

SC 11/11/91

# **RESNA**

**NOVEMBER 1991 QUARTERLY  
GROUNDWATER MONITORING  
REPORT**

**FOR**

**FORMER SHELL STATION  
7194 AMADOR VALLEY BOULEVARD  
DUBLIN, CALIFORNIA**

**Project No. 3-31000-F  
December 1991**

41674 Christy Street  
Fremont, California 94538  
Phone (510) 659-0404  
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January 28, 1992  
Project No. 3-31000-F

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

Attention: Mr. Paul Hayes

Subject: August 1991 Quarterly Groundwater Monitoring Report  
Former Shell Station, 7194 Amador Valley Boulevard, Dublin, California

*Revi*  
*2/3/92*  
*Continue monitoring*

Dear Mr. Hayes:

This quarterly monitoring report summarizes the groundwater sampling and analyses performed during November 1991 for the subject site in the City of Dublin, Alameda County, California (Figure 1). Groundwater level data from a Unocal and a former Mobil located at the intersection of Amador Valley Boulevard and Village Parkway were collected in a joint sampling effort with other consultants and included in this report.

### Groundwater Sampling

RESNA Industries, Inc. (formerly Exceltech) collected groundwater samples from 12 groundwater monitoring wells on and adjacent to the site (Figure 2) in accordance with RESNA's groundwater sampling protocol.<sup>1</sup> The groundwater purged from the wells and equipment rinse water was placed in drums approved by the Department of Transportation. The drums were left on-site pending removal by a licensed hauler to the Shell refinery for recycling.

### Laboratory Analyses

The groundwater samples were transported to NET Pacific, Inc. (NET) located in Santa Rosa, California for analysis. NET, which is a state-certified laboratory, analyzed the samples for the presence of total petroleum hydrocarbons as gasoline (TPHG) and benzene, toluene, ethyl benzene, and total xylenes (BTEX).

### Summary of Laboratory Results

The results of the groundwater sampling and analyses are summarized in Table 1. The analytical report from NET and chain-of-custody documents are attached in Appendix A. Hydrocarbon constituents were again detected in groundwater samples from six of the 12 monitoring wells (MW-1,

<sup>1</sup> For RESNA's groundwater sampling protocol refer to Appendix A in "November Quarterly Groundwater Sampling and Analysis for Former Shell Station, 7194 Amador Valley Boulevard, Dublin, California, December 20, 1991."

MW-2, MW-3, MW-4, MW-6, and MW-13). The highest concentrations of benzene and TPHG occurred in MW-13 at 0.32 and 0.68 parts per million, respectively.

## Discussion

A groundwater elevation contour map, Figure 2, was generated from measurements obtained during the November 1991 sampling. The groundwater below the site flows generally to the east at an apparent gradient of 0.0022. A joint measurement of groundwater levels in monitoring wells at the subject site, the adjacent Unocal, and former Mobil stations was organized by Kaprealian Engineers, the consultant for Unocal. The Unocal station is located north of the subject site on the northwest corner of Amador Valley Boulevard and Village Parkway. The former Mobil Station, represented by Alton Geoscience, is east of the site on the southeast corner of Amador Valley Boulevard and Village Parkway. Water levels for all three sites were measured on November 13, 1991 and well elevation and location data were exchanged between the three parties. Groundwater elevation contour maps generated for the sites indicate the flow direction for the area is generally towards the east. Gradient below the Unocal station is approximately 0.0064, and 0.0048 below the former Mobil site. Groundwater elevation data for the Unocal and Mobil sites are summarized in Table 3, and groundwater contour maps are included as figures 3 and 4.

The benzene concentration map (Figure 5) shows that the highest concentration of benzene continues to occur in the vicinity of MW-13. Figures 6 through 12 are graphs representing groundwater analyses data for monitoring wells MW-1 through MW-6 and MW-13. The graphs display data collected from January 1990 to the present. Hydrocarbon constituent levels have remained relatively constant when compared to last quarter's results, although an increase in the benzene level was noted in MW-2 and MW-3. The wells reported as containing xylenes only during the last quarter (MW-5, MW-11, and MW-12) contain no detectable hydrocarbon constituents this quarter. As xylenes are commonly used as laboratory cleaning agents, the occurrence of xylenes last quarter in the aforementioned wells may be due to residual xylene in the testing equipment. The next quarterly sampling should occur in February 1992.

## Reporting Requirements

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

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

California Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, California 94612-3429  
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. Gil Wistar, 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:

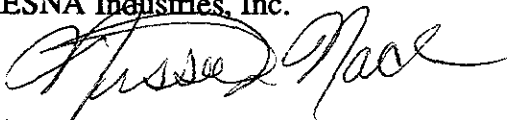
1. Observations by field personnel.
2. Results of laboratory analyses performed by a state-certified laboratory.
3. Our understanding of the regulations of the State of California, Alameda County, and the City of Dublin.

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 because of variations in rainfall, temperature, regional water usage, or other factors.

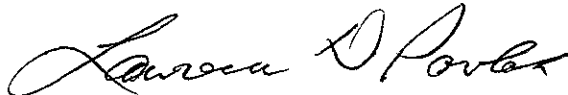
The service performed by RESNA has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the Dublin area. Please note that contamination of soil and groundwater must be reported to the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

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

Sincerely,  
RESNA Industries, Inc.



Nissa L. Nack  
Staff Geologist



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

NLN/LDP/sw  
Enclosures



RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-1	05/09/88	0.44	0.12	0.05	N R	0.12	8.72	334.83
	08/26/88	200	4.4	0.26	0.30	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	N A	
	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	
	09/11/89	ND	ND	ND	ND	0.0022	8.65	
	10/10/89	8.7	1.1	0.31	0.18	0.59	8.52	
	10/25/89	7.5	0.66	0.25	0.46	0.48	8.56	
	12/20/89	6.2	0.27	0.11	0.26	0.22	8.80	
	01/17/90	7.4	0.20	0.17	0.16	0.26	8.47	
	02/23/90	1.5	0.130	0.013	0.030	0.024	8.25	
06/04/90	0.83	0.088	0.010	0.0026	0.028	8.62		
11/20/90	NA	NA	NA	NA	NA	9.50		
02/12/91	1.5	0.180	0.039	0.0820	0.110	9.51		

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-1 (Con't)	05/06/91	0.51	0.041	0.011	0.025	0.035	8.34	
	08/28/91	0.45	0.041	0.016	0.024	0.034	9.28	
	11/13/91	0.32	0.041	0.014	0.023	0.033	9.59	
MW-2	05/09/88	N D	N D	N D	N R	N D	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	N A	
	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	
	05/01/89	N D	0.0027	N D	N D	N D	10.58	
	05/31/89	0.12	0.014	N D	0.0039	0.0076	10.73	
	06/28/89	N D	0.0041	N D	N D	N D	10.90	
	08/08/89	0.088	0.0039	N D	N D	N D	10.78	
	09/08/89	N D	0.0032	N D	N D	N D	10.97	
	10/09/89	0.11	0.0067	N D	N D	N D	10.88	
10/24/89	N D	0.0025	N D	N D	0.0019	11.00		
12/21/89	<0.05	0.0071	<0.0005	0.005	0.0098	11.06		
01/17/90	<0.05	0.0044	<0.0005	0.0016	0.0014	10.78		

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-2 (Con't)	02/23/90	0.07	0.0063	<0.0005	0.0027	0.0025	10.35	
	06/04/90	0.06	0.0024	<0.0005	0.0008	<0.0005	10.72	
	11/20/90	0.06	0.0056	<0.0005	<0.0005	<0.0005	11.35	
	02/12/91	0.13	0.014	<0.0005	0.0009	0.0005	11.64	
	05/06/91	0.06	0.0015	<0.0005	0.005	<0.0005	10.05	
	08/28/91	0.10	0.0063	<0.0005	0.001	0.0011	11.16	
	11/13/91	<0.05	0.011	<0.0005	0.0013	<0.0005	11.57	
MW-3	05/09/88	0.076	0.01	0.0044	N R	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	N D	N D	11.24	
	01/13/89	0.16	0.036	0.0012	0.003	0.002	N A	
	02/10/89	0.3	0.083	N D	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	N D	N D	N D	N D	N D	10.40	
	06/28/89	0.09	0.068	0.0007	N D	0.0051	10.60	
	08/09/89	0.15	0.023	0.0053	0.0026	N D	10.64	
09/11/89	N D	N D	N D	N D	N D	10.83		

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-3 (Con't)	10/10/89	0.08	0.0064	0.00072	N D	N D	10.95	
	10/26/89	0.15	0.011	N D	0.0016	N D	10.86	
	12/21/89	<0.05	0.0068	<0.0005	<0.0005	<0.0005	11.09	
	01/17/90	<0.05	0.004	<0.0005	0.0068	<0.0005	10.90	
	02/23/90	0.05	0.010	<0.0005	0.0012	0.0009	10.52	
	06/04/90	0.08	0.010	<0.0005	0.0014	<0.0005	10.52	
	11/20/90	0.10	0.026	0.0007	0.0012	0.0019	12.65	
	02/12/91	0.13	0.027	<0.0005	<0.0005	<0.0005	11.16	
	05/06/91	0.12	0.031	0.0008	0.0021	0.0008	9.85	336.93
	08/28/91	0.34	0.087	0.0011	0.0065	0.0038	10.90	
11/13/91	0.24	0.140	<0.0005	0.0031	0.0009	11.28		
MW-4	05/09/88	0.29	0.076	0.033	N R	0.15	10.88	337.14
	08/26/88	0.21	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	
	11/22/88	0.5	0.11	0.004	0.02	0.027	11.41	
	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	N A	
	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		



