DRAFT

Intrinsic Remediation Engineering Evaluation/Cost Analysis for the Former AGE Fueling Facility Site

Volume II: Appendices



Seymour Johnson Air Force Base
Goldsboro, North Carolina

Prepared For

Air Force Center for Environmental Excellence
Technology Transfer Division
Brooks Air Force Base
San Antonio, Texas

and

Seymour Johnson Air Force Base
North Carolina

April 1996

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INTRINSIC REMEDIATION ENGINEERING EVALUATION/COST ANALYSIS FOR THE FORMER AGE FUELING FACILITY SITE VOLUME II

SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA

April 1996

Prepared for:

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
TECHNOLOGY TRANSFER DIVISION
BROOKS AIR FORCE BASE
SAN ANTONIO, TEXAS

AND

SEYMOUR JOHNSON AIR FORCE BASE
NORTH CAROLINA

Prepared by:

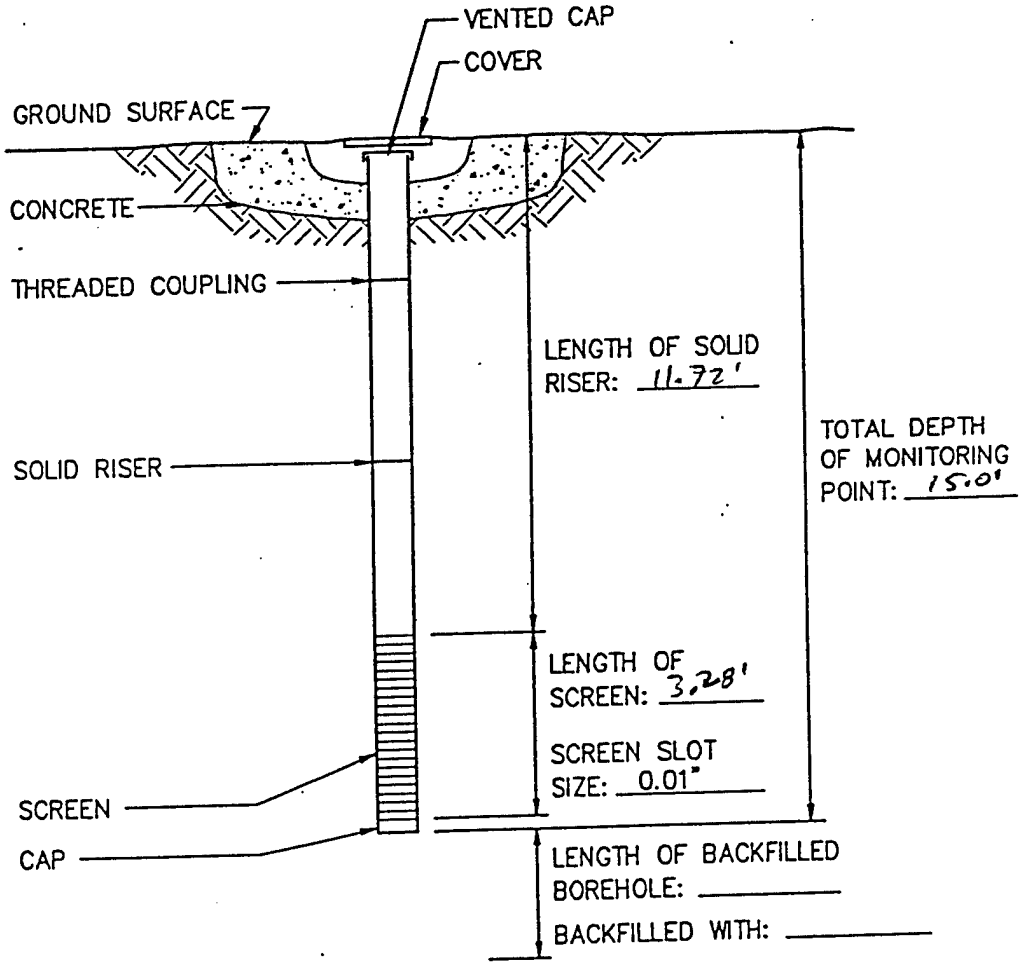
PARSONS ENGINEERING SCIENCE, INC.
1700 BROADWAY, SUITE 900
DENVER, COLORADO 80290

APPENDIX A

BORING LOGS AND WELL COMPLETION DIAGRAMS

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-16
JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"
CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-17

JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715

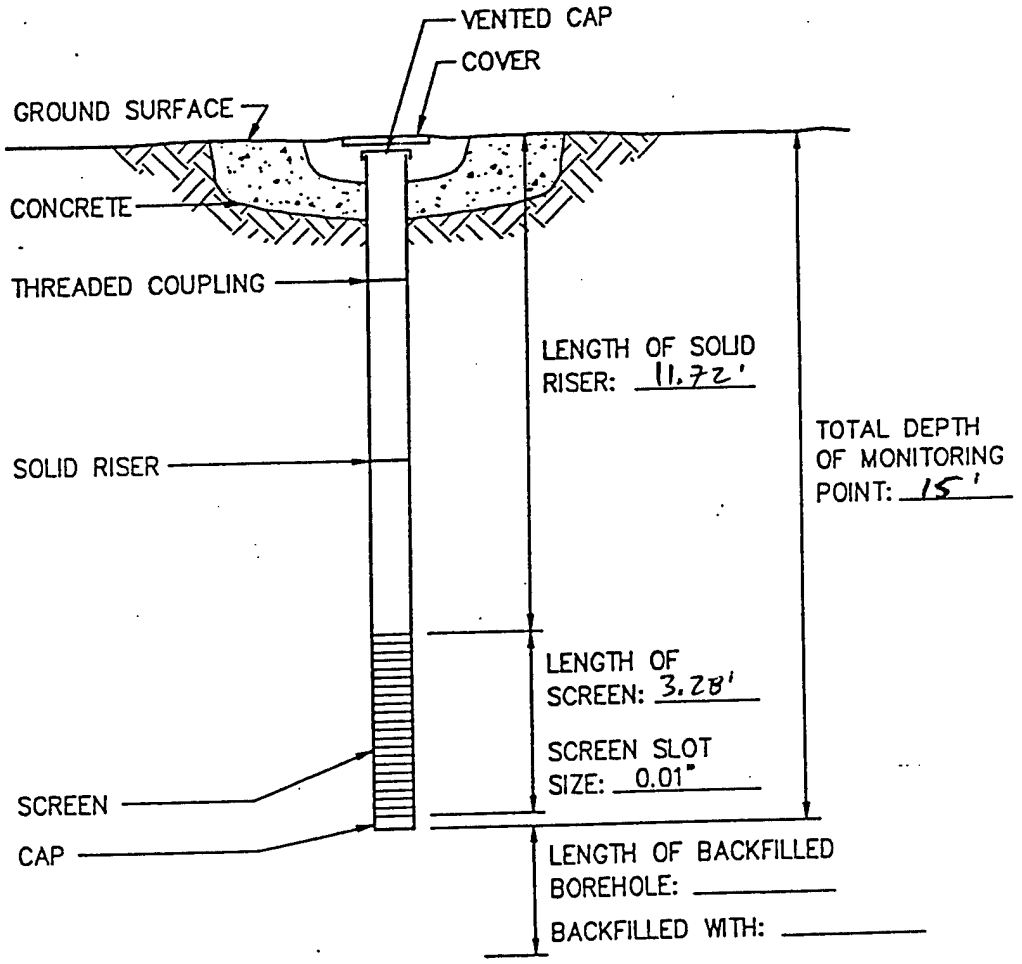
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"

CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-18

JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715

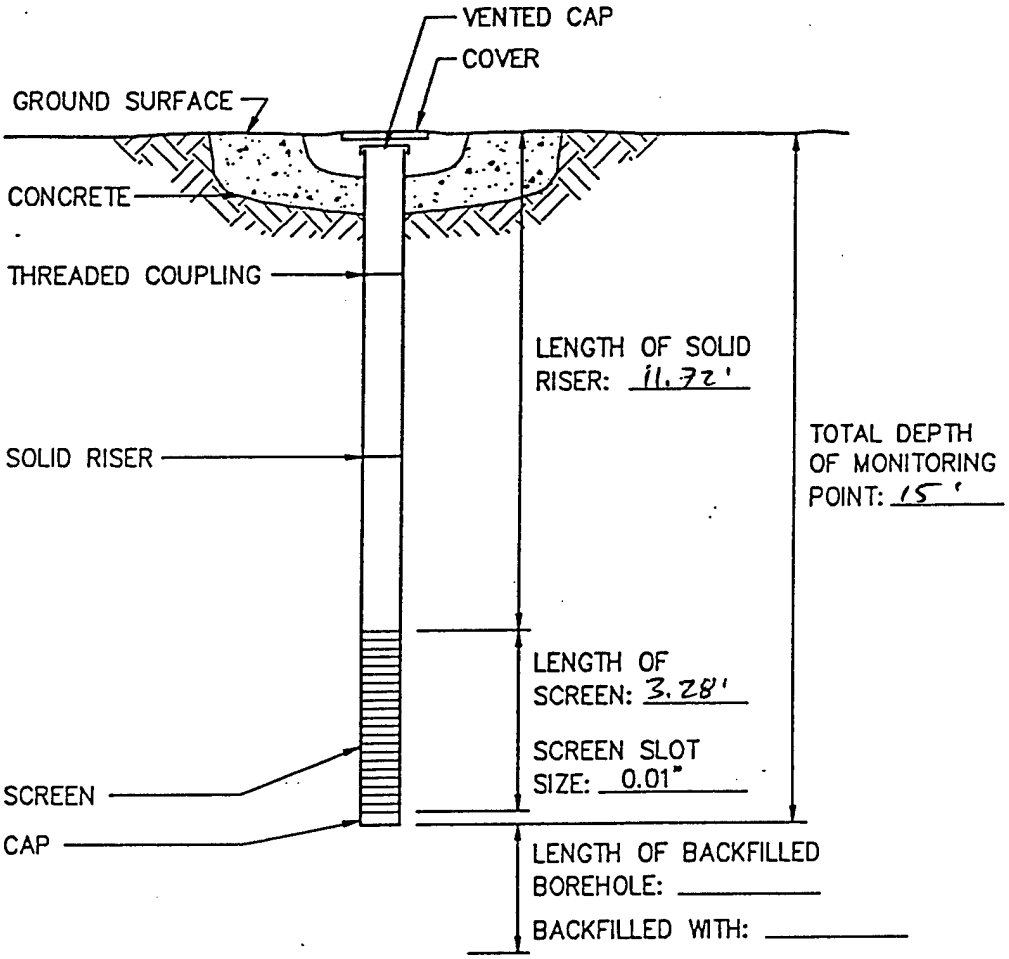
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"

CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-19

JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715

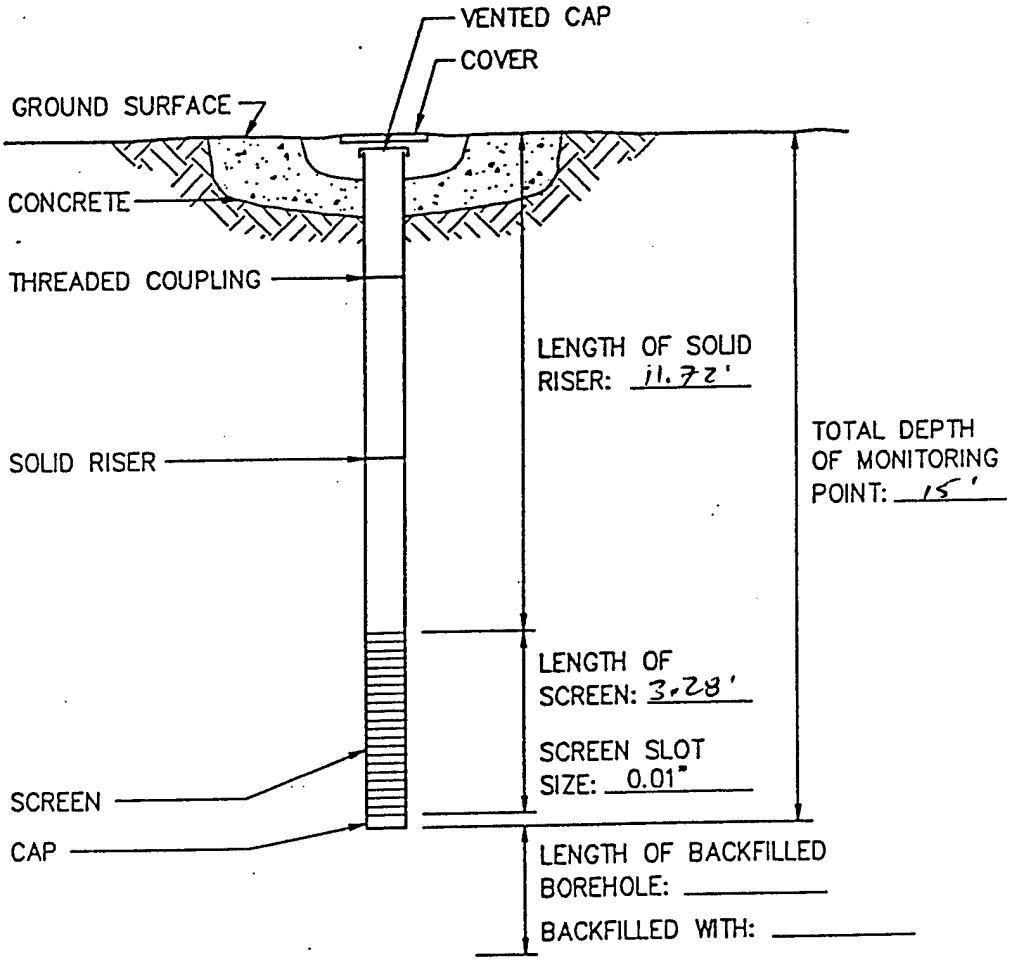
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"

CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

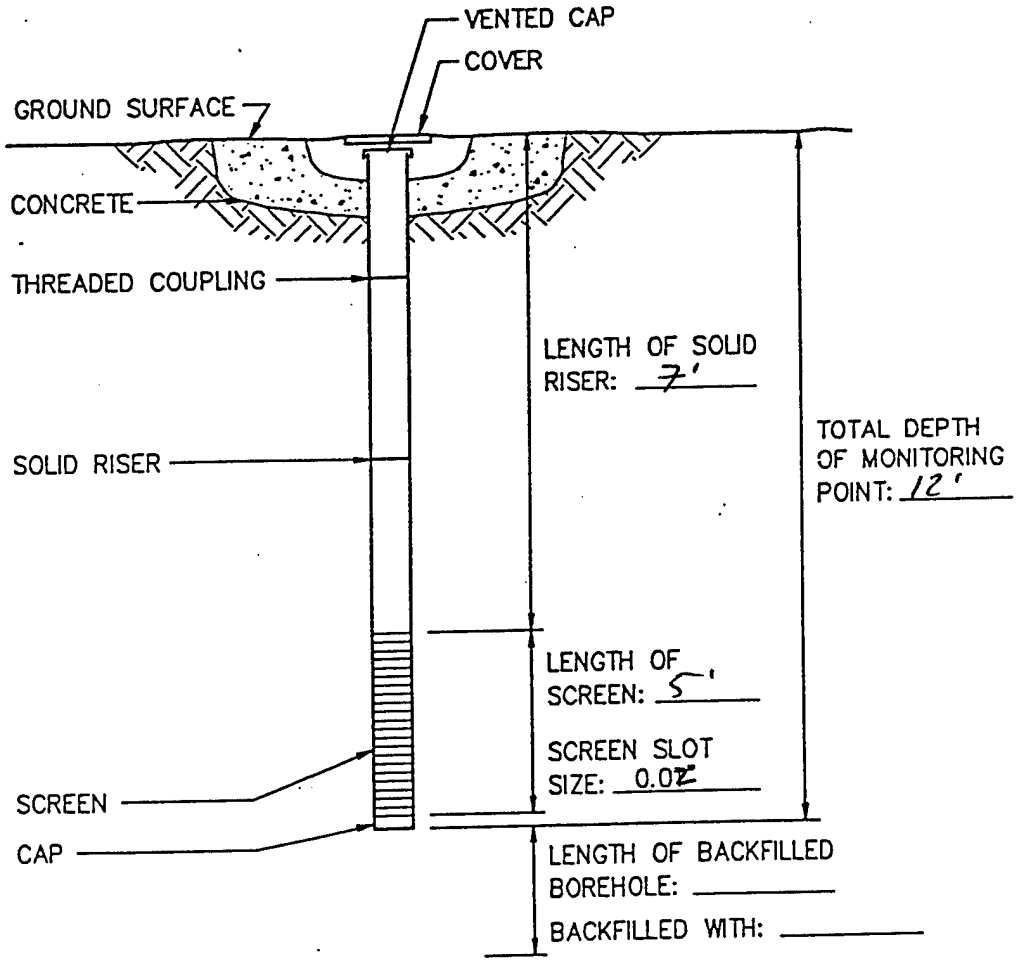
Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950WG\95000 PWG / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-2
JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

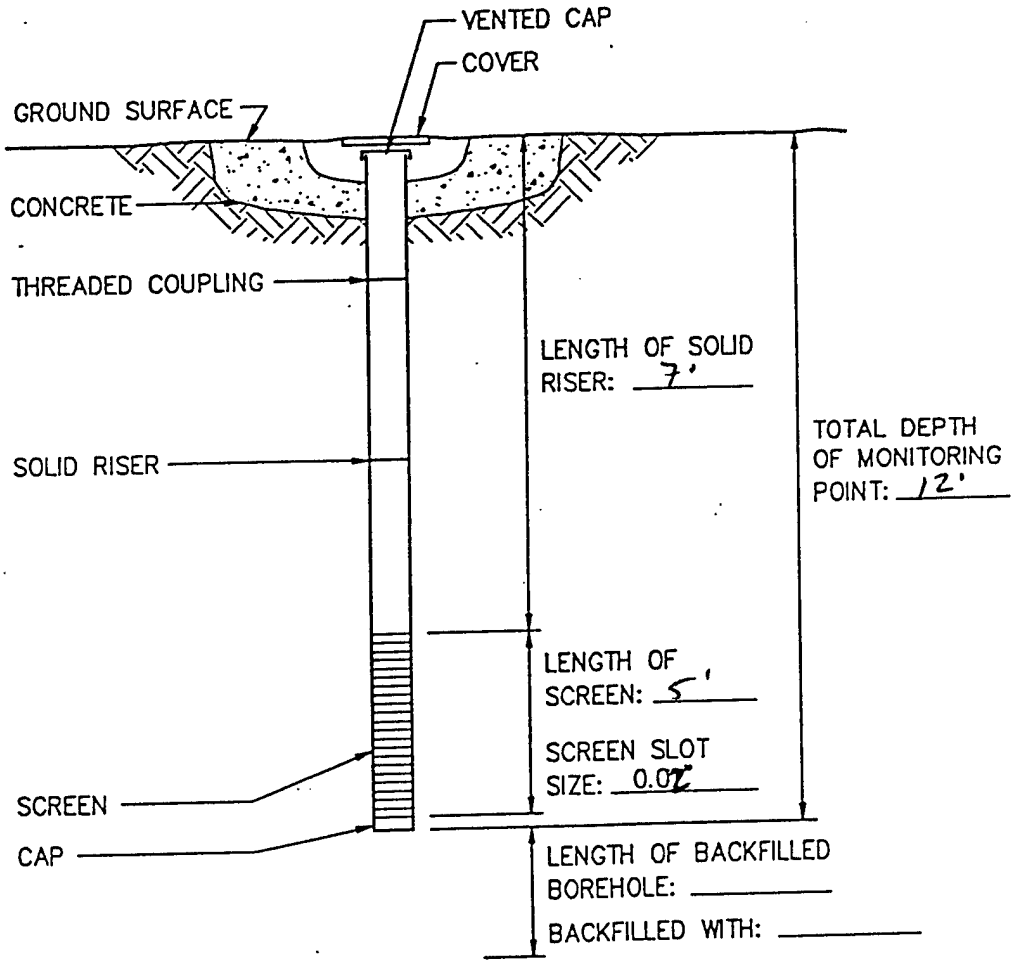
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Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-3
JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

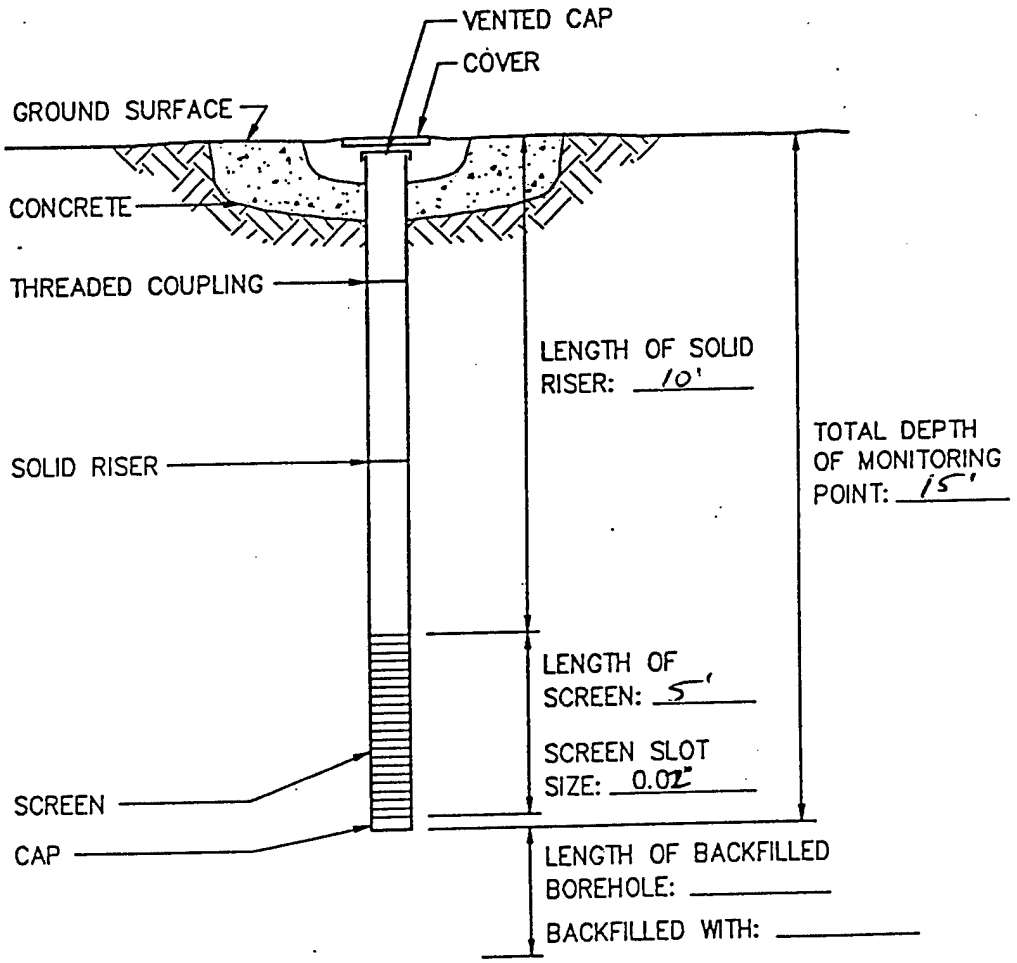
Intrinsic Remediation EE/CA
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Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950WG\950000 / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-4
JOB NUMBER 722450.26 INSTALLATION DATE _____ LOCATION Bldg 4716
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950DWG\950WG / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-5

JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION Bldg 4715

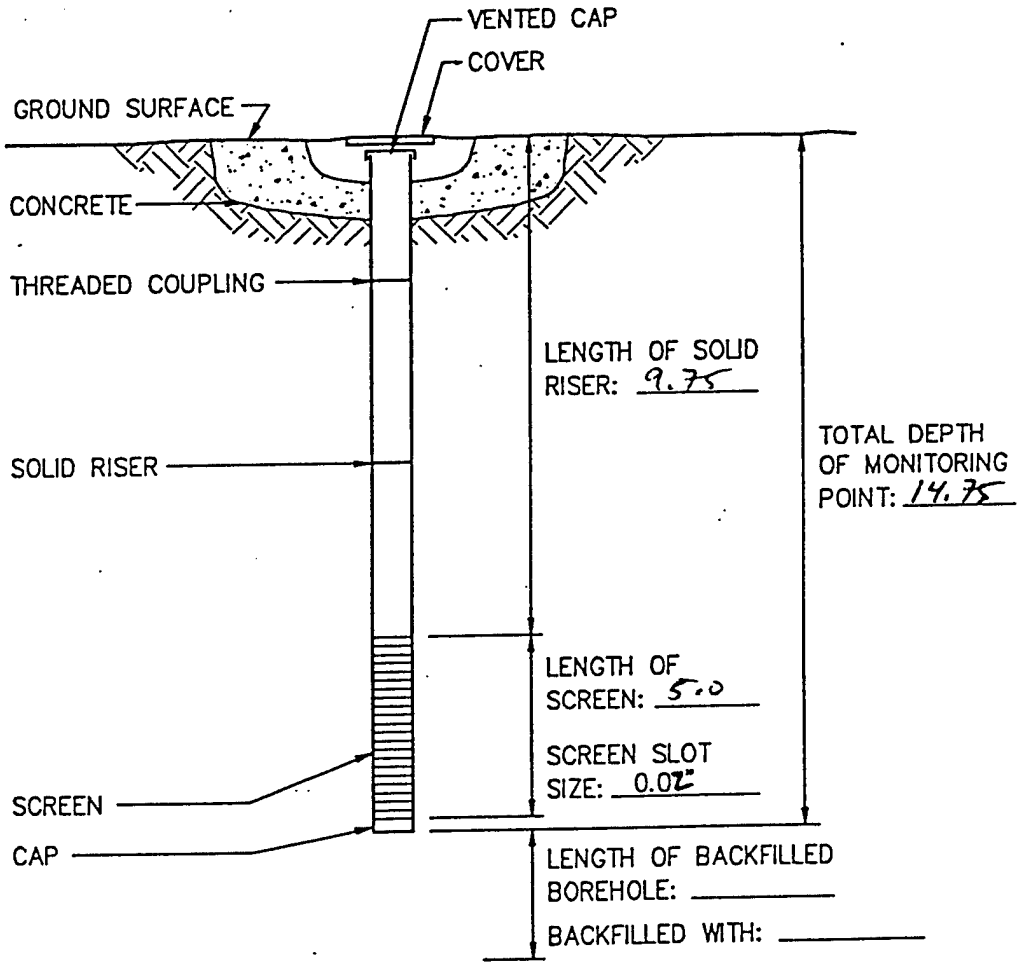
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

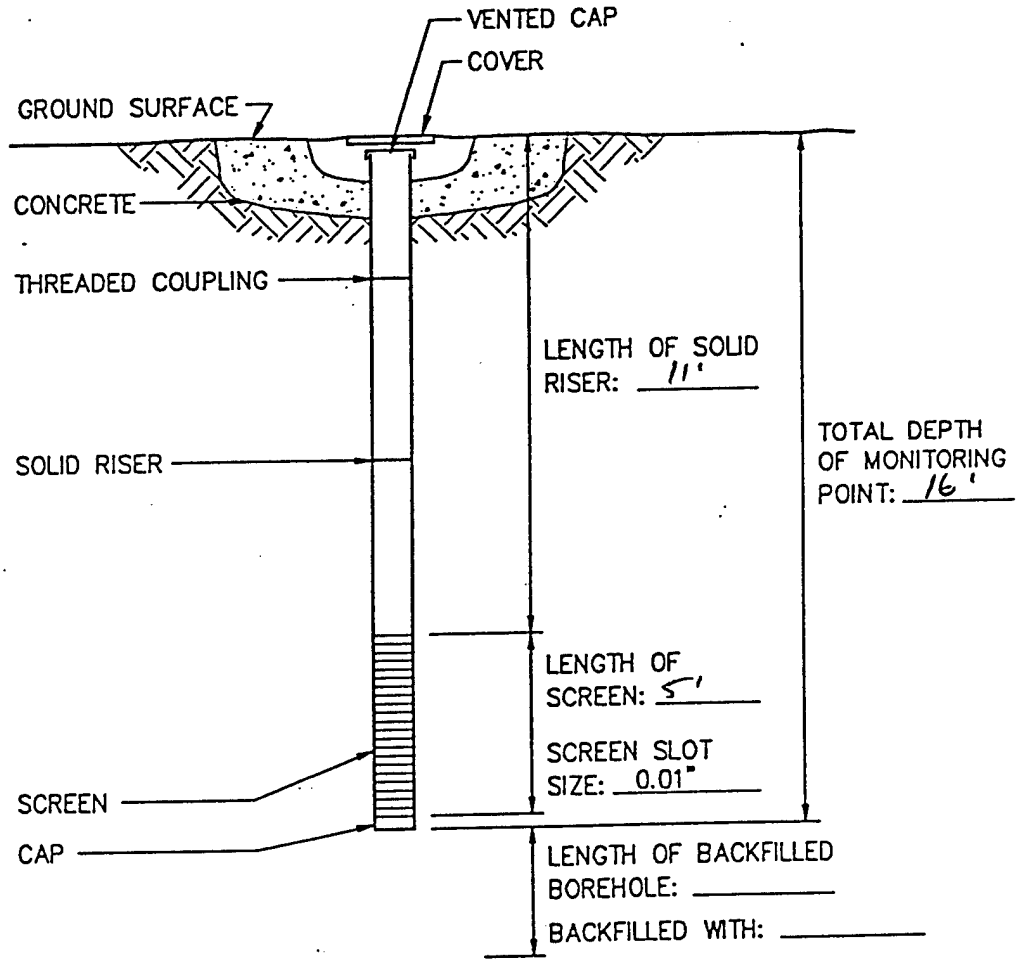
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Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\95DWG\95000 / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-6
JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950WG\95000 / 1=1 / 3-15-95 / llp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-7

JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715

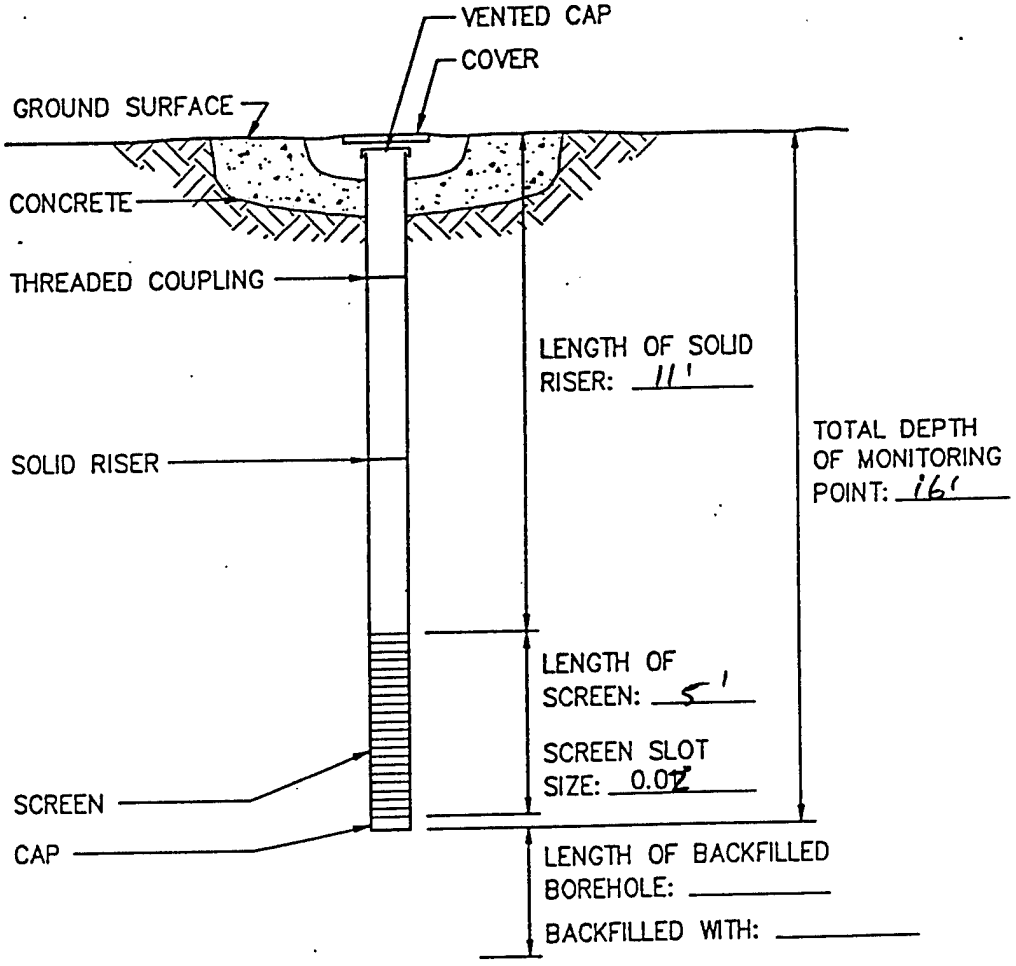
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

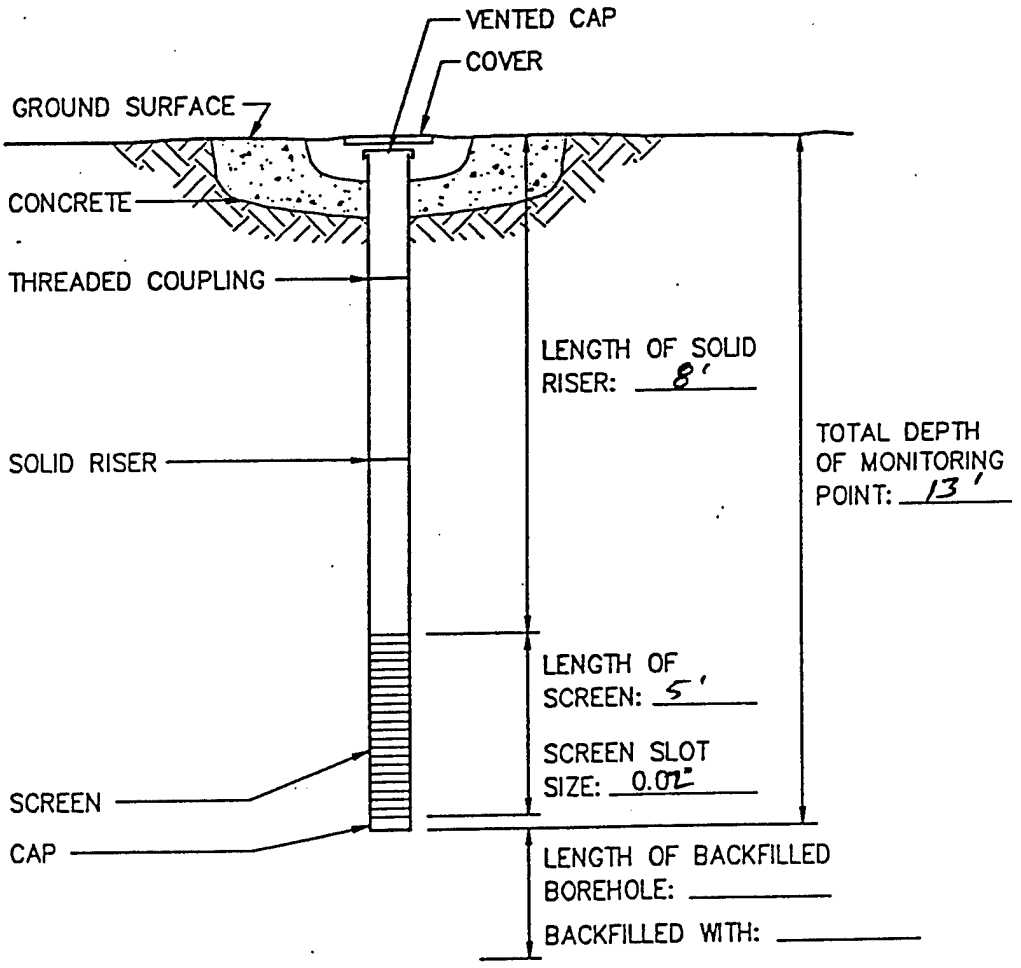
Intrinsic Remediation EE/CA
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Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-8
JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-9

JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715

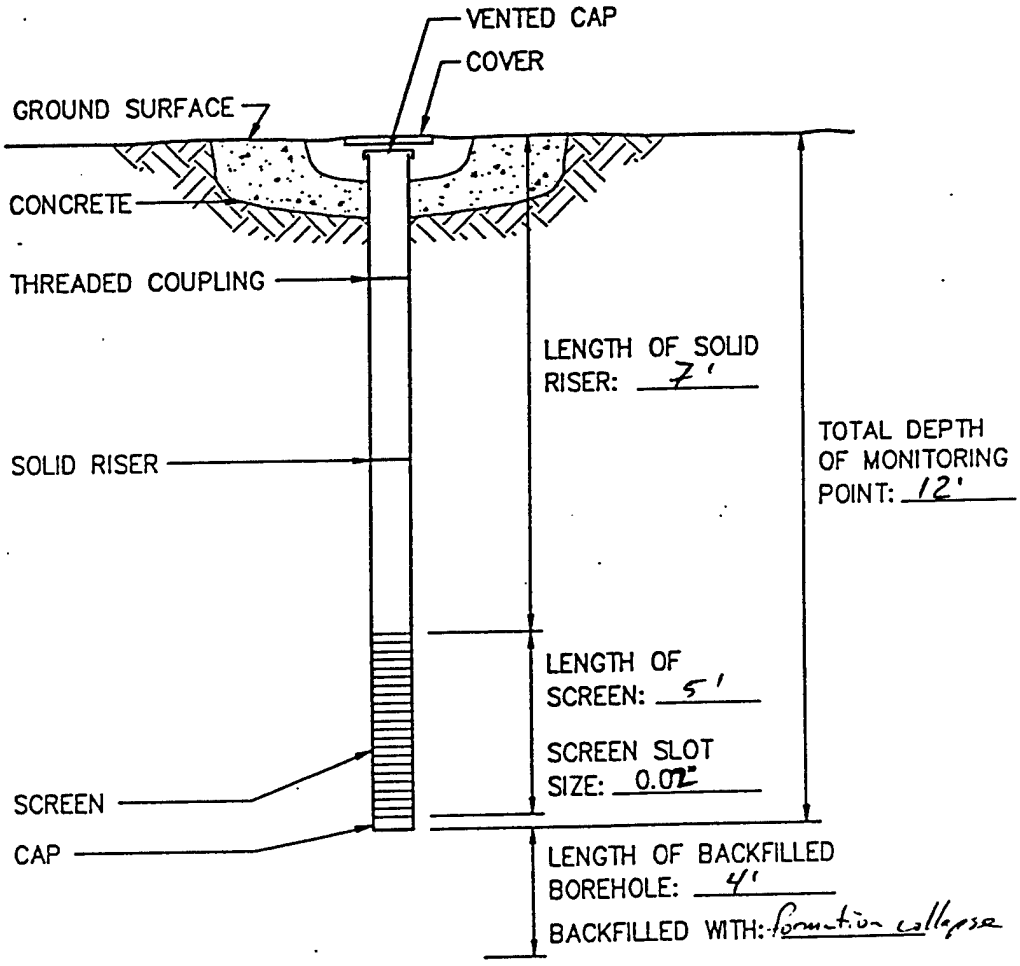
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\95DWG\9500G / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-10

JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715

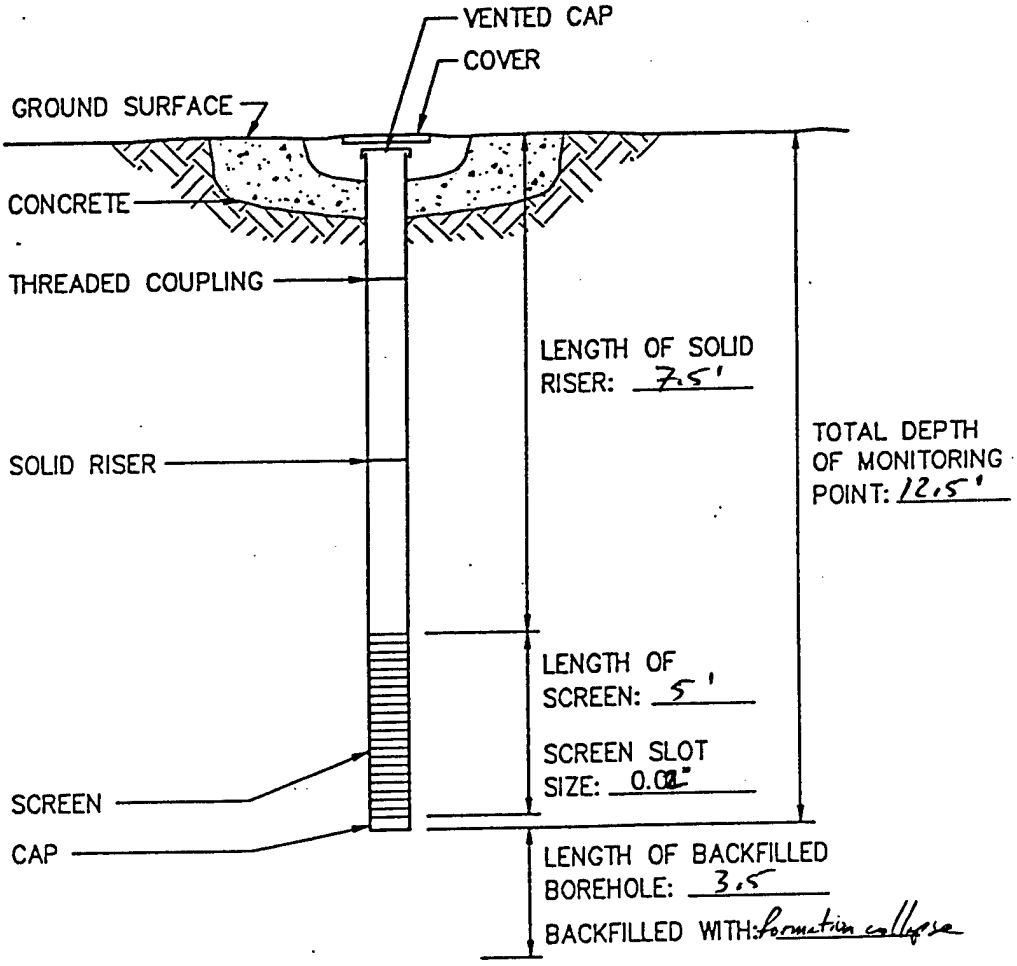
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\95DWG\95000 / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-11

JOB NUMBER 722450.26 INSTALLATION DATE 4/13/95 LOCATION Bldg 4715

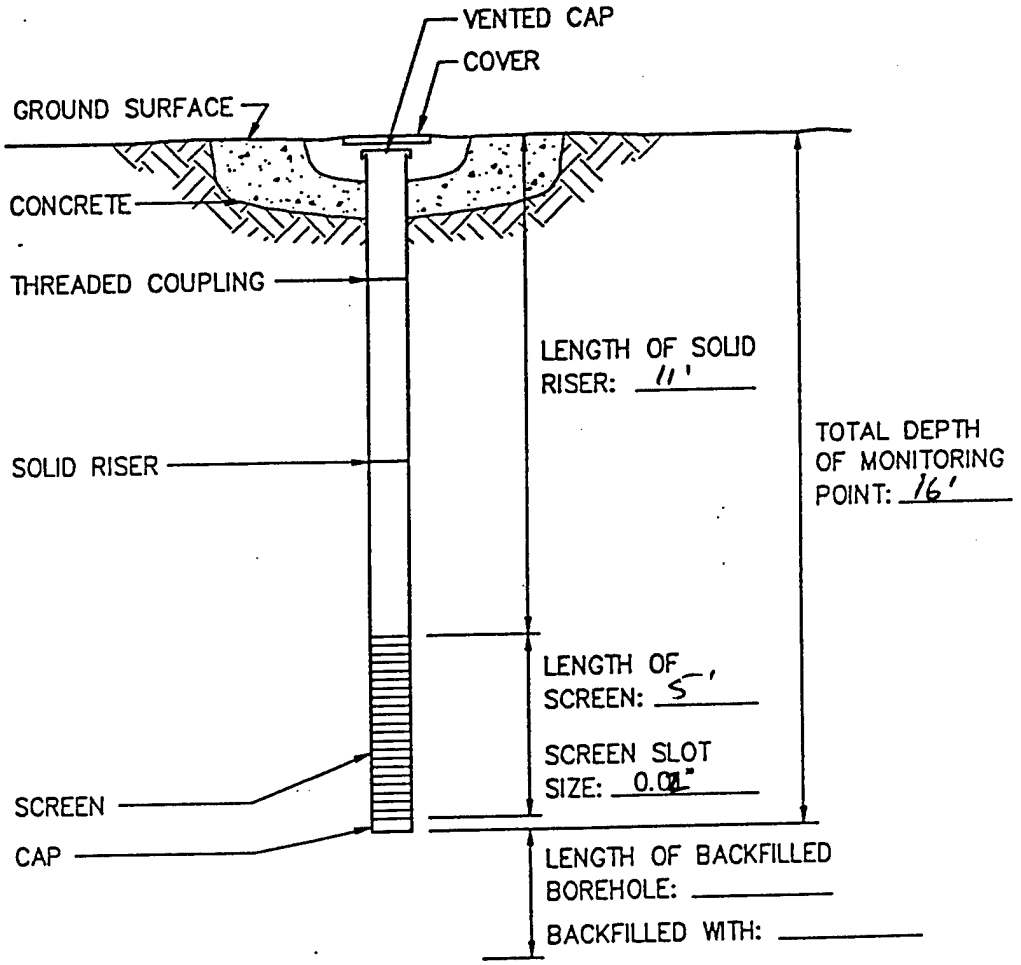
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"

RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

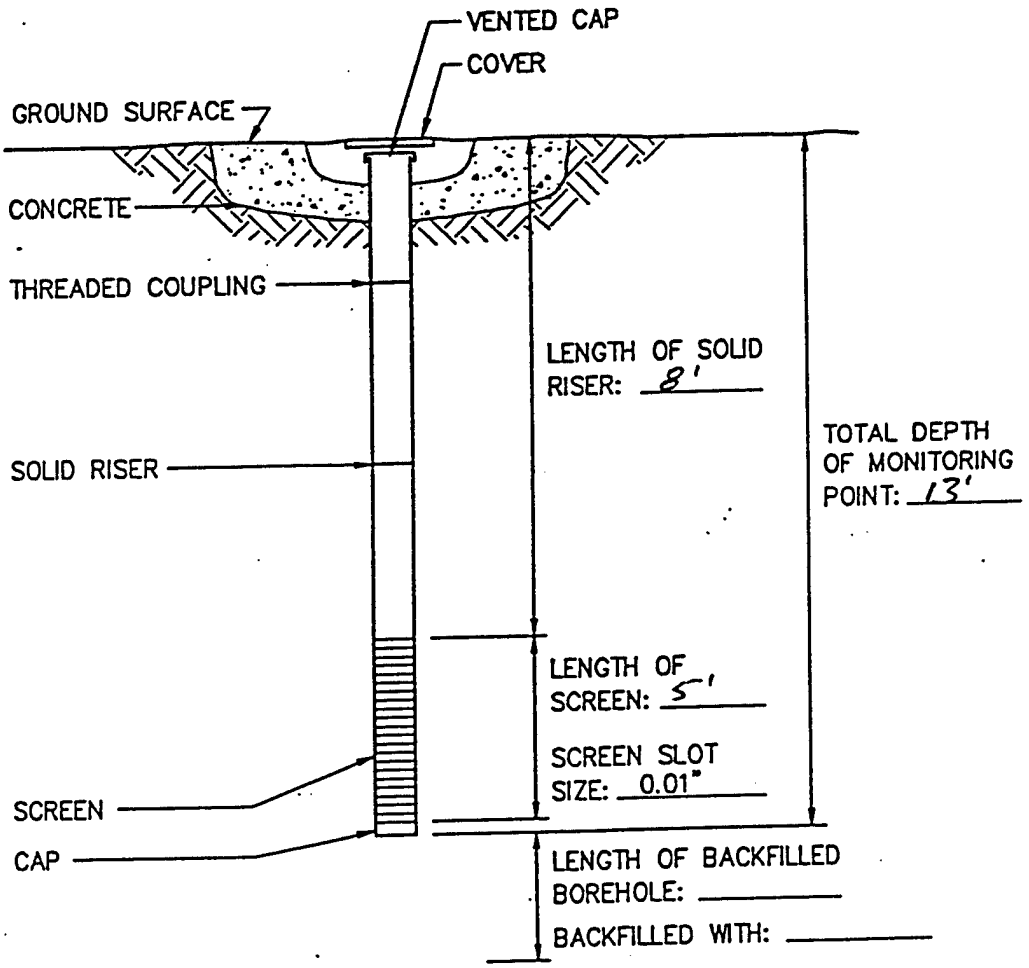
Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\95DWG\95000 / 1=1 / 3-15-95 / tlp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE — MONITORING POINT NUMBER MW-12
JOB NUMBER 722450.26 — INSTALLATION DATE 4/19/95 — LOCATION Bldg 4715
DATUM ELEVATION _____ — GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 2" PVC — SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 2" PVC — BOREHOLE DIAMETER 3"
CONE PENETROMETER CONTRACTOR hand auger — ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
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Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950WG\95WG / 1=1 / 3-15-95 / llp

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-12D

JOB NUMBER 722450.26 INSTALLATION DATE 4/13/95 LOCATION Bldg 4715

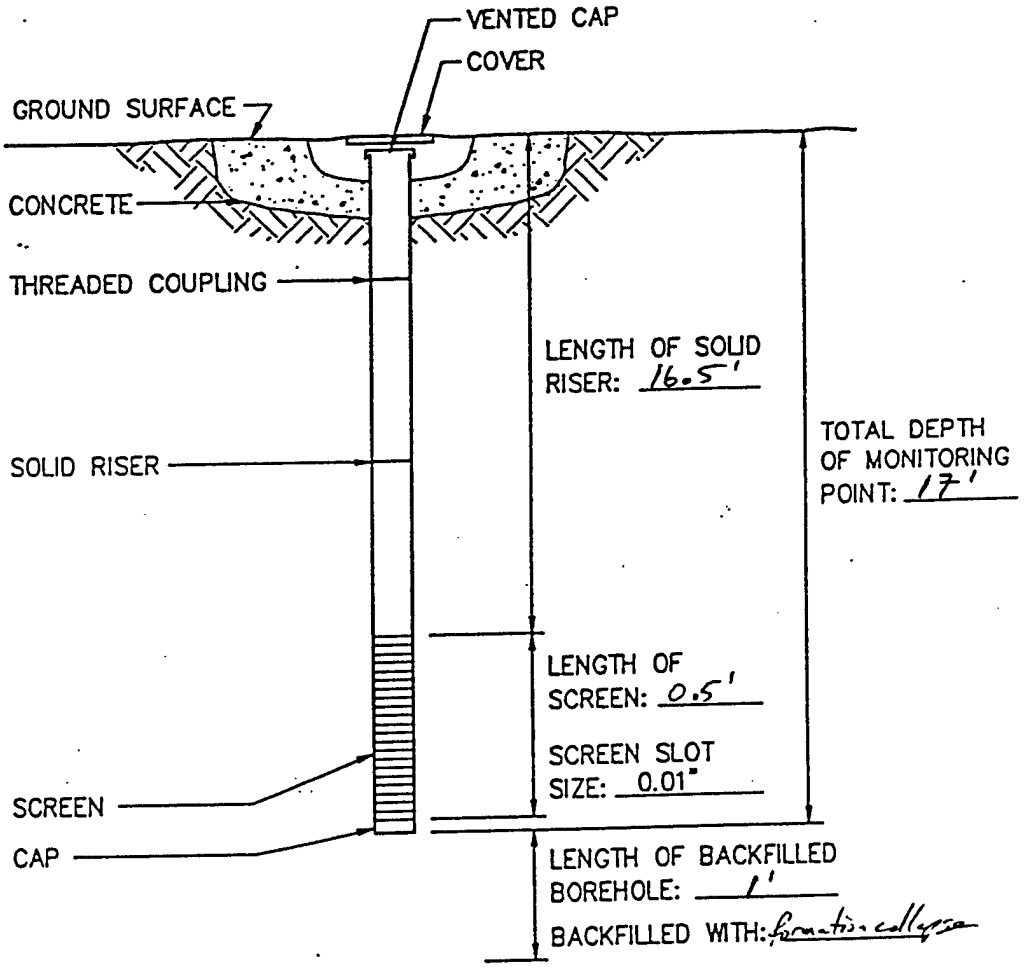
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____

DATUM FOR WATER LEVEL MEASUREMENT _____

SCREEN DIAMETER & MATERIAL 0.5" stainless steel SLOT SIZE _____

RISER DIAMETER & MATERIAL 0.375" polyethylene BOREHOLE DIAMETER 0.5"

CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

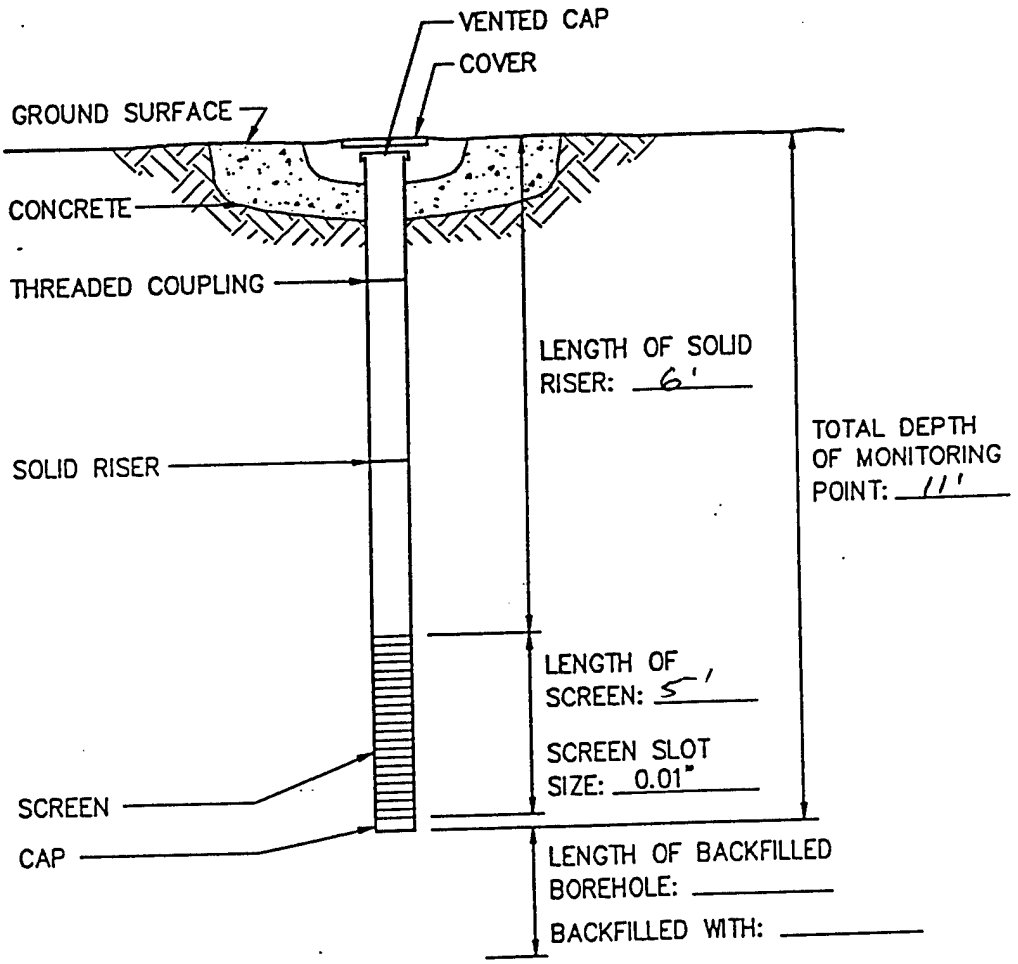
MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-13
JOB NUMBER 722450.26 INSTALLATION DATE 4/17/95 LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 2" PVC SLOT SIZE 0.01"
RISER DIAMETER & MATERIAL 2" PVC BOREHOLE DIAMETER 3"
CONE PENETROMETER CONTRACTOR Hand Auger ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

PARSONS ENGINEERING SCIENCE, INC.
Cary, North Carolina

DATA\950WG\95000 / 1=1 / 3-15-95 / tlp

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA

Evergreen

July 20, 1995

MR TODD WIEDEMEIER
PARSONS ENGINEERING SCIENCE INC
1700 BROADWAY SUITE 900
DENVER CO 80290

Data Reports : 95-2193
Client Project : 722450.26
Seymour Johnson

Dear Mr. Wiedemeier:

Enclosed are the analytical results for the samples shown in the Sample Log Sheet. The enclosed data have been reviewed for quality assurance. If you have any questions concerning the reported information, please contact Patty McClellan, Program Manager, or me.

Please Note: Samples marked for return on the Sample Log Sheet are considered hazardous, unsuitable for municipal disposal or were placed on hold at your request. Samples considered hazardous or unsuitable for municipal disposal will be returned to you immediately. Samples placed on hold will be returned and samples not considered hazardous will be disposed of one (1) month from the date of this letter.

The invoice for this work will be mailed to your Accounts Payable department shortly.

Thank you for using the services of Evergreen Analytical.

Sincerely,

Jack Barney
President

™

Evergreen

CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project: 95-2193

Parsons Engineering Science, Inc.(PES) Project: Seymour Johnson AFB 722450.26

Sample Receipt
Nine groundwater samples were received on July 11, 1995 at EAL for analysis under Subcontract 722450.SC02. Refer to the EAL Check-in Record for specific information regarding the condition of samples upon receipt. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Trimethylbenzenes, Tetramethylbenzene, Chlorobenzene, Method SW8020
1,3,5-Trimethylbenzene was detected in Method Blank MB1071295 at less than two times the reliable detection limit (RDL). The associated sample has been "B" flagged.

There are no other quality control anomalies to report.

Total Volatile Hydrocarbons (TVH), Method 8015M
There are no quality control anomalies to report.

Total Extractable Hydrocarbons (TEH), Method 8015M
There are no quality control anomalies to report.

Methane, Method RSKSOP-175
There are no quality control anomalies to report.

Anions, Method EPA 300.0
There are no quality control anomalies to report.

Disk Deliverables
The disk deliverables are included with the hard copy package. Matrix spike, matrix spike duplicate and laboratory duplicate samples are not included on the disk. Please note that blank spaces in the laboratory detection limit and/or practical quantitation limit (PQL) column indicate that there is no detection limit or PQL for that analyte.

A hard copy the spreadsheet is included.

Patricia A. McClellan, Program Manager

Evergreen Analytical Sample Log Sheet

Project # 95-2193

Date(s) Sampled: 07/10/95 COC

Date Due: 07/18/95-UST
07/25/95-ANIONS

Date Received: 07/11/95 0920

Holding Time(s): 07/12-NO2,NO3
07/17-TEH;07/24-BTEX,TVH

Client Project I.D. 722450.26

Rush STANDARD

Client: PARSONS ENGINEERING SCIENCE

Address: 1700 BROADWAY, SUITE 900
DENVER, CO 80290

Contact: TODD WIEDEMEIER

Client P.O. ____

Phone #831-8100 **Fax #**831-8208

Shipping Charges N/A

E.A. Cooler # 475

Airbill # FED EX 6475871920

Custody Seal Intact? N/A
Cooler ___ Bottles ___
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Special Invoicing/Billing

Special Instructions ✓ 1 SAMPLE BROKEN IN TRANSIT. ★ ALL BTEX ARE TO INCLUDE CHLOROBENZENE, TMB AND TEMB.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
8735A-C	MW-16	★ BTEX	W	40V	2
X08736A-C	MW-17	★ BTEX	W	40V	2
X08737A-C	MW-15	★ BTEX	W	40V	2
X08738A-C	MW-14	★ BTEX	W	40V	2
X08739A-C	MW-19	★ BTEX	W	40V	2
X08740A-C	MW-18	★ BTEX	W	40V	2
X08741A-C	MW-20	★ BTEX	W	40V	2
X08742A-C	MW-21	★ BTEX	W	40V	2
X08743A-C	TRIP BLANK	★ BTEX	W	40V	2
X08735D-F	MW-16	TVH	W	40V	2
X08736D-F	MW-17	TVH	W	40V	2
X08737D-F	MW-15	TVH	W	40V	2
X08738D-F	MW-14	TVH	W	40V	2
X08739D-F	MW-19	TVH	W	40V	2
X08740D-F	MW-18	TVH	W	40V	2

R = Samples to be returned

Route GC/MS ___ GC 5 Metals ___ Wet Chem 1 SxPrep 1 Acctg 1

SxRec C QA/QC C Sales C File Orig

Custodian/Date: 7/11/95
7/11/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X08741D/E	MW-20	✓ TVH	W	40V	2
08735G-I	MW-16	METHANE	W	40V	2
X08736G-I	MW-17	METHANE	W	40V	2
X08737G-I	MW-15	METHANE	W	40V	2
X08738G-I	MW-14	METHANE	W	40V	2
X08739G-I	MW-19	METHANE	W	40V	2
X08740G-I	MW-18	METHANE	W	40V	2
X08741G-I	MW-20	METHANE	W	40V	2
X08735J	MW-16	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08736J	MW-17	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08737J	MW-15	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08738J	MW-14	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08739J	MW-19	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08740J	MW-18	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08741J	MW-20	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
X08735K	MW-16	TEH	W	1LA	C3
X08736K	MW-17	TEH	W	1LA	C3
X08737K	MW-15	TEH	W	1LA	C3
3738K	MW-14	TEH	W	1LA	C3
X08739K	MW-19	TEH	W	1LA	C3
X08740K	MW-18	TEH	W	1LA	C3
X08741K	MW-20	TEH	W	1LA	C3

Project # 94-2193

R=Sample to be returned

Sample Receipt/Check-In Record

Date & Time Rec'd: 7/11/95 0920 Shipped Via: Fedex
(Airbill # if applicable)

Client : Parsons E.S.

Client Project ID(s): 722450.26

EAL Project #(s): 95-2193 EAL Cooler(s): (Y) N

Cooler#	475								
Ice packs	(Y)	N	Y	N	Y	N	Y	N	Y	N
Temperature °C	7°								

	Y	N	N/A
1. Custody seal(s) present:		✓	
Seals on cooler intact			✓
Seals on bottle intact			✓
2. Chain of Custody present:	✓		
3. Containers broken or leaking: (Comment on COC if Y) COC	✓	~~✓~~	
4. Containers labeled:	✓		
5. COC agrees w/ bottles received: (Comment on COC if N)	✓		
6. COC agrees w/ labels: (Comment on COC if N)	✓		
7. Headspace in VOA vials-waters only (comment on COC if Y)		✓	
8. VOA samples preserved:	✓	~~✓~~	
9. pH measured on metals, cyanide or phenolics*:			✓
List discrepancies			
*Non-EAL provided containers only, water samples only.			✓
10. Metal samples present:			
Total _____ , Dissolved _____			
D or PD to be filtered:			
T,TR,D,PD to be Preserved:			
11. Short holding times:	✓		
Specify parameters Anions - NO_2, NO_3			
12. Multi-phase sample(s) present:		✓	
13. COC signed w/ date/time:	✓		

Comments: One TVH vial was rec'd broken for MW-20 pm 7/11/95

(Additional comments on back)
Custodian Signature/Date: Trina Woods 7/11/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX # (919) 677-0118 FAX RESULTS Y / N

CLIENT CONTACT (print) ____
PROJECT I.D. 722450.26 Seymour Johnson
EAL. QUOTE # ____ P.O.# ____
TURNAROUND REQUIRED* ____
*expedited turnaround subject to additional fee

Sampler Name:
(signature) Thomas C. Richardson
(print) T. C. R.

Evergreen Analytical Cooler No. 475
Cooler Received ____

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	Soil / Solid	Oil / Sludge	ANALYSIS REQUESTED: TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Methane	(Cl, NO2, NO3, SO4) - Anions	EAL use only Do not write in shaded area: EAL Project # / Custodian / EAL Sample No.
MW-16	7/10/95	1030	11											3		3	1			3	1	
MW-17	7/10/95	1145	11											3		3	1			3	1	
MW-15	7/10/95	1245	11											3		3	1			3	1	
MW-14	7/10/95	1350	11											3		3	1			3	1	
MW-19	7/10/95	1530	11											3		3	1			3	1	
MW-18	7/10/95	1615	11											3		3	1			3	1	
MW-20	7/10/95	1715	11											3		3	1			3	1	
MW-21	7/10/95	1745	3											3								
TRIP BLANK	7/10/95		3											3								
HT:																						Location
DD:																						Container Size

Instructions: FED X B.H # 6475871920

Relinquished by: (Signature) ____ Date/Time ____ Received by: (Signature) ____ Date/Time ____ Relinquished by: (Signature) ____ Date/Time ____ Received by: (Signature) ____

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB1071195	Client Project No.	: 722450.26
Date Prepared	: 7/11/95	Lab Project No.	: 95-2193
Date Analyzed	: 7/11/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1071112

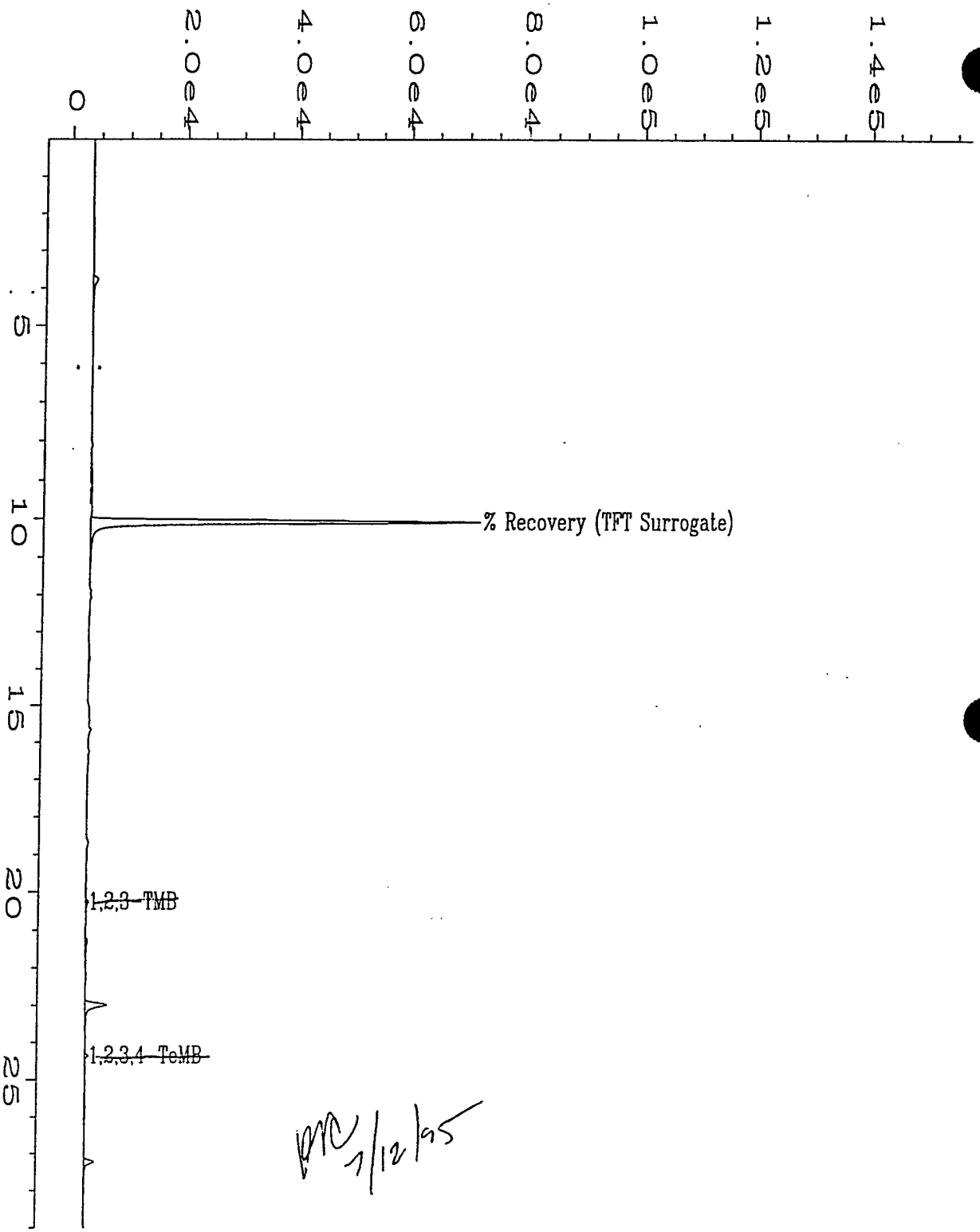
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		94%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



PRC 1/12/95

Data File Name	: C:\HPCHEM\1\DATA\BX10711\012F0901.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 12
Sample Name	: MB1071195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
quired on	: 11 Jul 95 06:30 PM	Instrument Method	: BX1071[illegible].MT
port Created on	: 12 Jul 95 11:59 AM	Analysis Method	: BX10711.MT
Last Recalib on	: 12 JUL 95 08:44 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB1071295	Client Project No.	: 722450.26
Date Prepared	: 7/12/95	Lab Project No.	: 95-2193
Date Analyzed	: 7/12/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1071210

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8	0.9		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		93%		70%-130% (QC limits)

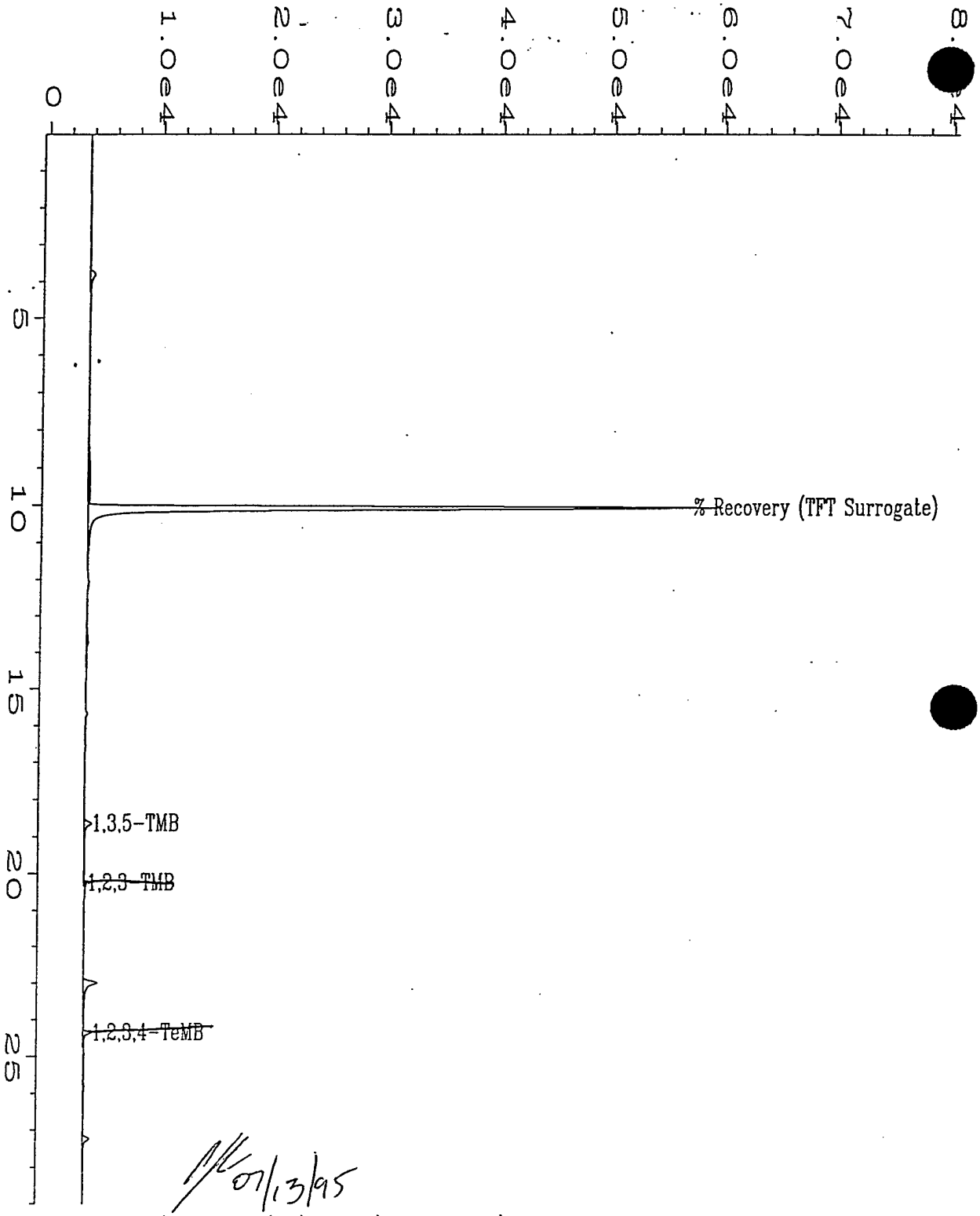
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



07/13/95

Data File Name	: C:\HPCHEM\1\DATA\BX10712\010F0801.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 10
Sample Name	: MB1071295	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 8
Acquired on	: 12 Jul 95 05:53 PM	Instrument Method	: BX107[illegible].M
Report Created on	: 13 Jul 95 10:33 AM	Analysis Method	: BX10712.M
Last Recalib on	: 12 JUL 95 04:18 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071113
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%		70%-130% (QC limits)

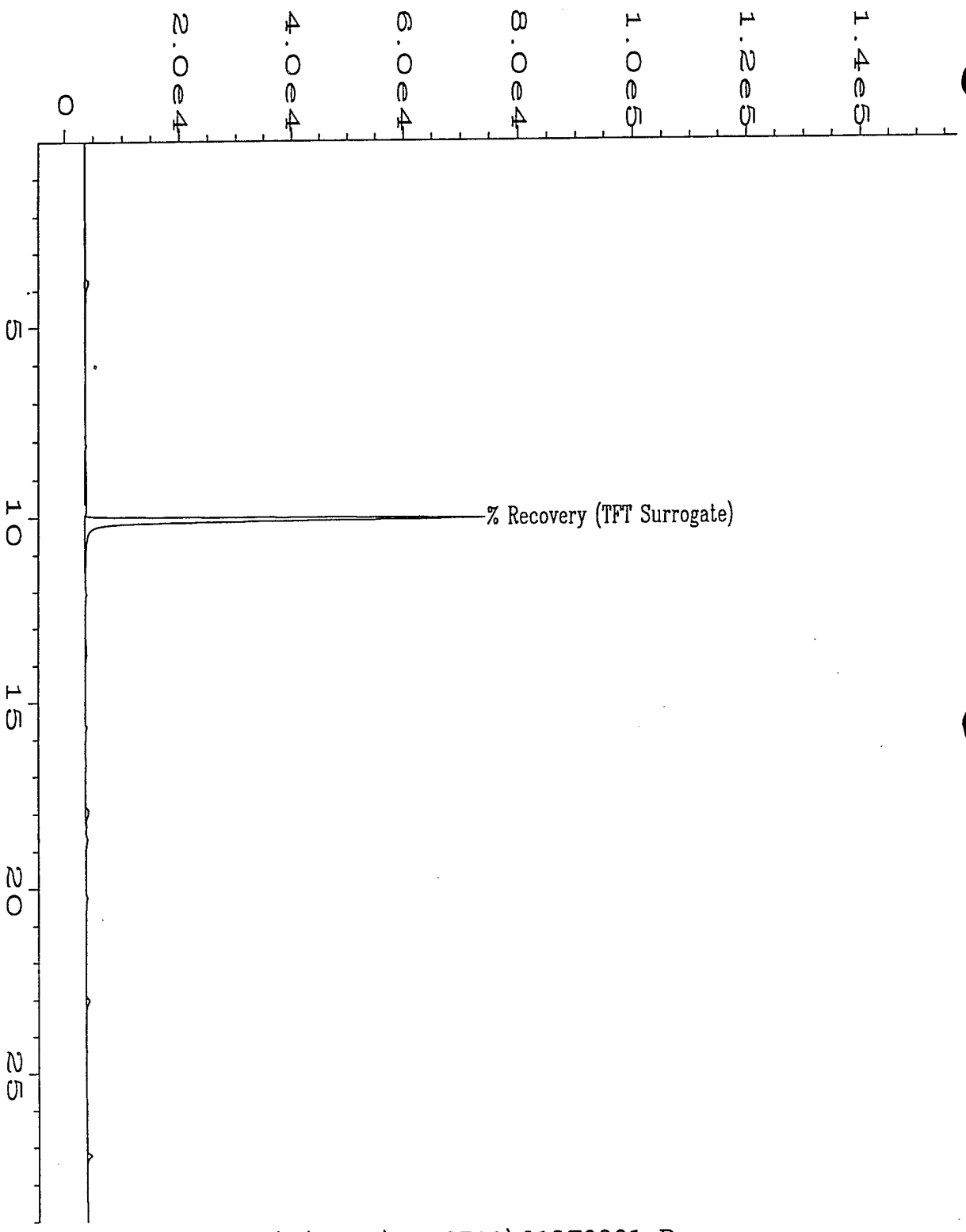
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



Data File Name : C:\HPCHEM\1\DATA\BX10711\013F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08735;1
Run Time Bar Code:
Acquired on : 11 Jul 95 07:12 PM
Report Created on: 12 Jul 95 11:16 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1
Sample Info : 95-2193;MW-16;5ml Water

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 9
Instrument Method: BX1071[redacted]MI
Analysis Method : BX1071[redacted].MI
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071114
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	37		0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		87%		70%-130% (QC limits)

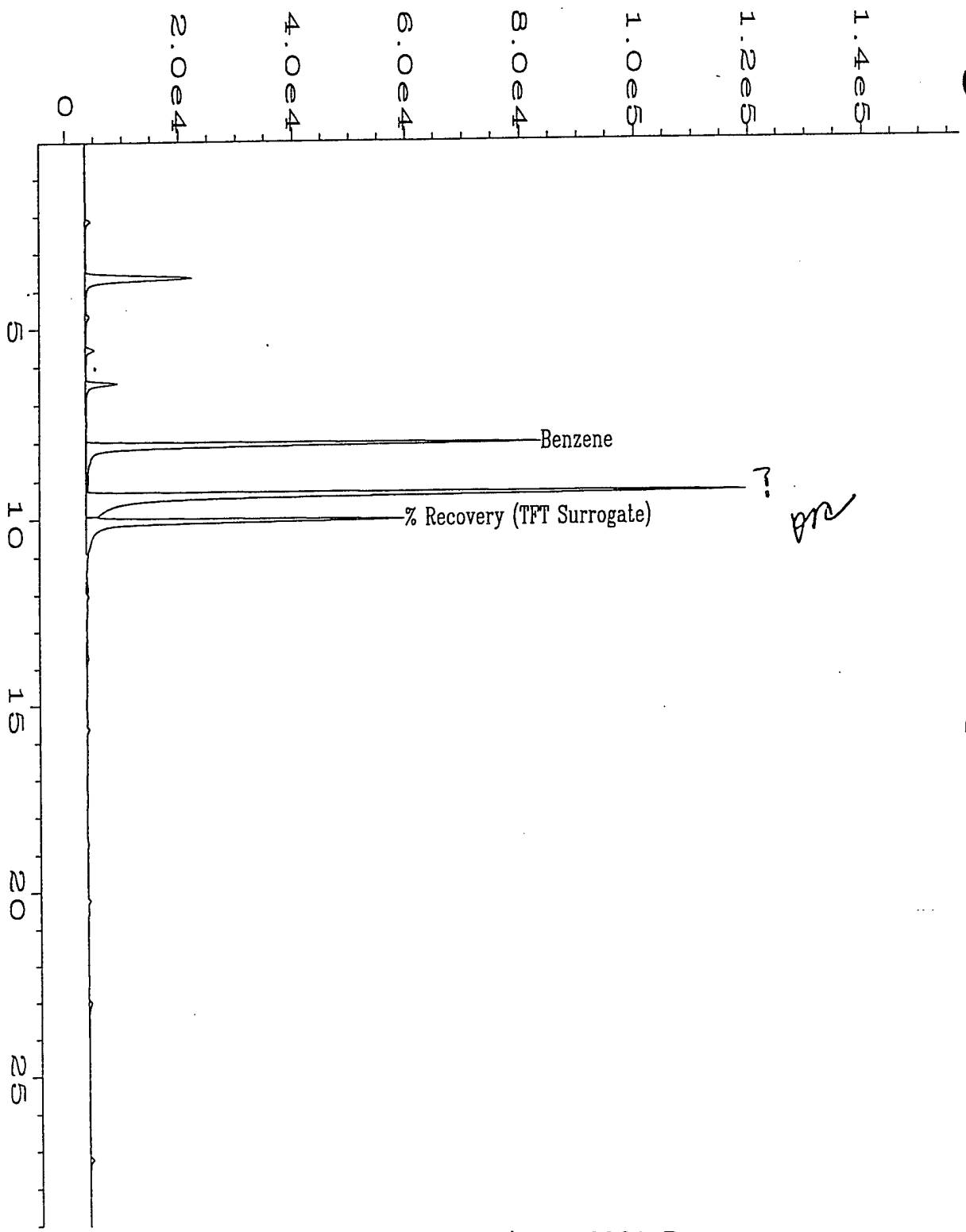
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



Data File Name : C:\HPCHEM\1\DATA\BX10711\014F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08736;1
Run Time Bar Code:
quired on : 11 Jul 95 07:53 PM
Report Created on: 12 Jul 95 11:16 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1
Sample Info : 95-2193;MW-17;5ml Water

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 9
Instrument Method: BX107[redacted]M
Analysis Method : BX107[redacted]M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071115
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		86%	70%-130% (QC limits)

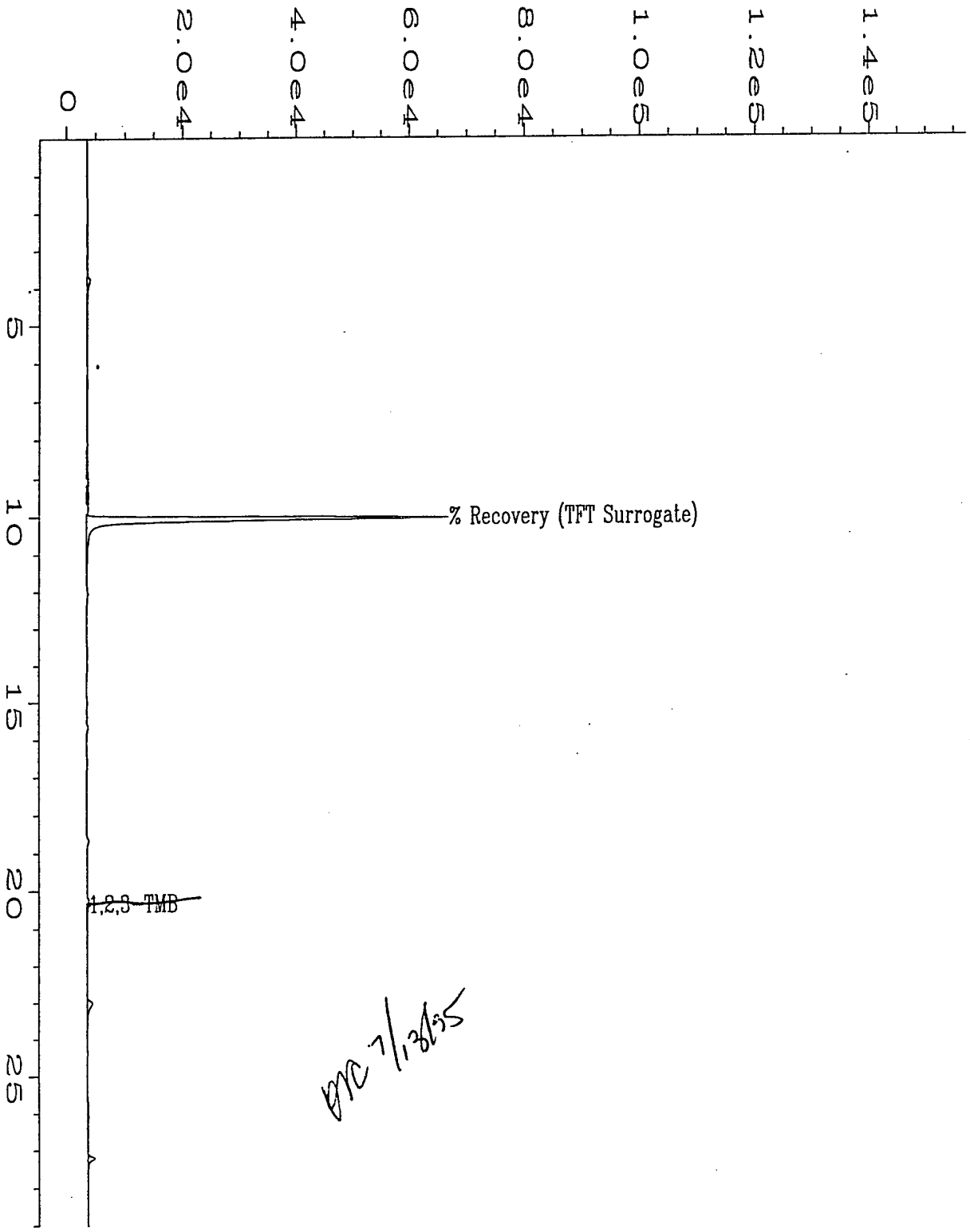
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



BJC 7/13/95

Data File Name	: C:\HPCHEM\1\DATA\BX10711\015F0901.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 15
Sample Name	: X08737;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 11 Jul 95 08:35 PM	Instrument Method	: BX1071[illegible]MT
Report Created on	: 12 Jul 95 11:16 AM	Analysis Method	: BX1071[illegible]MT
Last Recalib on	: 12 JUL 95 08:44 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-15;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071116
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		87%		70%-130% (QC limits)

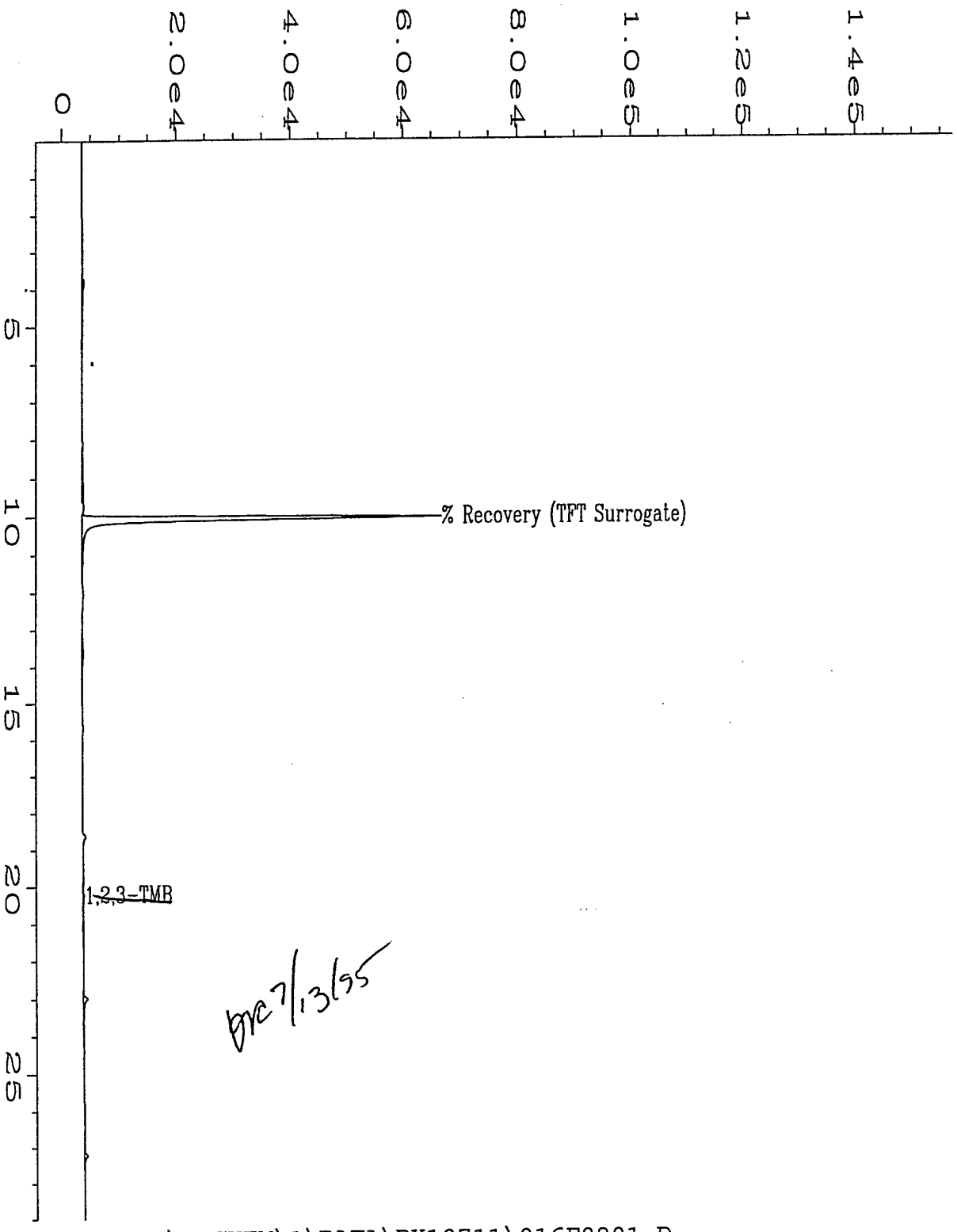
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



pjc 7/13/95

Data File Name : C:\HPCHEM\1\DATA\BX10711\016F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08738;1
Run Time Bar Code:
Acquired on : 11 Jul 95 09:16 PM
Report Created on: 12 Jul 95 11:16 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1
Sample Info : 95-2193;MW-14;5ml Water

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 9
Instrument Method: BX1071[redacted]
Analysis Method : BX10711.M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071117
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		94%		70%-130% (QC limits)

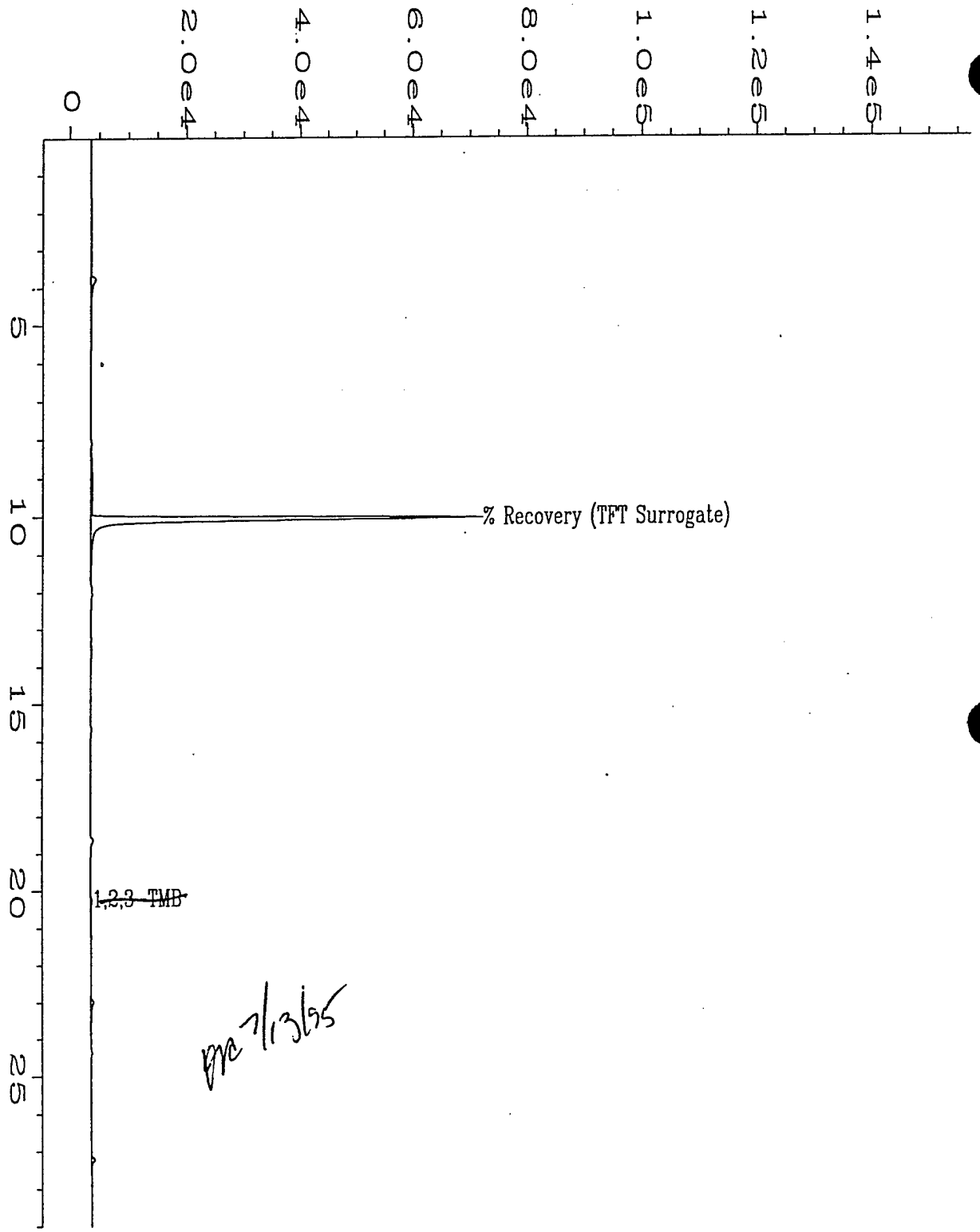
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



ppc 1/13/95

Data File Name	: C:\HPCHEM\1\DATA\BX10711\017F0901.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 17
Sample Name	: X08739;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 11 Jul 95 09:58 PM	Instrument Method	: BX1071[redacted].M
Report Created on	: 12 Jul 95 11:16 AM	Analysis Method	: BX10711.M
Last Recalib on	: 12 JUL 95 08:44 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-19;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071118
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,3,5-Trimethylbenzene	108-67-8	1.0		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		83%		70%-130% (QC limits)

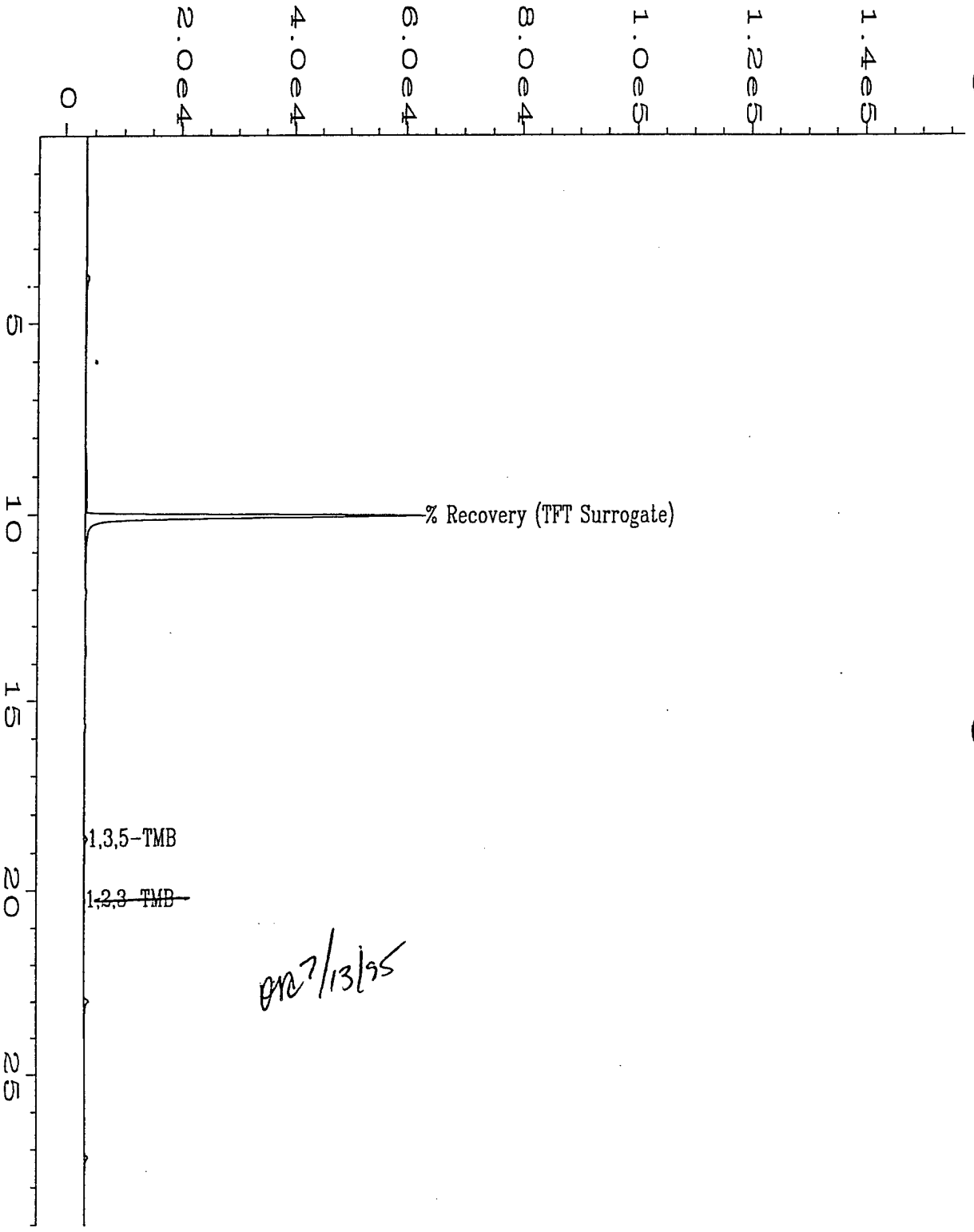
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10711\018F0901.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 18
Sample Name	: X08740;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
quired on	: 11 Jul 95 10:39 PM	Instrument Method	: BX1071[redacted]T
eport Created on	: 12 Jul 95 11:16 AM	Analysis Method	: BX1071[redacted]T
Last Recalib on	: 12 JUL 95 08:44 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-18;5ml Water		

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4036 Youngfield St. Wheat Ridge, CO 80033
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Method 602 Data Report

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071120
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3	1.1		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		80%		70%-130% (QC limits)

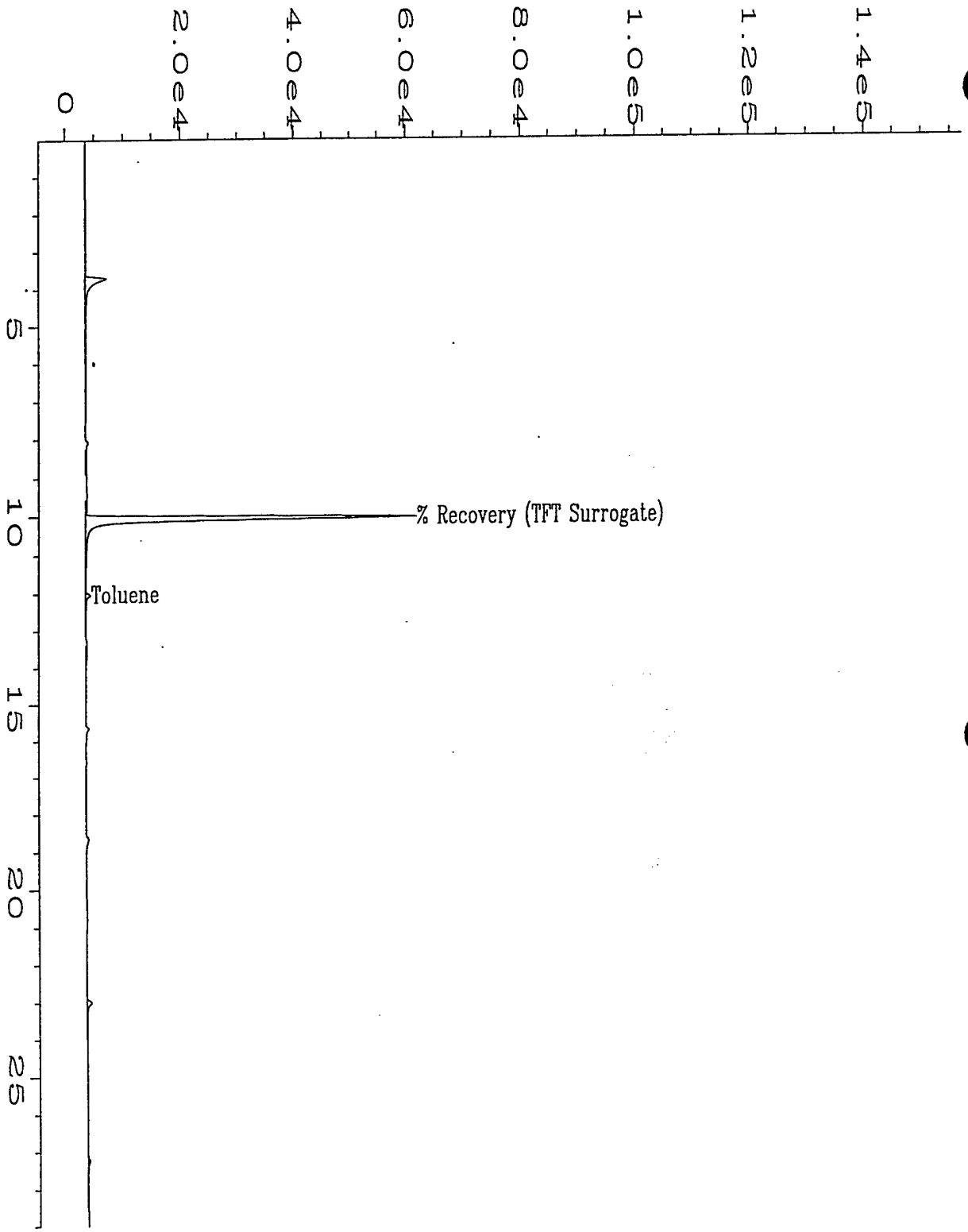
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K Cone
Approved

BTEX2193.XLS



Data File Name	: C:\HPCHEM\1\DATA\BX10711\020F0901.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 20
Sample Name	: X08741;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
quired on	: 12 Jul 95 00:02 AM	Instrument Method	: BX1071[redacted]MI
port Created on	: 12 Jul 95 11:17 AM	Analysis Method	: BX1071[redacted]MI
Last Recalib on	: 12 JUL 95 08:44 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-20;5ml Water		

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Method 602 Data Report

Client Sample Number	: MW-21	Client Project No.	: 722450.26
Lab Sample Number	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071121
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3	0.8		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8	1.1		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		84%		70%-130% (QC limits)

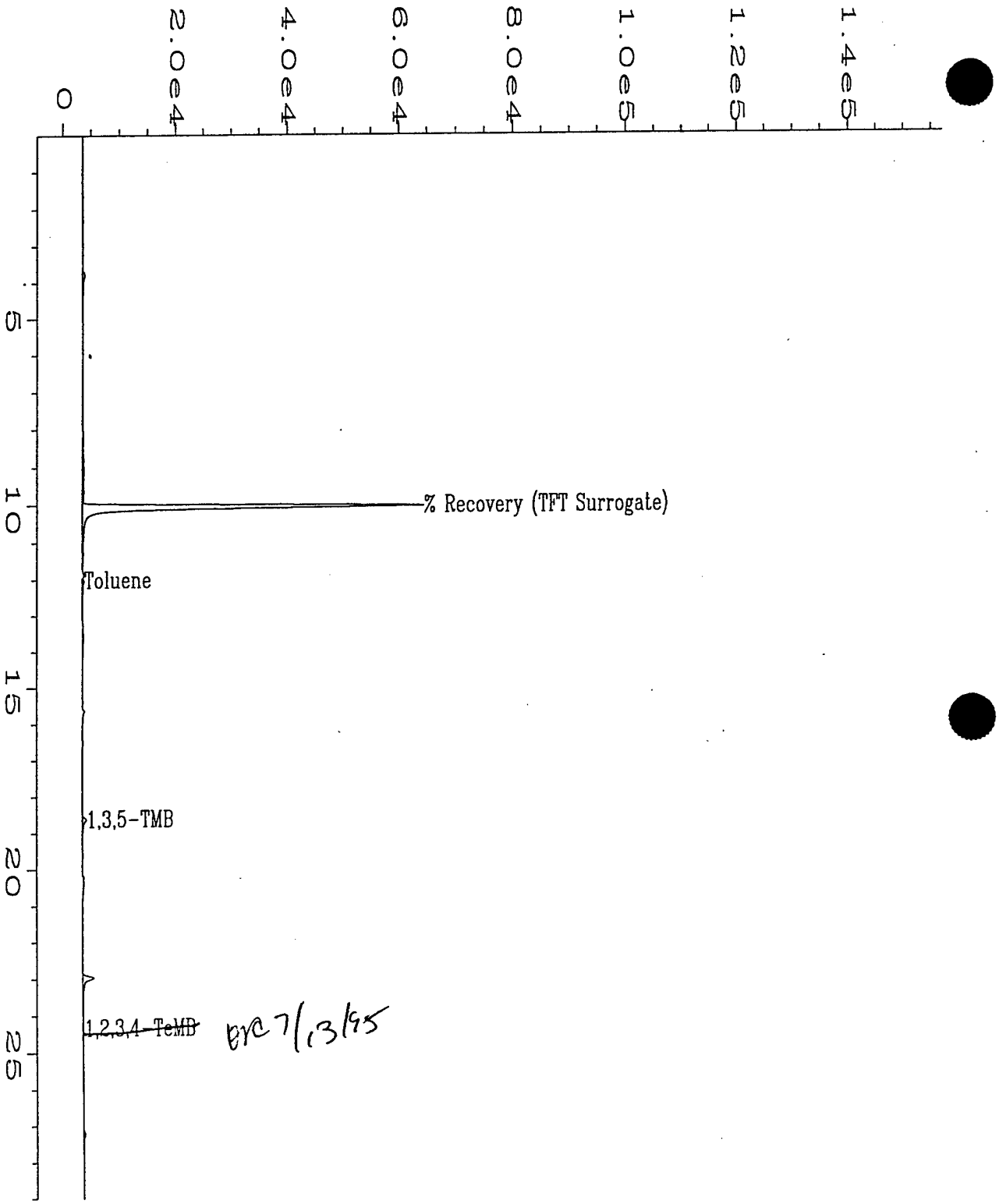
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS



prc 7/13/95

Data File Name : C:\HPCHEM\1\DATA\BX10711\021F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08742;1
Run Time Bar Code:
Acquired on : 12 Jul 95 00:44 AM
Report Created on: 12 Jul 95 11:17 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1
Sample Info : 95-2193;MW-21;5ml Water

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 9
Instrument Method: BX1071[redacted]T
Analysis Method : BX1071[redacted]T
Sample Amount : 0
ISTD Amount :

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Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26
Lab Sample Number	: X08743	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071123
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		72%		70%-130% (QC limits)

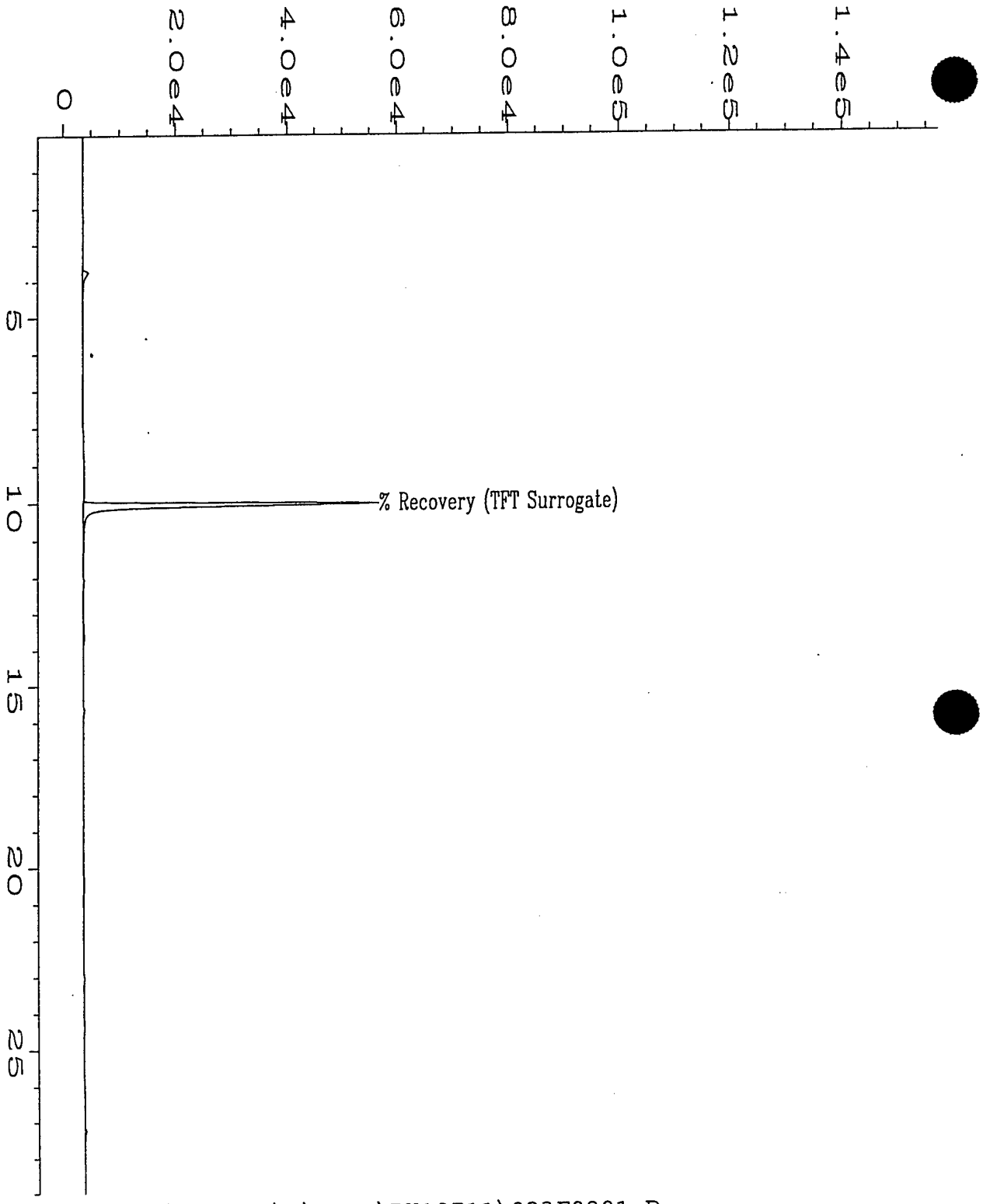
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

BTEX2193.XLS



Data File Name : C:\HPCHEM\1\DATA\BX10711\023F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08743;1
Run Time Bar Code:
quired on : 12 Jul 95 02:06 AM
port Created on: 12 Jul 95 11:17 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1
Sample Info : 95-2193;Trip Blank;5ml Water

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 9
Instrument Method: BX107[redacted].M
Analysis Method : BX107[redacted].M
Sample Amount : 0
ISTD Amount :

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-21	Client Project No.	: 722450.26
Lab Sample No.	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	EPA Method No.	: 602
Date Received	: 7/11/95	Matrix	: Water
Date Prepared	: 6/12/95	Lab File Number(s)	: BX1071211,12
Date Analyzed	: 6/12/95	Method Blank	: MB1071295
		Dilution Factor	: 1

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	Concentration (ug/L) MS		MSD		Comments
Benzene	20.0	0.0	14.2		14.7		
Toluene	20.0	0.8	14.3		14.8		
Chlorobenzene	20.0	0.0	13.8		14.4		
Ethylbenzene	20.0	0.0	14.0		14.6		
m,p-Xylene	40.0	0.0	28.5		30.0		
o-Xylene	20.0	0.0	14.2		14.8		
1,3,5-TMB	20.0	1.1	13.7	B	14.2	B	
1,2,4-TMB	20.0	0.0	13.4		14.0		
1,2,3-TMB	20.0	0.0	13.7		14.4		
1,2,3,4-TeMB	20.0	0.0	12.8		13.5		
Surrogate	100.0	84%	84%		78%		% RECOVERY

Compound		MS % RECOVERY	MSD % RECOVERY	RPD	QC# Limits RPD	%REC
Benzene		71.0	73.5	3.5	25	50 - 150
Toluene		67.5	70.0	3.6	25	50 - 148
Chlorobenzene		69.0	72.0	4.3	25	55 - 135
Ethylbenzene		70.0	73.0	4.2	25	50 - 150
m,p-Xylene		71.3	75.0	5.1	25	50 - 150
o-Xylene		71.0	74.0	4.1	25	50 - 150
1,3,5-TMB		63.0	65.5	3.9	25	50 - 150
1,2,4-TMB		67.0	70.0	4.4	25	50 - 150
1,2,3-TMB		68.5	72.0	5.0	25	50 - 150
1,2,3,4-TeMB		64.0	67.5	5.3	25	50 - 150
Surrogate		84.0	78.0	NA	NA	70 - 130

= Values taken from EPA methods 602/8020.
* = Values outside of QC limits.

