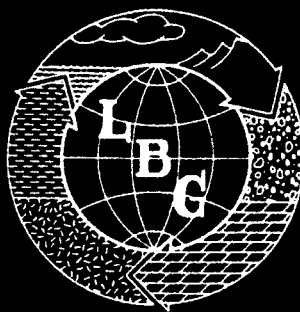


**MOBIL OIL CORPORATION
SUBSURFACE INVESTIGATION
OF THE MOBIL HANGAR
WESTCHESTER COUNTY AIRPORT**

VOLUME II OF II

5/15/91

#3



LEGGETTE, BRASHEARS & GRAHAM, INC.
PROFESSIONAL GROUND-WATER CONSULTANTS

**WILTON
CONNECTICUT**

**ST. PAUL
MINNESOTA**

**NASHUA
NEW HAMPSHIRE**

**TAMPA
FLORIDA**

**ALBUQUERQUE
NEW MEXICO**

**MIDLAND PARK
NEW JERSEY**

**EXTON
PENNSYLVANIA**

**FISHKILL
NEW YORK**

**SIOUX FALLS
SOUTH DAKOTA**

APPENDIX C

(continued)



April 2, 1991

Mr. Greg Hill
Mobil Oil Corporation
Environmental Health and Safety
Pennington Rocky Hill Road
Pennington, NJ 08540

Dear Mr. Hill:

Enclosed is the report for one aqueous and fourteen soil samples received at Enseco-Rocky Mountain Analytical Laboratory on March 12, 1991.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Sue Dalla
Manager
Program Administration

JEH/SD/dmh
Enclosures

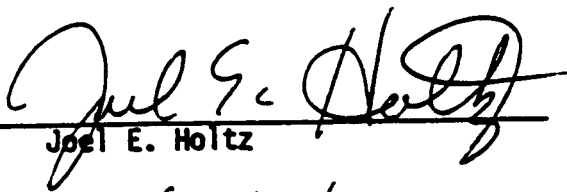
RMAL #013942

ANALYTICAL RESULTS
FOR
MOBIL OIL, CORPORATION
ENSECO-RMAL NO. 013942

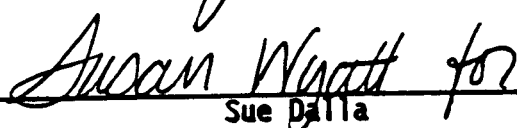


APRIL 2, 1991

Reviewed by:



Joel E. Holtz



Susan Wyatt for
Sue Dalla

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

I. OVERVIEW

On March 12, 1991, Enseco-Rocky Mountain Analytical Laboratory received one aqueous and fourteen soil samples from Mobil Oil Corporation.

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

- I. Overview
- II. Sample Description Information/Analytical Test Requests
- III. Analytical Results
- IV. Quality Control Report

The precision value for both TCO QC lots exceeds the acceptable range. The accuracy for each DCS and all other QC associated with the samples is acceptable. This anomaly is isolated to the precision of the DCS's.

II. SAMPLE DESCRIPTION INFORMATION/ANALYTICAL TEST REQUESTS

Sample Description Information

The Sample Description Information lists all of the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

SAMPLE DESCRIPTION INFORMATION
for
Mobil Oil Corporation

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
013942-0001-SA	TB-7A	SOIL	11 MAR 91	08:35	12 MAR 91
013942-0002-SA	TB-7B	SOIL	11 MAR 91	08:35	12 MAR 91
013942-0003-SA	TB-7C	SOIL	11 MAR 91	08:40	12 MAR 91
013942-0004-SA	TB-7D	SOIL	11 MAR 91	08:45	12 MAR 91
013942-0005-SA	TB-8A	SOIL	11 MAR 91	09:15	12 MAR 91
013942-0006-SA	TB-8B	SOIL	11 MAR 91	09:15	12 MAR 91
013942-0007-SA	TB-9A	SOIL	11 MAR 91	10:10	12 MAR 91
013942-0008-SA	TB-9B	SOIL	11 MAR 91	10:25	12 MAR 91
013942-0009-SA	TB-9C	SOIL	11 MAR 91	10:30	12 MAR 91
013942-0010-SA	TB-9D	SOIL	11 MAR 91	10:35	12 MAR 91
013942-0011-SA	TB-10A	SOIL	11 MAR 91	11:00	12 MAR 91
013942-0012-SA	TB-10B	SOIL	11 MAR 91	11:00	12 MAR 91
013942-0013-SA	TB-10C	SOIL	11 MAR 91	11:05	12 MAR 91
013942-0014-SA	TB-10D	SOIL	11 MAR 91	11:10	12 MAR 91
013942-0015-FB	FB	AQUEOUS	11 MAR 91	15:00	12 MAR 91

ANALYTICAL TEST REQUESTS
for
Mobil Oil Corporation

Lab ID: 013942	Group Code	Analysis Description	Custom Test?
0001 - 0014	A	Extractable Petroleum Hydrocarbons Prep - Hydrocarbons by GC	N
		Halogenated Volatile Organics	N
		Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)	N
0015	B	Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)	N
		Halogenated Volatile Organics	N
		Extractable Petroleum Hydrocarbons	N
		Prep - Hydrocarbons by GC	N

III. ANALYTICAL RESULTS

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin. The date prepared is typically the date an extraction or digestion was initiated. For volatile organic compounds in water, the date prepared is the date the screening of the sample was performed.

Data sheets contain a listing of the parameters measured in each test, the analytical results and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, May, 1989.

In addition, surrogate recovery data is presented for all GC/MS analyses. The surrogate recovery is an indication of the affect of the sample matrix on the performance of the method. The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is given in Section IV.

The analytical data reported are subject to the following limitations of the analytical methodology:

Extractable Petroleum Hydrocarbons by GC/FID

This method is based on a methylene chloride extraction of a sample followed by capillary column gas chromatography with flame ionization detection. Extractable Petroleum Hydrocarbons are reported as Total Chromatographable Organics (TCO). The TCO result was based on the entire area under the chromatogram as compared to a synthetic standard, ortho-terphenyl. The detection limit is based on the response of diesel #2/fuel oil #2. Reporting limits for other products may vary and can be determined. In particular, reporting limits for motor oils and lubricating oils will be higher.

In addition to functioning as the calibration standard, ortho-terphenyl is used as the surrogate standard. It is spiked into each sample to provide an evaluation of recovery for each sample. This recovery may be affected by matrix interference or sample dilution.

The composition of various petroleum products may vary depending on refinery operation, seasonal additives, and crude oil sources. If, on the judgement of the analyst, the fingerprint of the sample matched the fingerprint of one of the petroleum products listed below, the product is reported in the report footnote. In addition, the footnote contains the carbon range and any other pertinent information on the sample. The target petroleum products include:

- Gasoline
- Aviation Gasoline
- Kerosene
- Paint Thinner
- Turpentine
- Fuel Oil #2 and Diesel #2
- Fuel Oil #4
- Fuel Oil #6
- Coal Tar
- Creosote
- Lubricating Oils
- Motor Oils
- Vegetation Hydrocarbons
- Asphalt

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-7A

Lab ID: 013942-0001-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethane	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	200	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 98 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-7B

Lab ID: 013942-0002-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Chloromethane	ND	ug/kg	500	
Bromomethane	ND	ug/kg	500	
Vinyl chloride	ND	ug/kg	100	
Chloroethane	ND	ug/kg	500	
Methylene chloride	ND	ug/kg	500	
1,1-Dichloroethene	ND	ug/kg	50	
1,1-Dichloroethane	240	ug/kg	50	
trans-1,2-Dichloroethene	ND	ug/kg	50	
Chloroform	ND	ug/kg	50	
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100	
1,2-Dichloroethane	ND	ug/kg	100	
1,1,1-Trichloroethane	ND	ug/kg	50	
Carbon tetrachloride	ND	ug/kg	50	
Bromodichloromethane	210	ug/kg	100	L
1,2-Dichloropropane	ND	ug/kg	100	
trans-1,3-Dichloropropene	ND	ug/kg	100	
Trichloroethene	210	ug/kg	50	L
Dibromochloromethane	ND	ug/kg	100	
cis-1,3-Dichloropropene	ND	ug/kg	200	
1,1,2-Trichloroethane	ND	ug/kg	100	
EDB (1,2-Dibromoethane)	ND	ug/kg	200	
Bromoform	ND	ug/kg	500	
1,1,2,2-Tetrachloroethane	ND	ug/kg	100	
Tetrachloroethene	320	ug/kg	50	
Chlorobenzene	ND	ug/kg	200	
Surrogate	Recovery			
Bromochloromethane	112	%		

Note L : These components are not separable using this method and are therefore quantified together.

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-7C

Lab ID: 013942-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 84 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-7D

Lab ID: 013942-0004-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 77 %

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-8A

Lab ID: 013942-0005-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Chloromethane	ND	ug/kg	500	
Bromomethane	ND	ug/kg	500	
Vinyl chloride	ND	ug/kg	100	
Chloroethane	ND	ug/kg	500	
Methylene chloride	ND	ug/kg	500	
1,1-Dichloroethene	ND	ug/kg	50	
1,1-Dichloroethane	ND	ug/kg	50	
trans-1,2-Dichloroethene	ND	ug/kg	50	
Chloroform	ND	ug/kg	50	
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100	
1,2-Dichloroethane	ND	ug/kg	100	
1,1,1-Trichloroethane	ND	ug/kg	50	
Carbon tetrachloride	ND	ug/kg	50	
Bromodichloromethane	150	ug/kg	100	L
1,2-Dichloropropane	ND	ug/kg	100	
trans-1,3-Dichloropropene	ND	ug/kg	100	
Trichloroethene	150	ug/kg	50	L
Dibromochloromethane	ND	ug/kg	100	
cis-1,3-Dichloropropene	ND	ug/kg	200	
1,1,2-Trichloroethane	ND	ug/kg	100	
EDB (1,2-Dibromoethane)	ND	ug/kg	200	
Bromoform	ND	ug/kg	500	
1,1,2,2-Tetrachloroethane	ND	ug/kg	100	
Tetrachloroethene	790	ug/kg	50	
Chlorobenzene	ND	ug/kg	200	
Surrogate	Recovery			
Bromochloromethane	114	%		

Note L : These components are not separable using this method and are therefore quantified together.

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-8B

Lab ID: 013942-0006-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 110 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-9A

Lab ID: 013942-0007-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	106	%	

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-98

Lab ID: 013942-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 102 %

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-9C

Lab ID: 013942-0009-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	92	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-9D

Lab ID: 013942-0010-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

99

%

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-10A

Lab ID: 013942-0011-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	76	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	600	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 82 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-108

Lab ID: 013942-0012-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	120	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	86	%	

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-10C

Lab ID: 013942-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 91 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-10D

Lab ID: 013942-0014-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 21 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	89	%	

ND = Not detected

NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: FB

Lab ID: 013942-0015-FB

Matrix: AQUEOUS

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	0.90	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0
Surrogate	Recovery		
Bromochloromethane	75	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-7A

Lab ID: 013942-0001-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	102	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-7B

Lab ID: 013942-0002-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	104	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-7C

Lab ID: 013942-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-7D

Lab ID: 013942-0004-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-8A

Lab ID: 013942-0005-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-88

Lab ID: 013942-0006-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	104	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-9A

Lab ID: 013942-0007-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-9B

Lab ID: 013942-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	104	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-9C

Lab ID: 013942-0009-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 13 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-9D

Lab ID: 013942-0010-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-10A

Lab ID: 013942-0011-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-108

Lab ID: 013942-0012-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-10C

Lab ID: 013942-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-10D

Lab ID: 013942-0014-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: FB

Lab ID: 013942-0015-FB

Matrix: AQUEOUS

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	111	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-7A

Lab ID: 013942-0001-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	13	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	94	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C9-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-7B

Lab ID: 013942-0002-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	12	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	92	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C9-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-7C

Lab ID: 013942-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.3	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	88	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C16-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-7D

Lab ID: 013942-0004-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	20	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	92	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C16-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: T8-8A

Lab ID: 013942-0005-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	8.7	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	85	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C18-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-88

Lab ID: 013942-0006-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.3	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	86	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C22-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-9A

Lab ID: 013942-0007-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.2	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	91	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C22-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-98

Lab ID: 013942-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	91	%	

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-9C

Lab ID: 013942-0009-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	79	%	

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-9D

Lab ID: 013942-0010-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	8.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	91	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C13-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-10A

Lab ID: 013942-0011-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	11	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	86	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-10B

Lab ID: 013942-0012-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	10	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	95	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C18-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-10C

Lab ID: 013942-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	96	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C18-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-10D

Lab ID: 013942-0014-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 14 MAR 91

Received: 12 MAR 91

Analyzed: 26 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	78	%	

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: FB

Lab ID: 013942-0015-FB

Matrix: AQUEOUS

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 18 MAR 91

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Units	Reporting Limit
Total Chromatographable Organics	ND	mg/L	0.10
Surrogate	Recovery		
o-Terphenyl	95	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

IV. QUALITY CONTROL REPORT

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

- 1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data
- 2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix
- 3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and
- 4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/- 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g., metals or conventional analyses) a single DCS serves as the control sample. An SCS is prepared for each sample lot for which the DCS pair are not analyzed. The recovery of the SCS is charted in exactly the same manner as described for the DCS, and provides a daily check on the performance of the method.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013942-0001-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0001-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0001-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0002-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0002-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0002-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0003-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0003-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0003-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0004-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0004-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0004-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0005-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0005-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0005-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0006-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0006-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0006-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0007-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0007-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0007-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0008-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0008-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0008-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0009-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0009-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0009-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0010-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0010-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0010-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0011-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0011-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0011-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0012-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0012-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0012-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0013-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0013-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0013-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0014-SA	SOIL	TCO-S	14 MAR 91-A	14 MAR 91-A
013942-0014-SA	SOIL	8010-S	21 MAR 91-H	21 MAR 91-H
013942-0014-SA	SOIL	8020-S	13 MAR 91-Q	13 MAR 91-Q
013942-0015-FB	AQUEOUS	602-A	14 MAR 91-P	14 MAR 91-P
013942-0015-FB	AQUEOUS	601-A	29 MAR 91-F9	29 MAR 91-F9
013942-0015-FB	AQUEOUS	TCO-A	15 FEB 91-A	18 MAR 91-A

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Concentration		Measured DCS2	AVG	Accuracy Average(%)		Precision (RPD)	
		DCS1				DCS	Limits	DCS	Limit

Category: TCO-S
Matrix: SOIL
QC Lot: 14 MAR 91-A
Concentration Units: mg/kg

Total Chromatographable Organics	16.7	11.5	16.5	14.0	84	40-120	36	20
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Category: 8010-S
Matrix: SOIL
QC Lot: 21 MAR 91-H
Concentration Units: ug/kg

1,1-Dichloroethane	500	579	584	582	116	60-140	0.9	20
Chloroform	500	667	685	676	135	60-140	2.7	20
Bromodichloromethane	1000	1030	1050	1040	104	60-140	1.9	20
Trichloroethene	500	517	523	520	104	60-140	1.2	20
Chlorobenzene	500	583	593	588	118	60-140	1.7	20

Category: 8020-S
Matrix: SOIL
QC Lot: 13 MAR 91-Q
Concentration Units: ug/kg

Benzene	500	497	478	488	98	75-125	3.9	15
Toluene	500	476	460	468	94	75-125	3.4	15
Ethylbenzene	500	455	434	444	89	75-125	4.7	15
Xylenes (total)	500	526	468	497	99	75-125	12	15
1,3-Dichlorobenzene	500	546	461	504	101	75-125	17	15

Category: 602-A
Matrix: AQUEOUS
QC Lot: 14 MAR 91-P
Concentration Units: ug/L

Benzene	5.0	4.76	4.50	4.63	93	80-120	5.6	15
Toluene	5.0	4.44	4.24	4.34	87	80-120	4.6	15
Ethylbenzene	5.0	4.42	4.13	4.28	86	80-120	6.8	15
Xylenes (total)	5.0	4.61	4.27	4.44	89	80-120	7.7	15
1,3-Dichlorobenzene	5.0	5.24	4.59	4.92	98	80-120	13	15

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC (cont.)

Analyte	Concentration		Measured DCS2	AVG	Accuracy Average(%)		Precision (RPD)	
	Spiked	DCS1			DCS	Limits	DCS	Limit
Category: 601-A								
Matrix: AQUEOUS								
QC Lot: 29 MAR 91-F9								
Concentration Units: ug/L								
1,1-Dichloroethane	5.0	4.77	4.89	4.83	97	80-130	2.5	20
Chloroform	5.0	5.10	5.23	5.16	103	80-120	2.5	20
Bromodichloromethane	10	8.07	8.19	8.13	81	80-120	1.5	20
Trichloroethene	5.0	4.94	4.82	4.88	98	70-120	2.5	20
Chlorobenzene	5.0	4.24	4.13	4.18	84	80-120	2.6	20

Category: TCO-A
Matrix: AQUEOUS
QC Lot: 15 FEB 91-A
Concentration Units: mg/L

Total Chromatographable Organics	0.50	0.332	0.267	0.300	60	40-120	22	20
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Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits
Category: TCO-S				
Matrix: SOIL				
QC Lot: 14 MAR 91-A QC Run: 14 MAR 91-A				
Concentration Units: mg/kg				
o-Terphenyl	0.666	0.657	99	40-120
Category: 8010-S				
Matrix: SOIL				
QC Lot: 21 MAR 91-H QC Run: 21 MAR 91-H				
Concentration Units: ug/kg				
Bromochloromethane	500	404	81	20-160
Category: 8020-S				
Matrix: SOIL				
QC Lot: 13 MAR 91-Q QC Run: 13 MAR 91-Q				
Concentration Units: ug/kg				
a,a,a-Trifluorotoluene	3000	3170	106	20-160
Category: 602-A				
Matrix: AQUEOUS				
QC Lot: 14 MAR 91-P QC Run: 14 MAR 91-P				
Concentration Units: ug/L				
a,a,a-Trifluorotoluene	30.0	33.3	111	20-160
Category: 601-A				
Matrix: AQUEOUS				
QC Lot: 29 MAR 91-F9 QC Run: 29 MAR 91-F9				
Concentration Units: ug/L				
Bromochloromethane	5.00	4.22	84	20-160

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC (cont.)

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: TCO-A

Matrix: AQUEOUS

QC Lot: 15 FEB 91-A QC Run: 18 MAR 91-A

Concentration Units: mg/L

o-Terphenyl	0.0200	0.0166	83	40-120
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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: TCO-FID-S			
Matrix: SOIL			
QC Lot: 14 MAR 91-A QC Run: 14 MAR 91-A			
Total Chromatographable Organics	ND	mg/kg	4.0
Test: 8010-S			
Matrix: SOIL			
QC Lot: 21 MAR 91-H QC Run: 21 MAR 91-H			
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8020-BTEX-S			
Matrix: SOIL			
QC Lot: 13 MAR 91-Q QC Run: 13 MAR 91-Q			
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Test: 602-BTEX-AP			
Matrix: AQUEOUS			
QC Lot: 14 MAR 91-P QC Run: 14 MAR 91-P			
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Test: 601-A			
Matrix: AQUEOUS			
QC Lot: 29 MAR 91-F9 QC Run: 29 MAR 91-F9			
Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

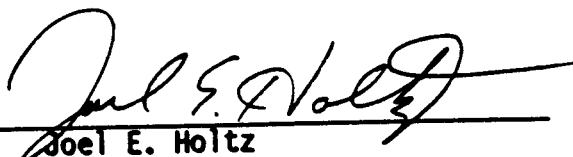
Analyte	Result	Units	Reporting Limit
Test: 601-A			
Matrix: AQUEOUS			
QC Lot: 29 MAR 91-F9 QC Run: 29 MAR 91-F9			
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0
Test: TCO-FID-A			
Matrix: AQUEOUS			
QC Lot: 15 FEB 91-A QC Run: 18 MAR 91-A			
Total Chromatographable Organics	ND	mg/L	0.10

Enseco

ANALYTICAL RESULTS
FOR
MOBIL OIL CORPORATION
ENSECO-RMAL NO. 013950

APRIL 4, 1991

Reviewed by:


Joel E. Holtz


Sue Datta

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I. OVERVIEW

On March 12, 1991, Enseco-Rocky Mountain Analytical Laboratory received 15 soil samples from Mobil Oil Corporation.

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

- I. Overview
- II. Sample Description Information/Analytical Test Requests
- III. Analytical Results
- IV. Quality Control Report

Each sample was analyzed to achieve the lowest possible reporting limits within the constraints of the method. Sample 013950-0012 was diluted for Method 8010 due to the concentration of target compounds and the reporting limits were raised accordingly.



II. SAMPLE DESCRIPTION INFORMATION/ANALYTICAL TEST REQUESTS

Sample Description Information

The Sample Description Information lists all of the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

SAMPLE DESCRIPTION INFORMATION
for
Mobil Oil Corporation

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
013950-0001-SA	TB-12A	SOIL	11 MAR 91	13:35	12 MAR 91
013950-0002-SA	TB-12B	SOIL	11 MAR 91	13:35	12 MAR 91
013950-0003-SA	TB-12C	SOIL	11 MAR 91	13:40	12 MAR 91
013950-0004-SA	TB-12D	SOIL	11 MAR 91	13:45	12 MAR 91
013950-0005-SA	TB-11A	SOIL	11 MAR 91	12:45	12 MAR 91
013950-0006-SA	TB-11B	SOIL	11 MAR 91	12:45	12 MAR 91
013950-0007-SA	TB-11D	SOIL	11 MAR 91	12:55	12 MAR 91
013950-0008-SA	TB-13A	SOIL	11 MAR 91	12:15	12 MAR 91
013950-0009-SA	TB-13B	SOIL	11 MAR 91	12:15	12 MAR 91
013950-0010-SA	TB-13C	SOIL	11 MAR 91	12:20	12 MAR 91
013950-0011-SA	TB-13D	SOIL	11 MAR 91	12:25	12 MAR 91
013950-0012-SA	TB-14A	SOIL	11 MAR 91	11:40	12 MAR 91
013950-0013-SA	TB-14B	SOIL	11 MAR 91	11:40	12 MAR 91
013950-0014-SA	TB-14C	SOIL	11 MAR 91	11:50	12 MAR 91
013950-0015-SA	TB-14D	SOIL	11 MAR 91	11:55	12 MAR 91

ANALYTICAL TEST REQUESTS
for
Mobil Oil Corporation

Lab ID: 013950	Group Code	Analysis Description	Custom Test?
0001 - 0015	A	Extractable Petroleum Hydrocarbons Prep - Hydrocarbons by GC Halogenated Volatile Organics Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)	N N N N



III. ANALYTICAL RESULTS

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin. The date prepared is typically the date an extraction or digestion was initiated. For volatile organic compounds in water, the date prepared is the date the screening of the sample was performed.

Data sheets contain a listing of the parameters measured in each test, the analytical results and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, May, 1989.

In addition, surrogate recovery data is presented for all GC/MS analyses. The surrogate recovery is an indication of the affect of the sample matrix on the performance of the method. The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is given in Section IV.

The analytical data reported are subject to the following limitations of the analytical methodology:

Extractable Petroleum Hydrocarbons by GC/FID

This method is based on a methylene chloride extraction of a sample followed by capillary column gas chromatography with flame ionization detection. Extractable Petroleum Hydrocarbons are reported as Total Chromatographable Organics (TCO). The TCO result was based on the entire area under the chromatogram as compared to a synthetic standard, ortho-terphenyl. The detection limit is based on the response of diesel #2/fuel oil #2. Reporting limits for other products may vary and can be determined. In particular, reporting limits for motor oils and lubricating oils will be higher.

In addition to functioning as the calibration standard, ortho-terphenyl is used as the surrogate standard. It is spiked into each sample to provide an evaluation of recovery for each sample. This recovery may be affected by matrix interference or sample dilution.

The composition of various petroleum products may vary depending on refinery operation, seasonal additives, and crude oil sources. If, on the judgement of the analyst, the fingerprint of the sample matched the fingerprint of one of the petroleum products listed below, the product is reported in the report footnote. In addition, the footnote contains the carbon range and any other pertinent information on the sample. The target petroleum products include:

- Gasoline
- Aviation Gasoline
- Kerosene
- Paint Thinner
- Turpentine
- Fuel Oil #2 and Diesel #2
- Fuel Oil #4
- Fuel Oil #6
- Coal Tar
- Creosote
- Lubricating Oils
- Motor Oils
- Vegetation Hydrocarbons
- Asphalt

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-12A

Lab ID: 013950-0001-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	106	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-12B

Lab ID: 013950-0002-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	119	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-12C

Lab ID: 013950-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	121	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-12D

Lab ID: 013950-0004-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	132	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-11A

Lab ID: 013950-0005-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	86	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	410	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	119	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-11B

Lab ID: 013950-0006-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	190	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	116	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-11D

Lab ID: 013950-0007-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	103	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-13A

Lab ID: 013950-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	630	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	1300	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	124	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-138

Lab ID: 013950-0009-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	150	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	114	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-13C

Lab ID: 013950-0010-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	117	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-13D

Lab ID: 013950-0011-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate	Recovery
Bromochloromethane	111 %

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-14A

Lab ID: 013950-0012-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	1000
Bromomethane	ND	ug/kg	1000
Vinyl chloride	ND	ug/kg	200
Chloroethane	ND	ug/kg	1000
Methylene chloride	ND	ug/kg	1000
1,1-Dichloroethene	ND	ug/kg	100
1,1-Dichloroethane	ND	ug/kg	100
trans-1,2-Dichloroethene	ND	ug/kg	100
Chloroform	ND	ug/kg	100
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	200
1,2-Dichloroethane	ND	ug/kg	200
1,1,1-Trichloroethane	5600	ug/kg	100
Carbon tetrachloride	ND	ug/kg	100
Bromodichloromethane	ND	ug/kg	200
1,2-Dichloropropane	ND	ug/kg	200
trans-1,3-Dichloropropene	ND	ug/kg	200
Trichloroethene	ND	ug/kg	100
Dibromochloromethane	ND	ug/kg	200
cis-1,3-Dichloropropene	ND	ug/kg	400
1,1,2-Trichloroethane	ND	ug/kg	200
EDB (1,2-Dibromoethane)	ND	ug/kg	400
Bromoform	ND	ug/kg	1000
1,1,2,2-Tetrachloroethane	ND	ug/kg	200
Tetrachloroethene	3100	ug/kg	100
Chlorobenzene	ND	ug/kg	400
Surrogate	Recovery		
Bromochloromethane	112	%	

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-148

Lab ID: 013950-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	180	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	150	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	110	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-14C

Lab ID: 013950-0014-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	190	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	340	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

99

%

ND = Not detected
NA = Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Halogenated Volatile Organics

Enseco
A Corning Company

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-14D

Lab ID: 013950-0015-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	280	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	300	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	100	%	

ND - Not detected
NA - Not applicable

Reported By: Mike Hoffman

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-12A

Lab ID: 013950-0001-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-12B

Lab ID: 013950-0002-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-12C

Lab ID: 013950-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	99	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Cuming Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-12D

Lab ID: 013950-0004-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	99	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-11A

Lab ID: 013950-0005-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-11B

Lab ID: 013950-0006-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 14 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	102	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-11D

Lab ID: 013950-0007-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-13A

Lab ID: 013950-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	98	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-13B

Lab ID: 013950-0009-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	98	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-13C

Lab ID: 013950-0010-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-13D

Lab ID: 013950-0011-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	99	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-14A

Lab ID: 013950-0012-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-14B

Lab ID: 013950-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-14C

Lab ID: 013950-0014-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Enseco
A Corning Company

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-14D

Lab ID: 013950-0015-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: NA

Received: 12 MAR 91

Analyzed: 15 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	95	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name: Mobil Oil Corporation****Client ID: TB-12A****Lab ID: 013950-0001-SA****Matrix: SOIL****Authorized: 12 MAR 91****Sampled: 11 MAR 91****Prepared: 19 MAR 91****Received: 12 MAR 91****Analyzed: 28 MAR 91**

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	97	%	

ND = Not detected
NA = Not applicable**Reported By: Kathy Ridley****Approved By: Jeff Lowry**

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-12B**Lab ID:** 013950-0002-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	9.8	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	98	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C32.

ND = Not detected**NA = Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons

Enseco
A Corning Company

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-12C

Lab ID: 013950-0003-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 19 MAR 91

Received: 12 MAR 91

Analyzed: 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.2	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	110	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C23-C32.

ND = Not detected
NA = Not applicable

Reported By: Kathy Ridley

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-12D**Lab ID:** 013950-0004-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	5.1	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	92	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C23-C32.

ND - Not detected**NA - Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-11A**Lab ID:** 013950-0005-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 29 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	14	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	109	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C19-C32.

ND = Not detected**NA = Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-11B**Lab ID:** 013950-0006-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 29 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	13	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	106	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C20-C32.

ND = Not detected**NA = Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-11D**Lab ID:** 013950-0007-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 29 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	6.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	98	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C21-C32.

ND = Not detected**NA = Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-13A

Lab ID: 013950-0008-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 19 MAR 91

Received: 12 MAR 91

Analyzed: 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	27	mg/kg	20	1
Surrogate	Recovery			
o-Terphenyl	88	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C18-C32.

ND = Not detected
NA = Not applicable

Reported By: Kathy Ridley

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-13B**Lab ID:** 013950-0009-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	12	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	91	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C17-C32.

ND - Not detected**NA - Not applicable****Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-13C**Lab ID:** 013950-0010-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.4	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	106	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C20-C32.

ND - Not detected
NA - Not applicable

Reported By: Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-13D**Lab ID:** 013950-0011-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 28 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	90	%	

ND = Not detected
NA = Not applicable**Reported By:** Kathy Ridley**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-14A**Lab ID:** 013950-0012-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 01 APR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	46	mg/kg	40 1
Surrogate	Recovery		
o-Terphenyl	112	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C17.

ND = Not detected
NA = Not applicable

Reported By: Janet Binns**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons

Enseco
A Corning Company

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-14B

Lab ID: 013950-0013-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 19 MAR 91

Received: 12 MAR 91

Analyzed: 27 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	27	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	100	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C15-C32.

ND = Not detected

NA = Not applicable

Reported By: Kathy Ridley

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons**Enseco**
A Corning Company**Method GC/FID****Client Name:** Mobil Oil Corporation**Client ID:** TB-14C**Lab ID:** 013950-0014-SA**Matrix:** SOIL**Authorized:** 12 MAR 91**Sampled:** 11 MAR 91**Prepared:** 19 MAR 91**Received:** 12 MAR 91**Analyzed:** 27 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.0	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	106	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C16-C32.

ND - Not detected
NA - Not applicable

Reported By: Janet Binns**Approved By:** Jeff Lowry

Extractable Petroleum Hydrocarbons

Enseco
A Corning Company

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-14D

Lab ID: 013950-0015-SA

Matrix: SOIL

Authorized: 12 MAR 91

Sampled: 11 MAR 91

Prepared: 19 MAR 91

Received: 12 MAR 91

Analyzed: 27 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	99	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry



IV. QUALITY CONTROL REPORT

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

- 1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data
- 2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix
- 3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and
- 4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery $\pm$ 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference $\pm$ 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g., metals or conventional analyses) a single DCS serves as the control sample. An SCS is prepared for each sample lot for which the DCS pair are not analyzed. The recovery of the SCS is charted in exactly the same manner as described for the DCS, and provides a daily check on the performance of the method.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013950-0001-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0001-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0001-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0002-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0002-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0002-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0003-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0003-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0003-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0004-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0004-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0004-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0005-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0005-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0005-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0006-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0006-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0006-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0007-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0007-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0007-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0008-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0008-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0008-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0009-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0009-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0009-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0010-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0010-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0010-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0011-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0011-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0011-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0012-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0012-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0012-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0013-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0013-SA	SOIL	8010-S	24 MAR 91-F10	24 MAR 91-F10
013950-0013-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0014-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0014-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0014-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q
013950-0015-SA	SOIL	TCO-S	19 MAR 91-B	19 MAR 91-B
013950-0015-SA	SOIL	8010-S	22 MAR 91-H4	22 MAR 91-H4
013950-0015-SA	SOIL	8020-S	14 MAR 91-Q	14 MAR 91-Q

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)	
		DCS1	DCS2		DCS	Limits	DCS	Limit

Category: TCO-S
Matrix: SOIL
QC Lot: 19 MAR 91-B
Concentration Units: mg/kg

Total Chromatographable Organics	20	23.5	21.9	22.7	114	40-120	7.0	20
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Category: 8010-S
Matrix: SOIL
QC Lot: 22 MAR 91-H4
Concentration Units: ug/kg

1,1-Dichloroethane	500	501	512	506	101	60-140	2.2	20
Chloroform	500	663	655	659	132	60-140	1.2	20
Bromodichloromethane	1000	951	972	962	96	60-140	2.2	20
Trichloroethene	500	475	436	456	91	60-140	8.6	20
Chlorobenzene	500	490	556	523	105	60-140	13	20

Category: 8020-S
Matrix: SOIL
QC Lot: 14 MAR 91-Q
Concentration Units: ug/kg

Benzene	500	476	458	467	93	75-125	3.9	1
Toluene	500	463	457	460	92	75-125	1.3	1
Ethylbenzene	500	459	445	452	90	75-125	3.1	1
Xylenes (total)	500	473	458	466	93	75-125	3.2	1
1,3-Dichlorobenzene	500	490	458	474	95	75-125	6.8	1

Category: 8010-S
Matrix: SOIL
QC Lot: 24 MAR 91-F10
Concentration Units: ug/kg

1,1-Dichloroethane	500	428	444	436	87	60-140	3.7	2
Chloroform	500	581	634	608	122	60-140	8.7	2
Bromodichloromethane	1000	940	976	958	96	60-140	3.8	2
Trichloroethene	500	470	488	479	96	60-140	3.8	2
Chlorobenzene	500	483	425	454	91	60-140	13	2

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: TCO-S

Matrix: SOIL

QC Lot: 19 MAR 91-B QC Run: 19 MAR 91-B

Concentration Units: mg/kg

o-Terphenyl	0.800	0.860	108	40-120
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Category: 8010-S

Matrix: SOIL

QC Lot: 22 MAR 91-H4 QC Run: 22 MAR 91-H4

Concentration Units: ug/kg

Bromochloromethane	500	601	120	20-160
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Category: 8020-S

Matrix: SOIL

QC Lot: 14 MAR 91-Q QC Run: 14 MAR 91-Q

Concentration Units: ug/kg

a,a,a-Trifluorotoluene	3000	3010	100	20-160
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Category: 8010-S

Matrix: SOIL

QC Lot: 24 MAR 91-F10 QC Run: 24 MAR 91-F10

Concentration Units: ug/kg

Bromochloromethane	500	459	92	20-160
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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: TCO-FID-S			
Matrix: SOIL			
QC Lot: 19 MAR 91-B QC Run: 19 MAR 91-B			
Total Chromatographable Organics	ND	mg/kg	4.0
Test: 8010-S			
Matrix: SOIL			
QC Lot: 22 MAR 91-H4 QC Run: 22 MAR 91-H4			
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8020-BTEX-S			
Matrix: SOIL			
QC Lot: 14 MAR 91-Q QC Run: 14 MAR 91-Q			
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50

Test: 8010-S
Matrix: SOIL
QC Lot: 24 MAR 91-F10 QC Run: 24 MAR 91-F10

Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Enseco
A CORNING Company

April 2, 1991

Mr. Greg Hill
Mobil Oil Corporation
Environmental Health & Safety
Pennington Rocky Hill Road
Pennington, NJ 08540

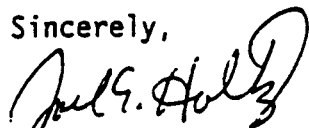
Dear Mr. Hill:

Enclosed is the report for 18 soil and two aqueous samples received at
Enseco-Rocky Mountain Analytical Laboratory on March 13, 1991.

Included with the report is a quality control summary.

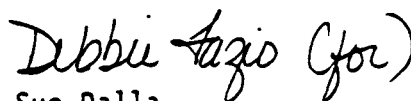
Please call if you have any questions.

Sincerely,



Joel E. Holtz
Program Administrator

Reviewed by:



Sue Dalla
Manager
Program Administration

JEH/SD/lw
Enclosures

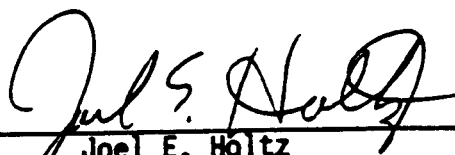
RMAL #013979

ANALYTICAL RESULTS
FOR
MOBIL OIL CORPORATION
ENSECO-RMAL NO. 013979

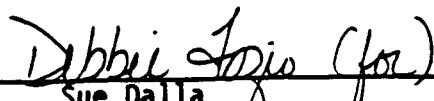
Enseco

APRIL 2, 1991

Reviewed by:



Joel E. Holtz



Sue Dalla

I. OVERVIEW

On March 13, 1991, Enseco-Rocky Mountain Analytical Laboratory received 18 soil and 2 aqueous samples from Mobil Oil Corporation.

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

- I. Overview
- II. Sample Description Information/Analytical Test Requests
- III. Analytical Results
- IV. Quality Control Report

Standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory QC samples analyzed in conjunction with the samples in this project were within established control limits.

II. SAMPLE DESCRIPTION INFORMATION/ANALYTICAL TEST REQUESTS

Sample Description Information

The Sample Description Information lists all of the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

SAMPLE DESCRIPTION INFORMATION
for
Mobil Oil Corporation

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
013979-0001-SA	TB-15A	SOIL	12 MAR 91	11:30	13 MAR 91
013979-0002-SA	TB-15B	SOIL	12 MAR 91	11:35	13 MAR 91
013979-0003-SA	TB-16A	SOIL	12 MAR 91	10:45	13 MAR 91
013979-0004-SA	TB-16B	SOIL	12 MAR 91	11:00	13 MAR 91
013979-0005-SA	TB-16C	SOIL	12 MAR 91	11:05	13 MAR 91
013979-0006-SA	TB-16D	SOIL	12 MAR 91	11:10	13 MAR 91
013979-0007-SA	TB-17A	SOIL	12 MAR 91	10:15	13 MAR 91
013979-0008-SA	TB-17B	SOIL	12 MAR 91	10:25	13 MAR 91
013979-0009-SA	TB-17C	SOIL	12 MAR 91	10:30	13 MAR 91
013979-0010-SA	TB-17D	SOIL	12 MAR 91	10:35	13 MAR 91
013979-0011-SA	TB-18A	SOIL	12 MAR 91	13:20	13 MAR 91
013979-0012-SA	TB-18B	SOIL	12 MAR 91	13:25	13 MAR 91
013979-0013-SA	TB-19A	SOIL	12 MAR 91	12:00	13 MAR 91
013979-0014-SA	TB-19B	SOIL	12 MAR 91	12:20	13 MAR 91
013979-0015-SA	TB-20A	SOIL	12 MAR 91	14:20	13 MAR 91
013979-0016-SA	TB-20B	SOIL	12 MAR 91	14:25	13 MAR 91
013979-0017-SA	TB-20C	SOIL	12 MAR 91	14:30	13 MAR 91
013979-0018-SA	TB-20D	SOIL	12 MAR 91	14:45	13 MAR 91
013979-0019-SA	FB	AQUEOUS	12 MAR 91	13:40	13 MAR 91
013979-0020-SA	TB	AQUEOUS			13 MAR 91

ANALYTICAL TEST REQUESTS
for
Mobil Oil Corporation

Lab ID: 013979	Group Code	Analysis Description	Custom Test?
0001 - 0018	A	Extractable Petroleum Hydrocarbons Prep - Hydrocarbons by GC Halogenated Volatile Organics Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)	N N N N
0019	B	Extractable Petroleum Hydrocarbons Prep - Hydrocarbons by GC Halogenated Volatile Organics Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)	N N N N
0020	C	Halogenated Volatile Organics Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)	N N

III. ANALYTICAL RESULTS

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin. The date prepared is typically the date an extraction or digestion was initiated. For volatile organic compounds in water, the date prepared is the date the screening of the sample was performed.

Data sheets contain a listing of the parameters measured in each test, the analytical results and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, May, 1989.

In addition, surrogate recovery data is presented for all GC/MS analyses. The surrogate recovery is an indication of the affect of the sample matrix on the performance of the method. The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is given in Section IV.

The analytical data reported are subject to the following limitations of the analytical methodology:

Extractable Petroleum Hydrocarbons by GC/FID

This method is based on a methylene chloride extraction of a sample followed by capillary column gas chromatography with flame ionization

detection. Extractable Petroleum Hydrocarbons are reported as Total Chromatographable Organics (TCO). The TCO result was based on the entire area under the chromatogram as compared to a synthetic standard, ortho-terphenyl. The detection limit is based on the response of diesel #2/fuel oil #2. Reporting limits for other products may vary and can be determined. In particular, reporting limits for motor oils and lubricating oils will be higher.

In addition to functioning as the calibration standard, ortho-terphenyl is used as the surrogate standard. It is spiked into each sample to provide an evaluation of recovery for each sample. This recovery may be affected by matrix interference or sample dilution.

The composition of various petroleum products may vary depending on refinery operation, seasonal additives, and crude oil sources. If, on the judgement of the analyst, the fingerprint of the sample matched the fingerprint of one of the petroleum products listed below, the product is reported in the report footnote. In addition, the footnote contains the carbon range and any other pertinent information on the sample. The target petroleum products include:

- Gasoline
- Aviation Gasoline
- Kerosene
- Paint Thinner
- Turpentine
- Fuel Oil #2 and Diesel #2
- Fuel Oil #4
- Fuel Oil #6
- Coal Tar
- Creosote
- Lubricating Oils
- Motor Oils
- Vegetation Hydrocarbons
- Asphalt

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-15A

Lab ID: 013979-0001-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	120	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 74 %

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-15B

Lab ID: 013979-0002-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate Recovery

Bromochloromethane 78 %

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-16A

Lab ID: 013979-0003-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

85

%

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-16B

Lab ID: 013979-0004-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	77	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-16C

Lab ID: 013979-0005-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

77

%

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-16D

Lab ID: 013979-0006-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

77

%

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-17A

Lab ID: 013979-0007-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

78

%

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-17B

Lab ID: 013979-0008-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

75

%

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-17C

Lab ID: 013979-0009-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 24 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

78

%

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-17D

Lab ID: 013979-0010-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 24 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	76	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-18A

Lab ID: 013979-0011-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

74

%

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-188

Lab ID: 013979-0012-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

73

%

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-19A

Lab ID: 013979-0013-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

72

%

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-19B

Lab ID: 013979-0014-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	82	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-20A

Lab ID: 013979-0015-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	250	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	400	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

72 %

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-208

Lab ID: 013979-0016-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	91	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	130	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	74	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-20C

Lab ID: 013979-0017-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Surrogate

Recovery

Bromochloromethane

76

%

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB-200

Lab ID: 013979-0018-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 25 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2- trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200
Surrogate	Recovery		
Bromochloromethane	77	%	

ND = Not detected

NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation
 Client ID: FB
 Lab ID: 013979-0019-SA
 Matrix: AQUEOUS
 Authorized: 13 MAR 91

Sampled: 12 MAR 91
 Prepared: NA

Received: 13 MAR 91
 Analyzed: 20 MAR 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0

Surrogate	Recovery	
Bromochloromethane	92	%

ND = Not detected
 NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Halogenated Volatile Organics

Method 8010

Client Name: Mobil Oil Corporation

Client ID: TB

Lab ID: 013979-0020-SA

Matrix: AQUEOUS

Authorized: 13 MAR 91

Sampled: Unknown

Prepared: NA

Received: 13 MAR 91

Analyzed: 20 MAR 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0

Surrogate Recovery

Bromochloromethane 103 %

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-15A

Lab ID: 013979-0001-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-15B

Lab ID: 013979-0002-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-16A

Lab ID: 013979-0003-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-16B

Lab ID: 013979-0004-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 20 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	97	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-16C

Lab ID: 013979-0005-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	94	%	

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-16D

Lab ID: 013979-0006-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-17A

Lab ID: 013979-0007-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-178

Lab ID: 013979-0008-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-17C

Lab ID: 013979-0009-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	102	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-17D

Lab ID: 013979-0010-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-18A

Lab ID: 013979-0011-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-188

Lab ID: 013979-0012-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	101	%	

ND = Not detected
NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-19A

Lab ID: 013979-0013-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	96	%	

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-198

Lab ID: 013979-0014-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	95	%	

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-20A

Lab ID: 013979-0015-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	98	%	

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-208

Lab ID: 013979-0016-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	99	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-20C

Lab ID: 013979-0017-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB-20D

Lab ID: 013979-0018-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 16 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: FB

Lab ID: 013979-0019-SA

Matrix: AQUEOUS

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	119	%	

ND = Not detected

NA = Not applicable

Reported By: Bret Collins

Approved By: Jeff Lowry

Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX)

Method 8020

Client Name: Mobil Oil Corporation

Client ID: TB

Lab ID: 013979-0020-SA

Matrix: AQUEOUS

Authorized: 13 MAR 91

Sampled: Unknown

Prepared: NA

Received: 13 MAR 91

Analyzed: 19 MAR 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50
Surrogate	Recovery		
a,a,a-Trifluorotoluene	111	%	

ND = Not detected
NA = Not applicable

Reported By: Garth Atkins

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-15A

Lab ID: 013979-0001-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	13	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	85	%	

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C11-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-15B

Lab ID: 013979-0002-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.7	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	78	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C24-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-16A

Lab ID: 013979-0003-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	17	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	85	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-16B

Lab ID: 013979-0004-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	12	mg/kg	4.0 1
Surrogate	Recovery		
o-Terphenyl	108	%	

Note 1 :

Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C21-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-16C

Lab ID: 013979-0005-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.2	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	88	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C24-C32.

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-16D

Lab ID: 013979-0006-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	80	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-17A

Lab ID: 013979-0007-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	6.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	92	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C20-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-17B

Lab ID: 013979-0008-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	5.2	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	83	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C23-C29.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-17C

Lab ID: 013979-0009-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	85	%	

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-17D

Lab ID: 013979-0010-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	82	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-18A

Lab ID: 013979-0011-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	27	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	89	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-188

Lab ID: 013979-0012-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	6.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	91	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C21-C32.

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-19A

Lab ID: 013979-0013-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	30	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	77	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C14-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-19B

Lab ID: 013979-0014-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.3	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	73	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C13-C32.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-20A

Lab ID: 013979-0015-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	86	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-208

Lab ID: 013979-0016-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	90	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-20C

Lab ID: 013979-0017-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Total Chromatographable Organics	4.6	mg/kg	4.0	1
Surrogate	Recovery			
o-Terphenyl	82	%		

Note 1 : Qualitative ID : This sample has GC/FID characteristics for which reliable identification of a product could not be achieved. Sample resembles a hydrocarbon product occurring within the n-alkane range of C24-C30.

ND = Not detected

NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: TB-200

Lab ID: 013979-0018-SA

Matrix: SOIL

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 19 MAR 91

Received: 13 MAR 91

Analyzed: 23 MAR 91

Parameter	Result	Wet wt. Units	Reporting Limit
Total Chromatographable Organics	ND	mg/kg	4.0
Surrogate	Recovery		
o-Terphenyl	79	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

Extractable Petroleum Hydrocarbons

Method GC/FID

Client Name: Mobil Oil Corporation

Client ID: FB

Lab ID: 013979-0019-SA

Matrix: AQUEOUS

Authorized: 13 MAR 91

Sampled: 12 MAR 91

Prepared: 18 MAR 91

Received: 13 MAR 91

Analyzed: 22 MAR 91

Parameter	Result	Units	Reporting Limit
Total Chromatographable Organics	ND	mg/L	0.10
Surrogate	Recovery		
o-Terphenyl	84	%	

ND = Not detected
NA = Not applicable

Reported By: Janet Binns

Approved By: Jeff Lowry

IV. QUALITY CONTROL REPORT

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

- 1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data
- 2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix
- 3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and
- 4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery $\pm$ 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g., metals or conventional analyses) a single DCS serves as the control sample. An SCS is prepared for each sample lot for which the DCS pair are not analyzed. The recovery of the SCS is charted in exactly the same manner as described for the DCS, and provides a daily check on the performance of the method.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013979-0001-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0001-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0001-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0002-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0002-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0002-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0003-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0003-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0003-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0004-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0004-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0004-SA	SOIL	8020-S	20 MAR 91-G	20 MAR 91-G
013979-0005-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0005-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0005-SA	SOIL	8020-S	18 MAR 91-G	18 MAR 91-G
013979-0006-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0006-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0006-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0007-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0007-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0007-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0008-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0008-SA	SOIL	8010-S	22 MAR 91-F	22 MAR 91-F
013979-0008-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0009-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0009-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0009-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0010-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0010-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0010-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0011-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0011-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0011-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0012-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0012-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0012-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0013-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0013-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0013-SA	SOIL	8020-S	18 MAR 91-G	18 MAR 91-G
013979-0014-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0014-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0014-SA	SOIL	8020-S	18 MAR 91-G	18 MAR 91-G
013979-0015-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0015-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0015-SA	SOIL	8020-S	18 MAR 91-G	18 MAR 91-G
013979-0016-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0016-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC (cont.)

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013979-0016-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0017-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0017-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0017-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0018-SA	SOIL	TCO-S	19 MAR 91-A	19 MAR 91-A
013979-0018-SA	SOIL	8010-S	24 MAR 91-F9	24 MAR 91-F9
013979-0018-SA	SOIL	8020-S	16 MAR 91-Q	16 MAR 91-Q
013979-0019-SA	AQUEOUS	TCO-A	15 FEB 91-A	18 MAR 91-A
013979-0019-SA	AQUEOUS	601-A	19 MAR 91-F10	19 MAR 91-F10
013979-0019-SA	AQUEOUS	602-A	19 MAR 91-P	18 MAR 91-P
013979-0020-SA	AQUEOUS	601-A	19 MAR 91-F10	19 MAR 91-F10
013979-0020-SA	AQUEOUS	602-A	19 MAR 91-P	18 MAR 91-P

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Spiked	Concentration		Measured	AVG	Accuracy		Precision	
		DCS1	DCS2			DCS	Average(%) Limits	(RPD) DCS	Limit
Category: TCO-S									
Matrix: SOIL									
QC Lot: 19 MAR 91-A									
Concentration Units: mg/kg									
Total Chromatographable Organics	20	18.7	15.9		17.3	87	40-120	16	20

Category: 8010-S
Matrix: SOIL
QC Lot: 22 MAR 91-F
Concentration Units: ug/kg

1,1-Dichloroethane	500	458	487	472	95	60-140	6.1	20
Chloroform	500	479	517	498	100	60-140	7.6	20
Bromodichloromethane	1000	800	802	801	80	60-140	0.3	20
Trichloroethene	500	513	508	510	102	60-140	1.0	20
Chlorobenzene	500	418	398	408	82	60-140	4.9	20

Category: 8020-S
Matrix: SOIL
QC Lot: 16 MAR 91-Q
Concentration Units: ug/kg

Benzene	500	452	433	442	89	75-125	4.3	15
Toluene	500	458	441	450	90	75-125	3.8	15
Ethylbenzene	500	473	448	460	92	75-125	5.4	15
Xylenes (total)	500	464	461	462	93	75-125	0.6	15
1,3-Dichlorobenzene	500	514	484	499	100	75-125	6.0	15

Category: 8020-S
Matrix: SOIL
QC Lot: 20 MAR 91-G
Concentration Units: ug/kg

Benzene	500	493	491	492	98	75-125	0.4	15
Toluene	500	459	476	468	94	75-125	3.6	15
Ethylbenzene	500	478	477	478	96	75-125	0.2	15
Xylenes (total)	500	457	452	454	91	75-125	1.1	15
1,3-Dichlorobenzene	500	518	510	514	103	75-125	1.6	15

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC (cont.)

Analyte	Spiked	Concentration		Measured	AVG	Accuracy		Precision	
		DCS1	DCS2			Average(%)	Limits	(RPD)	DCS Limit
Category: 8020-S									
Matrix: SOIL									
QC Lot: 18 MAR 91-G									
Concentration Units: ug/kg									
Benzene	500	423	407	415	83	75-125	3.9	15	
Toluene	500	406	398	402	80	75-125	2.0	15	
Ethylbenzene	500	431	421	426	85	75-125	2.3	15	
Xylenes (total)	500	447	409	428	86	75-125	8.9	15	
1,3-Dichlorobenzene	500	489	468	478	96	75-125	4.4	15	
Category: 8010-S									
Matrix: SOIL									
QC Lot: 24 MAR 91-F9									
Concentration Units: ug/kg									
1,1-Dichloroethane	500	475	476	476	95	60-140	0.2	20	
Chloroform	500	499	513	506	101	60-140	2.8	20	
Bromodichloromethane	1000	805	918	862	86	60-140	13	20	
Trichloroethene	500	520	532	526	105	60-140	2.3	20	
Chlorobenzene	500	382	389	386	77	60-140	1.8	20	
Category: TCO-A									
Matrix: AQUEOUS									
QC Lot: 15 FEB 91-A									
Concentration Units: mg/L									
Total Chromatographable Organics	0.50	0.332	0.267	0.300	60	40-120	22	20	
Category: 601-A									
Matrix: AQUEOUS									
QC Lot: 19 MAR 91-F10									
Concentration Units: ug/L									
1,1-Dichloroethane	5.0	5.38	5.49	5.44	109	80-130	2.0	20	
Chloroform	5.0	6.45	6.86	6.66	133	80-120	6.2	20	
Bromodichloromethane	10	10.8	11.4	11.1	111	80-120	5.4	20	
Trichloroethene	5.0	5.41	5.70	5.56	111	70-120	5.2	20	
Chlorobenzene	5.0	4.84	5.02	4.93	99	80-120	3.7	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC (cont.)

Analyte	Spiked	Concentration		Measured	AVG	Accuracy		Precision	
		DCS1	DCS2			DCS	Average(%) Limits	DCS	(RPD) Limit
Category: 602-A									
Matrix: AQUEOUS									
QC Lot: 19 MAR 91-P									
Concentration Units: ug/L									
Benzene	5.0	5.08	4.85	4.96	99	80-120	4.6	15	
Toluene	5.0	4.94	4.72	4.83	97	80-120	4.6	15	
Ethylbenzene	5.0	4.90	4.71	4.80	96	80-120	4.0	15	
Xylenes (total)	5.0	5.08	4.78	4.93	99	80-120	6.1	15	
1,3-Dichlorobenzene	5.0	5.54	5.04	5.29	106	80-120	9.5	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits
Category: TCO-S				
Matrix: SOIL				
QC Lot: 19 MAR 91-A QC Run: 19 MAR 91-A				
Concentration Units: mg/kg				
o-Terphenyl	0.800	0.643	80	40-120
Category: 8010-S				
Matrix: SOIL				
QC Lot: 22 MAR 91-F QC Run: 22 MAR 91-F				
Concentration Units: ug/kg				
Bromochloromethane	500	418	84	20-160
Category: 8020-S				
Matrix: SOIL				
QC Lot: 16 MAR 91-Q QC Run: 16 MAR 91-Q				
Concentration Units: ug/kg				
a,a,a-Trifluorotoluene	3000	3030	101	20-160
Category: 8020-S				
Matrix: SOIL				
QC Lot: 20 MAR 91-G QC Run: 20 MAR 91-G				
Concentration Units: ug/kg				
a,a,a-Trifluorotoluene	3000	3010	100	20-160
Category: 8020-S				
Matrix: SOIL				
QC Lot: 18 MAR 91-G QC Run: 18 MAR 91-G				
Concentration Units: ug/kg				
a,a,a-Trifluorotoluene	3000	3010	100	20-160

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC (cont.)

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 8010-S

Matrix: SOIL

QC Lot: 24 MAR 91-F9 QC Run: 24 MAR 91-F9

Concentration Units: ug/kg

Bromochloromethane	500	423	85	20-160
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Category: TCO-A

Matrix: AQUEOUS

QC Lot: 15 FEB 91-A QC Run: 18 MAR 91-A

Concentration Units: mg/L

o-Terphenyl	0.0200	0.0166	83	40-120
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Category: 601-A

Matrix: AQUEOUS

QC Lot: 19 MAR 91-F10 QC Run: 19 MAR 91-F10

Concentration Units: ug/L

Bromochloromethane	5.00	4.73	95	20-160
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Category: 602-A

Matrix: AQUEOUS

QC Lot: 19 MAR 91-P QC Run: 18 MAR 91-P

Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	32.8	109	20-160
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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: TCO-FID-S			
Matrix: SOIL			
QC Lot: 19 MAR 91-A QC Run: 19 MAR 91-A			
Total Chromatographable Organics	ND	mg/kg	4.0

Test: 8010-S
Matrix: SOIL
QC Lot: 22 MAR 91-F QC Run: 22 MAR 91-F

Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8020-BTEX-S			
Matrix: SOIL			
QC Lot: 16 MAR 91-Q QC Run: 16 MAR 91-Q			
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Test: 8020-BTEX-S			
Matrix: SOIL			
QC Lot: 20 MAR 91-G QC Run: 20 MAR 91-G			
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Test: 8020-BTEX-S			
Matrix: SOIL			
QC Lot: 18 MAR 91-G QC Run: 18 MAR 91-G			
Benzene	ND	ug/kg	50
Toluene	ND	ug/kg	50
Ethylbenzene	ND	ug/kg	50
Xylenes (total)	ND	ug/kg	50
Test: 8010-S			
Matrix: SOIL			
QC Lot: 24 MAR 91-F9 QC Run: 24 MAR 91-F9			
Chloromethane	ND	ug/kg	500
Bromomethane	ND	ug/kg	500
Vinyl chloride	ND	ug/kg	100
Chloroethane	ND	ug/kg	500
Methylene chloride	ND	ug/kg	500
1,1-Dichloroethene	ND	ug/kg	50
1,1-Dichloroethane	ND	ug/kg	50
trans-1,2-Dichloroethene	ND	ug/kg	50
Chloroform	ND	ug/kg	50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/kg	100

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8010-S			
Matrix: SOIL			
QC Lot: 24 MAR 91-F9 QC Run: 24 MAR 91-F9			
1,2-Dichloroethane	ND	ug/kg	100
1,1,1-Trichloroethane	ND	ug/kg	50
Carbon tetrachloride	ND	ug/kg	50
Bromodichloromethane	ND	ug/kg	100
1,2-Dichloropropane	ND	ug/kg	100
trans-1,3-Dichloropropene	ND	ug/kg	100
Trichloroethene	ND	ug/kg	50
Dibromochloromethane	ND	ug/kg	100
cis-1,3-Dichloropropene	ND	ug/kg	200
1,1,2-Trichloroethane	ND	ug/kg	100
EDB (1,2-Dibromoethane)	ND	ug/kg	200
Bromoform	ND	ug/kg	500
1,1,2,2-Tetrachloroethane	ND	ug/kg	100
Tetrachloroethene	ND	ug/kg	50
Chlorobenzene	ND	ug/kg	200

Test: TCO-FID-A
Matrix: AQUEOUS
QC Lot: 15 FEB 91-A QC Run: 18 MAR 91-A

Total Chromatographable Organics	ND	mg/L	0.10
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Test: 601-A
Matrix: AQUEOUS
QC Lot: 19 MAR 91-F10 QC Run: 19 MAR 91-F10

Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 601-A			
Matrix: AQUEOUS			
QC Lot: 19 MAR 91-F10 QC Run: 19 MAR 91-F10			
1,1,1-Trichloroethane	ND	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0

Test: 602-BTEX-AP
Matrix: AQUEOUS
QC Lot: 19 MAR 91-P QC Run: 18 MAR 91-P

Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50

Test: 601-A
Matrix: AQUEOUS
QC Lot: 19 MAR 91-F10 QC Run: 19 MAR 91-F10

Chloromethane	ND	ug/L	5.0
Bromomethane	ND	ug/L	5.0
Vinyl chloride	ND	ug/L	1.0
Chloroethane	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.50
1,1,2 Trichloro-1,2,2-trifluoroethane	ND	ug/L	1.0

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: 601-A			
Matrix: AQUEOUS			
QC Lot: 19 MAR 91-F10 QC Run: 19 MAR 91-F10			
1,2-Dichloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	0.50
Carbon tetrachloride	ND	ug/L	0.50
Bromodichloromethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	0.50
Dibromochloromethane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	2.0
1,1,2-Trichloroethane	ND	ug/L	1.0
EDB (1,2-Dibromoethane)	ND	ug/L	2.0
Bromoform	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	2.0

Test: 602-BTEX-AP
Matrix: AQUEOUS
QC Lot: 19 MAR 91-P QC Run: 18 MAR 91-P

Benzene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Xylenes (total)	ND	ug/L	0.50