8430 AMELIA STREET • OAKLAND, CA 94621

(800) 821-0424 • (415) 633-0336 FAX (415) 633-0759



1-29-92

November 7, 1991

Harry Buettner Hoyt & Buettner Tractor Co. 22117 Meekland Ave. Hayward CA 94541

RE: Groundwater Monitoring Well Sampling at Hoyt & Buettner Tractor Co. 22117 Meekland Ave., Hayward, CA.

Dear Mr. Buettner:

Crosby & Overton, Inc. (C&O) is pleased to submit this letter report concerning the results of groundwater monitoring well sampling and analyses for three groundwater monitoring wells (MW-1, MW-2, MW-3) at 22117 Meekland Ave., Hayward, California (Figure 1).

#### **BACKGROUND**

At this site, a waste oil underground storage tank was removed, the excavation pit was backfilled and the area was re-paved with concrete. Due to the discovery that samples from the backfill material were hydrocarbon impacted; re-excavation of the material and further excavation of adjacent impacted soils was required.

Crosby & Overton, Inc. was contracted by Hoyt & Buettner Tractor Company to: re-excavate; over-excavate, as necessary; conduct clearance sidewall sampling; biodetoxify the excavated soil; and to install, develop, and sample three groundwater monitoring wells at the site.

On October 8, 1991, C & O personnel resampled the three wells located at 22117 Meekland Ave. Well locations are shown in Figure 2.

#### **PROCEDURES**

See Appendix A for Standard Operating Procedures for monitoring well sampling.

After stabilization, the well was sampled and analyzed for total oil and grease (TOG); petroleum hydrocarbons as diesel (TPHd), plus benzene, toluene, xylenes, and ethylbenzene (BTXE) [Method 5520 C,F; 3550 GCFID + BTXE]. Results of the analyses are listed in Table I. All samples from this sampling event were sent to Med-Tox Associates, Inc. of Pleasant Hill, California. The laboratory report may be found in Appendix B.

Table I Analytic results of groundwater well sampling.

DATE	SAMPLE	TOG ppm	TPHd ppm	B ppb	T ppb	X ppb	E ppb
Detection	n Limits	0.05	0.05	0.3	0.3	1.0	0.3
04/05/91	MW-1	ND	ND	ND	ND	ND	ND
10/08/91	MW-1	ND	ND	ND	ND	ND	ND
04/05/91	MW-2	0.2	ND	ND	ND	ND	ND
10/08/91	MW-2	ND	ND	ND	1.0	ND	ND
04/05/91	MW-3	ND	ND	ND	ND	ND	ND
10/08/91	MW-3	ND	ND	ND	ND	ND	ND

TOG = Total Oil and Grease

TPHd = Total Petroleum Hydrocarbons as diesel

ppm = parts per million (mg/L)

ppb = parts per billion ( $\mu$ g/L)

ND = not detected

#### RESULTS AND CONCLUSIONS

Groundwater monitoring wells MW-1 and MW-3 had below detectable quantities of TOG, TPHd, and BTEX. MW-2 yielded below detectable quantities for all analyses except for toluene. Toluene concentration in MW-2 was detected at 1.0 parts per billion (ppb).

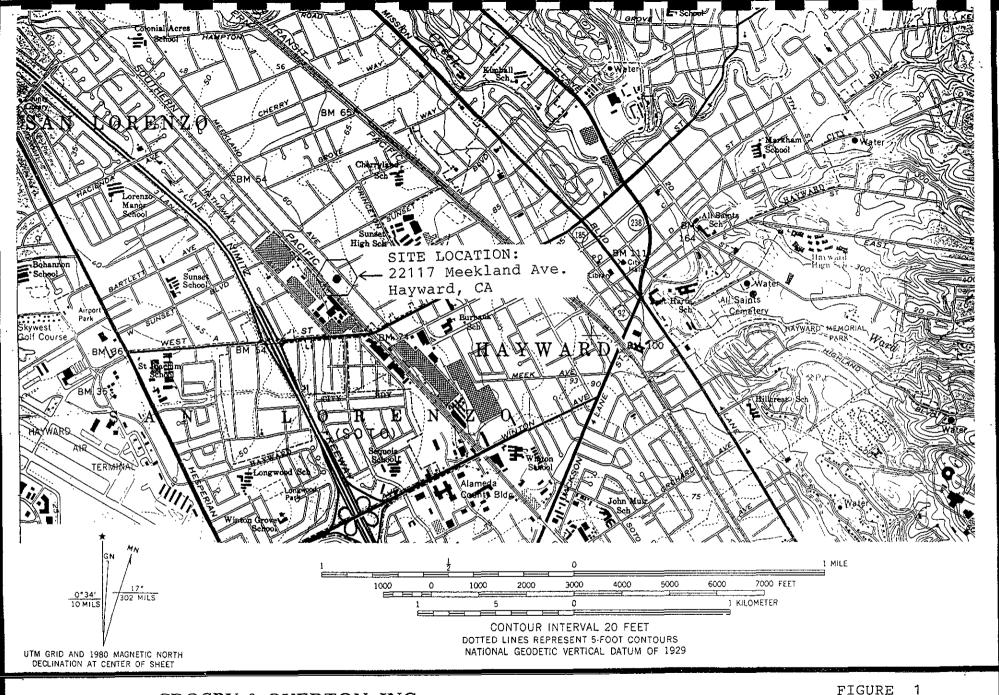
If we may be of further service, or should you have any questions, please contact us at your convenience.

