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

91 OCT 30 AM 8:04

October 25, 1991

County of Alameda
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Attention: Ms. Susan L. Hugo Certified Mail

Reference: ARCO Service Station #4931
731 W. MacArthur Street
Oakland, California 94611

Ms. Hugo:

As requested of ARCO Products Company, we are forwarding the Quarter Monitoring Report dated October 25, 1991 for the above referenced location. This report presents the results of the third quarter 1991 ground-water sampling conducted July 10, 1991 at this site.

If you should have any questions or comments, please call.

Sincerely,

John F. Vargas

JFV/cg

Enclosure

cc: Mr. Charles Carmel, ARCO Products Company
Mr. H. C. Winsor, ARCO Products Company
Mr. Tom Callaghan, Regional Water Quality Control Board (Certified Mail)

GeoStrategies Inc.

QUARTERLY MONITORING REPORT

ARCO Service Station No. 4931
731 West MacArthur Boulevard
Oakland, California

790901-13

October 25, 1991

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

October 25, 1991

ARCO Products Company
P.O. Box 5811
San Mateo, California 94402

Attn: Mr. Charles Carmel

Re: QUARTERLY MONITORING REPORT
ARCO Service Station No. 4931
731 West MacArthur Boulevard
Oakland, California

Gentlemen:

This Quarterly Monitoring Report by GeoStrategies Inc. (GSI) presents results of the 1991 third quarter ground-water sampling performed on July 10, 1991, by Gettler-Ryan Inc. (G-R) for the above referenced location (Plates 1 and 2). The scope of work presented in this document was performed at the request of ARCO Products Company. Field work and laboratory analysis methods were performed to comply with current State of California Water Resources Control Board (SWRCB) guidelines. G-R ground-water sampling procedures are presented in GSI Site Update report dated October 4, 1990.

SITE BACKGROUND

There are currently eleven monitoring wells at the site; Wells A-2 through A-12 (Plate 2). These wells were installed between 1982 and 1987 by Groundwater Technology, Inc. and Pacific Environmental Group. Wells A-2 through A-10 are onsite and Wells A-11 and A-12 are offsite. These wells were installed to evaluate the horizontal extent of petroleum hydrocarbons in the groundwater beneath the site.

Quarterly monitoring and sampling of wells began in 1989. 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, water levels were measured in each of the monitoring wells using an electronic oil-water interface probe (Table 1). Static water-levels were measured from the surveyed top of well box and recorded to the nearest $\pm$0.01 foot. Elevations corresponding to Mean Sea Level (MSL) are presented in Table 1. The potentiometric contour map presented on Plate 3 was prepared from the water-level measurement data. The local hydraulic gradient in the first water-bearing zone was calculated to be 0.02 with ground-water flow approximately to the southwest.

Floating Product Measurements

Each monitoring well was checked for the presence of floating product with an electronic oil-water interface probe. A clear acrylic bailer was used to confirm interface probe results. Floating product was observed in monitoring well A-8 at a measured thickness of 0.01 feet.

Groundwater Analytical Data

Prior to collecting samples, the monitoring wells were purged until ground-water parameters stabilized. Purge volumes and physical parameter values are presented in Table 1. Ground-water samples were collected on July 10, 1991. The samples were analyzed for TPH-Gasoline according to EPA Method 8015 (Modified) and BTEX according to EPA Method 8020 by Sequoia Analytical (Sequoia), a State-certified laboratory located in Redwood City, California.

Detectable TPH-Gasoline was reported in monitoring wells A-3 (59 parts per billion (ppb)) and A-4 (61000 ppb). Wells A-5 through A-12 were reported as none detected (ND) for TPH-Gasoline. Benzene was detected in monitoring Wells A-4 (2700 ppb), A-6 (1.4 ppb), A-9 (7.8 ppb) and A-11 (0.61 ppb). Wells A-3, A-5, A-7, A-10 and A-12 were reported ND for benzene. A sample from Well A-2 was not submitted for chemical analysis due to insufficient water remaining and slow recharge in the well after purging was complete.

The chemical analytical data are summarized in Table 2. Historical chemical data are summarized in Table 3. TPH-Gasoline and benzene chemical analytical data have been used to prepare a concentration map (Plates 4). The analytical laboratory report and Chain-of-Custody forms are presented in Appendix A and field data sheets are presented in Appendix B.

Quality Control

The Quality control (QC) sample for the third quarter's ground-water sampling was a trip blank. The trip blank was prepared in the Sequoia laboratory using organic-free water to evaluate field and laboratory handling and analytical procedures. The QC sample was reported as ND.

If you have any questions, please call.

GeoStrategies Inc. by,

Cliff M. Garratt
Hydrogeologist

David H. Peterson
C.E.G. 1186

REGISTERED GEOLOGIST
DAVID H. PETERSON
No. 1186
CERTIFIED
Exp 2-30-92
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

CMG/DHP/mlg

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Potentiometric Map
Plate 4. TPH-Gasoline/Benzene Concentration Map

Appendix A: Analytical Laboratory Report and Chain-of-Custody Forms
Appendix B: Field Data Sheets

QC Review:

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 (u MHOS/CM)
A-2	10-Jul-91	3	18.3	55.38	9.57	----	45.81	2	6.72	65.6	712
A-3	10-Jul-91	4	19.3	54.48	11.29	----	43.19	2	6.70	67.5	1099
A-4	10-Jul-91	3	19.7	54.62	11.55	----	43.07	3	6.66	68.9	1035
A-5	10-Jul-91	3	23.9	54.15	11.30	----	42.85	3	6.87	66.1	932
A-6	10-Jul-91	3	25.0	55.13	10.03	----	45.10	5	7.05	67.0	575
A-7	10-Jul-91	3	22.7	54.67	9.82	----	44.85	5	6.97	68.3	579
A-8	10-Jul-91	3	20.7	53.61	10.73	0.01	42.89	----	----	----	----
A-9	10-Jul-91	6	38.7	52.96	10.23	----	42.73	3	6.97	67.7	625
A-10	10-Jul-91	3	28.1	54.16	11.55	----	42.61	5	6.99	66.4	628
A-11	10-Jul-91	3	28.4	53.75	11.18	----	42.57	5	7.15	66.9	630
A-12	10-Jul-91	3	29.0	52.05	10.56	----	41.49	5	7.31	64.7	628

Notes: 1. Static water level elevations referenced to Mean Sea Level (MSL).
2. Physical parameter measurements represent stabilized values.
3. pH values reported in pH units.
4. Static water-levels corrected for floating product (conversion factor = 0.80).

