GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

November 8, 1991

Mr. Rick Mueller
City of Pleasanton
Pleasanton Fire Department
Post Office Box 520
Pleasanton, California 94566-0802

Reference: Shell Service Station
3790 Hopyard Road
Pleasanton, California
WIC 204-6138-0501

Mr. Mueller:

As requested by Mr. Jack Brastad of Shell Oil Company, we are forwarding a copy of the November 8, 1991 Site Update report prepared for the above referenced location. The report presents the results of the ground-water sampling conducted during the third quarter of 1991.

Should you have any questions or comments please do not hesitate to call.

Sincerely,

John Werfal
Project manager

enclosure

cc: Mr. Tom Callaghan, Regional Water Quality Control Board
Mr. Jack Brastad, Shell Oil Company

GeoStrategies Inc.

SITE UPDATE

Shell Service Station
3790 Hopyard Road
Pleasanton, California
WIC 204-6138-0501

763201-11

November 8, 1991

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

November 8, 1991

Shell Oil Company
P.O. Box 5278
Concord, California 94520

Attn: Mr. Jack Brastad

Re: SITE UPDATE
Shell Service Station
3790 Hopyard Road
Pleasanton, California

Gentlemen:

This Site Update has been prepared by GeoStrategies Inc. (GSI) and presents the results of the 1991 third quarter ground-water sampling performed by Gettler-Ryan Inc. (G-R) for the above referenced site (Plate 1). The scope of work presented in this document was performed at the request of Shell Oil Company. Field work and laboratory analysis methods were performed to comply with current State of California Water Resources Control Board guidelines.

SITE BACKGROUND

There are currently twelve ground-water monitoring wells in the site vicinity; Wells S-2 through S-10 and SR-1 through SR-3 (Plate 2). These wells were installed between 1986 and 1989 by EMCON Associates, Woodward-Clyde Consultants, Pacific Environmental Group, and GSI. The old underground storage tanks were replaced in August 1988. Wells S-2 through S-5 and SR-1 through SR-3 are onsite. Wells S-6 through S-10 are offsite. These wells were installed to evaluate the vertical and horizontal extent of petroleum hydrocarbons in soils and shallow groundwater beneath the site. Well S-1 was properly destroyed in August 1988.

Quarterly monitoring and sampling of wells began in 1988. Ground-water samples have been analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) according to EPA Method 8020.

CURRENT QUARTERLY SAMPLING RESULTS

Potentiometric Data

Prior to ground-water sampling, depth to water-level measurements were obtained from each monitoring well using an electronic oil-water interface probe. Static ground-water levels were measured from the surveyed top of well box and recorded to the nearest 0.01 foot. Corresponding elevations, referenced to Mean Sea Level (MSL) datum, are presented in Table 1. Water-level data were used to construct a quarterly potentiometric map (Plate 3). Shallow ground-water flows southeast at a calculated gradient of 0.01.

Floating Product Measurements

Each well was checked for the presence of floating product using an electronic oil-water interface probe. A clear acrylic bailer was used to confirm probe results. Floating product was not observed in the wells this quarter.

Ground-water Analytical Data

Ground-water samples were collected on September 5, 1991. The samples were analyzed for TPH-Gasoline according to EPA Method 8015 (Modified) and BTEX according to EPA Method 8020 by International Technology (IT) Analytical Services, a State of California certified laboratory located in San Jose, California.

TPH-Gasoline was detected in Wells S-2, S-4, S-5, S-6, and SR-3 at concentrations ranging from 0.06 to 4.7 parts per million (ppm). Benzene was detected in these same wells, and in Wells SR-1 and SR-2. Concentrations ranged from 0.0012 to 0.66 ppm. These data are summarized in Table 2 and included in Appendix A. These data were used to construct TPH-Gasoline and benzene isoconcentration maps (Plates 4 and 5). Historical chemical analytical data are presented in Table 3.

Quality Control

Quality Control (QC) samples for this quarter's sampling included a trip blank, a field blank, and a duplicate sample. The trip and field blanks were prepared in the laboratory and field using organic-free water to evaluate laboratory and field handling procedures. The duplicate sample was collected as a second (split) sample to assess laboratory analytical precision. The results of QC sample analyses are presented in Table 2.

If you have any questions, please call.

GeoStrategies Inc. by,

Stephen J. Carter
Geologist

John F. Vargas
Senior Geologist
R.G. 5046

REGISTERED GEOLOGIST
JOHN F. VARGAS
NO. 5046
STATE OF CALIFORNIA

SJC/JFV/kjj

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Potentiometric Map
Plate 4. TPH-G Isoconcentration Map
Plate 5. Benzene Isoconcentration Map

Appendix A: Analytical Laboratory Report and Chain-of-Custody

QC Review: _____

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TABLE 1

FIELD MONITORING DATA

WELL NO.	MONITORING DATE	CASING DIA. (IN)	TOTAL WELL DEPTH (FT)	WELL ELEV. (FT)	DEPTH TO WATER (FT)	PRODUCT THICKNESS (FT)	STATIC WATER ELEV. (FT)	PURGED WELL VOLUMES	pH	TEMPERATURE (F)	CONDUCTIVITY (uMHOS/cm)
S-2	05-Sep-91	3	34.4	329.21	15.50	----	313.71	5	6.69	74.0	3780
S-3	05-Sep-91	3	34.8	327.67	13.58	----	314.09	5	6.69	70.3	4020
S-4	05-Sep-91	3	35.6	328.53	14.84	----	313.69	3	6.33	68.0	3130
S-5	05-Sep-91	3	34.3	329.66	17.30	----	312.36	3	6.88	68.4	2190
S-6	05-Sep-91	3	34.2	327.62	16.00	----	311.62	5	6.78	68.0	1864
S-7	05-Sep-91	3	34.6	328.67	17.50	----	311.17	5	6.58	67.6	3370
S-8	05-Sep-91	3	33.7	327.00	15.71	----	311.29	5	6.18	66.5	3760
S-9	05-Sep-91	3	34.8	328.24	18.34	----	309.90	5	6.17	66.7	3390
S-10	05-Sep-91	3	34.2	326.55	14.56	----	311.99	5	6.79	65.9	2010
SR-1	05-Sep-91	4	35.2	329.78	17.17	----	312.61	5	6.80	69.6	3680
SR-2	05-Sep-91	4	35.2	328.35	15.52	----	312.83	5	6.32	67.8	3370
SR-3	05-Sep-91	4	35.1	329.11	15.60	----	313.51	5	6.23	68.7	3590

Notes: 1. Static water elevations referenced to Mean Sea Level (MSL).
2. Physical parameter measurements represent stabilized values.

