GERAGHTY
& MILLER, INC.
Environmental Services

a heidemij company

February 29, 1996
Project No. RC0174.003

Ms. Sue Jenne
EBMUD - Mail Slot #702
Source Control Division
East Bay Municipal Utility District
P.O. Box 24055
Oakland, California 94623-1055

(510) 287-1541

SUBJECT: Semiannual Sewer Discharge Report for Chevron/Lonestar Facility, 333 – 23rd Avenue, Oakland, California.

Dear Ms. Jenne:

Geraghty & Miller, Inc. (Geraghty & Miller) has prepared this discharge report on behalf of Chevron U.S.A. Products Company (Chevron) to address the requirements of the East Bay Municipal Utility District (EBMUD) Wastewater Discharge Permit (Account No. 502-44551). The permit was originally issued to Chevron for the above-referenced site on December 18, 1992, and has now been extended through December 17, 1996. This report covers the operational period from October 1, 1995, through March 31, 1996. The general conditions of the permit require the following:

- a summary of the treatment unit self-monitoring results, any other monitoring results, and well sample results collected for the reporting period;
- an estimate of the date that breakthrough of the primary carbon vessel will occur, using current loading data; and
- information concerning system operation and maintenance.

BACKGROUND AND SUMMARY OF ACTIVITIES

In January 1993, Geraghty & Miller assumed management of the operation and maintenance of the remedial groundwater extraction and treatment system at the above-referenced site (Figure 1). The extraction system consists of two 1-inch, air-driven, twin diaphragm pumps placed in Recovery Wells A and R-2, which pump hydrocarbon-affected groundwater from the wells to the treatment system (Figure 2). The treatment system

consists of an oil/water separator, product-storage tank, oil/water separator sump, transfer pump, bag filter, and two 200-pound carbon vessels plumbed in series (Figure 3).

On September 1, 1994, the above-mentioned groundwater extraction system was shut off. There is currently no groundwater passed through the carbon treatment system for discharge to the sanitary sewer system (other than approximately 100 gallons of well purge water per quarter). Data for operation through September 1995 were summarized in the previous quarterly discharge report dated October 9, 1995.

ANALYTICAL RESULTS

Treatment system samples were collected by Geraghty & Miller on December 29, 1995 (Table 1). All effluent results were below the laboratory method detection limit. Laboratory analytical results are included in Attachment 1. Groundwater analytical results for samples collected to date are presented in Table 2. A summary of flow totalizer readings and system discharge rates is presented in Table 3. Site visit reports for this operational period are included in Attachment 2.

DISCUSSION

There are no immediate plans to reimplement groundwater extraction. The system will remain onsite in operable condition for future use if required. EBMUD will be notified prior to use of the groundwater extraction system.

No petroleum hydrocarbons were removed from the product storage tank during this reporting period.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

Sincerely,
GERAGHTY & MILLER, INC.

Darryl B. Snow
Project Geologist/Project Manager

Jeffrey W. Hawkins, R.G.
Senior Scientist

Gary W. Keyes, P.E.
Principal Engineer/Associate
Richmond, California Office Manager

Enclosures:

Table 1	Treatment System Analytical Results
Table 2	Summary of Groundwater Sampling Results
Table 3	Flow Totalizer Readings
Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Process Flow Diagram
Attachment 1	Certified Laboratory Analytical Reports and Chain-of-Custody Documentation
Attachment 2	Copies of Site Visit Reports

cc: Mr. Bob Cochran, Chevron U.S.A. Products Company

Table 1: **Treatment System Analytical Results**
RMC Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Sample Date	Sample Name	Benzene (µg/L) (a)	Toluene (µg/L) (a)	Ethylbenzene (µg/L) (a)	Xylenes (µg/L) (a)	TPH-G (µg/L) (b)	TPH-D (µg/L) (b)
29-Dec-95	Influent	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)	1,500
	Between	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)	ND(<50)
	Effluent	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)	ND(<50)
	Trip Blank	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)	NA

(a) Analyzed by USEPA Method 8020.
(b) Analyzed by USEPA Method 8015, modified.

TPH-D Total petroleum hydrocarbons as diesel
TPH-G Total petroleum hydrocarbons as gasoline
µg/L Micrograms per liter.
NA Not analyzed

Analytical results from Sequoia Analytical, Walnut Creek, California.

Table 2: Summary of Groundwater Sampling Results
RMC Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing Elevation (a) (feet) (msl)	Depth to Water (feet)	Liquid-Phase Hydrocarbon Thickness (feet)	Groundwater Elevation (b) (feet) (msl)	TPH-G (c) (µg/L)	Benzene (d) (µg/L)	Toluene (d) (µg/L)	Ethyl-benzene (d) (µg/L)	Xylenes (d) (µg/L)	TPH-D (e) (µg/L)
MW-1	21-Dec-90	4.70	9.77	2.07	-3.41	NP	NP	NP	NP	NP	NP
	18-Dec-93		8.45	0.03	-3.73	NS	NS	NS	NS	NS	NS
	29-Mar-94		9.00	0.45	-3.94	NS	NS	NS	NS	NS	NS
	9-Jun-94		NS (i)	NS	NS	NS	NS	NS	NS	NS	NS
	4-Oct-94		8.71	0.04	-3.98	LPH	LPH	LPH	LPH	LPH	LPH
	20-Dec-94		8.38	0.67	-3.14	LPH	LPH	LPH	LPH	LPH	LPH
	28-Mar-95		7.79	0.50	-2.69	LPH	LPH	LPH	LPH	LPH	LPH
	30-Jun-95		NM	NM	NM	LPH	LPH	LPH	LPH	LPH	LPH
	24-Sep-95		7.79	0.50	-2.69	LPH	LPH	LPH	LPH	LPH	LPH
	29-Dec-95		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
MW-2 (f)	15-Jun-89	NS	NP	NP	---	ND(<200)	ND(<0.5)	ND(<5.0)	ND(<5.0)	ND(<5.0)	NA
MW-4	28-May-87	NS	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)
	15-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<0.2)
	21-Dec-90		7.31	NP	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	19-Mar-93		6.64	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	16-Jun-93		8.01	---	---	210	32	27	2.8	19	ND(<50)
	18-Dec-93		7.35	---	---	79	0.5	1.2	0.5	1.1	100
	29-Mar-94		8.05	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	9-Jun-94		8.14	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	4-Oct-94		7.31	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	20-Dec-94		7.03	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		6.83	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	30-Jun-95		7.84	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	24-Sep-95		7.67	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	29-Dec-95	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)

