



**GETTLER-RYAN INC.**

ENVIRONMENTAL  
PROTECTION

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**TRANSMITTAL**

**TO:** Mr. Barney Chan  
Alameda County Environmental  
Health Services  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

**DATE:** January 24, 1997  
**G-R #:** 6338.80

**FROM:** Deanna L. Harding  
Project Coordinator  
Gettler-Ryan Inc.  
6747 Sierra Court, Suite J  
Dublin, California 94568

**RE:** Chevron/RMC Lonestar Facility  
CPS# 206142  
333 - 23rd Avenue  
Oakland, California

**WE HAVE ENCLOSED THE FOLLOWING:**

<b>COPIES</b>	<b>DATED</b>	<b>DESCRIPTION</b>
1	January 20, 1997	Groundwater Monitoring & Sampling Report Fourth Quarter 1996 Sampling Event

**COMMENTS:**

At the request of Chevron Products Company, we are providing you a copy of the above referenced report. The referenced site is monitored and sampled on a semi-annual basis, scheduled in June and December. If you have questions please contact Mr. R.J. (Bob) Cochran, Chevron Project Manager, at (510) 842-9655, or myself at (510) 551-7555.

Enclosure

cc: Mr. Aaron O'Brien, Geraghty & Miller, 1050 Marina Way South, Richmond, CA 94804

agency/6338.ltr

**Table 1: Summary of Groundwater Sampling Results**  
RMC Lonestar Facility  
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing	Liquid-Phase Groundwater				Ethyl-		Xylenes	TPH-D
		Elevation	Hydrocarbon	Elevation	TPH-G	Benzene	Toluene	benzene		
		(a)	Depth to Water	Thickness	(b)	(c)	(d)	(d)	(d)	(e)
		(feet) (msl)	(feet)	(feet)	(feet) (msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1	21-Dec-90	4.70	9.77	2.07	-3.41	NP	NP	NP	NP	NP
	18-Dec-93		8.45	0.03	-3.73	NS	NS	NS	NS	NS
	29-Mar-94		9.00	0.45	-3.94	NS	NS	NS	NS	NS
	9-Jun-94		NS (i)	NS	NS	NS	NS	NS	NS	NS
	4-Oct-94		8.71	0.04	-3.98	LPH	LPH	LPH	LPH	LPH
	20-Dec-94		8.38	0.67	-3.14	LPH	LPH	LPH	LPH	LPH
	28-Mar-95		7.79	0.50	-2.69	LPH	LPH	LPH	LPH	LPH
	30-Jun-95		NM	NM	NM	LPH	LPH	LPH	LPH	LPH
	24-Sep-95		7.79	0.50	-2.69	LPH	LPH	LPH	LPH	LPH
	29-Dec-95		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
	24-Mar-96		7.68	0.01	-2.97	1,400 (n)	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)
MW-2 (f)	15-Jun-89	NS	NP	NP	---	ND(<200)	ND(<0.5)	ND(<5.0)	ND(<5.0)	ND(<5.0)
MW-4	28-May-87	NS	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)
	15-Jun-89		NP	NP	---	ND(<100)	ND(<0.2)	ND(<2.0)	ND(<2.0)	ND(<2.0)
	21-Dec-90		7.31	NP	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	19-Mar-93		6.64	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<1.5)
	16-Jun-93		8.01	---	---	210	32	27	2.8	19
	18-Dec-93		7.35	---	---	79	0.5	1.2	0.5	1.1
	29-Mar-94		8.05	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	9-Jun-94		8.14	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	4-Oct-94		7.31	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	20-Dec-94		7.03	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	28-Mar-95		6.83	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	30-Jun-95		7.84	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	24-Sep-95		7.67	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	110
	29-Dec-95	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)	(l)
	24-Mar-96		7.41	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	95



**Table 1: Summary of Groundwater Sampling Results**  
RMC Lonestar Facility  
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing	Depth to Water	Liquid-Phase Groundwater		TPH-G	Benzene	Toluene	Ethyl-	Xylenes	TPH-D
		Elevation		Hydrocarbon	Elevation						
		(a)	(feet)	(feet)	(feet)	(c)	(d)	(d)	(d)	(d)	(e)
		(feet) (msl)			(feet) (msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(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)
	24-Mar-96		NM	---	NM	NS	NS	NS	NS	NS	NS
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)
	24-Mar-96		7.69	0.01	-3.17	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	81