TABLE 2

GROUND-WATER ANALYSIS DATA

WELL NO	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
S-2	05-Sep-91	11-Sep-91	0.09	0.012	0.0032	0.0025	0.0023
S-3	05-Sep-91	11-Sep-91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-4	05-Sep-91	12-Sep-91	0.58	0.031	0.0008	0.053	0.026
S-5	05-Sep-91	13-Sep-91	4.7	0.66	0.15	0.17	0.28
S-6	05-Sep-91	12-Sep-91	0.06	<0.0005	0.0008	<0.0005	0.0005
S-7	05-Sep-91	11-Sep-91	<0.05	<0.0005	0.0006	<0.0005	<0.0005
S-8	05-Sep-91	11-Sep-91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-9	05-Sep-91	11-Sep-91	<0.05	<0.0005	0.0008	<0.0005	<0.0005
S-10	05-Sep-91	11-Sep-91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

CURRENT REGIONAL WATER QUALITY CONTROL BOARD MAXIMUM CONTAMINANT LEVELS
Benzene 0.001 ppm Xylenes 1.750 ppm Ethylbenzene 0.680 ppm

CURRENT DHS ACTION LEVELS
Toluene 0.1000 ppm

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million

SD = Duplicate Sample
SF = Field Blank
TB = Trip Blank

Note: 1. All data shown as <x is reported as ND (none detected).
2. DHS Action Levels and MCLs are subject to change pending State review.

TABLE 2

GROUND-WATER ANALYSIS DATA

WELL NO	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
SR-1	05-Sep-91	11-Sep-91	<0.05	0.0086	<0.0005	0.0007	<0.0005
SR-2	05-Sep-91	11-Sep-91	<0.05	0.0012	<0.0005	0.0012	<0.0005
SR-3	05-Sep-91	11-Sep-91	0.16	0.019	<0.0005	0.006	0.0059
SD-2	05-Sep-91	11-Sep-91	0.09	0.013	0.0038	0.0031	0.0026
SF-4	05-Sep-91	11-Sep-91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	----	11-Sep-91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
06-Nov-87	S-1	0.92	0.230	<0.005	0.150	0.150
14-Feb-88	S-1	3.5	1.3	<0.04	0.5	0.5
06-Nov-87	S-2	16.0	0.87	0.10	2.7	2.7
14-Feb-88	S-2	1.8	0.44	<0.01	0.14	0.14
13-Oct-88	S-2	0.55	0.11	0.001	0.045	0.015
31-Jan-89	S-2	0.62	0.17	0.002	0.062	0.014
07-Mar-89	S-2	1.90	0.26	0.27	0.13	0.26
26-Jun-89	S-2	0.32	0.088	0.001	0.032	0.010
08-Sep-89	S-2	0.23	0.08	0.001	0.030	0.015
14-Dec-89	S-2	0.16	0.056	0.0005	0.021	0.003
05-Mar-90	S-2	0.71	0.057	<0.0005	<0.0005	0.088
14-Jun-90	S-2	0.11	0.039	0.0005	0.011	0.002
02-Oct-90	S-2	0.29	0.084	0.0017	0.16	0.0081
18-Dec-90	S-2	0.061	0.018	0.0014	0.0022	0.0024
20-Mar-91	S-2	0.11	0.03	0.0022	0.01	0.0070
26-Jun-91	S-2	0.05*	0.0063	<0.0005	0.0033	0.0019
05-Sep-91	S-2	0.09	0.012	0.0032	0.0025	0.0023
14-Feb-88	S-3	<0.05	<0.0005	<0.001	<0.004	<0.004
13-Oct-88	S-3	<0.05	<0.0005	<0.001	<0.001	<0.003
31-Jan-89	S-3	<0.05	<0.0005	<0.001	<0.001	<0.003
07-Mar-89	S-3	<0.05	<0.0005	<0.001	<0.001	<0.003
26-Jun-89	S-3	<0.05	<0.0005	<0.001	<0.001	<0.003
08-Sep-89	S-3	<0.05	<0.0005	<0.001	<0.001	<0.003
14-Dec-89	S-3	<0.05	<0.0005	<0.0005	<0.0005	<0.001
05-Mar-90	S-3	<0.050	<0.0005	<0.0005	<0.0005	<0.001
14-Jun-90	S-3	<0.5	<0.0005	<0.0005	<0.0005	<0.001

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
02-Oct-90	S-3	<0.05	<0.0005	<0.0005	<0.0005	0.0010
18-Dec-90	S-3	<0.05	<0.0005	0.0016	<0.0005	0.0020
20-Mar-91	S-3	0.07	0.0023	0.0089	0.0040	0.023
26-Jun-91	S-3	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
05-Sep-91	S-3	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
14-Feb-88	S-4	5.1	0.16	0.008	0.73	0.73
13-Oct-88	S-4	0.53	0.024	0.001	0.025	0.016
31-Jan-89	S-4	1.1	0.033	0.002	0.020	0.024
07-Mar-89	S-4	0.65	0.037	0.001	0.035	0.027
26-Jun-89	S-4	0.67	0.11	<0.001	0.085	0.071
08-Sep-89	S-4	0.38	0.032	<0.001	0.036	0.026
14-Dec-89	S-4	0.21	0.021	<0.0005	0.030	0.023
05-Mar-90	S-4	0.35	0.043	<0.0005	0.024	0.047
14-Jun-90	S-4	0.43	0.074	<0.0005	0.071	0.046
02-Oct-90	S-4	0.70	0.074	0.0022	0.10	0.055
18-Dec-90	S-4	1.4	0.18	0.0029	0.28	0.23
20-Mar-91	S-4	1.2	0.10	<0.002	0.21	0.13
26-Jun-91	S-4	0.22	0.014	<0.0005	0.034	0.017
05-Sep-91	S-4	0.58	0.031	0.0008	0.053	0.026
14-Feb-88	S-5	1.0	0.04	0.086	0.180	0.180
13-Oct-88	S-5	0.56	0.066	0.020	0.018	0.036
31-Jan-89	S-5	0.18	0.027	0.008	0.009	0.013
07-Mar-89	S-5	3.8	0.52	0.53	0.26	0.57
26-Jun-89	S-5	<0.05	0.0038	<0.001	0.002	<0.003
08-Sep-89	S-5	0.11	0.025	0.002	0.002	0.012
14-Dec-89	S-5	1.7	0.30	0.086	0.067	0.14
05-Mar-90	S-5	1.1	0.10	0.11	0.079	0.24

