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

CLOSURE REPORT

WASTE OIL TANK
BUILDING 1224, TANK 79
FACILITY ID NUMBER: 9-089026
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, Georiga

Underground Storage Tank Removal and Closure

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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 Parkeay, 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 1224		
Street Address:	FAC 1224		
	Ft. Stewart	GA	31314-5000
	(city)	(state)	(zip code)
Facility ID#	9-089026		

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: 11/4/96

4. Site-specific Hydrogeology:

Depth to Groundwater ~11 ft. if encountered

☐ Not Applicable

5. Site Map: Include the following items on an attached site map: **REFER TO TAB 5**

- Tank Pit Area
- Piping Trenches
- Dispensers
- Sewer Lines (if present)
- Water Lines
- Tanks with thier ID#s, corresponding to the Notification Form 7530-1
- Sample Locations (with sample numbers and depths)
- Scale: See Map, Tab 5
- North Arrow

6. Tank Removal

- Date of Removal: 18-Jul-96
- Tank Information:

Tank #	Tank Size (gallons)	Tank Contents
79	1000	Waste Oil

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

- Attach Amended Notification Form 7530-1 **REFER TO TAB 6**
- Describe Soil Sampling Procedures (and groundwater, if encountered):

REFER TO TAB 6

7. Laboratory Analytical Data: The following items must be included on attached copies **REFER TO TAB 7**

- Laboratory Method
- Date of Sampling
- Date of Analysis
- Dectection Limits
- Signed Chain of Custody
- 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)

38.6 Tons OR _____ yd^3

☐ 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. Photograph of Tank 79 being uncovered.

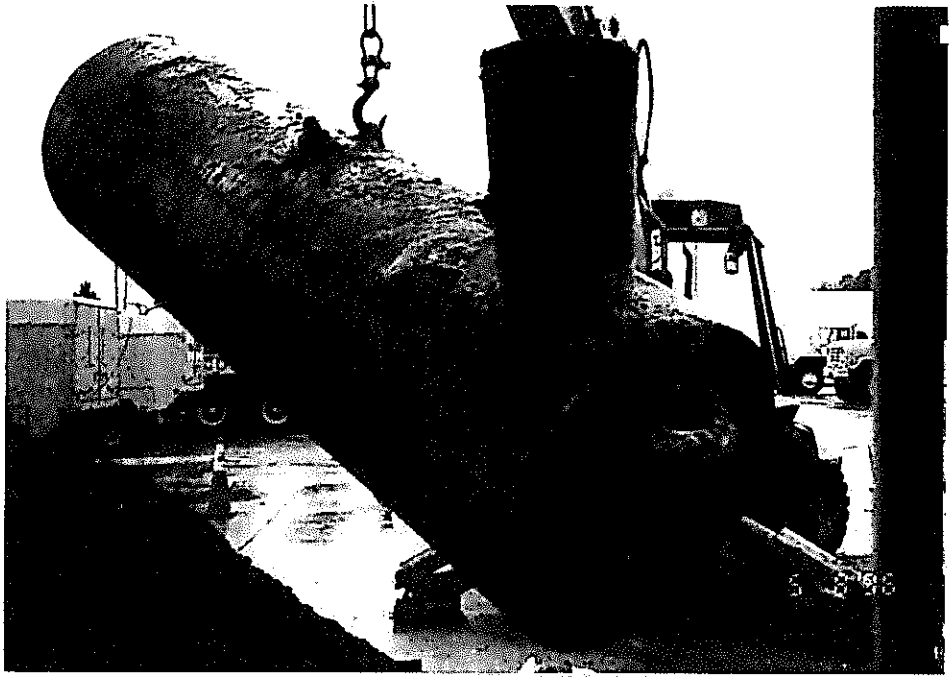


Photo 2. Tank 79 after removal from the excavation pit.

Photo 3. Photo of the floor of the open pit and area of sample collection.

TAB 5

SITE MAPS

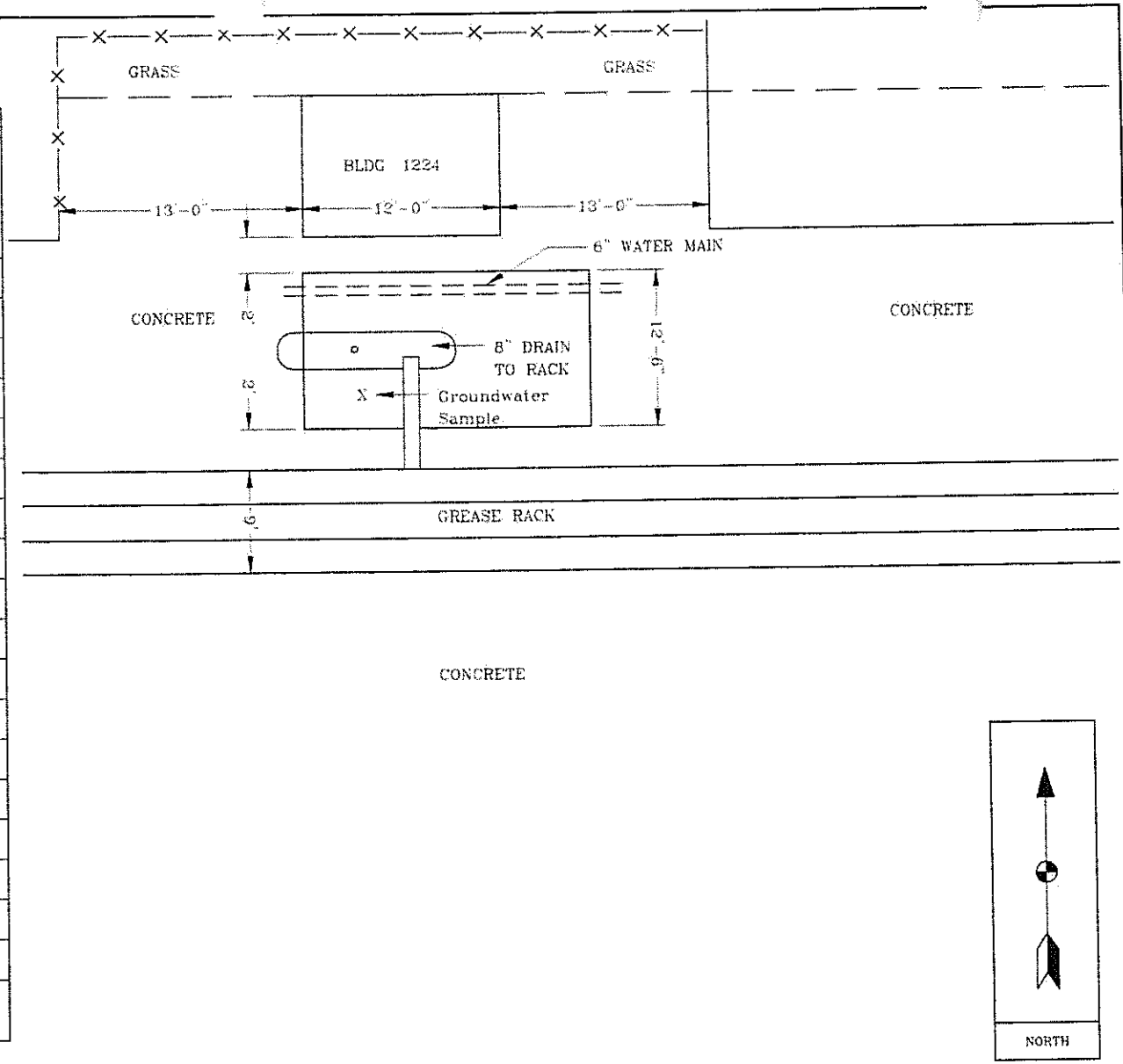
Headspace Analyses

Instrument: _____ Serial #: _____

Source: _____ Temp: _____

PID Correlation: 50 ppm

Sample	Depth	PID	FID	Methane	VOA



LEGEND/REF. DRWG.'S

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

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: Building 1224

TANK #79 WASTE OIL

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: 9-089026

OWNER'S ID: 197

INITIAL DATE RECEIVED: 5/6/86

DATE AMENDED LAST: _____

NOTIFICATION TYPE: [ ] New [X] Amended [X] 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 1224
Street Address : FAC 1224
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
County : LIBERTY Latitude: _____ Longitude: _____
Phone : _____

OWNER TYPE: [X] 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	[X] 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	9-089026				
TANK ID	79				
Status of Tank					
Currently in Use	X				
Temp. Out of Use					
Perm. Out of Use	X				
Date of Installation	1-Jan-81				
Age	15				
Est. Total Capacity	1000				
MATERIAL OF CONSTRUCTION					
Asphalt or Bare Steel	x				
Cath. Protected Steel					
Epoxy Coated Steel					
Composite					
Fiberglass Reinf. Plas.					
Lined Interior	x				
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	9-089026									
TANK ID	79									
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	7-11-96	7-11-96								
Est. Date Closed	7-18-96	7-18-96								
Removed from Ground	X									
Closed in Ground		X								
Filled with Iner. Mat.		X								
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 79
Building Number 1224

Method / **Sample ID** / *unit*	9073 **TRPH** ppm	9071A **TRPH** ppm	8020A **BTEX** ppb	8270B **Semi-Volatile Organics** ppb
TK79-GW			1510	1183
bdl= below method detection limits				

**Fort Stewart is in an area of 'High or Average Groundwater pollution susceptibility' and this tank was approximately 3000 feet from the closest withdrawal point (>500'). These analytical results should be compared with Table A, >500 feet to withrawal point on the sheet that follows.

38.60 tons of petroleum contaminated soil was removed from the Tank 79 pit.

Complete Data Package Follows

Table A

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)	
VOLATILE ORGANIC COMPOUNDS	≤500 feet to withdrawal point	>500 feet to withdrawal point	≤500 feet to withdrawal point	>500 feet to withdrawal point
Benzene[g]	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]

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 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

...l 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]	
VOLATILE ORGANIC COMPOUNDS	≤500 feet to surface water body	>500 feet to surface water body	≤500 feet to surface water body	>500 feet to surface water body
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*	N/A*	N/A*	N/A*
Anthracene	N/A*	N/A*	N/A*	N/A*
Benz(a)anthracene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Benzo(a)pyrene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Benzo(b)fluoranthene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Benzo(g,h,i)perylene	N/A*	N/A*	N/A*	N/A*
Benzo(k)fluoranthene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Chrysene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Dibenz(a,h)anthracene	0.660 mg/kg[d]	N/A*	N/A*	N/A*
Fluoranthene	N/A*	N/A*	N/A*	N/A*
Fluorene	N/A*	N/A*	N/A*	N/A*
Indeno(1,2,3-c,d)pyrene	0.660 mg/kg[d]	N/A*	0.660 mg/kg[d]	N/A*
Naphthalene	N/A*	N/A*	N/A*	N/A*
Phenanthrene	N/A*	N/A*	N/A*	N/A*
Pyrene	N/A*	N/A*	N/A*	N/A*

- ...ased on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.
- ...ased 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.
- a - 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: Commander, Savannah District US Army Corps of Engineers ATTN: 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	**REQN NO:** PMS-96-109 **W.O. NO:** 7996

SUBJECT: Chemical Analysis

1. Enclosed is our report of analytical test results and chain of custody forms for two samples collected 18 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:	SIGNATURE	DATE:
WILLIAM L. TISON, P. E. Director, SAD Laboratory		14 Aug 1996

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

strict - SAVANNAH
Date Received - 96/07/23
Date Reported - 96/08/14 08:07:47

FT. STEWART ARMY AF
Requisition - PMS-96-109
Work Order - 7996 Job Number - 4024

Lab #	Field ID	Date Sampled	Time Sampled
29566	TK79-GW	96/07/18	16:05

Test Performed	Result	Units	Tested By	Test Date
TOTAL SOLIDS, % OF WET	0.20	%	ECO	96/07/25
AROMATIC VOLATILE ORGANICS	*		ECO	96/08/01
SEMIVOLATILE ORGANICS GC/MS	*		ECO	96/08/01

