Chevron

Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address PO Box 5004, San Ramon, CA 94583-0804

Marketing Department

December 10, 1991

D/R

Mr. Rafat Shahid
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Re: Chevron Service Station #9-1583
5509 Martin Luther King Way, Oakland

Dear Mr. Shahid:

Enclosed we are forwarding the Quarterly Ground Water Sampling Report dated November 26, 1991, prepared by our consultant Geraghty & Miller, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor wells #1 and #3 only at concentrations of 24 and 1000 ppb, respectively. These concentrations are significantly lower than the previous concentrations reported last quarter. Depth to ground water was measured at approximately 9 to 13-feet below grade, and the direction of flows to the northwest.

Chevron will continue to sample this site and report findings on a quarterly basis. It appears that subsequent sampling events of monitor wells #1, #2 and #3 continue to purge these wells of subsurface contaminants that infiltrated into the wells prior to the well head replacements.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

Very truly yours,
CHEVRON U.S.A. INC.

Nancy Vukelich
Environmental Engineer

Enclosure

cc: Mr. Eddy So, RWQCB-Bay Area
Mr. W.T. Scudder
File (9-1583Q2)

GERAGHTY
& MILLER, INC.
Environmental Services

Ground Water *Engineering* *Hydrocarbon* *Remediation* *Education*

November 26, 1991
Project No. RC02604

Ms. Nancy Vukelich
Chevron U.S.A. Inc.
West Central Marketing
2410 Camino Ramon
San Ramon, California 94583-0804

Subject: Quarterly Ground-Water Sampling Results, November 1991, Service Station #9-1583, 5509 Martin Luther King Jr. Way, Oakland, California.

Dear Ms. Vukelich:

This letter presents the quarterly ground-water sampling results for the Chevron U.S.A. Inc. (Chevron) service station referenced above. The scope of work for this project was presented to Chevron in a previous letter from Geraghty & Miller, Inc. (Geraghty & Miller) dated January 11, 1991.

FIELD AND LABORATORY PROCEDURES

The quarterly ground-water sampling was performed on November 7, 1991. Water samples were collected from each of the seven existing monitor wells (Monitor Wells #1 through #3, MW-4, MW-5, and MW-6). Prior to sampling, depth to water was measured, and each well was checked for the presence of liquid-phase hydrocarbons. Liquid-phase hydrocarbons were not observed during the quarterly sampling. A minimum of three casing volumes of water was purged from each well prior to sampling using a surface diaphragm pump. The equipment that entered the well was washed in a solution of Micro™ (a phosphate-free detergent) and water and then triple rinsed in deionized water prior to sampling each well. The field sampling results are presented in Table 1. Following purging, ground-water samples were collected using a disposable polyethylene bailer. A new bailer was used for each well. The purged water was stored in 55-gallon drums and retained on-site for subsequent disposal by Chevron.

Ground-water samples for laboratory analysis were placed in the appropriate USEPA-approved containers, placed on ice, and transported to Superior Precision Analytical, Inc., located in Martinez, California. One trip blank consisting of laboratory-grade water, which accompanied the sample bottles from the laboratory, into the field, and back to the laboratory, was also analyzed. The water samples were analyzed for total petroleum hydrocarbons as gasoline (USEPA Method 8015, modified) and benzene, toluene, ethylbenzene, and xylenes (USEPA Method 8020).

RESULTS OF QUARTERLY SAMPLING

DEPTH TO WATER

A summary of the depth-to-water measurements is presented in Table 2. A ground-water contour map is presented in Figure 1. Based on the data collected during November 1991, the direction of shallow ground-water flow in the vicinity of the site is toward the west-northwest.

GROUND-WATER ANALYTICAL RESULTS

A summary of the ground-water analytical results is presented in Table 3. Copies of the certified laboratory reports and chain-of-custody documentation are included in Attachment 1.

If you have any questions regarding this letter report, please call the undersigned at (510) 233-3200.

Sincerely,
GERAGHTY & MILLER, INC.

JoEllen Kuszmaul
Senior Geologist/Project Manager

Gary W. Keyes, P.E.
Principal Engineer/Project Officer

Project No. RC02604

Enclosures:

	Table 1	Summary of Field Sampling Data
	Table 2	Summary of Depth-to-Water and Water-Elevation Data
	Table 3	Ground-Water Analytical Results
	Figure 1	Ground-Water Contour Map, November 1991
	Attachment 1:	Copies of Chain-of-Custody Documentation and Certified Analytical Reports

Table 1: Summary of Field Sampling Data
Chevron Service Station #9-1583,
5509 Martin Luther King Jr. Way, Oakland, California,

Well	Date	Calculated Purge Volume (a) (gallons)	Actual Purge Volume (gallons)	Depth to Water (b) (feet)	Measured Depth of Well (b) (feet)	Casing Diameter (inches)
Well #1	7-Nov-91	9.76	10	10.70	19.50	3
Well #2	7-Nov-91	8.76	9	11.50	19.40	3
Well #3	7-Nov-91	6.97	NA	12.81	19.09	3
MW-4	7-Nov-91	5.65	6	13.42	25.20	2
MW-5	7-Nov-91	4.92	5	9.76	20.01	2
MW-6	7-Nov-91	5.42	5.5	8.89	20.20	2

(a) Based on three casing volumes.
(b) Measured from top of PVC casing.