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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-4 (Con't)	05/31/89	0.06	N D	N D	N D	N D	10.62	
	06/28/89	0.11	0.062	0.0013	N D	0.0048	11.00	
	08/09/89	0.16	0.11	0.002	0.0064	N D	10.92	
	09/08/89	0.094	0.045	0.0005	0.0038	N D	11.05	
	10/10/89	0.09	0.03	0.001	0.0019	N D	10.97	
	10/26/89	N D	0.0034	N D	N D	N D	11.35	
	12/21/89	<0.05	0.035	0.0011	0.0036	0.0016	11.07	
	01/17/90	<0.05	0.004	<0.0005	0.0068	<0.0005	11.08	
	02/23/90	<0.05	0.008	<0.0005	0.0011	0.0007	10.90	
	06/04/90	0.16	0.085	0.0011	0.0019	<0.0005	10.74	
	11/20/90	0.14	0.052	0.001	0.0008	0.0009	11.45	
	02/12/91	0.13	0.048	<0.0005	0.0015	<0.0005	11.50	
	05/06/91	0.14	0.049	0.0013	0.0041	0.0017	10.04	
	08/28/91	0.09	0.013	<0.0005	0.001	0.0011	11.18	
11/13/91	<0.05	0.010	<0.0005	<0.0005	<0.0005	11.60		
MW-5	08/26/88	0.21	0.006	0.044	0.009	0.019	9.10	334.96
	10/05/88	7.5	2.7	N D	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	N D	0.0077	0.002	N A	
	02/10/89	0.06	N D	N D	N D	N D	10.35	

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-5 (Con 't)	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	
	08/09/89	0.089	0.0085	0.0018	0.0015	0.0022	8.76	
	09/11/89	1.1	0.0078	0.0014	ND	0.0063	8.80	
	10/10/89	ND	ND	ND	ND	ND	11.92	
	10/25/89	ND	0.0014	ND	ND	0.0016	9.03	
	12/20/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	11.26	
	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.95	
	02/23/90	<0.05	<0.0005	<0.0005	0.0006	<0.0005	8.30	
	06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.57	
	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	0.001	9.45	
	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.27	
05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.90		
08/28/91	<0.05	<0.0005	<0.0005	<0.0005	0.001	9.28		
11/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.36		
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	

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-6	12/09/88	0.54	0.062	0.003	0.026	0.005	9.85	
(Con 't)	01/13/89	0.98	0.16	0.022	0.12	0.029	N A	
	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	0.03	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	
	09/11/89	ND	ND	ND	ND	ND	9.31	
	10/10/89	1.0	0.085	0.011	0.012	0.016	9.32	
	10/24/89	1.5	0.067	0.02	0.05	0.039	9.30	
	12/20/89	<0.05	0.0049	0.0051	<0.0005	<0.0005	9.58	
	01/18/90	<0.05	0.067	0.012	0.048	0.018	9.46	
	02/23/90	0.0010	0.150	0.016	0.047	0.030	8.94	
	06/04/90	0.19	<0.0005	<0.0005	<0.0005	0.0006	9.22	
	11/20/90	0.73	0.120	0.012	0.039	0.0210	9.65	
	02/12/91	0.55	0.065	0.010	0.033	0.0160	9.85	
	05/06/91	0.55	0.072	0.011	0.038	0.023	9.12	
	08/28/91	0.58	0.082	0.0076	0.028	0.0200	9.68	
	11/13/91	0.43	0.060	0.0076	0.020	0.0120	10.00	

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Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
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	
	03/02/89	ND	ND	ND	ND	ND	7.03	
	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	
	09/07/89	ND	ND	ND	ND	ND	6.90	
	10/10/89	ND	ND	ND	ND	ND	6.90	
	10/24/89	ND	ND	ND	ND	ND	7.29	
	12/20/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.47	
	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.49	
	02/23/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	6.92	
	06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	6.95	
11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.10		
02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.04		

RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-7 (Con't)	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	6.37	
	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.94	
	11/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.41	
MW-8	03/01/89	ND	ND	ND	ND	ND	8.28	335.80
	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	
	09/07/89	ND	ND	ND	ND	ND	8.50	
	10/10/89	ND	ND	ND	ND	ND	9.46	
	10/26/89	ND	ND	ND	ND	ND	9.56	
	12/21/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.57	
	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.29	
	02/26/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.50	
	06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.04	
	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.40	
	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.70	
08/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.68		
11/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.87		

RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
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	
	09/07/89	ND	ND	ND	ND	ND	8.99	
	10/09/89	ND	ND	ND	ND	ND	8.89	
	10/23/89	ND	ND	ND	ND	ND	9.02	
	12/21/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.48	
	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.73	
	02/26/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.06	
	06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.64	
	MW-9 (Con't)	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	
02/11/91		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.85	
05/06/91		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	10.05	
08/28/91		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	10.34	
11/13/91		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	9.39	
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	

RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-10 (Con't)	06/01/89	1.4	0.12	0.039	N D	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	
	09/07/89	0.39	0.055	0.0029	0.0040	0.018	8.14	
	10/10/89	0.46	0.085	0.0076	0.010	0.045	9.21	
	10/26/89	0.27	0.02	0.0014	0.0035	0.0093	9.60	
	12/20/89	<0.05	0.0057	<0.0005	<0.0005	<0.0005	9.42	
	01/18/90	N A	N A	N A	N A	N A	N A	
	06/04/90	N A	N A	N A	N A	N A	N A	
	11/20/90	N A	N A	N A	N A	N A	N A	Destroyed
MW-11	03/02/89	N D	N D	N D	N D	N D	8.30	334.20
	04/04/89	N D	N D	N D	N D	N D	7.52	
	05/01/89	N D	N D	N D	N D	N D	7.97	
	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
	05/31/89	N D	N D	N D	N D	N D	8.13	
	06/28/89	N D	N D	N D	N D	N D	8.30	
	08/08/89	N D	N D	N D	N D	N D	8.22	
	09/07/89	N D	N D	N D	N D	N D	8.32	
	10/09/89	N D	N D	N D	N D	N D	8.28	
	10/24/89	N D	N D	N D	N D	N D	8.38	
	12/20/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.48	

RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-11 (Con't)	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.20	
	02/26/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.86	
	06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.13	
	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.83	
	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.95	
	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.71	
	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	0.001	8.62	
	11/15/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.99	
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	
	09/07/89	ND	ND	ND	ND	ND	6.81	
	10/09/89	ND	ND	ND	ND	ND	7.11	
	10/24/89	ND	ND	ND	ND	ND	7.60	
	12/20/89	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.25	
	01/18/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.23	
	02/26/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.54	
06/04/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.96		



RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

TABLE 1

GROUNDWATER ANALYSES DATA

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
MW-12 (Con't)	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	8.80	
	02/12/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.85	
	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.35	
	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	0.001	7.79	
	11/13/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	7.89	
MW-13	05/06/91	1.1	0.43	0.03	0.041	0.13	8.37	335.64
	08/28/91	1.0	0.35	0.0064	0.044	0.043	9.82	
	11/13/91	0.68	0.32	0.0056	0.038	0.017	10.19	
RW-1	12/09/89	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	
	02/10/89	6	2.8	ND	ND	ND	10.91	
	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	
	09/11/89	0.097	0.0017	0.0021	0.0023	0.014	10.02	
	10/10/89	1.4	0.048	0.0045	ND	0.003	9.88	
10/25/89	0.82	0.051	0.0012	0.025	0.003	9.80		

RESNA Industries Inc.  
 Project No. 3-31000-F  
 January 28, 1992

Shell Oil Company  
 7194 Amador Valley Boulevard  
 Dublin, California

**TABLE 1**

**GROUNDWATER ANALYSES DATA**

Well	Date	TPHG (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylenes (ppm)	Depth To Water (ft.)	Well Elevation (ft.)
RW-1	12/21/89	0.49	0.016	0.001	0.0085	0.019	10.25	
(Con't)	01/17/90	N D	0.027	0.0017	0.014	0.0016	9.80	
	02/23/90	0.42	0.042	0.0018	0.013	0.0027	9.60	
	06/04/90	0.18	0.023	0.0007	0.0053	0.0012	9.97	
	11/20/90	1.9	0.17	0.052	0.029	0.038	10.50	
	02/11/91	NA	NA	NA	NA	NA	10.87	

- (a) Groundwater monitoring well MW-10 destroyed on June 13, 1990
- ppm Parts per million (mg/kg)
- TPHG Total petroleum hydrocarbons as gasoline
- N A Data not available
- N R Analysis not requested
- N D Not detected at or above laboratory listed detection limit
- <0.05 Not detected at or above the indicated detection limit
- Note: For unlisted detection limits, refer to laboratory reports