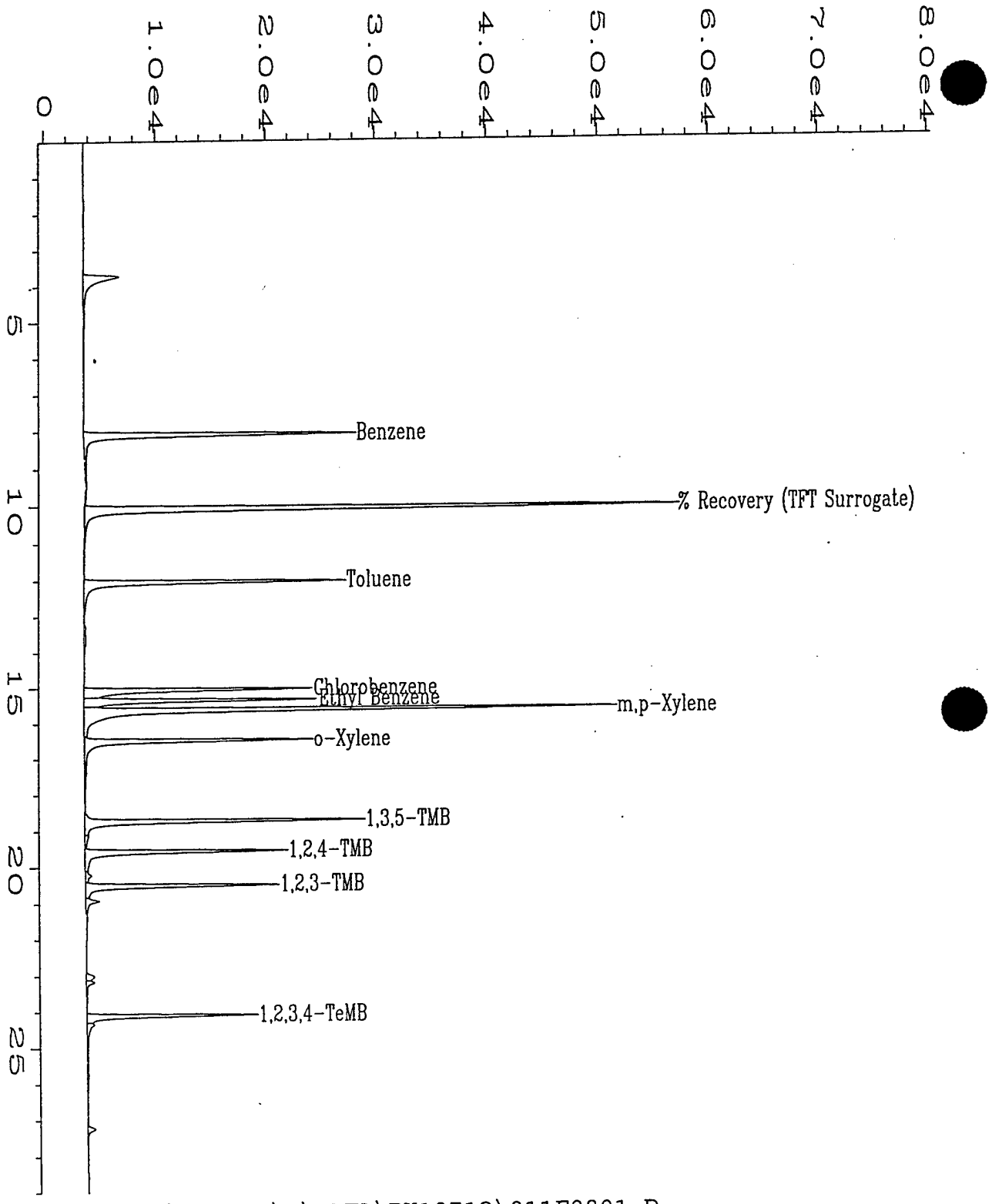
RPD: 0 out of (10) outside limits.
Spike Recovery: 0 out of (20) outside limits.

Comments:

Analyst

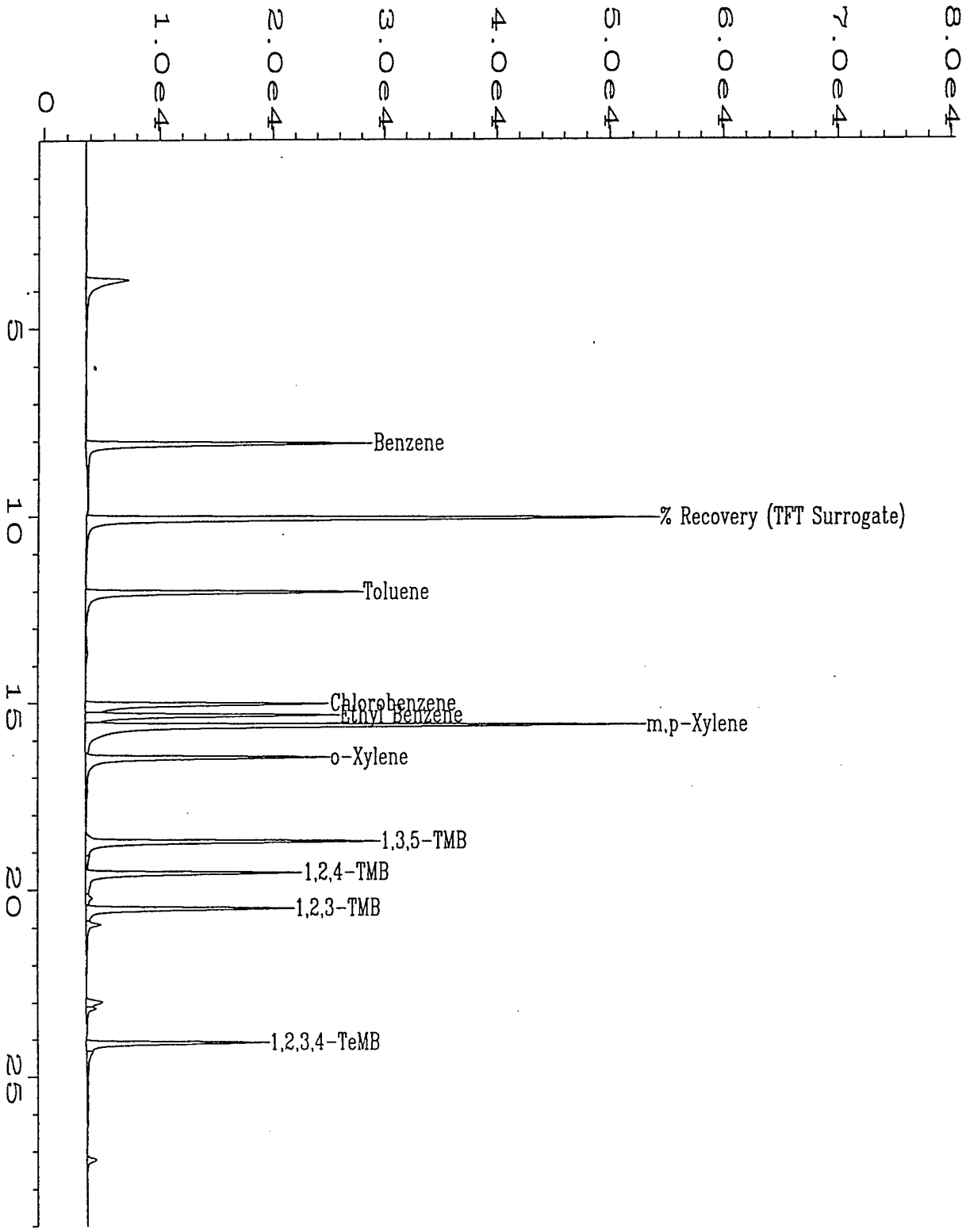
Approved

MS2193.XLS; 7/18/95



Data File Name : C:\HPCHEM\1\DATA\BX10712\011F0801.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08742MS;1
Run Time Bar Code:
Acquired on : 12 Jul 95 06:34 PM
Report Created on: 13 Jul 95 09:46 AM
Last Recalib on : 12 JUL 95 04:18 PM
Multiplier : 1
Sample Info : 95-2193;MW-21;5ml Water + 20ppb BTEX Std.

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 8
Instrument Method: BX1071[redacted]MT
Analysis Method : BX10712.MT
Sample Amount : 0
ISTD Amount :



Data File Name : C:\HPCHEM\1\DATA\BX10712\012F0801.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : X08742MSD;1
Run Time Bar Code:
Acquired on : 12 Jul 95 07:16 PM
Report Created on: 13 Jul 95 09:46 AM
Last Recalib on : 12 JUL 95 04:18 PM
Multiplier : 1
Sample Info : 95-2193;MW-21;5ml Water + 20ppb BTEX Std.

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 8
Instrument Method: BX10712.MTH
Analysis Method : BX10712.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS1071195	Dilution Factor	: 1.00
Date Extracted/Prepared	: 7/11/95	Method	: 602/8020
Date Analyzed	: 7/11/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1071111

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.7	88.5	68-111*
Toluene	108-88-3	18.5	92.5	71-111*
Chlorobenzene	108-90-7	18.6	93.0	65-115*
Ethyl Benzene	100-41-4	18.7	93.5	75-115*
m,p-Xylene	108-38-3 106-42-3	19.9	99.5	74-113*
o-Xylene	95-47-6	18.5	92.5	65-115*
1,3,5-Trimethylbenzene	108-67-8	18.6	93.0	69-10[illegible]
1,2,4-Trimethylbenzene	95-63-6	18.1	90.5	68-110*
1,2,3-Trimethylbenzene	526-73-8	22.4	112.0	71-127*
1,2,3,4-Tetramethylbenzene	488-23-3	18.4	92.0	65-115*
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%	70%-130% (QC limits)	

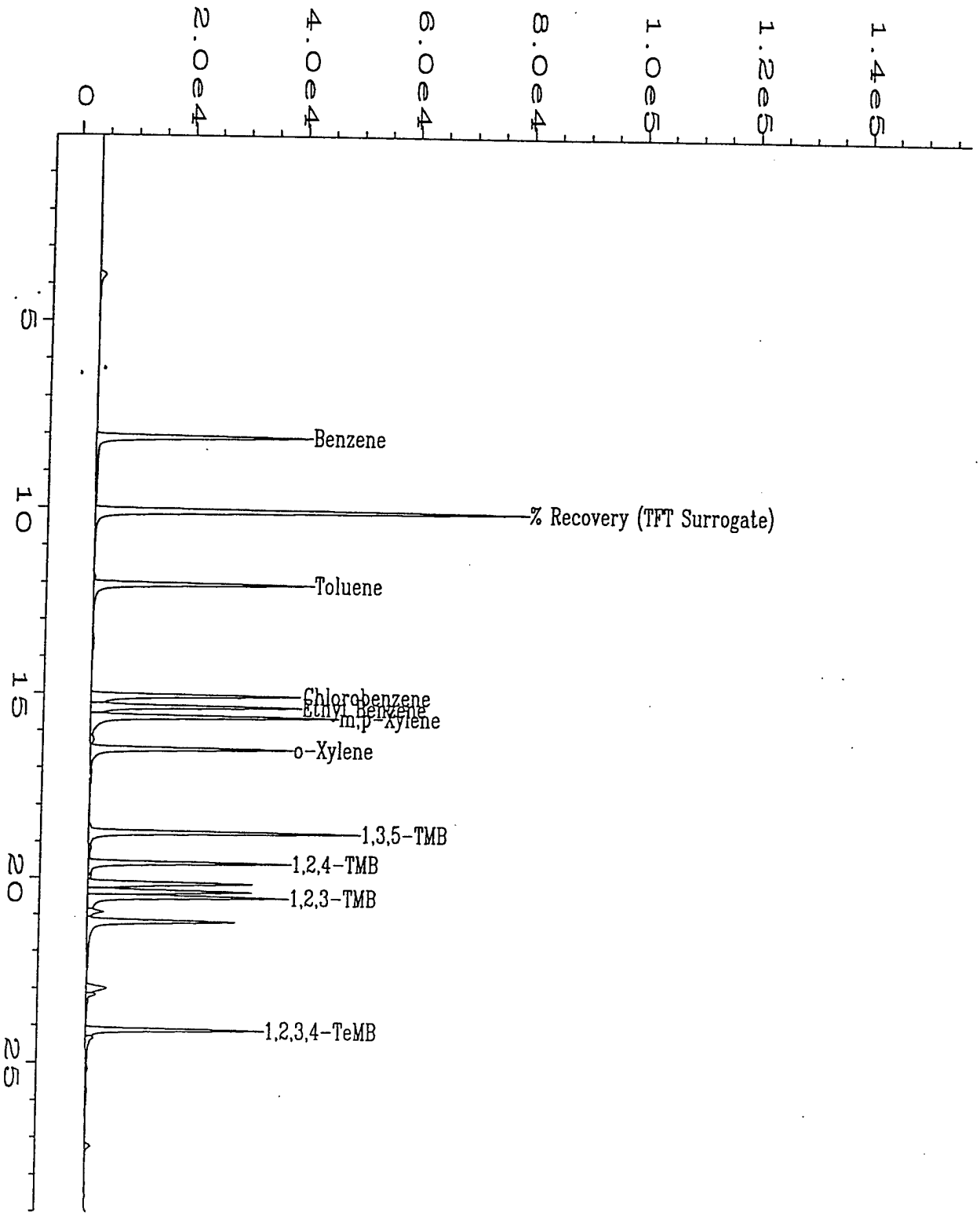
NOTES:

* = Limits established 7/5/95 KSC

QUALIFIERS:
E = Extrapolated value. Value exceeds that of the calibration range.
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
NA = Not available/Not analyzed.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\1\DATA\BX10711\011F0901.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : LCS1071195
Run Time Bar Code:
Acquired on : 11 Jul 95 05:49 PM
Report Created on: 12 Jul 95 10:58 AM
Last Recalib on : 12 JUL 95 08:44 AM
Multiplier : 1

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 9
Instrument Method: BX10711.MTH
Analysis Method : BX10711.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS1071295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 7/12/95	Method	: 602/8020
Date Analyzed	: 7/12/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1071208

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.4	92.0	68-111*
Toluene	108-88-3	18.8	94.0	71-111*
Chlorobenzene	108-90-7	19.4	97.0	65-115*
Ethyl Benzene	100-41-4	19.3	96.5	75-115*
m,p-Xylene	108-38-3 106-42-3	20.0	100.0	74-113*
o-Xylene	95-47-6	18.7	93.5	65-115*
1,3,5-Trimethylbenzene	108-67-8	19.8	99.0	69-109
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	68-110*
1,2,3-Trimethylbenzene	526-73-8	24.7	123.5	71-127*
1,2,3,4-Tetramethylbenzene	488-23-3	20.1	100.5	65-115*
Surrogate Recovery (α,α,α-Trifluorotoluene):		89%	70%-130% (QC limits)	

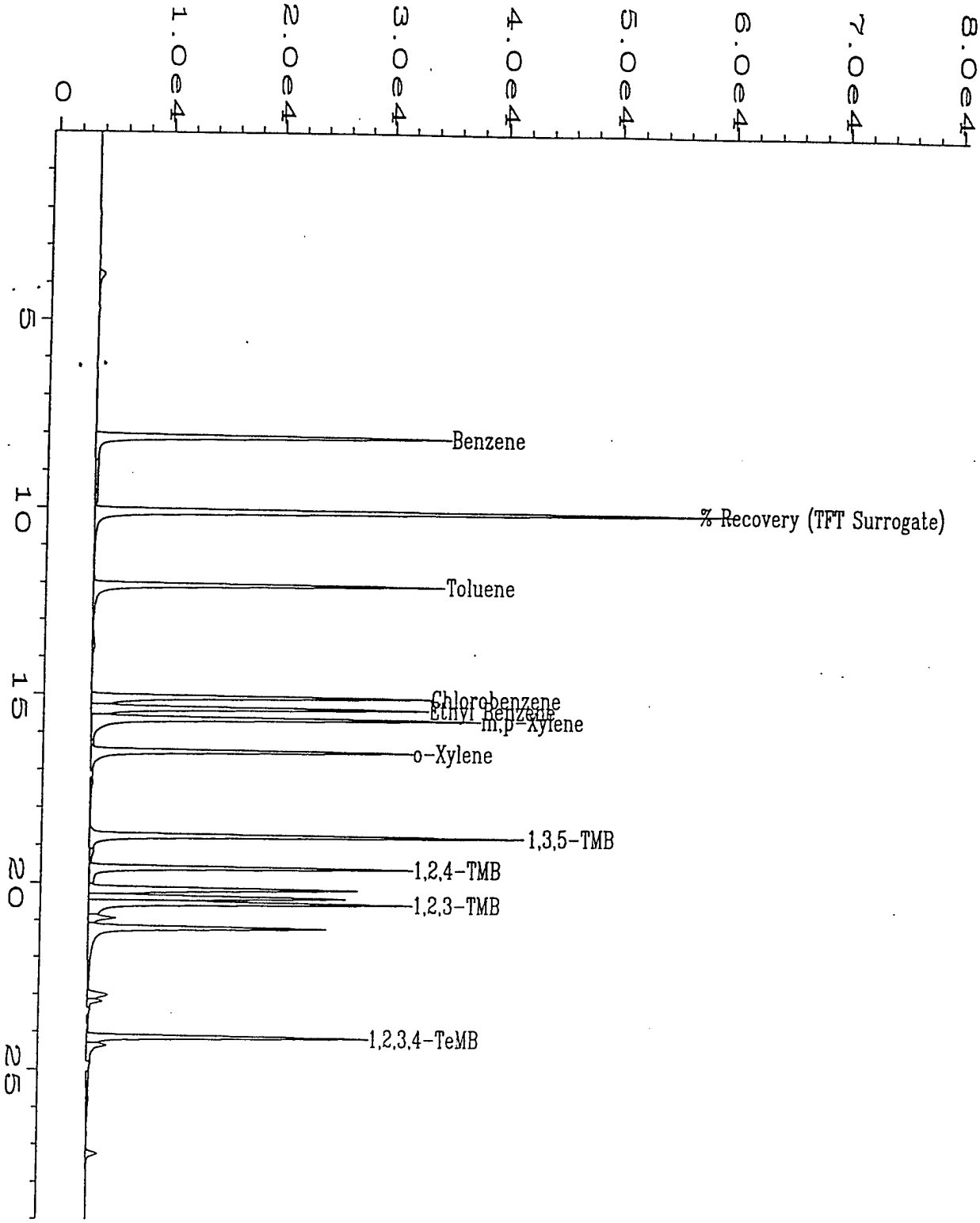
NOTES:

* = Limits established 7/5/95 KSC

QUALIFIERS:
E = Extrapolated value. Value exceeds that of the calibration range.
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
NA = Not available/Not analyzed.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\1\DATA\BX10712\008F0801.D
Operator : C.J. Cook
Instrument : BTEX1
Sample Name : LCS1071295
Run Time Bar Code:
Acquired on : 12 Jul 95 04:30 PM
Report Created on: 13 Jul 95 09:45 AM
Last Recalib on : 12 JUL 95 04:18 PM
Multiplier : 1

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 8
Instrument Method: BX10712.MTH
Analysis Method : BX10712.MTH
Sample Amount : 0
ISTD Amount :

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TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/12/95	Matrix	: Water
		Method Number	: EPA 5030/8015 Modified

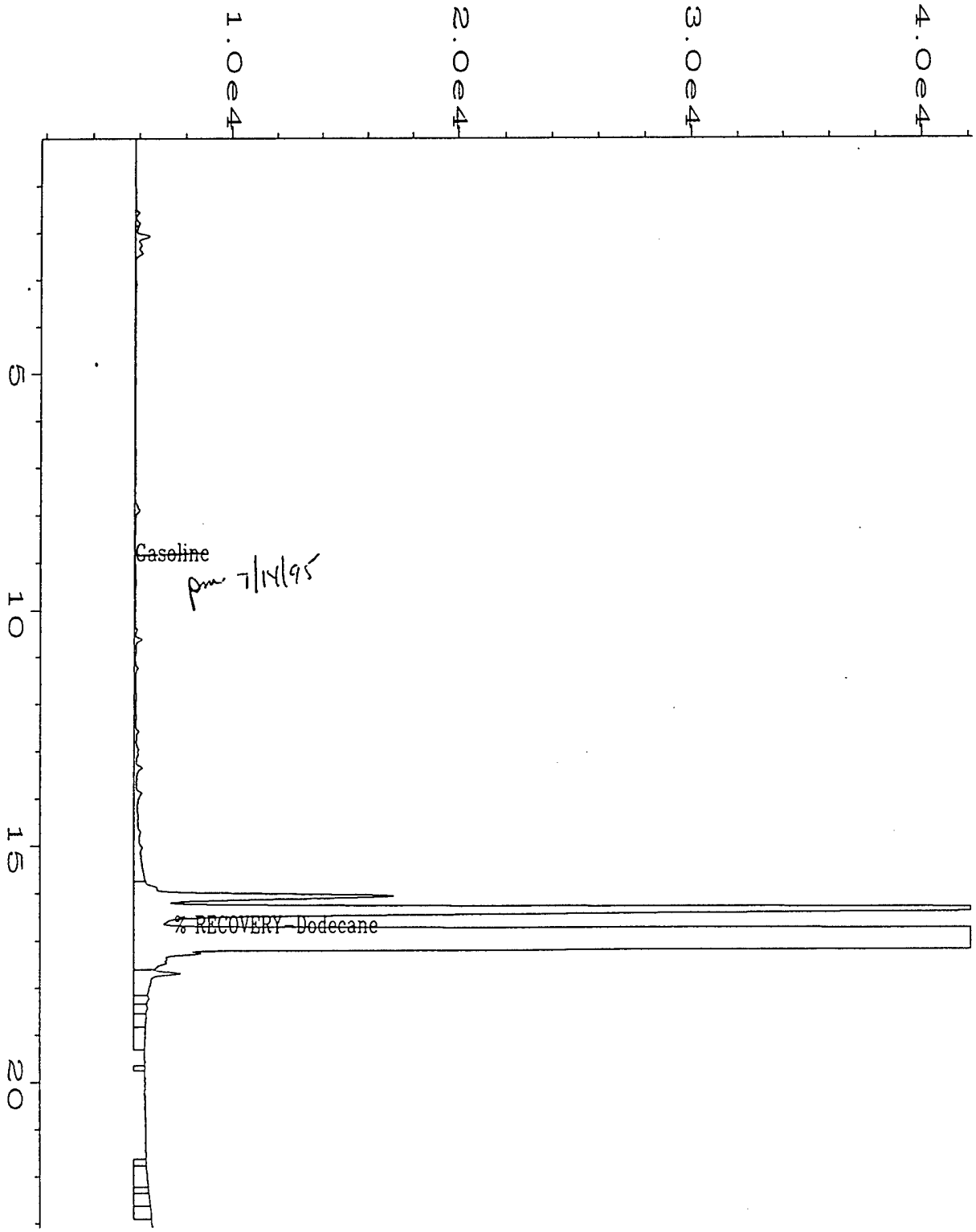
Evergreen Sample #	Client Sample #	Analysis Date	Surrogate Recovery	Result mg/L	RL mg/L
MB071195	METHOD BLANK	7/12/95	100%	U	0.1
X08741	MW-20	7/12/95	102%	U	0.1
X08735	MW-16	7/12/95	103%	U	0.1
X08736	MW-17	7/12/95	102%	0.1	0.1
X08737	MW-15	7/12/95	102%	U	0.1
X08738	MW-14	7/12/95	101%	U	0.1
X08739	MW-19	7/12/95	101%	U	0.1
X08740	MW-18	7/12/95	99%	U	0.1

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH found in blank also.
E = Extrapolated value. Exceeds calibration range.
RL = Reporting Limit.

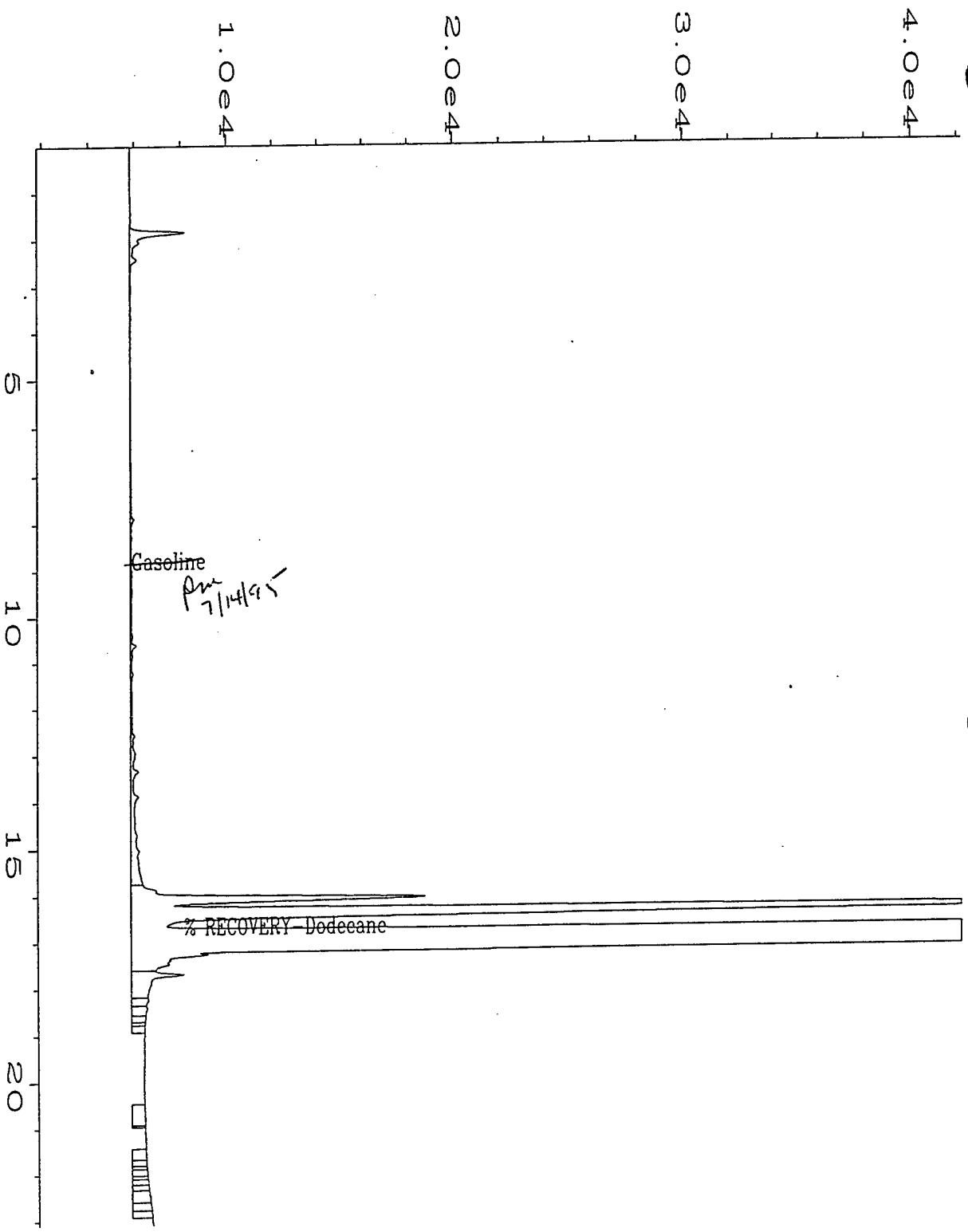
Analyst

Approved

TVH2193.XLS

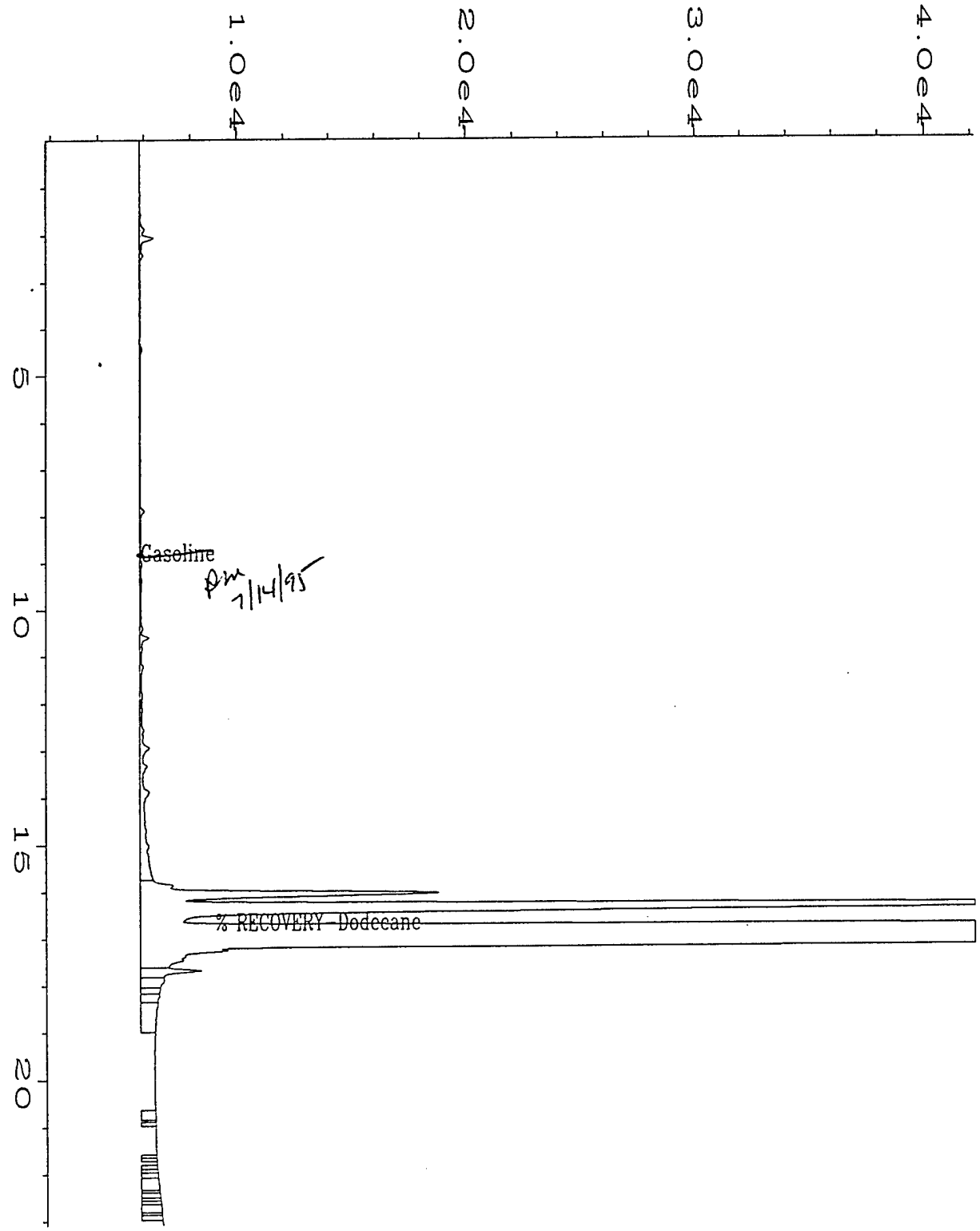


Data File Name	: C:\HPCHEM\1\DATA\TVH0711\009F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 9
Sample Name	: MB071195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Jul 95 06:21 PM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:00 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

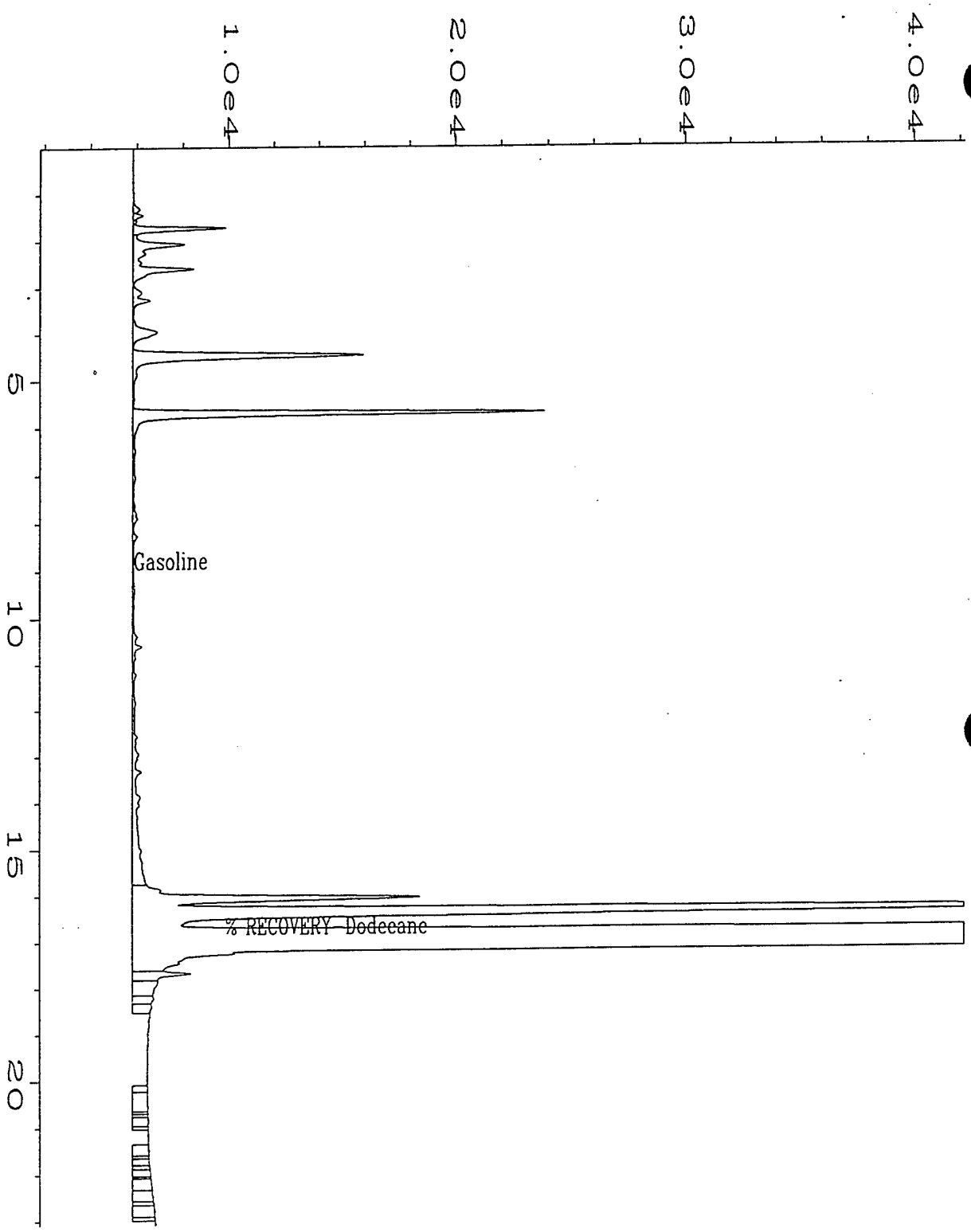


Data File Name : C:\HPCHEM\1\DATA\TVH0711\010F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X08741D;1
Run Time Bar Code:
Acquired on : 12 Jul 95 07:01 PM
Report Created on: 13 Jul 95 02:00 PM
Last Recalib on : 13 JUL 95 01:51 PM
Multiplier : 1
Sample Info : 95-2193;MW-20;WATER

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: TVHBAS[redacted]MT
Analysis Method : TVH0711.MT
Sample Amount : 0
ISTD Amount :

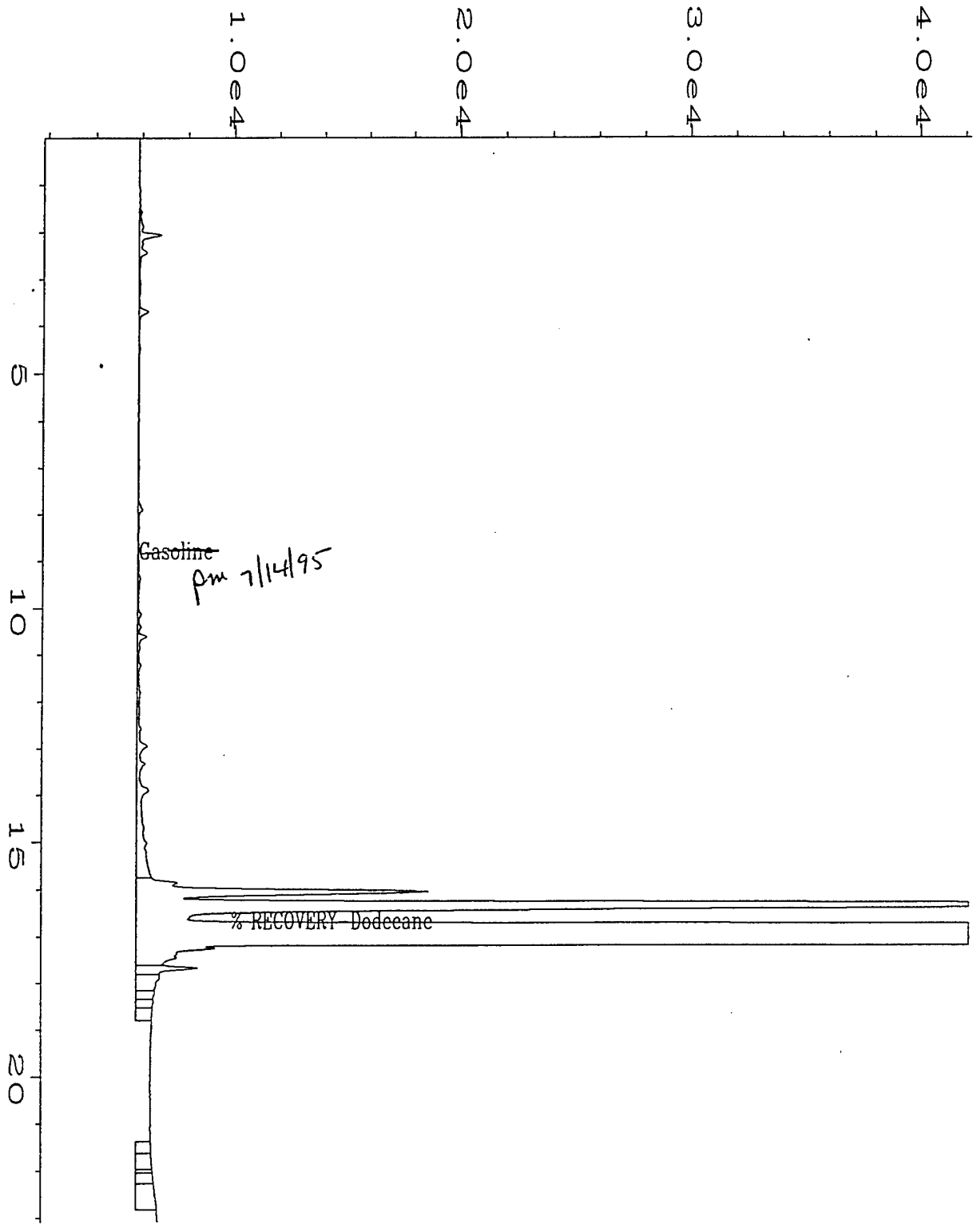


Data File Name	: C:\HPCHEM\1\DATA\TVH0711\011F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 11
Sample Name	: X08735D;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Jul 95 07:40 PM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:00 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-16;WATER		

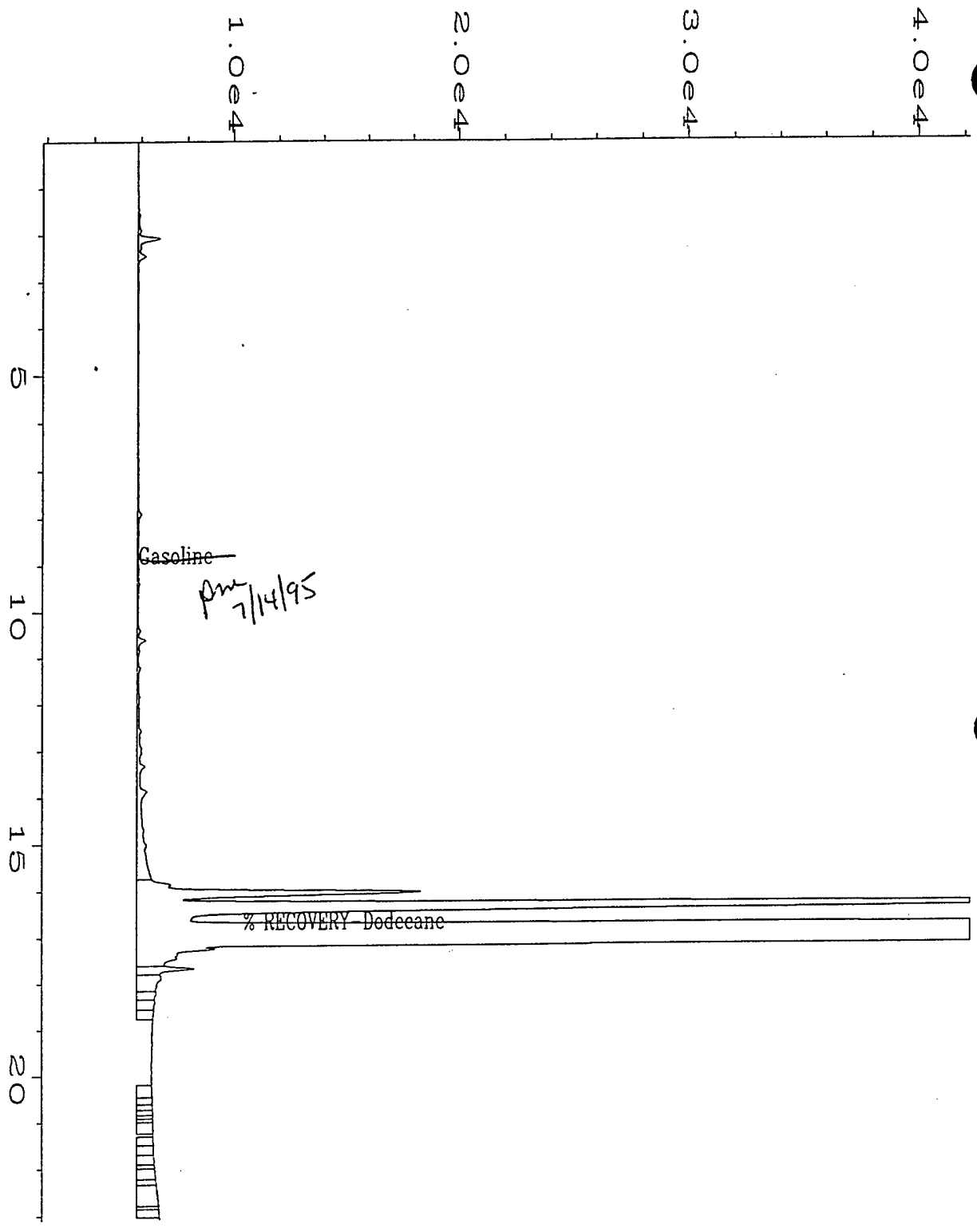


Data File Name : C:\HPCHEM\1\DATA\TVH0711\012F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X08736D;1
Run Time Bar Code:
Acquired on : 12 Jul 95 08:19 PM
Report Created on: 13 Jul 95 02:00 PM
Last Recalib on : 13 JUL 95 01:51 PM
Multiplier : 1
Sample Info : 95-2193;MW-17;WATER

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: TVHBAS[redacted]MT
Analysis Method : TVH0711.MT
Sample Amount : 0
ISTD Amount :

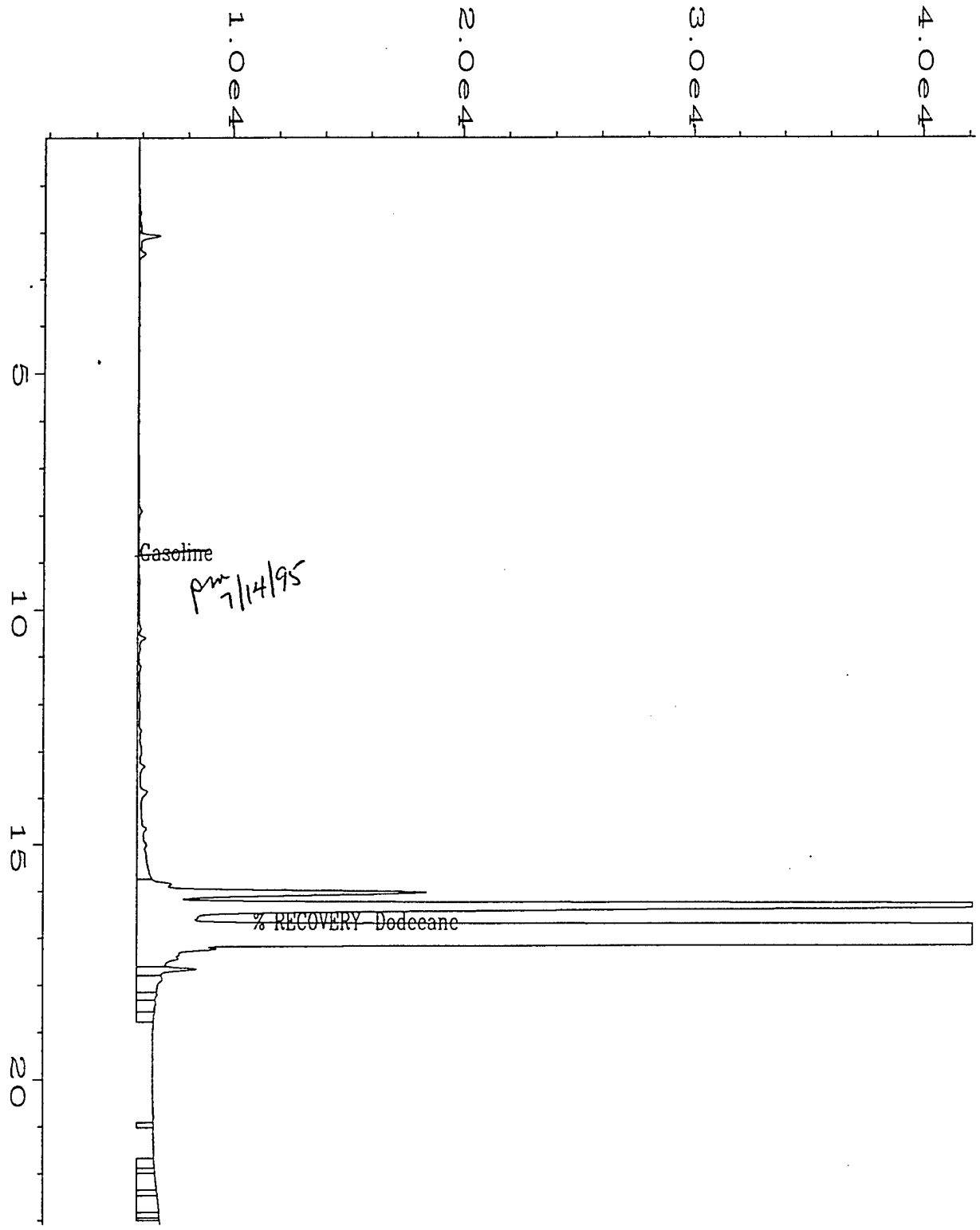


Data File Name	: C:\HPCHEM\1\DATA\TVH0711\013F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 13
Sample Name	: X08737D;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Jul 95 08:58 PM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:00 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-15;WATER		

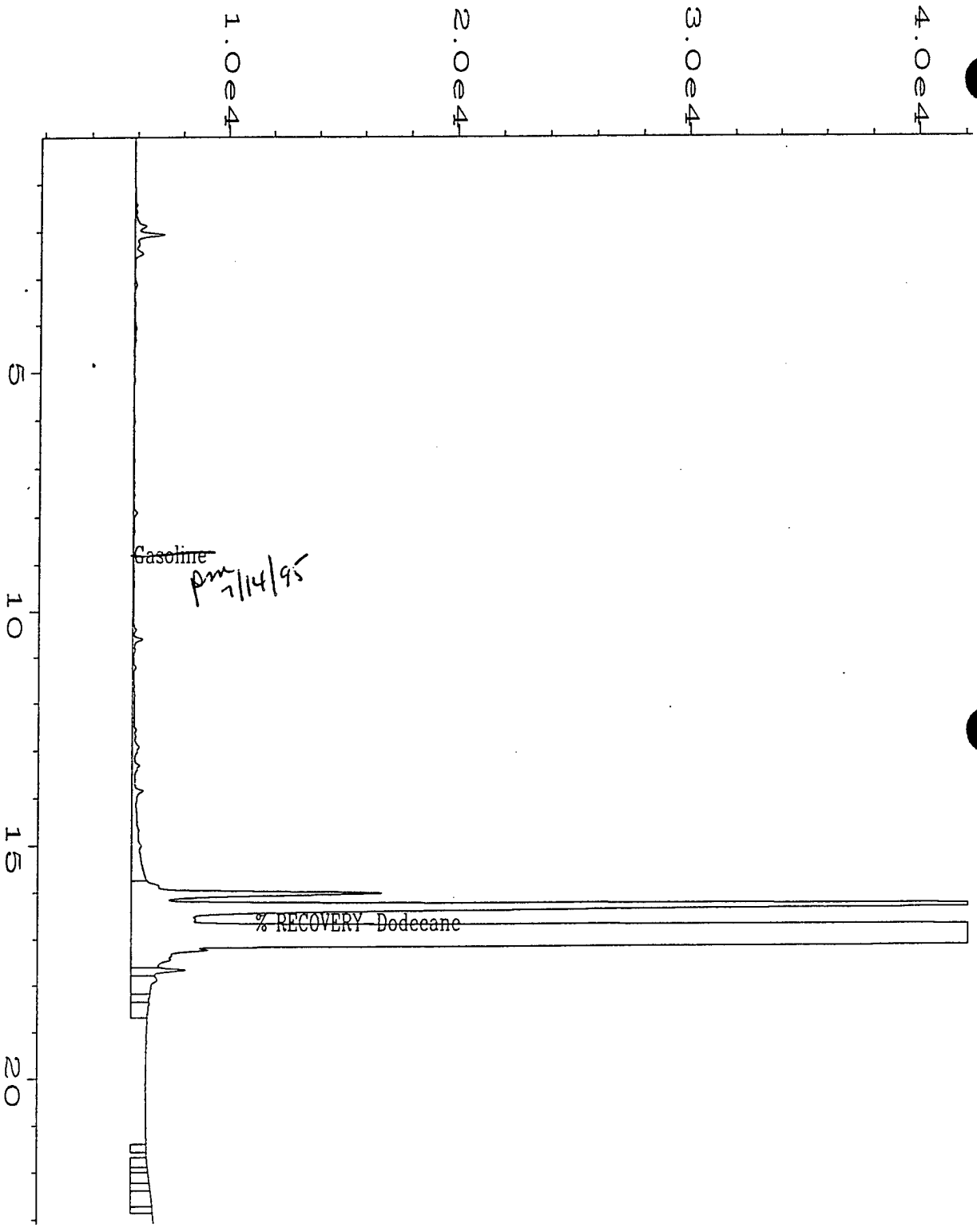


Data File Name : C:\HPCHEM\1\DATA\TVH0711\014F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X08738D;1
Run Time Bar Code:
uired on : 12 Jul 95 09:37 PM
port Created on: 13 Jul 95 02:00 PM
Last Recalib on : 13 JUL 95 01:51 PM
Multiplier : 1
Sample Info : 95-2193;MW-14;WATER

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: TVHBAS[redacted]T
Analysis Method : TVH071[redacted]MT
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\015F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 15
Sample Name	: X08739D;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Jul 95 10:16 PM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:01 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-19;WATER		



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\016F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 16
Sample Name	: X08740D;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 12 Jul 95 10:55 PM	Instrument Method	: TVHBAS[redacted]MI
port Created on	: 13 Jul 95 02:01 PM	Analysis Method	: TVH0711.MI
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-18;WATER		

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-20	**Client Project No.**	: 722450.26
Lab Sample No.	: X08741	**Lab Project No.**	: 95-2193
Date Sampled	: 7/10/95	**EPA Method No.**	: 5030/8015 Modified
Date Received	: 7/11/95	**Matrix**	: Water
Date Prepared	: 7/12/95	**Method Blank**	: MB071195
Date Analyzed	: 7/12/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.0	1.86	93%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Gasoline	2.00	1.88	94%	1.0	50	60-140

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

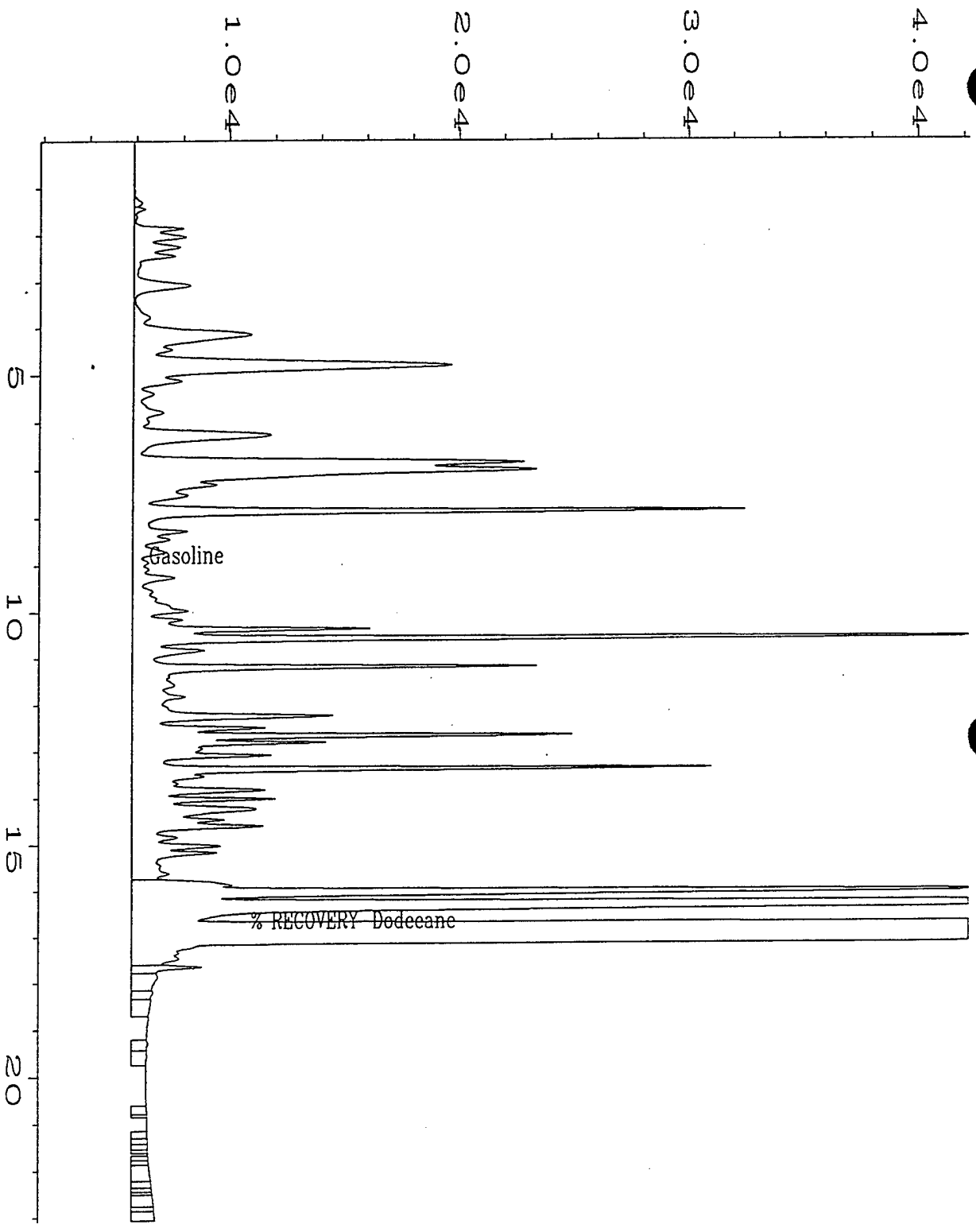
Notes:
NA = Not analyzed/not applicable.
* = Values outside of QC limits.

Comments: _____

Analyst

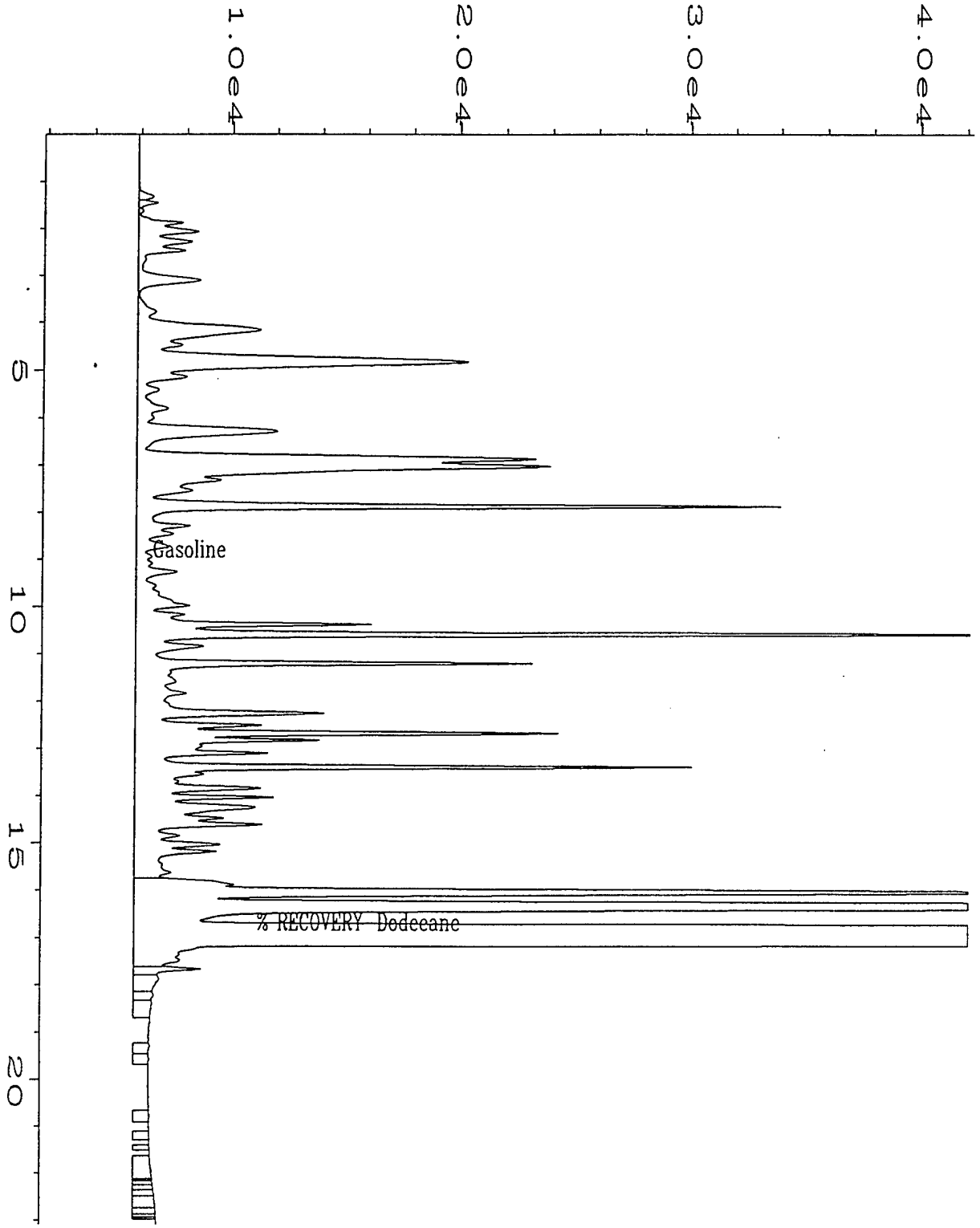
K. Cone
Approved

MSTV2193.XLS7/13/95



Data File Name : C:\HPCHEM\1\DATA\TVH0711\017F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X08741D MS
Run Time Bar Code:
quired on : 12 Jul 95 11:34 PM
port Created on: 13 Jul 95 02:01 PM
Last Recalib on : 13 JUL 95 01:51 PM
Multiplier : 1

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: TVHBAS[redacted]M
Analysis Method : TVH071[redacted]M
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\018F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 18
Sample Name	: X08741D MSD	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 13 Jul 95 00:13 AM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:01 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

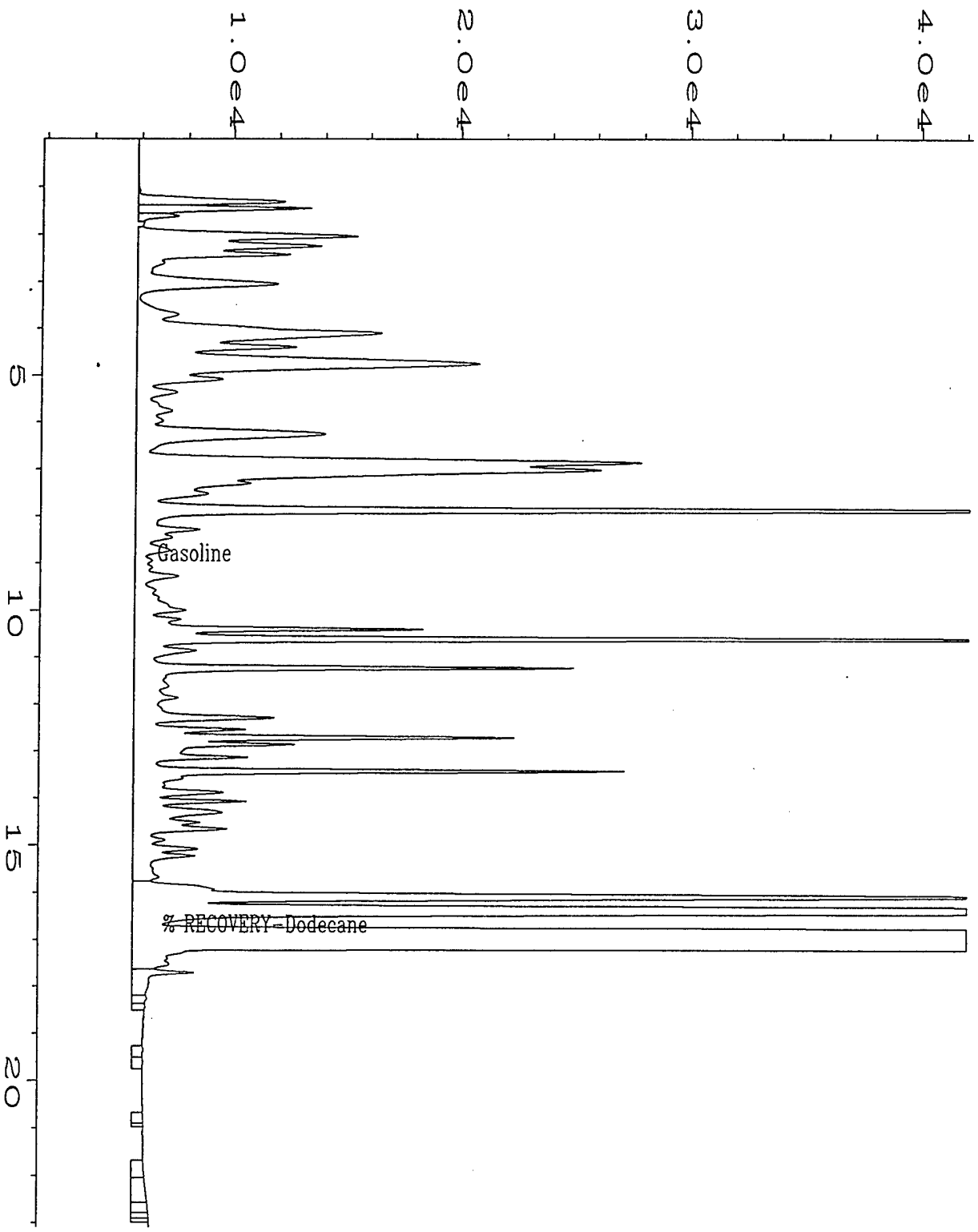
LCS Number	: LCS071195	Matrix	: WATER
Date Prepared	: 7/12/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 7/12/95		
Sequence Number	: 008F0101.D		

Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
Gasoline	2.00	2.34	117%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value. Exceeds calibration range.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\008F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 8
Sample Name	: LCS071195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Jul 95 05:40 PM	Instrument Method	: TVHBASE.MTH
Report Created on	: 13 Jul 95 02:00 PM	Analysis Method	: TVH0711.MTH
Last Recalib on	: 13 JUL 95 01:51 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: #1492		

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TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/13,14/95	Method Number	: 3500/Mod.8015

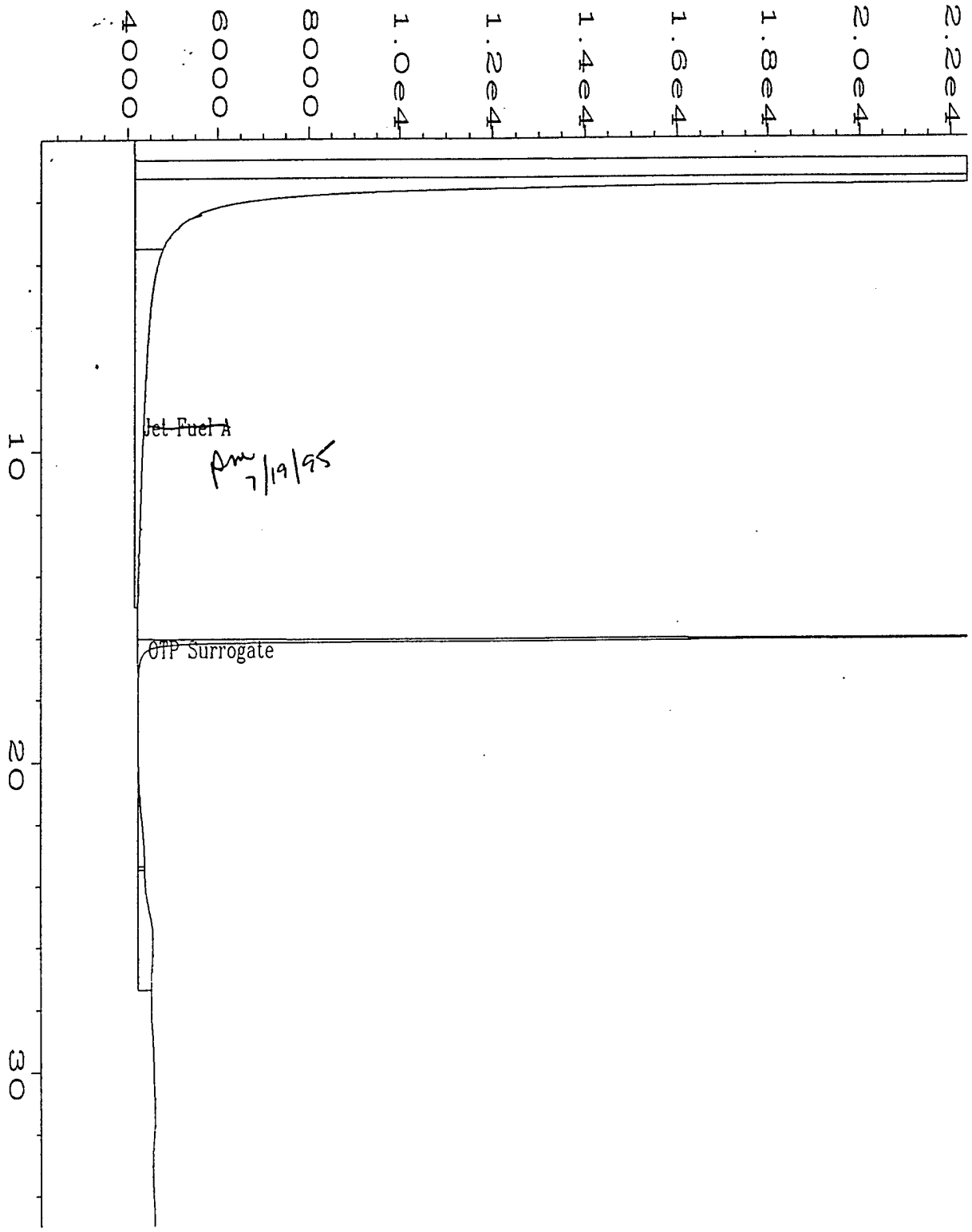
Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH Jet Fuel mg/L	RL mg/L
WB071195	WATER METHOD BLANK	91%	U	0.5
X08735	MW-16	102%	U	0.5
X08736	MW-17	97%	U	0.5
X08737	MW-15	81%	U	0.5
X08738	MW-14	83%	U	0.5
X08739	MW-19	97%	U	0.5
X08740	MW-18	89%	U	0.5
X08741	MW-20	93%	U	0.5

QUALIFIERS
U = TEH as Jet Fuel analyzed for but not detected.
B = TEH as Jet Fuel found in blank also.
E = Extrapolated value.
RL = Reporting Limit

Analyst

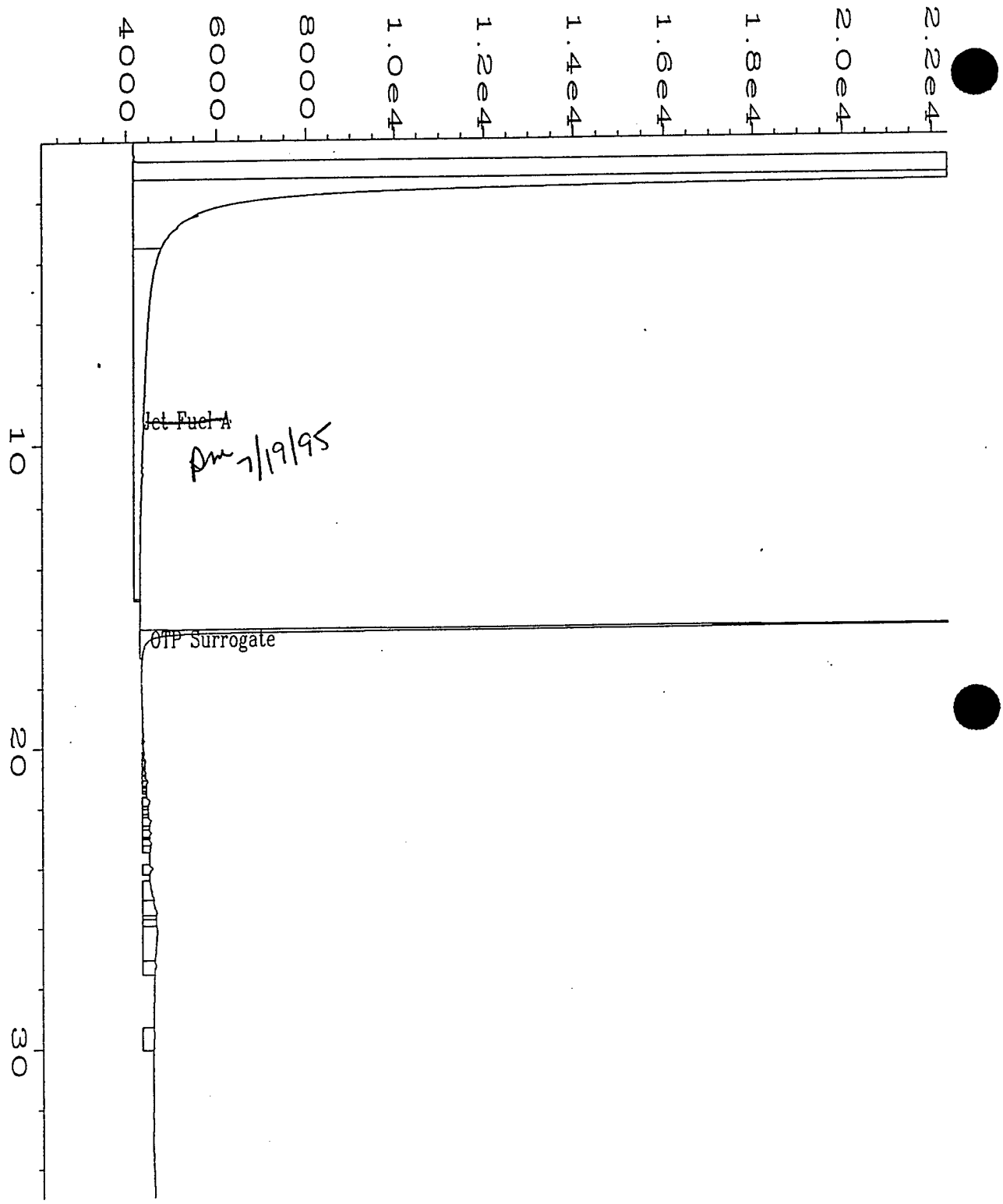
K. Cone
Approved

JET2193.XLS



dmw 7/19/95

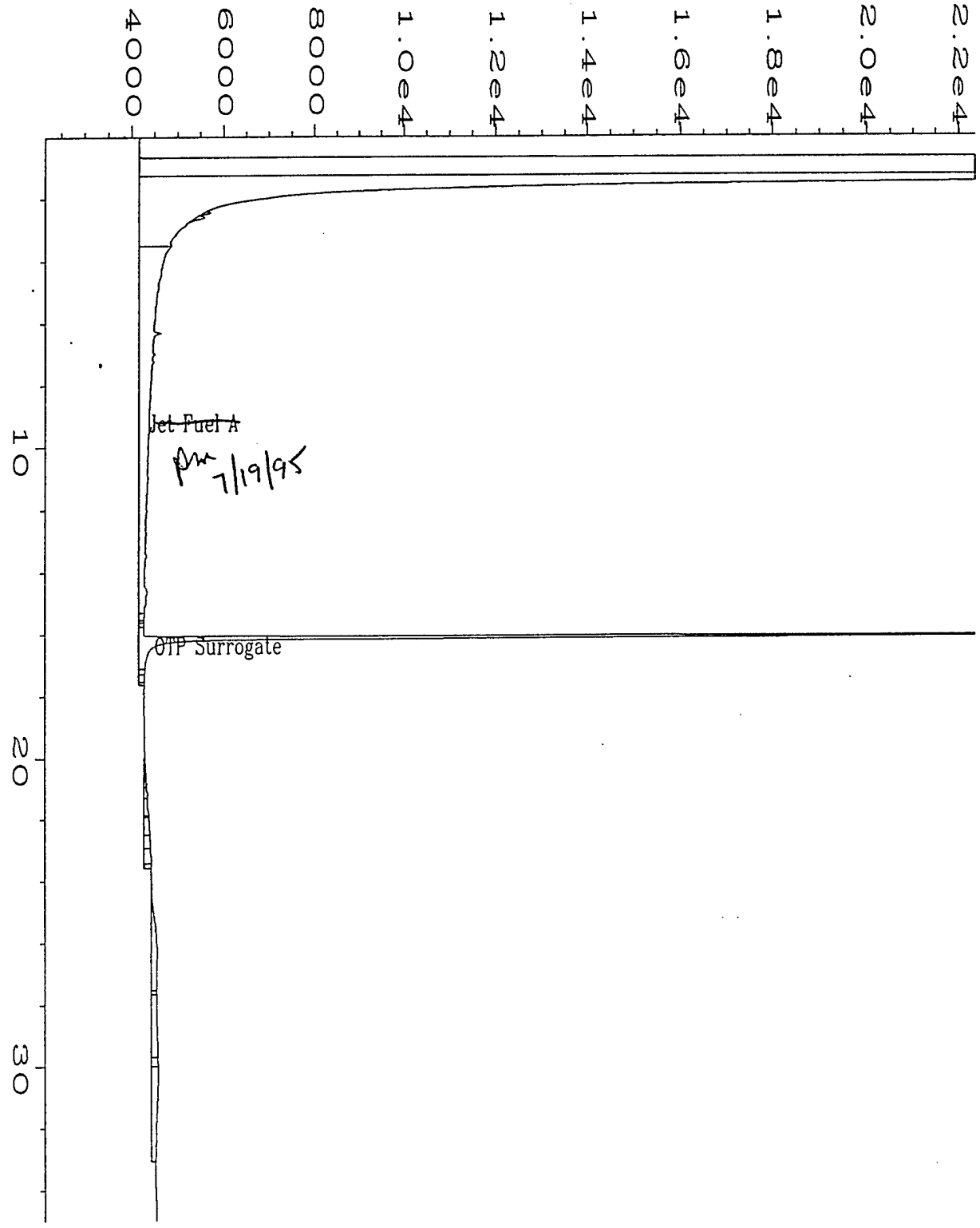
Data File Name	: C:\HPCHEM\2\DATA\JET0713\009R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 9
Sample Name	: WB071195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 13 Jul 95 08:25 PM	Instrument Method	: TEHBASE.MTH
Report Created on	: 14 Jul 95 10:37 AM	Analysis Method	: JET0713.MTH
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



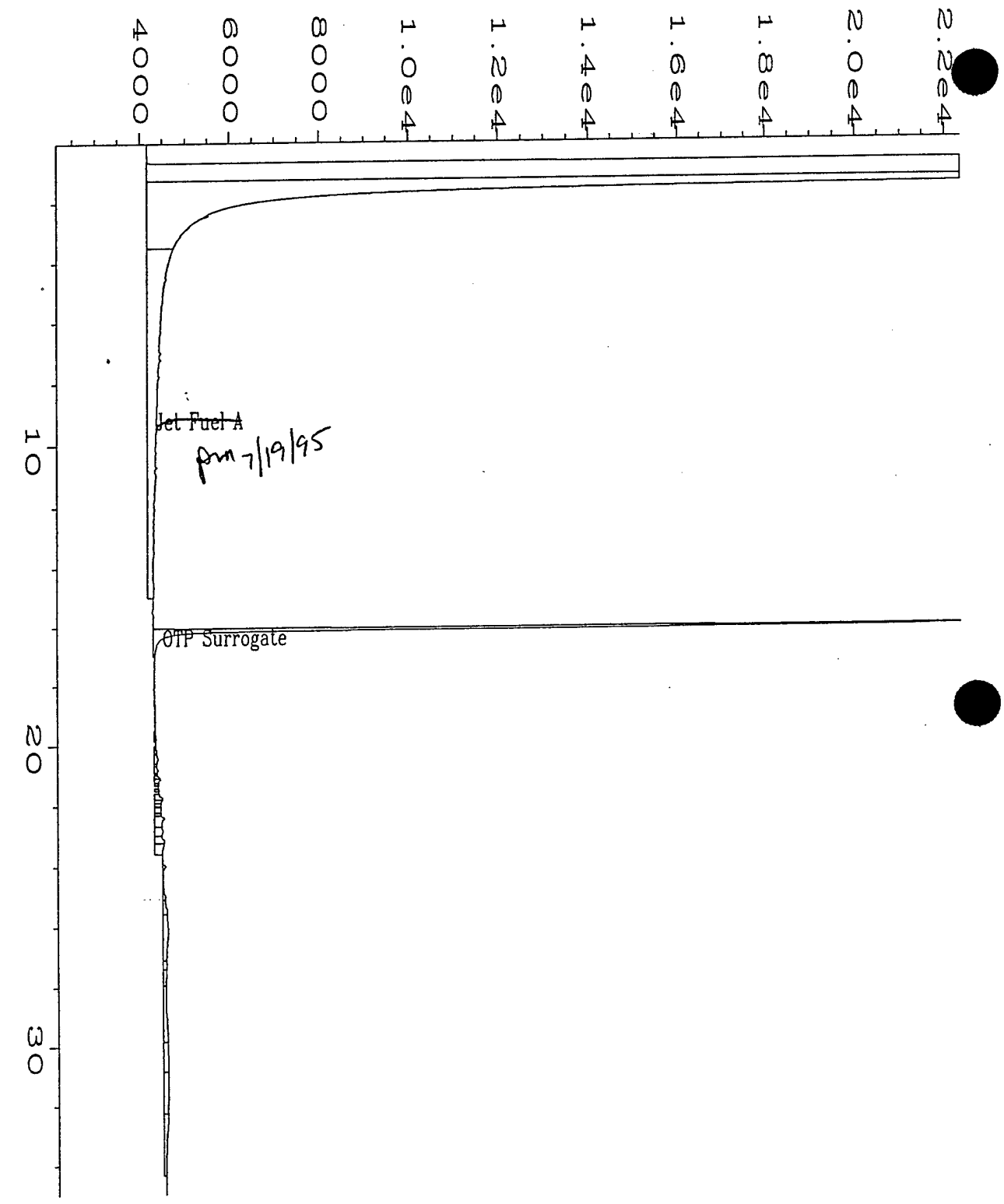
Data File Name : C:\HPCHEM\2\DATA\JET0713\011R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X08735K;1
Pgm Time Bar Code:
Acquired on : 13 Jul 95 10:08 PM
Report Created on: 14 Jul 95 10:53 AM
Last Recalib on : 14 JUL 95 10:24 AM
Multiplier : 1

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: TEHBAS[illegible]T
Analysis Method : JET0713.MT
Sample Amount : 0
ISTD Amount :

Client ID: MW-16

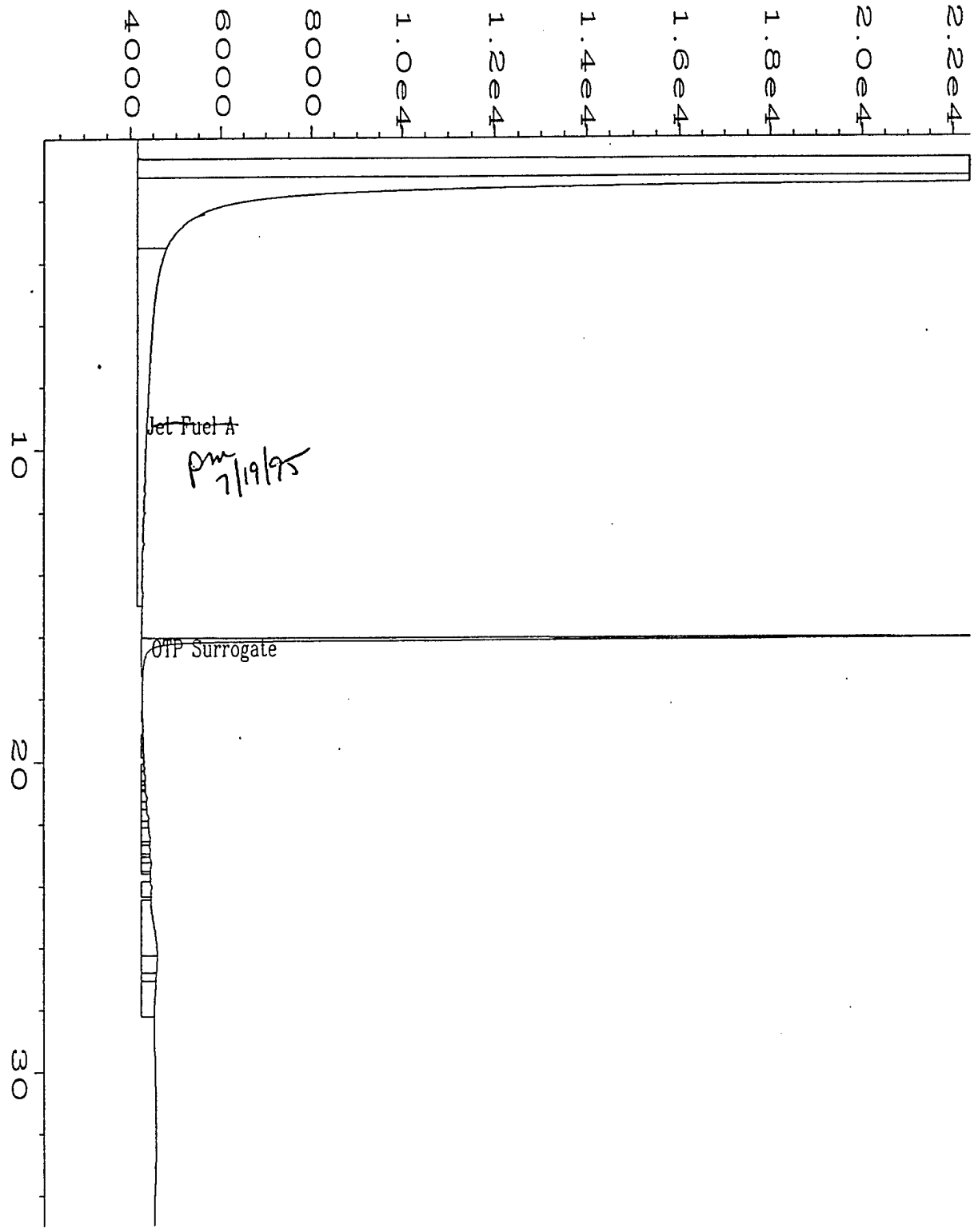


Data File Name	: C:\HPCHEM\2\DATA\JET0713\012R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 12
Sample Name	: X08736K;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 13 Jul 95 11:00 PM	Instrument Method	: TEHBASE.MTH
Report Created on	: 14 Jul 95 10:38 AM	Analysis Method	: JET0713.MTH
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-17;WATER		

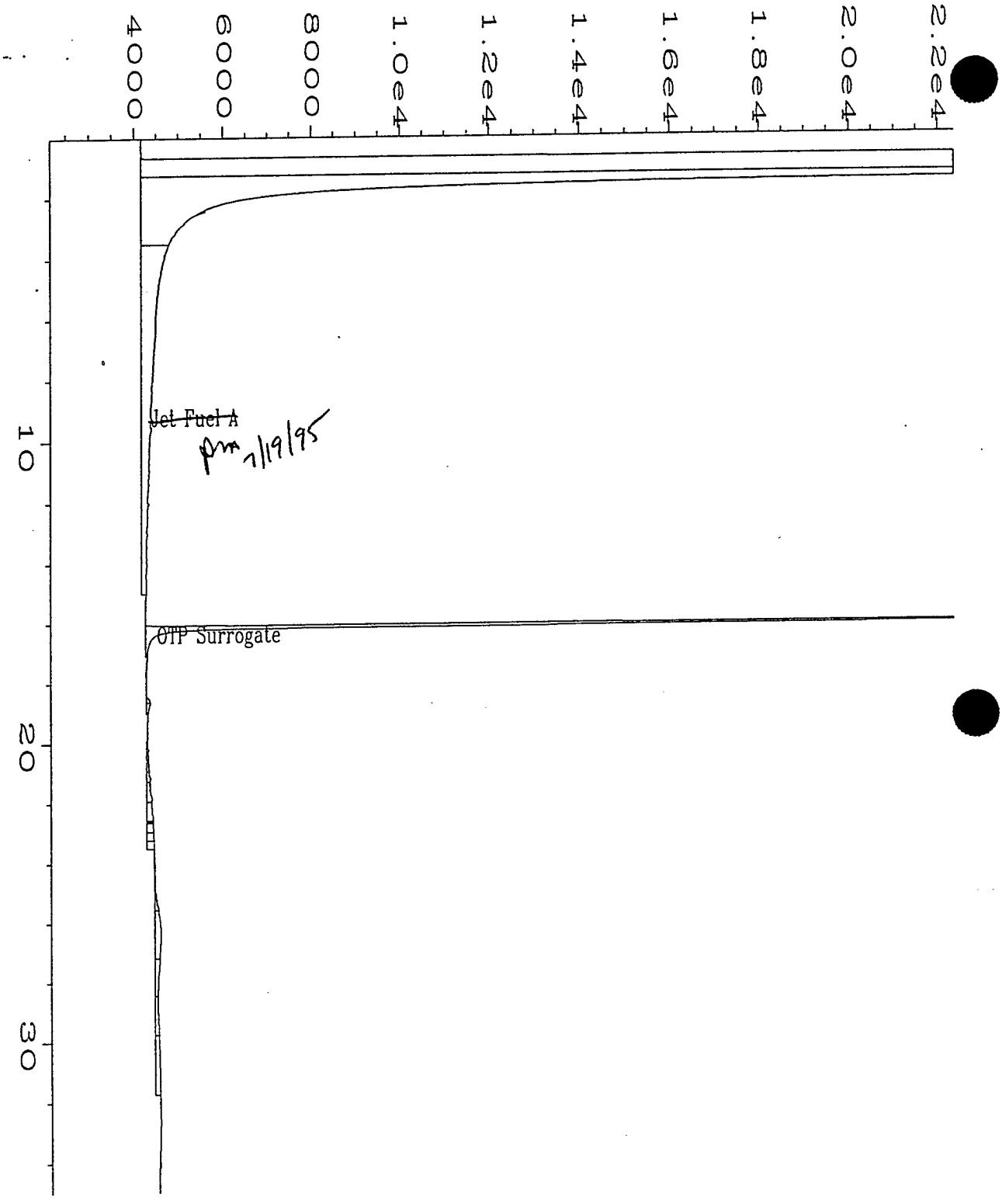


Data File Name : C:\HPCHEM\2\DATA\JET0713\013R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X08737K;1
Run Time Bar Code:
Acquired on : 13 Jul 95 11:51 PM
Report Created on: 14 Jul 95 10:38 AM
Last Recalib on : 14 JUL 95 10:24 AM
Multiplier : 1
Sample Info : 95-2193;MW-15;WATER

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 1
Instrument Method: TEHBA[redacted]M
Analysis Method : JET0713.M
Sample Amount : 0
ISTD Amount :

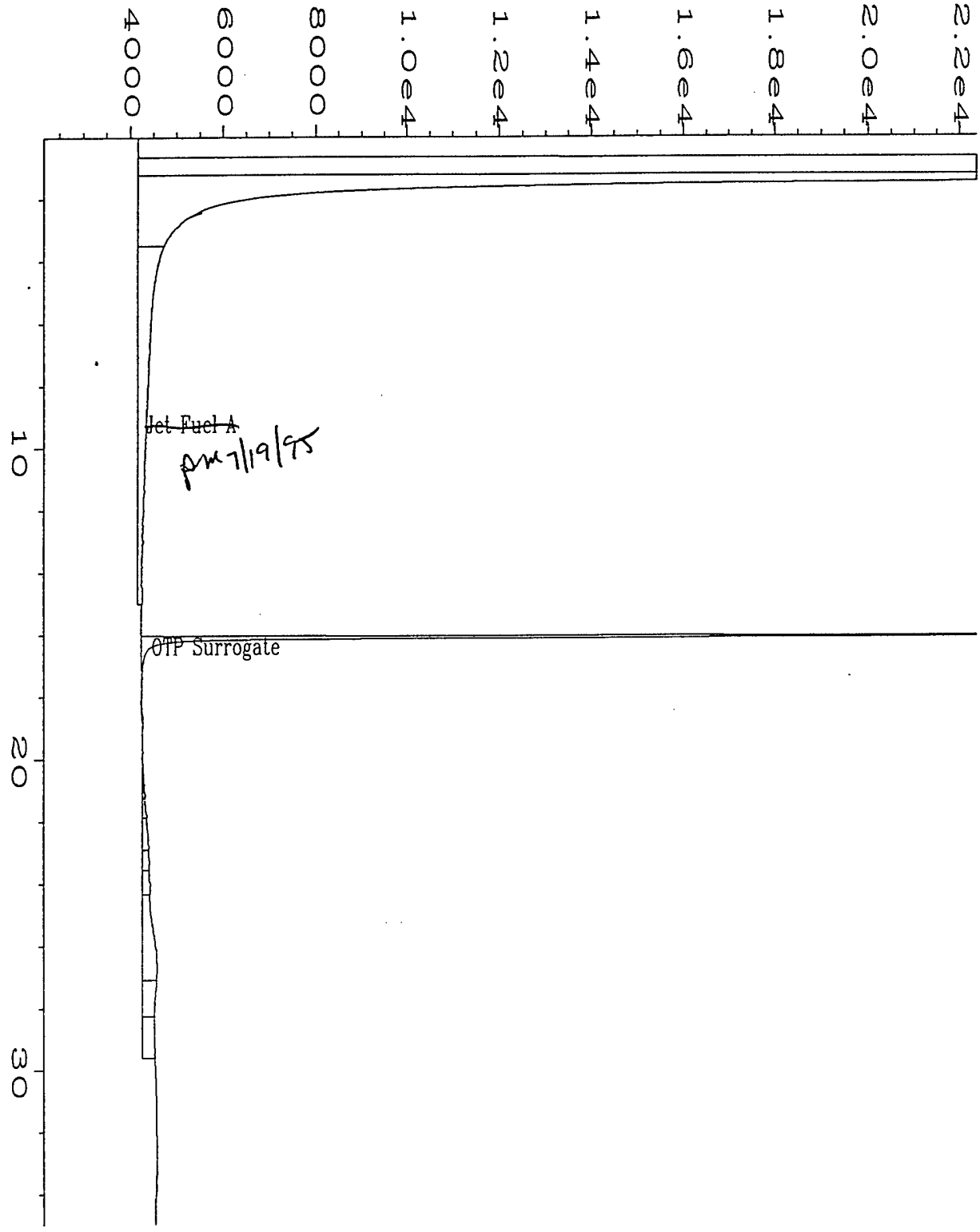


Data File Name	: C:\HPCHEM\2\DATA\JET0713\014R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 14
Sample Name	: X08738K;1	Injection Number	: 1
[illegible]n Time Bar Code:		Sequence Line	: 1
[illegible]quired on	: 14 Jul 95 00:43 AM	Instrument Method	: TEHBASE.MTH
Report Created on	: 14 Jul 95 10:38 AM	Analysis Method	: JET0713.MTH
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-14;WATER		

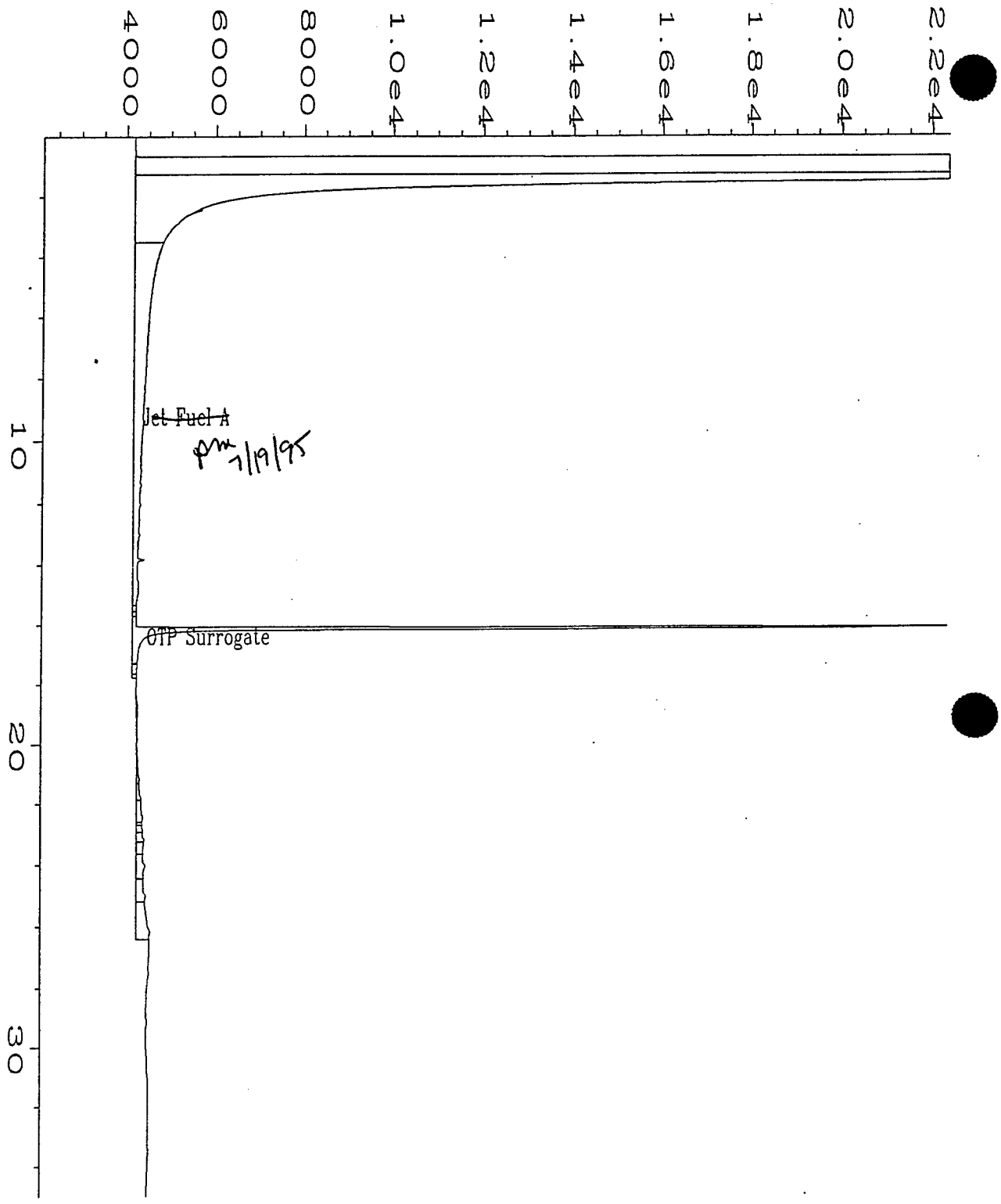


Data File Name : C:\HPCHEM\2\DATA\JET0713\015R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X08739K;1
Run Time Bar Code:
quired on : 14 Jul 95 01:35 AM
port Created on: 14 Jul 95 10:38 AM
Last Recalib on : 14 JUL 95 10:24 AM
Multiplier : 1
Sample Info : 95-2193;MW-19;WATER

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 1
Instrument Method: TEHBAS[redacted]M
Analysis Method : JET071[redacted]M
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\JET0713\016R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 16
Sample Name	: X08740K;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 14 Jul 95 02:26 AM	Instrument Method	: TEHBASE.MTH
Report Created on	: 14 Jul 95 10:38 AM	Analysis Method	: JET0713.MTH
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-18;WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0713\017R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 17
Sample Name	: X08741K;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 14 Jul 95 03:18 AM	Instrument Method	: TEHBAS[illegible]T
Report Created on	: 14 Jul 95 10:38 AM	Analysis Method	: JET0713.MT
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-20;WATER		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)
Laboratory Control Sample (LCS)

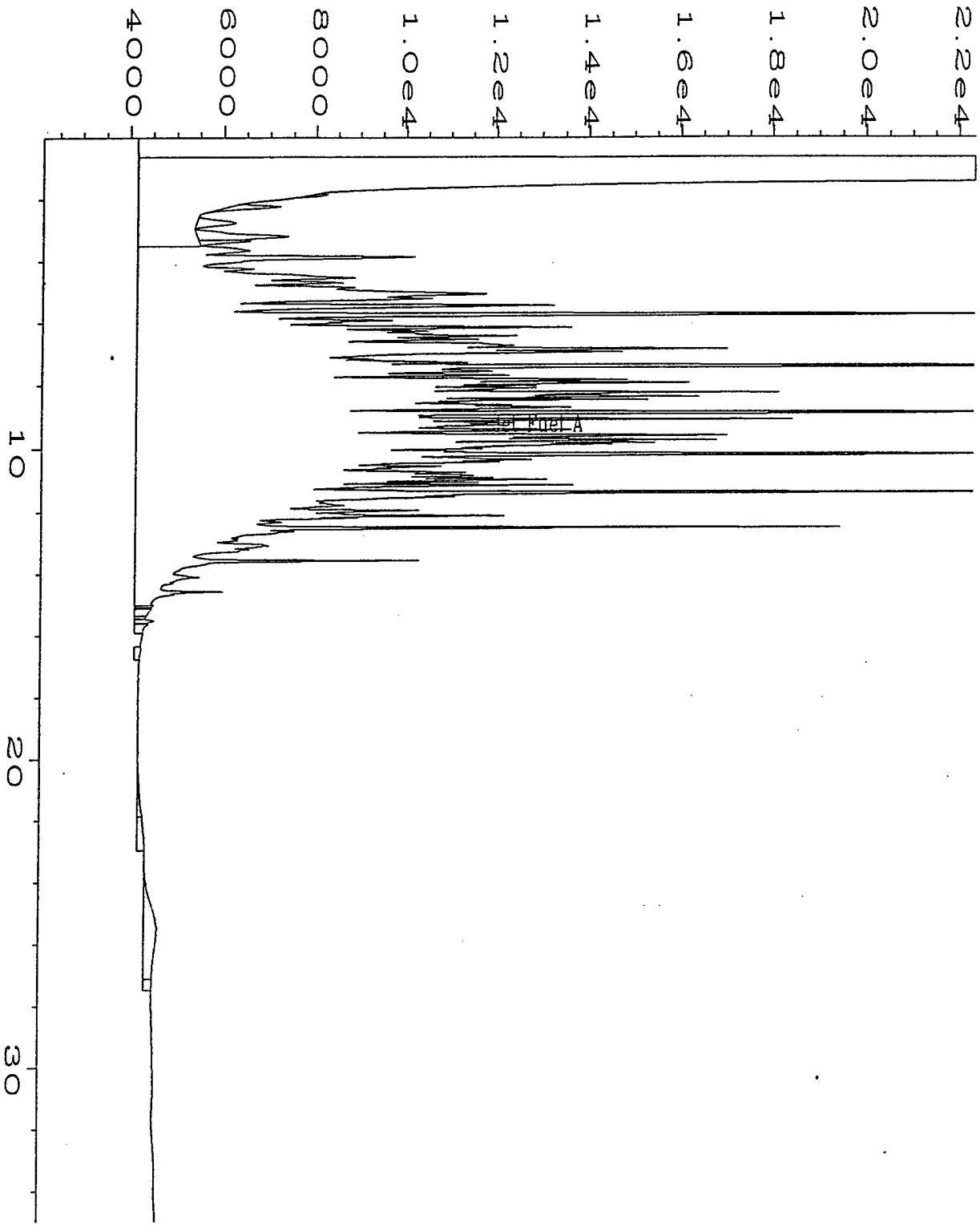
LCS Number	: LCS071395	Matrix	: WATER
Date Prepared	: 7/13/95	Method Number	: EPA 3500/8015 Modified
Date Analyzed	: 7/13/95		
Sequence Number	: JET007R0101.D		

Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
JET FUEL	5000	5000	100%	70%-130%
OTP Surrogate % Recovery:				70%-130%

QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH as Jet Fuel found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0713\007R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 7
Sample Name	: LCS071395	Injection Number	: 1
Ru Time Bar Code:		Sequence Line	: 1
A ired on	: 13 Jul 95 06:41 PM	Instrument Method	: TEHBASE.MTH
Report Created on	: 14 Jul 95 10:27 AM	Analysis Method	: JET0713.MTH
Last Recalib on	: 14 JUL 95 10:24 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: CAT.#31215;CAT.#A004154;RESTEK;5000 PPM		

