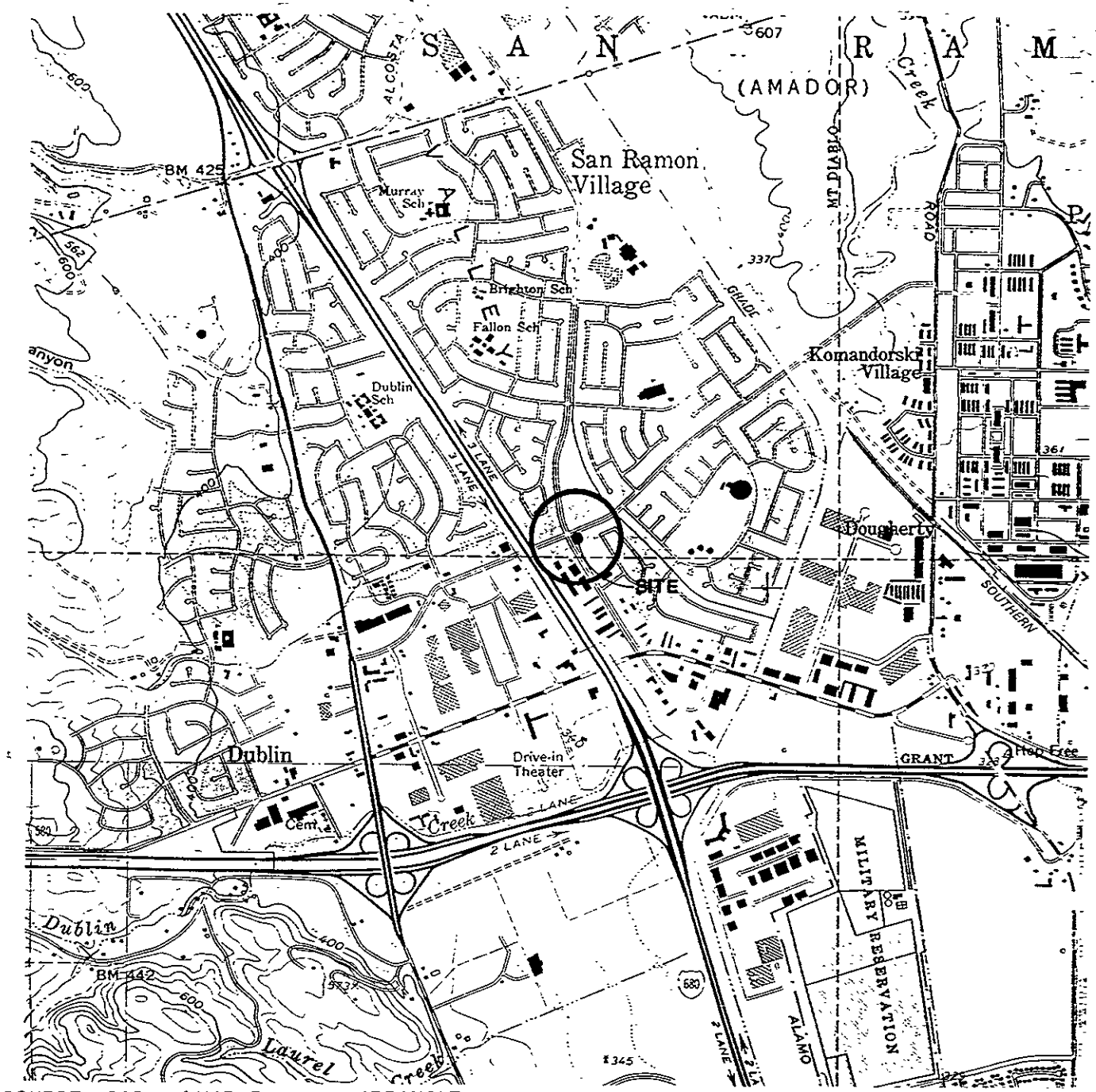
Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
MW-10	03/02/89	1	0.14	0.036	ND	0.077	8.95	335.37
	04/04/89	3.3	0.76	0.24	0.046	0.63	7.89	
	05/01/89	0.68	0.099	0.024	0.0081	0.032	9.07	
	06/01/89	1.4	0.12	0.039	ND	0.045	8.86	
	06/29/89	1.3	0.051	0.0014	0.0061	0.091	9.05	
	08/09/89	0.86	0.31	0.026	0.045	0.082	9.70	
MW-11	03/02/89	ND	ND	ND	ND	ND	8.30	334.2
	04/04/89	ND	ND	ND	ND	ND	7.52	
	05/01/89	ND	ND	ND	ND	ND	7.97	
	05/31/89	ND	ND	ND	ND	ND	8.13	
	06/28/89	ND	ND	ND	ND	ND	8.30	
	08/08/89	ND	ND	ND	ND	ND	8.22	
MW-12	03/02/89	ND	ND	ND	ND	ND	6.94	332.53
	04/04/89	ND	ND	ND	ND	ND	6.33	
	05/01/89	ND	ND	ND	ND	ND	6.62	
	06/01/89	ND	ND	ND	ND	ND	6.82	
	06/29/89	ND	ND	ND	ND	ND	7.00	
	08/09/89	ND	ND	ND	ND	ND	6.76	
RW-1	12/09/88	6.8	0.74	0.005	0.011	0.037	10.73	336.19
	01/13/89	10	3.2	0.027	0.06	ND	NA	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit

TABLE 1 (Continued)
GROUNDWATER ANALYSIS DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elev. (ft.)
RW-1	02/10/89	6	2.8	ND	ND	ND	10.91	
(Cont.)	03/02/89	3.9	2.4	ND	ND	ND	10.15	
	04/05/89	1.7	1	ND	0.009	ND	9.34	
	05/01/89	0.9	0.39	0.005	0.01	ND	9.85	
	06/01/89	1.1	0.0014	0.0033	ND	0.013	9.96	
	06/30/89	1.4	ND	ND	ND	ND	9.90	
	08/09/89	7.5	1.7	0.21	0.28	0.30	9.80	

TPHG Total Petroleum Hydrocarbons as Gasoline
ppm parts per million
NA Not analyzed
ND Not Detected above laboratory reporting limit
BRL Below reporting limit



SOURCE: USGS 7.5' MAP, DUBLIN QUADRANGLE

LEGEND

SITE LOCATION

0 1

SCALE IN MILES

N

ensco environmental services, Inc.

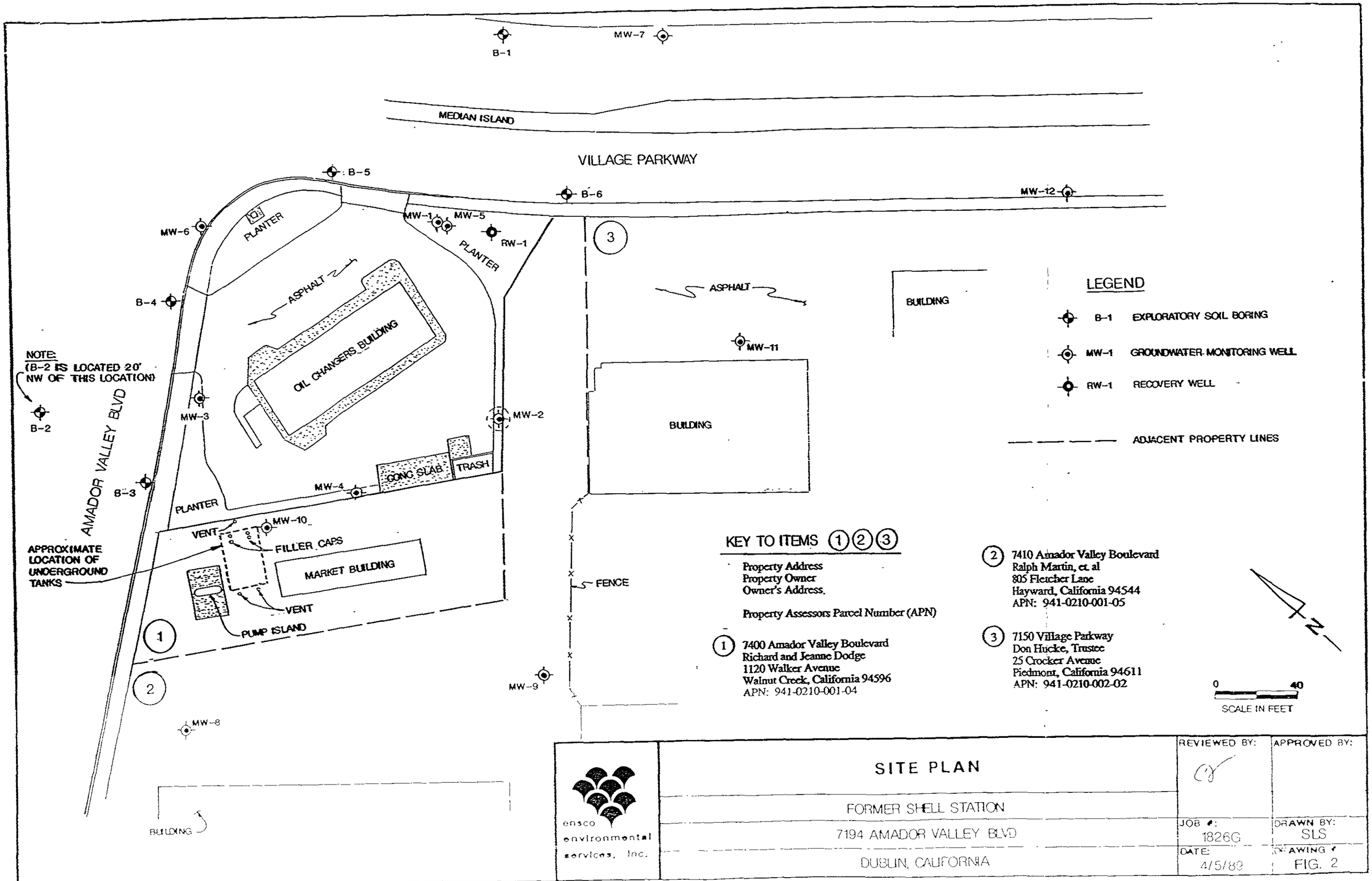
SITE LOCATION MAP

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

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



ensco environmental services, inc.