**TABLE 2**  
**GROUNDWATER SAMPLING DATA**

**Shell Oil Company**  
**7194 Amador Valley Boulevard**  
**Dublin, California**

Well	Date	Depth to Water (ft)	Well to Depth (ft)	Purge Volume (gal)	Temperature (°C)	Conductivity (µmho/cm)	pH	Observations
MW-1	8/28/91	9.28	25.26	40	26/26/24	510/500/490	6.31/6.82/6.21	Odor, cloudy
	11/13/91	9.59	25.26	40	34/33/33	940/980/1020	6.96/6.90/6.94	Odor, cloudy
MW-2	8/28/91	11.16	24.63	36	26/25/23	2770/2700/2380	6.16/6.37/6.83	Silty, cloudy
	11/13/91	11.57	24.63	34	39/39/39	2400/2380/2340	6.66/6.74/6.69	Silty, dry at 3-gal.
MW-3	8/28/91	10.90	24.35	36	25/25/23	1360/1310/1220	6.29/6.04/6.16	Odor, cloudy
	11/13/91	11.28	24.35	35	37/36/36	1390/1360/1340	6.53/6.57/6.55	Odor, cloudy
MW-4	8/28/91	11.18	24.87	36	25/25/24	2000/2050/1880	7.42/6.89/7.04	Slight odor, slightly cloudy
	11/13/91	11.60	24.87	36	37/36/36	2100/2090/2070	6.64/6.67/6.69	Slight odor, cloudy
MW-5	8/28/91	9.28	44.84	25	26/23	1510/1520	6.84/6.65	Cloudy, dry at 25-gal.
	11/13/91	9.36	44.84	26	32/33	1384/1402	7.08/7.10	Cloudy, dry at 26-gal.
MW-6	8/28/91	9.68	22.95	36	23/23/23	1310/1260/1220	6.27/6.46/6.52	Odor, cloudy
	11/13/91	10.00	22.95	36	40/39/39	1300/1280/1240	6.79/6.84/6.86	Odor, cloudy
MW-7	8/28/91	7.94	16.32	12	25/25	1710/1890	6.23/7.95	Cloudy, dry at 12-gal.
	11/13/91	8.41	16.32	10	38/38	1390/1360	6.96/6.90	Cloudy, dry at 10-gal.
MW-8	8/28/91	9.68	16.25	8	26/25	2050/1940	6.65/6.35	Cloudy, dry at 8-gal.
	11/13/91	9.87	16.25	8	40/39	2010/1990	6.54/6.69	Cloudy, dry at 8-gal.

**TABLE 2**  
**GROUNDWATER SAMPLING DATA**

**Shell Oil Company**  
**7194 Amador Valley Boulevard**  
**Dublin, California**

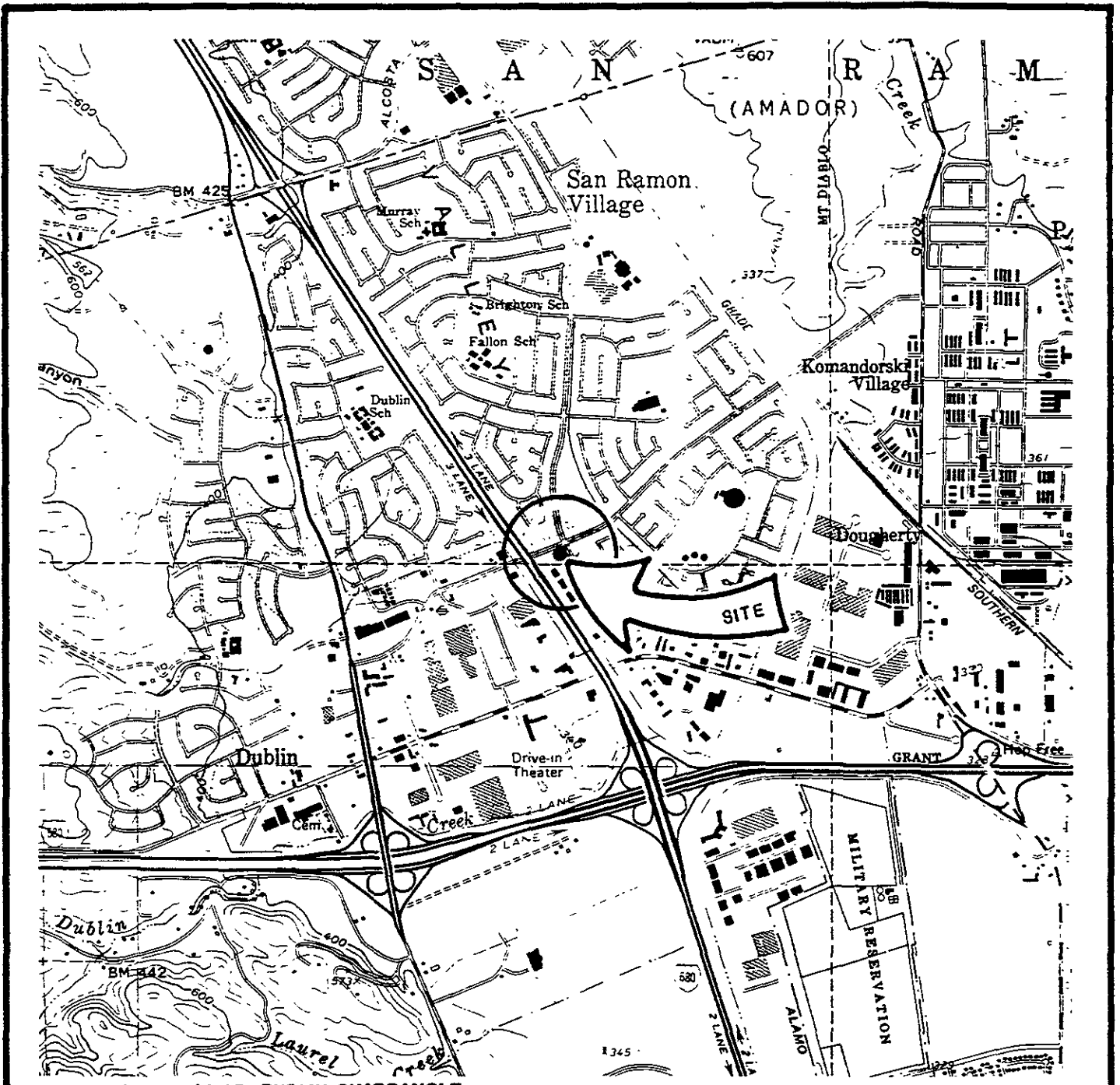
Well	Date	Depth to Water (ft)	Well to Depth (ft)	Purge Volume (gal)	Temperature (°C)	Conductivity (µmho/cm)	pH	Observations
MW-9	8/28/91	10.34	17.93	20	24/24/24	2190/2190/2210	6.54/7.15/7.00	Cloudy
	11/13/91	9.39	17.93	18	37/37/37	2190/2210/2210	6.67/6.68/6.74	Cloudy, dry at 18-gal.
MW-11	8/28/91	8.62	16.51	20	22/22/22	2550/2520/2580	6.20/6.12/6.15	Cloudy
	11/13/91	8.99	16.51	20	37/36/36	2340/2360/2320	6.61/6.68/6.66	Cloudy
MW-12	8/28/91	7.79	17.15	24	22/22/22	980/1010/970	6.31/6.24/6.15	Clear/yellow
	11/13/91	7.89	17.15	20	36/35/35	980/960/970	7.07/7.11/7.15	Cloudy, dry at 20-gal.
MW-13	8/28/91	9.82	17.13	20	25/22/22	1510/1410/1380	5.98/6.47	Cloudy, dry at 14-gal.
	11/13/91	10.19	17.13	14	38/38	1380/1420	6.96/6.99	

ft. Feet  
 gal. Gallons  
 °C Degrees Celcius  
 µmho/cm Micromhos per centimeter

**TABLE 3**  
**GROUNDWATER ELEVATIONS**

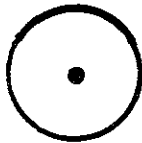
Former Mobil, Shell, and Unocal Joint Sampling

Station	Well Number	Date	Top of Casing Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	
Former Mobil	MW-1	11/13/91	335.17	10.09	325.08	
	MW-2	11/13/91	334.58	9.73	324.85	
	MW-3	11/13/91	335.13	10.27	324.86	
	AW-4	11/13/91	333.42	8.57	324.85	
	AW-5	11/13/91	334.79	9.80	324.99	
	AW-6	11/13/91	334.91	9.58	325.33	
Shell	MW-1	11/13/91	334.83	9.59	325.24	
	MW-2	11/13/91	336.96	11.57	325.39	
	MW-3	11/13/91	336.93	11.28	325.68	
	MW-4	11/13/91	337.14	11.60	325.54	
	MW-6	11/13/91	335.42	10.00	325.42	
	MW-7	11/13/91	333.23	8.41	324.82	
	MW-8	11/13/91	335.80	9.87	325.93	
	MW-9	11/13/91	334.57	9.39	325.18	
	MW-11	11/13/91	334.20	8.99	325.21	
	MW-12	11/13/91	332.53	7.89	324.61	
	MW-13	11/13/91	335.64	10.19	325.45	
	Unocal	MW-1	11/13/91	336.72	11.44	325.28
		MW-2	11/13/91	337.36	11.56	325.80
MW-3		11/13/91	337.53	11.70	325.83	
MW-4		11/13/91	337.00	11.67	325.33	