**Table 1: Summary of Groundwater Sampling Results**  
 RMC Lonestar Facility  
 333 - 23rd Avenue, Oakland, California.

Well	Date	Top of Casing	Liquid-Phase Groundwater			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)
		Elevation (a) (feet) (msl)	Depth to Water (feet)	Hydrocarbon Thickness (feet)	Elevation (b) (feet) (msl)						
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	---	<u>-2.55</u>	520	ND(<0.50)	ND(<0.50)	ND(<0.50)	ND(<0.50)	25,000
	24-Mar-96		NM	---	NM	NS	NS	NS	NS	NS	NS
	MW-9	28-May-87	4.42	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)
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	---	<u>-3.79</u>	NS	NS	NS	NS	NS	NS
29-Dec-95			7.48	---	<u>-3.06</u>	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	600
24-Mar-96			NM	---	NM	NS	NS	NS	NS	NS	NS

*why NS*



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Well	Date	Top of Casing	Liquid-Phase Groundwater			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)
		Elevation (a) (feet) (msl)	Depth to Water (feet)	Hydrocarbon Thickness (feet)	Elevation (b) (feet) (msl)						
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)
	24-Mar-96		NM	---	NM	NS	NS	NS	NS	NS	(NS) why?
	MW-11	21-Aug-87	4.37	NP	NP	---	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<2)
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)
24-Mar-96		8.46	---	-4.09	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	80	
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)

Project No. RC0174.003



**Table 1: Summary of Groundwater Sampling Results**  
RMC Lonestar Facility  
333 – 23rd Avenue, Oakland, California.

Well	Date	Top of Casing	Depth to Water	Liquid-Phase	Groundwater	TPH-G	Benzene	Toluene	Ethyl-	Xylenes	TPH-D
		Elevation		Hydrocarbon	Elevation				benzene		
		(a)	(feet)	Thickness	(b)	(c)	(d)	(d)	(d)	(d)	(e)
		(feet) (msl)		(feet)	(feet) (msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
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)
(o)	24-Mar-96		7.74	---	-3.01	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<50)
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
	24-Mar-96		---	---	---	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	NA

(Remarks on next page.)



Well	Date	Top of Casing		Liquid-Phase Groundwater		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)
		Elevation (a) (feet) (msl)	Depth to Water (feet)	Hydrocarbon Thickness (feet)	Elevation (b) (feet) (msl)						

- (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  $(TOC-DTW) + ((DTW-DTP) \times 0.8)$ .
- (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.
- (n) Laboratory reports that the chromatogram indicates the presence of unidentified hydrocarbons >C8.
- (o) Well MW-13 also analyzed on March 24, 1996, for Total Dissolved Solids (USEPA Method 160.1). Laboratory reported a concentration of 1,600 mg/L.

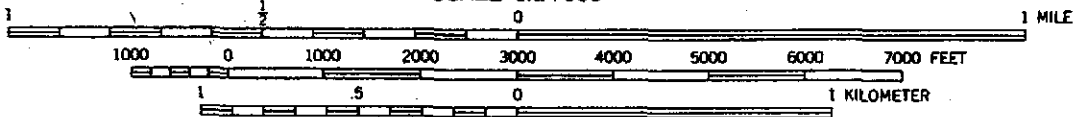
TPH-G Total petroleum hydrocarbons as gasoline  
TPH-D Total petroleum hydrocarbons as diesel  
µg/L Micrograms per liter  
ND Not detected within the method detection limit.  
NM Not measured  
NP Data not provided  
NS Not surveyed or not sampled  
LPH Liquid-phase hydrocarbons present; well not sampled

Data through January 1991 provided by Gettler-Ryan, Inc. (Site Update, January 15, 1991).  
March 24, 1996 laboratory analytical results provided by Sequoia Analytical, Walnut Creek, California.