SITE PLAN

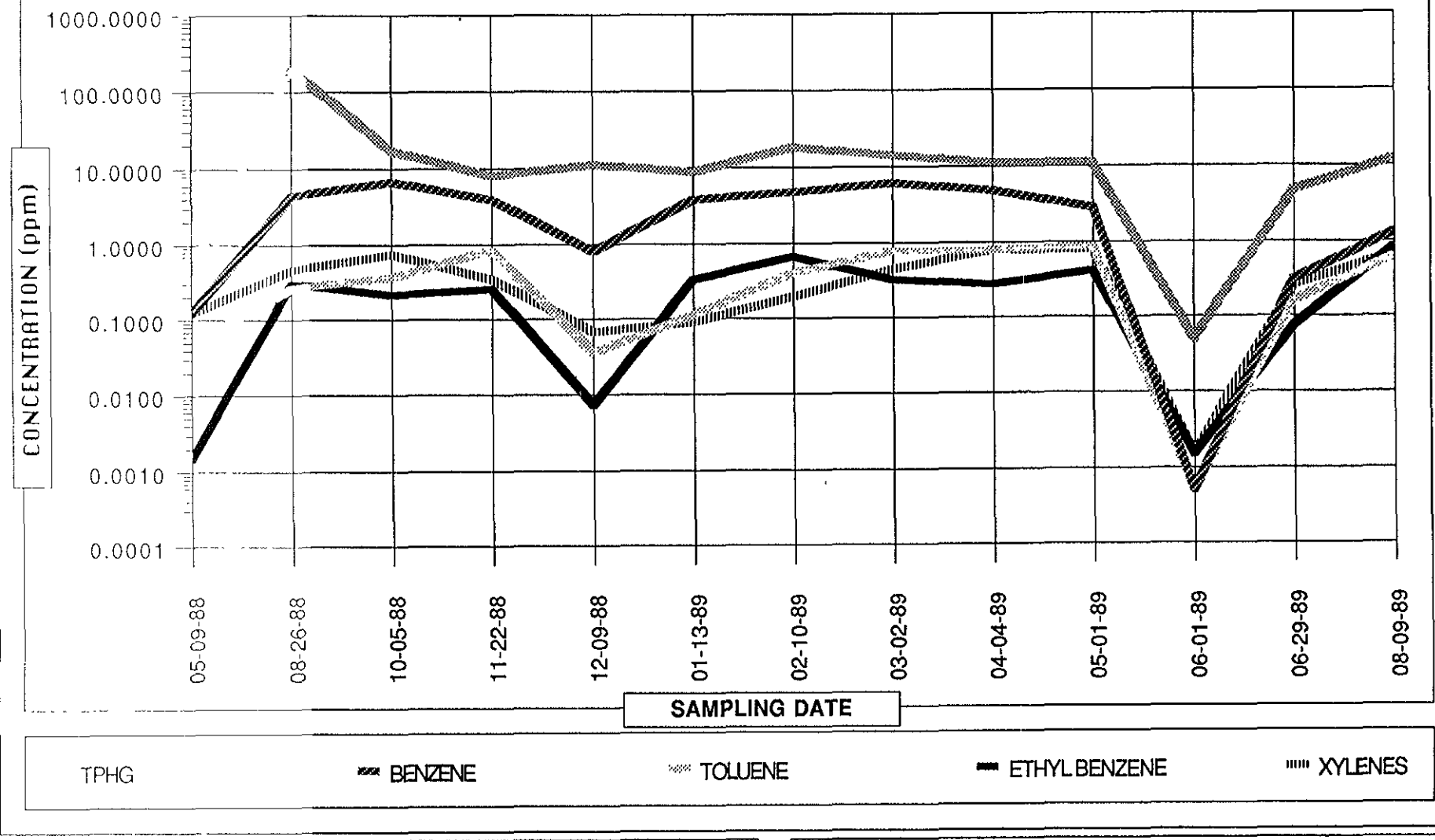
FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