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Methane Report Form
Method Blank Report

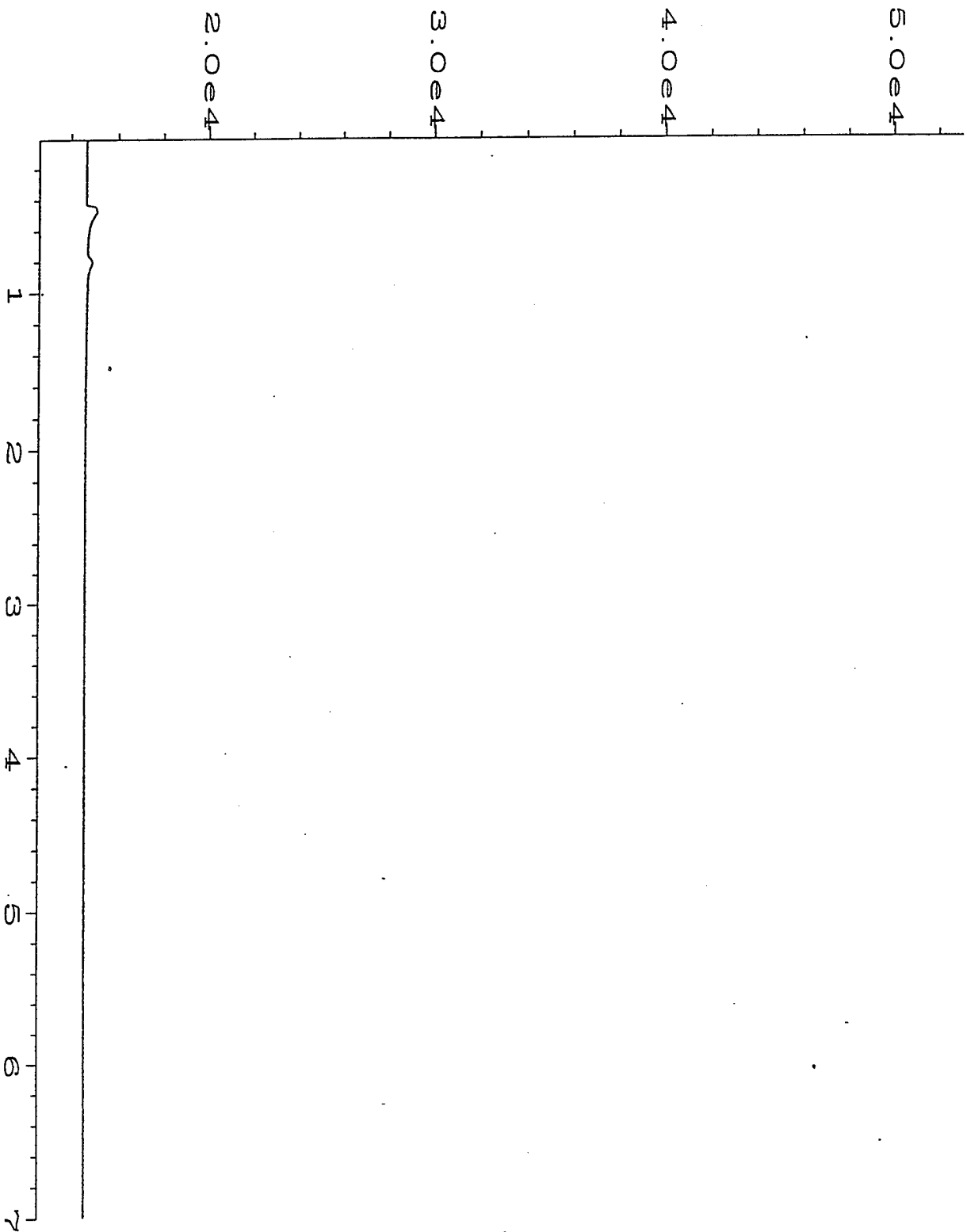
Method Blank Number	: GB071495	Client Project No.	: 722450.26
Date Extracted/Prepared	: 7/14/95	Lab Project No.	: 95-2193
Date Analyzed	: 7/14/95	Dilution Factor	: 1.00
		Method	: RSKSOP-175
		Matrix	: Water
		Lab File No.	: GAS0714002

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\GAS0714\002R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : GB071495
Run Time Bar Code:
Acquired on : 14 Jul 95 08:02 AM
Report Created on: 14 Jul 95 01:58 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1

Page Number : 1
Vial Number : 2
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES.M
Analysis Method : METH0714.MT
Sample Amount : 0
ISTD Amount :

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714010

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.142	0.004

Temperature	: 73 F	Saturation Concentration	Meth	0.034148524	
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0.107392382	
Head space created	: 4 ml				
Methane Area	: 794.107 ug				

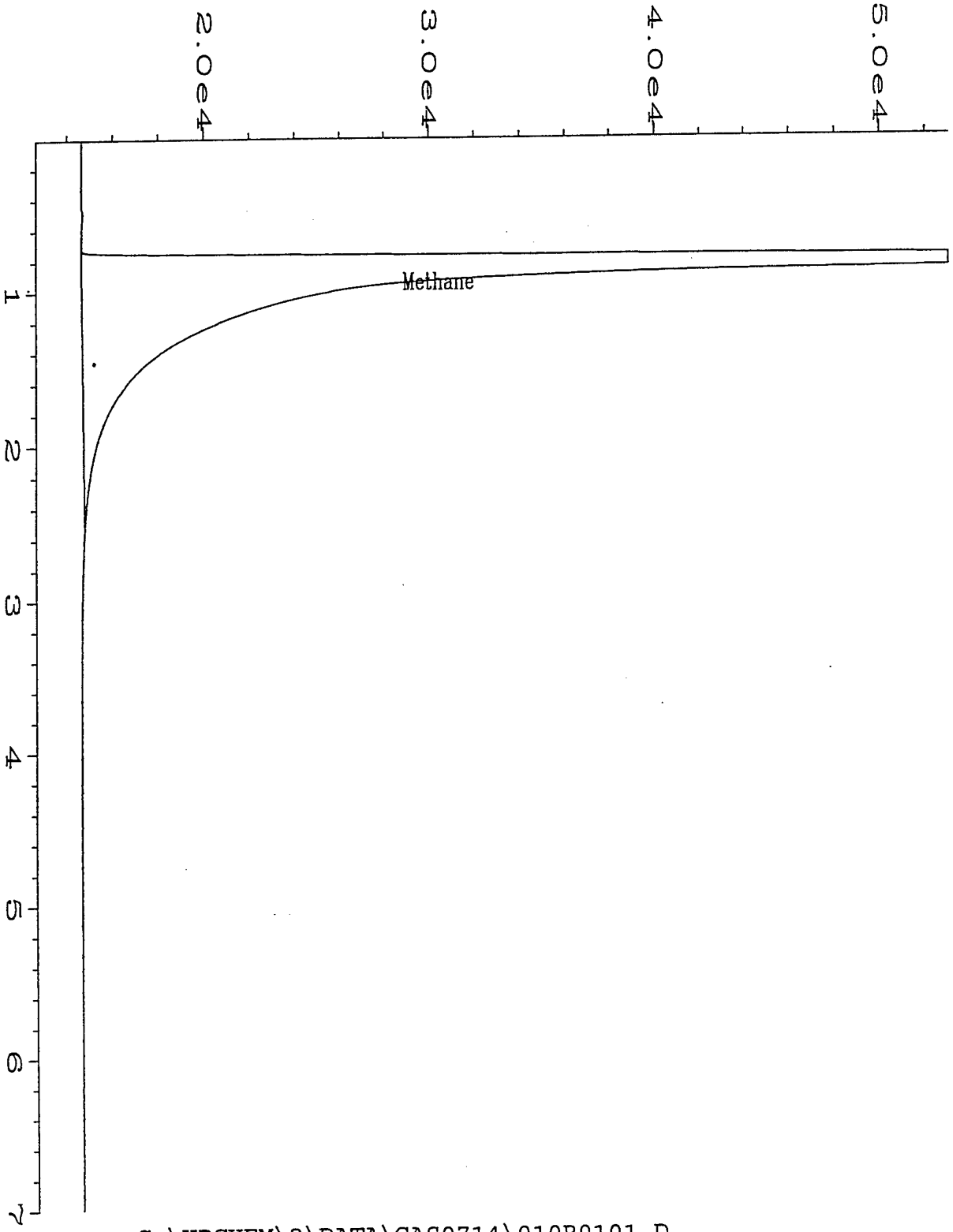
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\010R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08735;1
Run Time Bar Code:
quired on : 14 Jul 95 09:56 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-16;Water

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES.M
Analysis Method : METH071[redacted].M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714011

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.006	0.004

Temperature	: 73.1 F	Saturation Concentration	Meth	0.001504655
Amount Injected	: 0.5 ml			
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0.004731042
Head space created	: 4 ml			
Methane Area	: 34.99 ug			

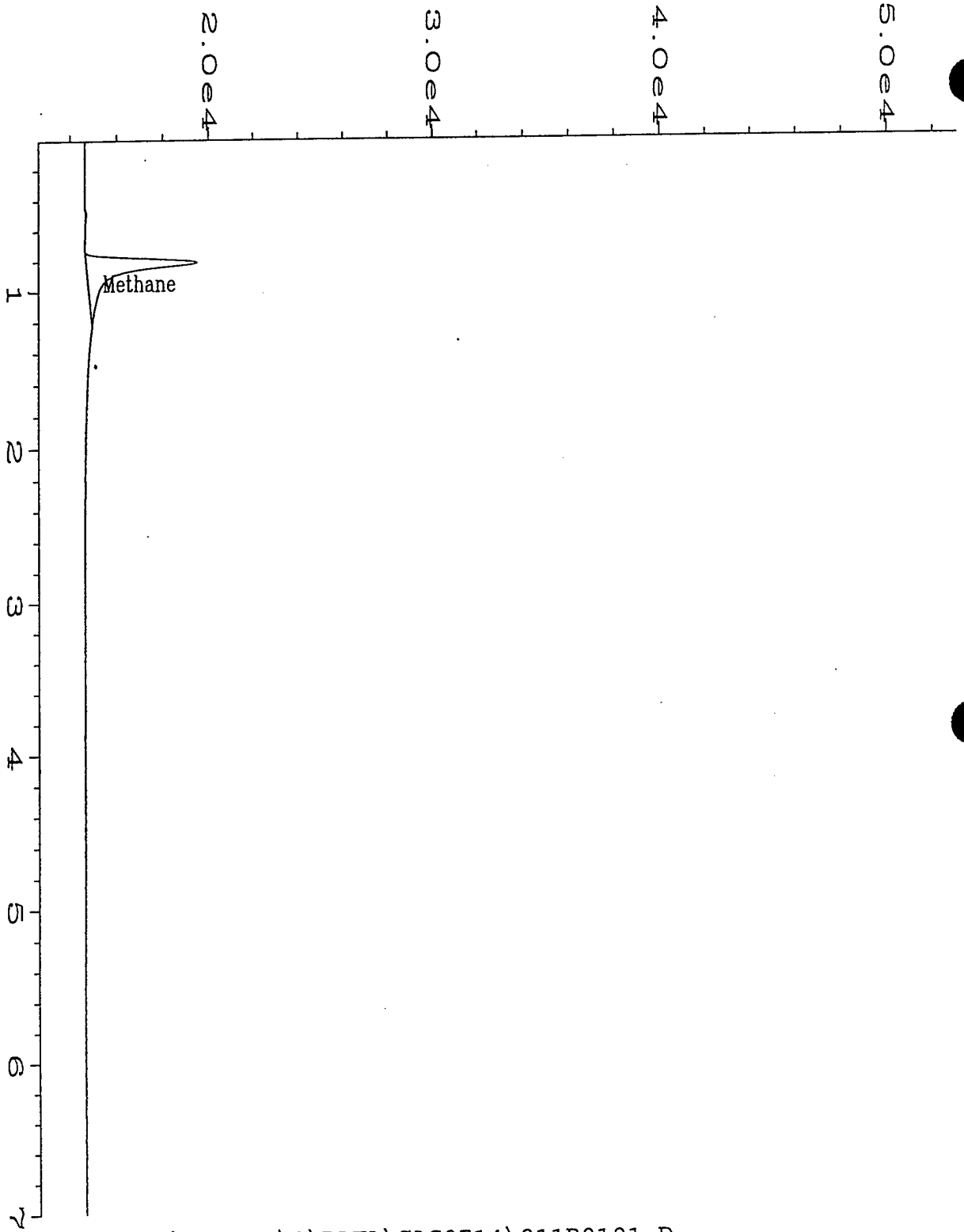
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\011R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08736;1
Run Time Bar Code:
quired on : 14 Jul 95 10:06 AM
eport Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-17;Water

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES[redacted]H
Analysis Method : METH0714.I
Sample Amount : 0
ISTD Amount :

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736Dupl	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714012

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.005	0.004

Temperature	: 73 F	Saturation Concentration	Meth		0.001133888
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		0.00356592
Head space created	: 4 ml				
Methane Area	: 26.368 ug				

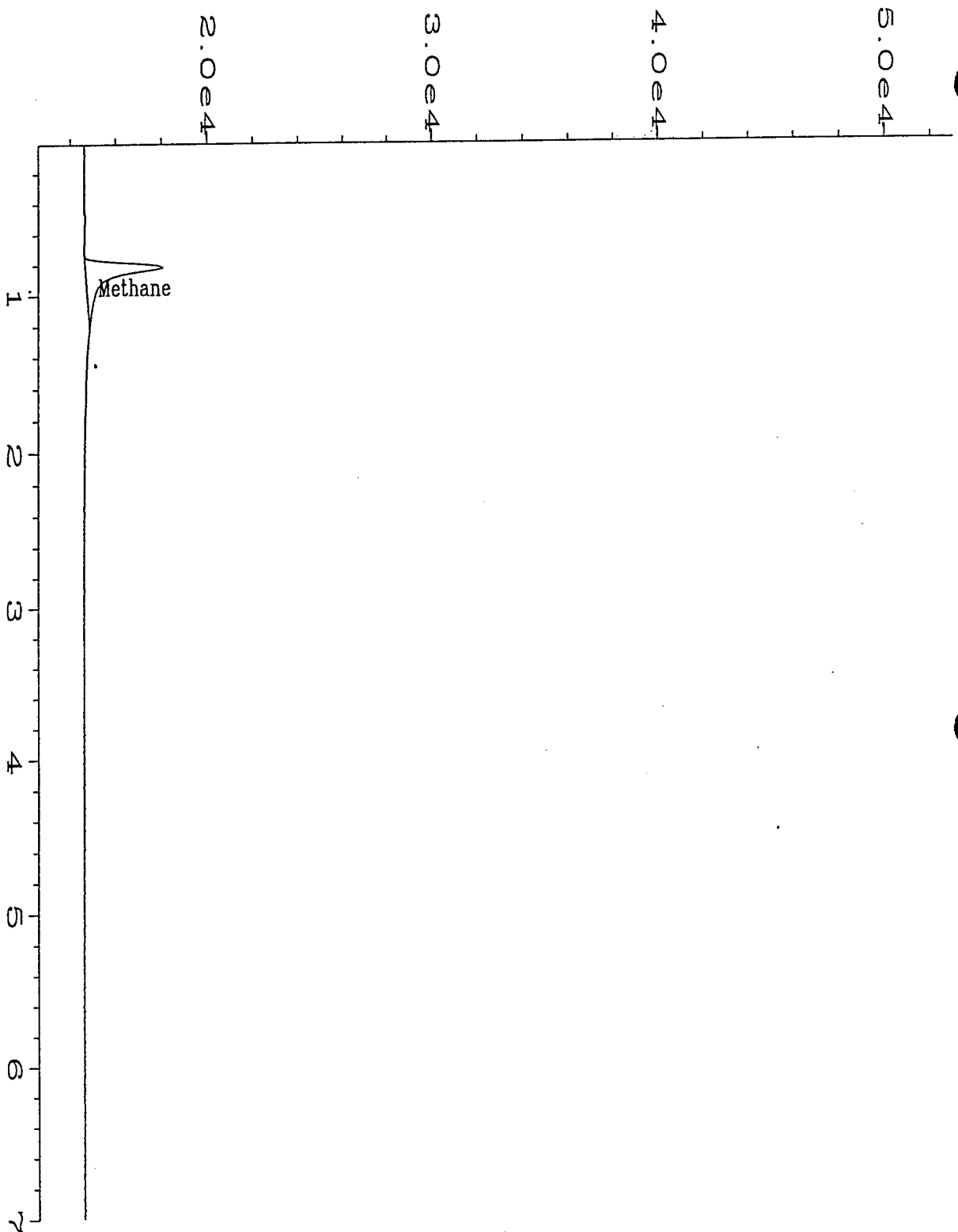
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\012R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08736Dupl;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:14 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-17;Water

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES [redacted]H
Analysis Method : METH0714.I
Sample Amount : 0
ISTD Amount :

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714013

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 71.9 F	Saturation Concentration	Meth		C
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		C
Head space created	: 4 ml				
Methane Area	: 0 ug				

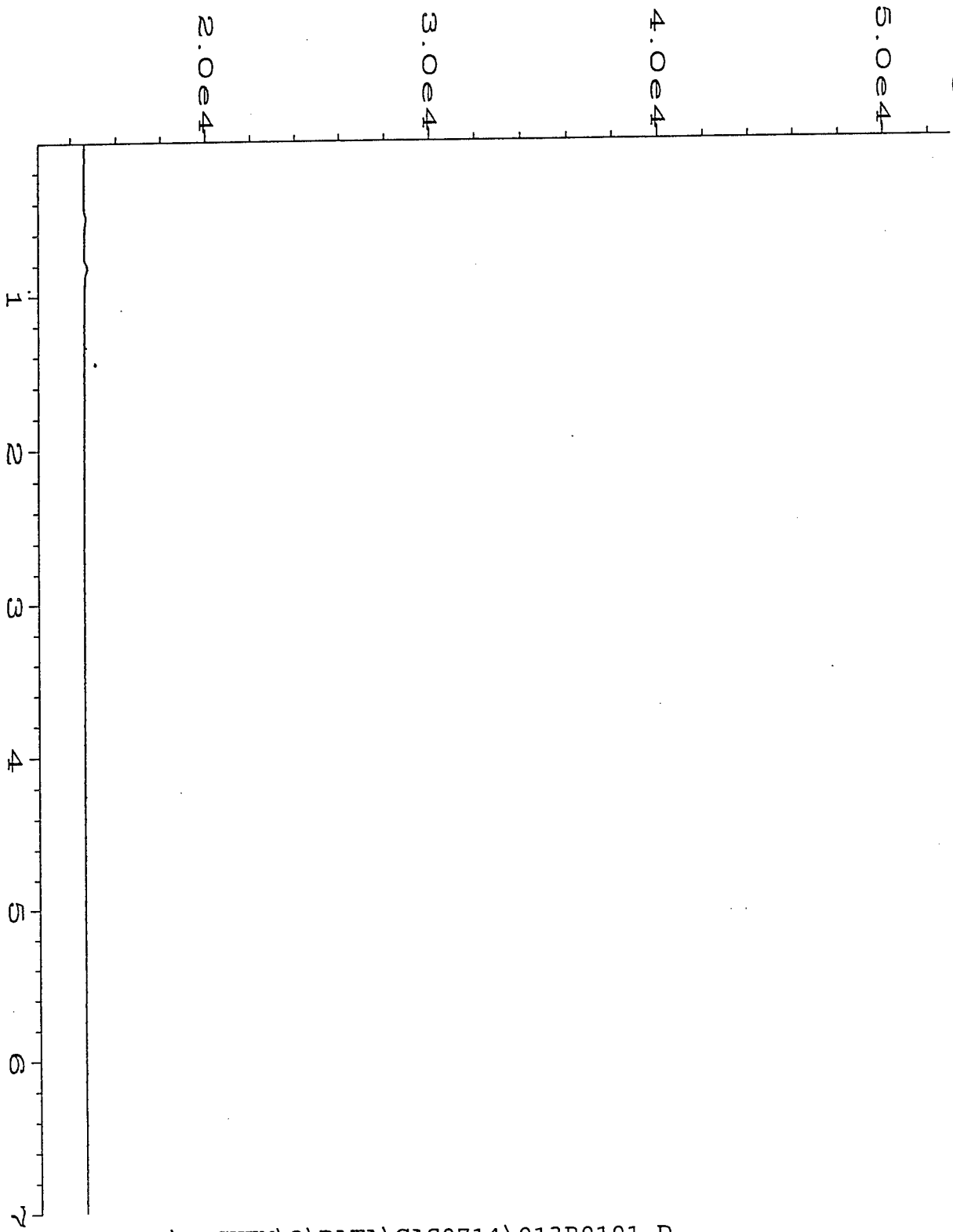
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\013R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08737;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:22 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-15;Water

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES[redacted]
Analysis Method : METH07[redacted].M
Sample Amount : 0
ISTD Amount :

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714014

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.2 F	Saturation Concentration	Meth		0
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		0
Head space created	: 4 ml				
Methane Area	: 0 ug				

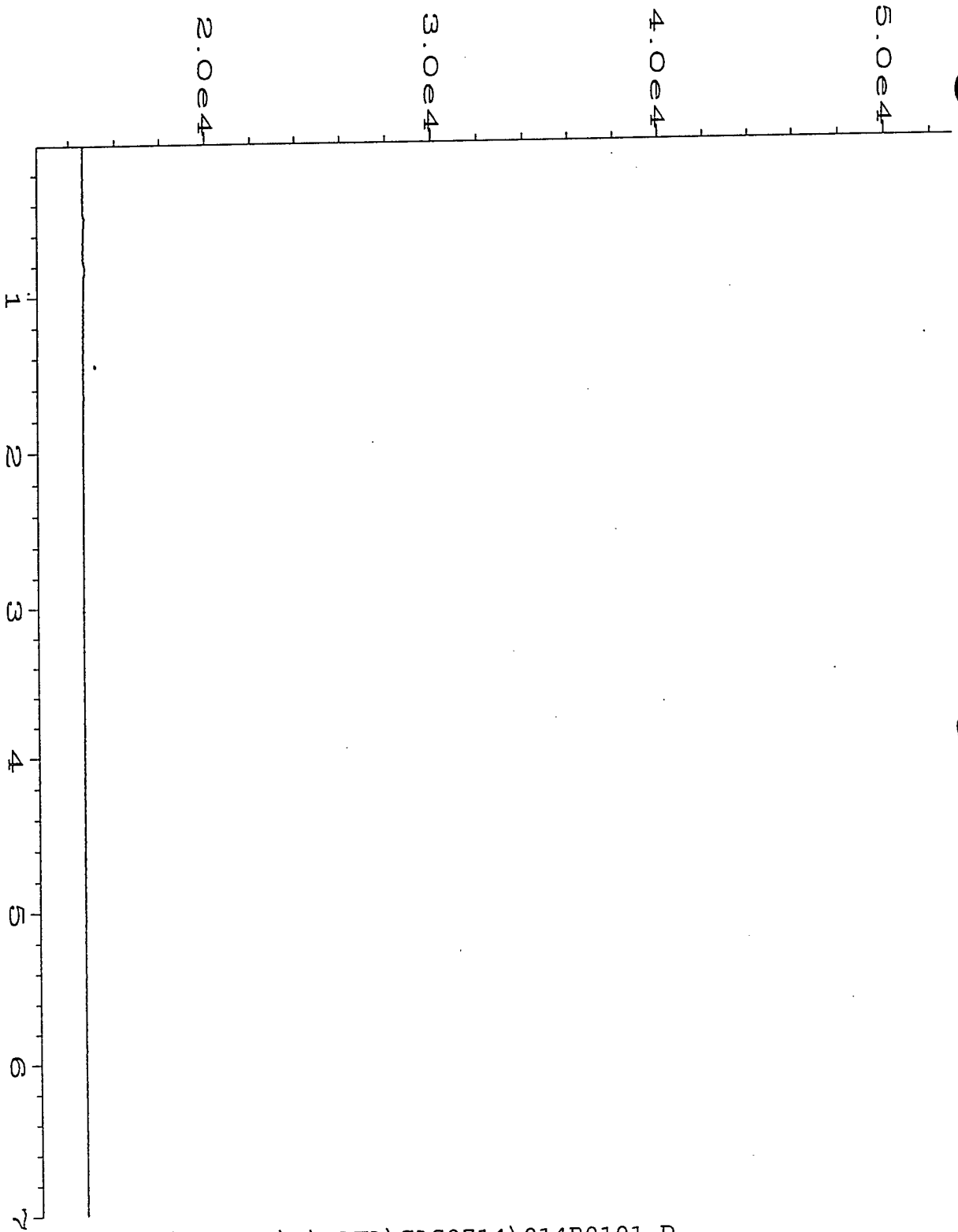
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\014R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08738;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:31 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-14;Water

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES[redacted]H
Analysis Method : METH07[redacted].M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714015

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.046	0.004

Temperature	: 72.7 F	Saturation Concentration	Meth		0.011132209
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		0.035028995
Head space created	: 4 ml				
Methane Area	: 258.874 ug				

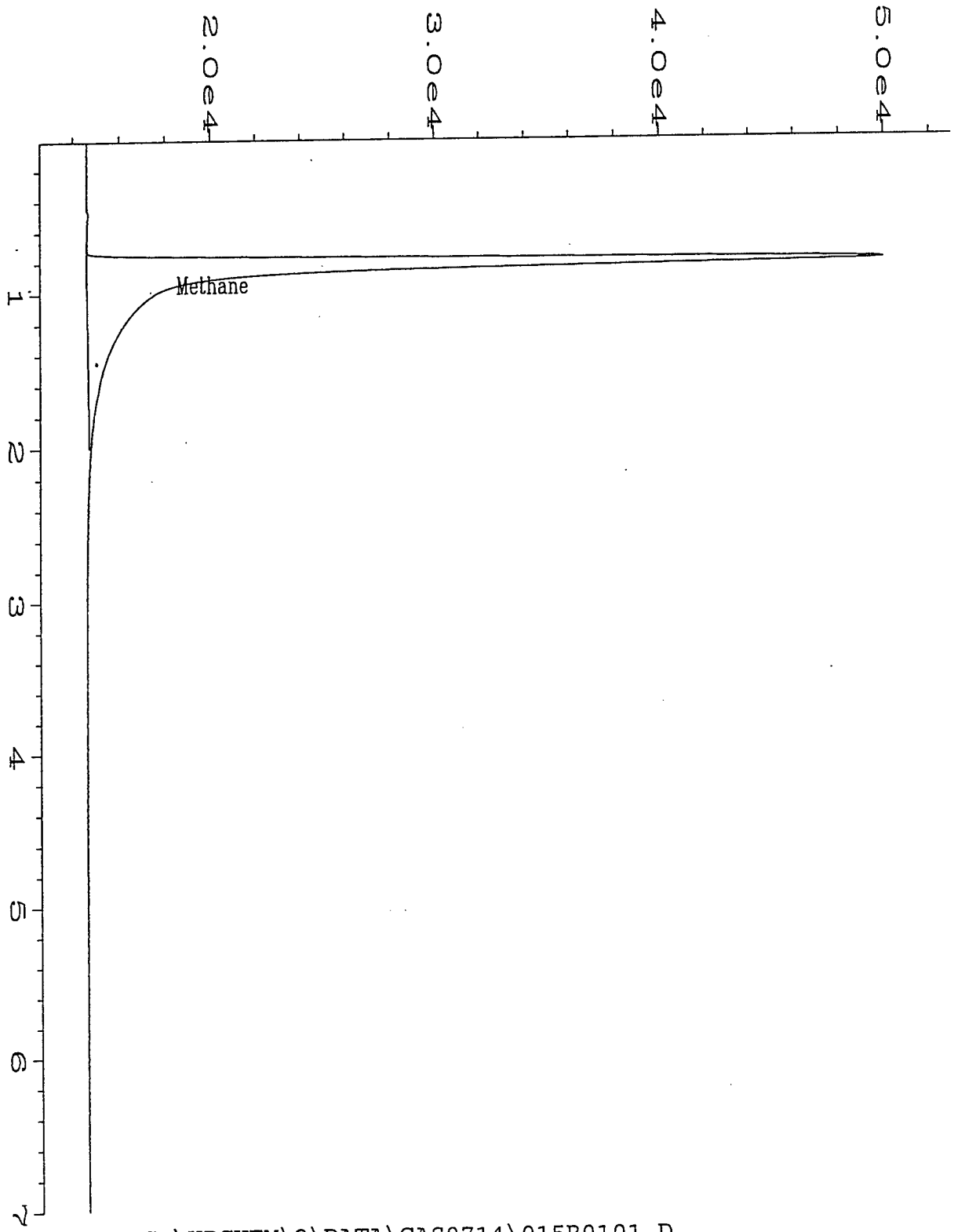
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\015R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08739;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:38 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-19;Water

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES.[redacted]
Analysis Method : METH07[redacted].M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714016

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 73 F	Saturation Concentration	Meth	0
Amount Injected	: 0.5 ml			
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0
Head space created	: 4 ml			
Methane Area	: 0 ug			

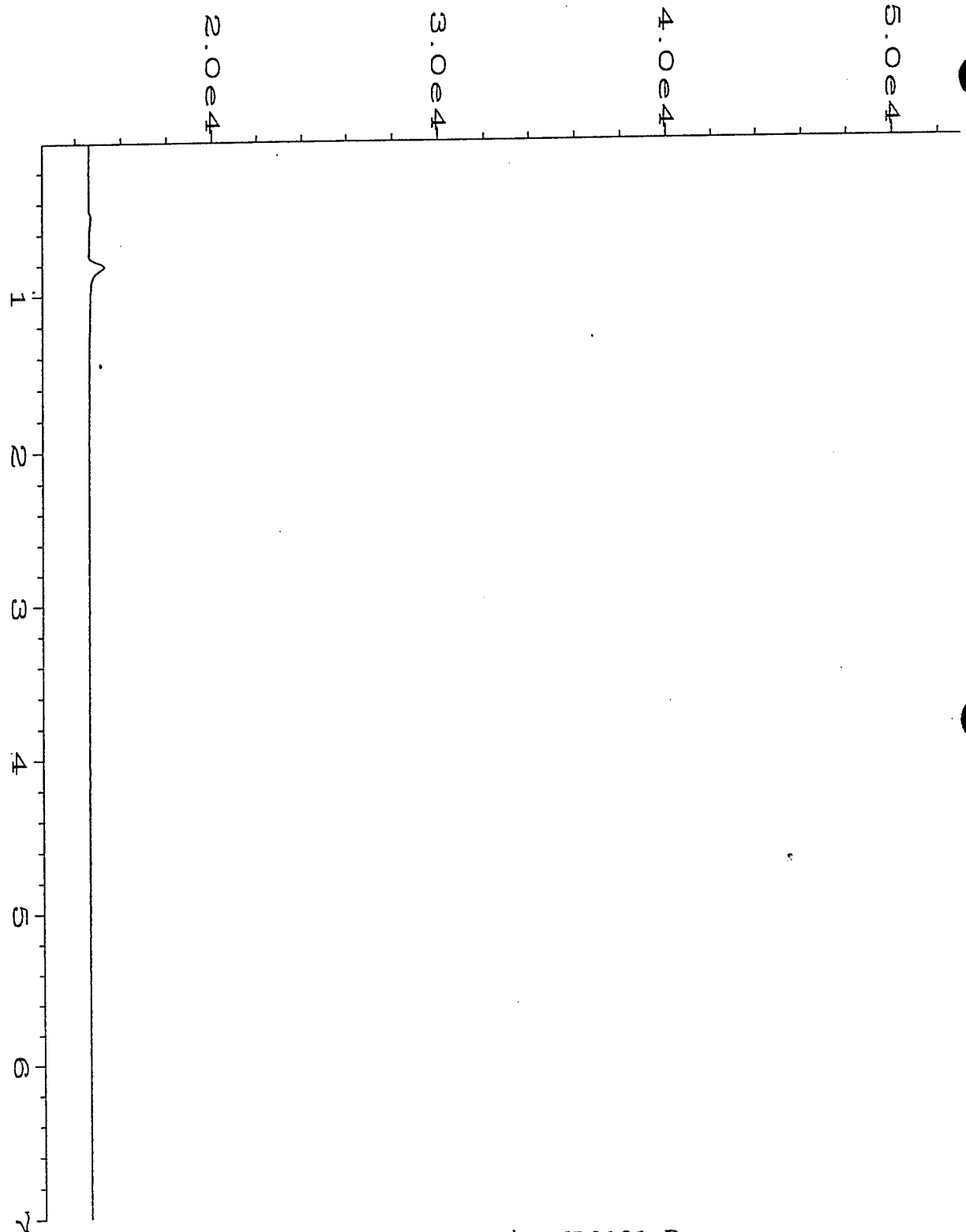
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\016R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08740;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:46 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-18;Water

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES[redacted]H
Analysis Method : METH0714.M
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714017

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.9 F	Saturation Concentration	Meth		0
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		0
Head space created	: 4 ml				
Methane Area	: 0 ug				

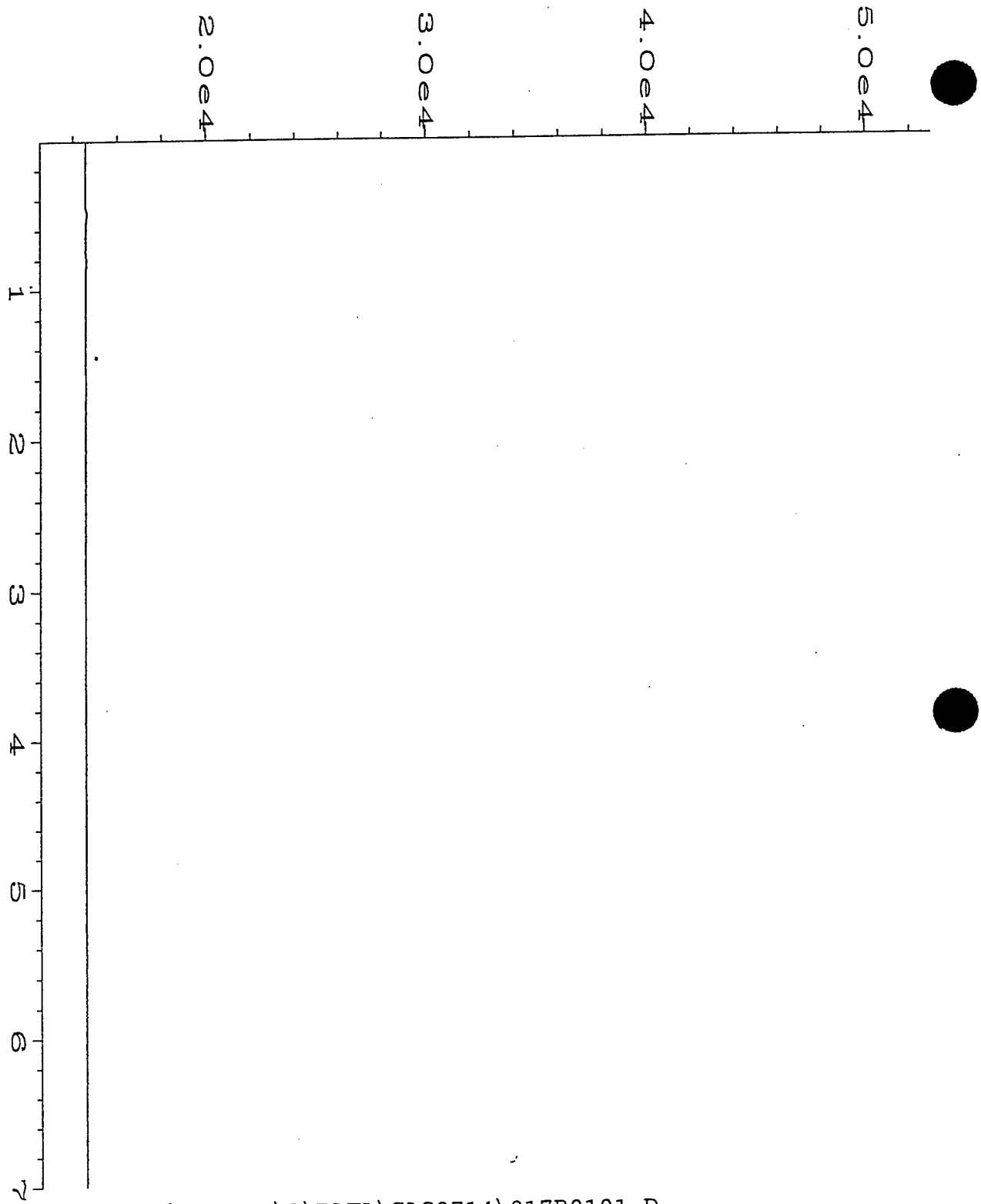
Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AF2193.XLS



Data File Name : C:\HPCHEM\2\DATA\GAS0714\017R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08741;1
Run Time Bar Code:
Acquired on : 14 Jul 95 10:56 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-20;Water

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES [redacted]
Analysis Method : METH07[redacted]
Sample Amount : 0
ISTD Amount :

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

RSK-175 Gas Method
Methane Gas Matrix Spike / Matrix Spike Duplicate Report

Client Sample No.	: MW-15	Client Project No.	: 722450.26
Lab Sample No.	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	EPA Method No.	: RSK-175
Date Received	: 7/11/95	Matrix	: Water
Date Prepared	: 7/14/95	Method Blank	: GB071495
Date Analyzed	: 7/14/95	Lab File No's.	: GAS0714024,025
E.A. MS/MSD Spike Source No.	: 1723		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Methane Gas	500	0	331	66	N/A

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Methane Gas	500	328	66	1.7	N/A	N/A

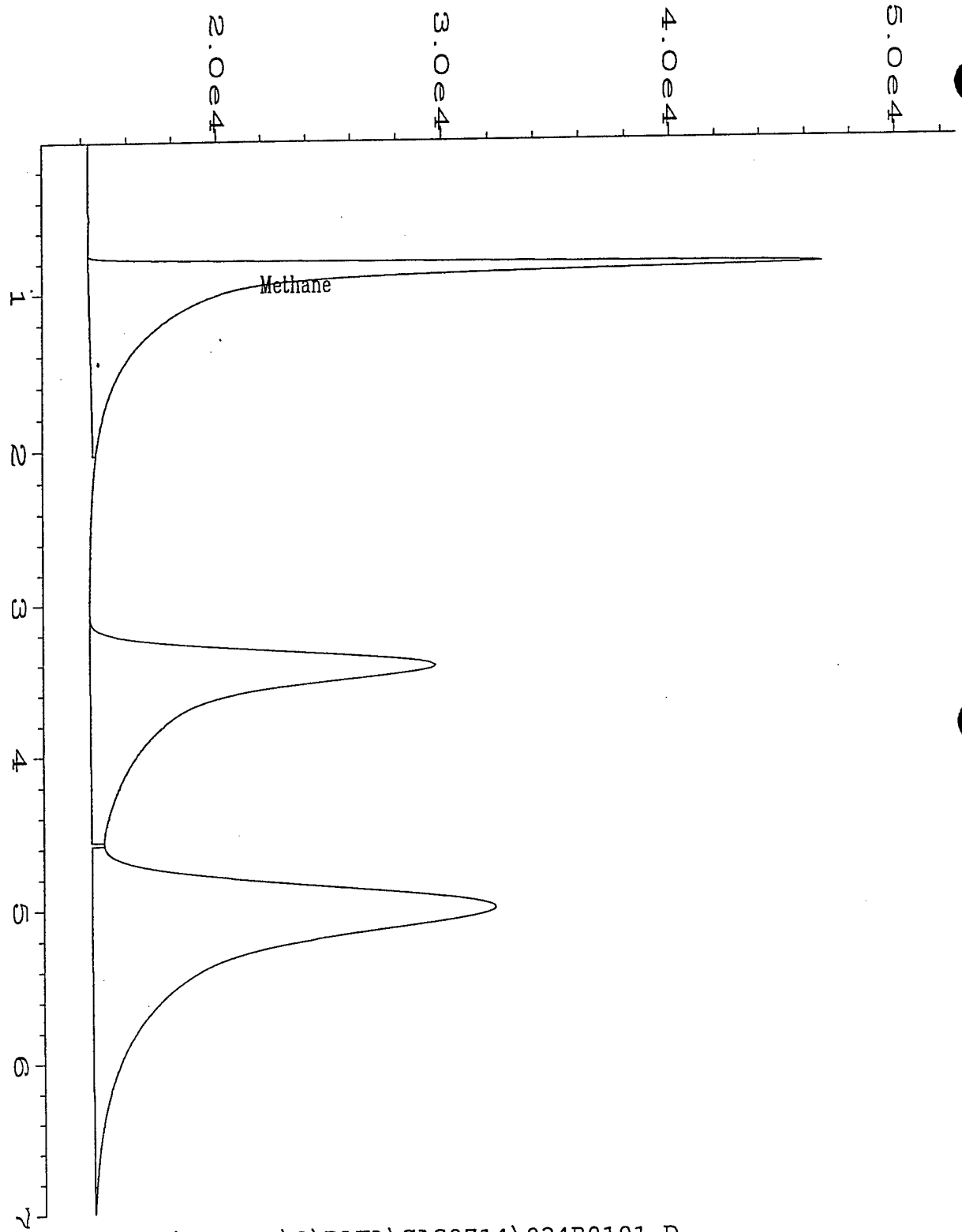
RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NOTES:
* = Values outside of QC limits.
NA = Not analyzed/not available

Note: The Spike was made by taking the sample and displacing 4ml of headspace with a 1% methane gas and shaking the VOA for 5 minutes. Then injecting 50 ul from the headspace into the GC resulting in a theoretical concentration of 500 ppm.

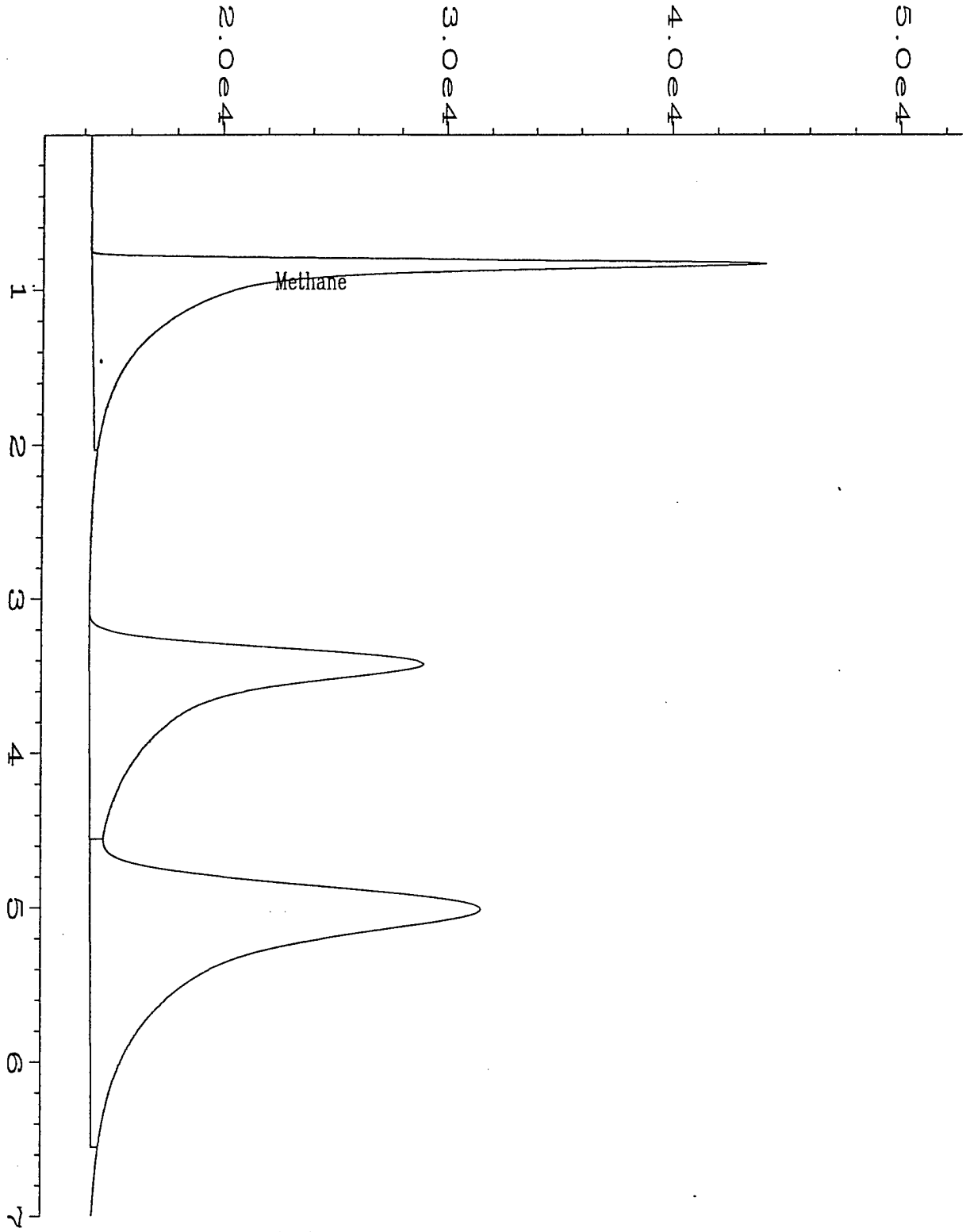
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\GAS0714\024R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : X08737MS;1
Run Time Bar Code:
Acquired on : 14 Jul 95 12:59 PM
Report Created on: 14 Jul 95 02:00 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : 95-2193;MW-15;1%(4mlHeadSpace) inject 50ul(500ppm Matrix Spike) Water

Page Number : 1
Vial Number : 24
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES[redacted]H
Analysis Method : METH0714.[redacted]
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\025R0101.D		
Operator	: Bill Michener	Page Number	: 1
Instrument	: ALC/GAS	Vial Number	: 25
Sample Name	: X08737MSDupl;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 14 Jul 95 01:32 PM	Instrument Method	: GASES.MTH
Report Created on	: 14 Jul 95 02:00 PM	Analysis Method	: METH0714.MTH
Last Recalib on	: 14 JUL 95 09:05 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-2193;MW-15;1%(4mlHeadSpace) inject 50ul(500ppm Matrix Spike) Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

RSK-175 Gas Method
Methane LCS Report Form

LCS No.	: LCS071495	EPA Method No.	: RSK-175
Date Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Method Blank	: GB071495
E.A. LCS Source No.	: 1723	Lab File No.	: GAS0714009

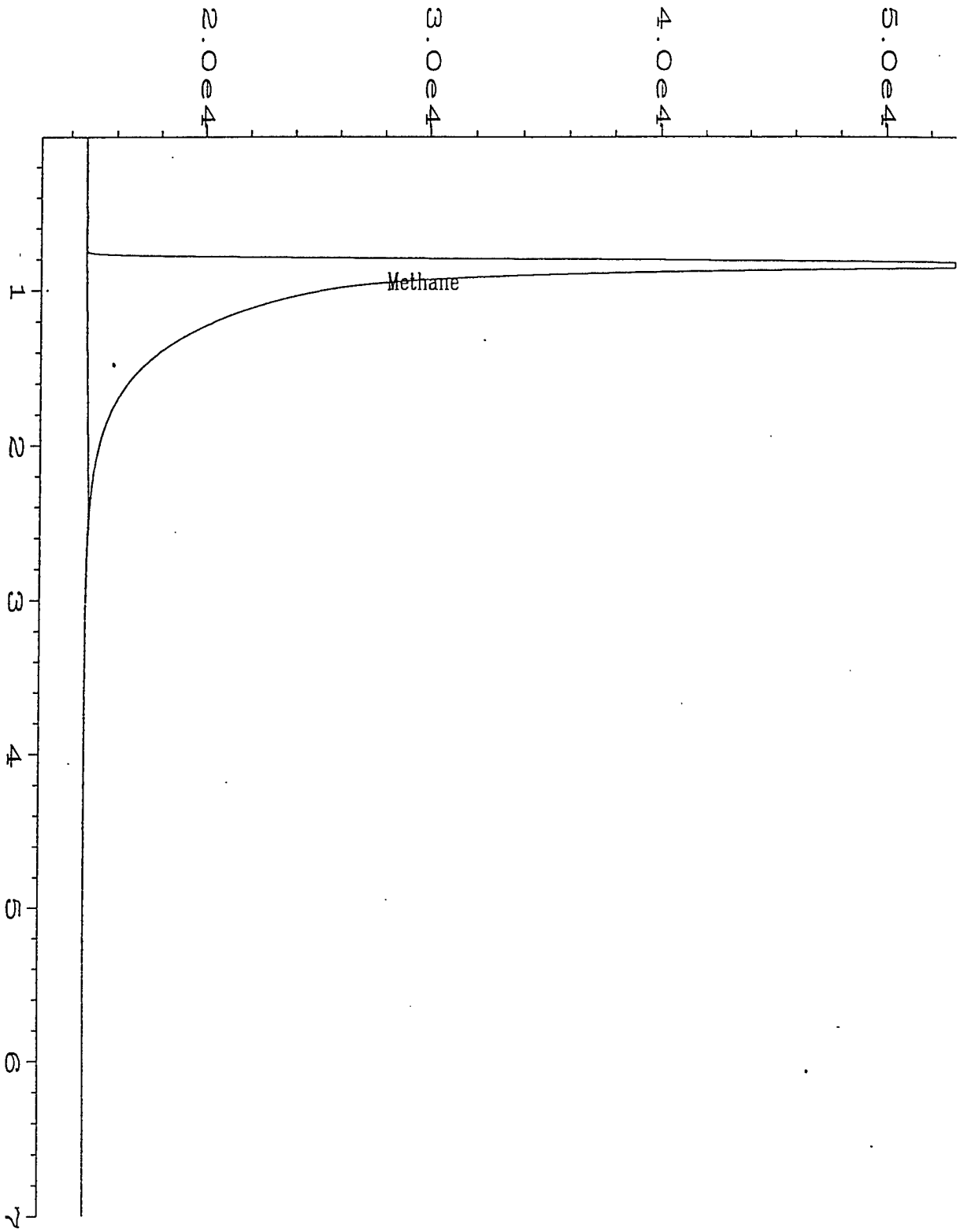
Compound	Spike Added (mg/L)	Method Blank Concentration (mg/L)	LCS Concentration (mg/L)	LCS %REC	QC Limits %REC
Methane Gas	500	0	548	110	N/A

Spike Recovery: 0 out of (1) outside limits.

NOTES:
* = Values outside of QC limits.
NA = Not analyzed/not applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\GAS0714\009R0101.D
Operator : Bill Michener
Instrument : ALC/GAS
Sample Name : LCS071495;Gas
Run Time Bar Code:
Acquired on : 14 Jul 95 09:04 AM
Report Created on: 14 Jul 95 01:59 PM
Last Recalib on : 14 JUL 95 09:05 AM
Multiplier : 1
Sample Info : Methane(500ppm) 50 ul from 1% Scotty

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: GASES.MTH
Analysis Method : METH0714.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

Evergreen Sample #	Client Sample ID	Chloride (mg/L)	Dilution Factor
X08735	MW-16	5.6	1X
X08736	MW-17	12.1	1X
X08737	MW-15	13.9	1X
X08738	MW-14	7.9	1X
X08739	MW-19	9.7	1X
X08740	MW-18	12.7	1X
X08741	MW-20	12.3	1X
Method Blank (7/11/95)		<0.25	

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	12.3	22.8	105
X08741	Matrix Spike Dup MW-20	10.0	12.3	23.4	111
	MS/MSD RPD				5.4

Analyst

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2193tm.25

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(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.076 mg/L

Evergreen Sample #	Client Sample ID	Nitrite-N(mg/L)	Dilution Factor
X08735	MW-16	<0.076	1X
X08736	MW-17	<0.076	1X
X08737	MW-15	<0.076	1X
X08738	MW-14	<0.076	1X
X08739	MW-19	<0.076	1X
X08740	MW-18	<0.076	1X
X08741	MW-20	<0.076	1X
Method Blank (7/11/95)		<0.076	

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	<0.25	10.0	100
X08741	Matrix Spike Dup MW-20	10.0	<0.25	9.5	95
	MS/MSD RPD				4.9

** = Quality assurance results reported as Nitrite (NO_2).

Analyst

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4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.056 mg/L

Evergreen Sample #	Client Sample ID	Nitrate-N(mg/L)	Dilution Factor
X08735	MW-16	<0.056	1X
X08736	MW-17	0.36	1X
X08737	MW-15	0.10	1X
X08738	MW-14	<0.056	1X
X08739	MW-19	0.076	1X
X08740	MW-18	1.7	1X
X08741	MW-20	1.7	1X
Method Blank (7/11/95)		<0.056	

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	7.6	17.4	98
X08741	Matrix Spike Dup MW-20	10.0	7.6	17.2	95
	MS/MSD RPD				2.3

** = Quality assurance results reported as Nitrate (NO_3).

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

Evergreen Sample #	Client Sample ID	Sulfate (mg/L)	Dilution Factor
X08735	MW-16	4.2	1X
X08736	MW-17	2.9	1X
X08737	MW-15	5.0	1X
X08738	MW-14	11.8	1X
X08739	MW-19	37.9	1X
X08740	MW-18	12.4	1X
X08741	MW-20	13.6	1X
Method Blank (7/11/95)		<0.25	

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	13.6	23.6	100
X08741	Matrix Spike Dup MW-20	10.0	13.6	23.8	102
	MS/MSD RPD				1.7

Analyst

Approved

2193tm.25

FAX

Evergreen Analytical Inc
4036 Youngfield St
Wheat Ridge, CO 80033

Date 7/19/95

Number of pages including cover sheet 13

To:

Todd Wiedemeier

Phone 303-831-8100

Fax Phone 303-831-8208

CC:

From:

Patty McClellan

Phone 303-425-6021

Fax Phone 303-425-6854

MARKS:

☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

Todd,

This fax is being sent in two portions of 13 pages each. Please call if you do not receive 26 pages total.

Thanks,

Patty

Seymour Johnson data.

Evergreen Analytical Sample Log Sheet

Project # 95-2193

Date(s) Sampled: 07/10/95 COC

Date Due: 07/18/95-UST
07/25/95-ANIONS

Date(s) Received: 07/11/95 0920

Holding Time(s): 07/12-NO2,NO3
07/17-TEH;07/24-BTEX,TVH

Client Project I.D. 722450.26 Seymour Johnson

Rush STANDARD

Client: PARSONS ENGINEERING SCIENCE

Address: 1700 BROADWAY, SUITE 900
DENVER, CO 80290

Contact: TODD WIEDEMEIER

Client P.O. _____

Phone #831-8100 **Fax #**831-8208

Shipping Charges N/A

E.A. Cooler # 475

Airbill # FED EX 6475871920

Custody Seal Intact?	N/A
Cooler ___ Bottles ___	
COC Present	Y
Sample Tags Present?	Y
Sample Tags Listed?	Y
Sample(s) Sealed?	Y

Special Invoicing/Billing _____

Special Instructions ✓ 1 SAMPLE BROKEN IN TRANSIT. ★ ALL BTEX ARE TO INCLUDE CHLOROBENZENE, TMB AND TEMB.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X[redacted]35A-C	MW-16	★ BTEX	W	40V	2
X08736A-C	MW-17	★ BTEX	W	40V	2
X08737A-C	MW-15	★ BTEX	W	40V	2
X08738A-C	MW-14	★ BTEX	W	40V	2
X08739A-C	MW-19	★ BTEX	W	40V	2
X08740A-C	MW-18	★ BTEX	W	40V	2
X08741A-C	MW-20	★ BTEX	W	40V	2
X08742A-C	MW-21	★ BTEX	W	40V	2
X08743A-C	TRIP BLANK	★ BTEX	W	40V	2
X08735D-F	MW-16	TVH	W	40V	2
X08736D-F	MW-17	TVH	W	40V	2
X08737D-F	MW-15	TVH	W	40V	2
X08738D-F	MW-14	TVH	W	40V	2
X08739D-F	MW-19	TVH	W	40V	2
X08740D-F	MW-18	TVH	W	40V	2

R = Samples to be returned

Route GC/MS ___ GC 5 Metals ___ Wet Chem 1 SxPrep 1 Acctg 1

[redacted]

SxRec C [redacted] C Sales C File Orig

Custodian/Date: 7/11/95
7/11/95

Lab #	Client ID#	Analysis	Mtx	Btl	Loc
41D/E	MW-20	✓ TVH	W	40V	2
08735G-I	MW-16	METHANE	W	40V	2
08736G-I	MW-17	METHANE	W	40V	2
08737G-I	MW-15	METHANE	W	40V	2
08738G-I	MW-14	METHANE	W	40V	2
08739G-I	MW-19	METHANE	W	40V	2
08740G-I	MW-18	METHANE	W	40V	2
08741G-I	MW-20	METHANE	W	40V	2
08735J	MW-16	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08736J	MW-17	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08737J	MW-15	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08738J	MW-14	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08739J	MW-19	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08740J	MW-18	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08741J	MW-20	Cl^-, NO_2, NO_3, SO_4	W	125P	C3
08735K	MW-16	TEH	W	1LA	C3
08736K	MW-17	TEH	W	1LA	C3
08737K	MW-15	TEH	W	1LA	C3
08738K	MW-14	TEH	W	1LA	C3
08739K	MW-19	TEH	W	1LA	C3
08740K	MW-18	TEH	W	1LA	C3
08741K	MW-20	TEH	W	1LA	C3

Project # 94-2193

R=Sample to be returned

Evergreen Analytical Inc.
4[redacted] Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY P[redacted]s ES
ADDRESS 401 Harrison Oaks Blvd Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX # (919) 677-0110 FAX RESULTS Y / N

CLIENT CONTACT (print)
PROJECT I.D. 722450.26 Sey Thomas Johnson
EAL. QUOTE # P.O.#
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

Sampler Name:
(signature) Thomas C. Richardson
(print) T. C. R.

Evergreen Analytical Cooler No. 475
Cooler Received

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	ANALYSIS REQUESTED: TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Methane G-I (Cl, NO2, NO3, SO4) Anions	EAL use only Do not write in shaded area: EAL Project #	Custodian	EAL Sample No.
MW-16	7/10/95	1030	11											3		3	1			3	1		X08735A-K
MW-17	7/10/95	1145	11											3		3	1			3	1		736
MW-15	7/10/95	1245	11											3		3	1			3	1		737
MW-14	7/10/95	1350	11											3		3	1			3	1		738
MW-19	7/10/95	1530	11											3		3	1			3	1		739
MW-18	7/10/95	1615	11											3		3	1			3	1		740
MW-20	7/10/95	1715	11											3		3	1			3	1		741
MW-21	7/10/95	1745	3											3									742 A-C
TRIP BLANK	7/10/95		3											3									743 A-C
HT:														40		HCl	H2SO4			HCl	1250		Location C3, #2
DD:																							Container Size

1 Sample broke in transit

Instructions: FEDEX B.L. # 6475371920

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
T. C. R.	7/10/95 20:00	[redacted]	7/11/95				

JUL-19-1995 11:18 EVERGREEN ANALYTICAL INC. 3034256854 P.04

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071113
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071114
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	37		0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		87%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071115
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		86%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071116
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		87%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071117
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		94%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071118
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8	1.0		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		83%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071120
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3	1.1		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		80%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K Lone
Approved

BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-21	Client Project No.	: 722450.26
Lab Sample Number	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071121
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3	0.8		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8	1.1		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		84%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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BTEX2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26
Lab Sample Number	: X08743	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071123
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.5
Surrogate Recovery (α,α,α-Trifluorotoluene):		72%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/12/95	Matrix	: Water
		Method Number	: EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Analysis Date	Surrogate Recovery	Result mg/L	RL mg/L
MB071195	METHOD BLANK	7/12/95	100%	U	0.1
X08741	MW-20	7/12/95	102%	U	0.1
X08735	MW-16	7/12/95	103%	U	0.1
X08736	MW-17	7/12/95	102%	0.1	0.1
X08737	MW-15	7/12/95	102%	U	0.1
X08738	MW-14	7/12/95	101%	U	0.1
X08739	MW-19	7/12/95	101%	U	0.1
X08740	MW-18	7/12/95	99%	U	0.1

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH found in blank also.
E = Extrapolated value. Exceeds calibration range.
RL = Reporting Limit.

Analyst

Approved

TVH2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/13,14/95	Method Number	: 3500/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH Jet Fuel mg/L	RL mg/L
WB071195	WATER METHOD BLANK	91%	U	0.5
X08735	MW-16	102%	U	0.5
X08736	MW-17	97%	U	0.5
X08737	MW-15	81%	U	0.5
X08738	MW-14	83%	U	0.5
X08739	MW-19	97%	U	0.5
J8740	MW-18	89%	U	0.5
X08741	MW-20	93%	U	0.5

QUALIFIERS
U = TEH as Jet Fuel analyzed for but not detected.
B = TEH as Jet Fuel found in blank also.
E = Extrapolated value.
RL = Reporting Limit

Analyst

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JET2193.XLS

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714010

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.142	0.004

Temperature	: 73 F	Saturation Concentration	Meth	0.034148524
Amount Injected	: 0.5 ml			
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0.107392382
Head space created	: 4 ml			
Methane Area	: 794.107 ug			

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714011

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.006	0.004

mperature	: 73.1 F	Saturation Concentration	Meth	0.0015
,ount Injected	: 0.5 ml			
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0.00473104
Head space created	: 4 ml			
Methane Area	: 34.99 ug			

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714013

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	71.9 F	Saturation Concentration in Head Space	Meth		0
Amount Injected	0.5 ml				
Total Volume of Sample	43 ml	Concentration	Meth		0
Head space created	4 ml				
Methane Area	0 ug				

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714014

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.2 F	Saturation Concentration	Meth		
nount Injected	: 0.5 ml				
otal Volume of Sample	: 43 ml	Concentration in Head Space	Meth		
Head space created	: 4 ml				
Methane Area	: 0 ug				

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714015

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.046	0.004

Temperature	: 72.7 F	Saturation Concentration	Meth	0.011132209
Amount Injected	: 0.5 ml			
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth	0.035028995
Head space created	: 4 ml			
Methane Area	: 258.874 ug			

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714016

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 73 F	Saturation Concentration	Meth		
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration in Head Space	Meth		
Head space created	: 4 ml				
Methane Area	: 0 ug				

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714017

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.9 F	Saturation Concentration in Head Space	Meth		0
Amount Injected	: 0.5 ml				
Total Volume of Sample	: 43 ml	Concentration	Meth		0
Head space created	: 4 ml				
Methane Area	: 0 ug				

Atomic weight(Methane) : 16 g

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

Evergreen Sample #	Client Sample ID	Chloride (mg/L)	Dilution Factor
X08735	MW-16	5.6	1X
X08736	MW-17	12.1	1X
X08737	MW-15	13.9	1X
X08738	MW-14	7.9	1X
X08739	MW-19	9.7	1X
X08740	MW-18	12.7	1X
X08741	MW-20	12.3	1X
Method Blank (7/11/95)		<0.25	

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	12.3	22.8	105
X08741	Matrix Spike Dup MW-20	10.0	12.3	23.4	111
	MS/MSD RPD				5.4

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.076 mg/L

Evergreen Sample #	Client Sample ID	Nitrite-N(mg/L)	Dilution Factor
X08735	MW-16	<0.076	1X
X08736	MW-17	<0.076	1X
X08737	MW-15	<0.076	1X
X08738	MW-14	<0.076	1X
X08739	MW-19	<0.076	1X
X08740	MW-18	<0.076	1X
X08741	MW-20	<0.076	1X
Method Blank (7/11/95)		<0.076	

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	<0.25	10.0	100
X08741	Matrix Spike Dup MW-20	10.0	<0.25	9.5	95
	MS/MSD RPD				4.9

** = Quality assurance results reported as Nitrite (NO_2).

Analyst

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2193tm.25

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.056 mg/L

Evergreen Sample #	Client Sample ID	Nitrate-N(mg/L)	Dilution Factor
X08735	MW-16	<0.056	1X
X08736	MW-17	0.36	1X
X08737	MW-15	0.10	1X
X08738	MW-14	<0.056	1X
X08739	MW-19	0.076	1X
X08740	MW-18	1.7	1X
X08741	MW-20	1.7	1X
Method Blank (7/11/95)		<0.056	

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	7.6	17.4	98
X08741	Matrix Spike Dup MW-20	10.0	7.6	17.2	95
	MS/MSD RPD				2.3

** = Quality assurance results reported as Nitrate (NO_3).

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4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

Evergreen Sample #	Client Sample ID	Sulfate (mg/L)	Dilution Factor
X08735	MW-16	4.2	1X
X08736	MW-17	2.9	1X
X08737	MW-15	5.0	1X
X08738	MW-14	11.8	1X
X08739	MW-19	37.9	1X
X08740	MW-18	12.4	1X
X08741	MW-20	13.6	1X
Method Blank (7/11/95)		<0.25	

Quality Assurance

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	13.6	23.6	100
X08741	Matrix Spike Dup MW-20	10.0	13.6	23.8	102
	MS/MSD RPD				1.7

Analyst

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Evergreen

May 16, 1995

MR TODD WIEDEMEIER
PARSONS ENGINEERING SCIENCE INC
1700 BROADWAY SUITE 900
DENVER CO 80290

Data Reports : 95-1182, 1217, 1240,1264
Client Project : 722450.SCO2
Seymour Johnson AFB

Dear Mr. Wiedemeier:

Enclosed are the analytical results for the samples shown in the Sample Log Sheet. The enclosed data have been reviewed for quality assurance. If you have any questions concerning the reported information, please contact Patty McClellan, Program Manager, or me.

Please Note: Samples marked for return on the Sample Log Sheet are considered hazardous, unsuitable for municipal disposal or were placed on hold at your request. Samples considered hazardous or unsuitable for municipal disposal will be returned to you immediately. Samples placed on hold will be returned and samples not considered hazardous will be disposed of one (1) month from the date of this letter.

The invoice for this work will be mailed to your Accounts Payable department shortly.

Thank you for using the services of Evergreen Analytical.

Sincerely,

J. A. Barney by pm

Jack Barney
President

™

Evergreen

CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Projects:
95-1182, 95-1217, 95-1240 and 95-1264

Parsons Engineering Science, Inc. (PES) Project:
Seymour Johnson AFB (722450.2602)

Sample Receipt

Between April 12 and 19, 1995, soil and groundwater samples were received at EAL for analysis under Subcontract 722450.SC02. Soil samples were received in coring tubes, and were non-homogeneous in nature. The problems associated with receiving samples in coring tubes was discussed with Todd Wiedemeier of PES on April 13, and it was agreed that samples would not be sent in tubes in future sampling events. Refer to the EAL Check-in Record for specific information regarding the condition of samples upon receipt. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

Data Package

All data are reported in one comprehensive package that is segregated based upon EAL project number. Each EAL project represents a group of samples received on a given day. The EAL Sample Log Sheet summarizes the samples represented in each EAL project.

A separate invoice for each EAL project number will be generated.

Quality assurance data may overlap from one EAL project to another. All required matrix spike/matrix spike duplicate (MS/MSD) and laboratory duplicate samples were analyzed. Laboratory Control Samples (LCS) and Method Blanks were analyzed when required and also are included in the data package.

BTEX, Trimethylbenzenes, Tetramethylbenzene, Chlorobenzene, Method SW8020

All samples were analyzed for BTEX within holding time.

Samples MW-2 9.5-10.5, MW-2 10.5-12, MW-4 12-13.5, SS-1 11.5-13.5, SS-1 11.5-13.5 Dupe, SS-3 9-11, SS-3 9-11 Dupe, MW-7, MW-11, CPT-16, CPT-17, CPT-18 MW-3, MW-4, MW-4 Dupe, MW-5, MW-5 Dupe, MW-8, MW-12D and MW-13 were analyzed at dilutions ranging from DF=5 to DF=125,000 due to concentrations of target compounds beyond the linear range of the instrument. All associated reporting limits have been raised accordingly.

Target analytes were detected in Method Blanks MB042395, MB042495, MB042595 and Methanol Extraction Blanks MEB042395 and MEB2050295 at concentrations less than 1 ppb. The associated samples have been "B" flagged.

Sample MW-10 11-12 MS/MSD recoveries were within the EAL acceptance criteria.

The Relative Percent Difference (RPD) for all laboratory duplicate samples was within the PES acceptance criteria. RPDs for SS-1 11.5-13.5, SS-3 9-11 and their associated duplicates were poor due to non-homogeneous coring samples noted at sample receipt.

All Laboratory Control Samples (LCS) and surrogate recoveries were within the EAL quality control acceptance criteria.

A 1 ppb standard has been analyzed with each SW8020 analytical sequence. The standard is generally part of the initial calibration curve. The initial calibration procedure is currently being switched from one based on a correlation coefficient, to one based on instrument response factors. The data included in this data package may have been analyzed by either procedure. It is anticipated that future samples for SW8020 will all be calibrated using the response factor procedure. The SW8020 SOP is being revised, and will be forwarded upon completion.

GC/MS, Method 624

Samples were analyzed by GC/MS Method 624 with the addition of MTBE, EDB, isopropyl ether, chlorobenzene, 1,2-dichlorobenzene (1,2-DCB), 1,3-DCB, 1,4-DCB, dichlorodifluromethane, and trichlorofluoromethane. All samples were analyzed within holding time with the exception of MW-11 which required a dilution due to the high concentration of target compounds. The original analysis was performed within holding time, however, the results of the diluted samples, analyzed one day outside of holding time are reported.

Contamination was detected in Method Blanks RB050195 and RB050295 at concentrations at or around the reporting limit. The associated samples have been "B" flagged. The data are considered acceptable.

Samples MW-11, CPT-18 and MW-4 were analyzed at dilutions due to levels of contaminations beyond linear range. The reporting limits have been adjusted accordingly.

MS/MSD samples were analyzed with MW-11 with acceptable recoveries.

All Laboratory Fortified Blanks, (LFB) were analyzed with acceptable recoveries.

As this analysis is not requested in the Scope of Work, only the BTEX and added compounds are reported in the electronic deliverables.

BNA (Full Suite), Method 625
Method 625 analysis was performed on one sample, however, is reported on hard copy only as it was not included in the Scope of Work. Laboratory duplicate and MS/MSD samples required by the Subcontract were not analyzed due to insufficient sample volume.

Bis(2-ethylhexyl)phthalate, 2-methylnapthalene, and Di-n-butylphthalate were detected in the Method Blank at 1 ppb. The associated sample data are "B" flagged as necessary. The data are considered acceptable.

There are no other quality control anomalies to report.

Total Volatile Hydrocarbons (TVH), Method 8015M
All samples submitted for TVH were analyzed within holding times.

Samples MW2 9.5-10.5, MW2 10.5-12, MW4 12-13.5, SS-1 11.5-13.5, SS-3 9-11, MW-7, MW-11, CPT-15 and MW-4 were analyzed at dilutions due to contamination in the samples. The reporting limits have been adjusted accordingly.

The relative percent difference for both sets of duplicates and MS/MSD samples were poor, due to the non-homogenous samples noted at the time of sample receipt.

Total Extractable Hydrocarbons (TEH), Method 8015M
All samples submitted for TEH analysis were analyzed within holding times.

Samples MW2 9.5-10.5, MW2 10.5-12, MW4 12-13.5,SS-1 11.5-13.5 and SS-3 9-11 were analyzed at dilutions due to contamination in the samples. Reporting limits have been raised accordingly.

The surrogate recovery for CPT-17,MW-8 and MW-3 was low and re-run with similar results. The samples were not reprepared due to insufficient sample volume.

Total Organic Carbon
Total Organic Carbon (TOC) in soil was analyzed by Huffman Laboratories of Golden, Colorado. TOC was determined by analyzing for total carbon (TC) and inorganic (carbonate) carbon (CC), then calculating the difference as TOC. Percent moisture results were applied to determine the adjusted result. The report from Huffman is included.

Methane, Method RSKSOP-175
There are no quality control anomalies to report.

Metals (Pb), Method 6010
There are no quality control anomalies to report.

General Chemistry
There are no quality control anomalies to report for Alkalinity or Anion analyses.

Disk Deliverables
The disk deliverables are included with the hard copy package. Matrix spike, matrix spike duplicate and laboratory duplicate samples are not included on the disk. Please note that blank spaces in the laboratory detection limit and/or PQL column indicate that there is no detection limit or PQL for that analyte.

Reporting limits have been adjusted to reflect the percent moisture in all soil samples or increases due to dilutions.

A hard copy of each spreadsheet included on the diskette is included. The name for each spreadsheet is located in the top left corner on the first page of each spreadsheet printout.

Patricia A. McClellan, Project Manager

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Methanol Blank Report

Method Blank Number	: MEB042295	Client Project No.	: 722450.2602/SJ AFE
Date Extracted/Prepared	: 4/22/95	Lab Project No.	: 95-1182
Date Analyzed	: 4/22/95	Dilution Factor	: 125.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water/MeOH
		Lab File No.	: BX2042215

Compound Name	Cas Number	Sample Concentration ug/kg		RL ug/kg
Benzene	71-43-2		U	500
Toluene	108-88-3		U	500
Chlorobenzene	108-90-7		U	500
Ethyl Benzene	100-41-4		U	500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	500
3,5-Trimethylbenzene	108-67-8		U	500
1,2,4-Trimethylbenzene	95-63-6		U	500
1,2,3-Trimethylbenzene	526-73-8		U	500
1,2,3,4-Tetramethylbenzene	488-23-3		U	500

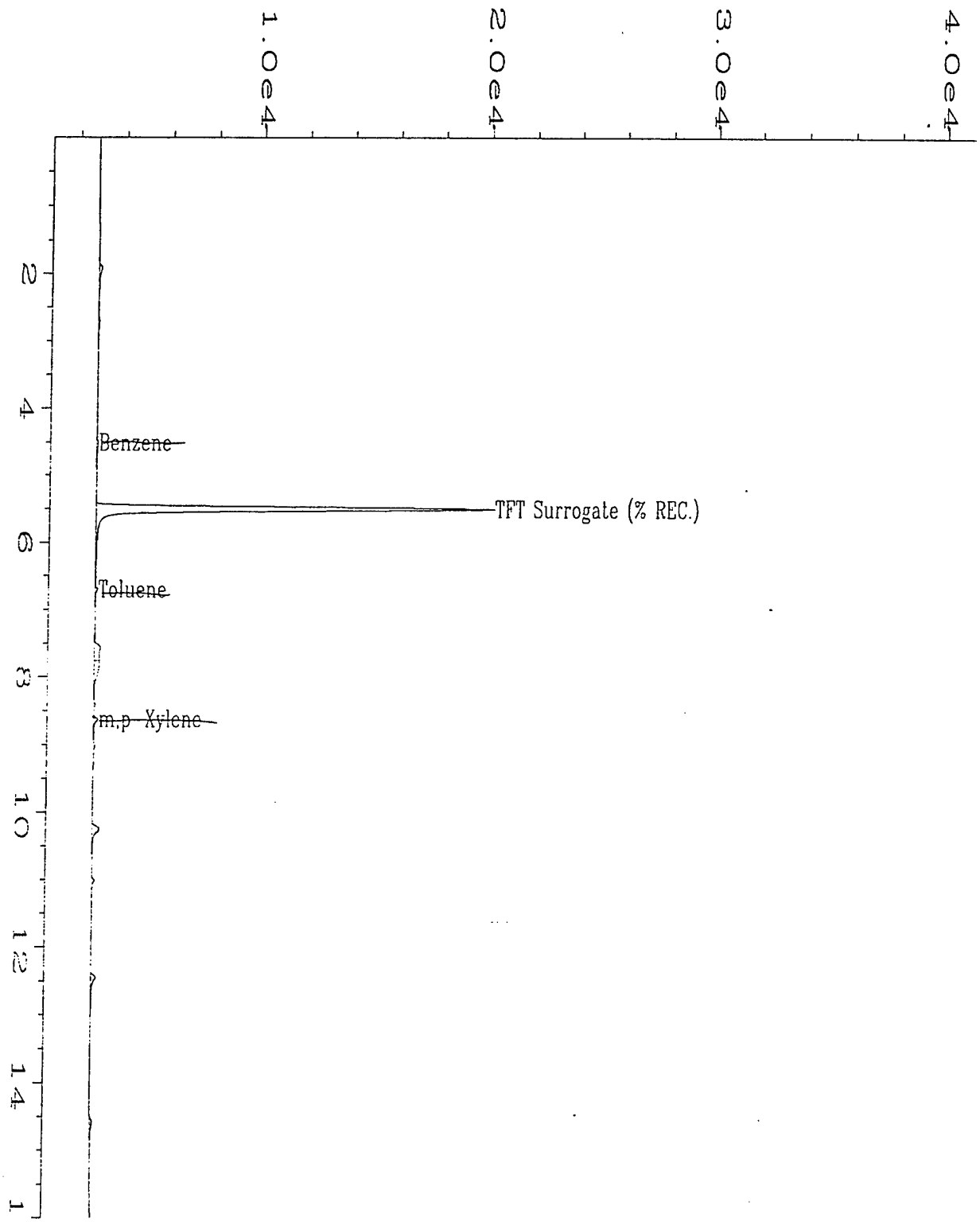
Surrogate Recovery (α,α,α-Trifluorotoluene):	104%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P McClella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\015R1001.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 15
Sample Name	: MEB042295;125	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 22 Apr 95 06:54 PM	Instrument Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:42 PM	Analysis Method	: BX20422.MTH
Last Recalib on	: 24 APR 95 06:19 PM	Sample Amount	: 0
Multiplier	: 125	ISTD Amount	:
Sample Info	: 100 UL MEOH		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Methanol Blank Report

Method Blank Number	: MEB042395	Client Project No.	: 722450.2602/SJ AFB
Date Extracted/Prepared	: 4/23/95	Lab Project No.	: 95-1182
Date Analyzed	: 4/23/95	Dilution Factor	: 125.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water/MeOH
		Lab File No.	: BX2042311

Compound Name	Cas Number	Sample Concentration ug/kg		RL ug/kg
Benzene	71-43-2		U	500
Toluene	108-88-3		U	500
Chlorobenzene	108-90-7		U	500
Ethyl Benzene	100-41-4		U	500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	51		500
3,5-Trimethylbenzene	108-67-8	54		500
1,2,4-Trimethylbenzene	95-63-6		U	500
1,2,3-Trimethylbenzene	526-73-8	110		500
1,2,3,4-Tetramethylbenzene	488-23-3		U	500

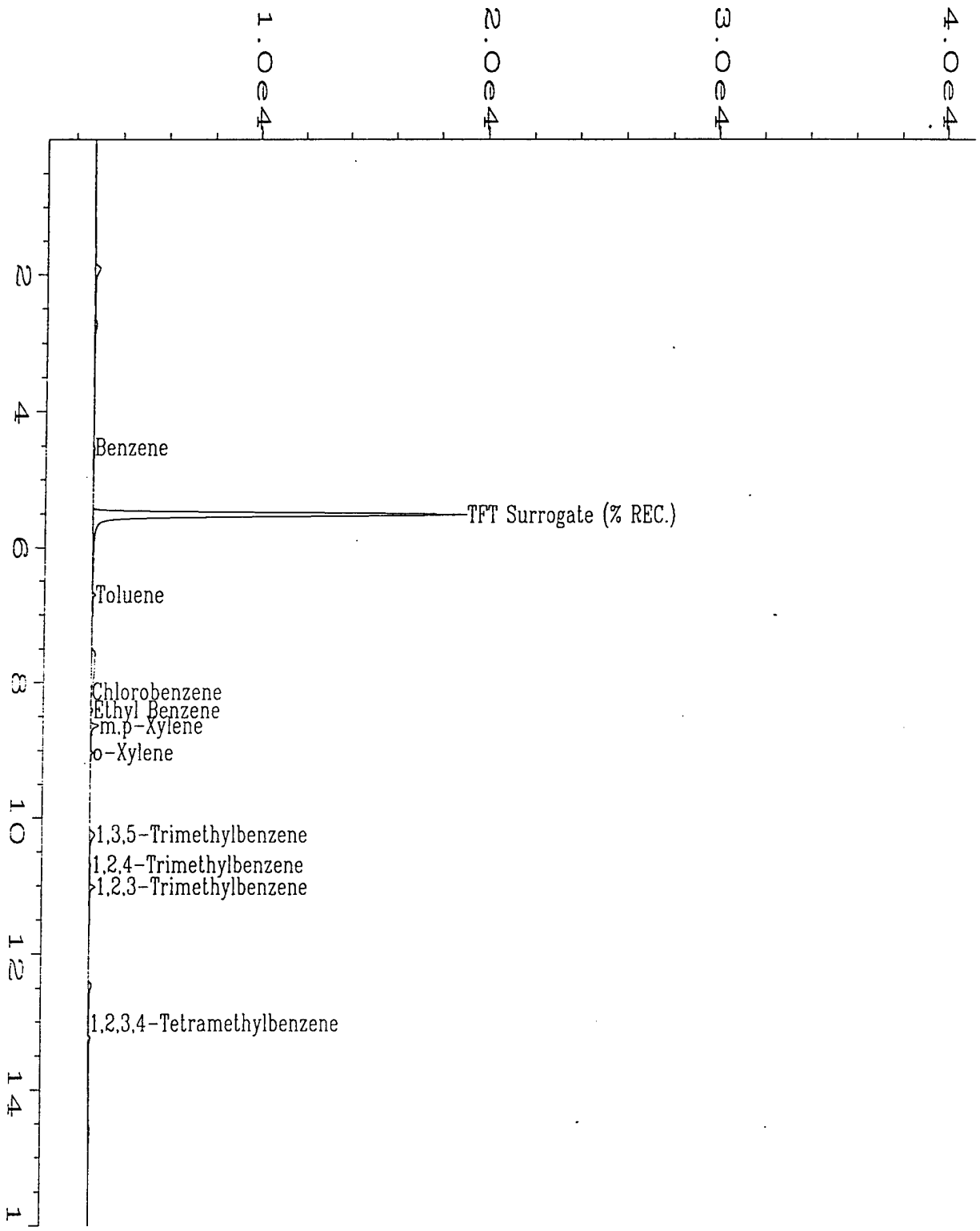
Surrogate Recovery (α,α,α-Trifluorotoluene):	105%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20423\011R0901.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 11
Sample Name	: MEB042395	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 23 Apr 95 02:50 PM	Instrument Method	: BX20423.MTH
Report Created on	: 02 May 95 02:26 PM	Analysis Method	: BX20423.MTH
Last Recalib on	: 25 APR 95 04:27 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042095	Client Project No.	: 722450.2602/SJ AFB
Date Extracted/Prepared	: 4/20/95	Lab Project No.	: 95-1182
Date Analyzed	: 4/20/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1042009

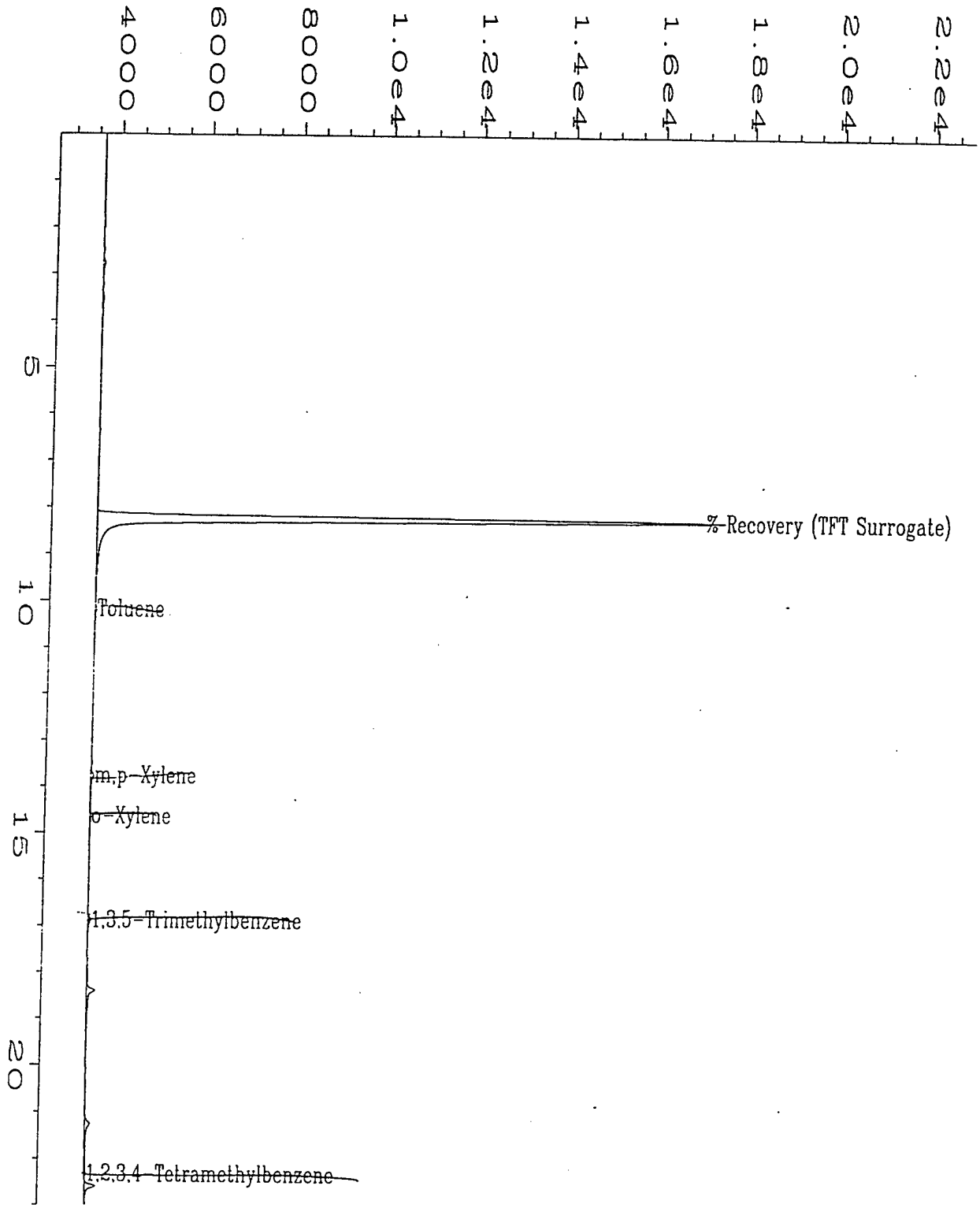
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
'A = Not Available/Not Applicable.

Analyst

Approved



ata File Name : C:\HPCHEM\1\DATA\BX10420\009F0701.D
perator : SW Tyson
nstrument : BTEX1
ample Name : MB042095
an Time Bar Code:
cquired on : 20 Apr 95 02:35 PM
[illegible] Created on: 21 Apr 95 12:38 PM
[illegible]ecalib on : 21 APR 95 12:15 PM
ultiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

jm 5/12/95

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(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042395	Client Project No.	: 722450.2602/SJ AFE
Date Extracted/Prepared	: 4/23/95	Lab Project No.	: 95-1182
Date Analyzed	: 4/23/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042310

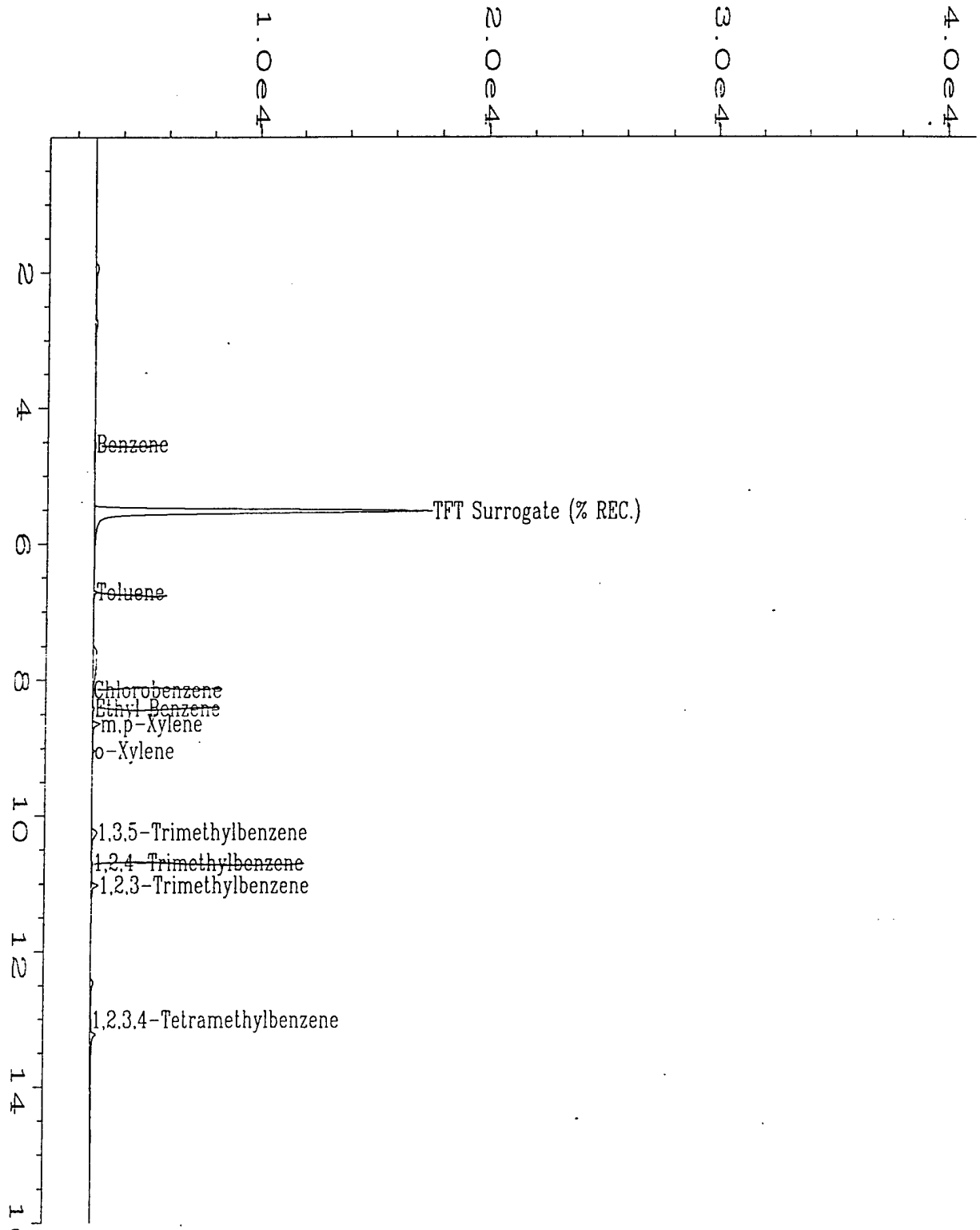
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4		0.4
,3,5-Trimethylbenzene	108-67-8	0.5		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.8		0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
A = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20423\010R0901.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 10
Sample Name	: MB042395	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 23 Apr 95 02:14 PM	Instrument Method	: BX20423.MTH
Report Created on	: 02 May 95 02:25 PM	Analysis Method	: BX20423.MTH
Last Recalib on	: 25 APR 95 04:27 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

JM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042295	Client Project No.	: 722450.2602/SJ AFE
Date Extracted/Prepared	: 4/22/95	Lab Project No.	: 95-1182
Date Analyzed	: 4/22/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042211

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.4		0.4

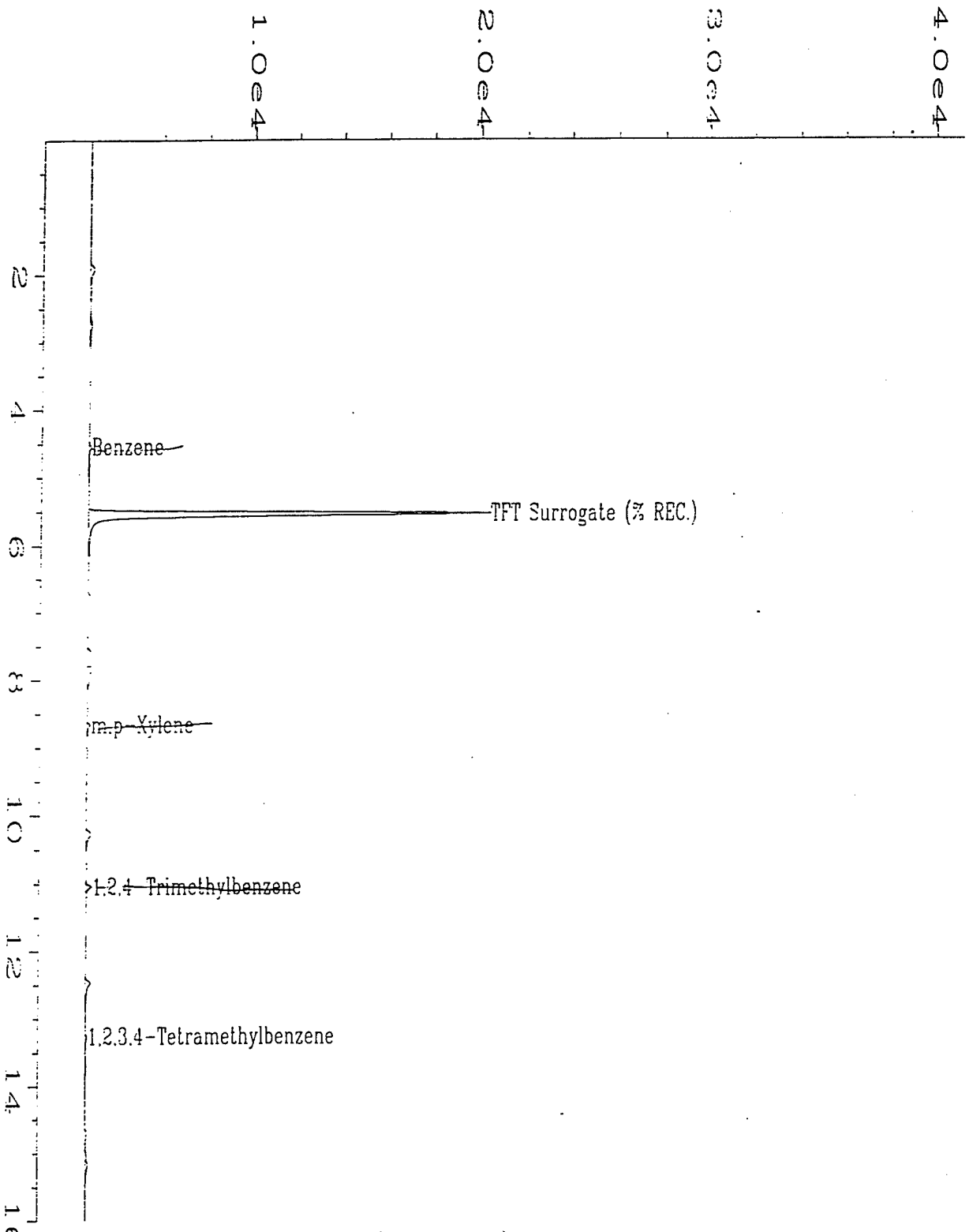
Surrogate Recovery (α,α,α-Trifluorotoluene):	101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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Data File Name	: C:\HPCHEM\2\DATA\BX20422\011R1001.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 11
Sample Name	: MB042295	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
uired on	: 22 Apr 95 03:54 PM	Instrument Method	: BX20422.MTH
ort Created on	: 24 Apr 95 06:40 PM	Analysis Method	: BX20422.MTH
Last Recalib on	: 24 APR 95 06:19 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-1 12-14	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05620	Lab Project No.	: 95-1182
Date Sampled	: 4/10/95	Dilution Factor	: 1.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/20/95	Lab File No.	: BX1042022
% Moisture	: 20.44%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.0
Toluene	108-88-3	1.0	J	5.0
Chlorobenzene	108-90-7		U	5.0
Ethyl Benzene	100-41-4		U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.8	J	5.0
,3,5-Trimethylbenzene	108-67-8		U	5.0
1,2,4-Trimethylbenzene	95-63-6		U	5.0
1,2,3-Trimethylbenzene	526-73-8		U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		92%		50%-150% (QC limits

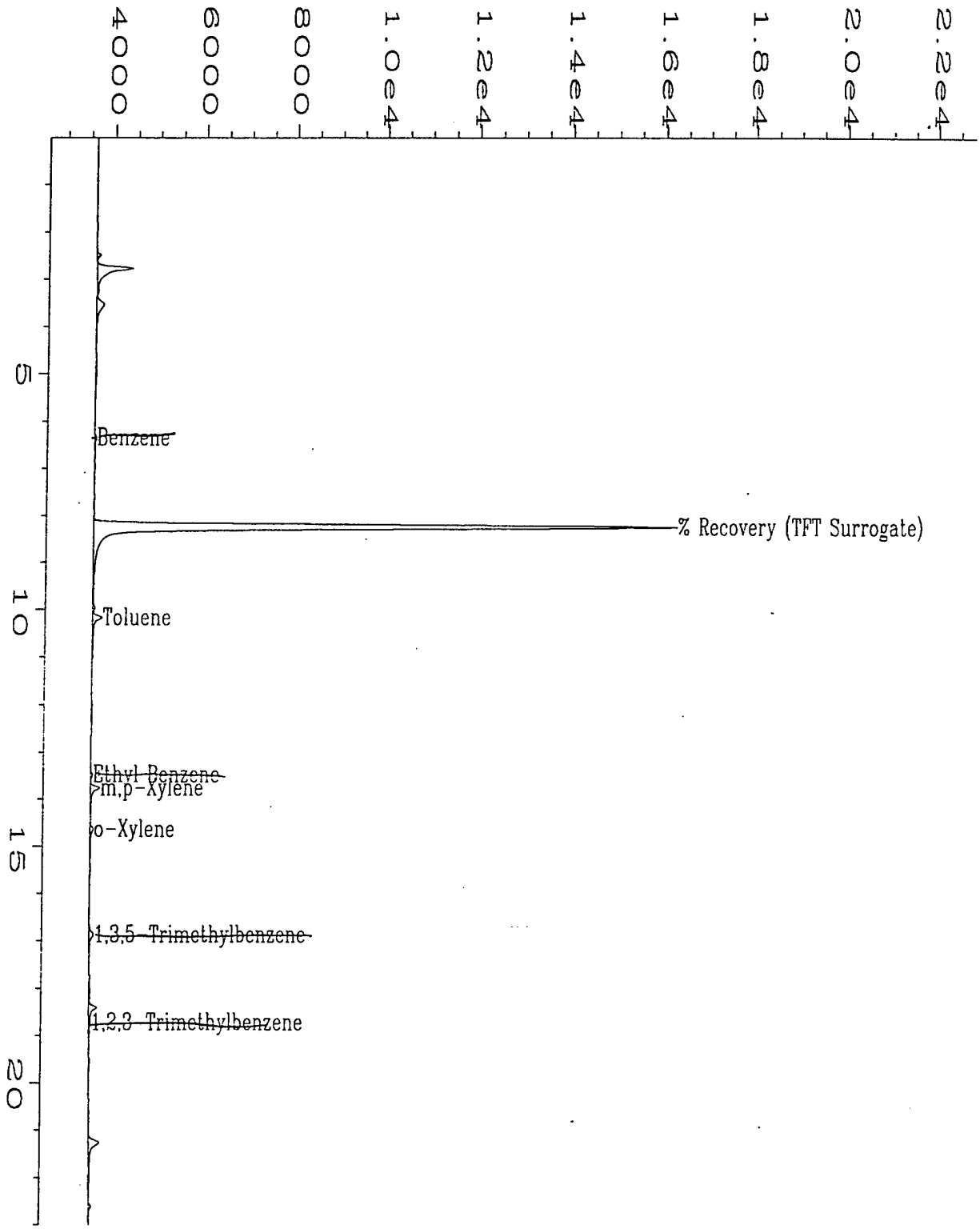
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
'A = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\1\DATA\BX10420\022F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05620;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 11:18 PM
Report Created on: 21 Apr 95 12:44 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : PROJECT#: 95-1182 CLIENT#: MW-1 12-14 SOIL

Page Number : 1
Vial Number : 22
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-2 9.5-10.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05621	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 5000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042218
% Moisture	: 19.92%	Method Blank No.	: MEB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	25000
Toluene	108-88-3	3800	J	25000
Chlorobenzene	108-90-7	9300	J	25000
Ethyl Benzene	100-41-4	4300	J	25000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	12000	J	25000
3,5-Trimethylbenzene	108-67-8	35000		25000
1,2,4-Trimethylbenzene	95-63-6	90000		25000
1,2,3-Trimethylbenzene	526-73-8	33000		25000
1,2,3,4-Tetramethylbenzene	488-23-3	42000		25000
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%		50%-150% (QC limits)

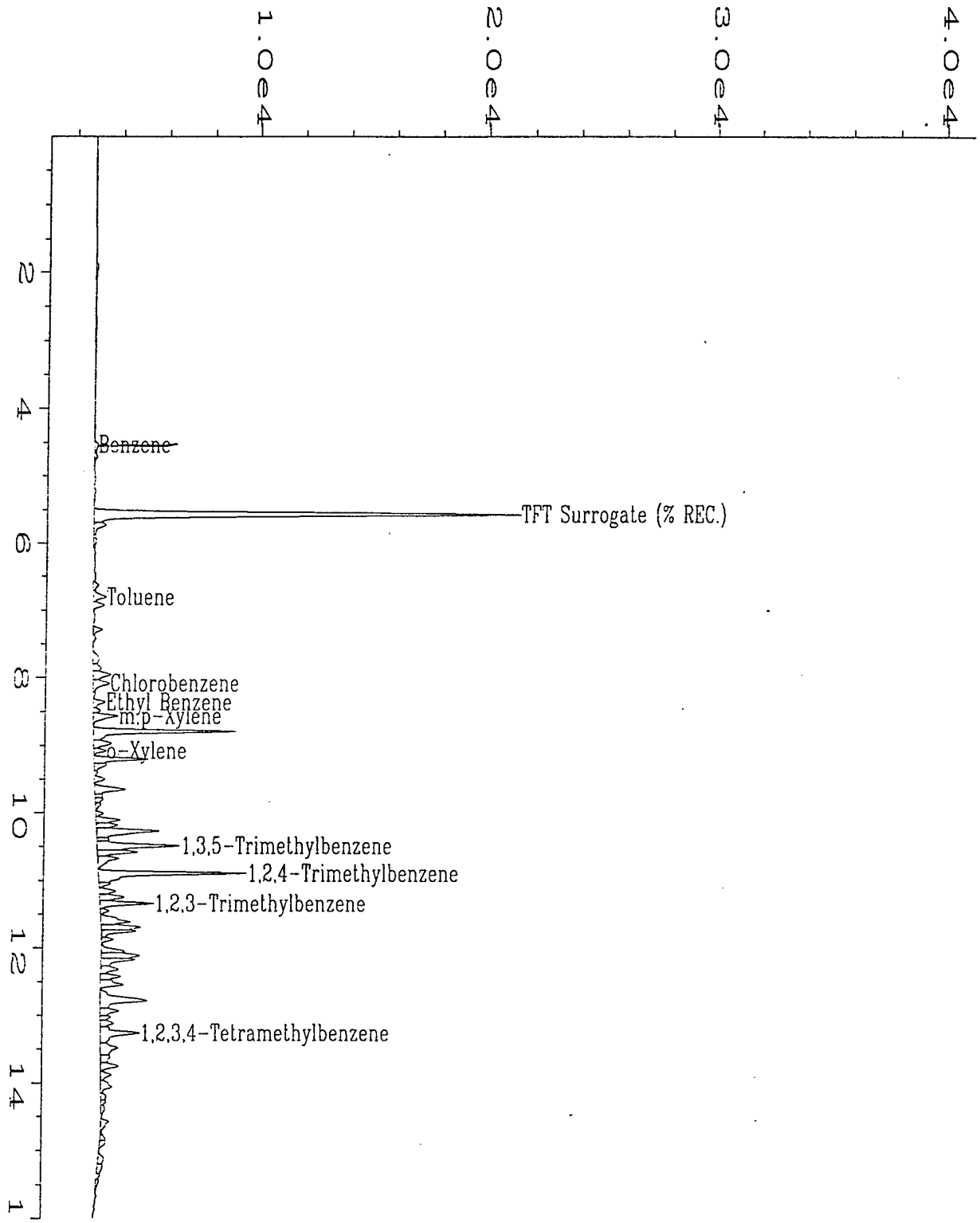
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20422\018R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05621;5000;4
Run Time Bar Code:
Acquired on : 22 Apr 95 08:42 PM
Report Created on: 24 Apr 95 06:44 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 5000
Sample Info : 95-1182; ,MW-2 9 1/2-10 1/2;2.5 UL SOIL EXTRACT OF 4GRAMS/10 ML MEOH

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-2 10.5-12	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05622	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 10000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042313
% Moisture	: 20.84%	Method Blank No.	: MEB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	13000	J	51000
Toluene	108-88-3	130000		51000
Chlorobenzene	108-90-7	15000	J	51000
Ethyl Benzene	100-41-4	130000		51000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	680000	B	51000
,3,5-Trimethylbenzene	108-67-8	190000	B	51000
1,2,4-Trimethylbenzene	95-63-6	540000		51000
1,2,3-Trimethylbenzene	526-73-8	130000	B	51000
1,2,3,4-Tetramethylbenzene	488-23-3	230000		51000
Surrogate Recovery (α,α,α-Trifluorotoluene):		102%		50%-150% (QC limits)

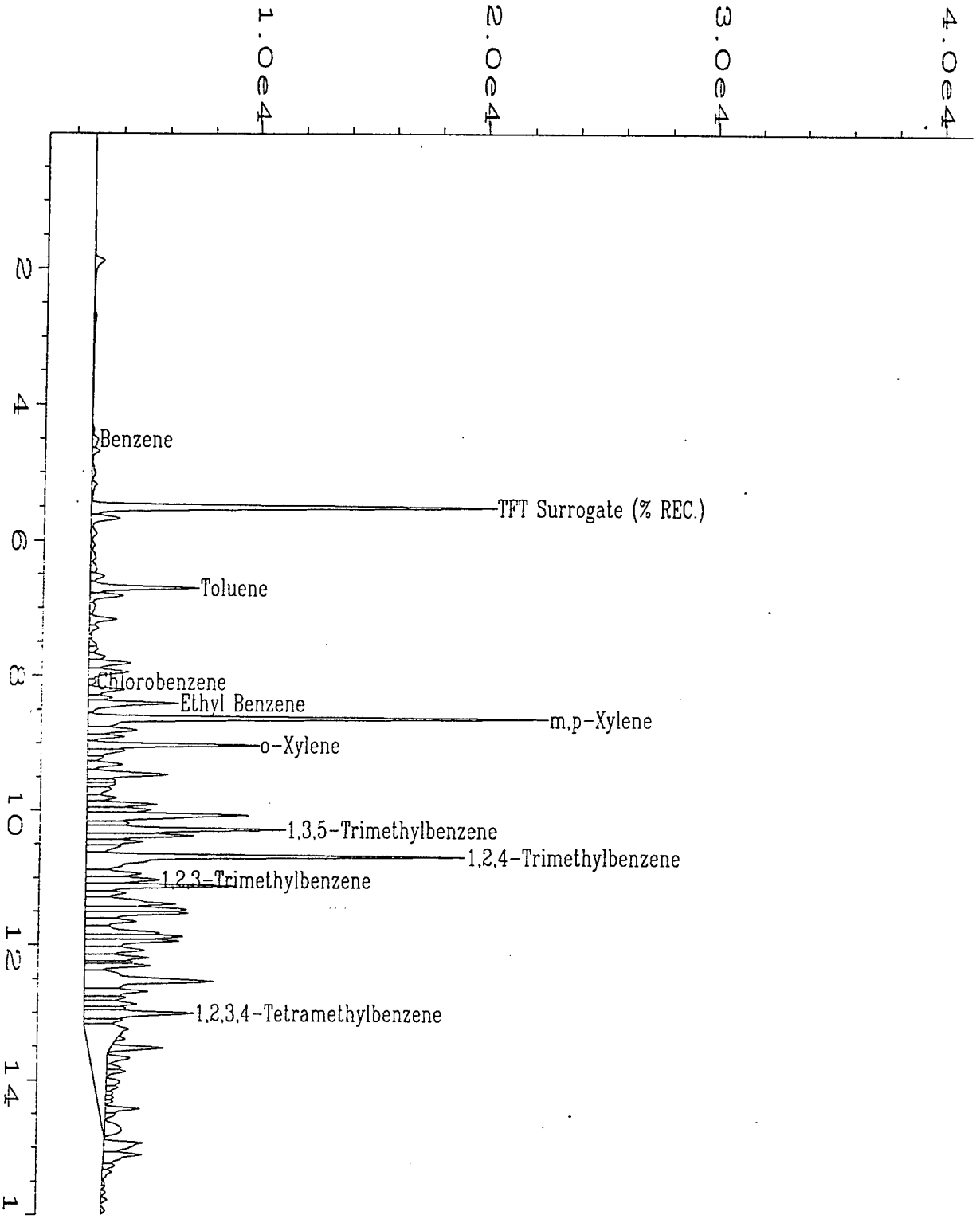
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
A = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20423\013R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05622;10000;1
Run Time Bar Code:
Acquired on : 23 Apr 95 04:01 PM
Report Created on: 25 Apr 95 04:49 PM
Last Recalib on : 25 APR 95 04:27 PM
Multiplier : 1e+004
Sample Info : 95-1182; MW-2 10 1/2-12';10 UL SOIL EXTRACT OF 1GRAMS/10 ML MEOH

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-4 13.5-15	Client Project No.	: 722450.2602/SJ AF
Lab Sample Number	: X05623	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 1.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042024
% Moisture	: 12.71%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	4.6
Toluene	108-88-3	1.1	J	4.6
Chlorobenzene	108-90-7	1.9	J	4.6
Ethyl Benzene	100-41-4	1.4	J	4.6
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	11		4.6
1,3,5-Trimethylbenzene	108-67-8	5.6		4.6
1,2,4-Trimethylbenzene	95-63-6	16		4.6
1,2,3-Trimethylbenzene	526-73-8	7.3		4.6
1,2,3,4-Tetramethylbenzene	488-23-3	11		4.6
Surrogate Recovery (α,α,α-Trifluorotoluene):		76%		50%-150% (QC limit

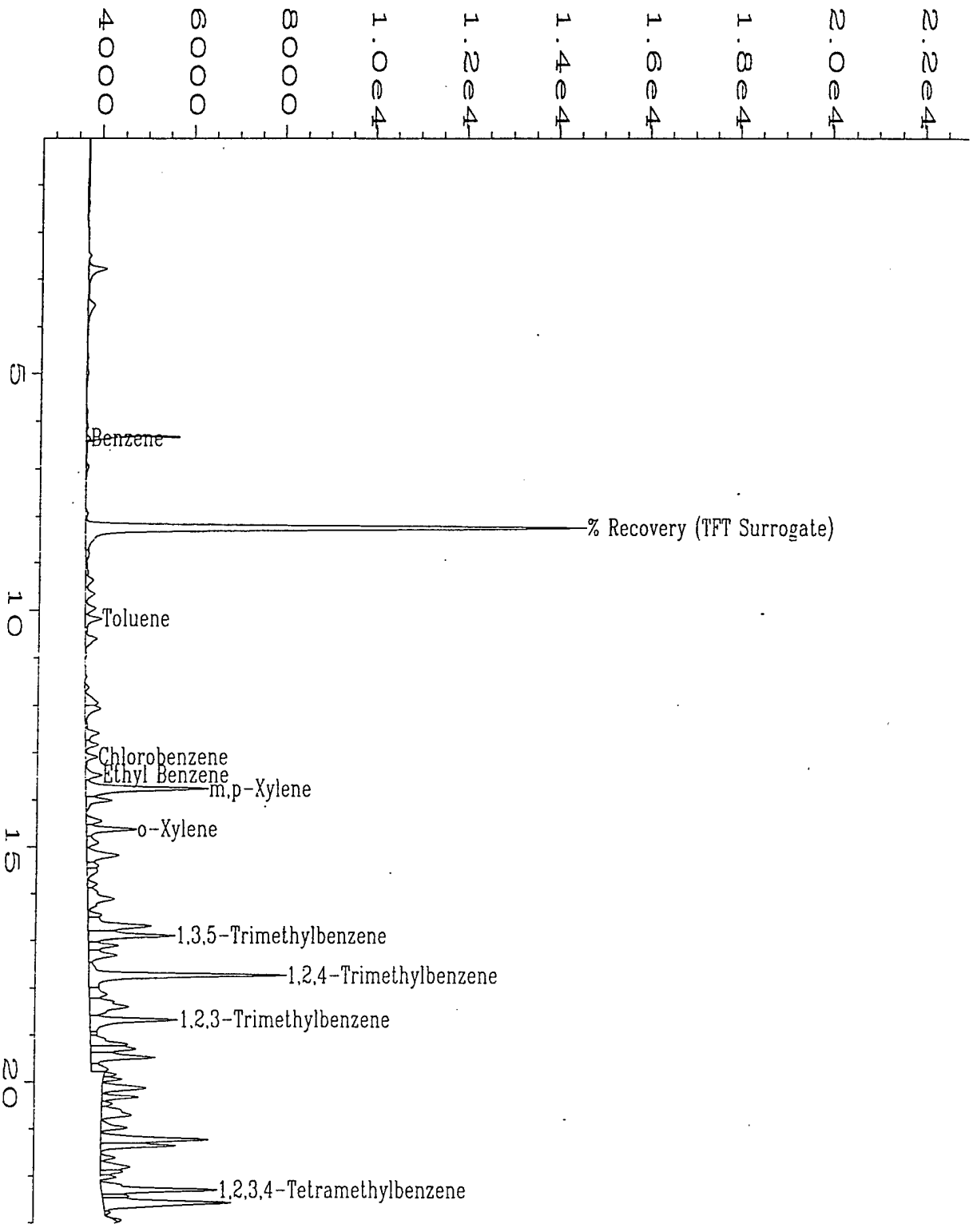
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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Data File Name : C:\HPCHEM\1\DATA\BX10420\024F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05623;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 00:37 AM
Report Created on: 21 Apr 95 12:45 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : PROJECT#: 95-1182 CLIENT#: MW-4 13 1/2-15 SOIL

Page Number : 1
Vial Number : 24
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

JM 5/12/95

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Method 8020 Data Report

Client Sample Number	: MW-4 12--13.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05624	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 5000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042217
% Moisture	: 21.33%	Method Blank No.	: MEB042295

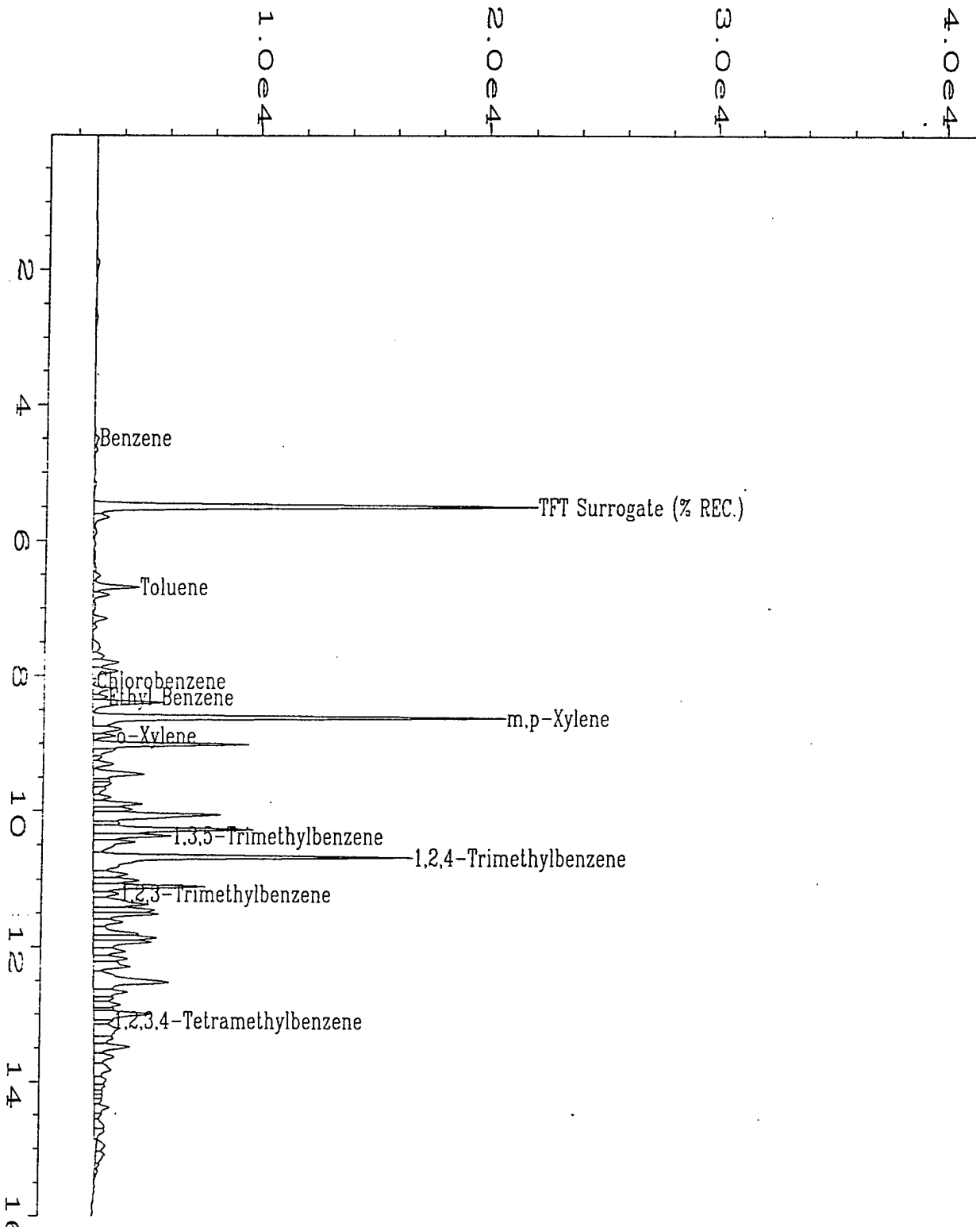
Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	**		25000
Toluene	108-88-3	23000		25000
Chlorobenzene	108-90-7	**		25000
Ethyl Benzene	100-41-4	4100	J	25000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	200000		25000
,3,5-Trimethylbenzene	108-67-8	31000		25000
1,2,4-Trimethylbenzene	95-63-6	220000		25000
1,2,3-Trimethylbenzene	526-73-8	17000	J	25000
1,2,3,4-Tetramethylbenzene	488-23-3	11000	J	25000
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%		50%-150% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX1042028 (DF=125).
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
\ =Not Available/Not Applicable.

