SOUTHWEST RESEARCH INSTITUTE

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, USA 78228-0510 • (512) 684-5111 • TELEX 244846

Chemistry and Chemical Engineering Division
Department of Environmental Sciences

August 31,1990

Texaco Chemical
7114 N. Lamar
Austin, Texas 78752

Attention: C.R. Morrison

Subject: Results of Analysis of Texaco water sample for priority pollutants
SwRI Project 01-3108-089

Gentlemen:

The above referenced sample received July 27,1990 was analyzed for priority pollutants using EPA Methods 624 and 625. Results are given on the attached forms.

Should you have any questions, please feel free to contact me at (512) 522-3051.

Very Truly Yours,

Herbert J. Schattenberg III
Senior Research Scientist

Approved

J.P. Hsu,Ph.D.
Assistant Director

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TEXACO GROUNDWATER

Lab Name: SWRI Contract: 68-D9-0057

Lab Code: SWRI Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: E0826007

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: E0826007

Level: (low/med) LOW Date Received: 07/27/90

% Moisture: Date Analyzed: 08/09/90

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	CHLOROMETHANE	10.	U
111-44-4	BROMOMETHANE	10.	U
95-57-8	VINYL CHLORIDE	10.	U
541-73-1	CHLOROETHANE	10.	U
106-46-7	METHYLENE CHLORIDE	5.	U
100-51-6	ACETONE	4.	U
95-50-1	CARBON DISULFIDE	5.	U
95-48-7	1,1-DICHLOROETHENE	5.	U
108-60-1	1,1-DICHLOROETHANE	5.	U
106-44-5	1,2-DICHLOROETHENE (TOTAL)	2.8	J
621-64-7	CHLOROFORM	5.	U
67-72-1	1,2-DICHLOROETHANE	5.	U
98-95-3	2-BUTANONE	10.	U
78-59-1	1,1,1-TRICHLOROETHANE	5.	U
88-75-5	CARBON TETRACHLORIDE	5.	U
105-67-9	VINYL ACETATE	10.	U
65-85-0	BROMODICHLOROMETHANE	5.	U
111-91-1	1,2-DICHLOROPROPANE	5.	U
120-83-2	CIS-1,3-DICHLOROPROPENE	5.	U
120-82-1	TRICHLOROETHENE	5.	U
91-20-3	DIBROMOCHLOROMETHANE	5.	U
106-47-8	1,1,2-TRICHLOROETHANE	5.	U
87-68-3	BENZENE	5.	U
59-50-7	TRANS-1,3-DICHLOROPROPENE	5.	U
91-57-6	BROMOFORM	5.	U
77-47-4	4-METHYL-2-PENTANONE	10.	U
88-06-2	2-HEXANONE	10.	U
95-95-4	TETRACHLOROETHENE	5.	U
91-58-7	1,1,2,2-TETRACHLOROETHANE	5.	U
88-74-4	TOLUENE	2.	U
131-11-3	CHLOROBENZENE	5.	U
208-96-8	ETHYLBENZENE	5.	U
606-20-2	STYRENE	5.	U
1330-20-7	XYLENE (TOTAL)	5.	U

J - estimated value below detection limit.
U - undetected above detection limit given.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TEXACO GROUNDWATER

Lab Name: SWRI Contract: 68-D9-0057

Lab Code: SWRI Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 6082202

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 6082202

Level: (low/med) LOW Date Received: 07/27/90

% Moisture: not dec. dec._____ Date Extracted: 08/20/90

Extraction: (SepF/Cont/Sonc) SepF Date Analyzed: 08/22/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	PHENOL	10.	U
111-44-4	BIS(2-CHLOROETHYL)ETHER	10.	U
95-57-8	2-CHLOROPHENOL	10.	U
541-73-1	1,3-DICHLOROBENZENE	10.	U
106-46-7	1,4-DICHLOROBENZENE	10.	U
100-51-6	BENZYL ALCOHOL	10.	U
95-50-1	1,2-DICHLOROBENZENE	10.	U
95-48-7	2-METHYLPHENOL	10.	U
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	10.	U
106-44-5	4-METHYLPHENOL	10.	U
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	10.	U
67-72-1	HEXACHLOROETHANE	10.	U
98-95-3	NITROBENZENE	10.	U
78-59-1	ISOPHORONE	10.	U
88-75-5	2-NITROPHENOL	10.	U
105-67-9	2,4-DIMETHYLPHENOL	10.	U
65-85-0	BENZOIC ACID	50.	U
111-91-1	BIS(2-CHLOROETHOXY)METHANE	10.	U
120-83-2	2,4-DICHLOROPHENOL	10.	U
120-82-1	1,2,4-TRICHLOROBENZENE	10.	U
91-20-3	NAPHTHALENE	10.	U
106-47-8	4-CHLOROANILINE	10.	U
87-68-3	HEXACHLOROBUTADIENE	10.	U
59-50-7	4-CHLORO-3-METHYLPHENOL	10.	U
91-57-6	2-METHYLNAPHTHALENE	10.	U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10.	U
88-06-2	2,4,6-TRICHLOROPHENOL	10.	U
95-95-4	2,4,5-TRICHLOROPHENOL	50.	U
91-58-7	2-CHLORONAPHTHALENE	10.	U
88-74-4	2-NITROANILINE	50.	U
131-11-3	DIMETHYLPHTHALATE	10.	U
208-96-8	ACENAPHTHYLENE	10.	U
606-20-2	2,6-DINITROTOLUENE	10.	U

J - estimated value below detection limit.
U - undetected above detection limit given.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TEXACO GROUNDWATER