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

MW-1 GROUNDWATER ANALYSIS DATA

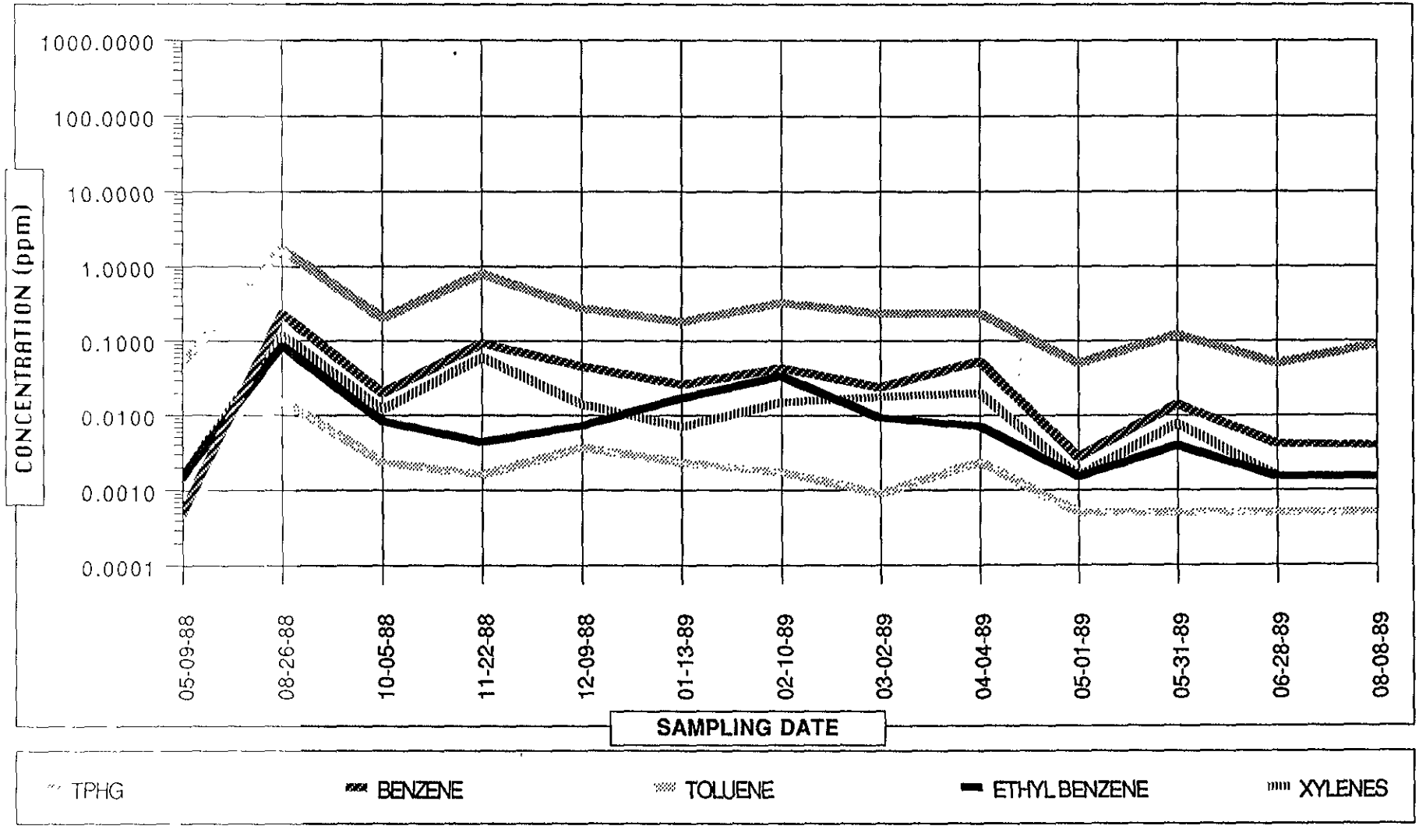


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 3

MW-2 GROUNDWATER ANALYSIS DATA

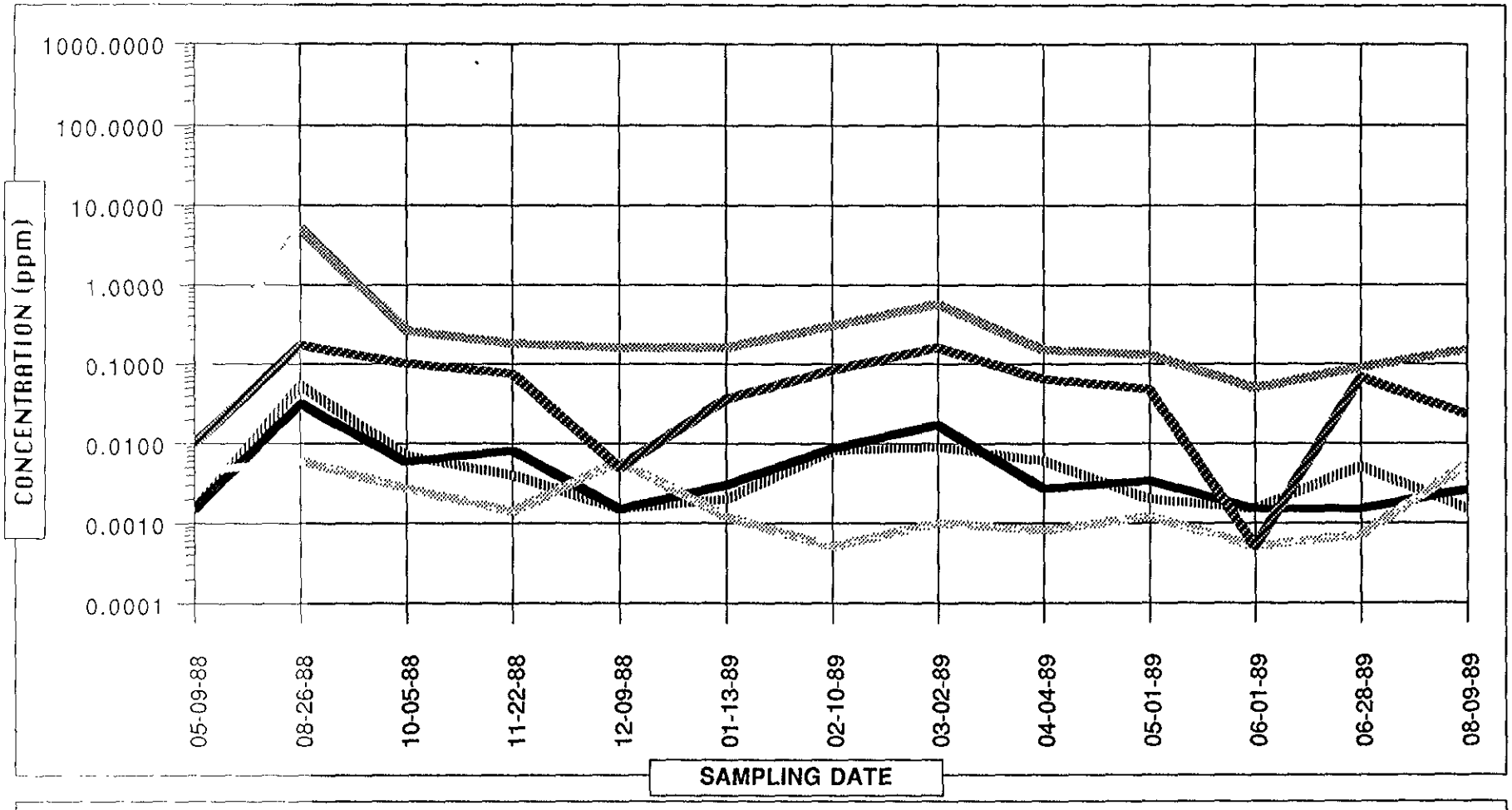


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 4

MW-3 GROUNDWATER ANALYSIS DATA

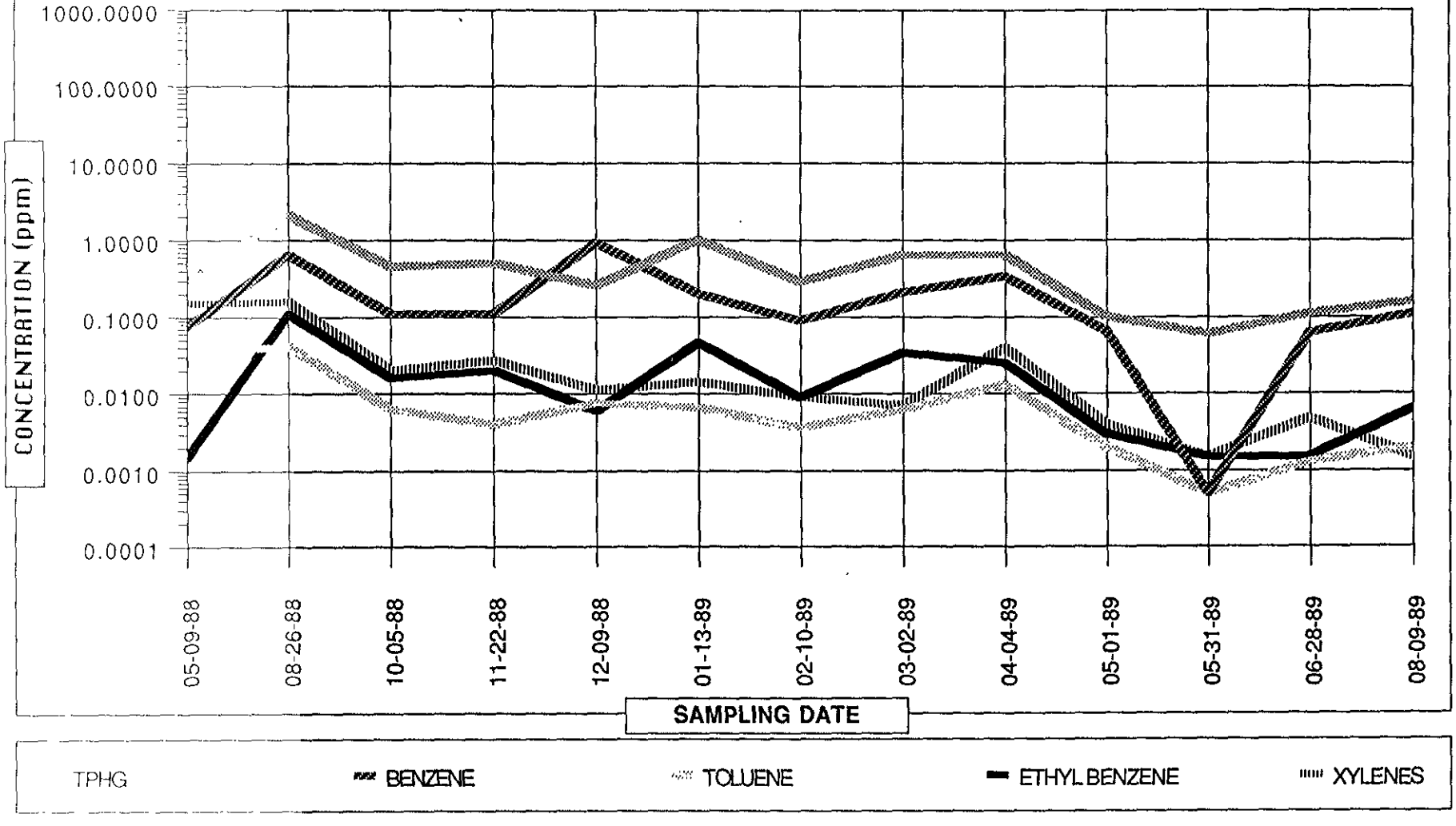


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 5

MW-4 GROUNDWATER ANALYSIS DATA

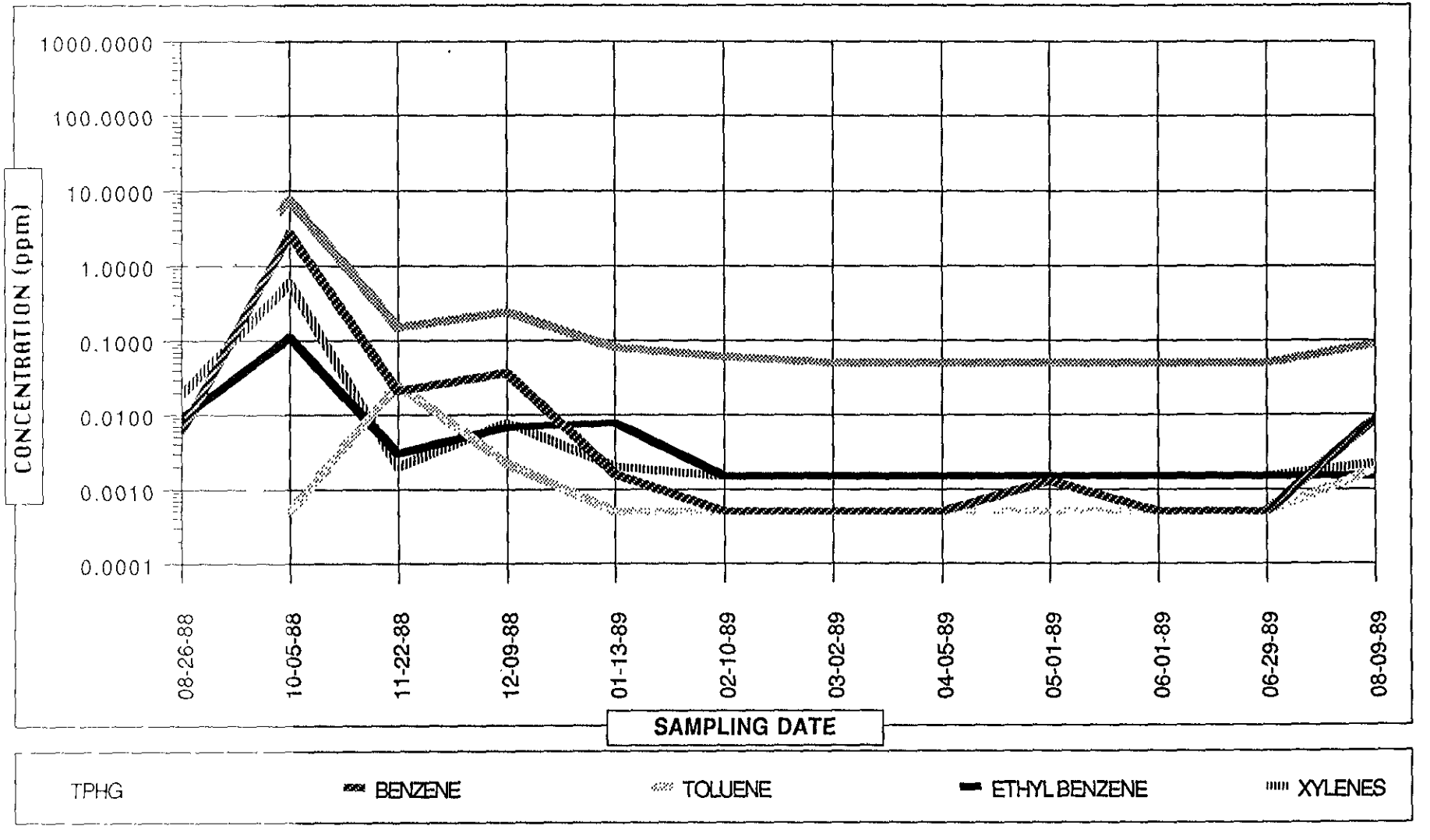


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0 0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 6