NA = Not analyzed

Table 2: Summary of Depth-to-Water and Water-Elevation Data
Chevron Service Station #9-1583,
5509 Martin Luther King Jr. Way, Oakland, California,

Well	Date	Depth to Water (feet)	Top of Casing Elevation (feet)		Water Level Elevation (feet)
Well #1	22-Dec-83	10.25	81.97	(a)	71.72
	30-Dec-83	9.17			72.80
	12-Mar-90	10.08			71.90
	25-Mar-90	10.46			71.51
	16-Nov-90	11.58	82.42	(b)	70.84
	8-Feb-91	10.11			72.31
	8-May-91	10.45			71.97
	12-Aug-91	11.23			71.19
	7-Nov-91	10.70			71.72
Well #2	22-Dec-83	10.50	83.48	(a)	72.98
	30-Dec-83	9.92			73.56
	12-Mar-90	11.02			72.46
	25-Mar-90	11.33			72.15
	16-Nov-90	12.31	83.48	(b)	71.17
	8-Feb-91	11.05			72.43
	8-May-91	11.36			72.12
	12-Aug-91	11.97			71.51
	7-Nov-91	11.50			71.98
Well #3	22-Dec-83	11.58	84.36	(a)	72.22
	30-Dec-83	11.17			71.81
	12-Mar-90	12.14			70.74
	25-Mar-90	12.55			72.18
	16-Nov-90	13.62	84.38	(b)	70.76
	8-Feb-91	12.18			72.20
	8-May-91	12.52			71.86
	12-Aug-91	13.27			71.11
	7-Nov-91	12.81			71.57
MW-4	18-Oct-90	15.75	84.25	(b)	68.50
	31-Oct-90	13.90			70.35
	16-Nov-90	14.25			70.00
	8-Feb-91	12.32			71.93
	8-May-91	12.23			72.02
	12-Aug-91	13.93			70.32
	7-Nov-91	13.42			70.83

Table 2: Summary of Depth-to-Water and Water-Elevation Data
Chevron Service Station #9-1583,
5509 Martin Luther King Jr. Way, Oakland, California,

Well	Date	Depth to Water (feet)	Top of Casing Elevation (feet)		Water Level Elevation (feet)
MW-5	18-Oct-90	10.78	81.95	(b)	71.17
	31-Oct-90	10.63			71.32
	16-Nov-90	10.68			71.27
	8-Feb-91	9.17			72.78
	8-May-91	8.68			73.27
	12-Aug-91	10.33			71.62
	7-Nov-91	9.76			72.19
MW-6	18-Oct-90	9.79	80.60	(b)	70.81
	31-Oct-90	9.69			70.91
	16-Nov-90	9.74			70.86
	8-Feb-91	NA			---
	8-May-91	9.54			71.06
	12-Aug-91	9.50			71.10
	7-Nov-91	8.89			71.71

(a) Surveyed March 26, 1990, by Geraghty & Miller Inc..
(b) Surveyed November 30, 1990, by Bates & Bailey Land Surveyors.

Elevations are reported in feet above mean sea level.

Table 3: Ground-Water Analytical Results
Chevron Service Station #9-1583,
5509 Martin Luther King Jr. Way, Oakland, California,

Well	Date	TPH (a) µg/L	Benzene (b) µg/L	Toluene (b) µg/L	Ethylbenzene (b) µg/L	Xylenes (b) µg/L
Well #1 (c)	12-Mar-90	50,000	3,000	7,300	1,900	18,000
	8-Feb-91	100,000	4,200	8,400	16,000	2,600
	8-May-91	31,000	200	66	670	2,000
	12-Aug-91	17,000	81	7.2	270	710
	7-Nov-91	7,100	24	6	130	170
Well #2 (c)	12-Mar-90	800	400	22	18	55
	8-Feb-91	4,600	820	440	720	210
	8-May-91	ND(<50)	5	ND(<0.5)	ND(<0.5)	ND(<0.5)
	12-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	7-Nov-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Well #3 (c)	12-Mar-90	47,000	1,000	9,900	1,700	9,800
	8-Feb-91	58,000	4,900	5,200	9,500	2,000
	8-May-91	50,000	2,100	1,400	2,000	9,400
	12-Aug-91	15,000	1,300	160	920	1,900
	7-Nov-91	26,000	1,000	310	1,900	5,900
MW-4	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1
	8-Feb-91	60	17	2	12	ND(<0.5)
	8-May-91	65	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	12-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	7-Nov-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
MW-5	31-Oct-90	110	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	8-Feb-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	8-May-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	12-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	7-Nov-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
MW-6	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	3
	8-Feb-91	NC	NC	NC	NC	NC
	8-May-91	56	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	12-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	7-Nov-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)