Analyst

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Data File Name : C:\HPCHEM\2\DATA\BX20422\017R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05624;5000;4
Run Time Bar Code:
Acquired on : 22 Apr 95 08:06 PM
Report Created on: 25 Apr 95 01:52 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 5000
Sample Info : 95-1182; MW-4 12-13 1/2;2.5 UL SOIL EXTRACT OF 4GRAMS/10 ML MEOH

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Sample Number	: MW-4 12-13.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05624	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 125.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042028
% Moisture	: 21.33%	Method Blank No.	: MB042095

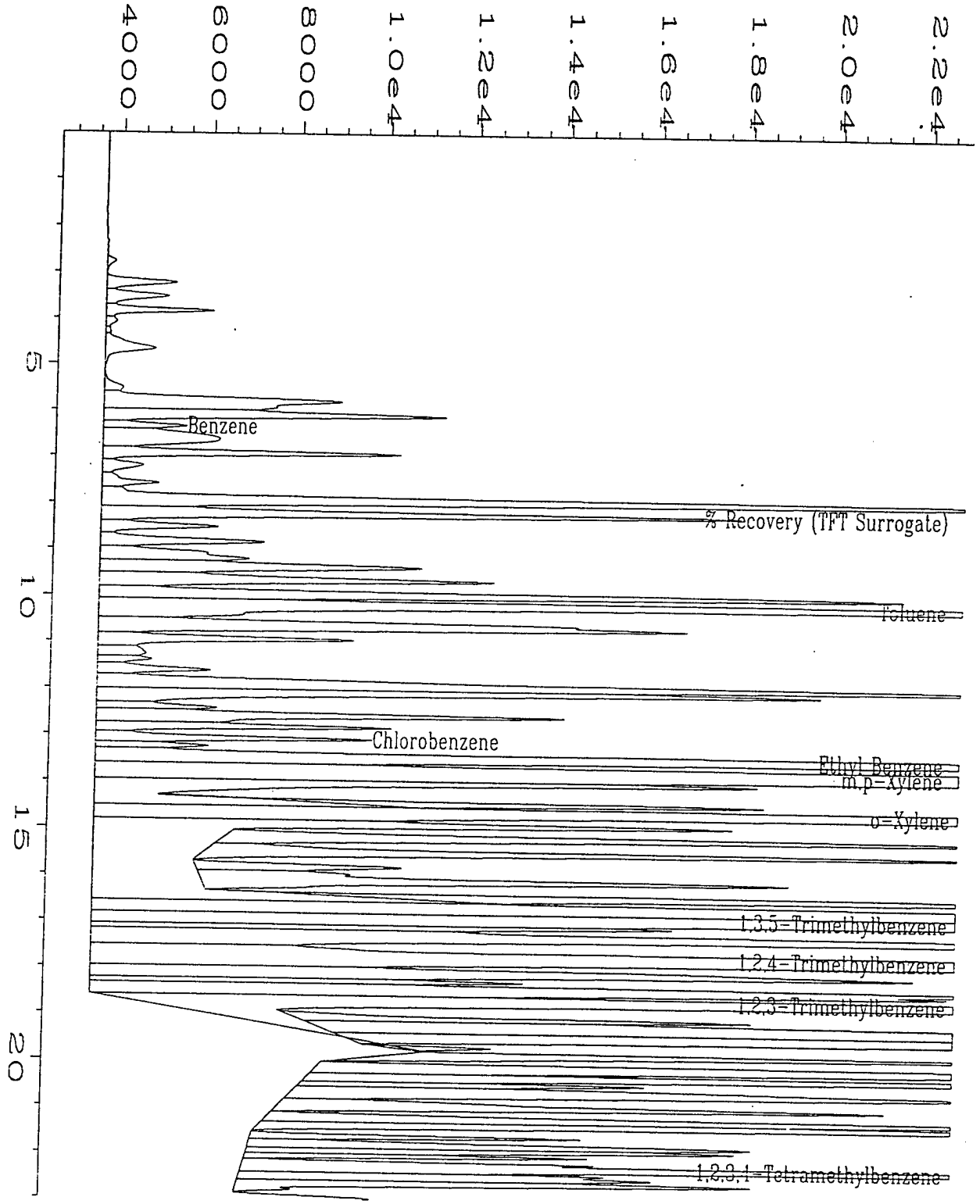
Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	740	640
Toluene	108-88-3	**	640
Chlorobenzene	108-90-7	2800	640
Ethyl Benzene	100-41-4	**	640
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	640
,3,5-Trimethylbenzene	108-67-8	**	640
1,2,4-Trimethylbenzene	95-63-6	**	640
1,2,3-Trimethylbenzene	526-73-8	**	640
1,2,3,4-Tetramethylbenzene	488-23-3	**	640
Surrogate Recovery (α,α,α-Trifluorotoluene):		114%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX2042217 (DF=5000).
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

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Data File Name : C:\HPCHEM\1\DATA\BX10420\028F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05624;125;4
Run Time Bar Code:
Acquired on : 21 Apr 95 03:15 AM
Report Created on: 21 Apr 95 12:51 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 125
Sample Info : PROJECT#: 95-1182 CLIENT#: MW-4 12-13 1/2 SOIL/EXT.

Page Number : 1
Vial Number : 28
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Sample Number	: MW-5 13-14.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05625	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 1.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042025
% Moisture	: 22.72%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.2
Toluene	108-88-3	0.7	J	5.2
Chlorobenzene	108-90-7		U	5.2
Ethyl Benzene	100-41-4		U	5.2
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	2.3	J	5.2
,3,5-Trimethylbenzene	108-67-8	0.6	J	5.2
1,2,4-Trimethylbenzene	95-63-6	0.8	J	5.2
1,2,3-Trimethylbenzene	526-73-8	0.6	J	5.2
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.2

Surrogate Recovery (α,α,α-Trifluorotoluene):	68%	50%-150% (QC limits)

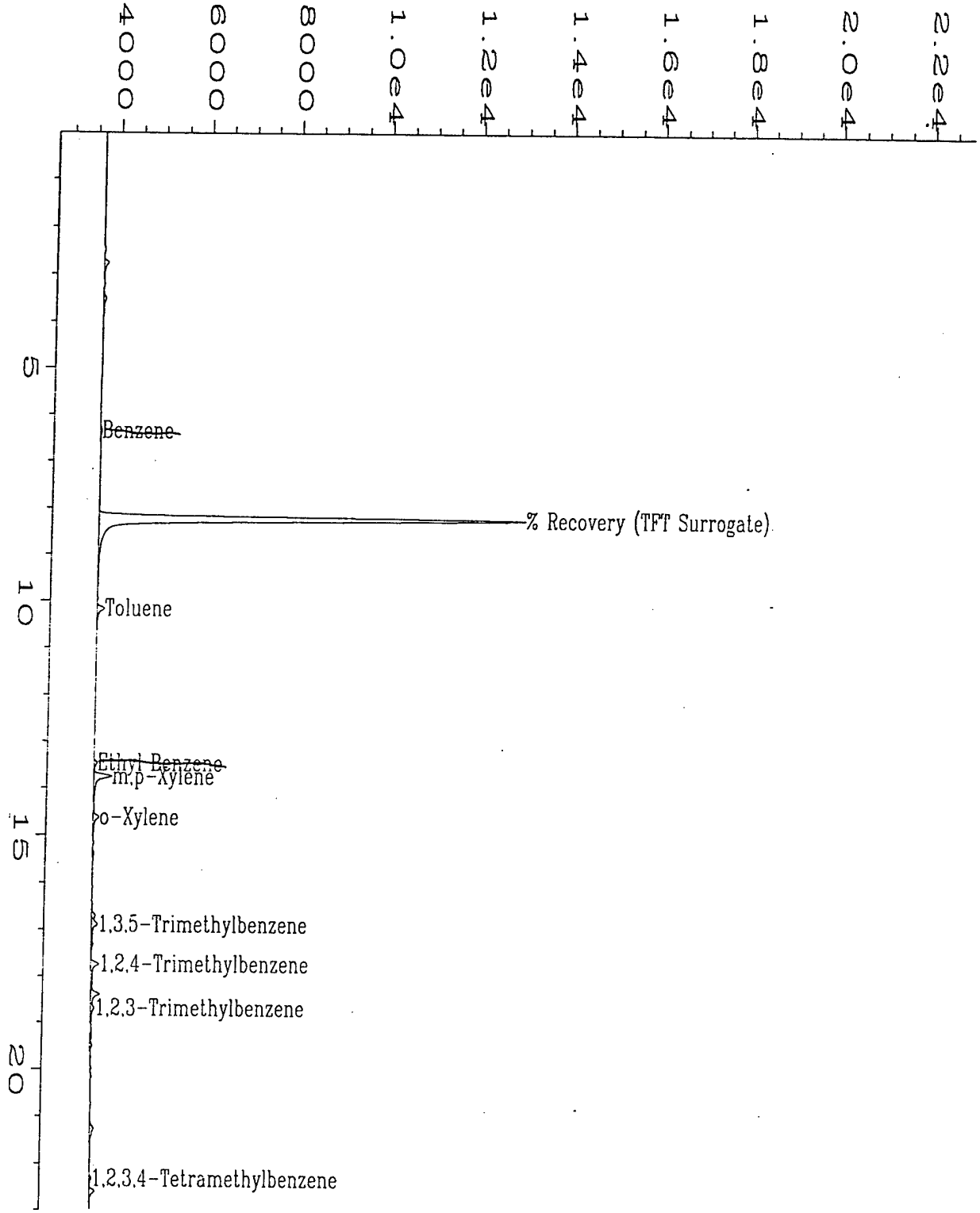
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
"A = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\1\DATA\BX10420\025F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05625;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 01:16 AM
Report Created on: 21 Apr 95 12:46 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : PROJECT#: 95-1182 CLIENT#: MW-5 13-14 SOIL

Page Number : 1
Vial Number : 25
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

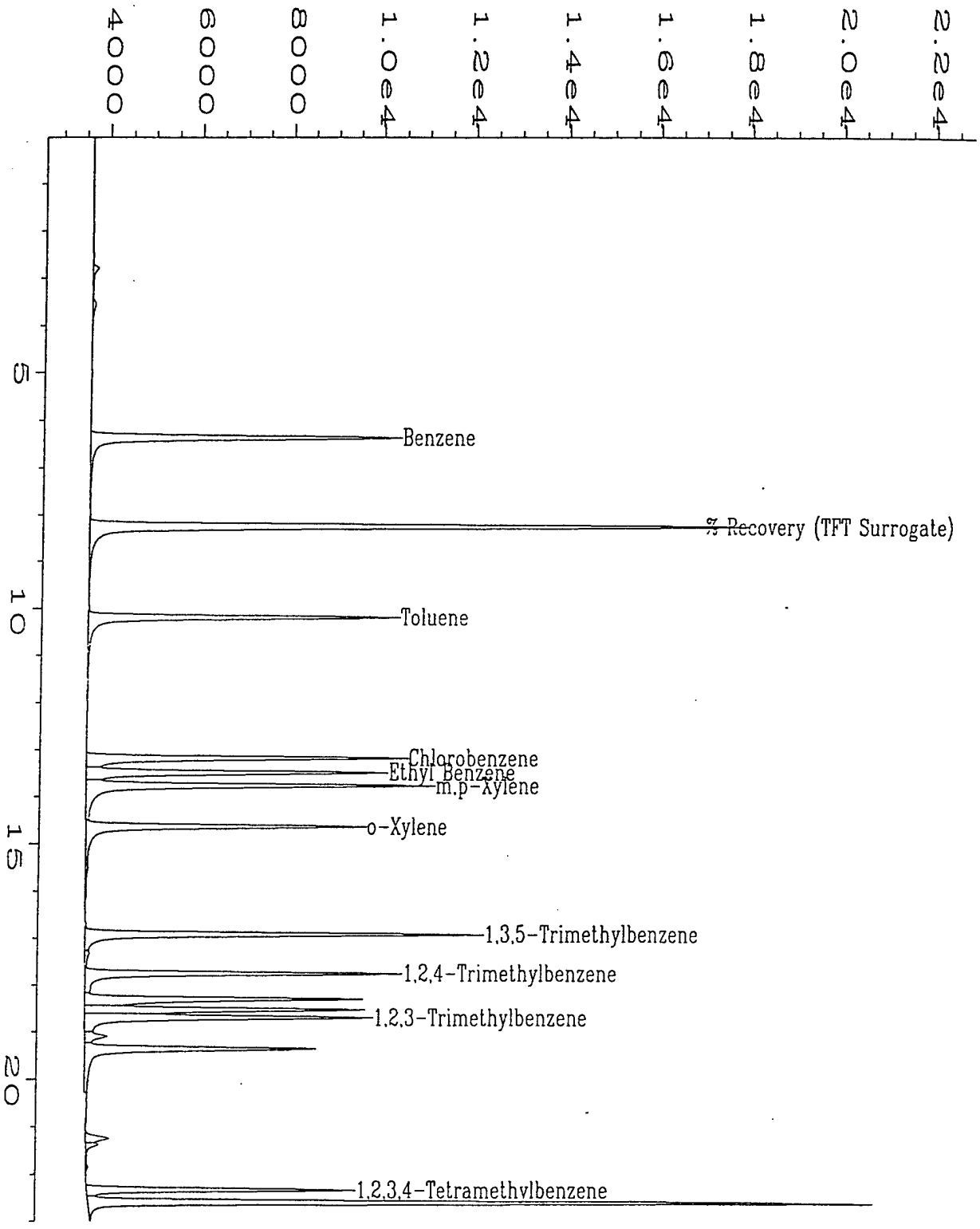
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.7	83.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	17.1	85.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	18.5	92.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	16.2	81.0	64.0-11[redacted]*
1,3,5-Trimethylbenzene	108-67-8	18.1	90.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.1	100.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		102%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\008F0701.D		
Operator	: SW Tyson	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 8
Sample Name	: LCS042095	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 20 Apr 95 01:56 PM	Instrument Method	: BX10420.MTH
Report Created on	: 21 Apr 95 12:38 PM	Analysis Method	: BX10420B.MTH
Last Recalib on	: 21 APR 95 12:15 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/22/95	Method	: 602
Date Analyzed	: 4/22/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042210

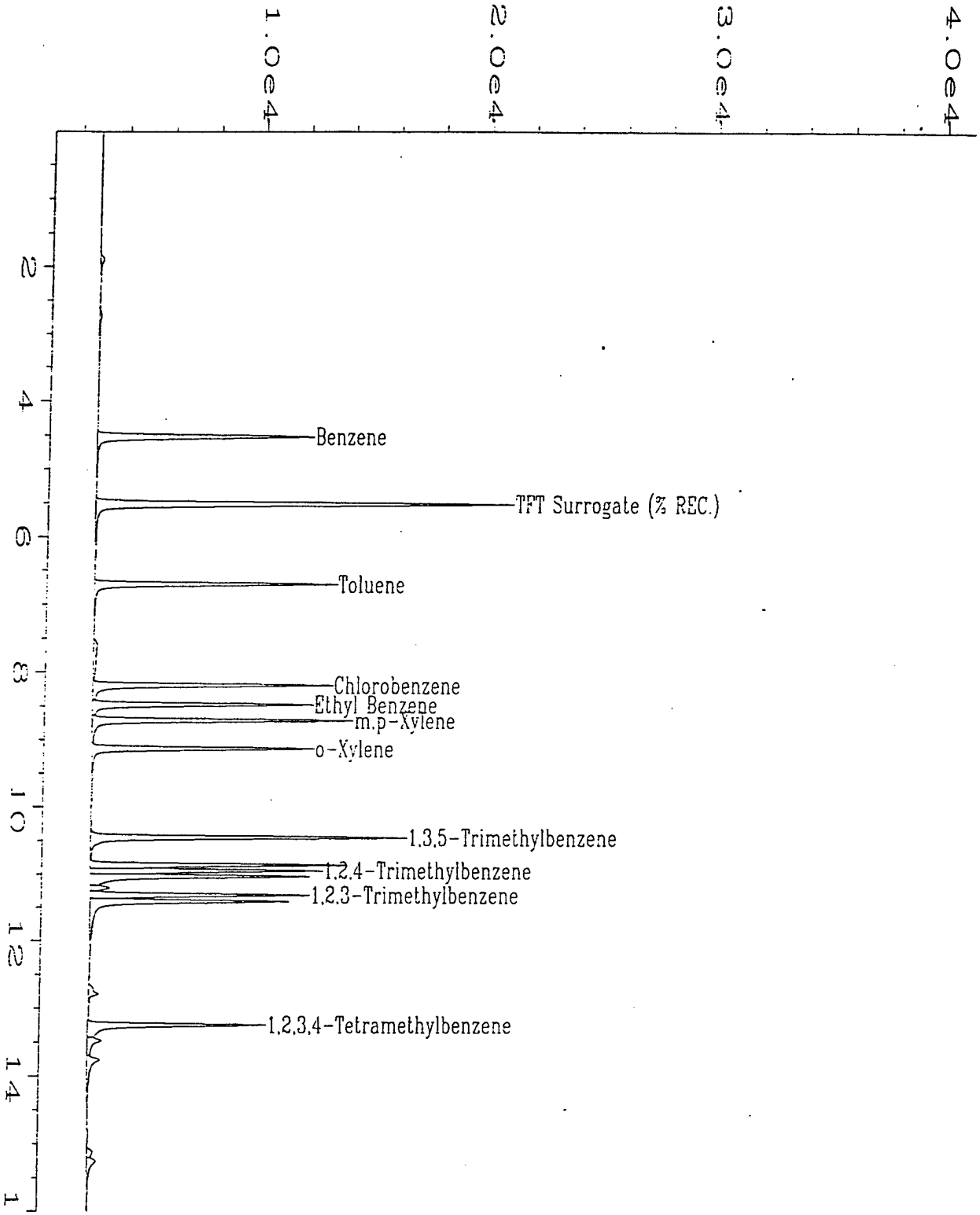
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.0	95.0	71.0-119.0*
Toluene	108-88-3	19.4	97.0	73.0-111.0*
Chlorobenzene	108-90-7	20.3	102	64.0-119.0*
Ethyl Benzene	100-41-4	19.9	99.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	18.7	93.5	75.0-114.0*
o-Xylene	95-47-6	19.7	98.5	64.0-11[redacted]*
1,3,5-Trimethylbenzene	108-67-8	20.9	105	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.3	107	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\010R1001.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 10
Sample Name	: LCS042295	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 22 Apr 95 03:15 PM	Instrument Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:36 PM	Analysis Method	: BX20422.MTH
Last Recalib on	: 24 APR 95 06:19 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20423009

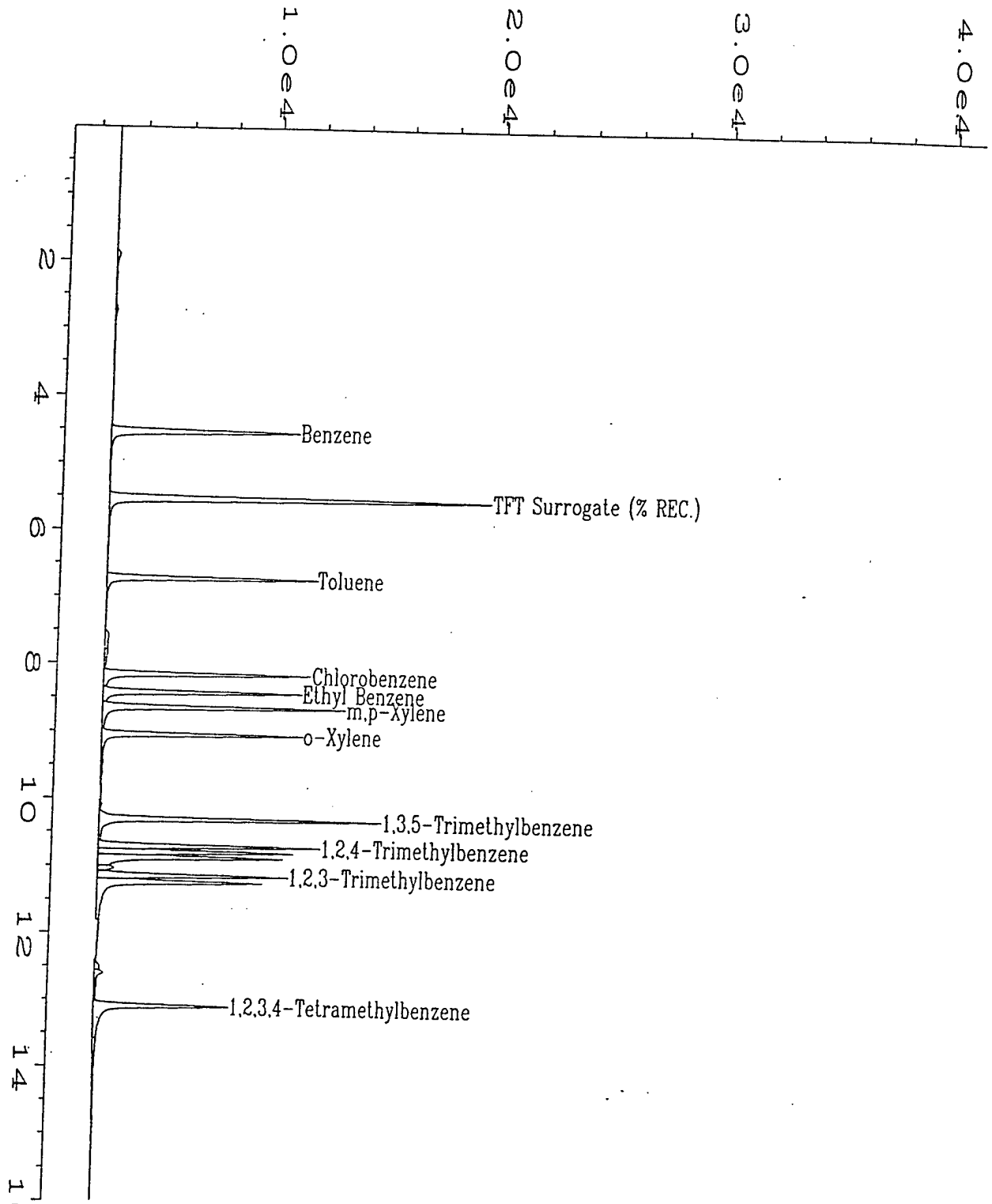
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.0	90.0	71.0-119.0*
Toluene	108-88-3	18.2	91.0	73.0-111.0*
Chlorobenzene	108-90-7	18.6	93.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100	75.0-114.0*
o-Xylene	106-42-3 95-47-6	18.4	92.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.1	90.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.8	104	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		103%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



ta File Name : D:\2\DATA\BX20423\009R0901.D
erator : T.Lockwood
strument : BTEX2
mple Name : LCS042395
n Time Bar Code:
[illegible]red on : 23 Apr 95 01:38 PM
[illegible] Created on: 25 Apr 95 04:31 PM
st Recalib on : 25 Apr 95 04:27 PM
ltiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/10,11/95	Client Project Number	: 722450.2602/SEYMORE
Date Received	: 4/12/95	Lab Project Number	: 95-1182
Date Prepared	: 4/21,24/95	Matrix	: Soil
Date Analyzed	: 4/21,24/95	Method Number	: EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH* mg/Kg	RL* mg/Kg
MB042195	METHOD BLANK	100%	U	0.1
MB042495	METHOD BLANK	100%	U	0.1
X05620	MW-1 12-14	119%	U	0.13
X05621	MW-2 9 1/2-10 1/2	99%	660	6.2
X05621 DUP	MW-2 9 1/2-10 1/2	118%	570	6.2
X05622	MW-2 10 1/2-12	**	3800 E	6.3
X05623	MW-4 13 1/2-15	105%	U	0.11
X05624	MW-4 12-13 1/2	114%	3200 E	6.4
X05625	MW-5 13-14 1/2	110%	U	0.13

* = Based on a dry weight basis.
** = Unable to separate surrogate from analyte.

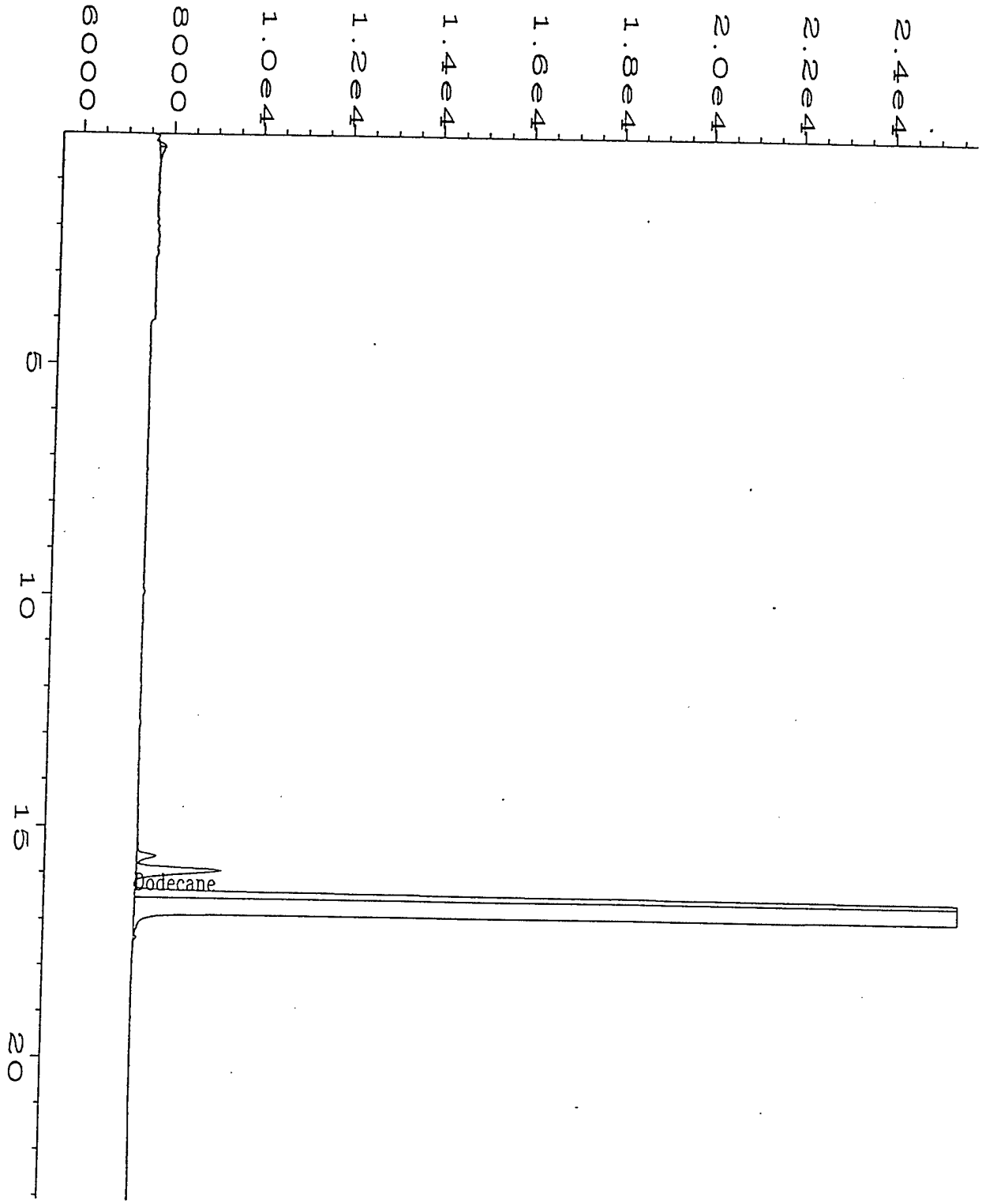
QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH found in blank also.
E = Extrapolated value.
RL = Reporting Limit.

Analyst

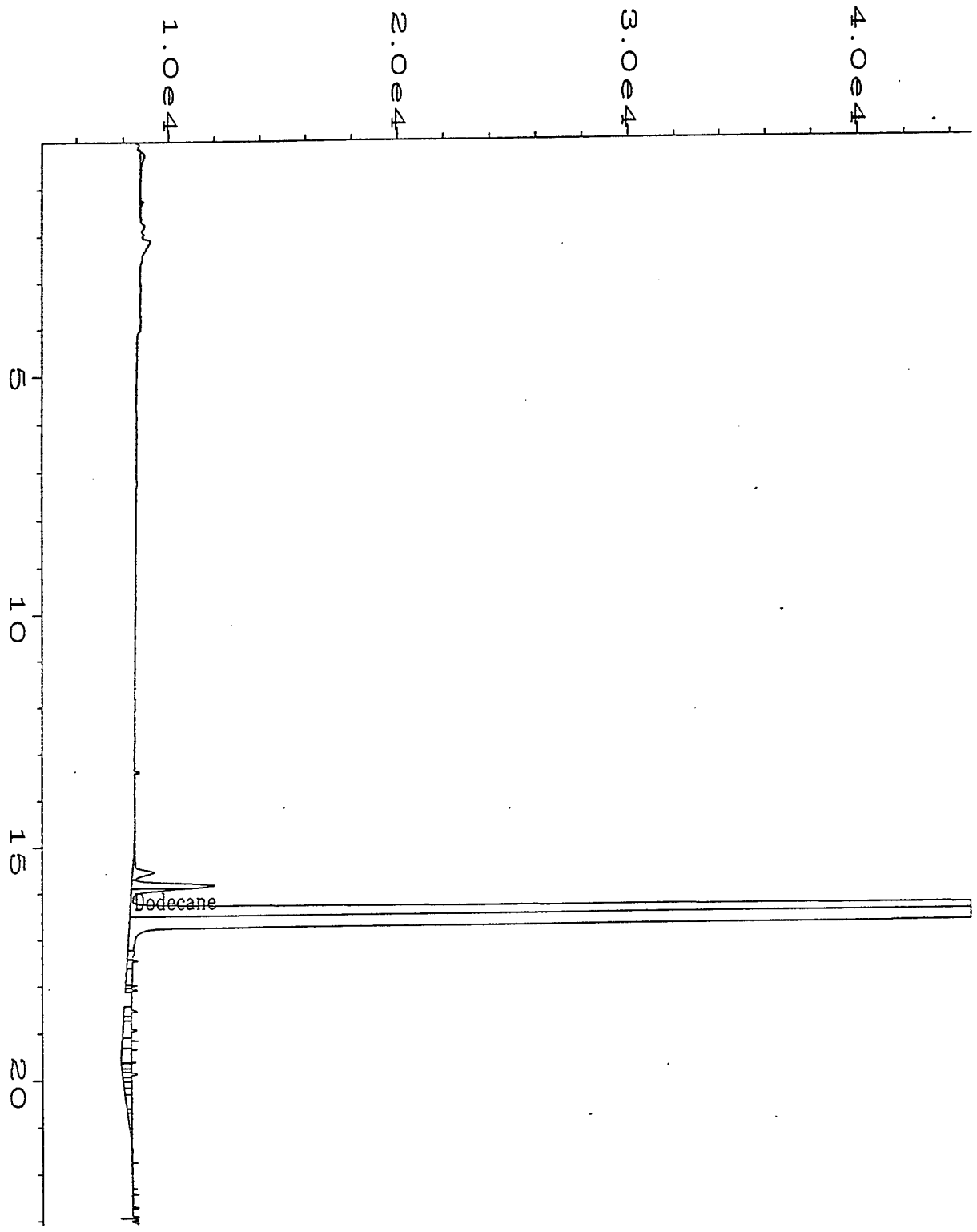
Approved

TVH1182.XLS



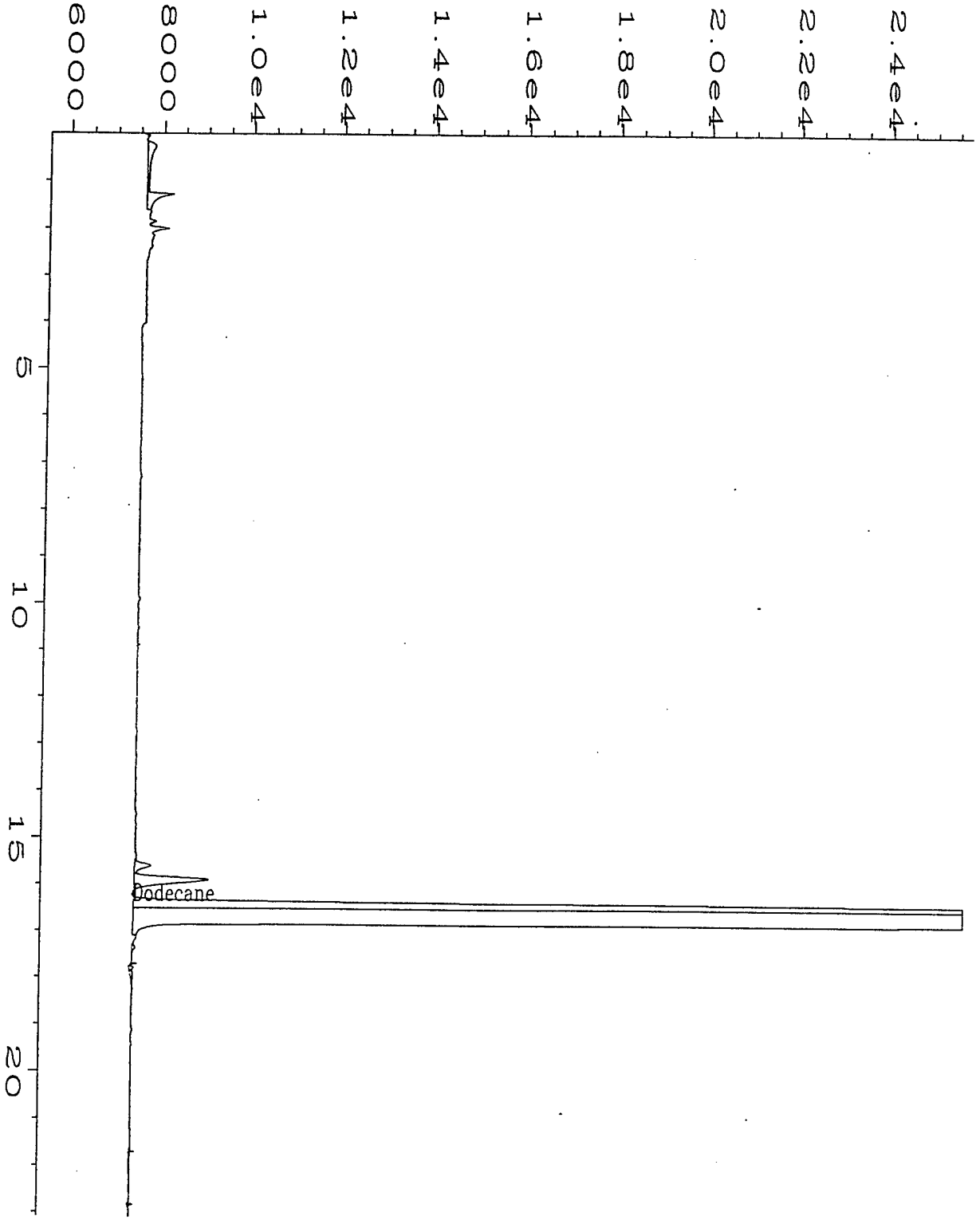
Data File Name : C:\HPCHEM\1\DATA\tvh0421\010F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : MB042195
Run Time Bar Code:
Acquired on : 21 Apr 95 02:26 PM
Report Created on: 24 Apr 95 09:25 AM
Last Recalib on : 21 APR 95 01:34 PM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.MTH
Analysis Method : TVH0421.MTH
Sample Amount : 0
ISTD Amount :

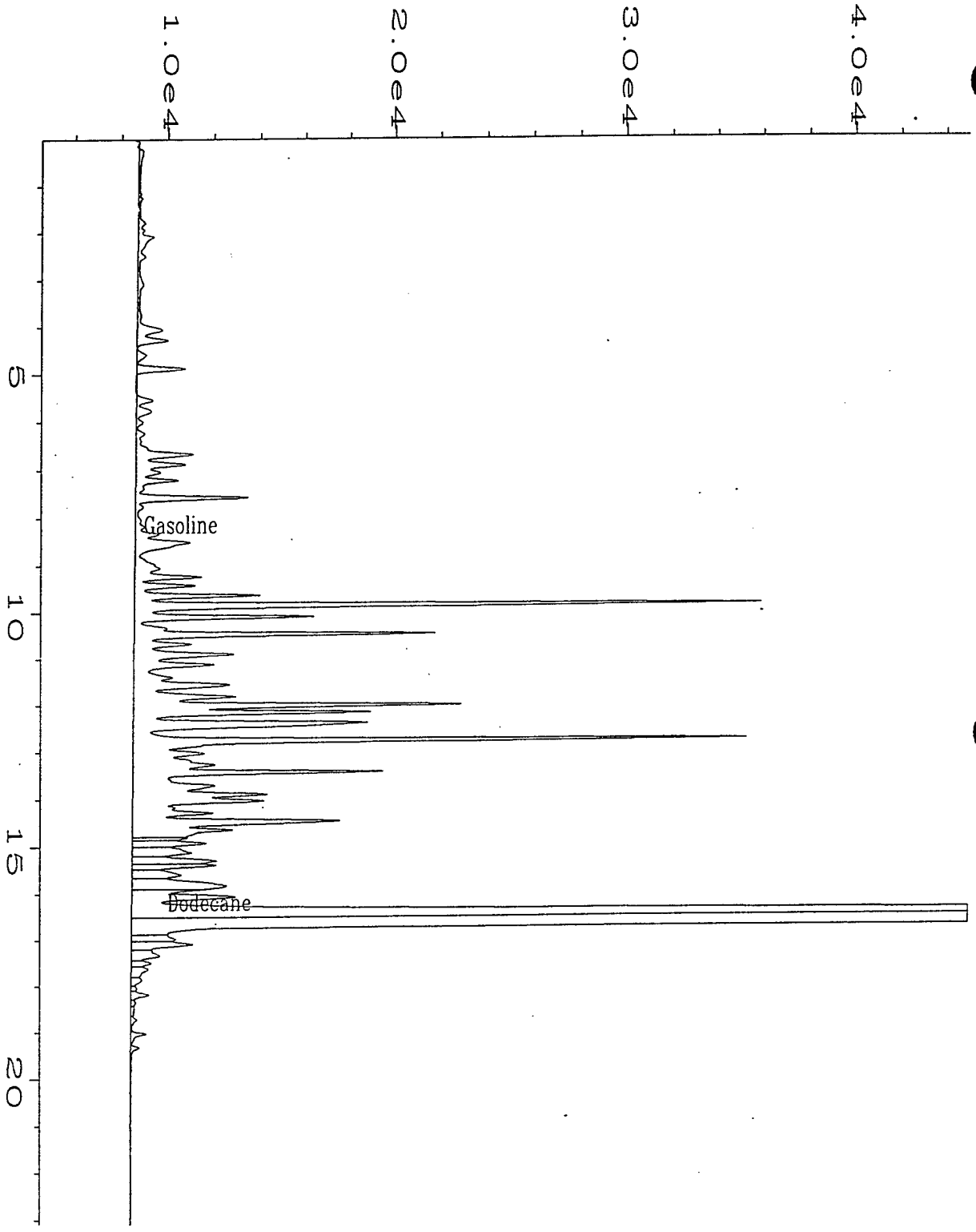


Data File Name : C:\HPCHEM\1\DATA\tvh0424\009F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : mb042495
Run Time Bar Code:
Acquired on : 24 Apr 95 08:35 PM
Report Created on: 25 Apr 95 00:26 AM
Last Recalib on : 25 APR 95 00:21 AM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BAS[illegible]
Analysis Method : TVH0424.[illegible]
Sample Amount : 0
ISTD Amount :

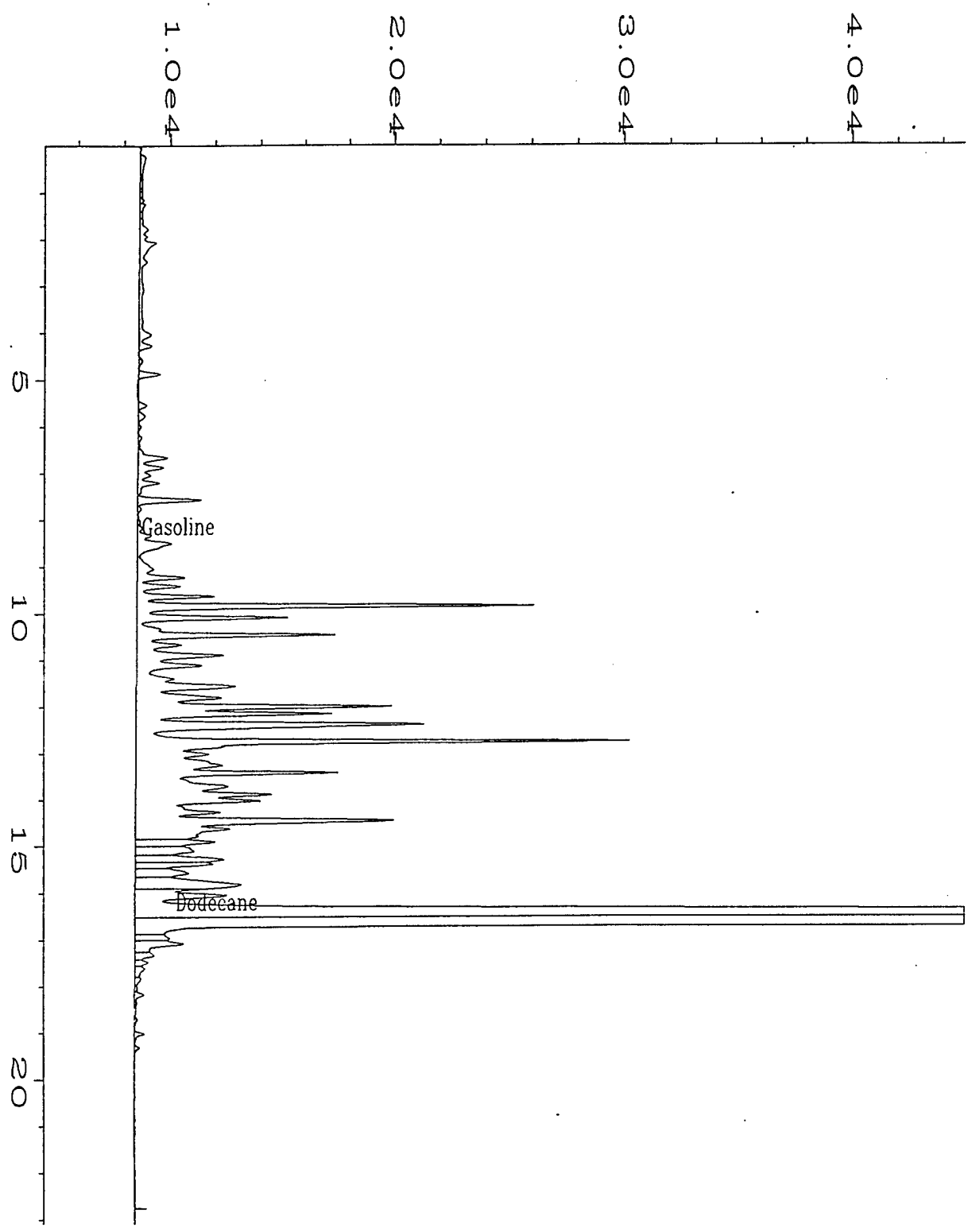


Data File Name	: C:\HPCHEM\1\DATA\tvh0421\012F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 12
Sample Name	: X05620;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 03:46 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 24 Apr 95 09:25 AM	Analysis Method	: TVH0421.MTH
Last Recalib on	: 21 APR 95 01:34 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-1 12-14 SOIL		



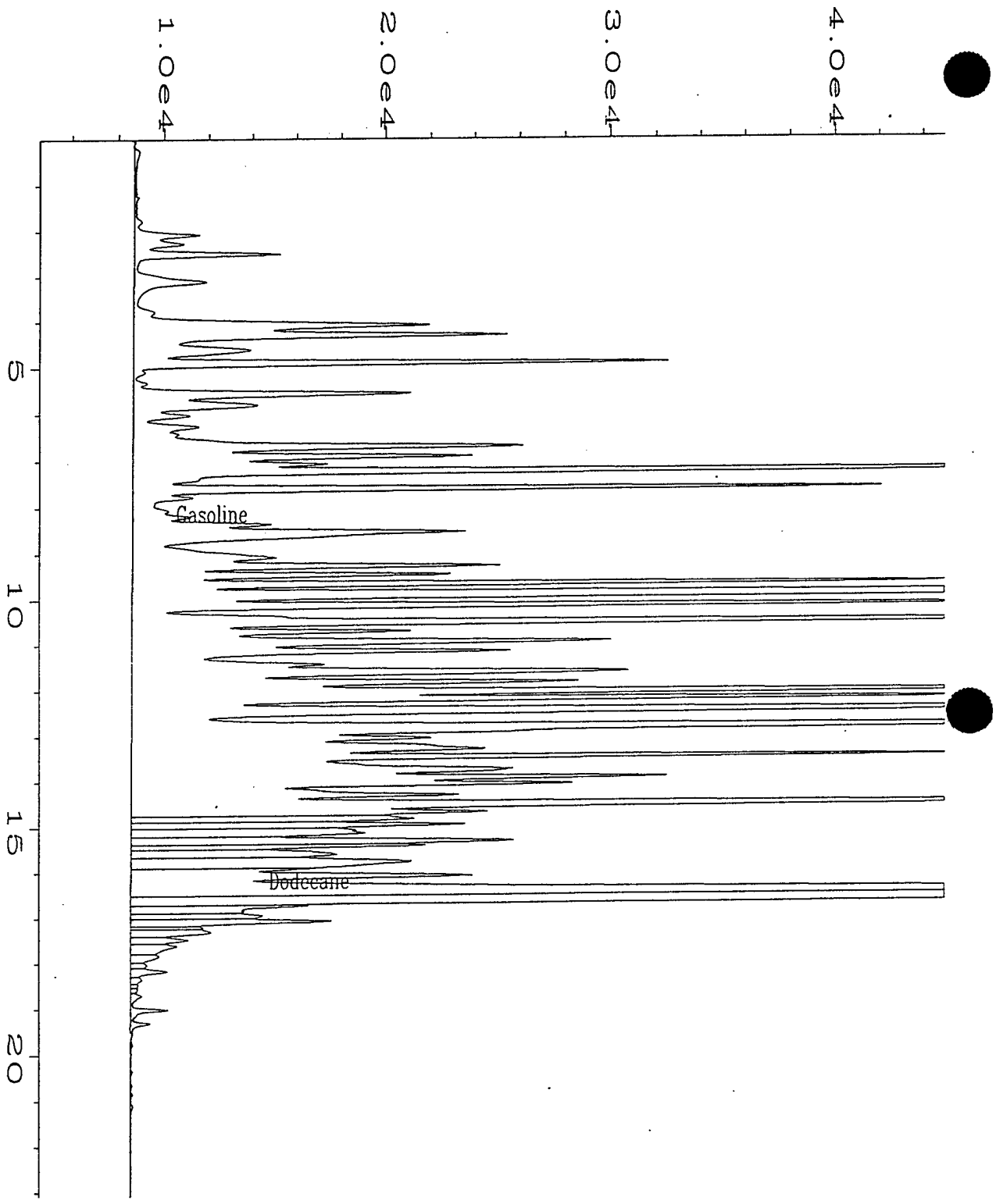
Data File Name : C:\HPCHEM\1\DATA\tvh0424\010F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X05621;50;.1
Run Time Bar Code:
Acquired on : 24 Apr 95 09:11 PM
Report Created on: 25 Apr 95 00:26 AM
Last Recalib on : 25 APR 95 00:21 AM
Multiplier : 50
Sample Info : PROJECT # 95-1182 CLIENT # MW-2 9 1/2-10 1/2 SOIL

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted]M
Analysis Method : TVH0424[redacted]T
Sample Amount : 0
ISTD Amount :



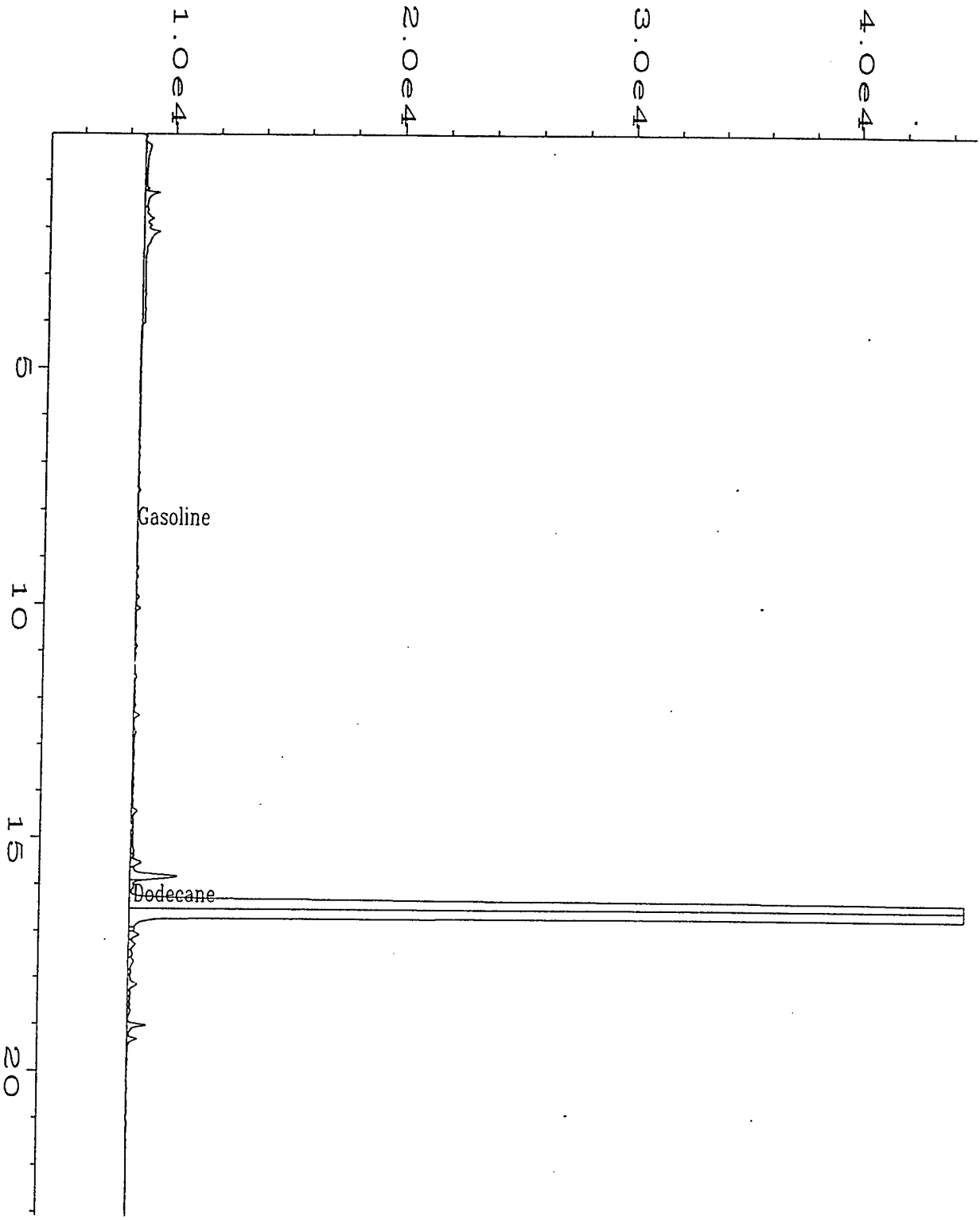
Data File Name	: C:\HPCHEM\1\DATA\tvh0424\011F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 11
Sample Name	: X05621 DUP	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 24 Apr 95 09:47 PM	Instrument Method	: TVH1BASE.MT
port Created on	: 25 Apr 95 00:26 AM	Analysis Method	: TVH0424.MTH
Last Recalib on	: 25 APR 95 00:21 AM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:

MW-2 9½-10½

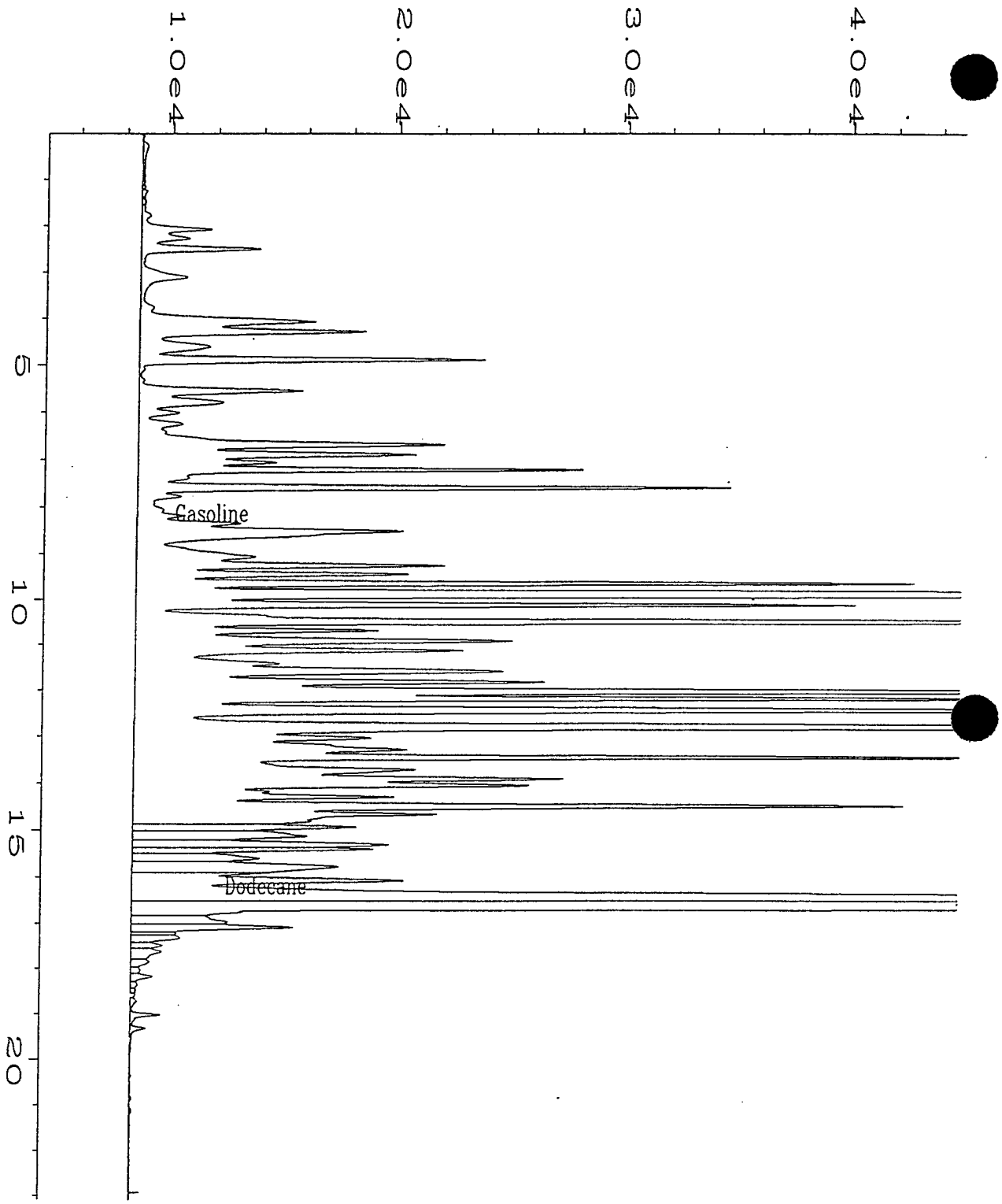


Data File Name : C:\HPCHEM\1\DATA\tvh0424\012F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X05622;50;.1
Run Time Bar Code:
Acquired on : 24 Apr 95 10:23 PM
Report Created on: 25 Apr 95 00:26 AM
Last Recalib on : 25 APR 95 00:21 AM
Multiplier : 50
Sample Info : PROJECT # 95-1182 CLIENT # MW-2 10 1/2-12 SOIL

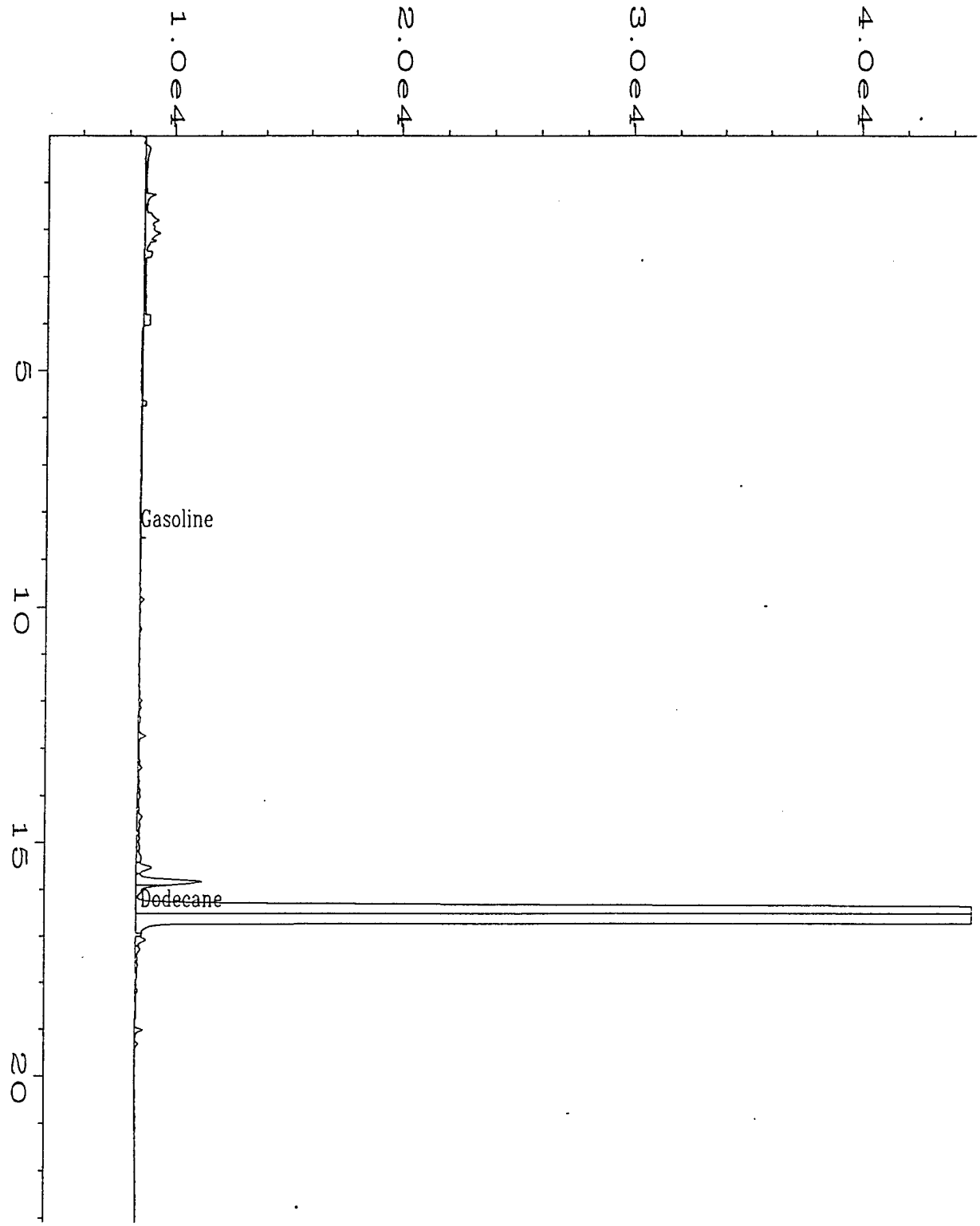
Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted]M
Analysis Method : TVH0424.MT
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\013F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 13
Sample Name	: X05623;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 24 Apr 95 10:59 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 25 Apr 95 00:26 AM	Analysis Method	: TVH0424.MTH
Last Recalib on	: 25 APR 95 00:21 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 13 1/2-15 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\014F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 14
Sample Name	: X05624;50;.1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 24 Apr 95 11:35 PM	Instrument Method	: TVH1BA[redacted].M
ort Created on	: 25 Apr 95 00:27 AM	Analysis Method	: TVH0424.MT
Last Recalib on	: 25 APR 95 00:21 AM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 12-13 1/2 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\TVH0424\015F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 15
Sample Name	: X05625;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 25 Apr 95 00:11 AM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 25 Apr 95 12:03 PM	Analysis Method	: TVH0424.MTH
Last Recalib on	: 25 APR 95 00:21 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

MW-5 13 - 14 ½

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

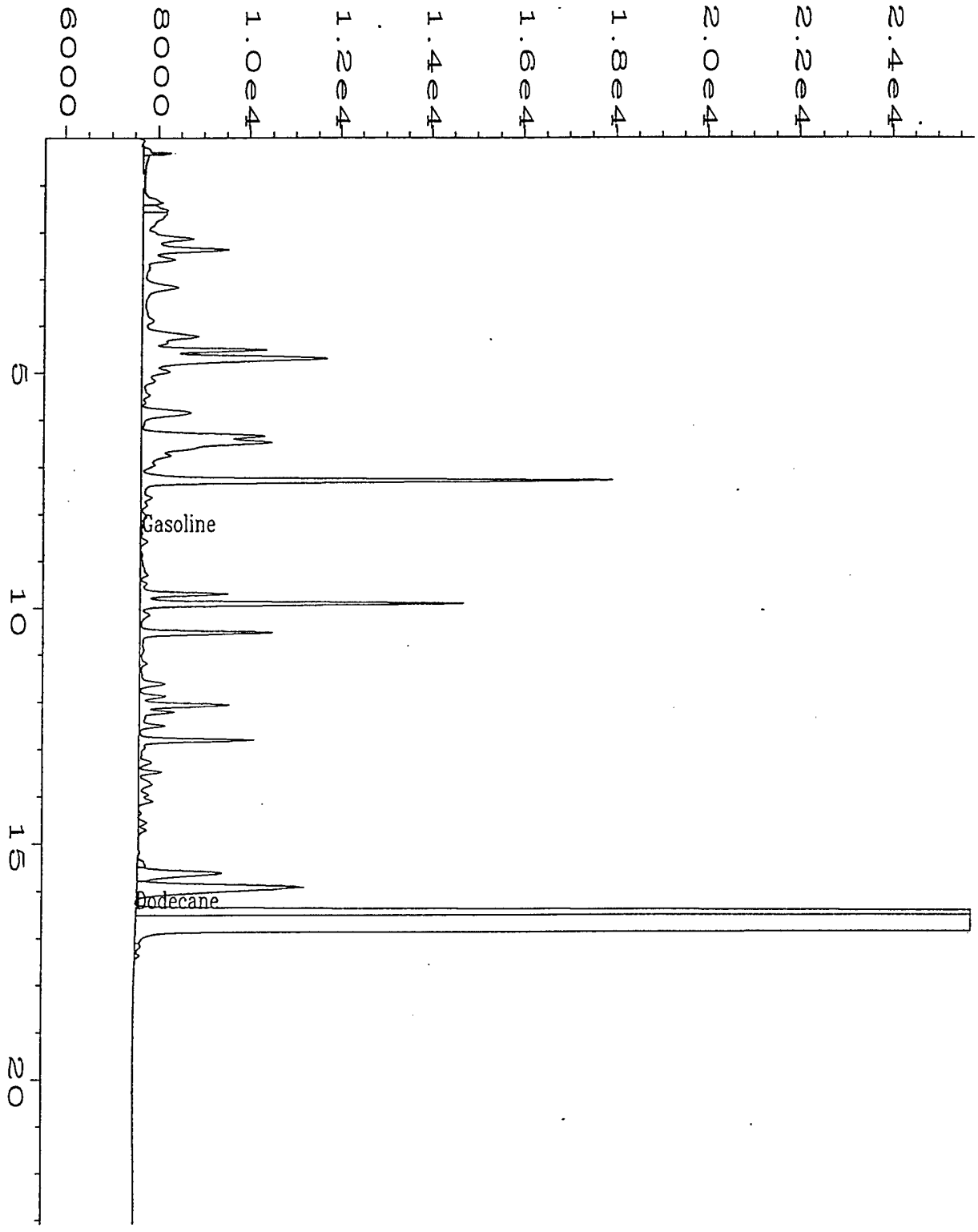
LCS Number	: LCS042195	Matrix	: SOIL
Date Prepared	: 4/21/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 4/21/95		
Sequence Number	: TVH9		

Compound Name	Theoretical Concentration mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	5.85	117%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0421\009F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 9
Sample Name	: LCS042195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 01:46 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 08 May 95 09:52 AM	Analysis Method	: TVH0421.MTH
Last Recalib on	: 24 APR 95 09:47 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

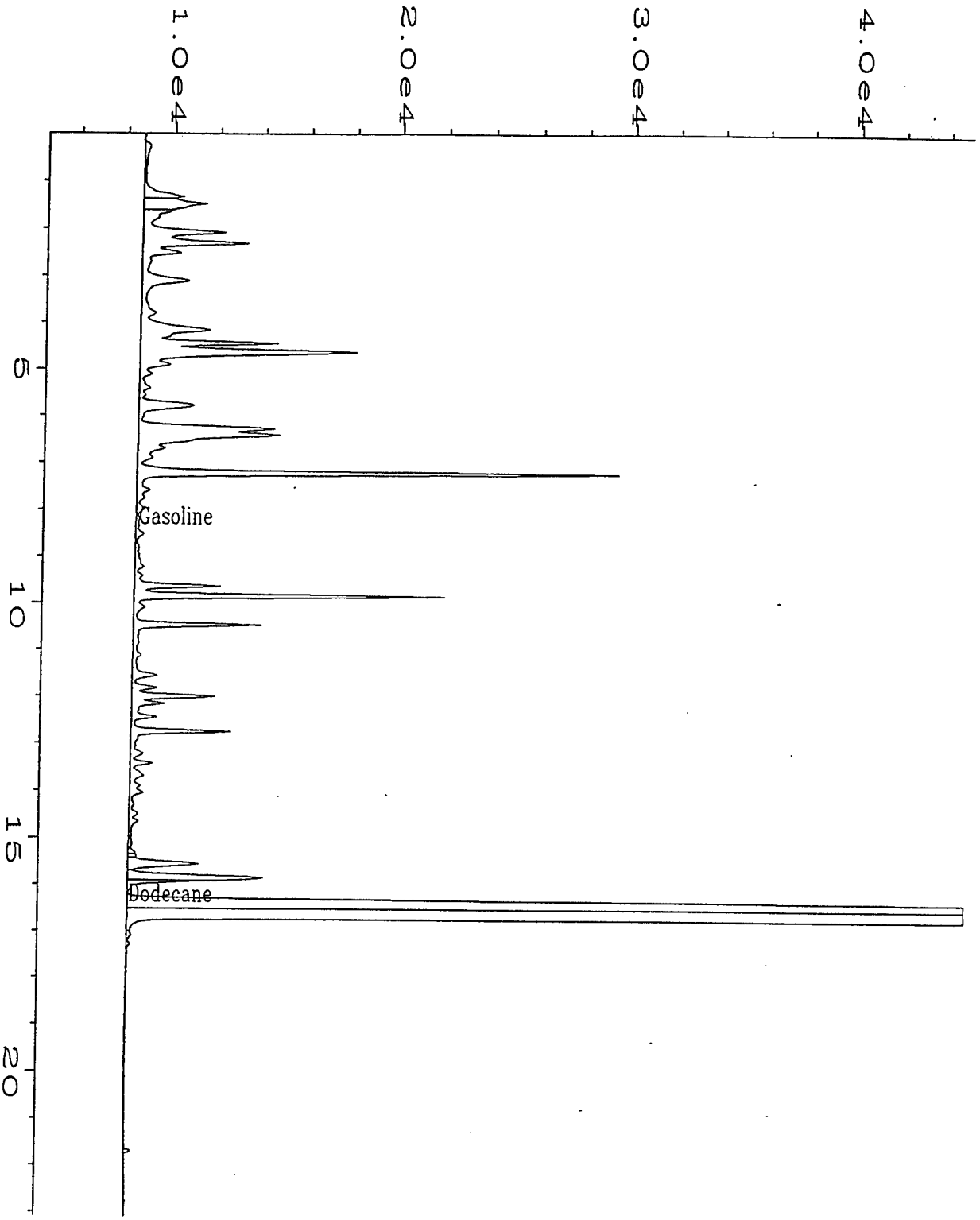
LCS Number	: LCS042495	Matrix	: SOIL
Date Prepared	: 4/24/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 4/24/95		
Sequence Number	: TVH8		

Compound Name	Theoretical Concentration mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	5.91	118%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\008F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 8
Sample Name	: lcs042495	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 24 Apr 95 07:59 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 25 Apr 95 00:25 AM	Analysis Method	: TVH0424.MTH
Last Recalib on	: 25 APR 95 00:21 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
JET FUEL

Date Sampled	: 4/10,11/95	Client Project Number	: 722450.2602/SEYMORE
Date Received	: 4/12/95	Lab Project Number	: 95-1182
Date Prepared	: 4/13/95	Matrix	: Soil
Date Analyzed	: 4/18,19/95	Method Number	: 3500/Mod. 8015

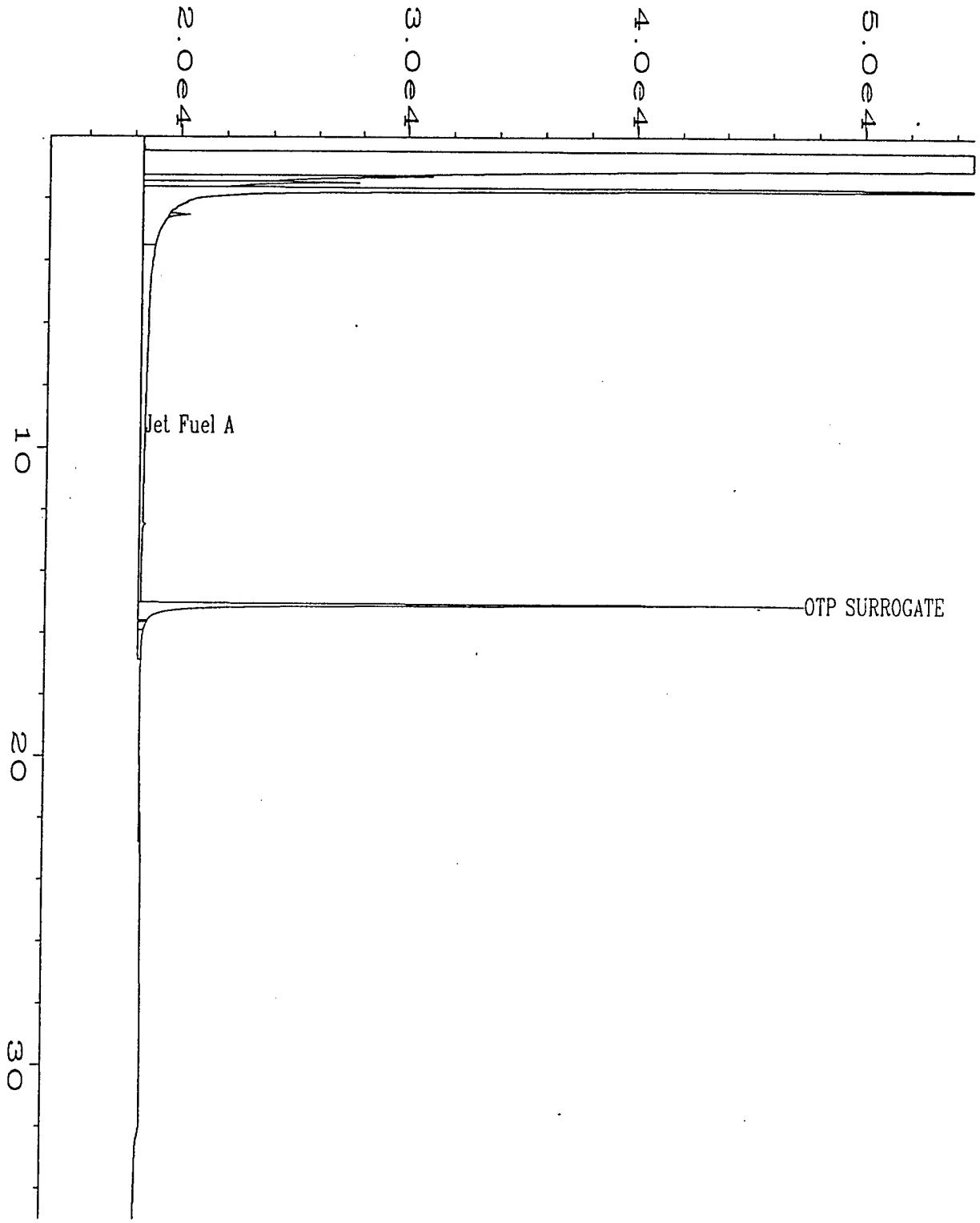
Evergreen Sample #	Client Sample #	OTP Surrogate % Recovery	TEH Jet Fuel mg/Kg	RL mg/Kg
SB041395	SOIL METHOD BLANK	92%	U	10
X05620	MW-1 12-14	82%	U	13
X05621	MW-2 9 1/2-10 1/2	*	2300	120
X05622	MW-2 10 1/2-12	*	8800	130
X05623	MW-4 13 1/2-15	86%	19	11
X05624	MW-4 12-13 1/2	*	5300	130
X05625	MW-5 13-14 1/2	87%	U	13

OTP Soil Surrogate % Recovery limits: 60% - 118%

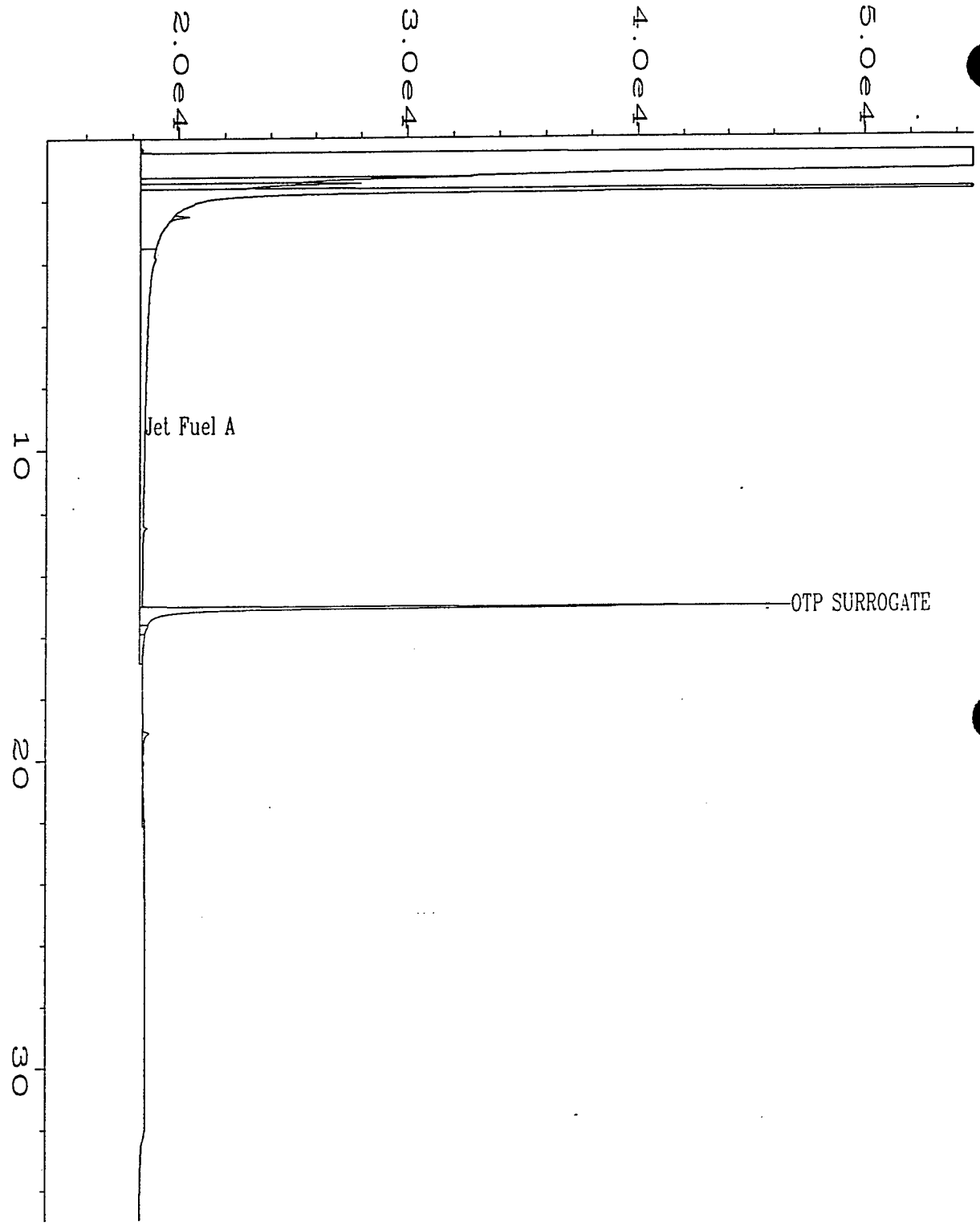
* = Diluted out.
QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
E = Extrapolated value.
RL = Reporting Limit

Analyst

Approved

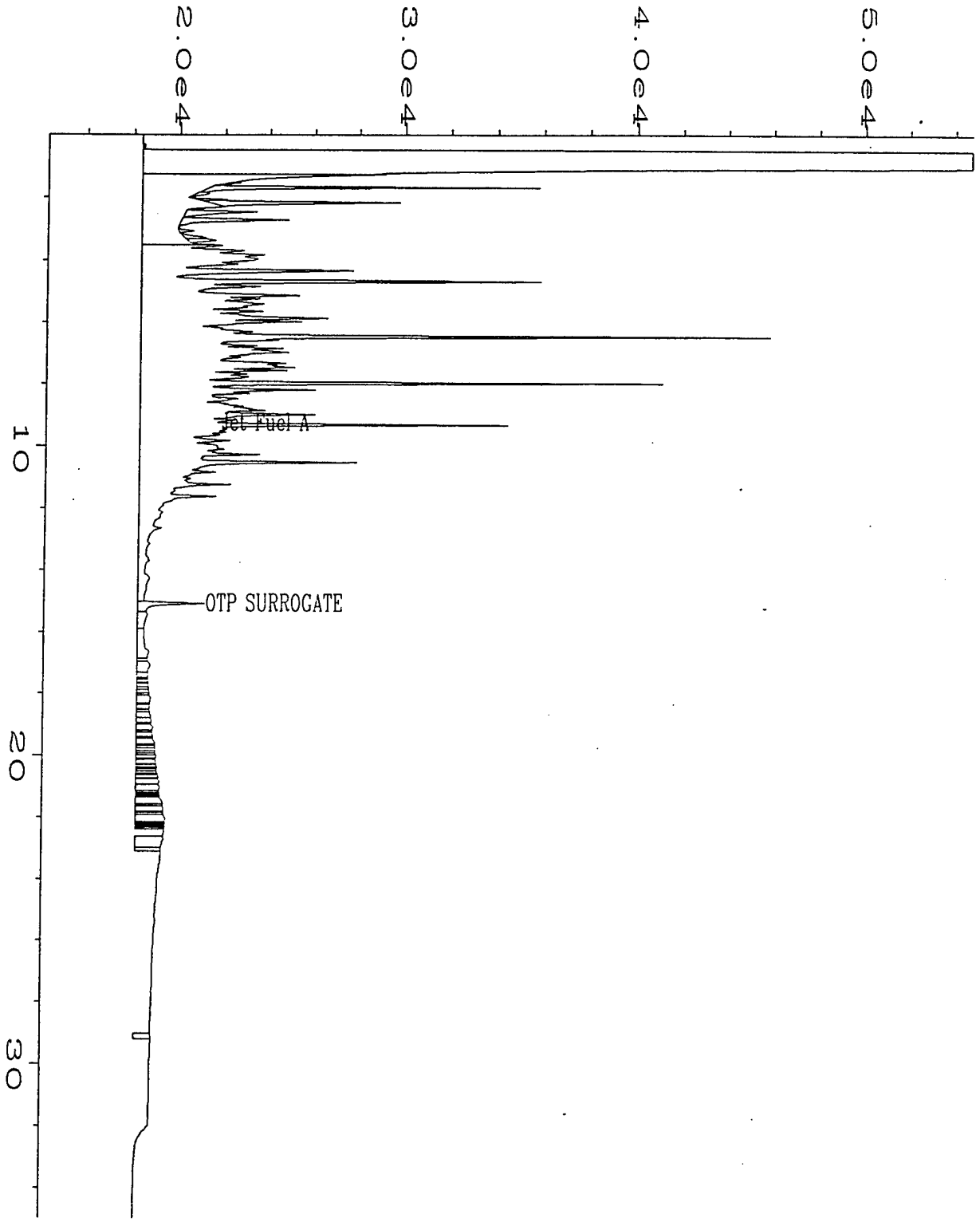


Data File Name	: C:\HPCHEM\2\DATA\JET0418\012R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 12
Sample Name	: SB041395	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 18 Apr 95 07:16 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:15 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

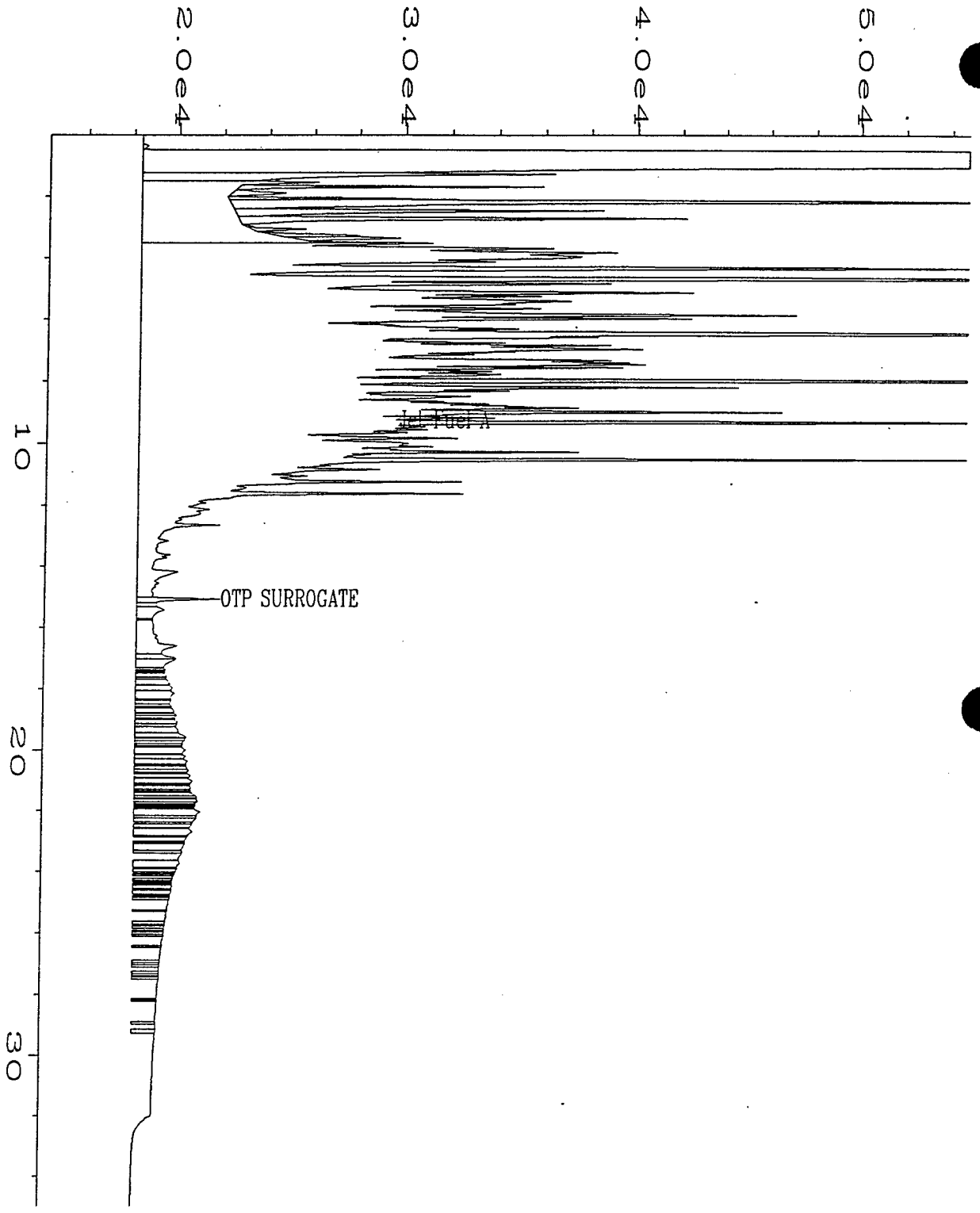


Data File Name : C:\HPCHEM\2\DATA\JET0418\013R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05620 DF=1
Run Time Bar Code:
Acquired on : 18 Apr 95 08:02 PM
Report Created on: 19 Apr 95 10:15 AM
Last Recalib on : 18 APR 95 06:54 PM
Multiplier : 1
Sample Info : PROJECT # 95-1182 CLIENT # MW-1 12-14 SOIL

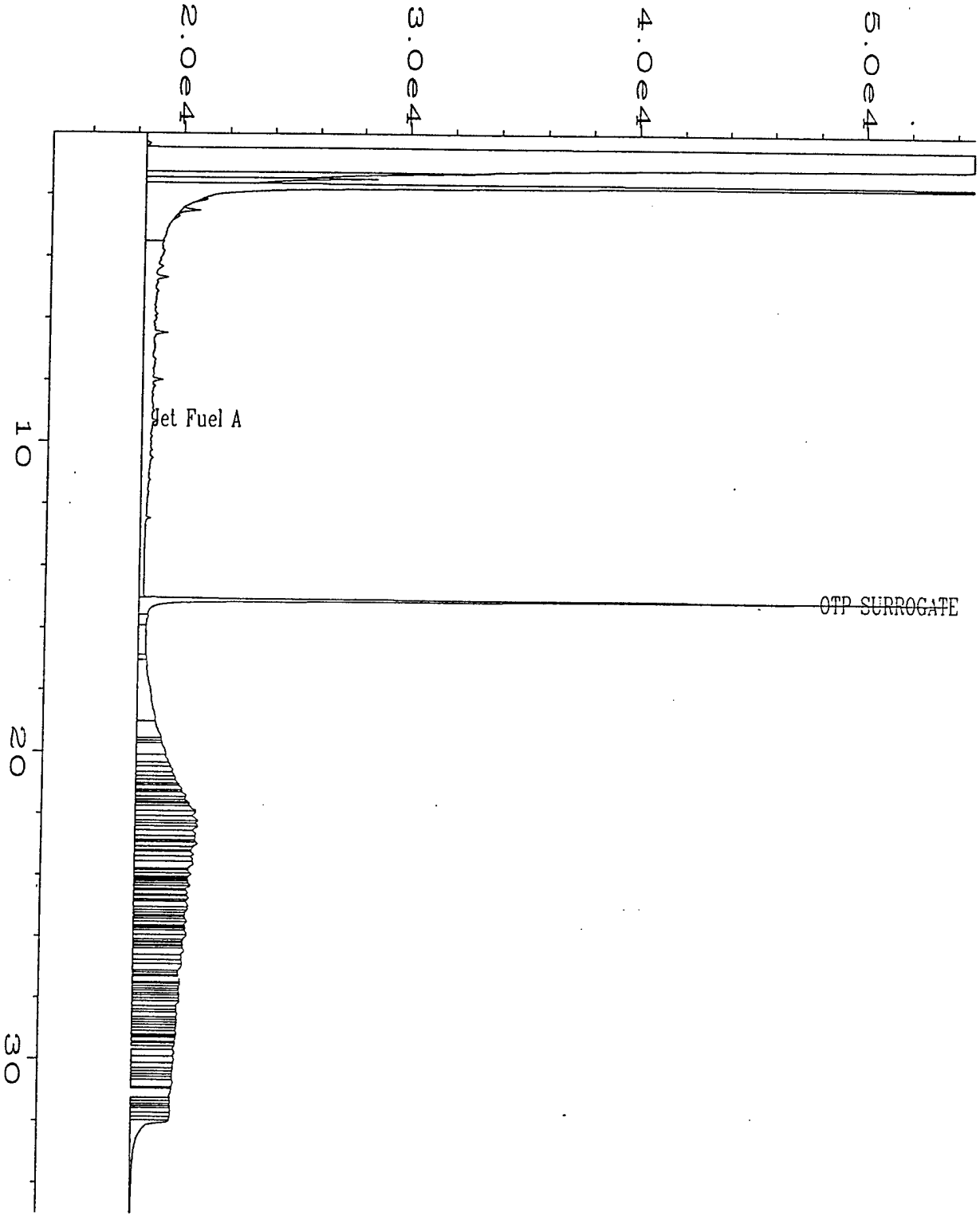
Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA[redacted]M
Analysis Method : JET0418.MT
Sample Amount : 0
ISTD Amount :



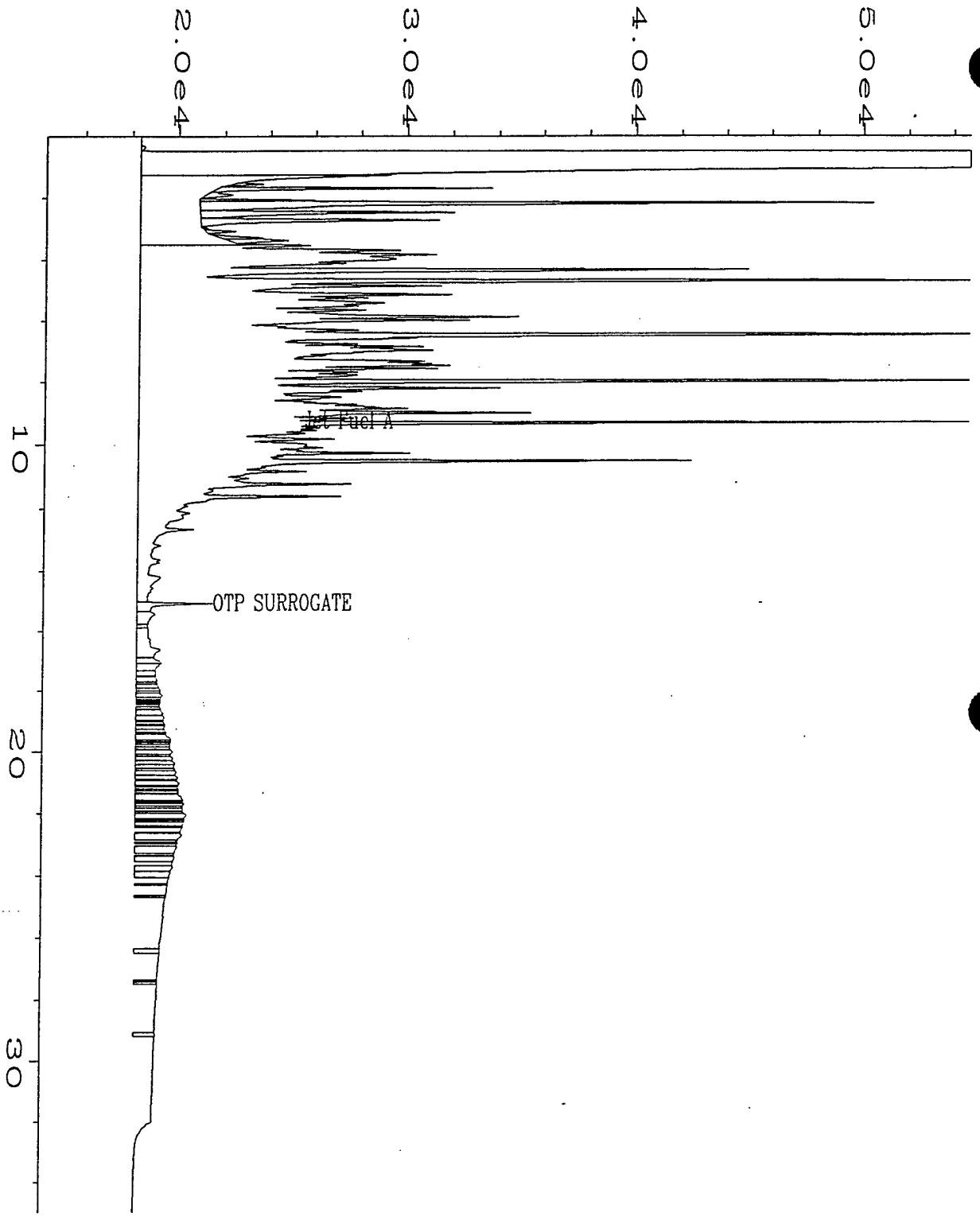
Data File Name	: C:\HPCHEM\2\DATA\JET0418\036R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 36
Sample Name	: X05621 DF=10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 02:44 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 20 Apr 95 09:24 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 10	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 9 1/2-10 1/2 SOIL		



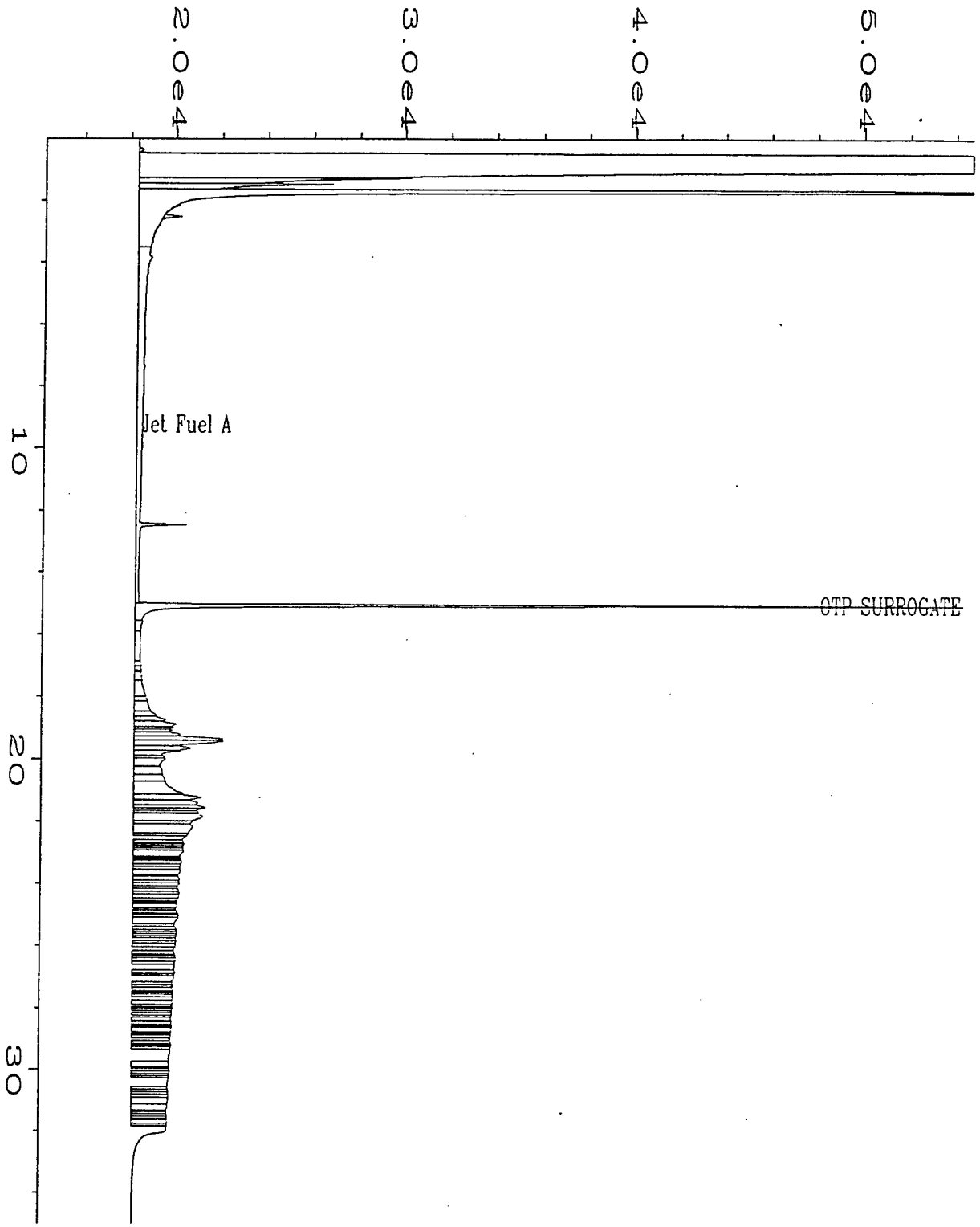
Data File Name	: C:\HPCHEM\2\DATA\JET0418\037R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 37
Sample Name	: X05622 DF=10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 03:31 PM	Instrument Method	: FID1BA[illegible]M
Report Created on	: 20 Apr 95 09:24 AM	Analysis Method	: JET0418.MT
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 10	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 10 1/2-12 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\016R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 16
Sample Name	: X05623 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 18 Apr 95 10:21 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:16 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 13 1/2-15 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\038R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 38
Sample Name	: X05624 DF=10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 04:17 PM	Instrument Method	: FID1BA[redacted]M
Report Created on	: 20 Apr 95 09:24 AM	Analysis Method	: JET0418.MT
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 10	ISTD Amount	:
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 12-13 1/2 SOIL		



Data File Name : C:\HPCHEM\2\DATA\JET0418\018R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05625 DF=1
Run Time Bar Code:
Acquired on : 18 Apr 95 11:53 PM
Report Created on: 19 Apr 95 10:16 AM
Last Recalib on : 18 APR 95 06:54 PM
Multiplier : 1
Sample Info : PROJECT # 95-1182 CLIENT # MW-5 13-14 1/2 SOIL

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BASE.MTH
Analysis Method : JET0418.MTH
Sample Amount : 0
ISTD Amount :

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NON-CLP ANALYSIS RESULTS

Date: 05/01/95
Lab Name: Huffman Labs — Client: Evergreen Analytical
Contact: Sue Zeller — Contact: Patty McClellan
Sample Matrix: soil — Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/ Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	#7
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	#7
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	#7
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	#7
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	#7
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	#7
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	tower
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	tower
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	tower
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	tower
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	tower
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	tower
		% moisture		adjusted result						
MW1(12-14)BLS	16079501	20.44 TOC	NA	0.05	0.06 %	NA	NA	NA	by calc	NA
MW1(12-14)BLS	16079501	20.44 TOC	NA	0.07	0.09 %	NA	NA	NA	by calc	
MW5(13-14.5)	16079502	22.72 TOC	NA	<0.05	0.06 %	NA	NA	NA	by calc	
MW6(16-16.5)	16079503	TOC	NA	0.31	%	NA	NA	NA	by calc	NA
MW10(10-11)	16079504	TOC	NA	0.09	%	NA	NA	NA	by calc	NA
MW11(11.5-13.5)	16079505	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA

Samples analyzed and results reported on as as received basis.
Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.
Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.
TC detection limit = 0.05%
CC detection limit = 0.02%
TOC detection limit = 0.05%

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NON-CLP ANALYSIS RESULTS
LABORATORY CONTROL STANDARD

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.39	101	%	04/27/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.34	100	%	04/27/95	COU-02	tower
LCS	BN 4056	CC	11.33	11.46	101	%	04/28/95	COU-02	tower

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	12600	12482	99	ug C	04/27/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	12120	12076	100	ug C	04/27/95	Leco CR12	#7
SPIKE	BN 4712	CC	525	529	101	ug C	04/28/95	COU-02	tower
SPIKE DUP	BN 4712	CC	737	729	99	ug C	04/28/95	COU-02	tower

PD = Prep date

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NON-CLP QA/QC ANALYSIS RESULTS
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	11.91	99	%	04/27/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.95	100	%	04/27/95	COU-02	tower
ICS	BN 4712	CC	12.00	12.04	100	%	04/28/95	COU-02	tower

Slope = NA
Intercept = NA
95% Correlation Coefficient = NA

Single point calibrations for this test.