MW-5 GROUNDWATER ANALYSIS DATA

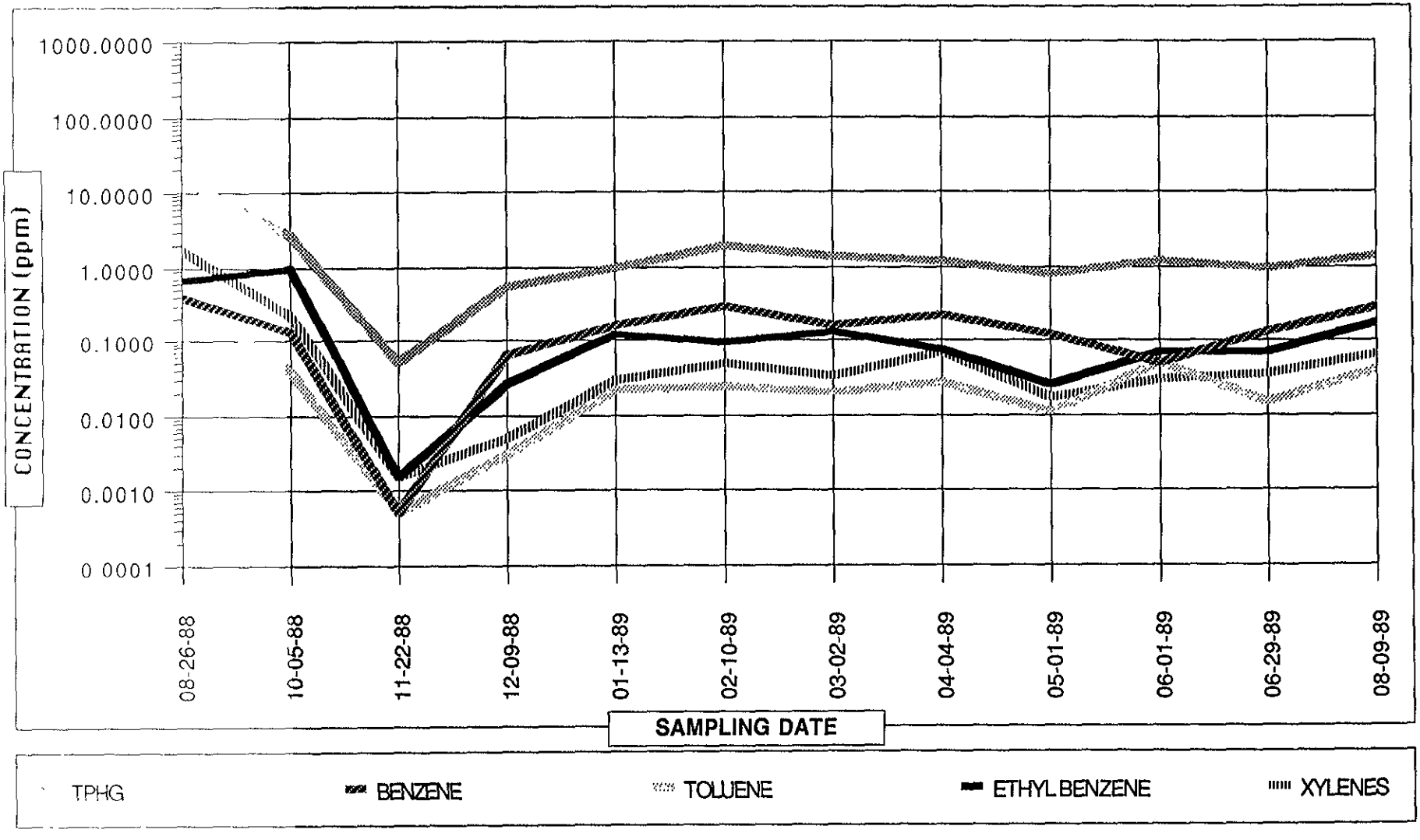


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 7

MW-6 GROUNDWATER ANALYSIS DATA

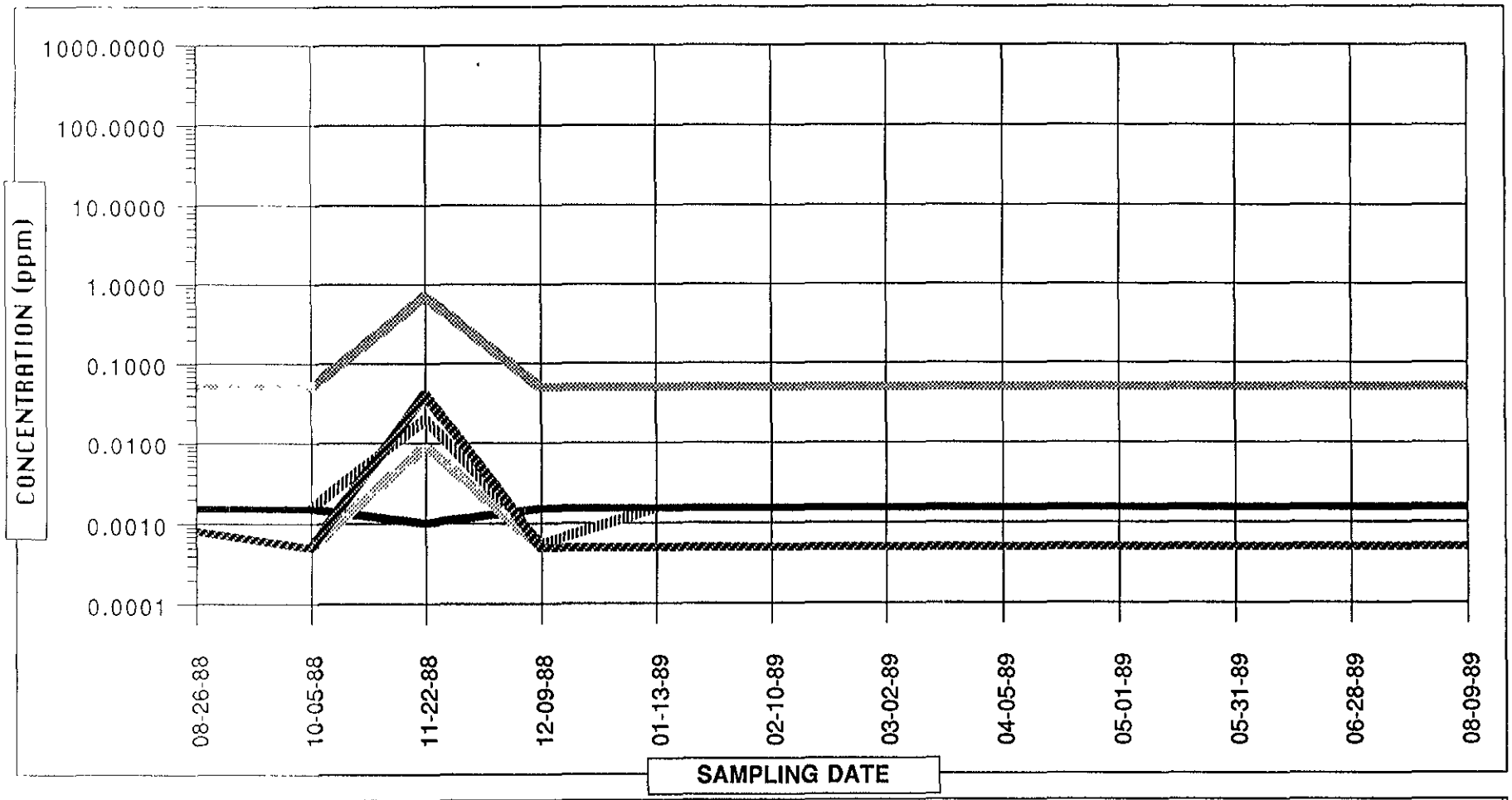


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 8

MW-7 GROUNDWATER ANALYSIS DATA

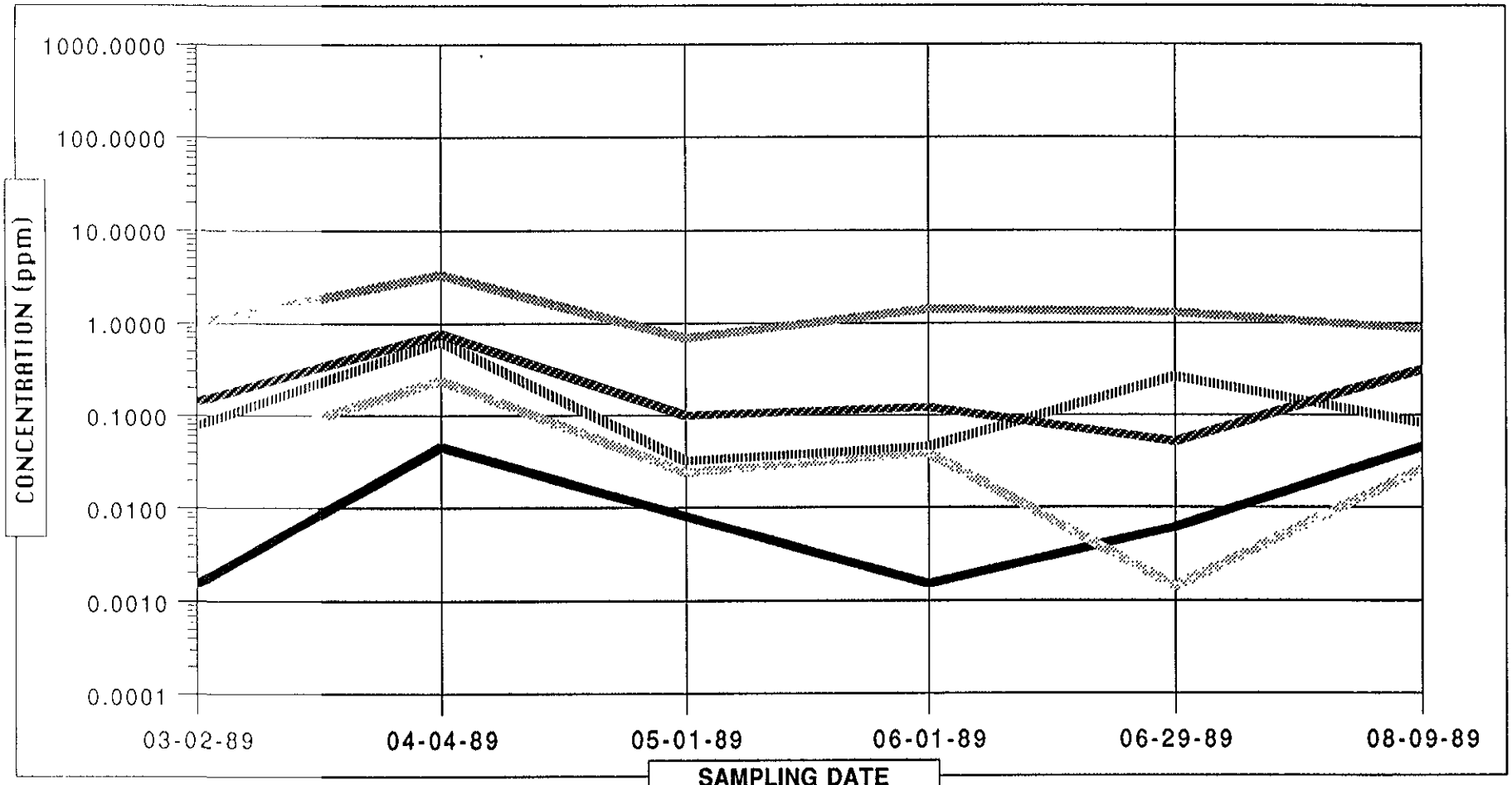


DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 9

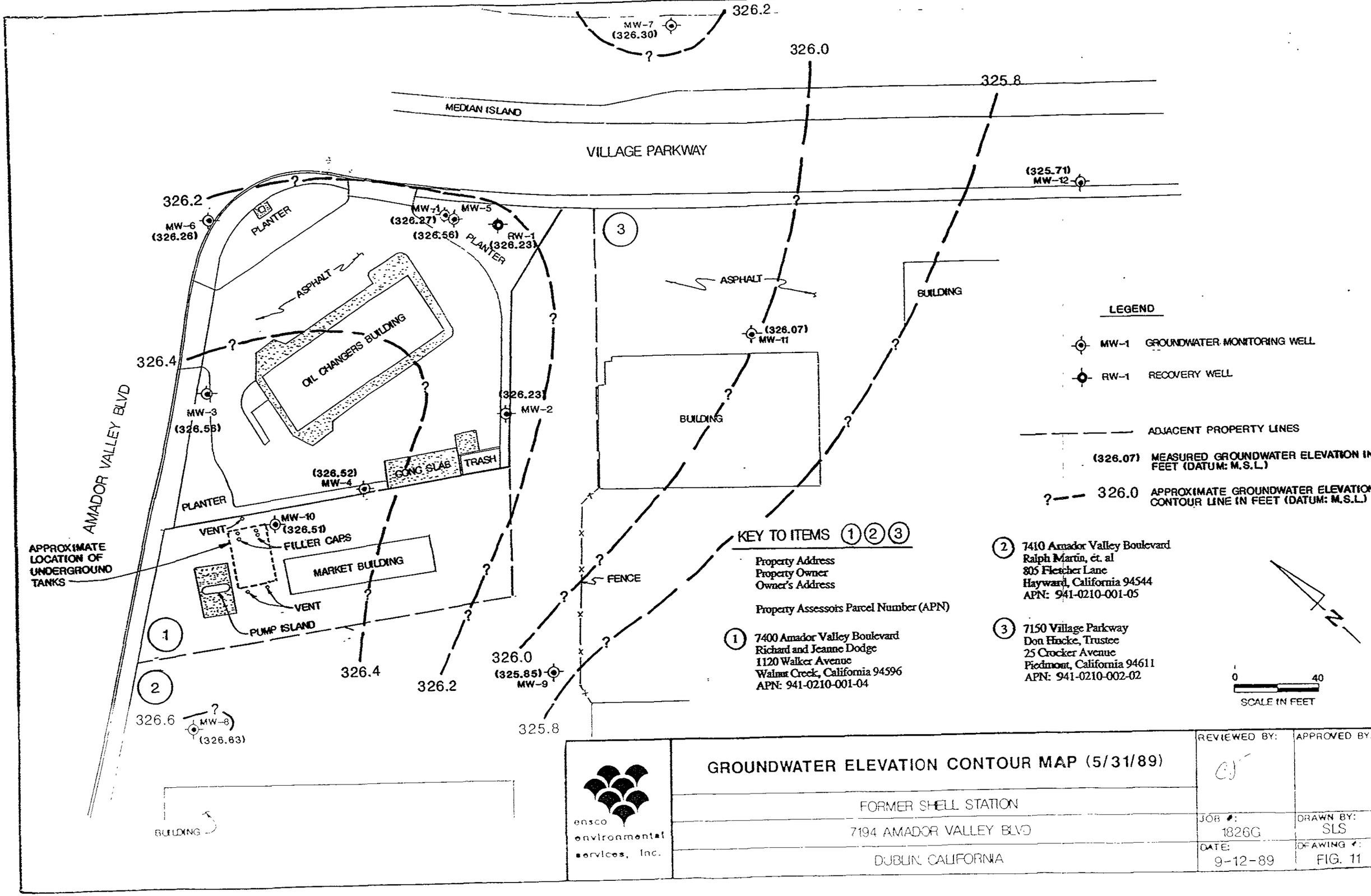
MW-10 GROUNDWATER ANALYSIS DATA



DETECTION LIMITS (ppm):
BENZENE, TOLUENE = 0.0005