*NOTE: See Attached

Sampled by District Personnel

Checked by: ATP

Signed by:

Blaise Willis
Chemist

eet 1 of 2

Lab #	Field ID	Date Sampled	Time Sampled
[illegible]9567	TRIP BLANK	96/07/18	16:20

Test Performed	Result	Units	Tested By	Test Date
AROMATIC VOLATILE ORGANICS	*		ECO	96/08/01

*NOTE: See Attached

Sampled by District Personnel

Checked by: ATP

Signed by:

Belinda Thom for

Blaise Willis
Chemist

Emp 3

Job # 4024

changed per conversation with Steve Clark 7/24/96

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
CHAIN OF CUSTODY RECORD

Page 1 of 1

Project No. 8101 8081

Project Name: Ft. Stewart

Samplers (Signature): Steven R. Clark

Sample Number	Date	Time	Grab	Comp.	Sample Location	No. of Containers	Preservative	8020	8270					Remarks:
TK79-GW	7/18/96	1605	✓		Tank Pit	3	HCl	✓	✓		2	95	66	Ground Water - had a visible sheen
Trip Blank	7/18/96	1620	✓		DI H2O	2		✓					67	
Temp Vial														

Relinquished by:	Date / Time	Received by:	Relinquished by:	Date / Time	Received by:
Steven R. Clark	7/23/96 0925	[signature] 7/23/96			
Relinquished by:	Date / Time	Received by:	Relinquished by:	Date / Time	Remarks:
		[signature] 0930			
Relinquished by:	Date / Time	Received by:			

Wo # 7990

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

DATE: 7/23/96

Number of coolers 1 Returned cooler(s) to: Anderson Columbia

PROJECT: Ft. Stewart W.O.# 7996 JOB# 4024

Coolers(s) opened by (print name) Rick McDonald (sign)

1. Did cooler come with shipping slip? [X] yes [ ] no
If yes, enter Tracking Number here 0797 3651 452 [CAB]

2. Were custody seals on out side of cooler? [ ] yes [X] no
How many? ___ Date on seal(s) _____ Name on seal(s) _____

3. Were custody seals unbroken upon receipt? [ ] yes [ ] no

4. Did you screen sample(s) for "Radioactivity"? [X] yes [ ] no

5. Were custody papers filled out properly? (ink,signed,etc.,) [X] yes [ ] no

6. Temperature of sample(s) upon receipt: 3c

7. Describe cooler packing: Bubble Bags

8. Did all sample containers arrive unbroken? [X] yes [ ] no

9. Were the sample containers sealed in separate plastic bags? [X] yes [ ] no

10. Were labels on containers in good condition and agree with Custody paper? [X] yes [ ] no

11. Were correct containers used for the test(s) indicated? [X] yes [ ] no

12. Were correct preservatives added to sample(s)? [ ] yes [ ] no [X] unk

13. Was a sufficient amount of sample sent for test? [X] yes [ ] no

14. Were bubbles absent in Volatile sample(s)? [X] yes [ ] no [ ] N/A
If no, list field ID# _____

15. Numbers of days from sample date, samples received in Lab 4 days

16. Number of Samples: 2 Sample Type: [ ]soil [X]water [ ]other Sludge (1)

SAMPLE ANALYSIS PERFORMED BY: ECBys TAT Regular

COMMENTS: _____

17. Did you sign custody papers in the appropriate place? [X] yes [ ] no

LAB NUMBER(S): 7956-67

SIGNATURE: [signature]

ECOSYS
LABORATORY SERVICES

ANALYTICAL REPORT

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

Client Code	29112130
Ledger Number	107984
P.O. Number	
Date Received	07/24/96
Time Received	10:31
Reporting Date	08/12/96

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

Lab Sample ID	AB36325	**Client Site #**	29566
Project #	4024	**Client Sample #**	TK79-GW
Project Name	FT. STEWART		
Sampling Date/Time	07/18/96 16:05		

Sample Comment This sample contains 0.2% TOTAL SOLIDS. Results are reported on a wet weight basis.

SEMI (GC/MS) WATER — **Prep Date** 08/01/96 — **Batch** 0801960004

METHOD	ANALYTE	TEST CODE	*RESULT*	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
8270B	PHENOL	$06113	*Below MDL*	100	ug/L	10.0	108-95-2	GC	08/01/96
8270B	BIS(2-CHLOROETHYL) ETHER	$06113	*Below MDL*	100	ug/L	10.0	111-44-4	GC	08/01/96
8270B	2-CHLOROPHENOL	$06113	*Below MDL*	100	ug/L	10.0	95-57-8	GC	08/01/96
8270B	1,3-DICHLOROBENZENE	$06113	*Below MDL*	100	ug/L	10.0	541-73-1	GC	08/01/96
8270B	1,4-DICHLOROBENZENE	$06113	*Below MDL*	100	ug/L	10.0	106-46-7	GC	08/01/96
8270B	1,2-DICHLOROBENZENE	$06113	*Below MDL*	100	ug/L	10.0	95-50-1	GC	08/01/96
8270B	BIS(2-CHLOROISOPROPYL) ETHER	$06113	*Below MDL*	100	ug/L	10.0	108-60-1	GC	08/01/96
8270B	2-METHYLPHENOL	$06113	*Below MDL*	100	ug/L	10.0	95-48-7	GC	08/01/96
8270B	4-METHYLPHENOL	$06113	*Below MDL*	100	ug/L	10.0	106-44-5	GC	08/01/96
8270B	N-NITROSODI-N-PROPYLAMINE	$06113	*Below MDL*	100	ug/L	10.0	621-64-7	GC	08/01/96
8270B	HEXACHLOROETHANE	$06113	*Below MDL*	100	ug/L	10.0	67-72-1	GC	08/01/96
8270B	NITROBENZENE	$06113	*Below MDL*	100	ug/L	10.0	98-95-3	GC	08/01/96
8270B	ISOPHORONE	$06113	*Below MDL*	100	ug/L	10.0	78-59-1	GC	08/01/96
8270B	2-NITROPHENOL	$06113	*Below MDL*	200	ug/L	10.0	88-75-5	GC	08/01/96
8270B	2,4-DIMETHYLPHENOL	$06113	*Below MDL*	100	ug/L	10.0	105-67-9	GC	08/01/96
8270B	BIS(2-CHLOROETHOXY)METHANE	$06113	*Below MDL*	100	ug/L	10.0	111-91-1	GC	08/01/96
8270B	2,4-DICHLOROPHENOL	$06113	*Below MDL*	100	ug/L	10.0	120-83-2	GC	08/01/96
8270B	1,2,4-TRICHLOROBENZENE	$06113	*Below MDL*	100	ug/L	10.0	120-82-1	GC	08/01/96
8270B	NAPHTHALENE	$06113	*196*	100	ug/L	10.0	91-20-3	GC	08/01/96
8270B	4-CHLOROANILINE	$06113	*Below MDL*	100	ug/L	10.0	106-47-8	GC	08/01/96
8270B	HEXACHLOROBUTADIENE	$06113	*Below MDL*	100	ug/L	10.0	87-68-3	GC	08/01/96
8270B	4-CHLORO-3-METHYLPHENOL	$06113	*Below MDL*	100	ug/L	10.0	59-50-7	GC	08/01/96
8270B	2-METHYLNAPHTHALENE	$06113	*803*	100	ug/L	10.0	91-57-6	GC	08/01/96
8270B	HEXACHLOROCYCLOPENTADIENE	$06113	*Below MDL*	100	ug/L	10.0	77-47-4	GC	08/01/96
8270B	2,4,6-TRICHLOROPHENOL	$06113	*Below MDL*	100	ug/L	10.0	88-06-2	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

Lab Sample ID	AB36325	**Client Site #**	29566
Project #	4024	**Client Sample #**	TK79-GW
Project Name	FT. STEWART		
Sampling Date/Time	07/18/96 16:05		

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
Sample Comment	This sample contains 0.2% TOTAL SOLIDS. Results are reported on a wet weight basis.								
SEMI (GC/MS) WATER				**Prep Date** 08/01/96			**Batch** 0801960004		
8270B	2-NITROANILINE	S06113	*Below MDL*	100	ug/L	10.0	88-74-4	GC	08/01/96
8270B	DIMETHYL PHTHALATE	S06113	*Below MDL*	100	ug/L	10.0	131-11-3	GC	08/01/96
8270B	ACENAPHTHYLENE	S06113	*Below MDL*	100	ug/L	10.0	208-96-8	GC	08/01/96
8270B	2,6-DINITROTOLUENE	S06113	*Below MDL*	100	ug/L	10.0	606-20-2	GC	08/01/96
8270B	3-NITROANILINE	S06113	*Below MDL*	100	ug/L	10.0	99-09-2	GC	08/01/96
8270B	ACENAPHTHENE	S06113	*Below MDL*	100	ug/L	10.0	83-32-9	GC	08/01/96
8270B	2,4-DINITROPHENOL	S06113	*Below MDL*	500	ug/L	10.0	51-28-5	GC	08/01/96
8270B	4-NITROPHENOL	S06113	*Below MDL*	500	ug/L	10.0	100-02-7	GC	08/01/96
8270B	DIBENZOFURAN	S06113	*Below MDL*	100	ug/L	10.0	132-64-9	GC	08/01/96
8270B	2,4-DINITROTOLUENE	S06113	*Below MDL*	100	ug/L	10.0	121-14-2	GC	08/01/96
8270B	DIETHYL PHTHALATE	S06113	*Below MDL*	100	ug/L	10.0	84-66-2	GC	08/01/96
8270B	4-CHLOROPHENYL PHENYL ETHER	S06113	*Below MDL*	100	ug/L	10.0	7005-72-3	GC	08/01/96
8270B	FLUORENE	S06113	*Below MDL*	100	ug/L	10.0	86-73-7	GC	08/01/96
8270B	4-NITROANILINE	S06113	*Below MDL*	100	ug/L	10.0	100-01-6	GC	08/01/96
8270B	2-METHYL-4,6-DINITROPHENOL	S06113	*Below MDL*	500	ug/L	10.0	534-52-1	GC	08/01/96
8270B	N-NITROSODIPHENYLAMINE	S06113	*Below MDL*	100	ug/L	10.0	86-30-6	GC	08/01/96
8270B	4-BROMOPHENYL PHENYL ETHER	S06113	*Below MDL*	100	ug/L	10.0	101-55-3	GC	08/01/96
8270B	HEXACHLOROBENZENE	S06113	*Below MDL*	100	ug/L	10.0	118-74-1	GC	08/01/96
0B	PENTACHLOROPHENOL	S06113	*Below MDL*	500	ug/L	10.0	87-86-5	GC	08/01/96
8270B	PHENANTHRENE	S06113	*184*	100	ug/L	10.0	85-01-8	GC	08/01/96
8270B	ANTHRACENE	S06113	*Below MDL*	100	ug/L	10.0	120-12-7	GC	08/01/96
8270B	DI-N-BUTYL PHTHALATE	S06113	*Below MDL*	100	ug/L	10.0	84-74-2	GC	08/01/96
8270B	FLUORANTHENE	S06113	*Below MDL*	100	ug/L	10.0	206-44-0	GC	08/01/96
8270B	PYRENE	S06113	*Below MDL*	100	ug/L	10.0	129-00-0	GC	08/01/96
8270B	BUTYL BENZYL PHTHALATE	S06113	*Below MDL*	100	ug/L	10.0	85-68-7	GC	08/01/96
8270B	3,3'-DICHLOROBENZIDINE	S06113	*Below MDL*	100	ug/L	10.0	91-94-1	GC	08/01/96
8270B	BENZO(A)ANTHRACENE	S06113	*Below MDL*	100	ug/L	10.0	56-55-3	GC	08/01/96
8270B	BIS(2-ETHYLHEXYL) PHTHALATE	S06113	*Below MDL*	200	ug/L	10.0	117-81-7	GC	08/01/96
8270B	CHRYSENE	S06113	*Below MDL*	100	ug/L	10.0	218-01-9	GC	08/01/96
8270B	DI-N-OCTYL PHTHALATE	S06113	*Below MDL*	100	ug/L	10.0	117-84-0	GC	08/01/96
8270B	BENZO(B)FLUORANTHENE	S06113	*Below MDL*	100	ug/L	10.0	205-99-2	GC	08/01/96
8270B	BENZO(K)FLUORANTHENE	S06113	*Below MDL*	100	ug/L	10.0	207-08-9	GC	08/01/96
8270B	BENZO(A)PYRENE	S06113	*Below MDL*	100	ug/L	10.0	50-32-8	GC	08/01/96
8270B	INDENO(1,2,3-CD)PYRENE	S06113	*Below MDL*	100	ug/L	10.0	193-39-5	GC	08/01/96
8270B	DIBENZO(A,H)ANTHRACENE	S06113	*Below MDL*	100	ug/L	10.0	53-70-3	GC	08/01/96
8270B	BENZO(G,H,I)PERYLENE	S06113	*Below MDL*	100	ug/L	10.0	191-24-2	GC	08/01/96
8270B	2-FLUOROPHENOL (SURR)	S06113	*38*	%	REC	1.0	367-12-4	GC	08/01/96
8270B	PHENOL-D5 (SURR)	S06113	*25*	%	REC	1.0	13127-88-3	GC	08/01/96
8270B	NITROBENZENE-D5 (SURR)	S06113	*76*	%	REC	1.0	4165-60-0	GC	08/01/96
8270B	2-FLUOROBIPHENYL (SURR)	S06113	*74*	%	REC	1.0	321-60-8	GC	08/01/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	S06113	*119*	%	REC	1.0	118-79-6	GC	08/01/96
JB	TERPHENYL-D14 (SURR)	S06113	*120*	%	REC	1.0	1718-51-0	GC	08/01/96
8270B	CARBAZOLE	S06113	*Below MDL*	100	ug/L	10.0	86-74-8	GC	08/01/96
BTEX (GC) WATER				**Prep Date** 08/01/96			**Batch** 073096BS		