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	11.98	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	11.94	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	12.11	101	%	04/27/95	COU-02	tower
CCS	BN 4712	CC	12.00	12.17	101	%	04/28/95	COU-02	tower

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Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

ANALYSIS : TOTAL CARBON	METHOD : HIGH TEMP COMB. - INFRARED DET.
INSTRUMENT : LECO CR12	ANALYZER # 7
BALANCE # 19	

[redacted]D. CALCIUM CARBONATE
12.00 %C (theory) BN 1712

STD. N.I.S.T. BUFFALO RIVER SEDIMENT (BRS)
3.348 %C (theory) BN 4851

SAMPLE #	SAMPLE WT G			% CARBON PRE-CALIB	% CARBON POST-CALIB		QC	% REC.
[redacted]								
$CaCO_3$	.1170			11.81	11.91		ICS	99.3
[redacted]								
$CaCO_3$	.1160	$CaCO_3$	.1000	11.84 (98.6)	11.98		CCS	
MB	1				.005			
[redacted]								
IB	1				.005			
BRS	.2520				3.388		LCS	101.2
1607-01	.3740		mix of 1607		.050	Trace Qa amount		dup
1607-01	.3256				.067		Qc	14.5
1607-01	.3340	$CaCO_3$ Spike .1050			(3.797)			
1607-01	.3080	$CaCO_3$ Spike .1011			(3.981)			
1607-02	.5030				.036			
1607-04	.3580				.088			
1607-03	.5400				.311			
1607-05	.3410				.036			
$CaCO_3$	.1020				11.94		CCS	99.5

[redacted]T. Anderson | DATE 4-27-95 | REVIEWED JS. | DATE 4/28/95 | PAGE 1 OF 2

7/27/93

HUFFMAN LABORATORIES, INC.
Quality Analytical Services Since 1936
4630 Indiana Street · Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	3
BALANCE #	10		

CALCIUM CARBONATE (STD # 333) CaCO3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na2CO3	BOTTLE # 2730	%C THEORY = 11.33

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS µ GRAMS	LESS BLANK 8	% CARBON AS CARBONATE CARBON	QC	% RECOVERY
BL					6.8			IB	
BL					8.6			MB	
[redacted]									
BL					8.5			MB	
Na_2CO_3	0.850016	0.856541	0.006525		~~738.6~~ 748.0	740.0	11.34	ICS	100.09
$CaCO_3$	0.863424	0.869667	0.005243		633.6	625.6	11.95	LCSR	99.6
[redacted]									
160701	0.941366	1.149121	0.207755	NH	8.0	0	0		0
160701	0.898693	1.278806	0.380113	NH 3 Spots Acid Scrubbed Clock	6.0 for 7 min 11.1 / 5 min 7	3.1	0.0000051		~0
~~160702~~	~~0.895199~~			NH Dropped Boat					
160702	0.912632	1.070765	0.157933	NH	8.9	.9	0.0000056		~0
160703	0.886964	1.007451	0.120487	NH	7.9	0	0		~0
160704	0.876686	1.114147	0.237461	NH	9.1	1.1	0.0000046		~0
160705	0.838101	0.963910	0.125809	NH	7.8	0	0		~0
$CaCO_3$	0.847686	0.853324	0.005638		690.9	682.9	12.11	CCS	100.9
[redacted]									

TST	DATE 4-27-95	REVIEWED SL	DATE 4/28/95	PAGE 1 OF 1

REVISED 1/30/97

HUFFMAN
LABORATORIES, INC.
Quality Analytical Services Since 1936
[redacted] Indiana Street • Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	3
BALANCE #	10		

[redacted]IUM CARBONATE [redacted]D # 3331 CaCO3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na2CO3	BOTTLE # 2730	%C THEORY = 11.33 %

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS µGRAMS	LESS BLANK 7	% CARBON AS CARBONATE CARBON	QC	% RECOVERY	
[redacted]					13.7					
[redacted]										
[redacted]										
[redacted]										
bl					8.1	~~1.1~~		IB		
BL					7.2	~~0.2~~		MB		
[redacted]							11.77			
$CaCO_3$	0.885022	0.890756	0.005734		697.4	690.4	12.04	ICS	100.33	
[redacted]CO_3	0.887394	0.894370	0.006976		806.9	799.9	11.46	LCS	101.2	
160701	0.868837	1.037549	0.168712		536.0	529.0			~~100.7~~ %	Spike Recov.
Spike $CaCO_3$	0.881538	0.885916	0.004378							
160701	0.912973	1.234770	0.321797		736.0	729.0		DUP	98.9	Spike Recov.
Spike $CaCO_3$	0.901204	0.907313	0.006139							
$CaCO_3$	0.906881	0.910958	0.004077		503.5	496.5	12.17	CCS	101.4	
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										

ANALYST	DATE	REVIEWED	DATE	PAGE
[redacted]	4-28-95	[redacted]	6/1/95	1 OF 2

REVISED 1/30/91

Evergreen Analytical Sample Log Sheet

Project # 95-1217

Date(s) Sampled: 04/12,13/95 COC

Date Due: 4/19-UST,4/28-OTHERS

Date Received: 04/14/95 1130

Holding Time(s): 04/26,27-UST

Client Project I.D. 722450.26020/SEYMORE JOHNSON AFB **Rush** STANDARD

Client: Parsons Engineering Science, Inc.

Address: 1700 BROADWAY ,SUITE 900
DENVER, CO. 80290

Contact: TODD WIEDEMEIER

Client P.O. _____

Phone #831-8100 **Fax** 831-8208

Shipping Charges $5.00

E.A. Cooler # CLIENT

Airbill # UPS

Custody Seal Intact? N/A
Cooler ___ Bottles __
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions *SAMPLES NEED BTEX SPLIT. BTEX-TMB, TEMB CHLOROBENZENES.

Lab ID #	Client ID#		Analysis	Mtx	Btl	Loc
X05753	MW-6 15-16'	*	BTEX,TVH,TEH,ALK.(%MOISTURE)	S	TUBE	A7
X05757	MW-10 10-11'	*	TOC,BTEX,TVH,TEH,ALK.(%MOISTURE)	S	TUBE	A7/OUT
X05758	MW-10 11-12' MS/MSD		BTEX,(%MOISTURE)	S	TUBE	A7
X05754	MW-6 16-16.5		TOC,(%MOISTURE)	S	TUBE	A7/OUT
X05755	MW-8 11-12'	*	BTEX,TVH,TEH,(%MOISTURE)	S	TUBE	A7
X05756	MW-9 15-16'	*	BTEX,TVH,TEH,(%MOISTURE)	S	TUBE	A7
X05759A/B	MW-11 11.5-13.5		TOC,BTEX,TVH,(%MOISTURE)	S	2WM	#2/OUT
X05760A/B	SS-1 11.5-13.5		BTEX	S	2WM	#2
X05760E/F	SS-1 11.5-13.5 DUP		BTEX	S	2WM	#2
X05762A/B	SS-1 16'-18'		BTEX	S	2WM	#2
X05763A/B	SS-2 11.5-13.5		BTEX	S	2WM	#2
X05764A/B	SS-3 9-11		BTEX	S	2WM	#2
X05764E/F	SS-3 9-11 DUP		BTEX	S	2WM	#2
X05760C	SS-1 11.5-13.5		TVH	S	2WM	#2
X05760G	SS-1 11.5-13.5 DUP		TVH	S	2WM	#2
X05762C	SS-1 16'-18'		TVH	S	2WM	#2

R=Sample to be returned

Route GC/MS __ GC 3 Metals __ Wet Chem 1 SxPrep 1 Acctg 1

SxRec C QA/QC C Sales C File Orig

Custodian/Date: 4/18/95
4/18/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05763C	SS-2 11.5-13.5	TVH	S	2WM	#2
X05764C	SS-3 9-11	TVH	S	2WM	#2
X05764G	SS-3 9-11 DUP	TVH	S	2WM	#2
X05760D	SS-1 11.5-13.5	TEH,(%MOISTURE)	S	2WM	A7
X05760H	SS-1 11.5-13.5 DUP	TEH,(%MOISTURE)	S	2WM	A7
X05762D	SS-1 16'-18'	TEH,(%MOISTURE)	S	2WM	A7
X05763D	SS-2 11.5-13.5	TEH,(%MOISTURE)	S	2WM	A7
X05764D	SS-3 9-11	TEH,(%MOISTURE)	S	2WM	A7
X05764H	SS-3 9-11 DUP	TEH,(%MOISTURE)	S	2WM	A7
X05759	MW-11 11 1/2-13 1/2	TEH,(%MOISTURE)	S	2WM	A7

Project # 95-1217

R=Sample to be returned

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX # (919) 677-0118 FAX RESULTS Y / N

CLIENT CONTACT (print)
PROJECT I.D. 722450.2602
EAL. QUOTE # P.O.#
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

Sampler Name:
(signature)
(print) Thomas C. Richardson

Evergreen Analytical Cooler No.
Cooler Received

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	EAL Sample No.
SS-2 11½-13½	4/13/95	1455	4		X									X		X	X			X057463
SS-3 9-11	4/13/95	1615	4		X									X		X	X			64
														AS		CD				
SS-3 9-11 Dup	4/13/95	1605	4											EF		GH				64
HT:																				
DD:																				

EAL use only
Do not write in shaded area

EAL Project # 127
Custodian

Location 2,47
Container Size 2wm tube

Instructions:

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	4/13/95		4/14/95				

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

Page 1 of 2

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd. Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX (919) 677-0119 FAX RESULTS Y / N

CLIENT CONTACT (print)
PROJECT I.D. 722450.26020
EAL. QUOTE # P.O.#
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

Sampler Name:
(signature)
(print) Thomas C. Richardson

Evergreen Analytical Cooler No.
Cooler Received

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	TOC	EAL Sample No.
MW-6 15-16'	4/12/95	0745	1		X								X		X	X			X			X05753
MW-6 16-16½'	4/12/95	0800	1		X															X		54
MW-8 11-12'	4/12/95	1120	1		X								X		X	X						55
MW-9 15-16'	4/12/95	1420	1		X								X		X	X						56
MW-10 10-11'	4/12/95	1545	1		X								X		X	X			X	X		57
MW-10 11-12'	4/12/95	1600	1		X								X							X		58
MW-11 11½-13½	4/13/95	0900	4		X								X		X	X				X		59
SS-1 11½-13½	4/13/95	1000	4		X								X		X	X						60
SS-1 duplicate 11½-13½	4/13/95	1000	4		X								X		X	X						60
SS-1 16'-18'	4/13/95	1140	4		X								X		C	D						62
HT:																					Location	2, A7
DD:																					Container Size	2wm tube

Instructions: MW-10 11-12' BTEX MS/MSD

Relinquished by: (Signature) Date/Time

Date & Time Rec'd: 4/14/95 1130 Shipped Via: UPS
(Airbill # if applicable)

Client : Parsons

Client Project ID(s): 722450.26020

EAL Project #(s): 95-1217 EAL Cooler(s): Y (N)

Cooler#	Client								
Ice packs	(Y)	N	Y	N	Y	N	Y	N	Y	N
Temperature °C	4°								

	Y	N	N/A
1. Custody seal(s) present:		✓	
Seals on cooler intact (taped)			✓
Seals on bottle intact			✓
2. Chain of Custody present:	✓		
3. Containers broken or leaking: (Comment on COC if Y)		✓	
4. Containers labeled:	✓		
5. COC agrees w/ bottles received: (Comment on COC if N)	✓		
6. COC agrees w/ labels: (Comment on COC if N)	✓		
7. Headspace in VOA vials-waters only (comment on COC if Y)			✓
8. VOA samples preserved:			✓
9. pH measured on metals, cyanide or phenolics*:			✓
List discrepancies			
*Non-EAL provided containers only, water samples only.			
10. Metal samples present:			✓
Total _____ , Dissolved _____			
D or PD to be filtered:			
T,TR,D,PD to be Preserved:			
11. Short holding times:		✓	
Specify parameters			
12. Multi-phase sample(s) present:		✓	
13. COC signed w/ date/time:	✓		

Comments: Chain of custody and labels on sample tubes do not agree. Samples in tubes are not homogeneous. pm 4/14/95

(Additional comments on back)

Custodian Signature/Date: Lee Carlile 4/14/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042095	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/20/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/20/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1042009

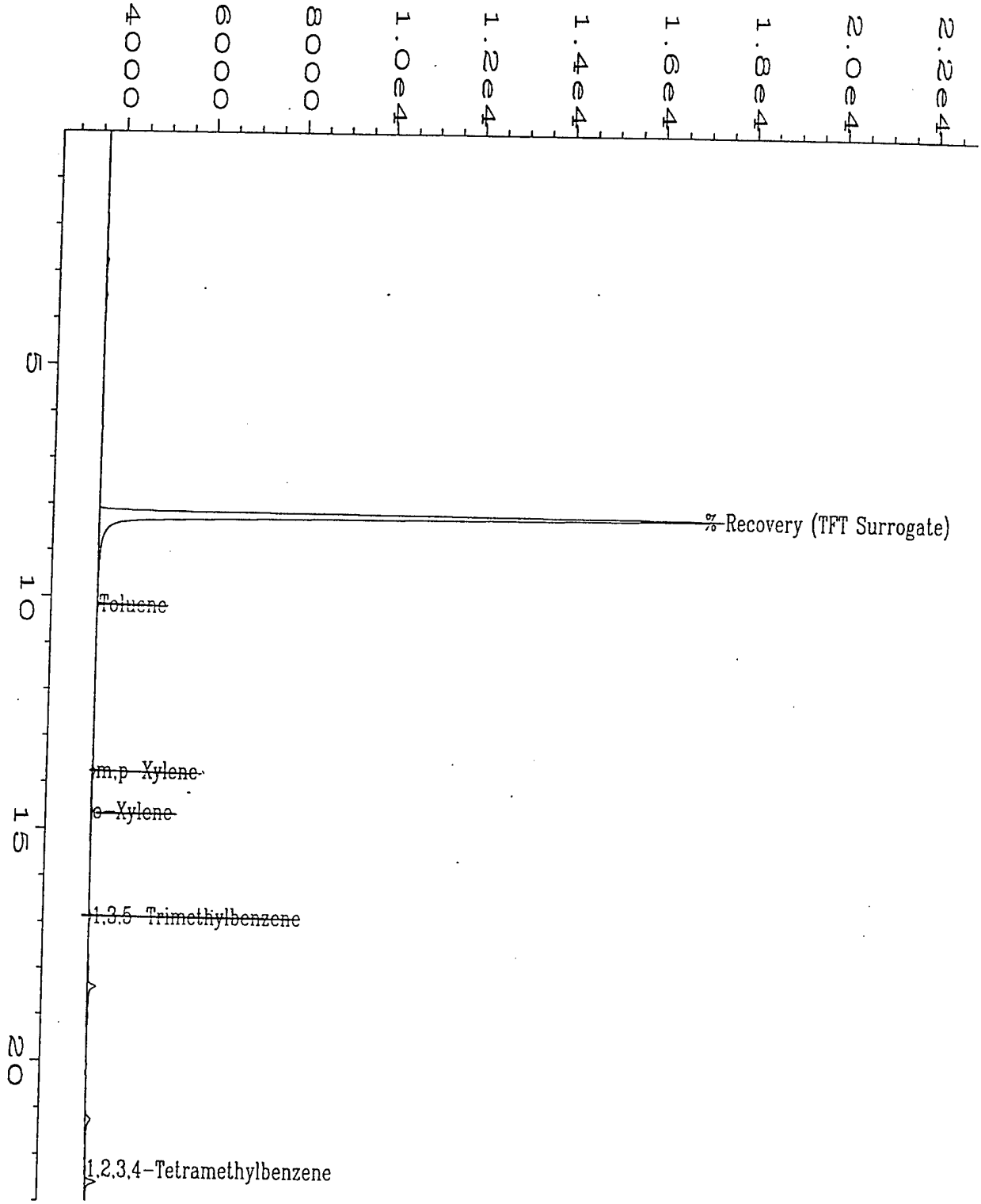
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



a File Name : C:\HPCHEM\1\DATA\BX10420\009F0701.D
rator : SW Tyson
trument : BTEX1
pl Name : MB042095
Bar Code:
uired on : 20 Apr 95 02:35 PM
ort Created on: 21 Apr 95 12:38 PM
t Recalib on : 21 APR 95 12:15 PM
tiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042295	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/22/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/22/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042211

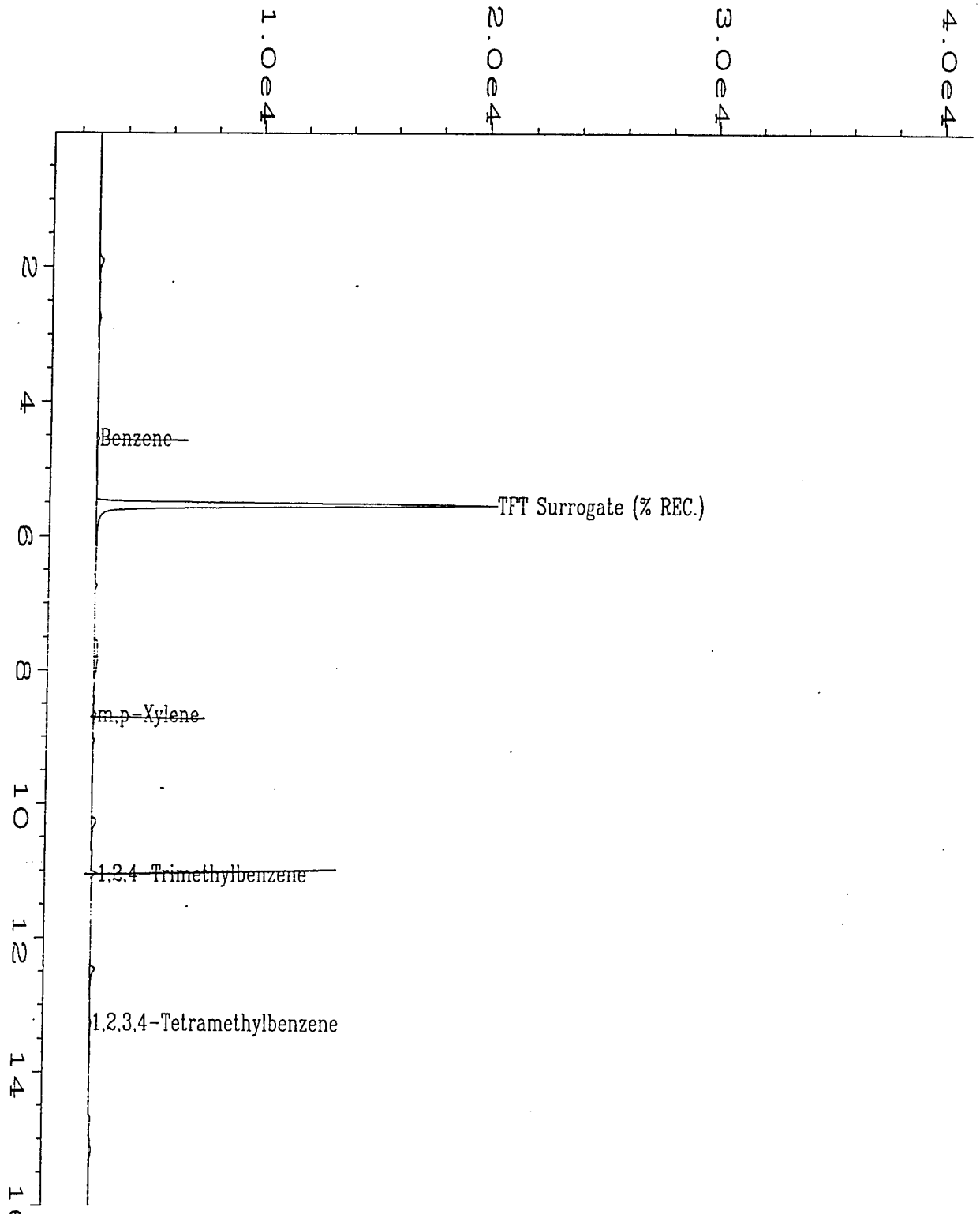
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.4		0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
R. Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



ata File Name	: C:\HPCHEM\2\DATA\BX20422\011R1001.D		
perator	: T.Lockwood	Page Number	: 1
nstrument	: BTEX2	Vial Number	: 11
a[redacted]le Name	: MB042295	Injection Number	: 1
u[redacted] me Bar Code:		Sequence Line	: 10
cquired on	: 22 Apr 95 03:54 PM	Instrument Method	: BX20422.MTH
eport Created on	: 24 Apr 95 06:40 PM	Analysis Method	: BX20422.MTH
ast Recalib on	: 24 APR 95 06:19 PM	Sample Amount	: 0
ultiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042395	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/23/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/23/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042310

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4		0.4
1,3,5-Trimethylbenzene	108-67-8	0.5		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.8		0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4

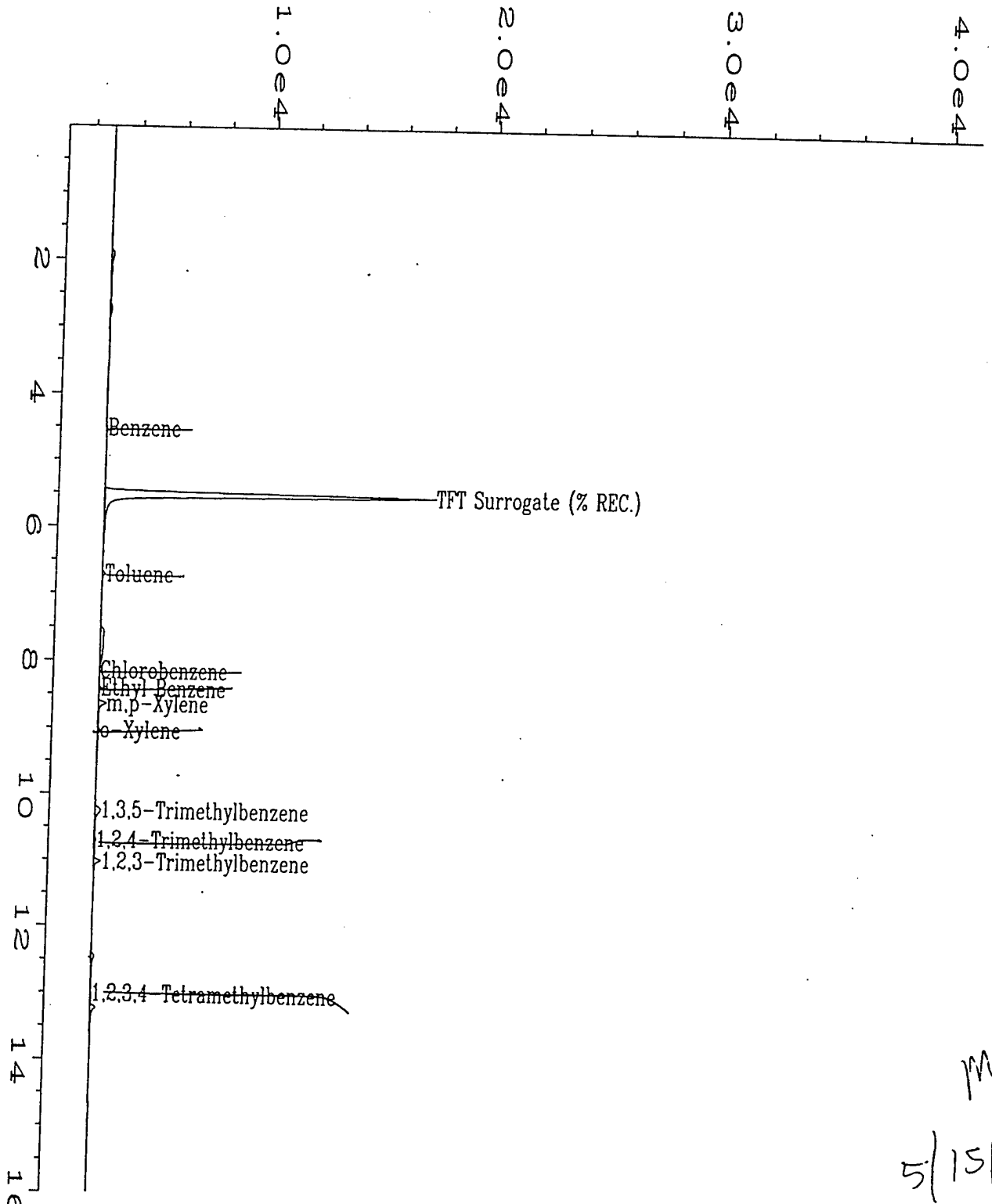
Surrogate Recovery (α,α,α-Trifluorotoluene):	96%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved



user modified

5/15/95

ta File Name : D:\2\DATA\BX20423\010R0901.D
erator : T.Lockwood
strument : BTEX2
mp Name : MB042395
l Time Bar Code:
quired on : 23 Apr 95 02:14 PM
port Created on: 25 Apr 95 04:32 PM
st Recalib on : 25 Apr 95 04:27 PM
tiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MEB042395	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/23/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/23/95	Dilution Factor	: 125.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water/MeOH
		Lab File No.	: BX2042311

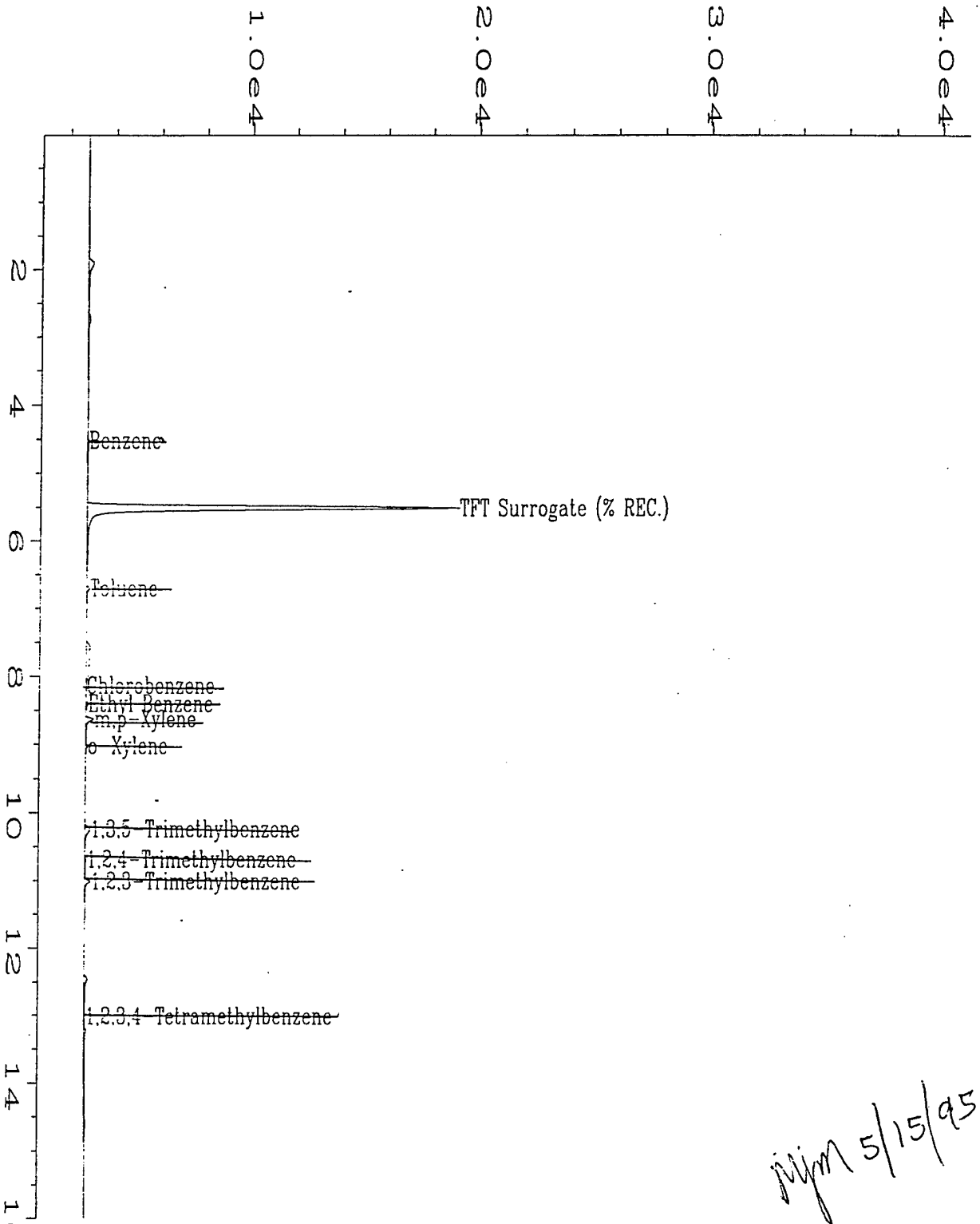
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	500
Toluene	108-88-3		U	500
Chlorobenzene	108-90-7		U	500
Ethyl Benzene	100-41-4		U	500
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	500
1,3,5-Trimethylbenzene	108-67-8		U	500
1,2,4-Trimethylbenzene	95-63-6		U	500
1,2,3-Trimethylbenzene	526-73-8		U	500
1,2,3,4-Tetramethylbenzene	488-23-3		U	500
Surrogate Recovery (α,α,α-Trifluorotoluene):		105%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



jvjm 5/15/95

ata File Name	: C:\HPCHEM\2\DATA\BX20423\011R0901.D		
perator	: T.Lockwood	Page Number	: 1
nstrument	: BTEX2	Vial Number	: 11
a[illegible]e Name	: MEB042395	Injection Number	: 1
u[illegible].me Bar Code:		Sequence Line	: 9
cquired on	: 23 Apr 95 02:50 PM	Instrument Method	: BX20423.MTH
eport Created on	: 25 Apr 95 04:48 PM	Analysis Method	: BX20423.MTH
ast Recalib on	: 25 APR 95 04:27 PM	Sample Amount	: 0
ultiplier	: 125	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042595	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/25/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/25/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042511

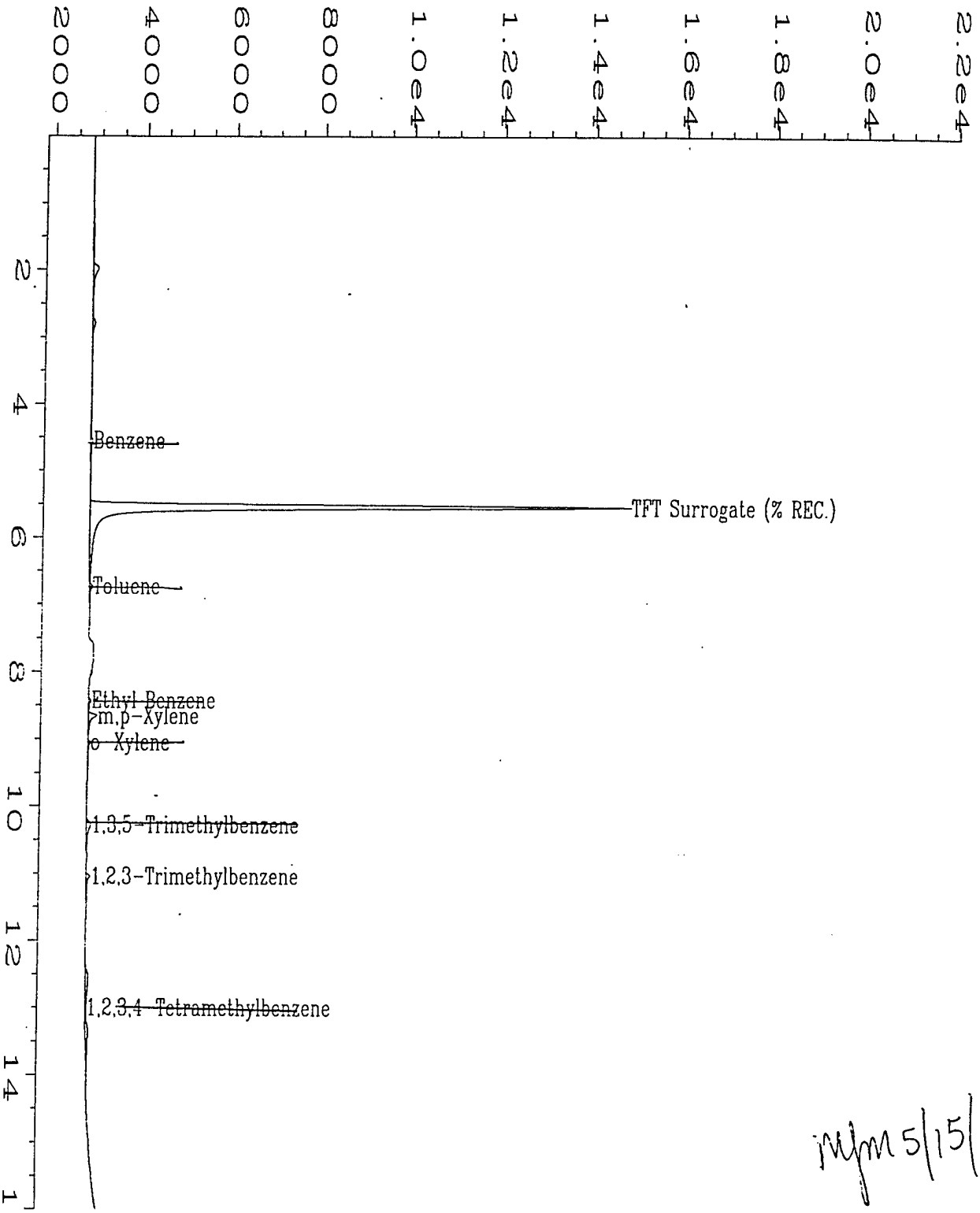
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
l Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.6		0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.4		0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	1.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		93%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
F Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



mjm 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20425\011R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : MB042595
Run Time Bar Code:
Acquired on : 25 Apr 95 03:02 PM
Report Created on: 12 May 95 06:13 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MEB042595	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/26/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/26/95	Dilution Factor	: 125.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water/MeOH
		Lab File No.	: BX2042621

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	500
Toluene	108-88-3		U	500
Chlorobenzene	108-90-7		U	500
Ethyl Benzene	100-41-4		U	500
Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	53	J	500
1,3,5-Trimethylbenzene	108-67-8		U	500
1,2,4-Trimethylbenzene	95-63-6		U	500
1,2,3-Trimethylbenzene	526-73-8	120	J	500
1,2,3,4-Tetramethylbenzene	488-23-3		U	500

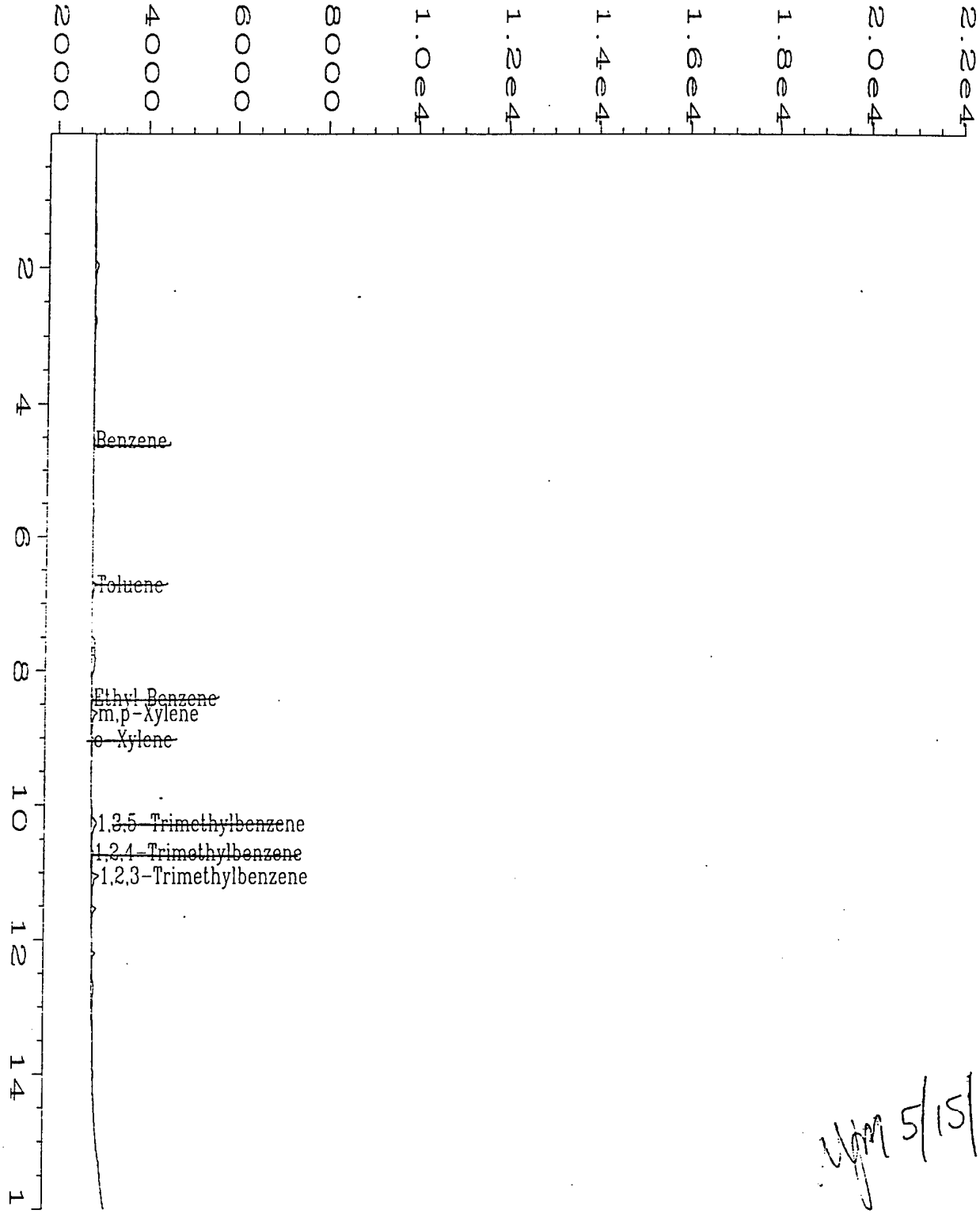
Surrogate Recovery (α,α,α-Trifluorotoluene):	93%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
F Reporting Limit.
NA = Not Available/Not Applicable.

K Cone
Analyst

Approved



WJM 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20425\018R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : MEB042595
Run Time Bar Code:
Acquired on : 25 Apr 95 07:34 PM
Report Created on: 12 May 95 06:16 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042695	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/26/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/26/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042611

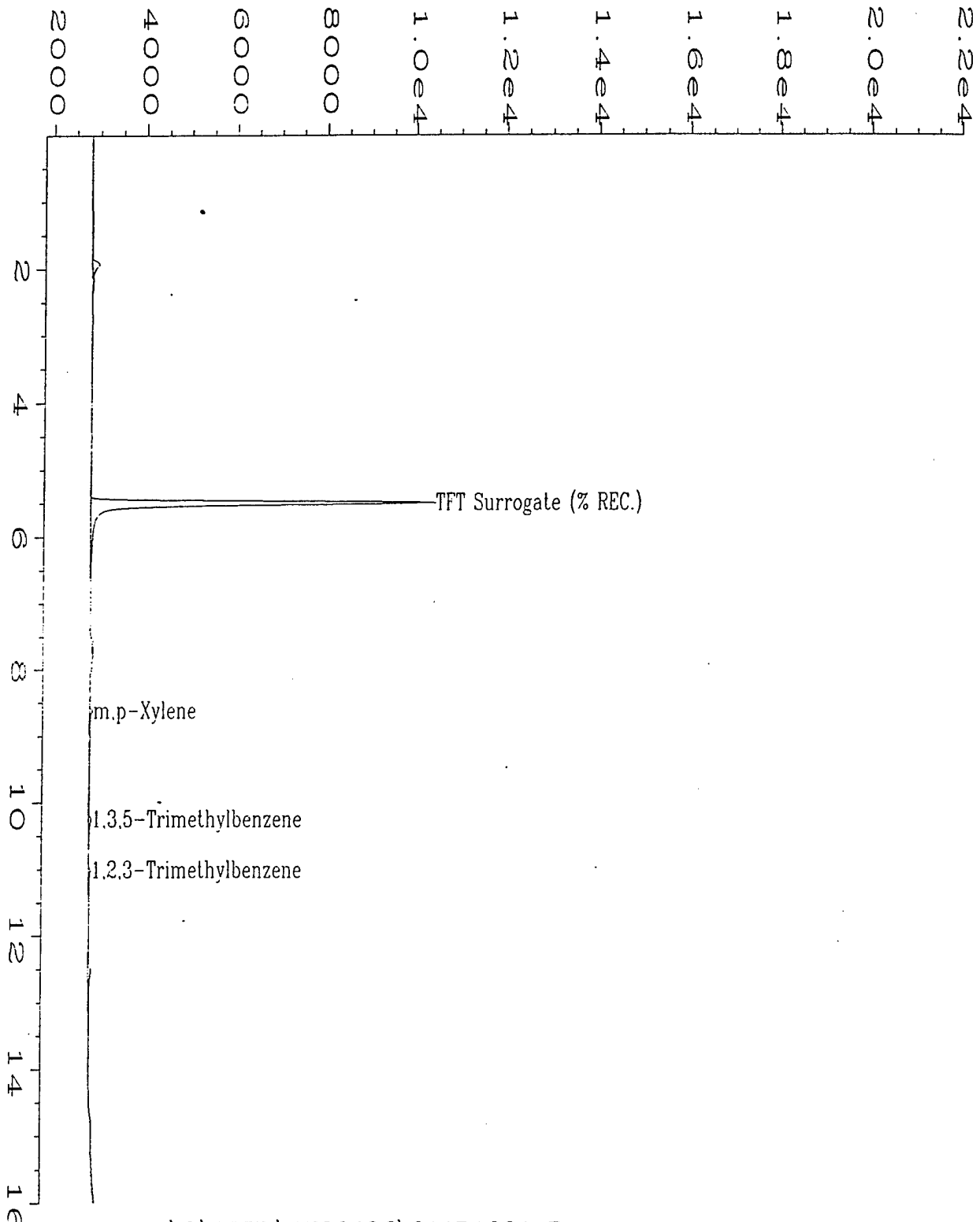
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
T ' Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7		0.4
1,3,5-Trimethylbenzene	108-67-8	0.6		0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.9		0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		106%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
R Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



Data File Name	: D:\2\DATA\BX20426\011R1001.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument.	: BTEX2	Vial Number	: 11
Sample Name	: MB042695	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 26 Apr 95 03:19 PM	Instrument Method	: BX20426.MTH
Report Created on	: 15 May 95 08:26 PM	Analysis Method	: BX20426.MTH
Last Recalib on	: 26 APR 95 02:33 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-6 15-16'	Client Project No.	: 722450.26020/S[illegible]ic Johnson AFB
Lab Sample Number	: X05753	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042214
% Moisture	: 25.33%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.4
Toluene	108-88-3		U	5.4
Chlorobenzene	108-90-7		U	5.4
Ethyl Benzene	100-41-4		U	5.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	5.4
1,3,5-Trimethylbenzene	108-67-8	0.5	J	5.4
1,2,4-Trimethylbenzene	95-63-6		U	5.4
1,2,3-Trimethylbenzene	526-73-8		U	5.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%		50%-150% (QC limits)

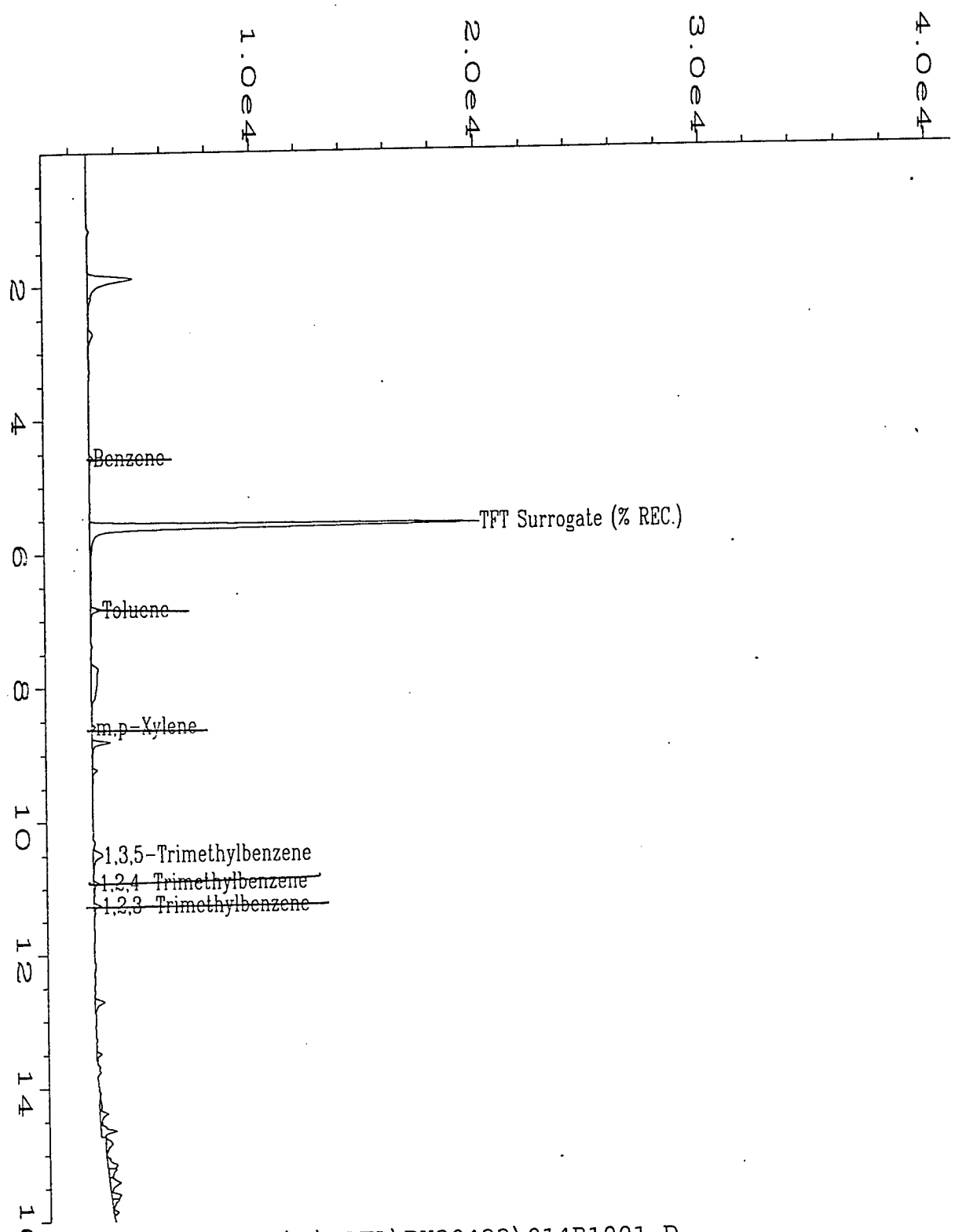
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20422\014R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05753;1;5
Run Time Bar Code:
Acquired on : 22 Apr 95 06:18 PM
Report Created on: 24 Apr 95 06:42 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 1
Sample Info : 95-1217; MW-6 15-16';5 GRAMS SOIL

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-6 15-16'	Client Project No.	: 722450.26020/[redacted]c Johnson AFB
Lab Sample Number	: X05753DUP	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042223
% Moisture	: 25.33%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.4
Toluene	108-88-3		U	5.4
Chlorobenzene	108-90-7		U	5.4
Ethyl Benzene	100-41-4		U	5.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	5.4
1,3,5-Trimethylbenzene	108-67-8		U	5.4
1,2,4-Trimethylbenzene	95-63-6		U	5.4
1,2,3-Trimethylbenzene	526-73-8		U	5.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		91%		50%-150% (QC limits

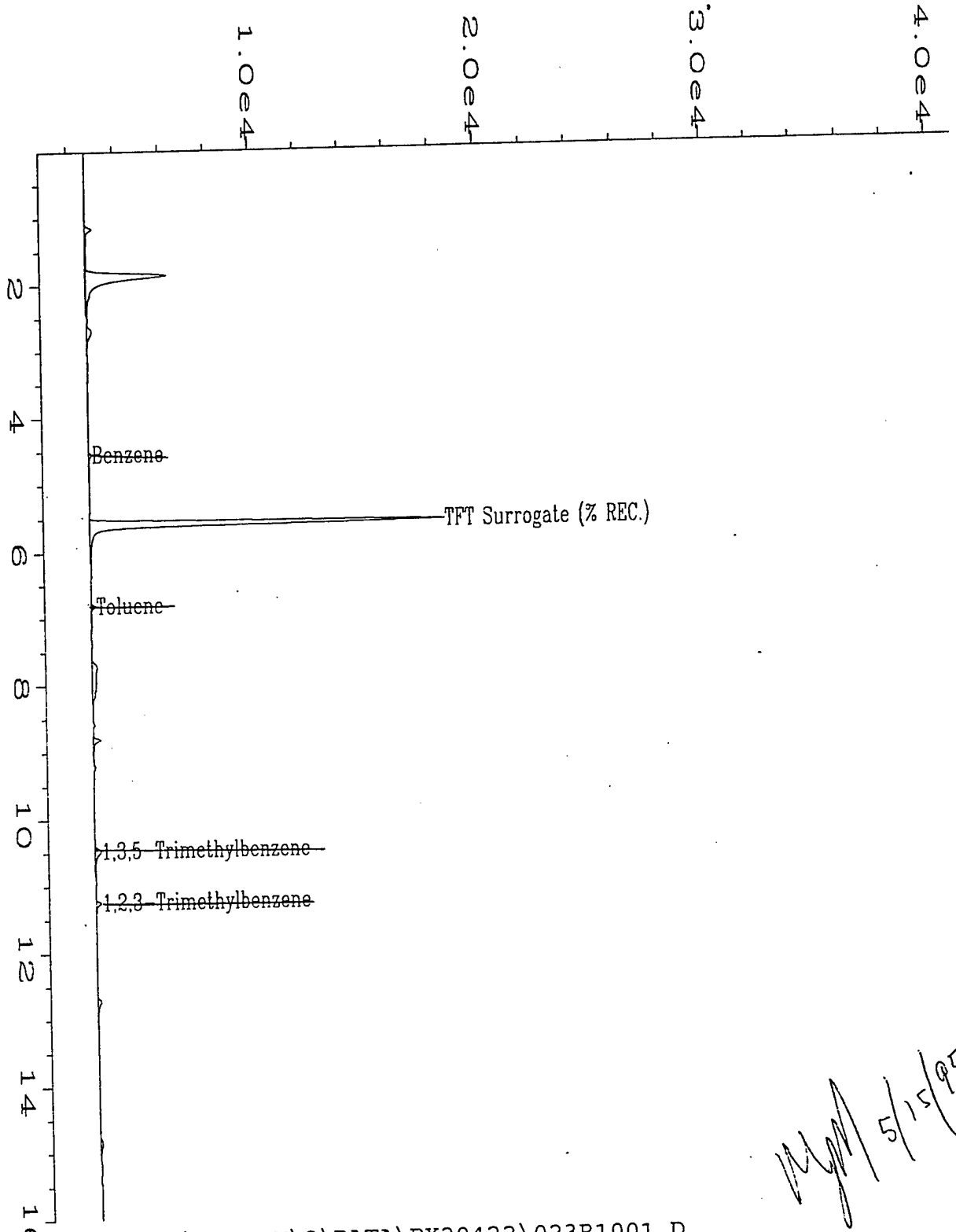
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Conn
Approved



5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20422\023R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05753DUP;1;5
Run Time Bar Code:
Acquired on : 22 Apr 95 11:43 PM
Report Created on: 24 Apr 95 06:46 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 1
Sample Info : 95-1217; MW-6 15-16'; 5 GRAMS SOIL

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-8 11-12'	Client Project No.	: 722450.26020/ Johnson AFB
Lab Sample Number	: X05755	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042219
% Moisture	: 20.45%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.0
Toluene	108-88-3		U	5.0
Chlorobenzene	108-90-7		U	5.0
Ethyl Benzene	100-41-4		U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7	J	5.0
1,3,5-Trimethylbenzene	108-67-8		U	5.0
1,2,4-Trimethylbenzene	95-63-6		U	5.0
1,2,3-Trimethylbenzene	526-73-8		U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.0

Surrogate Recovery (α,α,α-Trifluorotoluene):	91%	50%-150% (QC limits)

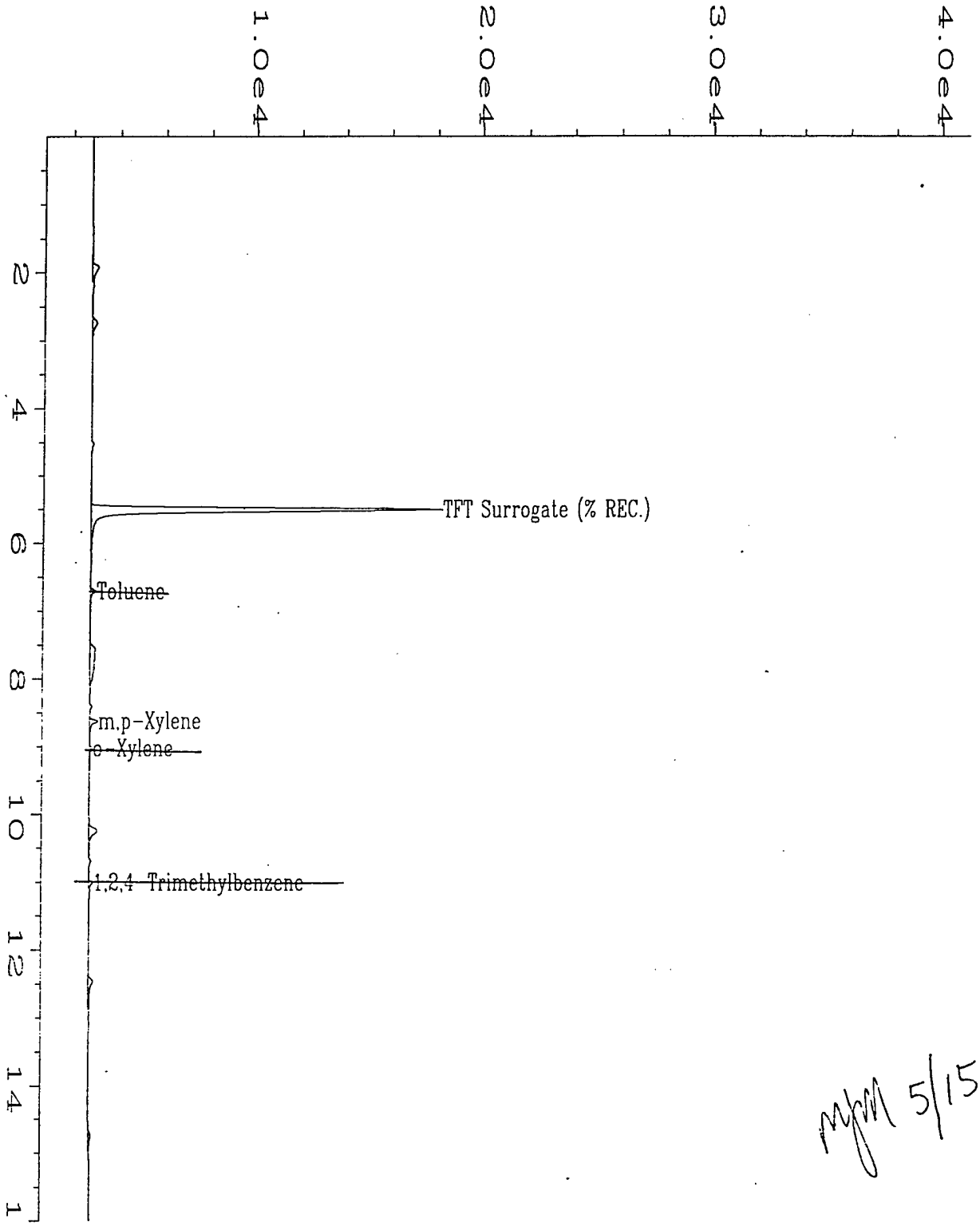
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



mgm 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20422\019R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05755;1;5
Run Time Bar Code:
Acquired on : 22 Apr 95 09:18 PM
Report Created on: 24 Apr 95 06:44 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 1
Sample Info : 95-1217; MW-8 11-12'; 5 GRAMS SOIL

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-8 11-12'	Client Project No.	: 722450.26020/[redacted] Johnson AFB
Lab Sample Number	: X05755DUP	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042220
% Moisture	: 20.45%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.0
Toluene	108-88-3	U	5.0
Chlorobenzene	108-90-7	U	5.0
Ethyl Benzene	100-41-4	U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.0
1,3,5-Trimethylbenzene	108-67-8	U	5.0
.,2,4-Trimethylbenzene	95-63-6	U	5.0
1,2,3-Trimethylbenzene	526-73-8	U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		88%	50%-150% (QC limits

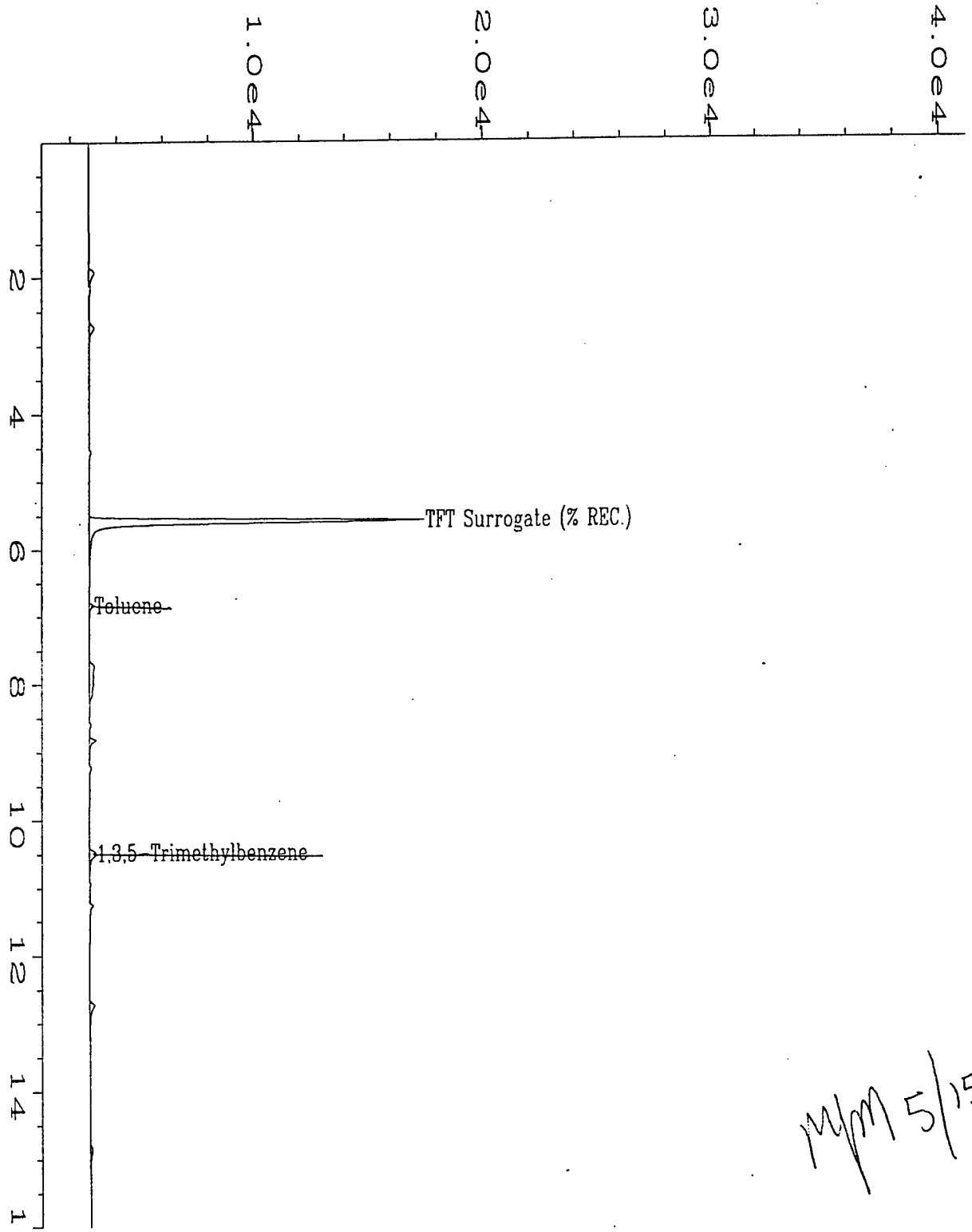
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Done
Approved



MM 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20422\020R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05755DUP;1;5
Run Time Bar Code:
Acquired on : 22 Apr 95 09:55 PM
Report Created on: 24 Apr 95 06:45 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 1
Sample Info : 95-1217; MW-8 11-12'; 5 GRAMS SOIL

Page Number : 1
Vial Number : 20
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-9 15-16'	Client Project No.	: 722450.26020/S[illegible] Johnson AFB
Lab Sample Number	: X05756	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042226
% Moisture	: 17.55%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	0.8	J	4.9
Toluene	108-88-3		U	4.9
Chlorobenzene	108-90-7		U	4.9
Ethyl Benzene	100-41-4		U	4.9
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7	J	4.9
1,3,5-Trimethylbenzene	108-67-8		U	4.9
.,2,4-Trimethylbenzene	95-63-6		U	4.9
1,2,3-Trimethylbenzene	526-73-8		U	4.9
1,2,3,4-Tetramethylbenzene	488-23-3	0.8	JB	4.9
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%		50%-150% (QC limits)

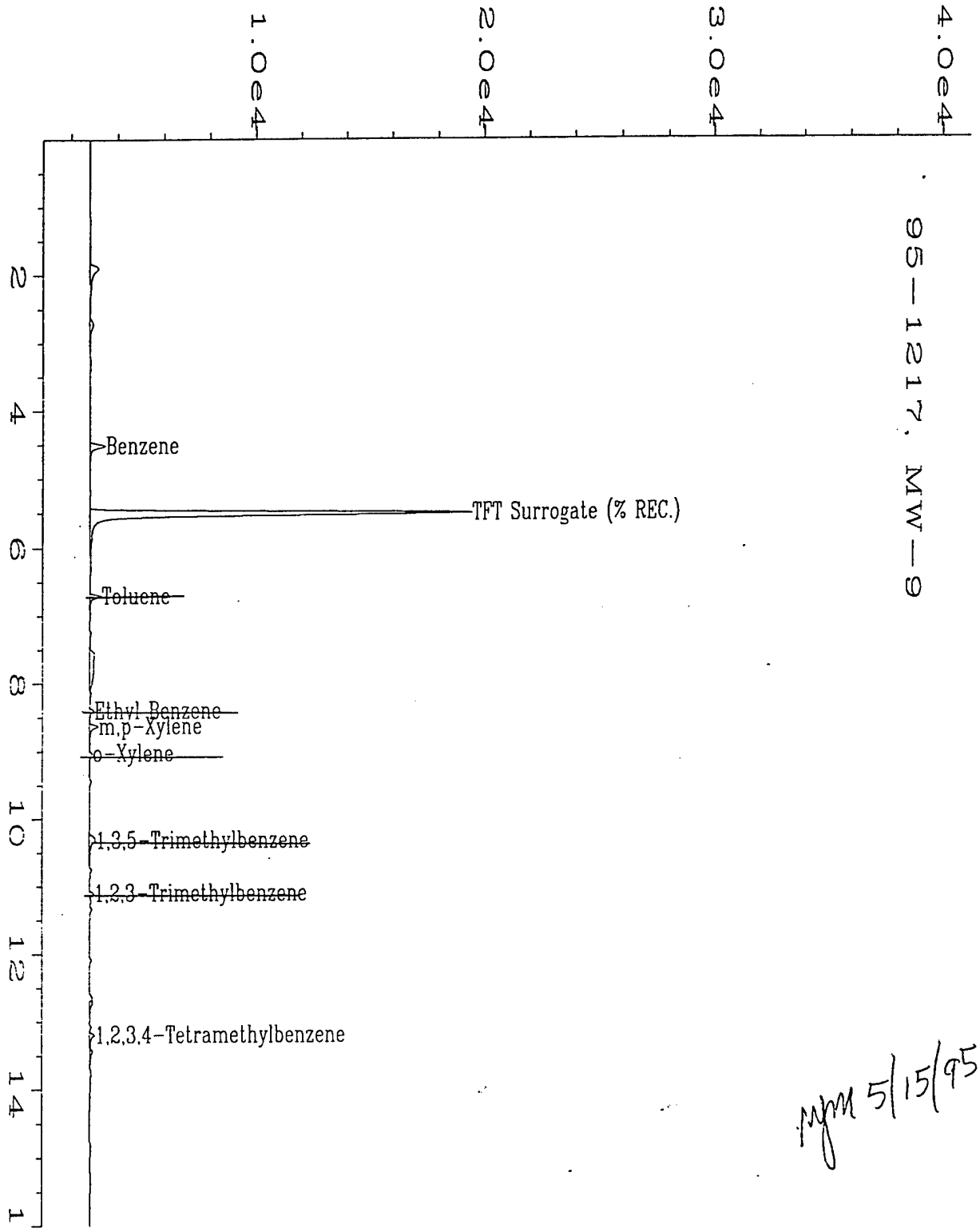
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



mjm 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20422\026R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05756;1;5
Run Time Bar Code:
Acquired on : 23 Apr 95 01:31 AM
Report Created on: 25 Apr 95 02:26 PM
Last Recalib on : 24 APR 95 06:19 PM
Multiplier : 1

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-10 10-11'	Client Project No.	: 722450.2602 /m Johnson AFB
Lab Sample Number	: X05757	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042030
% Moisture	: 21.90%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.1
Toluene	108-88-3	0.7	J	5.1
Chlorobenzene	108-90-7		U	5.1
Ethyl Benzene	100-41-4		U	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	1.6	J	5.1
1,3,5-Trimethylbenzene	108-67-8	0.5	J	5.1
,2,4-Trimethylbenzene	95-63-6	0.5	J	5.1
1,2,3-Trimethylbenzene	526-73-8		U	5.1
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.1
Surrogate Recovery (α,α,α-Trifluorotoluene):		72%		50%-150% (QC limits

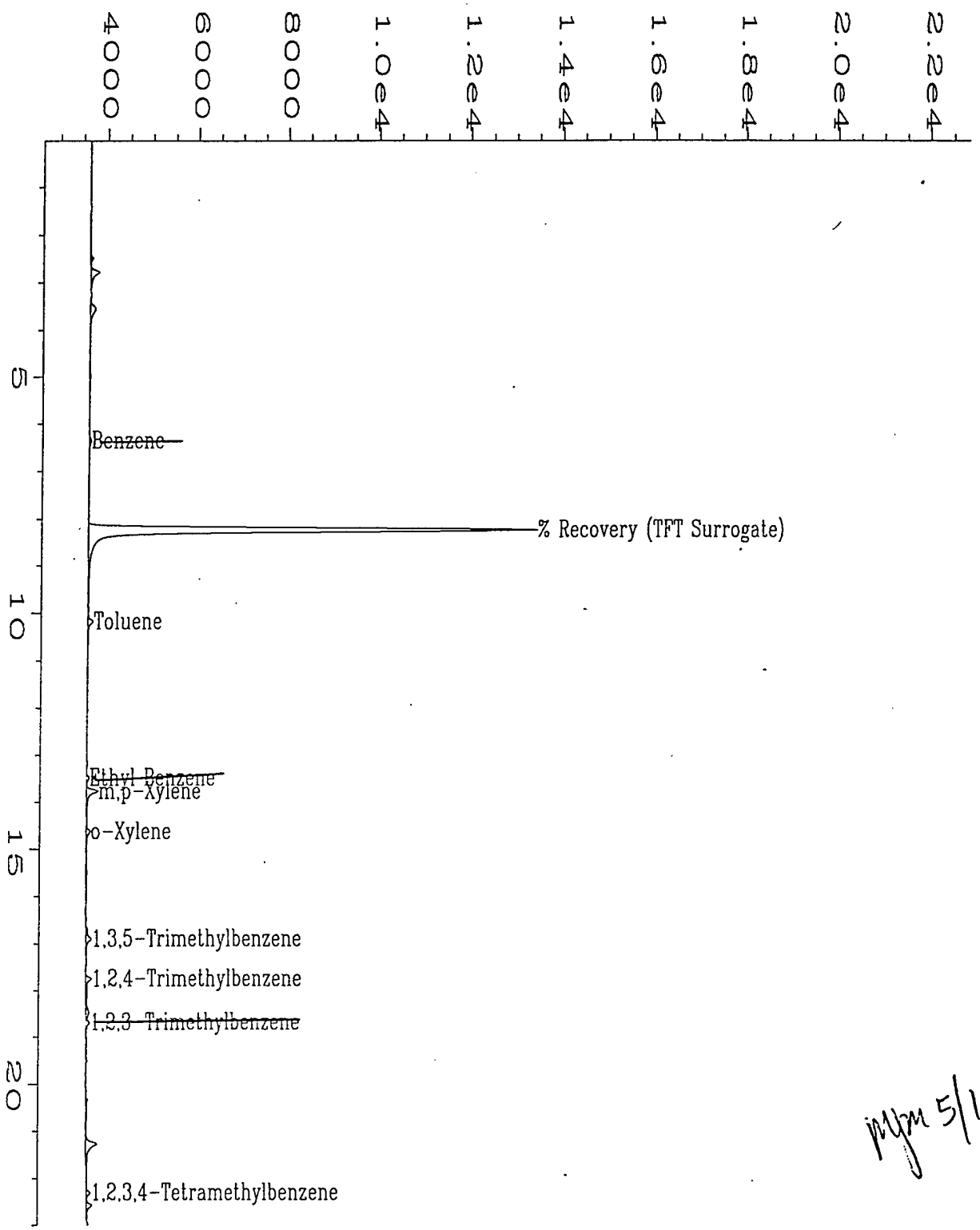
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



mym 5/15/95

Data File Name : C:\HPCHEM\1\DATA\BX10420\030F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05757;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 04:34 AM
Report Created on: 21 Apr 95 12:52 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : PROJECT#: 95-1217 CLIENT#: MW-10 10-11' SOIL

Page Number : 1
Vial Number : 30
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-10 11-12'	Client Project No.	: 722450.26020/ n Johnson AFB
Lab Sample Number	: X05758	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/20/95	Lab File No.	: BX1042013
% Moisture	: 21.37%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	U		5.1
Toluene	108-88-3	U		5.1
Chlorobenzene	108-90-7	U		5.1
Ethyl Benzene	100-41-4	U		5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U		5.1
1,3,5-Trimethylbenzene	108-67-8	U		5.1
,2,4-Trimethylbenzene	95-63-6	U		5.1
1,2,3-Trimethylbenzene	526-73-8	U		5.1
1,2,3,4-Tetramethylbenzene	488-23-3	U		5.1
Surrogate Recovery (α,α,α-Trifluorotoluene):		86%		50%-150% (QC limits

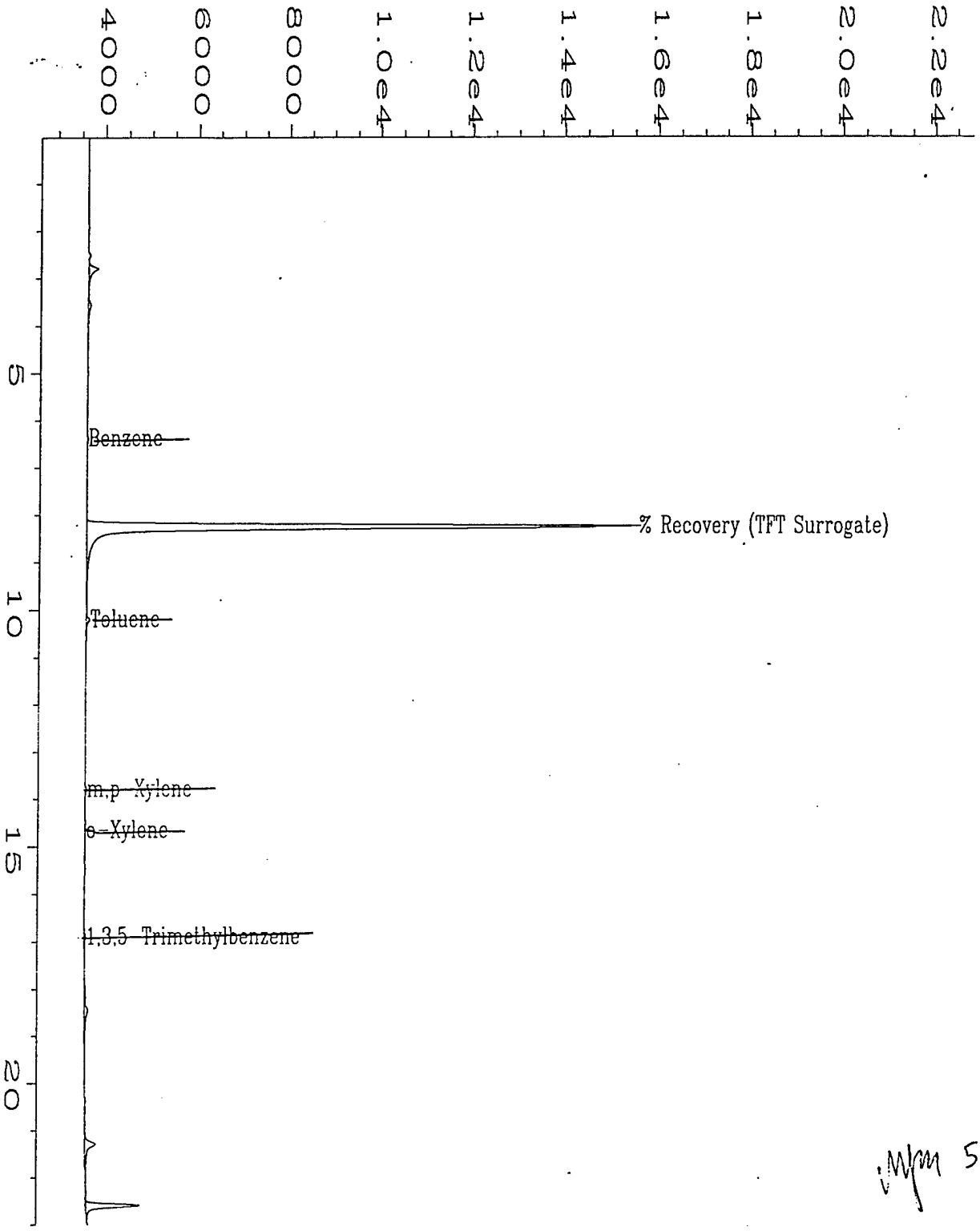
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



MM 5/15/95

Data File Name : C:\HPCHEM\1\DATA\BX10420\013F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05758;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 05:13 PM
Report Created on: 21 Apr 95 12:40 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : Project # 95-1217 Client # MW-10 11-12' Soil

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Sample Number	: MW-10 11-12'	Client Project No.	: 722450.26020/Seymo Johnson AFB
Lab Sample Number	: X05758DUP	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/20/95	Lab File No.	: BX2042016
% Moisture	: 21.37%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2		U	5.1
Toluene	108-88-3		U	5.1
Chlorobenzene	108-90-7		U	5.1
Ethyl Benzene	100-41-4		U	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	5.1
1,3,5-Trimethylbenzene	108-67-8		U	5.1
1,2,4-Trimethylbenzene	95-63-6		U	5.1
1,2,3-Trimethylbenzene	526-73-8		U	5.1
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.1
Surrogate Recovery (α,α,α-Trifluorotoluene):		64%		50%-150% (QC limits)

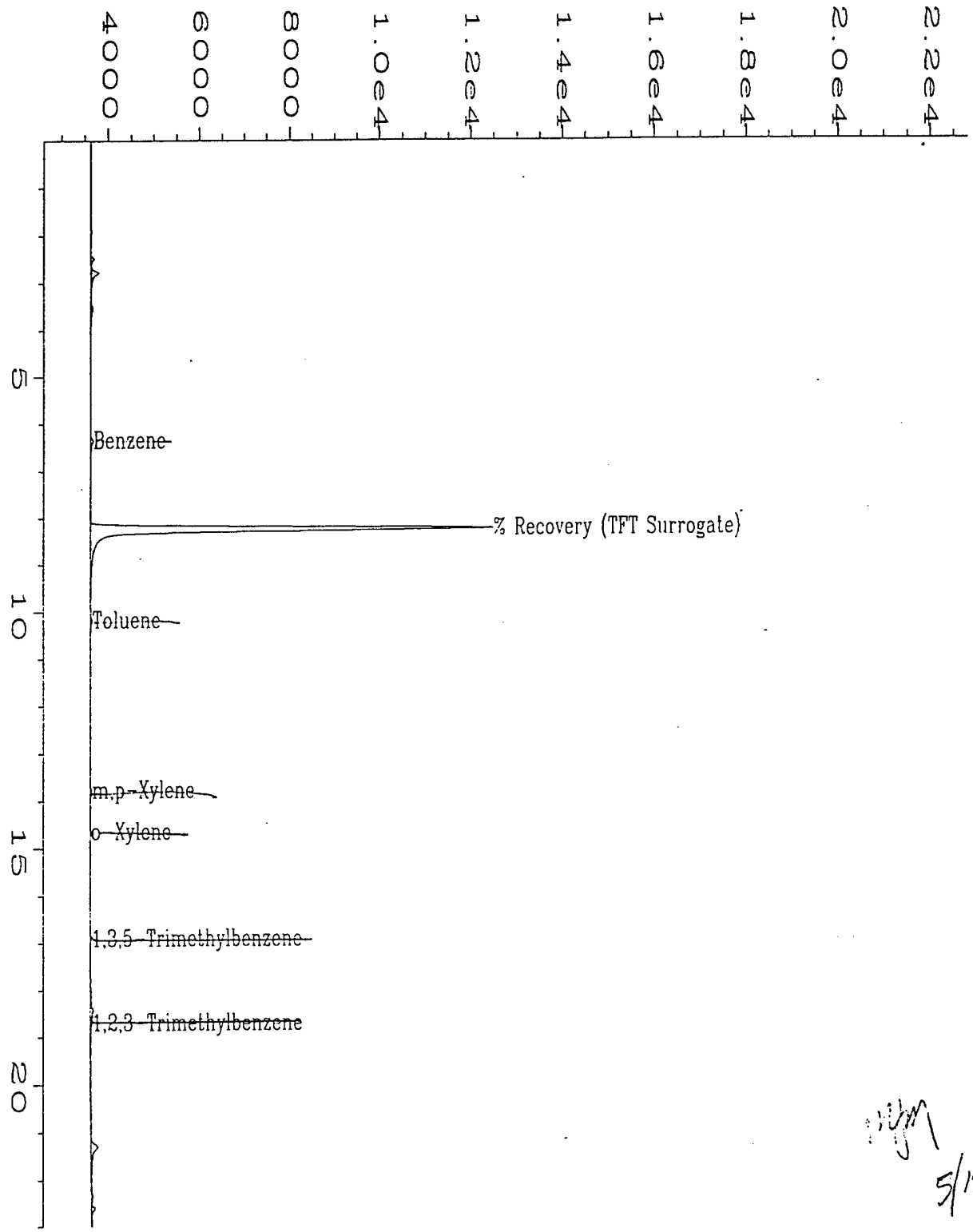
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



5/15/95

Data File Name : C:\HPCHEM\1\DATA\BX10420\016F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05758Dup;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 07:12 PM
Report Created on: 21 Apr 95 12:41 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : Project # 95-1217 Client # MW-10 11-12' Dupl.

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Sample Number	: MW-11 11.5-13.5'	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05759	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042227
% Moisture	: 21.70%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	6.2		5.1
Toluene	108-88-3	4.2		5.1
Chlorobenzene	108-90-7		U	5.1
Ethyl Benzene	100-41-4	2.8	J	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	33		5.1
1,3,5-Trimethylbenzene	108-67-8		U	5.1
1,2,4-Trimethylbenzene	95-63-6	4.9		5.1
1,2,3-Trimethylbenzene	526-73-8	1.8	J	5.1
1,2,3,4-Tetramethylbenzene	488-23-3		U	5.1
Surrogate Recovery (α,α,α-Trifluorotoluene):		80%		50%-150% (QC limits)

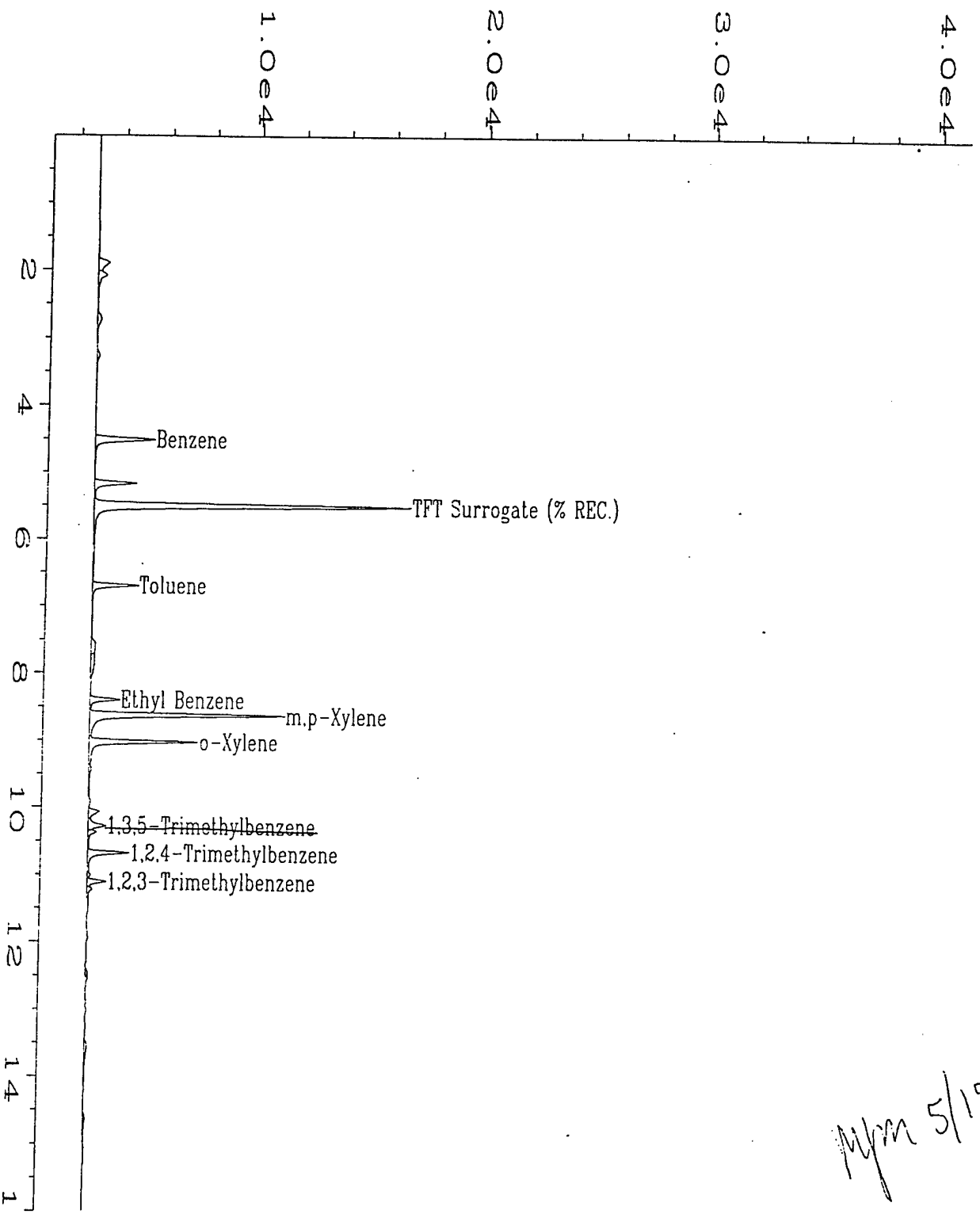
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



mjm 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20422\027R1001.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05759;1;5
Run Time Bar Code:
Acquired on : 23 Apr 95 02:08 AM
Report Created on: 25 Apr 95 02:24 PM
Recalib on : 24 APR 95 06:19 PM
Multiplier : 1

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20422.MTH
Analysis Method : BX20422.MTH
Sample Amount : 0
ISTD Amount :

MW-11 11.5-13.5'

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Method 8020 Data Report

Client Sample Number	: SS-1 11.5-13.5	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05760	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1250.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/25/95	Matrix	: Soil/Extract
Date Analyzed	: 4/25/95	Lab File No.	: BX2042516
% Moisture	: 8.40%	Method Blank No.	: MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	2100	J	5500
Toluene	108-88-3	16000		5500
Chlorobenzene	108-90-7	6000		5500
Ethyl Benzene	100-41-4	21000		5500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	130000	B	5500
1,3,5-Trimethylbenzene	108-67-8	27000		5500
1,2,4-Trimethylbenzene	95-63-6	77000		5500
1,2,3-Trimethylbenzene	526-73-8	28000	B	5500
1,2,3,4-Tetramethylbenzene	488-23-3	20000		5500
Surrogate Recovery (α,α,α-Trifluorotoluene):		87%		50%-150% (QC limits

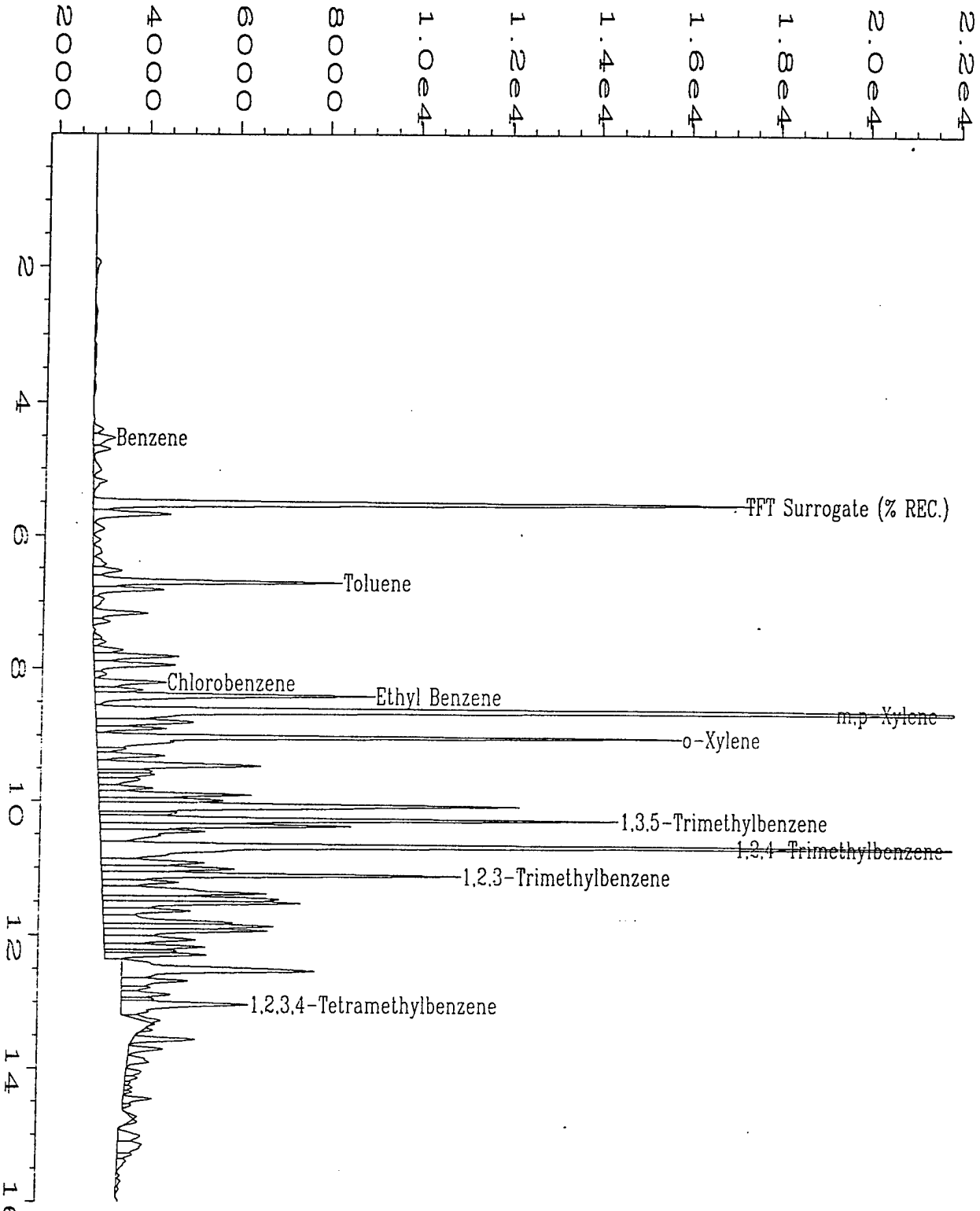
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20425\016R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05760;1250;.004
Run Time Bar Code:
Acquired on : 25 Apr 95 06:17 PM
Report Created on: 12 May 95 06:23 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1365
Sample Info : Project # 95-1217 Client # SS-1 11.5-13.5 Soil Extract; 8.40% moisture

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

		Client Project No.	: 722450.26020/Seym Johnson AFB
Client Sample Number	: SS-1 11.5-13.5 Dup.		
Lab Sample Number	: X05760FD	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1250.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/25/95	Matrix	: Soil/Extract
Date Analyzed	: 4/25/95	Lab File No.	: BX2042517
% Moisture	: 8.40%	Method Blank No.	: MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	3400	J	5500
Toluene	108-88-3	27000		5500
Chlorobenzene	108-90-7	8700		5500
Ethyl Benzene	100-41-4	33000		5500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	21000	B	5500
1,3,5-Trimethylbenzene	108-67-8	44000		5500
1,2,4-Trimethylbenzene	95-63-6	**		5500
1,2,3-Trimethylbenzene	526-73-8	44000	B	5500
1,2,3,4-Tetramethylbenzene	488-23-3	31000		5500

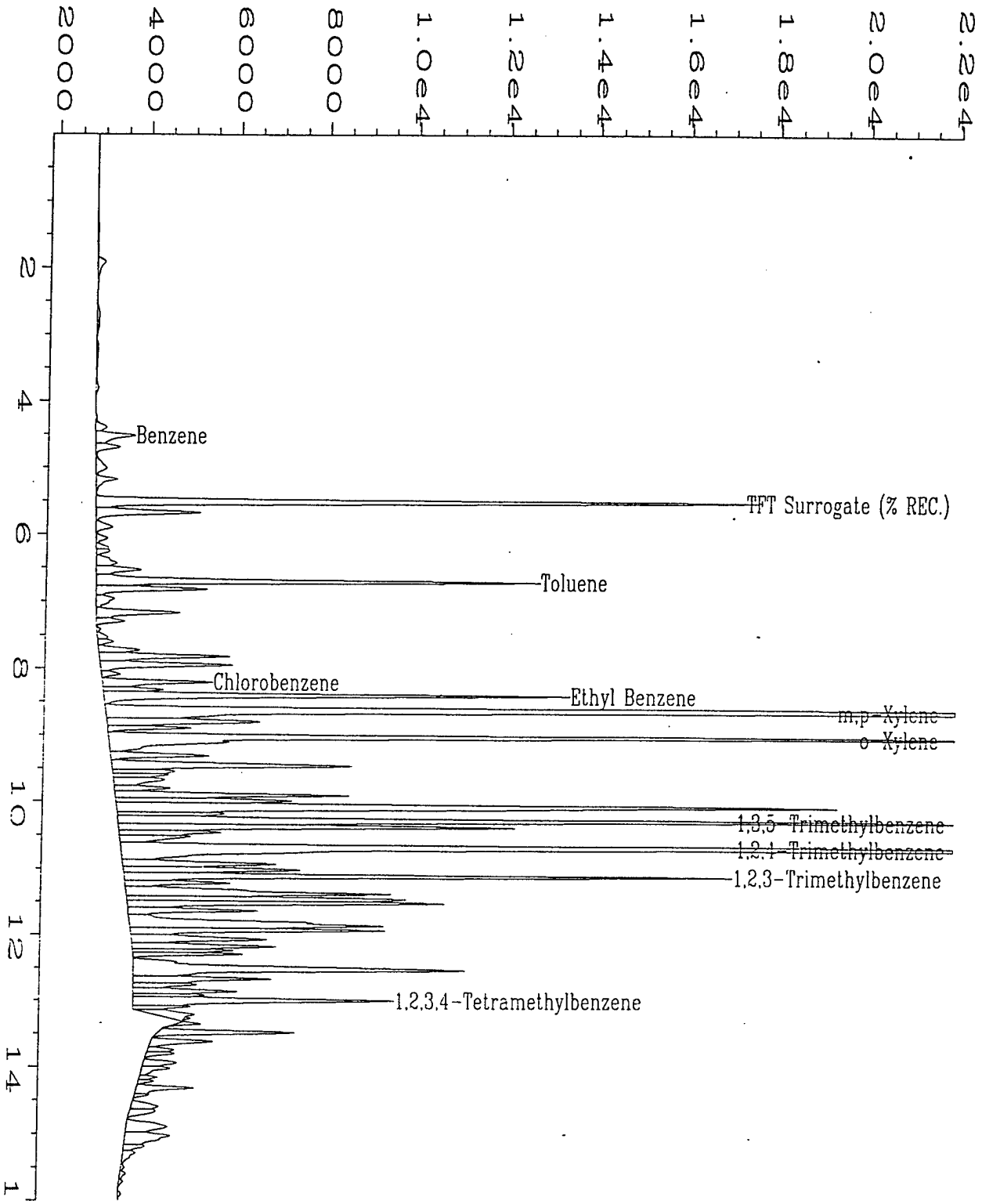
Surrogate Recovery (α,α,α-Trifluorotoluene):	87%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX2042614 for noted values, DF=2500.
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20425\017R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05760Dup;1250;
Run Time Bar Code:
Acquired on : 25 Apr 95 06:56 PM
Report Created on: 12 May 95 06:23 PM
Recalib on : 26 APR 95 09:49 AM
Multiplier : 1365
Sample Info : Project # 95-1217 Client # SS-1 11.5-13.5 Dup. (New Ex 4/25); 8.40% moisture

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

		Client Project No.	: 722450.26020/Seym Johnson AFB
Client Sample Number	: SS-1 11.5-13.5 Dup.		
Lab Sample Number	: X05760FD	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 2500.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/26/95	Matrix	: Soil/Extract
Date Analyzed	: 4/26/95	Lab File No.	: BX2042614
% Moisture	: 8.40%	Method Blank No.	: MEB042595

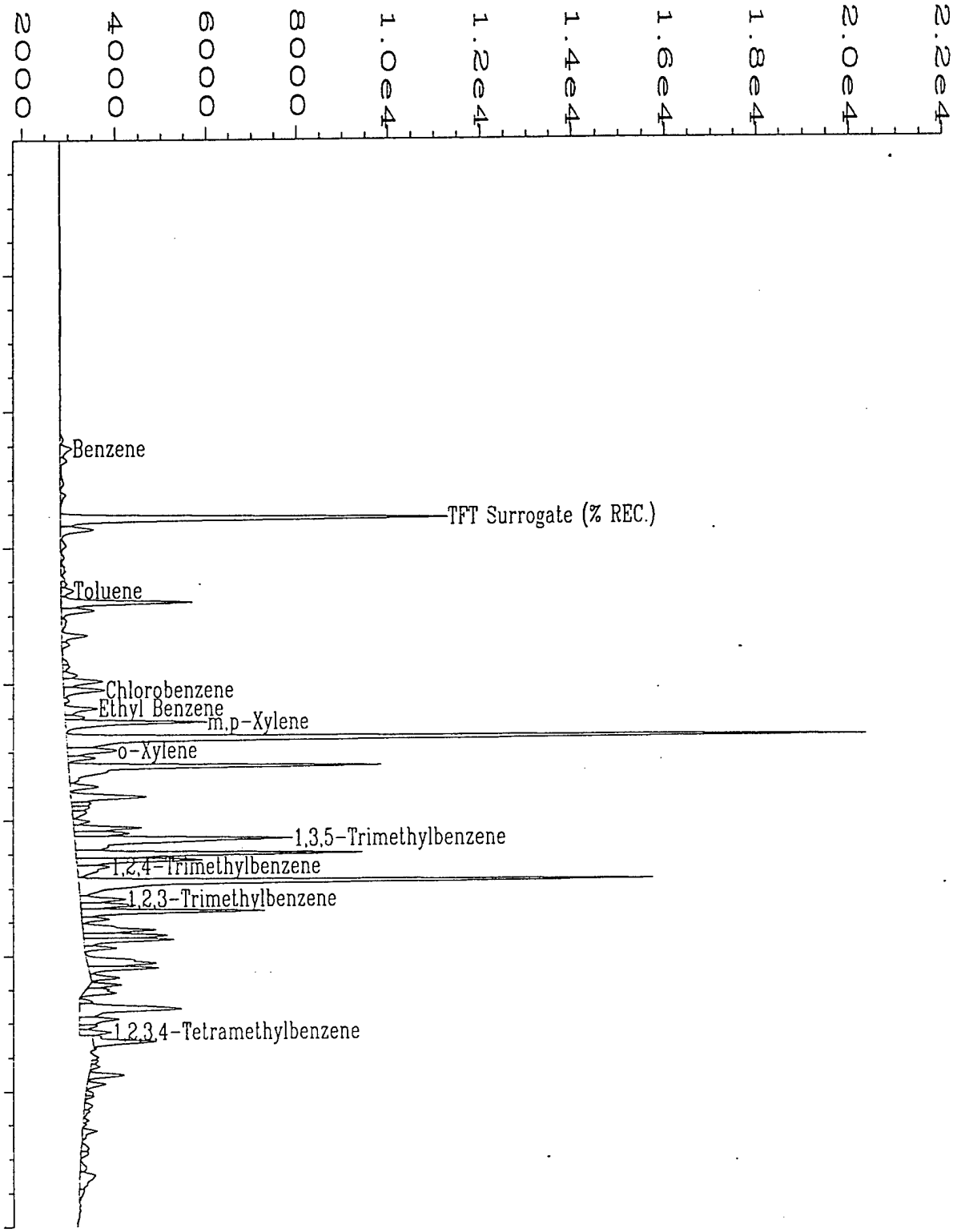
Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
,2,4-Trimethylbenzene	95-63-6	14000	11000
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX2042517 for noted values, DF=1250.
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20426\014R1001.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05760DUP;2500;
Run Time Bar Code:
Acquired on : 26 Apr 95 05:14 PM
Report Created on: 26 Apr 95 07:01 PM
Last Recalib on : 26 APR 95 02:33 PM
Multiplier : 2500
Sample Info : PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20426.MTH
Analysis Method : BX20426.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-1 16'-18'	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05762	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/26/95	Matrix	: Soil
Date Analyzed	: 4/26/95	Lab File No.	: BX2042613
% Moisture	: 7.85%	Method Blank No.	: MB042695

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	0.9	J	4.3
Toluene	108-88-3	5.1		4.3
Chlorobenzene	108-90-7		U	4.3
Ethyl Benzene	100-41-4		U	4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	1.1	BJ	4.3
1,3,5-Trimethylbenzene	108-67-8	1.2	BJ	4.3
,2,4-Trimethylbenzene	95-63-6		U	4.3
1,2,3-Trimethylbenzene	526-73-8		U	4.3
1,2,3,4-Tetramethylbenzene	488-23-3		U	4.3

Surrogate Recovery (α,α,α-Trifluorotoluene):	93%	50%-150% (QC limits)

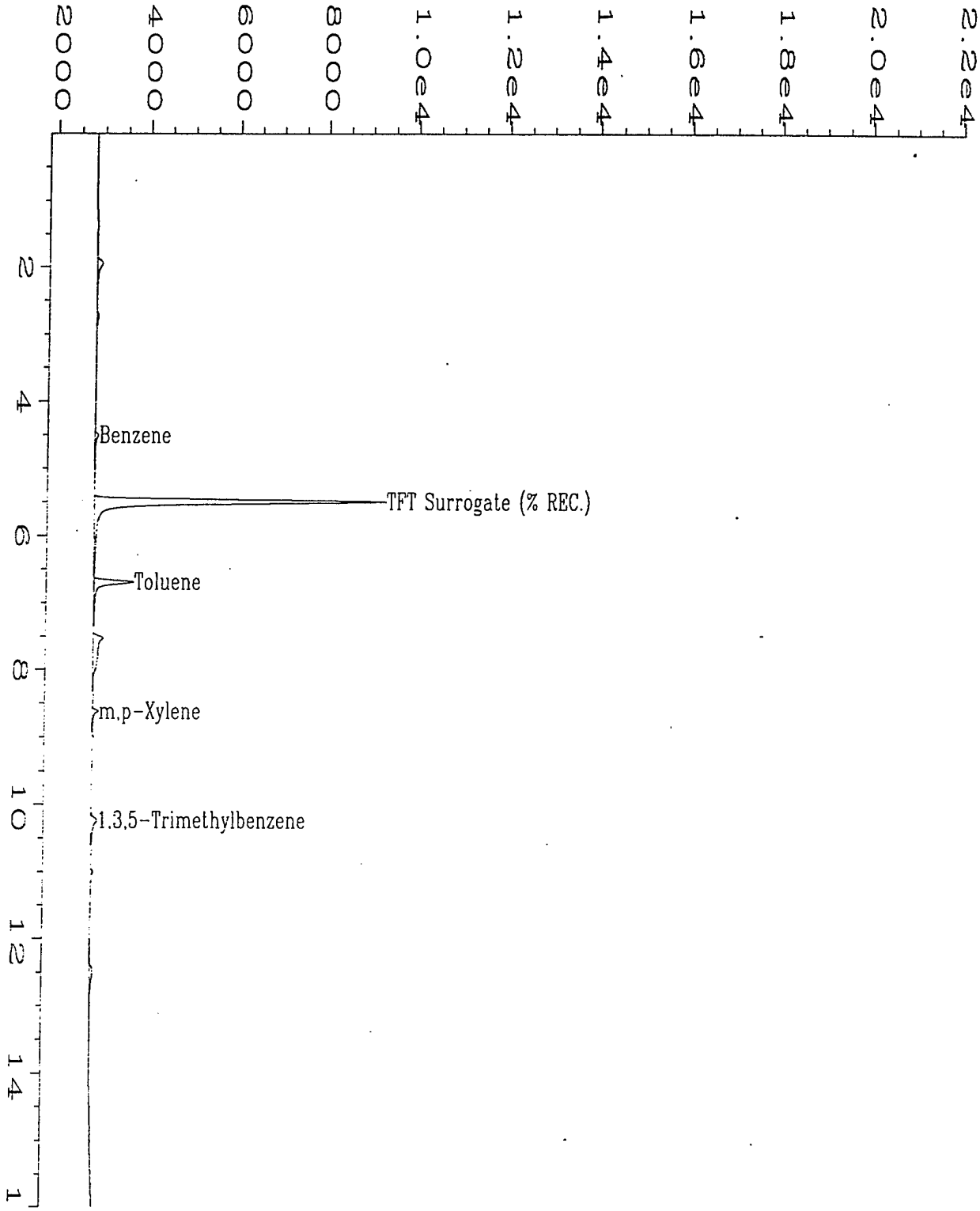
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20426\013R1001.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05762;1;5
Run Time Bar Code:
Acquired on : 26 Apr 95 04:36 PM
Report Created on: 26 Apr 95 07:01 PM
Last Recalib on : 26 APR 95 02:33 PM
Multiplier : 1
Sample Info : PROJECT # 95-1217 CLIENT # SS-1 16'-18' Soil

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20426.MTH
Analysis Method : BX20426.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-2 11.5-13.5	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05763	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042316
% Moisture	: 6.62%	Method Blank No.	: MB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	16		4.3
Toluene	108-88-3	29		4.3
Chlorobenzene	108-90-7		U	4.3
Ethyl Benzene	100-41-4	9.2		4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	35	B	4.3
1,3,5-Trimethylbenzene	108-67-8	3.7	BJ	4.3
1,2,4-Trimethylbenzene	95-63-6	3.7	J	4.3
1,2,3-Trimethylbenzene	526-73-8	1.2	BJ	4.3
1,2,3,4-Tetramethylbenzene	488-23-3	3.7	J	4.3
Surrogate Recovery (α,α,α-Trifluorotoluene):		94%		50%-150% (QC limits