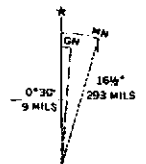




SCALE 1:24 000



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

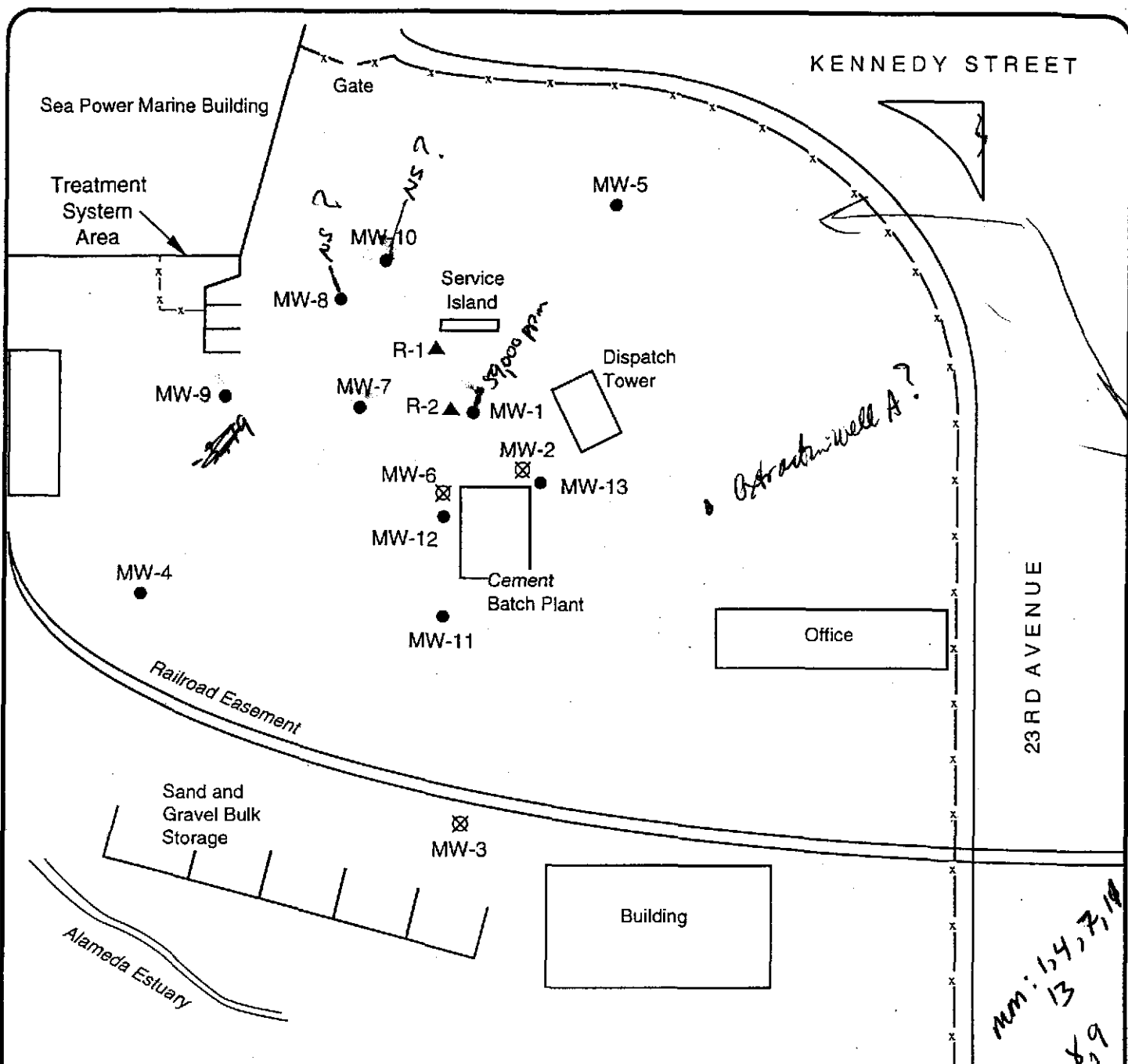
**SITE LOCATION MAP**

Lonestar Facility  
333-23rd Avenue  
Oakland, California

FIGURE

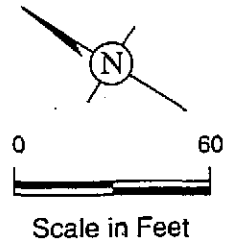
**1**





**EXPLANATION**

- MW-8 ● Groundwater Monitoring Well Location
- R-1 ▲ Recovery Well Location
- ⊗ MW-3 Abandoned Well



**ATTACHMENT 1**

**COPIES OF CERTIFIED LABORATORY REPORTS  
AND  
CHAIN-OF-CUSTODY DOCUMENTATION**



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
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Geraghty & Miller, Inc. 1050 Marina Way South Richmond, CA 94804 Attention: Cynthia Hilton	Client Project ID: RC0174.003, Chevron/Lonestar Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-2084	Sampled: Mar 24, 1996 Received: Mar 25, 1996 Reported: Apr 9, 1996
---	---	--

QC Batch Number:	GC040596	GC040596	GC040596	GC040596	GC040596	GC040896
------------------	----------	----------	----------	----------	----------	----------

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 603-2084 MW-4	Sample I.D. 603-2085 MW-7	Sample I.D. 603-2086 MW-11	Sample I.D. 603-2087 MW-13	Sample I.D. 603-2088 TB-LB	Sample I.D. 603-2089 MW-1
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.	N.D.	1,400
Benzene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Chromatogram Pattern: -- -- -- -- -- Unidentified Hydrocarbons >C8

### Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	4/5/96	4/5/96	4/5/96	4/5/96	4/5/96	4/8/96
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	105	94	104	105	104	100

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

Kevin Van Slambrook  
Project Manager



**Sequoia  
Analytical**

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

Client Project ID: RC0174.003, Chevron/Lonestar  
Sample Matrix: Water  
Analysis Method: EPA 3510/8015 Mod.  
First Sample #: 603-2084

Sampled:  
Received: Mar 25, 1996  
Reported:

QC Batch Number:

**TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS**

Analyte	Reporting Limit µg/L	Sample I.D. 603-2084 MW-4	Sample I.D. 603-2085 MW-7	Sample I.D. 603-2086 MW-11	Sample I.D. 603-2087 MW-13	Sample I.D. 603-2089 MW-1
Extractable Hydrocarbons	50	95	81	80	N.D.	59,000
Chromatogram Pattern:		Diesel	Diesel	Diesel	--	Diesel

**Quality Control Data**

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	50
Date Extracted:	3/27/96	3/27/96	3/27/96	3/27/96	3/27/96
Date Analyzed:	3/27/96	3/27/96	3/27/96	3/27/96	3/27/96
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B

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

  
Kevin Van Slambrook  
Project Manager



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Geraghty & Miller, Inc. 1050 Marina Way South Richmond, CA 94804 Attention: Cynthia Hilton	Client Project ID: RC0174.003, Chevron/Lonestar	Sampled: Mar 24, 1996
	Sample Descript: Water, MW-13	Received: Mar 25, 1996
	Lab Number: 603-2087	Analyzed: Mar 28, 1996 Reported: Apr 9, 1996

## LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L	QC Batch Number	Instrument ID
Total Dissolved Solids.....	1.0	1,600	IN032896160100A	MANUAL

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

  
Kevin Van Slambrook  
Project Manager



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

Client Project ID: RC0174.003, Chevron/Lonestar  
Matrix: Liquid

QC Sample Group: 6032084-2089

Reported: Apr 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040896 802004A	GC040896 802004A	GC040896 802004A	GC040896 802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	6031559	6031559	6031559	6031559
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/8/96	4/8/96	4/8/96	4/8/96
Analyzed Date:	4/8/96	4/8/96	4/8/96	4/8/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	17	17	16	51
MS % Recovery:	85	85	80	85
Dup. Result:	19	19	18	56
MSD % Recov.:	95	95	90	93
RPD:	11	11	12	9.3
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	4LCS040896	4LCS040896	4LCS040896	4LCS040896
Prepared Date:	4/8/96	4/8/96	4/8/96	4/8/96
Analyzed Date:	4/8/96	4/8/96	4/8/96	4/8/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	19	19	20	65
LCS % Recov.:	95	95	100	108

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130
---------------------------------	--------	--------	--------	--------

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, #1271

*Kevin Van Slambrook*  
Kevin Van Slambrook  
Project Manager



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FAX (916) 921-0100

Geraghty & Miller, Inc. Client Project ID: RC0174.003, Chevron/Lonestar  
1050 Marina Way South Matrix: Liquid  
Richmond, CA 94804  
Attention: Cynthia Hilton QC Sample Group: 6032084-2089 Reported: Apr 10, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040596 802004A	GC040596 802004A	GC040596 802004A	GC040596 802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	L. Huang	L. Huang	L. Huang	L. Huang
MS/MSD #:	6032052	6032052	6032052	6032052
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/5/96	4/5/96	4/5/96	4/5/96
Analyzed Date:	4/5/96	4/5/96	4/5/96	4/5/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	19	19	18	53
MS % Recovery:	95	95	90	88
Dup. Result:	19	19	18	54
MSD % Recov.:	95	95	90	90
RPD:	0.0	0.0	0.0	1.9
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	4LCS040596	4LCS040596	4LCS040596	4LCS040596
Prepared Date:	4/5/96	4/5/96	4/5/96	4/5/96
Analyzed Date:	4/5/96	4/5/96	4/5/96	4/5/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	19	19	17	54
LCS % Recov.:	95	95	85	90

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130
---------------------------	--------	--------	--------	--------

**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, #1271  
  
Kevin Van Slambrook  
Project Manager



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

Client Project ID: RC0174.003, Chevron/Lonestar  
Matrix: Liquid

QC Sample Group: 6032084-2089

Reported:

**QUALITY CONTROL DATA REPORT**

Analyte:	Diesel	Total Dissolved Solids
QC Batch#:	SP032796	IN032896
	8015EXA	160100A
Analy. Method:	EPA 8015 Mod.	EPA 160.1
Prep. Method:	EPA 3510	EPA 160.1
Analyst:	J. Dinsay	Y. Borinshteyn
MS/MSD #:	BLK032796	6032087
Sample Conc.:	N.D.	1600 mg/L
Prepared Date:	3/27/96	3/28/96
Analyzed Date:	3/27/96	3/28/96
Instrument I.D.#:	HP-3B	Manual
Conc. Spiked:	300 µg/L	1000 mg/L
Result:	250	2800
MS % Recovery:	83	120
Dup. Result:	240	2700
MSD % Recov.:	80	110
RPD:	4.1	3.6
RPD Limit:	0-50	0-20

LCS #:	LCS032796	160.1YB03L1
Prepared Date:	3/27/96	3/28/96
Analyzed Date:	3/27/96	3/28/96
Instrument I.D.#:	HP-3B	Manual
Conc. Spiked:	300 µg/L	500 mg/L
LCS Result:	240	470
LCS % Recov.:	80	94