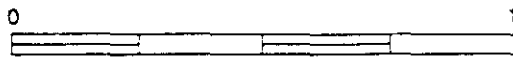


SOURCE: USGS 7.5' MAP, DUBLIN QUADRANGLE

**LEGEND**



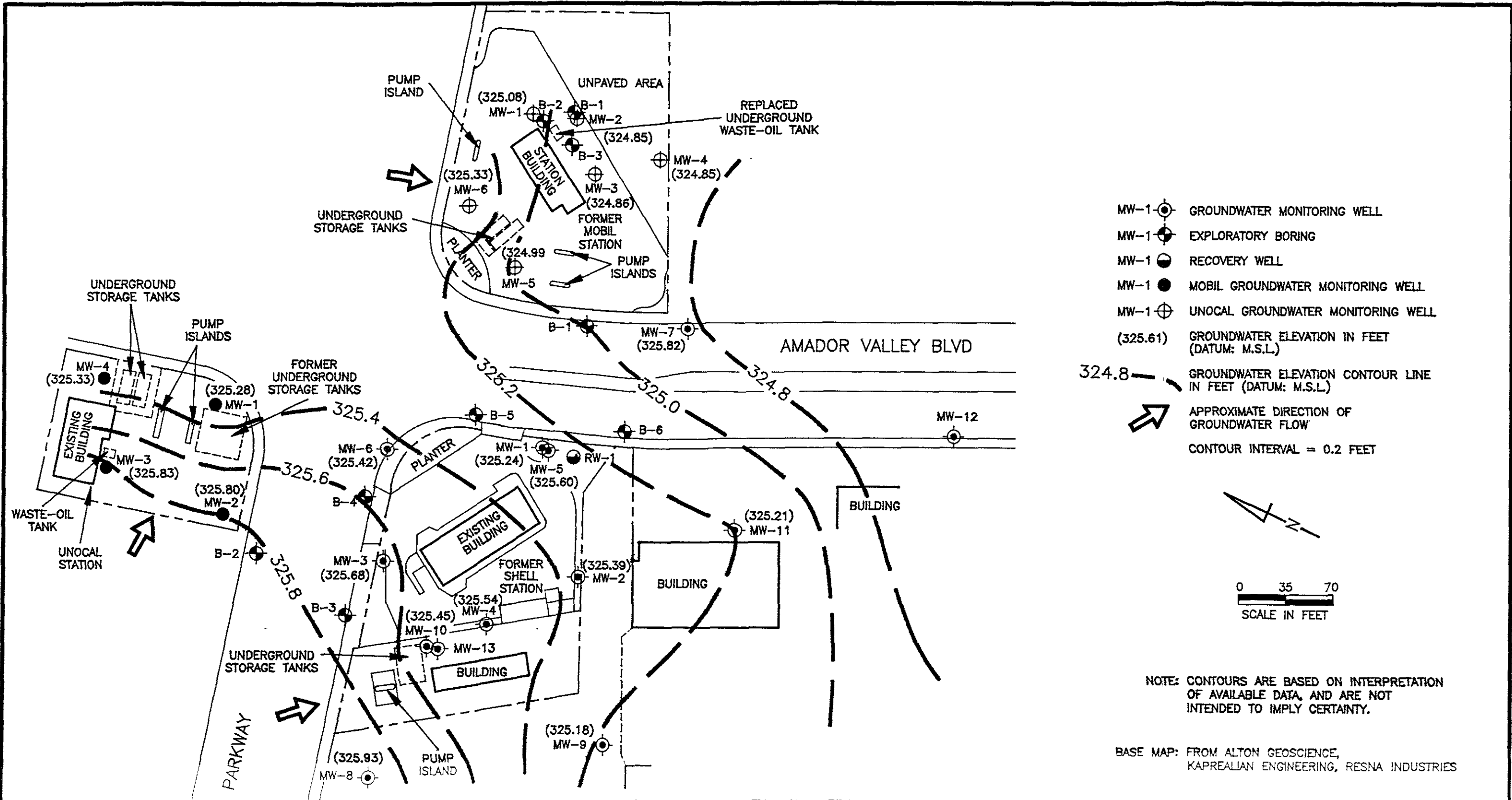
SITE LOCATION



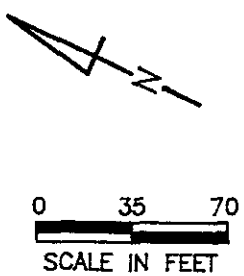
SCALE IN MILES



REVIEWED BY	<b>SITE LOCATION MAP</b> FORMER SHELL STATION 7194 AMADOR VALLEY BLVD DUBLIN, CALIFORNIA	<b>RESNA</b>
APPROVED BY <i>LP</i>		JOB # 3-31000-F DATE 12/31/91 DRAWN BY E.C. DRAWING # FIG. 1



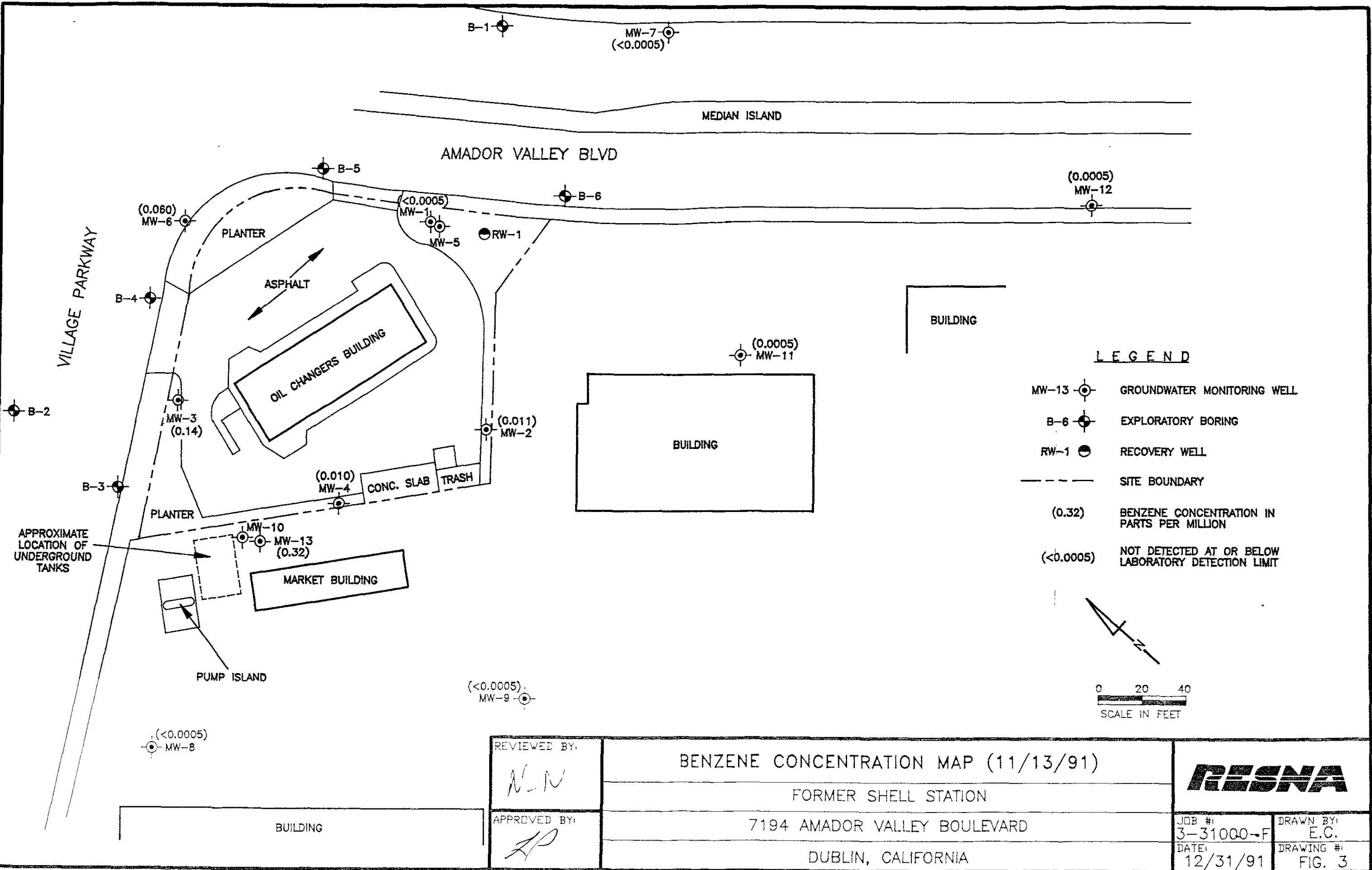
- MW-1 ⊕ GROUNDWATER MONITORING WELL
- MW-1 ⊕ EXPLORATORY BORING
- MW-1 ⊕ RECOVERY WELL
- MW-1 ● MOBIL GROUNDWATER MONITORING WELL
- MW-1 ⊕ UNOCAL GROUNDWATER MONITORING WELL
- (325.61) GROUNDWATER ELEVATION IN FEET (DATUM: M.S.L.)
- 324.8 — GROUNDWATER ELEVATION CONTOUR LINE IN FEET (DATUM: M.S.L.)
- ➔ APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- CONTOUR INTERVAL = 0.2 FEET



NOTE: CONTOURS ARE BASED ON INTERPRETATION OF AVAILABLE DATA, AND ARE NOT INTENDED TO IMPLY CERTAINTY.