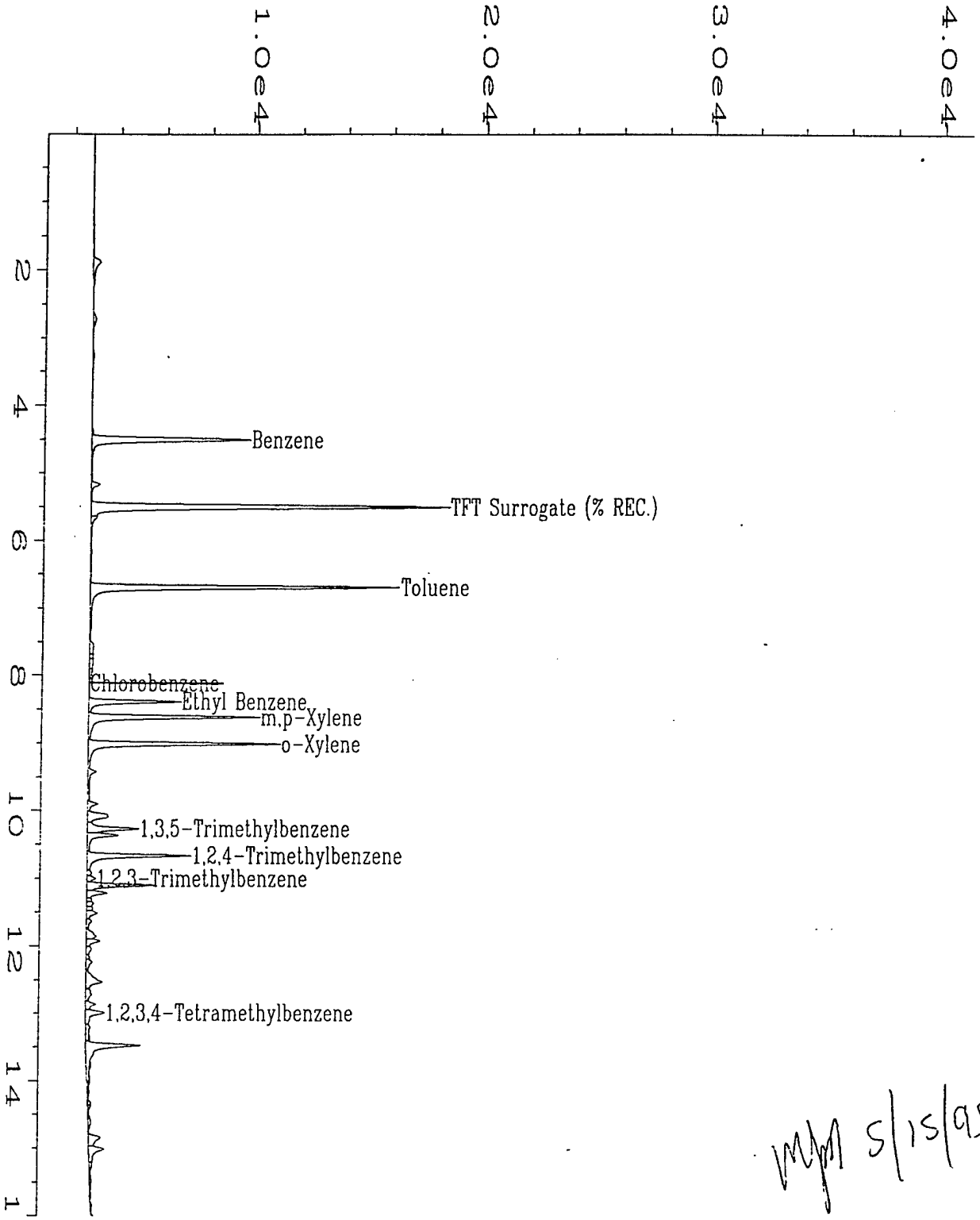
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



MMM 5/15/95

Data File Name : C:\HPCHEM\2\DATA\BX20423\016R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05763;1;5
Run Time Bar Code:
Acquired on : 23 Apr 95 05:49 PM
Report Created on: 25 Apr 95 04:50 PM
Last Recalib on : 25 APR 95 04:27 PM
Multiplier : 1
Sample Info : 95-1217; SS-2 11 1/2-13 1/2'; 5 GRAMS ~~SOIL/ext.~~ Wc

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Project No.	: 722450.26020/Seym Johnson AFB		
Client Sample Number	: SS-2 11.5-13.5		
Lab Sample Number	: X05763DUP	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042317
% Moisture	: 6.62%	Method Blank No.	: MB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	35		4.3
Toluene	108-88-3	59		4.3
Chlorobenzene	108-90-7	0.5	J	4.3
Ethyl Benzene	100-41-4	19		4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	63	B	4.3
1,3,5-Trimethylbenzene	108-67-8	7.1	B	4.3
,,2,4-Trimethylbenzene	95-63-6	20		4.3
1,2,3-Trimethylbenzene	526-73-8	1.7	BJ	4.3
1,2,3,4-Tetramethylbenzene	488-23-3	6.5		4.3

Surrogate Recovery (α,α,α-Trifluorotoluene):	88%	50%-150% (QC limits

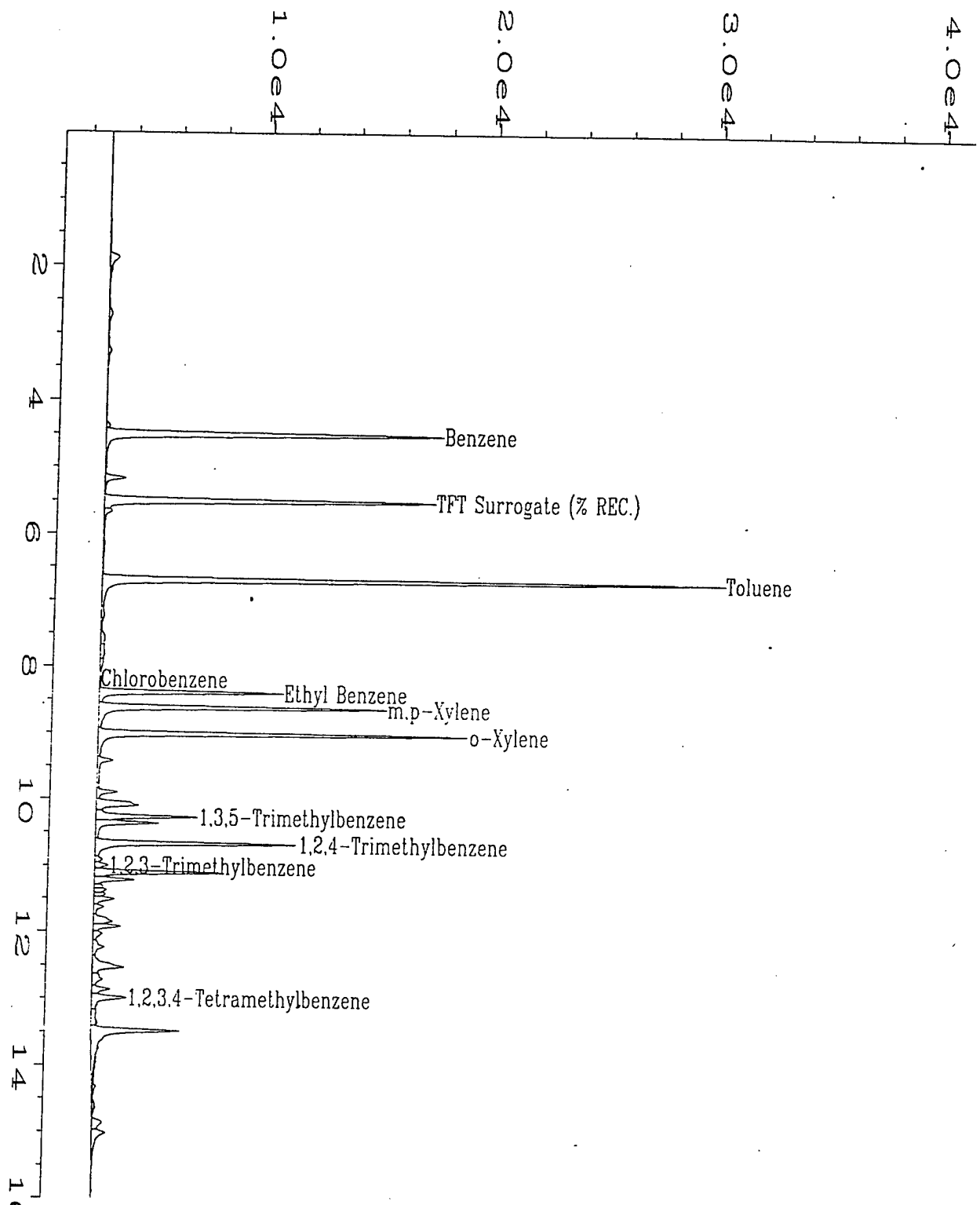
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20423\017R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05763DUP;1;5
Run Time Bar Code:
Acquired on : 23 Apr 95 06:25 PM
Report Created on: 25 Apr 95 04:50 PM
Last Recalib on : 25 APR 95 04:27 PM
Multiplier : 1
Sample Info : 95-1217; SS-2 11 1/2-13 1/2'; 5 GRAMS ~~SOIL/ext~~ Soc

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Project No.	: 722450.26020/Sa...n Johnson AFB		
Client Sample Number	: SS-3 9-11		
Lab Sample Number	: X05764	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 125.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil/Extract
Date Analyzed	: 4/23/95	Lab File No.	: BX2042318
% Moisture	: 7.69%	Method Blank No.	: MEB042395

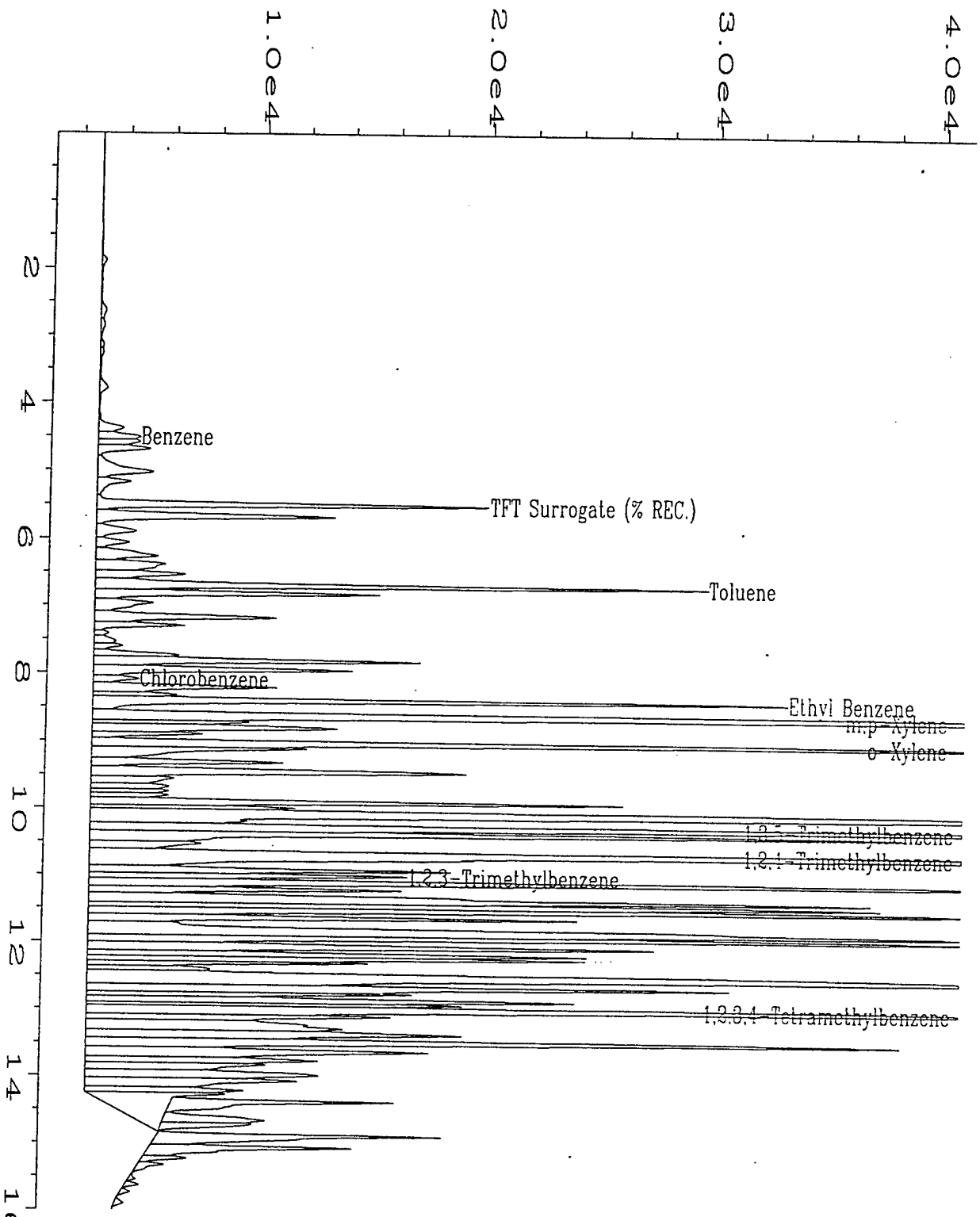
Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	630	540
Toluene	108-88-3	8100	540
Chlorobenzene	108-90-7	770	540
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α-Trifluorotoluene):		102%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX2042615 for noted values, df = 1250.
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20423\018R0901.D
Operator : T.Lockwood
Instrument : BTEX2 125
Sample Name : X05764;~~X~~;5
Run Time Bar Code:
Acquired on : 23 Apr 95 07:01 PM
Report Created on: 25 Apr 95 04:51 PM
Last Recalib on : 25 APR 95 04:27 PM
Multiplier : 1
Sample Info : 95-1217; SS-3 9-11; 5 GRAMS SOIL/~~ext.~~ Ext

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

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Method 8020 Data Report

Client Sample Number	: SS-3 9-11	Client Project No.	: 722450.26020/ Johnson AFB
Lab Sample Number	: X05764	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1250.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/26/95	Matrix	: Soil/Extract
Date Analyzed	: 4/26/95	Lab File No.	: BX2042615
% Moisture	: 7.69%	Method Blank No.	: MEB042595

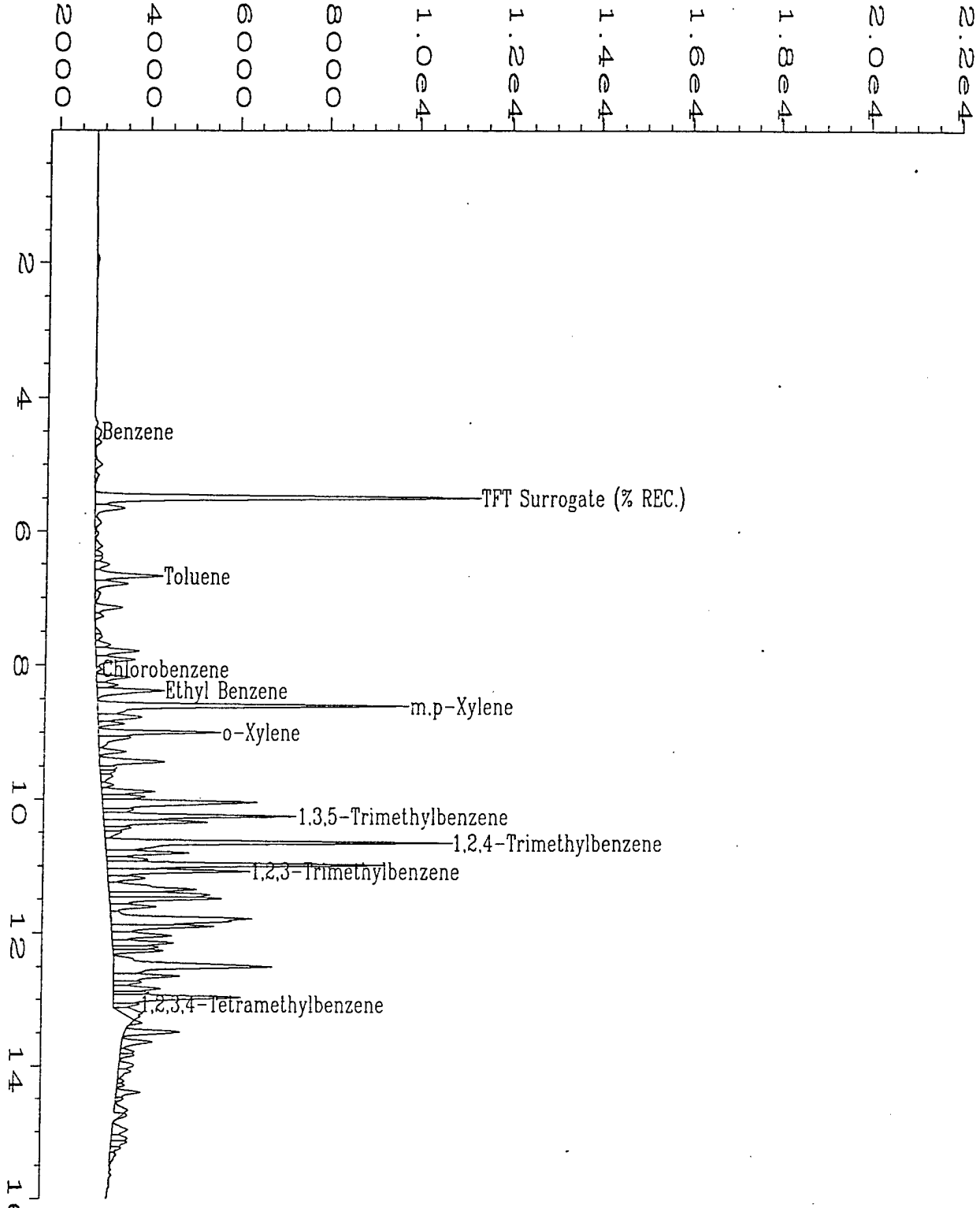
Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	**		**
Toluene	108-88-3	**		**
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	9600		5400
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	43000	B	5400
1,3,5-Trimethylbenzene	108-67-8	16000		5400
,,2,4-Trimethylbenzene	95-63-6	39000		5400
1,2,3-Trimethylbenzene	526-73-8	17000	B	5400
1,2,3,4-Tetramethylbenzene	488-23-3	3400	J	5400
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%		50%-150% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.
** = See BX2042318 for noted values, df = 125.
QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K Cone
Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20426\015R1001.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 15
Sample Name	: X05764;1250;.01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 26 Apr 95 05:53 PM	Instrument Method	: BX20426.MTH
Report Created on	: 26 Apr 95 07:01 PM	Analysis Method	: BX20426.MTH
Last Recalib on	: 26 APR 95 02:33 PM	Sample Amount	: 0
Multiplier	: 1250	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract		

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Method 8020 Data Report

Client Sample Number	: SS-1 11.5-13.5Dup	Client Project No.	: 722450.26020/ Johnson AFB
Lab Sample Number	: X05764FD	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 2500.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/26/95	Matrix	: Soil/Extract
Date Analyzed	: 4/26/95	Lab File No.	: BX2042616
% Moisture	: 7.69%	Method Blank No.	: MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	9200	J	11000
Toluene	108-88-3	8500	J	11000
Chlorobenzene	108-90-7	16000		11000
Ethyl Benzene	100-41-4	12000		11000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	45000	B	11000
1,3,5-Trimethylbenzene	108-67-8	54000		11000
1,2,4-Trimethylbenzene	95-63-6	11000		11000
1,2,3-Trimethylbenzene	526-73-8	13000	B	11000
1,2,3,4-Tetramethylbenzene	488-23-3	16000		11000
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%		50%-150% (QC limits

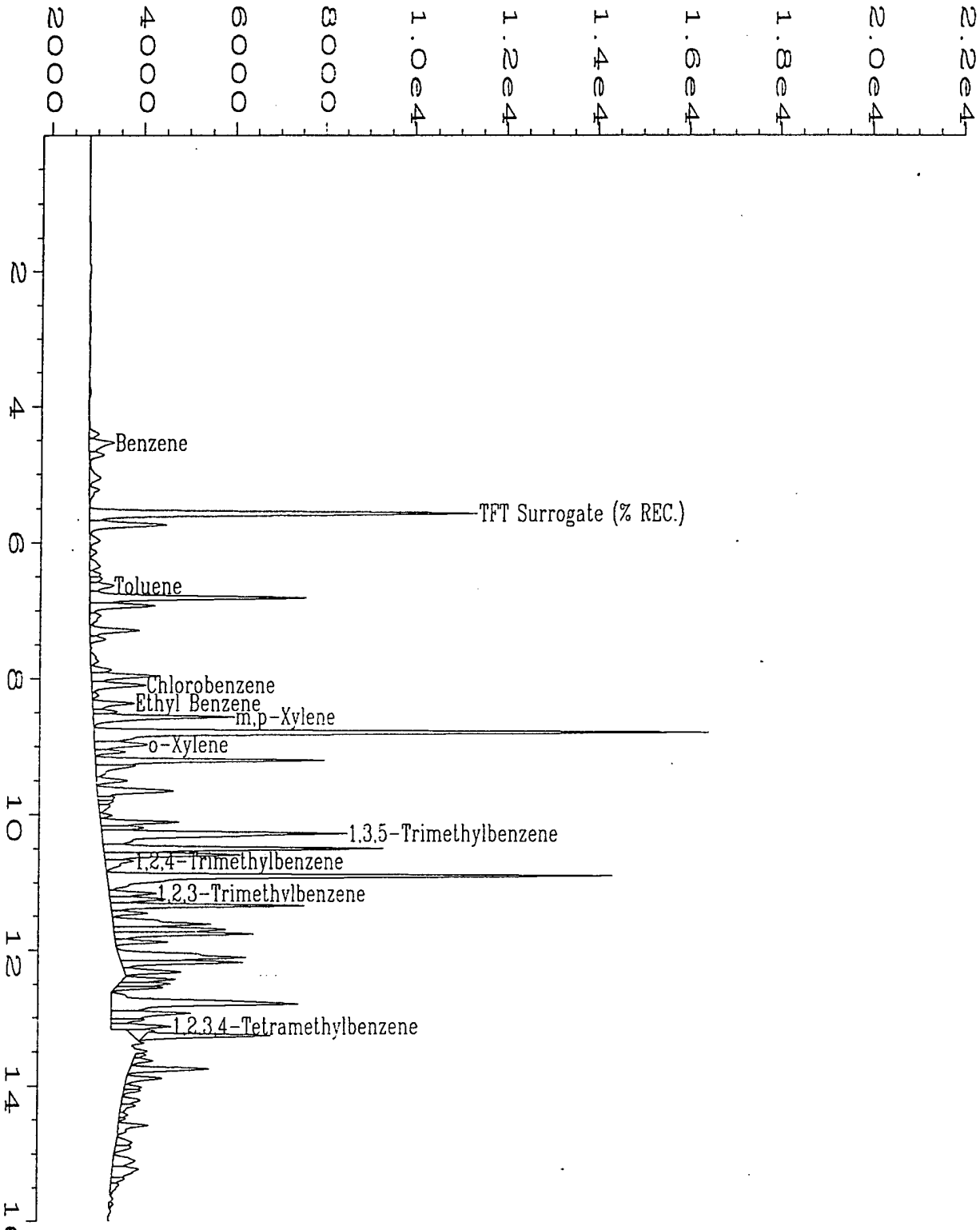
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20426\016R1001.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05764DUP;2500;
Run Time Bar Code:
Acquired on : 26 Apr 95 06:31 PM
Report Created on: 26 Apr 95 07:02 PM
Last Recalib on : 26 APR 95 02:33 PM
Multiplier : 2500
Sample Info : PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20426.MTH
Analysis Method : BX20426.MTH
Sample Amount : 0
ISTD Amount :

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Matrix Spike/Matrix Spike Duplicate Data Report

Client Project No.	: 722450.26020/ Seymore Johnson		
Client Sample No.	: MW-10 11-12'		
Lab Sample No.	: X05758	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	EPA Method No.	: 8020
Date Received	: 4/14/95	Matrix	: Soil
Date Prepared	: 4/25/95,4/20/95	Lab File Number(s)	: **
Date Analyzed	: 4/25/95,4/20/95	Method Blank	: MB042595,MB042095
		Dilution Factor	: 1

Compound	Spike Added (ug/Kg)	Sample Concentration (ug/Kg)	Concentration (ug/Kg) MS		MSD	Comments
Benzene	20.0	0.0	14.8		15.1	
Toluene	20.0	0.0	15.2		14.5	
Chlorobenzene	20.0	0.0	14.5		14.6	
Ethylbenzene	20.0	0.0	14.9		16.2	
m,p-Xylene	40.0	0.0	30.3	B	31.3	
o-Xylene	20.0	0.0	15.0		14.4	
1,3,5-TMB	20.0	0.0	15.1		14.4	
1,2,4-TMB	20.0	0.0	15.1		15.8	
1,2,3-TMB	20.0	0.0	14.7	B	13.4	
1,2,3,4-TeMB	20.0	0.0	15.9		14.2	
Surrogate	100.0	86%	82%		88%	% RECOVERY

Compound		MS % RECOVERY	MSD % RECOVERY	RPD	QC# Limits RPD	%REC
Benzene		74.0	75.5	2.0	25	50 - 150
Toluene		76.0	72.5	4.7	25	50 - 148
Chlorobenzene		72.5	73.0	0.7	25	55 - 135
Ethylbenzene		74.5	81.0	8.4	25	50 - 150
m,p-Xylene		75.8	78.3	3.2	25	50 - 150
o-Xylene		75.0	72.0	4.1	25	50 - 150
1,3,5-TMB		75.5	72.0	4.7	25	50 - 150
1,2,4-TMB		75.5	79.0	4.5	25	50 - 150
1,2,3-TMB		73.5	67.0	9.3	25	50 - 150
1,2,3,4-TeMB		79.5	71.0	11.3	25	50 - 150
Surrogate		82.0	88.0	NA	NA	50 - 150

= Values taken from EPA methods 602/8020.
* = Values outside of QC limits.

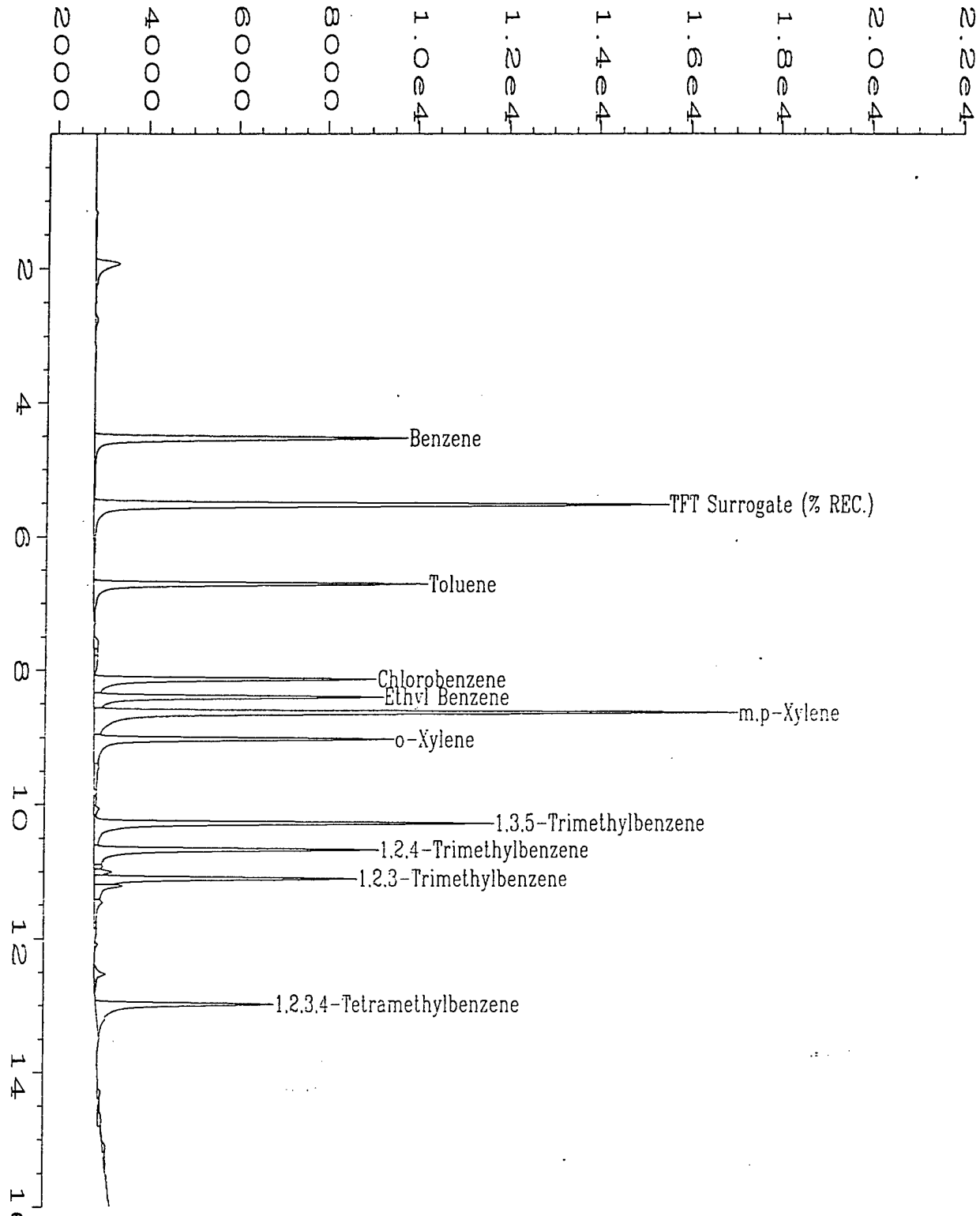
RPD: 0 out of (10) outside limits.
Spike Recovery: 0 out of (20) outside limits.

Comments: ** = Lab file numbers MS: BX2042514, MSD: BX1042015

K Cone
Analyst

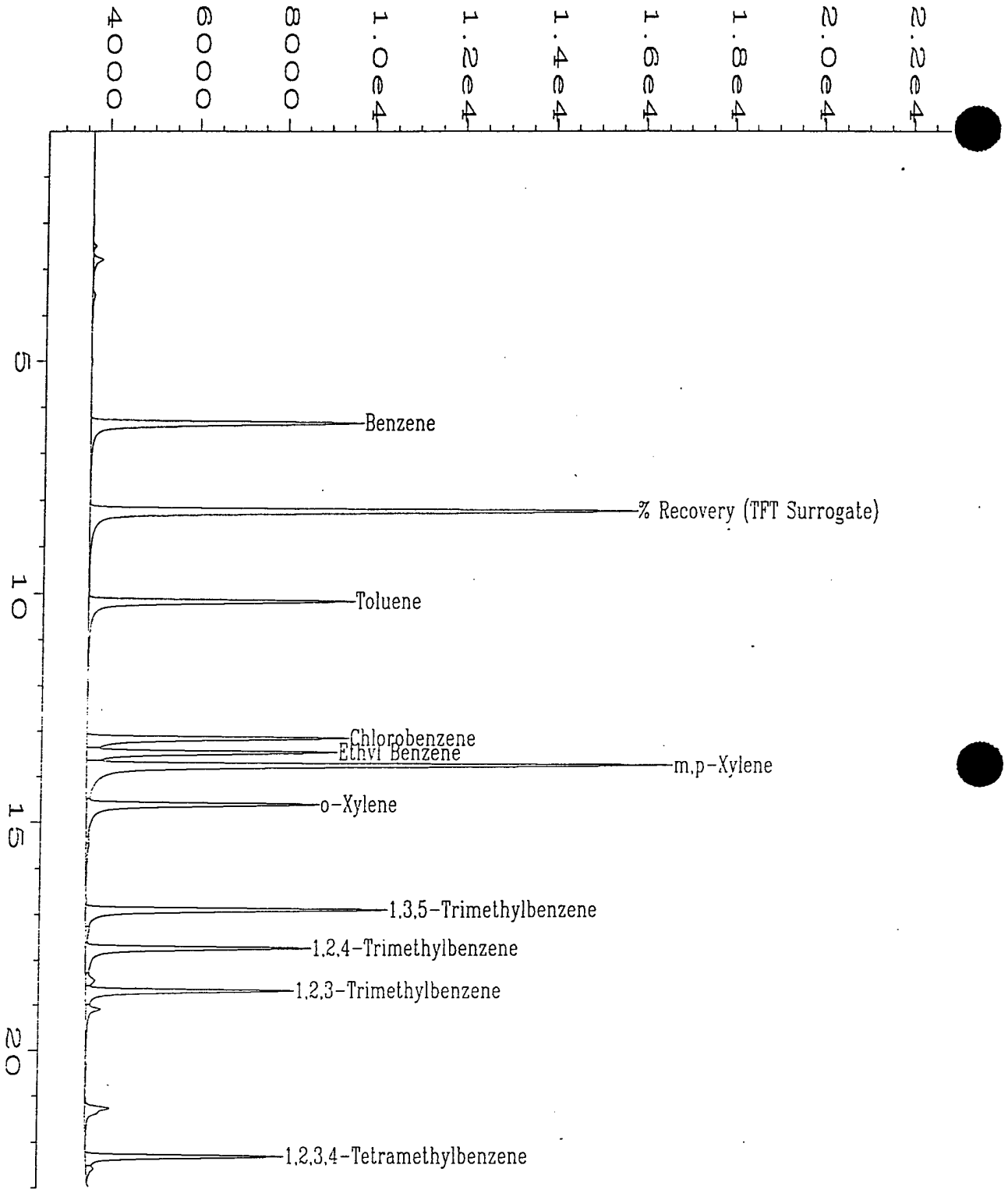
Approved

MS1217B.XLS; 5/15/95



Data File Name : C:\HPCHEM\2\DATA\BX20425\014R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : X05758MS;1;5
Run Time Bar Code:
Acquired on : 25 Apr 95 05:00 PM
Report Created on: 12 May 95 06:14 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1
Sample Info : Project # 95-1217 Client # MW-10 11'-12' Soil Matrix Spike

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :



Data File Name : C:\HPCHEM\1\DATA\BX10420\015F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05758MSD;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 06:32 PM
Report Created on: 21 Apr 95 12:41 PM
Last Recalib on : 21 APR 95 12:15 PM
Multiplier : 1
Sample Info : Project # 95-1217 Client # MW-10 11-12' Spike Dupl.

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTH
Analysis Method : BX10420B.MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

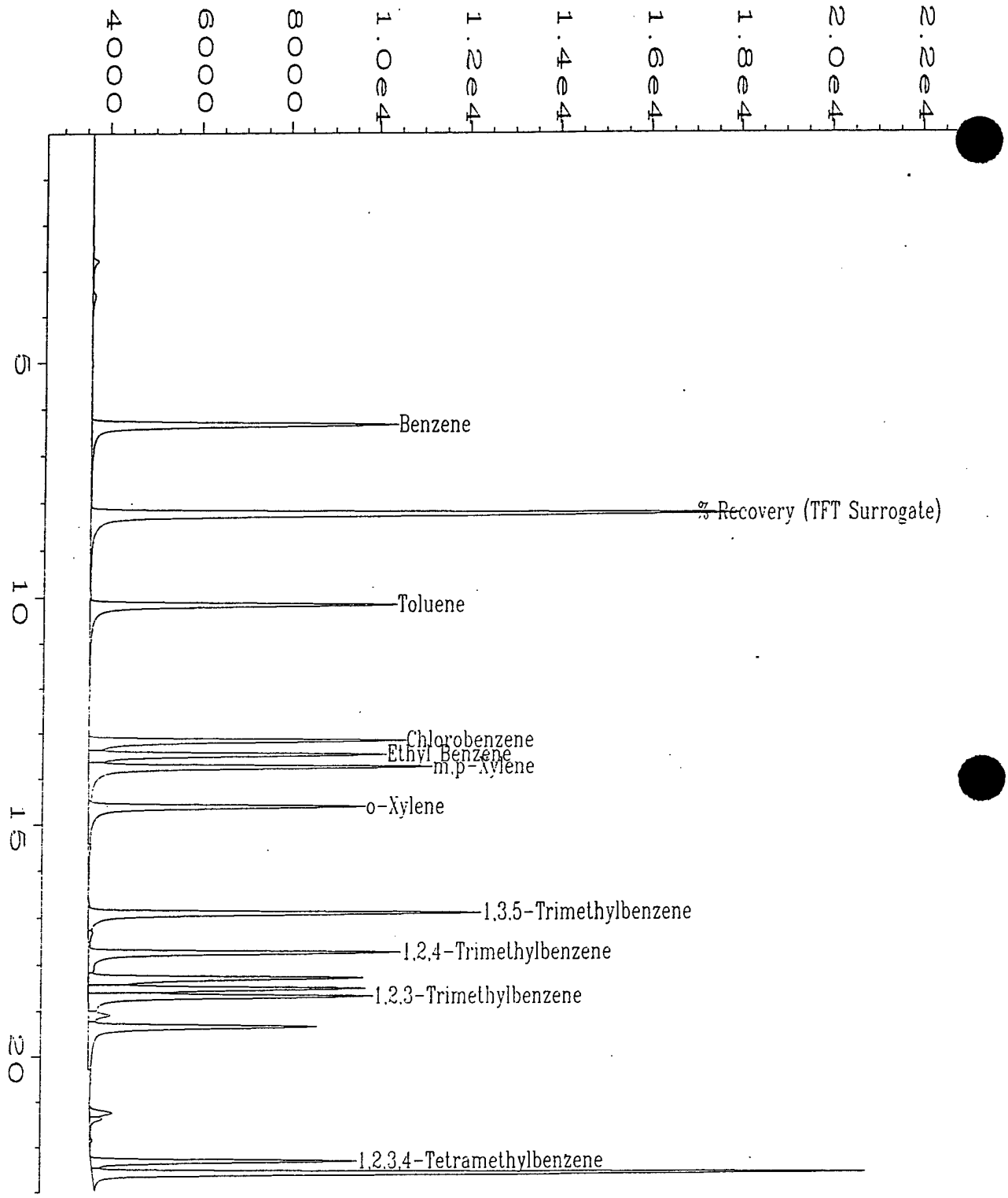
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.7	83.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	17.1	85.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	18.5	92.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	16.2	81.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	18.1	90.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.1	100.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		102%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

K. Cone
Approved



Data File Name : D:\1\DATA\BX10420\008F0701.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : LCS042095
Run Time Bar Code:
Acquired on : 20 Apr 95 01:56 PM
Report Created on: 15 May 95 10:31 AM
Last Recalib on : 21 APR 95 12:15 PM
M tiplier : 1

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 7
Instrument Method: BX10420.MTI
Analysis Method : BX10420B.MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/22/95	Method	: 602
Date Analyzed	: 4/22/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042210

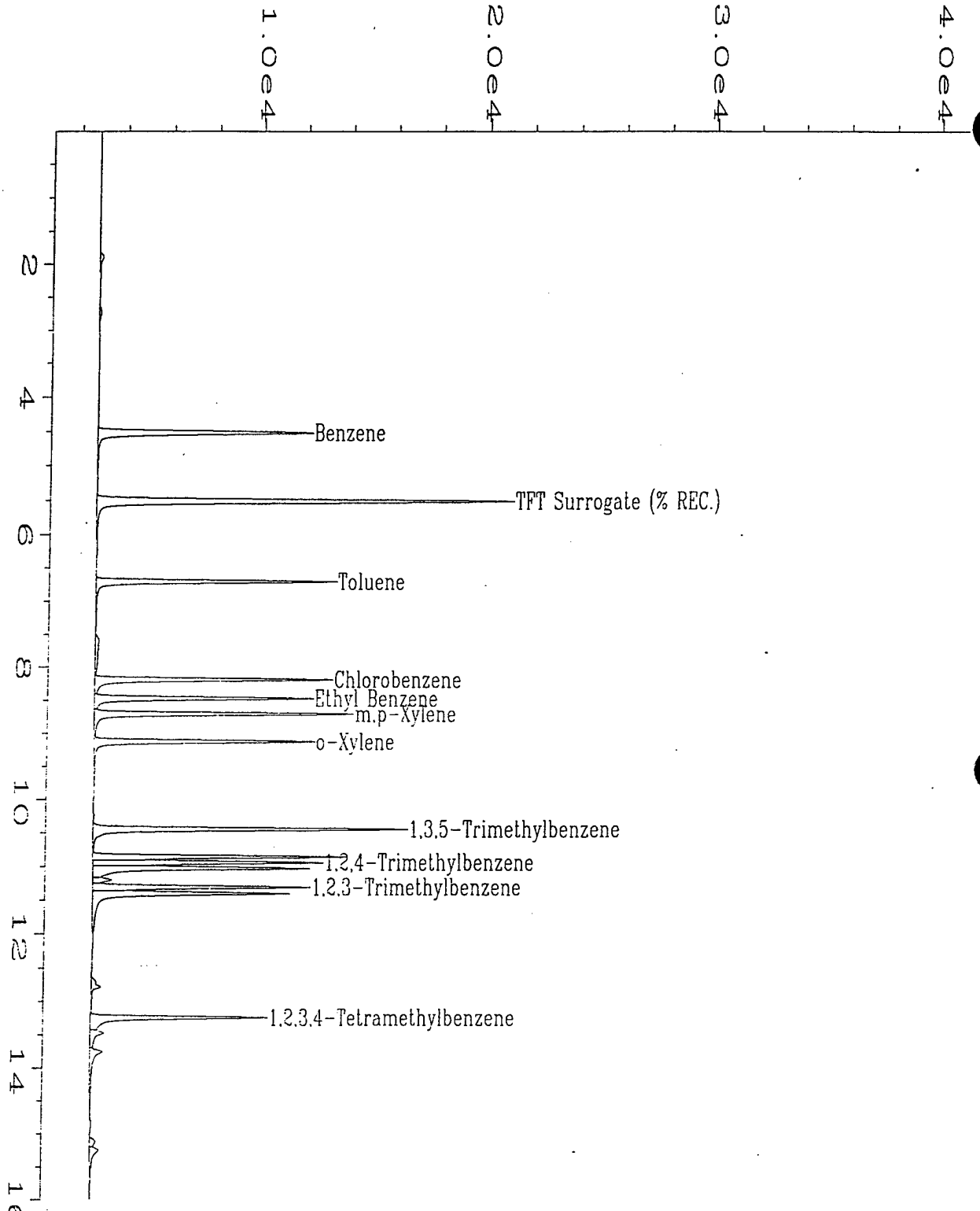
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.0	95.0	71.0-119.0*
Toluene	108-88-3	19.4	97.0	73.0-111.0*
Chlorobenzene	108-90-7	20.3	102	64.0-119.0*
Ethyl Benzene	100-41-4	19.9	99.5	75.0-114.0*
m,p-Xylene	108-38-3	18.7	93.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	19.7	98.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.9	105	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.3	107	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\010R1001.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 10
Sample Name	: LCS042295	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 22 Apr 95 03:15 PM	Instrument Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:36 PM	Analysis Method	: BX20422.MTH
Last Recalib on	: 24 APR 95 06:19 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20423009

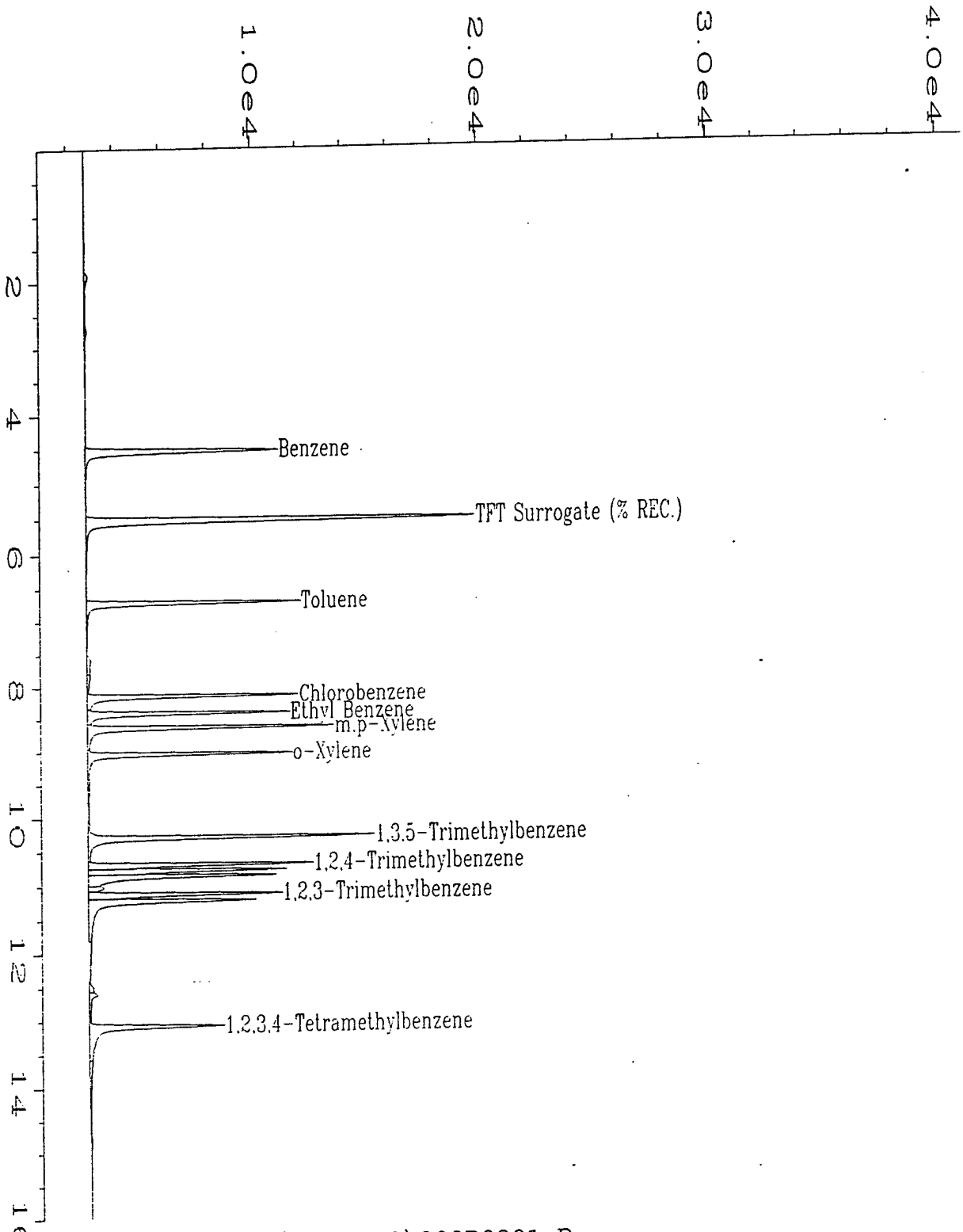
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.0	90.0	71.0-119.0*
Toluene	108-88-3	18.2	91.0	73.0-111.0*
Chlorobenzene	108-90-7	18.6	93.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100	75.0-114.0*
o-Xylene	106-42-3 95-47-6	18.4	92.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.1	90.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.8	104	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		103%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name : D:\2\DATA\BX20423\009R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : LCS042395
Run Time Bar Code:
Acquired on : 23 Apr 95 01:38 PM
Report Created on: 15 May 95 10:37 AM
Last Recalib on : 25 APR 95 04:27 PM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20423.MTH
Analysis Method : BX20423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042595	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/25/95	Method	: 602
Date Analyzed	: 4/25/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042510

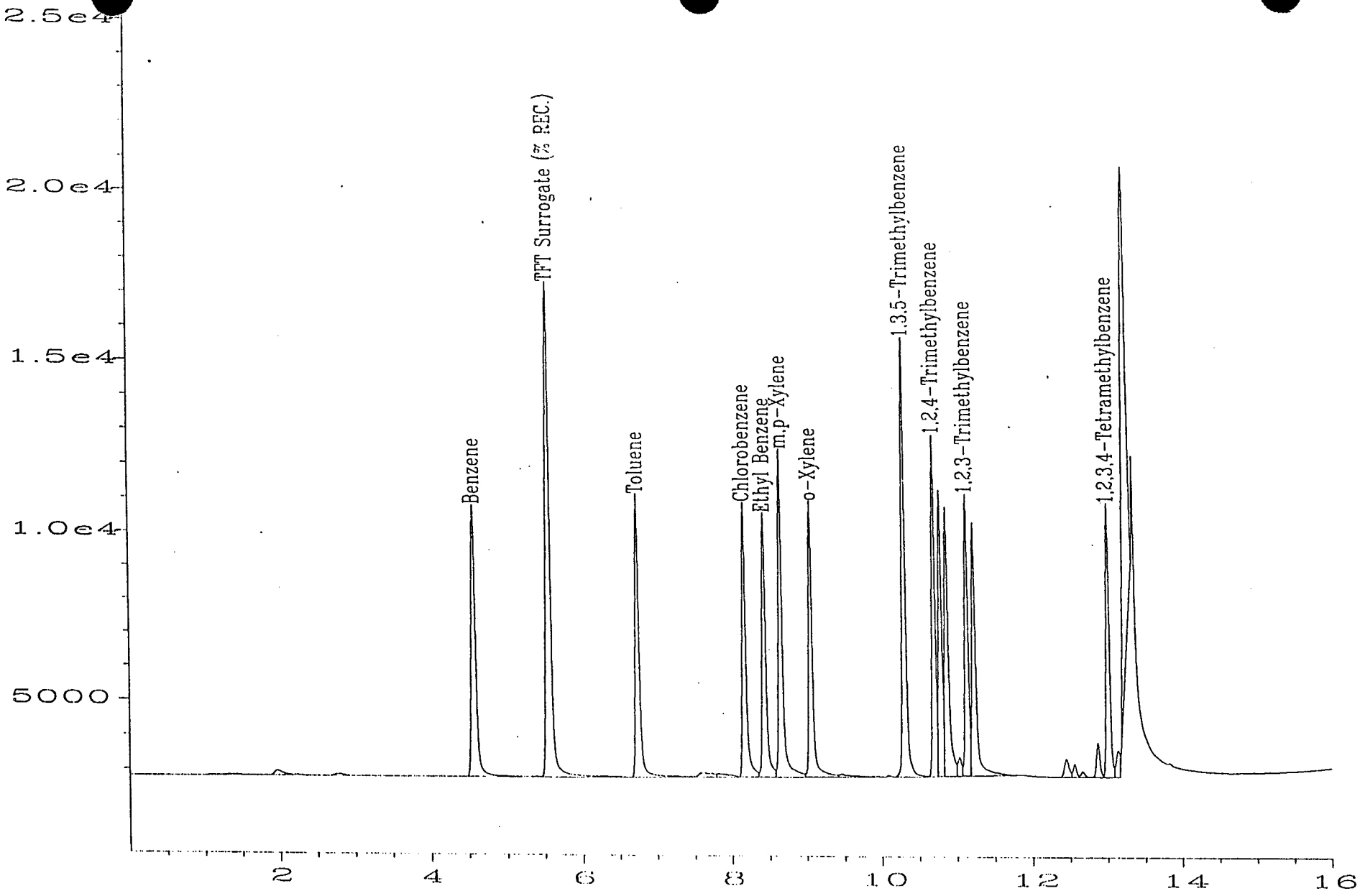
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.9	84.5	71.0-119.0*
Toluene	108-88-3	17.7	88.5	73.0-111.0*
Chlorobenzene	108-90-7	18.2	91.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.6	93.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100.0	75.0-114.0*
o-Xylene	106-42-3 95-47-6	18.3	91.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.8	104.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.7	98.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	22.5	112.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

K. Done
Approved



Sig. 2 in C:\HPCHEM\2\DATA\BX20425\010R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042695	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/26/95	Method	: 602
Date Analyzed	: 4/26/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042610

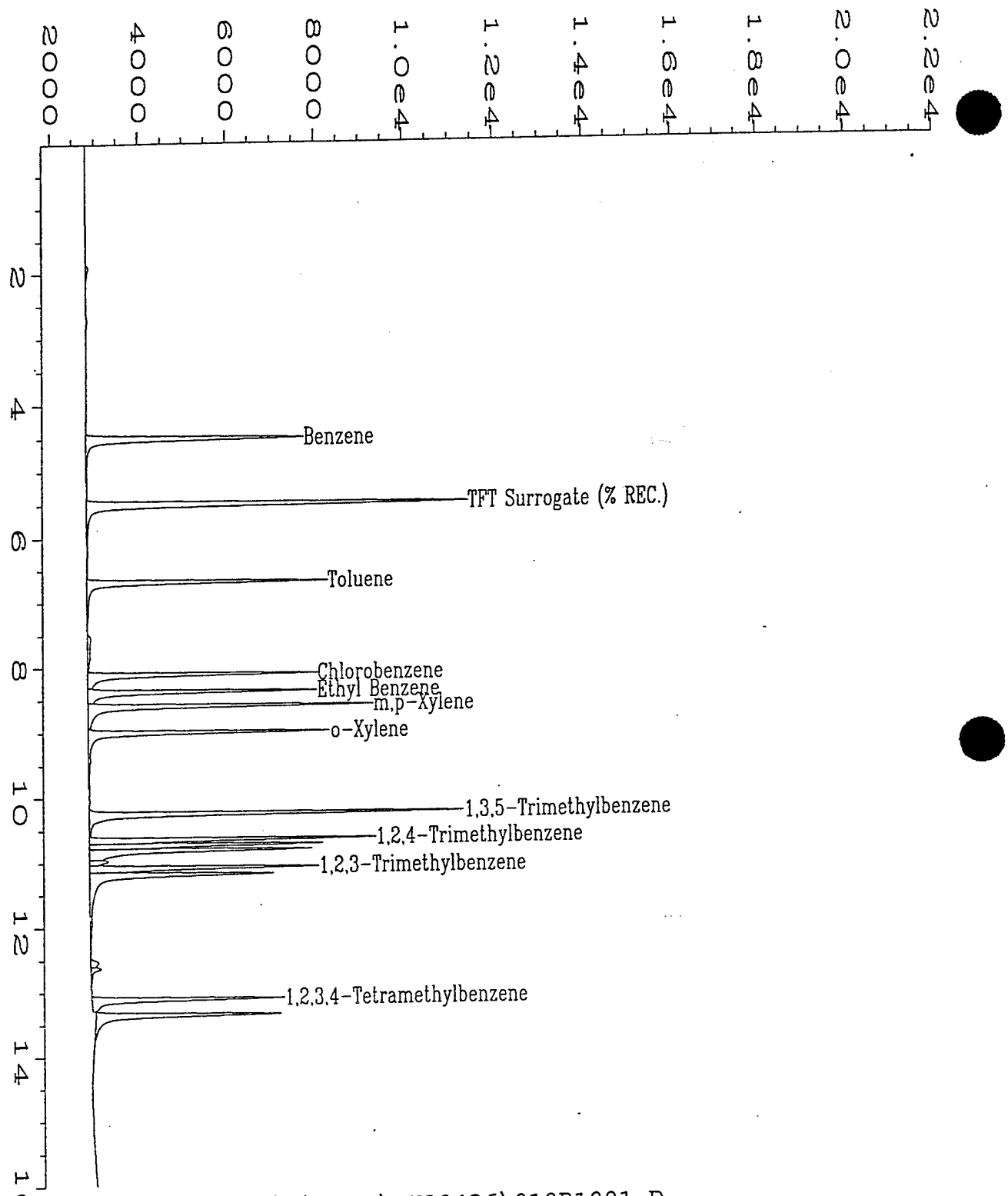
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.3	91.5	71.0-119.0*
Toluene	108-88-3	19.0	95.0	73.0-111.0*
Chlorobenzene	108-90-7	19.4	97	64.0-119.0*
Ethyl Benzene	100-41-4	19.5	97.5	75.0-114.0*
m,p-Xylene	108-38-3	21.4	107	75.0-114.0*
o-Xylene	106-42-3 95-47-6	19.2	96.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	21.7	109	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.3	102	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.5	103	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.7	98.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		104%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20426\010R1001.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : LCS042695
Run Time Bar Code:
Acquired on : 26 Apr 95 02:41 PM
Report Created on: 26 Apr 95 06:59 PM
Last Recalib on : 26 APR 95 02:33 PM
Multiplier : 1
Sample Info : REF # 1667 - New LCS Mix

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20426.MTH
Analysis Method : BX20426.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042695	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/26/95	Method	: 602
Date Analyzed	: 4/26/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042610

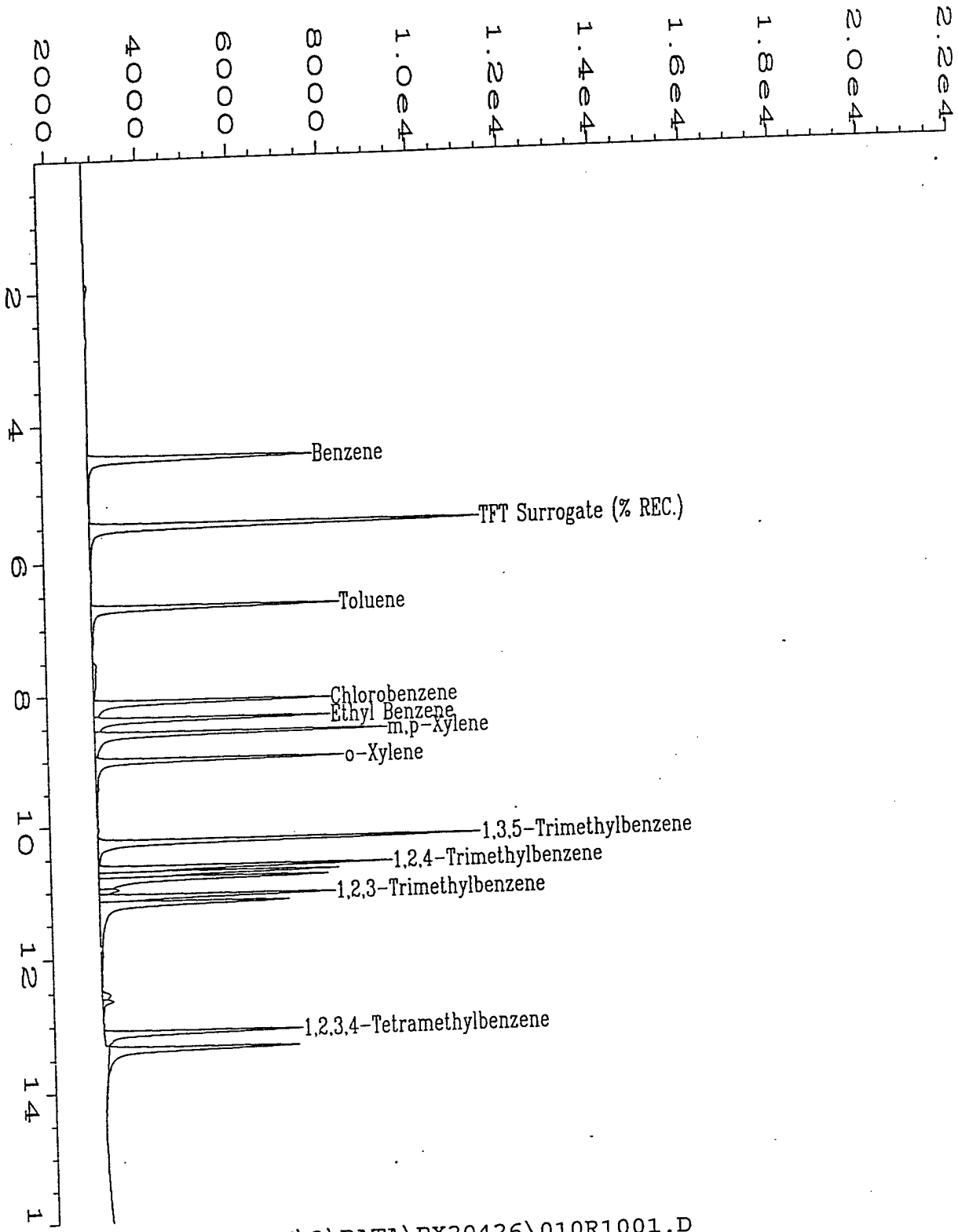
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.3	91.5	71.0-119.0*
Toluene	108-88-3	19.0	95.0	73.0-111.0*
Chlorobenzene	108-90-7	19.4	97	64.0-119.0*
Ethyl Benzene	100-41-4	19.5	97.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	21.4	107	75.0-114.0*
o-Xylene	95-47-6	19.2	96.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	21.7	109	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.3	102	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.5	103	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.7	98.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		104%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20426\010R1001.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : LCS042695
Run Time Bar Code:
Acquired on : 26 Apr 95 02:41 PM
Report Created on: 26 Apr 95 06:59 PM
Last Recalib on : 26 APR 95 02:33 PM
Multiplier : 1
Sample Info : REF # 1667 - New LCS Mix

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20426.MTH
Analysis Method : BX20426.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/12,13/95	Client Project Number	: 722450.26020/SEYMORE
Date Received	: 4/14/95	Lab Project Number	: 95-1217
Date Prepared	: 4/26,27/95	Matrix	: Soil
Date Analyzed	: 4/26,27/95	Method Number	: EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH* mg/Kg	RL* mg/Kg
MB042695	METHOD BLANK	100%	U	0.1
X05753	MW-6 15-16'	86%	U	0.13
X05755	MW-8 11-12'	97%	U	0.13
X05756	MW-9 15-16'	81%	U	0.12
X05757	MW-10 10-11'	88%	U	0.13
X05759	MW-11 11.5 13.5	83%	U	0.13
X05760C	SS-1 11.5-13.5	**	1000 E	5.5
X05760G	SS-1 11.5-13.5 DUP	**	6600 E	5.5
X05762	SS-1 16'-18'	94%	U	0.11
X05762 DUP	SS-1 16'-18'	86%	U	0.11
X05763	SS-2 11.5-13.5	105%	1.9	0.11
X05764C	SS-3 9-11	**	5200 E	5.4
X05764G	SS-3 9-11 DUP	**	2300 E	5.4

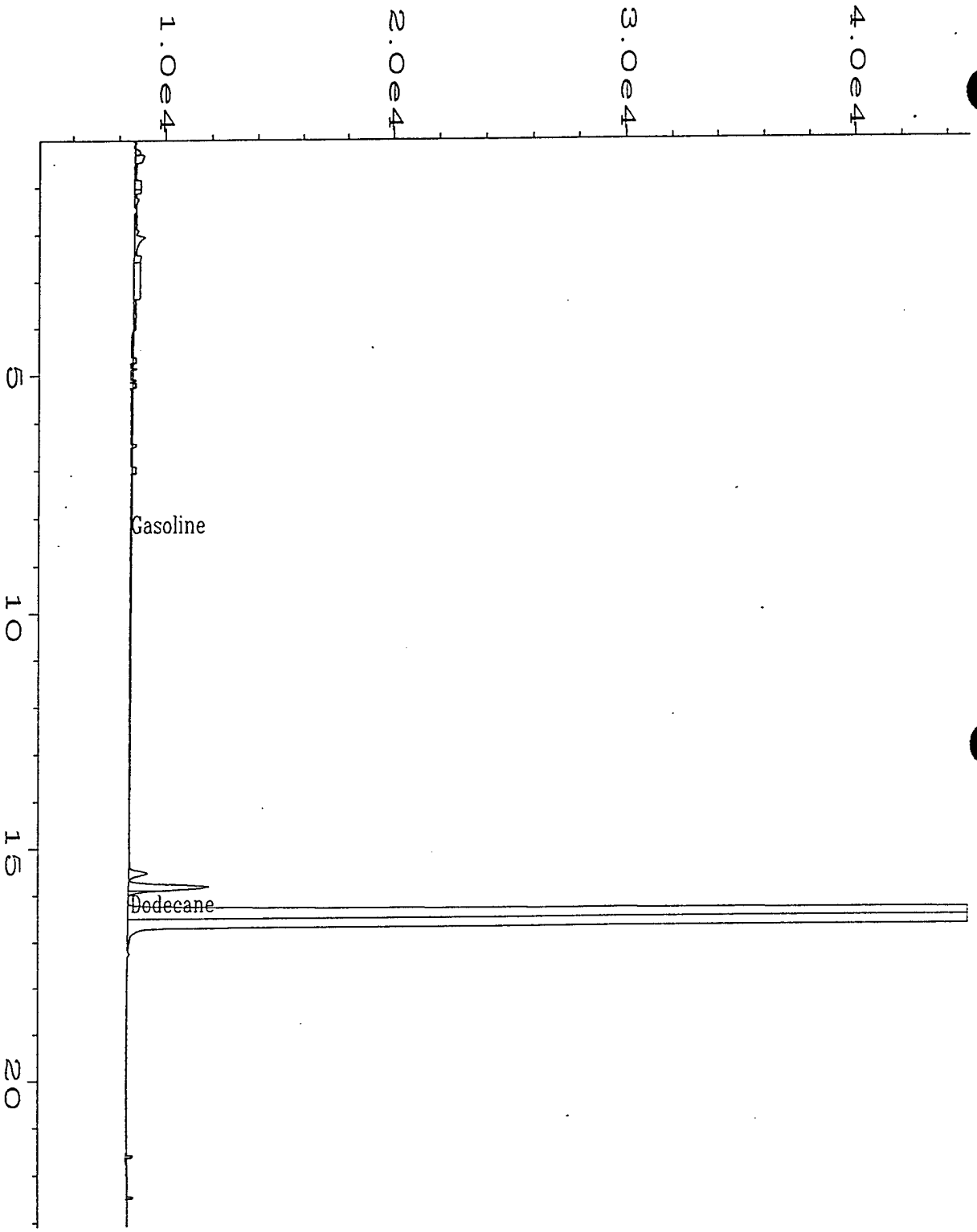
QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH found in blank also.
E = Extrapolated value.
RL = Reporting Limit.
* = Based on dry-weight.
** = Unable to separate surrogate from analyte.

Analyst

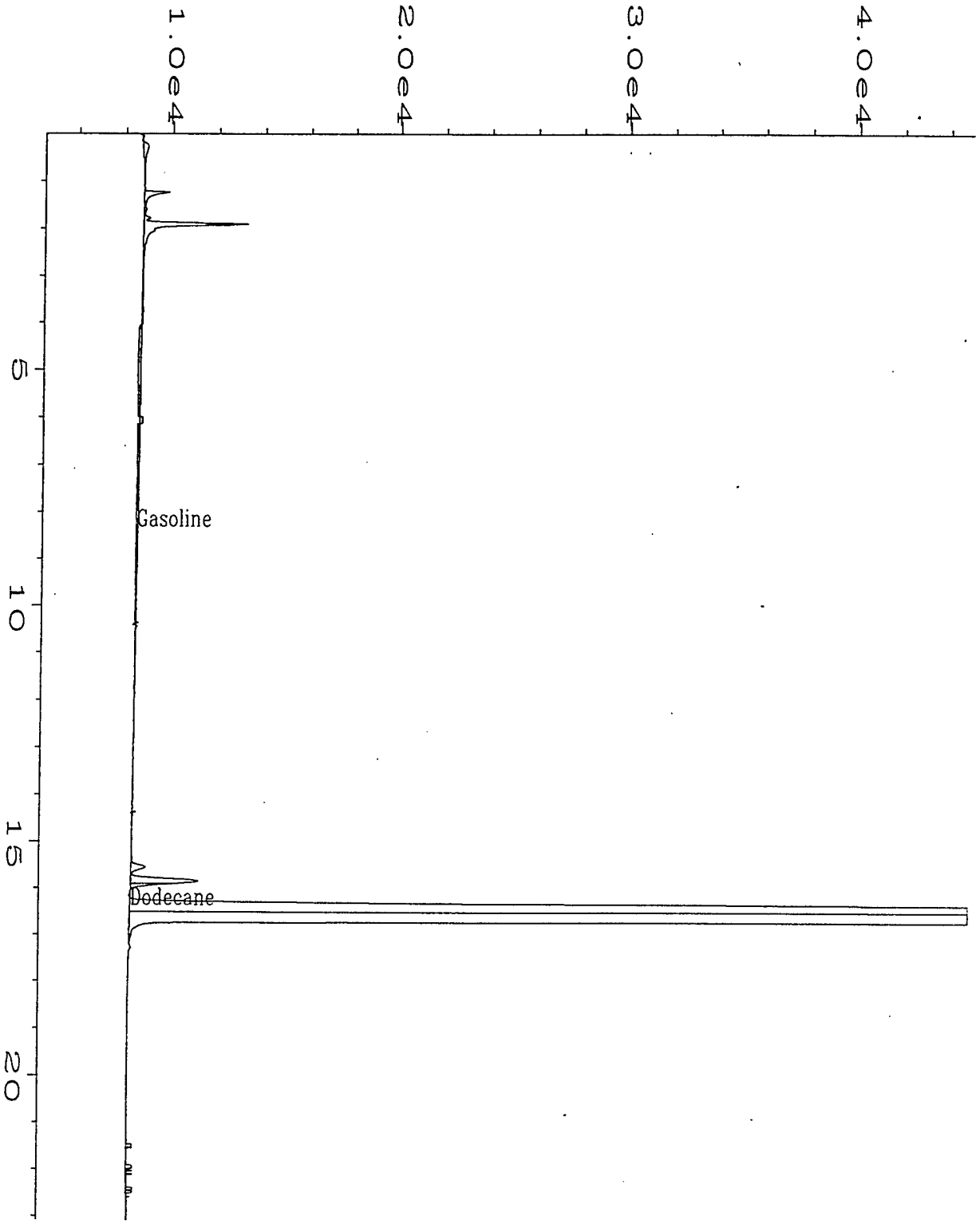
Approved

TVH1217.XLS



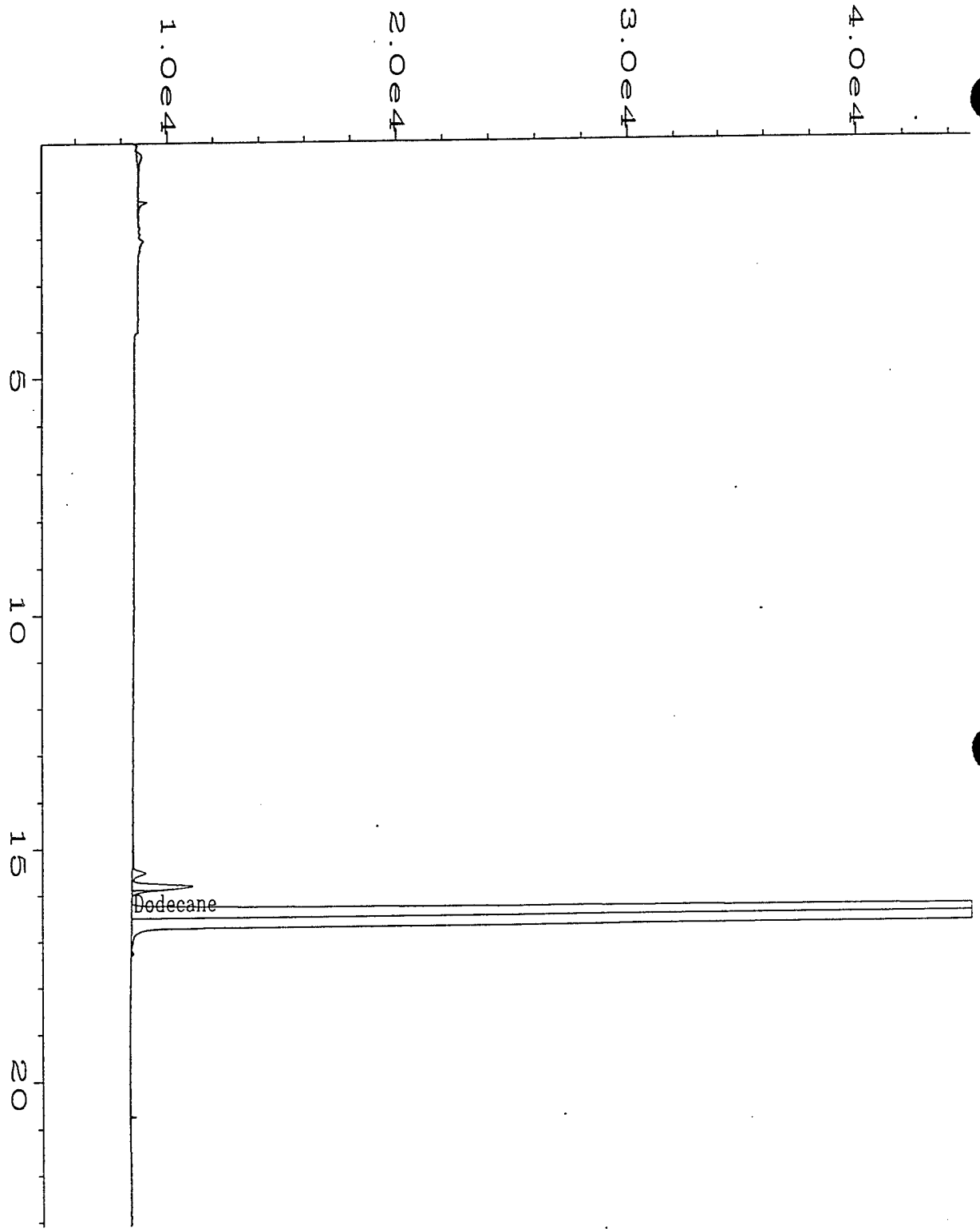
Data File Name : C:\HPCHEM\1\DATA\TVH0426\009F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : MB042695
Run Time Bar Code:
Acquired on : 26 Apr 95 06:46 PM
Report Created on: 26 Apr 95 07:12 PM
Last Recalib on : 26 APR 95 06:00 PM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted]M
Analysis Method : TVH042[redacted]T
Sample Amount : 0
ISTD Amount :

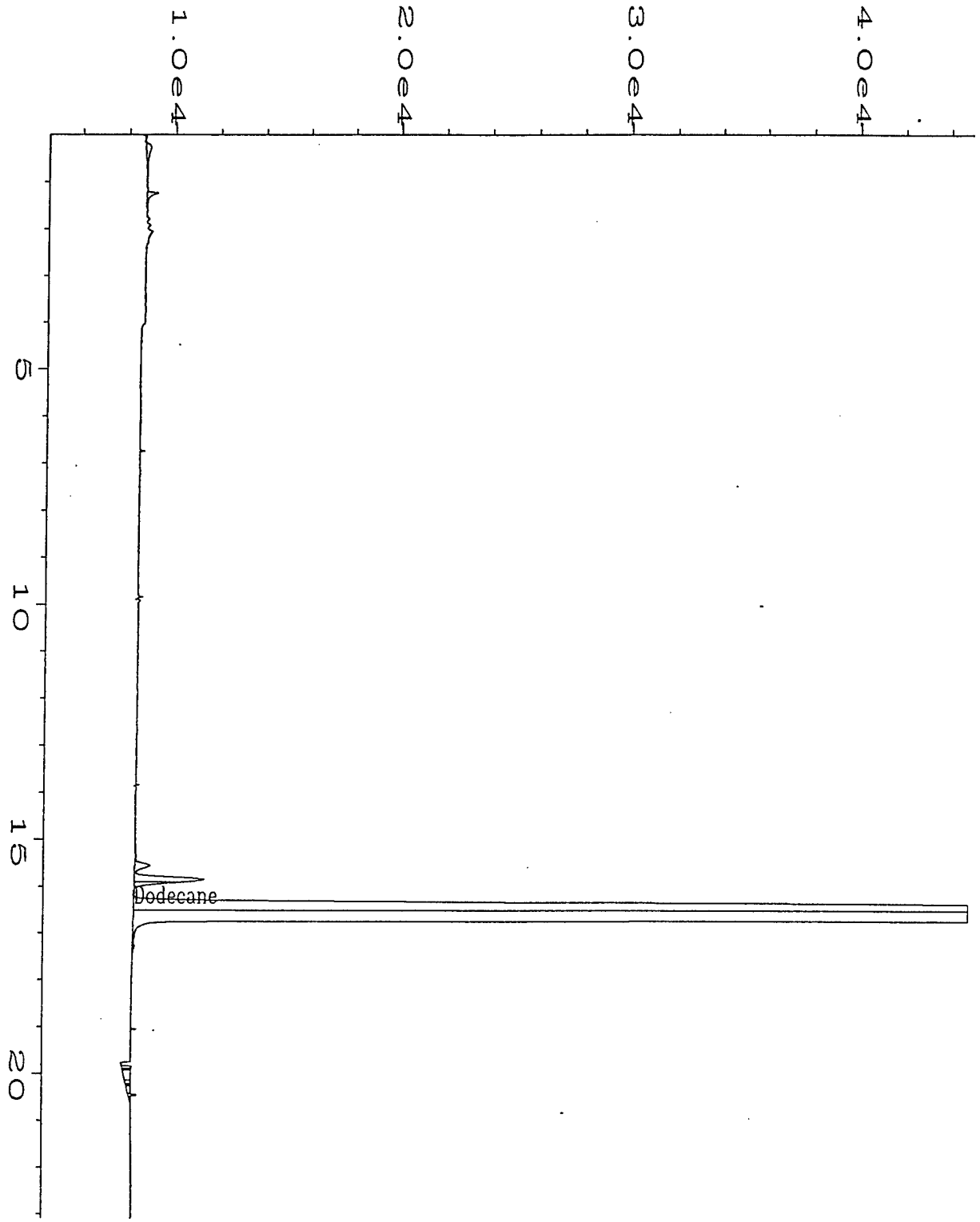


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Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 10
Sample Name	: X05753;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 26 Apr 95 07:22 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 27 Apr 95 10:27 AM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

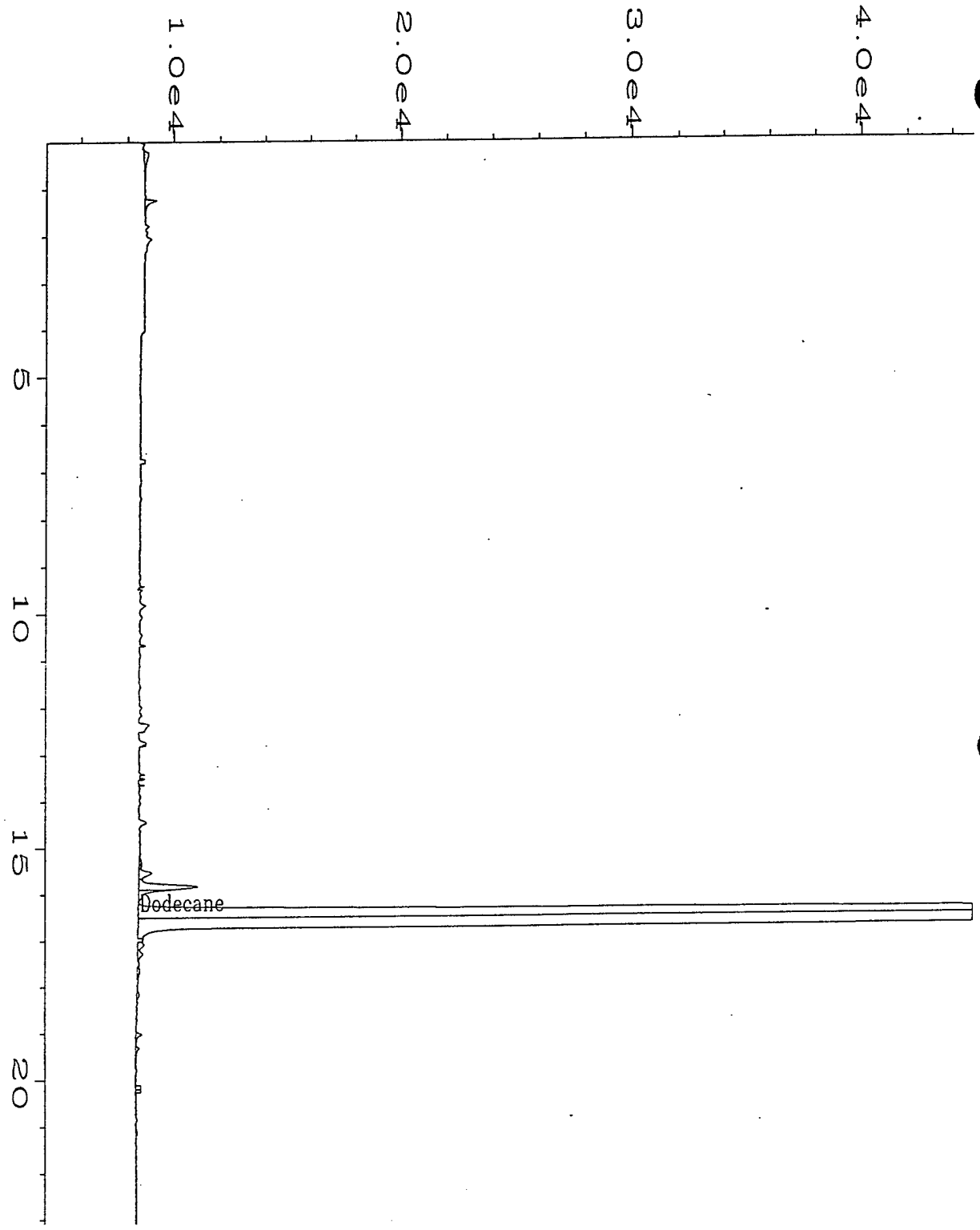
MW-6 15-16'



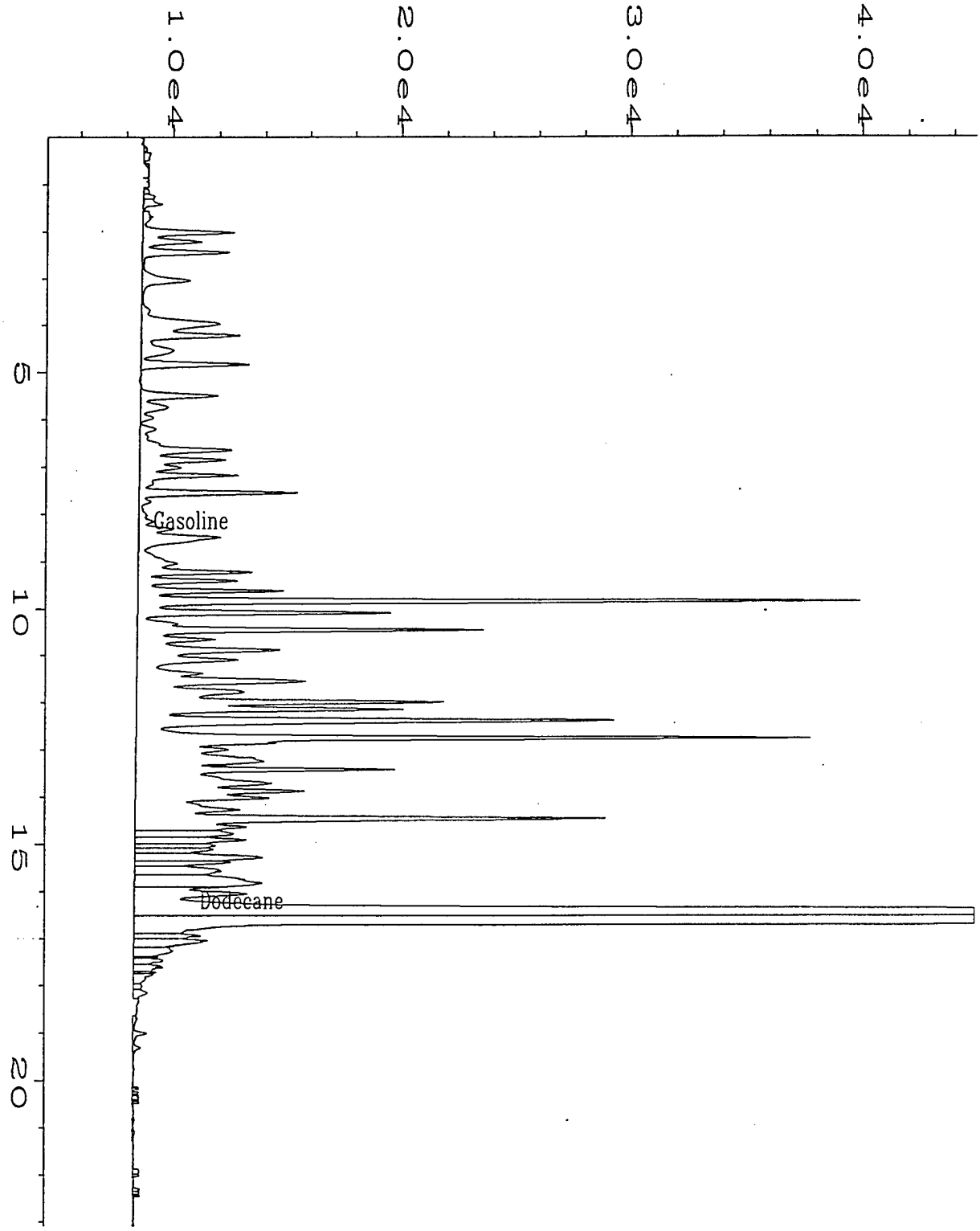
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\011F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 11
Sample Name	: X05755;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 26 Apr 95 07:58 PM	Instrument Method	: TVH1BASE.M
Report Created on	: 27 Apr 95 10:20 AM	Analysis Method	: TVH041[illegible]M
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-8 11-12' SOIL		



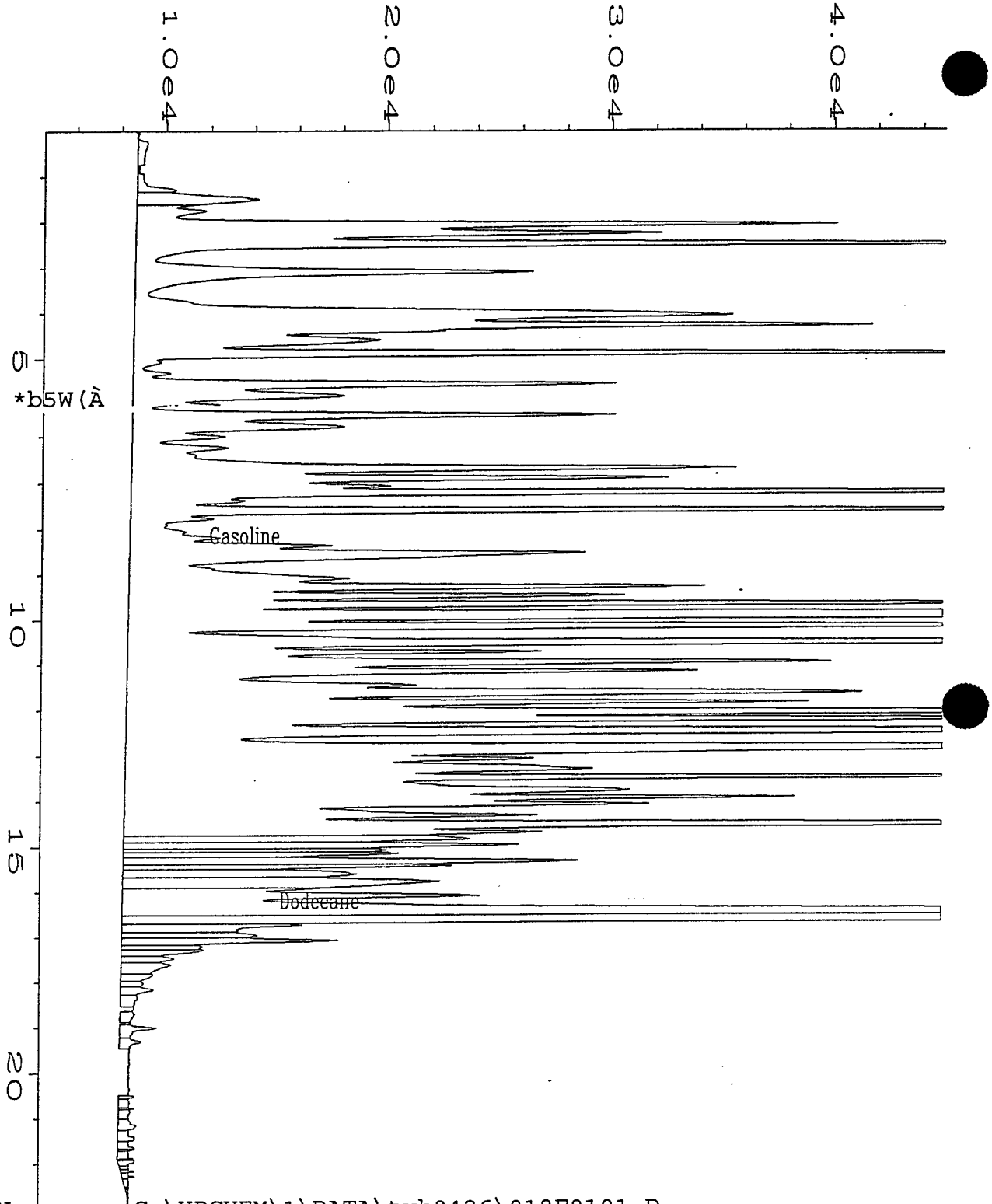
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Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 12
Sample Name	: X05756;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 26 Apr 95 08:34 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 27 Apr 95 10:20 AM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-9 15-16' SOIL		



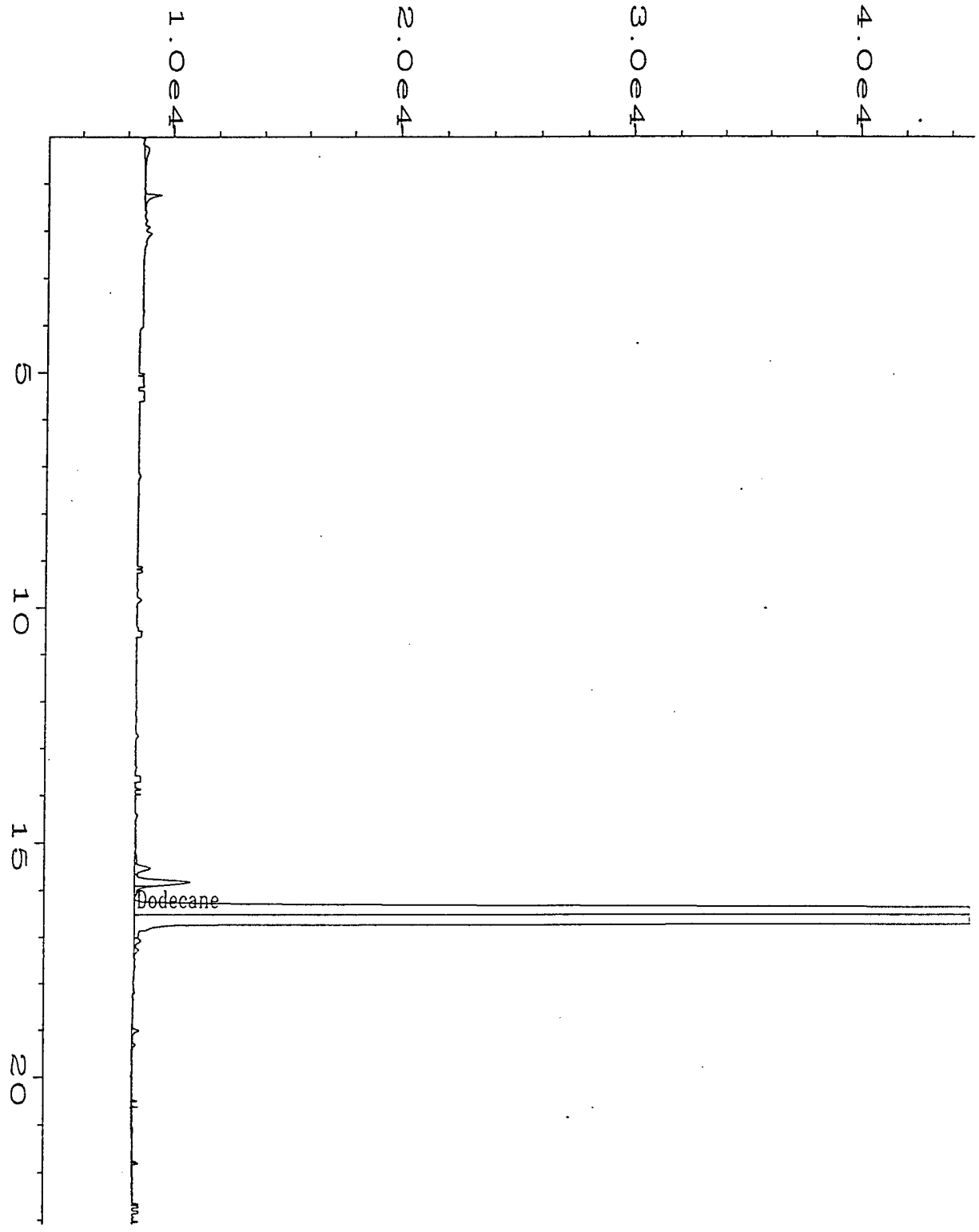
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Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 14
Sample Name	: X05759;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 26 Apr 95 09:46 PM	Instrument Method	: TVH1BASE.M
Report Created on	: 27 Apr 95 10:20 AM	Analysis Method	: TVH042[redacted]T
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-11 11.5-13.5 SOIL		



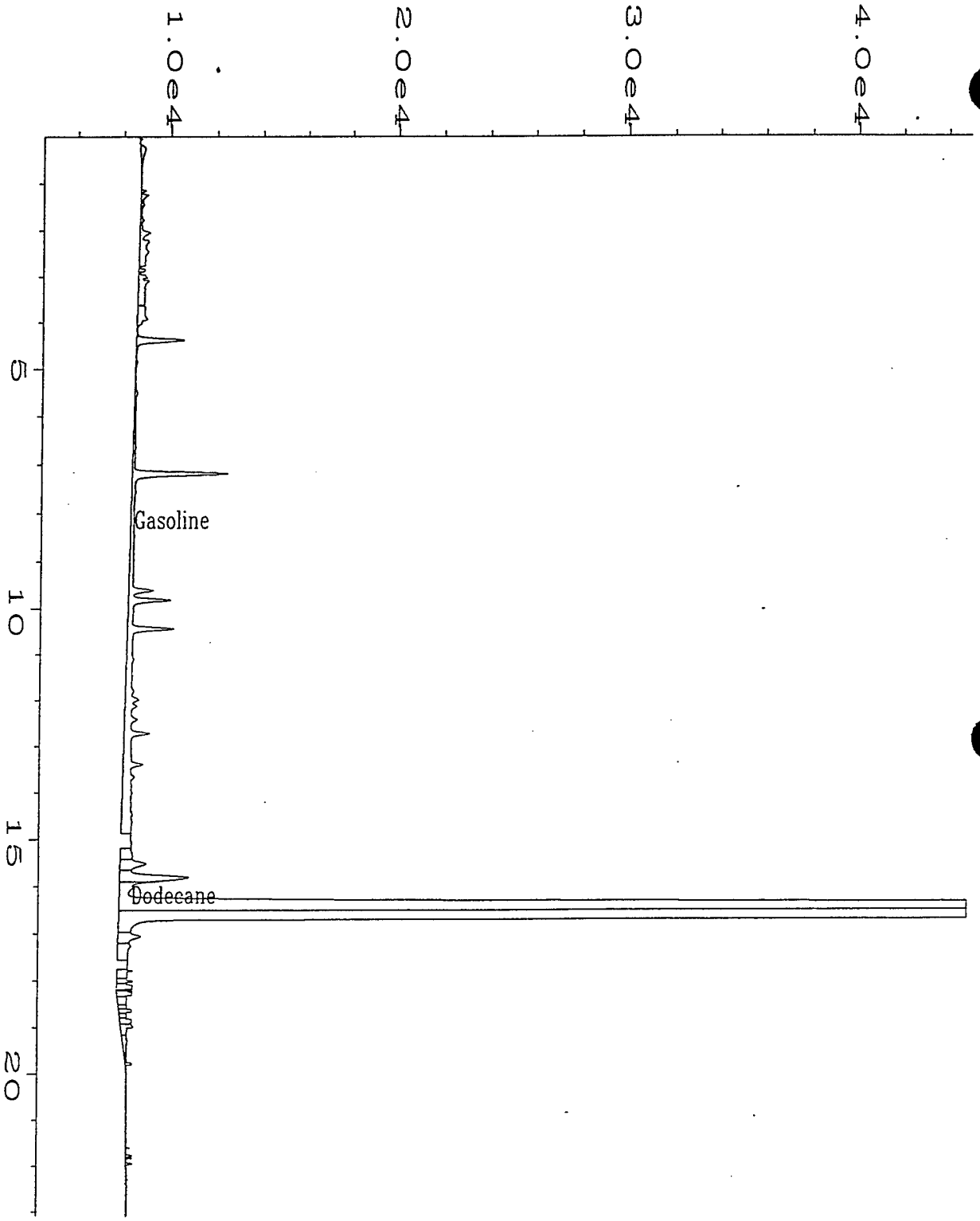
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\017F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 17
Sample Name	: X05760C;50;.1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 26 Apr 95 11:34 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 27 Apr 95 10:21 AM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\018F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 18
Sample Name	: X05760G;50;.1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Apr 95 00:10 AM	Instrument Method	: TVH1BA[illegible]M
Report Created on	: 27 Apr 95 10:21 AM	Analysis Method	: TVH0426[illegible]MT
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 DUP SOIL		

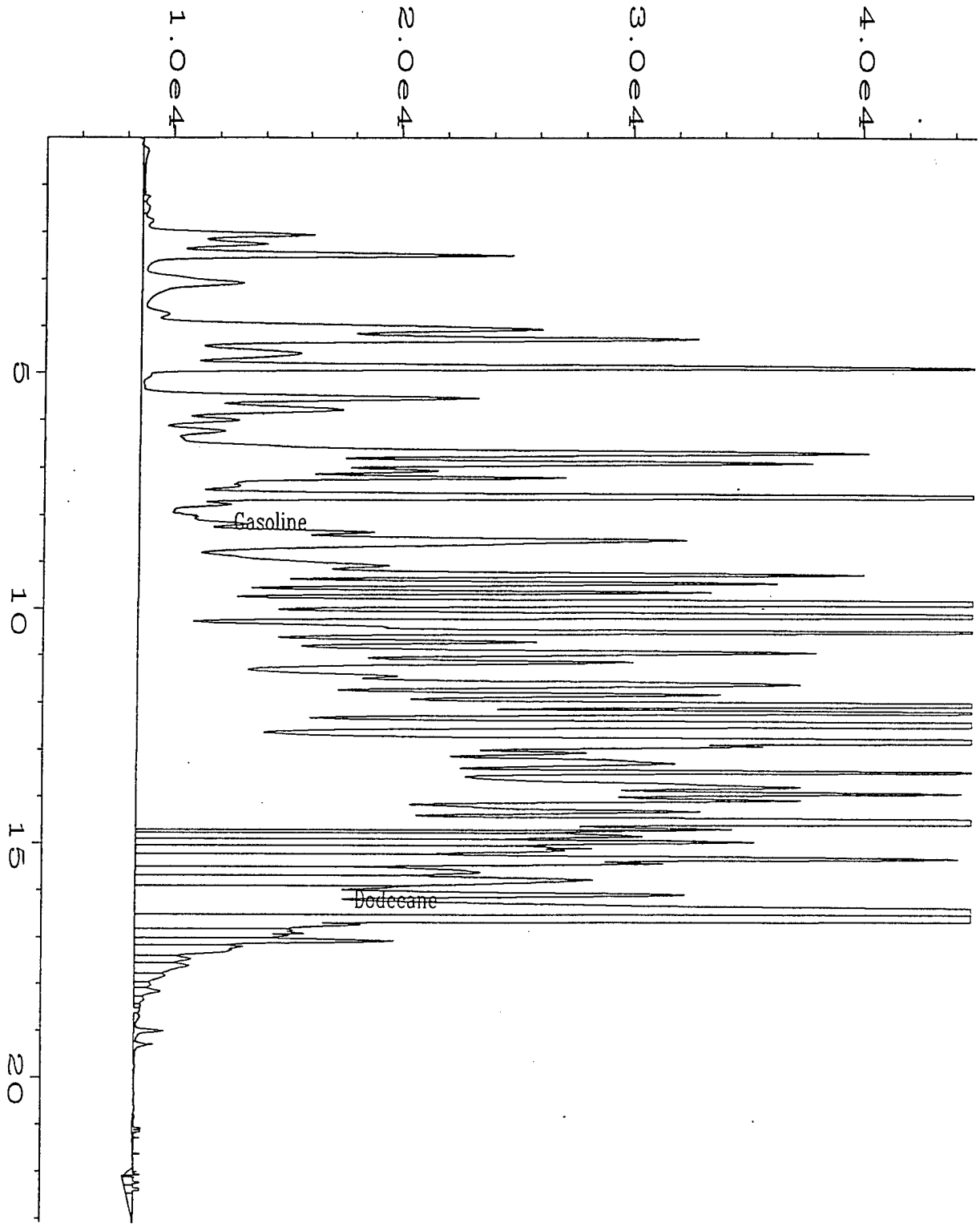


Data File Name	: C:\HPCHEM\1\DATA\tvh0426\019F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 19
Sample Name	: X05762;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Apr 95 00:46 AM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 27 Apr 95 10:21 AM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 16'-18' SOIL		

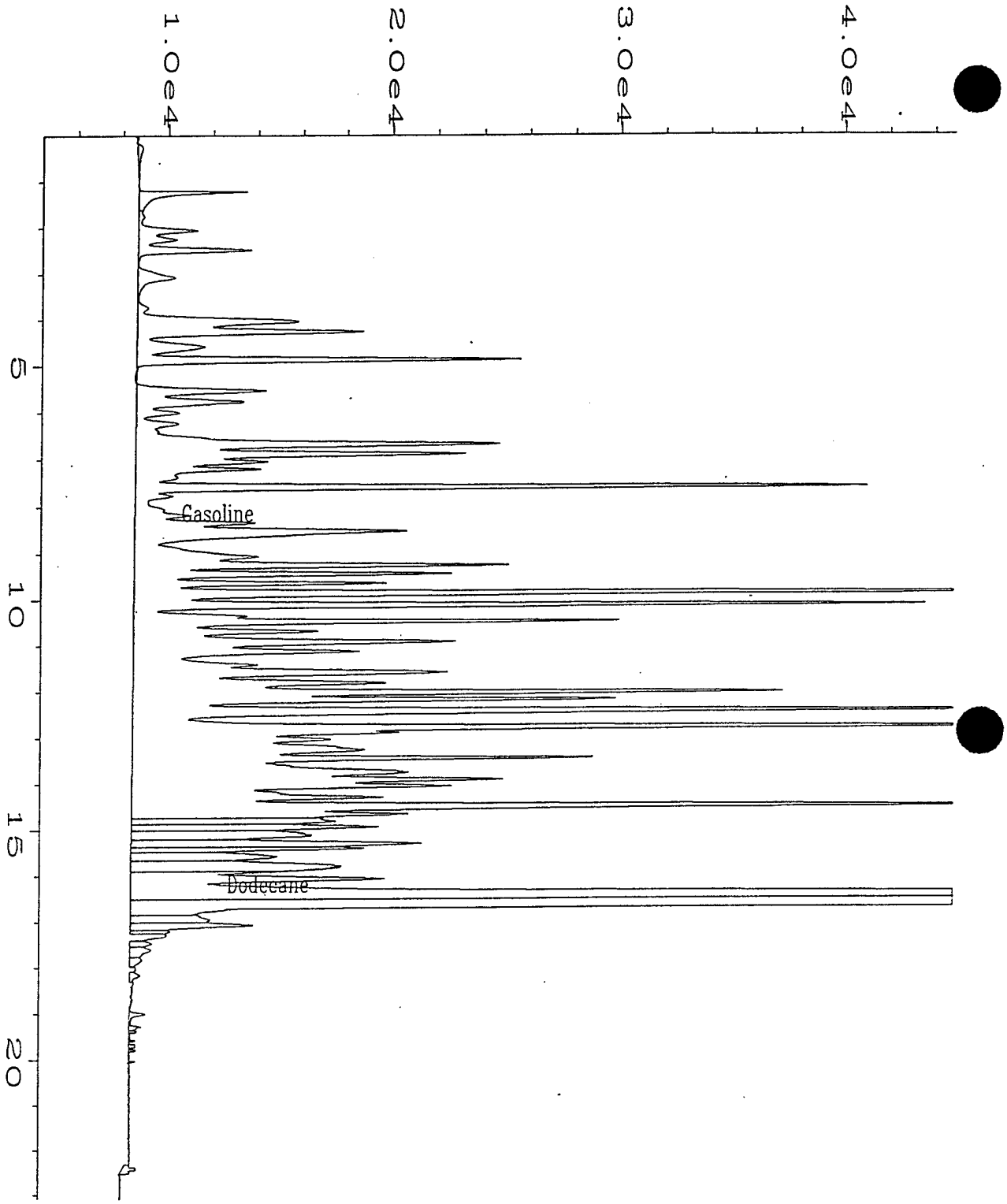


Data File Name : C:\HPCHEM\1\DATA\tvh0426\021F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X05763;1;5
Run Time Bar Code:
Acquired on : 27 Apr 95 01:58 AM
Report Created on: 27 Apr 95 10:22 AM
Last Recalib on : 26 APR 95 06:00 PM
Multiplier : 1
Sample Info : PROJECT # 95-1217 CLIENT # SS-2 11.5-13.5 SOIL

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BAS[illegible]M
Analysis Method : TVH042[illegible]T
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\022F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 22
Sample Name	: X05764C;50;.1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Apr 95 02:34 AM	Instrument Method	: TVH1BASE.MTH
port Created on	: 27 Apr 95 10:22 AM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-3 9-11 SOIL		



Data File Name : C:\HPCHEM\1\DATA\tvh0426\023F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : X05764G;50;.1
Run Time Bar Code:
Acquired on : 27 Apr 95 03:10 AM
Report Created on: 27 Apr 95 10:22 AM
Last Recalib on : 26 APR 95 06:00 PM
Multiplier : 50
Sample Info : PROJECT # 95-1217 CLIENT # SS-3 9-11 DUP SOIL

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted]M
Analysis Method : TVH042[redacted]
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

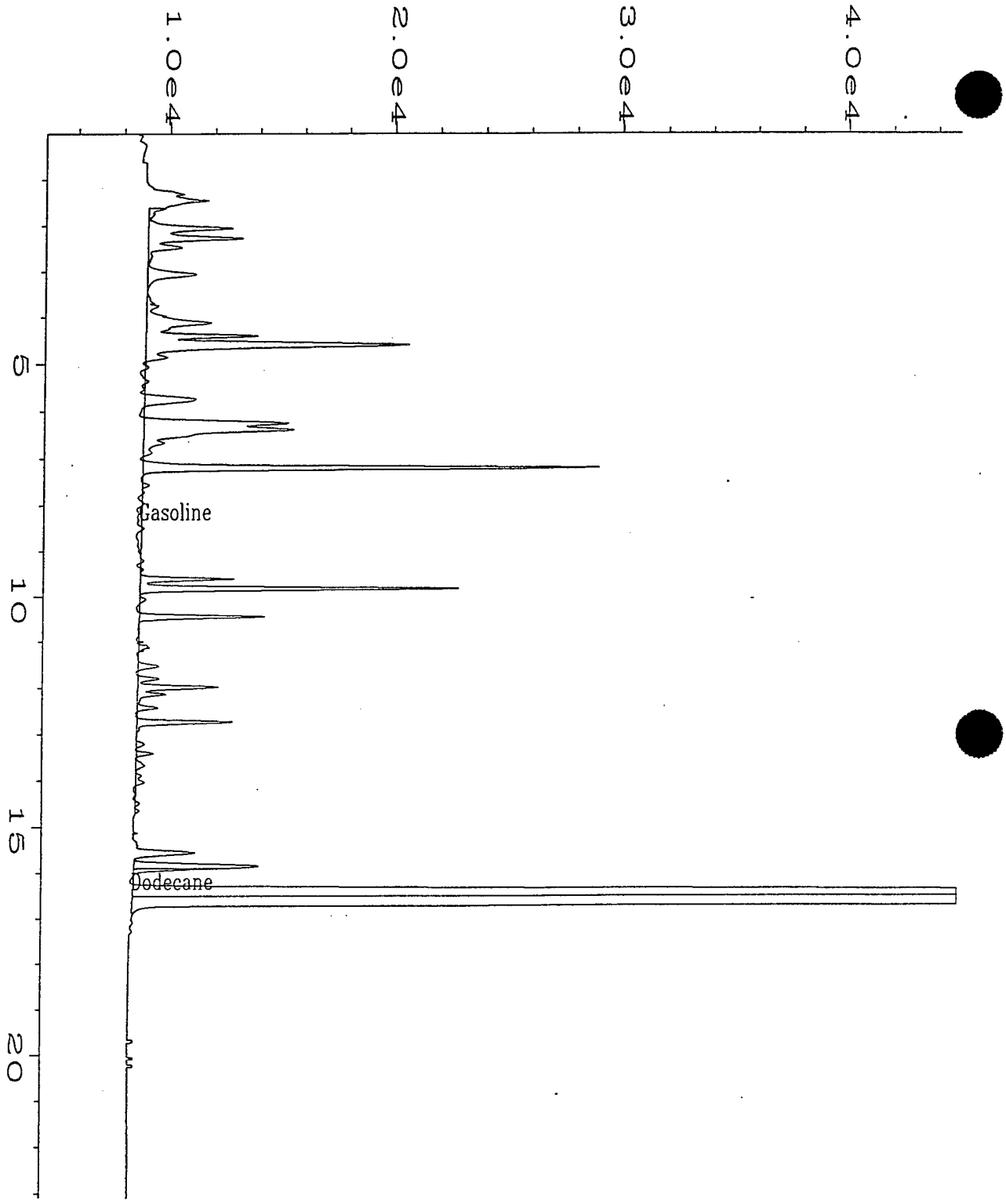
LCS Number	: LCS042695	Matrix	: SOIL
Date Prepared	: 4/26/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 4/26/95		
Sequence Number	: TVH8		

Compound Name	Theoretical Concentration mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	5.70	114%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\1\DATA\TVH0426\008F0101.D
Operator : Dawn N. Guildner
Instrument : TVH
Sample Name : LCS042695
Run Time Bar Code:
Acquired on : 26 Apr 95 06:10 PM
Report Created on: 26 Apr 95 06:47 PM
Last Recalib on : 26 APR 95 06:00 PM
Multiplier : 1

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.M
Analysis Method : TVH042[illegible]
Sample Amount : 0
ISTD Amount :

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-11 11.5 13.5	Client Project No.	: 722450.26020
Lab Sample No.	: X05759	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 4/14/95	Matrix	: SOIL
Date Prepared	: 4/27/95	Method Blank	: MB042695
Date Analyzed	: 4/27/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	2.10	105%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Gasoline	2.00	1.76	88%	18	50	60-140

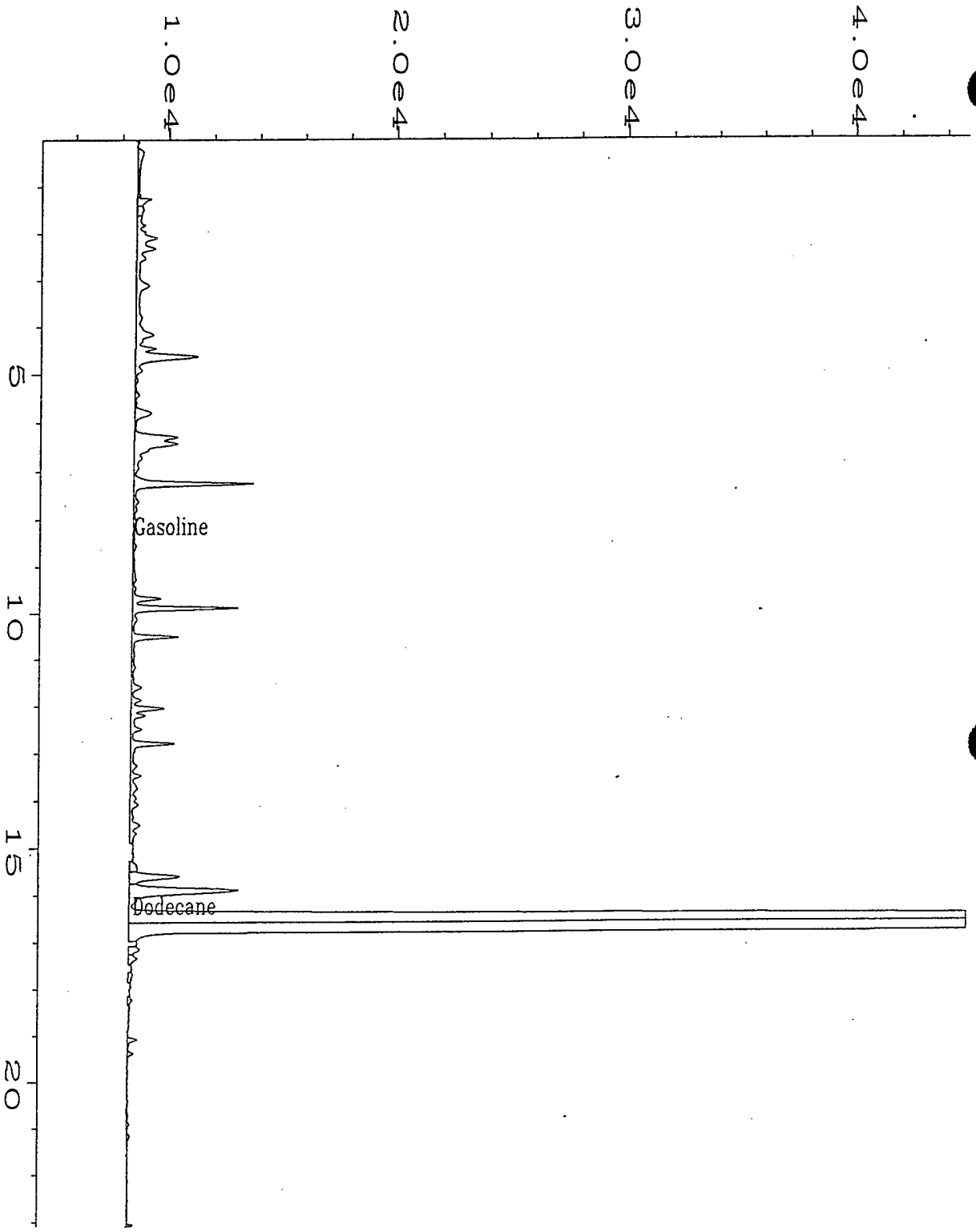
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

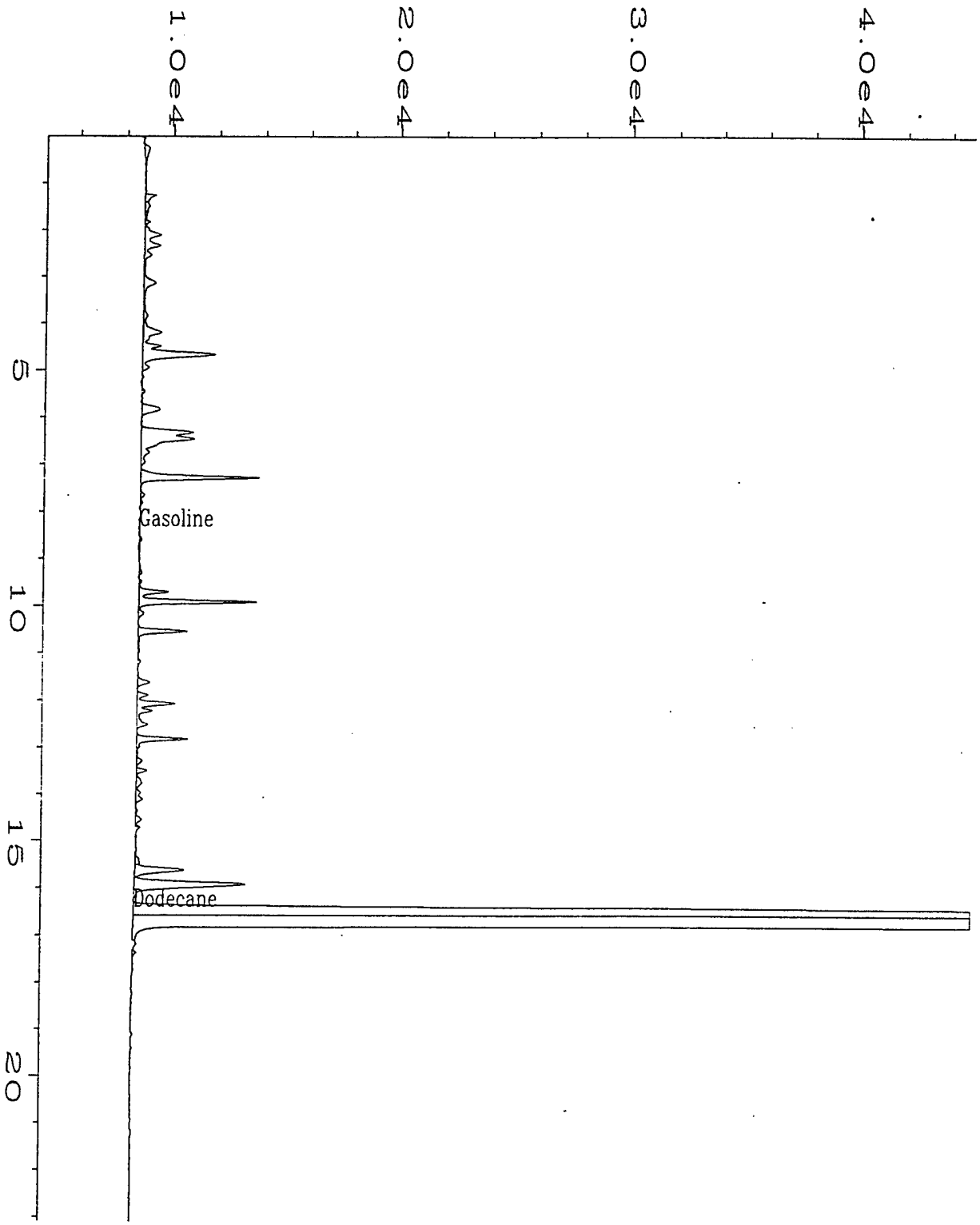
NA = Not analyzed/not applicable.