MS/MSD	LCS	Control Limits
	50-150	70-130

**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, #1271

*Kevin Van Slambrook*  
Kevin Van Slambrook  
Project Manager



# Chromatogram

Sample Name : GERAGHTY

Sample #: 6032084

Page 1 of 1

File Name : J:\HP3DATA\38MA505.RAW

Date : 3/28/96 4:34 PM

Method :  
Start Time : 0.00 min  
End Time : 33.65 min

Time of Injection: 3/28/96 7:03 AM

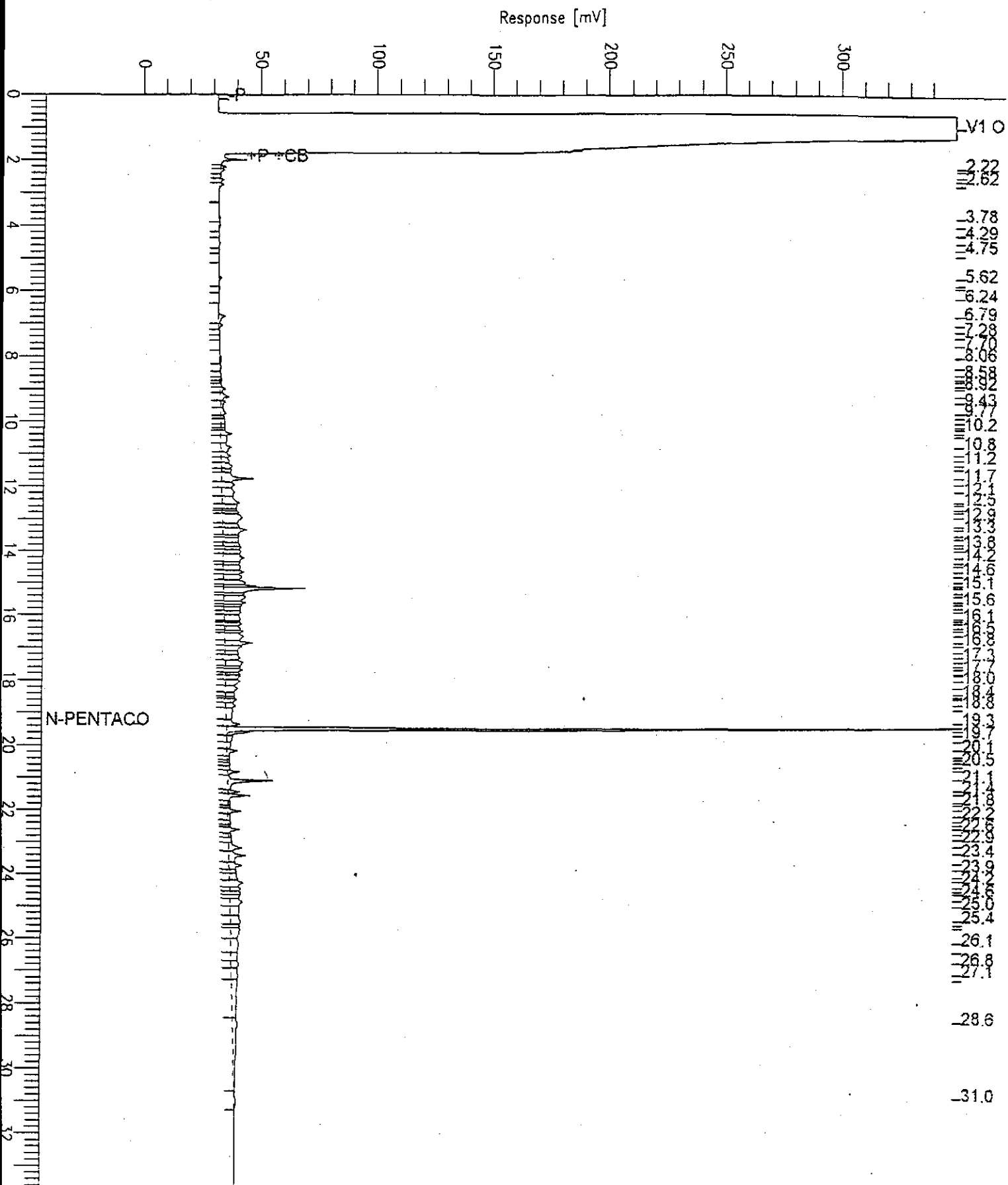
Low Point : 0.00 mV

High Point : 350.00 mV

Scale Factor: 0.0

Plot Offset: 0 mV

Plot Scale: 350.0 mV



# Chromatogram

Sample Name : GERAGHTY

Sample #: 6032085

Page 1 of 1

File Name : J:\HP3DATA\3BMA506.RAW

Date : 3/28/96 4:34 PM

Method :