Sincerely,

Matthew Walraven Staff Geologist

Dave Sadoff

Project Geologist





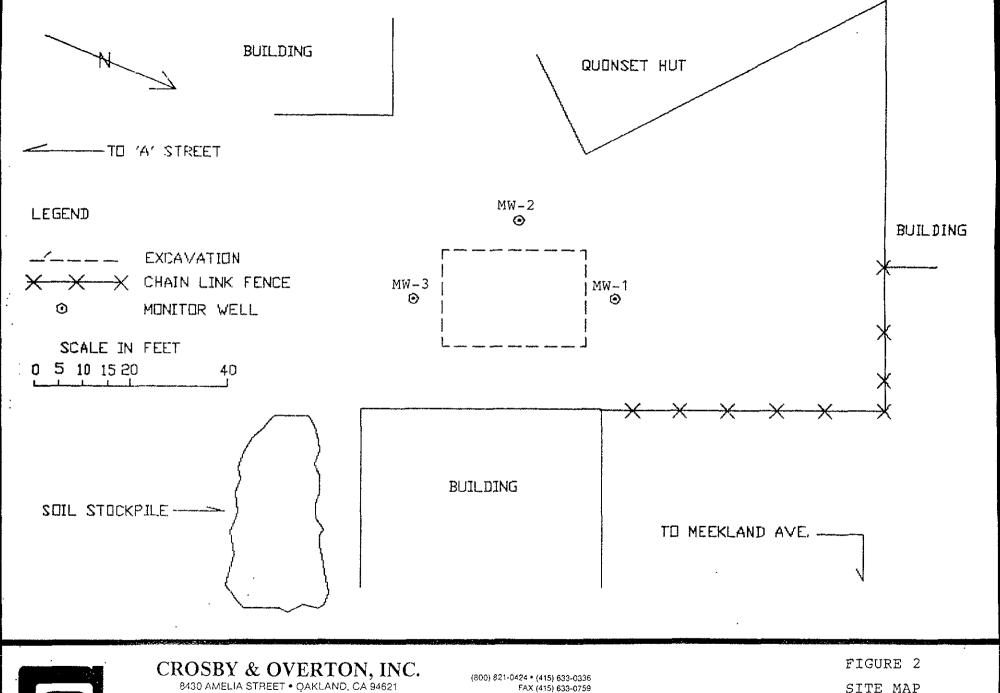
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After USGS 15' Hayward CA quadrangle 1959, rev. 1980.

DATE: 5-16-1991 JOB NUMBER: 8205-S

DRAWN BY: MHW



(800) 821-0424 • (415) 633-0336 FAX (415) 633-0759 SITE MAP

DATE: 5-16-1991 JOB NUMBER: 8205-S

DRAWN BY: M. Ayala

### APPENDIX A STANDARD OPERATING PROCEDURES

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#### STANDARD OPERATING PROCEDURES

#### Monitoring Well Sampling

A minimum of three well volumes are pumped from each well, each well is permitted to recharge to ≥80% of original capacity and stabilize. Stabilization is determined by measuring the parameters of pH; temperature; and electrical conductivity. When two subsequent measurements of these three parameters are within 10% of each other, the well is considered stabilized and is sampled.

The samples are collected using a new polyethylene bailer with a bottom siphon and nylon cord. The bailers are disposable, and therefore, never reused. Duplicate water samples for volatile organic compounds are collected from the well and siphoned into three (3) clear 40 ml VOA vials with all headspace removed. For all other analyses, samples are collected in 950 ml amber glass bottles. All samples are labeled, chilled to 4°C (utilizing either crushed ice or Blue-Ice®) in an ice chest, and transported in a refrigerated environment under Chain-of-Custody documentation to a California State certified hazardous materials testing laboratory for the analyses requested.

Groundwater sampling is performed in accordance with the California Regional Water Quality Control Board (RWQCB) procedures described in the Leaking Underground Fuel Tank (LUFT) Field Manual, the Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, and local regulatory guidelines.

Standard Environmental Protection Agency (EPA), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), and Department of Health Services (DHS) methodologies are routinely utilized.

Chain of Custody documentation accompanies all samples to the laboratory. A copy of the Chain of Custody documentation is attached to the Certificate of Analysis.