Lab Name: SWRI Contract: 68-D9-0057

Lab Code: SWRI Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 6082202

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 6082202

Level: (low/med) LOW Date Received: 07/27/90

% Moisture: not dec. dec._____ Date Extracted: 08/20/90

Extraction: (SepF/Cont/Sonc) SepF Date Analyzed: 08/22/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-NITROANILINE	50.	U
83-32-9	ACENAPHTHENE	10.	U
51-28-5	2,4-DINITROPHENOL	50.	U
100-02-7	4-NITROPHENOL	50.	U
132-64-9	DIBENZOFURAN	10.	U
121-14-2	2,4-DINITROTOLUENE	10.	U
84-66-2	DIETHYLPHTHALATE	10.	U
7005-72-3	4-CHLOROPHENYL-PHENYLETHER	10.	U
86-73-7	FLUORENE	10.	U
100-01-6	4-NITROANILINE	50.	U
534-52-1	4,6-DINITRO-2-METHYLPHENOL	50.	U
86-30-6	N-NITROSODIPHENYLAMINE (1)	10.	U
101-55-3	4-BROMOPHENYL-PHENYLETHER	10.	U
118-74-1	HEXACHLOROBENZENE	10.	U
87-86-5	PENTACHLOROPHENOL	50.	U
85-01-8	PHENANTHRENE	10.	U
120-12-7	ANTHRACENE	10.	U
84-74-2	DI-N-BUTYLPHTHALATE	10.	U
206-44-0	FLUORANTHENE	10.	U
129-00-0	PYRENE	10.	U
85-68-7	BUTYLBENZYLPHTHALATE	10.	U
91-94-1	3,3'-DICHLOROBENZIDINE	20.	U
56-55-3	BENZO(A)ANTHRACENE	10.	U
218-01-9	CHRYSENE	10.	U
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	10.	U
117-84-0	DI-N-OCTYLPHTHALATE	10.	U
205-99-2	BENZO(B)FLUORANTHENE	10.	U
207-08-9	BENZO(K)FLUORANTHENE	10.	U
50-32-8	BENZO(A)PYRENE	10.	U
193-39-5	INDENO(1,2,3-CD)PYRENE	10.	U
53-70-3	DIBENZO(A,H)ANTHRACENE	10.	U
191-24-2	BENZO(G,H,I)PERYLENE	10.	U

(1) - Cannot be separated from diphenylamine

J - estimated value below detection limit.
U - undetected above detection limit given.

SOUTHWEST RESEARCH INSTITUTE

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, USA 78228-0510 • (512) 684-5111 • TELEX 244846

Chemistry and Chemical Engineering Division
Department of Environmental Sciences

January 5, 1990

Texaco Chemical
7114 N. Lamar
Austin, Texas 78752

ATTN: C.R. Morrison

Subject: Results of Analysis of Texaco water sample for priority polutants
SwRI Project 01-3108-038

Gentlemen:

The above referenced sample received December 13, 1989 was analyzed for priority pollutants using EPA Methods 624 and 625. Results are given on the attached forms.

Should you have any questions, please feel free to contact me at (512) 522-3051.

Very truly yours,

Herbert J. Schattenberg, III
Senior Research Scientist

APPROVED

Don E. Johnson, Ph.D.
Director

HJS:tg

SAN ANTONIO, TEXAS
DALLAS / FT. WORTH, TEXAS • HOUSTON, TEXAS • DETROIT, MICHIGAN • WASHINGTON, DC

Sample ID:

C1214901
TRIP BLANK

Laboratory Name: SWRI
Sample Matrix: Water
Data Release Authorized by:

SOUTHWEST RESEARCH INSTITUTE

Client: TEXACO

Project No.: 01-3108-033
Date of Receipt: 12/13/89

Date Analyzed: 12/14/89
Conc/Dil Factor: 1

Concentration: Low
% Moisture: NA

CAS Number	Volatile Organic Compound	ug/l	CAS Number	Volatile Organic Compound	ug/l
74-87-3	CHLOROMETHANE	10.0 U	78-87-5	1,2-DICHLOROPROPANE	5.0 U
74-83-9	BROMOMETHANE	10.0 U	10061-02-6	TRANS-1,3-DICHLOROPROPYLENE	5.0 U
75-01-4	VINYL CHLORIDE	10.0 U	79-01-6	TRICHLOROETHYLENE	5.0 U
75-00-3	CHLOROETHANE	10.0 U	124-48-1	DIBROMOCHLOROMETHANE	5.0 U
75-09-2	METHYLENE CHLORIDE	5.0 U	79-00-5	1,1,2-TRICHLOROETHANE	5.0 U
75-35-4	1,1-DICHLOROETHYLENE	5.0 U	71-43-2	BENZENE	5.0 U
75-34-3	1,1-DICHLOROETHANE	5.0 U	10061-01-5	CIS-1,3-DICHLOROPROPYLENE	5.0 U
156-60-5	TRANS-1,2-DICHLOROETHYLENE	5.0 U	110-75-8	2-CHLOROETHYLVINYLETHER	10.0 U
67-66-3	CHLOROFORM	5.0 U	75-25-2	BROMOFORM	5.0 U
107-06-2	1,2-DICHLOROETHANE	5.0 U	127-18-4	TETRACHLOROETHYLENE	5.0 U
71-55-6	1,1,1-TRICHLOROETHANE	5.0 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5.0 U
56-23-5	CARBON TETRACHLORIDE	5.0 U	108-88-3	TOLUENE	5.0 U
75-27-4	BROMODICHLOROMETHANE	5.0 U	108-90-7	CHLOROBENZENE	5.0 U
95-50-1	1,2-DICHLOROBENZENE	5.0 U	100-41-4	ETHYLBENZENE	5.0 U
541-73-1	1,3-DICHLOROBENZENE	5.0 U	75-69-4	TRICHLOROFLUOROMETHANE	5.0 U
106-46-7	1,4-DICHLOROBENZENE	5.0 U			

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution action (this is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 0.1J). If limit of detection is 0.2 ug/L and a concentration of 0.1 ug/L is calculated, report as 0.1J.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

E This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor.

S Spiked compounds.