MJM 5/3/95

Comments:



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\037F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 37
Sample Name	: X05759 MS	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Apr 95 05:02 PM	Instrument Method	: TVH1BA[redacted]M
Report Created on	: 28 Apr 95 08:00 AM	Analysis Method	: TVH042[redacted]
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\TVH0426\033F0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TVH	Vial Number	: 33
Sample Name	: X05759 MSD	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Apr 95 02:38 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 27 Apr 95 03:14 PM	Analysis Method	: TVH0426.MTH
Last Recalib on	: 26 APR 95 06:00 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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TOTAL EXTRACTABLE HYDROCARBONS (TEH)
JET FUEL

Date Sampled	: 4/12,13/95	Client Project Number	: 722450.26020/SEYMORE
Date Received	: 4/14/95	Lab Project Number	: 95-1217
Date Prepared	: 4/17,21/1995	Matrix	: Soil
Date Analyzed	: 4/19,20,24/95	Method Number	: 3500/Mod. 8015

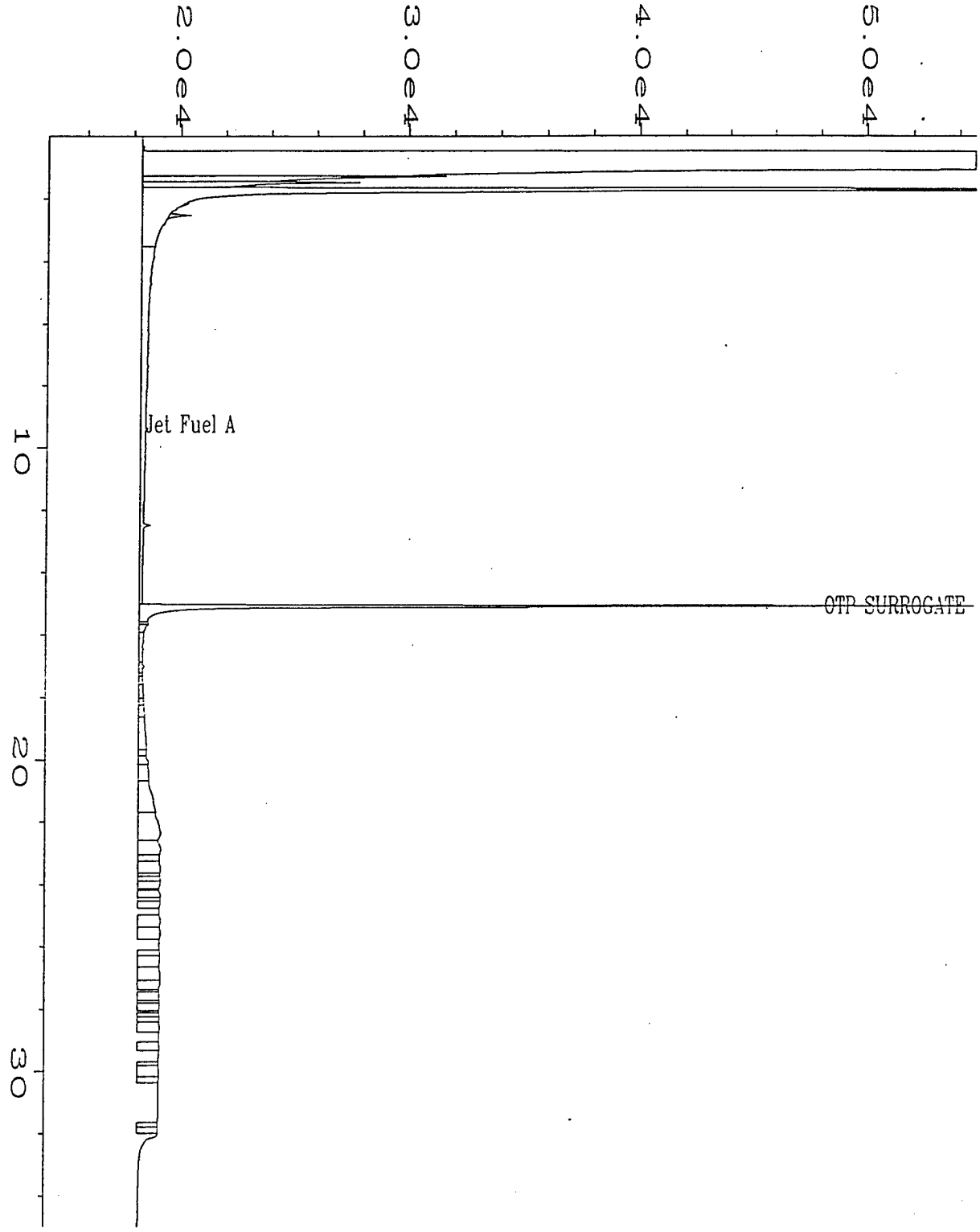
Evergreen Sample #	Client Sample #	OTP Surrogate % Recovery	TEH* Jet Fuel mg/Kg	RL* mg/Kg
SB041795	SOIL METHOD BLANK	97%	U	10
X05753	MW-6 15-16'	85%	U	13
X05755	95-MW-8 11-12'	88%	U	13
X05756	MW-915-16'	90%	U	12
X05757	MW-10 10-11'	95%	U	13
X05759	MW-11 11.5-13.5	87%	U	13
X05760 D	SS-1 11.5-13.5	**	2600	110
X05760 H	SS-1 11.5-13.5 DUP	**	3200	110
X05762	SS-1 16'-18'	90%	U	11
X05763	SS-2 11.5-13.5	84%	U	11
X05764	SS-3 9-11	**	4100	110
SB042195	SOIL METHOD BLANK	100%	U	10
X05764 DUP	SS-3 9-11	118%	4800	11

OTP Soil Surrogate % Recovery limits: 60% - 118%

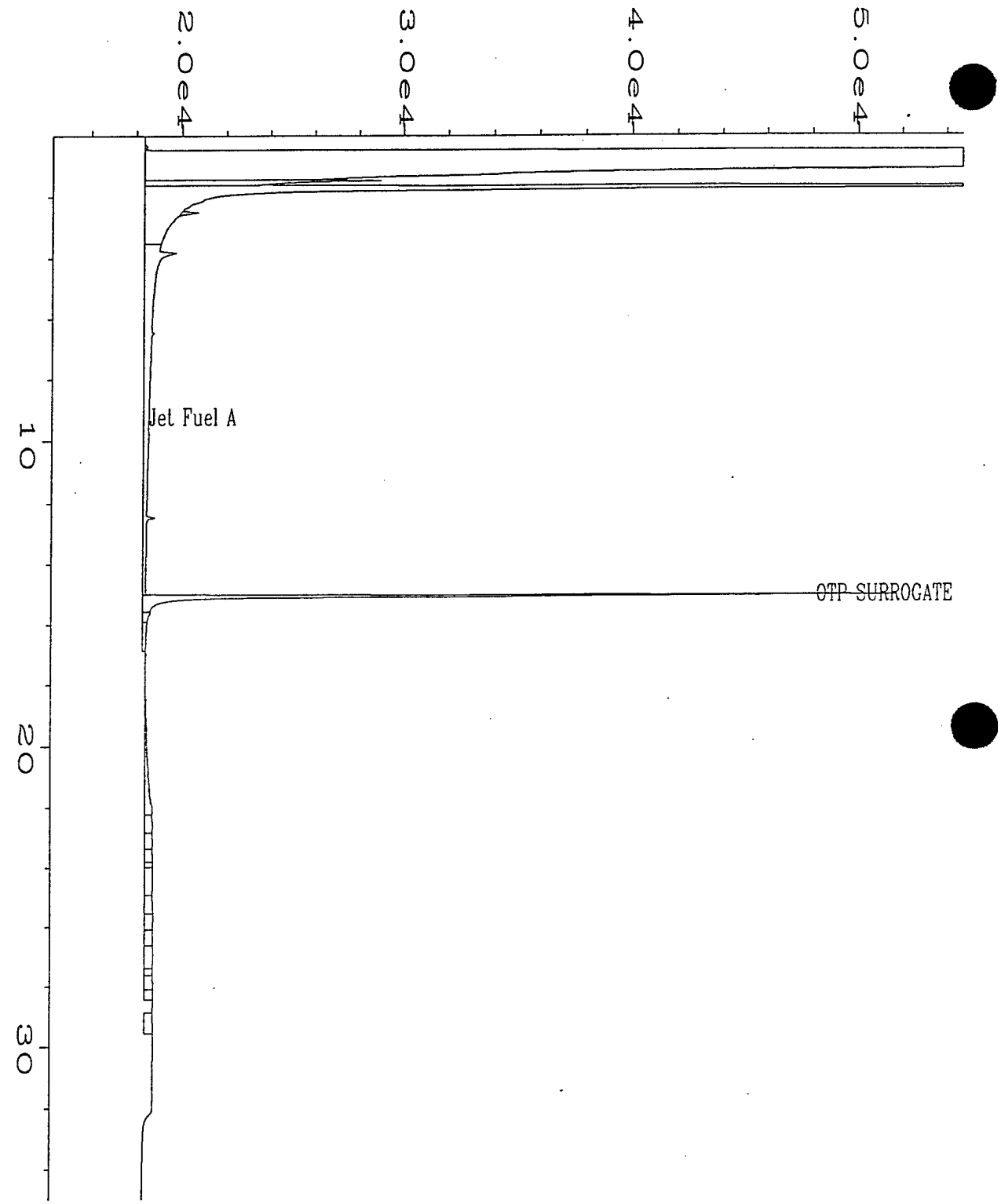
QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
RL = Reporting Limit
** = Diluted out.
* = Based on dry weight.

Analyst

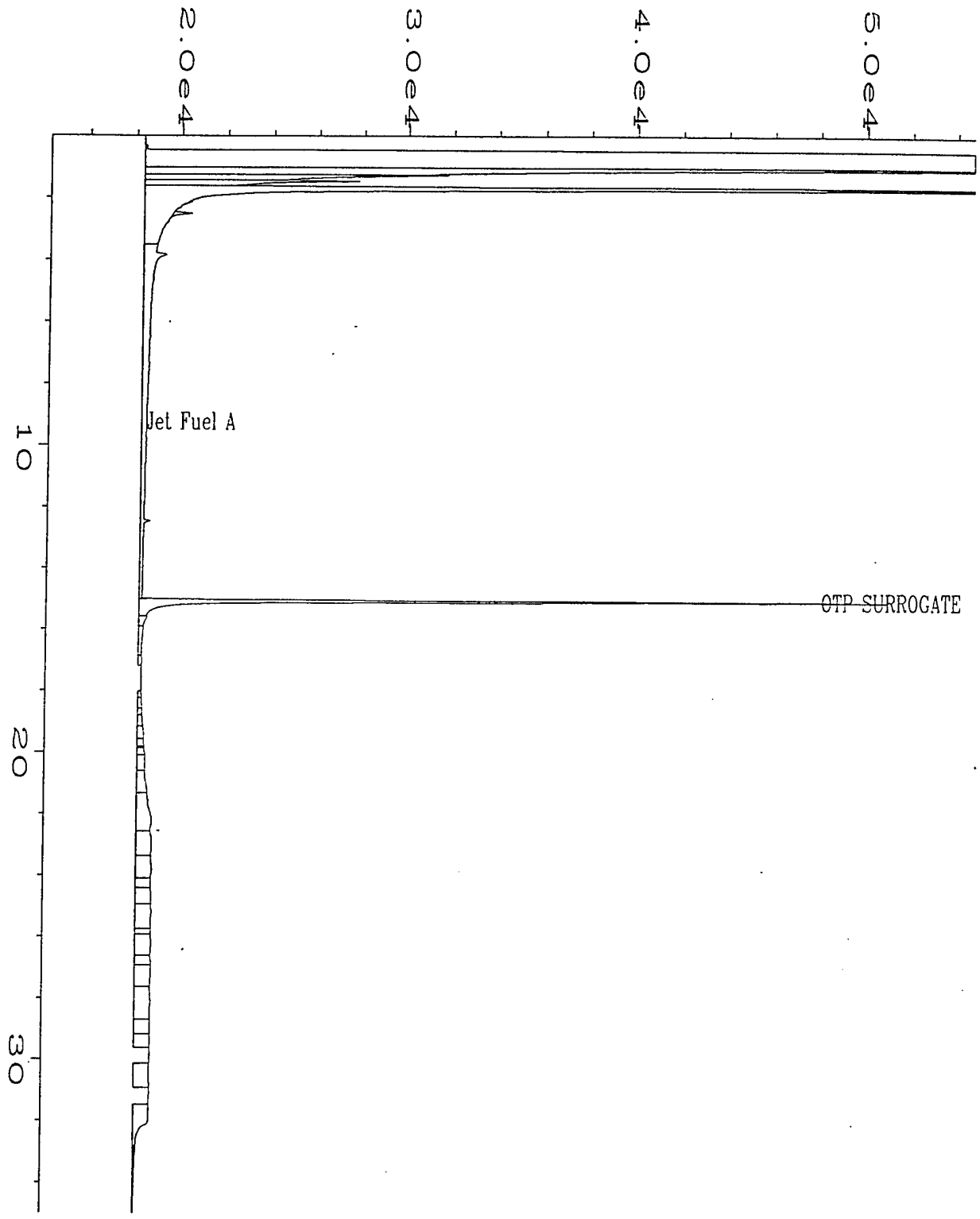
Approved



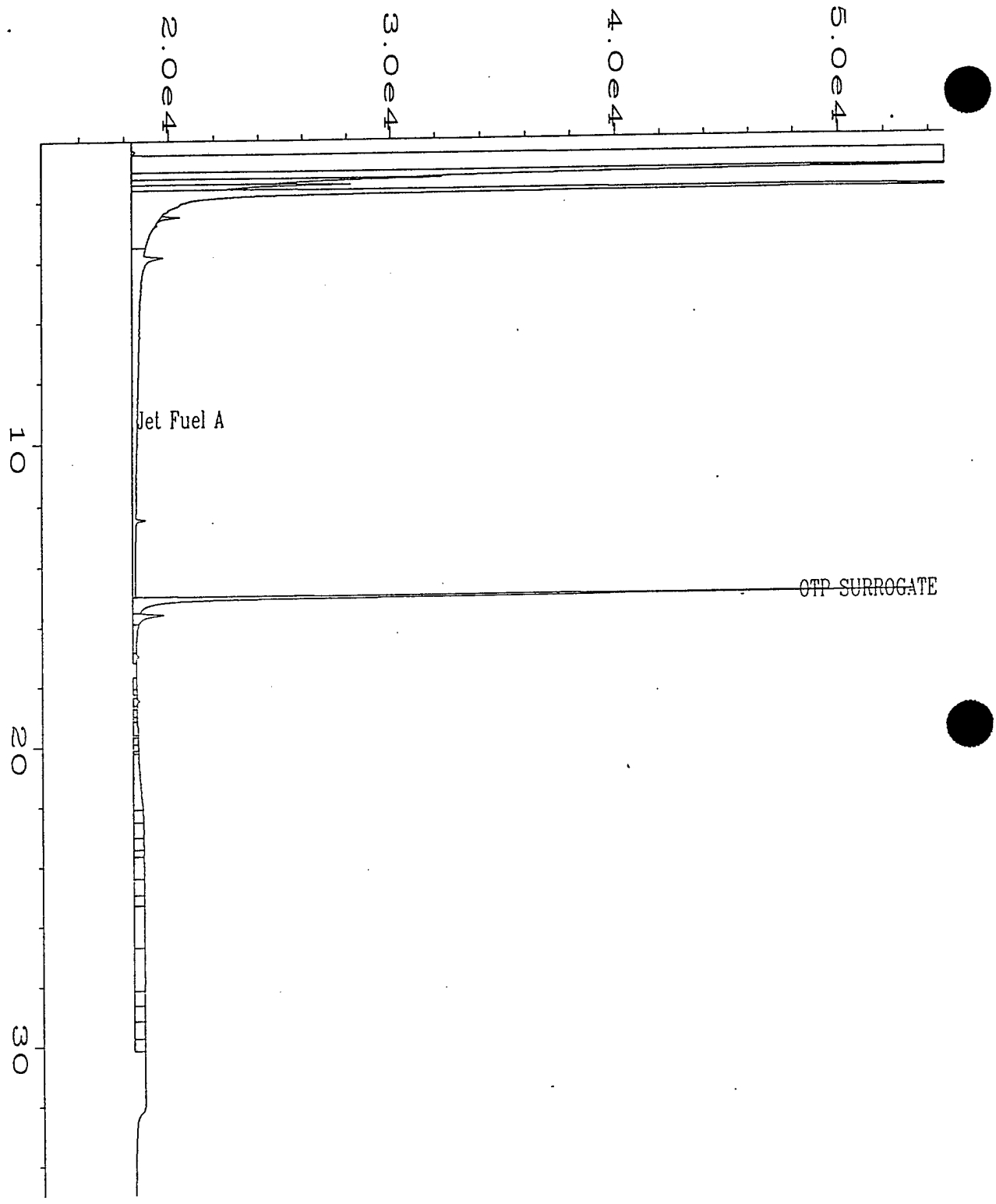
Data File Name	: C:\HPCHEM\2\DATA\JET0418\020R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 20
Sample Name	: SB041795	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 01:26 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:17 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



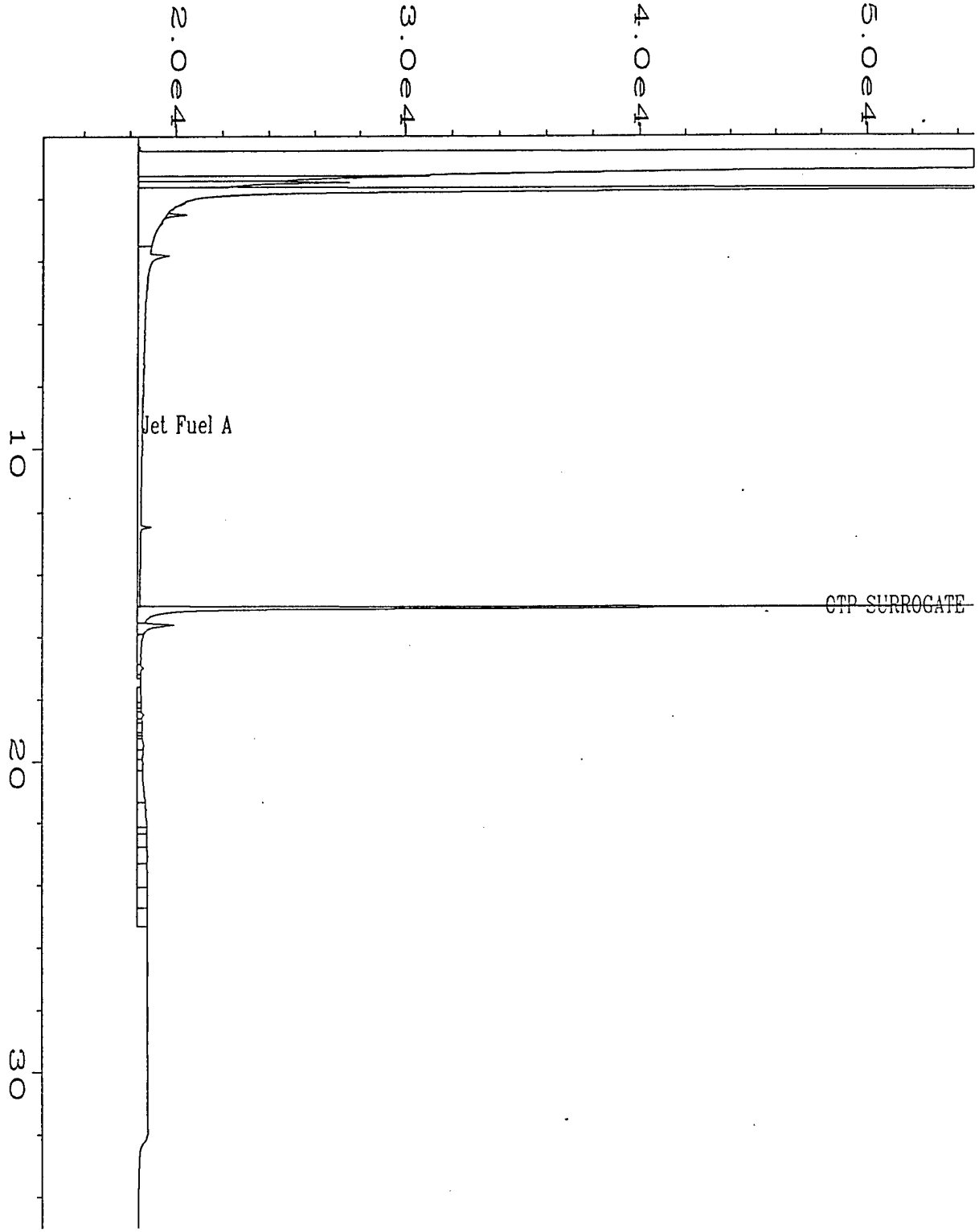
Data File Name	: C:\HPCHEM\2\DATA\JET0418\025R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 25
Sample Name	: X05753 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 05:17 AM	Instrument Method	: FID1B[redacted].M
Report Created on	: 19 Apr 95 10:18 AM	Analysis Method	: JET04[redacted]MT
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-6 15-16' SOIL		



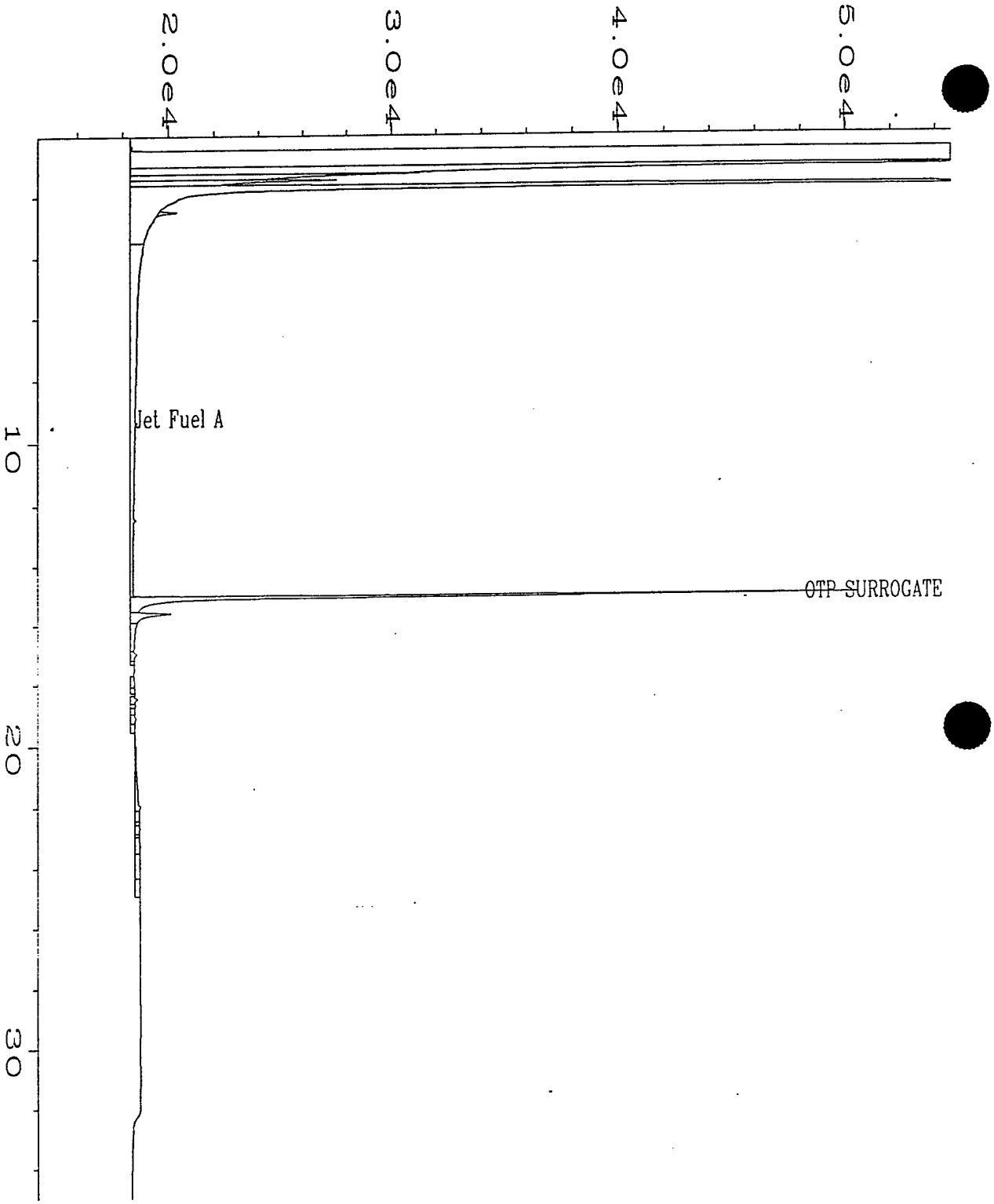
Data File Name	: C:\HPCHEM\2\DATA\JET0418\022R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 22
Sample Name	: X05755 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 02:58 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:17 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # 95-MW-8 11-12' SOIL		



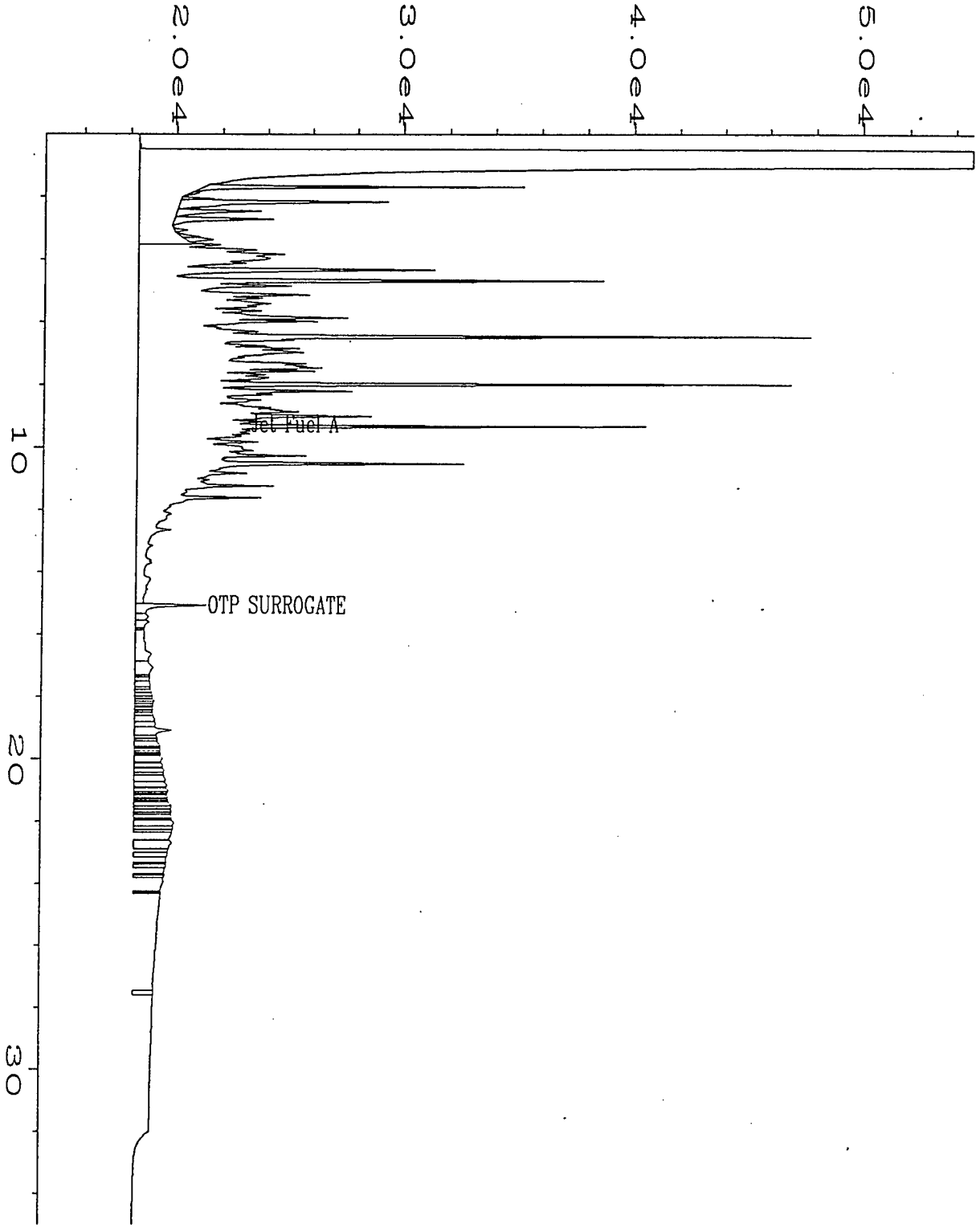
Data File Name	: C:\HPCHEM\2\DATA\JET0418\026R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 26
Sample Name	: X05756 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 06:03 AM	Instrument Method	: FID1BASE.I
Report Created on	: 19 Apr 95 10:18 AM	Analysis Method	: JET041[illegible]M
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-915-16' SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\027R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 27
Sample Name	: X05757 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 06:50 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:18 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-10 10-11' SOIL		

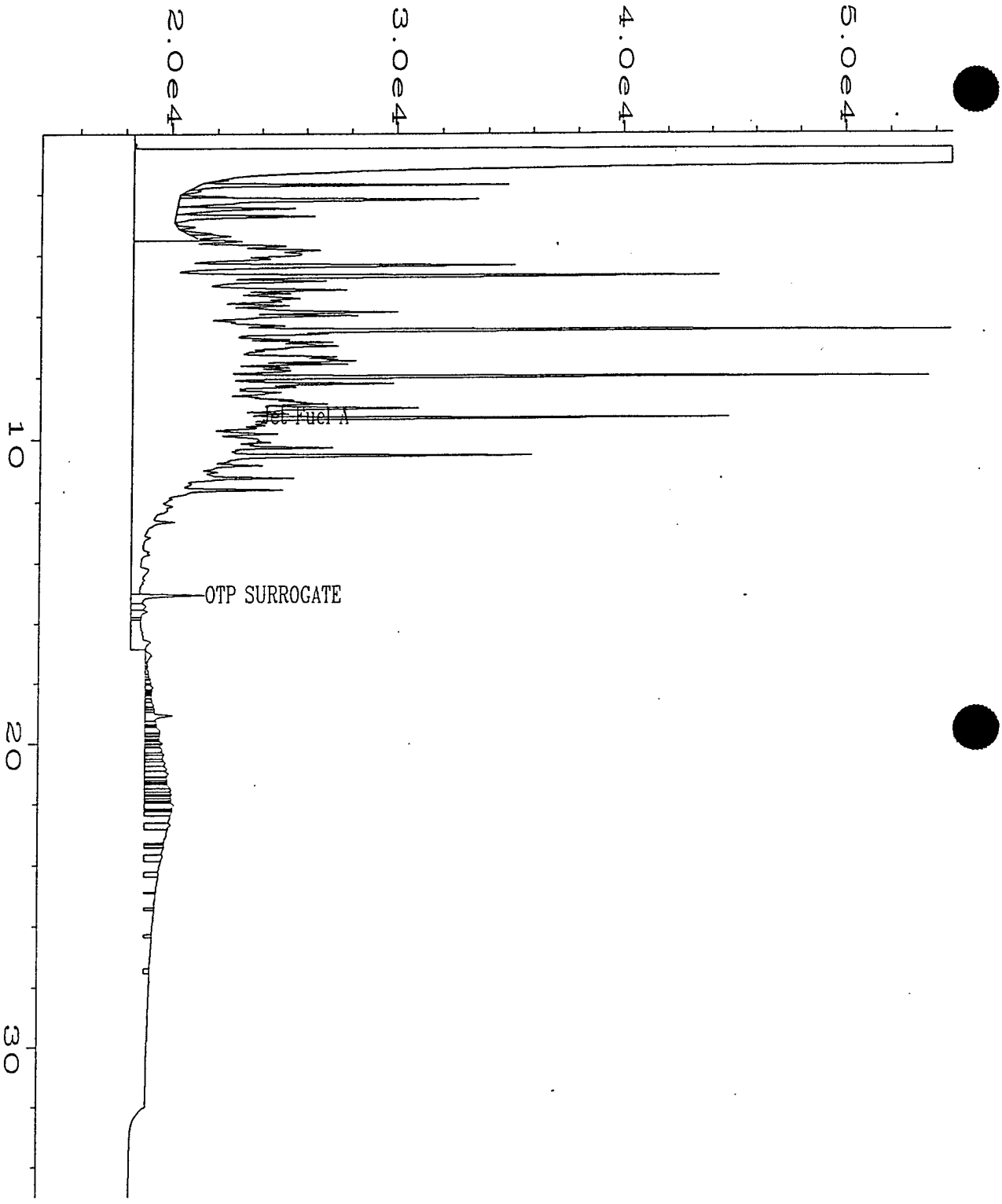


Data File Name	: C:\HPCHEM\2\DATA\JET0418\028R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 28
Sample Name	: X05759 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 07:36 AM	Instrument Method	: FID1BA[redacted].M
Report Created on	: 19 Apr 95 10:18 AM	Analysis Method	: JET04[redacted]M
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # MW-11 11.5-13.5 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\039R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 39
Sample Name	: X05760D DF=10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 05:04 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 20 Apr 95 09:24 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 10	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 SOIL		

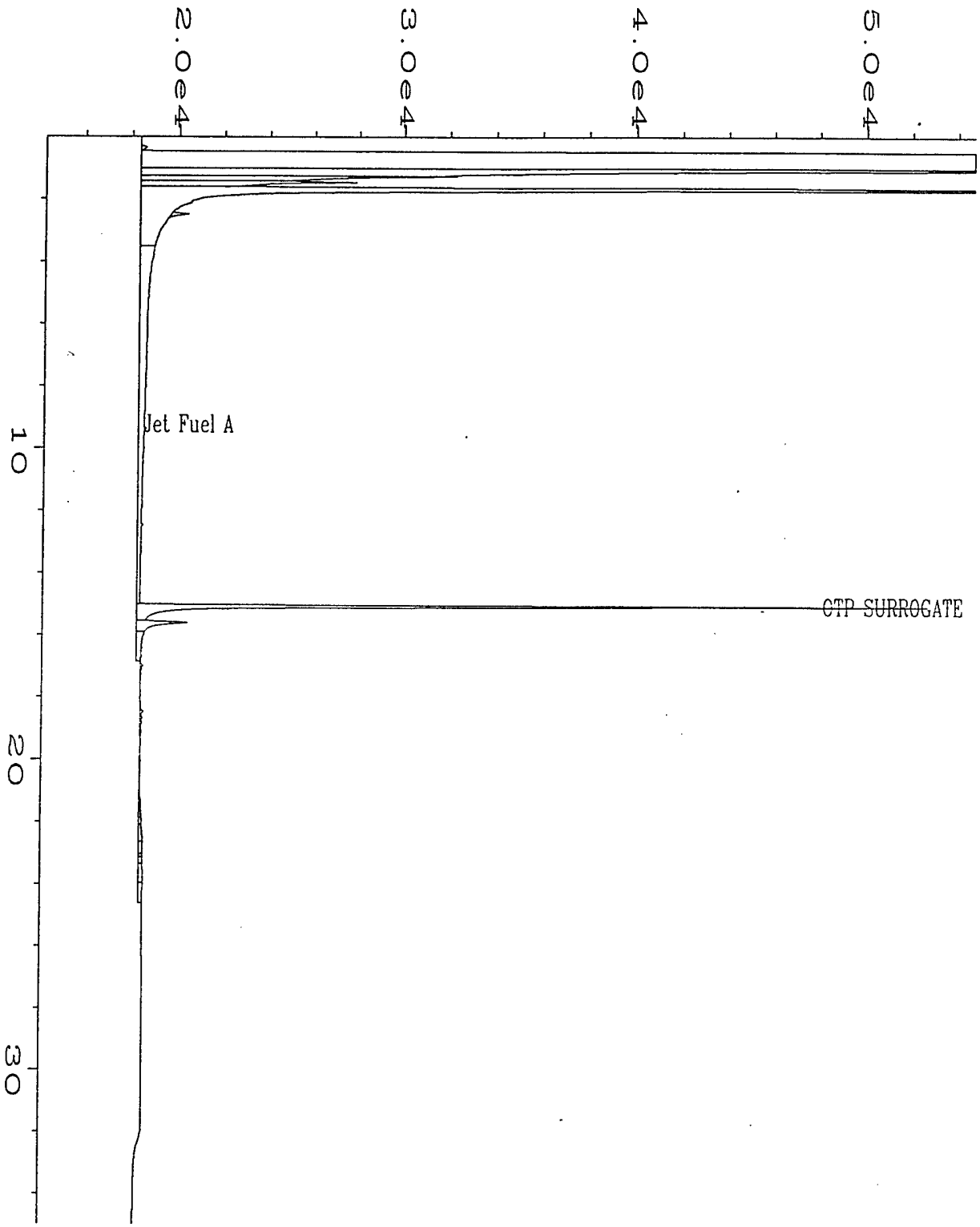
wpm 4/24/95



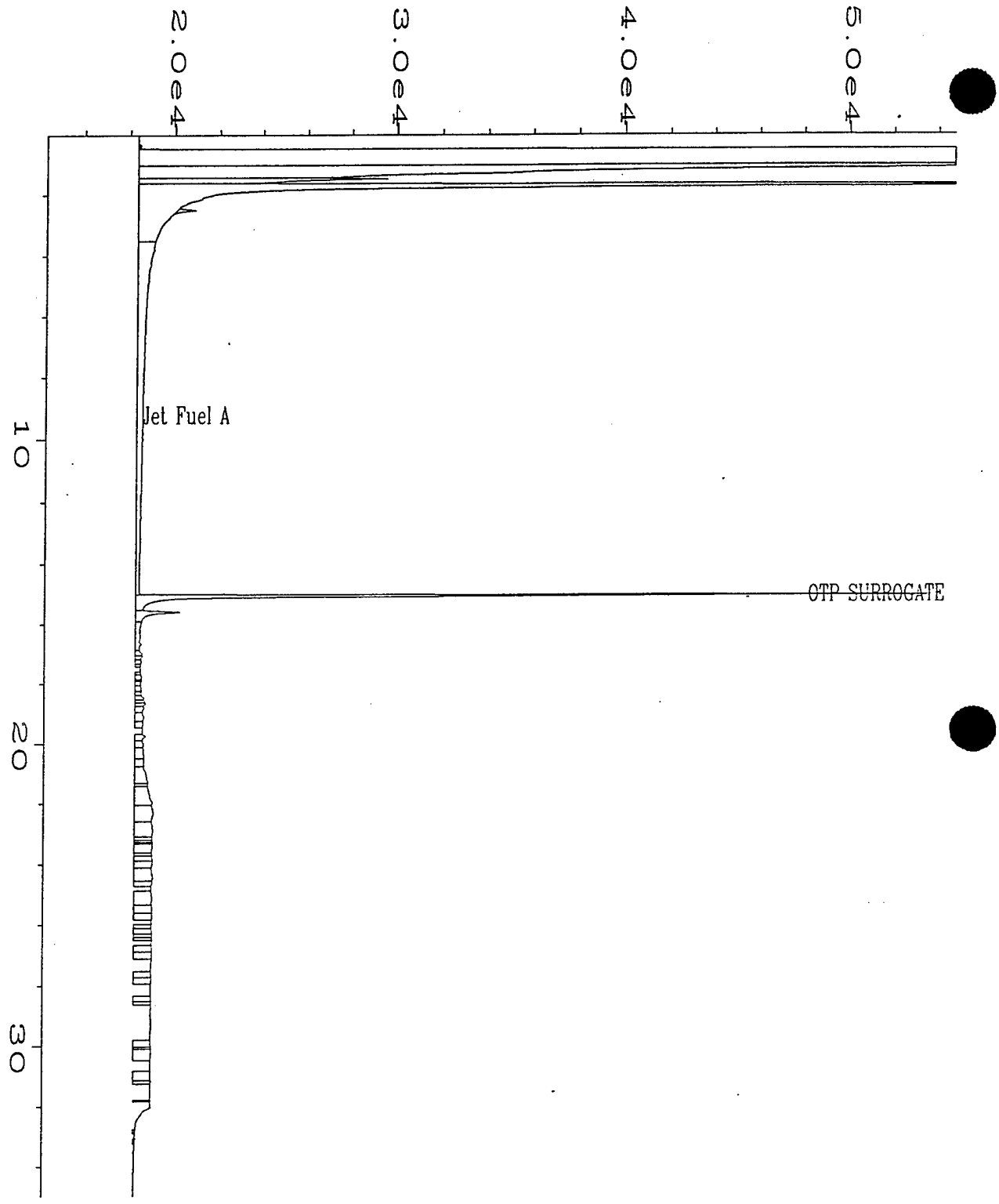
Data File Name : C:\HPCHEM\2\DATA\JET0418\040R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : ~~WB041395~~ X05760H
Run Time Bar Code:
Acquired on : 19 Apr 95 05:50 PM
Report Created on: 20 Apr 95 09:24 AM
Last Recalib on : 18 APR 95 06:54 PM
Multiplier : 1

Page Number : 1
Vial Number : 40
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA[illegible]M
Analysis Method : JET041[illegible]T
Sample Amount : 0
ISTD Amount :

Client # SS-1 11.5-13.5 DUPLICATE

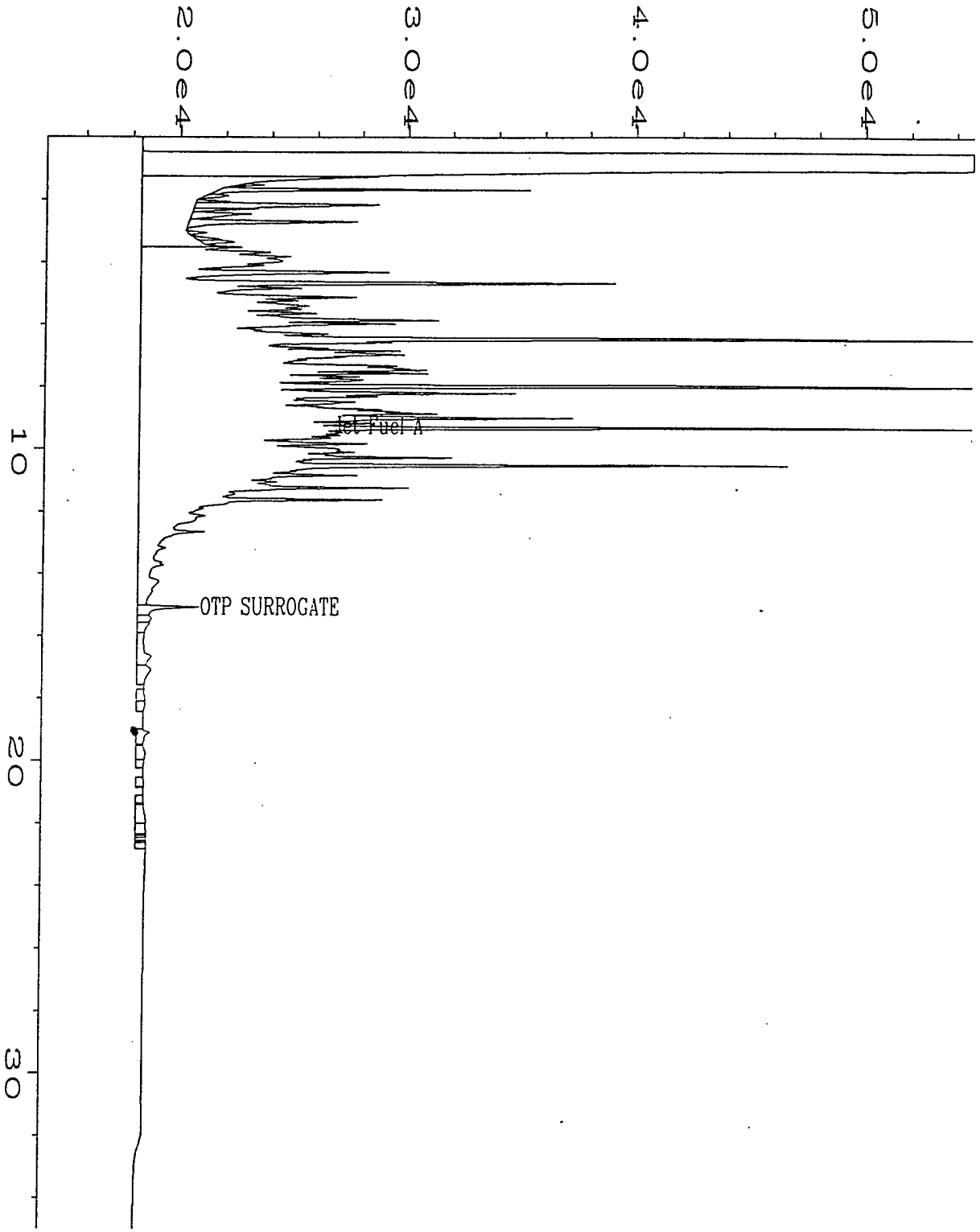


Data File Name	: C:\HPCHEM\2\DATA\JET0418\054R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 54
Sample Name	: X05762 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 11:37 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 20 Apr 95 01:10 PM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 16'-18' SOIL		

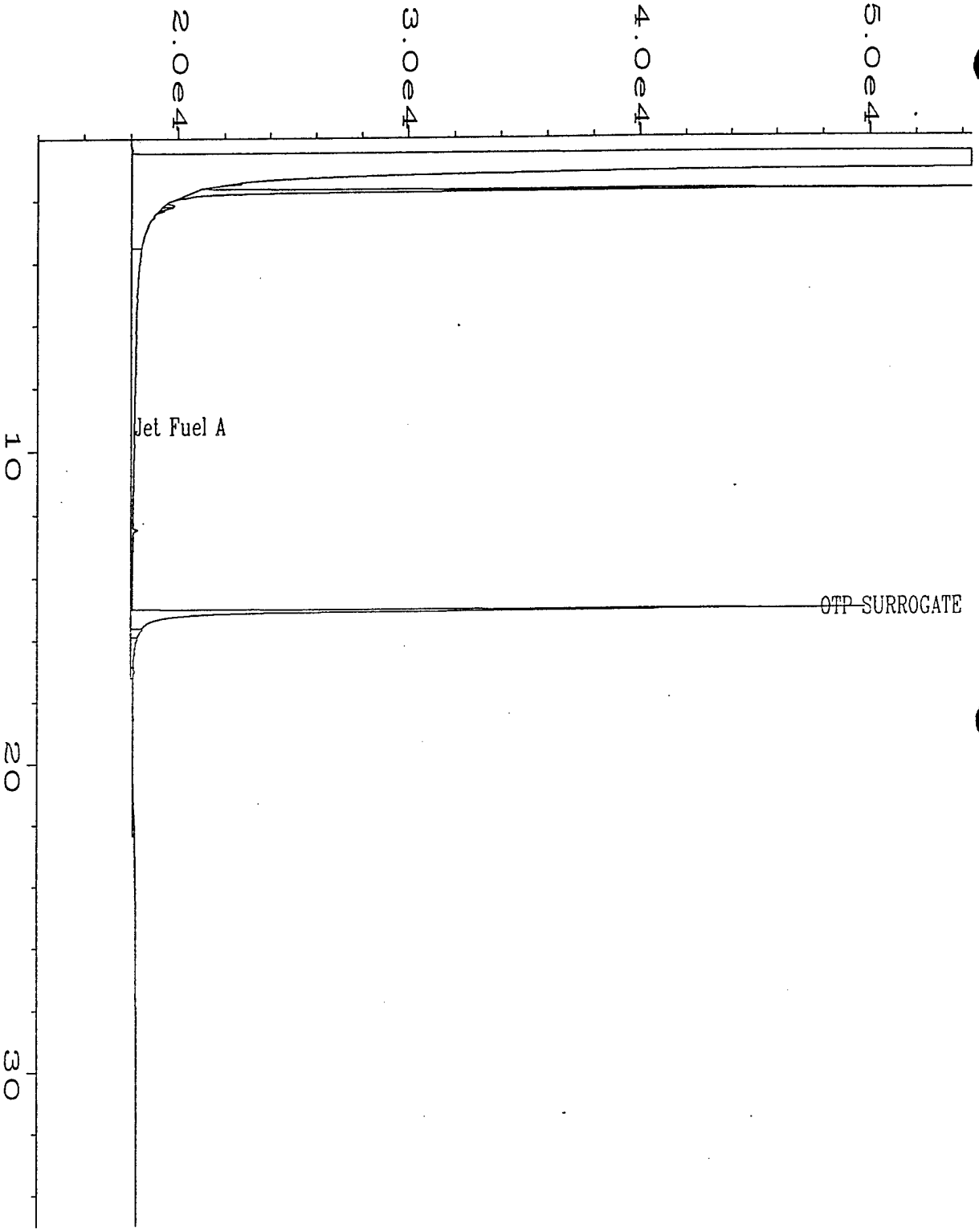


Data File Name : C:\HPCHEM\2\DATA\JET0418\033R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05163 DF=1 mjm 4/24/95
Run Time Bar Code: 7
Acquired on : 19 Apr 95 12:25 PM
Report Created on: 20 Apr 95 09:23 AM
Last Recalib on : 18 APR 95 06:54 PM
Multiplier : 1
Sample Info : PROJECT # 95-1217 CLIENT # SS-2 11.5-13.5 SOIL

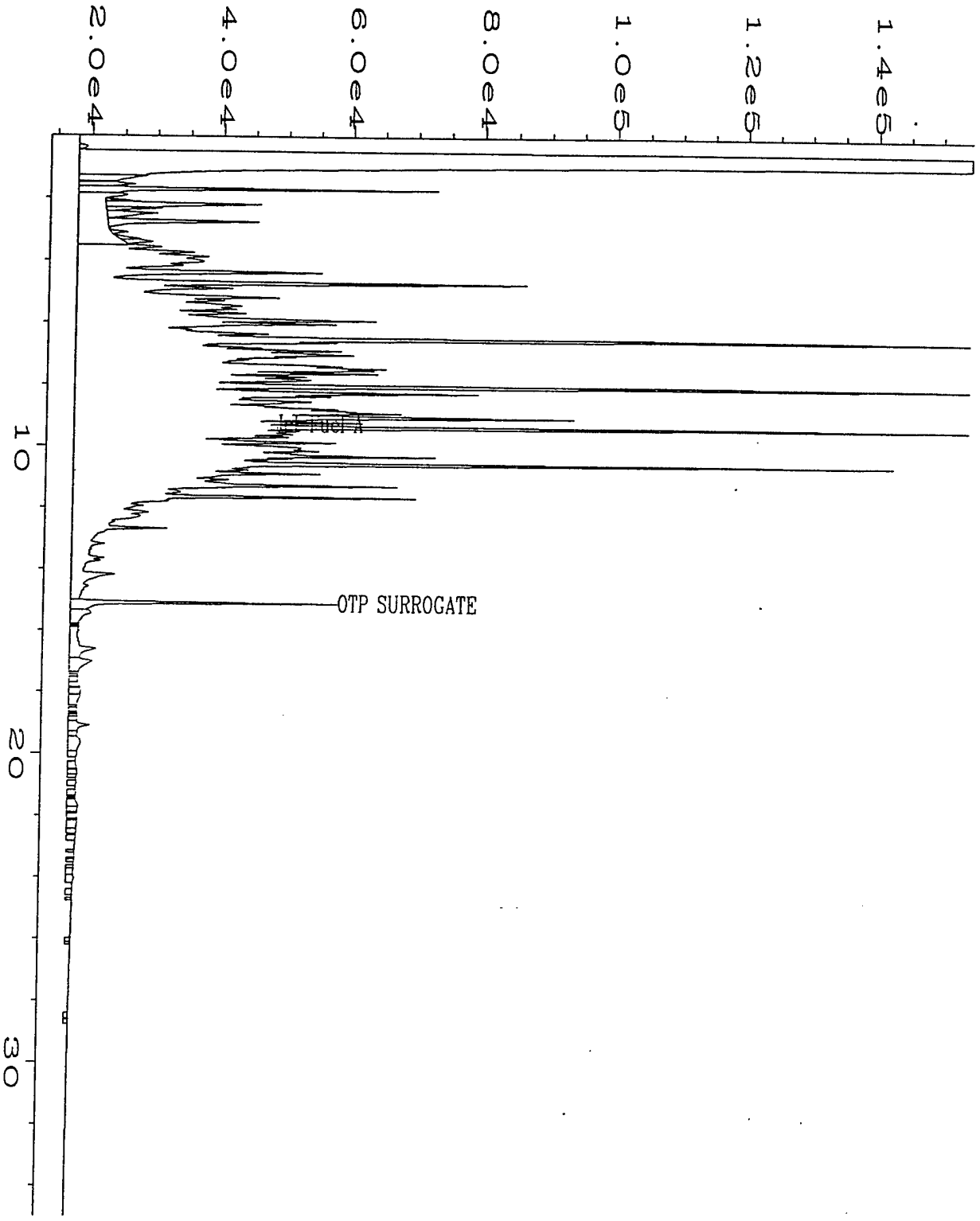
Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA[redacted].M
Analysis Method : JET041[redacted]T
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\JET0418\055R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 55
Sample Name	: X05764 DF=1 IC mfm 5/11/95	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 12:23 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 20 Apr 95 01:10 PM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1217 CLIENT # SS-3 9-11 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\teh0424\009R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 9
Sample Name	: sb042195	Injection Number	: 1
ı Time Bar Code:		Sequence Line	: 1
quired on	: 24 Apr 95 06:53 PM	Instrument Method	: FID1BA[redacted]M
Report Created on	: 25 Apr 95 02:28 PM	Analysis Method	: JET0424.MT
Last Recalib on	: 24 APR 95 04:23 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name : C:\HPCHEM\2\DATA\TEH0424\010R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : x05764 df=1 Dup
Run Time Bar Code:
Acquired on : 24 Apr 95 07:43 PM
Report Created on: 25 Apr 95 02:28 PM
Last Recalib on : 24 APR 95 04:23 PM
Multiplier : 1

4/25/95

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BASE.MTH
Analysis Method : JET0424.MTH
Sample Amount : 0
ISTD Amount :

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TOTAL EXTRACTABLE HYDROCARBONS
TEH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 95-MW-8 11-12'	**Client Project No.**	: 722450.26020/SEY
Lab Sample No.	: X05755	**Lab Project No.**	: 95-1217
Date Sampled	: 4/12/95	**EPA Method No.**	: 5030/MOD.8015
Date Received	: 4/14/95	**Matrix**	: SOIL
Date Prepared	: 4/17/95	**Method Blank**	: SB041795
Date Analyzed	: 4/19/95		

Compound	Spike Added (ug/mL)	Sample Concentration (ug/mL)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Jet Fuel	1000	99.3	1050	95	60-140

Compound	Spike Added (ug/mL)	MSD Concentration (ug/mL)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Jet Fuel	1000	1070	97	2.1	50	60-140

* = Values outside of QC limits.

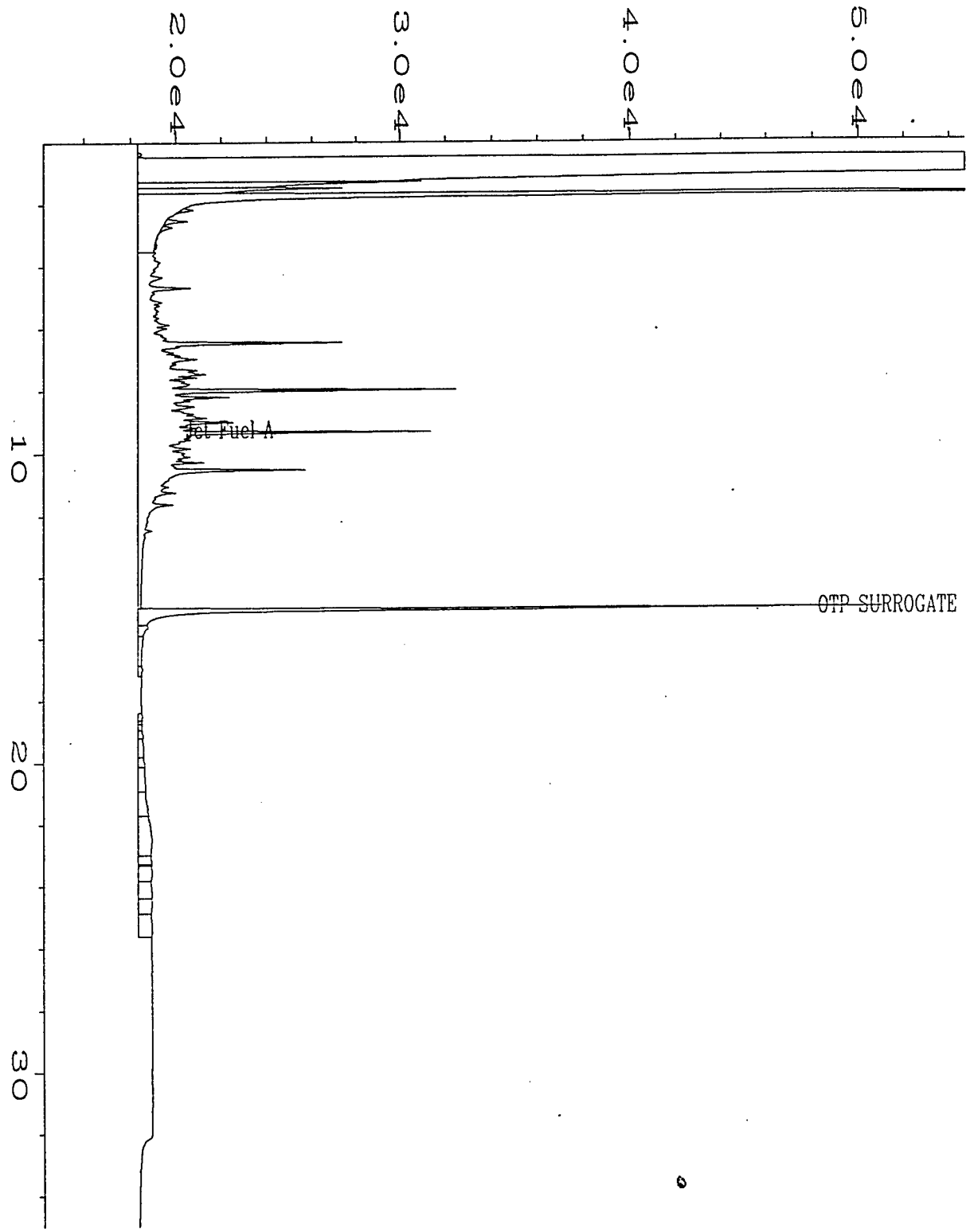
RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

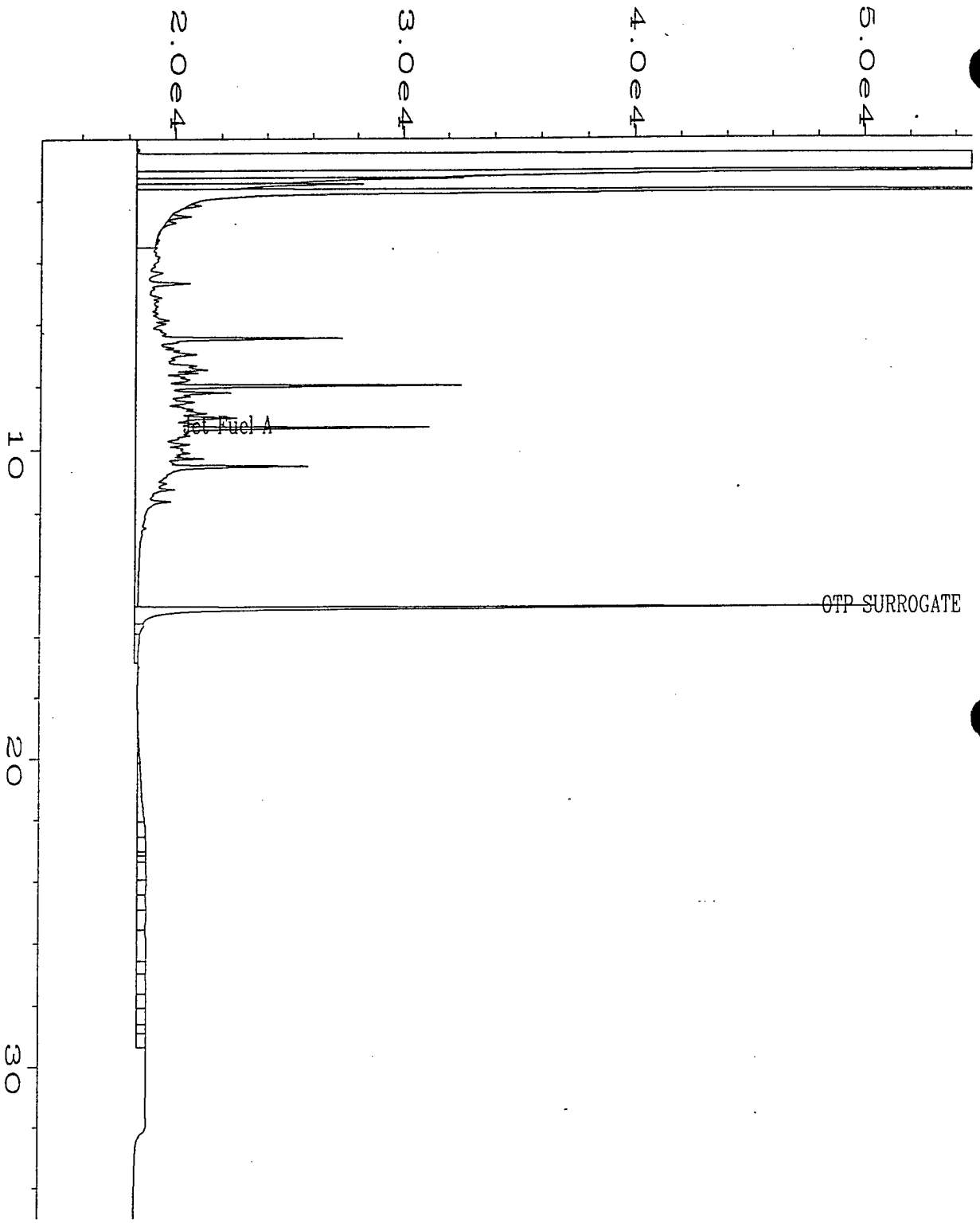
Comments: NA = Not analyzed/not applicable.

Values reported in ug/mL in the liquid extract.

4/25/95



Data File Name	: C:\HPCHEM\2\DATA\JET0418\023R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 23
Sample Name	: X05755 MS	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 03:45 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 19 Apr 95 10:17 AM	Analysis Method	: JET0418.MTH
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\2\DATA\JET0418\024R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 24
Sample Name	: X05755 MSD	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 04:31 AM	Instrument Method	: FID1BA[illegible]M
Report Created on	: 19 Apr 95 10:18 AM	Analysis Method	: JET0418.MT
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number	: LCS041795	Matrix	: SOIL
Date Prepared	: 4/17/95	Method Number	: 5030/MOD.8015
Date Analyzed	: 4/19/95		
Sequence Number	: JET21		

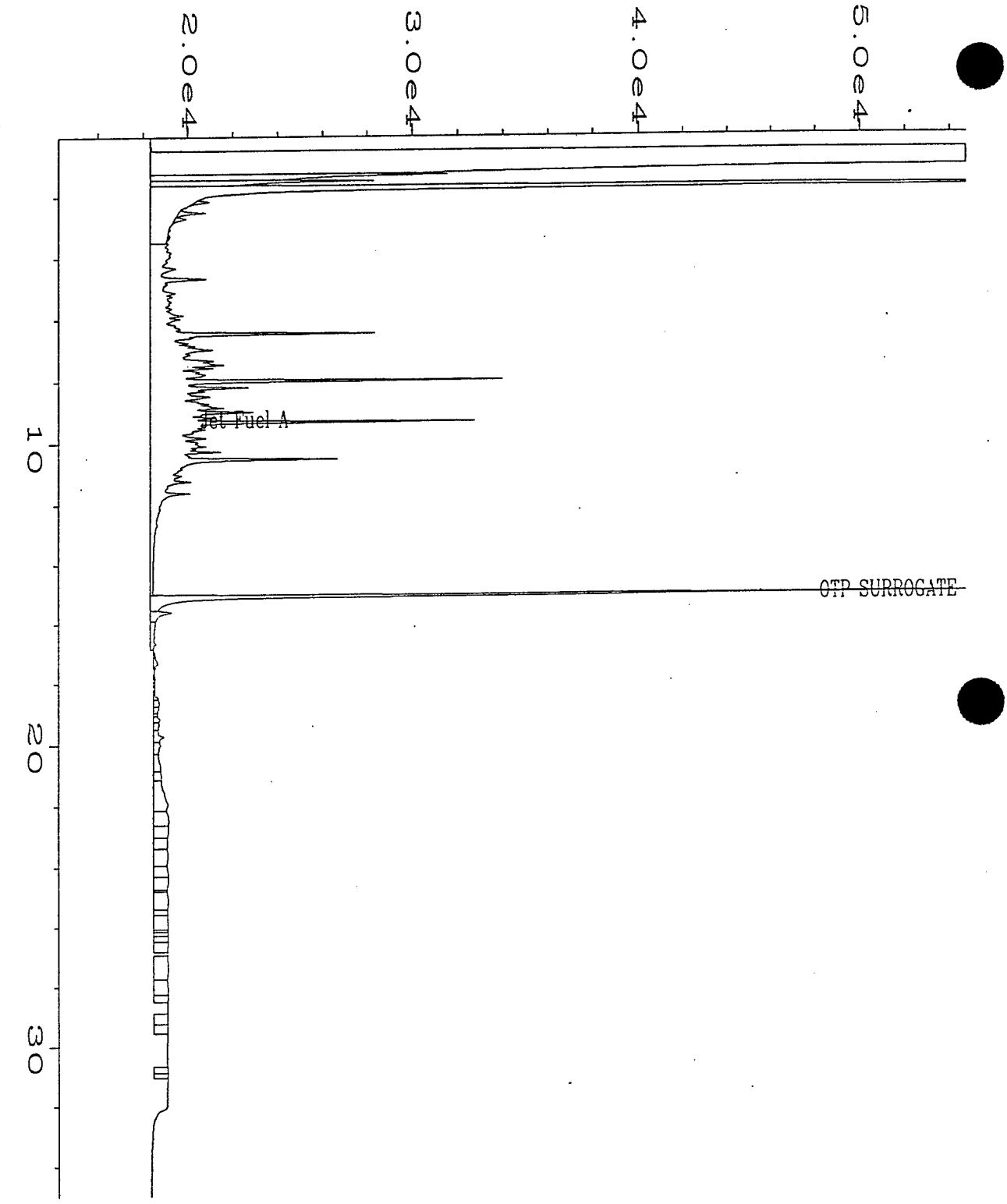
Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
JET FUEL	1000	1120	112%	70%-130%

Surrogate Recovery: 99%

QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
E = Extrapolated value.
NA = Not Available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0418\021R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 21
Sample Name	: LCS041795	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 19 Apr 95 02:12 AM	Instrument Method	: FID1B[redacted]
Report Created on	: 20 Apr 95 01:19 PM	Analysis Method	: JET0418.M
Last Recalib on	: 18 APR 95 06:54 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

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(303)425-6021

Miscellaneous Analyses

Date Sampled	: 4/12/95	Client Project ID.	: 722450.2602/ Seymore Johnson AFB
Date Received	: 4/14/95	Lab Project No.	: 95-1217
Date Prepared	: 4/26/95	Detection limit	: 25.0 mg$CaCO_3$/L
Date Analyzed	: 4/26/95	Method	: EPA 310.1

Evergreen Sample #	Client Sample ID	Matrix	Total Alkalinity* mg$CaCO_3$/k
X05753	MW-6 15-16′	Soil	<33.0
X05757	MW-10 10-11′	Soil	<32.0
X05757 Dup	MW-10 10-11′ Dup	Soil	<32.0
Method Blank	4/26/95		<5.00 (mg/L)

Quality Assurance

	True Value (mg$CaCO_3$/L)	Result (mg$CaCO_3$/L)	% Recovery
APG Minerals reference Lot # 13862	11.85	11.78	99.3

* Results reported on a dry-weight basis.

Analyst

Approved

1217JJ.4

HUFFMAN
LABORATORIES, INC.
Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 05/01/95
Lab Name: Huffman Labs — Client: Evergreen Analytical
Contact: Sue Zeller — Contact: Patty McClellan
Sample Matrix: soil — Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/ Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Ins
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	t
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	t
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	t
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	t
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	t
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	t
		% moisture		adjusted result						
MW1(12-14)BLS	16079501	TOC	NA	0.05	%	NA	NA	NA	by calc	
MW1(12-14)BLS	16079501	TOC	NA	0.07	%	NA	NA	NA	by calc	
MW5(13-14.5)	16079502	TOC	NA	<0.05	%	NA	NA	NA	by calc	
MW6(16-16.5)	16079503 36.04	TOC	NA	0.31	0.48 %	NA	NA	NA	by calc	
MW10(10-11)	16079504 21.90	TOC	NA	0.09	0.12 %	NA	NA	NA	by calc	
MW11(11.5-13.5)	16079505 21.70	TOC	NA	<0.05	0.06 %	NA	NA	NA	by calc	

95-1182
9- 1217

Samples analyzed and results reported on as as received basis.
Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.
Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.
TC detection limit = 0.05%
CC detection limit = 0.02%
TOC detection limit = 0.05%

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Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller
Sample Matrix: soil
Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/ Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	#7
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	#7
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	#7
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	#7
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	#7
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	#7
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	tower
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	tower
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	tower
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	tower
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	tower
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	tower
MW1(12-14)BLS	16079501	TOC	NA	0.05	%	NA	NA	NA	by calc	NA
MW1(12-14)BLS	16079501	TOC	NA	0.07	%	NA	NA	NA	by calc	NA
MW5(13-14.5)	16079502	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
MW6(16-16.5)	16079503	TOC	NA	0.31	%	NA	NA	NA	by calc	NA
MW10(10-11)	16079504	TOC	NA	0.09	%	NA	NA	NA	by calc	NA
MW11(11.5-13.5)	16079505	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA

Samples analyzed and results reported on as as received basis.
Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.
Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.
TC detection limit = 0.05%
CC detection limit = 0.02%
TOC detection limit = 0.05%

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Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS
LABORATORY CONTROL STANDARD

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.39	101	%	04/27/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.34	100	%	04/27/95	COU-02	tower
LCS	BN 4056	CC	11.33	11.46	101	%	04/28/95	COU-02	tower

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	12600	12482	99	ug C	04/27/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	12120	12076	100	ug C	04/27/95	Leco CR12	#7
SPIKE	BN 4712	CC	525	529	101	ug C	04/28/95	COU-02	tower
SPIKE DUP	BN 4712	CC	737	729	99	ug C	04/28/95	COU-02	tower

PD = Prep date

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Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

NON-CLP QA/QC ANALYSIS RESULTS
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	11.91	99	%	04/27/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.95	100	%	04/27/95	COU-02	tower
ICS	BN 4712	CC	12.00	12.04	100	%	04/28/95	COU-02	tower

Slope = NA
Intercept = NA
95% Correlation Coefficient = NA

Single point calibrations for this test.

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	11.98	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	11.94	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	12.11	101	%	04/27/95	COU-02	tower
CCS	BN 4712.	CC	12.00	12.17	101	%	04/28/95	COU-02	tower

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Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

ANALYSIS : TOTAL CARBON	METHOD : HIGH TEMP COMB. - INFRARED DET.
INSTRUMENT : LECO CR12	ANALYZER # 7
BALANCE # 19	

STD. CALCIUM CARBONATE	STD. N.I.S.T. BUFFALO RIVER SEDIMENT (BR
12.00 %C (theory) BN 4712	3.348 %C (theory) BN 4851

SAMPLE #	SAMPLE WT G			% CARBON PRE-CALIB	% CARBON POST-CALIB		QC	% REC.
[redacted]								
$CaCO_3$	.1170			11.81	11.91		ICS	99.3
[redacted]								
$CaCO_3$	.1160	$CaCO_3$	.1000	11.84	(98.6?) 11.98		CCS	
MB	1				.005			
[redacted]								
IB	1				.005			
BRS	.2520				3.388		LCS	101.2
1607-01	.3740		mix of 1607		.050	Trace Qu	dup	
1607-01	.3256				.067	amount Qu		14.5
1607-01	.3340	$CaCO_3$ Spike .1050			(3.797)			
1607-01	.3080	$CaCO_3$ Spike .1011			(3.981)			
1607-02	.5030				.036			
1607-04	.3580				.088			
1607-03	.5400				.031			
1607-05	.3410				.036			
$CaCO_3$	.1020				11.94		CCS	99.5
[redacted]								

ANALYST Jim Anderson	DATE 4-27-95	REVIEWED	DATE 4/28/95	PAGE 1 OF 2

7/27/93

[redacted] LABORATORIES, INC.
Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	3
BALANCE #	10		

CALCIUM CARBONATE (STD #333) CaCO3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na2CO3	BOTTLE # 2730	%C THEORY = 11.33 %

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS µGRAMS	LESS BLANK 8	% CARBON AS CARBONATE CARBON	QC	% RECOVERY
BL					6.8			IB	
BL					8.6			MB	
[redacted]									
BL					8.5			MB	
Na_2CO_3	0.850016	0.856541	0.006525		748.0 ~~738.6~~	740.0	11.34	ICS	100.09
$CaCO_3$	0.863424	0.868667	0.005243		633.6	625.6	11.95	LCS	99.6
[redacted]									
160701	0.941366	1.149121	0.207755	NH	8.0	0	0		0
160701	0.898693	1.278806	0.380113	NH 3 Spunks Acid Restricted Clock	6.0 after 7 min 11.1 / 5 at 7 min	3.1	0.0000091		~0
~~160702~~	0.875199	~~2 fm~~		NH Dropped Boat					
0702	0.912632	1.070765	0.157933	NH	8.9	.9	0.0000056		~0
160703	0.886964	1.007451	0.120487	NH	7.9	0	0		~0
160704	0.876686	1.114147	0.237461	NH	9.1	1.1	0.0000046		~0
160705	0.838101	0.963910	0.125809	NH	7.8	0	0		~0
$CaCO_3$	0.847686	0.853324	0.005638		690.9	682.9	12.11	CCS	100.9
[redacted]									

ANALYST M. Ll. | DATE 4-27-95 | REVIEWED SL | DATE 4/28/95 | PAGE 1 OF 1

REVISED 1/30/95

HUFFMAN
LABORATORIES, INC.
Quality Analytical Services Since 1936
4630 Indiana Street • Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	3
BALANCE #	10		

CALCIUM CARBONATE (STD # 333) CaCO3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na2CO3	BOTTLE # 2730	%C THEORY = 11

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS µGRAMS	LESS BLANK 7	% CARBON AS CARBONATE CARBON	QC	% RECOVERY
[redacted]					15.7				
bl					8.1	~~1.1~~		IB	
BL					7.2	~~0.2~~		MB	
$CaCO_3$	0.885022	0.890756	0.005734		697.4	690.4	12.04	ICS	100.33
Na_2CO_3	0.887394	0.894370	0.006976		806.9	799.9	11.46	LCS	101.2
160701	0.868837	1.037549	0.168712		536.0	529.0			~~100.~~
Spike $CaCO_3$	0.881538	0.885916	0.004378						
160701	0.912973	1.234770	0.321797		736.0	729.0		DUP	98.9
Spike $CaCO_3$	0.901204	0.907313	0.006139						
$CaCO_3$	0.906881	0.910958	0.004077		503.5	496.5	12.17	CCS	101.4
[redacted]									

ANALYST [redacted] DATE 4-26-95 REVIEWED [redacted] DATE 6/1/95 PAGE 1 OF 2

REVISED 10/30/91

Evergreen Analytical Sample Log Sheet

Project # 95-1240

Date(s) Sampled: 04/17/95 COC

Date Due: 04/21-BTEX,TVH,
05/02-OTHERS

Date Received: 04/18/95 1030

Holding Time(s): 04/19-NO_2,NO-
05/01-BTEX,TVH,TEH,ALKALINI

Client Project I.D. 722450.2602/SJAFB

Rush STANDARD

Client: Parsons Engineering Science, Inc.

Address: 1700 Broadway Suite 900
Denver, CO 80290

Contact: TODD WIEDEMEIER

Client P.O. _____

Phone #831-8100 Fax #831-8208

Shipping Charges 5.00

E.A. Cooler # N/A

Airbill # FED EX 4616481811

Custody Seal Intact? N/A
Cooler ___ Bottles ___
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions ★ ALL BTEX AND VOA SAMPLES ARE TO INCLUDE CHLOROBENZENE TMB AND TEMB. ✓ PLUS MTBE, EDB, ISOPROPYL ETHER, CHLOROBENZENE, 1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE, 1,4-DICHLOROBENZENE, DICHLORODIFLOUROMETHANE AND TRICHLOROFLOUROMETHANE. DID NOT RECEIVE SAMPLES MW-6, CPT-16 FOR ALKALINITY.

Lab #	Client ID#		Analysis	Mtx	Btl	Loc
X05832L-N	MW-11	★ ✓	VOA 624	W	40V	9
X05829A/B	MW-6	★	BTEX 602	W	40V	2
X05830A/B	MW-7	★	BTEX 602	W	40V	2
X05831A/B	MW-10	★	BTEX 602	W	40V	2
X05832A/B	MW-11	★	BTEX 602	W	40V	2
X05834A/B	CPT-16	★	BTEX 602	W	40V	2
X05833A/B	TRIP BLANK	★	BTEX 602	W	40V	2
X05829C/D	MW-6		TVH	W	40V	2
X05830C/D	MW-7		TVH	W	40V	2
X05831C/D	MW-10		TVH	W	40V	2
X05832C/D	MW-11		TVH	W	40V	2
X05834C/D	CPT-16		TVH	W	40V	2
X05829E	MW-6		TEH JET	W	1LA	D4
X05830E	MW-7		TEH JET	W	1LA	D4

R=Sample to be returned

te GC/MS 2 GC 4 Metals ___ Wet Chem 2 SxPrep 1 Acct 1
ro

SxRec C QA/QC C Sales C File Orig

Page 1 of 1 Page(s)

Custodian/Date: 4/19/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05831E	MW-10	TEH JET	W	1LA	D4
X05832E	MW-11	TEH JET	W	1LA	D4
X05834E	CPT-16	TEH JET	W	1LA	D4
X05829F-I	MW-6	METHANE	W	1LA	D4
X05830F-I	MW-7	METHANE	W	1LA	D4
X05831F-I	MW-10	METHANE	W	1LA	D4
X05832F-I	MW-11	METHANE	W	1LA	D4
X05834F-I	CPT-16	METHANE	W	1LA	D4
X05829J	MW-6	ANIONS-Cl, SO_4^{-2}, NO_2, NO_3	W	125P	D4
X05831J	MW-10	ANIONS-Cl, SO_4^{-2}, NO_2, NO_3	W	125P	D4
X05830J	MW-7	ANIONS-SO_4^{-2}, NO_2, NO_3	W	125P	D4
X05832J	MW-11	ANIONS-SO_4^{-2}, NO_2, NO_3	W	125P	D4
X05834J	CPT-16	ANIONS-SO_4^{-2}, NO_2, NO_3	W	125P	D4
X05830K	MW-7	ALKALINITY	W	1LA	D4
X05831K	MW-10	ALKALINITY	W	1LA	D4
X05832K	MW-11	ALKALINITY	W	1LA	D4

Project # 95-1240

Sample to be returned

PROJECT SPECIAL INSTRUCTIONS 95-~~24~~ 1240

Date: 4/18 EAL Contact: Patty Client Contact: Todd Wiedem
Parsons E.S

INSTRUCTIONS:

Please remove MTBE from BTEX analysis for samples X05829 through X05834.

X05832 Please analyze Method 624 + MTBE, EDB, isopropyl ether, chlorobenzene, 1,2-dichlorobenzene, 1,3-DCB, 1,4-DCB, dichlorodifluoromethane and trichlorofluoromethane.

Please take these samples off HOLD.

Date & Time Rec'd: 4/18/95 1030 Shipped Via: Fed Ex 4611648
(Airbill # if applicable)

Client : Parsons ES&E

Client Project ID(s): 722450.2602

EAL Project #(s): 95- 1240 EAL Cooler(s): Y (N)

Cooler#	Client									
Ice packs	(Y)	N	Y	N	Y	N	Y	N	Y	N
Temperature °C	3°									

	Y	N	N/A
1. Custody seal(s) present:		✓	
Seals on cooler intact			✓
Seals on bottle intact			
2. Chain of Custody present:	✓		
3. Containers broken or leaking: (Comment on COC if Y)		✓	
4. Containers labeled:	✓		
5. COC agrees w/ bottles received: (Comment on COC if N)		✓	2 sample not rec CAllcott.
6. COC agrees w/ labels: (Comment on COC if N)		✓	
7. Headspace in VOA vials-waters only (comment on COC if Y)		✓	
8. VOA samples preserved:		✓	
9. pH measured on metals, cyanide or phenolics*:			✓
List discrepancies			
*Non-EAL provided containers only, water samples only.			
10. Metal samples present:			✓
Total _____ , Dissolved _____			
D or PD to be filtered:			
T,TR,D,PD to be Preserved:			
11. Short holding times:		✓	
Specify parameters			
12. Multi-phase sample(s) present:		✓	
13. COC signed w/ date/time:	✓		

Comments: MW-6 and CPT-16 for alkalinity missing. jm 4/18/95

(Additional comments on back)
Custodian Signature/Date: Lee Common 4/18/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

Page 1 of _____

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX (919) 677-0118 FAX RESULTS Y / N

CLIENT CONTACT (print) _____
PROJECT I.D. 722450.26.02
EAL. QUOTE # _____ P.O.# _____
TURNAROUND REQUIRED* _____
*expedited turnaround subject to additional fee

Sampler Name:
(signature) Michael K Baskett
(print) MICHAEL K BASKETT

Evergreen Analytical Cooler No. _____
Cooler Received _____

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle) Tetra 45, Eng	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline) jet	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	Methane	Anions (Cl, SO_4^{-2}, nitrate)	Anions (nitrate, sulfate, nitrite)				EAL Sample No.
MW-6	4/17/95	0940	11	✓										2		2	1			1	4	1					
MW-7	4/17/95	1145	11	✓										2		2	1			1	4		1				
MW-10	4/17/95	1200	11	✓										2		2	1			1	4	1					
MW-11	4/17/95	1250	14	✓				3						2		2	1			1	4		1				
trip blank	4/17/95		2	✓										2													
CPT-16	4/17/95	300	11	✓										2		2	1			1	4		1				
HT:																										Location	
DD:																										Container Size	

EAL use only
Do not write in shaded area
EAL
Project # _____
Custodian _____

Instructions:

Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Date/Time | Received by: (Signature)

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042095	Client Project No.	: 722450.2602/SJAFB
Date Prepared	: 4/20/95	Lab Project No.	: 95-1240
Date Analyzed	: 4/20/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042009

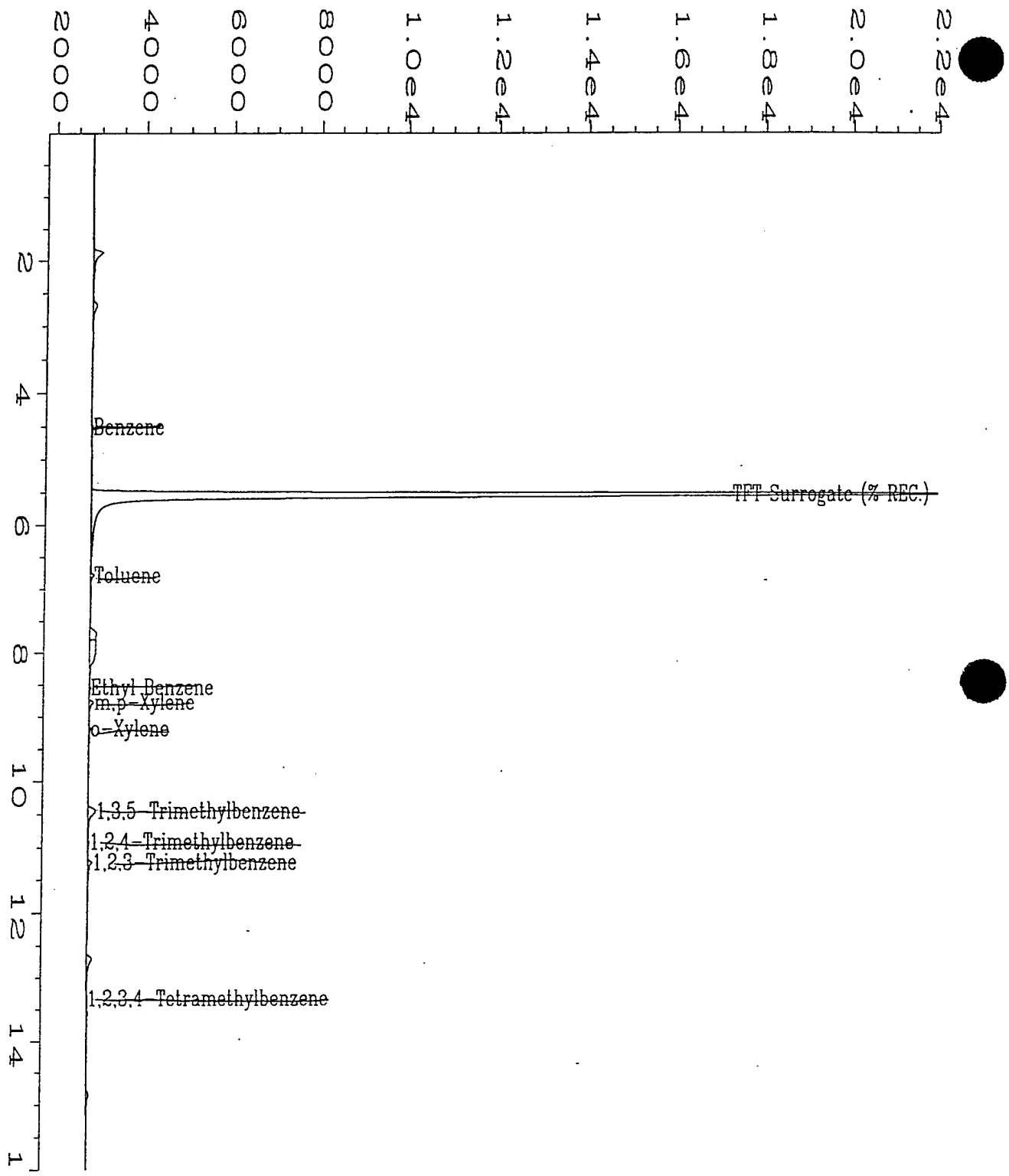
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		107%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



ata File Name : C:\HPCHEM\2\DATA\BX20420\009R0101.D
perator : KAPRIE S. CONE
nstrument : BTEX2
ample Name : MB042095
un Time Bar Code:
c red on : 20 Apr 95 06:19 PM
eport Created on: 21 Apr 95 01:21 PM
ast Recalib on : 20 Apr 95 05:30 PM
ultiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20420.[illegible]
Analysis Method : BX20420.MTH
Sample Amount : 0
ISTD Amount :

DM 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042195	Client Project No.	: 722450.2602/SJAFB
Date Prepared	: 4/21/95	Lab Project No.	: 95-1240
Date Analyzed	: 4/21/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042110

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%		70%-130% (QC limits)

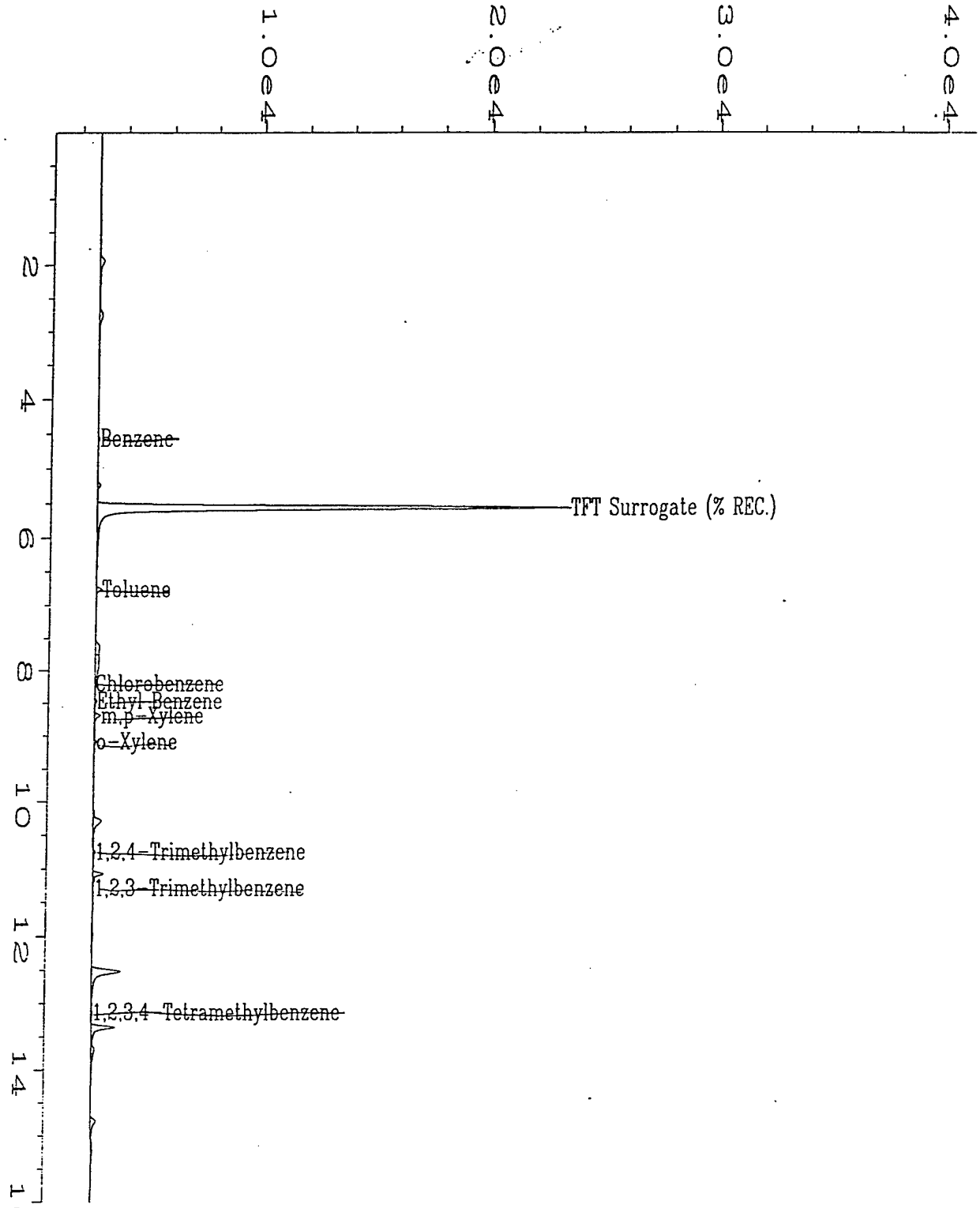
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

BTEX1240.XLS



user modifi

Data File Name : C:\HPCHEM\2\DATA\BX20421\010R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : MB042195
Run Time Bar Code:
Acquired on : 21 Apr 95 03:07 PM
Report Created on: 21 Apr 95 03:29 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421H
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

PM 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042395	Client Project No.	: 722450.2602/SJAFB
Date Prepared	: 4/23/95	Lab Project No.	: 95-1240
Date Analyzed	: 4/23/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1042310

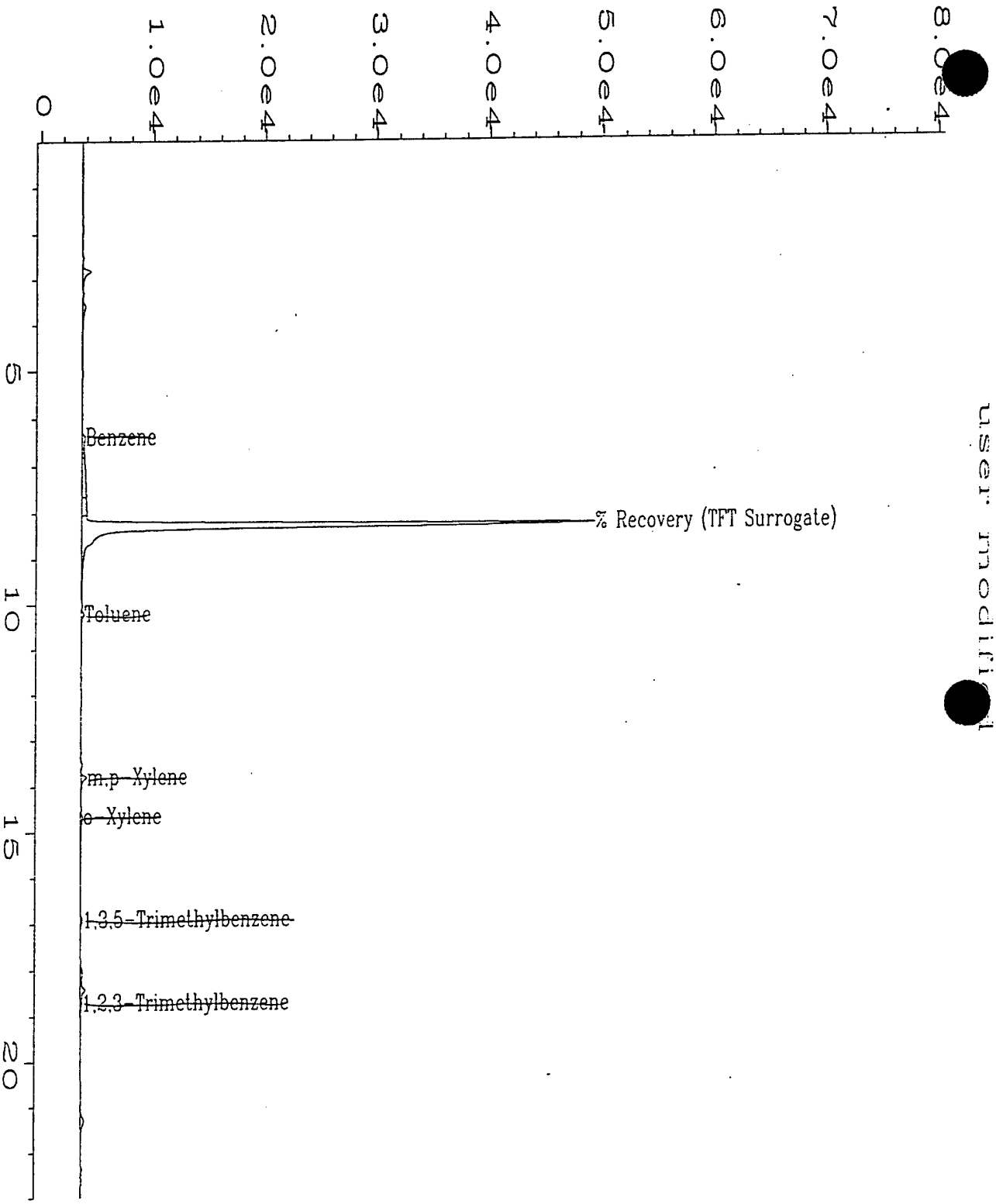
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		92%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



user modified

Data File Name : E:\1\DATA\BX10423\010F0901.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : MB042395
Run Time Bar Code:
Acquired on : 23 Apr 95 02:42 PM
Report Created on: 25 Apr 95 01:07 PM
Last Recalib on : 24 APR 95 10:52 AM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 9
Instrument Method: BX1042[illegible].MT
Analysis Method : BX10423.MT
Sample Amount : 0
ISTD Amount :

pmc 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-6	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042010
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	25		0.4
Toluene	108-88-3	1.0		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
',3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		108%		70%-130% (QC limits)

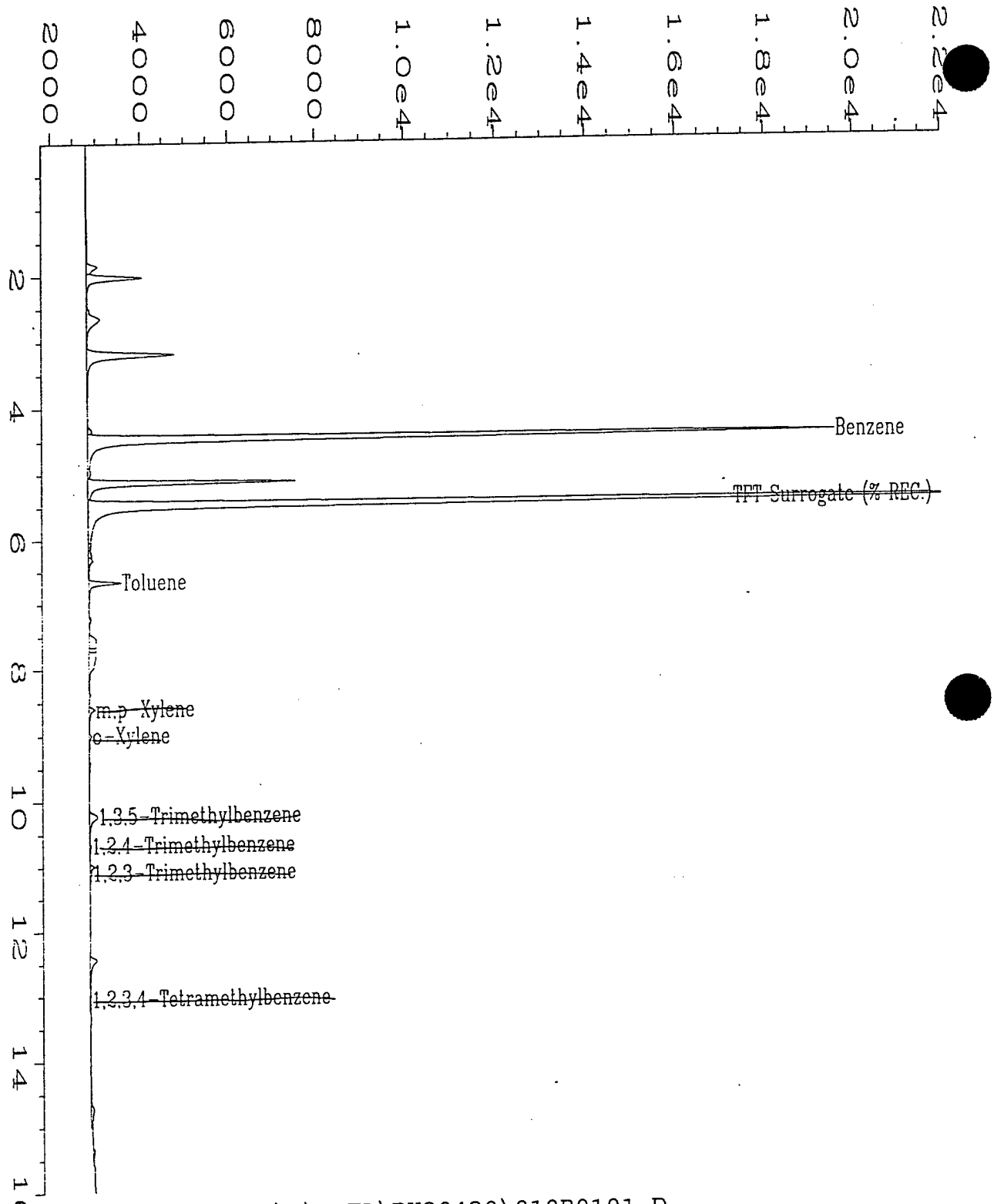
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\010R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05829;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 06:55 PM
Report Created on: 20 Apr 95 07:11 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 1
Sample Info : 95-1240; MW-6; 5 ML WATER