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
14-Jun-90	S-5	0.6	0.094	0.036	0.04	0.062
02-Oct-90	S-5	4.5	1.4	0.16	0.26	0.30
20-Nov-90	S-5	16.	4.6	0.72	0.79	1.0
18-Dec-90	S-5	25.	7.6	1.1	1.3	2.3
20-Mar-91	S-5	0.31	0.039	0.012	0.018	0.03
26-Jun-91	S-5	1.3	0.25	0.062	0.12	0.16
05-Sep-91	S-5	4.7	0.66	0.15	0.17	0.28
13-Oct-88	S-6	1.1	0.0130	0.001	0.042	0.033
31-Jan-89	S-6	0.34	0.0038	<0.001	0.008	0.003
07-Mar-89	S-6	0.19	0.0038	<0.001	0.007	0.003
26-Jun-89	S-6	0.48	0.015	<0.001	0.006	<0.003
08-Sep-89	S-6	0.27	0.0013	0.001	0.007	<0.003
15-Dec-89	S-6	0.32	0.0010	<0.0005	0.0026	<0.001
06-Mar-90	S-6	0.42	0.0031	<0.0005	0.014	<0.001
14-Jun-90	S-6	0.37	0.0037	0.0009	0.0048	0.003
02-Oct-90	S-6	0.19	0.0066	0.0016	0.0019	0.0028
18-Dec-90	S-6	0.43	0.010	0.0007	0.0016	0.0015
20-Mar-91	S-6	0.13*	0.0066	0.0006	0.0007	0.003
26-Jun-91	S-6	0.12*	0.0038	0.0008	<0.0005	0.0017
05-Sep-91	S-6	0.06	<0.0005	0.0008	<0.0005	0.0005
13-Oct-88	S-7	<0.05	0.0006	0.001	<0.001	<0.003
31-Jan-89	S-7	<0.05	<0.0005	<0.001	<0.001	<0.003
07-Mar-89	S-7	<0.05	<0.0005	<0.001	<0.001	<0.003
26-Jun-89	S-7	<0.05	<0.0005	<0.001	<0.001	<0.003
08-Sep-89	S-7	<0.05	<0.0005	<0.001	<0.001	<0.003
15-Dec-89	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.001
06-Mar-90	S-7	<0.050	<0.0005	<0.0005	<0.0005	<0.001

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
14-Jun-90	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.001
02-Oct-90	S-7	<0.05	<0.0005	0.0006	<0.0005	0.0009
18-Dec-90	S-7	<0.05	0.0005	<0.0005	<0.0005	0.00086
20-Mar-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
26-Jun-91	S-7	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
05-Sep-91	S-7	<0.05	<0.0005	0.0006	<0.0005	<0.0005
07-Mar-89	S-8	<0.05	0.0012	0.001	<0.001	<0.003
26-Jun-89	S-8	<0.05	0.0008	0.001	<0.001	<0.003
08-Sep-89	S-8	<0.05	<0.0005	<0.001	<0.001	<0.003
14-Dec-89	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.001
05-Mar-90	S-8	<0.050	<0.0005	0.0005	<0.0005	<0.001
14-Jun-90	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.001
02-Oct-90	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
18-Dec-90	S-8	<0.05	0.0029	0.0070	0.0010	0.0064
20-Mar-91	S-8	0.05*	0.0008	0.0016	0.0026	0.0052
26-Jun-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
05-Sep-91	S-8	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
07-Mar-89	S-9	<0.05	<0.0005	<0.001	<0.001	<0.003
26-Jun-89	S-9	<0.05	<0.0005	<0.001	<0.001	<0.003
08-Sep-89	S-9	<0.05	0.0017	0.002	<0.001	<0.003
15-Dec-89	S-9	<0.05	0.0005	<0.0005	<0.0005	<0.001
06-Mar-90	S-9	<0.050	<0.0005	<0.0005	<0.0005	<0.001
14-Jun-90	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.001
02-Oct-90	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
18-Dec-90	S-9	<0.05	0.020	0.027	0.0071	0.035
20-Mar-91	S-9	0.07*	0.0007	0.0007	<0.0005	0.0010
26-Jun-91	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
05-Sep-91	S-9	<0.05	<0.0005	0.0008	<0.0005	<0.0005
11-Aug-89	S-10	<0.05	<0.0005	<0.001	<0.001	<0.003
08-Sep-89	S-10	<0.05	<0.0005	<0.001	<0.001	<0.003
15-Dec-89	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.001
06-Mar-90	S-10	<0.050	<0.0005	<0.0005	<0.0005	<0.001
14-Jun-90	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.001
02-Oct-90	S-10	<0.05	<0.0005	<0.0005	<0.0005	0.0010
18-Dec-90	S-10	<0.05	<0.0005	<0.0005	<0.0005	0.0014
20-Mar-91	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
26-Jun-91	S-10	0.05	0.0018	0.0058	0.0019	0.013
05-Sep-91	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
11-Oct-89	SR-1	0.20	0.10	<0.001	0.010	0.010
14-Dec-89	SR-1	0.5	0.21	<0.0005	0.016	0.016
05-Mar-90	SR-1	0.064	0.020	<0.0005	0.0015	0.004
14-Jun-90	SR-1	0.06	0.017	<0.0005	0.0019	0.001
02-Oct-90	SR-1	<0.05	0.0050	<0.0005	<0.0005	<0.0005
18-Dec-90	SR-1	<0.05	0.028	0.0055	0.0045	0.0045
20-Mar-91	SR-1	<0.05*	0.0042	<0.0005	0.0014	0.0005
26-Jun-91	SR-1	<0.05	0.0050	<0.0005	0.0005	<0.0005
05-Sep-91	SR-1	<0.05	0.0086	<0.0005	0.0007	<0.0005
11-Oct-89	SR-2	0.88	<0.01	0.001	0.029	0.033
14-Dec-89	SR-2	1.1	0.017	<0.0005	0.10	0.067
05-Mar-90	SR-2	0.14	0.0030	<0.0005	0.012	0.007
14-Jun-90	SR-2	<0.05	<0.0005	<0.0005	0.0026	<0.001
02-Oct-90	SR-2	<0.05	<0.0005	<0.0005	0.0005	<0.0005

TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHLYBENZENE (PPM)	XYLENES (PPM)
18-Dec-90	SR-2	<0.05	0.0016	0.0014	0.0016	0.0027
20-Mar-91	SR-2	0.09	0.0013	<0.0005	0.0061	0.0014
26-Jun-91	SR-2	<0.05	0.0006	<0.0005	0.0017	<0.0005
05-Sep-91	SR-2	<0.05	0.0012	<0.0005	0.0012	<0.0005
11-Oct-89	SR-3	0.50	0.092	0.010	0.043	0.10
14-Dec-89	SR-3	2.4	0.31	0.027	0.17	0.34
05-Mar-90	SR-3	0.070	0.015	0.0008	0.0058	0.010
14-Jun-90	SR-3	0.47	0.059	0.0023	0.035	0.05
02-Oct-90	SR-3	1.7	0.091	0.0062	0.0070	0.10
18-Dec-90	SR-3	0.14	0.010	0.0008	0.0075	0.014
20-Mar-91	SR-3	1.35	0.97	0.0036	0.064	0.079
26-Jun-91	SR-3	0.24	0.048	0.015	0.020	N/A
26-Jun-91	SR-3	0.24	0.048	0.0042	0.015	0.020
05-Sep-91	SR-3	0.16	0.019	<0.0005	0.006	0.0059

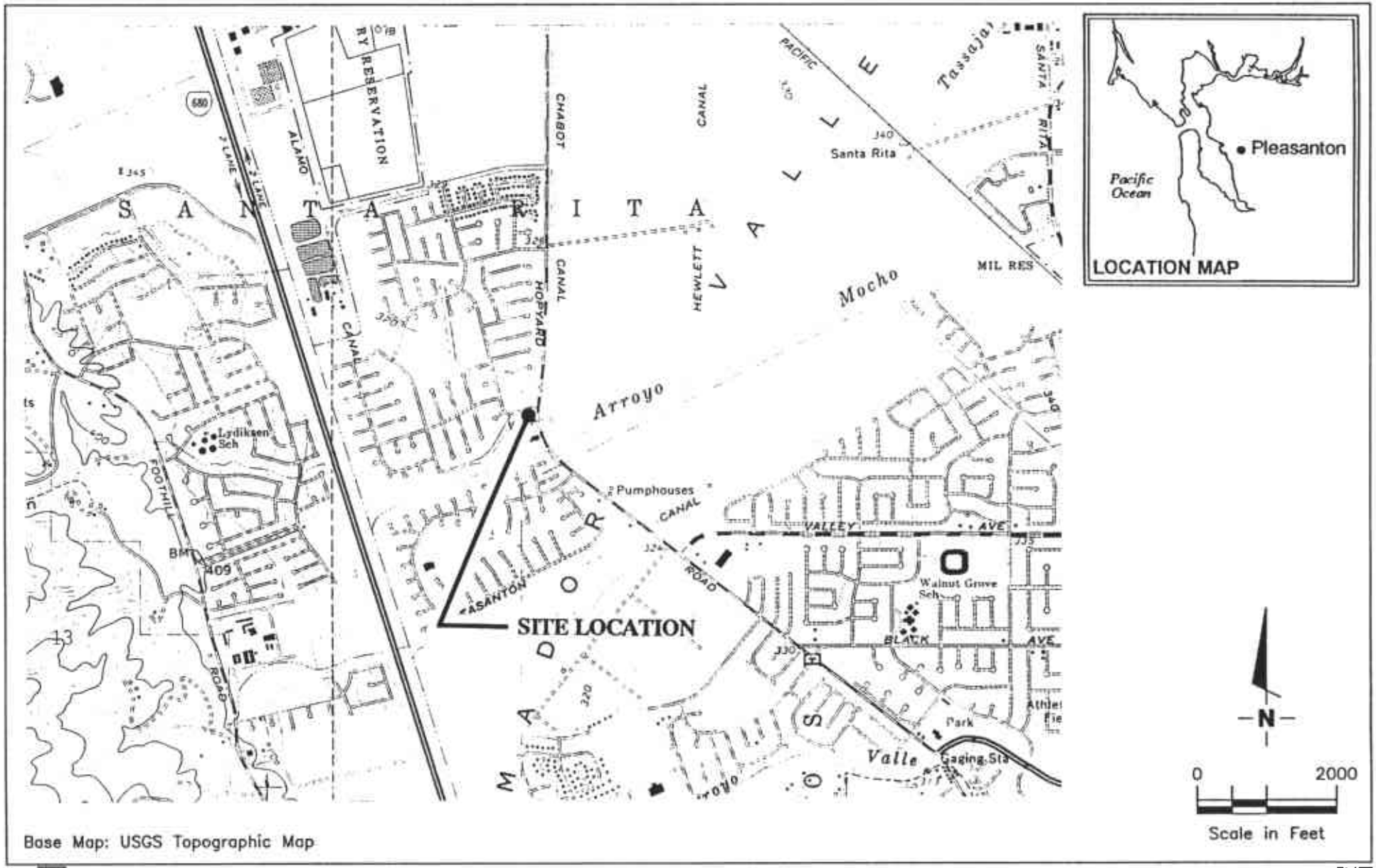
TABLE 3

HISTORICAL GROUND-WATER QUALITY DATABASE

Current Regional Water Quality Control Board Maximum Contaminant Levels
Benzene = 0.001 ppm Xylenes = 1.750 ppm Ethylbenzene = 0.680 ppm

Current DHS Action Levels Toluene = 0.1000 ppm

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million
* Compounds detected and calculated as low boiling hydrocarbons consist of compounds eluting within the chromatographic range of gasoline, but are not characteristic of the standard gasoline standard pattern.
NOTE: 1. DHS Action levels and MCL's are subject to change pending State of California review.
2. All data shown as <X are reported as ND (none detected).