BASE MAP: FROM ALTON GEOSCIENCE, KAPREALIAN ENGINEERING, RESNA INDUSTRIES

REVIEWED BY: <i>[Signature]</i>	GROUNDWATER ELEVATION CONTOUR MAP (11/13/91) JOINT SAMPLING		<b>RESNA</b>
APPROVED BY: <i>[Signature]</i>	FORMER SHELL STATION		
	7194 AMADOR VALLEY BOULEVARD		JOB #: 3-31000-F
	DUBLIN, CALIFORNIA		DATE: 1/13/92
			DRAWN BY: E.C.
			DRAWING #: FIG. 2



REVIEWED BY:  
*NLN*

APPROVED BY:  
*AP*

BENZENE CONCENTRATION MAP (11/13/91)

FORMER SHELL STATION

7194 AMADOR VALLEY BOULEVARD

DUBLIN, CALIFORNIA



JOB #:  
3-31000-F

DATE:  
12/31/91

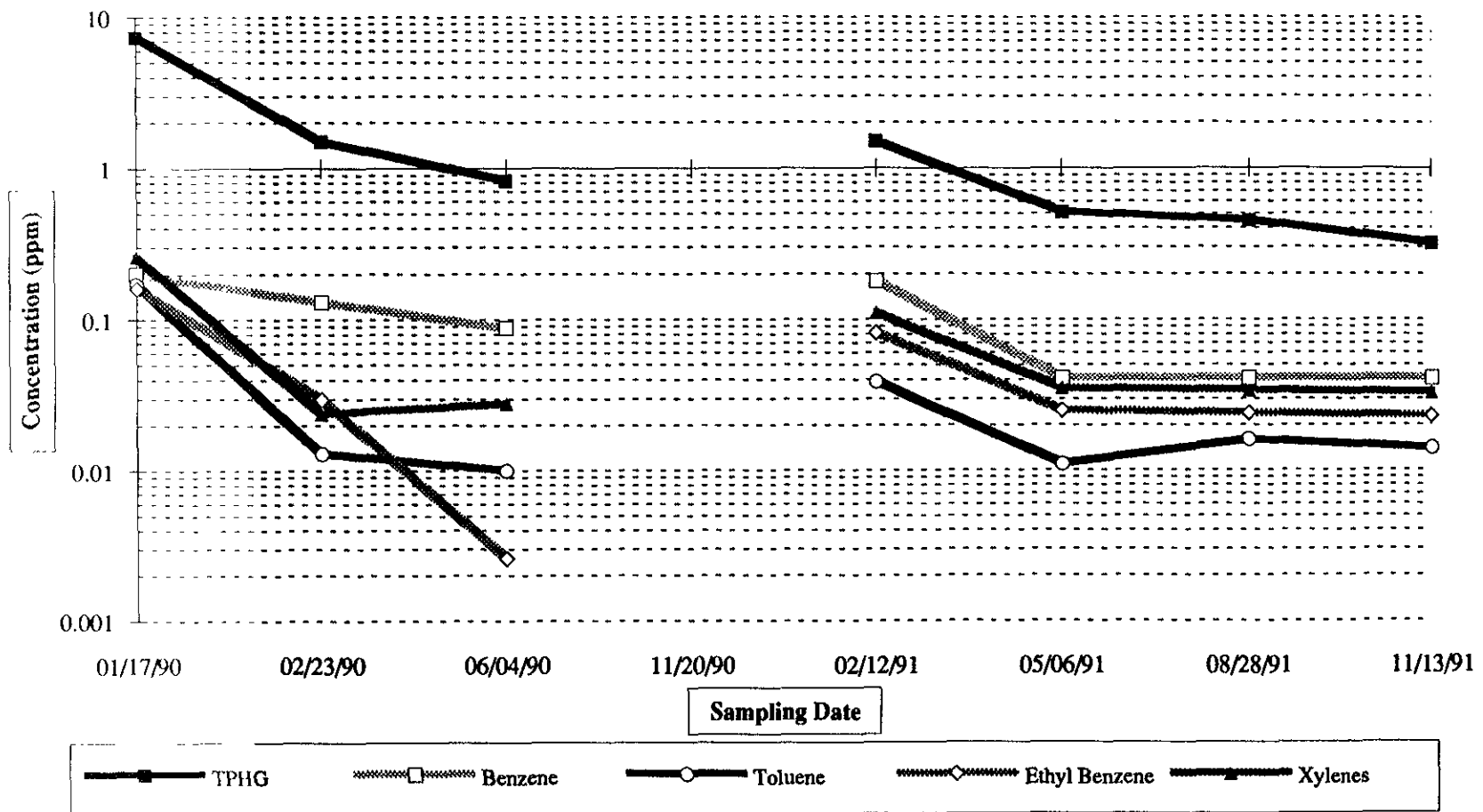
DRAWN BY:  
E.C.