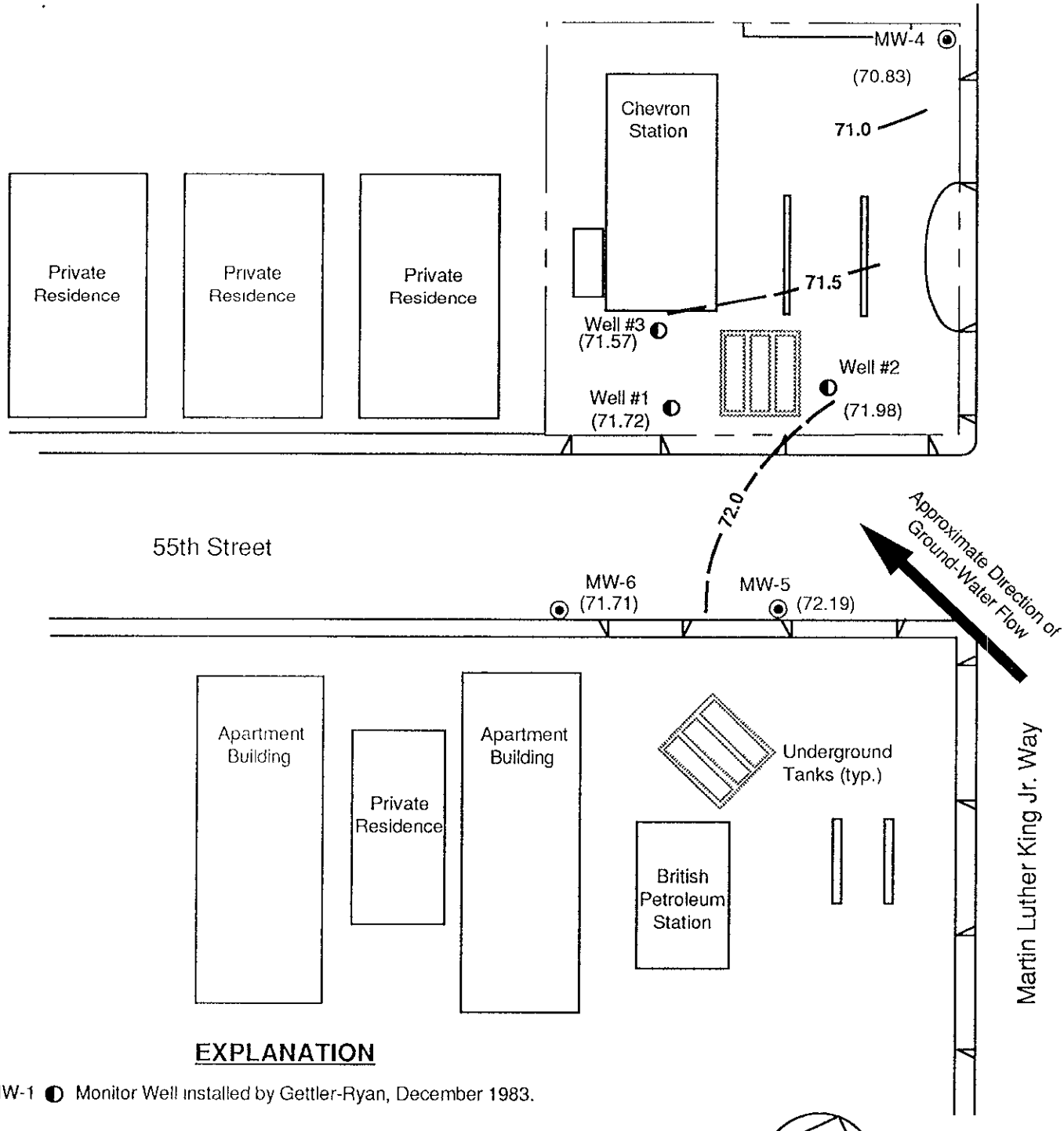
Table 3: Ground-Water Analytical Results
Chevron Service Station #9-1583,
5509 Martin Luther King Jr. Way, Oakland, California,

Well	Date	TPH (a) µg/L	Benzene (b) µg/L	Toluene (b) µg/L	Ethylbenzene (b) µg/L	Xylenes (b) µg/L
Trip Blank	12-Mar-90	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.6)
	8-Feb-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	8-May-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	12-Aug-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	7-Nov-91	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Field Blank	31-Oct-90	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)

(a) TPH - Total petroleum hydrocarbons as gasoline. Analyzed by USEPA Method 8015, modified.
(b) BTEX analyzed by USEPA Method 8020.
(c) Wells #1, #2, and #3 were installed by Gettler-Ryan, Inc., December 1983.