TABLE 2

GROUND-WATER ANALYSES DATA

WELL NO	SAMPLE DATE	ANALYZED DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
A-3	10-Jul-91	22-Jul-91	59	<0.30	<0.30	0.50	0.51
A-4	10-Jul-91	22-Jul-91	61000	2700	8500	1700	8200
A-5	10-Jul-91	22-Jul-91	<30	<0.30	<0.30	<0.30	<0.30
A-6	10-Jul-91	22-Jul-91	<30	1.4	0.39	0.47	1.5
A-7	10-Jul-91	22-Jul-91	<30	<0.30	0.49	<0.30	1.2
A-9	10-Jul-91	22-Jul-91	<30	7.8	<0.30	<0.30	<0.30
A-10	10-Jul-91	22-Jul-91	<30	<0.30	<0.30	<0.30	<0.30
A-11	10-Jul-91	22-Jul-91	<30	0.61	0.46	<0.30	1.0
A-12	10-Jul-91	22-Jul-91	<30	<0.30	<0.30	<0.30	<0.30
TB	----	22-Jul-91	<30	<0.30	<0.30	<0.30	<0.30

CURRENT REGIONAL WATER QUALITY CONTROL BOARD MAXIMUM CONTAMINANT LEVELS
Benzene 1. ppb Xylenes 1,750. ppb Ethylbenzene 680. ppb

CURRENT DHS ACTION LEVELS
Toluene 100.0 ppb

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPB = Parts Per Billion TB = Trip Blank

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

TABLE 3

HISTORICAL GROUND WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
21-Mar-86	A-2	31000.	----	----	----	----
07-Jan-88	A-2	12000.	920.	1500.	----	4000.
20-Mar-89	A-2	22000.	1200.	1800.	1200.	7700.
24-May-89	A-2	9000.	460.	260.	250.	2400.
18-Aug-89	A-2	14000.	900.	200.	<200.	1300.
27-Oct-89	A-2	16000.	1200.	340.	90.	3100.
15-Jan-90	A-2	9900.	1100.	460.	150.	2900.
04-Apr-90	A-2	16000.	1100.	400.	380.	3900.
30-Jul-90	A-2	16000.	1400.	340.	290.	3600.
30-Jul-90	A-2	16000.	1400.	340.	290.	3600.
29-Oct-90	A-2	14000.	1100.	210.	66.	2700.
16-Jan-91	A-2	15000.	1200.	800.	190.	4600.
12-Apr-91	A-2	16000	640	290	280	2600
21-Mar-86	A-3	1000.	----	----	----	----
07-Jan-88	A-3	250.	2.3	8.	----	21.
20-Mar-89	A-3	230.	1.6	<1.	3.	3.
24-May-89	A-3	170.	0.9	2.	1.	<3.
18-Aug-89	A-3	180.	0.7	1.	<1.	<3.
27-Oct-89	A-3	120.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-3	<50.	<0.5	<0.5	<0.5	<1.
04-Apr-90	A-3	88.	1.2	2.0	0.8	4.
30-Jul-90	A-3	120.	8.3	2.9	2.3	12.
29-Oct-90	A-3	780.	10.	27.	18.	85.
16-Jan-91	A-3	69.	2.0	3.5	<0.5	9.6
12-Apr-91	A-3	<30	<0.30	<0.30	<0.30	<0.30
10-Jul-91	A-3	59	<0.30	<0.30	0.50	0.51
20-Mar-89	A-4	360000.	1500.	3700.	6500.	35000.

TABLE 3

HISTORICAL GROUND WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
24-May-89	A-4	1500000.	1000.	2000.	6000.	23000.
04-Apr-90	A-4	40000.	680.	320.	1400.	4900.
12-Apr-91	A-4	1800	<60	90	650	1700
10-Jul-91	A-4	61000	2700	8500	1700	8200
21-Mar-86	A-5	88.	----	----	----	----
07-Jan-88	A-5	<50.	0.5	1.	----	4.
20-Mar-89	A-5	60.	0.5	1.	2.	10.
24-May-89	A-5	<50.	0.5	<1.	<1.	<3.
18-Aug-89	A-5	<50.	<0.5	<1.	<1.	<3.
27-Oct-89	A-5	<50.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-5	<50.	<0.5	<0.5	<0.5	<1.
04-Apr-90	A-5	<50.	<0.5	<0.5	<0.5	<1.
30-Jul-90	A-5	<50.	<0.5	<0.5	<0.5	<0.5
29-Oct-90	A-5	280.	<0.5	<0.5	<0.5	<0.5
16-Jan-91	A-5	<50.	<0.5	<0.5	<0.5	<0.5
12-Apr-91	A-5	<30	<0.30	<0.30	<0.30	0.84
10-Jul-91	A-5	<30	<0.30	<0.30	<0.30	<0.30
21-Mar-86	A-6	<10.	----	----	----	----
21-Mar-86	A-6	<10.	----	----	----	----
07-Jan-88	A-6	390.	54.	89.	----	110.
20-Mar-89	A-6	220.	33.	21.	9.	39.
24-May-89	A-6	110.	13.	6.	3.	13.
18-Aug-89	A-6	<50.	2.1	1.	<1.	<3.
27-Oct-89	A-6	55.	3.8	1.6	1.7	6.
15-Jan-90	A-6	100.	12.	2.5	5.5	18.
04-Apr-90	A-6	100.	17.	7.1	5.5	18.
30-Jul-90	A-6	<50.	2.6	<0.5	<0.5	1.2
29-Oct-90	A-6	<50.	0.7	<0.5	<0.5	<0.5
16-Jan-91	A-6	<50.	<0.5	<0.5	<0.5	<0.5