DRAWING #:  
FIG. 3

BUILDING

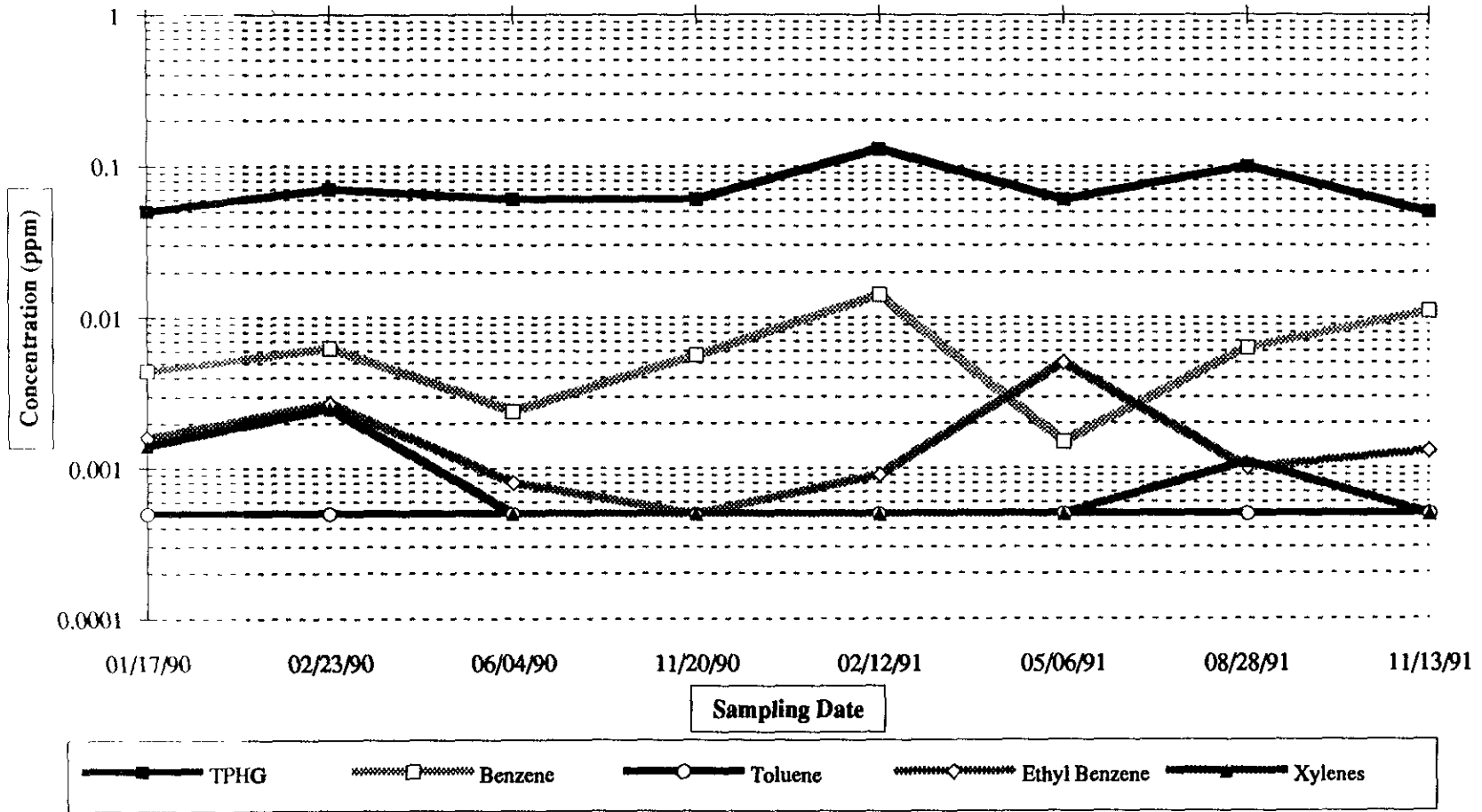


### MW-1 GROUNDWATER ANALYSES DATA



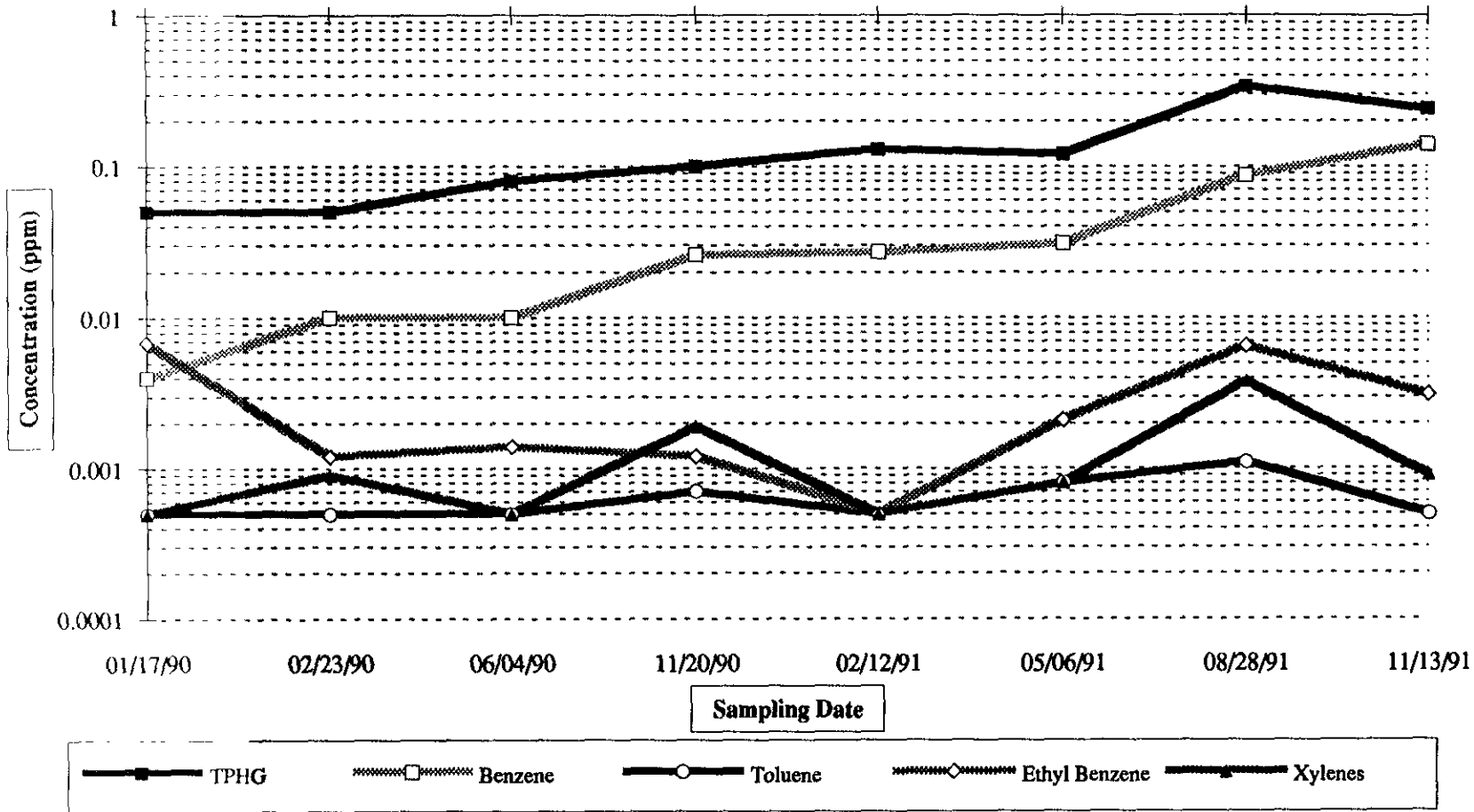
NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where

### MW-2 GROUNDWATER ANALYSES DATA



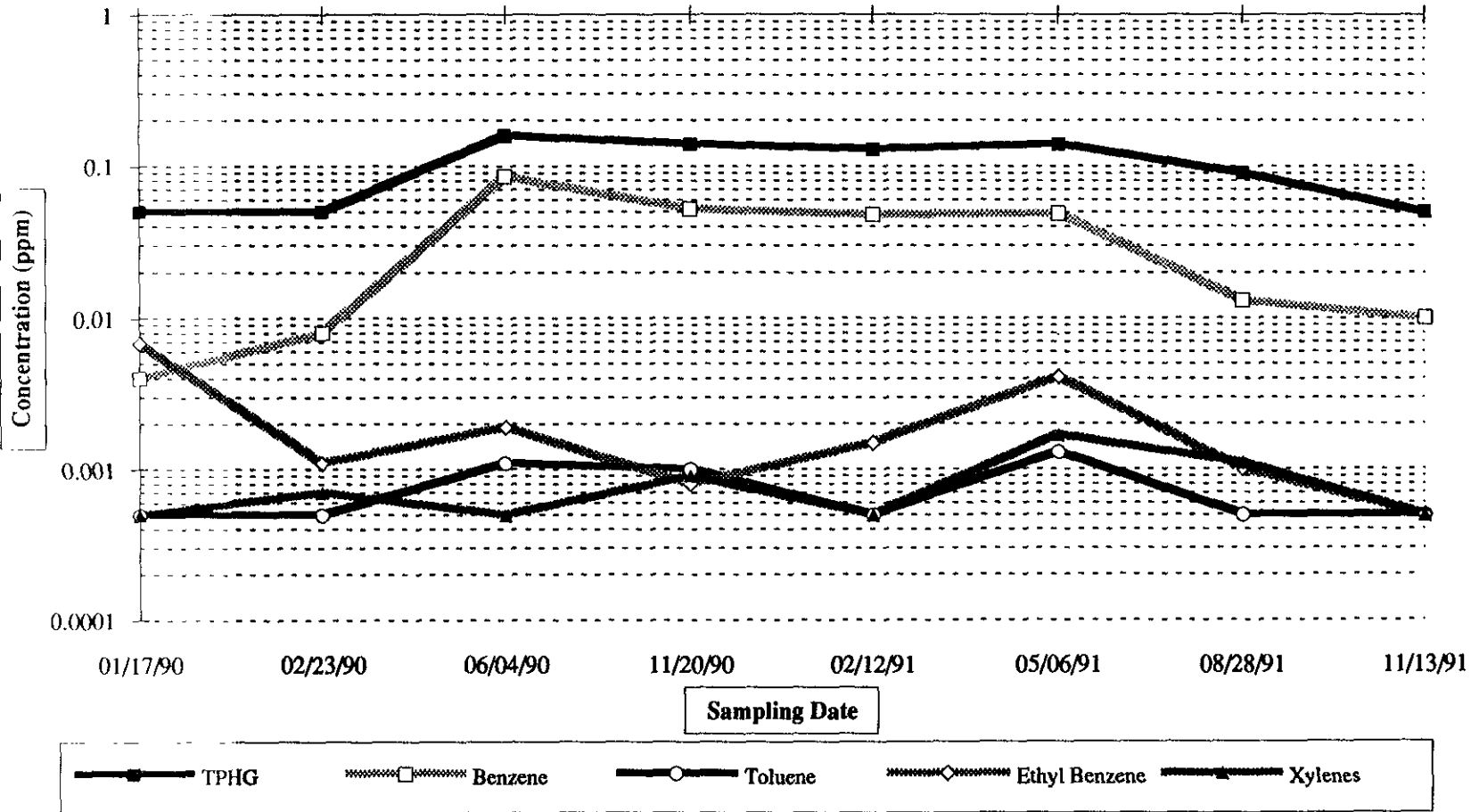
NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

### MW-3 GROUNDWATER ANALYSES DATA



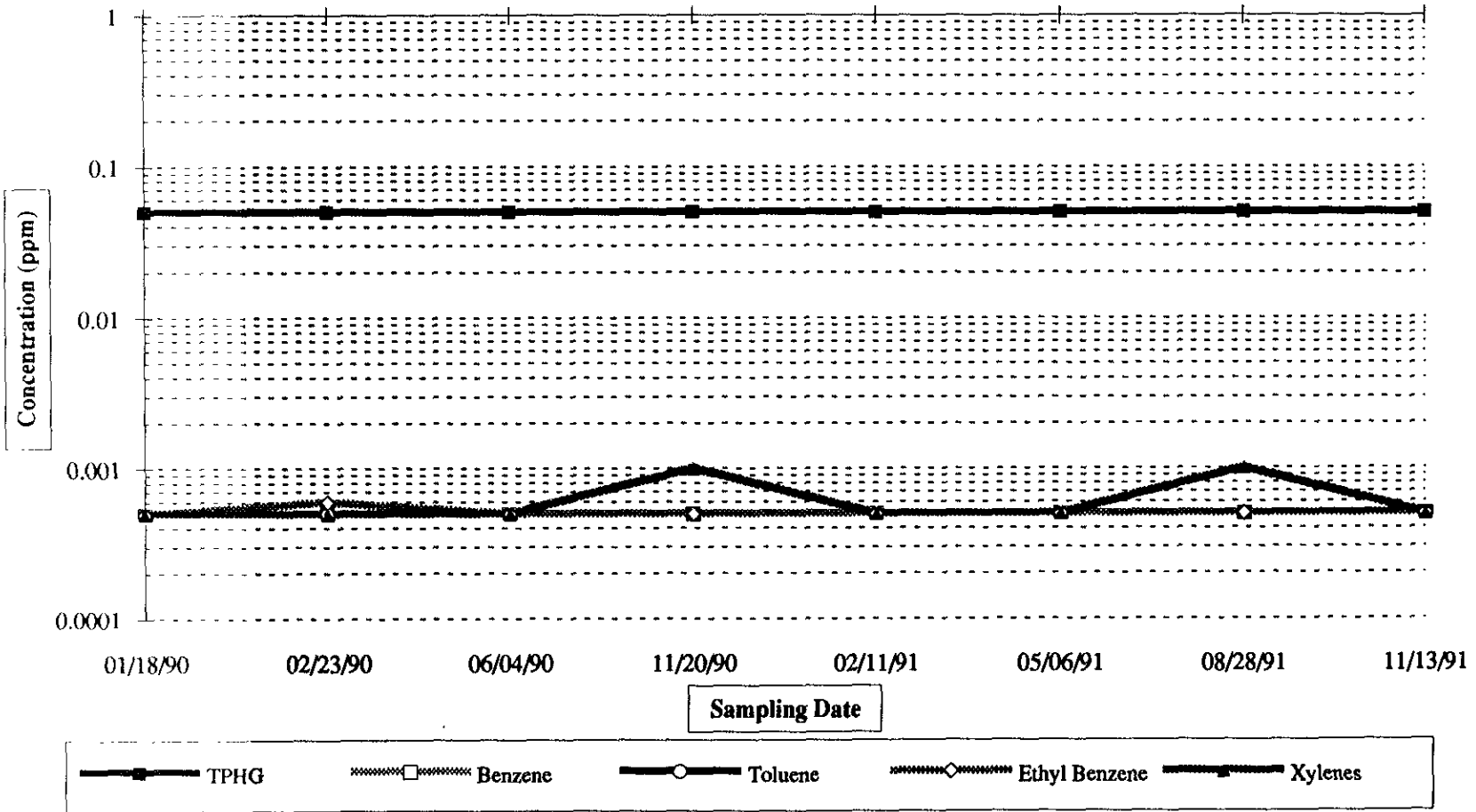
NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