Lab Sample ID AB36325 **Client Site #** 29566
Project # 4024 **Client Sample #** TK79-GW
Project Name FT. STEWART
Sampling Date/Time 07/18/96 16:05

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
Sample Comment	This sample contains 0.2% TOTAL SOLIDS. Results are reported on a wet weight basis.								
BTEX (GC) WATER				Prep Date 08/01/96			Batch 073096BS		
8020A	BENZENE	$08106	*130*	10	ug/L	10.0	71-43-2	DTA	08/01/96
8020A	TOLUENE	$08106	*420*	10	ug/L	10.0	108-88-8	DTA	08/01/96
8020A	ETHYLBENZENE	$08106	*120*	10	ug/L	10.0	100-41-4	DTA	08/01/96
8020A	XYLENES (TOTAL)	$08106	*730*	10	ug/L	10.0	1330-20-7	DTA	08/01/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*106*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*107*		% REC	1.0	460-00-4	DTA	08/01/96
8020A	CHLOROBENZENE	$08106	*Below MDL*	10	ug/L	10.0	108-90-7	DTA	08/01/96
8020A	1,2-DICHLOROBENZENE	$08106	*Below MDL*	10	ug/L	10.0	95-50-1	DTA	08/01/96
8020A	1,3-DICHLOROBENZENE	$08106	*Below MDL*	10	ug/L	10.0	541-73-1	DTA	08/01/96
8020A	1,4-DICHLOROBENZENE	$08106	*Below MDL*	10	ug/L	10.0	106-46-7	DTA	08/01/96
8020A	TERT-METHYLBUTYL ETHER	$08106	*110*	10	ug/L	10.0	1634-04-4	DTA	08/01/96
				Prep Date 07/25/96			Batch 072596		
160.3	% TOTAL SOLID SOIL (N/C)	09099	*0.2*	0.1	%	1.0		NM	07/25/96

Lab Sample ID AB36326 **Client Site #** 29567
Project # 4024 **Client Sample #** TRIP BLANK
Project Name FT. STEWART
Sampling Date/Time 07/18/96 16:20

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 08/01/96			Batch 073096BS		
8020A	BENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	71-43-2	DTA	08/01/96
8020A	TOLUENE	$08106	*Below MDL*	1.0	ug/L	1.0	108-88-8	DTA	08/01/96
8020A	ETHYLBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	100-41-4	DTA	08/01/96
8020A	XYLENES (TOTAL)	$08106	*Below MDL*	1.0	ug/L	1.0	1330-20-7	DTA	08/01/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*100*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*102*		% REC	1.0	460-00-4	DTA	08/01/96
8020A	CHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	108-90-7	DTA	08/01/96
8020A	1,2-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	95-50-1	DTA	08/01/96
8020A	1,3-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	541-73-1	DTA	08/01/96
8020A	1,4-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	106-46-7	DTA	08/01/96
8020A	TERT-METHYLBUTYL ETHER	$08106	*Below MDL*	1.0	ug/L	1.0	1634-04-4	DTA	08/01/96

Lab Sample ID	AB36328	**Client Site #**	
Project #	4024	**Client Sample #**	WATER METHOD BLANK
Project Name	FT. STEWART		
Sampling Date/Time	/ / :		

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
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
)B	4-CHLOROANILINE	$06113	*Below MDL*	10.0	ug/L	1.0	106-47-8	GC	08/01/96
0B	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	606-20-2	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	132-64-9	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
)B	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

Lab Sample ID	AB36328	**Client Site #**	
Project #	4024	**Client Sample #**	WATER METHOD BLANK
Project Name	FT. STEWART		
Sampling Date/Time	/ / :		

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	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
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 08/01/96			Batch 073096BS		
8020A	BENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	71-43-2	DTA	08/01/96
8020A	TOLUENE	$08106	*Below MDL*	1.0	ug/L	1.0	108-88-8	DTA	08/01/96
8020A	ETHYLBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	100-41-4	DTA	08/01/96
8020A	XYLENES (TOTAL)	$08106	*Below MDL*	1.0	ug/L	1.0	1330-20-7	DTA	08/01/96
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*105*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*107*		% REC	1.0	460-00-4	DTA	08/01/96
8020A	CHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	108-90-7	DTA	08/01/96
8020A	1,2-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	95-50-1	DTA	08/01/96
8020A	1,3-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	541-73-1	DTA	08/01/96
8020A	1,4-DICHLOROBENZENE	$08106	*Below MDL*	1.0	ug/L	1.0	106-46-7	DTA	08/01/96
8020A	TERT-METHYLBUTYL ETHER	$08106	*Below MDL*	1.0	ug/L	1.0	1634-04-4	DTA	08/01/96

Lab Sample ID AB36637 Client Site #
Project # 4024 Client Sample # LCS
Project Name FT. STEWART
Sampling Date/Time / /

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 08/01/96			Batch 073096BS		
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*97*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*101*		% REC	1.0	460-00-4	DTA	08/01/96

Lab Sample ID AB36638 Client Site #
Project # 4024 Client Sample # MS
Project Name FT. STEWART
Sampling Date/Time / /

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 08/01/96			Batch 073096BS		
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*106*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*112*		% REC	1.0	460-00-4	DTA	08/01/96

Lab Sample ID AB36639 Client Site #
Project # 4024 Client Sample # MSD
ect Name FT. STEWART
Sampling Date/Time / /

METHOD	ANALYTE	TEST CODE	RESULT	MDL	UNITS	Dilution Factor	CAS #	ANALYST	DATE OF ANALYSIS
BTEX (GC) WATER				Prep Date 08/01/96			Batch 073096BS		
8020A	A,A,A-TRIFLUOROTOLUENE (SURR)	$08106	*105*		% REC	1.0	98-08-8	DTA	08/01/96
8020A	4-BROMOFLUOROBENZENE (SURR)	$08106	*111*		% REC	1.0	460-00-4	DTA	08/01/96

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

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	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
B	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	**Client Site #**	
Project #	4004	**Client Sample #**	LCSD
Project Name	FT. STEWART		
Sampling Date/Time	/ /		

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	2-FLUOROPHENOL (SURR)	S06113	*78*		% REC	1.0	367-12-4	GC	08/02/96
8270B	PHENOL-D5 (SURR)	S06113	*57*		% REC	1.0	13127-88-3	GC	08/02/96
8270B	NITROBENZENE-D5 (SURR)	S06113	*75*		% REC	1.0	4165-60-0	GC	08/02/96
8270B	2-FLUOROBIPHENYL (SURR)	S06113	*70*		% REC	1.0	321-60-8	GC	08/02/96
8270B	2,4,6-TRIBROMOPHENOL (SURR)	S06113	*96*		% REC	1.0	118-79-6	GC	08/02/96
8270B	TERPHENYL-D14 (SURR)	S06113	*107*		% REC	1.0	1718-51-0	GC	08/02/96

12 Aug 96

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, WI-DNR 998014380

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

U.S. Army Corps of Engineers Work Order # 996 Job # 4024 Chain of Custody Record

(ER 1110-1-263)

Proj. No. | Project Name: Ft. Stewart

Sampler : (Signature)

TAT: Regular

Due 7/31

Date	Time	Preс.	Grab	Comp	Site Code/Sample Number	Number of Containers	MB020	MB210						Remarks: SAD NO.	MATRIX
7/18/96	1605				1K79-GW	3	V	V						29506 AB 36325	Sludge
↓	1620				TRIP BLANK	2	V							29507 AB 36326	Water
					sludge method Blank		X	X						AB 36327	
					Water method Blank		X							AB 36328	

Sampler Relinquished by:	Date/Time	Received by: (Sig.)	Date/Time	Hazards Associated with Samples
Relinquished by: (Sig.)	Date/Time 7/23/96	Received by: (Sig.)	Date/Time 7/24/96 1031	
Relinquished by: (Sig)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time	Remarks at time of receipt: ICE pac
Custody Seal No.		Lab case No.:		