TPHG = 0.05
ETHYL BENZENE, TOTAL XYLENES = 0.0015

NOTE: Graph may reflect higher laboratory detection or reporting limits. For analytical results, refer to appended laboratory reports.

Ensco Environmental Services, Inc. Project No. 1826G
Figure # 10



ensco environmental services, Inc.

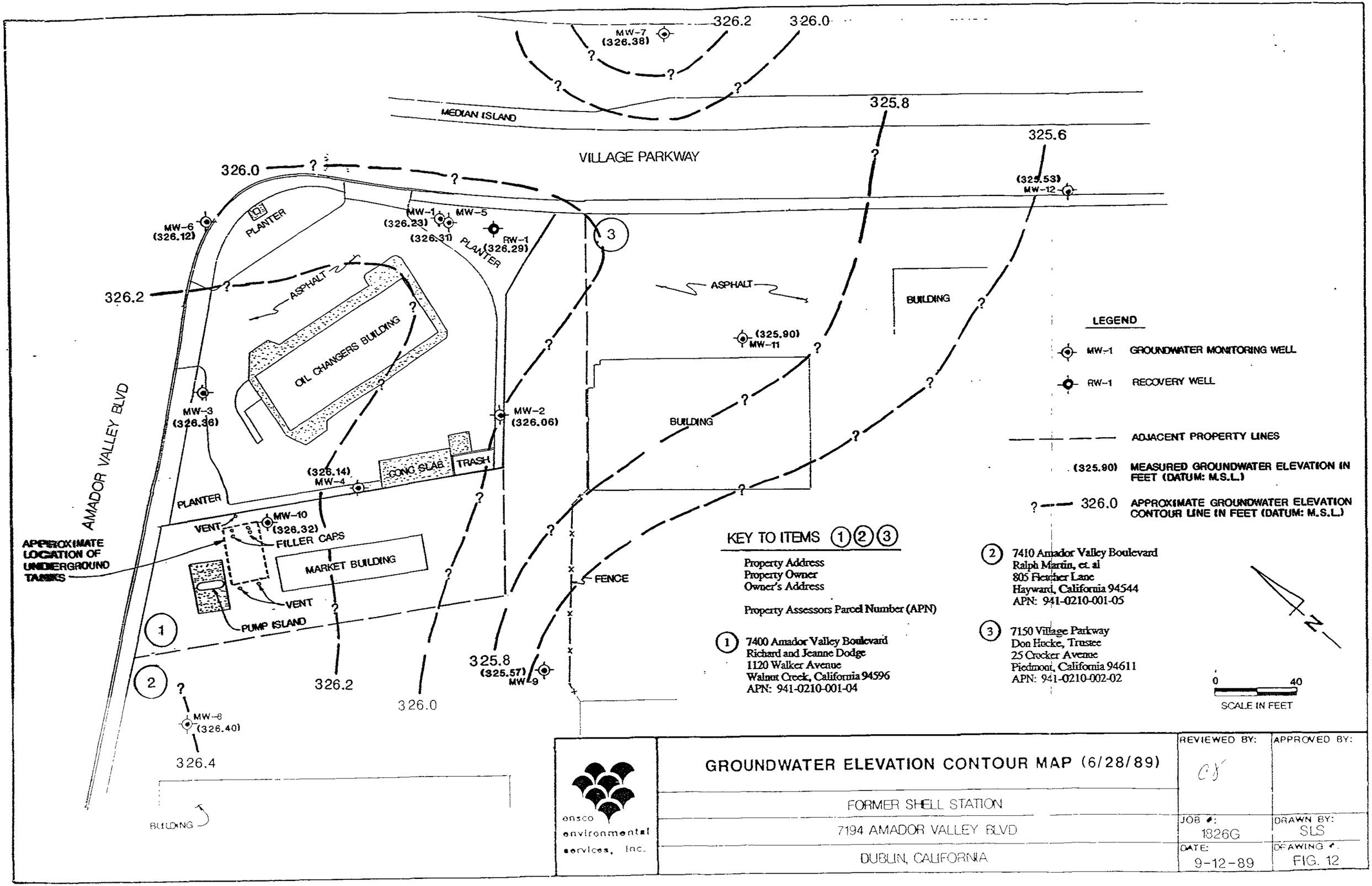
GROUNDWATER ELEVATION CONTOUR MAP (5/31/89)

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
CJ	
JOB #: 1826G	DRAWN BY: SLS
DATE: 9-12-89	DRAWING #: FIG. 11



ensco environmental services, inc.