FORM 1

SOUTHWEST RESEARCH INSTITUTE

Sample No: TRIP BLANK FOR TEXACO
Lab No: 40102002
Project No: 01-3108-033

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10U
111-44-4	bis(2-Chloroethyl)Ether	10U	51-28-5	2,4-Dinitrophenol	50U
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50U
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10U
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10U
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10U
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10U
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10U
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50U
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50U
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10U
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10U
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10U
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50U
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10U
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10U
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10U
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10U
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10U
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10U
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzidine	20U
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10U
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	10U
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10U
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10U
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10U
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10U
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10U
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10U
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10U
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10U
99-09-2	3-Nitroaniline	50U	62-75-9	N-Nitrosodimethylamine	50U

92-87-5 BENZIDINE 20U

(1) - Cannot be separated from diphenylamine

Form I

Sample ID:

C1214902
UNDERGROUND WATER

Laboratory Name: SWRI
Sample Matrix: Water
Data Release Authorized by:

SOUTHWEST RESEARCH INSTITUTE

Client: TEXACO

Project No.: 01-3108-033
Date of Receipt: 12/13/89

Date Analyzed: 12/14/89
Conc/Dil Factor: 1

Concentration: Low
% Moisture: NA

CAS Number	Volatile Organic Compound	ug/l	CAS Number	Volatile Organic Compound	ug/l
74-87-3	CHLOROMETHANE	10.0 U	78-87-5	1,2-DICHLOROPROPANE	5.0 U
74-83-9	BROMOMETHANE	10.0 U	10061-02-6	TRANS-1,3-DICHLOROPROPYLENE	5.0 U
75-01-4	VINYL CHLORIDE	10.0 U	79-01-6	TRICHLOROETHYLENE	5.0 U
75-00-3	CHLOROETHANE	10.0 U	124-48-1	DIBROMOCHLOROMETHANE	5.0 U
75-09-2	METHYLENE CHLORIDE	5.0 U	79-00-5	1,1,2-TRICHLOROETHANE	5.0 U
75-35-4	1,1-DICHLOROETHYLENE	5.0 U	71-43-2	BENZENE	5.0 U
75-34-3	1,1-DICHLOROETHANE	5.0 U	10061-01-5	CIS-1,3-DICHLOROPROPYLENE	5.0 U
156-60-5	TRANS-1,2-DICHLOROETHYLENE	5.0 U	110-75-8	2-CHLOROETHYLVINYLETHER	10.0 U
67-66-3	CHLOROFORM	5.0 U	75-25-2	BROMOFORM	5.0 U
107-06-2	1,2-DICHLOROETHANE	5.0 U	127-18-4	TETRACHLOROETHYLENE	5.0 U
71-55-6	1,1,1-TRICHLOROETHANE	5.0 U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5.0 U
56-23-5	CARBON TETRACHLORIDE	5.0 U	108-88-3	TOLUENE	5.0 U
75-27-4	BROMODICHLOROMETHANE	5.0 U	108-90-7	CHLOROBENZENE	5.0 U
95-50-1	1,2-DICHLOROBENZENE	5.0 U	100-41-4	ETHYLBENZENE	5.0 U
541-73-1	1,3-DICHLOROBENZENE	5.0 U	75-69-4	TRICHLOROFLUOROMETHANE	5.0 U
106-46-7	1,4-DICHLOROBENZENE	5.0 U			

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution action (this is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 0.1J). If limit of detection is 0.2 ug/L and a concentration of 0.1 ug/L is calculated, report as 0.1J.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

E This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor.

S Spiked compounds.

FORM 1

SOUTHWEST RESEARCH INSTITUTE

POST OFFICE DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, USA 78284 • (512) 684-5111 • TELEX 244846

CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

April 24, 1989

Texaco Chemical
7114 N. Lamar
P.O. Box 15730
Austin, Texas 78752

Attention: C.R. Morrison

Subject: Results of Analysis of Texaco Water Sample for Priority Pollutants using EPA Methods 624 and 625.
SwRI Project: 01-2605-093

Gentlemen:

The above referenced sample was analyzed by the described EPA Methods. Results are given in the attached tables.

Should you have any questions please feel free to contact me at (512) 522-3051.

Very truly yours,

Herbert J. Schattenberg, III
Senior Research Scientist

HJS/bd

enclosure

SOUTHWEST RESEARCH INSTITUTE

Sample Number: UNDERGROUND WATER (3/21/89)

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No:D03298901
Sample Matrix: Water

Project No:01-2605-093
Date Sample Received:03/23/89

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	2 J	79-01-6	Trichloroethene	1 J
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	0.3 J	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

1,2-DICHLOROBENZENE=5U 1,3-DICHLOROBENZENE=5U 1,4-DICHLOROBENZENE=5U TRICHLOROFLUOROMETHANE=5U

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed,when the mass spectral data indicates the presence of a compound that meets the identificatio criteria but the result is less than specified detection limit but greater than zero (e.g. 10J).
If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

E This flag identifies compounds whose concentrations exceed calibration range of a GC/MS instrument for that specificanalysis.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor.

S spiked compounds.

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample Number: TEXACO UNDERGROUND WASTE

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No:C04138901
Sample Matrix: Water

Project No:01-2605-093
Date Sample Received:03/23/89

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed,when the mass spectral data indicates the presence of a compound that meets the identificatio criteria but the result is less than specified detection limit but greater than zero (e.g. 10J).
If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

E This flag identifies compounds whose concentrations exceed calibration range of a GC/MS instrument for that specificanalysis.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor.

S spiked compounds.