TABLE 3

HISTORICAL GROUND WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
12-Apr-91	A-6	430	24	5.1	9.4	32
10-Jul-91	A-6	<30	1.4	0.39	0.47	1.5
07-Jan-88	A-7	<50.	<0.5	1.	----	4.
20-Mar-89	A-7	<50.	0.9	<1.	<1.	<3.
24-May-89	A-7	<50.	<0.5	<1.	<1.	<3.
18-Aug-89	A-7	<50.	<0.5	<1.	<1.	<3.
27-Oct-89	A-7	<50.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-7	<50.	<0.5	<0.5	<0.5	<1.
04-Apr-90	A-7	<50.	<0.5	<0.5	<0.5	<1.
30-Jul-90	A-7	<50.	<0.5	<0.5	<0.5	<0.5
29-Oct-90	A-7	<50.	2.7	7.6	1.1	3.0
16-Jan-91	A-7	<50.	<0.5	<0.5	<0.5	<0.5
12-Apr-91	A-7	<30	<0.30	<0.30	<0.30	0.48
10-Jul-91	A-7	<30	<0.30	0.49	<0.30	1.2
07-Jan-88	A-9	300.	45.	14.	----	43.
21-Mar-89	A-9	50.	2.8	1.	1.	3.
24-May-89	A-9	120.	26.	12.	4.	79.
18-Aug-89	A-9	14000.	400.	800.	400.	2000.
27-Oct-89	A-9	1700.	150.	36.	30.	110.
15-Jan-90	A-9	860.	140.	58.	38.	140.
04-Apr-90	A-9	620.	36.	13.	9.4	32.
30-Jul-90	A-9	180.	77.	1.6	2.1	4.2
29-Oct-90	A-9	110.	30.	3.7	4.1	8.3
16-Jan-91	A-9	<50.	15.	<0.5	<0.5	0.6
12-Apr-91	A-9	130	52	0.83	5.3	6.0
10-Jul-91	A-9	<30	7.8	<0.30	<0.30	<0.30
07-Jan-88	A-10	<50.	0.6	11.	----	4.
20-Mar-89	A-10	<50.	<0.5	<1.	<1.	<3.

TABLE 3

HISTORICAL GROUND WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
24-May-89	A-10	<50.	<0.5	<1.	<1.	<3.
18-Aug-89	A-10	<50.	<0.5	<1.	<1.	<3.
27-Oct-89	A-10	<50.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-10	<50.	<0.5	<0.5	<0.5	<1.
30-Jul-90	A-10	<50.	<0.5	<0.5	<0.5	<0.5
29-Oct-90	A-10	<50.	2.3	6.9	1.2	3.0
16-Jan-91	A-10	<50.	<0.5	<0.5	<0.5	<0.5
12-Apr-91	A-10	<30	0.67	0.55	<0.30	0.90
10-Jul-91	A-10	<30	<0.30	<0.30	<0.30	<0.30
07-Jan-88	A-11	<50.	1.1	2.	----	5.
20-Mar-89	A-11	<50.	<0.5	<1.	<1.	<3.
24-May-89	A-11	<50.	<0.5	<1.	<1.	<3.
18-Aug-89	A-11	<50.	<0.5	<1.	<1.	<3.
27-Oct-89	A-11	<50.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-11	<50.	<0.5	<0.5	<0.5	<1.
04-Apr-90	A-11	<50.	<0.5	<0.5	<0.5	<1.
30-Jul-90	A-11	<50.	<0.5	0.6	<0.5	0.5
29-Oct-90	A-11	<50.	0.6	2.4	0.6	1.5
16-Jan-91	A-11	<50.	<0.5	<0.5	<0.5	<0.5
12-Apr-91	A-11	<30	<0.30	0.37	<0.30	<0.30
10-Jul-91	A-11	<30	0.61	0.46	<0.30	1.0
07-Jan-88	A-12	<50.	<0.5	2.	----	<4.
20-Mar-89	A-12	<50.	<0.5	<1.	<1.	<3.
24-May-89	A-12	<50.	<0.5	<1.	<1.	<3.
18-Aug-89	A-12	<50.	<0.5	<1.	<1.	<3.
27-Oct-89	A-12	<50.	<0.5	<0.5	<0.5	<1.
15-Jan-90	A-12	<50.	<0.5	<0.5	<0.5	<1.
04-Apr-90	A-12	<50.	<0.5	<0.5	<0.5	<1.
30-Jul-90	A-12	<50.	<0.5	<0.5	<0.5	<0.5

TABLE 3

HISTORICAL GROUND WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
29-Oct-90	A-12	<50.	<0.5	<0.5	<0.5	<0.5
16-Jan-91	A-12	<50.	<0.5	<0.5	<0.5	<0.5
12-Apr-91	A-12	<30	<0.30	<0.30	<0.30	<0.30
10-Jul-91	A-12	<30	<0.30	<0.30	<0.30	<0.30

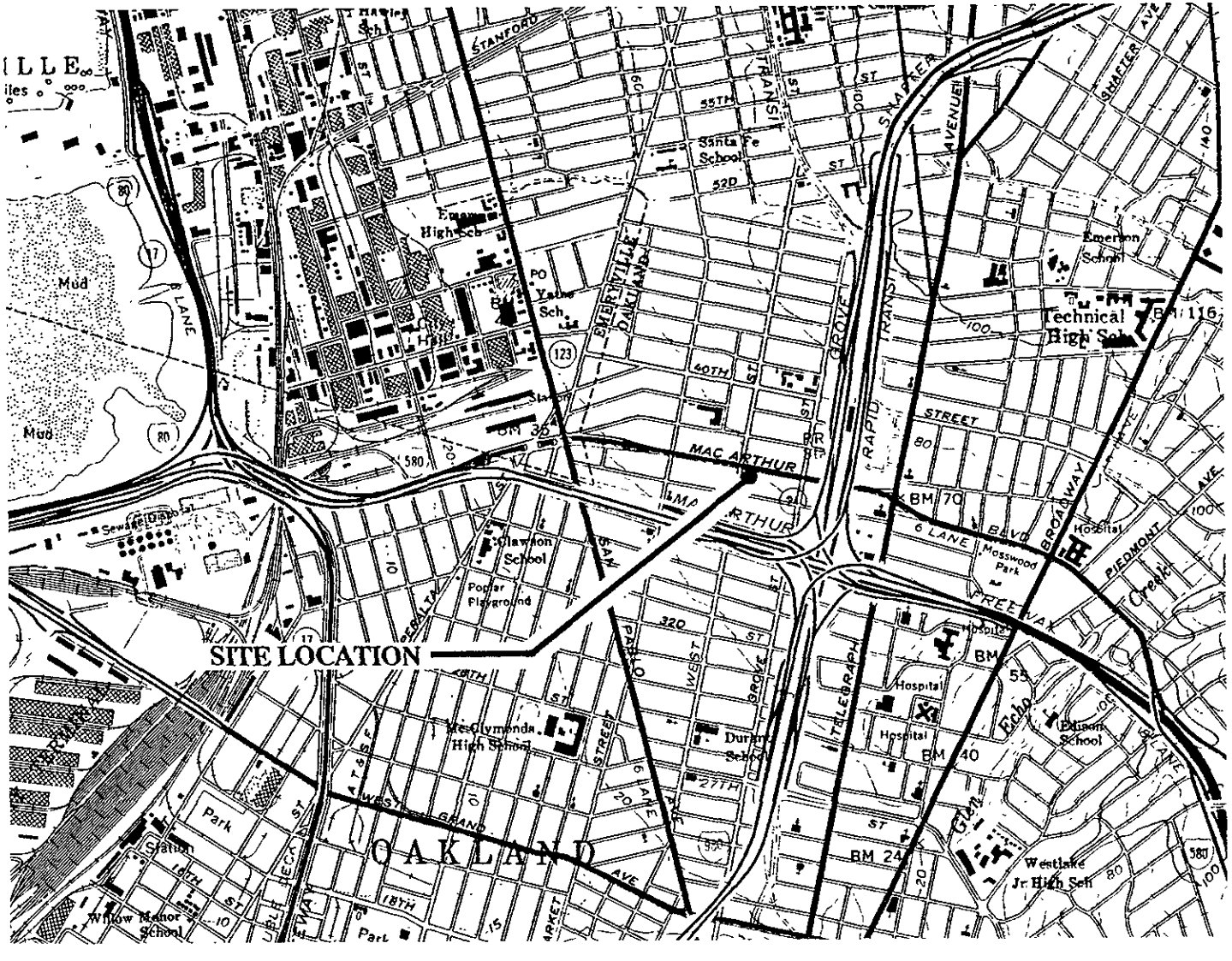
TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline

PPB = Parts Per Billion

NOTE 1. All data shown as <X are reported as ND (none detected).

2. Ethylbenzene & Xylenes were combined in 1986 and 1988.

ILLUSTRATIONS



Base Map: USGS Topographic Map

GeoStrategies Inc.

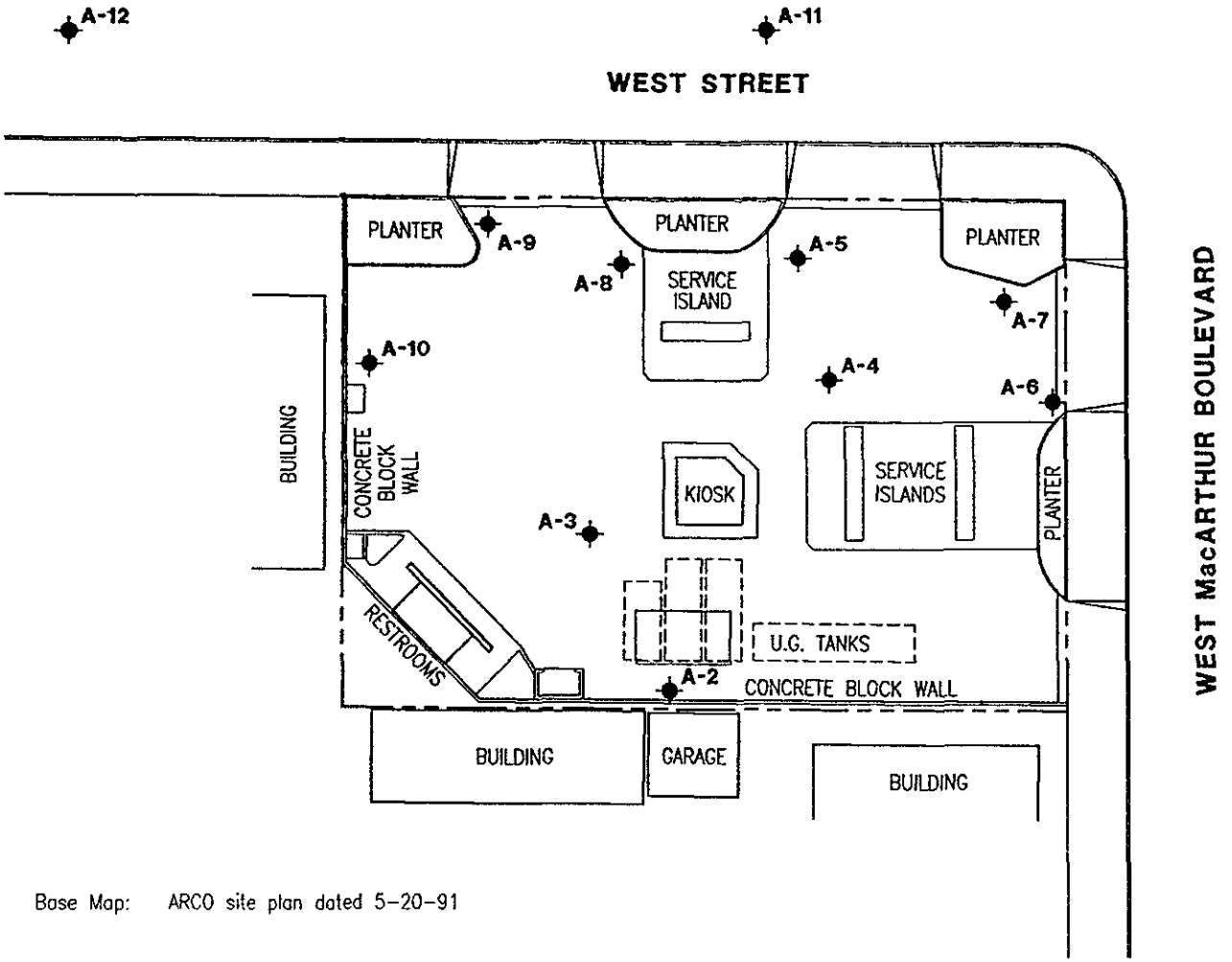
VICINITY MAP
ARCO Service Station #4931
731 West MacArthur Boulevard
Oakland, California

PLATE
1

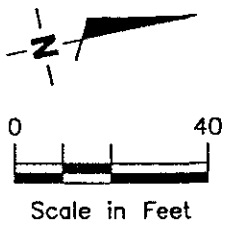
JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7909		9/91	