ENG Form 502[illegible], Oct 90

Ja-# 107984

Proponent CEMP-RT

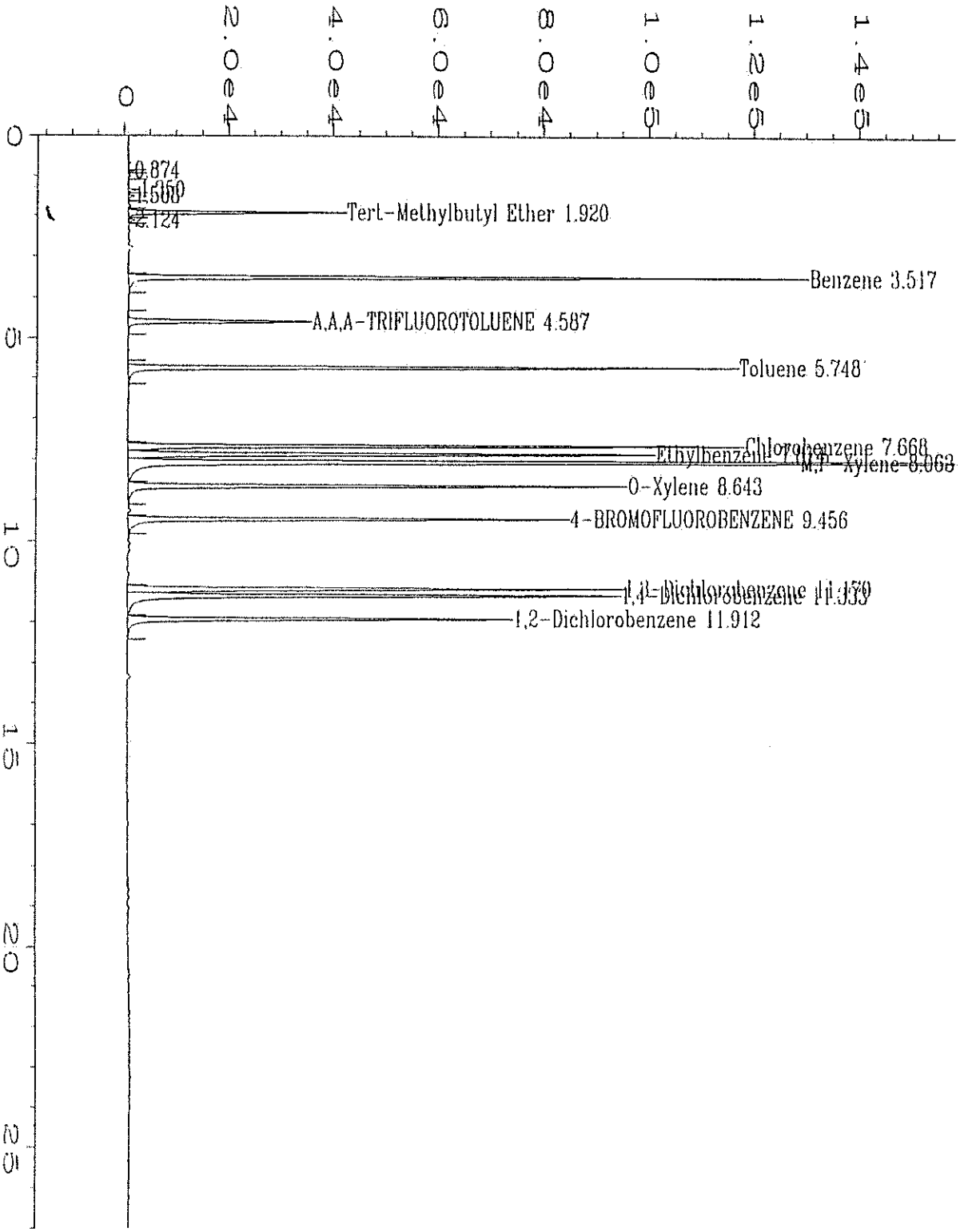
External Standard Report

Data File Name : C:\HPCHEM\1\DATA\b080196\30801F08.D
Operator : Doug Anderson
Instrument : GC3
Sample Name : 20ppb 8020 ccv
Run Time Bar Code:
Acquired on : 01 Aug 96 04:20 PM
Report Created on: 02 Aug 96 08:33 AM
Last Recalib on : 02 AUG 96 07:23 AM
Multiplier : 1
Sample Info : 16ppb surr

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 1
Instrument Method: 3B061396.MTH
Analysis Method : 3B080196.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\1\DATA\b080196\30801F08.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
1.920	156176	PV	0.059	1	17.869	Tert-Methylbutyl Ether
3.517	465016	BB	0.056	1	17.638	Benzene
4.587	147891	BB	0.065	1	16.957	A,A,A-TRIFLUOROTOLUENE
5.748	448179	BV	0.060	1	17.550	Toluene
7.668	447246	BV	0.059	1	17.378	Chlorobenzene
7.874	404689	VV	0.063	1	17.571	Ethylbenzene
8.063	943237	VV	0.065	1	35.488	M,P-Xylene
8.643	395206	VB	0.064	1	17.637	O-Xylene
9.456	340378	PV	0.062	1	16.996	4-BROMOFLUOROBENZENE
11.170	388293	BV	0.063	1	17.323	1,3-Dichlorobenzene
11.333	428787	VV	0.069	1	18.294	1,4-Dichlorobenzene
11.912	313216	VB	0.066	1	17.490	1,2-Dichlorobenzene



Data File Name	: C:\HPCHEM\1\DATA\b080196\30801F08.D		
Operator	: Doug Anderson	Page Number	: 1
Instrument	: GC3	Vial Number	: 8
Sample Name	: 20ppb 8020 ccv	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
uired on	: 01 Aug 96 04:20 PM	Instrument Method	: 3B061396.MTH
Report Created on	: 02 Aug 96 08:33 AM	Analysis Method	: 3B080196.MTH
Last Recalib on	: 02 AUG 96 07:23 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 16ppb surr		

BTEX Method Blank Summary

Lab Name:	EcoSys, Inc.	Client:	ACE-SAD
Ledger No(s):	107984		
Batch No:	073096BS	Date Analyzed:	8/1/96
Lab File ID:	30801F09	Time Analyzed:	16:53
Lab Sample ID:	AB36328	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	AB36637 LCS	30801F10	8/1/96
2	NA	AB36638 MS	30801F11	8/1/96
3	NA	AB36639 MSD	30801F12	8/1/96
4	TK79-GW	AB36325	30801F14	8/1/96
5	TRIP BLANK	AB36326	30801F13	8/1/96
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

NA = Not Applicable

12 Aug 96

QA/QC Officer

Comments:

Water BTEX MS/MSD Recovery

Lab Name: EcoSys, Inc. Client: ACE-SAD
Ledger No: 107984 Matrix Spike/Matrix Dup No.: AB36326 REF
Batch No: 073096BS AB36638 MS
Lab File ID: 30801F11/30801F12 AB36639 MSD
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	19.6	98		80-120
Toluene	20.0	ND	19.9	100		80-120
Ethylbenzene	20.0	ND	19.5	98		80-120
m,p-Xylene	40.0	ND	39.2	98		80-120
o-Xylene	20.0	ND	19.6	98		80-120

Compound	Spike Added (ug/L)	MSD Conc (ug/L)	MSD % Recovery	#	% RPD	#	QC Limits RPD	QC Limits Recovery
Benzene	20.0	19.5	98		0		30	80-120
Toluene	20.0	19.8	99		1		30	80-120
Ethylbenzene	20.0	19.4	97		1		30	80-120
m,p-Xylene	40.0	39.0	98		0		30	80-120
o-Xylene	20.0	19.4	97		1		30	80-120

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
ND = None Detected

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

QA/QC Officer 12 Aug 94

Comments: _____

BTEX LCS Recoveries (Water)

Lab Name: EcoSys, Inc.	Client: ACE-SAD
Ledger No: 107984	Lab Control Spike: AB36637
Batch No: 073096BS	Level (Low/Med): Low
Lab File ID: 30801F10	

Compound	Spike Added (ug/L)	Sample Conc. (ug/L)	LCS Conc (ug/L)	LCS % Recovery	#	QC Limits Recovery
Benzene	20	NR	19	93		80-120
Toluene	20	NR	18	92		80-120
Ethylbenzene	20	NR	19	93		80-120
m,p-Xylene	40	NR	37	93		80-120
o-Xylene	20	NR	18	92		80-120

* Values outside of QC limits
ND = Not Detected
NR = Not Required

Spike Recovery: 0 out of 5 outside limits

12 Aug 96
QA/QC Officer

Comments: _____

BTEX Surrogate Recovery Summary

Lab Name: EcoSys, Inc. Client: ACE-SAD
Ledger No(s): 107984
Batch No.: 073096BS Matrix: Water
GC Column : DB-VXR Level: Low

Lab Sample No.	A,A,A-Trifluorotoluene %Rec	#	4-Bromofluorobenzene %Rec	#	Total Out
AB36328 MB	105		107		0
AB36637 LCS	97		101		0
AB36638 MS	106		112		0
AB36639 MSD	105		111		0
AB36325	106		107		0
AB36326	100		102		0

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

12 Aug 96
QA/QC Officer

Comments:

Lab Name: EcoSys, Inc. Client: ACE-SAD

Ledger No: 107984 DFTPP Injection Date: 8/1/96

Lab File ID: DFTPP080196 DFTPP Injection Time: 7:19

Instrument ID: MSD-2 Batch 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	AB36328 MB	BNA0801008	08/01/96	3:26 PM
	03	TK79-GW	AB36325	BNA0901009	08/01/96	4:16 PM
	04					
	05					
	06					
	07					
	08					

NA: Not Applicable

Comments:

12/5/96

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 Autotune Date: 31-Jul-96 09:13:5
Operator : GORDON Inst ID: msd_2.i
Smp Info : 50NG 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 : 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

RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE		RATIO
dftpp					CAS #: 5074-71-5		
16(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)	275	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

) - Qualifier signal failed the ratio test.

Ecosys, Inc.

TARGET COMPOUNDS

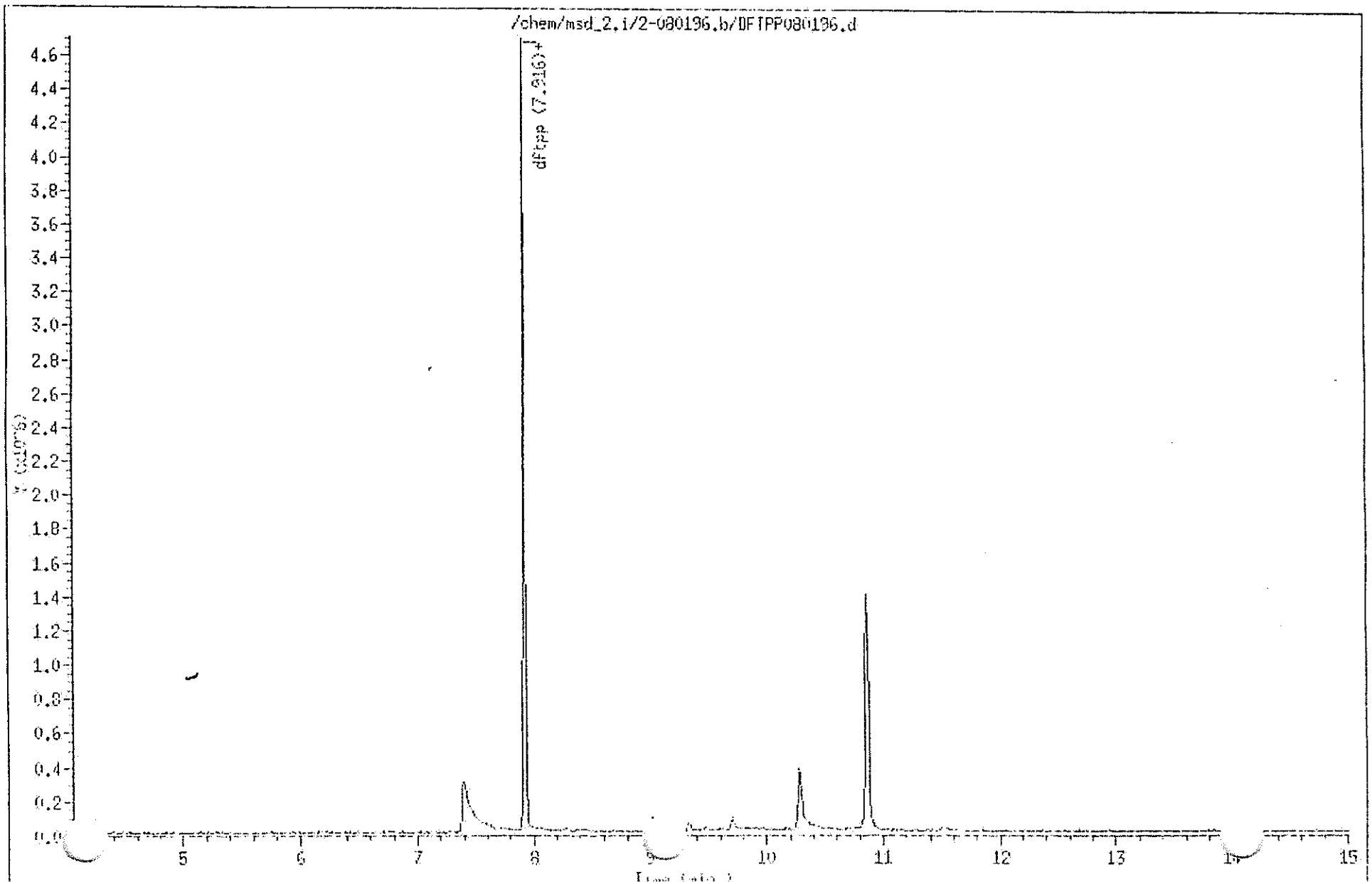
Client Name:
Client Sample ID: DFTPP02
Sample Location:
Lab Sample ID: DFTPP02
Sample Type: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: TUNE FOR INSTRUMENT msd2.i