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No:TEXACO UNDERGROUND WASTE
Lab No:C04138901
Project No:01-2605-093

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10U
111-44-4	bis(2-Chloroethyl)Ether	4.5 J	51-28-5	2,4-Dinitrophenol	50U
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50U
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10U
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10U
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10U
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10U
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10U
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50U
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50U
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10U
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10U
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10U
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50U
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10U
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10U
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10U
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10U
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10U
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10U
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzidine	20U
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10U
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	6.9 J
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10U
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10U
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10U
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10U
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10U
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10U
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10U
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10U
99-09-2	3-Nitroaniline	50U	62-75-9	N-Nitrosodimethylamine	20U
92-87-5	BENZIDINE	45U		4-ETHYL MORPHOLINE	200

(1) - Cannot be separated from diphenylamine

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample Number: TEXACO QC BLANK

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No:CB04138901 BLK
Sample Matrix: Water

Project No:01-2605-093
Date Sample Received:03/23/89

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed,when the mass spectral data indicates the presence of a compound that meets the identificatio criteria but the result is less than specified detection limit but greater than zero (e.g. 10J).
If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

E This flag identifies compounds whose concentrations exceed calibration range of a GC/MS instrument for that specificanalysis.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor.

S spiked compounds.

SOUTHWEST RESEARCH INSTITUTE

Sample No:TEXACO QC BLANK
Lab No:CB04138901BLK
Project No:01-2605-093

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U
92-87-5	BENZIDINE	45U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U
62-75-9	N-Nitrosodimethylamine	20U

(1) - Cannot be separated from diphenylamine

Form I

SOUTHWEST RESEARCH INSTITUTE

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

June 7, 1988

Texaco Chemical
7114 N. Lamar
P.O. Box 15730
Austin, Texas 78752

Attn: C. R. Morrison

Subject: Analysis of Two Texaco Water Samples for Priority Pollutants.
SwRI Project 01-1905-070

Gentlemen:

The above referenced waters, labeled A wastewater and B underground water composite, were analyzed using EPA Methods 624 and 625. Results are presented in the enclosed forms.

Should you have any questions please feel free to contact me at (512) 522-3051.

Very truly yours,

Herbert J. Schattenberg, III
Senior Research Scientist

APPROVED BY:

Dr. Donald E. Johnson
Director, Department of Environmental Sciences
Chemisty and Chemical Engineering Division

Enclosure

SOUTHWEST RESEARCH INSTITUTE

Sample Number: A

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: A Wastewater
Sample Matrix: Water

Project No: 01-1905-070 TEXACO
Date Sample Received: 05/19/88

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	230	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	4600 E	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	15
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

E EXCEEDS THE CALIBRATION RANGE, SAMPLE WAS DILUTED

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identificati criteria but the result is less than specified detection limit but greater than zero (e.g. 10J).
If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

SOUTHWEST RESEARCH INSTITUTE

Sample Number: A VOA DILUTION

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: ADL
Sample Matrix: Water

Project No: 01-1905-070 TEXACO
Date Sample Received: 05/19/88

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	167U	78-87-5	1,2-Dichloropropane	84U
74-83-9	Bromomethane	167U	10061-02-6	Trans-1,3-Dichloropropene	84U
75-01-4	Vinyl Chloride	167U	79-01-6	Trichloroethene	84U
75-00-3	Chloroethane	167U	124-48-1	Dibromochloromethane	84U
75-09-2	Methylene Chloride	165	79-00-5	1,1,2-Trichloroethane	84U
67-64-1	Acetone	4400	71-43-2	Benzene	84U
75-15-0	Carbon Disulfide	84U	10061-01-5	Cis-1,3-Dichloropropene	84U
75-35-4	1,1-Dichloroethene	84U	110-75-8	2-Chloroethylvinylether	167U
75-34-3	1,1-Dichloroethane	84U	75-25-2	Bromoform	84U
156-60-5	Trans-1,2-Dichloroethene	84U	591-78-6	4-Methyl-2-Pentanone	167U
67-66-3	Chloroform	84U	108-10-1	2-Hexanone	167U
107-06-2	1,2-Dichloroethane	84U	127-18-4	Tetrachloroethene	84U
78-93-3	2-Butanone	167U	79-34-5	1,1,2,2-Tetrachloroethane	84U
71-55-6	1,1,1-Trichloroethane	84U	108-88-3	Toluene	84U
56-23-5	Carbon Tetrachloride	84U	108-90-7	Chlorobenzene	84U
108-05-4	Vinyl Acetate	167U	100-41-4	Ethylbenzene	84U
75-27-4	Bromodichloromethane	84U	100-42-5	Styrene	84U
				Total Xylenes	84U

DATA REPORTING QUALIFIERS

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identificati criteria but the result is less than specified detection limit but greater than zero (e.g. 10J).
If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

SOUTHWEST RESEARCH INSTITUTE

Sample No: A
Lab No: A
Project No: 01-1905-070 TEXACO

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l
108-95-2	Phenol	5 J
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U
62-75-9	N-Nitrosodimethylamine	10U

(1) - Cannot be separated from diphenylamine

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: A
Lab No: A
Project No: 01-1905-070 TEXACO

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	UNKNOWN	BNA	375	20 J
	UNKNOWN	BNA	833	10 J
101-84-8	BENZENE, 1,1'-OXYBIS-	BNA	904	20 J
	UNKNOWN HYDROCARBON	BNA	1112	10 J
	UNKNOWN	BNA	1141	30 J
	UNKNOWN HYDROCARBON	BNA	1252	50 J
	UNKNOWN	BNA	1278	60 J
	UNKNOWN HYDROCARBON	BNA	1288	20 J
	UNKNOWN	BNA	1298	8 J
	UNKNOWN	BNA	1324	30 J
6738-04-1	1,1'-BIPHENYL, 2-PHENOXY-	BNA	1331	10 J
	UNKNOWN HYDROCARBON	BNA	1403	40 J
3933-94-6	1,1'-BIPHENYL, 4-PHENOXY-	BNA	1453	8 J
	UNKNOWN	BNA	1484	60 J
	UNKNOWN	BNA	1555	20 J
	UNKNOWN	BNA	1626	200 J
	UNKNOWN	BNA	1770	200 J
	UNKNOWN	BNA	1970	70 J
	UNKNOWN	BNA	1981	40 J
	UNKNOWN	BNA	2062	20 J
75-07-0	ACETALDEHYDE	VOA	74	30 J
	UNKNOWN HYDROCARBON	VOA	244	70 J