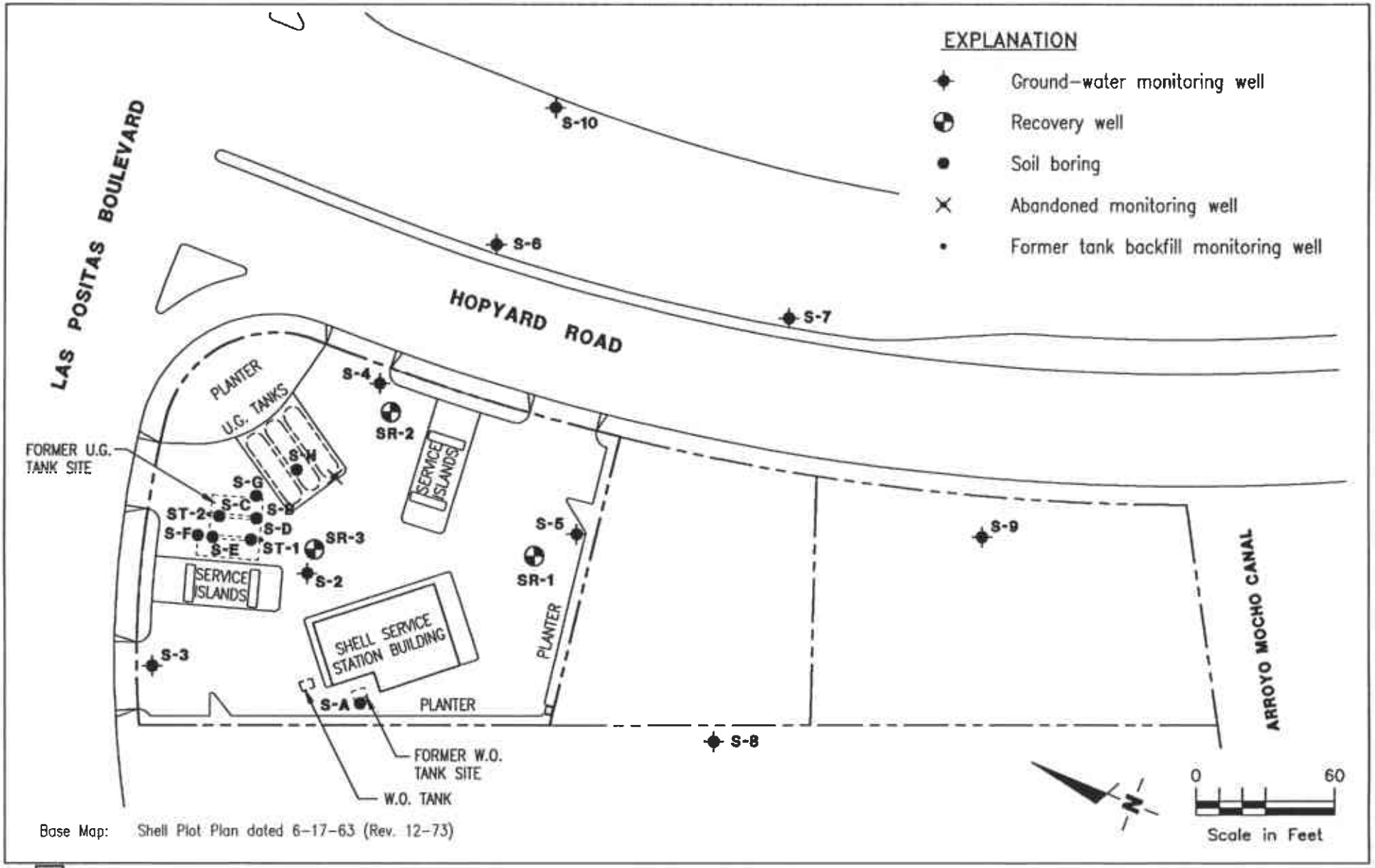


GeoStrategies Inc.

VICINITY MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **1**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7632		2/91	



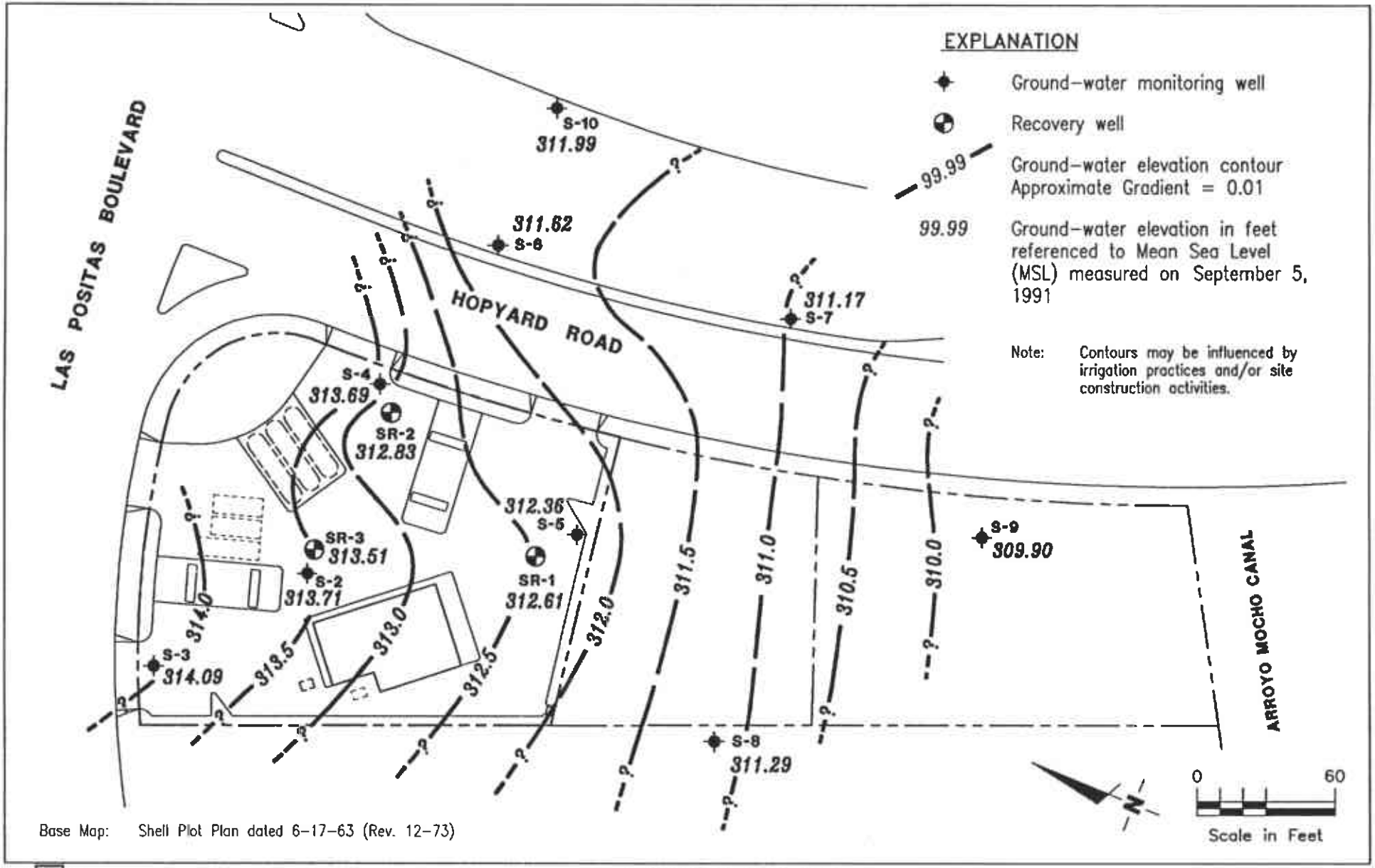
Base Map: Shell Plot Plan dated 6-17-63 (Rev. 12-73)