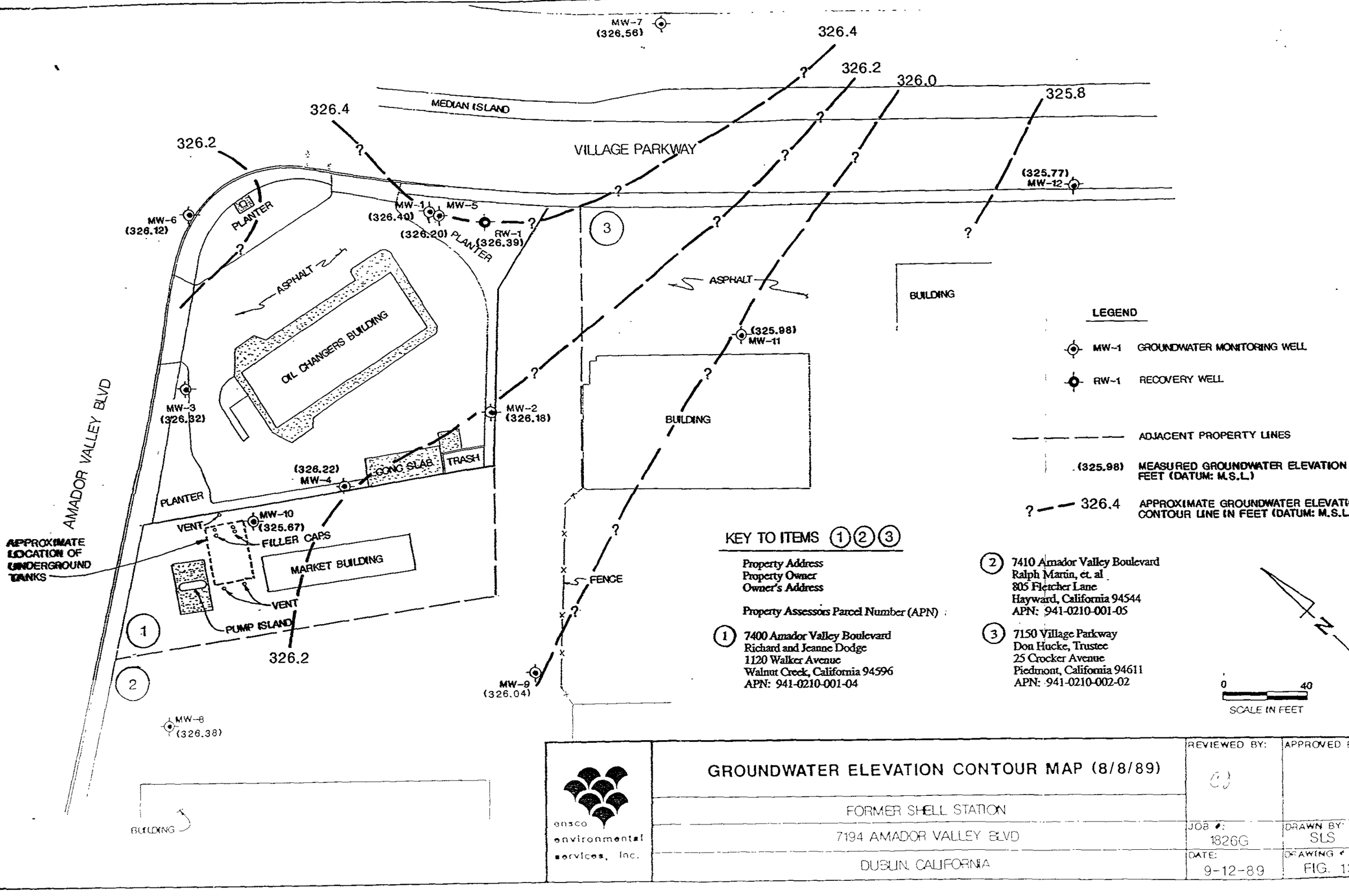
GROUNDWATER ELEVATION CONTOUR MAP (6/28/89)

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
CS	
JOB #: 1826G	DRAWN BY: SLS
DATE: 9-12-89	DRAWING #: FIG. 12



ensco environmental services, Inc.

GROUNDWATER ELEVATION CONTOUR MAP (8/8/89)

FORMER SHELL STATION

7194 AMADOR VALLEY BLVD

DUBLIN, CALIFORNIA

REVIEWED BY:	APPROVED BY:
CJ	
JOB #: 1826G	DRAWN BY: SLS
DATE: 9-12-89	DRAWING #: FIG. 13

APPENDIX A

GROUNDWATER SAMPLING PROTOCOL AND LABORATORY PROCEDURES

ENSCO ENVIRONMENTAL SERVICES, INC.

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

Sampling of groundwater is performed by Ensco Environmental Services, Inc. (EES) sampling technicians. Summarized field sampling procedures are as follows:

1. Measurements of liquid surface in the well and depth of monitoring well.

2. Field check for presence of floating product.

3. Purge well prior to collecting samples.

4. Monitor groundwater for temperature, pH, and specific conductance during purging.

5. Collect samples using Environmental Protection Agency (EPA) approved sample collection devices, i.e., teflon or stainless steel bailers or pumps.

6. Transfer samples into laboratory-supplied EPA-approved containers.

7. Label samples and log onto chain-of-custody form.

8. Store samples in a chilled ice chest for shipment to a state-certified analytical laboratory.

Equipment Cleaning

All water samples are placed in precleaned laboratory-supplied bottles. Sample bottles and caps remain sealed until actual usage at the site. All equipment which comes in contact with the well or groundwater is thoroughly cleaned with a trisodium phosphate (TSP) solution and rinsed with deionized or distilled water before use at the site. This cleaning procedure is followed between each well sampled. Wells are sampled in approximate order of increasing contamination. If a teflon cord is used, the cord is cleaned. If a nylon or cotton cord is used, a new cord is used in each well All equipment blanks are collected prior to sampling. The blanks are analyzed periodically to ensure proper cleaning.

Water Level Measurements

Depth to groundwater is measured in each well using a sealed sampling tape or sealed electric sounder prior to purging or sampling. If the well is known or suspected of containing free-phase petroleum hydrocarbons, an optical interface probe is used to measure the hydrocarbon thickness and groundwater level. Measurements are collected and recorded to the nearest 0.01 foot.

Bailer Sheen Check

If no measurable free-phase petroleum hydrocarbons are detected, a clear acrylic bailer is used to determine the presence of a sheen. Any observed film as well as odor and color of the water is recorded.

Groundwater Sampling

Prior to groundwater sampling, each well is purged of "standing" groundwater. Either a bailer, hand pump, or submersible pump is used to purge the well. The amount of purging is dependent on the well yield. In a high yield formation, samples will be collected when normal field measurement, including temperature, pH, and specific conductance stabilize, provided a minimum of three well-casing volumes of water have been removed. Field measurements will be taken after purging each well volume. In low yield formations, the well is purged such that the "standing" water is removed and the well is allowed to recharge. (Normal field measurements will be periodically recorded during the purging process.) In situations where recovery to 80% of static water level is estimated, or observed to exceed a two hour duration, a sample will be collected when sufficient volume is available for a sample for each parameter. At no time will the well be purged dry so that the recharge rate causes the formation water to cascade into the well.

In wells where free-phase hydrocarbons are detected, the free-phase portion will be bailed from the well and the volume removed recorded. A groundwater sample will be collected if bailing reduces the amount of free-phase hydrocarbons to the point where they are not present in the well. Well sampling will be conducted using one of the aforementioned methods depending on the formation yield. However, if free-phase hydrocarbons persist throughout bailing, then groundwater samples will not be collected.

Groundwater sample containers are labeled with a unique sample number, location, product name and number, and date of collection. All samples are logged into a chain-of-custody form and placed in a chilled ice chest for shipment to a laboratory certified by the State of California Department of Health Services.

ENSCO ENVIRONMENTAL SERVICES, INC.

LABORATORY PROCEDURES

LABORATORY PROCEDURES

Selection of the Laboratory

The laboratories selected to perform the analytical work are certified by the California State Department of Health Services as being qualified to perform the selected analyses. The selected laboratories are reviewed by Ensco Environmental Services, Inc. to ensure that an adequate quality control program is in place and certified by the State of California.

Chain-of-Custody Control

The following procedures are used during sampling and analytical activities to provide chain-of-custody control during transfer of samples from collection through delivery to the laboratories. Record keeping activities used to achieve chain-of-custody control are:

- Contact made by sampling organization with facility supervisor and laboratory prior to sampling to alert them of dates of sampling and sample delivery.
- Well location map with well identification number prominently displayed.
- Field log book for documenting sampling activities in the field.
- Labels for identifying individual samples.
- Chain-of-custody record for documenting transfer and possession of samples.
- Laboratory analysis request sheet for documenting analyses to be performed.

Analytical Procedures

The analysis of ground water samples is conducted in accordance with accepted quantitative analytical procedures. The following four publications are considered the primary references for ground water sample analysis, and the contracts with the laboratories analyzing the samples stipulate that the methods set out in these publications be used. Please note that procedures used are periodically updated by federal and state agencies, and the certified laboratories amend analysis as required by the update.

- Standard Methods for the Examination of Water and Wastewater, 16th Ed., American Public Health Association, et al., 1985.
- Methods for Chemical Analysis of Water and Wastes, U.S. EPA, 600/4-79-020, March 1979.
- Test Methods for Evaluation of Solid Waste: Physical/Chemical Methods, U.S. EPA SW-846, 1982.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA, 600/4-82-057, 1982.
- Practical Guide for Ground water Sampling, EPA, 600/2-85/104, September 1985.
- RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, EPA, September 1986.

Analytical Methods

The analytical methods used by the selected laboratories are those required by the type of analysis (fuels, metals, etc.). These methods are those currently approved by the State Regional Water Quality Control Board

APPENDIX B

LABORATORY REPORT
AND
CHAIN-OF-CUSTODY RECORDS

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Rich Garlow
ENSCO
41674 Christy St
Fremont, CA 94538

06-15-89
NET Pacific Log No: 6647
Series No: 509
Client Ref: PO #13659

Subject: Analytical Results for Shell-Dublin, 7194 Amador Valley Blvd.
Received 06-02-89.

Dear Mr. Garlow:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Susan Joy Griffin
Group Leader
Gas Chromatography

Approved by:

Brian Fies
Group Leader
Atomic Spectroscopy

/sm
Enc: Sample Custody Document

KEY TO ABBREVIATIONS

mean	:	Average; the sum of the measurements divided by the total number of measurments.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample, unless noted otherwise.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
ND	:	Not detected; the analyte concentration is less than the listed reporting limit.
NR	:	Not requested.
NTU	:	Nephelometric turbidity units.
RL	:	Reporting limit.
RPD	:	Relative percent difference, $[V^1-V^2/V \text{ mean}]x100$.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
ug/filter	:	Concentration in units of micrograms of analyte per filter.
umhos/cm	:	Micromhos per centimeter.
*	:	See cover letter for details.