Client SDG: 2-080196.b
Sample Date:
Sample Point:
Date Received:

Level: LOW
Column Number: 1

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

Data File: /chem/msd_2.i/2-080196.b/DFTPP080196.d
Date : 01-AUG-96 07:19
Instrument : msd_2.i
Sample ID : DFTPP02
Column phase :
Column diameter : 2.00
Volume Injected (uL) : 1.0



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

Date : 01-AUG-96 07:19

Instrument : msd_2.i

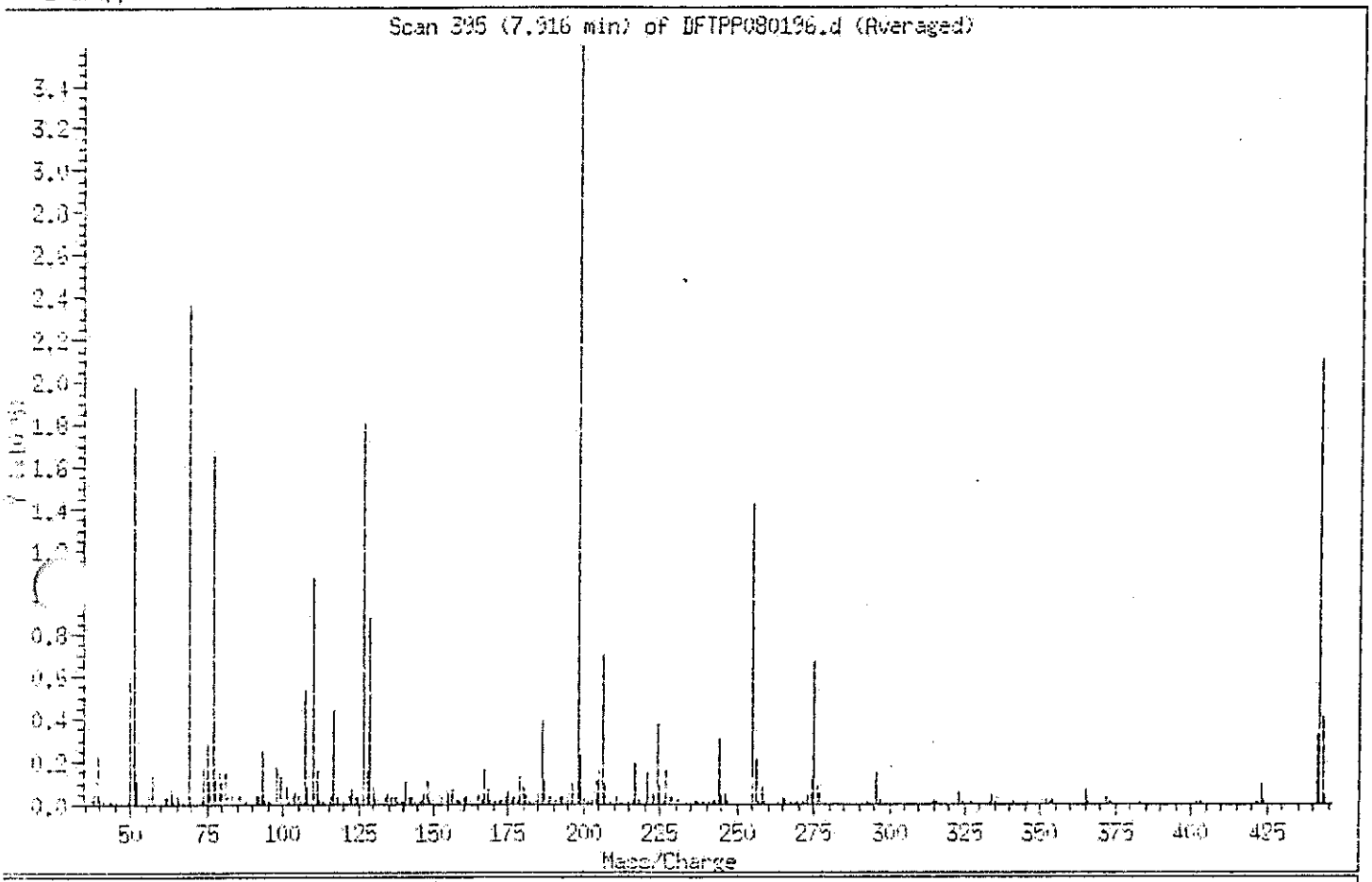
Sample ID : DFTPP02

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	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

Data File: /chem/msd_2.i/2-080196.b/DFTPP080196.d
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
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	3782	121.00	280	200.00	1808	285.00	900
39.00	21959	122.00	3545	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	10058	290.00	84
42.00	224	125.00	2645	205.00	17343	291.00	95
43.00	36	127.00	180873	206.00	69818	292.00	88
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	13925
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	5697	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	835	334.00	3494

Data File: /chem/msd_2.i/2-080196.b/DFTPP080196.d
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
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	109
76.00	10326	158.00	1739	240.00	426	346.00	963
77.00	164725	159.00	1058	241.00	807	347.00	188
78.00	11082	160.00	2643	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	375
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
93.00	24371	174.00	3419	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	265.00	117	403.00	1588
100.00	1378	180.00	7743	264.00	282	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	11291	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

e : 01-AUG-96 07:19

.trument : msd_2.i

Sample ID : DFTPP02

Column phase : Column diameter : 2.00

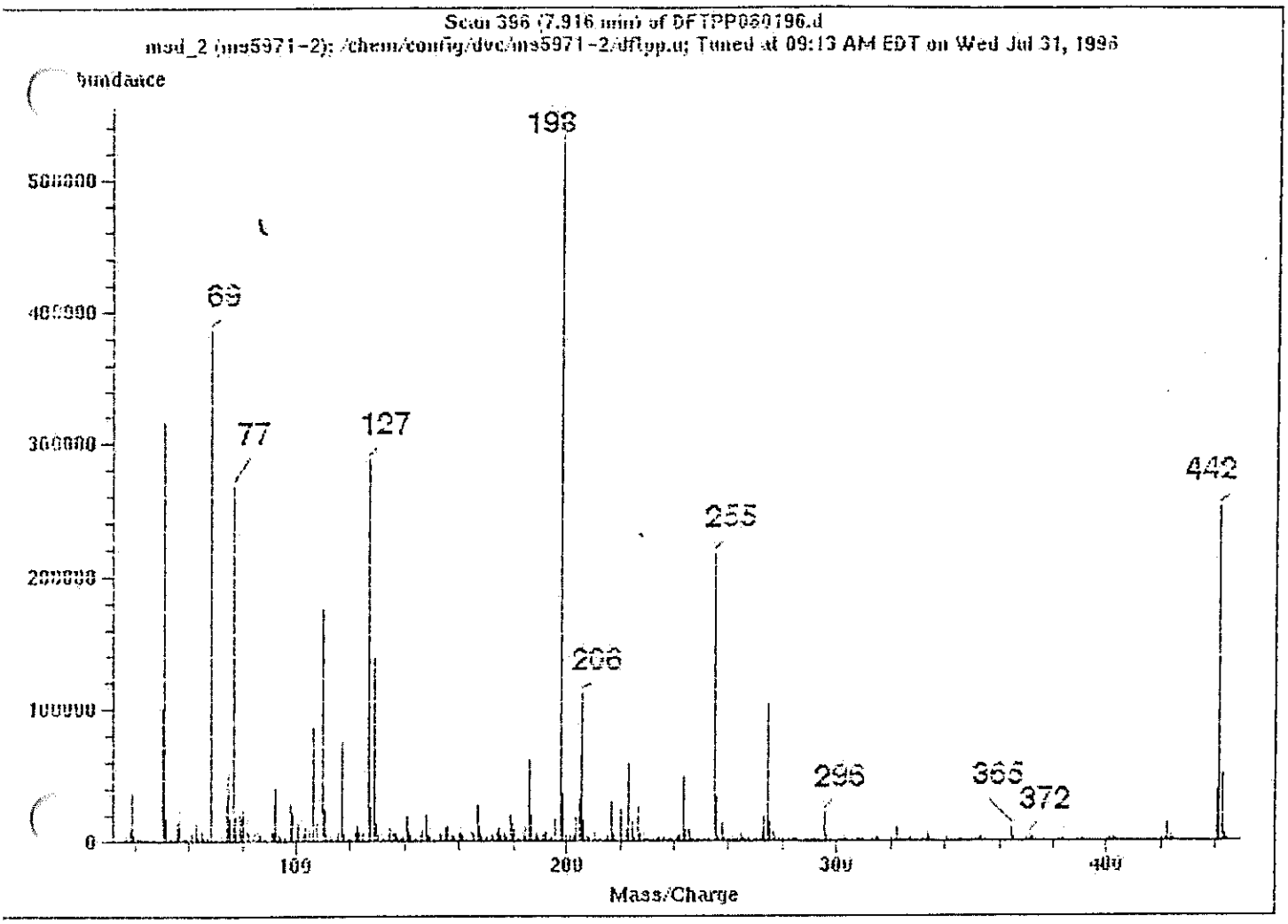
Volume Injected (uL) : 1.0

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		



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
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	6.1
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/med_2.i/2-073196.b/MA-BNA.m
Cal Date : 01-Aug-1996 06:42 target

Calibration File Names:
Level 2: /chem/med_2.i/2-073196.b/BNA0201002.d
Level 3: /chem/med_2.i/2-073196.b/BNA0301003.d
Level 4: /chem/med_2.i/2-073196.b/BNA0601006.d
Level 5: /chem/med_2.i/2-073196.b/BNA0401004.d
Level 6: /chem/med_2.i/2-073196.b/BNA0501005.d

	Compound	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	%RSD/R^2
2	Aniline	0.664671	1.06565	1.00573	1.45125	1.37849	1.11316	28.395
4	Phenol **	0.927431	1.02261	1.11432	1.16621	1.19629	1.08537	10.151
5	Bis(2-chloroethyl) ether	1.30183	1.08113	1.21910	1.17990	1.22625	1.20165	6.701
6	2-Chlorophenol	1.16173	1.22024	1.25666	1.45597	1.31928	1.29277	9.765
7	1,3-Dichlorobenzene	1.46041	1.47016	1.53775	1.54213	1.54683	1.51147	2.806
9	1,4-Dichlorobenzene **	1.46266	1.50179	1.56282	1.59046	1.63592	1.55073	4.460
10	1,2-Dichlorobenzene	1.39879	1.40059	1.46753	1.49726	1.54562	1.45996	4.514
11	Benzyl alcohol	0.77978	0.92002	0.93584	0.90645	0.84179	0.87638	7.359
12	2-Methylphenol	0.81176	0.86821	0.90954	1.07949	0.99101	0.93180	11.296
13	Bis(2-chloroisopropyl) ether	0.90776	0.91853	0.97968	1.16841	1.12956	1.02079	11.852
14	N-Nitrosodi-n-propylamine *	0.70771	0.69337	0.71480	0.68787	0.69155	0.69906	1.657
15	4-Methylphenol	0.76799	0.87773	0.95013	1.11857	1.04909	0.95270	14.520
16	Hexachloroethane	0.63969	0.64393	0.66962	0.68581	0.71690	0.67099	4.739
18	Nitrobenzene	0.35399	0.39178	0.40817	0.42160	0.41513	0.39812	6.807
19	Isophorone	0.67325	0.69582	0.72705	0.61049	0.70892	0.68311	6.599
20	2-Nitrophenol **	0.22871	0.25752	0.27143	0.27329	0.29528	0.26525	9.234
21	2,4-Dimethylphenol	0.32725	0.38564	0.41578	0.34182	0.38645	0.37139	9.730
22	Bis(2-chloroethoxy)methane	0.35989	0.37601	0.40360	0.34813	0.39370	0.37627	6.105
23	2,4-Dichlorophenol **	0.28475	0.33655	0.33717	0.30718	0.29966	0.31306	7.402
24	Benzoic acid	0.22030	0.18236	0.19424	0.25453	0.23956	0.21820	13.823
25	1,2,4-Trichlorobenzene	0.36812	0.38352	0.39418	0.38181	0.39716	0.38496	2.989
27	Naphthalene	1.09411	1.13078	1.18725	1.16754	1.15797	1.14753	3.148
28	4-Chloroaniline	0.26020	0.31419	0.33218	0.40779	0.37552	0.33798	16.823
29	Hexachlorobutadiene **	0.22720	0.22230	0.22519	0.21981	0.22410	0.22372	1.259
	4-Chloro-3-methylphenol **	0.32626	0.34318	0.36666	0.36781	0.34521	0.34981	5.011
	2-Methylnaphthalene	0.73158	0.74551	0.76939	0.72467	0.75242	0.74472	2.367
32	Hexachlorocyclopentadiene *	0.20349	0.25460	0.25547	0.28406	0.29814	0.25915	14.010
33	2,4,6-Trichlorophenol **	0.25944	0.30361	0.33218	0.36173	0.35082	0.32156	12.789
34	2,4,5-Trichlorophenol	0.33308	0.35623	0.37489	0.39529	0.34741	0.36138	6.714