GeoStrategies Inc.

SITE PLAN
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-11	EFS	11/91	

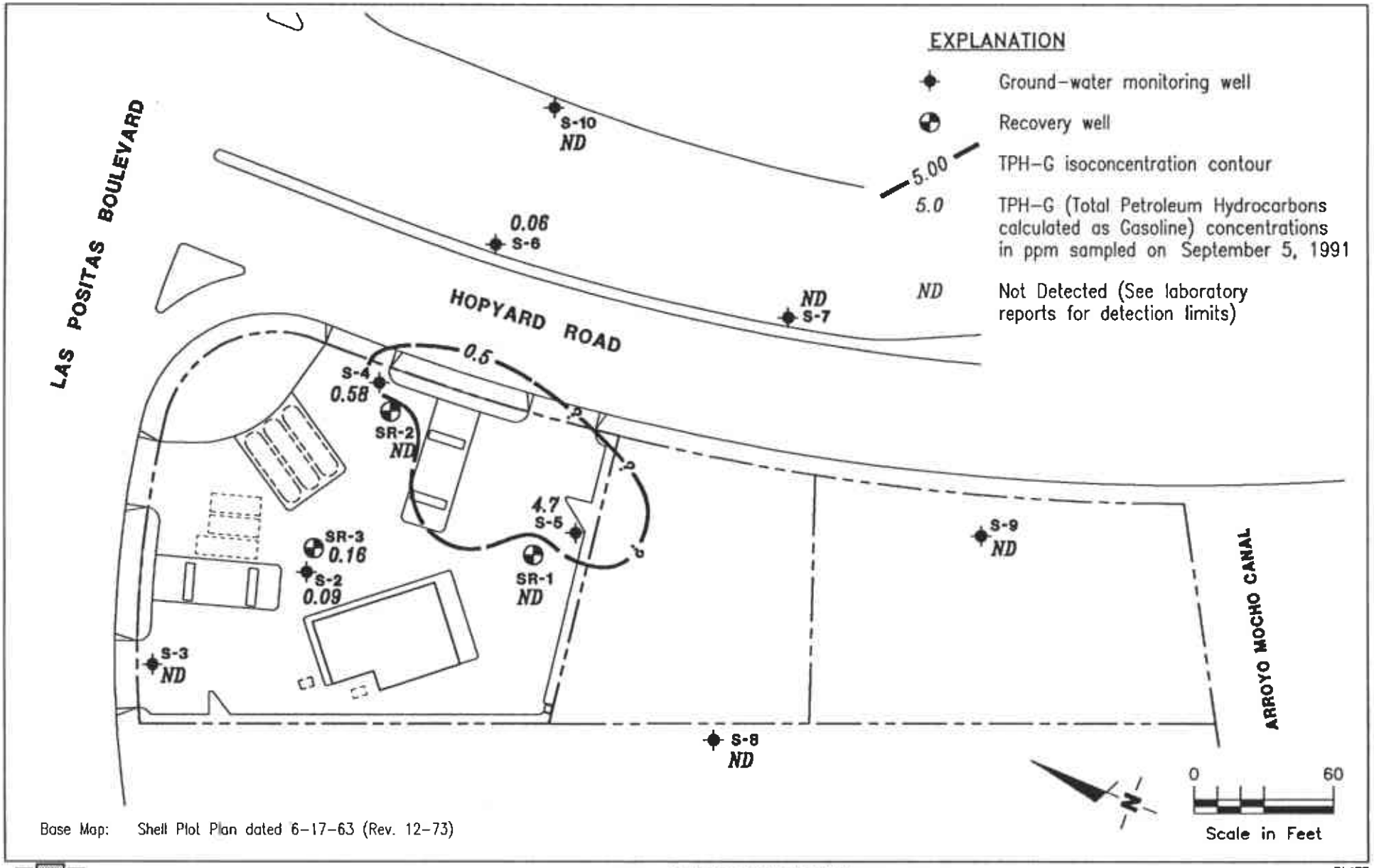


GeoStrategies Inc.