THE COVER LETTER AND KEY TO ABBREVIATIONS ARE AN INTEGRAL PART OF THIS REPORT

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm)				
		BB-1 05-31-89 1052 (-28479)	MW-7 05-31-89 1103 (-28480)	MW-9 05-31-89 1128 (-28481)	MW-11 05-31-89 1154 (-28482)	MW-2 05-31-89 1243 (-28483)
PETROLEUM HYDROCARBONS						
Volatile, as Gasoline	0.05	ND	ND	ND	ND	0.12
DATE ANALYZED		06-13-89	06-13-89	06-13-89	06-13-89	06-09-89
METHODC 8015/5030						

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm)				
		BB-1 05-31-89 1052 (-28479)	MW-7 05-31-89 1103 (-28480)	MW-9 05-31-89 1128 (-28481)	MW-11 05-31-89 1154 (-28482)	MW-2 05-31-89 1243 (-28483)
PURGEABLE AROMATICS						
Benzene	0.0005	ND	ND	ND	ND	0.014
Ethylbenzene	0.0015	ND	ND	ND	NND	0.0039
Toluene	0.0005	ND	ND	ND	ND	ND
Xylenes, total	0.0015	ND	ND	ND	ND	0.0076
METHOD 602						

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm) MW-8 05-31-89 1310 (-28484)	MW-4 05-31-89 1409 (-28485)	BB-1 06-01-89 0947 (-28486)	MW-3 06-01-89 0954 (-28487)	MW-12 06-01-89 1018 (-28488)
PETROLEUM HYDROCARBONS						
Volatile, as Gasoline	0.05	ND	0.06	ND	ND	ND
DATE ANALYZED		06-09-89	06-09-89	06-09-89	06-09-89	06-09-89
METHOD 8015/5030						

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm) MW-8 05-31-89 1310 (-28484)	MW-4 05-31-89 1409 (-28485)	BB-1 06-01-89 0947 (-28486)	MW-3 06-01-89 0954 (-28487)	MW-12 06-01-89 1018 (-28488)
PURGEABLE AROMATICS						
Benzene	0.0005	ND	ND	ND	ND	ND
Ethylbenzene	0.0015	ND	ND	ND	ND	ND
Toluene	0.0005	ND	ND	ND	ND	ND
Xylenes, total	0.0015	ND	ND	ND	ND	ND
METHOD 602						

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm)				
		MW-1 06-01-89 1053 (-28489)	MW-10 06-01-89 1130 (-28490)[a]	MW-6 06-01-89 1217 (-28491)	MW-5 06-01-89 1338 (-28492)	RW-1 06-01-89 1516 (-28493)
PETROLEUM HYDROCARBONS						
Volatile, as Gasoline	0.05	ND	1.4	1.2	ND	1.1
DATE ANALYZED			06-13-89	06-09-89	06-09-89	06-09-89
METHOD 8015/5030						

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm)				
		MW-1 06-01-89 1053 (-28489)	MW-10 06-01-89 1130 (-28490)	MW-6 06-01-89 1217 (-28491)	MW-5 06-01-89 1338 (-28492)	RW-1 06-01-89 1516 (-28493)
PURGEABLE AROMATICS						
Benzene	0.0005	ND	0.12	0.049	ND	0.0014
Ethylbenzene	0.0015	ND	ND	0.069	ND	ND
Toluene	0.0005	ND	0.039	0.049	ND	0.0033
Xylenes, total	0.0015	ND	0.045	0.030	ND	0.013

[a] Gasoline reporting limit for this sample is 10 times the listed reporting limit.

CHAIN OF CUSTODY RECORD

P.O.# 13659

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

SAMPLERS (Signature): John Monroe, Cyndi Wostlee

NO	DATE	TIME	DRIVE	GRAB	STATION AND LOCATION	TEST REQUESTED: TPH G/BTEX
BB-1	5/31/09	10:52			2 pres VOA	X
MW-7	"	11:03			" " "	X
MW-9	"	11:28			" " "	X
MW-11	"	11:54			" " "	X
MW-2	"	12:43			" " "	X
MW-3	"	1:10			" " "	X
MW-4	"	2:09			" " "	X

NORMAL TAT

REMARKS: 6647

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
			Thomas Hom		6/1	4:15p	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY
	6/1/09			CVIANCSI	6/2/09	0015	

REMARKS: Report For Rich Gaelow

DISTRIBUTION

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

RE Pacific

CHAIN OF CUSTODY RECORD

No. 13659

PROJECT NO	PROJECT NAME
1626G	Shell Dublin

SAMPLERS (Signature): John Monroe, Cyndi Virostko

NO	DATE	TIME	DRIVE	GRAB	STATION AND LOCATION	TPH G/BTEX
BB1	6/1/09	9:47			2 pres VOA	X
MW-3	"	9:54				X
MW-12	"	10:18				X
MW-11	"	10:53				X
MW-10	"	11:30				X
MW-6	"	12:17				X
MW-5	"	1:38				X
RW-1	"	3:16				X

TEST REQUESTED

Normal TAT

REMARKS (6647)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
	6/1/09	4:55p	B. Cu	B. Cu	6/1/09	6:00p	SSE
RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY
				(VIA NCS)	6/2/09	0615	K Temple

REMARKS: Report For Rich Gaylax

DISTRIBUTION

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

FORM DATED 1-28-87

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Richard A. Garlow
ENSCO
41674 Christy St
Fremont, CA 94538

07-17-89
NET Pacific Log No: 6952
Series No: 509
Client Ref: Proj # 1826G

Subject: Analytical Results for Shell - Dublin Received 06-30-89.

Dear Mr. Garlow:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Susan Joy Griffin
Group Leader
Gas Chromatography

Approved by:

Brian Fies
Group Leader
Atomic Spectroscopy

/sm
Enc: Sample Custody Document

KEY TO ABBREVIATIONS

mean	:	Average; the sum of the measurements divided by the total number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample, unless noted otherwise.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
ND	:	Not detected; the analyte concentration is less than the listed reporting limit.
NR	:	Not requested.
NTU	:	Nephelometric turbidity units.
RL	:	Reporting limit.
RPD	:	Relative percent difference, $[V^1-V^2/V \text{ mean}]x100$.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
ug/filter	:	Concentration in units of micrograms of analyte per filter.
umhos/cm	:	Micromhos per centimeter.
*	:	See cover letter for details.

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm)				
		BB-1 06-28-89 1145 (-30149)	MW-9 06-28-89 1153 (-30150)	MW-2 06-28-89 1226 (-30151)	MW-11 06-28-89 1345 (-30152)	MW-7 06-28-89 1400 (-30153)
PETROLEUM HYDROCARBONS						
Volatile, as Gasoline	0.05	ND	ND	ND	ND	ND
DATE ANALYZED		07-10-89	07-10-89	07-10-89	07-10-89	07-10-89
PURGEABLE AROMATICS						
Benzene	0.0005	ND	ND	0.0041	ND	ND
Ethylbenzene	0.0015	ND	ND	ND	ND	ND
Toluene	0.0005	ND	ND	ND	ND	ND
Xylenes, total	0.0015	ND	ND	ND	ND	ND

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm) MW-8 06-28-89 1445 (-30154)	MW-4 06-28-89 1500 (-30155)	MW-3 06-28-89 1510 (-30156)
PETROLEUM HYDROCARBONS				
Volatile, as Gasoline	0.05	ND	0.11	0.09
DATE ANALYZED		07-10-89	07-10-89	07-10-89
PURGEABLE AROMATICS				
Benzene	0.0005	ND	0.062	0.068
Ethylbenzene	0.0015	ND	ND	ND
Toluene	0.0005	ND	0.0013	0.0007
Xylenes, total	0.0015	ND	0.0048	0.0051

6952

CHAIN OF CUSTODY RECORD

PROJECT NO: 14266
PROJECT NAME: Shell Dublin

SAMPLERS (Signature): James Dunbar, Clandy Stan

P.O. #: 14049
LAB: NET Pacific
TURN AROUND TIME: NORM

NO	DATE	TIME	STATION AND LOCATION	TPH-G/BTEX							REMARKS
BB-1	6/28/89	11:45	2 Pres VOAs	X							
MW-9	"	11:53	" " "	X							
MW-2	" "	12:26	" " "	X							
MW-11	6-28-89	1:45	" " " "	X							
MW-7	" " "	2:00	" " "	X							
MW-8	" " "	2:45	" " "	X							
MW-4	" " "	3:00	" " "	X							
MW-3	" " "	3:10	" " "	X							
				8							

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
James Dunbar	6/29/89	1515	Diane Kruger	D. Kruger	6-30	0930	[illegible]
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	RELINQUISHED BY: (via NCS)	DATE: 6/30/89	TIME:	RECEIVED BY: deborah dow

REMARKS:

REPORT TO:

ensco environmental services, inc.
41674 Christy Street
Fremont, C.A. 94538-3114
(415) 659-0404
Fax (415) 651-4677
Contr. Lic. No. 550205

FORM DATED 5-30-89

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Richard A. Garlow
ENSCO
41674 Christy St
Fremont, CA 94538

07-19-89
NET Pacific Log No: 6973
Series No: 509
Client Ref: PO# 14049

Subject: Analytical Results for Shell - 7194 Amador Valley, Project #1826G
Received 06-30-89.

Dear Mr. Garlow:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Brian Fies
Group Leader
Atomic Spectroscopy

Approved by:

Susan Joy Griffin
Group Leader
Gas Chromatography

/sm
Enc: Sample Custody Document

KEY TO ABBREVIATIONS

mean	:	Average; the sum of the measurements divided by the total number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample, unless noted otherwise.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
ND	:	Not detected; the analyte concentration is less than the listed reporting limit.
NR	:	Not requested.
NTU	:	Nephelometric turbidity units.
RL	:	Reporting limit.
RPD	:	Relative percent difference, $[V^1-V^2/V \text{ mean}]x100$.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
ug/filter	:	Concentration in units of micrograms of analyte per filter.
umhos/cm	:	Micromhos per centimeter.
*	:	See cover letter for details.