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	% RSD/R^2
36	2-Chloronaphthalene	1.12479	1.18116	1.23549	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	1.49211	1.53044	1.54900	1.52436	1.50607	4.272
39	2,6-Dinitrotoluene	0.32402	0.33601	0.30482	0.29565	0.31131	0.31237	6.128
42	Acenaphthylene	1.78680	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	1.21967	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	1.66028	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	0.65279	0.67651	0.63519	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	0.09902	0.11428	0.13540	0.13992	0.11111	23.283
53	N-Nitrosodiphenylamine **	0.42209	0.44330	0.40617	0.41486	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	3.098
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	4.049
62	Carbazole	0.75283	0.56202	0.55738	0.72086	0.58909	0.63643	14.635
	n-n-butyl phthalate	2.04394	2.00785	1.96648	2.13475	1.87178	2.00496	4.835
	luoranthene **	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	Bi(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	%RSD/R^2
	3,3'-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	1.191421	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	1.643951	1.722291	1.847361	2.019471	1.738991	12.0991
76	Benzo(k)fluoranthene	2.054951	1.929601	2.155271	1.921261	1.768231	1.965661	7.4701
77	Benzo(a)pyrene **	1.335551	1.421281	1.454511	1.442991	1.485091	1.427881	3.9591
79	Indeno(1,2,3-cd)pyrene	1.095561	1.174241	1.109801	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	1.489721	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)	CONCENTRATIONS FINAL (ug/L)
Fluorophenol	112.00	9.555(0.717)	1651748	73.5	73.5
iline	93.00	12.459(0.934)	1746519	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)	2174391	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	
25 1,2,4-Trichlorobenzene	180.00	16.607(0.992)	1971384	79.7	79.7
hthalene	128.00	16.791(1.003)	5998216	81.4	81.4
28 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)	1798180	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	88.0	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)	1130323	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	21.590(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)
[illegible] 6-Dinitro-2-methylphenol	198.00	22.965(0.912)	542772	95.4	95.4(M)
5[illegible] -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(1.009)	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	26.906(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	79.0	79.0
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 [illegible]nzo(a)pyrene **	252.00	35.996(1.000)	1563534	78.6	78.6
[illegible] [illegible]rylene-d12	264.00	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)

QC Flag Legend

1 - 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 RRF	%D	MAX %D
2-Fluorophenol	1.112	1.022	0.050	8.1	30.0
Aniline	1.113	1.081	0.050	2.9	30.0
Phenol-d5	1.062	1.111	0.050	4.6	30.0
Phenol **	1.085	1.126	0.050	3.7	30.0
Bis(2-chloroethyl) ether	1.202	1.201	0.050	0.0	30.0
2-Chlorophenol	1.283	1.271	0.050	0.9	30.0
1,3-Dichlorobenzene	1.511	1.537	0.050	1.7	30.0
1,4-Dichlorobenzene **	1.551	1.595	0.050	2.9	30.0
1,2-Dichlorobenzene	1.460	1.487	0.050	1.8	30.0
Benzyl alcohol	0.876	0.984	0.050	12.3	30.0
2-Methylphenol	0.932	0.973	0.050	4.4	30.0
Bis(2-chloroisopropyl) ether	1.021	1.090	0.050	6.7	30.0
N-Nitroso-di-n-propylamine *	0.699	0.775	0.050	10.9	30.0
4-Methylphenol	0.953	1.010	0.050	6.0	30.0
Hexachloroethane	0.671	0.699	0.050	4.2	30.0
Nitrobenzene-d5	0.424	0.423	0.050	0.3	30.0
Nitrobenzene	0.398	0.399	0.050	0.2	30.0
Isophorone	0.683	0.736	0.050	7.7	30.0
2-Nitrophenol **	0.265	0.269	0.050	1.5	30.0
2,4-Dimethylphenol	0.371	0.399	0.050	4.8	30.0
Bis(2-chloroethoxy)methane	0.376	0.407	0.050	8.1	30.0
2,4-Dichlorophenol **	0.313	0.330	0.050	5.3	30.0
Benzoic acid	0.219	0.192	0.050	11.9	30.0
1,2,4-Trichlorobenzene	0.385	0.384	0.050	0.4	30.0
Naphthalene	1.148	1.167	0.050	1.7	30.0
4-Chloroaniline	0.338	0.305	0.050	9.7	30.0
Hexachlorobutadiene **	0.224	0.219	0.050	2.1	30.0
4-Chloro-3-methylphenol **	0.350	0.350	0.050	0.0	30.0
2-Methylnaphthalene	0.745	0.747	0.050	0.4	30.0
Hexachlorocyclopentadiene *	0.259	0.285	0.050	10.0	30.0
2,4,6-Trichlorophenol **	0.322	0.325	0.050	0.9	30.0
2,4,5-Trichlorophenol	0.361	0.372	0.050	3.0	30.0
2-Fluorobiphenyl	1.446	1.466	0.050	1.4	30.0
2-Chloronaphthalene	1.202	1.221	0.050	1.6	30.0
2-Nitroaniline	0.315	0.292	0.050	7.1	30.0
Dimethyl phthalate	1.506	1.524	0.050	1.2	30.0
2,6-Dinitrotoluene	0.312	0.335	0.050	7.4	30.0
Acenaphthylene	1.850	1.885	0.050	1.9	30.0
3-Nitroaniline	0.170	0.172	0.050	1.1	30.0
Acenaphthene **	1.219	1.222	0.050	0.3	30.0
2,4-Dinitrophenol *	0.112	0.116	0.050	4.4	30.0
2,4-Dinitrotoluene	0.397	0.391	0.050	1.6	30.0
4-Nitrophenol *	0.134	0.152	0.050	13.4	30.0
Dibenzofuran	1.643	1.639	0.050	0.3	30.0
Diethyl phthalate	1.537	1.580	0.050	2.8	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 RRF	%D	MAX %D
Fluorene	1.2841	1.255	0.050	2.3	30.0
4-Chlorophenyl phenyl ether	0.6351	0.622	0.050	2.1	30.0
4-Nitroaniline	0.1311	0.151	0.050	15.3	30.0
4,6-Dinitro-2-methylphenol	0.1111	0.133	0.050	19.3	30.0
N-Nitrosodiphenylamine **	0.4231	0.424	0.050	0.2	30.0
1,2-Diphenylhydrazine	2.0921	1.981	0.050	5.3	30.0
2,4,6-Tribromophenol	0.1371	0.136	0.050	0.7	30.0
4-Bromophenyl phenyl ether	0.3001	0.287	0.050	4.1	30.0
Hexachlorobenzene	0.3341	0.325	0.050	2.6	30.0
Pentachlorophenol **	0.1231	0.131	0.050	6.4	30.0
Phenanthrene	1.3451	1.333	0.050	0.9	30.0
Anthracene	1.2431	1.175	0.050	5.5	30.0
Carbazole	0.6361	0.562	0.050	11.6	30.0
Di-n-butyl phthalate	2.0051	1.918	0.050	4.3	30.0
Fluoranthene **	1.1451	1.129	0.050	1.4	30.0
Pyrene	2.1751	2.215	0.050	1.8	30.0
Terphenyl-d14	1.4481	1.356	0.050	6.3	30.0
Butyl benzyl phthalate	1.3721	1.337	0.050	2.5	30.0
Bis(2-ethylhexyl) adipate	1.1851	1.159	0.050	2.2	30.0
3,3'-Dichlorobenzidine	0.1431	0.130	0.050	8.7	30.0
Benz(a)anthracene	1.2501	1.221	0.050	2.3	30.0
Bis(2-ethylhexyl) phthalate	2.1191	2.055	0.050	3.0	30.0
Chrysene	1.1621	1.186	0.050	2.1	30.0
Di-n-octyl phthalate **	5.9661	5.146	0.050	13.7	30.0
Benzo(b)fluoranthene	1.7391	1.607	0.050	7.6	30.0
Benzo(k)fluoranthene	1.9661	2.055	0.050	4.5	30.0
Benzo(a)pyrene **	1.4281	1.402	0.050	1.8	30.0
Indeno(1,2,3-cd)pyrene	1.0751	1.198	0.050	11.5	30.0
Dibenz(a,h)anthracene	0.9261	0.921	0.050	0.6	30.0
Benzo(g,h,i)perylene	1.0081	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

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
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
79 Perylene-d12	557551	278775	1115102	557551	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
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
79 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.i/2-080196.b/BNAU01001.d
Date : 01-AUG-1996 07:47
Instrument : msd_2.i
Sample ID :
Column phase :
Volume Injected (uL) : 1.0

Column diameter : 2.00

Lab Name: EcoSys, Inc. Client: ACE-SAD

Ledger No: 107984 DFTPP Injection Date: 8/2/96

Lab File ID: DFTPP080296 DFTPP Injection Time: 6:47

Instrument ID: MSD-2 Batch 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:

12 Aug 96

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 Autotune Date: 31-Jul-96 09:13:5
Operator : GORDON Inst ID: msd_2.i
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 : Cal File:
Vials bottle: 1 QC Sample: DFTPP
Vial Factor: 1.000 Target Version: Target 2.20
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE		RATIO
dftpp					CAS #: 5074-71-5		
17(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 Sample ID: DFTPP02
Sample Location:
Lab Sample ID: DFTPP02
Sample Type: WATER
Analysis Type: SV
Data Type: MS DATA
Misc Info: TUNE FOR INSTRUMENT msd2.i