EXPLANATION

Ground–water monitoring well



Base Map: ARCO site plan dated 5–20–91

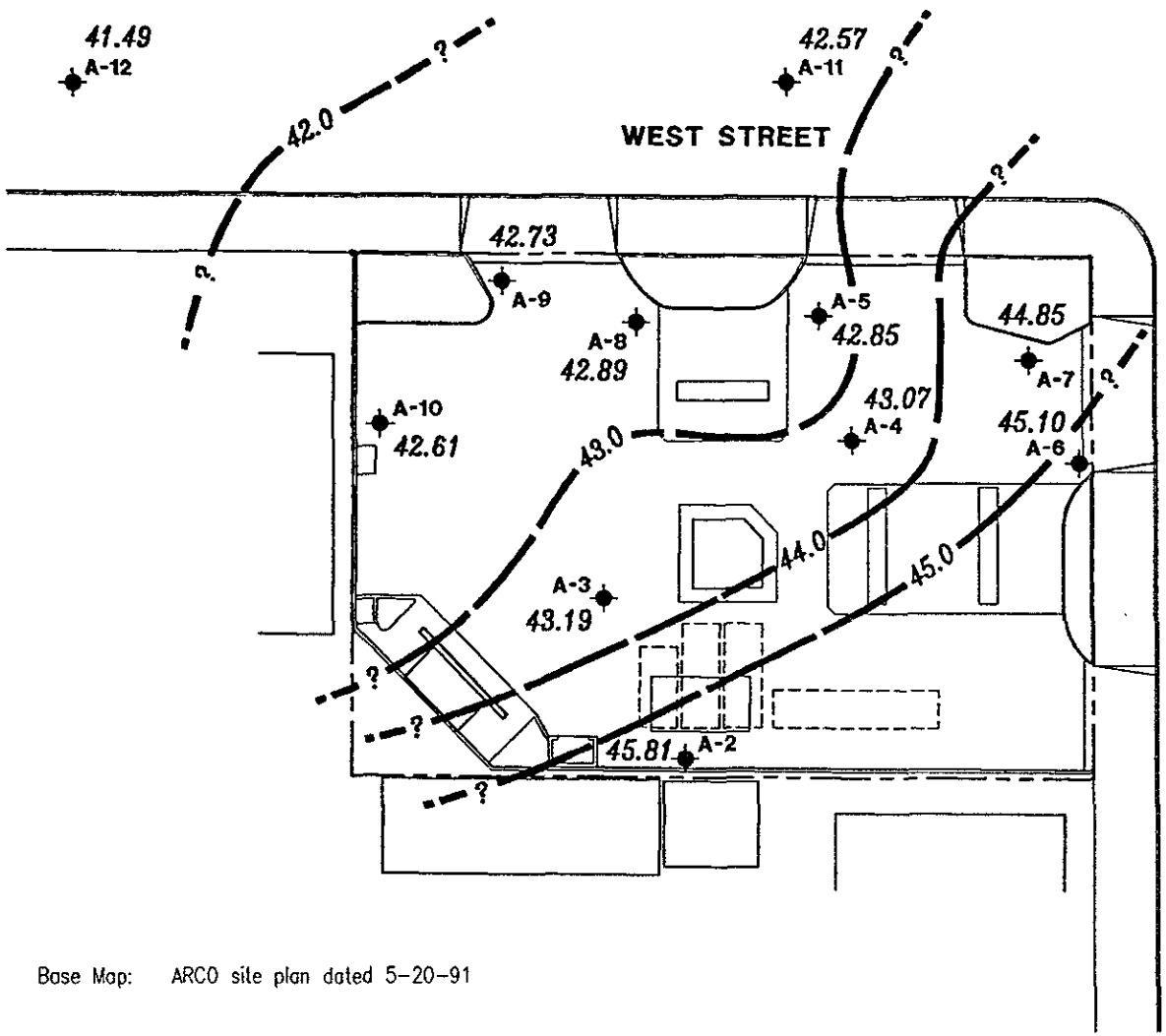


GeoStrategies Inc.

SITE PLAN
ARCO Service Station #4931
731 West MacArthur Boulevard
Oakland, California

PLATE 2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
790901–13	DHP	9/91	



EXPLANATION

- Ground–water monitoring well
- 99.99 Ground–water elevation contour Approximate Gradient = 0.02
- 99.99 Ground–water elevation in feet referenced to Mean Sea Level (MSL) measured on July 10, 1991

Note: Contours may be influenced by irrigation practices and/or site construction activities.

Base Map: ARCO site plan dated 5–20–91

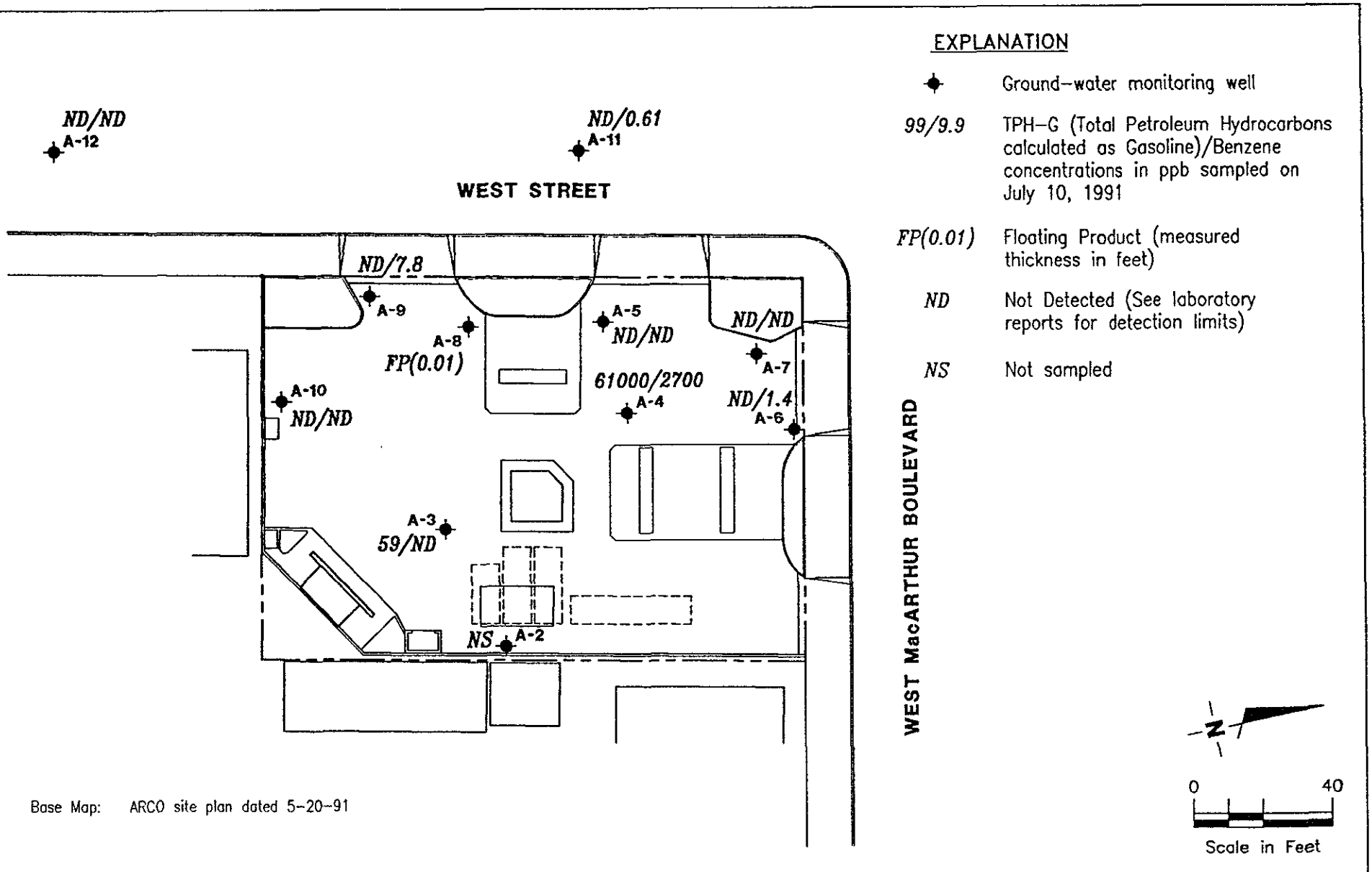
0 40
Scale in Feet

GeoStrategies Inc.