µg/L - micrograms/liter.

ND - Not detected.
NC - Not collected; wellhead blocked by parked vehicle.
( ) = Detection limit.



EXPLANATION

MW-1 ◐ Monitor Well installed by Gettler-Ryan, December 1983.

MW-6 ◉ Monitor Well installed by Geraghty & Miller, October 18, 1990.

(71.72) Ground-water surface elevation (feet, MSL), measured 11/7/91.

71.5 Ground-water surface elevation contour (feet, MSL). Contour interval equals 0.5 feet Dashed where approximate; queried where uncertain.

N

0 50

Scale feet

GERAGHTY & MILLER, INC.
Environmental Services

Project No. RC02604

GROUND-WATER CONTOUR MAP
NOVEMBER 1991
CHEVRON STATION #9-1583
5509 Martin Luther King Jr. Way
Oakland, California

FIGURE
1

ATTACHMENT 1

COPIES OF CERTIFIED ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 84336
CLIENT: Geraghty & Miller
CLIENT JOB NO.: RCO2604

DATE RECEIVED: 11/08/91
DATE REPORTED: 11/15/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84336- 1	MW-2	11/07/91	11/14/91
84336- 2	MW-5	11/07/91	11/14/91
84336- 3	MW-4	11/07/91	11/14/91
84336- 4	MW-6	11/07/91	11/15/91
84336- 5	MW-3	11/07/91	11/14/91
84336- 6	MW-1	11/07/91	11/14/91
84336- 7	TRIP BLANK	11/07/91	11/15/91

Laboratory Number:	84336 1	84336 2	84336 3	84336 4	84336 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	26000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1000
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	310
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1900
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5900

Laboratory Number:	84336 6	84336 7
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)	
OIL AND GREASE:	NA	NA
TPH/GASOLINE RANGE:	7100	ND<50
TPH/DIESEL RANGE:	NA	NA
BENZENE:	24	ND<0.5
TOLUENE:	6	ND<0.5
ETHYL BENZENE:	130	ND<0.5
XYLENES:	170	ND<0.5

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 84336

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/04/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/04/91	200 ng	90/93	4	70-130
Benzene	10/11/91	200 ng	96/100	4	70-130
Toluene	10/11/91	200 ng	94/96	3	70-130
Ethyl Benzene	10/11/91	200 ng	92/94	2	70-130
Total Xylene	10/11/91	200 ng	97/100	3	70-130

Richard Srna, Ph.D.
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☒ No 84336

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number # 9-1583
Facility Address 5509 MARTIN LUTHER KING WAY
Consultant Project Number RC02604
Consultant Name GERAGHTY + MILLER INC.
Address 1050 MARINA WAY SOUTH, RICHMOND CA 94804
Project Contact (Name) JOELLEN KUSZMAUL
(Phone) (415) 233-3200 (Fax Number) (415) 233-3204

Chevron Contact (Name) NANCY VUKELICH
(Phone)
Laboratory Name SUPERIOR
Laboratory Release Number 4446580
Samples Collected by (Name) ALEX RIOS
Collection Date 11-07-91
Signature Alex Rios

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
MW-2	1	3	W	G	1300	HCL	✓	✓												
MW-5	2	3	W	G	12:28	HCL	✓	✓												
MW-4	3	3	W	G	14:04	HCL	✓	✓												
MW-6	4	3	W	G	13:35	HCL	✓	✓												
MW-3	5	3	W	G	15:28	HCL	✓	✓												
MW-1	6	3	W	G	15:04	HCL	✓	✓												
TRIP BLANK	7	2	W	—	—	—	✓	✓												

Please Initial:
Samples Stored in ice. MW
Appropriate containers MW
Samples preserved MW
VOA's without headspace N/O
Comments:
Trip blank lot listed
Space

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
ALEX RIOS	GERAGHTY & MILLER	11-08-91 10:22	CORDUZ, RICH	EXPRESS-1	11/8 1022
	EXPRESS-1	11/8 1325			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					11/8/91 1325

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
~~10 Days~~
As Contracted

COC-3.DWG/03 91/HCH