Time of Injection: 3/28/96 7:45 AM

Start Time : 0.00 min

End Time : 33.65 min

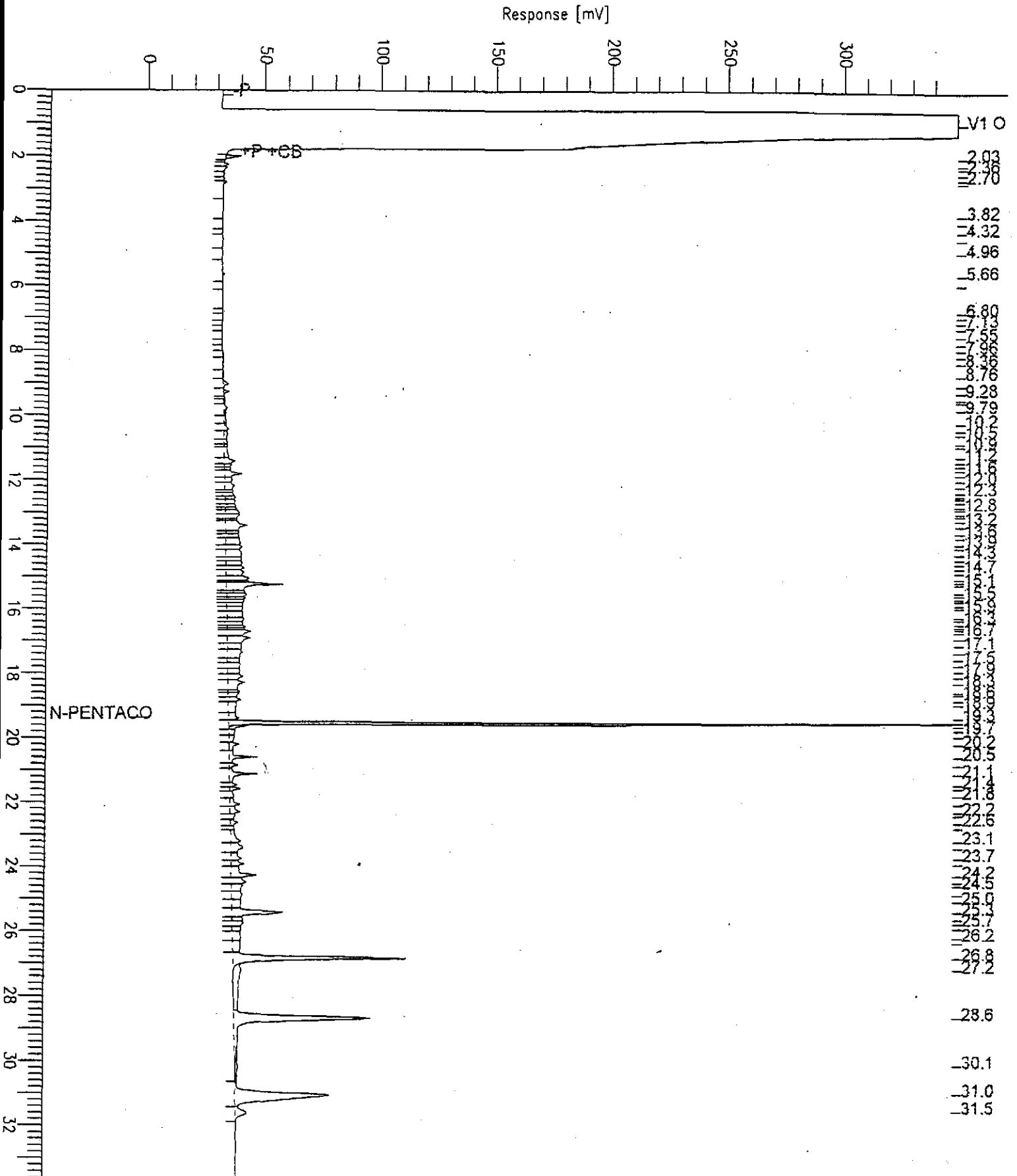
Low Point : 0.00 mV

High Point : 350.00 mV

Scale Factor: 0.0

Plot Offset: 0 mV

Plot Scale: 350.0 mV



# Chromatogram

Sample Name : GERAGHTY

Sample #: 6032086

Page 1 of 1

Sample Name : J:\HP3DATA\3BMA507.RAW

Date : 3/28/96 4:35 PM

Method :