### MW-4 GROUNDWATER ANALYSES DATA



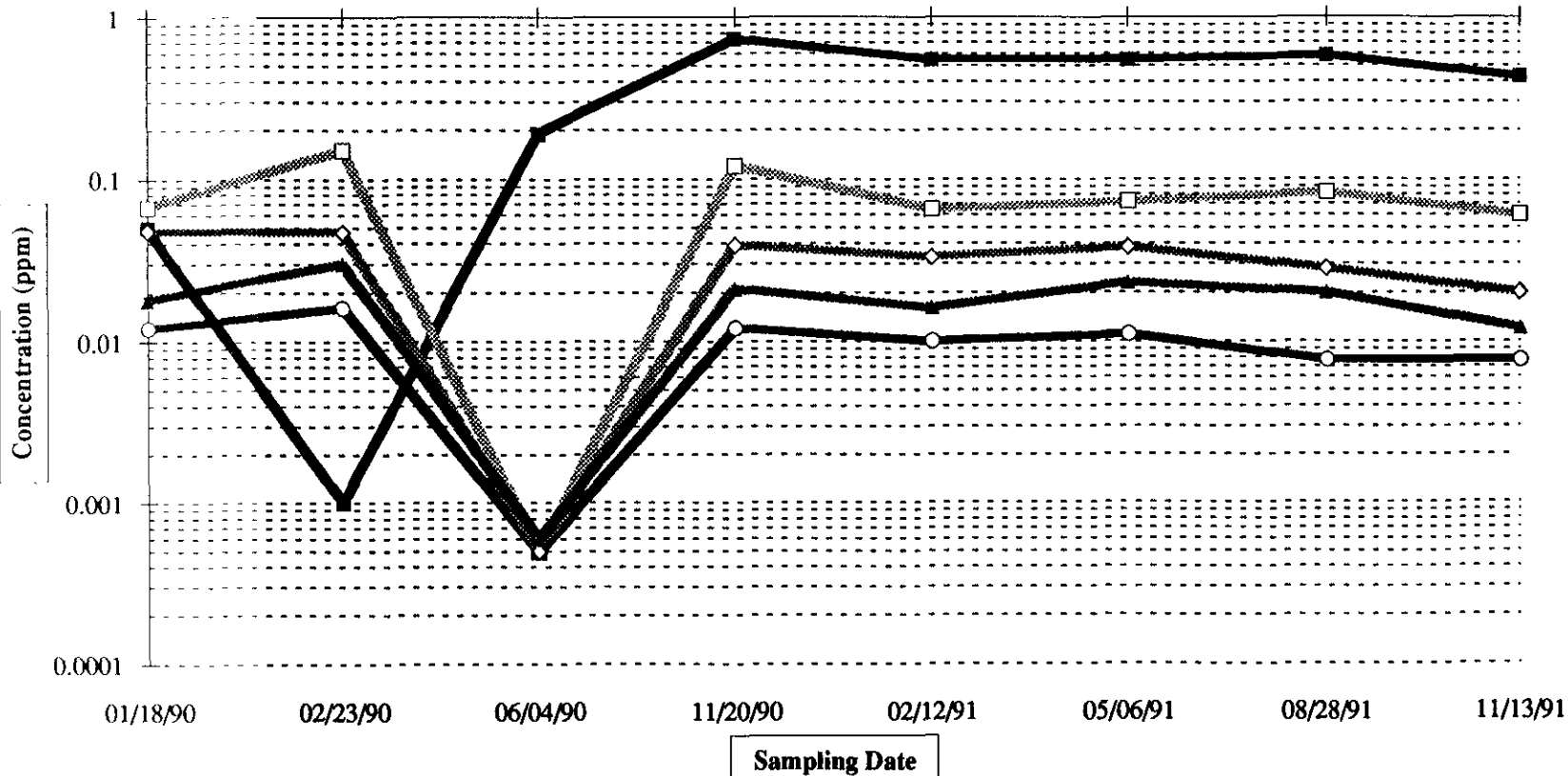
NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

### MW-5 GROUNDWATER ANALYSES DATA



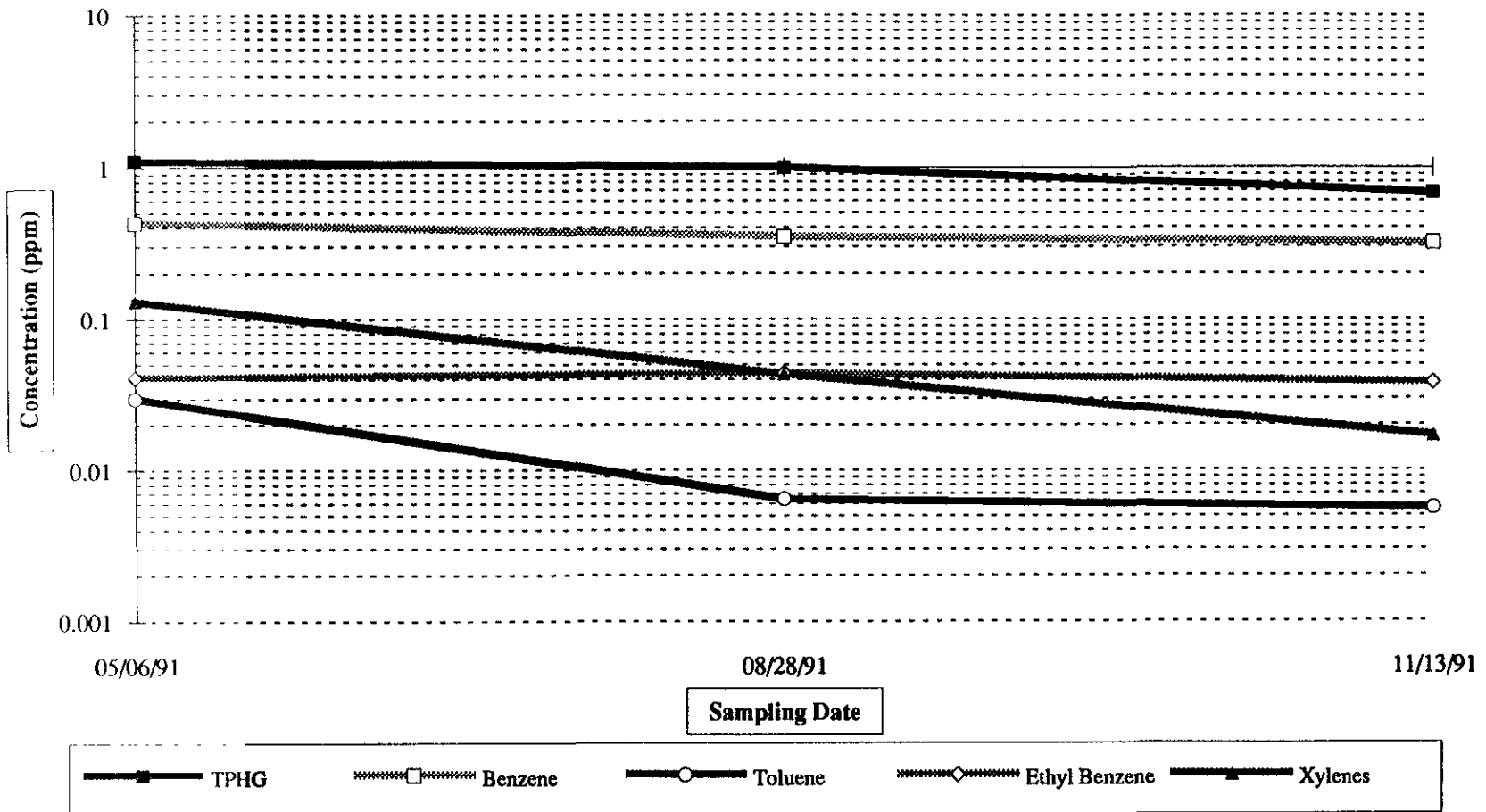
NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

### MW-6 GROUNDWATER ANALYSES DATA



NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

### MW-13 GROUNDWATER ANALYSES DATA



NOTE: For analytical results, refer to appended laboratory reports. Gaps on graph represent dates where no sample was collected.

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**APPENDIX A**

**LABORATORY REPORTS  
AND  
CHAIN-OF-CUSTODY RECORD**

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NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

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

Nissa Nack  
Exceltech  
41674 Christy St.  
Fremont, CA 94538

Date: 12/04/1991  
NET Client Acct No: 1806  
NET Pacific Log No: 91.0726  
Received: 11/19/1991

Client Reference Information

Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

A handwritten signature in black ink, appearing to read "Jules Skamarack", is written over a horizontal line.