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results (ppm) MW-6 06-29-89 1045 (-30213)	MW-12 06-29-89 1145 (-30214)	MW-5 06-29-89 1345 (-30215)	MW-10 06-29-89 1425 (-30216)	MW-1 06-29-89 1510 (-30217)
PETROLEUM HYDROCARBONS						
Volatile, as Gasoline	0.05	0.94	ND	ND	1.3	4.7
DATE ANALYZED		07-11-89	07-11-89	07-11-89	07-11-89	07-11-89
METHOD 8015/5030						
PURGEABLE AROMATICS						
Benzene	0.0005	0.13	ND	ND	0.051	0.31
Ethylbenzene	0.0015	0.069	ND	ND	0.0061	0.075
Toluene	0.0005	0.015	ND	ND	0.0014	0.16
Xylenes, total	0.0015	0.035	ND	ND	0.091	0.26
METHOD 602						

CHAIN OF CUSTODY RECORD

6973

PROJECT NO	PROJECT NAME	
1826G	Shell Dublin	7184 Amador Valley Blvd. Dublin CA

SAMPLERS (Signature) James Durkin

NO.	DATE	TIME	STATION AND LOCATION	TEST REQUESTED (TPH-G/BTEX)
MW-6	6/29/89	1045	2 Res 40A	X
MW-12	6/29/89	1145	" " "	X
MW-5	6/29/89	1345	" " "	X
MW-10	6/29/89	1425	" " "	X
MW-1	6/29/89	1510	" " "	X

P.O. # 14049

LAB NET Pacific

TURN AROUND TIME Norm

REMARKS

RELINQUISHED BY	DATE:	TIME:	RECEIVED BY:
James Durkin	6/30/89	1725	Diane Thy
RELINQUISHED BY	DATE:	TIME:	RECEIVED BY:

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
	6.30	1945	FHC
RELINQUISHED BY: (VIA NCSI)	6-30-89	2145	K Temple

REMARKS: All reports in ppm, put address on all reports

REPORT TO Rick Gaulon

ensco environmental services, inc.
41674 Christy Street
Fremont, C.A. 94538-3114
(415) 659-0404
Fax (415) 651-4677
Contr. Lic. No. 660208

FORM DATED 5-30-89

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Richard A. Garlow
ENSCO
41674 Christy St
Fremont, CA 94538

07-19-89
NET Pacific Log No: 6974
Series No: 509
Client Ref: PO# 14049

Subject: Analytical Results for Shell - 7194 Amador Valley Rd., Project #1826G Received 06-30-89.

Dear Mr. Garlow:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Brian Fies
Group Leader
Atomic Spectroscopy

Approved by:

Susan Joy Griffin
Group Leader
Gas Chromatography

/sm
Enc: Sample Custody Document

KEY TO ABBREVIATIONS

mean	:	Average; the sum of the measurements divided by the total number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample, unless noted otherwise.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
ND	:	Not detected; the analyte concentration is less than the listed reporting limit.
NR	:	Not requested.
NTU	:	Nephelometric turbidity units.
RL	:	Reporting limit.
RPD	:	Relative percent difference, $[V^1-V^2/V \text{ mean}]x100$.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
ug/filter	:	Concentration in units of micrograms of analyte per filter.
umhos/cm	:	Micromhos per centimeter.
*	:	See cover letter for details.

SAMPLE DESCRIPTION: RW-1 06-30-89 1000
LAB NO.: (-30218)

Parameter	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			
Volatile, as Gasoline	0.05	1.4	ppm
DATE ANALYZED		07-11-89	
METHOD 8015/5030			
PURGEABLE AROMATICS			
Benzene	0.0005	ND	ppm
Ethylbenzene	0.0015	ND	ppm
Toluene	0.0005	ND	ppm
Xylenes, total	0.0015	ND	ppm
METHOD 8020			

6974

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	TEST REQUESTED	P.O. #
18266	7194 Amador Vly Rd. Shell Dublin	TPHG/BTEX	14049

SAMPLERS (Signature): James D [signature]

LAB: NET Pacific

TURN AROUND TIME: Norm

NO.	DATE	TIME	STATION AND LOCATION	TPHG/BTEX							REMARKS
~~RW-1~~	~~6/30~~			~~X~~							
RW-1	6/30/89	1000	2 pcs VOA'S	X							

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
James D [signature]	6/30/89	1725	Diane Kr[signature]	D Kr[signature]	6-30	1945	[signature]
				(VIA NCS)	6-30-89	2145	K Temple

REMARKS: all reports in ppm

REPORT TO: Rich Garlow

ensco environmental services, inc.
41674 Christy Street
Fremont, C.A. 94538-3114
(415) 659-0404
Fax (415) 651-4677
Contr. Lic. No. 550205

FORM DATED 5-30-89

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Richard A. Garlow
ENSCO
41674 Christy St
Fremont, CA 94538

08-23-89
NET Pacific Log No: 7380
Series No: 509
Client Ref: PO# 13712, Proj# 1826G

Subject: Analytical Results for "Shell - 7194 Amador Valley Blvd., Dublin"
Received 08-11-89.

Dear Mr. Garlow:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Brian Fies
Group Leader
Atomic Spectroscopy

Approved by:

Susan Joy Griffin
Group Leader
Gas Chromatography

/sm
Enc: Sample Custody Document

KEY TO ABBREVIATIONS and METHOD REFERENCES

Abbreviations

mean : Average; sum of measurements divided by number of measurements.

mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).

mg/L : Concentration in units of milligrams of analyte per liter of sample.

mL/L/hr : Milliliters per liter per hour.

MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.

N/A : Not applicable.

NA : Not analyzed.

ND : Not detected; the analyte concentration is less than applicable listed reporting limit.

NR : Not requested.

NTU : Nephelometric turbidity units.

RPD : Relative percent difference, 100 [Value 1 - Value 2]/mean value.

SNA : Standard not available.

ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).

ug/L : Concentration in units of micrograms of analyte per liter of sample.

umhos/cm : Micromhos per centimeter.

Method References

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

* Reporting Limits are a function of the dilution factor for any given sample. To obtain the acutal reporting limits for this sample, multiply the stated reporting limits by the dilution factor.

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results				
		BB-1 08-08-89 1153 (-32681)	MW-8 08-08-89 1207 (-32682)	MW-9 08-08-89 1310 (-32683)	MW-11 08-08-89 1413 (-32684)	MW-2 08-08-89 1510 (-32685)
PETROLEUM HYDROCARBONS VOLATILE (WATER)						
DILUTION FACTOR		1	1	1	1	1
DATE ANALYZED		08-17-89	08-17-89	08-17-89	08-17-89	08-17-89
METHOD GC FID/5030 as Gasoline	0.05	ND	ND	ND	ND	0.088
METHOD 602						
Benzene	0.0005	ND	ND	ND	ND	0.0039
Ethylbenzene	0.0015	ND	ND	ND	ND	ND
Toluene	0.0005	ND	ND	ND	ND	ND
Xylenes, total	0.0015	ND	ND	ND	ND	ND

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results				
		BB-2 08-09-89 0938 (-32686)	MW-12 08-09-89 0950 (-32687)	MW-7 08-09-89 1040 (-32688)	MW-3 08-09-89 1141 (-32689)	MW-6 08-09-89 1253 (-32690)
PETROLEUM HYDROCARBONS VOLATILE (WATER)						
DILUTION FACTOR		1	1	1	1	1
DATE ANALYZED		08-17-89	08-17-89	08-17-89	08-17-89	08-17-89
METHOD GC FID/5030 as Gasoline	0.05	ND	ND	ND	0.15	1.4
METHOD 602						
Benzene	0.0005	ND	ND	ND	0.023	0.28
Ethylbenzene	0.0015	ND	ND	ND	0.0026	0.17
Toluene	0.0005	ND	ND	ND	0.0053	0.039
Xylenes, total	0.0015	ND	ND	ND	ND	0.064

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results: MW-4 08-09-89 1332 (-32691)	MW-10 08-09-89 1409 (-32692)	MW-1 08-09-89 1510 (-32693)	BB-3 08-09-89 1445 (-32694)	RW-1 8-09-89 1515 (-32695)
PETROLEUM HYDROCARBONS VOLATILE (WATER)						
DILUTION FACTOR		1	1	10	1	10
DATE ANALYZED						
METHOD GC FID/5030						
as Gasoline	0.05	0.16	0.86	12	ND	7.5
METHOD 602						
Benzene	0.0005	0.11	0.31	1.3	ND	1.7
Ethylbenzene	0.0015	0.0064	0.045	0.83	ND	0.28
Toluene	0.0005	0.0020	0.026	0.62	ND	0.21
Xylenes, total	0.0015	ND	0.082	0.68	ND	0.30

Parameter	Reporting Limit (ppm)	Descriptor, Lab No. and Results MW-5 8-09-89 1551 (-32696)
PETROLEUM HYDROCARBONS VOLATILE (WATER)		
DILUTION FACTOR		1
DATE ANALYZED		08-17-89
METHOD GC FID/5030		
as Gasoline	0.05	0.089
METHOD 602		
Benzene	0.0005	0.0085
Ethylbenzene	0.0015	0.0015
Toluene	0.0005	0.0018
Xylenes, total	0.0015	0.0022

CHAIN OF CUSTODY RECORD

7380

PROJECT NO	PROJECT NAME		TEST REQUESTED	P.O. #
1826G	Shell Dublin	7194 Amador Valley Blvd	TPH Gas/BTEX	13712
SAMPLERS (Signature)	John Monroe			LAB NET Pacific
				TURN AROUND TIME Normal

NO	DATE	TIME	STATION AND LOCATION	REMARKS
BB-1	9/8/89	11:53	2 pres VOA	
MW-8		12:07	"	
MW-9		1:10	"	
MW-11		2:13	"	
MW-2		3:10	"	
BB-2	9/7/89	9:38	"	
MW-12		9:50	"	
MW-7		10:40	"	
MW-3		11:41	"	
MW-6		12:53	"	
MW-4		1:32	"	
MW-10		3:09	"	
MW-1		3:10	"	
BB-3		2:45	"	
RW-1		3:15	"	
MW-5		3:51	"	

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Cyndi Trottko	8/10	17:05	Jeff Wickham	Jeff Wickham	8-11	2245	SSE
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
				CUIA NCS	8-11-89	0635	Krumpe

REMARKS.

REPORT TO:

ensco environmental services, Inc.
41674 Christy Street
Fremont, C.A. 94538-3114
(415) 659-0404
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FORM DATED 5-30-89