Table 2: Summary of Groundwater Sampling Results
RMC Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing Elevation (a) (feet) (msl)	Depth to Water (feet)	Liquid-Phase Hydrocarbon Thickness (feet)	Groundwater Elevation (b) (feet) (msl)	TPH-G (c) (µg/L)	Benzene (d) (µg/L)	Toluene (d) (µg/L)	Ethyl-benzene (d) (µg/L)	Xylenes (d) (µg/L)	TPH-D (e) (µg/L)
MW-5	28-May-87	5.43	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)
	15-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	21-Dec-90		9.11	NP	-3.68	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	16-Jun-93		9.12	---	-3.69	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	18-Dec-93		8.72	---	-3.29	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	690
	29-Mar-94		9.00	---	-3.57	NS	NS	NS	NS	NS	NS
	9-Jun-94		9.36	---	-3.93	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	4-Oct-94		NM	---	NM	NS	NS	NS	NS	NS	NS
	20-Dec-94		8.10	---	-2.67	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		8.21	---	-2.78	NS	NS	NS	NS	NS	NS
	30-Jun-95		8.78	---	-3.35	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	900
	24-Sep-95		8.40	---	-2.97	NS	NS	NS	NS	NS	NS
	29-Dec-95		8.39	---	-2.96	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
MW-7	15-Jun-89	4.51	NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	21-Dec-90		7.90	0.01	-3.38	NA	NA	NA	NA	NA	NA
	16-Jun-93		8.45	---	-3.94	ND(<50)	ND(<0.5)	0.9	ND(<0.5)	ND(<0.5)	ND(<50)
	18-Dec-93		8.01	---	-3.50	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	240
	29-Mar-94		8.60	---	-4.09	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	9-Jun-94		8.61	---	-4.10	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	130 (h)
	4-Oct-94		7.82	---	-3.31	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	20-Dec-94		7.70	---	-3.19	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	140
	28-Mar-95		7.67	---	-3.16	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	30-Jun-95		8.33	---	-3.82	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	24-Sep-95		8.16	---	-3.65	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	29-Dec-95		7.51	---	-3.00	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	230 (j)

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MW-8	21-Dec-90	4.93	8.53	0.02	-3.59	NA	NA	NA	NA	NA	NA
	18-Dec-93		NM	NM	NM	NS	NS	NS	NS	NS	NS
	29-Mar-94		8.38	---	-3.46	NS	NS	NS	NS	NS	NS
	9-Jun-94		NS (i)	NS	NS	NS	NS	NS	NS	NS	NS
	20-Dec-94		7.58	---	-2.66	ND(<2500)	120	100	ND(<25)	100	50,000
	28-Mar-95		7.08	---	-2.16	NS	NS	NS	NS	NS	NS
	30-Jun-95		8.09	---	-3.17	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	14,000
	24-Sep-95		8.45	---	-3.53	NS	NS	NS	NS	NS	NS
	29-Dec-95		7.47	---	-2.55	520	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)	25,000
MW-9	28-May-87	4.42	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<5)
	15-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	21-Dec-90		7.86	sheen	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1	230
	16-Jun-93		8.34	---	-3.92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	18-Dec-93		7.91	---	-3.49	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	29-Mar-94		7.85	---	-3.43	NS	NS	NS	NS	NS	NS
	9-Jun-94		8.69	---	-4.27	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	4-Oct-94		NM	---	NM	NS	NS	NS	NS	NS	NS
	20-Dec-94		7.60	---	-3.18	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		7.58	---	-3.16	NS	NS	NS	NS	NS	NS
	30-Jun-95		8.34	---	-3.92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	24-Sep-95		8.21	---	-3.79	NS	NS	NS	NS	NS	NS
	29-Dec-95		7.48	---	-3.06	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	600
MW-10	15-Jun-89	5.24	NP	NP	---	ND(<100	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	21-Dec-90		8.92	NP	-3.68	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	80
	16-Jun-93		8.97	---	-3.73	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	18-Dec-93		7.87	---	-2.63	51 (g)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	12,000
	29-Mar-94		9.20	---	-3.96	NS	NS	NS	NS	NS	NS
	9-Jun-94		9.31	---	-4.07	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	4-Oct-94		NM	---	NM	NS	NS	NS	NS	NS	NS
	20-Dec-94		8.30	---	-3.06	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		8.26	---	-3.02	NS	NS	NS	NS	NS	NS
	30-Jun-95		8.95	---	-3.71	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	24-Sep-95		8.87	---	-3.63	NS	NS	NS	NS	NS	NS
	29-Dec-95		8.03	---	-2.79	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	1,800 (k)