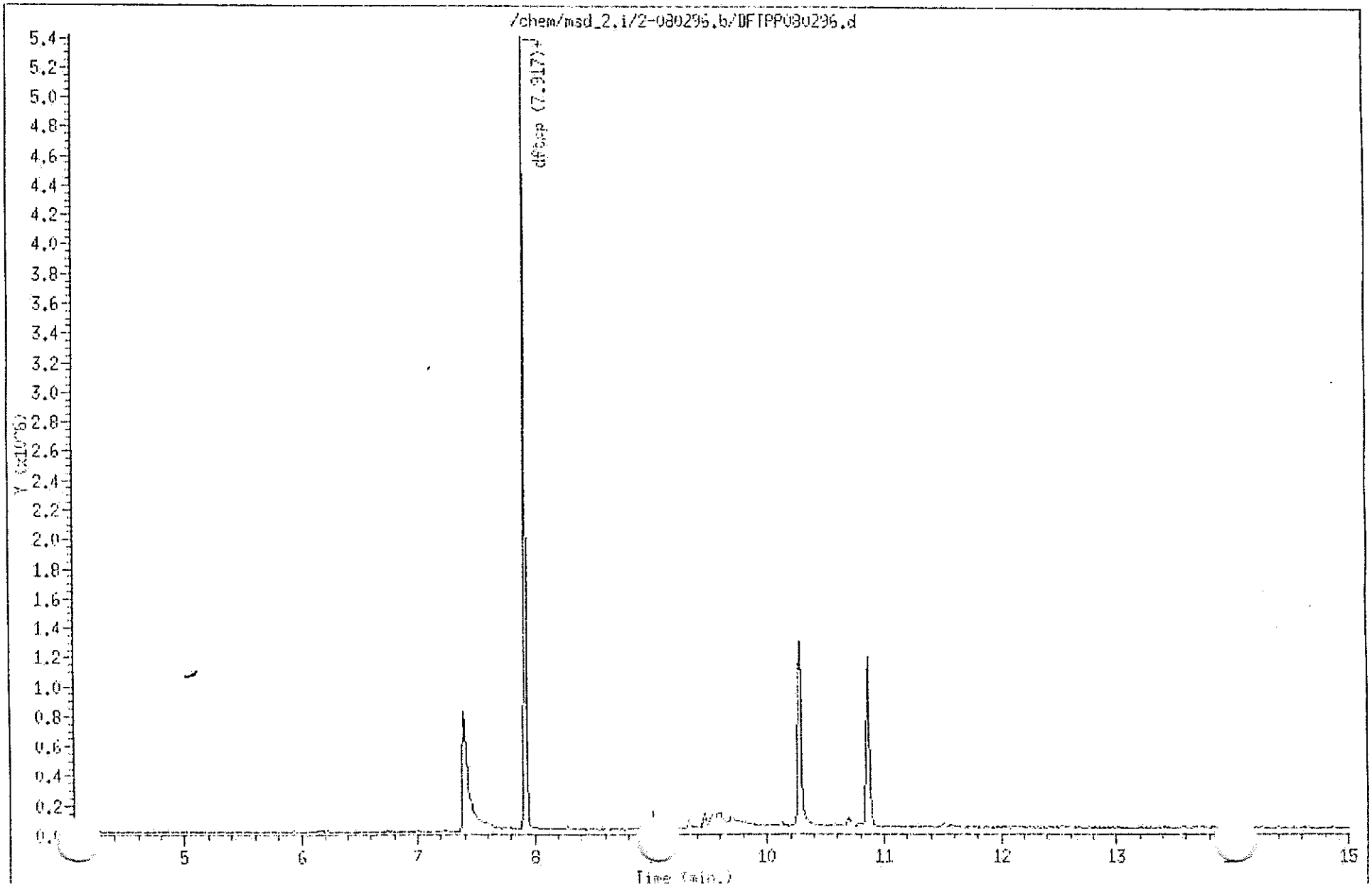
Client SDG: 2-080296.b
Sample Date:
Sample Point:
Date Received:

Level: LOW
Column Number: 1

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

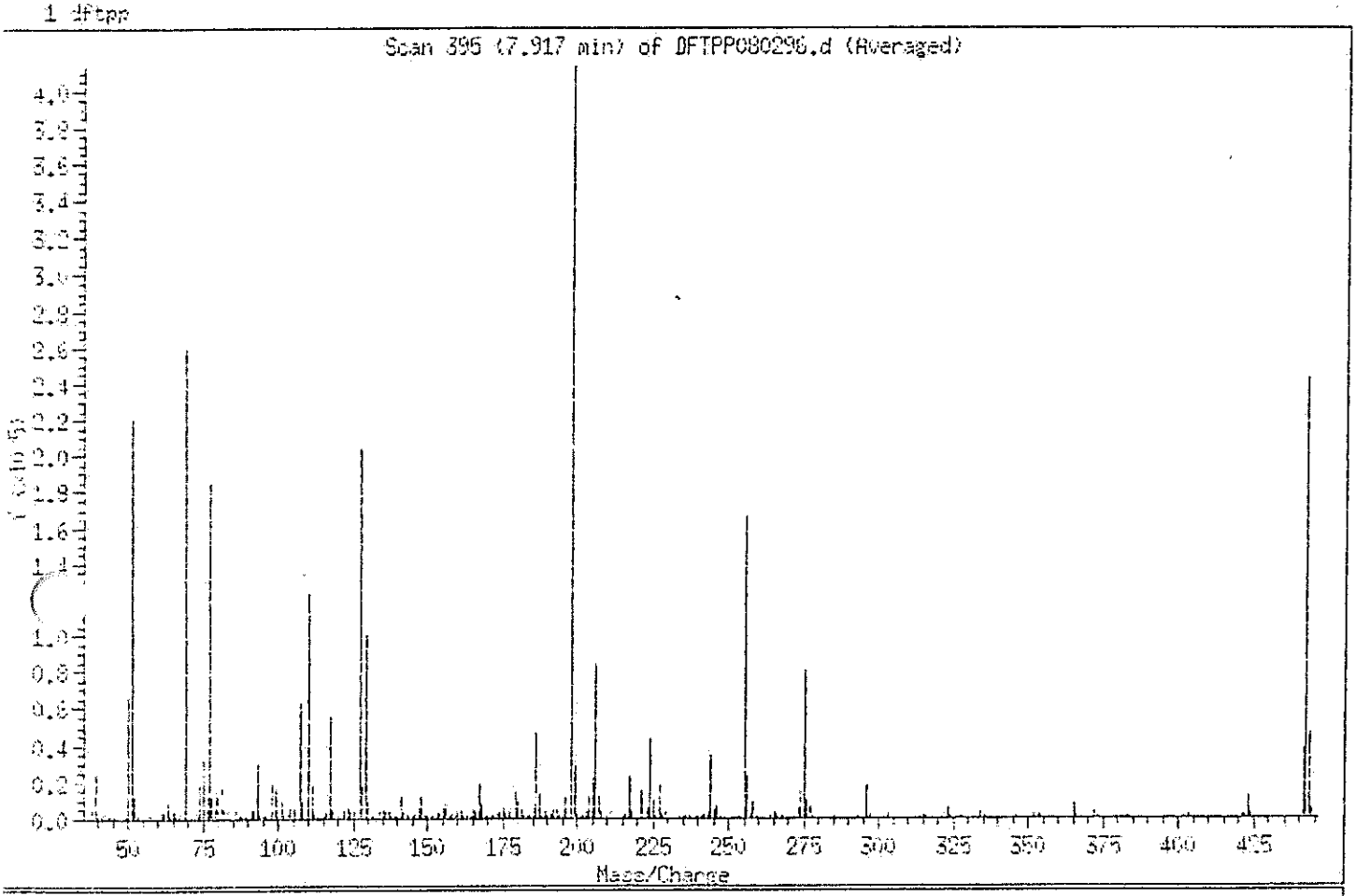
Data File: /chem/msd_2.i/2-080296.b/DFTPP080296.d
Date : 02-AUG-96 06:47
Instrument : msd_2.i
Sample ID : DFTPP02
Column phase :
Volume Injected (uL) : 1.0

Column diameter : 2.00



Data File: /chem/msd_2.i/2-080296.b/DFTPP080296.d
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



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

trument : 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
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	1187	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	2951	211.00	3057	297.00	1981
51.00	219412	135.00	7089	212.00	281	298.00	87
52.00	11784	136.00	2758	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	23522	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	19003	310.00	183
59.00	133	143.00	1965	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	2635	317.00	179
66.00	757	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	267	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	184133	159.00	1474	239.00	656	334.00	3590

Data File: /chem/msd_2.i/2-080296.b/DFTPP080296.d
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	11938	162.00	1382	242.00	2319	341.00	502
81.00	16521	163.00	572	243.00	2890	346.00	910
82.00	3765	164.00	714	244.00	33916	347.00	66
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	5065
96.00	894	177.00	3429	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	9130	261.00	271	384.00	85
101.00	8718	181.00	4809	262.00	173	390.00	301
102.00	562	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	259
105.00	5560	185.00	7265	267.00	68	402.00	1147
107.00	62517	186.00	46141	268.00	143	403.00	1745
108.00	9117	187.00	12978	270.00	531	404.00	479
110.00	122752	188.00	1383	271.00	386	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.i

Sample ID : DFTPP02

Column phase : Column diameter : 2.00

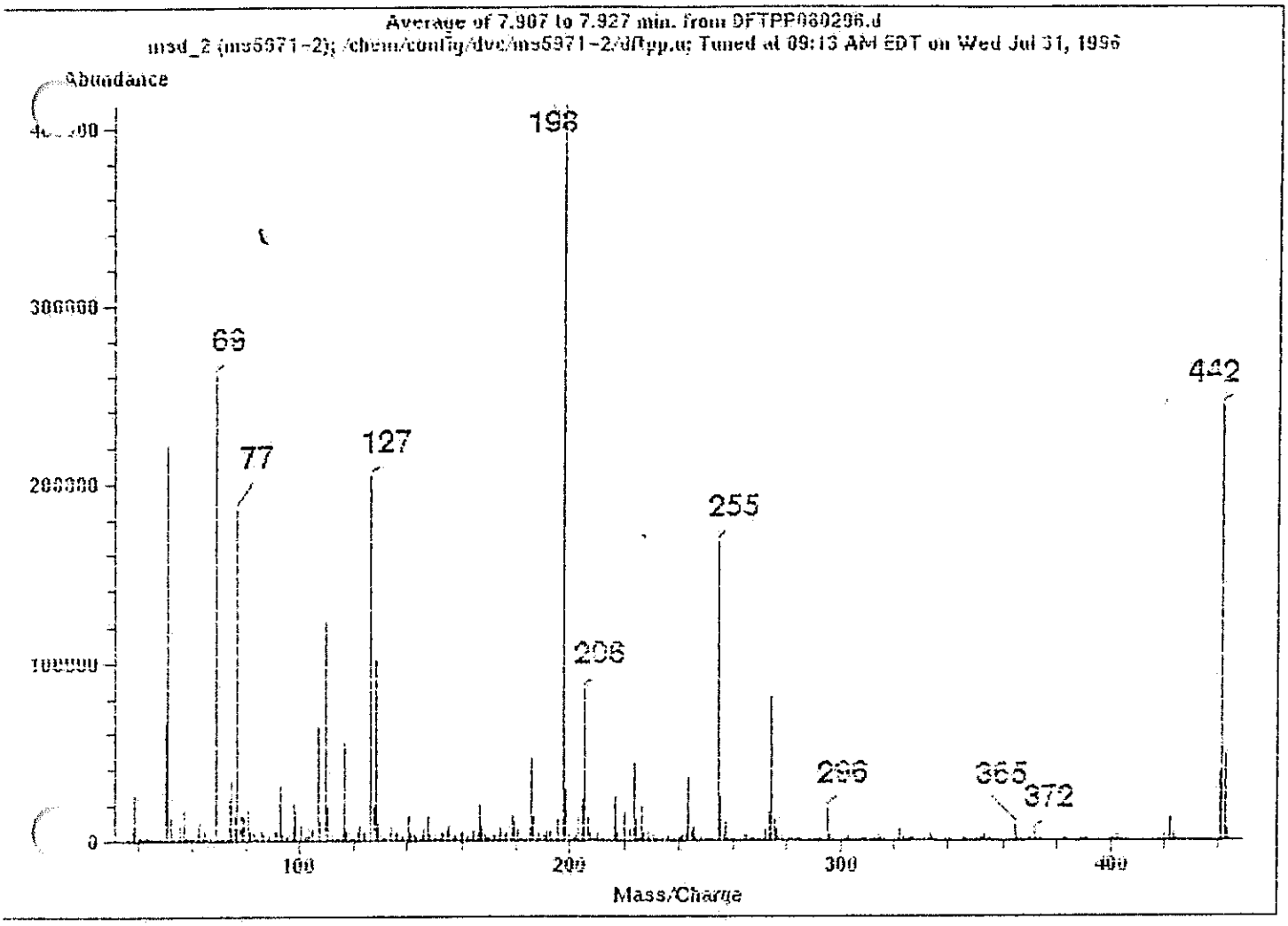
Volume Injected (uL) : 1.0

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
118.00	4037	195.00	659	278.00	1017	443.00	46680
119.00	273	196.00	10940	279.00	16	444.00	4902
120.00	790	198.00	412757	281.00	75	445.00	251
121.00	340	199.00	28084	282.00	95		
122.00	4492	200.00	2168	283.00	596		
123.00	6976	201.00	1515	284.00	431		



Mass	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 is	63.1
70	Less than 2.0% of mass 69	0.1
127	40.0 to 60.0% of mass 198	49.2
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	6.8
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 40.0% of mass 198	58.6
443	17.0 - 23.0% of mass 442	19.3

Ecosys, Inc.

