



November 3, 1988 /

Harding Lawson Associates  
1355 Willow Way, Suite 109  
Concord, CA 94520

Attention: Mr. Randy Stone

Subject: Report of Data - Case Number 2509

Dear Mr. Stone:

The technical staff at CHEMWEST is pleased to provide our report for the analysis you requested: BTEX - EPA Method 602.

Two water samples for Project Texaco #8; 500 Grand, Project Number 2251,081.03 were received October 24, 1988 in good condition. Results of the analysis, along with the analytical methodology and appropriate reporting limits, are presented on the following pages.

Thank you for choosing CHEMWEST Laboratories. Should you have questions concerning this data report or the analytical methods employed, please do not hesitate to contact Toni Weeks, our Technical Service Representative, or your project manager. We hope that you will consider CHEMWEST Laboratories for your future analytical support and service requirements.

Sincerely,

Handwritten signature of Jill B. Henes in cursive.

Jill B. Henes, Ph.D.  
Vice President of Technical Services

and

Handwritten signature of Kirk Pocan in cursive.

Kirk Pocan  
Project Manager

KP:bw

cc: Joel Bird, President  
File

## ANALYTICAL METHODOLOGY

BTEX (Benzene, Toluene, Ethyl Benzene, and Xylenes) by Purge & Trap and GC-PID

WATER - Method 602 or 8020

A 5 ml sample volume, or 5 ml of a suitable dilution, is purged on a suitable purge and trap system with helium. The purged sample is analyzed on a Gas Chromatograph equipped with a Photoionization Detector (PID). A packed column is used to separate the compounds.

SOIL - Method 8020

A 10 gram, or other appropriate aliquot of soil, is weighed into a clean VOA vial. Soils received in brass core tubes are sampled by discarding 2-5 centimeters of soil from each end of the tubes (this is done to reduce the possibility of analyzing a portion of soil that has been exposed to sampling technique contamination). Equal aliquots of soil are then removed from each end of the tube and combined in the VOA vial. Soil in jars or bags is aliquoted using a similar technique, which discards exposed sample surfaces. A 10 ml, or other appropriate volume of methanol, is added to the soil and the soil is shaken with the solvent. 100 ul of the extract, or a reduced aliquot or volume of a suitable dilution, is injected into 5 ml of laboratory blank water and analyzed by the same technique used for water samples.

CHEMWEST ANALYTICAL LABORATORIES  
BENZENE, TOLUENE, ETHYL BENZENE, XYLENES

Client I.D.: ~~MM-12-12~~  
Date Analyzed: 10/28/88

CHEMWEST I.D.: 2509-1  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Benzene	BRL	0.5
Toluene	BRL	1
Ethyl Benzene	BRL	2
Total-Xylenes (1)	3.1	1

Surrogate	% Recovery	Acceptance Window
ortho-Chlorotoluene	73%	50-150%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

(1): Total of P-, M-, and O- Xylenes.

Approved by: JG4

REV2.9.88

CHEMWEST ANALYTICAL LABORATORIES  
BENZENE, TOLUENE, ETHYL BENZENE, XYLENES

Client I.D.: ~~XXXXXXXXXX~~  
Date Analyzed: 11/1/88

CHEMWEST I.D.: 2509-2  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Benzene	BRL	0.5
Toluene	BRL	1
Ethyl Benzene	BRL	2
Total-Xylenes (1)	BRL	1

Surrogate	% Recovery	Acceptance Window
ortho-Chlorotoluene	80%	50-150%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

(1): Total of P-, M-, and O- Xylenes.

Approved by: JBH

REV2.9.88

CHEM WEST ANALYTICAL LABORATORIES, INC.  
600 West North Market Blvd.  
Sacramento, California 95834  
(916) 923-0840 FAX (916) 923-1938

# CLIENT

2509

Order No. \_\_\_\_\_  
Date Rec'd. 10/24/88  
Compl. Date \_\_\_\_\_  
Section H. Pocan

CLIENT: Handinghausen Assoc.  
1355 Willow Way Suite 109  
Concord, CA 94526

Project Name: 2251, 081.03  
Project No. Terco #8; 500 Hand  
P.O. NO. \_\_\_\_\_  
Contact \_\_\_\_\_  
Phone (415) 687-9100

ANALYSIS: Two water samples rec'd under chain of custody  
in 40ml vial (4) to be analyzed for BTEX.

\* Seven day turnaround !!!

Sample ID	Date	Time	Analysis	Matrix	Container
2509-1 Mw-8B-1&2	10/21	1403	BTEX	Water	2-40ml vial
-2 Mw-8C-1&2	11	1139	"	"	2- " "

GC  
M.T. MICHELLE TOLVER

Chem West Courier



Harding Lawson Associates  
1355 Willow Way, Suite 109  
Concord, California 94520  
415/687-9660  
Telecopy: 415/687-9673

# CHAIN OF CUSTODY FORM

Lab: CHEM WEST.