#### APPENDIX B LABORATORY REPORT

## ANALYTICAL SERVICES

DOHS CERTIFICATION NO: E772



CERTIFICATE OF ANALYSIS

PAGE 1 OF 7

CROSBY & OVERTON, INC. 8430 AMELIA STREET

OAKLAND, CA 94621

ATTN: DAVE SADOFF

CLIENT PROJ. ID: 9149-S PURCHASE ORDER NO: 12372 REPORT DATE: 10/18/91

DATE SAMPLED: 10/08/91

DATE RECEIVED: 10/08/91

MED-TOX JOB NO: 9110077

ANALYSIS OF: WATER SAMPLES

Sample Identii Client Id.	fication Lab No.	Extractable Hydrocarbons as Diesel (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
MW-1 MW-1 MW-2 MW-2 MW-3 MW-3	01C 01D 02C 02D 03C 03D	ND  ND  ND	 ND  ND  ND	ND ND ND
Detection Limi	it	0.05	0.5	0.5
Method:		3510 GCFID	5520C	5520F
Instrument:		E	IR	IR
Date Extracted Date Analyzed:		10/11/91 10/15/91	10/09/91 10/09/91	10/09/91 10/09/91

ND = Not Detected

Andrew Bradeen, Manager Organic Laboratory

Results FAXed 10/17/91



CLIENT PROJ. ID: 9149-S

CLIENT ID: MW-1

DATE SAMPLED: 10/08/91 DATE RECEIVED: 10/08/91

REPORT DATE: 10/18/91

MED-TOX LAB NO: 9110077-01A

MED-TOX JOB NO: 9110077

DATE ANALYZED: 10/11/91

INSTRUMENT: F

#### BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/l)
Benzene	71-43-2	ND	0.3
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, Total	1330-20-7	ND	1



CLIENT PROJ. ID: 9149-S

CLIENT ID: MW-2

DATE SAMPLED: 10/08/91 DATE RECEIVED: 10/08/91

REPORT DATE: 10/18/91

MED-TOX LAB NO: 9110077-02A

MED-TOX JOB NO: 9110077

DATE ANALYZED: 10/11/91

INSTRUMENT: F

#### BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.3
Toluene	108-88-3	1	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, Total	1330-20-7	ND	1



CLIENT PROJ. ID: 9149-S

CLIENT ID: MW-3

DATE SAMPLED: 10/08/91 DATE RECEIVED: 10/08/91

REPORT DATE: 10/18/91

MED-TOX LAB NO: 9110077-03A

MED-TOX JOB NO: 9110077

DATE ANALYZED: 10/11/91

INSTRUMENT: F

#### BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.3
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, Total	1330-20-7	ND	1



QUALITY CONTROL DATA

CROSBY & OVERTON, INC.

CLIENT PROJECT ID: 9149-S

MED-TOX JOB NO: 9110077



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DATE EXTRACTED: 10/09/91 DATE ANALYZED: 10/09/91 SAMPLE SPIKED: D.I. WATER

MED-TOX JOB NO: 9110077 CLIENT PROJ. ID: 9149-S

INSTRUMENT: IR

## IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS METHOD SPIKE RECOVERY SUMMARY WATER MATRIX

ANALYTE	MS Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Oil	7.33	ND	7,00	7.00	95.5	0.0

#### CURRENT QC LIMITS (Revised 08/14/91)

<u>Analyte</u>	Percent Recovery	RPD
oil	(87-116)	6.5

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference



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DATE EXTRACTED: 10/11/91 DATE ANALYZED: 10/15/91 CLIENT PROJ. ID: 9149-S

MED-TOX JOB NO: 9110077 SAMPLE SPIKED: D.I. WATER

INSTRUMENT: E

# MATRIX SPIKE RECOVERY SUMMARY TPH EXTRACTABLE WATERS METHOD 3510 GCFID (WATER MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.636	ND	0.468	0.478	74.4	2.1

#### CURRENT QC LIMITS (Revised 08/15/91)

<u>Analyte</u>	Percent Recovery	<u>RPD</u>
Diesel	(49.3-101.4)	29.0

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference



PAGE 7 OF 7

DATE ANALYZED: 10/11/91 MED-TOX JOB NO: 9110077

SAMPLE SPIKED: 9110077-01A INSTRUMENT: F

#### MATRIX SPIKE RECOVERY SUMMARY METHOD TPHBTW 5030 w/GCFID/8020

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
Benzene	15,6	ND	14.3	15.7	96.2	9.3
Toluene Hydrocarbons	64.5	ND	59.4	64.8	96.8	8.7
as Gasoline	519	ND	518	561	104.0	8.0

#### CURRENT QC LIMITS (Revised 08/15/91)

<u>Analyte</u>	Percent Recovery	$\underline{\text{RPD}}$
Benzene	(77.7-118.0)	10.3
Toluene	(80.7-116.2)	10.1
Gasoline	(72.5-110.7)	13.6

MS = Matrix Spike MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference



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