Time of Injection: 3/28/96 8:26 AM

Start Time : 0.00 min

End Time : 33.65 min

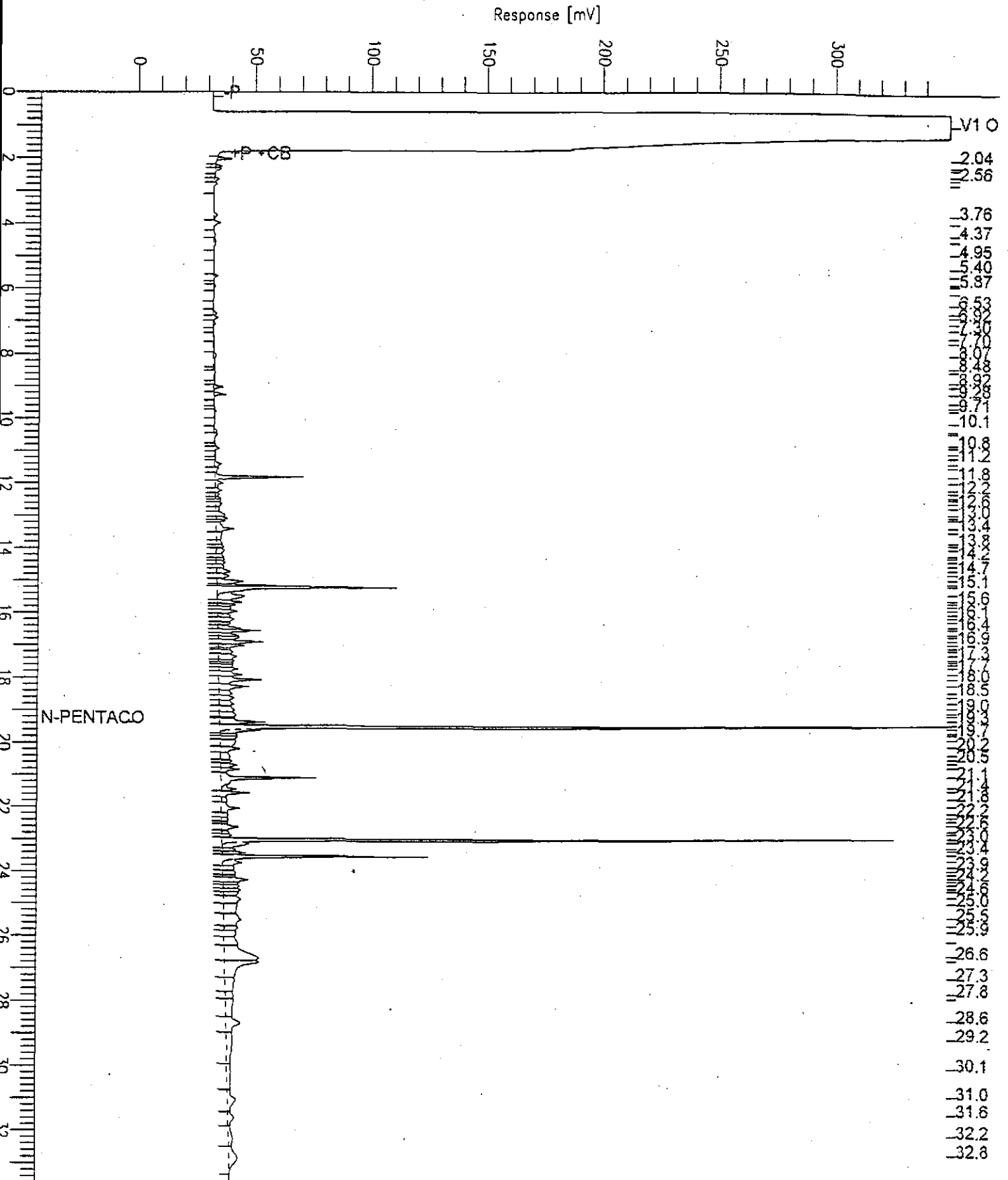
Low Point : 0.00 mV

High Point : 350.00 mV

Scale Factor: 0.0

Plot Offset: 0 mV

Plot Scale: 350.0 mV



# Chromatogram

Sample Name : GERAGHTY

Sample #: 6032089RS

Page 1 of 1

File Name : J:\HP3DATA\3BMA513.RAW

Date : 3/28/96 4:35 PM

Method :