POTENTIOMETRIC MAP
ARCO Service Station #4931
731 West MacArthur Boulevard
Oakland, California

PLATE 3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
790901–13	DHP	9/91	



Base Map: ARCO site plan dated 5-20-91

GeoStrategies Inc.

TPH-G/BENZENE CONCENTRATION MAP
ARCO Service Station #4931
731 West MacArthur Boulevard
Oakland, California

PLATE 4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
790901-13	DHP	9/91	

APPENDIX A
ANALYTICAL LABORATORY REPORT AND CHAIN-OF-CUSTODY FORMS

SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: Tom Paulson

Project: #3909.01, Arco 4931, Oakland

Enclosed are the results from 10 water samples received at Sequoia Analytical on July 11,1991. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
1072136	Water, A-3	7/10/91	EPA 5030/8015/8020
1072137	Water, A-4	7/10/91	EPA 5030/8015/8020
1072138	Water, A-5	7/10/91	EPA 5030/8015/8020
1072139	Water, A-6	7/10/91	EPA 5030/8015/8020
1072140	Water, A-7	7/10/91	EPA 5030/8015/8020
1072141	Water, A-9	7/10/91	EPA 5030/8015/8020
1072142	Water, A-10	7/10/91	EPA 5030/8015/8020
1072143	Water, A-11	7/10/91	EPA 5030/8015/8020
1072144	Water, A-12	7/10/91	EPA 5030/8015/8020
1072145	Water, Trip Blank	7/10/91	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

VM Tague

Vickie Tague
Project Manager

SEQUOIA ANALYTICAL

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

Gettler Ryan	Client Project ID:	#3909.01, Arco 4931, Oakland	Sampled: Jul 10, 1991
2150 W. Winton Avenue	Matrix Descript:	Water	Received: Jul 11, 1991
Hayward, CA 94545	Analysis Method:	EPA 5030/8015/8020	Analyzed: Jul 17-22, 1991
Attention: Tom Paulson	First Sample #:	107-2136	Reported: Jul 29, 1991

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

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
107-2136	A-3	59	N.D.	N.D.	0.50	0.51
107-2137	A-4	61,000	2,700	8,500	1,700	8,200
107-2138	A-5	N.D.	N.D.	N.D.	N.D.	N.D.
107-2139	A-6	N.D.	1.4	0.39	0.47	1.5
107-2140	A-7	N.D.	N.D.	0.49	N.D.	1.2
107-2141	A-9	N.D.	7.8	N.D.	N.D.	N.D.
107-2142	A-10	N.D.	N.D.	N.D.	N.D.	N.D.
107-2143	A-11	N.D.	0.61	0.46	N.D.	1.0
107-2144	A-12	N.D.	N.D.	N.D.	N.D.	N.D.
107-2145	Trip Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

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

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

1072136.GET <1>

SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: Tom Paulson

Client Project ID: #3909.01, Arco 4931, Oakland

Q C Sample Group: 1072136-40

Reported: Jul 29, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Dreblow	D. Dreblow	D. Dreblow	D. Dreblow
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 19, 1991	Jul 19, 1991	Jul 19, 1991	Jul 19, 1991
QC Sample #:	GBLK071991	GBLK071991	GBLK071991	GBLK071991
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	100	100	100	310
Matrix Spike % Recovery:	100	100	100	103
Conc. Matrix Spike Dup.:	100	100	100	300
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	0.0	0.0	0.0	3.3

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

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

SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: Tom Paulson

Client Project ID: #3909.01, Arco 4931, Oakland

Q C Sample Group: 1072142, 2144-45

Reported: Jul 29, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Dreblow	D. Dreblow	D. Dreblow	D. Dreblow
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 17, 1991	Jul 17, 1991	Jul 17, 1991	Jul 17, 1991
QC Sample #:	GBLK071791	GBLK071791	GBLK071791	GBLK071791
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	99	98	97	290
Matrix Spike % Recovery:	99	98	97	97
Conc. Matrix Spike Dup.:	100	100	99	300
Matrix Spike Duplicate % Recovery:	100	100	99	100
Relative % Difference:	1.0	2.0	2.0	3.4

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

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

1072136.GET <3>

SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: Tom Paulson

Client Project ID: #3909.01, Arco 4931, Oakland

Q C Sample Group: 107-2143

Reported: Jul 29, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Dreblow	D. Dreblow	D. Dreblow	D. Dreblow
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 19, 1991	Jul 19, 1991	Jul 19, 1991	Jul 19, 1991
QC Sample #:	GBLK071991	GBLK071991	GBLK071991	GBLK071991
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	100	100	100	300
Matrix Spike % Recovery:	100	100	100	100
Conc. Matrix Spike Dup.:	96	97	96	290
Matrix Spike Duplicate % Recovery:	96	97	96	97
Relative % Difference:	4.1	3.0	4.1	3.4

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

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

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

SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: Tom Paulson

Client Project ID: #3909.01, Arco 4931, Oakland

Q C Sample Group: 107-2141

Reported: Jul 29, 1991

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nguyen	M. Nguyen	M. Nguyen	M. Nguyen
Reporting Units:	ng	ng	ng	ng
Date Analyzed:	Jul 22, 1991	Jul 22, 1991	Jul 22, 1991	Jul 22, 1991
QC Sample #:	GBLK072291	GBLK072291	GBLK072291	GBLK072291
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	100	100	100	300
Conc. Matrix Spike:	100	100	100	310
Matrix Spike % Recovery:	100	100	100	103
Conc. Matrix Spike Dup.:	100	100	100	300
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	0.0	0.0	0.0	3.3