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RMC Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing Elevation (a) (feet) (msl)	Depth to Water (feet)	Liquid-Phase Hydrocarbon Thickness (feet)	Groundwater Elevation (b) (feet) (msl)	TPH-G (c) (µg/L)	Benzene (d) (µg/L)	Toluene (d) (µg/L)	Ethyl-benzene (d) (µg/L)	Xylenes (d) (µg/L)	TPH-D (e) (µg/L)
MW-11	21-Aug-87	4.37	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<0.1)
	21-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	21-Dec-90		8.59	sheen	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	19-Mar-93		7.57	---	-3.20	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	16-Jun-93		8.84	---	-4.47	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	18-Dec-93		8.26	---	-3.89	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	29-Mar-94		9.07	---	-4.70	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	9-Jun-94		9.14	---	-4.77	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	150 (h)
	4-Oct-94		7.94	---	-3.57	ND(<50)	ND(<0.5)	1.0	ND(<0.5)	ND(<0.5)	ND(<50)
	20-Dec-94		7.68	---	-3.31	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		6.90	---	-2.53	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	30-Jun-95		8.81	---	-4.44	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	24-Sep-95		8.80	---	-4.43	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	110
	29-Dec-95		8.22	---	-3.85	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
MW-12	21-Aug-87	NS	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<0.1)
	18-Dec-93	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS
	29-Mar-94	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS
	9-Jun-94	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)
MW-13	21-Aug-87	4.73	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)	ND(<0.1)
	15-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)	NA
	19-Mar-93		7.62	---	-2.89	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	16-Jun-93		8.56	---	-3.83	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	ND(<50)
	18-Dec-93		8.11	---	-3.38	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	29-Mar-94		8.65	---	-3.92	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	9-Jun-94		8.60	---	-3.87	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	4-Oct-94		8.31	---	-3.58	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	20-Dec-94		7.92	---	-3.19	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	28-Mar-95		7.78	---	-3.05	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
	30-Jun-95		NM	NM	NM	NS	NS	NS	NS	NS	NS
	24-Sep-95		8.34	---	-3.61	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	180
	29-Dec-95	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)

Table 2: Summary of Groundwater Sampling Results
RMC Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing Elevation (a) (feet) (msl)	Depth to Water (feet)	Liquid-Phase Hydrocarbon Thickness (feet)	Groundwater Elevation (b) (feet) (msl)	TPH-G (c) (µg/L)	Benzene (d) (µg/L)	Toluene (d) (µg/L)	Ethyl-benzene (d) (µg/L)	Xylenes (d) (µg/L)	TPH-D (e) (µg/L)
TB	19-Mar-93	---	---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	NA
	16-Jun-93		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)	NA
	18-Dec-93		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	29-Mar-94		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
FB	9-Jun-94		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
TB	20-Dec-94		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	28-Mar-95		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	30-Jun-95		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	24-Sep-95		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA
	29-Dec-95		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA

(a) Elevations surveyed on 9/26/93 by Field Designs relative to City of Oakland Benchmark #3457 and corrected to msl. (Benchmark datum is 2.998 feet off of msl.)
(b) The top-of-water elevation in the presence of liquid-phase hydrocarbons is calculated by (TOC-DTW)+((DTW-DTP) X 0.8).
(c) Analyzed by USEPA Method 8015, modified.
(d) Analyzed by USEPA Method 8020.
(e) Analyzed by USEPA Method 8015, modified.
(f) Monitor Well MW-2 was abandoned prior to December 1992.
(g) Laboratory reports that the chromatogram does not match typical gasoline pattern.
(h) Laboratory reports that the chromatogram does not match typical diesel pattern; lighter hydrocarbons present.
(i) Monitor Well MW-12 inaccessible due to the presence of hardened concrete in the vault box.
(j) Laboratory reports that the chromatogram indicates the presence of unidentified hydrocarbons >C16.
(k) Laboratory reports that the chromatogram indicates the presence of diesel and unidentified hydrocarbons >C16.
(l) Well could not be found.
(m) Well inaccessible.

TPH-G Total petroleum hydrocarbons as gasoline
TPH-D Total petroleum hydrocarbons as diesel
µg/L Micrograms per liter
ND Not detected within the method detection limit.
NM Not measured
NP Data not provided
NS Not surveyed or not sampled
LPH Liquid-phase hydrocarbons present; well not sampled