SOUTHWEST RESEARCH INSTITUTE

Sample No: A VOA DILUTION
Lab No: ADL
Project No: 01-1905-070 TEXACO

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	UNKNOWN HYDROCARBON	VOA	245	70 J
	UNKNOWN HYDROCARBON	VOA	643	10 J

Form I, Part B

SOUTHWEST RESEARCH INSTITUTE

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

October 28, 1987

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, Texas 78752

ATTN: C.R. Morrison

Subject: Analysis of Texaco Well Sample
Sample Received September 9, 1987
SwRI Project 01-1394-163

Gentlemen:

The above-referenced Well sample was analyzed for organic priority pollutants using EPA Methods 624 (volatiles) and 625 (semi-volatiles). The samples did not contain any priority pollutants above the detection limits given in the attached tables.

If you have any questions, please call me at 512/522-3051.

Sincerely yours,

Herbert J. Schattenberg
Senior Research Scientist

APPROVED BY:

Donald E. Johnson
Director, Environmental Sciences

HJS/mjc

SOUTHWEST RESEARCH INSTITUTE

Sample Number

Texaco Chemical

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: Well Sample
Sample Matrix: Water
Data Release Authorized By:

Case No: Texaco
QC Report No:
Contract No:
Date Sample Received: 9/10/87

Volatile Compounds

D.L. Mult=1

Concentration: Low
Date Extracted/Prepared: 9/15/87
Date Analyzed: 9/15/87
Conc/Dil Factor: 1
pH
Percent Moisture (Not Decanted): NA

CAS Number		ug/l
74-87-3	Chloromethane	10U
74-83-9	Bromomethane	10U
75-01-4	Vinyl Chloride	10U
75-00-3	Chloroethane	10U
75-09-2	Methylene Chloride	5U
67-64-1	Acetone	10U
75-15-0	Carbon Disulfide	5U
75-35-4	1,1-Dichloroethene	5U
75-34-3	1,1-Dichloroethane	5U
156-60-5	Trans-1,2-Dichloroethene	5U
67-66-3	Chloroform	5U
107-06-2	1,2-Dichloroethane	5U
78-93-3	2-Butanone	10U
71-55-6	1,1,1-Trichloroethane	5U
56-23-5	Carbon Tetrachloride	5U
108-05-4	Vinyl Acetate	10U
75-27-4	Bromodichloromethane	5U

CAS Number		ug/l
78-87-5	1,2-Dichloropropane	5
10061-02-6	Trans-1,3-Dichloropropene	5
79-01-6	Trichloroethene	5
124-48-1	Dibromochloromethane	5
79-00-5	1,1,2-Trichloroethane	5
71-43-2	Benzene	5
10061-01-5	Cis-1,3-Dichloropropene	5
110-75-8	2-Chloroethylvinylether	10
75-25-2	Bromoform	5
591-78-6	4-Methyl-2-Pentanone	10
108-10-1	2-Hexanone	10
127-18-4	Tetrachloroethene	5
79-34-5	1,1,2,2-Tetrachloroethane	5
108-88-3	Toluene	5
108-90-7	Chlorobenzene	5
100-41-4	Ethylbenzene	5
100-42-5	Styrene	5
	Xylenes	5

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimated a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.

S spiked compounds

Laboratory Name: SWRI
Case No: 01-1394-163

Sample Number
TEXACO_WELL

ORGANICS ANALYSIS DATA SHEET
(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 09/21/87
Date Analyzed: 09/23/87
Conc/Dil Factor: 1
Percent Moisture: (Decanted)

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		ug/L		CAS Number		ug/L	
108-95-2	Phenol	10	U	83-32-9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3-Dichlorobenzene	10	U	132-64-9	Dibenzofuran	10	U
106-46-7	1,4-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20-2	2,6-Dinitrotoluene	10	U
95-50-1	1,2-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	10	U
95-48-7	2-Methylphenol	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	10	U
106-44-5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72-1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98-95-3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78-59-1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75-5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	10	U
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20-3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87-68-3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	10	U	218-01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58-7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208-96-8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) - Cannot be separated from diphenylamine
B - Compound detected in the QC blank

FORM 1

SOUTHWEST RESEARCH INSTITUTE

POST OFFICE DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, USA 78284 • (512) 684-5111 • TELEX 244846

February 23, 1987

CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, Texas 78752

ATTN: C.R. Morrison

Subject: Analysis of Texaco Well Sample
Sample Received February 5, 1987
SwRI Project 01-1394-076

Gentlemen:

The above referenced Well sample was analyzed for organic priority pollutants using EPA Methods 624 (volatiles) and 625 (semi-volatiles). The sample did not contain any priority pollutants above the detection limits given in the attached tables.

If you have any questions, please call me at 512/522-3051.

Sincerely yours,

Herbert J. Schattenberg
Research Scientist

APPROVED BY:

Donald E. Johnson, Director
Environmental Sciences

HJS/mjc

SOUTHWEST RESEARCH INSTITUTE

Sample Number

Texaco Well Sample

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: TEXWELL
Sample Matrix: Water

Project No: Verbal
Date Sample Received: 02/05/87

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimating value. This flag is used either when estimated a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides)=10 ng/ul in the final extract should be confirmed by GC/MS.

SOUTHWEST RESEARCH INSTITUTE

Sample No: Texaco Well Sample
Project No: Verbal

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U
62-75-9	N-Nitrosodimethylamine	10U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

POST OFFICE DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, USA 78284 • (512) 684-5111 • TELEX 76-7357

CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

June 10, 1986

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, Texas 78752

Attention: C.R. Morrison

Subject: Analysis of Texaco Chemical Well Sample
Sample Dated May 13, 1986
SwRI Project 01-8816-117

Gentlemen:

The above-referenced well sample was analyzed for organic priority pollutants using EPA Methods 624 (volatiles) and 625 (semivolatiles). The results for the priority pollutants are given in the attached tables. If you have any questions, please call me at 1-522-3051.

Very truly yours,

Herb Schattenberg

Herbert J. Schattenberg
Research Scientist

HJS:jes
Attachments

APPROVED:

Donald E Johnson

Donald E. Johnson, Director
Department of Environmental Sciences

SOUTHWEST RESEARCH INSTITUTE

Sample Number

14:30 HOURS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: 1430HRS
Sample Matrix: Water

Project No: 01-8816-117
Date SampleReceived: 05/20/86

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

SOUTHWEST RESEARCH INSTITUTE

Sample No: 14:30 HOURS
Project No: 01-8816-117

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10U
111-44-4	bis(2-Chloroethyl)Ether	10U	51-28-5	2,4-Dinitrophenol	50U
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50U
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10U
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10U
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10U
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10U
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10U
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50U
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50U
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10U
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10U
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10U
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50U
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10U
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10U
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10U
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10U
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10U
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10U
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzidine	20U
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10U
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	10U
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10U
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10U
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10U
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10U
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10U
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10U
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10U
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10U
99-09-2	3-Nitroaniline	50U	62-75-9	N-Nitrosodimethylamine	10U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

Sample No: 14:30 HOURS
Project No: 01-8816-117

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

SOUTHWEST RESEARCH INSTITUTE

Sample No: 14:30 HOURS
Project No: 01-8816-117

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l

NONE DETECTED

Form I, Part B

SOUTHWEST RESEARCH INSTITUTE

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

April 16, 1986

Texaco Chemical
P. O. Box 15730
7114 N. Lamar
Austin, Texas 78752

Attention: C. R. Morrison

Subject: Analysis of Texaco Chemical Well Sample
Sample Dated March 24, 1986
SwRI Project 01-8816-081

Gentlemen:

The above-referenced well sample was analyzed for organic priority pollutants using EPA Methods 624 (volatiles) and 625 (semivolatiles). The results for the priority pollutants are given in the attached tables. The semivolatile fraction contained several unknown hydrocarbons with an approximate concentration range of 10-400 µg/L (PPB). If you have any questions, please call me at 1-522-3051.

Very truly yours,

Herb Schattenberg

Herb Schattenberg
Research Scientist

APPROVED:

Donald E Johnson

Donald E. Johnson, Director
Department of Environmental Sciences

HS:bzc/B
Attachments

SOUTHWEST RESEARCH INSTITUTE

Sample Number

Texaco Well Sample

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: TEXACO
Sample Matrix: Water

Project No: 01-8816-081
Date Sample Received: 03/25/86

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

Sample No: Texaco Well Sample
Project No: 01-8816-081

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10
51-28-5	2,4-Dinitrophenol	50
100-02-7	4-Nitrophenol	50
132-64-9	Dibenzofuran	10
121-14-2	2,4-Dinitrotoluene	10
606-20-2	2,6-Dinitrotoluene	10
84-66-2	Diethylphthalate	10
7005-72-3	4-Chlorophenylphenylether	10
86-73-7	Fluorene	10
100-01-6	4-Nitroaniline	50
534-52-1	4,6-Dinitro-2-Methylphenol	50
86-30-6	N-Nitrosodiphenylamine(1)	10
101-55-3	4-Bromophenylphenylether	10
118-74-1	Hexachlorobenzene	10
87-86-5	Pentachlorophenol	50
85-01-8	Phenanthrene	10
120-12-7	Anthracene	10
84-74-2	Di-n-Butylphthalate	10
206-44-0	Fluoranthene	10
129-00-0	Pyrene	10
85-68-7	Butylbenzylphthalate	10
91-94-1	3,3'-Dichlorobenzidine	20
56-55-3	Benzo(a)Anthracene	10
117-81-7	bis(2-Ethylhexyl)Phthalate	10
218-01-9	Chrysene	10
117-84-0	Di-n-Octyl Phthalate	10
205-99-2	Benzo(b)Fluoranthene	10
207-08-9	Benzo(k)Fluoranthene	10
50-32-8	Benzo(a)Pyrene	10
193-39-5	Indeno(1,2,3-cd)Pyrene	10
53-70-3	Dibenz(a,h)Anthracene	10
191-24-2	Benzo(g,h,i)Perylene	10
62-75-9	N-Nitrosodimethylamine	10

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

POST OFFICE DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, USA 78284 • (512) 634-5111 • TELEX 76-7357

CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

September 30, 1985

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, TX 78752

ATTN: C.R. Morrison

SUBJECT: Analysis of Texaco Chemical Well Sample
Sample Dated July 11, 1985
SwRI Project 01-8301-177

Gentlemen:

The above-referenced well sample was analyzed for organic priority pollutants using EPA methods 624 (volatiles) and 625 (semi-volatiles). The results are given in the attached tables. If you have any questions, please call me at 1-522-3051.

Very truly yours,

Herb Schattenberg
Research Chemist

HS:ack
Encl.

APPROVED:

(for)

Donald E. Johnson, Director
Department of Environmental Sciences

SOUTHWEST RESEARCH INSTITUTE

Sample Number

SAMPLE DATED JULY 11,1985

Organic Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: 83011771
Sample Matrix: Water

Project No: 01-8301-177
Date Sample Received: 07/30/85

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	5U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	10U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	5U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	10U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Xylenes	5U

Data Reporting Qualifiers

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

SOUTHWEST RESEARCH INSTITUTE

Sample No: SAMPLE DATED JULY 11,1985
Project No: 01-8301-177

Organic Analysis Data Sheet
(Page 2)
Semivolatile Compounds

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10
111-44-4	bis(2-Chloroethyl)Ether	10U	51-28-5	2,4-Dinitrophenol	50
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzene	20
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	10
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10
99-09-2	3-Nitroaniline	50U	62-75-9	N-Nitrosodimethylamine	10

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

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DIVISION OF CHEMISTRY
AND CHEMICAL ENGINEERING

February 8, 1985

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, Tx 78752

Attn: C.R. Morrison

Subject: Analysis of Texaco Chemical Well Sample
Received January 29, 1985
SwRI Project #01-8301-063

Gentlemen:

underground stream

The above-referenced well sample was analyzed for organic priority pollutants using EPA methods 624 (volatiles) and 625 (semi-volatiles). The results are given in the attached table. If you have any questions, please call me at (512) 684-5111, ext. 3051.

Very truly yours,

Herb Schattenberg

Herb Schattenberg
Research Chemist

HS:lrj

Approved: Donald E Johnson
Donald E. Johnson, Director
Department of Environmental Sciences

TABLE 1. SUMMARY OF PRIORITY POLLUTANTS AND OTHER MAJOR ORGANICS IN TEXACO CHEMICAL WELL SAMPLE

RECEIVED: JANUARY 29, 1985

Compound	Level (ug/L)
Volatiles:	
1,1 dichloroethane	0.1
1,2 dichloroethylene	6
1,2 dichloroethane	3
trichloroethylene	2
Semi-volatiles:	
bis(2-chloroethyl)ether	15
N-nitrosodiphenyl amine	4
Others:	
4-ethyl morpholine	160[a]
alkyl morpholine	10[a]
alkyl morpholine	35[a]
series of polypropylene glycols	b
dichlorofluoromethane	2[c]
cyclohexane	1[c]

a - estimated level based on response of d_8-naphthalene internal standard

b - these compounds do not extract efficiently therefore estimated concentrations are not given; they are the dominant peaks in the reconstructed ion current chromatogram

c - estimated level based on response of d_6-Benzene internal standard

SOUTHWEST RESEARCH INSTITUTE

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

September 30, 1985

Texaco Chemical
P.O. Box 15730
7114 N. Lamar
Austin, TX 78752

ATTN: C.R. Morrison

SUBJECT: Analysis of Texaco Chemical Well Sample
Sample Dated July 11, 1985
SwRI Project 01-8301-177

Gentlemen:

The above-referenced well sample was analyzed for organic priority pollutants using EPA methods 624 (volatiles) and 625 (semi-volatiles). The results are given in the attached tables. If you have any questions, please call me at 1-522-3051.

Very truly yours,

Herb Schattenberg

Herb Schattenberg
Research Chemist

HS:ack
Encl.

APPROVED:

(for)

Donald E. Johnson, Director
Department of Environmental Sciences

SOUTHWEST RESEARCH INSTITUTE

Sample No: SAMPLE DATED JULY 11,1985
Project No: 01-8301-177

Organic Analysis Data Sheet
(Page 2)
Semivolatile Compounds

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10
111-44-4	bis(2-Chloroethyl)Ether	10U	51-28-5	2,4-Dinitrophenol	50
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzene	20
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	10
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10
99-09-2	3-Nitroaniline	50U	62-75-9	N-Nitrosodimethylamine	10

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

Sample Number

SAMPLE DATED JULY 11,1985

Organic Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: 83011771
Sample Matrix: Water

Project No: 01-8301-177
Date Sample Received: 07/30/85

Volatile Compounds

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	10U	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	5U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	10U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	5U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	10U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Xylenes	5U

Data Reporting Qualifiers

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

May 17, 1983

FORM 7-147

Austin Laboratory
Base Neutral Fractions
by GC/MS
JCW

Compounds	2319-AR-83 ng/ml Groundwater	2320-AR-83 ng/ml Well #2	2321-AR-83 ng/ml Well #11
1,3-dichlorobenzene	<10	<10	<10
1,4-dichlorobenzene	<10	<10	<10
1,2-dichlorobenzene	<10	<10	<10
bis(2-chloroethyl) ether	18	<10	112
hexachloroethane	<10	<10	<10
bis(2-chloroisopropyl) ether	<10	<10	<10
nitrobenzene	<10	<10	<10
hexachlorobutadiene	<10	<10	<10
1,2,4-trichlorobenzene	<10	<10	<10
naphthalene	<10	<10	<10
hexachlorocyclopentadiene	<10	<10	<10
2-chloronaphthalene	<10	<10	<10
acenaphthylene	<10	<10	<10
acenaphthene	<10	<10	<10
dimethylphthalate	<10	<10	<10
2,6-dinitrotoluene	<10	<10	<10
fluorene	<10	<10	<10
4-chlorophenyl phenyl ether	<10	<10	<10
1,2-diphenylhydrazine	<10	<10	<10
diethylphthalate	<10	<10	<10
N-nitrosodiphenylamine	<10	<10	<10

Air in Laboratory
Base Neutral Fractions
by GC/MS
JCW

Compounds	2319-AR-83 ng/ml Groundwater	2320-AR-83 ng/ml Well # 2	2321-AR-83 ng/ml Well # 11
hexachlorobenzene	<10	<10	<10
4-bromophenyl phenyl ether	<10	<10	<10
phenanthrene/anthracene	<10	<10	<10
dibutylphthalate	<10	<10	<10
fluoranthene	<10	<10	<10
pyrene	<10	<10	<10
butyl benzyl phthalate	<10	<10	<10
bis(2-ethylhexyl) phthalate	<10	81	35
3,3'-dichlorobenzidine	<10	<10	<10
dioctyl phthalate	<10	<10	<10
benzo (b +/or k) fluoranthene	<10	<10	<10
benzo (a) pyrene	<10	<10	<10
bis (2-chloroethoxy) methane	<10	<10	<10
benzidine	<10	<10	<10
benzo (a) anthracene	<10	<10	<10
chrysene	<10	<10	<10

Austin Laboratory
Base Neutral Fractions
by GC/MS
JCW

Compounds Detected	2319-AR-83 Groundwater	2320-AR-83 Well #2	2321-AR-83 Well #11
4-methyl-morpholine	P	—	P
morpholine	P	—	—
4-ethyl-morpholine	P	—	—
biphenyl	—	—	P
diphenyl ether	—	—	P

P = present

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Austin Laboratory
VOA Samples (Purgables) 10 mL sample
by GC/MS
JCW

	2318-AR-83 ng/ml Well #11	2317-AR-83 ng/ml Well #2	2316-AR-83 ng/ml Groundwater
Compounds			
dichloromethane	49	81	174
dimethoxy methane	P	—	P
tetrahydrofuran	P	P	—
trans-1,2-dichloroethene	12	<10	<10
1,1,1-trichloroethane	<10	<10	<10
benzene	<10	<10	<10
toluene	<10	<10	<10
chlorobenzene	<10	<10	<10
ethyl benzene	<10	<10	<10
cyclohexane	P	—	—
1,2-dichloroethane	<10	<10	<10
2-methoxy-2-methyl-propane	—	P	P
trichloroethene	<10	<10	<10

P = present

Mar 83

FORM 6-147

Austin Laboratory

Acid Fractions - Phenols

by GC/MS

JCW

	2319-AR-83 ng/ml Groundwater	2320-AR-83 ng/ml well #2	2321-AR-83 ng/ml well #11
Compounds			
2-chlorophenol	<10	<10	<10
2-nitrophenol	<10	<10	<10
phenol	<10	<10	10
2,4-dimethyl phenol	<10	<10	<10
2,4-dichloro phenol	<10	<10	<10
2,4,6-trichlorophenol	<10	<10	<10
4-chloro-3-methyl phenol	<10	<10	<10
2-methyl-4,6-dinitrophenol	<10	<10	<10
pentachlorophenol	<10	<10	<10
Compounds Detected			
2-phenoxy-propanoic acid	P	—	P
bromacil	P	—	P
~~dioctyl phthalate~~	—	P	P
diphenyl benzene	—	—	! P
biphenyl	—	—	P

P = present

TEXACO

Carroll Morrison

Port Arthur, Texas
October 7, 1982

GC - MS ANALYSIS OF AUSTIN
LABORATORY GROUNDWATER
COMPOSITE SAMPLE

Dr. W. H. Brader (VAC)
Austin, Texas

Results of the GC - MS analysis of the groundwater composite sample from the Austin Laboratory groundwater recovery system submitted on July 20, 1982 are attached.

The sample was analyzed for all priority pollutants i.e., volatile organics, base neutrals and phenols. Also listed are four non-priority materials found to be present. No standards are available for quantitation of these materials. However, the estimated morpholine concentration is 100 ppb and the glycol is probably present at the low ppm level.

Please advise if we can provide further assistance.

B. F. Smith

B. F. SMITH

RCW-VL
Attachment

JSL
GDE

WATER FROM AUSTIN LAB

GC - MS Analysis

	Composite Sample 1661-AR-82	Background Water Well #4a,1660-AR-82
Methylene chloride	83 ppb	71 ppb
1, 2-Dichloroethane	176 ppb	1.0 ppb
Benzene	221 ppb	0.5 ppb
Toluene	170 ppb	1.6 ppb
Chlorobenzene	31 ppb	0.7 ppb
C_8 Aromatics	23 ppb	1.4 ppb
Naphthalene	3.1 ppb	
Butylbenzylphthalate	4.5 ppb	
Bis (2-chloroethyl) ether	83 ppb	
Dimethylphthalate	8.2 ppb	
Diethylphthalate	26 ppb	
Acenaphthene		8.1 ppb
Dibutylphthalate		19 ppb
Bis (2-ethylhexyl) phthalate		49 ppb
4-Ethylmorpholine	present	
4-Methylmorpholine	present	
Morpholine	present	
Tripropylene glycol methyl ether + higher homologs	major impurity	

TEXACO

Port Arthur, Texas
December 30, 1982

GC-MS ANALYSIS OF
GROUNDWATER SAMPLES

Dr. W. H. Brader (CRM)
Austin, TX

The results of GC-MS analysis of groundwater samples from the Austin, TX laboratory groundwater interceptor system submitted on October 1, 1982 are attached.

Please advise if we can provide further assistance.

W. R. Coons BFS
W. R. COONS

RCW-VL
Attachment

JFC(GDE)
RTR

Attachment IV
Page 1 - etc

WRC-WHB
~~12-30-82~~ 2
~~11-16-82~~
~~P1~~

GC/MS DATA Base Neutrals Austin Lab

Compound		ng/ml Groundwater	ng/ml Well #2	ng/ml Well #11
1) Bis (2-chloro ethyl) Ether	✓	30	<10	59
2) Hexachloroethane		<10	<10	<10
3) Bis (2-chloroisopropyl) Ether	✓	<10	<10	<10
4) Nitrobenzene	✓	<10	<10	<10
5) Hexachloro butadiene		<10	<10	<10
6) 1,2,4-Trichlorobenzene	✓	<10	<10	<10
7) Bis (2-chloroethoxy) Methane	✓	<10	<10	<10
8) Naphthalene	✓	<10	<10	<10
9) 2-Chloronaphthalene	✓	<10	<10	<10
10) Acenaphthylene	✓	<10	<10	<10
11) Acenaphthene	✓	<10	<10	<10
12) Dimethyl Phthalate		<10	20	<10
13) 2,6-dinitrotoluene	✓	<10	<10	<10
14) 4-Chlorophenyl Phenyl Ether	✓	<10	<10	<10
15) Fluorene		<10	<10	<10
16) Diethyl Phthalate		17	22	14
17) 1,2-Diphenylhydrazine	✓	<10	<10	<10
18) N-Nitrosodiphenylamine	✓	<10	<10	<10
19) Hexachloro benzene		<10	<10	<10
20) 4-Bromophenyl Phenyl Ether		<10	<10	<10
21) Anthracene/Phenanthrene		<10	<10	<10
22) Dibutyl Phthalate		<10	<10	<10