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

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

ARCO Products Company

Division of AtlanticRichfieldCompany

Chain of Custody

Task Order No. 4931-91-5

ARCO Facility no. 4931	City (Facility) OAKLAND	Project manager (Consultant) Tom Paulson	Laboratory name SEQUOIA
ARCO engineer Chuck Carmel	Telephone no. (ARCO) 658-5000	Telephone no. (Consultant) 783-7500	Fax no. (Consultant) 783-1089
Consultant name Gettler-Ryan	Address (Consultant) 2150 W. Winton - Hayward		Contract number 07073

Method of shipment: G/R

Special detection Limit/reporting: STANDARD

Special QA/QC: STANDARD

Remarks: G/R # 3909.01

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH G,D EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐
A-3	2136			✓		✓	✓	7-10-91	11:22		✓									
A-4	2137			↓		↓	↓	↓	13:00		↓									
A-5	2138								~~10:45~~											
A-6	2139								10:45											
A-7	2140								12:30											
A-9	2141								9:30											
A-10	2142								9:55											
A-11	2143								9:09											
A-12	2144								8:50											
Trip Blank	2145			↓		↓	↓	↓	—		↓									

Condition of sample: good

Temperature received: cool

	Date	Time		Date	Time
Relinquished by sampler	7-10-91	1425	Received by REFRIG #1	7-10-91	1425
Relinquished by Refrig #1	7-11-91	07:00	Received by	7-11-91	07:00
Relinquished by	7-11-91	14:00	Received by laboratory K. Dawson	7/11/91	1400

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☑

Lab number

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

APPENDIX B
FIELD DATA SHEETS

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING
FIELD DATA SHEET

COMPANY Arco JOB # 3909.01

LOCATION 731 W MacArthur DATE 7-10-91

CITY Oakland TIME

Well ID. A-2 Well Condition OK

Well Diameter 4 in. Hydrocarbon Thickness — ft.

Total Depth 18.3 ~~19.3~~ ft.

Depth to Liquid ~~9.57~~ ~~11.29~~ ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x ~~8.73~~ x(VF) .66 ~~.66~~ = (Estimated Purge Volume) ~~28.5~~ 28.5 gal. (58)

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 1017 Purging Flow Rate 4 gpm.

(Estimated Purge Volume) 28.5 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 6.6 min.

Time	pH	Conductivity	Temperature	Volume
1018	6.54	706	65.0	4 gal
1021	6.72	712	65.6	12 gal
				2 pm

Did well dewater? yes If yes, time 1021 Volume 12 gal

Sampling Time N/A Weather Conditions P/C

Analysis gas (BTXE) Bottles Used 2x40ml

Chain of Custody Number

COMMENTS Checked 11:30 / no H_2O — Checked at 12:50 / 2" H_2O + 6" thick m
— Could not sample due to lack of recovery ; well was no lock — did r

FOREMAN [signature] ASSISTANT

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Arco JOB # 3909.01

LOCATION 731 W MacArthur DATE 7-10-91

CITY Oakland TIME

Well ID. A-3 Well Condition OK

Well Diameter 4" in. Hydrocarbon Thickness — ft.

Total Depth 14.3 ft.

Depth to Liquid- 11.29 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 8 x(VF) .38 .66 = (Estimated Purge Volume) ~~15~~ 26 gal. ~~8~~ 5

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 1004 Purging Flow Rate 3 gpm.

(Estimated Purge Volume) 15 gal. / (Purging Flow Rate) 3 gpm. = (Anticipated Purging Time) 5 min.

Time	pH	Conductivity	Temperature	Volume
1005	6.75	912	67.3	3 gal
1007	6.79	762	68.2	9 gal
~~1009~~ 1122	6.70	1099	67.5	~~10~~ gal
~~1015~~				

Did well dewater? YES ~~NO~~ If yes, time 1007 Volume ~9 gal

Sampling Time ~~1009~~ 1122 Weather Conditions P/C

Analysis gas (BTXE) Bottles Used 2x40 ml

Chain of Custody Number

COMMENTS

FOREMAN ASSISTANT

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Arco JOB # 3909.01

LOCATION 731 W MacArthur DATE 7-10-91

CITY Oakland TIME

Well ID. A-4 Well Condition OK

Well Diameter 3 in. Hydrocarbon Thickness Heavy Sheen ft.

Total Depth 19.7 ft.

Depth to Liquid- 11.55 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 8.15 x(VF) .38 = (Estimated Purge Volume) (3.09) gal.

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 1249 Purging Flow Rate 3 gpm.

(Estimated Purge Volume) gal. / (Purging Flow Rate) 3 gpm. = (Anticipated Purging Time) min.

Time	pH	Conductivity	Temperature	Volume
1250	6.56	1181	68.2	3 gal
1252	6.74	1164	68.9	9 gal
1300	6.66	1035	68.9	10 gal

Did well dewater? Yes If yes, time 1252 Volume 9 gal

Sampling Time 1300 Weather Conditions P/c

Analysis gas (BTXE) Bottles Used 2 x 40 ml

Chain of Custody Number

COMMENTS

FOREMAN Robert Kitchen ASSISTANT

GETTLER-RYAN INC.
General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Arco JOB # 3909.01
LOCATION 731 W MACARTHUR DATE 7-10-91
CITY Oakland TIME

Well ID. A-5 Well Condition OK
Well Diameter 3 in. Hydrocarbon Thickness — ft.
Total Depth 23.9 ft.
Depth to Liquid- 11.30 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 12.60 x(VF) .38 = (Estimated Purge Volume) 23.9 gal. (4.8)

Purging Equipment DD
Sampling Equipment Bailer

Starting Time 1232 Purging Flow Rate 4 gpm.
(Estimated Purge Volume) 23.9 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 6.0 min.

Time	pH	Conductivity	Temperature	Volume
1233	7.17	935	66.7	4 gal
1235	6.89	878	65.8	12 gal
1243	6.87	932	66.1	13 gal

Did well dewater? Yes If yes, time 1235 Volume 12 gal
Sampling Time 12:43 Weather Conditions P/C
Analysis gas (BTXE) Bottles Used 2x40ml
Chain of Custody Number

COMMENTS

FOREMAN ASSISTANT

GETTLER-RYAN INC.
General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Arco JOB # 3909.01
LOCATION 731 W MacArthur DATE 7-10-91
CITY Oakland TIME

Well ID. A-6 Well Condition OK
Well Diameter 3 in. Hydrocarbon Thickness — ft.
Total Depth 25.0 ft.
Depth to Liquid- 10.03 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 15 x(VF) .38 = (Estimated Purge Volume) 28.5 gal. 5.7

Purging Equipment DD
Sampling Equipment Bailer

Starting Time 1031 Purging Flow Rate 4 gpm.
(Estimated Purge Volume) 28 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 7 min.