POTENTIOMETRIC MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **3**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-11	EPS	11/91	



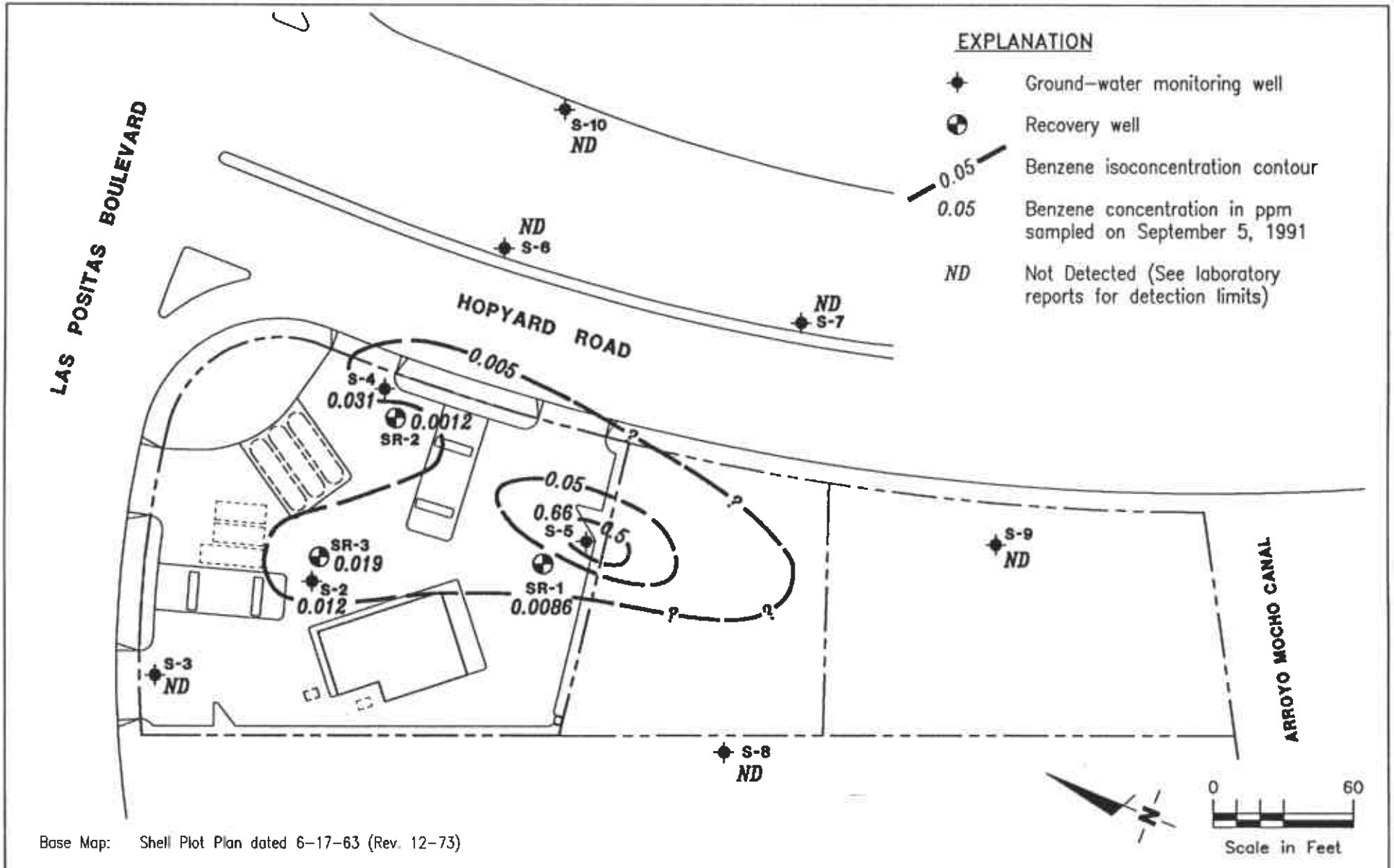
Base Map: Shell Plot Plan dated 6-17-63 (Rev. 12-73)

GeoStrategies Inc.

TPH-G ISOCONCENTRATION MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **4**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201-11	CPS	11/91	



Base Map: Shell Plot Plan dated 6–17–63 (Rev. 12–73)

GeoStrategies Inc.

BENZENE ISOCONCENTRATION MAP
Shell Service Station
3790 Hopyard Road
Pleasanton, California

PLATE **5**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
763201–11	ES	11/91	

APPENDIX A
ANALYTICAL LABORATORY REPORT
AND CHAIN-OF-CUSTODY

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Gettler-Ryan
2150 West Winton
Hayward, CA 94545
Tom Paulson

Date: 09/25/91

Work Order: T1-09-054

P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: GR3632, 3790 Hopyard, Plsntn
Date Received: 09/06/91
Number of Samples: 9
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

9/26/91

Hamid Allameh
Petroleum GC Team Leader

Company: Shell Oil Company
Date: 09/26/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T1-09-054

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-2
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-01
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH = 5

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.09
BTEX		
Benzene	0.0005	0.012
Toluene	0.0005	0.0032
Ethylbenzene	0.0005	0.0025
Xylenes (total)	0.0005	0.0023

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	99.
1,3-Dichlorobenzene (BTEX)	97.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: S-3
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-02
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	98.
1,3-Dichlorobenzene (BTEX)	95.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-4
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-03
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/12/91
Low Boiling Hydrocarbons	Mod.8015		09/12/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.58
BTEX		
Benzene	0.0005	0.031
Toluene	0.0005	0.0008
Ethylbenzene	0.0005	0.053
Xylenes (total)	0.0005	0.026

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	103.
1,3-Dichlorobenzene (BTEX)	93.

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T1-09-054

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-5
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-04
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/13/91
Low Boiling Hydrocarbons	Mod.8015		09/13/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.25	4.7
BTEX		
Benzene	0.0025	0.66
Toluene	0.0025	0.15
Ethylbenzene	0.0025	0.17
Xylenes (total)	0.0025	0.28

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	118.
1,3-Dichlorobenzene (BTEX)	98.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-6**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109054-05**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/12/91
Low Boiling Hydrocarbons	Mod.8015		09/12/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.06
BTEX		
Benzene	0.0005	None
Toluene	0.0005	0.0008
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	0.0005

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	105.
1,3-Dichlorobenzene (BTEX)	94.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-7**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109054-06**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	0.0006
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	88.
1,3-Dichlorobenzene (BTEX)	100.

Company: Shell Oil Company
Date: 09/26/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T1-09-054

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: S-7 MS/MSD
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-06D
EXTRACTION DATE:
ANALYSIS DATE: 09/11/91
ANALYSIS METHOD: 8020

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	LS Result	LSD Result	LS %Rec	LSD %Rec	RPD
Benzene	None	50.	50.5	N/A	101.	N/A	N/A
Toluene	None	50.	50.7	N/A	101.	N/A	N/A
Ethylbenzene	None	50.	51.0	N/A	102.	N/A	N/A
Total Xylenes	None	150.	149.	N/A	99.	N/A	N/A

SURROGATES	LS %Rec	LSD %Rec
1,3-Dichloroebenzene	94.	N/A

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plantn

Work Order: T1-09-054

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: S-7 MS/MSD
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-06D
EXTRACTION DATE:
ANALYSIS DATE: 09/11/91
ANALYSIS METHOD: 8020

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Benzene	(.444)	50.0	56.4	68.4	113.	137.	19.
Toluene	0.607	50.0	56.6	67.9	112.	136.	19.
Ethyl benzene	ND<0.5	50.0	53.8	65.2	108.	130.	18.
Xylenes	ND<0.5	150.	167.	202.	111.	135.	20.