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/msd_2.i/2-080296.b/BNA0101001.d
Lab. Id. :
Inj Date : 02-AUG-1996 07:15 Autotune Date: 31-Jul-96 09:13:5
Operator : GORDON Inst ID: msd_2.i
Sac Info : BNA-80-38
Misc Info : CONTINUE CALIBRATION
Comment :
Method : /chem/msd_2.i/2-080296.b/MA-BNA.m
Meth Date : 02-Aug-1996 08:13 target
Cal Date : 02-AUG-96 07:15 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)
Fluorophenol	112.00	9.675(0.000)	1716785	76.1	76.1(M)
Aniline	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	82.00	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 1,2,4-Trichlorobenzene	180.00	16.619(0.993)	2070060	87.0	87.0
27 Naphthalene	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)	CONCENTRATIONS 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)	1001395	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(1.029)	1351071	86.8	86.8
45 4-Nitrophenol *	65.00	21.915(1.026)	373437	71.0	71.0(M)
46 Dibenzofuran	168.00	21.983(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 4-Nitroaniline	138.00	23.139(0.000)	466357	90.6	90.6(M)
51 4,6-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)	1289952	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)	9246171	93.7	93.7
65 Pyrene	202.00	28.931(0.902)	9097253	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)	4782308	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 Perylene-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 RRF	%D	MAX %D
2-Fluorophenol	1.112	1.058	0.050	4.9	30.0
Aniline	1.113	1.050	0.050	5.6	30.0
Phenol-d5	1.062	1.118	0.050	5.3	30.0
Phenol **	1.085	1.313	0.050	21.0	30.0
Bis(2-chloroethyl) ether	1.202	1.176	0.050	2.1	30.0
2-Chlorophenol	1.283	1.257	0.050	2.0	30.0
1,3-Dichlorobenzene	1.511	1.545	0.050	2.2	30.0
1,4-Dichlorobenzene **	1.551	1.596	0.050	2.9	30.0
1,2-Dichlorobenzene	1.460	1.479	0.050	1.3	30.0
Benzyl alcohol	0.876	0.990	0.050	13.0	30.0
2-Methylphenol	0.932	0.888	0.050	4.7	30.0
Bis(2-chloroisopropyl) ether	1.021	1.063	0.050	4.2	30.0
N-Nitrosodi-n-propylamine *	0.699	0.775	0.050	10.8	30.0
4-Methylphenol	0.953	0.890	0.050	6.5	30.0
Hexachloroethane	0.671	0.697	0.050	3.8	30.0
Nitrobenzene-d5	0.424	0.439	0.050	3.4	30.0
Nitrobenzene	0.399	0.396	0.050	0.6	30.0
Isophorone	0.683	0.764	0.050	11.9	30.0
2-Nitrophenol **	0.265	0.276	0.050	3.9	30.0
2,4-Dimethylphenol	0.371	0.399	0.050	7.4	30.0
Bis(2-chloroethoxy)methane	0.376	0.391	0.050	4.0	30.0
2,4-Dichlorophenol **	0.313	0.341	0.050	9.0	30.0
Benzoic acid	0.218	0.230	0.050	5.3	30.0
1,2,4-Trichlorobenzene	0.385	0.419	0.050	8.8	30.0
Naphthalene	1.148	1.213	0.050	5.7	30.0
4-Chloroaniline	0.338	0.345	0.050	2.1	30.0
Hexachlorobutadiene **	0.224	0.249	0.050	11.1	30.0
4-Chloro-3-methylphenol **	0.350	0.324	0.050	7.4	30.0
2-Methylnaphthalene	0.745	0.788	0.050	5.8	30.0
Hexachlorocyclopentadiene *	0.259	0.263	0.050	1.7	30.0
2,4,6-Trichlorophenol **	0.322	0.337	0.050	4.8	30.0
2,4,5-Trichlorophenol	0.361	0.392	0.050	8.6	30.0
2-Fluorobiphenyl	1.446	1.520	0.050	5.1	30.0
2-Chloronaphthalene	1.202	1.220	0.050	1.5	30.0
2-Nitroaniline	0.315	0.319	0.050	1.4	30.0
Dimethyl phthalate	1.506	1.437	0.050	4.6	30.0
2,6-Dinitrotoluene	0.312	0.314	0.050	0.4	30.0
Acenaphthylene	1.850	1.848	0.050	0.1	30.0
3-Nitroaniline	0.170	0.165	0.050	3.4	30.0
Acenaphthene **	1.219	1.205	0.050	1.1	30.0
2,4-Dinitrophenol *	0.112	0.095	0.050	14.6	30.0
2,4-Dinitrotoluene	0.397	0.431	0.050	8.5	30.0
4-Nitrophenol *	0.134	0.119	0.050	11.2	30.0
Dibenzofuran	1.643	1.677	0.050	2.0	30.0
Diethyl phthalate	1.537	1.626	0.050	5.8	30.0

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	$\overline{RRF}$	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
Bis(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 **	1.428	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

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
Misc Info: CONTINUE CALIBRATION

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

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
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

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
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

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.i/2-080296.b/BNAUL001.d
Date : 02-AUG-1996 07:15
Instrument : msd_2.i
Sample ID :
Column Phase :
Volume Injected (uL) : 1.0

Column diameter : 2.00

SemiVolatile Method Blank Summary

Lab Name: EcoSys, Inc.	Client: ACE-SAD
Ledger No(s): 107984	Extraction Method No.: 3510
Batch No(s): 0801960004	Date Extracted: 8/1/96
Lab File ID: BNA0801008	Date Analyzed: 8/1/96
Lab Sample ID: AB36328	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	TK79-GW	AB36325	BNA0901009	8/1/96
4				
5				
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24				

12 Aug 96

QA/QC Officer

Comments:

TAB 9

MANIFESTS

79

REYNOLDS CONSTRUCTION COMPANY

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

Date _____ 19__ Load No. ~~18~~ 19

Triple 'R' Mgt — Customer
RRR 104 — Project Number
Ft Stewart — Location
Pcs — Description
Liberty — County

38780 lb Net
21260 lb Tare
60040 lb+ Gross
01:44 PM AU 12 96

Signature of Weigher

TONS: 19.39

TOTAL TONS: 388.54 ~~388.34~~

Hendrix — TRUCKER

49 — TRUCK NO.

DRIVER

TICKET NO. 58843

VIP-1518-HV

47

NON-HAZARDOUS WASTE MANIFEST

Manifest Document No. 00020

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 # 79

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	Signature	Month	Day	Year
Tom C Fry	Tom C. Fry	08	06	96

13. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Gregory A Johnson		08	02	96

14. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	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

FACI.

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. 18

Triple "R" Mgt. RS
Customer Description

RRR 104
Project Number

Ft Stewart Liberty
Location County

38420 lb Net
21260 lb Tare
59680 lb+ Gross
01:12 PM AU 12 96

Signature of Weigher

TONS: 19.21 TOTAL TONS: 368.15

Hendrix 43
TRUCKER TRUCK NO.

Sherrie Cribb
DRIVER TICKET NO. 58842

VIP-1518-HV

NON-HAZARDOUS WASTE MANIFEST

Manifest Document No. 0001.9

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 K 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.	8. Containers 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 # 79

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	Signature	Month	Day	Year
Tom C. FRY	Tom C. Fry	08	06	96

13. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Sherrie A. Cribb	Sherrie A Cribb	08	1	96

14. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
~~Ste~~ Charles Pruitt	Charles Pruitt	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

GENERATOR

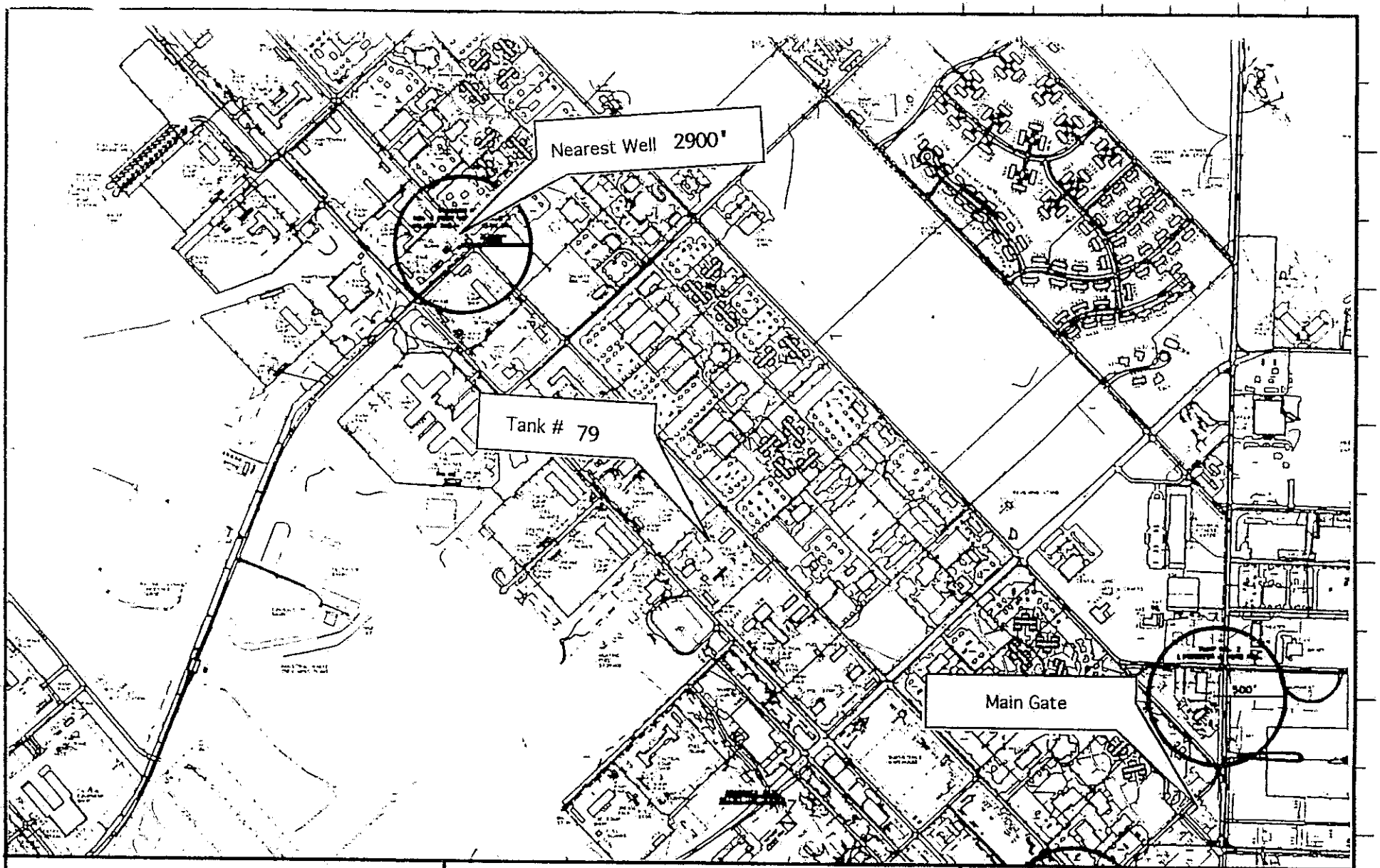
TRANSPORTER

FACIL

ORIGINAL – RETURN TO GENERATOR

TAB 10

FORT STEWART AREA MAP



LEGEND/REF. DRWG'S

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 # 79
Fort Stewart
Hinesville, Georgia

DRAWING NO.: FIGURE 1