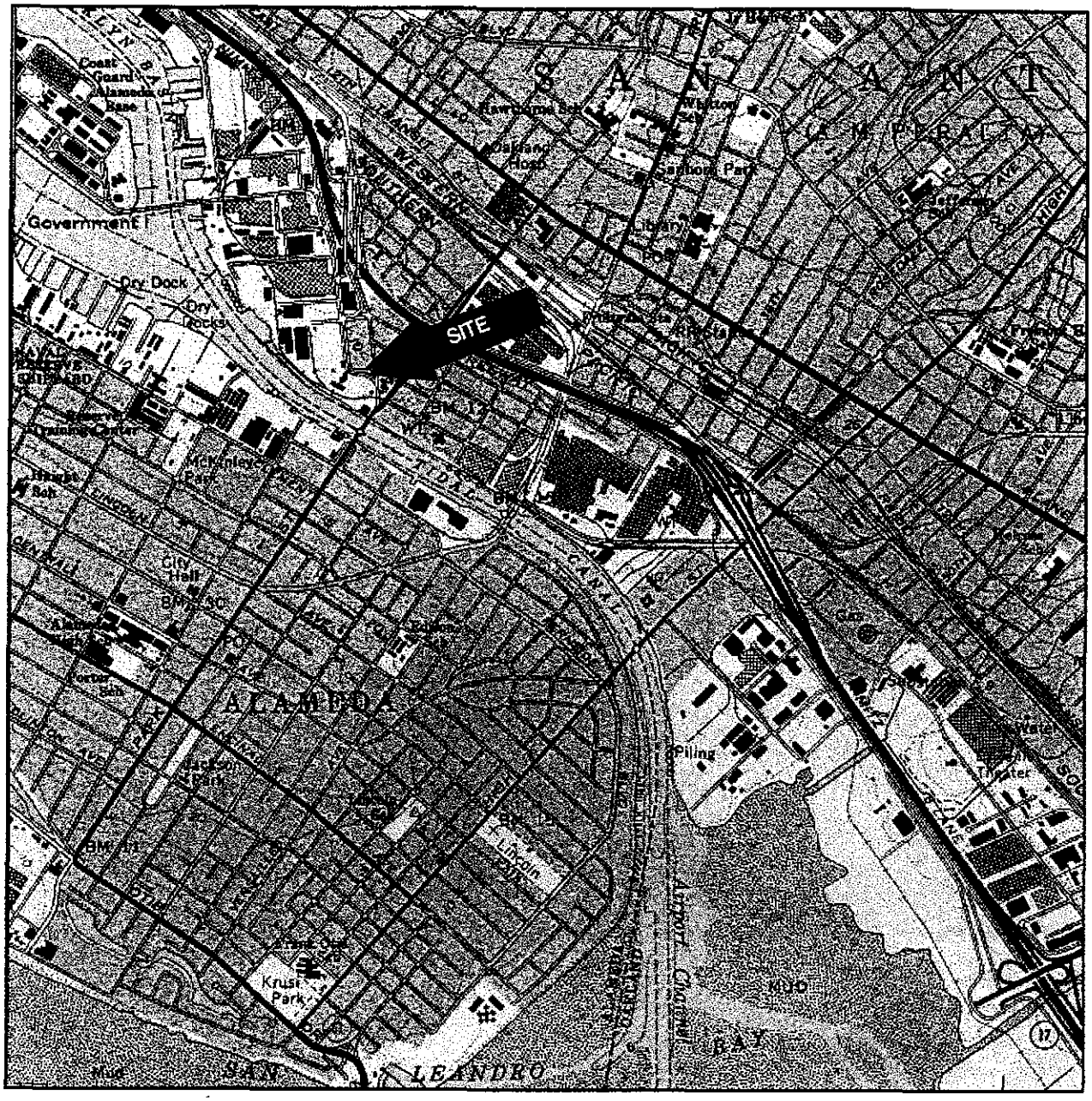
Data through January 1991 provided by Gettler-Ryan, Inc. (Site Update, January 15, 1991).
December 29, 1995 laboratory analytical results provided by Sequoia Analytical, Walnut Creek, California.

Project No. RC0174.003

Table 3: Flow Totalizer Readings
Chevron Lonestar Facility
333 – 23rd Avenue, Oakland, California.

Date	Totalizer Reading (Gallons)	Gallons Discharged This Period	Cumulative Gallons	Days Since Previous Reading	Average Discharge Rate (GPM)	Notes
3-Feb-93	167,942 (a)	0	0		0	Initial reading by Geraghty & Miller
12-Feb-93	168,505	0	0		0	System sampling
24-Feb-93	168,910	405	405	12	0.02	Drop-by site visit
7-Apr-93	169,528	618	1,023	42	0.01	Installed new carbon vessels
14-Apr-93	169,764	236	1,259	7	0.02	System restart
20-Apr-93	195,863	26,099	27,358	6	3.02	System sampling
28-May-93	207,635	11,771	39,130	38	0.22	System off
9-Jun-93	207,635	0	39,130	12	0.00	System sampling
16-Jun-93	214,010	6,376	45,505	7	0.63	System and groundwater sampling
19-Jul-93	215,495	1,485	46,990	33	0.03	System sampling
24-Aug-93	221,826	6,331	53,321	36	0.12	System sampling
13-Sep-93	225,420	3,594	56,915	20	0.12	System sampling
28-Oct-93	242,940	17,520	74,435	45	0.27	System sampling
8-Nov-93	260,323	17,383	91,818	11	1.10	System sampling
18-Dec-93	266,213	5,890	97,708	40	0.10	System and groundwater sampling
16-Mar-94	266,444	231	97,939	88	0.002	System sampling
11-Jul-94	285,890	19,446	117,385	117	0.12	Meet EBMUD onsite
1-Sep-94	353,898	68,008	185,393	52	0.91	Respond to system failure; turn system off
4-Oct-94	353,898	0	185,393	33	0.00	System and groundwater sampling
17-Oct-94	149	149	185,542	13	0.01	Replace flowmeter
20-Dec-94	296	147	185,689	64	0.002	Groundwater sampling
16-Mar-95	296	0	185,689	86	0.00	Groundwater sampling; system inadvertently left on.
28-Mar-95	2,978	2,682	188,371	12	0.16	Turn system off
31-May-95	2,978	0	188,371	64	0.00	Drop-by site visit
30-Sep-95	2,978	0	188,371	122	0.00	No discharge during reporting period
12-Oct-95	3,061.9	84	188,455	12	0.00	Collect flowmeter reading
29-Dec-95	3,062.2	0	188,455	78	0.00	Groundwater sampling

GPM = Gallons per minute
(a) Meter not zeroed when system began operation.



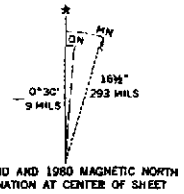
SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET



UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

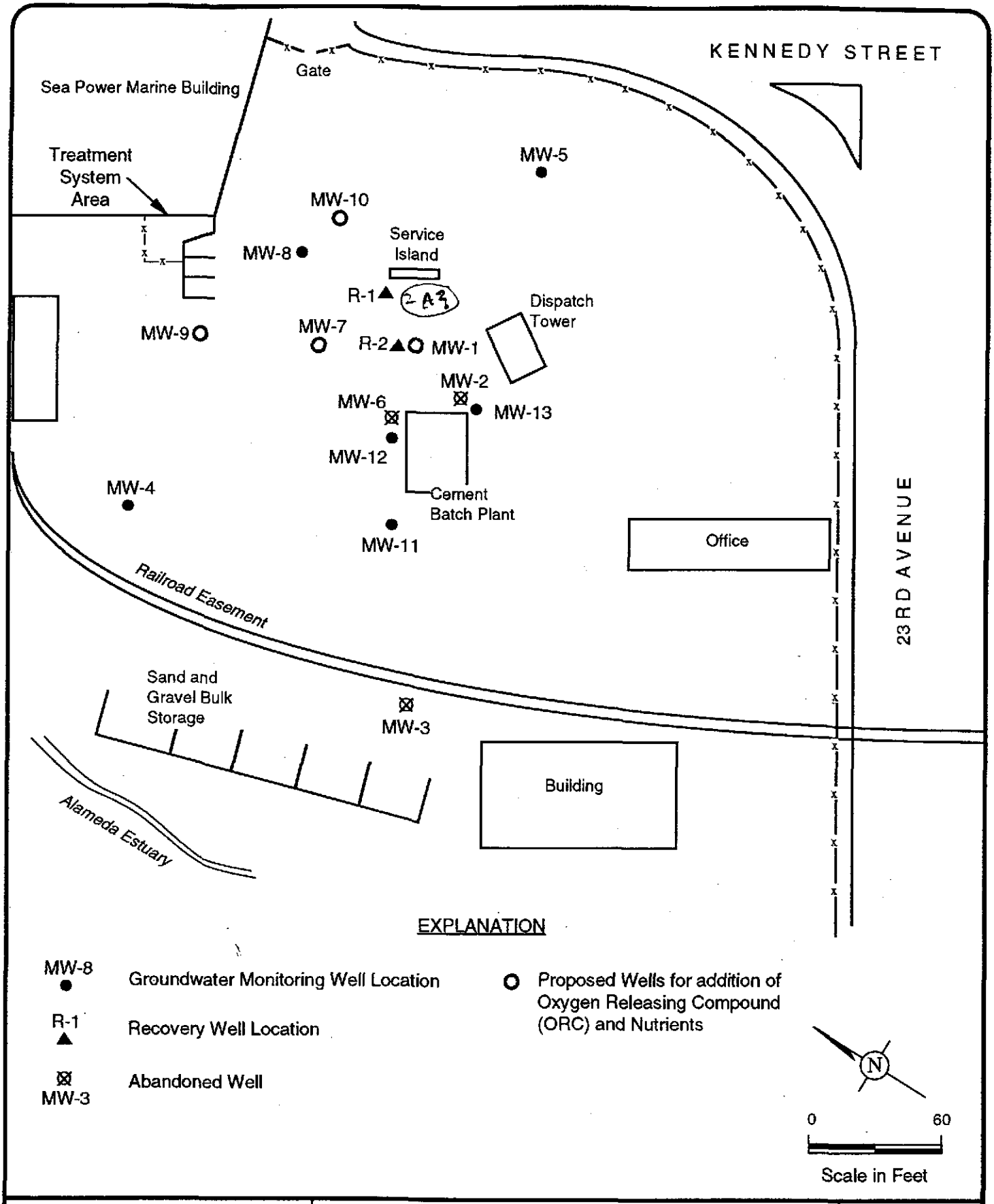
Reference: U.S.G.S. 7.5-minute Quadrangle Oakland East California, 1959 photorevised 1980.

GERAGHTY & MILLER, INC.
Environmental Services
A **Heidemij** Company

Project No. RC0174.000

SITE LOCATION MAP
Lonestar Facility
333–23rd Avenue
Oakland, California

FIGURE
1

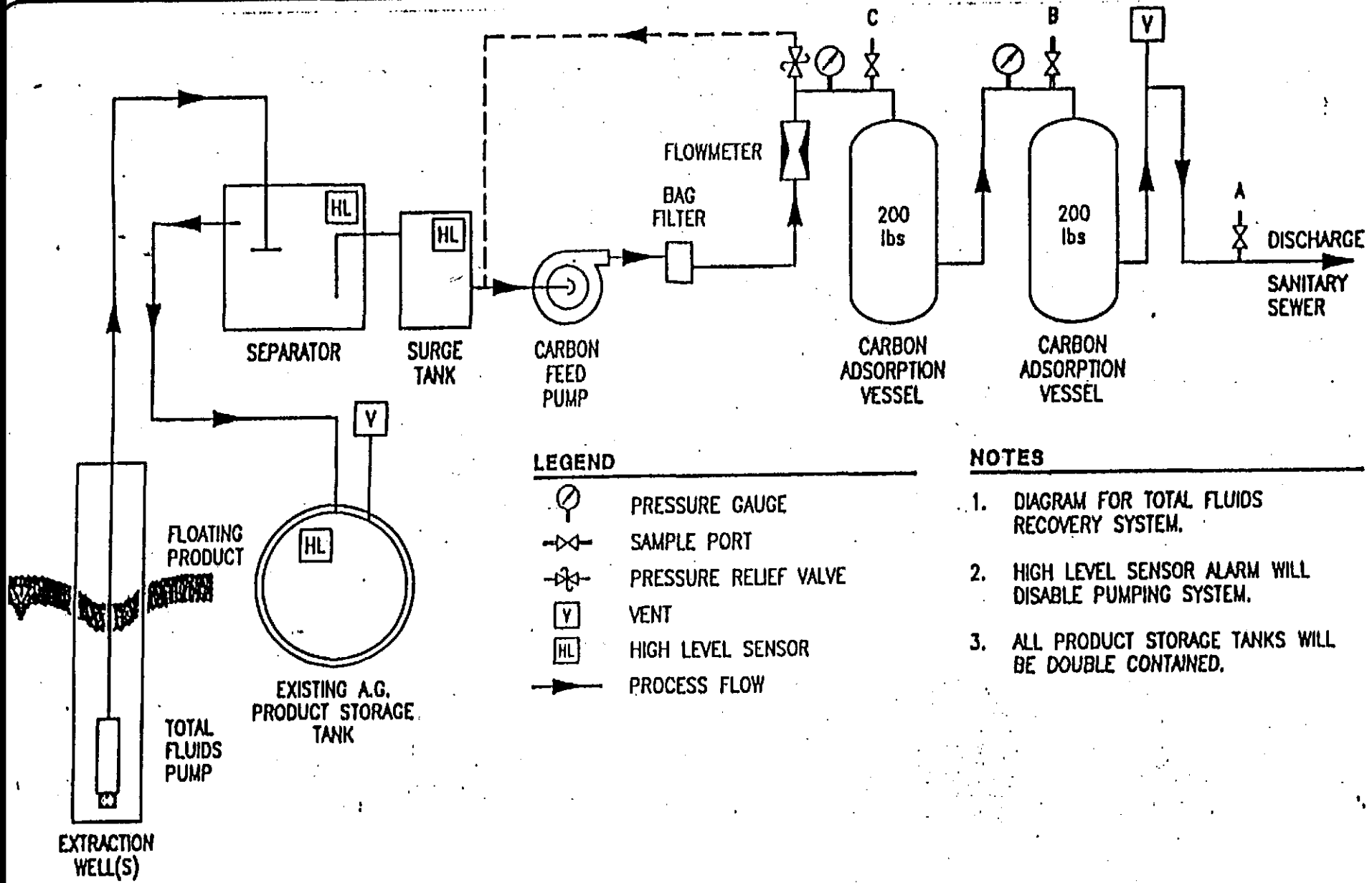


GERAGHTY & MILLER, INC.
Environmental Services
A **Heidemij** Company

Project No. RC0174.000

SITE PLAN
Lonestar Facility
333 – 23rd Avenue
Oakland, California

FIGURE
2
REVISION
2/07/96



GERAGHTY & MILLER, INC.
Environmental Services
Project No. RC17400

PROCESS FLOW DIAGRAM
Lonestar Facility
333 – 23rd Avenue
Oakland, California

FIGURE
3

ATTACHMENT 1

CERTIFIED LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Geraghty & Miller, Inc.	Client Project ID:	Chevron / Lonestar	Sampled: Dec 29, 1995
1050 Marina Way South	Sample Matrix:	Water	Received: Jan 2, 1996
Richmond, CA 94804	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Jan 17, 1996
Attention: Cynthia Hilton	First Sample #:	601-0030	

QC Batch Number: GC011695 802005A | GC011695 802005A | GC011695 802005A | GC011296 802004A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 601-0030 A (EFFL)	Sample I.D. 601-0031 B (INTER)	Sample I.D. 601-0032 C (INFL)	Sample I.D. 601-0033 TB-LB
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	1/16/96	1/16/96	1/16/96	1/12/96
Instrument Identification:	HP-5	HP-5	HP-5	HP.4
Surrogate Recovery, %: (QC Limits = 70-130%)	86	89	89	118

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Kenneth L. Wimer
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Geraghty & Miller, Inc.	Client Project ID:	Chevron / Lonestar	Sampled: Dec 29, 1995
1050 Marina Way South	Sample Matrix:	Water	Received: Jan 2, 1996
Richmond, CA 94804	Analysis Method:	EPA 3510/8015 Mod.	Reported: Jan 17, 1996
Attention: Cynthia Hilton	First Sample #:	601-0030	

QC Batch Number:	SP010396	SP010396	SP010396
	8015EXB	8015EXB	8015EXB

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 601-0030 A (EFFL)	Sample I.D. 601-0031 B (INTER)	Sample I.D. 601-0032 C (INFL)
Extractable Hydrocarbons	50	N.D.	N.D.	1500
Chromatogram Pattern:		--	--	Diesel

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	1/3/96	1/3/96	1/3/96
Date Analyzed:	1/4/96	1/4/96	1/4/96
Instrument Identification:	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Kenneth L. Wimer
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Cynthia Hilton

Client Project ID: Chevron / Lonestar
Matrix: Liquid
QC Sample Group: 6010030-033
Reported: Jan 17, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC011296	GC011296	GC011296	GC011296	SP010396
	802004A	802004A	802004A	802004A	8015EXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3510
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	J. Dinsay
MS/MSD #:	6010013	6010013	6010013	6010013	BLK010396
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/12/96	1/12/96	1/12/96	1/12/96	1/3/96
Analyzed Date:	1/12/96	1/12/96	1/12/96	1/12/96	1/4/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	GCHP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Result:	19	20	21	63	290
MS % Recovery:	95	100	105	105	97
Dup. Result:	24	25	25	74	270
MSD % Recov.:	120	125	125	123	90
RPD:	23	22	17	16	7.1
RPD Limit:	0-20	0-20	0-20	0-20	0-20

LCS #:	2LCS011296	2LCS011296	2LCS011296	2LCS011296	LCS010396
Prepared Date:	1/12/96	1/12/96	1/12/96	1/12/96	1/3/96
Analyzed Date:	1/12/96	1/12/96	1/12/96	1/12/96	1/4/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	GCHP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
LCS Result:	22	23	23	69	310
LCS % Recov.:	110	115	115	115	103

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120	38-122

SEQUOIA ANALYTICAL, #1271

Kenneth L. Wimer
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Cynthia Hilton

Client Project ID: Chevron / Lonestar
Matrix: Liquid
QC Sample Group: 6010030-033

Reported: Jan 17, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011696	GC011696	GC011696	GC011696
	802005A	802005A	802005A	802005A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn
MS/MSD #:	BLK011696	BLK011696	BLK011696	BLK011696
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/16/96	1/16/96	1/16/96	1/16/96
Analyzed Date:	1/16/96	1/16/96	1/16/96	1/16/96
nstrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	20	19	19	58
MS % Recovery:	100	95	95	97
Dup. Result:	19	18	18	55
MSD % Recov.:	95	90	90	92
RPD:	5.1	5.4	5.4	5.3
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	3LCS011696	3LCS011696	3LCS011696	3LCS011696
Prepared Date:	1/16/96	1/16/96	1/16/96	1/16/96
Analyzed Date:	1/16/96	1/16/96	1/16/96	1/16/96
nstrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	20	19	19	59
LCS % Recov.:	100	95	95	98

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Kenneth L. Wimer
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

ax copy of Lab Report and COC to Chevron Contact: ☒ No 9601013 **Chain-of-Custody-Record**

vron U.S.A. Inc.
. BOX 5004
Ramon, CA 94583
(415)842-9591

Chevron Facility Number: CHEVRON / LONESTAR
Facility Address: 333 23 AVE. OAKLAND, CA
Consultant Project Number: RC0174.003
Consultant Name: Geraghty & Miller, Inc.
Address: 1050 Marina Way So., Richmond, CA
Project Contact (Name): CYNTHIA HILTON
(Phone) 510-233-3200 (Fax Number) 510-233-3204

Chevron Contact (Name): Bob Cochran
(Phone) 510-842-9655
Laboratory Name: Sequoia
Laboratory Release Number: 3479240
Samples Collected by (Name): STEVE BOUSSEE / KIRK HASTINGS
Collection Date: 12-29-95
Signature: [signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX (8020)	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
(EFFL)		3	W	G	1050	HCL	Y	X			6010030 A-D									40 mL VOA
(EFFL)		1			1053	NONE			X											1 L AMBER
(INTER)		3			1055	HCL		X			6010031 A-D									40 mL VOA
(INTER)		1			1056	NONE			X											1L AMBER
(INFL)		3			1059	HCL		X			6010032 A-D									40mL VOA
(INFL)		1			1102	NONE			X											1L AMBER
-LB		1						X			6010033									

NOTE: INFLUENT SAMPLE VERY HIGH TPH-Diesel

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	G & M	1-2-96 0:45	[signature]	Seq	1/2/96 10:45
Relinquished By (Signature) [signature]	Organization Seq	Date/Time 1/2/96 4:20	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) [signature]		Date/Time 1/2/96 17:00

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

ATTACHMENT 2

COPIES OF SITE VISIT REPORTS

SITE VISIT REPORT

CHEVRON LONESTAR — **GROUNDWATER EXTRACTION SYSTEM**

Name: Rlpomer	Date: 10-12-95
Purpose of Visit: Check Bailer Collect fl meter Reading	

SYSTEM OPERATION READINGS

Point of Reading	On Arrival	On Departure	Remarks
System Status	ON / (OFF)	ON / OFF	
No. 1- Time of Reading	1325		
No. 2- Diaphragm Pump Air Pressure	N/A psi	psi	
No. 3- Position of Influent Valve	Open		— = closed | = open
No. 4- Pressure on 1st Carbon vessel	0 psi	psi	
No. 5- Pressure on 2nd Carbon vessel	0 psi	psi	
No. 6- Flowmeter Reading	30619.2 gal	gal	
No. 7- Flow Rate	N/A gpm	gpm	
No. 8-	gal	gal	

Hazardous materials removed from site? YES / NO (If yes, describe)

Operational changes made? YES / NO (If yes, describe)

Any system leaks observed? YES / NO (If yes, describe)

Summary of Activities

CHECK SKIMMER IN MW-11 OR 12
READ FLOWMETER
114614.5 Diap Pump in well w/ Bailer + fl meter, meter Rea
Treatment System flow meter Rd. 30619.2
REMOVE SKIMMERS FOR REPLACEMENT

System Samples Obtained? YES / NO	Monitor Well Samples Obtained? YES / NO
Type of Vehicle	Weather
	Continued Other Side

SITE VISIT REPORT

PROJECT NAME Chevron/Lonestar	CLIENT	JOB # 8C014.03
		DATE 10-12-95
LOCATION OF PROJECT	NATURE OF SITE	DAY OF WEEK Wed
		SITE #

NAMES AND FUNCTIONS OF INDIVIDUALS PRESENT INCLUDING G&M PERSONNEL
R Spencer

PURPOSE OF SITE VISIT Swing by to read flowmeter

SUMMARY OF ACTIVITIES

flowmeter 30619.2

DRUM TALLY EMPTY: # WATER: # SOIL: #

HOURS PRESENT	TYPE OF VEHICLE	MILEAGE
	Co. Van	start____ stop____ total____

EQUIPMENT AND MATERIALS USED

WEATHER	SIGNATURE	☐ continued other side of sheet
	[signature] for R Spencer	

GERAGHTY & MILLER, INC.

SITE VISIT REPORT

JOB # RC0174.003		
PROJECT NAME Cheuron Lonestar	**CLIENT** Cheuron	**DATE** 11.9.95
LOCATION OF PROJECT 333 - 23rd Ave. Oakland Ca	**NATURE OF SITE** Rmc Plant	**DAY OF WEEK** Thursday
		SITE #

NAMES AND FUNCTIONS OF INDIVIDUALS PRESENT INCLUDING G&M PERSONNEL

G. Crowley

PURPOSE OF SITE VISIT

Phosphate, Nitrate, Ammonia Field test

SUMMARY OF ACTIVITIES

6:00 - 11:30 · travel to site - measure DTW, Field test for phosphate, Nitrate, Ammonia & D.O. Readings. trvel Back to shop.

R-1 well Box was Filled with Sand

mw-12 was Filled with water (2" to water - no test)

mw-13 was not Found

For The rest of the wells check Record of water level Measurements.

HOURS PRESENT	**TYPE OF VEHICLE**	**MILEAGE**
5.5	Van	start ____ stop ____ total ____

EQUIPMENT AND MATERIALS USED

D.O. Meter - Oil / H_2O InterFace probe - Field test Kits.

WEATHER	**SIGNATURE**	
Overcast -	[signature]	☐ continued other side of sheet

GERAGHTY & MILLER, INC.

Site Visit Summary, RC0174, Chevron -- Lonestar

Date: 1/8/96

To: File

cc: Gary Keyes
Darryl Snow

From: Steve Brussee

Scope: RC0174.003

Activity Dates: 12/29/95

G & M Personnel Present: Steve Brussee, Kirk Hastings

Site Contacts: Not Applicable

Field Activities:

- Purpose of visit: To sample as many monitoring wells as possible.
- For each well sampled:
  - 3 well casing volumes were purged, except where otherwise noted
  - 3 @ HCl-preserved VOAs and 1 @ 1 liter amber were collected.
- The weather was inclimate -- raining throughout the entire time we were present.
  - The rain, in combination with the sand, slurry, and aggregate present made well identification difficult.
  - Several well covers were cracked or not present.
- The treatment system was turned on upon arrival.
  - Steve tripped over the pressure regulation recycle valve before sampling began and broke it. The system was repaired.
  - Considerable effort was required to re-establish flow through the pump. The pump does not self prime.
  - Throughout the day, the rain filled the containment berm to a depth of approximately 1.5 inches. Because the treatment system once again lost prime, the containment berm was not pumped dry. A return trip with a portable sump pump may be necessary.
  - System operating parameter readings:
    - Influent air supply pressure: 70 psig.
    - C-1 in pressure: 4 psig.
    - System totalizer reading: 3,062.2 gal.
    - Samples were collected per information recorded on the COC.
  - The system was turned off at the end of the site sampling process.
- The site monitoring wells were sampled per information recorded on the COC.
  - MW-9. Well cover fractured. Well head annulus was completely filled with slurry. Free product not detected by bailer method.

Site Visit Summary, RC0174, Chevron -- Lonestar

- Depth to water (DTW): 7.48 ft below top of well casing. Depth to bottom (DTB): 20 ft. Purged ~25 gal.

- MW-8. Well cover fractured. Well head surround completely filled with slurry. Free product not detected by bailer method. Diesel odor from bailer was detected. A prismatic sheen was noted on the surface of the collected samples prior to capping.
  - DTW: 7.47 ft. DTB: 18.5 ft. Purged ~25 gal.
- Product interface probe delivered at approximately 13:15.
- MW-10. Well cover fractured. Well head surround completely filled with slurry. Free product not detected with product interface probe.
  - DTW: 8.03 ft. DTB: 13.5 ft. Purged ~20 gal.
- MW-7. Well cover fractured. Well head surround completely filled with slurry. Free product not detected with product interface probe.
  - DTW: 7.51 ft. DTB: 19 ft. Purged dry at ~10 gal.
- MW-11. Well cover fractured. Well head surround completely filled with slurry. Free product not detected with product interface probe.
  - DTW: 8.22 ft. DTB: 21 ft. Purged dry at ~10 gal.
- MW-5. Well cover not fractured. Free product not detected with product interface probe.
  - DTW: 8.39 ft. DTB: 20 ft. Purged ~25 gal.
- MW-4 could not be located (behind the sump washout area). Had it been located and opened, the well cap area would have filled with the water and slurry which were pooled on the surrounding ground surface.
- MW-12 was located but was open and filled with water.
- MW-1 was inacessible.
- MW-13 could not be located.

Signature

1-8-96
Date