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	104.	114.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: S-8
SAMPLE DATE: 09/05/91
LAB SAMPLE ID: T109054-07
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	103.
1,3-Dichlorobenzene (BTEX)	92.

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T1-09-054

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-9**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109054-08**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	0.0008
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	102.
1,3-Dichlorobenzene (BTEX)	94.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **S-10**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109054-09**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	101.
1,3-Dichlorobenzene (BTEX)	96.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: T109054-10A
EXTRACTION DATE:
ANALYSIS DATE: 09/12/91
ANALYSIS METHOD: **Mod.8015**

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	LS Result	LSD Result	LS %Rec	LSD %Rec	RPD
Gasoline	None	500.	525.	N/A	105.	N/A	N/A

SURROGATES	LS %Rec	LSD %Rec
1,3-Dichloroebenzene	112.	N/A

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-054

TEST CODE **QC** TEST NAME **Quality Control**

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE **TPHVB** TEST NAME **TPH Gas,BTEX by 8015/8020**

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Gettler-Ryan
2150 West Winton
Hayward, CA 94545
Tom Paulson

Date: 09/25/91

Work Order: T1-09-055

P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: GR3632, 3790 Hopyard, Plsntn
Date Received: 09/06/91
Number of Samples: 6
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

Hamid Allameh 9/26/91

Hamid Allameh
Petroleum GC Team Leader

Company: Shell Oil Company
Date: 09/26/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

IT ANALYTICAL SERVICES
SAN JOSE, CA

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SR-1**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109055-01**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	0.0086
Toluene	0.0005	None
Ethylbenzene	0.0005	0.0007
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	99.
1,3-Dichlorobenzene (BTEX)	90.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SR-2**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109055-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	**None**
BTEX		
Benzene	0.0005	**0.0012**
Toluene	0.0005	**None**
Ethylbenzene	0.0005	**0.0012**
Xylenes (total)	0.0005	**None**

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	99.
1,3-Dichlorobenzene (BTEX)	92.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SR-3**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109055-03**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	**0.16**
BTEX		
Benzene	0.0005	**0.019**
Toluene	0.0005	**None**
Ethylbenzene	0.0005	**0.006**
Xylenes (total)	0.0005	**0.0059**

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	98.
1,3-Dichlorobenzene (BTEX)	93.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SD-2**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109055-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH = 5**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	**0.09**
BTEX		
Benzene	0.0005	**0.013**
Toluene	0.0005	**0.0038**
Ethylbenzene	0.0005	**0.0031**
Xylenes (total)	0.0005	**0.0026**

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	98.
1,3-Dichlorobenzene (BTEX)	97.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **SF-4**
SAMPLE DATE: **09/05/91**
LAB SAMPLE ID: **T109055-05**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	107.
1,3-Dichlorobenzene (BTEX)	98.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **Trip Blank**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T109055-06**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		09/11/91
Low Boiling Hydrocarbons	Mod.8015		09/11/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None
BTEX		
Benzene	0.0005	None
Toluene	0.0005	None
Ethylbenzene	0.0005	None
Xylenes (total)	0.0005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	109.
1,3-Dichlorobenzene (BTEX)	93.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T109055-07A**
EXTRACTION DATE:
ANALYSIS DATE: **09/11/91**
ANALYSIS METHOD: **8020**

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	LS Result	LSD Result	LS %Rec	LSD %Rec	RPD
Benzene	None	50.	50.5	N/A	101.	N/A	N/A
Toluene	None	50.	50.7	N/A	101.	N/A	N/A
Ethylbenzene	None	50.	51.0	N/A	102.	N/A	N/A
Total Xylenes	None	150.	149.	N/A	99.	N/A	N/A

SURROGATES	LS %Rec	LSD %Rec
1,3-Dichloroebenzene	94.	N/A

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 09/25/91
Client Work ID: GR3632, 3790 Hopyard, Plsntn

Work Order: T1-09-055

TEST CODE **QC** TEST NAME **Quality Control**

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE **TPHVB** TEST NAME **TPH Gas,BTEX by 8015/8020**

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

Gettler - Ryan Inc. T1-09-054 / T1-09-055

ENVIRONMENTAL DIVISION

2769 Chain of Custody

COMPANY Shell JOB NO. _____

JOB LOCATION 3790 Hopyard Rd

CITY Pleasanton PHONE NO. 783-7500

AUTHORIZED Tom Pawlson DATE 9-5-91 P.O. NO. 3632.01

SAMPLE ID	NO. OF CONTAINERS	SAMPLE MATRIX	DATE/TIME SAMPLED	ANALYSIS REQUIRED	SAMPLE CONDITION LAB ID
S-2	3	H_2O	9-5-91 / 13:19	THC (gas) BTXE	Cool
S-3			/ 1206		
S-4			/ 1335		
S-5			/ 1308		
S-6			/ 916		
S-7			/ 848		
S-8			/ 1030		
S-9			/ 0818		
S-10			/ 955		
SR-1			/ 1049		
SR-2			/ 11:26		
SR-3			/ 12:55		
SD-2			/ —		
~~SRF-3~~ SF-4			/ 13:35		
Trip Blank	1				

RELINQUISHED BY: 9/5/91

RECEIVED BY: 9/5/91
REFRIG #1

RELINQUISHED BY: Delvig #1 9-6-91 08:00

RECEIVED BY: 9-6-91 08:00

RELINQUISHED BY: 9-6-91 9:5

RECEIVED BY LAB: Joann DeHerrera 9/6/91 09:30

DESIGNATED LABORATORY: IT (Sac) DHS #: 137

REMARKS: NORMAL TAT WIC # 204-6138-0501

Exp: 5461

Eng: J Brasted

DATE COMPLETED 9-5-91 FOREMAN _____