Time of Injection: 3/28/96 1:42 PM

Start Time : 0.00 min

End Time : 33.65 min

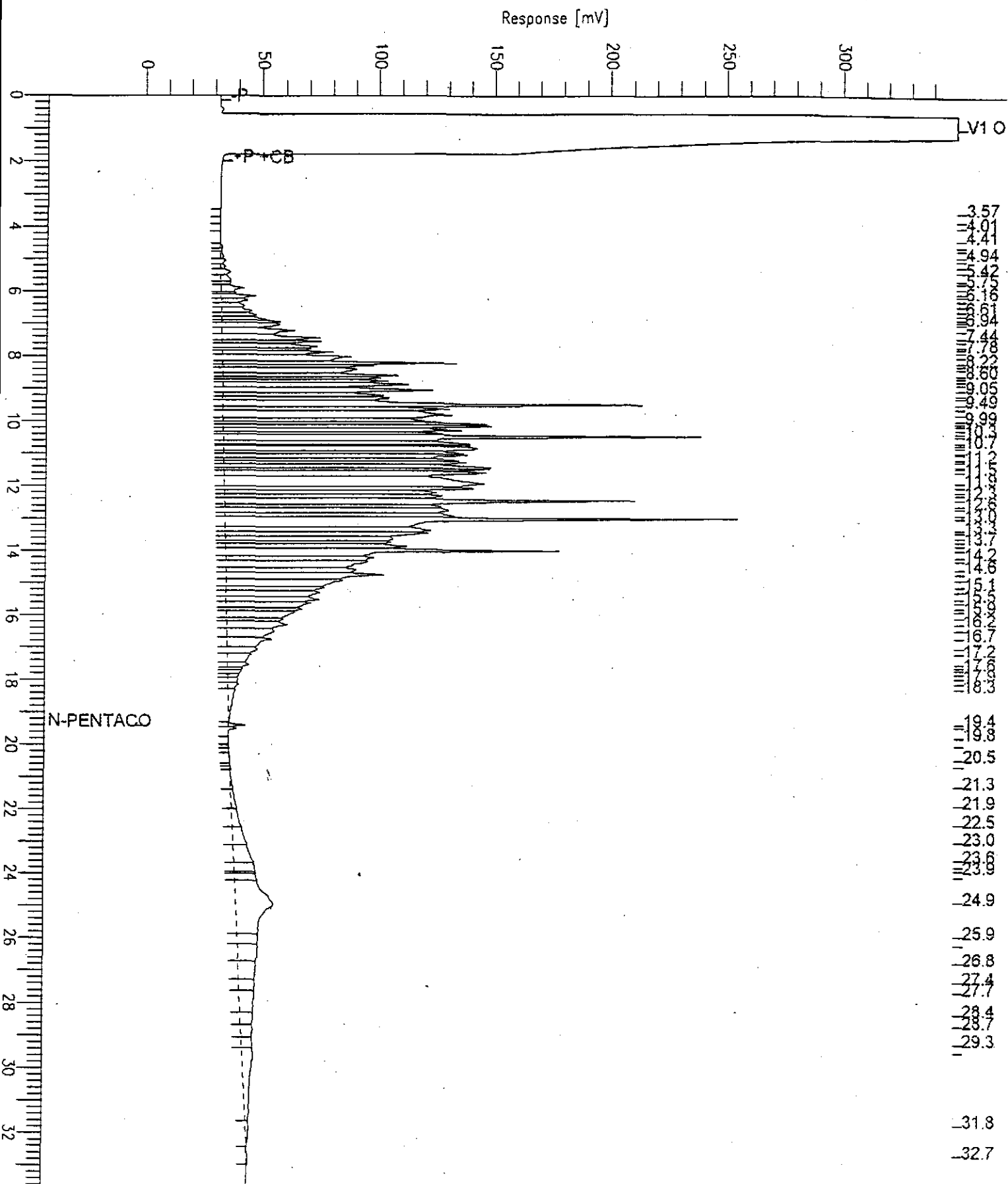
Low Point : 0.00 mV

High Point : 350.00 mV

Scale Factor: 0.0

Plot Offset: 0 mV

Plot Scale: 350.0 mV



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

Chevron Facility Number CHEVRON LONESTAR  
Facility Address 333 23rd Ave., OAKLAND, CA  
Consultant Project Number RCD174.003  
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) Aaron Brown  
Collection Date 3/29/96  
Signature [Signature]

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	Leak (Yes or No)	Analyses To Be Performed											NOTE:  Remarks
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals CA, Cr, Pb, Zn, Ni (ICAP or AA)				
MW-4			W	G	4:45	AS LABELED	Y	X	X										6032084A-D
MW-7					2:45			X	X										6032085
MW-11								X	X										6032086
MW-13								X	X										6032087A-E
TB-LB								X	X										6032088A
MW-1			W	G			Y	X	X										6032089A-D

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GM</u>	Date/Time <u>3-25-96</u>	Received By (Signature) <u>Ralph Bonelli</u>	Organization <u>Seq</u>	Date/Time <u>3/25/96 12:50</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>Ralph Bonelli</u>	Organization <u>Seq</u>	Date/Time <u>3/25/96 10:40</u>	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>Ralph Bonelli</u>	Organization <u>Seq</u>	Date/Time <u>3/26/96 16:40</u>	

Q.

DES R-1 Same as well A, well A - not on Fig 2

2) Estimate of amount discharged

3) " " " recovered

4) Current levels of DO, NO<sub>3</sub>, PO<sub>3</sub> + NH<sub>3</sub>

5) Current monitoring program

6) gradient?

7) Proposed cleanup level. protective February.

. Site is high risk because located next to estuary.