Time	pH	Conductivity	Temperature	Volume
1032	6.93	573	68.2	4 gal
1034	7.01	572	68.5	12 gal
1038	7.12	576	67.3	28
1045	7.05	575	67.0	29

Did well dewater? NO If yes, time — Volume —
Sampling Time 1045 Weather Conditions p/c
Analysis gas (BTXE) Bottles Used 2x40 ml
Chain of Custody Number

COMMENTS

FOREMAN [signature] ASSISTANT [signature]

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Arco JOB # 3909.01

LOCATION 731 W MacArthur DATE 7-10-91

CITY Oakland TIME

Well ID. A-7 Well Condition OK

Well Diameter 3 in. Hydrocarbon Thickness — ft.

Total Depth 22.7 ft.

Depth to Liquid- 9.82 ft.

Volume Factor (VF)			
2" = 0.17	6" = 1.50	12" = 5.80	
3" = 0.38	8" = 2.60		
4" = 0.66	10" = 4.10		

(# of casing volumes) 5 x 12.88 x(VF) 1.38 = (Estimated Purge Volume) 24.5 gal. / 4.9

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 1218 Purging Flow Rate 4 gpm.

(Estimated Purge Volume) 24.5 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 6 min.

Time	pH	Conductivity	Temperature	Volume
1219	6.96	604	71.7	4 gal
1221	6.97	577	70.1	12 gal
1224	7.03	576	71.3	24
1230	6.97	579	68.3	25

Did well dewater? NO If yes, time — Volume —

Sampling Time 1230 Weather Conditions P/C

Analysis Gas (BTXE) Bottles Used 2x40ml

Chain of Custody Number

COMMENTS

FOREMAN [signature] ASSISTANT [signature]

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING
FIELD DATA SHEET

COMPANY Arco JOB # 3909.01

LOCATION 731 W MacArthur DATE 7-10-91

CITY Oakland TIME

Well ID. A-9 Well Condition OK

Well Diameter 6 in. Hydrocarbon Thickness — ft.

Total Depth 38.7 ft.

Depth to Liquid- 10.23 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 28.47 x(VF) 1.5 = (Estimated Purge Volume) 213.5 gal. (42.7)

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 910 Purging Flow Rate 8 gpm.

(Estimated Purge Volume) 213.5 gal. / (Purging Flow Rate) 8 gpm. = (Anticipated Purging Time) min.

Time	pH	Conductivity	Temperature	Volume
911	7.40	625	66.9	8 gal
913	7.20	625	66.7	24 gal
917	7.16	632	66.6	56 gal
924	7.12	632	66.8	112 gal
930	6.97	625	67.7	113 gal

Did well dewater? NO If yes, time — Volume —

Sampling Time 930 Weather Conditions D/C

Analysis GAS(BTXE) Bottles Used 2x40 ml

Chain of Custody Number

COMMENTS

FOREMAN [signature] ASSISTANT [signature]

GETTLER-RYAN INC.
General and Environmental Contractors

WELL SAMPLING
FIELD DATA SHEET

COMPANY Arco
LOCATION 731 W MacArthur
CITY Oakland

JOB # 3909.01
DATE 7-10-91
TIME

Well ID. A-10
Well Diameter 3 in.
Total Depth 28.1 ft.
Depth to Liquid- 11.55 ft.

Well Condition OK
Hydrocarbon Thickness —

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 16.55 x(VF) .38 = (Estimated Purge Volume) 31.4 gal (6.3)

Purging Equipment DD
Sampling Equipment Bailer

Starting Time 0939
(Estimated Purge Volume) 31.4 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 7.8 min.

Purging Flow Rate 4 gpm.

Time	pH	Conductivity	Temperature	Volume
0940	7.06	619	66.3	4 gal
0943	7.08	618	65.4	16 gal
0947	7.02	619	65.5	32 gal
0955	6.99	628	66.4	33 gal

Did well dewater? No If yes, time — Volume —
Sampling Time 0955 Weather Conditions P/C
Analysis gas (BTXE) Bottles Used 2 x 40 ml
Chain of Custody Number

COMMENTS

FOREMAN [signature] ASSISTANT [signature]

GETTLER-RYAN INC.
General and Environmental Contractors

WELL SAMPLING
FIELD DATA SHEET

COMPANY Arco JOB # 3909.01
LOCATION 731 W MacArthur DATE 7-10-91
CITY Oakland TIME

Well ID. A-11 Well Condition OK
Well Diameter 3 in. Hydrocarbon Thickness — ft.
Total Depth 28.4 ft.
Depth to Liquid- 11.18 ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 17.22 x(VF) .38 = (Estimated Purge Volume) 32.7 gal. (6.5)

Purging Equipment DD
Sampling Equipment Bailer

Starting Time 856
(Estimated Purge Volume) 32.7 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 8.2 min.
Purging Flow Rate 4 gpm.

Time	pH	Conductivity	Temperature	Volume
857	7.28	635	66.5	4 gal
901	7.20	626	67.2	20 gal
904	7.19	626	66.0	32
909	7.15	630	66.9	33 ↓

Did well dewater? No If yes, time — Volume —
Sampling Time 909 Weather Conditions P/C
Analysis Gas (BTXE) Bottles Used 2 x 40 ml
Chain of Custody Number

COMMENTS

FOREMAN ASSISTANT

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING
FIELD DATA SHEET

COMPANY Arco

LOCATION 731 W MacArthur

CITY Oakland

JOB # 3909.01

DATE 7-10-91

TIME

Well ID. A-12

Well Diameter 3 in.

Total Depth 29 ft.

Depth to Liquid- 10.56 ft.

Well Condition OK

Hydrocarbon Thickness - ft.

Volume Factor (VF)			
	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.60	
	4" = 0.66	10" = 4.10	

(# of casing volumes) 5 x 18.44 x(VF) .38 = (Estimated Purge Volume) 35.0 gal. (7.01)

Purging Equipment DD

Sampling Equipment Bailer

Starting Time 833

(Estimated Purge Volume) 35.0 gal. / (Purging Flow Rate) 4 gpm. = (Anticipated Purging Time) 8.8 min.

Purging Flow Rate 4 gpm.

Time	pH	Conductivity	Temperature	Volume
834	7.28	599	66.5	4 gal
836	7.09	622	65.8	12
839	7.12	628	66.0	24
842	7.28	628	65.9	32
850	7.31	628	64.7	33

Did well dewater? Yes If yes, time 842 Volume 30 gal

Sampling Time 850 Weather Conditions p/c

Analysis gas (BTXE) Bottles Used 2x40 ml

Chain of Custody Number

COMMENTS

FOREMAN

ASSISTANT