Jules Skamarack  
Laboratory Manager

JS:rct  
Enclosure(s)



NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

Page: 2

Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	BB-1	MW-5	Units
			11/13/1991	11/13/1991	
			105289	105290	
TPH (Gas/BTXE,Liquid)			--	--	
METHOD 5030 (GC,FID)					
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	0.63	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	0.020	ND	mg/L
Ethylbenzene		0.0005	0.018	ND	mg/L
Toluene		0.0005	0.061	ND	mg/L
Xylenes (Total)		0.0005	0.088	ND	mg/L



Client No: 1806  
 Client Name: Exceltech  
 NET Log No: 91.0726

Date: 12/04/1991

Page: 3

NET Pacific, Inc

Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-7	MW-8	Units
			11/13/1991	11/15/1991	
			105291	105292	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	ND	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	ND	ND	mg/L
Ethylbenzene		0.0005	ND	ND	mg/L
Toluene		0.0005	ND	ND	mg/L
Xylenes (Total)		0.0005	ND	ND	mg/L



NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

Page: 4

Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-9	MW-11	Units
			11/15/1991	11/15/1991	
			105293	105294	
TPH (Gas/BTEXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-22-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	ND	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-22-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	ND	ND	mg/L
Ethylbenzene		0.0005	ND	ND	mg/L
Toluene		0.0005	ND	ND	mg/L
Xylenes (Total)		0.0005	ND	ND	mg/L



NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

Page: 5

Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-12	MW-2	Units
			11/15/1991	11/15/1991	
			105295	105296	
TPH (Gas/BTXE,Liquid)			--	--	
METHOD 5030 (GC,FID)					
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	ND	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	ND	0.011	mg/L
Ethylbenzene		0.0005	ND	0.0013	mg/L
Toluene		0.0005	ND	ND	mg/L
Xylenes (Total)		0.0005	ND	ND	mg/L



Client No: 1806  
 Client Name: Exceltech  
 NET Log No: 91.0726

Date: 12/04/1991

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NET Pacific, Inc

Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-3	MW-4	Units
			11/15/1991	11/15/1991	
			105297	105298	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	0.24	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	0.14	0.010	mg/L
Ethylbenzene		0.0005	0.0031	ND	mg/L
Toluene		0.0005	ND	ND	mg/L
Xylenes (Total)		0.0005	0.0009	ND	mg/L



NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

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Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-1	MW-6	Units
			11/15/1991	11/15/1991	
			105299	105300	
TPH (Gas/BTEX,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
as Gasoline		0.05	0.32	0.43	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-24-91	11-24-91	
DILUTION FACTOR*			1	1	
Benzene		0.0005	0.041	0.060	mg/L
Ethylbenzene		0.0005	0.023	0.020	mg/L
Toluene		0.0005	0.014	0.0076	mg/L
Xylenes (Total)		0.0005	0.033	0.012	mg/L



NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

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Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

Descriptor, Lab No. and Results

MW-13  
11/15/1991

Parameter	Method	Reporting Limit	105301	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			11-24-91	
DILUTION FACTOR*			1	
as Gasoline		0.05	0.68	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			11-24-91	
DILUTION FACTOR*			1	
Benzene		0.0005	0.32	mg/L
Ethylbenzene		0.0005	0.038	mg/L
Toluene		0.0005	0.0056	mg/L
Xylenes (Total)		0.0005	0.017	mg/L





NET Pacific, Inc

Client No: 1806  
Client Name: Exceltech  
NET Log No: 91.0726

Date: 12/04/1991

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Ref: Shell, Project 204-2277-0105, 7194 Amador Valley, Dublin

QUALITY CONTROL DATA

<u>Parameter</u>	<u>Reporting Limits</u>	<u>Units</u>	<u>Cal Verif Stand % Recovery</u>	<u>Blank Data</u>	<u>Spike % Recovery</u>	<u>Duplicate Spike % Recovery</u>	<u>RPD</u>
Gasoline	0.05	mg/L	91	ND	92	97	5.3
Benzene	0.0005	mg/L	111	ND	104	104	<1
Toluene	0.0005	mg/L	105	ND	102	102	<1

COMMENT: Blank Results were ND on other analytes tested.



NET Pacific, Inc

KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- \* : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample (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.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

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.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

ATTN: (SHELL PROJ. ENGR.)

Jack Brablad

VENDOR NAME: <u>NET Picopie</u>		
INV. DATE:	INV. NO:	BKT PO NO: MOH-
SHELL LOC. ADDRESS: <u>7194 Amador Valley Blvd</u>		
CITY: <u>Dublin</u>	STATE: <u>CA</u>	ZIP:
WIC: <u>204-2277-0105</u> SPECIAL PAY TERMS:		

GENERAL DESCRIPTION OF WORK	CIRCLE CLASS TYPE	\$ AMOUNT
ENVIRONMENTAL COMPLIANCE	5460	\$
SITE INVESTIGATION/ASSESSMENT	5441	\$
CONTAMINATED SOIL DISPOSAL	5442	\$
CONTAMINATED WATER DISPOSAL	5443	\$
CONTAMINATED SOIL REMEDIATION	5452	\$
CONTAMINATED WATER REMEDIATION	5453	\$
SITE MONITORING ONLY	5461	\$
CAR WASH SLUDGE DISPOSAL	5411	\$
TANK WATER BOTTOMS	5406	\$
OTHER:		\$
OTHER, (SAD):		
CAPITAL ADC:205620 AFE NO:	QTY:	\$
TOTAL PAY THIS AMOUNT:		\$

## VENDOR APPROVAL

PRINT NAME:

SIGNATURE:

DATE:

## SHELL APPROVAL

SIGNATURE:

DATE:

NOTE: Vendor to staple this cover sheet on top of his invoice. (Rev 1)



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No.: \_\_\_\_\_

Date: 13, 15 NOV 91

Page 1 of 2

Site Address: 7194 Amador Valley Blvd  
Dublin, CA

**Analysis Required**

LAB: NET

WIC#: 204-22770105

Shell Engineer: Jack Brastad

Phone No.  
Fax #:

Consultant Name & Address: Resna  
41674 Christy St, Fremont, CA 94538

Consultant Contact: Nissa Nack  
Phone No. 510-659-0404  
Fax #: 651-4677

Comments:

Sampled By: *Robin Sutherland*  
Printed Name: Robin S Sutherland

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample- Sys O&M <input type="checkbox"/>	5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

Sample ID	Date	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
BB-1	13 NOV 91	X	X		3	X	X	X			40ml Vops	HCL	N		
MW-5	↓	X	X		3	X	X	X							
MW-7	↓	X	X		3	X	X	X							
MW-8	15 NOV 91	X	X		3	X	X	X						UNLABLED 11/18/91	
MW-9	↓	X	X		3	X	X	X						19:00 J.W.	
MW-11	↓	X	X		3	X	X	X						<i>Sutherland</i>	
MW-12	↓	X	X		3	X	X	X							
MW-2	↓	X	X		3	X	X	X							

Relinquished By (signature): <i>Robin Sutherland</i>	Printed name: Robin Sutherland	Date: 11/15/91 Time: 16:45	Received (signature): <i>J. Winkler</i>	Printed name: J. Winkler	Date: 11-15-91 Time: 16:50
Relinquished By (signature): <i>David R Dement</i>	Printed name: David R Dement	Date: 11/18/91 Time: 15:00	Received (signature): <i>Kelly Temple</i>	Printed name: Kelly Temple	Date: 11/18/91 Time: 15:00
Relinquished By (signature): <i>J. Winkler</i>	Printed name: J. Winkler	Date: 11/18 Time: 19:00	Received (signature): <i>Kelly Temple</i>	Printed name: Kelly Temple	Date: 11/19/91 Time: 0800

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No.: \_\_\_\_\_

Date: 13, 15 Nov 91  
Page 2 of 2

Site Address: 7194 Amador Valley Blvd  
Dublin, CA

**Analysis Required**

LAB: NET

WIC#: 204-227-0105

Shell Engineer: \_\_\_\_\_ Phone No. \_\_\_\_\_  
Fax #: \_\_\_\_\_

Consultant Name & Address: Resna  
41674 Christy St, Fremont, CA 94538

Consultant Contact: Nisga Nack Phone No. (510) 659-0400  
Fax #: 651-4677

Comments

Sampled By: *Robin S Sutherland*  
Printed Name: Robin S Sutherland

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample- Sys O&M <input type="checkbox"/>	5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

Sample ID	Date	Soil	Water	Air	No. of conds.
MW-3	15 NOV 91	X	X		3
MW-4	↓	X	X		3
MW-1	↓	X	X		3
MW-6	↓	X	X		3
MW-13	↓	X	X		3

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal
X	X	X		
X	X	X		
X	X	X		
X	X	X		
X	X	X		

Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
40ml 10005	HCL	N		
↓	↓	↓		

Relinquished By (signature): *Robin Sutherland*  
Printed name: Robin Sutherland  
Date: 11/5/91  
Time: 16:45

Received (signature): *Greg*  
Printed name: \_\_\_\_\_  
Date: 11/5/91  
Time: 15:00

Received (signature): *J. Winckler*  
Printed name: J. Winckler  
Date: 11/18/91  
Time: 14:00

Relinquished By (signature): *David R Dement*  
Printed name: David R Dement  
Date: 11/18  
Time: 19:00

Received (signature): *Jeff*  
Printed name: \_\_\_\_\_  
Date: 11/18  
Time: 19:00

Received (signature): *Kelly Temple*  
Printed name: Kelly Temple  
Date: 11/19/91  
Time: 08:00

Relinquished By (signature): *Jeff*  
Printed name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received (signature): *Kemp*  
Printed name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received (signature): \_\_\_\_\_  
Printed name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS