

U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
CONTRACT DACA21-92-D-0002, DELIVERY ORDER #0101

CLOSURE REPORT

WASTE OIL TANK
BUILDING 1260, TANK 71A
FACILITY ID NUMBER: 9-089023
FT. STEWART, GEORGIA

PREPARED BY:

ANDERSON COLUMBIA ENVIRONMENTAL, INC.

NOVEMBER 1996

P.O. Box 1386, Lake City, Florida 32056-1386
Phone: (904) 755-1196 Fax: (904) 758-9050

US Army Corps of Engineers
Delivery Order 0101
Ft. Stewart, Hinesville, Georgia
Underground Storage Tank Removal and Closure

Table of Contents

<u>Item</u>	<u>Tab</u>
Georgia Closure Forms	1
Site Photographs.....	4
Site Map.....	5
EPA Form 7530-1 & Field Assessment Methods.....	6
Laboratory Data Summary, Georgia Threshold Levels & Lab Data	7
Manifests	9
Fort Stewart Area Map.....	10

Prepared by

Anderson Columbia Enviornmental, Inc.

TAB 1

GEORGIA CLOSURE REPORT
FORMS

Georgia Department of Natural Resources

Environmental Protection Division
Underground Storage Tank Management Program
4244 International Parkey, Suite 104, Atlanta, Georgia 30354
Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
(404) 362-2687



CLOSURE REPORT FORM

Please complete the following form, include the listed items and check all of the boxes that apply. This form can be used as a Closure Report, provided documentation is attached when specified, to substantiate the information on this form, as outlined in the guidance document "So You Want to Close an UST?" (GUST-9). If one of the items does not apply to your tank closure, please provide a written explanation for the omission. If soil was excavated and disposed of, be sure to complete the applicable sections and attach the proper disposal documents.

1. Owner of UST System:

Name: US Army/Ft. Stewart
Phone Number: (912) 767-2010/1234
Company: US Army
Address: Cdr. 3rd Inf. Div. (Mech.), Attn: AFZP-DEV, Bldg. 1139
Ft. Stewart GA 31314-5000
(city) (state) (zip code)

I hereby certify that the information contained in this Closure Report and in all the attachments is true, accurate, and complete, and the Closure Report satisfies all criteria and requirements of Rule 391-3-15-.09 of the Georgia Rules for Underground Storage Tank Management.

Signature: _____ Date: _____

2. UST System Site Location:

Facility Name: Ft. Stewart, GA FAC 1260
Street Address: FAC 1260
Ft. Stewart GA 31314-5000
(city) (state) (zip code)
Facility ID# 9-089023

3. Contract Certification:

I hereby certify that I have performed or supervised the work detailed in this report, and have examined and am familiar with the information submitted in this and all attached documents. The submitted information is, to the best of knowledge, true, accurate, complete, and in accordance with the Georgia Rules for Underground Storage Tank Management, revised February, 1995.

Name: David F. Black
Address: PO Box 1386 Lake City, Florida 32056

Signature: _____

Date: 11/13/96

Closure for

(1 of 3)

August 1995

4. Site-specific Hydrogeology:

Depth to Groundwater ~10 ft. if encountered

☐ Not Applicable

5. Site Map: Include the following items on an attached site map:

REFER TO TAB 5

- Tank Pit Area
- Sewer Lines (if present)
- Sample Locations (with sample numbers and depths)
- Scale: 1" = 10'
- Piping Trenches
- Water Lines
- North Arrow
- Dispensers
- Tanks with thier ID#s, corresponding to the Notification Form 7530-1

6. Tank Removal

• Date of Removal: 16-Jul-96

Tank #	Tank Size (gallons)	Tank Contents
71A	1000	Waste Oil

(This information should correspond to the 7530-1 Form.)

- Attach Amended Notification Form 7530-1
- Describe Soil Sampling Procedures (and groundwater, if encountered):

REFER TO TAB 6

REFER TO TAB 6

7. Laboratory Analytical Data:

The following items must be included on attached copies

REFER TO TAB 7

- Laboratory Method
- Detection Limits
- Date of Sampling
- Signed Chain of Custody
- Date of Analysis
- Quality Control Data

8. Regulated Substance Released:

Check the applicable box(es).

☐ Gasoline ☐ Diesel ☐ Kerosene ☒ Used Oil ☐ Other _____

9. Excavation and Treatment/Disposal of Contaminated Soil:

- Attach Soil Disposal Manifests
- Volume of Soil Excavated (less than 6 ft from USTs and 4 ft from piping or dispenser islands)

42.66 Tons OR _____ yd³

☐ Not Applicable

10. Local Water Resources: Attach documentation only if Table B Soil Threshold Values and/or in-Stream Water Quality Standards are proposed for soil disposal, or No Further Action Required status. Check the applicable box(es).

☐ Drinking water supplies are NOT located in:
High or average groundwater pollution susceptibility area:*
Public water systems within 2.0 miles and
Non-public water systems within 0.5 mile

OR

Low groundwater pollution susceptibility area:*
Public water systems within 1.0 mile and
Non-public water systems within 0.25 mile

* As defined by the Groundwater Pollution Susceptibility Map of Georgia

☐ Streams, Lakes, and Ponds:
Distance to closest surface water body: _____ mile(s) or _____ feet

☒ Not Applicable

SEE TAB 7, 10

11. Conclusions or Recommendations: Choose one.

☐ Clean Closure, thus No Further Action is Required.

☐ Soil Excavated within the Limits Specified in Question 7 (GUST-9) and Transported to an EPD Treatment/Disposal Facility, Thus No Further Action is Required.

TAB 4

SITE PHOTOGRAPHS



Photo 1. The Tank 71A site prior to tank removal.



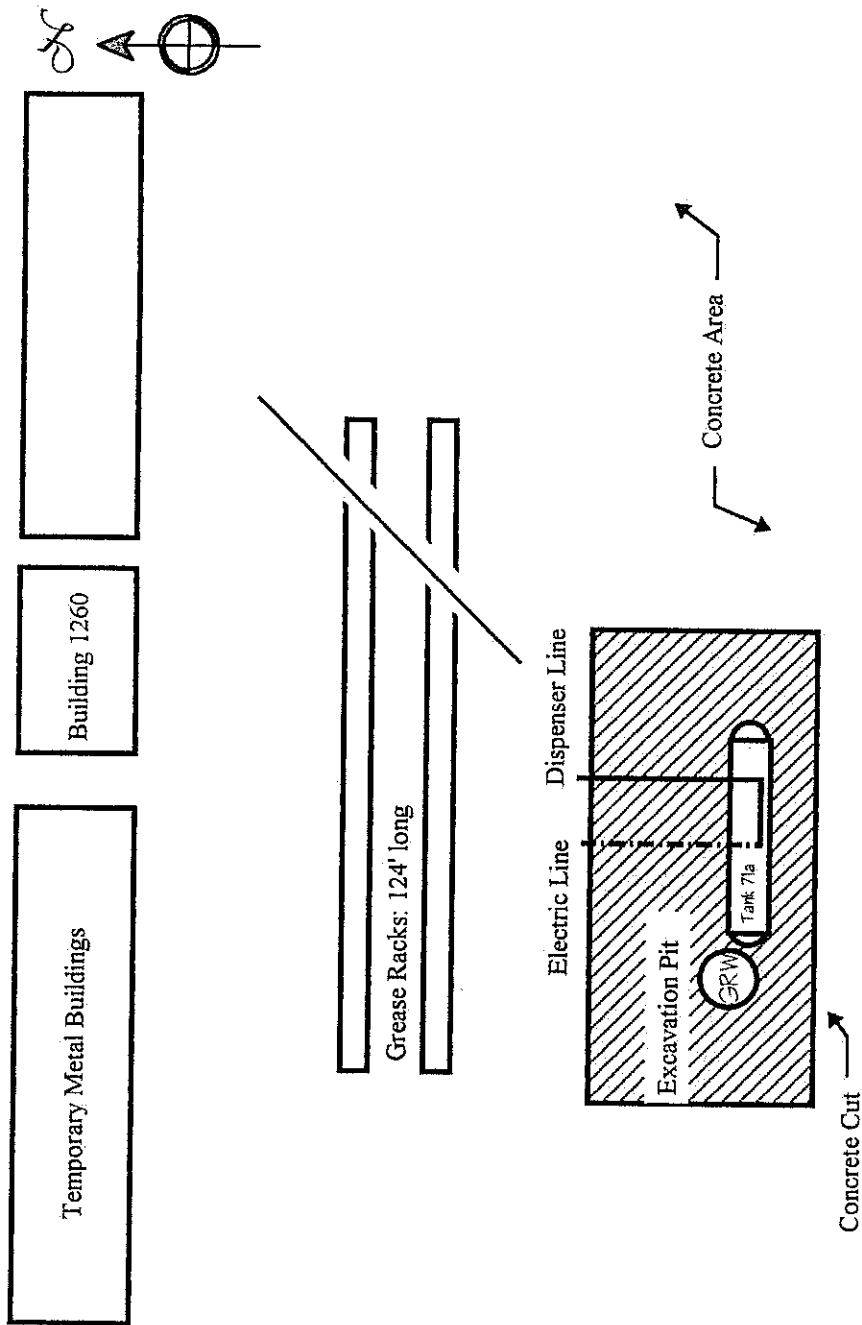
Photo 2. Tank 71A just prior to extraction from the excavation pit.



Photo 3. Some of the 42.66 tons of petroleum contaminated soil removed from the Tank 71A excavation pit.

TAB 5

SITE MAPS



LEGEND



Location of Groundwater
Closure Sample

ANDERSON COLUMBIA

Environmental, Inc.

P.O. BOX 1386, LAKE CITY, FLORIDA 32056-1386 PHONE: (904) 755-1196 FAX: (904) 758-9050

DR. AIR

DR. APP.

DATE: 10 Oct 96

SCALE: 1" = 10'

Sampling Map - Tank 71A

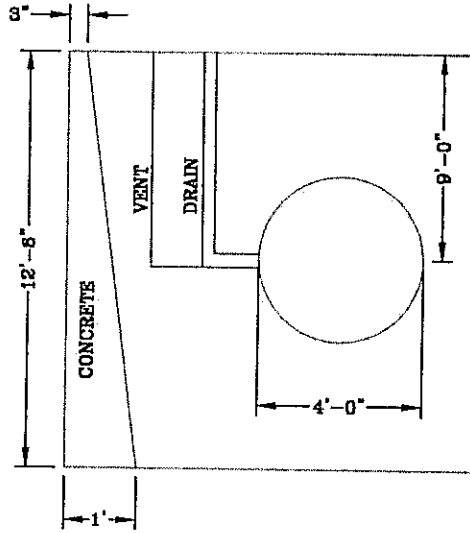
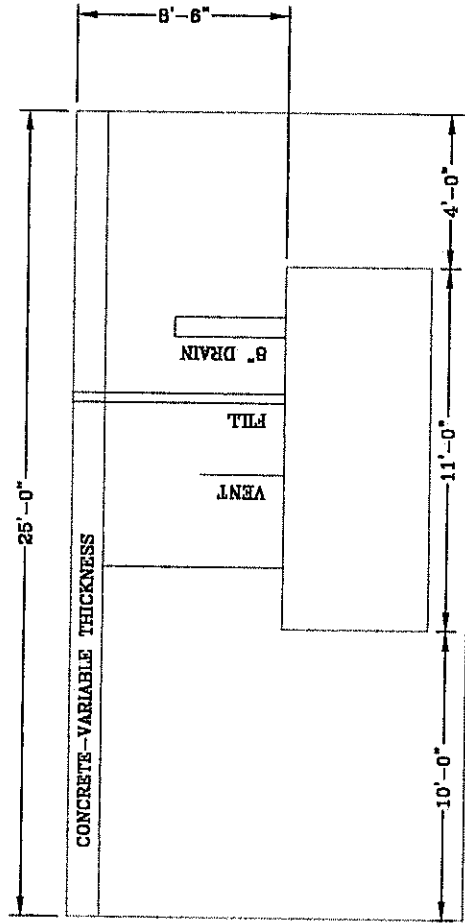
Building 1260

Ft. Stewart, Georgia

Delivery Order 101

FIGURE NO.: 1

Instrument: _____ Serial #: _____
Source: _____ Temp: _____
PID Correlation: 50 ppm

[illegible]

CROSS SECTIONS

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
P.O. BOX 1386 LAKE CITY, FLORIDA 32056 (904) 755-1188

DR. N.A.M. _____ CH'D _____ DR. APP. _____
ENGR. _____ ENGR.'S DEPT. _____
DATE 10-7-96 SCALE N.T.S.

JOB #8101 FT. STEWART, GA

LOCATION: 1280

TANK #71a

TAB 6

EPA FORM 7530-1
&
FIELD ASSESSMENT METHODS

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

state use only

Part I: Facility Data

FACILITY ID NUMBER: 9-089023

OWNER'S ID: 197

INITIAL DATE RECEIVED: 05-06-1986

DATE AMENDED LAST: _____

NOTIFICATION TYPE: ☐ New ☒ Amended ☒ Closure

OWNERSHIP OF TANK (S):

NUMBER OF TANK (S): 1

Name : US ARMY/FT STEWART
Mailing Address : HQ 3RD INF DIV (M), AFZP-DEV/BLDG 1139
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
Phone : 912-767-1071 County: LIBERTY

LOCATION OF TANK (S):

Name : FT STEWART/FAC 1260
Street Address : FAC 1260
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
County : LIBERTY Latitude: _____ Longitude: _____
Phone : _____

OWNER TYPE: ☒ Federal ☐ State ☐ Local ☐ Commercial ☐ Private

FACILITY TYPE (S):

☐ Gas Station	☐ Local Government	☐ Contractor
☐ Petroleum Dist	☐ State Government	☐ Truck/Transport
☐ Air Tax (Airport)	☐ Fed Non-Military	☐ Utilities
☐ Aircraft Owner	☒ Fed Military	☐ Farm
☐ Auto Dealership	☐ Commercial	☐ Residential
☐ Railroad	☐ Industrial	☐ Other
☐ Hospital	☐ Educational	

CONTACT PERSON IN CHARGE OF TANK (S):

Name : US ARMY/FT STEWART Title: JOHN SPEAR/ENV ENG
Address : HQ 3RD INF DIV (M), AFZP-DEV/BLDG 1139
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
Phone : 912-767-1071

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part I: Facility Data

FINANCIAL RESPONSIBILITY:

FACILITY ID NUMBER:

- ☐ I meet the financial responsibility requirements of SS12-13-9 Official Code of Georgia Annotated by providing or participating in one of the following financial assurance mechanisms.

Primary Financial Responsibility Mechanism (check one)

- | | |
|---|---|
| ☐ GUST Trust Fund | ☐ Insurance |
| ☐ Surety Bond | ☐ Guarantee |
| ☐ Letter of Credit | ☐ Trust Fund (other than GUST) |
| ☐ Risk Retention Group | ☒ Other Method |
| ☐ Self-insured | ☐ None |

If a primary coverage mechanism other than GUST Trust Fund is checked, provide the following information pursuant to GUST Rule 391-3-15-.12 (1):

Financial Responsibility Provider (primary):

Name: US Army

Address: HQ 3rd Inf. Div. (M) AFZP-DEV/BLDG 1139 City: Ft. Stewart State: GA

Mechanism Id Number: _____

Mechanism Anniversary Date: _____

Deductible Financial Responsibility, if any: (check one)

Note: If your primary Financial Responsibility Mechanism is provided through participation in the GUST Trust Fund by payment of Environmental Assurance Fees, as required under GUST Rule 391-3-15-.13, you must also check one of the following boxes indicating how coverage for the GUST Trust Fund \$10,000 deductible is being provided.

If your Financial Responsibility Mechanism is other than GUST Trust Fund and it has a deductible, you must also check one of the following boxes indicating how coverage for the deductible is being provided.

- | | |
|---|---|
| ☐ Surety Bond | ☐ Insurance |
| ☐ Letter of Credit | ☐ Guarantee |
| ☐ Risk Retention Group | ☐ Trust Fund (other than GUST) |
| ☐ Self-insured | ☐ Other Method |

Provide the name and address of Financial Responsibility Provider for Deductible pursuant to GUST Rule 391-15-.12 (1):

Financial Responsibility Provider (deductible):

Name: _____

Address: _____ City: _____ State: _____

Mechanism Id Number: _____

Mechanism Anniversary Date: _____

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part III: Certifications

OATH OF

INSTALLATION: I certify the information concerning installation of the UST system, release detection, and spill/overflow protection specified in Part II-Tank Data is true to the best of my belief and knowledge.

Installer:

Company

Company Address

Authorized Representative

Signature

Date

Title

Telephone Number (include Area Code)

CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Owner: John H. Spears
Owner Name

Chief, Environmental Branch
Title

Owner's Signature

Date

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part II: Tank Data

FACILITY ID	9-089023				
TANK ID	71A				
Status of Tank					
Currently in Use	X				
Temp. Out of Use					
Perm. Out of Use	X				
Date of Installation	01-01-1984				
Age	12				
Est. Total Capacity	1000				
MATERIAL OF CONSTRUCTION					
Asphalt or Bare Steel	x				
Cath. Protected Steel					
Epoxy Coated Steel					
Composite					
Fiberglass Reinf. Plas.					
Lined Interior					
Double Walled					
Poly. Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Other, Explanation					
Date Tank Repaired					
PIPING MATERIAL					
Bare Steel					
Galvanized Steel	x				
Fiberglass					
Copper					
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Explanation					
Date Piping Installed					
Piping Type					
Suction: No Valve					
Suction: Valve					
Pressure					
Gravity Fed					
Date Piping Repaired					
Substance Stored in Tank					
Gasoline					
Diesel					
Gasohol					
Kerosene					
Heating Oil					
Used Oil	x				
Propane					
Empty					
Other, Explanation					

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part II: Tank Data

FACILITY ID	9-089023										
TANK ID	71A										
Substance Stored in Tank											
Hazardous Substance											
CERCLA Name											
CAS Number											
Mixture											
Mixture, Specification											
Out of Use/Chg. Ser.	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	
Est. Date Last Used	7/07/96	7/07/96									
Est. Date Closed	7/14/96	7/14/96									
Removed from Ground	Y										
Closed in Ground		Y									
Filled with Iner. Mat.		Y									
Change in Service											
Site Assessment Compl.											
Leak Detected											
Installation											
Certified by Manufac.											
Certified by Imple. Agn.											
Inspected by Engineer											
Checklists Completed											
Another Allowed Method											
Method Description											
Certified by Imple. Agn.											
Inspected by Engineer											
Checklists Completed											
Another Allowed Method											
Method Description											
Release Detection	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	
Tank Tightness Testing											
Inventory Controls											
SIR											
Automatic Tank Guaging											
Inter. Mon./Double Wall											
Groundwater Monitoring											
Manual Tank Guaging											
Vapor Monitoring											
Inter. Mon./Sec. Cont.											
Auto. Line Leak Detect.											
Line Tightness Testing											
Other Method											
Other Description											
Spill and Overfill											
Date Overfill Device											
Date Spill Device											
Installer Certification											
Name											
Position											
Company											
Date											

TAB 6

FIELD ASSESSMENT METHODS

SOIL SAMPLES

Soil samples for analytical testing were collected by Anderson Columbia Environmental, Inc. (ACE) personnel two (2) feet below both end of the excavated tanks and from the side walls of the excavation. Soil samples were collected into precleaned, labeled laboratory sample bottles and immediately placed on ice. The samples were shipped under Chain of Custody to the Corps of Engineers contract laboratory, Ecosys Laboratory Services.

Soil samples for field screening were collected by ACE personnel from each side and bottom of the tank pit. Soil samples were collected at various intervals and soil vapors were withdrawn for volatile organic compounds (VOCs) with a Heath PORTA-FID II, Model No. 8000 Flame Ionization Detector (FID) fitted with a methane filter. Calibration was performed prior to field sampling with a 100 ppm methane/air mixture.

FID readings of soil samples were collected by filling a clean glass jar one-half full with soil, capping the jar with clean aluminum foil and allowing conditions in the jar to equilibrate for approximately 60 minutes. The tip of the FID was then carefully inserted through the aluminum foil and an air sample from the jar's headspace was analyzed for total VOCs.

GROUNDWATER SAMPLES

Groundwater samples were collected from the bottom of the tank pits only when groundwater invaded the excavation. Groundwater samples were collected from the excavation site with a disposable Teflon bailer and immediately placed in precleaned, labeled laboratory sample containers. Following collection, samples were immediately placed in a sample cooler with ice and were delivered, under Chain of Custody, to Ecosys Laboratory Services.

TAB 7

ANALYTICAL DATA

TAB 7 - Laboratory Analytical Data

Delivery Order #101

Fort Stewart, Georgia

Tank Number 71A

Building Number 1260

<i>Method</i> Sample ID <i>unit</i>	9073 TRPH ppm	418.1 TPH ppm	8020 BTEX ppb	8270B Semi-Volatile Organics ppb
TK/1A-GV			1186	2146
bdl= below method detection limits				

**Fort Stewart is in an area of 'High or Average Groundwater pollution susceptibility' and this tank is approximately 2800 feet from a withdrawal point. Comparisons should be made to Table A for contaminants >500 feet from a withdrawal point.

42.66 tons of petroleum contaminated soil were excavated from the Tank 71A pit.

Complete Data Package Follows

Petroleum Constituents and Soil Threshold Levels^a

At UST corrective action sites where withdrawal points for public and non-public water supplies exist within distances defined in GUST Rule 391-3-15-.09(3):

CONSTITUENT	AVERAGE OR HIGHER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^b (Where public water supplies exist within 2.0 miles and/or non-public supplies exist within 0.5 miles)		LOWER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^c (Where public water supplies exist within 1.0 mile and/or non-public supplies exist within 0.25 mile)	
	≤500 feet to withdrawal point	> 500 feet to withdrawal point	≤500 feet to withdrawal point	> 500 feet to withdrawal point
VOLATILE ORGANIC COMPOUNDS				
Benzene ^d	0.005 mg/kg ^d	0.008 mg/kg	0.005 mg/kg ^d	0.71 mg/kg
Toluene	0.400 mg/kg	6.00 mg/kg	0.400 mg/kg	500.00 mg/kg
Ethylbenzene	0.370 mg/kg	10.00 mg/kg	0.500 mg/kg	140.00 mg/kg
Xylenes (total)	20.00 mg/kg	700.00 mg/kg	27.00 mg/kg	700.00 mg/kg
POLYNUCLEAR AROMATIC HYDROCARBONS				
Acenaphthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benz(a)anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(a)pyrene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(b)fluoranthene	0.820 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Benzo(g,h,i)perylene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(k)fluoranthene	1.60 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Chrysene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Dibenz(a,h)anthracene	1.50 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Fluoranthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Fluorene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Indeno(1,2,3-c,d)pyrene	0.660 mg/kg ^d	N/A ^e	0.660 mg/kg ^d	N/A ^e
Naphthalene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Phenanthrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Pyrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e

Based on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.

Based on an assumed distance of 0.5 feet between contaminated soils and the water table.

Based on an assumed distance of 5.0 feet between contaminated soils and the water table.

d - Estimated Quantitation Limit. The health-based threshold level is less than the laboratory method limit of detection.

e - Not applicable. The health-based threshold level exceeds the expected soil concentration under free product condition.

f - In order to protect surface waters, the soil threshold level in Table B may supersede that found in Table A.

g - In the presence of other petroleum contaminants in concentrations exceeding 1.0 mg/kg, the Estimated Quantitation Limit, and hence the soil threshold level, may be substantially greater, as approved by EPD.

Table B

Petroleum Constituents and Soil Threshold^a Levels

other UST corrective action sites where withdrawal points for public and non-public water supplies do not exist within distances defined in GUST Rule 391-3-15-.09(3):

CONSTITUENT	AVERAGE OR HIGHER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^b		LOWER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^c	
	≤500 feet to sur- face water body	>500 feet to sur- face water body	≤500 feet to sur- face water body	>500 feet to sur- face water body
VOLATILE ORGANIC COMPOUNDS				
Benzene ^f	0.017 mg/kg	0.120 mg/kg	0.020 mg/kg	11.30 mg/kg
Toluene	115.00 mg/kg	500.00 mg/kg	135.00 mg/kg	500.00 mg/kg
Ethylbenzene	18.00 mg/kg	140.00 mg/kg	28.00 mg/kg	140.00 mg/kg
Xylenes (total)	700.00 mg/kg	700.00 mg/kg	700.00 mg/kg	700.00 mg/kg
POLYNUCLEAR AROMATIC HYDROCARBONS				
Acenaphthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benz(a)anthracene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(a)pyrene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(b)fluoranthene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(g,h,i)perylene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(k)fluoranthene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Chrysene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Dibenz(a,h)anthracene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Fluoranthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Fluorene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Indeno(1,2,3-c,d)pyrene	0.660 mg/kg ^d	N/A ^e	0.660 mg/kg ^d	N/A ^e
Naphthalene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Phenanthrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Pyrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e

^a based on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.

^b based on an assumed distance of 0.5 feet between contaminated soils and the water table.

^c based on an assumed distance of 5.0 feet between contaminated soils and the water table.

^d Estimated Quantitation Limit. The health-based threshold level is less than the laboratory method limit of detection.

^e Not applicable. The health-based threshold level exceeds the expected soil concentration under free product condition.

^f In the presence of other petroleum contaminants in concentrations exceeding 1.0 mg/kg, the Estimated Quantitation Limit, and hence the soil threshold level, may be substantially greater, as approved by EPD.

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: US Army Corps of Engineers
Savannah District
CESAS-PM-H (Mr. Brent Rose)
P. O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAD-ET-EL)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Ft. Stewart

MIPR NO: PMS-96-109
W.O. NO: 7996

SUBJECT: Analytical Testing Results

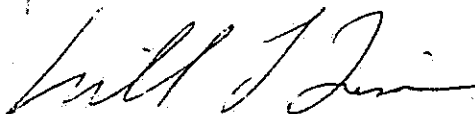
1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 16 July 1996 from Ft. Stewart.

2. If you have any questions, please call Mr. Blaise Willis at 770/919-5295 or me at 770/919-3990.

SUBMITTED BY:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory

SIGNATURE



DATE:

20 Aug 96

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH
Date Received - 96/07/18
Date Reported - 96/08/19 10:27:33
FT. STEWART ARMY AF
Requisition - PMS-96-109
Work Order - 7996 Job Number - 4019

Lab #	Field ID	Date Sampled	Time Sampled
29558	TK71A-GW	96/07/16	10:10

Test Performed	Result	Units	Tested By	Test Date
AROMATIC VOLATILE ORGANICS	*		ECO	96/07/31
SEMIVOLATILE ORGANICS GC/MS	*		ECO	96/08/01

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Lab # Field ID

559 TK71-S1

Date Sampled

96/07/16

Time Sampled

15:10

Test Performed

TOTAL SOLIDS, % OF WET
AROMATIC VOLATILE ORGANICS
SEMIVOLATILE ORGANICS GC/MS
TRPH

Result

Units

92.10

%

*

*

174.0

MG/KG

Tested
By

Test
Date

ECO

96/07/22

ECO

96/07/30

ECO

96/07/26

ECO

96/07/31

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

et 2 of 3

Lab # Field ID

560 TRIP BLANK

Date Sampled

96/07/16

Time Sampled

15:30

Test Performed

AROMATIC VOLATILE ORGANICS

Result Units

*

Tested By Test Date

ECO 96/07/30

*NOTE: See Attached

Sampled by District Personnel

Checked by: OWS

Signed by:


Blaise Willis
Chemist

Page 3 of 3

SABD

**ANDERSON COLUMBIA
ENVIRONMENTAL, INC.**

CHAIN OF CUSTODY RECORD

Page 7 of 7

[illegible]

5

SOUTH ATLANTIC DIVISION LABORATORY
SAMPLE RECEIVING AND COOLER RECEIPT DATA SHEET
CHEMICAL SECTION - Sample Log-In

DATE: 7/12/96

Number of coolers 1

Returned cooler(s) to: Anderson Chambers

PROJECT: FT. STEWART

W.O.#

JOB# 4019

Coolers(s) opened by (print name) René McDermid

(sign) [Signature]

1. Did cooler come with shipping slip?

If yes, enter Tracking Number here 1020383195

☒ yes ☐ no

2. Were custody seals on out side of cooler?

How many? Date on seal(s)

Name on seal(s) Custody Sealing Tape!

☐ yes ☒ no

3. Were custody seals unbroken upon receipt?

☐ yes ☐ no

4. Did you screen sample(s) for "Radioactivity"?

☒ yes ☐ no

5. Were custody papers filled out properly? (ink, signed, etc..)

☒ yes ☐ no

6. Temperature of sample(s) upon receipt: 4C

7. Describe cooler packing: Bubble wrap

8. Did all sample containers arrive unbroken?

☒ yes ☐ no

9. Were the sample containers sealed in separate plastic bags?

☒ yes ☐ no

10. Were labels on containers in good condition and agree with Custody paper?

☒ yes ☐ no

11. Were correct containers used for the test(s) indicated?

☒ yes ☐ no

12. Were correct preservatives added to sample(s)?

☒ yes ☐ no ☐ unk

13. Was a sufficient amount of sample sent for test?

☒ yes ☐ no

14. Were bubbles absent in Volatile sample(s)?

If no, list field ID#

☒ yes ☐ no ☐ N/A

15. Numbers of days from sample date, samples received in Lab 2 days

16. Number of Samples: 3

Sample Type: ☐ soil ☐ water ☐ other Sludge

SAMPLE ANALYSIS PERFORMED BY: ECOSYS

TAT Regular

COMMENTS:

17. Did you sign custody papers in the appropriate place?

☒ yes ☐ no

LAB NUMBER(S): 21558 - 60

SIGNATURE: [Signature]

ECOSYS

LABORATORY SERVICES

ANALYTICAL REPORT

1412 Oakbrook Drive
Suite 105
Norcross, Georgia 30093
Phone (770) 368-0636
Fax (770) 368-0806

USACE-SAD
Blaisdell Willis
611 South Cobb Drive
Marietta, GA 30060
P: 919-5270 F: 919-4977

Client Code 29112130
Ledger Number 107962
P.O. Number
Date Received 07/19/96
Time Received 10:31
Reporting Date 08/16/96

Lab Sample ID AB36117
Project # 4019
Project Name FT. STEWART
Sampling Date/Time 07/16/96 10:10

Client Site # 29558
Client Sample # TK71A-GW

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	DATE OF ANALYST ANALYSIS
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Sample Comment This sample contained only 0.03 % total solids, so it was treated as a water sample even though the chain-of-custody indicated the sample was "sludge". Note that the sample was extracted outside of the 7 day hold time as a result of this confusion about the matrix. The high dilution factor for semivolatile organics was required because the sample formed an emulsion at lower dilutions. The BTEX data were acquired 1 day outside of hold time; however, the sample was analyzed once within hold time.

SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	PHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	108-95-2	GC	08/01/96
8270B	BIS(2-CHLOROETHYL) ETHER	\$06113	<i>Below MDL</i>	100	ug/L	10.0	111-44-4	GC	08/01/96
8270B	2-CHLOROPHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	95-57-8	GC	08/01/96
8270B	1,3-DICHLOROBENZENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	541-73-1	GC	08/01/96
8270B	1,4-DICHLOROBENZENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	106-46-7	GC	08/01/96
8270B	1,2-DICHLOROBENZENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	95-50-1	GC	08/01/96
8270B	BIS(2-CHLOROISOPROPYL) ETHER	\$06113	<i>Below MDL</i>	100	ug/L	10.0	108-60-1	GC	08/01/96
8270B	2-METHYLPHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	95-48-7	GC	08/01/96
8270B	4-METHYLPHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	106-44-5	GC	08/01/96
8270B	N-NITROSODI-N-PROPYLAMINE	\$06113	<i>Below MDL</i>	100	ug/l	10.0	621-64-7	GC	08/01/96
8270B	HEXACHLOROETHANE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	67-72-1	GC	08/01/96
8270B	NITROBENZENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	98-95-3	GC	08/01/96
8270B	ISOPHORONE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	78-59-1	GC	08/01/96
8270B	2-NITROPHENOL	\$06113	<i>Below MDL</i>	200	ug/L	10.0	88-75-5	GC	08/01/96
8270B	2,4-DIMETHYLPHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	105-67-9	GC	08/01/96
8270B	BIS(2-CHLOROETHOXY)METHANE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	111-91-1	GC	08/01/96
8270B	2,4-DICHLOROPHENOL	\$06113	<i>Below MDL</i>	100	ug/L	10.0	120-83-2	GC	08/01/96
8270B	1,2,4-TRICHLOROBENZENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	120-82-1	GC	08/01/96
8270B	NAPHTHALENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	91-20-3	GC	08/01/96
8270B	4-CHLOROANILINE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	108-47-8	GC	08/01/96
8270B	HEXACHLOROBUTADIENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	87-68-3	GC	08/01/96
8270B	4-CHLORO-3-METHYLPHENOL	\$06113	<i>Below MDL</i>	200	ug/L	10.0	59-50-7	GC	08/01/96
8270B	2-METHYLNAPHTHALENE	\$06113	2140	100	ug/L	10.0	91-57-6	GC	08/01/96
8270B	HEXACHLOROCYCLOPENTADIENE	\$06113	<i>Below MDL</i>	100	ug/L	10.0	77-47-4	GC	08/01/96

Lab Sample ID AB36117
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 10:10

Client Site # 29558
 Client Sample # TK71A-GW

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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Sample Comment This sample contained only 0.03 % total solids, so it was treated as a water sample even though the chain-of-custody indicated the sample was "sludge". Note that the sample was extracted outside of the 7 day hold time as a result of this confusion about the matrix. The high dilution factor for semivolatile organics was required because the sample formed an emulsion at lower dilutions. The BTEX data were acquired 1 day outside of hold time; however, the sample was analyzed once within hold time.

SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	2,4,6-TRICHLOROPHENOL	\$06113	Below MDL	100	ug/L	10.0	88-08-2	GC	08/01/96
8270B	2,4,5-TRICHLOROPHENOL	\$06113	Below MDL	100	ug/L	10.0	95-95-4	GC	08/01/96
8270B	2-CHLORONAPHTHALENE	\$06113	Below MDL	100	ug/L	10.0	91-58-7	GC	08/01/96
8270B	2-NITROANILINE	\$06113	Below MDL	100	ug/L	10.0	88-74-4	GC	08/01/96
8270B	DIMETHYL PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	131-11-3	GC	08/01/96
8270B	ACENAPHTHYLENE	\$06113	Below MDL	100	ug/L	10.0	208-98-8	GC	08/01/96
8270B	2,6-DINITROTOLUENE	\$06113	Below MDL	100	ug/L	10.0	608-20-2	GC	08/01/96
8270B	3-NITROANILINE	\$06113	Below MDL	100	ug/L	10.0	99-09-2	GC	08/01/96
8270B	ACENAPHTHENE	\$06113	Below MDL	100	ug/L	10.0	83-32-9	GC	08/01/96
8270B	2,4-DINITROPHENOL	\$06113	Below MDL	500	ug/L	10.0	51-28-5	GC	08/01/96
8270B	4-NITROPHENOL	\$06113	Below MDL	500	ug/L	10.0	100-02-7	GC	08/01/96
8270B	DIBENZOFURAN	\$06113	Below MDL	100	ug/L	10.0	132-84-9	GC	08/01/96
8270B	2,4-DINITROTOLUENE	\$06113	Below MDL	100	ug/L	10.0	121-14-2	GC	08/01/96
8270B	DIETHYL PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	84-66-2	GC	08/01/96
8270B	4-CHLOROPHENYL PHENYL ETHER	\$06113	Below MDL	100	ug/L	10.0	7005-72-3	GC	08/01/96
8270B	FLUORENE	\$06113	Below MDL	100	ug/L	10.0	86-73-7	GC	08/01/96
8270B	4-NITROANILINE	\$06113	Below MDL	100	ug/L	10.0	100-01-6	GC	08/01/96
8270B	2-METHYL-4,6-DINITROPHENOL	\$06113	Below MDL	500	ug/L	10.0	534-52-1	GC	08/01/96
8270B	N-NITROSODIPHENYLAMINE	\$06113	Below MDL	100	ug/L	10.0	88-30-6	GC	08/01/96
8270B	4-BROMOPHENYL PHENYL ETHER	\$06113	Below MDL	100	ug/L	10.0	101-55-3	GC	08/01/96
8270B	HEXACHLOROBENZENE	\$06113	Below MDL	100	ug/L	10.0	118-74-1	GC	08/01/96
8270B	PENTACHLOROPHENOL	\$06113	Below MDL	500	ug/L	10.0	87-86-5	GC	08/01/96
8270B	PHENANTHRENE	\$06113	Below MDL	100	ug/L	10.0	85-01-8	GC	08/01/96
8270B	ANTHRACENE	\$06113	Below MDL	100	ug/L	10.0	120-12-7	GC	08/01/96
8270B	DI-N-BUTYL PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	84-74-2	GC	08/01/96
8270B	FLUORANTHENE	\$06113	Below MDL	100	ug/L	10.0	208-44-0	GC	08/01/96
8270B	PYRENE	\$06113	Below MDL	100	ug/L	10.0	129-00-0	GC	08/01/96
8270B	BUTYL BENZYL PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	85-68-7	GC	08/01/96
8270B	3,3'-DICHLOROBENZIDINE	\$06113	Below MDL	200	ug/L	10.0	91-94-1	GC	08/01/96
8270B	BENZO(A)ANTHRACENE	\$06113	Below MDL	100	ug/L	10.0	58-55-3	GC	08/01/96
8270B	BIS(2-ETHYLHEXYL) PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	117-81-7	GC	08/01/96
8270B	CHRYSENE	\$06113	Below MDL	100	ug/L	10.0	218-01-9	GC	08/01/96
8270B	DI-N-OCTYL PHTHALATE	\$06113	Below MDL	100	ug/L	10.0	117-84-0	GC	08/01/96
8270B	BENZO(B)FLUORANTHENE	\$06113	Below MDL	100	ug/L	10.0	205-99-2	GC	08/01/96
8270B	BENZO(K)FLUORANTHENE	\$06113	Below MDL	100	ug/L	10.0	207-08-9	GC	08/01/96
8270B	BENZO(A)PYRENE	\$06113	Below MDL	100	ug/L	10.0	50-32-8	GC	08/01/96
8270B	INDENO(1,2,3-CD)PYRENE	\$06113	Below MDL	100	ug/L	10.0	193-39-5	GC	08/01/96
8270B	DIBENZO(A,H)ANTHRACENE	\$06113	Below MDL	100	ug/L	10.0	53-70-3	GC	08/01/96
8270B	BENZO(G,H,I)PERYLENE	\$06113	Below MDL	100	ug/L	10.0	191-24-2	GC	08/01/96
8270B	2-FLUOROPHENOL (SURR)	\$06113	34	%	REC	1.0	367-12-4	GC	08/01/96

Lab Sample ID AB36117
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 10:10

Client Site # 29558
 Client Sample # TK71A-GW

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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Sample Comment This sample contained only 0.03 % total solids, so it was treated as a water sample even though the chain-of-custody indicated the sample was "sludge". Note that the sample was extracted outside of the 7 day hold time as a result of this confusion about the matrix. The high dilution factor for semivolatile organics was required because the sample formed an emulsion at lower dilutions. The BTEX data were acquired 1 day outside of hold time; however, the sample was analyzed once within hold time.

SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	PHENOL-D5 (SURR)	\$06113	23	%	REC	1.0	13127-88-3	GC	08/01/96
8270B	NITROBENZENE-D5 (SURR)	\$06113	76	%	REC	1.0	4165-80-0	GC	08/01/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06113	62	%	REC	1.0	321-60-8	GC	08/01/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06113	89	%	REC	1.0	118-79-6	GC	08/01/96
8270B	TERPHENYL-D14 (SURR)	\$06113	127	%	REC	1.0	1718-51-0	GC	08/01/96
8270B	CARBAZOLE	\$06113	Below MDL	100	ug/L	10.0	88-74-8	GC	08/01/96

BTEX (GC) WATER

Prep Date 07/30/96

Batch 073096BS

8020A	BENZENE	\$08106	116	100	ug/L	100.0	71-43-2	DTA	07/31/96
8020A	TOLUENE	\$08106	Below MDL	100	ug/L	100.0	108-88-8	DTA	07/31/96
8020A	ETHYLBENZENE	\$08106	Below MDL	100	ug/L	100.0	100-41-4	DTA	07/31/96
8020A	XYLENES (TOTAL)	\$08106	1070	100	ug/L	100.0	1330-20-7	DTA	07/31/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	87	%	REC	1.0	98-08-8	DTA	07/31/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	94	%	REC	1.0	460-00-4	DTA	07/31/96
8020A	CHLOROBENZENE	\$08106	Below MDL	100	ug/L	100.0	108-90-7	DTA	07/31/96
8020A	1,2-DICHLOROBENZENE	\$08106	Below MDL	100	ug/L	100.0	95-50-1	DTA	07/31/96
8020A	1,3-DICHLOROBENZENE	\$08106	Below MDL	100	ug/L	100.0	541-73-1	DTA	07/31/96
8020A	1,4-DICHLOROBENZENE	\$08106	Below MDL	100	ug/L	100.0	106-46-7	DTA	07/31/96
8020A	TERT-METHYLBUTYL ETHER	\$08106	Below MDL	100	ug/L	100.0	1634-04-4	DTA	07/31/96

Lab Sample ID AB36118
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 15:10

Client Site # 29559
 Client Sample # TK71-S1

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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Sample Comment Results are reported on a dry weight basis. For semivolatile organics, 20 grams were extracted instead of 30 to produce a dilution factor of 1.5.

SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	PHENOL	\$06013	Below MDL	543	ug/Kg	1.5	108-95-2	GC	07/26/96
8270B	BIS(2-CHLOROETHYL) ETHER	\$06013	Below MDL	543	ug/Kg	1.5	111-44-4	GC	07/26/96
8270B	2-CHLOROPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	95-57-8	GC	07/26/96
8270B	1,3-DICHLOROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	541-73-1	GC	07/26/96
8270B	1,4-DICHLOROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	108-46-7	GC	07/26/96
8270B	1,2-DICHLOROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	95-50-1	GC	07/26/96
8270B	BIS(2-CHLOROISOPROPYL) ETHER	\$06013	Below MDL	543	ug/Kg	1.5	108-60-1	GC	07/26/96
8270B	2-METHYLPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	95-48-7	GC	07/26/96
8270B	4-METHYLPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	106-44-5	GC	07/26/96

Lab Sample ID AB36118
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 15:10

Client Site # 29559
 Client Sample # TK71-S1

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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Sample Comment Results are reported on a dry weight basis. For semivolatile organics, 20 grams were extracted instead of 30 to produce a dilution factor of 1.5.

SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	N-NITROSODI-N-PROPYLAMINE	\$06013	Below MDL	543	ug/Kg	1.5	621-84-7	GC	07/26/96
8270B	HEXACHLOROETHANE	\$06013	Below MDL	543	ug/Kg	1.5	67-72-1	GC	07/26/96
8270B	NITROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	98-95-3	GC	07/26/96
8270B	ISOPHORONE	\$06013	Below MDL	543	ug/Kg	1.5	78-59-1	GC	07/26/96
8270B	2-NITROPHENOL	\$06013	Below MDL	1090	ug/Kg	1.5	88-75-5	GC	07/26/96
8270B	2,4-DIMETHYLPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	105-87-9	GC	07/26/96
8270B	BIS(2-CHLOROETHOXY)METHANE	\$06013	Below MDL	543	ug/Kg	1.5	111-91-1	GC	07/26/96
8270B	2,4-DICHLOROPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	120-83-2	GC	07/26/96
8270B	1,2,4-TRICHLOROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	120-82-1	GC	07/26/96
8270B	NAPHTHALENE	\$06013	Below MDL	543	ug/Kg	1.5	91-20-3	GC	07/26/96
8270B	4-CHLOROANILINE	\$06013	Below MDL	543	ug/Kg	1.5	106-47-8	GC	07/26/96
8270B	HEXACHLOROBUTADIENE	\$06013	Below MDL	543	ug/Kg	1.5	87-68-3	GC	07/26/96
8270B	4-CHLORO-3-METHYLPHENOL	\$06013	Below MDL	1090	ug/Kg	1.5	59-50-7	GC	07/26/96
8270B	2-METHYLNAPHTHALENE	\$06013	Below MDL	543	ug/Kg	1.5	91-57-6	GC	07/26/96
8270B	HEXACHLOROCYCLOPENTADIENE	\$06013	Below MDL	543	ug/Kg	1.5	77-47-4	GC	07/26/96
8270B	2,4,6-TRICHLOROPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	88-06-2	GC	07/26/96
8270B	2,4,5-TRICHLOROPHENOL	\$06013	Below MDL	543	ug/Kg	1.5	95-95-4	GC	07/26/96
8270B	2-CHLORONAPHTHALENE	\$06013	Below MDL	543	ug/Kg	1.5	91-58-7	GC	07/26/96
8270B	2-NITROANILINE	\$06013	Below MDL	543	ug/Kg	1.5	88-74-4	GC	07/26/96
8270B	DIMETHYL PHTHALATE	\$06013	Below MDL	543	ug/Kg	1.5	131-11-3	GC	07/26/96
8270B	ACENAPHTHYLENE	\$06013	Below MDL	543	ug/Kg	1.5	208-96-8	GC	07/26/96
8270B	2,6-DINITROTOLUENE	\$06013	Below MDL	543	ug/Kg	1.5	606-20-2	GC	07/26/96
8270B	3-NITROANILINE	\$06013	Below MDL	543	ug/Kg	1.5	99-09-2	GC	07/26/96
8270B	ACENAPHTHENE	\$06013	Below MDL	543	ug/Kg	1.5	83-32-9	GC	07/26/96
8270B	2,4-DINITROPHENOL	\$06013	Below MDL	2710	ug/Kg	1.5	51-28-5	GC	07/26/96
8270B	4-NITROPHENOL	\$06013	Below MDL	2710	ug/Kg	1.5	100-02-7	GC	07/26/96
8270B	DIBENZOFURAN	\$06013	Below MDL	543	ug/Kg	1.5	132-64-9	GC	07/26/96
8270B	2,4-DINITROTOLUENE	\$06013	Below MDL	543	ug/Kg	1.5	121-14-2	GC	07/26/96
8270B	DIETHYL PHTHALATE	\$06013	Below MDL	543	ug/Kg	1.5	84-68-2	GC	07/26/96
8270B	4-CHLOROPHENYL PHENYL ETHER	\$06013	Below MDL	543	ug/Kg	1.5	7005-72-3	GC	07/26/96
8270B	FLUORENE	\$06013	Below MDL	543	ug/Kg	1.5	86-73-7	GC	07/26/96
8270B	4-NITROANILINE	\$06013	Below MDL	543	ug/Kg	1.5	100-01-6	GC	07/26/96
8270B	2-METHYL-4,6-DINITROPHENOL	\$06013	Below MDL	2710	ug/Kg	1.5	534-52-1	GC	07/26/96
8270B	N-NITROSODIPHENYLAMINE	\$06013	Below MDL	543	ug/Kg	1.5	88-30-6	GC	07/26/96
8270B	4-BROMOPHENYL PHENYL ETHER	\$06013	Below MDL	543	ug/Kg	1.5	101-55-3	GC	07/26/96
8270B	HEXACHLOROBENZENE	\$06013	Below MDL	543	ug/Kg	1.5	118-74-1	GC	07/26/96
8270B	PENTACHLOROPHENOL	\$06013	Below MDL	2710	ug/Kg	1.5	87-86-5	GC	07/26/96
8270B	PHENANTHRENE	\$06013	Below MDL	543	ug/Kg	1.5	85-01-8	GC	07/26/96
8270B	ANTHRACENE	\$06013	Below MDL	543	ug/Kg	1.5	120-12-7	GC	07/26/96
8270B	DI-N-BUTYL PHTHALATE	\$06013	2324	543	ug/Kg	1.5	84-74-2	GC	07/26/96
8270B	FLUORANTHENE	\$06013	Below MDL	543	ug/Kg	1.5	206-44-0	GC	07/26/96
8270B	PYRENE	\$06013	Below MDL	543	ug/Kg	1.5	129-00-0	GC	07/26/96
8270B	BUTYL BENZYL PHTHALATE	\$06013	Below MDL	543	ug/Kg	1.5	85-68-7	GC	07/26/96

Lab Sample ID AB36118
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 15:10

Client Site # 29559
 Client Sample # TK71-S1

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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Sample Comment Results are reported on a dry weight basis. For semivolatile organics, 20 grams were extracted instead of 30 to produce a dilution factor of 1.5.

SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	3,3'-DICHLOROBENZIDINE	\$06013	Below MDL	1090	ug/Kg	1.5	91-94-1	GC	07/26/96
8270B	BENZO(A)ANTHRACENE	\$06013	Below MDL	543	ug/Kg	1.5	56-55-3	GC	07/26/96
8270B	BIS(2-ETHYLHEXYL) PHTHALATE	\$06013	Below MDL	543	ug/Kg	1.5	117-81-7	GC	07/26/96
8270B	CHRYSENE	\$06013	Below MDL	543	ug/Kg	1.5	218-01-9	GC	07/26/96
8270B	DI-N-OCTYL PHTHALATE	\$06013	Below MDL	543	ug/Kg	1.5	117-84-0	GC	07/26/96
8270B	BENZO(B)FLUORANTHENE	\$06013	Below MDL	543	ug/Kg	1.5	205-99-2	GC	07/26/96
8270B	BENZO(K)FLUORANTHENE	\$06013	Below MDL	543	ug/Kg	1.5	207-08-9	GC	07/26/96
8270B	BENZO(A)PYRENE	\$06013	Below MDL	543	ug/Kg	1.5	50-32-8	GC	07/26/96
8270B	INDENO(1,2,3-CD)PYRENE	\$06013	Below MDL	543	ug/Kg	1.5	193-39-5	GC	07/26/96
8270B	DIBENZO(A,H)ANTHRACENE	\$06013	Below MDL	543	ug/Kg	1.5	53-70-3	GC	07/26/96
8270B	BENZO(G,H,I)PERYLENE	\$06013	Below MDL	543	ug/Kg	1.5	191-24-2	GC	07/26/96
8270B	2-FLUOROPHENOL (SURR)	\$06013	25	%	REC	1.0	367-12-4	GC	07/26/96
8270B	PHENOL-D5 (SURR)	\$06013	28	%	REC	1.0	13127-88-3	GC	07/26/96
8270B	NITROBENZENE-D5 (SURR)	\$06013	24	%	REC	1.0	4165-60-0	GC	07/26/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06013	38	%	REC	1.0	321-60-8	GC	07/26/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06013	26	%	REC	1.0	118-79-6	GC	07/26/96
8270B	TERPHENYL-D14 (SURR)	\$06013	40	%	REC	1.0	1718-51-0	GC	07/26/96
JB	CARBAZOLE	\$06013	Below MDL	543	ug/Kg	1.5	86-74-8	GC	07/26/96

BTEX (GC) SOIL

Prep Date 07/30/96

Batch 073096BS

8020A	BENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	71-43-2	DTA	07/30/96
8020A	TOLUENE	\$08006	Below MDL	1.1	ug/Kg	1.0	108-88-3	DTA	07/30/96
8020A	ETHYLBENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	100-41-4	DTA	07/30/96
8020A	XYLENES (TOTAL)	\$08006	25	1.1	ug/Kg	1.0	1330-20-7	DTA	07/30/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08006	56	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08006	54	%	REC	1.0	480-00-4	DTA	07/30/96
8020A	CHLOROBENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	108-90-7	DTA	07/30/96
8020A	1,2-DICHLOROBENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	95-50-1	DTA	07/30/96
8020A	1,3-DICHLOROBENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	541-73-1	DTA	07/30/96
8020A	1,4-DICHLOROBENZENE	\$08006	Below MDL	1.1	ug/Kg	1.0	106-46-7	DTA	07/30/96
8020A	TERT-METHYLBUTYL ETHER	\$08006	Below MDL	1.1	ug/Kg	1.0	1634-04-4	DTA	07/30/96

Prep Date 07/30/96

Batch 073196

418.1	TPH (FTIR) SOIL	08008	174	54	mg/Kg	10.0		ML	07/31/96
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Prep Date 07/22/96

Batch 072296

160.3	% TOTAL SOLIDS SOIL (N/C)	09099	92.1	0.1	%	1.0		MN	07/22/96
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Lab Sample ID AB36119
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time 07/16/96 15:30

Client Site # 29560
 Client Sample # TRIP BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 07/30/96		Batch 073096BW			
8020A	BENZENE	\$08106	Below MDL	1.0	ug/L	1.0	71-43-2	DTA	07/30/96
8020A	TOLUENE	\$08106	Below MDL	1.0	ug/L	1.0	108-88-8	DTA	07/30/96
8020A	ETHYLBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	100-41-4	DTA	07/30/96
8020A	XYLENES (TOTAL)	\$08106	Below MDL	1.0	ug/L	1.0	1330-20-7	DTA	07/30/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	77	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	84	%	REC	1.0	480-00-4	DTA	07/30/96
8020A	CHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	108-90-7	DTA	07/30/96
8020A	1,2-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	95-50-1	DTA	07/30/96
8020A	1,3-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	541-73-1	DTA	07/30/96
8020A	1,4-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	108-46-7	DTA	07/30/96
8020A	TERT-METHYLBUTYL ETHER	\$08106	Below MDL	1.0	ug/L	1.0	1634-04-4	DTA	07/30/96

Lab Sample ID AB36121
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # SOIL METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
SEMI (GC/MS) SOIL				Prep Date 07/24/96		Batch 0724960003			
8270B	PHENOL	\$06013	Below MDL	330	ug/Kg	1.0	108-95-2	GC	07/26/96
8270B	BIS(2-CHLOROETHYL) ETHER	\$06013	Below MDL	330	ug/Kg	1.0	111-44-4	GC	07/26/96
8270B	2-CHLOROPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	95-57-8	GC	07/26/96
8270B	1,3-DICHLOROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	541-73-1	GC	07/26/96
8270B	1,4-DICHLOROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	106-46-7	GC	07/26/96
8270B	1,2-DICHLOROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	95-50-1	GC	07/26/96
8270B	BIS(2-CHLOROISOPROPYL) ETHER	\$06013	Below MDL	330	ug/Kg	1.0	108-60-1	GC	07/26/96
8270B	2-METHYLPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	95-48-7	GC	07/26/96
8270B	4-METHYLPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	108-44-5	GC	07/26/96
8270B	N-NITROSODI-N-PROPYLAMINE	\$06013	Below MDL	330	ug/Kg	1.0	621-84-7	GC	07/26/96
8270B	HEXACHLOROETHANE	\$06013	Below MDL	330	ug/Kg	1.0	67-72-1	GC	07/26/96
8270B	NITROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	98-95-3	GC	07/26/96
8270B	ISOPHORONE	\$06013	Below MDL	330	ug/Kg	1.0	78-59-1	GC	07/26/96
8270B	2-NITROPHENOL	\$06013	Below MDL	660	ug/Kg	1.0	88-75-5	GC	07/26/96
8270B	2,4-DIMETHYLPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	105-67-9	GC	07/26/96
8270B	BIS(2-CHLOROETHOXY)METHANE	\$06013	Below MDL	330	ug/Kg	1.0	111-91-1	GC	07/26/96
8270B	2,4-DICHLOROPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	120-83-2	GC	07/26/96
8270B	1,2,4-TRICHLOROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	120-82-1	GC	07/26/96
B	NAPHTHALENE	\$06013	Below MDL	330	ug/Kg	1.0	91-20-3	GC	07/26/96
8270B	4-CHLOROANILINE	\$06013	Below MDL	330	ug/Kg	1.0	106-47-8	GC	07/26/96
8270B	HEXACHLOROBUTADIENE	\$06013	Below MDL	330	ug/Kg	1.0	87-68-3	GC	07/26/96
8270B	4-CHLORO-3-METHYLPHENOL	\$06013	Below MDL	660	ug/Kg	1.0	59-50-7	GC	07/26/96

Lab Sample ID AB36121
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # SOIL METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
SEMI (GC/MS) SOIL				Prep Date 07/24/96		Batch 0724960003			
8270B	2-METHYLNAPHTHALENE	\$06013	Below MDL	330	ug/Kg	1.0	91-57-8	GC	07/26/96
8270B	HEXACHLOROCYCLOPENTADIENE	\$06013	Below MDL	330	ug/Kg	1.0	77-47-4	GC	07/26/96
8270B	2,4,6-TRICHLOROPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	88-08-2	GC	07/26/96
8270B	2,4,5-TRICHLOROPHENOL	\$06013	Below MDL	330	ug/Kg	1.0	95-95-4	GC	07/26/96
8270B	2-CHLORONAPHTHALENE	\$06013	Below MDL	330	ug/Kg	1.0	91-58-7	GC	07/26/96
8270B	2-NITROANILINE	\$06013	Below MDL	330	ug/Kg	1.0	88-74-4	GC	07/26/96
8270B	DIMETHYL PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	131-11-3	GC	07/26/96
8270B	ACENAPHTHYLENE	\$06013	Below MDL	330	ug/Kg	1.0	208-96-8	GC	07/26/96
8270B	2,6-DINITROTOLUENE	\$06013	Below MDL	330	ug/Kg	1.0	606-20-2	GC	07/26/96
8270B	3-NITROANILINE	\$06013	Below MDL	330	ug/Kg	1.0	99-09-2	GC	07/26/96
8270B	ACENAPHTHENE	\$06013	Below MDL	330	ug/Kg	1.0	83-32-9	GC	07/26/96
8270B	2,4-DINITROPHENOL	\$06013	Below MDL	1650	ug/Kg	1.0	51-28-5	GC	07/26/96
8270B	4-NITROPHENOL	\$06013	Below MDL	1650	ug/Kg	1.0	100-02-7	GC	07/26/96
8270B	DIBENZOFURAN	\$06013	Below MDL	330	ug/Kg	1.0	132-64-9	GC	07/26/96
8270B	2,4-DINITROTOLUENE	\$06013	Below MDL	330	ug/Kg	1.0	121-14-2	GC	07/26/96
8270B	DIETHYL PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	84-86-2	GC	07/26/96
8270B	4-CHLOROPHENYL PHENYL ETHER	\$06013	Below MDL	330	ug/Kg	1.0	7005-72-3	GC	07/26/96
8270B	FLUORENE	\$06013	Below MDL	330	ug/Kg	1.0	86-73-7	GC	07/26/96
B	4-NITROANILINE	\$06013	Below MDL	330	ug/Kg	1.0	100-01-6	GC	07/26/96
8270B	2-METHYL-4,6-DINITROPHENOL	\$06013	Below MDL	1650	ug/Kg	1.0	534-52-1	GC	07/26/96
8270B	N-NITROSODIPHENYLAMINE	\$06013	Below MDL	330	ug/Kg	1.0	86-30-6	GC	07/26/96
8270B	4-BROMOPHENYL PHENYL ETHER	\$06013	Below MDL	330	ug/Kg	1.0	101-55-3	GC	07/26/96
8270B	HEXACHLOROBENZENE	\$06013	Below MDL	330	ug/Kg	1.0	118-74-1	GC	07/26/96
8270B	PENTACHLOROPHENOL	\$06013	Below MDL	1650	ug/Kg	1.0	87-86-5	GC	07/26/96
8270B	PHENANTHRENE	\$06013	Below MDL	330	ug/Kg	1.0	85-01-8	GC	07/26/96
8270B	ANTHRACENE	\$06013	Below MDL	330	ug/Kg	1.0	120-12-7	GC	07/26/96
8270B	DI-N-BUTYL PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	84-74-2	GC	07/26/96
8270B	FLUORANTHENE	\$06013	Below MDL	330	ug/Kg	1.0	208-44-0	GC	07/26/96
8270B	PYRENE	\$06013	Below MDL	330	ug/Kg	1.0	129-00-0	GC	07/26/96
8270B	BUTYL BENZYL PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	85-68-7	GC	07/26/96
8270B	3,3'-DICHLOROBENZIDINE	\$06013	Below MDL	660	ug/Kg	1.0	91-94-1	GC	07/26/96
8270B	BENZO(A)ANTHRACENE	\$06013	Below MDL	330	ug/Kg	1.0	58-55-3	GC	07/26/96
8270B	BIS(2-ETHYLHEXYL) PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	117-81-7	GC	07/26/96
8270B	CHRYSENE	\$06013	Below MDL	330	ug/Kg	1.0	218-01-9	GC	07/26/96
8270B	DI-N-OCTYL PHTHALATE	\$06013	Below MDL	330	ug/Kg	1.0	117-84-0	GC	07/26/96
8270B	BENZO(B)FLUORANTHENE	\$06013	Below MDL	330	ug/Kg	1.0	205-99-2	GC	07/26/96
8270B	BENZO(K)FLUORANTHENE	\$06013	Below MDL	330	ug/Kg	1.0	207-08-9	GC	07/26/96
8270B	BENZO(A)PYRENE	\$06013	Below MDL	330	ug/Kg	1.0	50-32-8	GC	07/26/96
8270B	INDENO(1,2,3-CD)PYRENE	\$06013	Below MDL	330	ug/Kg	1.0	193-39-5	GC	07/26/96
8270B	DIBENZO(A,H)ANTHRACENE	\$06013	Below MDL	330	ug/Kg	1.0	53-70-3	GC	07/26/96
8270B	BENZO(G,H,I)PERYLENE	\$06013	Below MDL	330	ug/Kg	1.0	191-24-2	GC	07/26/96
B	2-FLUOROPHENOL (SURR)	\$06013	44	%	REC	1.0	367-12-4	GC	07/26/96
8270B	PHENOL-D5 (SURR)	\$06013	43	%	REC	1.0	13127-88-3	GC	07/26/96
8270B	NITROBENZENE-D5 (SURR)	\$06013	46	%	REC	1.0	4165-60-0	GC	07/26/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06013	49	%	REC	1.0	321-60-8	GC	07/26/96

Lab Sample ID AB36121
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # SOIL METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
SEMI (GC/MS) SOIL				Prep Date 07/24/96		Batch 0724960003			
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06013	37	%	REC	1.0	118-79-8	GC	07/26/96
8270B	TERPHENYL-D14 (SURR)	\$06013	55	%	REC	1.0	1718-51-0	GC	07/26/96
8270B	CARBAZOLE	\$06013	Below MDL	330	ug/Kg	1.0	88-74-8	GC	07/26/96
BTEX (GC) SOIL				Prep Date 07/30/96		Batch 073096BS			
8020A	BENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	71-43-2	DTA	07/30/96
8020A	TOLUENE	\$08006	Below MDL	1.0	ug/Kg	1.0	108-88-3	DTA	07/30/96
8020A	ETHYLBENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	100-41-4	DTA	07/30/96
8020A	XYLENES (TOTAL)	\$08006	Below MDL	1.0	ug/Kg	1.0	1330-20-7	DTA	07/30/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08006	89	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08006	95	%	REC	1.0	460-00-4	DTA	07/30/96
8020A	CHLOROBENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	108-90-7	DTA	07/30/96
8020A	1,2-DICHLOROBENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	95-50-1	DTA	07/30/96
8020A	1,3-DICHLOROBENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	541-73-1	DTA	07/30/96
8020A	1,4-DICHLOROBENZENE	\$08006	Below MDL	1.0	ug/Kg	1.0	106-46-7	DTA	07/30/96
8020A	TERT-METHYLBUTYL ETHER	\$08006	Below MDL	1.0	ug/Kg	1.0	1634-04-4	DTA	07/30/96
				Prep Date 07/30/96		Batch 073196			
1	TPH (FTIR) SOIL	08008	Below MDL	5.0	mg/Kg	1.0		ML	07/31/96

Lab Sample ID AB36122
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # WATER METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
SEMI (GC/MS) WATER				Prep Date 08/01/96		Batch 0801960004			
8270B	PHENOL	\$06113	Below MDL	10.0	ug/L	1.0	108-95-2	GC	08/01/96
8270B	BIS(2-CHLOROETHYL) ETHER	\$06113	Below MDL	10.0	ug/L	1.0	111-44-4	GC	08/01/96
8270B	2-CHLOROPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	95-57-8	GC	08/01/96
8270B	1,3-DICHLOROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	541-73-1	GC	08/01/96
8270B	1,4-DICHLOROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	106-46-7	GC	08/01/96
8270B	1,2-DICHLOROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	95-50-1	GC	08/01/96
8270B	BIS(2-CHLOROISOPROPYL) ETHER	\$06113	Below MDL	10.0	ug/L	1.0	108-60-1	GC	08/01/96
8270B	2-METHYLPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	95-48-7	GC	08/01/96
8270B	4-METHYLPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	106-44-5	GC	08/01/96
8270B	N-NITROSODI-N-PROPYLAMINE	\$06113	Below MDL	10.0	ug/L	1.0	621-64-7	GC	08/01/96
8270B	HEXACHLOROETHANE	\$06113	Below MDL	10.0	ug/L	1.0	67-72-1	GC	08/01/96
8270B	NITROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	98-95-3	GC	08/01/96
8270B	ISOPHORONE	\$06113	Below MDL	10.0	ug/L	1.0	78-59-1	GC	08/01/96
8270B	2-NITROPHENOL	\$06113	Below MDL	20.0	ug/L	1.0	88-75-5	GC	08/01/96
8270B	2,4-DIMETHYLPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	105-67-9	GC	08/01/96

Lab Sample ID AB36122
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # WATER METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
SEMI (GC/MS) WATER				Prep Date 08/01/96		Batch 0801960004			
8270B	BIS(2-CHLOROETHOXY)METHANE	\$06113	Below MDL	10.0	ug/L	1.0	111-91-1	GC	08/01/96
8270B	2,4-DICHLOROPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	120-83-2	GC	08/01/96
8270B	1,2,4-TRICHLOROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	120-82-1	GC	08/01/96
8270B	NAPHTHALENE	\$06113	Below MDL	10.0	ug/L	1.0	91-20-3	GC	08/01/96
8270B	4-CHLOROANILINE	\$06113	Below MDL	10.0	ug/L	1.0	106-47-8	GC	08/01/96
8270B	HEXACHLOROBUTADIENE	\$06113	Below MDL	10.0	ug/L	1.0	87-68-3	GC	08/01/96
8270B	4-CHLORO-3-METHYLPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	59-50-7	GC	08/01/96
8270B	2-METHYLNAPHTHALENE	\$06113	Below MDL	10.0	ug/L	1.0	91-57-6	GC	08/01/96
8270B	HEXACHLOROCYCLOPENTADIENE	\$06113	Below MDL	10.0	ug/L	1.0	77-47-4	GC	08/01/96
8270B	2,4,6-TRICHLOROPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	88-06-2	GC	08/01/96
8270B	2,4,5-TRICHLOROPHENOL	\$06113	Below MDL	10.0	ug/L	1.0	95-95-4	GC	08/01/96
8270B	2-CHLORONAPHTHALENE	\$06113	Below MDL	10.0	ug/L	1.0	91-58-7	GC	08/01/96
8270B	2-NITROANILINE	\$06113	Below MDL	10.0	ug/L	1.0	88-74-4	GC	08/01/96
8270B	DIMETHYL PHTHALATE	\$06113	Below MDL	10.0	ug/L	1.0	131-11-3	GC	08/01/96
8270B	ACENAPHTHYLENE	\$06113	Below MDL	10.0	ug/L	1.0	208-96-8	GC	08/01/96
8270B	2,6-DINITROTOLUENE	\$06113	Below MDL	10.0	ug/L	1.0	608-20-2	GC	08/01/96
8270B	3-NITROANILINE	\$06113	Below MDL	10.0	ug/L	1.0	99-09-2	GC	08/01/96
8270B	ACENAPHTHENE	\$06113	Below MDL	10.0	ug/L	1.0	83-32-9	GC	08/01/96
8270B	2,4-DINITROPHENOL	\$06113	Below MDL	50.0	ug/L	1.0	51-28-5	GC	08/01/96
8270B	4-NITROPHENOL	\$06113	Below MDL	50.0	ug/L	1.0	100-02-7	GC	08/01/96
8270B	DIBENZOFURAN	\$06113	Below MDL	10.0	ug/L	1.0	132-84-9	GC	08/01/96
8270B	2,4-DINITROTOLUENE	\$06113	Below MDL	10.0	ug/L	1.0	121-14-2	GC	08/01/96
8270B	DIETHYL PHTHALATE	\$06113	Below MDL	10.0	ug/L	1.0	84-66-2	GC	08/01/96
8270B	4-CHLOROPHENYL PHENYL ETHER	\$06113	Below MDL	10.0	ug/L	1.0	7005-72-3	GC	08/01/96
8270B	FLUORENE	\$06113	Below MDL	10.0	ug/L	1.0	86-73-7	GC	08/01/96
8270B	4-NITROANILINE	\$06113	Below MDL	10.0	ug/L	1.0	100-01-6	GC	08/01/96
8270B	2-METHYL-4,6-DINITROPHENOL	\$06113	Below MDL	50.0	ug/L	1.0	534-52-1	GC	08/01/96
8270B	N-NITROSODIPHENYLAMINE	\$06113	Below MDL	10.0	ug/L	1.0	86-30-6	GC	08/01/96
8270B	4-BROMOPHENYL PHENYL ETHER	\$06113	Below MDL	10.0	ug/L	1.0	101-55-3	GC	08/01/96
8270B	HEXACHLOROBENZENE	\$06113	Below MDL	10.0	ug/L	1.0	118-74-1	GC	08/01/96
8270B	PENTACHLOROPHENOL	\$06113	Below MDL	50.0	ug/L	1.0	87-86-5	GC	08/01/96
8270B	PHENANTHRENE	\$06113	Below MDL	10.0	ug/L	1.0	85-01-8	GC	08/01/96
8270B	ANTHRACENE	\$06113	Below MDL	10.0	ug/L	1.0	120-12-7	GC	08/01/96
8270B	DI-N-BUTYL PHTHALATE	\$06113	Below MDL	10.0	ug/L	1.0	84-74-2	GC	08/01/96
8270B	FLUORANTHENE	\$06113	Below MDL	10.0	ug/L	1.0	206-44-0	GC	08/01/96
8270B	PYRENE	\$06113	Below MDL	10.0	ug/L	1.0	129-00-0	GC	08/01/96
8270B	BUTYL BENZYL PHTHALATE	\$06113	Below MDL	10.0	ug/L	1.0	85-68-7	GC	08/01/96
8270B	3,3'-DICHLOROBENZIDINE	\$06113	Below MDL	10.0	ug/L	1.0	91-94-1	GC	08/01/96
8270B	BENZO(A)ANTHRACENE	\$06113	Below MDL	10.0	ug/L	1.0	56-55-3	GC	08/01/96
8270B	BIS(2-ETHYLHEXYL) PHTHALATE	\$06113	Below MDL	20.0	ug/L	1.0	117-81-7	GC	08/01/96
8270B	CHRYSENE	\$06113	Below MDL	10.0	ug/L	1.0	218-01-9	GC	08/01/96
8270B	DI-N-OCTYL PHTHALATE	\$06113	Below MDL	10.0	ug/L	1.0	117-84-0	GC	08/01/96
8270B	BENZO(B)FLUORANTHENE	\$06113	Below MDL	10.0	ug/L	1.0	205-99-2	GC	08/01/96
8270B	BENZO(K)FLUORANTHENE	\$06113	Below MDL	10.0	ug/L	1.0	207-08-9	GC	08/01/96
8270B	BENZO(A)PYRENE	\$06113	Below MDL	10.0	ug/L	1.0	50-32-8	GC	08/01/96

Lab Sample ID AB36122
 Project # 4019
 Project Name FT. STEWART
 Sampling Date/Time / / :

Client Site #
 Client Sample # WATER METHOD BLANK

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	INDENO(1,2,3-CD)PYRENE	\$06113	Below MDL	10.0	ug/L	1.0	193-39-5	GC	08/01/96
8270B	DIBENZO(A,H)ANTHRACENE	\$06113	Below MDL	10.0	ug/L	1.0	53-70-3	GC	08/01/96
8270B	BENZO(G,H,I)PERYLENE	\$06113	Below MDL	10.0	ug/L	1.0	191-24-2	GC	08/01/96
8270B	2-FLUOROPHENOL (SURR)	\$06113	47	%	REC	1.0	367-12-4	GC	08/01/96
8270B	PHENOL-D5 (SURR)	\$06113	25	%	REC	1.0	13127-88-3	GC	08/01/96
8270B	NITROBENZENE-D5 (SURR)	\$06113	75	%	REC	1.0	4165-60-0	GC	08/01/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06113	76	%	REC	1.0	321-60-8	GC	08/01/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06113	84	%	REC	1.0	118-79-6	GC	08/01/96
8270B	TERPHENYL-D14 (SURR)	\$06113	123	%	REC	1.0	1718-51-0	GC	08/01/96
8270B	CARBAZOLE	\$06113	Below MDL	10.0	ug/L	1.0	86-74-8	GC	08/01/96

BTEX (GC) WATER

Prep Date 07/30/96

Batch 073096BW

8020A	BENZENE	\$08106	Below MDL	1.0	ug/L	1.0	71-43-2	DTA	07/30/96
8020A	TOLUENE	\$08106	Below MDL	1.0	ug/L	1.0	108-88-8	DTA	07/30/96
8020A	ETHYLBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	100-41-4	DTA	07/30/96
8020A	XYLENES (TOTAL)	\$08106	Below MDL	1.0	ug/L	1.0	1330-20-7	DTA	07/30/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	102	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	106	%	REC	1.0	460-00-4	DTA	07/30/96
8020A	CHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	108-90-7	DTA	07/30/96
8020A	1,2-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	95-50-1	DTA	07/30/96
8020A	1,3-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	541-73-1	DTA	07/30/96
8020A	1,4-DICHLOROBENZENE	\$08106	Below MDL	1.0	ug/L	1.0	106-46-7	DTA	07/30/96
8020A	TERT-METHYLBUTYL ETHER	\$08106	Below MDL	1.0	ug/L	1.0	1634-04-4	DTA	07/30/96

Lab Sample ID AB36317
 Project # 4007
 Project Name FT. STEWART
 Sampling Date/Time / /

Client Site #
 Client Sample # MS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	2-FLUOROPHENOL (SURR)	\$06013	82	%	REC	1.0	367-12-4	GC	07/27/96
8270B	PHENOL-D5 (SURR)	\$06013	78	%	REC	1.0	13127-88-3	GC	07/27/96
8270B	NITROBENZENE-D5 (SURR)	\$06013	82	%	REC	1.0	4165-60-0	GC	07/27/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06013	103	%	REC	1.0	321-60-8	GC	07/27/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06013	99	%	REC	1.0	118-79-6	GC	07/27/96
8270B	TERPHENYL-D14 (SURR)	\$06013	118	%	REC	1.0	1718-51-0	GC	07/27/96

Lab Sample ID AB36318
Project # 4007
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # MSD

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	2-FLUOROPHENOL (SURR)	\$06013	70	%	REC	1.0	367-12-4	GC	07/27/96
8270B	PHENOL-D5 (SURR)	\$06013	72	%	REC	1.0	13127-88-3	GC	07/27/96
8270B	NITROBENZENE-D5 (SURR)	\$06013	69	%	REC	1.0	4165-80-0	GC	07/27/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06013	89	%	REC	1.0	321-80-8	GC	07/27/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06013	83	%	REC	1.0	118-79-6	GC	07/27/96
8270B	TERPHENYL-D14 (SURR)	\$06013	104	%	REC	1.0	1718-51-0	GC	07/27/96

Lab Sample ID AB36319
Project # 4007
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # LCS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) SOIL

Prep Date 07/24/96

Batch 0724960003

8270B	2-FLUOROPHENOL (SURR)	\$06013	44	%	REC	1.0	367-12-4	GC	07/26/96
8270B	PHENOL-D5 (SURR)	\$06013	43	%	REC	1.0	13127-88-3	GC	07/26/96
8270B	NITROBENZENE-D5 (SURR)	\$06013	44	%	REC	1.0	4165-80-0	GC	07/26/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06013	48	%	REC	1.0	321-80-8	GC	07/26/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06013	47	%	REC	1.0	118-79-6	GC	07/26/96
8270B	TERPHENYL-D14 (SURR)	\$06013	54	%	REC	1.0	1718-51-0	GC	07/26/96

Lab Sample ID AB36534
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # LCS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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BTEX (GC) WATER

Prep Date 07/30/96

Batch 073096BW

8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	89	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	95	%	REC	1.0	460-00-4	DTA	07/30/96

Lab Sample ID AB36535
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # MS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 07/30/96		Batch 073096BW			
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	85	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	91	%	REC	1.0	460-00-4	DTA	07/30/96

Lab Sample ID AB36536
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # MSD

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 07/30/96		Batch 073096BW			
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08106	83	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08106	90	%	REC	1.0	460-00-4	DTA	07/30/96

Sample ID AB36537
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # LCS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) SOIL				Prep Date 07/30/96		Batch 073096BS			
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08006	91	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08006	97	%	REC	1.0	460-00-4	DTA	07/30/96

Lab Sample ID AB36538
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # MS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) SOIL				Prep Date 07/30/96		Batch 073096BS			
JA	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08006	51	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08006	49	%	REC	1.0	460-00-4	DTA	07/30/96

Lab Sample ID AB36539
Project # 4019
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # MSD

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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BTEX (GC) SOIL

Prep Date 07/30/96

Batch 073096BS

8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	\$08006	53	%	REC	1.0	98-08-8	DTA	07/30/96
8020A	4-BROMOFLUOROBENZENE (SURR)	\$08006	52	%	REC	1.0	460-00-4	DTA	07/30/96

Lab Sample ID AB36646
Project # 4004
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # LCS

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	2-FLUOROPHENOL (SURR)	\$06113	73	%	REC	1.0	367-12-4	GC	08/02/96
8270B	PHENOL-D5 (SURR)	\$06113	60	%	REC	1.0	13127-88-3	GC	08/02/96
8270B	NITROBENZENE-D5 (SURR)	\$06113	74	%	REC	1.0	4165-60-0	GC	08/02/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06113	73	%	REC	1.0	321-60-8	GC	08/02/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06113	99	%	REC	1.0	118-79-6	GC	08/02/96
8270B	TERPHENYL-D14 (SURR)	\$06113	109	%	REC	1.0	1718-51-0	GC	08/02/96

Lab Sample ID AB36647
Project # 4004
Project Name FT. STEWART
Sampling Date/Time / /

Client Site #
Client Sample # LCSD

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
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SEMI (GC/MS) WATER

Prep Date 08/01/96

Batch 0801960004

8270B	2-FLUOROPHENOL (SURR)	\$06113	78	%	REC	1.0	367-12-4	GC	08/02/96
8270B	PHENOL-D5 (SURR)	\$06113	57	%	REC	1.0	13127-88-3	GC	08/02/96
8270B	NITROBENZENE-D5 (SURR)	\$06113	75	%	REC	1.0	4165-60-0	GC	08/02/96
8270B	2-FLUOROBIPHENYL (SURR)	\$06113	70	%	REC	1.0	321-60-8	GC	08/02/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	\$06113	96	%	REC	1.0	118-79-6	GC	08/02/96
8270B	TERPHENYL-D14 (SURR)	\$06113	107	%	REC	1.0	1718-51-0	GC	08/02/96

Robert Lee

Certifying Scientist

Organics and Inorganics in Wastewater, Solids, and Wastes

NC-DEHNR 441, SC-DHEC 98013, GA, TN-DOH 02826, UT-DOH E-228, FL-DEP 940134 HRS E87511 (Water) HRS 87485 (Drinking Water), NY-DEH ELAP 11551,

NR 998014380

hazardous Materials License	ISO 9000	EPA ID	EPA Reg Waste	GA APHIS	Fed Lab ID	US Army Corps of
JNR 1283-1	A2LA:0594-01	GA-00058	GA-0001011006	S-3966	58-188334	Engineers Validation

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Proj. No.

Project Name

H. D. Drenth

Sampler (Signature)

Date

Time

Pres.

Site Code/Sample Number

7/10/90 1010

1K71A-GW

7/10/90 1510

TK71-S1

7/10/90 1530

TEP BLANK

Sludge
solid method blank

soil method blank

water method blank

CONTAINER NO.

3

3

2

CM920
CM9210
TK71

✓

✓

✓

✓

✓

✓

Due 7/26

Remarks:
SAD NO.

29558 AB36117 Sludge

29559 AB36118 Sludge

29560 AB36119 WATER

AB36120

AB36121

AB36122

MATRIX

Sample

Requisition

by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Received by: (Sig.)

Date/Time

7/13/1990

Hazards Associated with Samples

Remarks at time of receipt:

Lab case No.

107962

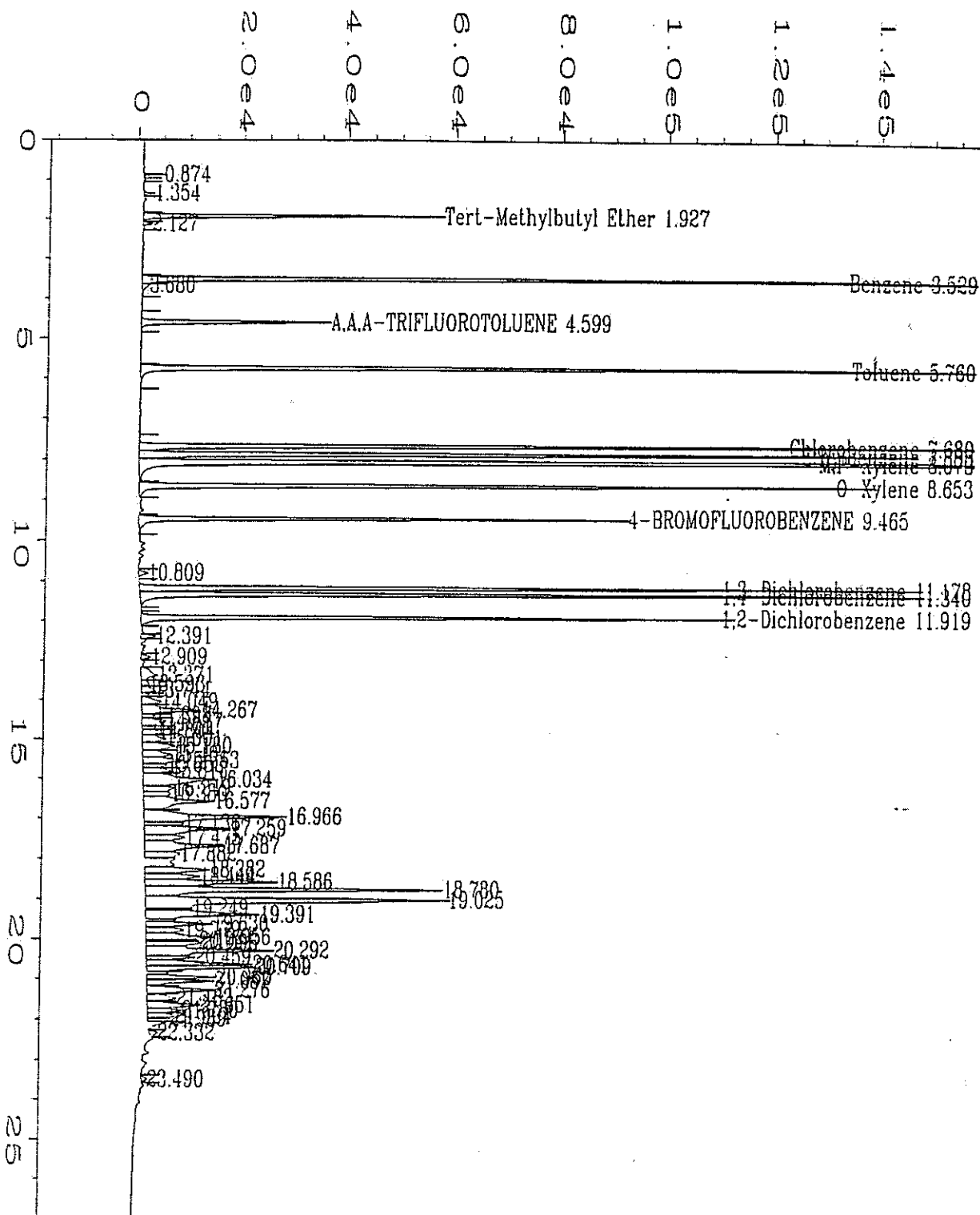
External Standard Report

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Data File Name      : C:\HPCHEM\1\DATA\b073096\30730F07.D
Operator           : Doug Anderson
Instrument          : GC3
Sample Name        : 20ppb 8020 ccv
Run Time Bar Code  :
Acquired on        : 30 Jul 96 07:52 PM
Report Created on   : 01 Aug 96 09:41 AM
Last Recalib on    : 14 JUN 96 10:38 AM
Multiplier         : 1
Sample Info        : 16ppb surr
Page Number        : 1
Vial Number        : 7
Injection Number    : 1
Sequence Line      : 1
Instrument Method    : 3B061396.MTH
Analysis Method     : 3B061396.MTH
Sample Amount       : 0
ISTD Amount        :
  
```

Sig. 1 in C:\HPCHEM\1\DATA\b073096\30730F07.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
1.927	214528	PV	0.059	1	18.249	Tert-Methylbutyl Ether
3.529	647212	BV	0.056	1	19.000	Benzene
4.599	149096	BB	0.065	1	14.542	A,A,A-TRIFLUOROTOLUENE
5.760	634498	PB	0.059	1	18.937	Toluene
7.680	638105	BV	0.058	1	19.443	Chlorobenzene
7.885	572183	VV	0.061	1	20.199	Ethylbenzene
8.073	1322797	VV	0.062	1	36.564	M,P-Xylene
8.653	555624	VV	0.062	1	19.259	O-Xylene
9.465	350541	PV	0.059	1	15.517	4-BROMOFLUOROBENZENE
11.178	566726	PV	0.060	1	18.528	1,3-Dichlorobenzene
11.340	572236	VB	0.060	1	18.714	1,4-Dichlorobenzene
11.919	439455	BV	0.061	1	18.289	1,2-Dichlorobenzene



Data File Name	: C:\HPCHEM\1\DATA\b073096\30730F07.D	Page Number	: 1
Operator	: Doug Anderson	Vial Number	: 7
Instrument	: GC3	Injection Number	: 1
Sample Name	: 20ppb 8020 ccv	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: 3B061396.MTH
Acquired on	: 30 Jul 96 07:52 PM	Analysis Method	: 3B061396.MTH
Report Created on	: 01 Aug 96 09:41 AM	Sample Amount	: 0
Last Recalib on	: 14 JUN 96 10:38 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 16ppb surr		

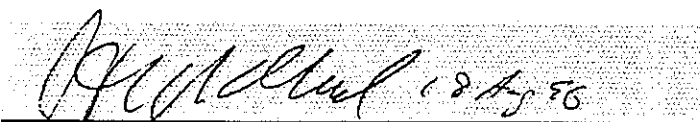
BTEX Method Blank Summary

Lab Name: EcoSys, Inc.	Client: ACE-SAD
Ledger No(s): 107962	
Batch No: 073096BS	Date Analyzed: 7/30/96
Lab File ID: 30730F08	Time Analyzed: 20:25
Lab Sample ID: AB36121	Level: Low
Instrument ID: GC3	Matrix: Soil/Water

This method blank applies to the following samples, LCS, MS, and MSD:

	Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
1	NA	AB36537 LCS	30730F09	7/30/96
2	NA	AB36538 MS	30730F10	7/30/96
3	NA	AB36539 MSD	30730F11	7/30/96
4	TK71-S1	AB36118	30730F12	7/30/96
5	TK71A-GW	AB36117	30730F14	7/31/96
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

NA = Not Applicable



QA/QC Officer

Comments:

Aromatic Volatile Organics MS/MSD Recovery

Lab Name: EcoSys, Inc.
 Ledger No: 107962
 Batch No: 073096BS
 Lab File ID: 30730F10/30730F11

Client: ACE-SAD
 Matrix Spike/Lab Sample No: AB36118 REF
 AB36538 MS
 AB36539 MSD
 Matrix: Soil
 Level (Low/Medium): Low

Compound	Spike Added (ug/Kg)	Sample Conc (ug/Kg)	MS Conc (ug/Kg)	MS % Recovery	#	QC Limits Recovery
Benzene	20	ND	15	76		40-160
Toluene	20	ND	14	68		40-160
Chlorobenzene	20	ND	14	68		40-160
Ethylbenzene	20	3.0	15	61		40-160
m,p-Xylene	40	12	32	49		40-160
o-Xylene	20	11	20	45		40-160
1,3-Dichlorobenzene	20	ND	10	49		40-160
1,4-Dichlorobenzene	20	1.0	10	47		40-160
1,2-Dichlorobenzene	20	1.4	11	46		40-160

Compound	Spike Added (ug/Kg)	MSD Conc (ug/Kg)	MSD % Recovery	#	% RPD	#	QC Limits RPD	Recovery
Benzene	20	15	74		2		30	40-160
Toluene	20	13	64		6		30	40-160
Chlorobenzene	20	13	63		8		30	40-160
Ethylbenzene	20	14	71		16		30	40-160
m,p-Xylene	40	31	78		46	*	30	40-160
o-Xylene	20	21	104		80	*	30	40-160
1,3-Dichlorobenzene	20	8	41		17		30	40-160
1,4-Dichlorobenzene	20	9	45		5		30	40-160
1,2-Dichlorobenzene	20	9	47		2		30	40-160

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of OC limits

ND = Not Detected

RPD: 2 out of 9 outside limits

Spike Recovery: 0 out of 18 outside limits

Comments: _____

QA/QC Officer

Aromatic Volatile Organics LCS Recoveries

Lab Name: EcoSys, Inc.
 Ledger No: 107962
 Batch No: 073096BS
 Lab File ID: 30730F09

Client: ACE-SAD
 Laboratory Control Sample No: AB36537
 Level (Low/Med): Low
 Matrix: Soil

Compound	Spike Added (ug/Kg)	LCS	LCS % Recovery	#	QC Limits Recovery
		Conc (ug/Kg)			
Benzene	20	19	93		61-145
Toluene	20	18	91		61-145
Chlorobenzene	20	19	94		61-145
Ethylbenzene	20	19	97		61-145
m,p-Xylene	40	35	87		61-145
o-Xylene	20	19	93		61-145
1,3-Dichlorobenzene	20	18	89		61-145
1,4-Dichlorobenzene	20	18	91		61-145
1,2-Dichlorobenzene	20	18	91		61-145

* Values outside of OC limits

ND = Not Detected

Spike Recovery: 0 out of 9 outside limits

Comments:

[Signature]
 QA/QC Officer

819

BTEX Surrogate Recovery Summary

Lab Name: EcoSys, Inc.
Ledger No(s): 107962
Batch No.: 073096BS
GC Column : DB-VXR

Client: ACE-SAD

Matrix: Soil/Water
Level: Low

[illegible]

Surrogate Recovery Limits: Soil = 40-160%; Water = 80-120%

Column to be used to flag recovery values

* Values outside of required QC limits

ND = Not Detected

DO = Diluted Out

QA/QC Officer

Comments:

Btxssurr

Printed: 8/18/96/12:31 PM

SemiVolatiles DFTPP

Lab Name: EcoSys, Inc.Client: ACE-SADLedger No: 107962DFTPP Injection Date: 7/26/96Lab File ID: DFTPP072696DFTPP Injection Time: 7:04Instrument ID: MSD-3Batch Number: 0724960003

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.0
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance	82.9 (1)
70	Less than 2.0% of mass 69	0.5
127	40.0 - 60.0% of mass 198	54.2
197	Less than 1.0% of mass 198	0.0 (1)
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 1% of mass 198	2.5
441	Present, but less than mass 443	75.7
442	Greater than 40% of mass 198	59.1
443	17.0 - 23.0% of mass 442	20.4 (2)

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	01	STD	INITAL CAL-1	BNA0201002	07/26/96 8:50 AM
	02	STD	INITAL CAL-2	BNA0301003	07/26/96 9:42 AM
	03	STD	INITAL CAL-4	BNA0401004	07/26/96 10:41 AM
	04	STD	INITAL CAL-5	BNA0501005	07/26/96 11:48 AM
	05	STD	INITAL CAL-3	BNA0601006	07/26/96 12:37 PM
	06	NA	AB36121 MB	BNA0701007	07/26/96 2:21 PM
	07	NA	AB36319 LCS	BNA0801008	07/26/96 3:28 PM
	08				

NA: Not Applicable

Comments:

QA/QC OFFICER

EcoSys, Inc.

Data file : /chem/msd3.i/3-072696.b/dftpp072696.d
Lab. Id. : DFTPP02
Inj Date : 26-JUL-96 07:04 Autotune Date: 26-Jul-96 07:03:3
Operator : BINA Inst ID: msd3.i
Smp Info : 50ng OF DFT-05-(39)
Misc Info : INSTRUMENT TUNE FOR msd3.i
Comment :
Method : /chem/msd3.i/3-072696.b/dftpp288.m
Meth Date : 26-Jul-1996 06:48
Cal Date : Cal File:
Als bottle: 1 QC Sample: DFTPP
Dil Factor: 1.000 Target Version: Target 2.20
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

		CONCENTRATIONS			
		ON-COL	FINAL		
RT (REL RT)	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
1 dftpp		CAS #: 5074-71-5			
7.474(0.000)	198	161282			100.00(Q)
7.474(0.000)	51	90538		0.00- 0.00	56.14
7.474(0.000)	68	0		0.00- 0.00	0.00
7.474(0.000)	69	122946		0.00- 0.00	76.23
7.474(0.000)	70	288		0.00- 0.00	0.23
7.474(0.000)	127	83498		0.00- 0.00	51.77
7.474(0.000)	197	0		0.00- 0.00	0.00
7.474(0.000)	199	10388		0.00- 0.00	6.44
7.474(0.000)	275	36589		0.00- 0.00	22.69
7.474(0.000)	365	4269		0.00- 0.00	2.65
7.474(0.000)	441	16298		0.00- 0.00	77.26
7.474(0.000)	442	108762		0.00- 0.00	67.44
7.474(0.000)	443	21094		0.00- 0.00	19.39

QC Flag Legend

Q - Qualifier signal failed the ratio test.

EcoSys, Inc.

TARGET COMPOUNDS

Client Name:
Client Sample ID: DFTPP02
Sample Location:
Lab Sample ID: DFTPP02
Sample Type: WATER
Analysis Type: SU
Data Type: NS DATA
Misc Info: INSTRUMENT TUNE FOR msd3.i

Client SDG: 3-072696.b
Sample Date:
Sample Point:
Date Received:

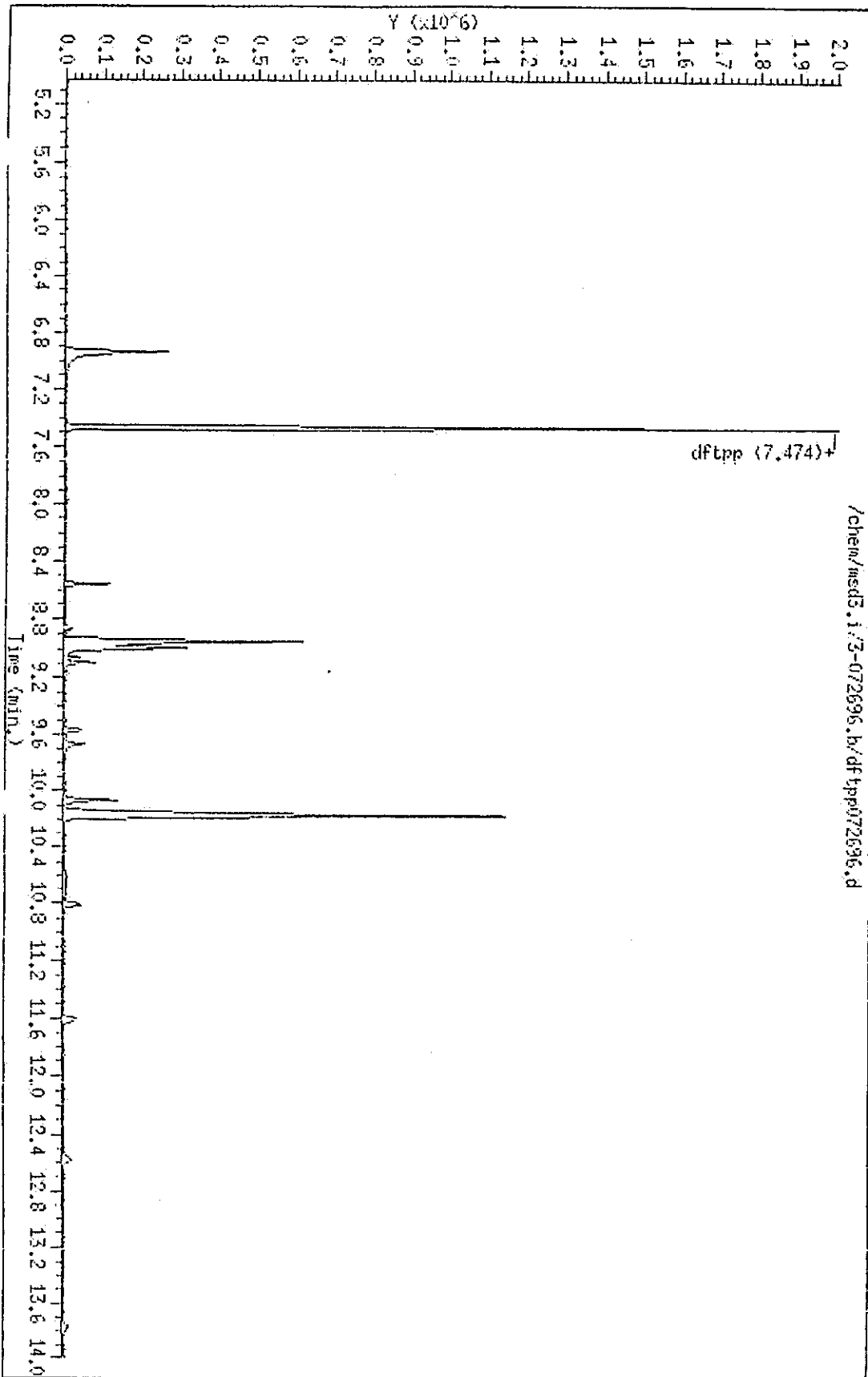
Level: LOW
Column Number: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/KG)	ug/L	
5074-71-5-----dftpp			0.0	
=====		=====	=====	

Data File: /chem/msd3.i/3-072696.b/dftpp072696.d
Date: 26-JUL-96 07:04
Instrument: msd3.i
Sample ID: DFTPP02
Column phase:
Volume Injected (uL): 1.0

Column diameter: 2.00

Page 3



Date : 26-JUL-96 07:04

Instrument : msd3.i

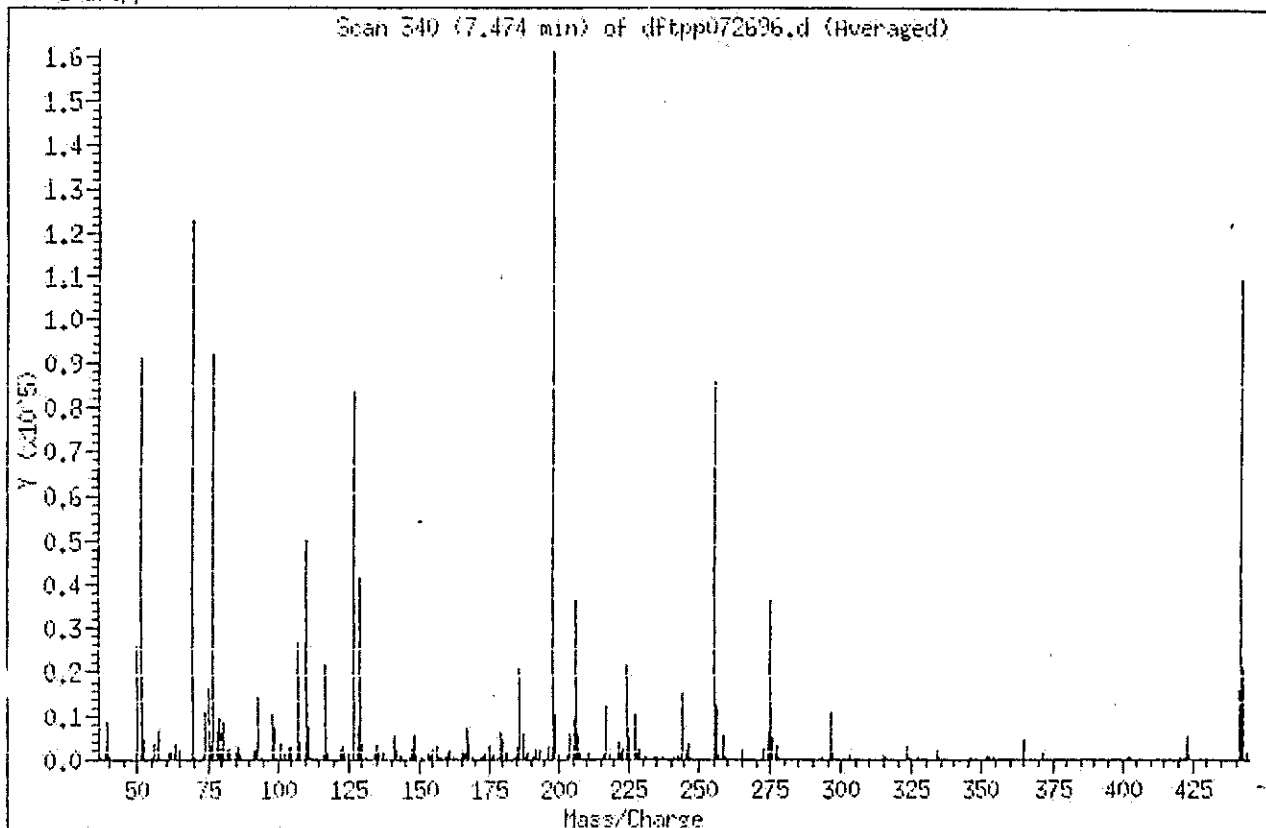
Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.0
51	Mass 51 relative abundance	56.1
68	Mass 68 relative abundance	0.0
69	Mass 69 relative abundance	76.2
70	Mass 70 relative abundance	0.2
127	Mass 127 relative abundance	51.9
197	Mass 197 relative abundance	0.0
199	Mass 199 relative abundance	6.4
275	Mass 275 relative abundance	22.7
365	Mass 365 relative abundance	2.6
441	Mass 441 relative abundance	77.3
442	Mass 442 relative abundance	67.4
443	Mass 443 relative abundance	19.4

Date : 26-JUL-96 07:04

Instrument : msd3.i

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 340-342 (7.474 min) Subtraction Scan 336

Base Peak: 198.00

Number of mass peaks: 176

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
37.00	294	116.00	1147	178.00	581	247.00	294
38.00	1594	117.00	21592	179.00	6531	255.00	85365
39.00	8236	118.00	1435	180.00	4582	256.00	12547
50.00	25781	122.00	2205	181.00	1703	257.00	1144
51.00	90538	123.00	2922	184.00	273	258.00	5344
52.00	4356	124.00	1404	185.00	3007	259.00	668
55.00	666	125.00	1272	186.00	20524	265.00	1935
56.00	3236	127.00	83498	187.00	5955	273.00	2634
57.00	6329	128.00	7516	188.00	600	274.00	6281
61.00	1403	129.00	41306	189.00	1447	275.00	36589
62.00	1632	130.00	3674	191.00	689	276.00	4968
63.00	3583	131.00	315	192.00	1780	277.00	3041
65.00	1901	134.00	1256	193.00	2098	278.00	534
69.00	122946	135.00	3185	196.00	2959	293.00	551
70.00	288	136.00	1273	198.00	161282	296.00	10659
73.00	1145	137.00	1359	199.00	10388	297.00	1623
74.00	10834	141.00	5209	200.00	786	303.00	937
75.00	16463	142.00	1746	203.00	1061	315.00	947
76.00	2907	143.00	1011	204.00	5961	316.00	279
77.00	91645	146.00	614	205.00	9199	323.00	3004
78.00	6501	147.00	2581	206.00	36666	324.00	637
79.00	9445	148.00	5416	207.00	5713	327.00	583
80.00	5770	149.00	1059	208.00	1391	334.00	2101
81.00	8218	151.00	318	211.00	1428	335.00	251
82.00	1922	153.00	1574	216.00	1023	346.00	554
83.00	1824	154.00	997	217.00	12088	352.00	780
85.00	1485	155.00	2487	218.00	1056	353.00	366
86.00	2364	156.00	3128	221.00	4164	354.00	719
87.00	994	157.00	249	222.00	1485	365.00	4269
91.00	2167	158.00	660	223.00	2531	366.00	244
92.00	2182	159.00	291	224.00	21599	372.00	1386
93.00	14127	160.00	1621	225.00	4876	402.00	601
94.00	326	161.00	1995	227.00	10222	403.00	678
98.00	10321	162.00	297	228.00	1438	421.00	637
99.00	7511	165.00	1949	229.00	1909	422.00	341

Date : 26-JUL-96 07:04

Instrument : msd3.i

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

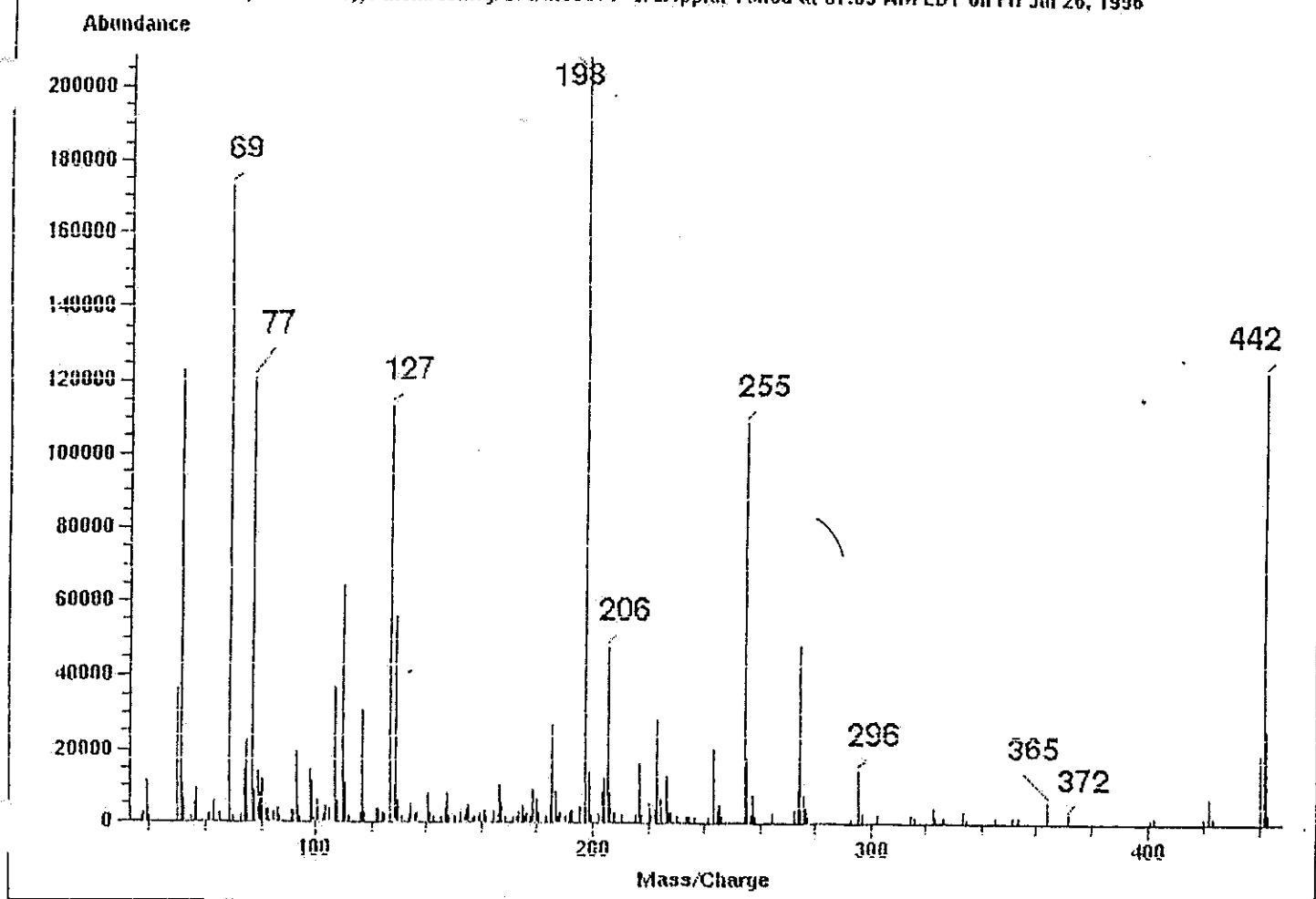
Volume Injected (uL) : 1.0

Spectrum: Scan 340-342 (7.474 min) Subtraction Scan 336

Base Peak: 198.00

Number of mass peaks: 176

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
100.00	265	166.00	1448	231.00	617	423.00	5406
101.00	3680	167.00	7252	234.00	303	424.00	740
103.00	1492	168.00	3240	235.00	375	441.00	16298
104.00	2497	169.00	271	237.00	273	442.00	108762
105.00	2304	172.00	418	241.00	254	443.00	21094
107.00	26522	173.00	975	242.00	759	444.00	1616
108.00	3937	174.00	1715	243.00	269		
110.00	49800	175.00	2981	244.00	15144		
111.00	7299	176.00	542	245.00	2063		
112.00	387	177.00	1480	246.00	3555		



Mass	Ion abundance criteria	%relative abundance
51	30.0 - 60.0% of mass 198	59.0
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance is	82.9
70	Less than 2.0% of mass 69	0.5
127	40.0 to 60.0% of mass 198	54.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 1% of mass 198	2.5
441	Present, but less than mass 443	75.7
442	Greater than 40.0% of mass 198	59.1
443	17.0 - 23.0% of mass 442	20.4

EcoSys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-1993 11:35
 End Cal Date : 26-JUL-1996 12:37
 Quant Method : ISTD
 Cal Curve Type : Averaged
 Target Version : Target 2.20
 Integrator : HP RTE
 Method file : /chem/msd3.i/3-072696.b/MA-BNA_2.m
 Cal Date : 26-Jul-1996 13:51 target

Calibration File Names:

Level 1: /chem/msd3.i/3-072696.b/BNA0201002.d
 Level 2: /chem/msd3.i/3-072696.b/BNA0301003.d
 Level 3: /chem/msd3.i/3-072696.b/BNA0601006.d
 Level 4: /chem/msd3.i/3-072696.b/BNA0401004.d
 Level 5: /chem/msd3.i/3-072696.b/BNA0501005.d

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD/R ²
1 Aniline	1.99032	2.07605	2.13815	2.21344	2.08587	2.10077	3.920
4 Phenol **	2.06395	1.92241	1.92035	1.41411	1.78794	1.82175	13.608
5 Bis(2-chloroethyl) ether	1.81854	1.64686	1.56772	1.57310	1.46877	1.61500	8.063
6 2-Chlorophenol	1.47828	1.43605	1.41840	1.36306	1.26812	1.39278	5.818
7 1,3-Dichlorobenzene	1.58855	1.43483	1.45129	1.36650	1.40184	1.44860	5.848
9 1,4-Dichlorobenzene **	1.59544	1.50041	1.46226	1.40242	1.45937	1.48398	4.815
10 1,2-Dichlorobenzene	1.60551	1.46654	1.43850	1.35820	1.38256	1.45026	6.682
11 Benzyl alcohol	1.66221	1.71315	1.77957	1.87893	1.75241	1.75725	4.615
12 2-Methylphenol	1.41717	1.26815	1.25065	1.31127	1.17297	1.28404	6.984
13 Bis(2-chloroisopropyl) ether	2.64188	2.35390	2.30300	2.25931	2.08053	2.32773	8.746
14 4-Methylphenol	1.40387	1.37568	1.38172	1.29110	1.14327	1.31913	8.130
15 N-Nitrosodi-n-propylamine *	1.62533	1.42314	1.40418	1.35574	1.27165	1.41601	9.240
16 Hexachloroethane	0.94797	0.86678	0.82493	0.78240	0.79196	0.84281	8.000
18 Nitrobenzene	0.60523	0.65355	0.73674	0.93803	0.88180	0.76307	18.799
19 Isophorone	1.12293	1.18121	1.15915	1.21171	1.10047	1.15510	3.853
20 2-Nitrophenol **	0.26796	0.28685	0.28003	0.26998	0.25857	0.27268	4.032
21 2,4-Dimethylphenol	0.47995	0.50006	0.49314	0.49721	0.45466	0.48500	3.841
22 Bis(2-Chloroethoxy)methane	0.63280	0.57679	0.55661	0.55462	0.50364	0.56489	8.245
23 2,4-Dichlorophenol **	0.28023	0.29723	0.31099	0.32806	0.29383	0.30207	6.021
24 Benzoic acid	++++	0.17171	0.19942	0.15042	0.19224	0.17845	12.367
25 1,2,4-Trichlorobenzene	0.37317	0.38390	0.38300	0.36038	0.37208	0.37451	2.560
27 Naphthalene	1.14599	1.08079	1.02580	0.99615	1.02519	1.05478	5.638
28 4-Chloroaniline	0.38051	0.36773	0.41234	0.42362	0.39691	0.39622	5.742
29 Hexachlorobutadiene **	0.29876	0.30487	0.30325	0.29335	0.29185	0.29841	1.938
4-Chloro-3-methylphenol **	0.42007	0.45028	0.42799	0.42803	0.39502	0.42428	4.681
2-Methylnaphthalene	0.66557	0.63521	0.69991	0.91631	0.91042	0.76548	17.889
32 Hexachlorocyclopentadiene *	0.21479	0.32703	0.37123	0.37674	0.39049	0.33606	21.376
33 2,4,6-Trichlorophenol **	0.32996	0.35541	0.34788	0.35766	0.33636	0.34545	3.476
34 2,4,5-Trichlorophenol	0.37034	0.38705	0.40724	0.41700	0.39318	0.39496	4.580

EcoSys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-1993 11:35
End Cal Date : 26-JUL-1996 12:37
Quant Method : ISTD
Cal Curve Type : Averaged
Target Version : Target 2.20
Integrator : HP RTE
Method file : /chem/msd3.i/3-072696.b/MA-BNA_2.m
Cal Date : 26-Jul-1996 13:51 target

Calibration File Names:

Level 1: /chem/msd3.i/3-072696.b/BNA0201002.d
Level 2: /chem/msd3.i/3-072696.b/BNA0301003.d
Level 3: /chem/msd3.i/3-072696.b/BNA0601006.d
Level 4: /chem/msd3.i/3-072696.b/BNA0401004.d
Level 5: /chem/msd3.i/3-072696.b/BNA0501005.d

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD/R^2
2-Chloronaphthalene	1.161971	1.088571	1.070251	1.021271	1.036981	1.075811	5.1121
37 2-Nitroaniline	0.509481	0.576261	0.576691	0.628451	0.578301	0.573841	7.3721
38 Dimethyl phthalate	1.553331	1.447491	1.385031	1.433011	1.269901	1.417751	7.2641
39 2,6-Dinitrotoluene	0.348481	0.350781	0.327111	0.317991	0.304291	0.329731	6.0411
40 Acenaphthylene	1.831141	1.683191	1.572281	1.486241	1.500751	1.614721	8.9111
41 3-Nitroaniline	0.237931	0.210481	0.270481	0.297121	0.275621	0.258331	13.2091
43 Acenaphthene **	1.118161	1.043591	1.003511	0.959061	0.948151	1.014501	6.8271
44 2,4-Dinitrophenol *	+++++	0.079141	0.118451	0.162551	0.152111	0.128061	29.4041
45 4-Nitrophenol *	0.060361	0.043901	0.038341	0.045031	0.048761	0.047281	17.3691<-
46 2,4-Dinitrotoluene	0.389451	0.431731	0.427831	0.447371	0.399801	0.419241	5.7031
47 Dibenzofuran	1.531511	1.453951	1.385471	1.341831	1.286941	1.399941	6.8311
48 Diethyl phthalate	1.655711	1.497561	1.476241	1.531941	1.372251	1.506741	6.7951
49 4-Chlorophenyl phenyl ether	0.643651	0.586411	0.581331	0.563341	0.539061	0.582761	6.6511
50 Fluorene	1.166891	1.072351	1.070171	1.032931	0.987671	1.066001	6.1991
51 4-Nitroaniline	0.158291	0.145591	0.161351	0.234481	0.208301	0.181601	20.8951
52 4,6-Dinitro-2-methylphenol	+++++	0.165641	0.190171	0.205921	0.190221	0.187991	8.8521
53 N-Nitrosodiphenylamine **	0.533141	0.488821	0.473471	0.432841	0.415061	0.468671	9.9761
54 1,2-Diphenylhydrazine	3.552221	3.298171	2.948241	3.140721	2.829001	3.153671	9.0731
56 4-Bromophenyl phenyl ether	0.327801	0.327841	0.315021	0.305091	0.302901	0.315731	3.7831
57 Hexachlorobenzene	0.351081	0.346751	0.349771	0.322381	0.333101	0.340611	3.6551
58 Pentachlorophenol **	+++++	0.048111	0.074171	0.100311	0.066641	0.072311	29.9351
60 Phenanthrene	1.180981	1.113551	1.074711	1.046861	0.999001	1.083021	6.3581
61 Anthracene	1.133471	1.108921	1.057861	1.022501	0.972821	1.059111	6.1191
62 Carbazole	0.988781	1.055071	1.113841	1.076771	0.962041	1.039301	6.0341
Di-n-butyl phthalate	1.894321	1.706631	1.681911	1.676381	1.436891	1.679231	9.6831
fluoranthene **	0.996231	1.010201	1.017151	1.008681	0.937521	0.993951	3.2641
65 Pyrene	1.851091	1.821721	1.808501	1.717111	1.722711	1.784231	3.4041
67 Butyl benzyl phthalate	1.001681	0.982011	1.012801	1.050241	0.958491	1.001041	3.4361
68 Dioctyl adipate	0.806601	0.746051	0.748311	0.742021	0.679401	0.744481	6.0511

EcoSys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-1993 11:35
 End Cal Date : 26-JUL-1996 12:37
 Quant Method : ISTD
 Cal Curve Type : Averaged
 Target Version : Target 2.20
 Integrator : HP RTE
 Method file : /chem/msd3.i/3-072696.b/MA-BNA_2.m
 Cal Date : 26-Jul-1996 13:51 target

Calibration File Names:

Level 1: /chem/msd3.i/3-072696.b/BNA0201002.d
 Level 2: /chem/msd3.i/3-072696.b/BNA0301003.d
 Level 3: /chem/msd3.i/3-072696.b/BNA0601006.d
 Level 4: /chem/msd3.i/3-072696.b/BNA0401004.d
 Level 5: /chem/msd3.i/3-072696.b/BNA0501005.d

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD/R^2
1,3'-Dichlorobenzidine	0.25785	0.18576	0.25785	0.38889	0.25787	0.26965	27.299
70 Bis(2-ethylhexyl) phthalate	1.40875	1.29500	1.31791	1.42362	1.22502	1.33406	6.190
71 Benz(a)anthracene	1.20757	1.25245	1.26275	1.27087	1.25631	1.24999	1.978
73 Chrysene	1.22497	1.20571	1.20674	1.16866	1.14708	1.19063	2.671
74 Di-n-octyl phthalate **	2.96574	2.89367	2.81500	2.69027	2.65137	2.80321	4.738
75 Benzo(b)fluoranthene	1.41246	1.53121	1.49130	1.41073	1.53581	1.47630	4.169
76 Benzo(k)fluoranthene	1.61230	1.60490	1.65974	1.59555	1.42516	1.57953	5.684
77 Benzo(a)pyrene **	1.34213	1.44077	1.39781	1.33381	1.40598	1.38410	3.265
79 Indeno(1,2,3-cd)pyrene	1.06004	1.20768	1.25028	1.22066	1.26839	1.20141	6.872
80 Dibenz(a,h)anthracene	1.05009	1.17568	1.27917	1.26556	1.29958	1.21402	8.497
81 Benzo(g,h,i)perylene	1.06004	1.20768	1.25028	1.22066	1.26839	1.20141	6.872
1 2-Fluorophenol	1.23558	1.19812	1.25711	1.39995	1.28848	1.27585	6.017
2 Phenol-d5	1.97777	1.74166	1.91037	1.99768	1.82372	1.89024	5.680
17 Nitrobenzene-d5	0.72433	0.74967	0.72664	0.73600	0.69999	0.72733	2.508
35 2-Fluorobiphenyl	1.49863	1.33275	1.29888	1.29596	1.28469	1.34218	6.652
55 2,4,6-Tribromophenol	0.14878	0.18730	0.20422	0.22032	0.20714	0.19355	14.289
66 Terphenyl-d14	1.23812	1.20243	1.20455	1.20378	1.18220	1.20621	1.667

SemiVolatiles DFTPP

Lab Name: EcoSys, Inc.Client: ACESADLedger No: 107962DFTPP Injection Date: 7/26/96Lab File ID: BNA1201012DFTPP Injection Time: 19:07Instrument ID: MSD-3Batch Number: 0724960003

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.2
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance	69.2 (1)
70	Less than 2.0% of mass 69	0.0
127	40.0 - 60.0% of mass 198	49.3
197	Less than 1.0% of mass 198	0.0 (1)
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 1% of mass 198	3.0
441	Present, but less than mass 443	76.2
442	Greater than 40% of mass 198	71.5
443	17.0 - 23.0% of mass 442	20.2 (2)

1-Value is % mass 69

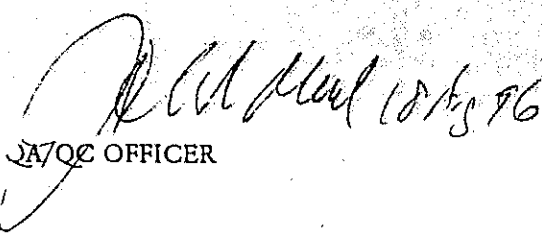
2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	01 NA	CCV	BNA1301013	07/26/96	7:25 PM
	02 NA	AB36317 MS	BNA1801018	07/27/96	12:14 AM
	03 NA	AB36318 MSD	BNA1901019	07/27/96	1:13 AM
	04 TK71-S1	AB36118	BNA1601016	07/26/96	10:19 PM
	05				
	06				
	07				
	08				

NA: Not Applicable

Comments:


 JAVOC OFFICER

EcoSys, Inc.

Data file : /chem/msd3.i/3-072696.b/BNA1201012.d
Lab. Id. : DFTPP02
Inj Date : 26-JUL-96 19:07
Operator : GORDON
Smp Info : 50ng OF DFT-05-(39)
Misc Info : INSTRUMENT TUNE FOR msd3.i
Comment :
Method : /chem/msd3.i/3-072696.b/dftpp288.m
Meth Date : 26-Jul-1996 06:48
Cal Date :
Als bottle: 12
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: WATER
Autotune Date: 26-Jul-96 07:03:3
Inst ID: msd3.i
Cal File:
QC Sample: DFTPP
Target Version: Target 2.20
Compound Sublist: all.sub

		CONCENTRATIONS			
		ON-COL	FINAL		
RT (REL RT)	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
1 dftpp					
CAS #: 5074-71-5					
7.467(0.000)	198	167877			100.00(Q)
67(0.000)	51	90453		0.00- 0.00	53.88
7.467(0.000)	68	0		0.00- 0.00	0.00
7.467(0.000)	69	122112		0.00- 0.00	72.74
7.467(0.000)	70	253		0.00- 0.00	0.21
7.467(0.000)	127	83824		0.00- 0.00	49.93
7.467(0.000)	197	0		0.00- 0.00	0.00
7.467(0.000)	199	11567		0.00- 0.00	6.89
7.467(0.000)	275	39386		0.00- 0.00	23.46
7.467(0.000)	365	4652		0.00- 0.00	2.77
7.467(0.000)	441	18184		0.00- 0.00	75.67
7.467(0.000)	442	123629		0.00- 0.00	73.64
7.467(0.000)	443	24032		0.00- 0.00	19.44

IC Flag Legend

1 - Qualifier signal failed the ratio test.

EcoSys, Inc.

TARGET COMPOUNDS

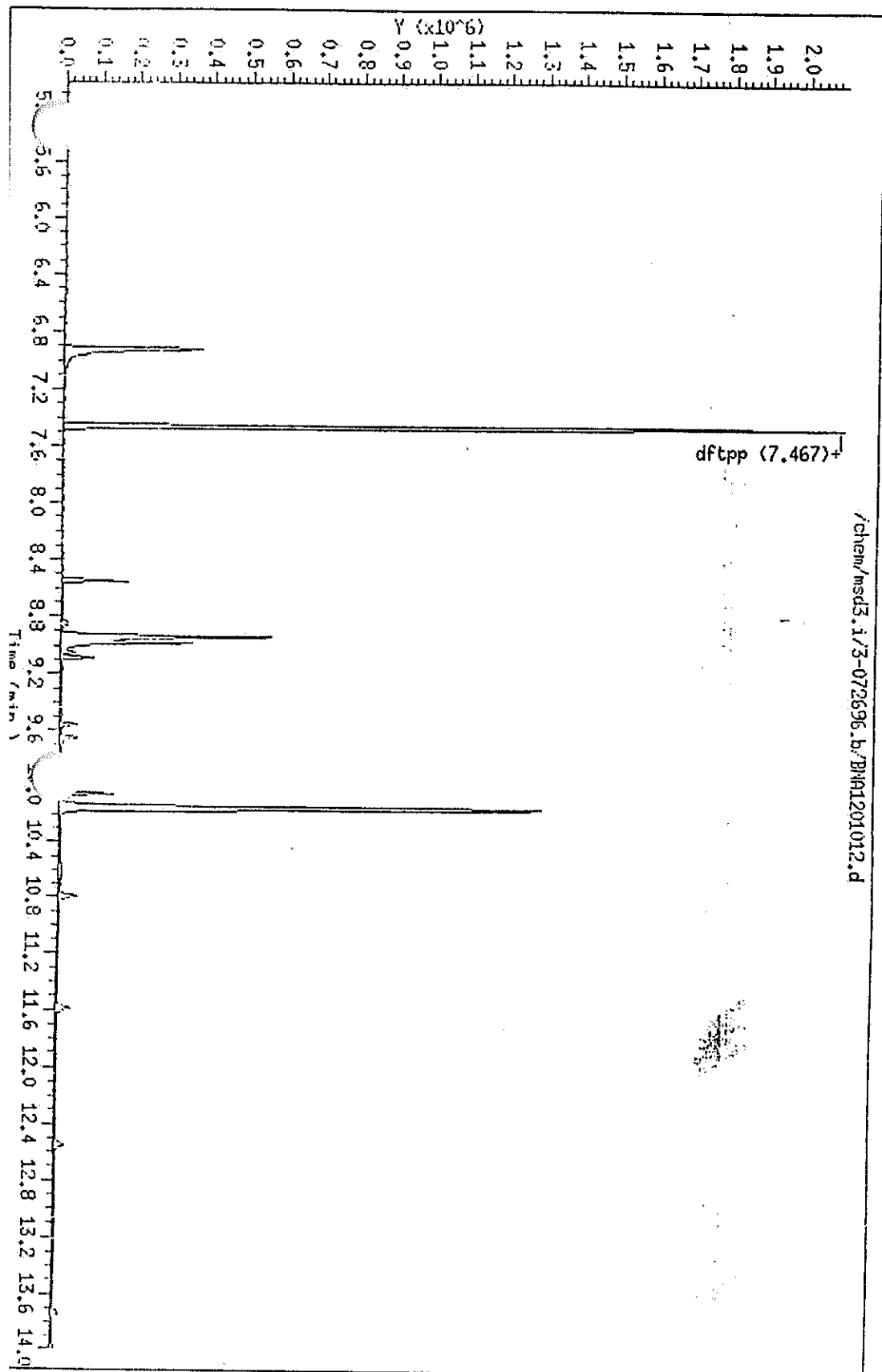
Client Name:	Client SDG: 3-072696.b
Client Sample ID: DFTPP02	Sample Date:
Sample Location:	Sample Point:
Lab Sample ID: DFTPP02	Date Received:
Sample Type: WATER	
Analysis Type: SU	Level: LOW
Data Type: MS DATA	Column Number: 1
Misc Info: INSTRUMENT TUNE FOR msd3.i	

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG)	ug/L
5074-71-5-----dftpp		0.0	
=====		=====	=====

Data File: /chem/msd3.i/3-072696.b/BNA1201012.d
Date : 26-JUL-96 19:07
Instrument : msd3.1
Sample ID : DF1PP02
Column phase :
Volume Injected (uL) : 1.0

Column diameter : 2.00

Page 3



Date : 28-JUL-96 19:07

Instrument : msd3.1

Sample ID : DFTPP02

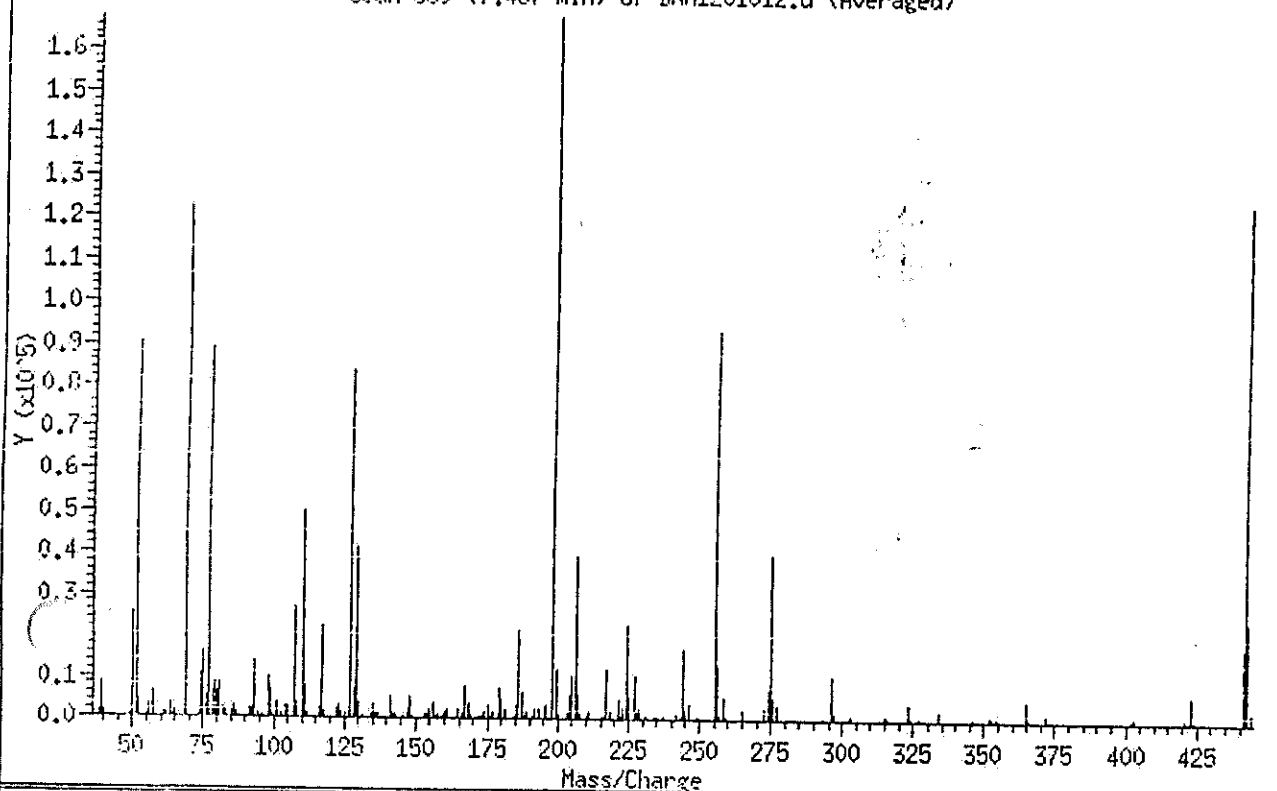
Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

1 dftpp

Scan 339 (7.467 min) of BNA1201012.d (Averaged)



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
199	Base Peak, 100% relative abundance	100.0
51	Mass 51 relative abundance	53.9
68	Mass 68 relative abundance	0.0
69	Mass 69 relative abundance	72.7
70	Mass 70 relative abundance	0.2
127	Mass 127 relative abundance	49.9
137	Mass 137 relative abundance	0.0
197	Mass 197 relative abundance	6.9
275	Mass 275 relative abundance	23.5
365	Mass 365 relative abundance	2.8
441	Mass 441 relative abundance	75.7
442	Mass 442 relative abundance	73.6
443	Mass 443 relative abundance	19.4

Date : 26-JUL-96 19:07

Instrument : msd3.i

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 339-341 (7.467 min) Subtraction Scan 335
Base Peak: 198.00

Number of mass peaks: 180

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
37.00	239	111.00	7786	179.00	6974	246.00	3347
38.00	1520	112.00	864	180.00	4402	249.00	295
39.00	8023	116.00	1948	181.00	1806	255.00	93418
49.00	420	117.00	22063	184.00	270	256.00	12950
50.00	25434	118.00	1577	185.00	3158	257.00	806
51.00	90453	122.00	1884	186.00	20884	258.00	4910
52.00	3875	123.00	3310	187.00	5952	259.00	321
55.00	610	124.00	1544	188.00	313	265.00	2109
56.00	2941	125.00	1105	189.00	1397	273.00	2782
57.00	5964	127.00	83824	191.00	555	274.00	7218
61.00	827	128.00	6966	192.00	1957	275.00	39386
62.00	1106	129.00	40890	193.00	1914	276.00	5231
63.00	3816	130.00	3739	196.00	3247	277.00	2961
64.00	317	131.00	538	198.00	167877	285.00	239
65.00	1610	134.00	1111	199.00	11567	293.00	435
69.00	122112	135.00	3032	200.00	776	296.00	10290
70.00	253	136.00	1024	203.00	1408	297.00	1550
73.00	725	137.00	1171	204.00	5869	303.00	1208
74.00	10017	141.00	5170	205.00	10113	314.00	251
75.00	16123	142.00	1102	206.00	39114	315.00	1280
76.00	5179	143.00	895	207.00	5434	316.00	299
77.00	98608	146.00	708	208.00	1159	323.00	3433
78.00	6416	147.00	2268	210.00	393	324.00	312
79.00	8222	148.00	5311	211.00	1462	327.00	333
80.00	6026	149.00	711	215.00	263	334.00	2013
81.00	8262	151.00	244	216.00	491	346.00	294
82.00	1960	153.00	1222	217.00	11858	352.00	842
83.00	1688	154.00	982	218.00	1320	353.00	335
85.00	1662	155.00	2017	221.00	4437	354.00	692
86.00	2604	156.00	3351	222.00	396	365.00	4652
87.00	920	157.00	337	223.00	2608	366.00	295
91.00	1909	158.00	807	224.00	22361	372.00	1539
92.00	2270	159.00	323	225.00	5218	402.00	327
93.00	13990	160.00	1510	227.00	10260	403.00	787
94.00	775	161.00	1935	228.00	1538	421.00	782

Date : 26-JUL-96 19:07

Instrument : msd3.1

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

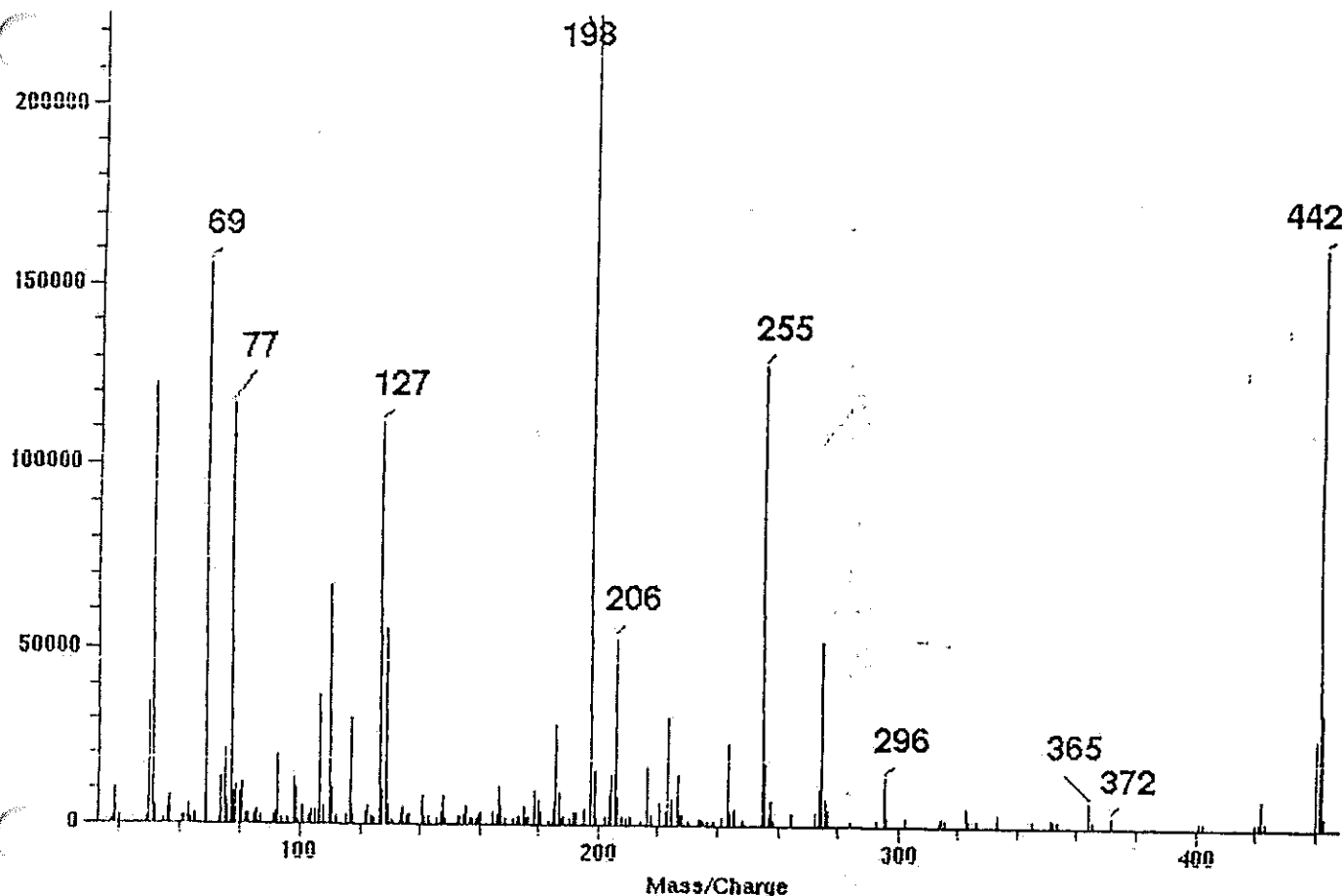
Spectrum: Scan 339-341 (7.467 min) Subtraction Scan 335

Base Peak: 198.00

Number of mass peaks: 180

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
96.00	351	165.00	1971	229.00	1907	422.00	585
98.00	9618	166.00	1116	231.00	282	423.00	6073
99.00	6889	167.00	7767	234.00	619	424.00	746
100.00	261	168.00	3415	235.00	325	441.00	18184
101.00	3351	169.00	553	236.00	238	442.00	123629
103.00	1008	172.00	638	237.00	258	443.00	24032
104.00	2405	173.00	504	239.00	244	444.00	2157
105.00	2558	174.00	1540	242.00	1205		
107.00	26607	175.00	3016	243.00	330		
108.00	3592	176.00	689	244.00	16936		
110.00	50050	177.00	1540	245.00	2273		

Abundance



Mass	Ion abundance criteria	%relative abundance
51	30.0 - 60.0% of mass 198	54.2
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance is	69.2
70	Less than 2.0% of mass 69	0.0
127	40.0 to 60.0% of mass 198	49.3
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 1% of mass 198	3.0
441	Present, but less than mass 443	76.2
442	Greater than 40.0% of mass 198	71.5
443	17.0 - 23.0% of mass 442	20.2

Ecosys, Inc.

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/msd3.i/3-072696.b/BNA1301013.d

Lab. Id. :

Inj Date : 26-JUL-1996 19:25

Autotune Date: 26-Jul-96 07:03:3

Operator : GORDON

Inst ID: msd3.i

Smp Info : BNA-80-38

Misc Info : CONTINUE CALIBRATION

Comment :

Method : /chem/msd3.i/3-072696.b/MA-BNA_2.m

Meth Date : 29-Jul-1996 08:29 target

Cal Date : 26-JUL-96 19:25

Cal File: BNA1301013.d

Als bottle: 13

Continuing Calibration Sample

Dil Factor: 1.000

Target Version: Target 2.20

Integrator: HP RTE

Compound Sublist: all.sub

Sample Type: WATER

Compounds	QUANT SIG MASS	RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
1 2-Fluorophenol	112.00	9.252(0.735)	510815	81.8	81.8
2 Phenol-d5	99.00	12.297(0.976)	722722	78.1	78.1
3 Aniline	93.00	11.754(0.933)	797877	77.6	77.6
4 Phenol **	94.00	12.346(0.980)	761583	85.4	85.4
5 Bis(2-chloroethyl) ether	93.00	12.030(0.955)	634368	80.3	80.3
6 2-Chlorophenol	128.00	12.277(0.975)	557350	81.8	81.8
7 1,3-Dichlorobenzene	146.00	12.415(0.986)	556836	78.5	78.5
8 1,4-Dichlorobenzene-d4	152.00	12.594(1.000)	195747	40.0	
9 1,4-Dichlorobenzene **	146.00	12.653(1.005)	575346	79.2	79.2
10 1,2-Dichlorobenzene	146.00	13.038(1.035)	560490	79.0	79.0
11 Benzyl alcohol	79.00	13.226(1.050)	698061	81.2	81.2
12 2-Methylphenol	108.00	13.808(1.096)	506275	80.6	80.6
13 Bis(2-chloroisopropyl) ether	45.00	13.522(1.074)	887099	77.9	77.9
14 4-Methylphenol	108.00	14.233(1.130)	518750	80.4	80.4(MH)
15 N-Nitrosodi-n-propylamine *	70.00	13.907(1.104)	555113	80.1	80.1
16 Hexachloroethane	117.00	13.927(1.106)	324077	78.6	78.6
17 Nitrobenzene-d5	82.00	14.174(0.885)	975186	81.7	81.7
18 Nitrobenzene	77.00	14.233(0.889)	1233861	98.5	98.5
19 Isophorone	82.00	14.924(0.932)	1534943	81.0	81.0
20 2-Nitrophenol **	139.00	15.082(0.942)	367420	82.1	82.1
21 2,4-Dimethylphenol	107.00	15.486(0.967)	655249	82.3	82.3
22 Bis(2-Chloroethoxy)methane	93.00	15.566(0.972)	736974	79.5	79.5
23 2,4-Dichlorophenol **	162.00	15.980(0.998)	414857	83.7	83.7
24 Benzoic acid	105.00	16.149(0.000)	215819	73.7	73.7(MH)
25 1,2,4-Trichlorobenzene	180.00	15.891(0.993)	504726	82.1	82.1
26 Naphthalene-d8	136.00	16.010(1.000)	656567	40.0	
27 Naphthalene	128.00	16.070(1.004)	1358265	78.4	78.4
28 4-Chloroaniline	127.00	16.337(1.020)	533490	82.0	82.0
29 Hexachlorobutadiene **	225.00	16.446(1.027)	405260	82.7	82.7
30 4-Chloro-3-methylphenol **	107.00	17.935(1.120)	566051	81.3	81.3
31 2-Methylnaphthalene	142.00	17.895(1.118)	1238444	98.6	98.6

Compounds	QUANT MASS	SIG RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
32 Hexachlorocyclopentadiene *	237.00	18.300(0.890)	280196	85.2	85.2
33 2,4,6-Trichlorophenol **	196.00	18.774(0.913)	274879	81.3	81.3
34 2,4,5-Trichlorophenol	196.00	19.090(0.928)	310546	80.4	80.4
* 35 2-Fluorobiphenyl	172.00	18.902(0.919)	993271	75.6	75.6
36 2-Chloronaphthalene	162.00	19.150(0.931)	820352	78.0	78.0
37 2-Nitroaniline	65.00	19.535(0.950)	452137	80.6	80.6
38 Dimethyl phthalate	163.00	20.028(0.974)	1072644	77.3	77.3
39 2,6-Dinitrotoluene	165.00	20.176(0.981)	252085	78.2	78.2
40 Acenaphthylene	152.00	20.196(0.982)	1220233	77.2	77.2
41 3-Nitroaniline	138.00	20.620(1.003)	204089	80.8	80.8
* 42 Acenaphthene-d10	164.00	20.561(1.000)	391260	40.0	
43 Acenaphthene **	153.00	20.660(1.005)	771958	77.8	77.8
44 2,4-Dinitrophenol *	184.00	20.897(1.016)	95975	76.6	76.6
45 4-Nitrophenol *	65.00	21.993(1.059)	38843	84.0	84.0(M)
46 2,4-Dinitrotoluene	165.00	21.194(1.031)	336791	82.1	82.1
47 Dibenzofuran	168.00	21.115(1.027)	1070251	78.2	78.2
48 Diethyl phthalate	149.00	21.855(1.063)	1145320	77.7	77.7
49 4-Chlorophenyl phenyl ether	204.00	22.053(1.073)	448044	78.6	78.6
50 Fluorene	166.00	21.993(1.070)	815443	78.2	78.2
51 4-Nitroaniline	138.00	22.221(1.081)	134234	75.6	75.6
52 4,6-Dinitro-2-methylphenol	198.00	22.241(0.912)	176983	84.2	84.2
53 N-Nitrosodiphenylamine **	169.00	22.399(0.919)	411250	78.4	78.4
54 2,2-Diphenylhydrazine	77.00	22.468(0.921)	2601610	73.8	73.8(A)
* 55 2,4,6-Tribromophenol	330.00	22.656(1.102)	162063	85.6	85.6
56 4-Bromophenyl phenyl ether	248.00	23.297(0.956)	275171	77.9	77.9
57 Hexachlorobenzene	283.70	23.387(0.959)	302681	79.4	79.4
58 Pentachlorophenol **	265.70	24.037(0.986)	67016	82.9	82.9
59 Phenanthrene-d10	188.00	24.382(1.000)	447380	40.0	
60 Phenanthrene	178.00	24.452(1.003)	945422	78.0	78.0
61 Anthracene	178.00	24.580(1.008)	927057	78.3	78.3
62 Carbazole	167.00	25.083(0.000)	869980	74.8	74.8(AM)
63 Di-n-butyl phthalate	149.00	26.059(1.069)	1475367	78.6	78.6
64 Fluoranthene **	202.00	27.507(1.128)	882728	79.4	79.4
65 Pyrene	202.00	28.068(0.900)	890554	80.2	80.2
66 Terphenyl-d14	244.00	28.561(0.916)	589373	78.6	78.6
67 Butyl benzyl phthalate	149.00	29.892(0.958)	494223	79.4	79.4
68 Dioctyl adipate	129.00	30.148(0.967)	372927	80.5	80.5(A)
69 3,3'-Dichlorobenzidine	252.00	31.212(1.001)	120772	72.0	72.0(M)
70 Bis(2-ethylhexyl) phthalate	149.00	31.401(1.007)	643220	77.5	77.5
71 Benz(a)anthracene	228.00	31.173(0.999)	628537	80.8	80.8
72 Chrysene-d12	240.00	31.193(1.000)	248812	40.0	
73 Chrysene	228.00	31.262(1.002)	590254	79.7	79.7
74 Di-n-octyl phthalate **	149.00	32.977(0.947)	1070716	83.2	83.2
75 Benzo(b)fluoranthene	252.00	33.796(0.971)	559330	82.6	82.6
76 Benzo(k)fluoranthene	252.00	33.865(0.973)	599630	82.7	82.7
77 Benzo(a)pyrene **	252.00	34.664(0.995)	536941	84.5	84.5
8 Perylene-d12	264.00	34.822(1.000)	183555	40.0	
9 1,2,3-cdpyrene	276.00	39.633(0.000)	485399	88.0	88.0(M)
10 2(a,h)anthracene	278.00	38.627(1.109)	475285	85.3	85.3
11 Benzo(g,h,i)perylene	276.00	39.633(0.000)	463912	84.1	84.1(M)

QC Lag Legend

- A - Target compound detected but, quantitated amount exceeded maximum amount.
- M - Compound response manually integrated.
- H - Operator selected an alternate compound hit.

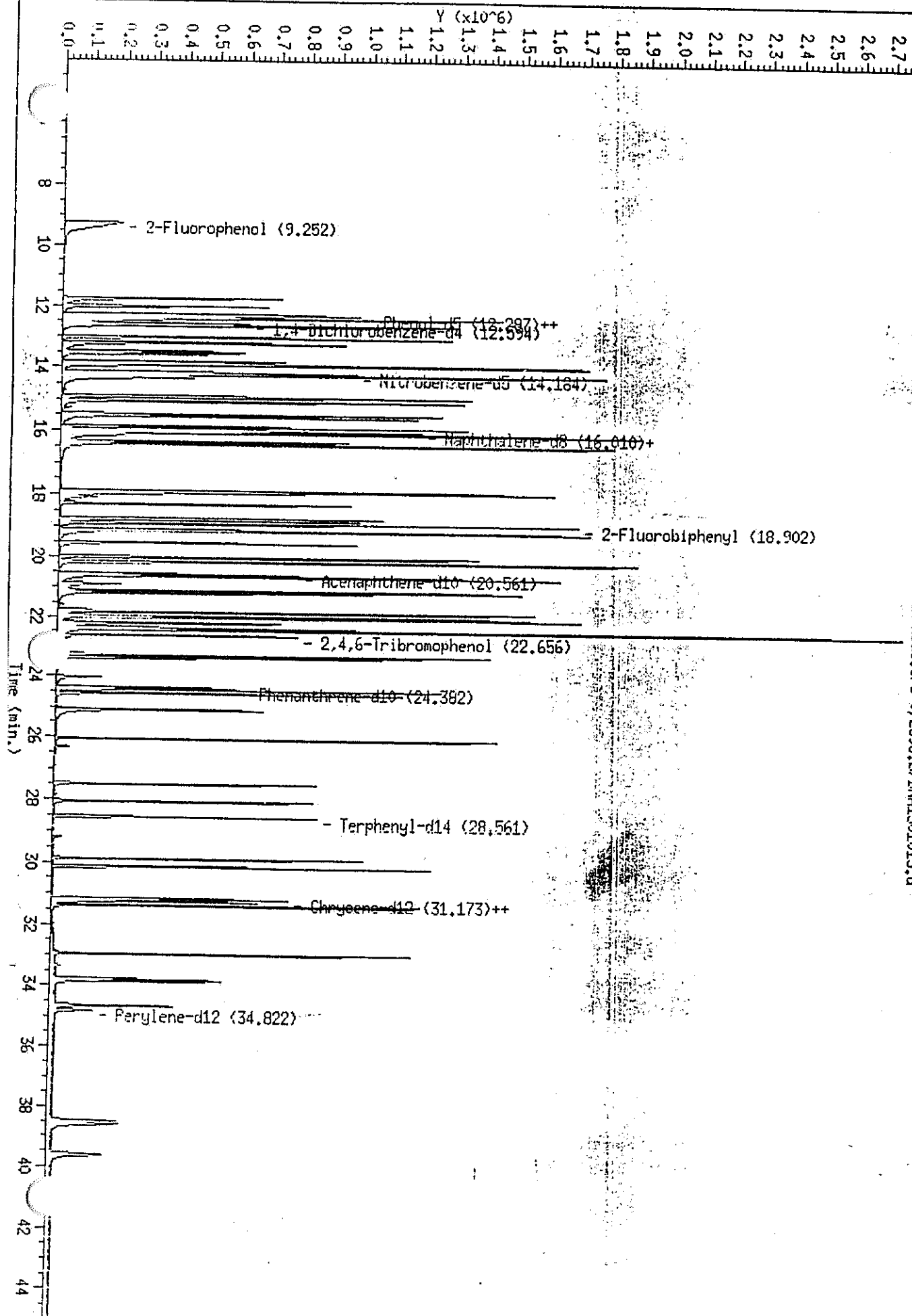
Data file: /chem/msd3.i/3-0/2696.b/ENH1301013.d
Date: 26-JUL-1996 19:25
Instrument: msd3.i

Sample ID:

Column phase:
Volume injected (ul): 1.0

Column diameter: 0.20

/chem/msd3.i/3-0/2696.b/ENH1301013.d



Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd3.i Injection Date: 26-JUL-1996 19:25
 Lab File ID: BNA1301013.d Init. Calibration Date(s): 03/10/93 07/26/96
 Analysis Type: WATER Init. Calibration Times: 11:35 12:37
 Lab Sample ID: Method File: /chem/msd3.i/3-072696.b/MA-BNA_2.m

COMPOUND	RRF	RF80	MIN RRF	%D	MAX %D
12-Fluorophenol	1.276	1.305	0.050	2.3	30.0
Phenol-d5	1.890	1.846	0.050	2.3	30.0
Aniline	2.101	2.038	0.050	3.0	30.0
Phenol **	1.822	1.945	0.050	6.8	30.0
Bis(2-chloroethyl) ether	1.615	1.620	0.050	0.3	30.0
2-Chlorophenol	1.393	1.424	0.050	2.2	30.0
1,3-Dichlorobenzene	1.449	1.422	0.050	1.8	30.0
1,4-Dichlorobenzene **	1.484	1.470	0.050	1.0	30.0
1,2-Dichlorobenzene	1.450	1.432	0.050	1.3	30.0
Benzyl alcohol	1.757	1.783	0.050	1.5	30.0
2-Methylphenol	1.284	1.293	0.050	0.7	30.0
Bis(2-chloroisopropyl) ether	2.328	2.266	0.050	2.7	30.0
4-Methylphenol	1.319	1.325	0.050	0.4	30.0
N-Nitrosodi-n-propylamine *	1.416	1.418	0.050	0.1	30.0
Hexachloroethane	0.843	0.828	0.050	1.8	30.0
Nitrobenzene-d5	0.727	0.743	0.050	2.1	30.0
Nitrobenzene	0.763	0.940	0.050	23.1	30.0
Isophorone	1.155	1.169	0.050	1.2	30.0
2-Nitrophenol **	0.273	0.280	0.050	2.6	30.0
2,4-Dimethylphenol	0.485	0.499	0.050	2.9	30.0
Bis(2-Chloroethoxy)methane	0.565	0.561	0.050	0.6	30.0
2,4-Dichlorophenol **	0.302	0.316	0.050	4.6	30.0
Benzoic acid	0.178	0.164	0.010	7.9	30.0
1,2,4-Trichlorobenzene	0.375	0.384	0.050	2.6	30.0
Naphthalene	1.055	1.034	0.050	1.9	30.0
4-Chloroaniline	0.396	0.406	0.050	2.5	30.0
Hexachlorobutadiene **	0.298	0.309	0.050	3.4	30.0
4-Chloro-3-methylphenol **	0.424	0.431	0.050	1.6	30.0
2-Methylnaphthalene	0.765	0.943	0.050	23.2	30.0
Hexachlorocyclopentadiene *	0.336	0.358	0.050	6.6	30.0
2,4,6-Trichlorophenol **	0.345	0.351	0.050	1.7	30.0
2,4,5-Trichlorophenol	0.395	0.397	0.050	0.5	30.0
2-Fluorobiphenyl	1.342	1.269	0.050	5.4	30.0
2-Chloronaphthalene	1.076	1.048	0.050	2.6	30.0
2-Nitroaniline	0.574	0.578	0.050	0.7	30.0
Dimethyl phthalate	1.418	1.371	0.050	3.3	30.0
2,6-Dinitrotoluene	0.330	0.322	0.050	2.3	30.0
Acenaphthylene	1.615	1.559	0.050	3.4	30.0
3-Nitroaniline	0.258	0.261	0.050	1.0	30.0
Acenaphthene **	1.014	0.987	0.050	2.8	30.0
2,4-Dinitrophenol *	0.128	0.123	0.050	4.2	30.0
4-Nitrophenol *	0.047	0.050	0.050	5.0	30.0
2,4-Dinitrotoluene	0.419	0.430	0.050	2.7	30.0
Dibenzofuran	1.400	1.368	0.050	2.3	30.0
Diethyl phthalate	1.507	1.464	0.050	2.9	30.0

Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd3.i Injection Date: 26-JUL-1996 19:25
 Lab File ID: BNA1301013.d Init. Calibration Date(s): 03/10/93 07/26/96
 Analysis Type: WATER Init. Calibration Times: 11:35 12:32
 Lab Sample ID: Method File: /chem/msd3.i/3-072696.b/MA-BNA_2.m

COMPOUND	RRF	RF80	MIN	MAX
=====	-----	-----	-----	-----
14-Chlorophenyl phenyl ether	0.583	0.573	0.050	1.7
Fluorene	1.066	1.042	0.050	2.2
4-Nitroaniline	0.182	0.172	0.050	5.5
4,6-Dinitro-2-methylphenol	0.188	0.198	0.050	5.2
N-Nitrosodiphenylamine **	0.469	0.460	0.050	1.9
1,2-Diphenylhydrazine	3.154	2.908	0.050	7.8
2,4,6-Tribromophenol	0.194	0.207	0.050	7.0
4-Bromophenyl phenyl ether	0.316	0.308	0.050	2.6
Hexachlorobenzene	0.341	0.338	0.050	0.7
Pentachlorophenol **	0.072	0.075	0.050	3.6
Phenanthrene	1.083	1.057	0.050	2.4
Anthracene	1.059	1.036	0.050	2.2
Carbazole	1.039	0.972	0.050	6.4
Di-n-butyl phthalate	1.679	1.649	0.050	1.8
Fluoranthene **	0.994	0.987	0.050	0.7
Pyrene	1.784	1.790	0.050	0.3
Terphenyl-d14	1.206	1.184	0.050	1.8
Butyl benzyl phthalate	1.001	0.993	0.050	0.8
Dioctyl adipate	0.744	0.749	0.050	0.7
1,3,3'-Dichlorobenzidine	0.270	0.243	0.050	10.0
Bis(2-ethylhexyl) phthalate	1.334	1.293	0.050	3.1
Benz(a)anthracene	1.250	1.263	0.050	1.0
Chrysene	1.191	1.186	0.050	0.4
Di-n-octyl phthalate **	2.803	2.912	0.050	4.0
Benzo(b)fluoranthene	1.476	1.524	0.050	3.2
Benzo(k)fluoranthene	1.580	1.633	0.050	3.4
Benzo(a)pyrene **	1.384	1.463	0.050	5.7
Indeno(1,2,3-cd)pyrene	1.201	1.322	0.050	10.1
Dibenz(a,h)anthracene	1.214	1.295	0.050	6.6
Benzo(g,h,i)perylene	1.201	1.264	0.050	5.2

SemiVolatile Method Blank Summary

Lab Name: EcoSys, Inc.	Client: ACE-SAD
Ledger No(s): 107962	Extraction Method No.: 3550
Batch No(s): 0724960003	Date Extracted: 7/24/96
Lab File ID: BNA0701007	Date Analyzed: 7/26/96
Lab Sample ID: AB36121	Time Analyzed: 14:21
Cleanup Method: NA	Level: Low
Instrument ID: MSD-3	Matrix: Soil

This method blank applies to the following samples, LCS, MS, and MSD:

	Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
1	NA	AB36319 LCS	BNA0801008	7/26/96
2	NA	AB36317 MS	BNA1801018	7/27/96
3	NA	AB36318 MSD	BNA1901019	7/27/96
4	TK71-S1	AB36118	BNA1601016	7/26/96
5				
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10				

[Signature]
18 Aug 96

QA/QC Officer

Comments:

SemiVolatile MS/MSD Recovery

Lab Name: EcoSys, Inc.

Client: ACE-SAD

Ledger No(s): 107962

Matrix Spike/Spike dup AB35867

Batch No(s): 0724960003

AB36317 MS

Lab File ID: BNA1801018/BNA1901019

AB36318 MS

Compound	Spike Added (ug/Kg)	Sample Conc (ug/Kg)	MS Conc (ug/Kg)	MS % Recovery	#	QC Limits Recovery
Phenol	3330	ND	2830	85		26-90
2-Chlorophenol	3330	ND	2720	82		25-102
1,4-Dichlorobenzene	1670	ND	1490	89		28-104
N-Nitroso-di-n-propylamine	1670	ND	1520	91		41-126
1,2,4-Trichlorobenzene	1670	ND	1450	87		38-107
4-Chloro-3-methylphenol	3330	ND	3180	95		26-103
Acenaphthene	1670	ND	1830	110		31-137
4-Nitrophenol	3330	ND	13700	411	*	11-114
2,4-Dinitrotoluene	1670	ND	1520	91	*	28-89
Pentachlorophenol	3330	ND	3760	113	*	17-109
Pyrene	1670	ND	1890	113		35-142

Compound	Spike Added (ug/Kg)	MSD Conc (ug/Kg)	MSD % Recovery	#	% RPD	#	QC Limits	
Phenol	3330	2550	77		10		RPD	Recovery
2-Chlorophenol	3330	2520	76		8		35	26-90
1,4-Dichlorobenzene	1670	1330	80		11		50	25-102
N-Nitroso-di-n-propylamine	1670	1410	84		8		27	28-104
1,2,4-Trichlorobenzene	1670	1270	76		13		38	41-126
4-Chloro-3-methylphenol	3330	2960	89		7		23	38-107
Acenaphthene	1670	1610	96		13		33	26-103
4-Nitrophenol	3330	12800	384	*	7		19	31-137
2,4-Dinitrotoluene	1670	1410	84		8		50	11-114
Pentachlorophenol	3330	3710	111	*	1		47	28-89
Pyrene	1670	1590	95		17		47	17-109
							36	35-142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

ND = Not Detected

RPD: 0 out of 11 outside limits

Spike Recovery: 5 out of 22 outside limits

QA/QC Officer

Comments: 4-Nitrophenol, 2,4-Dinitrotoluene, and Pentachlorophenol is outside the QC limits. (See Narrative)

SemiVolatile LCS Recovery

Lab Name: EcoSys, Inc.
 Ledger No(s): 107962
 Batch No(s): 0724960003
 Lab File ID: BNA0801008

Client: ACESAD
 Lab Control Spike: AB36319 LCS

Compound	Spike Added (ug/Kg)	Sample	LCS	LCS % Recovery	#	QC Limits Recovery
		Conc (ug/Kg)	Conc (ug/Kg)			
Phenol	3330	NR	1590	48		26-90
2-Chlorophenol	3330	NR	1500	45		25-102
1,4-Dichlorobenzene	1670	NR	797	48		28-104
N-Nitroso-di-n-propylamine	1670	NR	916	55		41-126
1,2,4-Trichlorobenzene	1670	NR	734	44		38-107
4-Chloro-3-methylphenol	3330	NR	1680	50		26-103
Acenaphthene	1670	NR	898	54		31-137
4-Nitrophenol	3330	NR	8310	250	*	11-114
2,4-Dinitrotoluene	1670	NR	758	45		28-89
Pentachlorophenol	3330	NR	1300	39		17-109
Pyrene	1670	NR	865	52		35-142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NR = Not Required

Spike Recovery: 1 out of 11 outside limits

J. R. Muel 10/1/80

QA/QC Officer

Comments: 4-Nitrophenol is outside QC limits. (See Narrative)

SemiVolatile Surrogate Recovery (Soil)

Lab Name: EcoSys, Inc.	Client: ACESAD
Ledger No(s): 107962	Level: Low
Batch No.(s): 0724960003	Matrix: Soil

Lab	S1	S2	S3	S4	S5	S6	Total
Sample No.	(2FP) #	(PHL) #	(NBZ) #	(FBP) #	(TBP) #	(TPH) #	Out
AB36121 MB	44	43	46	49	37	55	0
AB36319 LCS	44	43	44	48	47	54	0
AB36317 MS	82	78	82	103	99	118	0
AB36318 MSD	70	72	69	89	83	104	0
AB36118	25	28	24	38	26	40	0

Column used to flag recovery values

* = Values outside of required QC limits

ND = Not Detected

	QC Limits
S1 (2FP) 2-Fluorophenol	25-121
S2 (PHL) Phenol-d5	24-113
S3 (NBZ) Nitrobenzene-d5	23-120
S4 (FBP) 2-Fluorobiphenyl	30-115
S5 (TBP) 2,4,6-Tribromophenol	19-122
S6 (TPH) Terphenyl-d14	18-137

[Signature]
 QA/QC Officer

Comments: _____

TRPH Method Blank Summary

Lab Name: EcoSys, Inc.
 Ledger No(s): 107962
 Batch No: 073196
 Lab File ID: NA
 Lab Sample ID: AB36121
 Instrument ID: FTIR

Client: ACE SAD

Date Extracted: 7/30/96
 Date Analyzed: 7/31/96
 Time Analyzed: -
 Matrix: Soil

This method blank applies to the following samples, LCS, and LCSD.

	Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
1	TK71-S1	AB36118	NA	7/31/96
2	NA (LCS)	NA	NA	7/31/96
3	NA (MS)	NA	NA	7/31/96
4	NA (MSD)	NA	NA	7/31/96
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NA - Not Applicable

LCS - Laboratory Control Sample; LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike; MSD - Matrix Spike Duplicate

Comments: MS/MSD performed on an ACE SAD sample in another ledger (107919)

QA/QC Officer

General Chemistry MS/MSD Recovery Summary

Lab Name: EcoSys, Inc.

Client: ACE-SAD

Ledger No(s): 107962

AB35825 REF

MS	Spike Added mg/Kg	Sample Conc. mg/Kg	MS Conc. mg/Kg	MS % Recovery	QC Limits Required
TPH 418.1	200	ND	204	102	80-120

MSD	Spike Added mg/Kg	MSD Conc. mg/Kg	MSD % mg/Kg	QC Limits Required	%RPD
TPH 418.1	200	206	103	80-120	1

NR = Not Required

NC = Not Calculable due to values less than CRDL

ND = Not Detected

QA/QC Officer

Comments:

General Chemistry LCS Recovery

Lab Name: EcoSys, Inc.

Client: ACE-SAD

Ledger No(s): 107962

LCS

	Spike Added mg/Kg	Sample Conc. mg/Kg	LCS Conc. mg/Kg	LCS % Recovery	QC Limits Required
TPH 418.1	200	NR	180	90	80-120

NR = Not Required

ND = Not Detected

NC = Not Calculable due to value(s) less than CRDL

QA/QC Officer

Comments:

General Chemistry Duplicate Recovery

Lab Name: EcoSys, Inc.

Client: ACESAD

Ledger No(s): 107962

Sample AB36322

	Sample Result (mg/Kg)	Dup. Sample Result (mg/Kg)	% RPD
TPH 418.1	14150	13200	6.9

RPD Limit 20%

NR = Not Required

ND = Not Detected

NC = Not Calculable due to value(s) less than CRDL

[Signature] 18 Aug 20

QA/QC Officer

Comments:

Sample AB36322 is not a USACE sample.

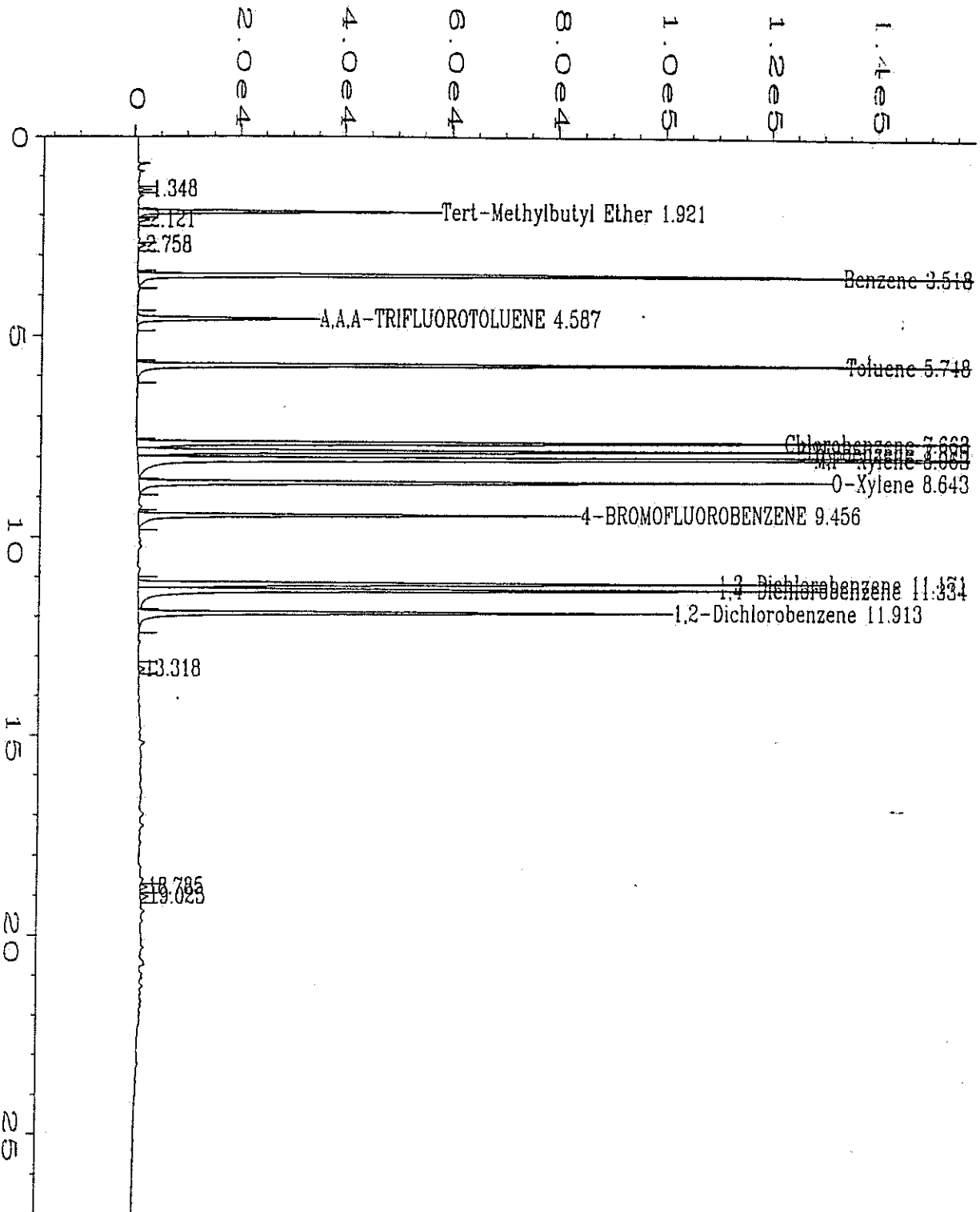
External Standard Report

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Data File Name   : C:\HPCHEM\1\DATA\b073096\30730F01.D
Operator        : Doug Anderson
Instrument       : GC3
Sample Name     : 20ppb 8020 ccv
Run Time Bar Code:
Acquired on    : 30 Jul 96  04:27 PM
Report Created on: 01 Aug 96  09:37 AM
Last Recalib on : 14 JUN 96 10:38 AM
Multiplier     : 1
Sample Info    : 16ppb surr
Page Number    : 1
Vial Number    : 1
Injection Number : 1
Sequence Line  : 1
Instrument Method: 3B061396.MTH
Analysis Method : 3B061396.MTH
Sample Amount   : 0
ISTD Amount     :
  
```

Sig. 1 in C:\HPCHEM\1\DATA\b073096\30730F01.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
1.921	215189	PV	0.059	1	18.314	Tert-Methylbutyl Ether
3.518	632347	BV	0.056	1	18.563	Benzene
4.587	146354	BV	0.066	1	14.274	A,A,A-TRIFLUOROTOLUENE
5.748	612601	BB	0.060	1	18.245	Toluene
7.668	608784	BV	0.059	1	18.575	Chlorobenzene
7.875	553429	VV	0.063	1	19.548	Ethylbenzene
8.063	1286570	VV	0.065	1	35.579	M,P-Xylene
8.643	532799	VV	0.063	1	18.525	O-Xylene
9.456	336598	PV	0.062	1	14.900	4-BROMOFLUOROBENZENE
11.171	531334	BV	0.063	1	17.421	1,3-Dichlorobenzene
11.334	583894	VV	0.068	1	19.078	1,4-Dichlorobenzene
11.913	428155	VB	0.065	1	17.844	1,2-Dichlorobenzene



Data File Name	: C:\HPCHEM\1\DATA\b073096\30730F01.D	Page Number	: 1
Operator	: Doug Anderson	Vial Number	: 1
Instrument	: GC3	Injection Number	: 1
Sample Name	: 20ppb 8020 ccv	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	3B061396.MTH
Acquired on	: 30 Jul 96 04:27 PM	Analysis Method	: 3B061396.MTH
Report Created on:	01 Aug 96 09:37 AM	Sample Amount	: 0
Last Recalib on	: 14 JUN 96 10:38 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 16ppb surr		

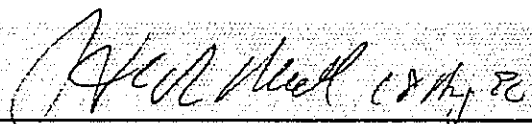
BTEX Method Blank Summary

Lab Name: EcoSys, Inc.	Client: ACE-SAD
Ledger No(s): 107962	
Batch No: 073096BW	Date Analyzed: 7/30/96
Lab File ID: 30730F02	Time Analyzed: 17:06
Lab Sample ID: AB36122	Level: Low
Instrument ID: GC3	Matrix: Water

This method blank applies to the following samples, LCS, MS, and MSD:

	Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
1	NA	AB36534 LCS	30730F03	7/30/96
2	NA	AB36535 MS	30730F04	7/30/96
3	NA	AB36536 MSD	30730F05	7/30/96
4	TRIP BLANK	AB36119	30730F06	7/30/96
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NA = Not Applicable



QA/QC Officer

Comments:

257

Aromatic Volatile Organics MS/MSD Recovery

Lab Name: EcoSys, Inc.
 Ledger No: 107962
 Batch No: 073096BW
 Lab File ID: 30730F04/30730F05

Client: ACESAD
 Matrix Spike/Lab Sample No: AB36119 REF
 AB36535 MS
 AB36536 MSD
 Matrix: Water
 Level (Low/Med): Low

Compound	Spike Added (ug/L)	Sample Conc (ug/L)	MS Conc (ug/L)	MS % Recovery	#	QC Limits Recovery
Benzene	20.0	ND	22.5	112		80-120
Toluene	20.0	ND	22.5	113		80-120
Chlorobenzene	20.0	ND	22.6	113		80-120
Ethylbenzene	20.0	ND	23.5	118		80-120
m,p-Xylene	40.0	1.0	42.7	104		80-120
o-Xylene	20.0	1.6	22.4	104		80-120
1,3-Dichlorobenzene	20.0	ND	21.5	108		80-120
1,4-Dichlorobenzene	20.0	ND	22.0	110		80-120
1,2-Dichlorobenzene	20.0	ND	21.3	106		80-120

Compound	Spike Added (ug/L)	MSD Conc (ug/L)	MSD % Recovery	#	% RPD	#	QC Limits	
Benzene	20.0	19.2	96		15		RPD	Recovery
Toluene	20.0	19.1	96		17		30	80-120
Chlorobenzene	20.0	19.4	97		15		30	80-120
Ethylbenzene	20.0	20.1	100		16		30	80-120
m,p-Xylene	40.0	36.5	91		13		30	80-120
o-Xylene	20.0	19.3	96		8		30	80-120
1,3-Dichlorobenzene	20.0	18.4	92		16		30	80-120
1,4-Dichlorobenzene	20.0	18.9	94		15		30	80-120
1,2-Dichlorobenzene	20.0	18.3	91		15		30	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of OC limits

ND = Not Detected

RPD: 0 out of 9 outside limits

Spike Recovery: 0 out of 18 outside limits

Comments: _____

QA/QC Officer

Btexms

Printed: 8/18/96/12:23 PM

Aromatic Volatile Organics LCS Recoveries

Lab Name: EcoSys, Inc.
 Ledger No: 107962
 Batch No: 073096BW
 Lab File ID: 30730F03

Client: ACE-SAD
 Laboratory Control Sample No: AB36534
 Level (Low/Med): Low
 Matrix: Water

Compound	Spike Added (ug/L)	LCS Conc (ug/L)	LCS % Recovery	#	QC Limits Recovery
Benzene	20	21	107		80-120
Toluene	20	21	105		80-120
Chlorobenzene	20	22	108		80-120
Ethylbenzene	20	22	112		80-120
m,p-Xylene	40	40	101		80-120
o-Xylene	20	21	106		80-120
1,3-Dichlorobenzene	20	21	103		80-120
1,4-Dichlorobenzene	20	21	105		80-120
1,2-Dichlorobenzene	20	20	101		80-120

* Values outside of QC limits
 ND = Not Detected

Spike Recovery: 0 out of 9 outside limits

Comments:

QA/QC Officer

[Signature]
 8/18/96

859

BTEX Surrogate Recovery Summary

Lab Name: EcoSys, Inc.
Ledger No(s): 107962
Batch No.: 073096BW
GC Column : DB-VXR

Client: ACE-SAD

Matrix: Water
Level: Low

[illegible]

Surrogate Recovery Limits: 80-120%

Column to be used to flag recovery values

* Values outside of required QC limits

ND = Not Detected

DO = Diluted Out

QA/QC Officer

Comments:

Lab Name: EcoSys, Inc.Client: ACESADLedger No: 107962DFTPP Injection Date: 8/1/96Lab File ID: DFTPP080196DFTPP Injection Time: 7:19Instrument ID: MSD-2Batch Number: 0801960004

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.9
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance	69.2 (1)
70	Less than 2.0% of mass 69	0.5
127	40.0 - 60.0% of mass 198	51.6
197	Less than 1.0% of mass 198	0.0 (1)
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	18.3
365	Greater than 1% of mass 198	1.5
441	Present, but less than mass 443	77.0
442	Greater than 40% of mass 198	45.2
443	17.0 - 23.0% of mass 442	19.7 (2)

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	01 NA	CCV	BNA0101001	08/01/96	7:47 AM
	02 NA	AB36122 MB	BNA0801008	08/01/96	3:26 PM
	03 TK71A-GW	AB36117	BNA1001010	08/01/96	5:14 PM
	04				
	05				
	06				
	07				
	08				

NA: Not Applicable

Comments:

QA/QC OFFICER

Ecosys, Inc.

Data file : /chem/msd_2.i/2-080196.b/DFTPP080196.d

Lab. Id. : DFTPP02

Inj Date : 01-AUG-96 07:19

Operator : GORDON

Smp Info : 50MG of dft-05-39

Misc Info : TUNE FOR INSTRUMENT msd2.i

Comment :

Method : /chem/msd_2.i/2-080196.b/dftpp288.m

Meth Date : 01-Aug-1996 07:05

Cal Date :

Als bottle: 1

Dil Factor: 1.000

Integrator: HP RTE

Sample Type: WATER

Autotune Date: 31-Jul-96 09:13:5

Inst ID: msd_2.i

Cal File:

QC Sample: DFTPP

Target Version: Target 2.20

Compound Sublist: all.sub

		CONCENTRATIONS			
		ON-COL	FINAL		
RT (REL RT)	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
dftpp				CAS #: 5074-71-5	
7.916(0.000)	198	357653			100.00(Q)
7.916(0.000)	51	196270		0.00- 0.00	54.88
7.916(0.000)	68	0		0.00- 0.00	0.00
7.916(0.000)	69	236341		0.00- 0.00	66.08
7.916(0.000)	70	1045		0.00- 0.00	0.44
7.916(0.000)	127	180373		0.00- 0.00	50.43
7.916(0.000)	197	0		0.00- 0.00	0.00
7.916(0.000)	199	22391		0.00- 0.00	6.26
7.916(0.000)	225	66512		0.00- 0.00	18.60
7.916(0.000)	365	6214		0.00- 0.00	1.74
7.916(0.000)	441	32742		0.00- 0.00	79.62
7.916(0.000)	442	211552		0.00- 0.00	59.15
7.916(0.000)	443	41121		0.00- 0.00	19.44

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Ecosys, Inc.

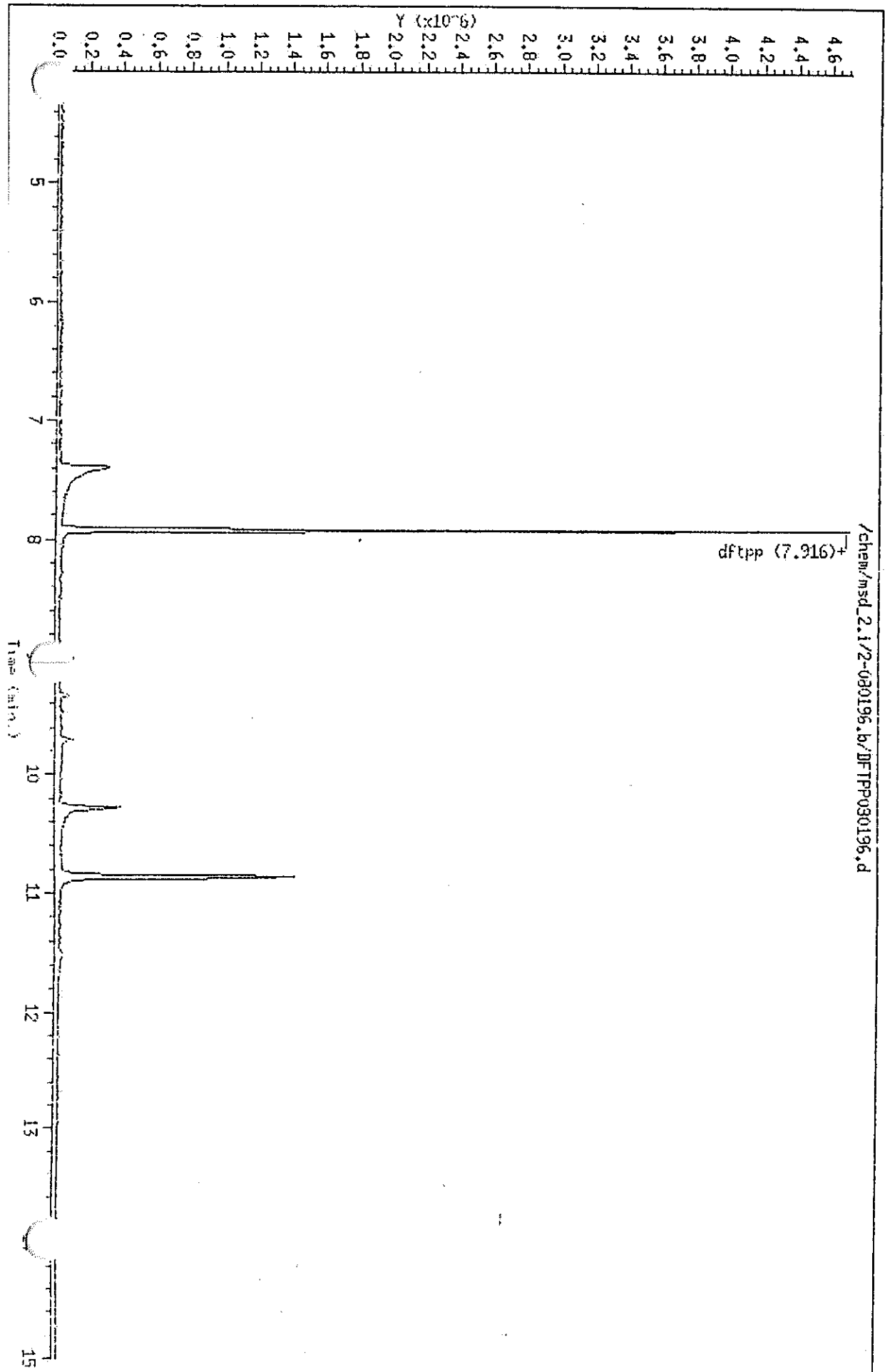
TARGET COMPOUNDS

Client Name:	Client SDG: 2-080196.b
Client Sample ID: DFTPP02	Sample Date:
Sample Location:	Sample Point:
Lab Sample ID: DFTPP02	Date Received:
Sample Type: WATER	
Analysis Type: SU	Level: LOW
Data Type: MS DATA	Column Number: 1
Misc Info: TUNE FOR INSTRUMENT msd2.i	

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG)	ug/L
5074-71-5-----dftpp		0.0	
=====		=====	=====

Data File: /chem/msd_2.1/2-080196.b/DFTFP080196.d
Date : 01-AUG-96 07:19
Instrument : msd_2.1
Sample ID : DFTFP02
Column phase :
Volume Injected (ul) : 1.0

Column diameter : 2.00



Date : 01-AUG-96 07:19

Instrument : msd_2.1

Sample ID : DFTPP02

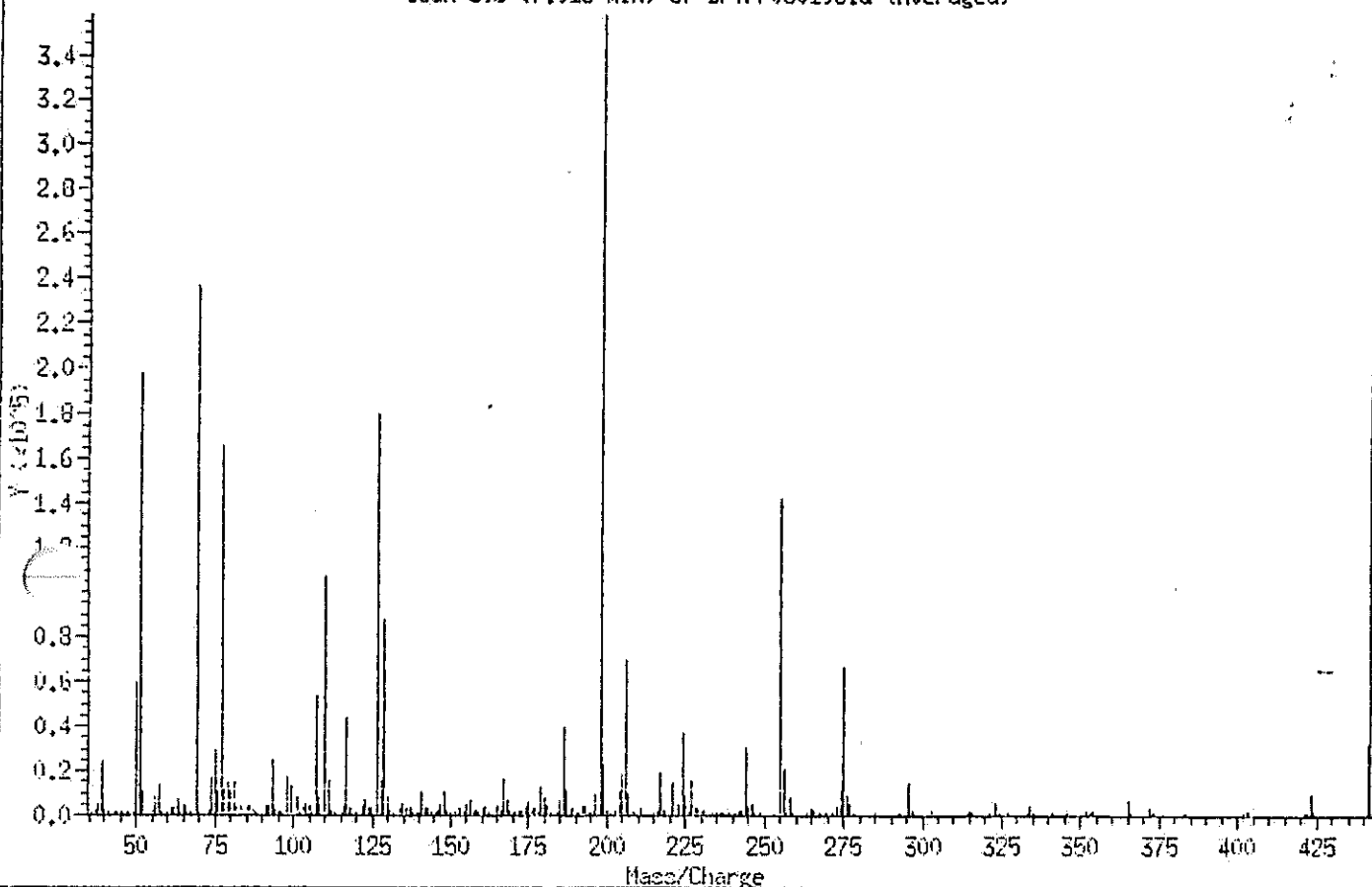
Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

1 dftpp

Scan 395 (7.916 min) of DFTPP080196.d (Averaged)



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
199	Base Peak, 100% relative abundance	100.0
51	Mass 51 relative abundance	54.9
68	Mass 68 relative abundance	0.0
69	Mass 69 relative abundance	66.1
70	Mass 70 relative abundance	0.4
127	Mass 127 relative abundance	50.4
197	Mass 197 relative abundance	0.0
199	Mass 199 relative abundance	6.3
275	Mass 275 relative abundance	18.6
365	Mass 365 relative abundance	1.7
441	Mass 441 relative abundance	79.6
442	Mass 442 relative abundance	59.2
443	Mass 443 relative abundance	19.4

Date : 01-AUG-96 07:19

Instrument : msd_2.1

Sample ID : BFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 395-397 (7.916 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 300

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
35.00	94	118.00	2898	196.00	9267	281.00	75
36.00	58	119.00	433	198.00	357653	283.00	450
37.00	1401	120.00	386	199.00	22381	284.00	332
38.00	3762	121.00	280	200.00	1808	285.00	900
39.00	21959	122.00	3543	201.00	1273	286.00	102
40.00	942	123.00	6419	203.00	2314	289.00	153
41.00	756	124.00	3157	204.00	10038	290.00	84
42.00	224	125.00	2645	205.00	17943	291.00	95
43.00	36	127.00	180373	206.00	69818	292.00	80
45.00	301	128.00	15350	207.00	9354	293.00	1023
46.00	96	129.00	87132	208.00	2223	294.00	245
47.00	251	130.00	7036	209.00	822	296.00	13923
48.00	256	131.00	1565	211.00	3182	297.00	1761
49.00	717	132.00	372	212.00	164	298.00	326
50.00	58751	134.00	2348	213.00	186	301.00	273
51.00	196270	135.00	5897	215.00	913	302.00	219
52.00	10055	136.00	2406	216.00	1510	303.00	1522
53.00	143	137.00	2978	217.00	19096	304.00	442
54.00	304	138.00	558	218.00	2236	308.00	271
55.00	1095	139.00	446	219.00	256	309.00	77
56.00	7274	140.00	902	221.00	14539	310.00	177
57.00	12813	141.00	10053	223.00	4396	314.00	584
58.00	646	142.00	3111	224.00	37378	315.00	1526
59.00	174	143.00	2098	225.00	8655	316.00	938
60.00	179	144.00	626	226.00	913	321.00	591
61.00	2207	145.00	682	227.00	15582	322.00	199
62.00	2279	146.00	1629	228.00	2155	323.00	5633
63.00	6302	147.00	4459	229.00	3011	324.00	1147
64.00	559	148.00	10812	230.00	554	325.00	134
65.00	2735	149.00	2156	231.00	1484	326.00	96
67.00	314	150.00	498	232.00	369	327.00	852
69.00	236341	151.00	993	233.00	170	328.00	429
70.00	1045	152.00	166	234.00	1022	332.00	363
71.00	137	153.00	2722	235.00	1047	333.00	596
72.00	75	154.00	2251	236.00	855	334.00	3494

Date : 01-AUG-96 07:19

Instrument : msd_2.1

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 395-397 (7.916 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 300

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
73.00	1807	155.00	4501	237.00	1153	335.00	744
74.00	18173	156.00	6300	238.00	233	341.00	588
75.00	30029	157.00	1505	239.00	531	342.00	100
76.00	10326	158.00	1739	240.00	426	346.00	968
77.00	164723	159.00	1058	241.00	807	347.00	188
78.00	11082	160.00	2649	242.00	1971	350.00	74
79.00	14106	161.00	3879	243.00	1976	352.00	1550
80.00	10060	162.00	1192	244.00	30742	353.00	1203
81.00	13350	163.00	276	245.00	4110	354.00	1702
82.00	2870	164.00	220	246.00	4722	355.00	373
83.00	3365	165.00	3130	247.00	908	359.00	78
84.00	21	166.00	1652	248.00	285	365.00	6214
85.00	2397	167.00	15195	249.00	1004	366.00	823
86.00	3823	168.00	6559	250.00	172	370.00	69
87.00	1782	169.00	1127	251.00	157	371.00	397
88.00	779	170.00	773	252.00	418	372.00	2598
89.00	476	171.00	451	253.00	896	373.00	618
91.00	3710	172.00	1564	255.00	143210	383.00	583
92.00	3655	173.00	2295	256.00	20340	384.00	337
95.00	24371	174.00	5419	257.00	1373	390.00	356
94.00	1697	175.00	5952	258.00	7224	391.00	220
95.00	46	176.00	1823	259.00	1090	392.00	320
96.00	1145	177.00	2871	260.00	200	401.00	227
98.00	17217	178.00	1051	262.00	97	402.00	831
99.00	12575	179.00	12018	263.00	117	403.00	1588
100.00	1378	180.00	7743	264.00	292	404.00	446
101.00	7733	181.00	4100	265.00	2868	410.00	74
102.00	317	182.00	721	266.00	1457	421.00	1393
103.00	2672	183.00	339	267.00	71	422.00	1229
104.00	4898	184.00	1317	268.00	199	423.00	9966
105.00	4067	185.00	6446	269.00	82	424.00	2130
106.00	281	186.00	39249	270.00	135	425.00	252
107.00	53052	187.00	11281	271.00	288	441.00	32742
108.00	7645	188.00	1184	272.00	565	442.00	211552
110.00	107186	189.00	2736	273.00	4147	443.00	41121

Date : 01-AUG-96 07:19

Instrument : msd_2.i

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

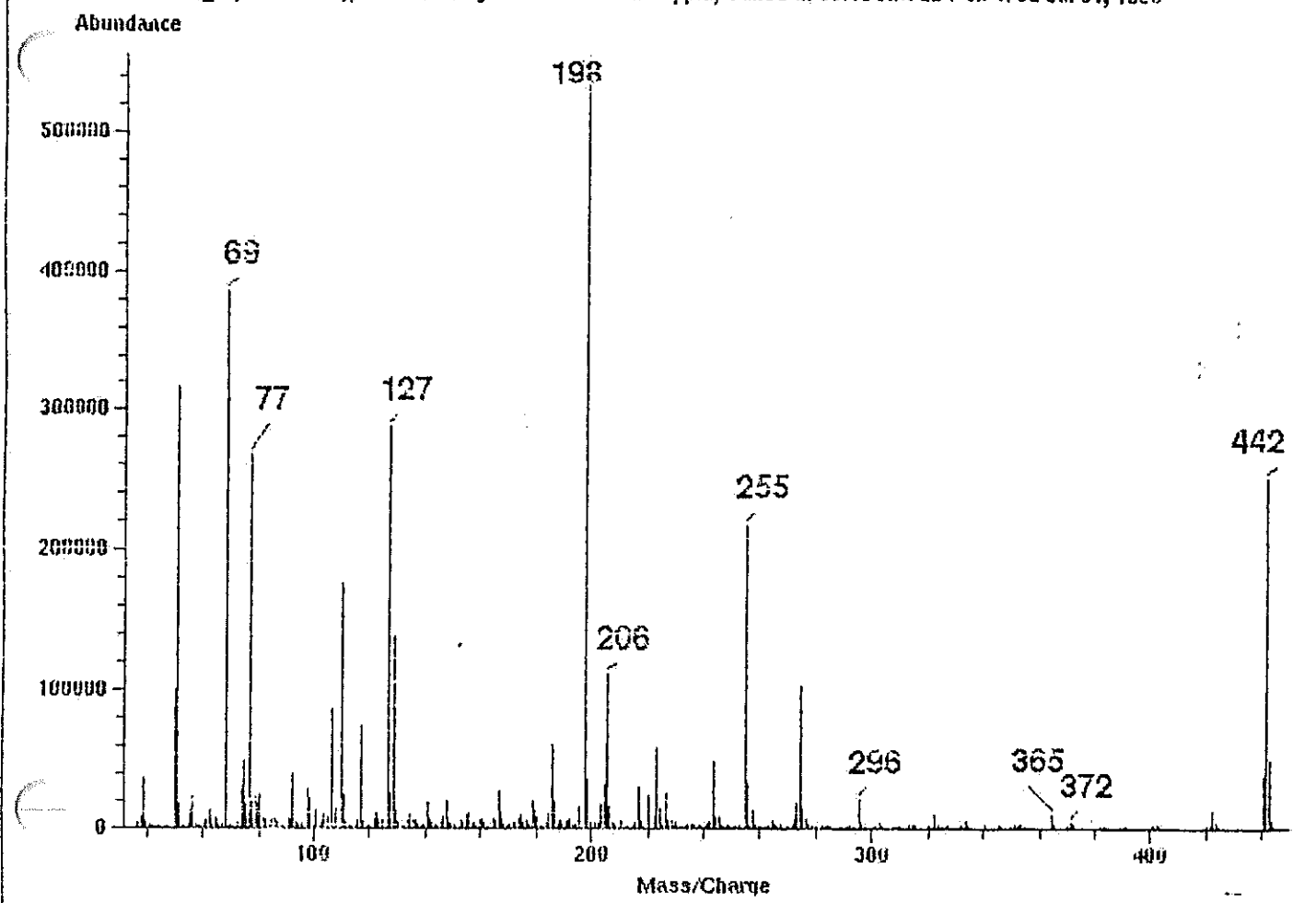
Spectrum: Scan 395-397 (7.916 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 300

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
111.00	15369	190.00	595	274.00	11528	444.00	3773
112.00	2017	191.00	1398	275.00	66512	445.00	195
113.00	498	192.00	3678	276.00	8638		
115.00	21	193.00	3363	277.00	4341		
116.00	4052	194.00	858	278.00	745		
117.00	44301	195.00	671	279.00	302		

Scan 396 (7.916 min) of DFTPP080196.d
 mod_2 (ms5971-2); /chem/config/dvc/ms5971-2/dftpp.u; Tuned at 09:13 AM EDT on Wed Jul 31, 1996



Mass	Ion abundance criteria	%relative abundance
51	30.0 - 60.0% of mass 198	56.9
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance is	69.2
70	Less than 2.0% of mass 69	0.5
127	40.0 to 60.0% of mass 198	51.6
127	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	18.3
365	Greater than 1% of mass 198	1.5
441	Present, but less than mass 443	77.0
442	Greater than 40.0% of mass 198	45.2
443	17.0 - 23.0% of mass 442	19.7

Ecosys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-MAY-93 15:51
 End Cal Date : 31-JUL-1996 13:17
 Quant Method : ISTD
 Cal Curve Type : Averaged
 Target Version : Target 2.20
 Integrator : HP RTE
 Method file : /chem/msd_2.i/2-073196.b/MA-BNA.m
 Cal Date : 01-Aug-1996 06:42 target

Calibration File Names:

Level 2: /chem/msd_2.i/2-073196.b/BNA0201002.d
 Level 3: /chem/msd_2.i/2-073196.b/BNA0301003.d
 Level 4: /chem/msd_2.i/2-073196.b/BNA0601006.d
 Level 5: /chem/msd_2.i/2-073196.b/BNA0401004.d
 Level 6: /chem/msd_2.i/2-073196.b/BNA0501005.d

Compound	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	1% RSD/R^2
Line	0.664671	1.065651	1.005731	1.451251	1.378491	1.113161	28.3951
4 Phenol **	0.927431	1.022611	1.114321	1.166211	1.196291	1.085371	10.1511
5 Bis(2-chloroethyl) ether	1.301831	1.081181	1.219101	1.179901	1.226251	1.201651	6.7011
6 2-Chlorophenol	1.161731	1.220241	1.256661	1.455971	1.319281	1.292771	8.7651
7 1,3-Dichlorobenzene	1.460411	1.470161	1.537751	1.542181	1.546831	1.511471	2.8061
9 1,4-Dichlorobenzene **	1.462661	1.501791	1.562821	1.590461	1.635921	1.550731	4.4601
10 1,2-Dichlorobenzene	1.388791	1.400591	1.467531	1.497261	1.545621	1.459961	4.5141
11 Benzyl alcohol	0.779781	0.920021	0.933841	0.906451	0.841791	0.876381	7.3591
12 2-Methylphenol	0.811761	0.868211	0.908541	1.079491	0.991011	0.931801	11.2961
13 Bis(2-chloroisopropyl) ether	0.907761	0.919531	0.979681	1.168411	1.129561	1.020791	11.8521
14 N-Nitrosodi-n-propylamine *	0.707711	0.693371	0.714801	0.687871	0.691551	0.699061	1.6571
15 4-Methylphenol	0.767991	0.877731	0.950131	1.118571	1.049091	0.952701	14.5201
16 Hexachloroethane	0.639691	0.643931	0.668621	0.685811	0.716901	0.670991	4.7391
18 Nitrobenzene	0.353901	0.391781	0.408171	0.421601	0.415131	0.398121	6.8071
19 Isophorone	0.673251	0.695821	0.727051	0.610491	0.708921	0.683111	6.5991
20 2-Nitrophenol **	0.228711	0.257521	0.271431	0.273291	0.295281	0.265251	9.2341
21 2,4-Dimethylphenol	0.327251	0.385641	0.415781	0.341821	0.386451	0.371391	9.7301
22 Bis(2-chloroethoxy)methane	0.359891	0.376011	0.403601	0.348131	0.393701	0.376271	6.1051
23 2,4-Dichlorophenol **	0.284751	0.336551	0.337171	0.307181	0.299661	0.313061	7.4021
24 Benzoic acid	0.220301	0.182361	0.194241	0.254531	0.239561	0.218201	13.8231
25 1,2,4-Trichlorobenzene	0.368121	0.383521	0.394181	0.381811	0.397161	0.384961	2.9891
27 Naphthalene	1.094111	1.130781	1.187251	1.167541	1.157971	1.147531	3.1481
28 4-Chloroaniline	0.260201	0.314191	0.332181	0.407791	0.375521	0.337981	16.8231
29 Hexachlorobutadiene **	0.227201	0.222301	0.225181	0.219811	0.224101	0.223721	1.2591
30 3-Chloro-3-methylphenol **	0.326261	0.343101	0.366661	0.367811	0.345211	0.349811	5.0111
31 Methyl-naphthalene	0.731581	0.745511	0.769391	0.724671	0.752421	0.744721	2.3671
32 Hexachlorocyclopentadiene *	0.203491	0.254601	0.255471	0.284061	0.298141	0.259151	14.0101
33 2,4,6-Trichlorophenol **	0.259441	0.303611	0.332181	0.361731	0.350821	0.321561	12.7891
34 2,4,5-Trichlorophenol	0.333081	0.356231	0.374891	0.395291	0.347411	0.361381	6.7141

EcoSys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-MAY-93 15:51
 End Cal Date : 31-JUL-1996 13:17
 Quant Method : ISTD
 Int Curve Type : Averaged
 Target Version : Target 2.20
 Integrator : HP RTE
 Method file : /chem/msd_2.i/2-073196.b/MA-BNA.m
 Cal Date : 01-Aug-1996 06:42 target

Calibration File Names:

Level 2: /chem/msd_2.i/2-073196.b/BNA0201002.d
 Level 3: /chem/msd_2.i/2-073196.b/BNA0301003.d
 Level 4: /chem/msd_2.i/2-073196.b/BNA0601006.d
 Level 5: /chem/msd_2.i/2-073196.b/BNA0401004.d
 Level 6: /chem/msd_2.i/2-073196.b/BNA0501005.d

Compound	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD/R ²
36 1-Chloronaphthalene	1.12479	1.18116	1.23548	1.21694	1.24983	1.20164	4.166
37 2-Nitroaniline	0.31532	0.31374	0.32014	0.32646	0.29772	0.31468	3.399
38 Dimethyl phthalate	1.53443	1.39211	1.53044	1.54900	1.52436	1.50607	4.272
39 2,6-Dinitrotoluene	0.32402	0.33601	0.30489	0.28565	0.31131	0.31237	6.128
42 Acenaphthylene	1.70689	1.83876	1.89627	1.88086	1.92512	1.84956	4.633
41 3-Nitroaniline	0.20153	0.10292	0.15493	0.22854	0.16383	0.17035	28.130
43 Acenaphthene **	1.17690	1.20977	1.20593	1.24295	1.25779	1.21867	2.629
44 2,4-Dinitrophenol *	+++++	0.07469	0.11086	0.13015	0.13043	0.11153	23.503
47 2,4-Dinitrotoluene	0.35910	0.39177	0.42081	0.38998	0.42362	0.39706	6.650
45 4-Nitrophenol *	0.11579	0.12201	0.16167	0.14751	0.12335	0.13407	14.621
46 Dibenzofuran	1.54299	1.60570	1.64028	1.68959	1.71874	1.64346	4.259
48 Diethyl phthalate	1.57139	1.47849	1.61389	1.53164	1.48834	1.53675	3.699
50 Fluorene	1.15400	1.25010	1.28855	1.34247	1.38706	1.28444	6.975
49 4-Chlorophenyl phenyl ether	0.60238	0.61464	0.62956	0.65278	0.67651	0.63518	4.688
52 4-Nitroaniline	0.11718	0.12711	0.13126	0.13647	0.14422	0.13125	7.720
51 4,6-Dinitro-2-methylphenol	0.07389	0.09802	0.11428	0.13540	0.13392	0.11111	23.283
53 N-Nitrosodiphenylamine **	0.47209	0.44330	0.40617	0.41485	0.37711	0.42271	8.592
54 1,2-Diphenylhydrazine	2.12393	2.09748	2.04161	2.02511	2.17141	2.09191	2.865
56 4-Bromophenyl phenyl ether	0.29573	0.30323	0.28802	0.31305	0.29834	0.29967	3.099
57 Hexachlorobenzene	0.33781	0.33608	0.32286	0.33314	0.33927	0.33383	1.961
58 Pentachlorophenol **	0.10790	0.10803	0.12565	0.14551	0.12921	0.12326	12.854
60 Phenanthrene	1.21068	1.23195	1.36382	1.46502	1.45517	1.34533	8.929
61 Anthracene	1.18514	1.20530	1.23675	1.29740	1.29147	1.24321	4.045
62 Carbazole	0.75283	0.56202	0.55738	0.72085	0.58909	0.63643	14.635
63 n-butyl phthalate	2.04394	2.00785	1.96648	2.13475	1.97178	2.09496	4.835
64 Anthracene **	1.01621	1.03898	1.22756	1.22107	1.22142	1.14505	9.393
65 Pyrene	2.39729	2.40590	1.99877	2.01945	2.05139	2.17456	9.571
67 Butyl benzyl phthalate	1.52748	1.45777	1.26894	1.36805	1.23604	1.37166	8.977
68 Di(2-ethylhexyl) adipate	1.25841	1.28324	1.06330	1.20481	1.11429	1.18481	7.922

Ecosys, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-MAY-93 15:51
End Cal Date : 31-JUL-1996 13:17
Quant Method : ISTD
Cal Curve Type : Averaged
Target Version : Target 2.20
Integrator : HP RTE
Method file : /chem/msd_2.i/2-073196.b/MA-BNA.m
Cal Date : 01-Aug-1996 06:42 target

Calibration File Names:
Level 2: /chem/msd_2.i/2-073196.b/BNA0201002.d
Level 3: /chem/msd_2.i/2-073196.b/BNA0301003.d
Level 4: /chem/msd_2.i/2-073196.b/BNA0601006.d
Level 5: /chem/msd_2.i/2-073196.b/BNA0401004.d
Level 6: /chem/msd_2.i/2-073196.b/BNA0501005.d

Compound	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	1% RSD/R^2
67 2,2'-Dichlorobenzidine	0.178011	0.129331	0.133361	0.142031	0.129781	0.142501	14.3801
71 Benz(a)anthracene	1.147721	1.232071	1.266991	1.293541	1.310181	1.250101	5.1521
70 Bis(2-ethylhexyl) phthalate	2.305141	2.180571	1.922321	2.302961	1.885461	2.119291	9.5981
73 Chrysene	1.179391	1.157701	1.159931	1.129711	1.181421	1.161631	1.7981
74 Di-n-octyl phthalate **	5.966301	5.801271	6.041031	6.446831	5.574621	5.966011	5.4131
75 Benzo(b)fluoranthene	1.461531	1.643851	1.722291	1.847361	2.019471	1.738901	12.0881
76 Benzo(k)fluoranthene	2.054951	1.928601	2.155271	1.921261	1.768231	1.965661	7.4701
77 Benzo(a)pyrene **	1.335551	1.421281	1.454511	1.442991	1.485081	1.427881	3.9581
79 Indeno(1,2,3-cd)pyrene	1.005561	1.174241	1.108801	1.035131	1.050391	1.074821	6.2431
80 Dibenz(a,h)anthracene	0.795691	0.929591	0.907761	0.982831	1.013631	0.925901	9.0741
81 Benzo(g,h,i)perylene	0.913541	1.030651	1.054251	1.011171	1.032721	1.008471	5.4751
1 2-Fluorophenol	1.077191	1.033271	1.061031	1.253521	1.136361	1.112271	7.8671
3 Phenol-d5	0.911151	1.042581	1.040721	1.120151	1.195101	1.061941	9.9531
17 Nitrobenzene-d5	0.404031	0.414541	0.432241	0.439021	0.432681	0.424501	3.4461
35 2-Fluorobiphenyl	1.392561	1.402341	1.449071	1.488081	1.497771	1.445971	3.3211
55 2,4,6-Tribromophenol	0.120961	0.130331	0.141701	0.151141	0.142711	0.137371	8.5801
66 Terphenyl-d14	1.488721	1.552021	1.372061	1.436391	1.390741	1.447991	5.0821

Ecosys, Inc.

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/msd_2.i/2-080196.b/BNA0101001.d
Lab. Id. :
Inj Date : 01-AUG-1996 07:47 Autotune Date: 31-Jul-96 09:13:5
Operator : GORDON Inst ID: msd_2.i
Smp Info : BNA-80-38
Misc Info : CONTINUE CALIBRATION
Comment :
Method : /chem/msd_2.i/2-080196.b/MA-BNA.m
Meth Date : 01-Aug-1996 08:49 target
Cal Date : 01-AUG-96 07:47 Cal File: BNA0101001.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.000 Target Version: Target 2.20
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
1 Fluorophenol	112.00	9.555(0.717)	1651748	73.5	73.5
2 Aniline	93.00	12.459(0.934)	1746518	77.7	77.7
3 Phenol-d5	99.00	12.578(0.943)	1795468	83.7	83.7
4 Phenol **	94.00	12.610(0.946)	1818654	83.0	83.0
5 Bis(2-chloroethyl) ether	93.00	12.740(0.955)	1940730	80.0	80.0
6 2-Chlorophenol	128.00	12.783(0.959)	2053187	79.2	79.2
7 1,3-Dichlorobenzene	146.00	13.161(0.987)	2483700	81.4	81.4
8 1,4-Dichlorobenzene-d4	152.00	13.334(1.000)	807916	40.0	
9 1,4-Dichlorobenzene **	146.00	13.377(1.003)	2577800	82.3	82.3
10 1,2-Dichlorobenzene	146.00	13.776(1.033)	2402426	81.5	81.5
11 Benzyl alcohol	79.00	13.841(1.038)	1590244	89.8	89.8
12 2-Methylphenol	108.00	14.197(1.065)	1571595	83.5	83.5
13 Bis(2-chloroisopropyl) ether	45.00	14.197(1.065)	1760527	85.4	85.4
14 N-Nitrosodi-n-propylamine *	70.00	14.575(1.093)	1252400	88.7	88.7
15 4-Methylphenol	108.00	14.640(1.098)	1631811	84.8	84.8
16 Hexachloroethane	117.00	14.662(1.100)	1129494	83.3	83.3
17 Nitrobenzene-d5	82.00	14.878(0.889)	2174381	79.7	79.7
18 Nitrobenzene	77.00	14.932(0.892)	2049589	80.1	80.1
19 Isophorone	82.00	15.601(0.932)	3780771	86.2	86.2
20 2-Nitrophenol **	139.00	15.763(0.942)	1384086	81.2	81.2
21 2,4-Dimethylphenol	107.00	16.001(0.956)	2000729	83.9	83.9
22 Bis(2-chloroethoxy)methane	93.00	16.228(0.970)	2090028	86.5	86.5
23 2,4-Dichlorophenol **	162.00	16.444(0.983)	1693659	84.2	84.2
24 Benzoic acid	105.00	16.531(0.988)	987722	70.5	70.5(M)
26 Naphthalene-d8	136.00	16.737(1.000)	2569586	40.0	
27 2,4-Trichlorobenzene	180.00	16.607(0.992)	1971384	79.7	79.7
28 Phthalene	128.00	16.791(1.003)	5998216	81.4	81.4
29 4-Chloroaniline	127.00	17.008(1.016)	1568326	72.2	72.2(M)
29 Hexachlorobutadiene **	224.30	17.148(1.025)	1125491	78.3	78.3
30 4-Chloro-3-methylphenol **	107.00	18.346(1.096)	1798189	80.0	80.0
31 2-Methylnaphthalene	142.00	18.627(1.113)	3841457	80.3	80.3

Compounds	QUANT SIG MASS	RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
32 Hexachlorocyclopentadiene *	237.00	19.027(0.892)	904645	98.0	88.0
33 2,4,6-Trichlorophenol **	196.00	19.405(0.910)	1029650	80.8	80.8
34 2,4,5-Trichlorophenol	196.00	19.502(0.915)	1180323	82.4	82.4
35 2-Fluorobiphenyl	172.00	19.622(0.920)	4650916	81.1	81.1
36 2-Chloronaphthalene	162.00	19.893(0.933)	3873693	81.3	81.3
37 2-Nitroaniline	65.00	20.228(0.949)	927199	74.3	74.3
38 Dimethyl phthalate	163.00	20.735(0.973)	4834713	81.0	81.0
39 2,6-Dinitrotoluene	165.00	20.876(0.979)	1063830	85.9	85.9
42 Acenaphthylene	152.00	20.963(0.983)	5980653	81.5	81.5
41 3-Nitroaniline	138.00	21.363(1.002)	546145	80.8	80.8(M)
* 40 Acenaphthene-d10	164.00	21.319(1.000)	1586067	40.0	
43 Acenaphthene **	153.00	21.417(1.005)	3877446	80.2	80.2
44 2,4-Dinitrophenol *	184.00	21.598(0.000)	369294	83.5	83.5(M)
47 2,4-Dinitrotoluene	165.00	21.915(1.028)	1239581	78.7	78.7
45 4-Nitrophenol *	65.00	21.904(1.027)	482409	90.7	90.7(M)
46 Dibenzofuran	168.00	21.871(1.026)	5200007	79.8	79.8
48 Diethyl phthalate	149.00	22.564(1.058)	5012254	82.2	82.2
50 Fluorene	166.00	22.770(1.068)	3981821	78.2	78.2
49 4-Chlorophenyl phenyl ether	204.00	22.803(1.070)	1973162	78.3	78.3
52 4-Nitroaniline	138.00	23.063(0.000)	480031	92.2	92.2(M)
4,6-Dinitro-2-methylphenol	198.00	22.965(0.912)	542772	95.4	95.4(M)
-Nitrosodiphenylamine **	169.00	23.128(0.918)	1735037	80.2	80.2
54 1,2-Diphenylhydrazine	77.00	23.225(0.922)	8112551	75.8	75.8
55 2,4,6-Tribromophenol	329.70	23.399(0.929)	558656	79.5	79.5
56 4-Bromophenyl phenyl ether	248.00	24.058(0.955)	1176574	76.7	76.7
57 Hexachlorobenzene	283.30	24.178(0.960)	1331586	77.9	77.9
58 Pentachlorophenol **	265.75	24.718(0.981)	537220	85.2	85.2
* 59 Phenanthrene-d10	188.00	25.185(1.000)	2047185	40.0	
60 Phenanthrene	178.00	25.250(1.003)	5458854	79.3	79.3
61 Anthracene	178.00	25.391(1.008)	4810733	75.6	75.6
62 Carbazole	167.00	25.888(1.028)	2303017	70.7	70.7(M)
63 Di-n-butyl phthalate	149.00	26.806(1.064)	7853330	76.5	76.5
64 Fluoranthene **	202.00	28.337(1.125)	4624349	78.9	78.9
65 Pyrene	202.00	28.919(0.902)	4580693	81.5	81.5
66 Terphenyl-d14	244.00	29.362(0.916)	2805733	74.9	74.9
67 Butyl benzyl phthalate	149.00	30.666(0.957)	2765630	78.0	78.0
68 Di(2-ethylhexyl) adipate	129.00	30.893(0.964)	2397516	78.3	78.3
69 3,3'-Dichlorobenzidine	252.00	32.036(1.000)	269220	73.1	73.1(M)
71 Benz(a)anthracene	228.00	32.025(0.999)	2525330	78.1	78.1
* 72 Chrysene-d12	240.00	32.047(1.000)	1034224	40.0	
70 Bis(2-ethylhexyl) phthalate	149.00	32.156(1.003)	4250605	77.6	77.6
73 Chrysene	228.00	32.123(1.002)	2453437	81.7	81.7
74 Di-n-octyl phthalate **	149.00	33.784(1.000)	5738464	69.0	69.0
75 Benzo(b)fluoranthene	252.00	34.861(1.000)	1791949	73.9	73.9
76 Benzo(k)fluoranthene	252.00	34.948(0.000)	2290991	83.6	83.6(M)
77 Benzo(a)pyrene **	252.00	35.896(1.000)	1563534	78.6	79.6
* 78 Indeno(1,2,3-cd)pyrene	276.00	36.080(1.000)	557551	40.0	(M)
79 Indeno(1,2,3-cd)pyrene	276.00	40.502(0.000)	1335862	89.2	89.2(M)
80 Dibenz(a,h)anthracene	278.00	40.665(0.000)	1026655	79.5	79.5(M)
81 Benzo(g,h,i)perylene	276.00	41.893(0.000)	1134860	80.7	80.7(M)

Data File: /chem/msd_2.i/2-080196.b/BNA0101001.d
Report Date: 01-Aug-1996 08:49

Page 3

QC Flag Legend

M - Compound response manually integrated.

Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd_2.i Injection Date: 01-AUG-1996 07:47
Lab File ID: BNA0101001.d Init. Calibration Date(s): 05/28/93 07/31/96
Analysis Type: WATER Init. Calibration Times: 15:51 13:17
Lab Sample ID: Method File: /chem/msd_2.i/2-080196.b/MA-BNA.m

COMPOUND	RRF	RF80	MIN	MAX
=====	=====	=====	=====	=====
12-Fluorophenol	1.112	1.022	0.050	30.0
Aniline	1.113	1.081	0.050	30.0
Phenol-d5	1.062	1.111	0.050	30.0
Phenol **	1.085	1.126	0.050	30.0
Bis(2-chloroethyl) ether	1.202	1.201	0.050	30.0
12-Chlorophenol	1.283	1.271	0.050	30.0
1,3-Dichlorobenzene	1.511	1.537	0.050	30.0
1,4-Dichlorobenzene **	1.551	1.595	0.050	30.0
1,2-Dichlorobenzene	1.460	1.487	0.050	30.0
Benzyl alcohol	0.876	0.984	0.050	30.0
12-Methylphenol	0.932	0.973	0.050	30.0
Bis(2-chloroisopropyl) ether	1.021	1.090	0.050	30.0
N-Nitrosodi-n-propylamine *	0.699	0.775	0.050	30.0
14-Methylphenol	0.953	1.010	0.050	30.0
Hexachloroethane	0.671	0.699	0.050	30.0
Nitrobenzene-d5	0.424	0.423	0.050	30.0
Nitrobenzene	0.398	0.399	0.050	30.0
Isophorone	0.683	0.736	0.050	30.0
12-Nitrophenol **	0.265	0.269	0.050	30.0
12,4-Dimethylphenol	0.371	0.389	0.050	30.0
Bis(2-chloroethoxy)methane	0.376	0.407	0.050	30.0
12,4-Dichlorophenol **	0.313	0.330	0.050	30.0
Benzoic acid	0.218	0.192	0.050	30.0
1,2,4-Trichlorobenzene	0.385	0.384	0.050	30.0
Naphthalene	1.148	1.167	0.050	30.0
14-Chloroaniline	0.338	0.305	0.050	30.0
Hexachlorobutadiene **	0.224	0.219	0.050	30.0
14-Chloro-3-methylphenol **	0.350	0.350	0.050	30.0
12-Methylnaphthalene	0.745	0.747	0.050	30.0
Hexachlorocyclopentadiene *	0.259	0.285	0.050	30.0
12,4,6-Trichlorophenol **	0.322	0.325	0.050	30.0
12,4,5-Trichlorophenol	0.361	0.372	0.050	30.0
12-Fluorobiphenyl	1.446	1.466	0.050	30.0
12-Chloronaphthalene	1.202	1.221	0.050	30.0
12-Nitroaniline	0.315	0.292	0.050	30.0
Dimethyl phthalate	1.506	1.524	0.050	30.0
12,6-Dinitrotoluene	0.312	0.335	0.050	30.0
Acenaphthylene	1.850	1.885	0.050	30.0
13-Nitroaniline	0.170	0.172	0.050	30.0
Acenaphthene **	1.219	1.222	0.050	30.0
12,4-Dinitrophenol *	0.112	0.116	0.050	30.0
12,4-Dinitrotoluene	0.397	0.391	0.050	30.0
14-Nitrophenol *	0.134	0.152	0.050	30.0
Dibenzofuran	1.643	1.639	0.050	30.0
Diethyl phthalate	1.537	1.580	0.050	30.0

Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd_2.i Injection Date: 01-AUG-1996 07:47
 Lab File ID: BNA0101001.d Init. Calibration Date(s): 05/28/93 07/31/96
 Analysis Type: WATER Init. Calibration Times: 15:51 13:17
 Lab Sample ID: Method File: /chem/msd_2.i/2-080196.b/MA-BNA.m

COMPOUND	RRF	RF80	MIN	%D	MAX
=====	=====	=====	=====	=====	=====
Fluorene	1.284	1.255	0.050	2.3	30.0
4-Chlorophenyl phenyl ether	0.635	0.622	0.050	2.1	30.0
4-Nitroaniline	0.131	0.151	0.050	15.3	30.0
4,6-Dinitro-2-methylphenol	0.111	0.133	0.050	19.3	30.0
N-Nitrosodiphenylamine **	0.423	0.424	0.050	0.2	30.0
1,2-Diphenylhydrazine	2.092	1.981	0.050	5.3	30.0
2,4,6-Tribromophenol	0.137	0.136	0.050	0.7	30.0
4-Bromophenyl phenyl ether	0.300	0.287	0.050	4.1	30.0
Hexachlorobenzene	0.334	0.325	0.050	2.6	30.0
Pentachlorophenol **	0.123	0.131	0.050	6.4	30.0
Phenanthrene	1.345	1.333	0.050	0.9	30.0
Anthracene	1.243	1.175	0.050	5.5	30.0
Carbazole	0.636	0.562	0.050	11.6	30.0
Di-n-butyl phthalate	2.005	1.918	0.050	4.3	30.0
Fluoranthene **	1.145	1.129	0.050	1.4	30.0
Pyrene	2.175	2.215	0.050	1.8	30.0
Terphenyl-d14	1.448	1.356	0.050	6.3	30.0
Butyl benzyl phthalate	1.372	1.337	0.050	2.5	30.0
Di(2-ethylhexyl) adipate	1.185	1.159	0.050	2.2	30.0
3,3'-Dichlorobenzidine	0.143	0.130	0.050	8.7	30.0
Benz(a)anthracene	1.250	1.221	0.050	2.3	30.0
Bis(2-ethylhexyl) phthalate	2.119	2.055	0.050	3.0	30.0
Chrysene	1.162	1.186	0.050	2.1	30.0
Di-n-octyl phthalate **	5.966	5.146	0.050	13.7	30.0
Benzo(b)fluoranthene	1.739	1.607	0.050	7.6	30.0
Benzo(k)fluoranthene	1.966	2.055	0.050	4.5	30.0
Benzo(a)pyrene **	1.428	1.402	0.050	1.8	30.0
Indeno(1,2,3-cd)pyrene	1.075	1.198	0.050	11.5	30.0
Dibenz(a,h)anthracene	0.926	0.921	0.050	0.6	30.0
Benzo(g,h,i)perylene	1.008	1.018	0.050	0.9	30.0

Ecosys, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd_2.i
Lab File ID: BNA0101001.d
Lab Sample ID:
Analysis Type: OTHER
Method File: /chem/msd_2.i/2-080196.b/MA-BNA.m
Misc Info: CONTINUE CALIBRATION

Calibration Date: 08/01/96
Calibration Time: 0833
Sample Type: WATER
Level: LOW

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	% DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenzene-	807916	403958	1615832	807916	0.00
26 Naphthalene-d8	2569586	1284793	5139172	2569586	0.00
40 Acenaphthene-d10	1586067	793033	3172134	1586067	0.00
59 Phenanthrene-d10	2047185	1023592	4094370	2047185	0.00
72 Chrysene-d12	1034224	517112	2068448	1034224	0.00
78 Perylene-d12	557551	278775	1115102	557551	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	% DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenzene-	13.33	12.83	13.83	13.33	0.00
26 Naphthalene-d8	16.74	16.24	17.24	16.74	0.00
40 Acenaphthene-d10	21.32	20.82	21.82	21.32	0.00
59 Phenanthrene-d10	25.18	24.68	25.68	25.18	0.00
72 Chrysene-d12	32.05	31.55	32.55	32.05	0.00
78 Perylene-d12	36.08	35.58	36.58	36.08	0.00

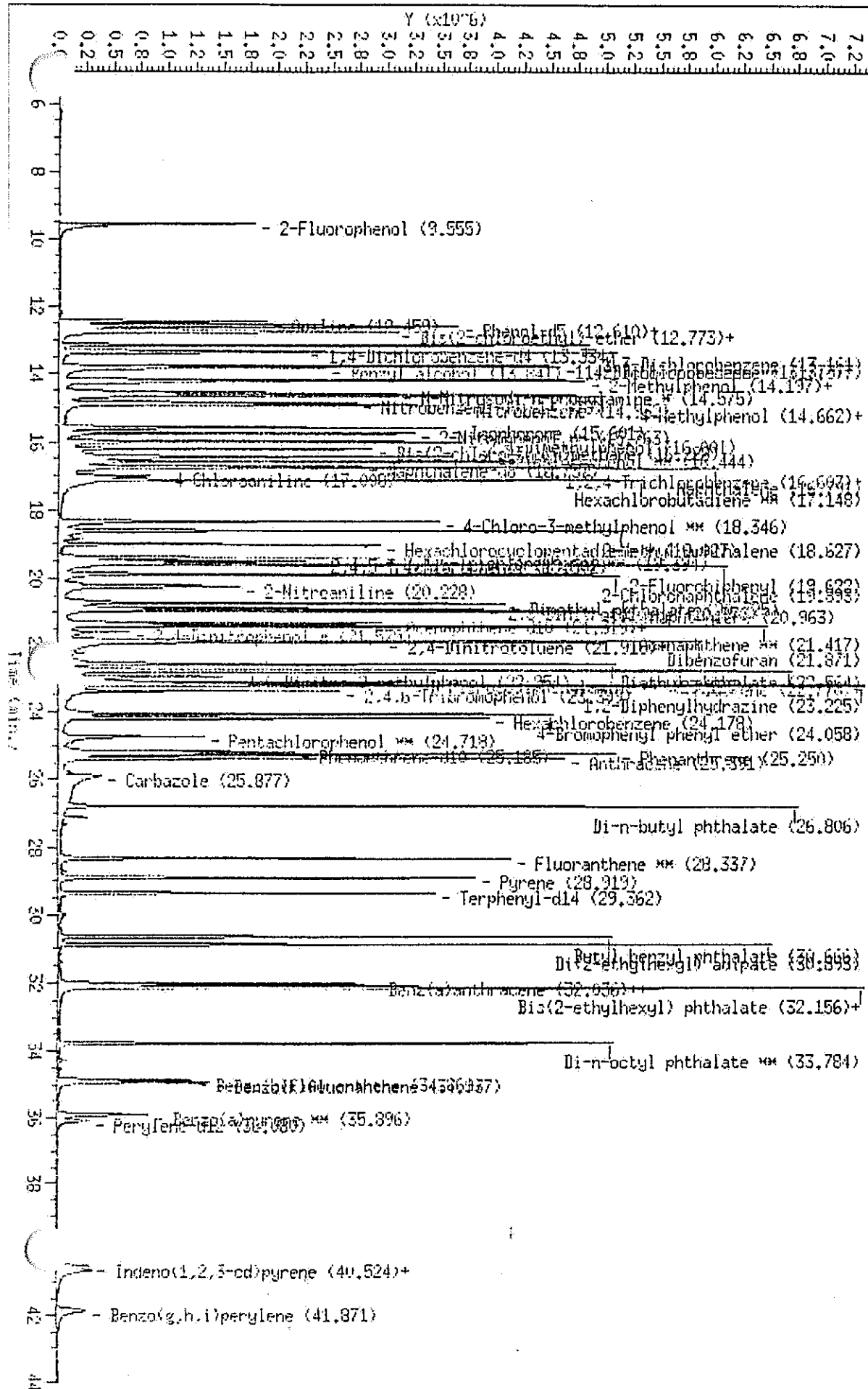
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msd_2.1/2-080196.b/IN001001.d
 Date: 01-JUG-1996 07:47
 Instrument: msd_2.1
 Sample ID:
 Column phase:
 Volume Injected (ul): 1.0

/chem/msd_2.1/2-080196.b/IN001001.d

Column diameter: 2.00

Page 7



SemiVolatiles DFTPP

Lab Name: EcoSys, Inc.Client: ACE-SADLedger No: 107962DFTPP Injection Date: 8/2/96Lab File ID: DFTPP080296DFTPP Injection Time: 6:47Instrument ID: MSD-2Batch Number: 0801960004

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.4
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance	63.1 (1)
70	Less than 2.0% of mass 69	0.1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.0 (1)
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	19.5
365	Greater than 1% of mass 198	1.7
441	Present, but less than mass 443	80.4
442	Greater than 40% of mass 198	58.6
443	17.0 - 23.0% of mass 442	19.3 (2)

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	01 NA	CCV	BNA0101001	08/02/96	7:15 AM
	02 NA	AB36646 LCS	BNA0201002	08/02/96	8:18 AM
	03 NA	AB36647 LCSD	BNA0301003	08/02/96	9:06 AM
	04				
	05				
	06				
	07				
	08				

NA: Not Applicable

Comments:

QA/QC OFFICER

Ecosys, Inc.

Data file : /chem/msd_2.i/2-080296.b/DFTPP080296.d
Lab. Id. : DFTPP02
Inj Date : 02-AUG-96 06:47
Operator : GORDON
Smp Info : 50NG of dft-05-39
Misc Info : TUNE FOR INSTRUMENT msd2.i
Comment :
Method : /chem/msd_2.i/2-080296.b/dftpp288.m
Meth Date : 02-Aug-1996 06:29
Cal Date :
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: WATER

Autotune Date: 31-Jul-96 09:13:5
Inst ID: msd_2.i
Cal File:
QC Sample: DFTPP
Target Version: Target 2.20
Compound Sublist: all.sub

		CONCENTRATIONS			
		ON-COL	FINAL		
RT (REL RT)	MASS	RESPONSE (ug/L)	(ug/L)	TARGET RANGE	RATIO
dftpp				CAS #: 5074-71-5	
7.917(0.000)	198	412757			100.00(Q)
7.917(0.000)	51	219412		0.00- 0.00	53.16
7.917(0.000)	68	0		0.00- 0.00	0.00
7.917(0.000)	69	260025		0.00- 0.00	63.00
7.917(0.000)	70	240		0.00- 0.00	0.09
7.917(0.000)	127	202892		0.00- 0.00	49.16
7.917(0.000)	197	0		0.00- 0.00	0.00
7.917(0.000)	199	28084		0.00- 0.00	6.80
7.917(0.000)	275	80504		0.00- 0.00	19.50
7.917(0.000)	365	7166		0.00- 0.00	1.74
7.917(0.000)	441	37525		0.00- 0.00	80.37
7.917(0.000)	442	241680		0.00- 0.00	58.55
7.917(0.000)	443	46690		0.00- 0.00	19.32

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Ecosys, Inc.

TARGET COMPOUNDS

Client Name:	Client SDG: 2-080296.b
Client Sample ID: DFTPP02	Sample Date:
Sample Location:	Sample Point:
Lab Sample ID: DFTPP02	Date Received:
Sample Type: WATER	
Analysis Type: SV	Level: LOW
Data Type: MS DATA	Column Number: 1
Misc Info: TUNE FOR INSTRUMENT msd2.i	

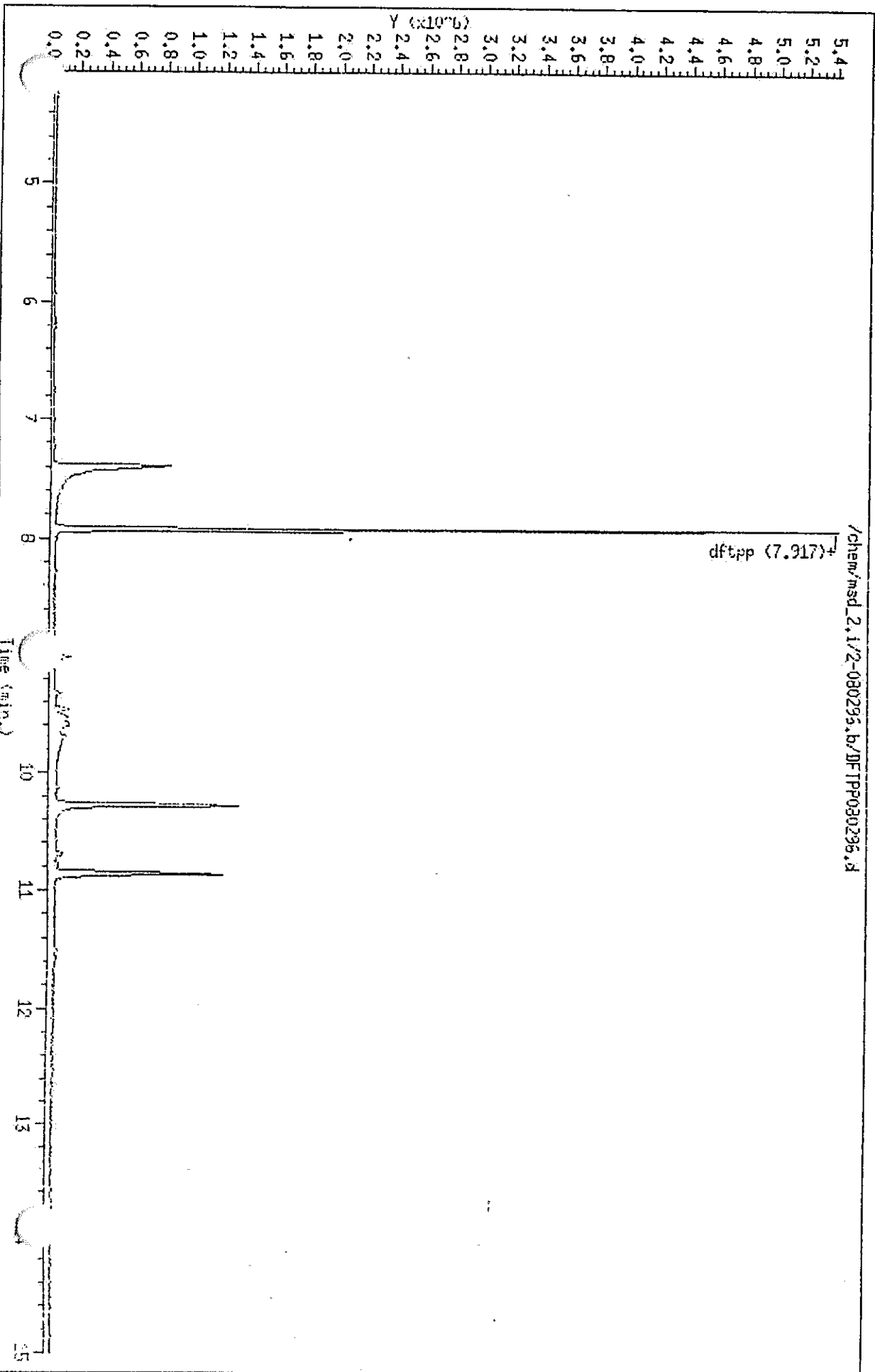
CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/KG)	ug/L
			Q
5074-71-5-----dftpp		0.01	
=====	=====	=====	=====

Data File: /chem/msd_2.1/2-080296.b/DFTFP080296.d
Date : 02-AUG-96 06:47

Instrument : msd_2.1
Sample ID : DFTFP02

Column phase :
Volume Injected (uL) : 1.0

Column diameter : 2.00



Date : 02-AUG-96 06:47

Instrument : msd_2.i

Sample ID : DFTPP02

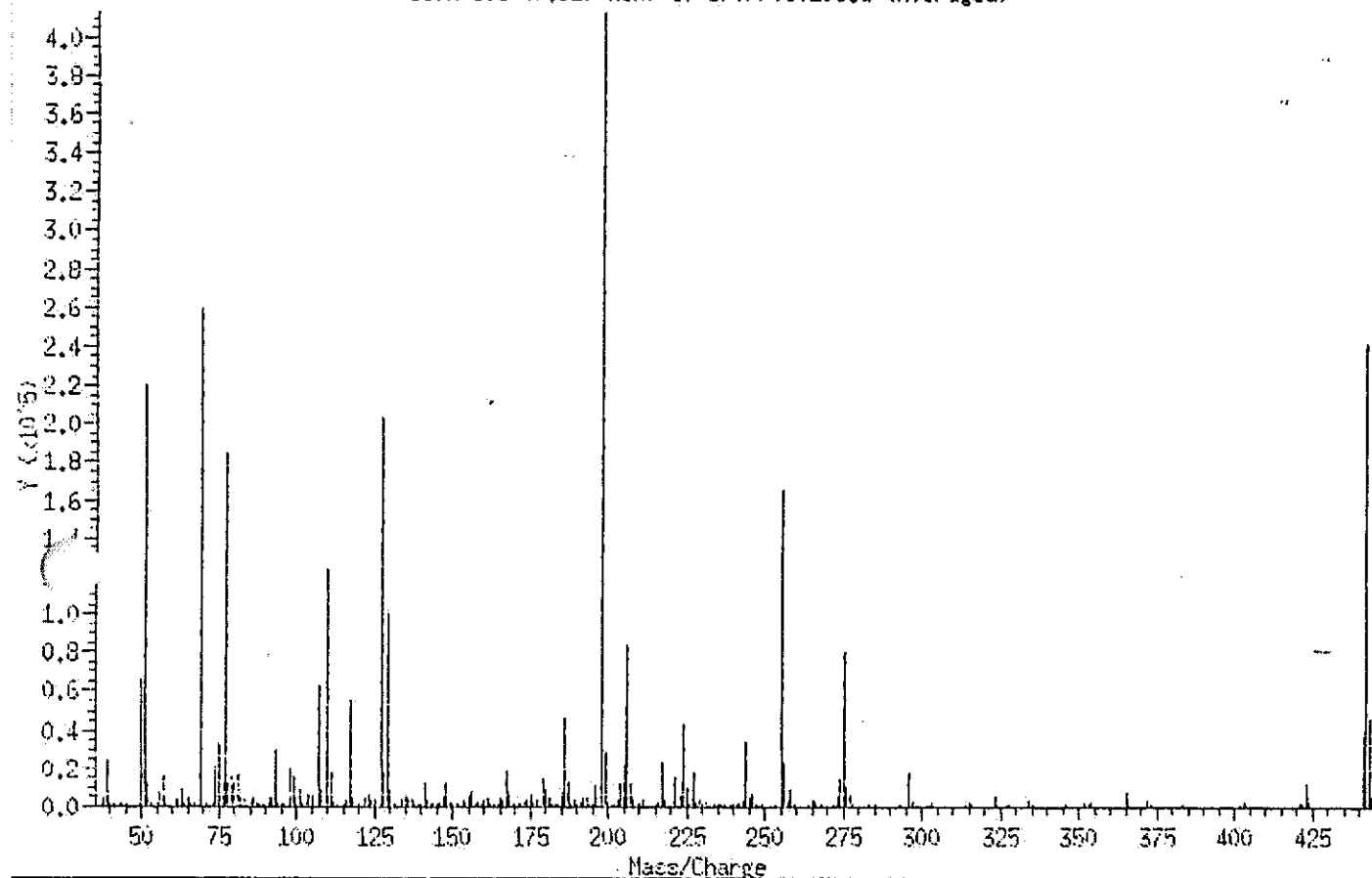
Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

1 dftpp

Scan 395 (7.917 min) of DFTPP080296.d (Averaged)



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.0
51	Mass 51 relative abundance	53.2
68	Mass 68 relative abundance	0.0
69	Mass 69 relative abundance	63.0
70	Mass 70 relative abundance	0.1
127	Mass 127 relative abundance	49.2
197	Mass 197 relative abundance	0.0
199	Mass 199 relative abundance	6.8
275	Mass 275 relative abundance	19.5
365	Mass 365 relative abundance	1.7
441	Mass 441 relative abundance	80.4
442	Mass 442 relative abundance	58.6
443	Mass 443 relative abundance	19.3

Date : 02-AUG-96 06:47

Argument : msd_2.1

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 395-397 (7.917 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 301

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
37.00	1130	124.00	3444	202.00	658	285.00	982
38.00	4679	125.00	2942	203.00	2806	286.00	83
39.00	22786	127.00	202892	204.00	11719	289.00	142
40.00	1107	128.00	17747	205.00	21967	290.00	133
41.00	578	129.00	100052	206.00	84184	291.00	196
44.00	149	130.00	8034	207.00	11272	292.00	361
45.00	1114	131.00	1368	208.00	2887	293.00	904
47.00	293	132.00	834	209.00	939	294.00	452
49.00	449	133.00	165	210.00	656	296.00	17278
50.00	65906	134.00	2931	211.00	3057	297.00	1981
51.00	219412	135.00	7009	212.00	281	298.00	87
52.00	11784	136.00	2798	213.00	297	301.00	280
53.00	303	137.00	3620	215.00	1061	302.00	309
54.00	223	138.00	932	216.00	1938	303.00	1944
55.00	1375	139.00	350	217.00	23322	304.00	540
56.00	6641	140.00	1356	218.00	3045	308.00	283
57.00	15208	141.00	11726	219.00	297	309.00	159
58.00	692	142.00	3284	221.00	15003	310.00	183
59.00	153	143.00	1985	223.00	5474	312.00	85
61.00	2873	144.00	824	224.00	42878	313.00	92
62.00	2757	145.00	659	225.00	10389	314.00	795
63.00	8162	146.00	1817	226.00	1246	315.00	1817
64.00	1068	147.00	5254	227.00	17951	316.00	823
65.00	3307	148.00	12509	228.00	2695	317.00	179
66.00	737	149.00	2349	229.00	3818	321.00	452
67.00	958	150.00	757	230.00	997	322.00	280
69.00	260025	151.00	1232	231.00	1812	323.00	5607
70.00	240	152.00	458	232.00	47	324.00	1059
71.00	74	153.00	3113	233.00	315	326.00	125
72.00	287	154.00	2701	234.00	1206	327.00	1040
73.00	1953	155.00	5564	235.00	1229	328.00	557
74.00	20919	156.00	7992	236.00	1024	329.00	118
75.00	33077	157.00	1535	237.00	1330	332.00	295
76.00	12038	158.00	2049	238.00	223	333.00	537
77.00	184135	159.00	1474	239.00	656	334.00	3590

Date : 02-AUG-96 06:47

Instrument : msd_2.i

Sample ID : DFTPP02

Column phase :

Column diameter : 2.00

Volume Injected (uL) : 1.0

Spectrum: Scan 395-397 (7.917 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 301

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
78.00	12023	160.00	3165	240.00	722	335.00	962
79.00	15085	161.00	4336	241.00	978	340.00	70
80.00	11838	162.00	1382	242.00	2319	341.00	502
81.00	16321	163.00	572	243.00	2090	346.00	910
82.00	3765	164.00	714	244.00	33916	347.00	68
83.00	2942	165.00	3608	245.00	4374	351.00	74
84.00	324	166.00	3259	246.00	6704	352.00	1997
85.00	2424	167.00	18262	247.00	1317	353.00	1307
86.00	4497	168.00	7501	248.00	250	354.00	1868
87.00	2013	169.00	1074	249.00	1337	355.00	366
88.00	993	170.00	623	250.00	244	356.00	74
89.00	662	171.00	1155	251.00	457	365.00	7166
91.00	4060	172.00	2090	252.00	188	366.00	1177
92.00	4444	173.00	2102	253.00	797	367.00	85
93.00	29066	174.00	3678	255.00	166010	370.00	215
94.00	1848	175.00	6845	256.00	23412	371.00	329
95.00	337	176.00	2139	257.00	1963	372.00	3063
96.00	894	177.00	3428	258.00	9089	373.00	785
98.00	19944	178.00	502	259.00	1335	374.00	79
99.00	15172	179.00	14275	260.00	94	383.00	814
100.00	1352	180.00	9190	261.00	271	384.00	85
101.00	8718	181.00	4809	262.00	173	390.00	301
102.00	568	182.00	767	264.00	446	391.00	373
103.00	2572	183.00	620	265.00	3426	392.00	301
104.00	6311	184.00	1456	266.00	89	401.00	239
105.00	5560	185.00	7265	267.00	68	402.00	1147
107.00	62517	186.00	46141	268.00	143	403.00	1743
108.00	9117	187.00	12978	270.00	531	404.00	479
110.00	122752	188.00	1383	271.00	306	421.00	1702
111.00	17937	189.00	3466	272.00	711	422.00	1615
112.00	2072	190.00	597	273.00	5305	423.00	11938
113.00	664	191.00	1840	274.00	14575	424.00	2567
115.00	479	192.00	4441	275.00	80504	425.00	216
116.00	3326	193.00	4369	276.00	10404	441.00	37525
117.00	54508	194.00	1002	277.00	5723	442.00	241680

Date: 02-AUG-96 06:47

Instrument: msd_2.1

Sample ID: DFTPP02

Column phase:

Column diameter: 2.00

Volume Injected (uL): 1.0

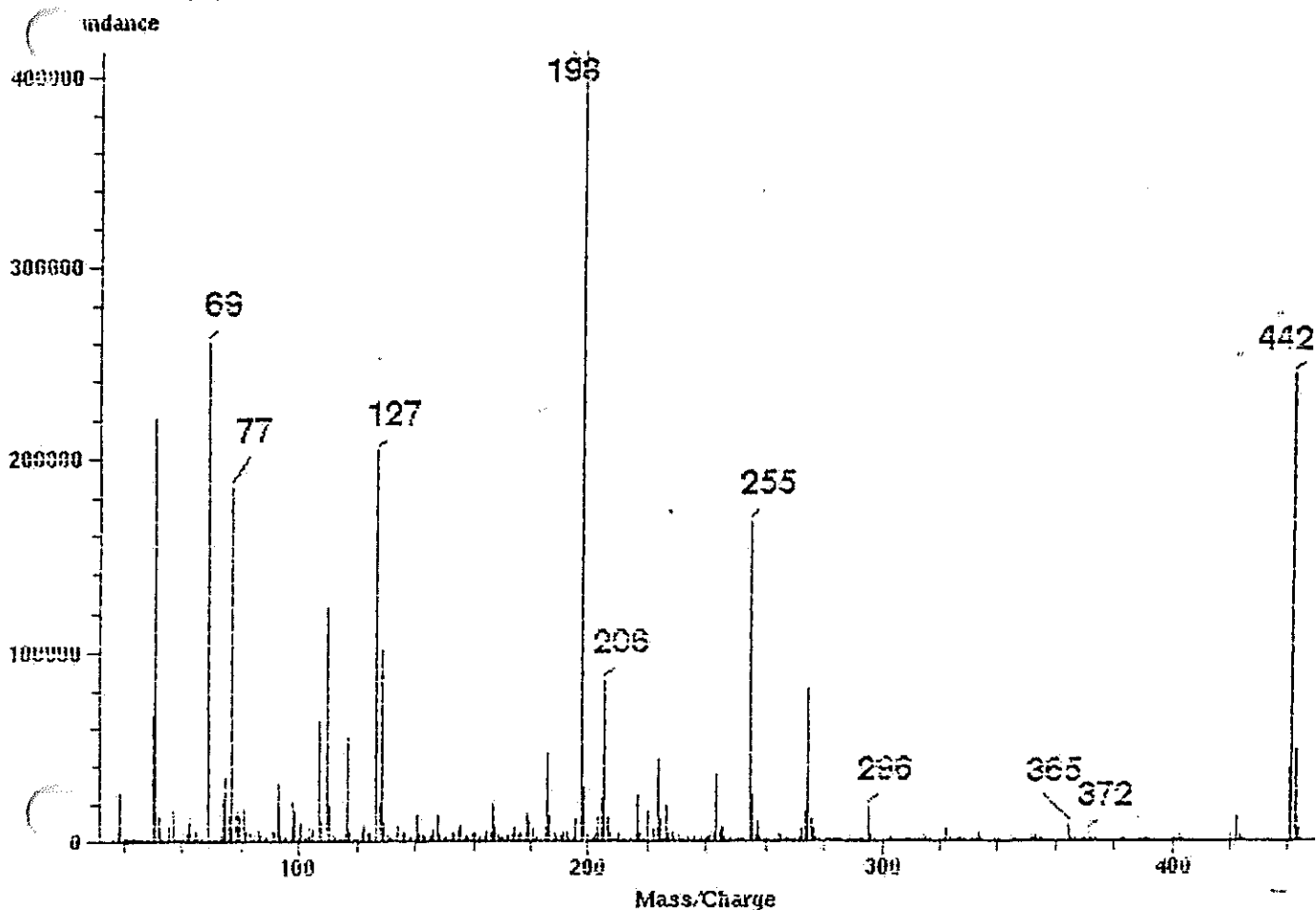
Spectrum: Scan 395-397 (7.917 min) Subtraction Scan 392

Base Peak: 198.00

Number of mass peaks: 301

Mass	Abund	Mass	Abund	Mass	Abund	Mass	Abund
118.00	4037	195.00	659	278.00	1017	443.00	46690
119.00	273	196.00	10940	279.00	16	444.00	4802
120.00	790	198.00	412757	281.00	75	445.00	251
121.00	340	199.00	23084	282.00	95		
122.00	4432	200.00	2169	285.00	596		
123.00	6976	201.00	1515	284.00	491		

Average of 7.907 to 7.927 min. from DFTPP060296.d
 msd_2 (ms5971-2); /chem/config/doc/ms5971-2/dftpp.q; Tuned at 09:13 AM EDT on Wed Jul 31, 1996



Mass	Ion abundance criteria	%relative abundance
61	30.0 - 60.0% of mass 198	53.4
68	Less than 2.0% of mass 69	0.0
69	Mass 69 relative abundance is	63.1
70	Less than 2.0% of mass 69	0.1
127	40.0 to 60.0% of mass 198	49.2
127	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
255	10.0 - 30.0% of mass 198	19.5
255	Greater than 1% of mass 198	1.7
441	Present, but less than mass 443	80.4
442	Greater than 40.0% of mass 198	58.6
443	17.0 - 23.0% of mass 442	19.3

Ecosys, Inc.

BASE NEUTRAL QUANT AND RATIO REPORT

ata file : /chem/msd_2.i/2-080296.b/BNA0101001.d
ab. Id. :
nj Date : 02-AUG-1996 07:15 Autotune Date: 31-Jul-96 09:13:5
perator : GORDON Inst ID: msd_2.i
ap Info : BNA-80-33
isc Info : CONTINUE CALIBRATION
omment :
ethod : /chem/msd_2.i/2-080296.b/MA-BNA.m
eth Date : 02-Aug-1996 08:13 target
al Date : 02-AUG-96 07:15 Cal File: BNA0101001.d
ls bottle: 1 Continuing Calibration Sample
il Factor: 1.000 Target Version: Target 2.20
ntegrator: HP RTE Compound Sublist: all.sub
ample Type: WATER

Compounds	QUANT SIG MASS	RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
uorophenol	112.00	9.675(0.000)	1716785	76.1	76.1(M)
2-mniline	93.00	12.494(0.937)	1704568	75.5	75.5
3 Phenol-d5	99.00	12.720(0.000)	1813935	84.2	84.2(M)
4 Phenol **	94.00	12.753(0.937)	2131306	96.8	96.8(M)
5 Bis(2-chloroethyl) ether	93.00	12.731(0.955)	1908511	78.3	78.3
6 2-Chlorophenol	128.00	12.850(0.964)	2040462	78.4	78.4
7 1,3-Dichlorobenzene	146.00	13.163(0.987)	2506549	81.8	81.8
8 1,4-Dichlorobenzene-d4	152.00	13.336(1.000)	811352	40.0	
9 1,4-Dichlorobenzene **	146.00	13.390(1.004)	2589390	82.3	82.3
10 1,2-Dichlorobenzene	146.00	13.778(1.033)	2399878	81.0	81.0
11 Benzyl alcohol	79.00	13.897(1.042)	1606966	90.4	90.4
12 2-Methylphenol	108.00	14.318(1.074)	1440351	76.2	76.2
13 Bis(2-chloroisopropyl) ether	45.00	14.210(1.066)	1725353	83.3	83.3
14 N-Nitrosodi-n-propylamine *	70.00	14.588(1.094)	1257208	88.7	88.7
15 4-Methylphenol	108.00	14.761(1.107)	1444941	74.8	74.8
16 Hexachloroethane	117.00	14.664(1.100)	1130702	83.1	83.1
17 Nitrobenzene-d5	92.00	14.891(0.890)	2169772	82.7	82.7
18 Nitrobenzene	77.00	14.945(0.893)	1955276	79.5	79.5
19 Isophorone	82.00	15.625(0.933)	3776574	89.5	89.5
20 2-Nitrophenol **	139.00	15.787(0.943)	1362162	83.1	83.1
21 2,4-Dimethylphenol	107.00	16.078(0.961)	1970291	85.9	85.9
22 Bis(2-chloroethoxy)methane	93.00	16.240(0.970)	1934686	83.2	83.2
23 2,4-Dichlorophenol **	162.00	16.564(0.990)	1686790	87.2	87.2
24 Benzoic acid	105.00	16.684(0.997)	1135585	84.2	84.2
26 Naphthalene-d8	136.00	16.738(1.000)	2470959	40.0	
25 4-Trichlorobenzene	180.00	16.619(0.993)	2070060	87.0	87.0
27 Nthalene	128.00	16.803(1.004)	5996036	84.6	84.6
28 4-Chloroaniline	127.00	17.041(1.018)	1705479	81.7	81.7(M)
29 Hexachlorobutadiene **	224.30	17.149(1.025)	1228445	88.9	88.9
30 4-Chloro-3-methylphenol **	107.00	18.476(1.104)	1601011	74.1	74.1
31 2-Methylnaphthalene	142.00	18.627(1.113)	3892608	84.6	84.6

Compounds	QUANT SIG MASS	RT (REL RT)	RESPONSE	CONCENTRATIONS	
				ON-COLUMN (ng/ul)	FINAL (ug/L)
32 Hexachlorocyclopentadiene *	237.00	19.027(0.892)	826330	81.3	81.3
33 2,4,6-Trichlorophenol **	196.00	19.448(0.912)	1056567	83.8	83.8
34 2,4,5-Trichlorophenol	196.00	19.622(0.920)	1230484	86.8	86.8(M)
35 2-Fluorobiphenyl	172.00	19.622(0.920)	4768342	84.1	84.1
36 2-Chloronaphthalene	162.00	19.904(0.933)	3825423	81.2	81.2
37 2-Nitroaniline	65.00	20.282(0.951)	1001325	81.2	81.2
38 Dimethyl phthalate	163.00	20.747(0.973)	4508006	76.3	76.3
39 2,6-Dinitrotoluene	165.00	20.898(0.980)	983412	80.3	80.3
42 Acenaphthylene	152.00	20.974(0.983)	5796540	79.9	79.9
41 3-Nitroaniline	138.00	21.428(1.005)	516155	77.3	77.3(M)
40 Acenaphthene-d10	164.00	21.331(1.000)	1568314	40.0	
43 Acenaphthene **	153.00	21.428(1.005)	3779764	79.1	79.1
44 2,4-Dinitrophenol *	184.00	21.655(0.000)	298757	68.3	68.3(M)
47 2,4-Dinitrotoluene	165.00	21.937(1.028)	1351071	86.8	86.8
45 4-Nitrophenol *	65.00	21.915(1.026)	373437	71.0	71.0(M)
46 Dibenzofuran	168.00	21.883(1.026)	5260527	81.6	81.6
48 Diethyl phthalate	149.00	22.575(1.058)	5098715	84.6	84.6
50 Fluorene	166.00	22.770(1.067)	4275099	84.9	84.9
49 4-Chlorophenyl phenyl ether	204.00	22.803(1.069)	2126205	85.4	85.4
52 Nitroaniline	138.00	23.139(0.000)	466357	90.6	90.6(M)
51 2,4-Dinitro-2-methylphenol	198.00	22.987(0.912)	438653	80.7	80.7
53 N-Nitrosodiphenylamine **	169.00	23.150(0.919)	1892647	91.6	91.6
54 1,2-Diphenylhydrazine	77.00	23.236(0.922)	8270622	80.8	80.8
55 2,4,6-Tribromophenol	329.70	23.421(0.930)	674316	100	100
56 4-Bromophenyl phenyl ether	248.00	24.070(0.955)	1299952	88.0	88.0
57 Hexachlorobenzene	283.30	24.189(0.960)	1503610	92.1	92.1
58 Pentachlorophenol **	265.75	24.773(0.983)	557329	92.5	92.5
59 Phenanthrene-d10	188.00	25.196(1.000)	1956080	40.0	
60 Phenanthrene	178.00	25.272(1.003)	5837079	88.7	88.7
61 Anthracene	178.00	25.402(1.008)	5219891	85.8	85.8
62 Carbazole	167.00	25.932(0.000)	2815908	90.5	90.5(M)
63 Di-n-butyl phthalate	149.00	26.819(1.064)	8104823	82.7	82.7
64 Fluoranthene **	202.00	28.349(1.125)	5246171	93.7	93.7
65 Pyrene	202.00	28.931(0.902)	5097253	73.5	73.5
66 Terphenyl-d14	244.00	29.374(0.916)	3468657	75.1	75.1
67 Butyl benzyl phthalate	149.00	30.678(0.957)	3115801	71.2	71.2
68 Di(2-ethylhexyl) adipate	129.00	30.895(0.963)	2520770	66.7	66.7
69 3,3'-Dichlorobenzidine	252.00	32.049(0.999)	398483	87.6	87.6(M)
71 Benz(a)anthracene	228.00	32.049(0.999)	3291045	82.5	82.5
72 Chrysene-d12	240.00	32.070(1.000)	1276331	40.0	
70 Bis(2-ethylhexyl) phthalate	149.00	32.158(1.003)	4782300	70.7	70.7
73 Chrysene	228.00	32.136(1.002)	2945049	79.4	79.4
74 Di-n-octyl phthalate **	149.00	33.789(1.000)	6988085	71.2	71.2
75 Benzo(b)fluoranthene	252.00	34.890(1.000)	2309965	80.8	80.8
76 Benzo(k)fluoranthene	252.00	34.977(0.000)	2554806	79.0	79.0(M)
77 Benzo(a)pyrene **	252.00	35.916(1.000)	1879692	80.1	80.1
78 Acrylene-d12	264.00	36.101(1.000)	657608	40.0	(M)
79 Indeno(1,2,3-cd)pyrene	276.00	40.565(0.000)	1692851	95.8	95.8(M)
80 Dibenz(a,h)anthracene	278.00	40.673(0.000)	1356505	89.1	89.1(M)
81 Benzo(g,h,i)perylene	276.00	41.935(0.000)	1337377	80.7	80.7(M)

C Flag Legend

- Compound response manually integrated.
- Operator selected an alternate compound hit.

Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd_2.i Injection Date: 02-AUG-1996 07:15
 Lab File ID: BNA0101001.d Init. Calibration Date(s): 05/28/93 07/31/96
 Analysis Type: WATER Init. Calibration Times: 15:51 13:17
 Lab Sample ID: Method File: /chem/msd_2.i/2-080296.b/MA-BNA.m

COMPOUND	RRF	RF80	MIN	MAX
12-Fluorophenol	1.112	1.058	0.050	4.9
Aniline	1.113	1.050	0.050	5.6
Phenol-d5	1.062	1.118	0.050	5.3
Phenol **	1.085	1.313	0.050	21.0
Bis(2-chloroethyl) ether	1.202	1.176	0.050	2.1
2-Chlorophenol	1.283	1.257	0.050	2.0
1,3-Dichlorobenzene	1.511	1.545	0.050	2.2
1,4-Dichlorobenzene **	1.551	1.596	0.050	2.9
1,2-Dichlorobenzene	1.460	1.479	0.050	1.3
Benzyl alcohol	0.876	0.990	0.050	13.0
2-Methylphenol	0.932	0.888	0.050	4.7
Bis(2-chloroisopropyl) ether	1.021	1.063	0.050	4.2
-Nitrosodi-n-propylamine *	0.699	0.775	0.050	10.8
4-Methylphenol	0.953	0.890	0.050	6.5
Hexachloroethane	0.671	0.697	0.050	3.8
Nitrobenzene-d5	0.424	0.439	0.050	3.4
Nitrobenzene	0.398	0.396	0.050	0.6
Isophorone	0.683	0.764	0.050	11.9
2-Nitrophenol **	0.265	0.276	0.050	3.9
2,4-Dimethylphenol	0.371	0.399	0.050	7.4
Bis(2-chloroethoxy)methane	0.376	0.391	0.050	4.0
2,4-Dichlorophenol **	0.313	0.341	0.050	9.0
Benzoic acid	0.218	0.230	0.050	5.3
1,2,4-Trichlorobenzene	0.385	0.419	0.050	8.8
Naphthalene	1.148	1.213	0.050	5.7
4-Chloroaniline	0.338	0.345	0.050	2.1
Hexachlorobutadiene **	0.224	0.249	0.050	11.1
4-Chloro-3-methylphenol **	0.350	0.324	0.050	7.4
2-Methylnaphthalene	0.745	0.789	0.050	5.9
Hexachlorocyclopentadiene *	0.259	0.263	0.050	1.7
2,4,6-Trichlorophenol **	0.322	0.337	0.050	4.8
2,4,5-Trichlorophenol	0.361	0.392	0.050	8.6
2-Fluorobiphenyl	1.446	1.520	0.050	5.1
2-Chloronaphthalene	1.202	1.220	0.050	1.5
2-Nitroaniline	0.315	0.319	0.050	1.4
Dimethyl phthalate	1.506	1.437	0.050	4.6
2,6-Dinitrotoluene	0.312	0.314	0.050	0.4
Acenaphthylene	1.850	1.848	0.050	0.1
-Nitroaniline	0.170	0.165	0.050	3.4
Acenaphthene **	1.219	1.205	0.050	1.1
2,4-Dinitrophenol *	0.112	0.095	0.050	14.6
2,4-Dinitrotoluene	0.397	0.431	0.050	8.5
4-Nitrophenol *	0.134	0.119	0.050	11.2
Dibenzofuran	1.643	1.677	0.050	2.0
Diethyl phthalate	1.537	1.626	0.050	5.8

Report Date: 02-Aug-1996 08:13

Ecosys, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd_2.i Injection Date: 02-AUG-1996 07:15
 Lab File ID: BNA0101001.d Init. Calibration Date(s): 05/28/93 07/31/96
 Analysis Type: WATER Init. Calibration Times: 15:51 13:17
 Lab Sample ID: Method File: /chem/msd_2.i/2-080296.b/MA-BNA.m

COMPOUND	RRF	RF80	MIN RRF	%D	MAX %D
Fluorene	1.284	1.363	0.050	6.1	30.0
4-Chlorophenyl phenyl ether	0.635	0.678	0.050	6.7	30.0
4-Nitroaniline	0.131	0.149	0.050	13.3	30.0
4,6-Dinitro-2-methylphenol	0.111	0.112	0.050	0.9	30.0
N-Nitrosodiphenylamine **	0.423	0.484	0.050	14.4	30.0
1,2-Diphenylhydrazine	2.092	2.114	0.050	1.1	30.0
2,4,6-Tribromophenol	0.137	0.172	0.050	25.5	30.0
4-Bromophenyl phenyl ether	0.300	0.330	0.050	10.0	30.0
Hexachlorobenzene	0.334	0.384	0.050	15.1	30.0
Pentachlorophenol **	0.123	0.142	0.050	15.6	30.0
Phenanthrene	1.345	1.492	0.050	10.9	30.0
Anthracene	1.243	1.334	0.050	7.3	30.0
Carbazole	0.636	0.720	0.050	13.1	30.0
Di-n-butyl phthalate	2.005	2.072	0.050	3.3	30.0
Fluoranthene **	1.145	1.341	0.050	17.1	30.0
Pyrene	2.175	1.997	0.050	8.2	30.0
Terphenyl-d14	1.448	1.359	0.050	6.2	30.0
Butyl benzyl phthalate	1.372	1.221	0.050	11.0	30.0
Di(2-ethylhexyl) adipate	1.185	0.988	0.050	16.7	30.0
3,3'-Dichlorobenzidine	0.143	0.156	0.050	9.5	30.0
Benz(a)anthracene	1.250	1.289	0.050	3.1	30.0
Bis(2-ethylhexyl) phthalate	2.119	1.873	0.050	11.6	30.0
Chrysene	1.162	1.154	0.050	0.7	30.0
Di-n-octyl phthalate **	5.966	5.313	0.050	10.9	30.0
Benzo(b)fluoranthene	1.739	1.756	0.050	1.0	30.0
Benzo(k)fluoranthene	1.966	1.942	0.050	1.2	30.0
Benzo(a)pyrene **	1.429	1.429	0.050	0.1	30.0
Indeno(1,2,3-cd)pyrene	1.075	1.287	0.050	19.8	30.0
Dibenz(a,h)anthracene	0.926	1.031	0.050	11.4	30.0
Benzo(g,h,i)perylene	1.008	1.017	0.050	0.8	30.0

Report Date: 02-Aug-1996 08:13

EcoSys, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd_2.i
Lab File ID: BNA0101001.d
Lab Sample ID:
Analysis Type: OTHER
Method File: /chem/msd_2.i/2-080296.b/MA-BNA.m
Disc Info: CONTINUE CALIBRATION

Calibration Date: 08/02/96
Calibration Time: 0802
Sample Type: WATER
Level: LOW

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	% DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenzene-	811352	405676	1622704	811352	0.00
26 Naphthalene-d8	2470959	1235479	4941918	2470959	0.00
40 Acenaphthene-d10	1568314	784157	3136628	1568314	0.00
59 Phenanthrene-d10	1956080	978040	3912160	1956080	0.00
72 Chrysene-d12	1276331	638165	2552662	1276331	0.00
78 Perylene-d12	657608	328804	1315216	657608	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	% DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenzene-	13.34	12.84	13.84	13.34	0.00
26 Naphthalene-d8	16.74	16.24	17.24	16.74	0.00
40 Acenaphthene-d10	21.33	20.83	21.83	21.33	0.00
59 Phenanthrene-d10	25.20	24.70	25.70	25.20	0.00
72 Chrysene-d12	32.07	31.57	32.57	32.07	0.00
78 Perylene-d12	36.10	35.60	36.60	36.10	0.00

REA UPPER LIMIT = +100% of internal standard area.

REA LOWER LIMIT = - 50% of internal standard area.

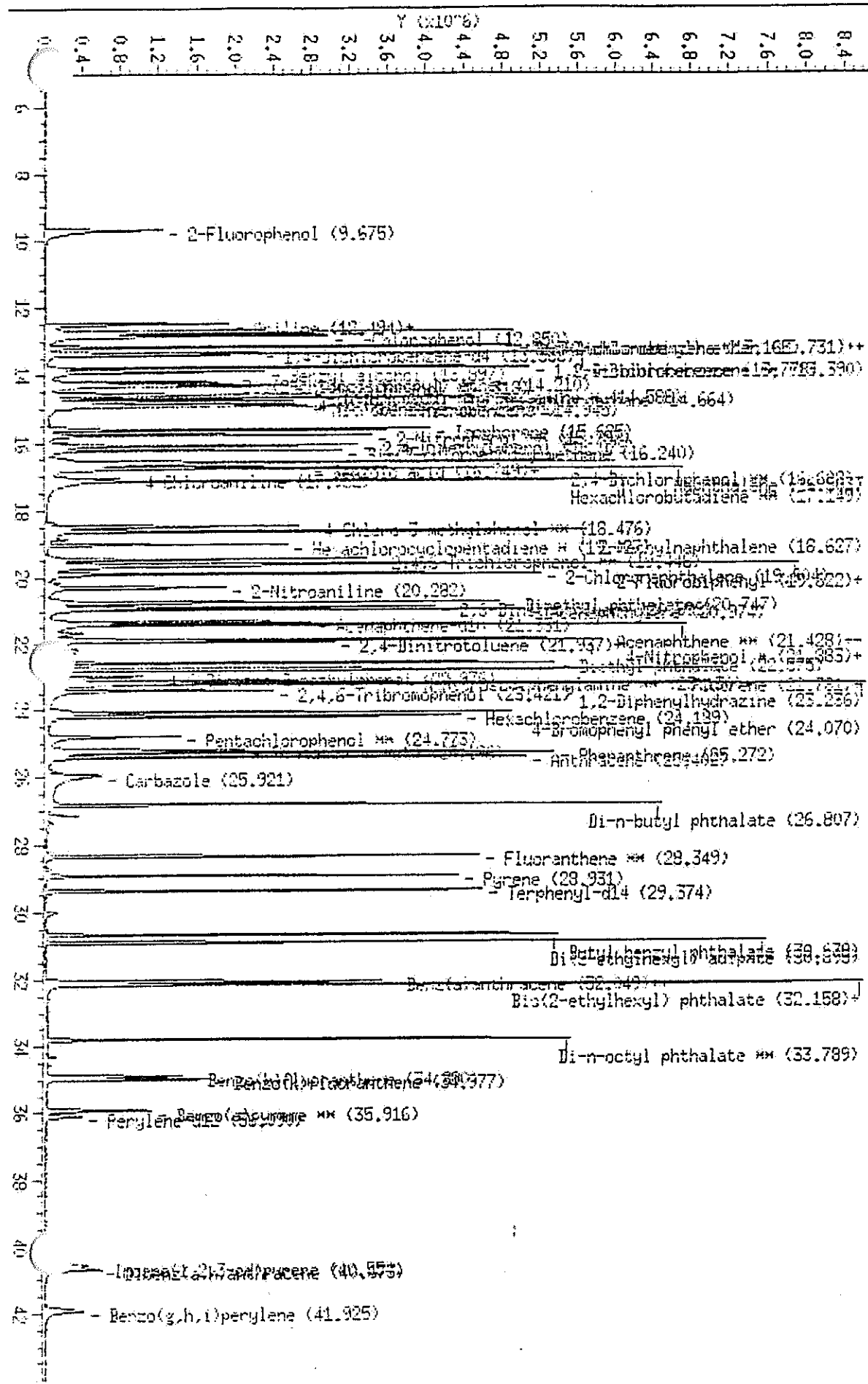
T UPPER LIMIT = + 0.50 minutes of internal standard RT.

T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/med.2.1/2-080296.lv/INSTRUMENT.D
 Date: 02-AUG-1996 07:15
 Instrument: med.2.1
 Sample ID:
 Column phase:
 Volume injected (ul): 1.0

Column diameter: 2.00

/chem/med.2.1/2-080296.lv/INSTRUMENT.D



SemiVolatile Method Blank Summary

Lab Name: EcoSys, Inc.	Client: ACESAD
Ledger No(s): 107962	Extraction Method No.: 3510
Batch No(s): 081960004	Date Extracted: 8/1/96
Lab File ID: BNA0801008	Date Analyzed: 8/1/96
Lab Sample ID: AB36122	Time Analyzed: 15:26
Cleanup Method: NA	Level: Low
Instrument ID: MSD-2	Matrix: Water

This method blank applies to the following samples, LCS and LCSD.

	Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
1	NA	AB36646 LCS	BNA0201002	8/2/96
2	NA	AB36647 LCSD	BNA0301003	8/2/96
3	TK71A-GW	AB36117	BNA1001010	8/1/96
4				
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ASCA Muel 18 Aug 96

QA/QC Officer

Comments:

SemiVolatile LCS/LCSD Recovery

Lab Name: EcoSys, Inc.

Client: ACE SAD

Ledger No(s): 107962

Matrix Spike/MS Dup: AB36646 LCS

Batch No(s): 0801960004

AB36647 LCSD

Lab File ID: BNA0201002/BNA0301003

Compound	Spike Added (ug/L)	Sample Conc (ug/L)	LCS Conc (ug/L)	LCS% Recovery	#	QC Limits Recovery
Phenol	100	NR	66	66		12-110
2-Chlorophenol	100	NR	72	72		27-123
1,4-Dichlorobenzene	50	NR	37	74		36-97
N-Nitroso-di-n-propylamine	50	NR	41	83		41-116
1,2,4-Trichlorobenzene	50	NR	38	76		39-98
4-Chloro-3-methylphenol	100	NR	90	90		23-97
Acenaphthene	50	NR	43	85		46-118
4-Nitrophenol	100	NR	72	72		10-80
2,4-Dinitrotoluene	50	NR	41	82		24-96
Pentachlorophenol	100	NR	71	71		9-103
Pyrene	50	NR	55	110		26-127

Compound	Spike Added (ug/L)	LCSD Conc (ug/L)	LCSD% Recovery	#	% RPD	#	QC Limits RPD	Recovery
Phenol	100	64	64		4		42	12-110
2-Chlorophenol	100	71	71		1		40	27-123
1,4-Dichlorobenzene	50	37	74		0		28	36-97
N-Nitroso-di-n-propylamine	50	41	81		2		38	41-116
1,2,4-Trichlorobenzene	50	39	77		2		28	39-98
4-Chloro-3-methylphenol	100	91	91		1		42	23-97
Acenaphthene	50	42	83		2		31	46-118
4-Nitrophenol	100	71	71		1		50	10-80
2,4-Dinitrotoluene	50	40	80		3		38	24-96
Pentachlorophenol	100	68	68		4		50	9-103
Pyrene	50	55	111		0		31	26-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NR = Not Required

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

QA/QC Officer

Comments:

SemiVolatile Surrogate Recovery (Water)

Lab Name: EcoSys, Inc.

Client: ACE-SAD

Ledger No(s): 107962

Level: Low

Batch No.(s): 0801960004

[illegible]

Column used to flag recovery values

* = Values outside of required QC limits

ND = Not Detected

	QC Limits
S1 (2FP) 2-Fluorophenol	21-110
S2 (PHL) Phenol-d5	10-110
S3 (NBZ) Nitrobenzene-d5	35-114
S4 (FBP) 2-Fluorobiphenyl	43-116
S5 (TBP) 2,4,6-Tribromophenol	10-123
S6 (TPH) Terphenyl-d14	33-141

QA/QC Officer

Comments:

TAB 9

MANIFESTS

REYNOLDS CONSTRUCTION COMPANY

Highway 84 • P. O. Box 749
Ludowici, Georgia 31316
Office (912) 368-7488 • Plant (912) 876-8085

Date _____ 19____ Load No. 28
Triple "R" Mant
Customer RR 104 Description PCs
Project Number ST STEWART
Location _____ County Liberty

42180 lb Net

21260 lb Tare

63440 lb+ Gross

03:05 PM AU 12 96

Charles
Signature of Weigher

TONS:

21.09

TOTAL TONS:

565.79
~~546.58~~

Wendrix
TRUCKER

49

TRUCK NO.

[Signature]
DRIVER

TICKET NO. 58852

49

71A

NON-HAZARDOUS WASTE MANIFEST

Manifest
Document No.
00029

1. Page 1
of 1

2. Generator's Name and Mailing Address
Ft. Stewart
Hinesville, GA 31313
3. Generator's Phone (912) 234-6579

4. Transporter 1 Company Name
Hendricks Hauling

5. Transporter 2 Company Name

6. Designated Facility Name and Site Address TRIPLE R MANAGEMENT ,INC.
c/o Reynolds Constr Co.
Rt. 84
Ludowici, GA 31316

A. Transporter's Phone
B. Transporter's Phone 912-427-6758
C. Facility's Phone
912-756-3655

7. Waste Shipping Name and Description

8. Containers
No. Type
9. Total
Quantity
10. Unit
Wt/Vol

a. Petroleum Contaminated Soil

1 TT 18.00 CY

b.

.

c.

.

d.

.

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

11. Special Handling Instructions and Additional Information

8101

Tank # 71A

12. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name
Tom C. Fry

Signature
Tom C. Fry

Month Day Year
08 06 96

13. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name
Gregory A Johnson

Signature
Gregory A Johnson

Month Day Year
08 12 96

14. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Charles Pruitt

Signature
Charles Pruitt

Month Day Year
08 12 96

15. Discrepancy Indication Space

16. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year
08 12 96

ORIGINAL - RETURN TO GENERATOR

REYNOLDS CONSTRUCTION COMPANY

Highway 84 • P. O. Box 749

Ludowici, Georgia 31316

Office (912) 368-7488 • Plant (912) 876-8085

Date 19 Load No. 1920
Customer Triple "R" Maint Description PCS
Project Number KRR 104
Location Stewart County Liberty

43140 lb Net

20080 lb Tare

63220 lb+ Gross

01:58 PM AU 12 96

Signature of Weigher Chub

TONS:

2157

TOTAL TONS:

410.11
396.70

TRUCKER

DRIVER

TRUCK NO.

TICKET NO.

58844

47

71A

NON-HAZARDOUS WASTE MANIFEST		Manifest Document No. 000006	1. Page 1 of 1		
2. Generator's Name and Mailing Address Ft. Stewart Hinesville, GA 31313					
3. Generator's Phone (912) 234-6579					
4. Transporter 1 Company Name Hendricks Hauling					
5. Transporter 2 Company Name					
6. Designated Facility Name and Site Address c/o Triple R Management, Inc. Reynolds Constr Co. Rt. 84 Ludowici, GA 31316		A. Transporter's Phone B. Transporter's Phone 912-427-6758 C. Facility's Phone 912-756-3655			
7. Waste Shipping Name and Description		8. Containers No.	Type	9. Total Quantity	10. Unit Wt/Vol
a. Petroleum Contaminated Soil		1	TT	18.00	CY
b.		.	.	.	.
c.		.	.	.	.
d.		.	.	.	.
D. Additional Descriptions for Materials Listed Above		E. Handling Codes for Wastes Listed Above			
11. Special Handling Instructions and Additional Information 8101 Tank # _____					
12. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name Tom C. Fry		Signature Tom C. Fry		Month Day Year 08 05 96	
13. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name Raymond G. BACA		Signature Raymond G. BACA		Month Day Year 08 12 96	
14. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name RAYMOND		Signature		Month Day Year .	
15. Discrepancy Indication Space					
16. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month Day Year 08 12 96	

GENERATOR

TRANSPORTER

FACILITY

Y

TAB 10

FORT STEWART AREA MAP

LEGEND/REF. DRWG'S

Base map of Fort Stewart.



ANDERSON COLUMBIA

ENVIRONMENTAL INC.
P.O. BOX 1386 LAKE CITY, FLORIDA 32056 (904) 755-1196

DR. AJR CH'D SRC DR. APP. DFB

ENGR. ENGR'G DEPT.
DATE 9 Oct 96 SCALE 1"=1000'

Area Map for Tank # 71A
Fort Stewart
Hinesville, Georgia

DRAWING NO.: FIGURE 1