Job Number: 2257, 041, 03  
Name/Location: TERACO #8 500 GRAND  
Project Manager: AA KAROEF

Samplers: GLENN S. YOUNG  
DAVID R. ROSE  
Recorder: [Signature]  
*(Signature Required)*

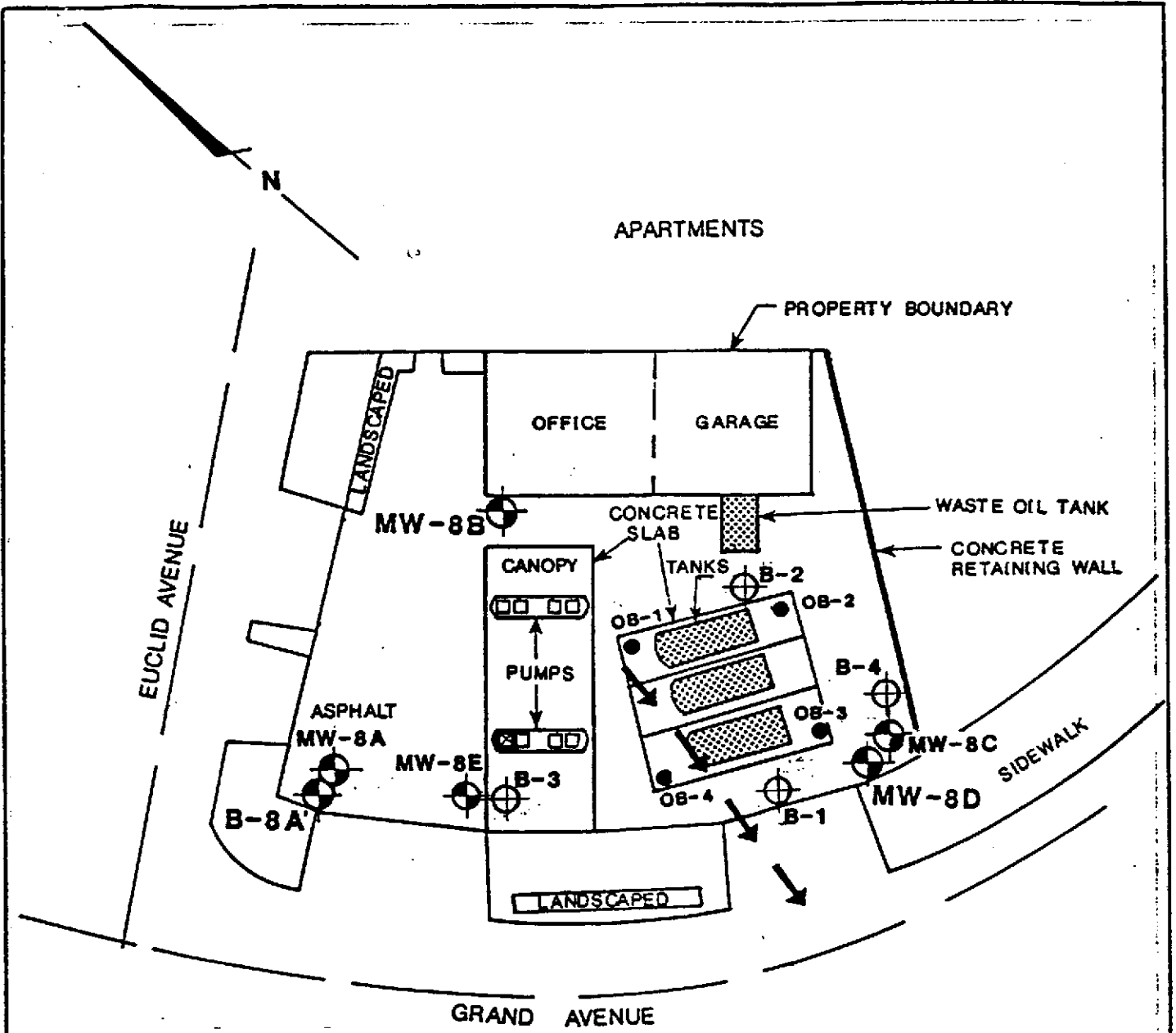
SOURCE CODE	MATRIX				#CONTAINERS & PRESERV.			SAMPLE NUMBER OR LAB NUMBER			DATE				
	Water	Sediment	Soil	Oil	Unpres.	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCL	Yr	Wk	Seq	Yr	Mo	Dy	Time
	23	X						X		11	08	-1	11	02	1
23	X						X		11	08	-2				1403
23	X						X		11	08	-1				1109
23	X						X		11	08	-2				1139

STATION DESCRIPTION/NOTES
Air Bubble

ANALYSIS REQUESTED						
EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pflnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
					X	X

LAB NUMBER			DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
Yr	Wk	Seq				

CHAIN OF CUSTODY RECORD		
RELINQUISHED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/24/03 1305</u>
RELINQUISHED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/21/03 1825</u>
RELINQUISHED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME:
RELINQUISHED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME:
DISPATCHED BY: <u>[Signature]</u>	DATE/TIME:	RECEIVED FOR LAB BY: <u>[Signature]</u> MICHELLE TOLVER 10/21/03 1825
METHOD OF SHIPMENT: <u>ChemWest Courier</u>		



**EXPLANATION**

- MW-8B Monitoring Well Location and Number
- B-1 Boring Well Location and Number
- OB-1 Observation Well and Number
- Ground-water Flow Direction
- Bench Mark (HLA Datum El. = 100 feet)



**Harding Lawson Associates**  
Engineers and Geoscientists

**Site Plan**  
Texaco Station #8  
500 Grand Avenue  
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		11/88		