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[illegible]MT
Analysis Method : BX20420.MT
Sample Amount : 0
ISTD Amount :

5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-6	**Client Project No.**	: 722450.2602/SJAFB
Lab Sample Number	: X05829 Dup	**Lab Project No.**	: 95-1240
Date Sampled	: 4/17/95	**Dilution Factor**	: 1.00
Date Received	: 4/18/95	**Method**	: 602
Date Prepared	: 4/20/95	**Matrix**	: Water
Date Analyzed	: 4/20/95	**Lab File No.**	: BX2042013
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	23		0.4
Toluene	108-88-3	1.0		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
',3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		98%		70%-130% (QC limits)

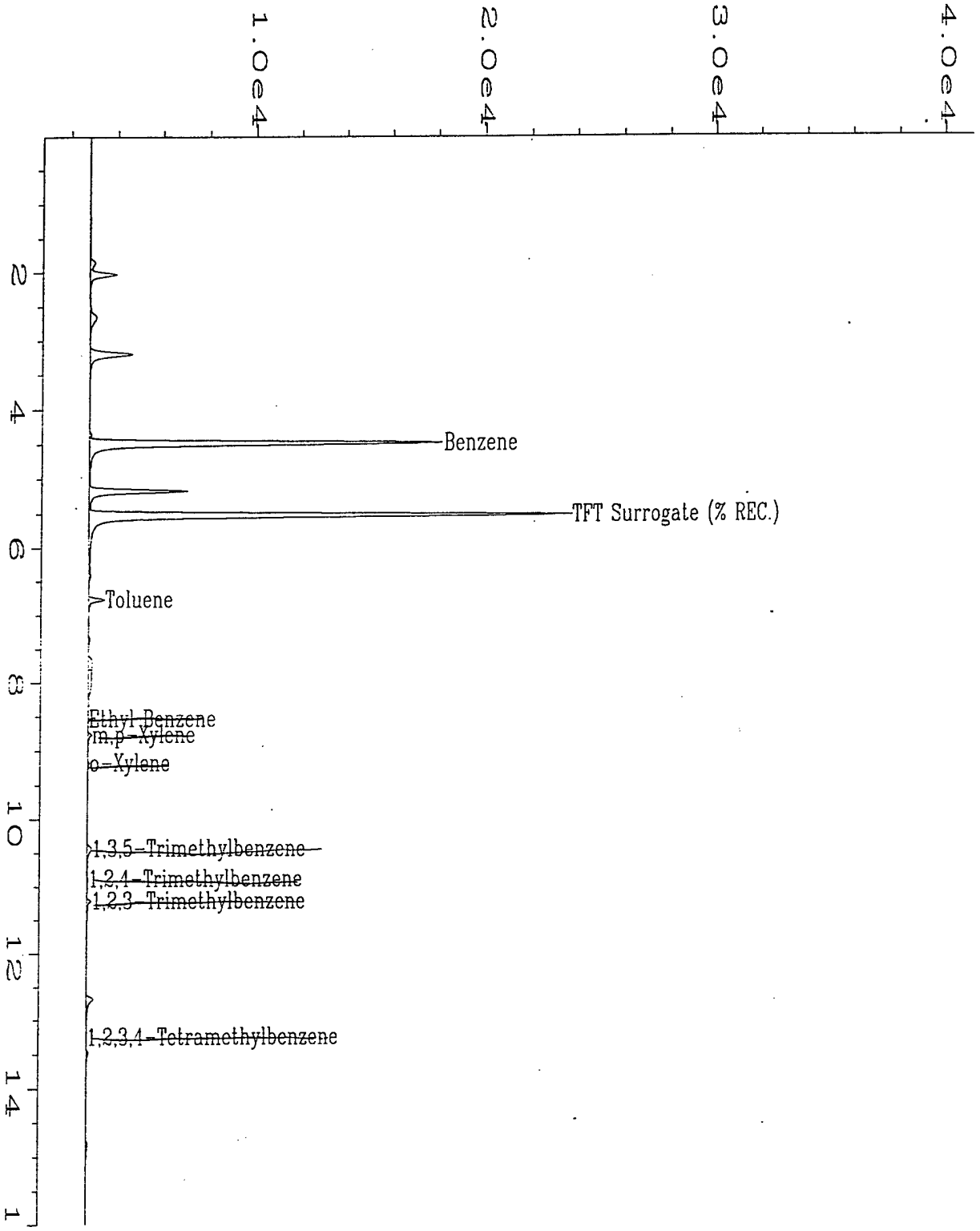
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20420\013R0101.D		
Operator	: KAPRIE S. CONE	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 13
Sample Name	: X05829DUP;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 08:41 PM	Instrument Method	: BX20420.MTH
Report Created on	: 21 Apr 95 01:20 PM	Analysis Method	: BX20420.MTH
Last Recalib on	: 20 Apr 95 05:30 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

pm 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-7	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05830	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042014
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	0.4
Toluene	108-88-3	11.0	0.4
Chlorobenzene	108-90-7	0.8	0.4
Ethyl Benzene	100-41-4	**	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	0.4
1,3,5-Trimethylbenzene	108-67-8	7.6	0.4
1,2,4-Trimethylbenzene	95-63-6	8.7	0.4
1,2,3-Trimethylbenzene	526-73-8	30	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	9.8	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		105%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

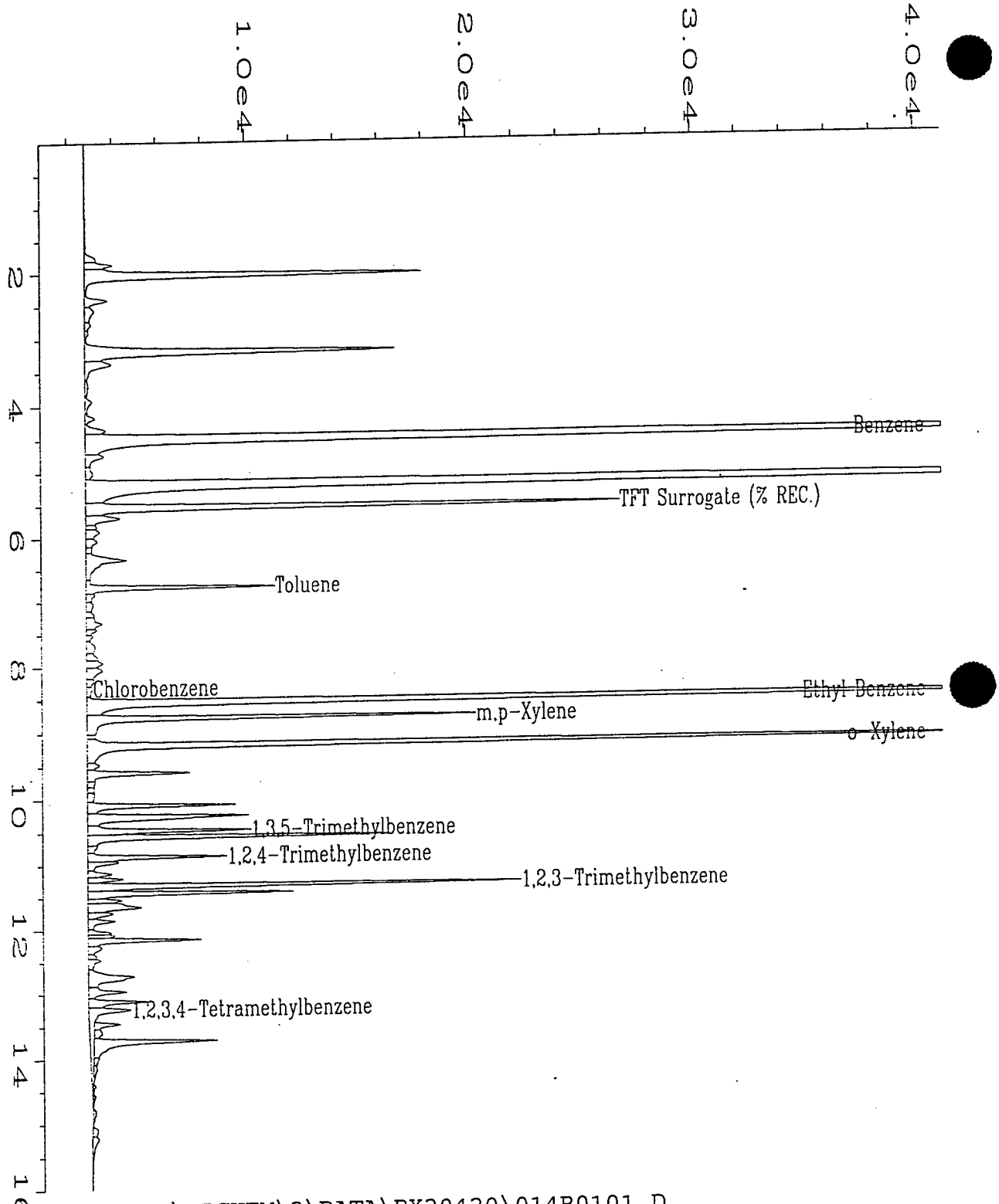
** = See BX2042111 (DF=5).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\014R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05830;1;5
Time Bar Code:
Acquired on : 20 Apr 95 09:17 PM
Report Created on: 20 Apr 95 09:34 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 1
Sample Info : 95-1240; MW-7; 5 ML WATER

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]MT
Analysis Method : BX20420.MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-7	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05830	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 5.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042111
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	180	2.0
Toluene	108-88-3	**	2.0
Chlorobenzene	108-90-7	**	2.0
Ethyl Benzene	100-41-4	120	2.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	100	2.0
,3,5-Trimethylbenzene	108-67-8	**	2.0
1,2,4-Trimethylbenzene	95-63-6	**	2.0
1,2,3-Trimethylbenzene	526-73-8	**	2.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	2.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

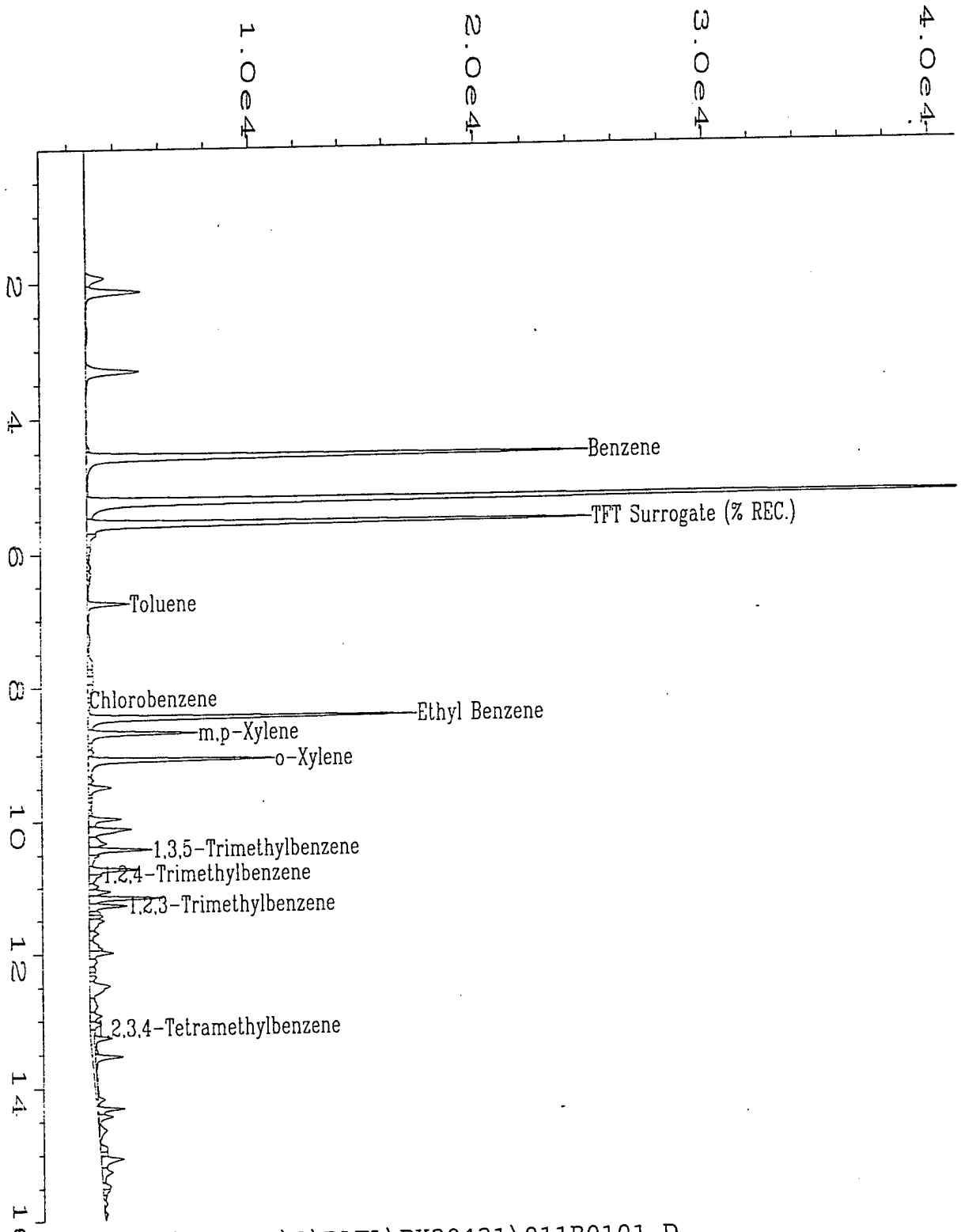
** = See BX2042014.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\011R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05830;5;1
Run Time Bar Code:
Acquired on : 21 Apr 95 03:50 PM
Report Created on: 22 Apr 95 12:52 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 5
Sample Info : 95-1240; MW-7; 1.0 ML WATER

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[illegible]T
Analysis Method : BX20421.MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-10	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05831	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042015
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3	5.3		0.4
Chlorobenzene	108-90-7	0.7		0.4
Ethyl Benzene	100-41-4	2.6		0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	4.4		0.4
',3,5-Trimethylbenzene	108-67-8	0.8		0.4
1,2,4-Trimethylbenzene	95-63-6	8.0		0.4
1,2,3-Trimethylbenzene	526-73-8	0.9		0.4
1,2,3,4-Tetramethylbenzene	488-23-3	4.0		0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		98%		70%-130% (QC limits)

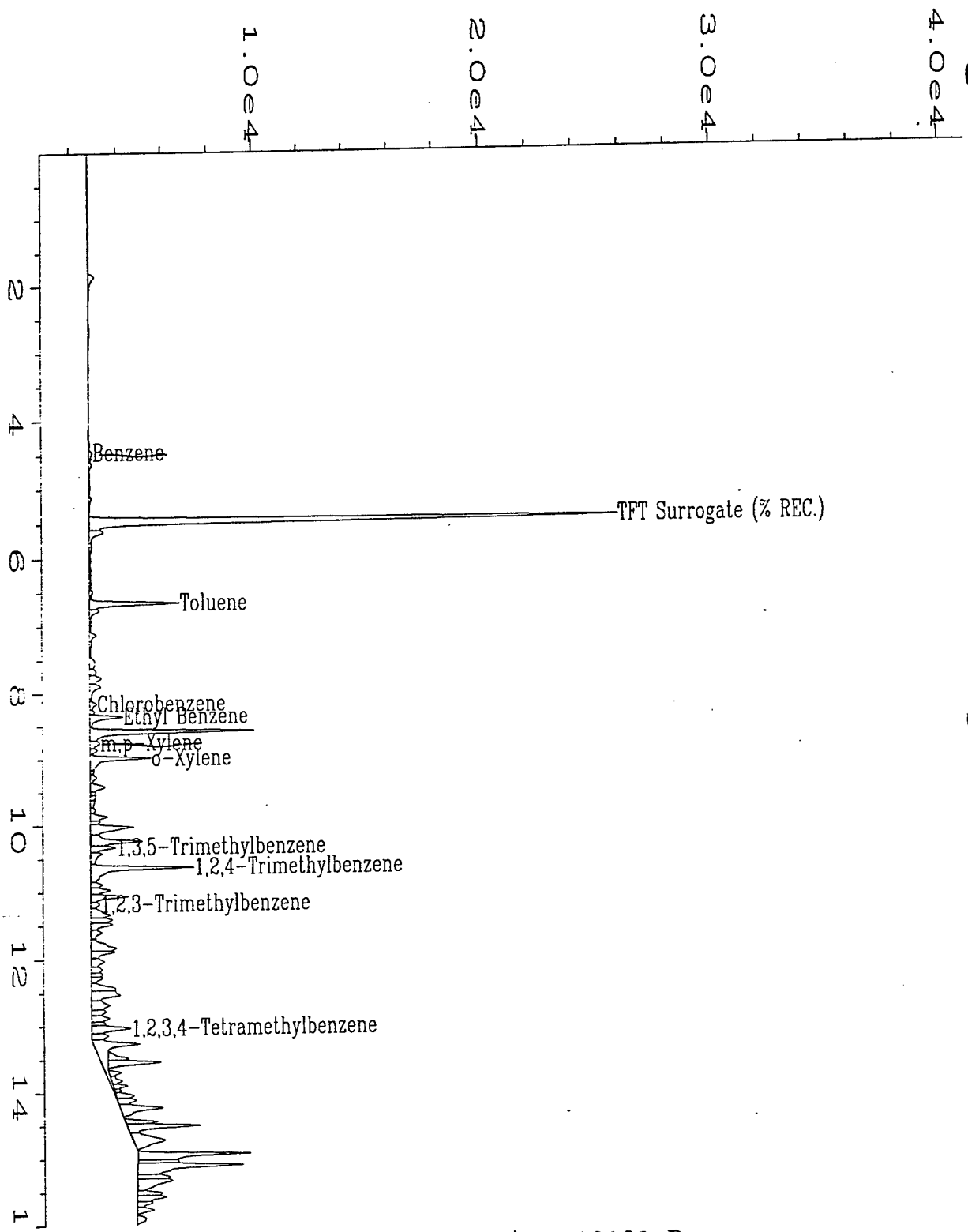
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\015R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05831;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 09:53 PM
Report Created on: 20 Apr 95 10:10 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 1
Sample Info : 95-1240; MW-10; 5 ML WATER

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2041[illegible].M
Analysis Method : BX20420.M
Sample Amount : 0
ISTD Amount :

dlm 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-11	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05832	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 10.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042016
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	4.0
Toluene	108-88-3	**	4.0
Chlorobenzene	108-90-7	37	4.0
Ethyl Benzene	100-41-4	**	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	4.0
1,3,5-Trimethylbenzene	108-67-8	180	4.0
1,2,4-Trimethylbenzene	95-63-6	**	4.0
1,2,3-Trimethylbenzene	526-73-8	140	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	270	4.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		107%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

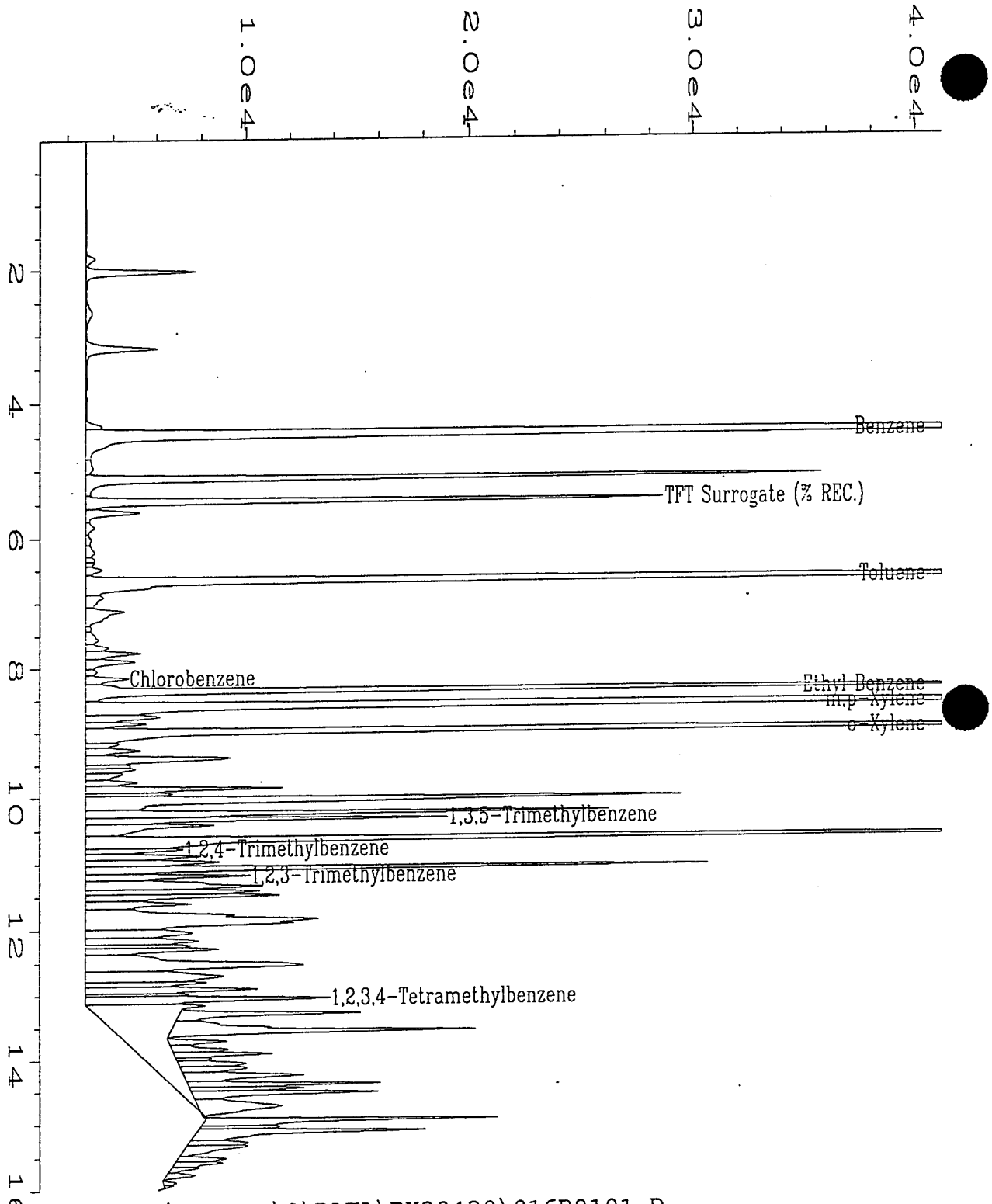
** = See BX2042112 (DF=100).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\016R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05832;10;500UL
Run Time Bar Code:
Acquired on : 20 Apr 95 10:30 PM
Report Created on: 20 Apr 95 10:46 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 10
Sample Info : 95-1240; MW-10; 500 UL WATER

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]MT
Analysis Method : BX2042[redacted]MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-11	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05832	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 100.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042112
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2300	40.0
Toluene	108-88-3	2000	40.0
Chlorobenzene	108-90-7	**	40.0
Ethyl Benzene	100-41-4	620	40.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	3700	40.0
1,3,5-Trimethylbenzene	108-67-8	**	40.0
1,2,4-Trimethylbenzene	95-63-6	610	40.0
1,2,3-Trimethylbenzene	526-73-8	**	40.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	40.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

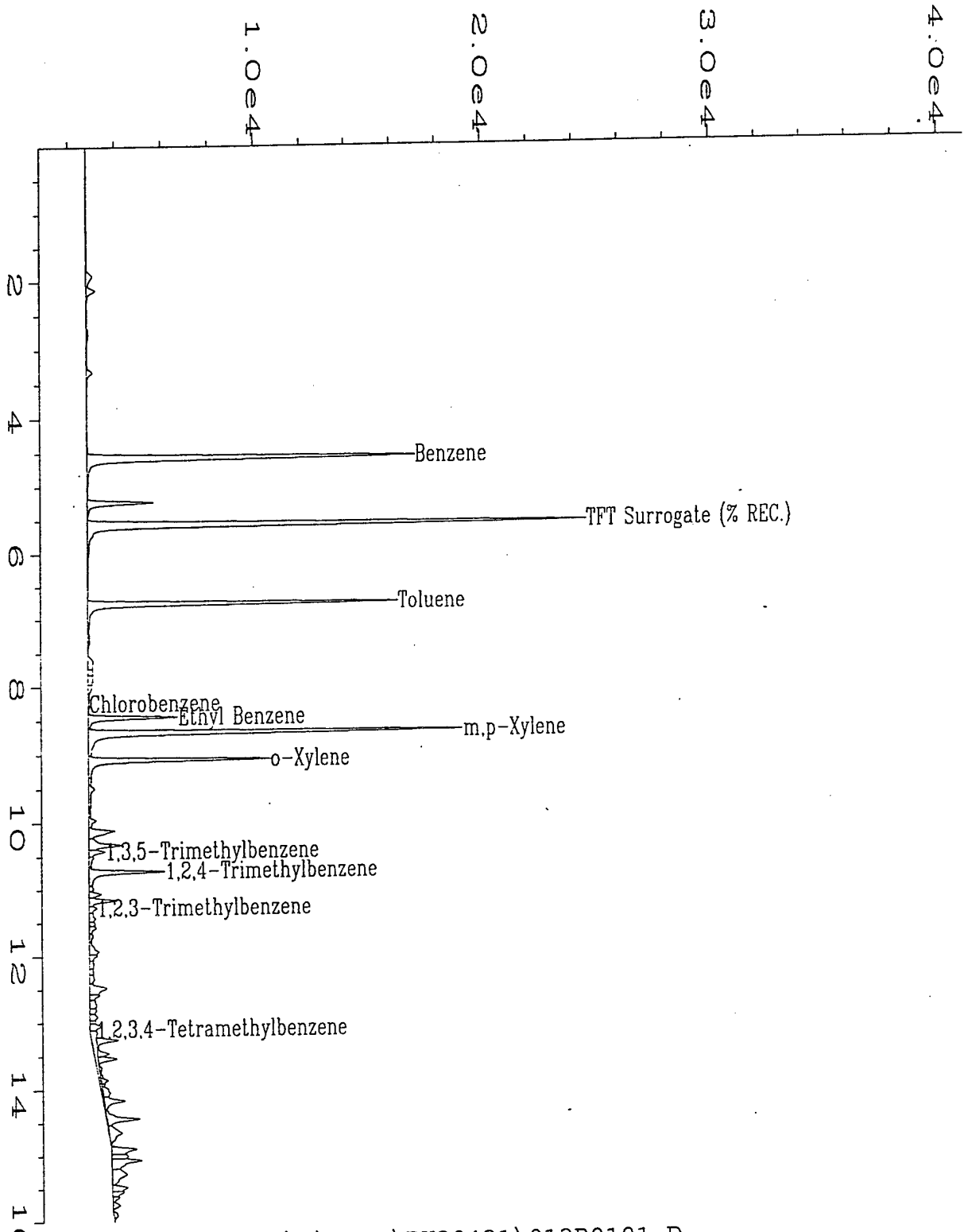
** = See BX2042016 (DF=10).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClella
Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\012R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05832;100;X 0.050 ppm
F Time Bar Code:
Acquired on : 21 Apr 95 04:29 PM
Report Created on: 21 Apr 95 04:46 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 100
Sample Info : 95-1240; MW-11; 0.050 ML WATER

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]T
Analysis Method : BX20421.MT
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05833	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/23/95	Matrix	: Water
Date Analyzed	: 4/23/95	Lab File No.	: BX1042312
		Method Blank No.	: MB042395

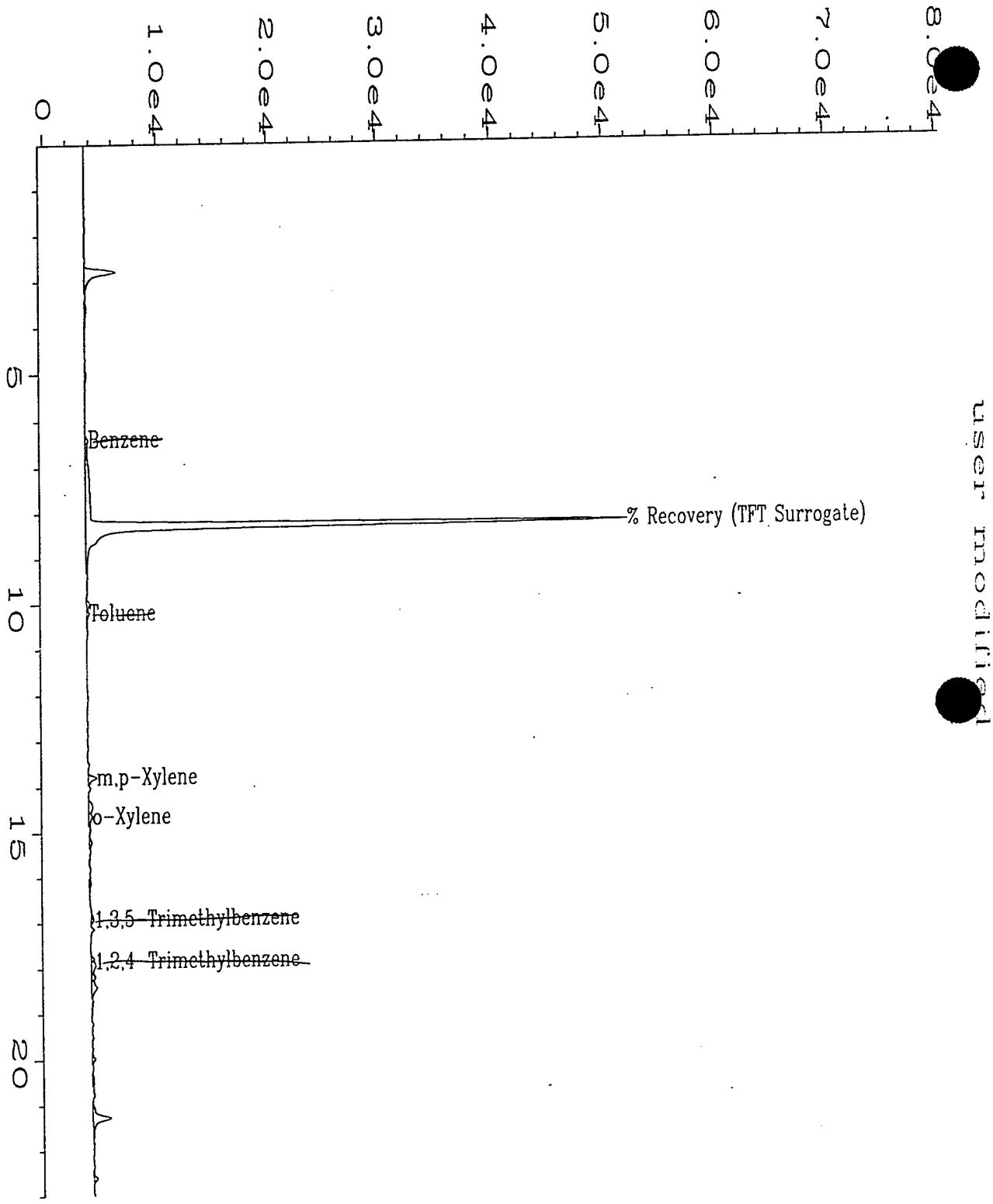
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5		0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		103%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



user modified

Data File Name : E:\1\DATA\BX10423\012F0901.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : X05833;1;5
Run Time Bar Code:
Acquired on : 23 Apr 95 04:03 PM
Report Created on: 25 Apr 95 01:11 PM
Last Recalib on : 24 APR 95 10:52 AM
Multiplier : 1

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 9
Instrument Method: BX104[redacted].M
Analysis Method : BX10423.M
Sample Amount : 0
ISTD Amount :

pm 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-16	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05834	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 10.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042017
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	4.0
Toluene	108-88-3	**	4.0
Chlorobenzene	108-90-7	U	4.0
Ethyl Benzene	100-41-4	**	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	4.0
1,3,5-Trimethylbenzene	108-67-8	110	4.0
1,2,4-Trimethylbenzene	95-63-6	590	4.0
1,2,3-Trimethylbenzene	526-73-8	260	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	80	4.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		103%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

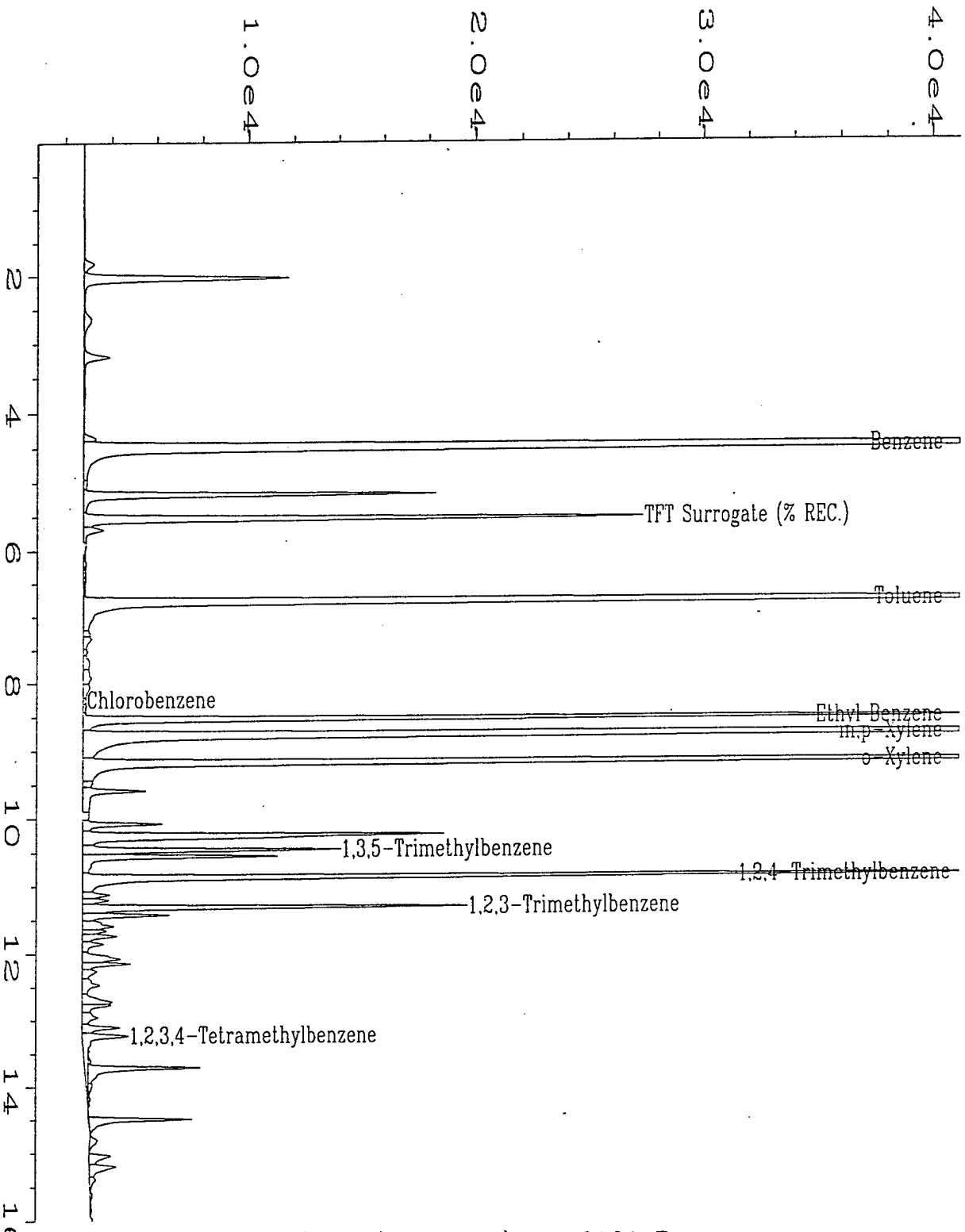
** = See BX2042113 (DF=100).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\017R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05834;10;500UL
Run Time Bar Code:
Acquired on : 20 Apr 95 11:06 PM
Report Created on: 20 Apr 95 11:22 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 10
Sample Info : 95-1240; CPT-16; 500UL ML WATER

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]T
Analysis Method : BX2042[redacted]T
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-16	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05834	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 100.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042113
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2100	40.0
Toluene	108-88-3	2100	40.0
Chlorobenzene	108-90-7	**	40.0
Ethyl Benzene	100-41-4	560	40.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	4100	40.0
1,3,5-Trimethylbenzene	108-67-8	**	40.0
1,2,4-Trimethylbenzene	95-63-6	**	40.0
1,2,3-Trimethylbenzene	526-73-8	**	40.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	40.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

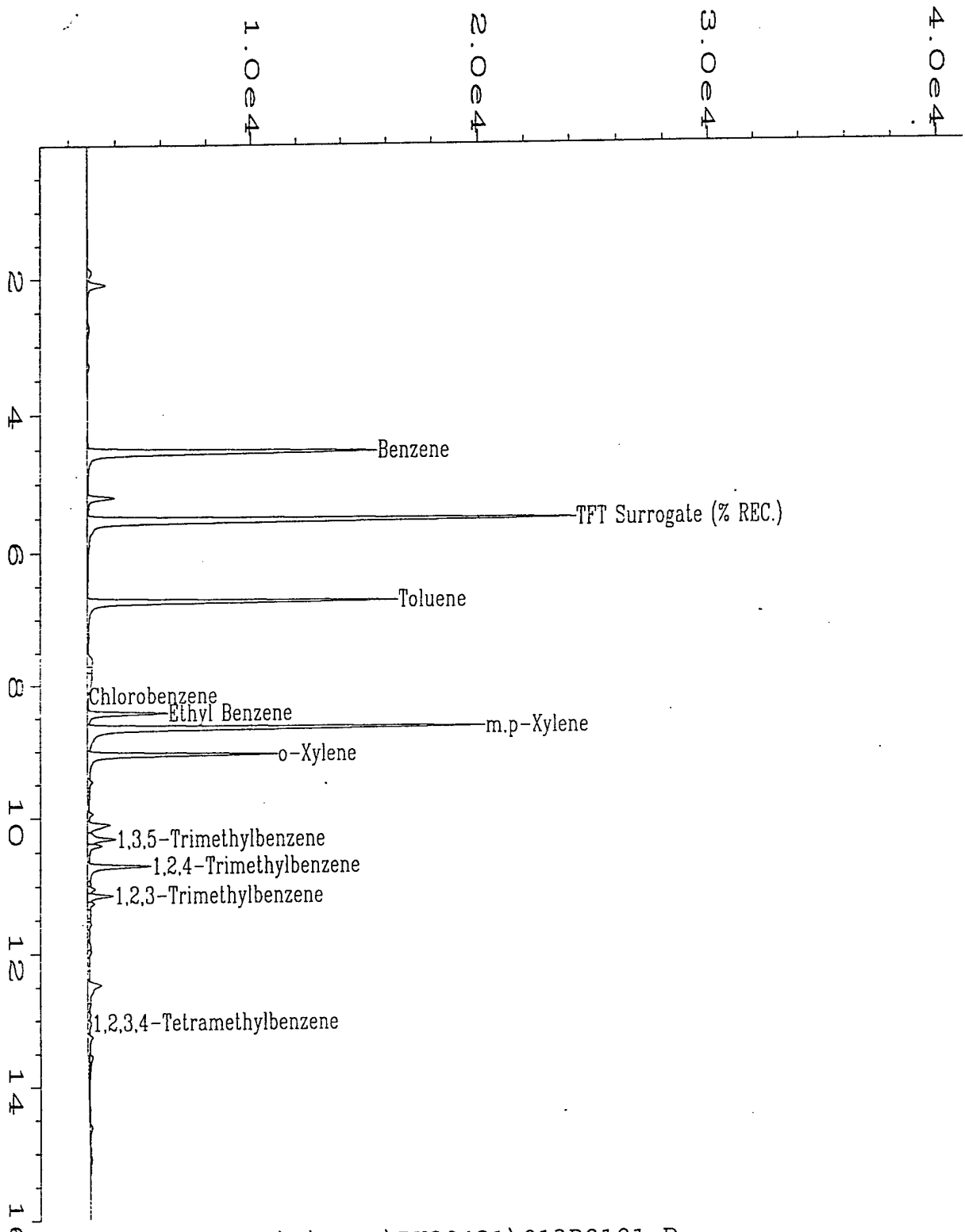
** = See BX2042017 (DF=10).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\013R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05834;100;X 0.050 PR
Run Time Bar Code:
Acquired on : 21 Apr 95 05:06 PM
Report Created on: 21 Apr 95 05:22 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 100
Sample Info : 95-1240; CPT-16; 0.050 ML WATER

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]T
Analysis Method : BX2042[redacted]T
Sample Amount : 0
ISTD Amount :

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-6	Client Project No.	: 722450.2602/SJAFB
Lab Sample No.	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: Water
Date Prepared	: 4/20/95	Lab File Number(s)	: BX2042011,12
Date Analyzed	: 4/20/95	Method Blank	: MB042095

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	25.0	43.5	92.5	50-150
Toluene	20.0	1.0	20.7	98.5	50-148
Ethyl Benzene	20.0	0.0	19.6	98.0	50-150
m,p-Xylene	40.0	0.0	39.7	99.3	50-150
o-Xylene	20.0	0.0	20.0	100.0	50-150
Chlorobenzene	20.0	0.0	19.5	97.5	55-135
1,3,5-TMB	20.0	0.0	19.9	99.5	50-150
1,2,4-TMB	20.0	0.0	19.6	98.0	50-150
1,2,3-TMB	20.0	0.0	19.1	95.5	50-150
1,2,3,4-TeMB	20.0	0.0	21.1	105.5	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Benzene	20.0	42.5	87.5	5.6	25	50-150
Toluene	20.0	19.8	94.0	4.7	25	50-148
Ethyl Benzene	20.0	18.7	93.5	4.7	25	50-150
m,p-Xylene	40.0	37.8	94.5	4.9	25	50-150
o-Xylene	20.0	18.6	93.0	7.3	25	50-150
Chlorobenzene	20.0	18.6	93.0	4.7	25	55-135
1,3,5-TMB	20.0	18.3	91.5	8.4	25	50-150
1,2,4-TMB	20.0	18.2	91.0	7.4	25	50-150
1,2,3-TMB	20.0	17.9	89.5	6.5	25	50-150
1,2,3,4-TeMB	20.0	16.1	80.5	26.9 *	25	50-150

* = Values outside of QC limits.

RPD: 1 out of (10) outside limits.

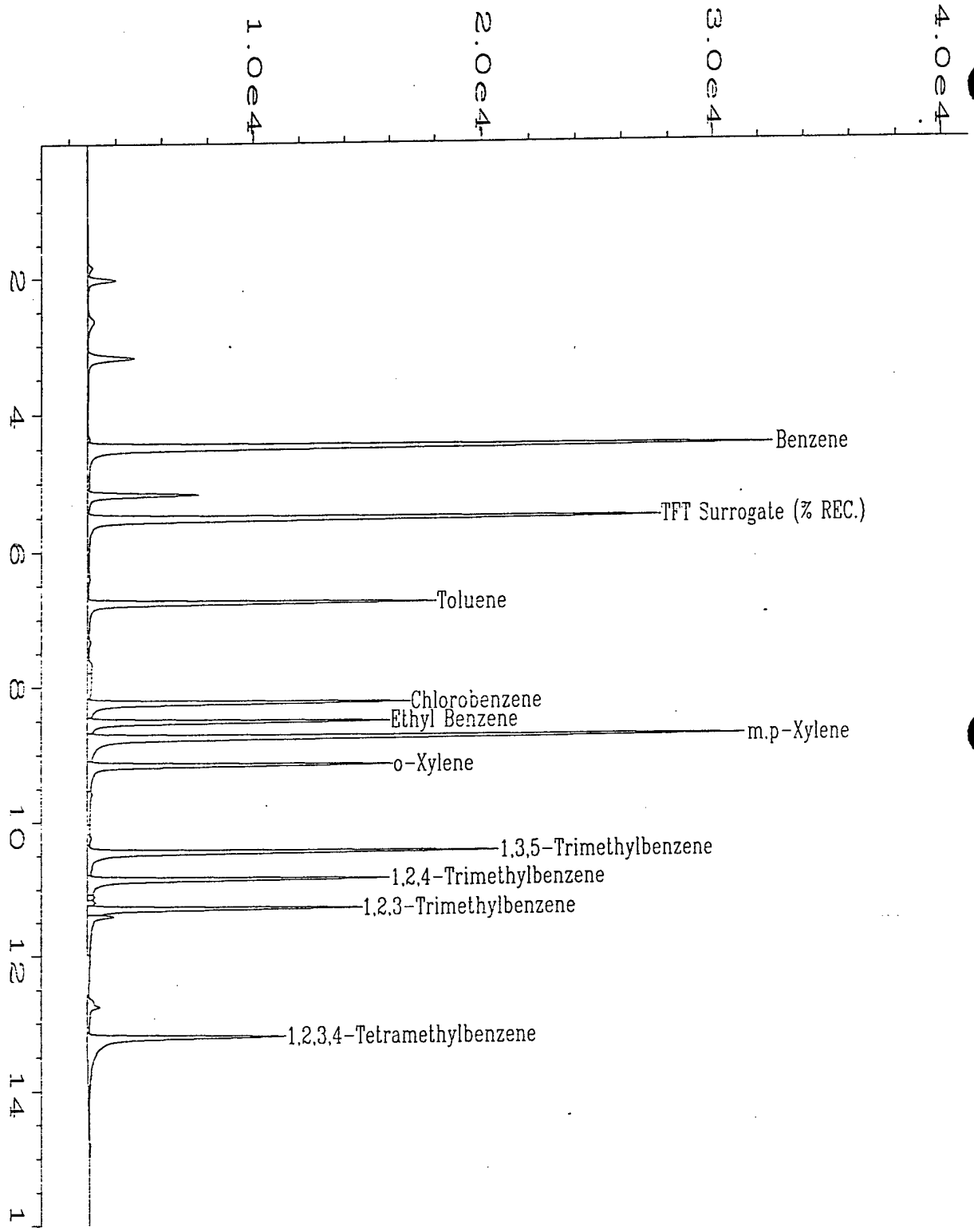
Spike Recovery: 0 out of (20) outside limits.

Comments: See LCS042095.

K. Cone
Analyst

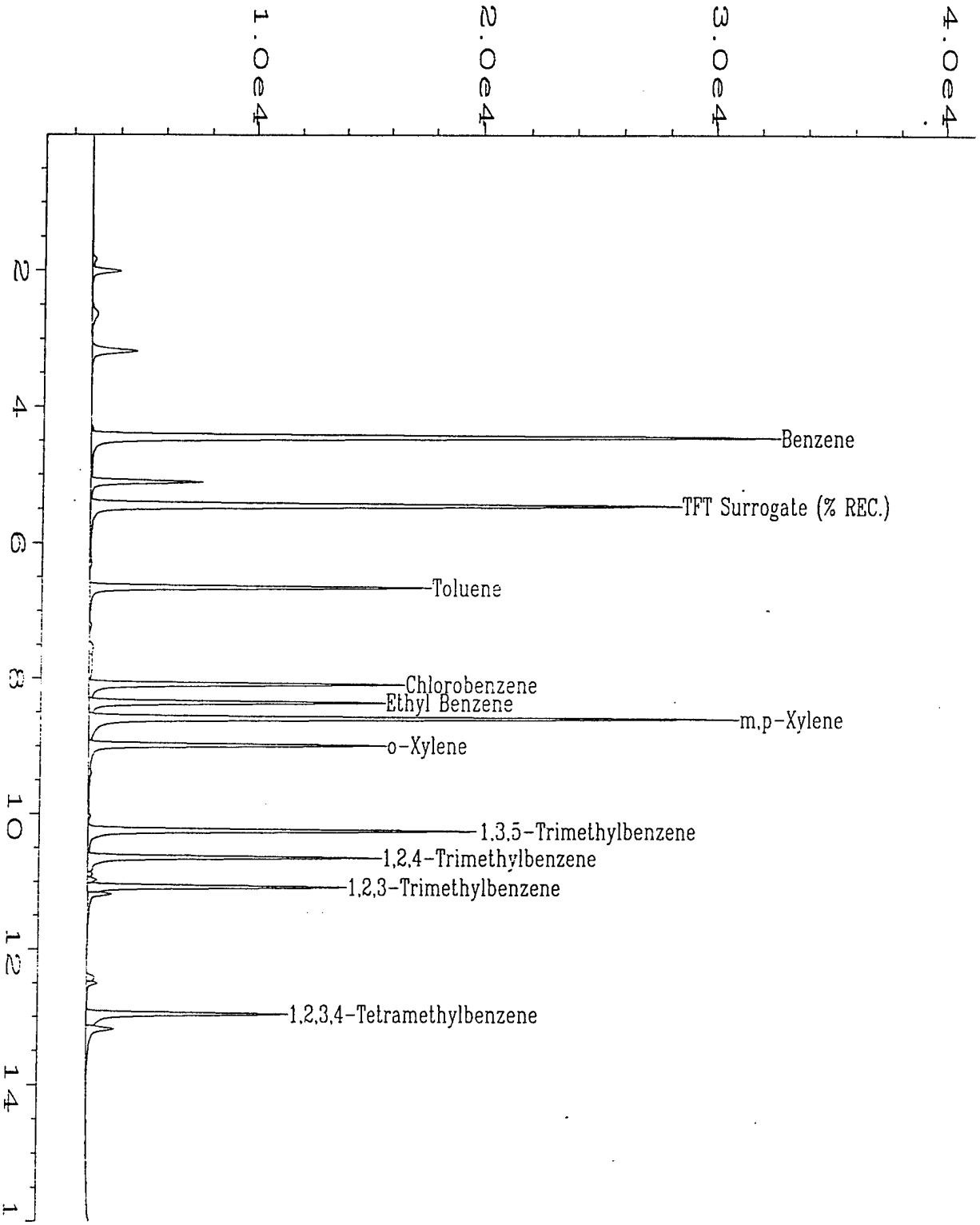
Approved

MS1240.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20420\011R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05829MS;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 07:30 PM
Report Created on: 20 Apr 95 07:47 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 1
Sample Info : 95-1240; MW-6; 5 ML WATER; 20 PPB SPIKE

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: BX2042[redacted]MT
Analysis Method : BX2042[redacted]MT
Sample Amount : 0
ISTD Amount :



Data File Name : C:\HPCHEM\2\DATA\BX20420\012R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : X05829MSD;1;5
Run Time Bar Code:
Acquired on : 20 Apr 95 08:06 PM
Report Created on: 21 Apr 95 09:00 AM
Last Recalib on : 20 Apr 95 05:30 PM
Multiplier : 1

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20420.MTH
Analysis Method : BX20420.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

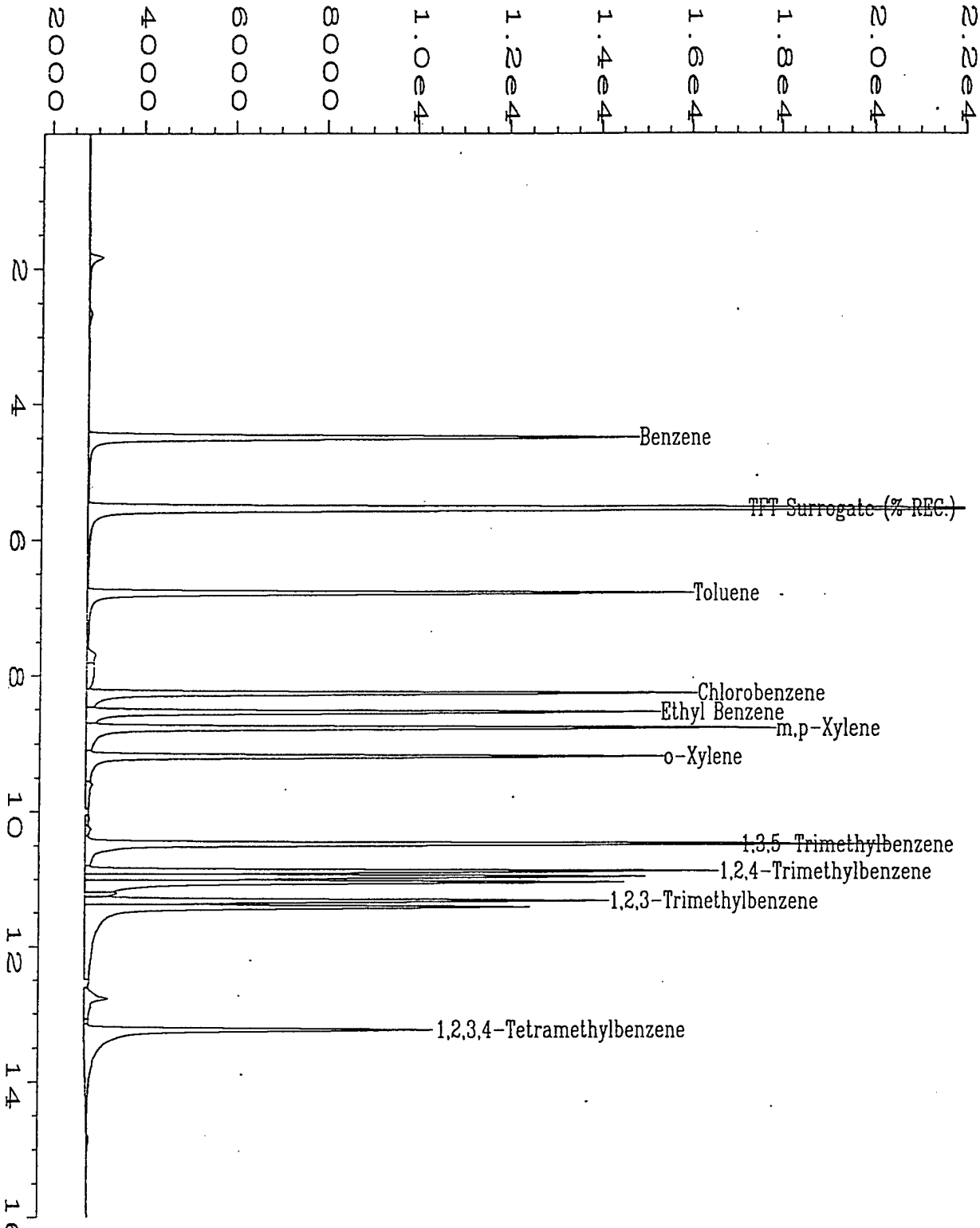
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.8	89.0	71.0-119.0*
Toluene	108-88-3	18.6	93.0	73.0-111.0*
Chlorobenzene	108-90-7	18.5	92.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3	19.5	97.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	18.3	91.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.4	97.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.9	89.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	17.9	89.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.6	98.0	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		110%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
'A = Not available/Not analyzed.

K. Cone
Analyst

Approved



Data File Name : C:\HPCHEM\2\DATA\BX20420\008R0101.D
Operator : KAPRIE S. CONE
Instrument : BTEX2
Sample Name : LCS042095
Retention Time Bar Code:
Acquired on : 20 Apr 95 05:42 PM
Report Created on: 20 Apr 95 05:58 PM
Last Recalib on : 20 APR 95 05:30 PM
Multiplier : 1
Sample Info : REF # 1649

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20420.MTH
Analysis Method : BX20420.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042195	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/21/95	Method	: 602
Date Analyzed	: 4/21/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20421009

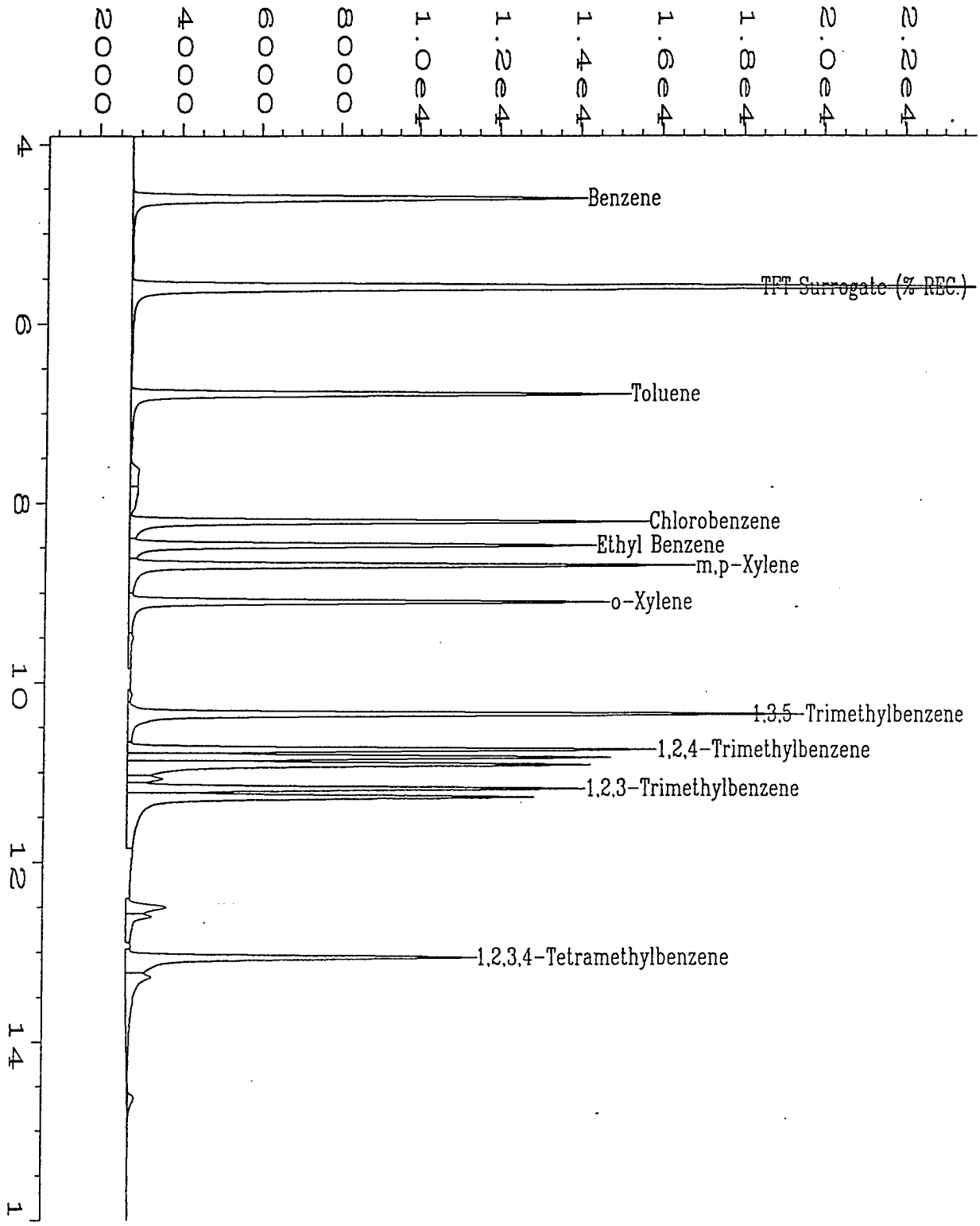
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.9	89.5	71.0-119.0*
Toluene	108-88-3	18.3	91.5	73.0-111.0*
Chlorobenzene	108-90-7	18.8	94.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	19.6	98.0	75.0-114.0*
o-Xylene	95-47-6	18.8	94.0	64.0-11
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.7	93.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\009R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 9
Sample Name	: LCS042195	Injection Number	: 1
[illegible] Time Bar Code:		Sequence Line	: 1
[illegible] red on	: 21 Apr 95 02:25 PM	Instrument Method	: BX20421.MTH
Report Created on	: 21 Apr 95 02:54 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395New	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1042311

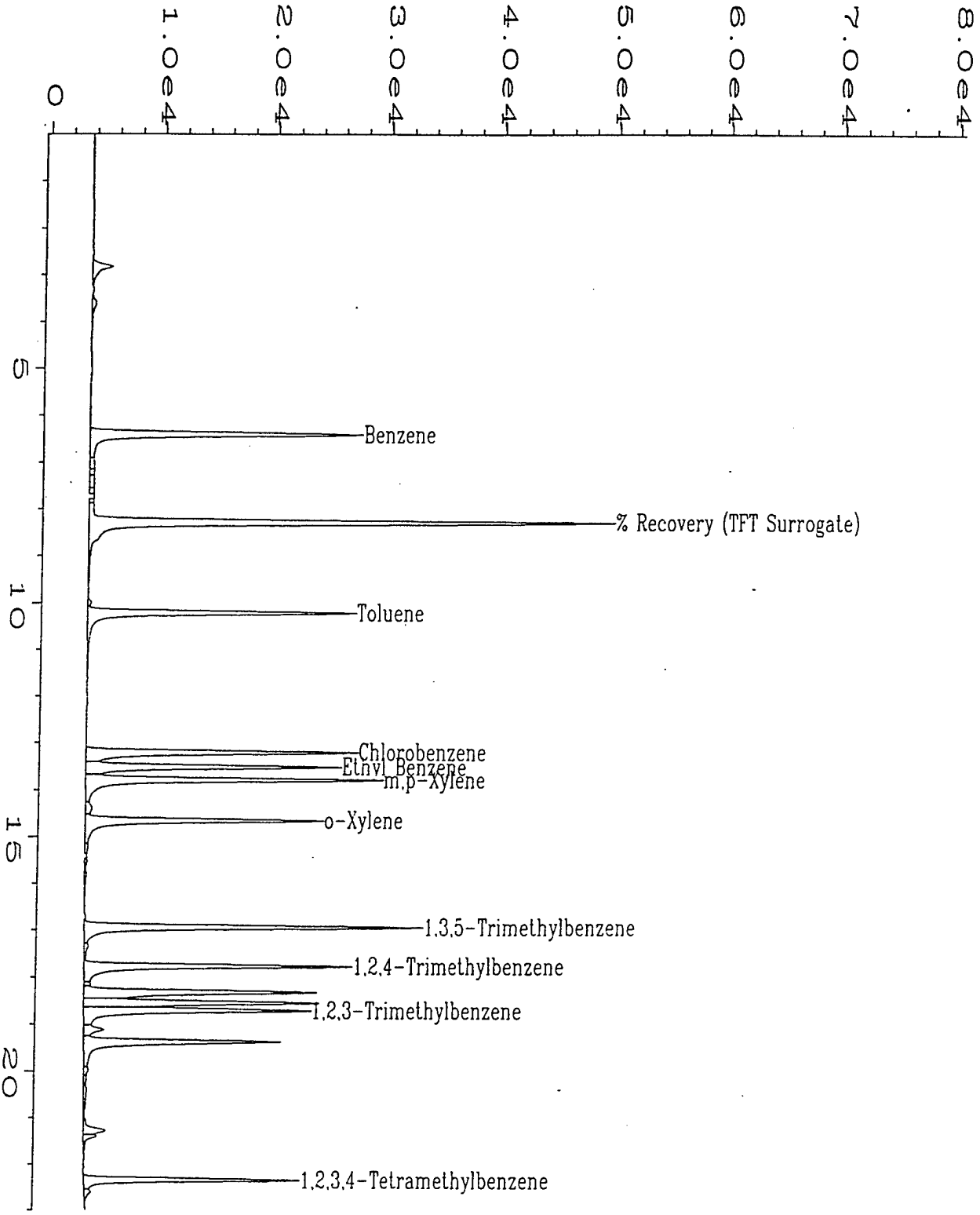
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.1	95.5	71.0-119.0*
Toluene	108-88-3	19.9	99.5	73.0-111.0*
Chlorobenzene	108-90-7	19.7	98.5	64.0-119.0*
Ethyl Benzene	100-41-4	20.0	100.0	75.0-114.0*
m,p-Xylene	108-38-3	20.9	104.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	19.3	96.5	64.0-1[redacted]*
1,3,5-Trimethylbenzene	108-67-8	21.6	108.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	21.8	109.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	23.3	116.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.2	101.0	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		92%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

K. Cone
Approved



Data File Name	: E:\1\DATA\BX10423\011F0901.D		
Operator	: SW Tyson	Page Number	: 1
Instrument	: BTEX1	Vial Number	: 11
Sample Name	: New LCS 1667	Injection Number	: 1
Time Bar Code:		Sequence Line	: 9
Acquired on	: 23 Apr 95 03:22 PM	Instrument Method	: BX10423.MTH
Report Created on	: 25 Apr 95 01:08 PM	Analysis Method	: BX10423.MTH
Last Recalib on	: 24 APR 95 10:52 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1042309

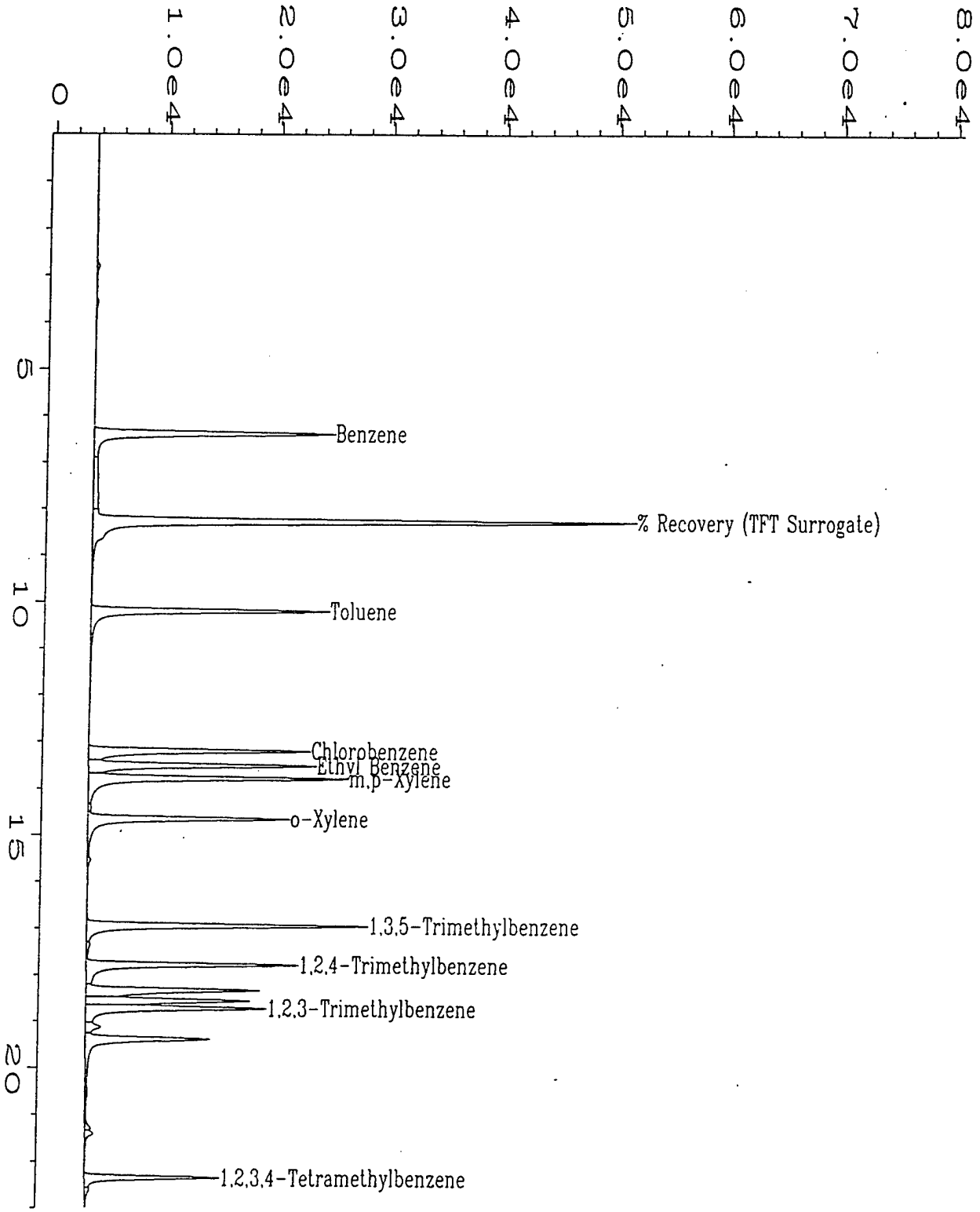
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.4	87.0	71.0-119.0*
Toluene	108-88-3	18.0	90.0	73.0-111.0*
Chlorobenzene	108-90-7	16.5	82.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.3	91.5	75.0-114.0*
m,p-Xylene	108-38-3	18.9	94.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	17.0	85.0	64.0-1[redacted]*
1,3,5-Trimethylbenzene	108-67-8	18.2	91.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.2	91.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	13.1	65.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

Analyst

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Data File Name : E:\1\DATA\BX10423\009F0901.D
Operator : SW Tyson
Instrument : BTEX1
Sample Name : LCS042395
Time Bar Code:
Acquired on : 23 Apr 95 02:01 PM
Report Created on: 25 Apr 95 01:02 PM
Last Recalib on : 24 APR 95 10:52 AM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 9
Instrument Method: BX10423.MTH
Analysis Method : BX10423.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-11	Client I.D.	: 722450.2[illegible] SJAFB
Lab Sample Number	: X05832		
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0487
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	1,700	E	0.5
Toluene	108-88-3	1,400	E	0.5
Ethyl Benzene	100-41-4	650	E	0.5
Total Xylenes	1330-20-7	3,100	E	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	160		0.5
1,2,4-Trimethylbenzene	526-73-8	430	E	0.5
1,2,3-Trimethylbenzene	108-67-8	200		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	17		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	32		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/[illegible]
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	31		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	98%	(83-112)
Toluene-d8	94%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w[illegible]
E = Compound is detected but concentration is outside of calibration limit[illegible]
NA = Not applicable or not available.

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(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-11	Client I.D.	: 722450.2602 / SJAFB
Lab Sample Number	: X05832		
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0487
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	3	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	290		1.0
1,1-Dichloroethane	75-34-3	440	E	1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	120		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	20		1.0
2-Butanone	78-93-3	20		10.0
1,1,1-Trichloroethane	71-55-6	250		0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	770	E	1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	1,700	E	0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	1,400	E	0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	650	E	0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7	3,100	E	0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	98%	(83-112)
Toluene-d8	94%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wat
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-11	Client I.D.	: 722450.26 SJAFB
ab Sample Number	: X05832		
ate Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0502
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	2,200		2.5
Toluene	108-88-3	1,900		2.5
Ethyl Benzene	100-41-4	680		2.5
Total Xylenes	1330-20-7	3,900		2.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	130		2.5
1,2,4-Trimethylbenzene	526-73-8	440		2.5
1,2,3-Trimethylbenzene	108-67-8	190		2.5
1,2,3,4-Tetramethylbenzene	488-23-3	19		5.0
Methyl-t-butyl ether (MTBE)	156-60-5		U	5.0
Chlorobenzene	108-90-7		U	5.0
Styrene	100-42-5		U	5.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	5.0
Isopropyl ether	108-20-3	28		5.0
1,2-Dibromoethane (EDB)	106-93-4		U	5.0
1,3-Dichlorobenzene	541-73-1		U	5.0
1,2-Dichlorobenzene	95-50-1		U	5.0
1,4-Dichlorobenzene	106-46-7		U	5.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	94%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	94%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-11	Client I.D.	: 722450.2602 / SJAFB
Lab Sample Number	: X05832		
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0502
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
1,1-Dichloroethene	75-35-4	300	5.0
1,1-Dichloroethane	75-34-3	440	5.0
Cis-1,2-Dichloroethene	156-59-2	120	5.0
1,1,1-Trichloroethane	71-55-6	200	2.5
Trichloroethene	79-01-6	850	5.0
Benzene	71-43-2	2,200	2.5
Toluene	108-88-3	1,900	2.5
Ethyl Benzene	100-41-4	680	2.5
Total Xylenes	1330-20-7	3,900	2.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	94%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	94%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
GC Confirmation and Additional Compounds

ethod Blank Number : RB050195
Date Extracted/Prepared : 05/01/95
Date Analyzed : 05/01/95

Client I.D. : 722450.2[redacted]2
SJAFB
Lab Project No. : 95-1240
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0486

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2		U	0.5
Toluene	108-88-3		U	0.5
Ethyl Benzene	100-41-4		U	0.5
Total Xylenes	1330-20-7		U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6		U	0.5
1,2,4-Trimethylbenzene	526-73-8		U	0.5
1,2,3-Trimethylbenzene	108-67-8		U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3		U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5		U	1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit ug/[redacted]
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3		U	1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
Target Compound List

Method Blank Number	: RB050195	Client I.D.	: 722450.2602 / SJAFB
Date Extracted/Prepared	: 05/01/95		
Date Analyzed	: 05/01/95	Lab Project No.	: 95-1240
		Effective Dilution	: 1.00
		Method	: 624
		Lab File No.	: >L0486

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
GC Confirmation and Additional Compounds

Method Blank Number : RB050295
Date Extracted/Prepared : 05/02/95
Date Analyzed : 05/02/95

Client I.D. : 722450.2
SJAFB
Lab Project No. : 95-1240
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	103%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
Target Compound List

Method Blank Number	: RB050295	Client I.D.	: 722450.2602 / SJAFB
Date Extracted/Prepared	: 05/02/95		
Date Analyzed	: 05/02/95	Lab Project No.	: 95-1240
		Effective Dilution	: 1.00
		Method	: 624
		Lab File No.	: >L0501

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	1	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	103%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.26 SJAFB
Lab Sample Number	: X05933MS		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		REC %
Benzene	71-43-2	480		152%
Toluene	108-88-3	45		95%
Ethyl Benzene	100-41-4	250		78%
Total Xylenes	1330-20-7	340		108%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	47	NS	---
1,2,4-Trimethylbenzene	526-73-8	110	NS	---
1,2,3-Trimethylbenzene	108-67-8	30	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	31	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	34		74%
Chlorobenzene	108-90-7	21		103%
Styrene	100-42-5	23		116%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		REC %
Dichlorodifluoromethane	75-71-8		NS	---
Isopropyl ether	108-20-3	4	NS	---
1,2-Dibromoethane (EDB)	106-93-4		NS	---
1,3-Dichlorobenzene	541-73-1	20		100%
1,2-Dichlorobenzene	95-50-1	21		103%
1,4-Dichlorobenzene	106-46-7	19		95%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	101%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.2602 / SJAFB
Lab Sample Number	: X05933MS		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	12		62%
Bromomethane	74-83-9	18	B	80%
Vinyl Chloride	75-01-4	12		60%
Chloroethane	75-00-3	17		85%
Methylene Chloride	75-09-2	22		110%
Acetone	67-64-1	24		120%
Carbon Disulfide	75-15-0	19		94%
1,1-Dichloroethene	75-35-4	23		110%
1,1-Dichloroethane	75-34-3	21		103%
Trans-1,2-Dichloroethene	156-60-5	20		98%
Cis-1,2-Dichloroethene	156-59-2	320		109%
Chloroform	67-66-3	25	B	123%
1,2-Dichloroethane	107-06-2	21		84%
2-Butanone	78-93-3	21		103%
1,1,1-Trichloroethane	71-55-6	18		88%
Carbon Tetrachloride	56-23-5	19		93%
Bromodichloromethane	75-27-4	19		95%
Vinyl Acetate	108-05-4	17		85%
1,2-Dichloropropane	78-87-5	22		108%
Trans-1,3-Dichloropropene	10061-02-6	10		48%
Trichloroethene	79-01-6	180		88%
1,1,2-Trichloroethane	79-00-5	21		105%
Benzene	71-43-2	480		152%
Dibromochloromethane	124-48-1	19		97%
Cis-1,3-Dichloropropene	10061-01-5	18		92%
2-Chloroethylvinyl Ether	110-75-8	1		7%
Bromoform	75-25-2	17		84%
4-Methyl-2-Pentanone	108-10-1	17		84%
2-Hexanone	591-78-6	23		113%
1,1,2,2-Tetrachloroethane	79-34-5	18		90%
Tetrachloroethene	127-18-4	20		99%
Toluene	108-88-3	45		95%
Chlorobenzene	108-90-7	21		103%
Ethyl Benzene	100-41-4	250		78%
Styrene	100-42-5	23		116%
Total Xylenes	1330-20-7	340		108%
Trichlorofluoromethane	75-69-4	18		91%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	101%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.2602 SJAFB
Lab Sample Number	: X05923MS		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0505
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		REC %
Benzene	71-43-2	890		56%
Toluene	108-88-3	110		101%
Ethyl Benzene	100-41-4	190		92%
Total Xylenes	1330-20-7	120		74%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6		NS	---
1,2,4-Trimethylbenzene	526-73-8	13	NS	---
1,2,3-Trimethylbenzene	108-67-8	5	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	23	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	48		48%
Chlorobenzene	108-90-7	100		100%
Styrene	100-42-5	4		4%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L	
Dichlorodifluoromethane	75-71-8		NS	---	
Isopropyl ether	108-20-3	28	NS	---	
1,2-Dibromoethane (EDB)	106-93-4		NS	---	
1,3-Dichlorobenzene	541-73-1	100		100%	
1,2-Dichlorobenzene	95-50-1	100		100%	
1,4-Dichlorobenzene	106-46-7	94		94%	

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
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Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.2602 / SJAFB
Lab Sample Number	: X05923MS		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0505
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	54		54%
Bromomethane	74-83-9	89	B	89%
Vinyl Chloride	75-01-4	61		61%
Chloroethane	75-00-3	89		89%
Methylene Chloride	75-09-2	110		110%
Acetone	67-64-1	142		142%
Carbon Disulfide	75-15-0	100		100%
1,1-Dichloroethene	75-35-4	130		130%
1,1-Dichloroethane	75-34-3	120		120%
Trans-1,2-Dichloroethene	156-60-5	99		99%
Cis-1,2-Dichloroethene	156-59-2	140		140%
Chloroform	67-66-3	130	B	130%
1,2-Dichloroethane	107-06-2	110		110%
2-Butanone	78-93-3	95		95%
1,1,1-Trichloroethane	71-55-6	97		97%
Carbon Tetrachloride	56-23-5	100		100%
Bromodichloromethane	75-27-4	96	B	96%
Vinyl Acetate	108-05-4	63		63%
1,2-Dichloropropane	78-87-5	100		100%
Trans-1,3-Dichloropropene	10061-02-6	54		54%
Trichloroethene	79-01-6	190		190%
1,1,2-Trichloroethane	79-00-5	100		100%
Benzene	71-43-2	890		56%
Dibromochloromethane	124-48-1	92		92%
Cis-1,3-Dichloropropene	10061-01-5	98		98%
2-Chloroethylvinyl Ether	110-75-8	21		21%
Bromoform	75-25-2	82		82%
4-Methyl-2-Pentanone	108-10-1	90		90%
2-Hexanone	591-78-6	82		82%
1,1,2,2-Tetrachloroethane	79-34-5	84		84%
Tetrachloroethene	127-18-4	110		110%
Toluene	108-88-3	110		110%
Chlorobenzene	108-90-7	100		100%
Ethyl Benzene	100-41-4	190		190%
Styrene	100-42-5	4		4%
Total Xylenes	1330-20-7	120		120%
Trichlorofluoromethane	75-69-4	94		94%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: 624 REF	Client I.D.	: 722450.2[redacted] SJAFB
Lab Sample Number	: 624 REF		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	22	109%
Toluene	108-88-3	21	105%
Ethyl Benzene	100-41-4	22	109%
Total Xylenes	1330-20-7	24	118%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	NS	---
1,2,3-Trimethylbenzene	108-67-8	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	8	40%
Chlorobenzene	108-90-7	23	114%
Styrene	100-42-5	22	110%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/[redacted]
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	22	108%
1,2-Dichlorobenzene	95-50-1	22	108%
1,4-Dichlorobenzene	106-46-7	20	102%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	107%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
NS = **Not spiked.**
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: 624 REF	Client I.D.	: 722450.2602 / SJAFB
Lab Sample Number	: 624 REF		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	11		56%
Bromomethane	74-83-9	19	B	97%
Vinyl Chloride	75-01-4	13		64%
Chloroethane	75-00-3	19		95%
Methylene Chloride	75-09-2	23		115%
Acetone	67-64-1	29		145%
Carbon Disulfide	75-15-0	21		107%
1,1-Dichloroethene	75-35-4	25		127%
1,1-Dichloroethane	75-34-3	22		111%
Trans-1,2-Dichloroethene	156-60-5	21		106%
Cis-1,2-Dichloroethene	156-59-2	23		116%
Chloroform	67-66-3	26	B	128%
1,2-Dichloroethane	107-06-2	23		115%
2-Butanone	78-93-3	22		108%
1,1,1-Trichloroethane	71-55-6	20		99%
Carbon Tetrachloride	56-23-5	22		112%
Bromodichloromethane	75-27-4	21	B	104%
Vinyl Acetate	108-05-4	6		32%
1,2-Dichloropropane	78-87-5	22		112%
Trans-1,3-Dichloropropene	10061-02-6	12		62%
Trichloroethene	79-01-6	25		124%
1,1,2-Trichloroethane	79-00-5	22		112%
Benzene	71-43-2	22		109%
Dibromochloromethane	124-48-1	21		103%
Cis-1,3-Dichloropropene	10061-01-5	22		112%
2-Chloroethylvinyl Ether	110-75-8	4		19%
Bromoform	75-25-2	18		89%
4-Methyl-2-Pentanone	108-10-1	22		110%
2-Hexanone	591-78-6	21		106%
1,1,2,2-Tetrachloroethane	79-34-5	19		94%
Tetrachloroethene	127-18-4	23		117%
Toluene	108-88-3	21		105%
Chlorobenzene	108-90-7	23		114%
Ethyl Benzene	100-41-4	22		109%
Styrene	100-42-5	22		110%
Total Xylenes	1330-20-7	24		118%
Trichlorofluoromethane	75-69-4	20		100%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	107%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: TMB LFB	Client I.D.	: 722450.2 SJAFB
Lab Sample Number	: TMB LFB		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0507
		Method Blank No.	: TMB LFB

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	NS	---
Toluene	108-88-3	NS	---
Ethyl Benzene	100-41-4	NS	---
Total Xylenes	1330-20-7	NS	---
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	18	90%
1,2,4-Trimethylbenzene	526-73-8	17	85%
1,2,3-Trimethylbenzene	108-67-8	19	94%
1,2,3,4-Tetramethylbenzene	488-23-3	21	107%
Methyl-t-butyl ether (MTBE)	156-60-5	NS	---
Chlorobenzene	108-90-7	NS	---
Styrene	100-42-5	NS	---

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	NS	---
1,2-Dichlorobenzene	95-50-1	NS	---
1,4-Dichlorobenzene	106-46-7	NS	---

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	106%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	99%	(87-105)

QUALIFIERS:
NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/17/95	Client Project Number	: 722450.2602
Date Received	: 4/18/95	Lab Project Number	: 95-1240
Date Prepared	: 04/30-5/01/95	Matrix	: Water
Date Analyzed	: 4/30-5/01/95	Method Number	: EPA 5030/8015 Modified

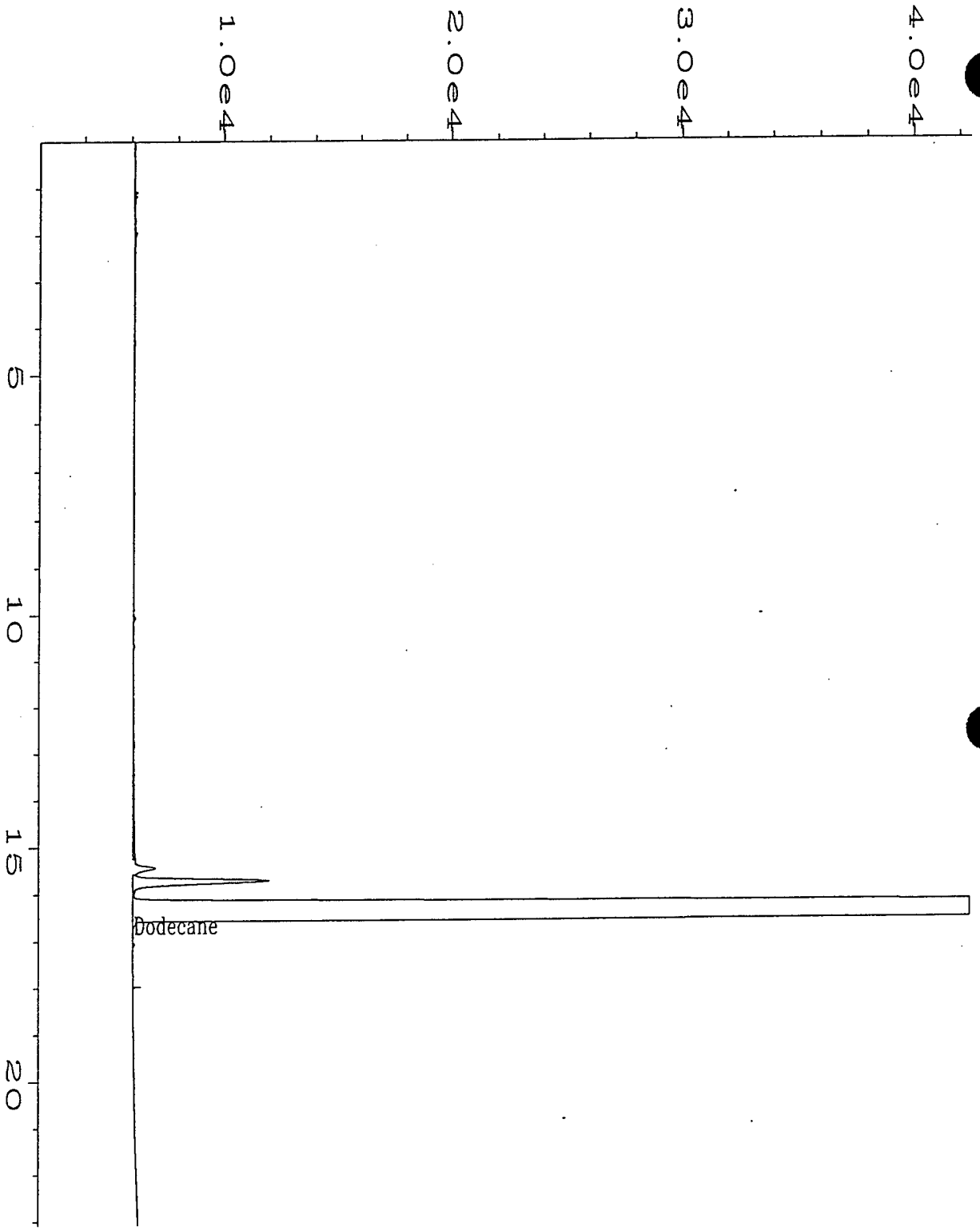
Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	RL mg/L
MB050195	METHOD BLANK	103%	U	0.1
MB050195B	METHOD BLANK	100%	U	0.1
X05829	MW-6	100%	U	0.1
X05830	MW-7	101%	U	0.1
X05830 DUP	MW-7	100%	U	0.1
X05831	MW-10	101%	U	0.1
X05832	MW-11	82%	18	0.5
X05834	CPT-16	103%	14	0.5

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH found in blan also.
E = Extrapolated value.
RL = Reporting Limit.

Analyst

Approved

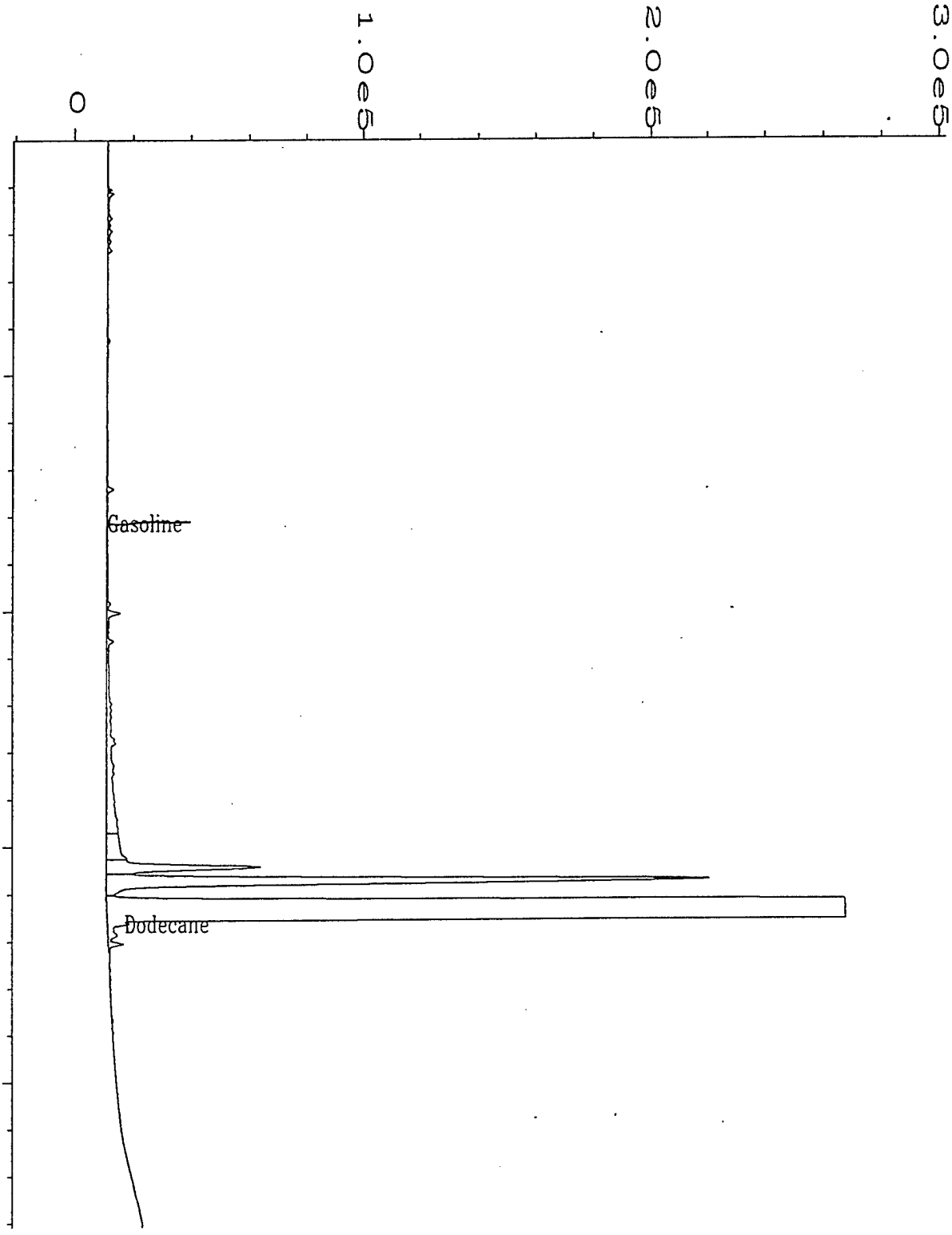
TVH1240.XLS



user modified

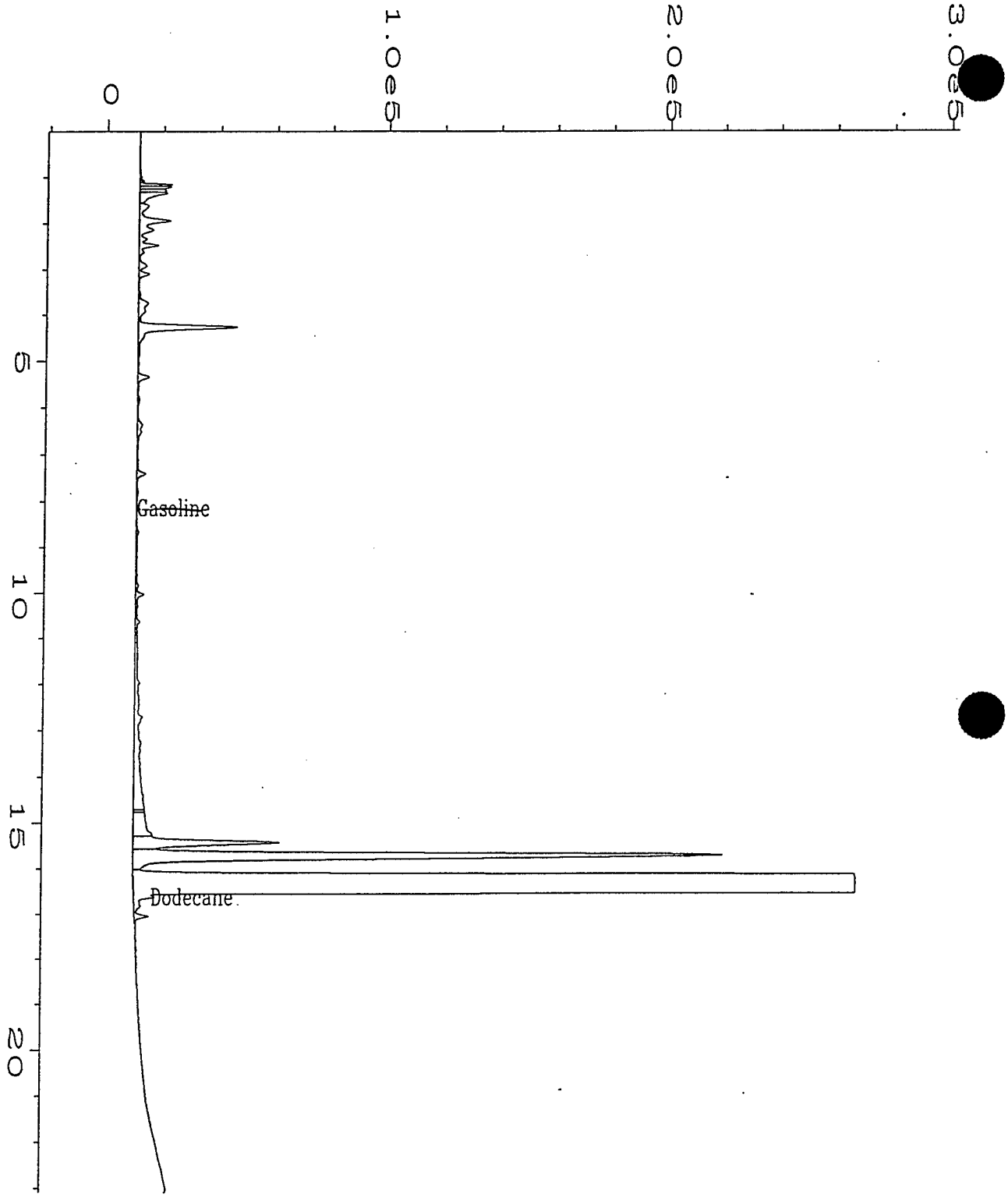
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Operator : S.W. Tyson
Instrument : TVH
Sample Name : MB050195
Run Time Bar Code:
Acquired on : 30 Apr 95 11:58 PM
Report Created on: 03 May 95 05:37 PM
Last Recalib on : 01 MAY 95 08:09 AM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted].M
Analysis Method : TVH0430.MT
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\tvh0501\008F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 8
Sample Name	: MB050195B ICC	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 07:19 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 02 May 95 10:19 AM	Analysis Method	: TVH0501.MTH
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Multiplier	: 1	ISTD Amount	:

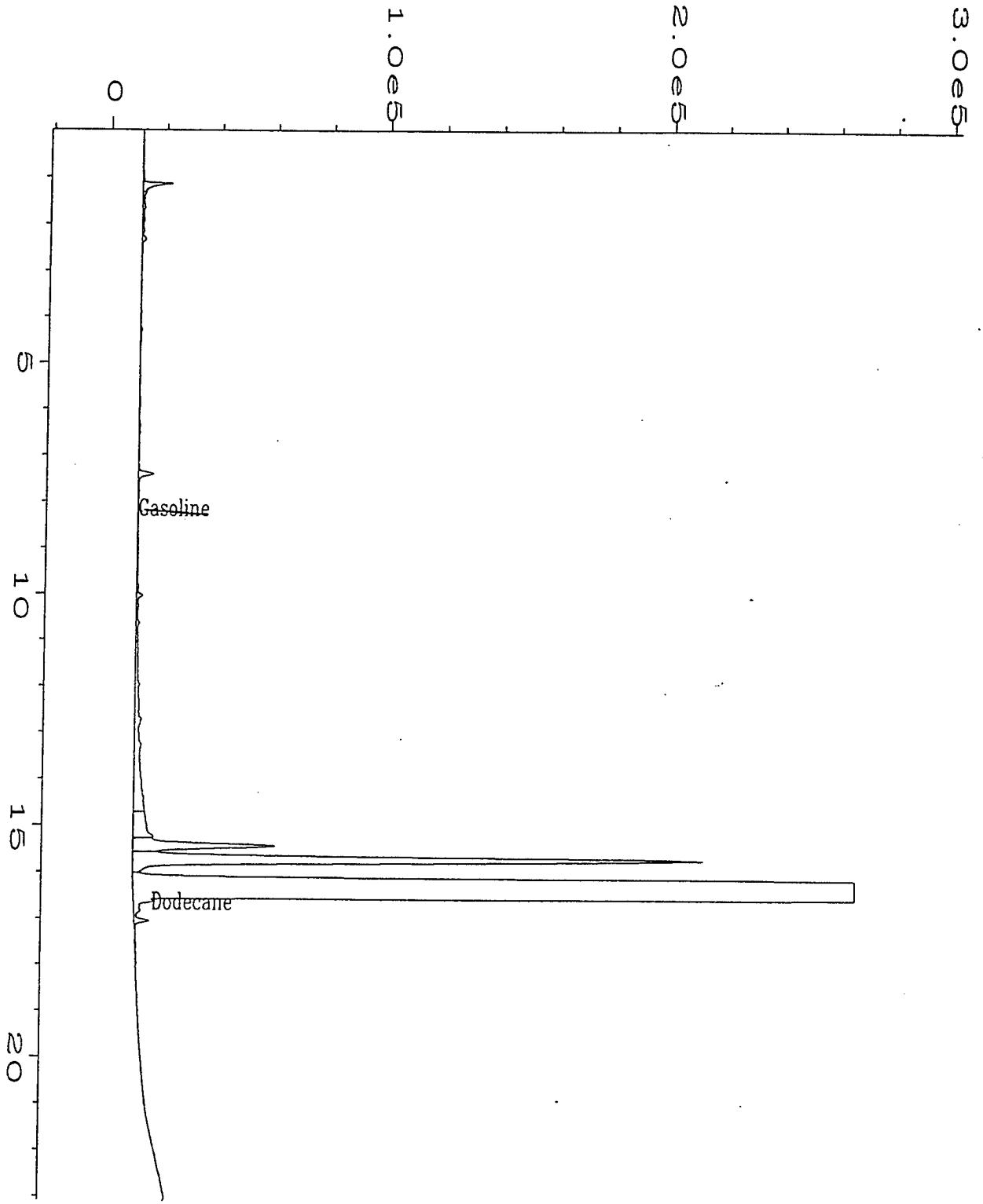
pm 5/10/95



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Instrument	: TVH	Vial Number	: 9
Sample Name	: X05829;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 07:54 PM	Instrument Method	: TVH1BA[illegible]M
Report Created on	: 01 May 95 08:18 PM	Analysis Method	: TVH0501[illegible]
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

5/10/95

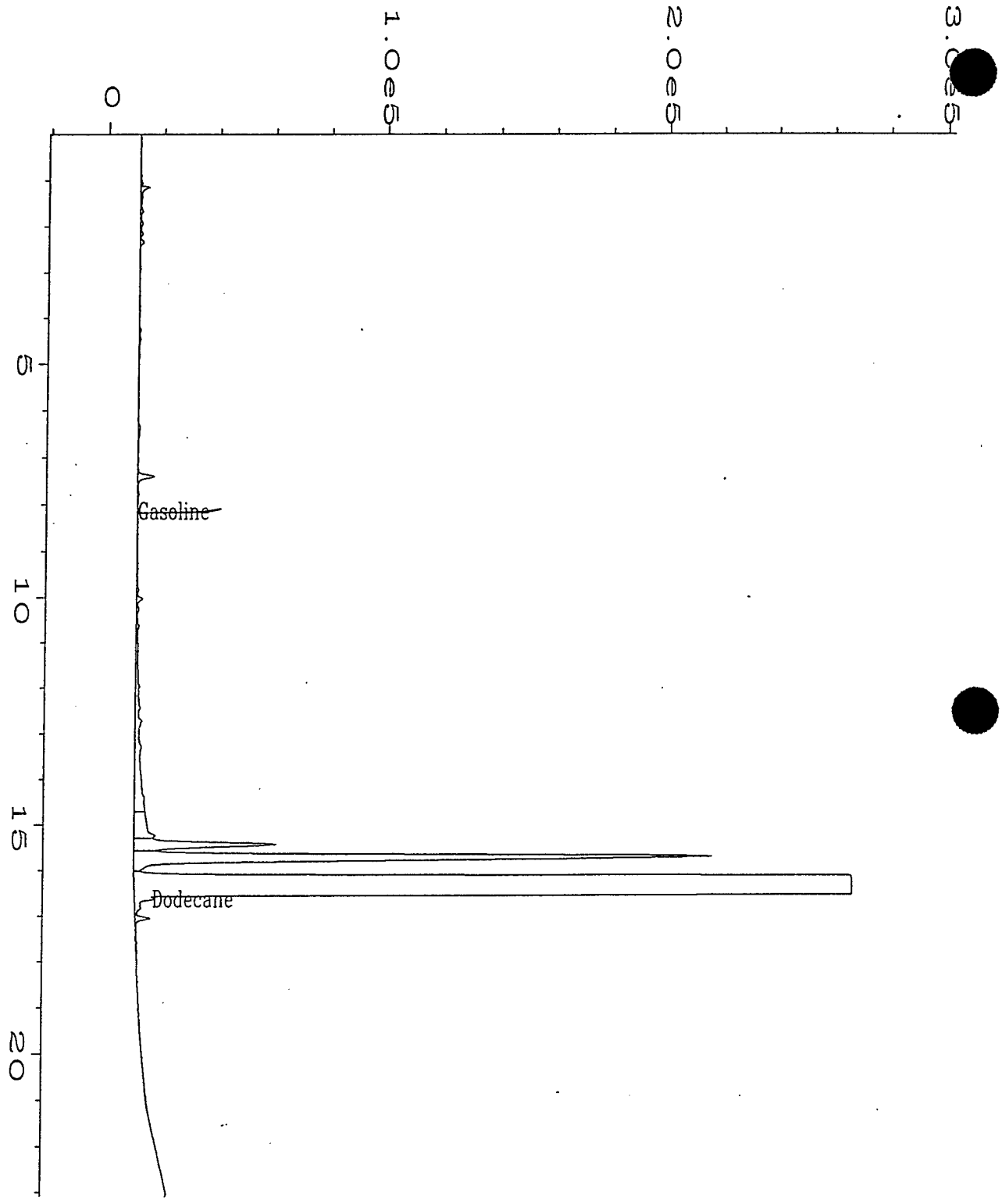
MW-6



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\010F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 10
Sample Name	: X05830;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 08:29 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 01 May 95 08:54 PM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

dm 5/10/95

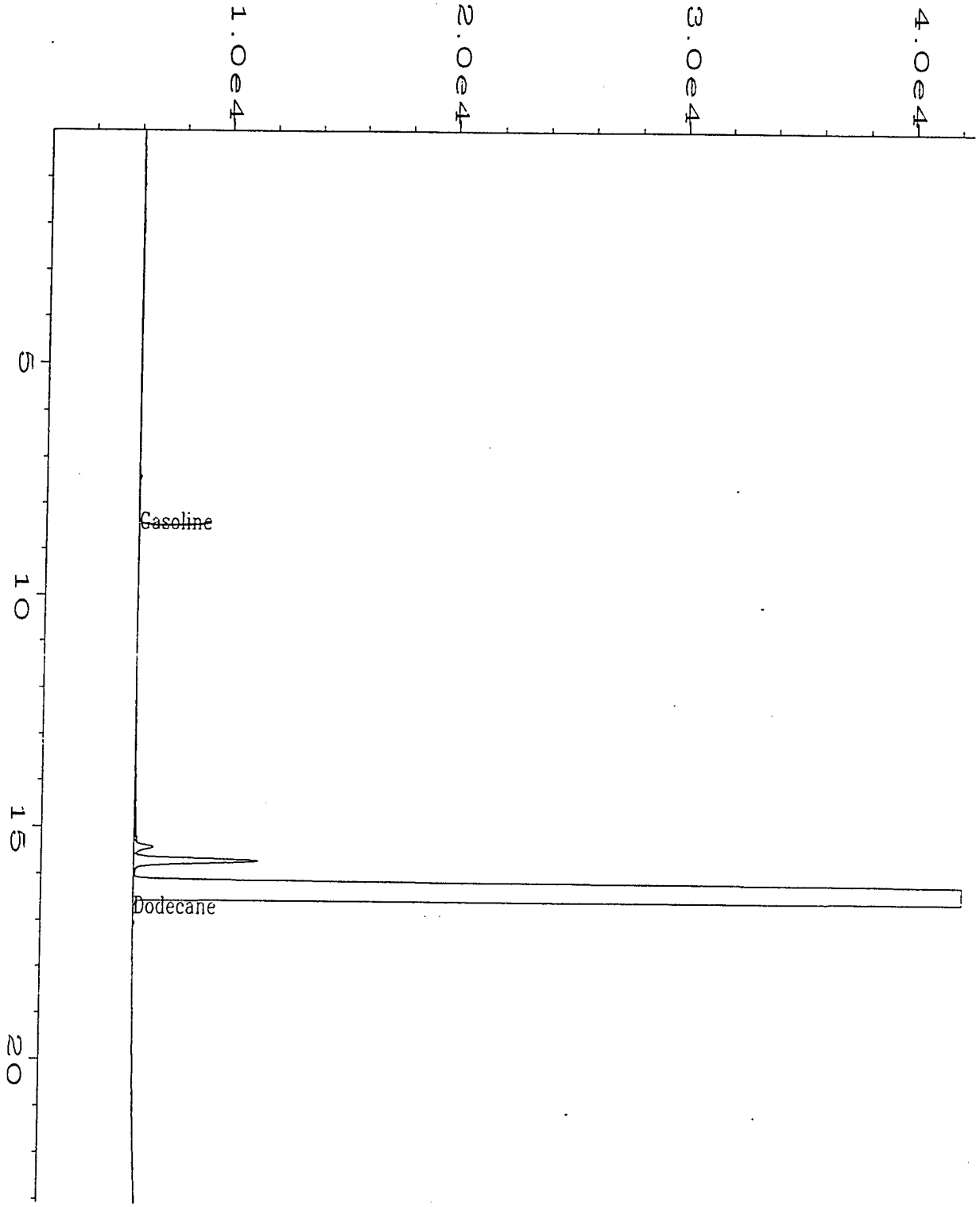
MW-7



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Run Time Bar Code:		Sequence Line	: 1
uired on	: 01 May 95 09:04 PM	Instrument Method	: TVH1BA[illegible]M
Report Created on	: 01 May 95 09:30 PM	Analysis Method	: TVH0501.MT
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

pm 5/10/95

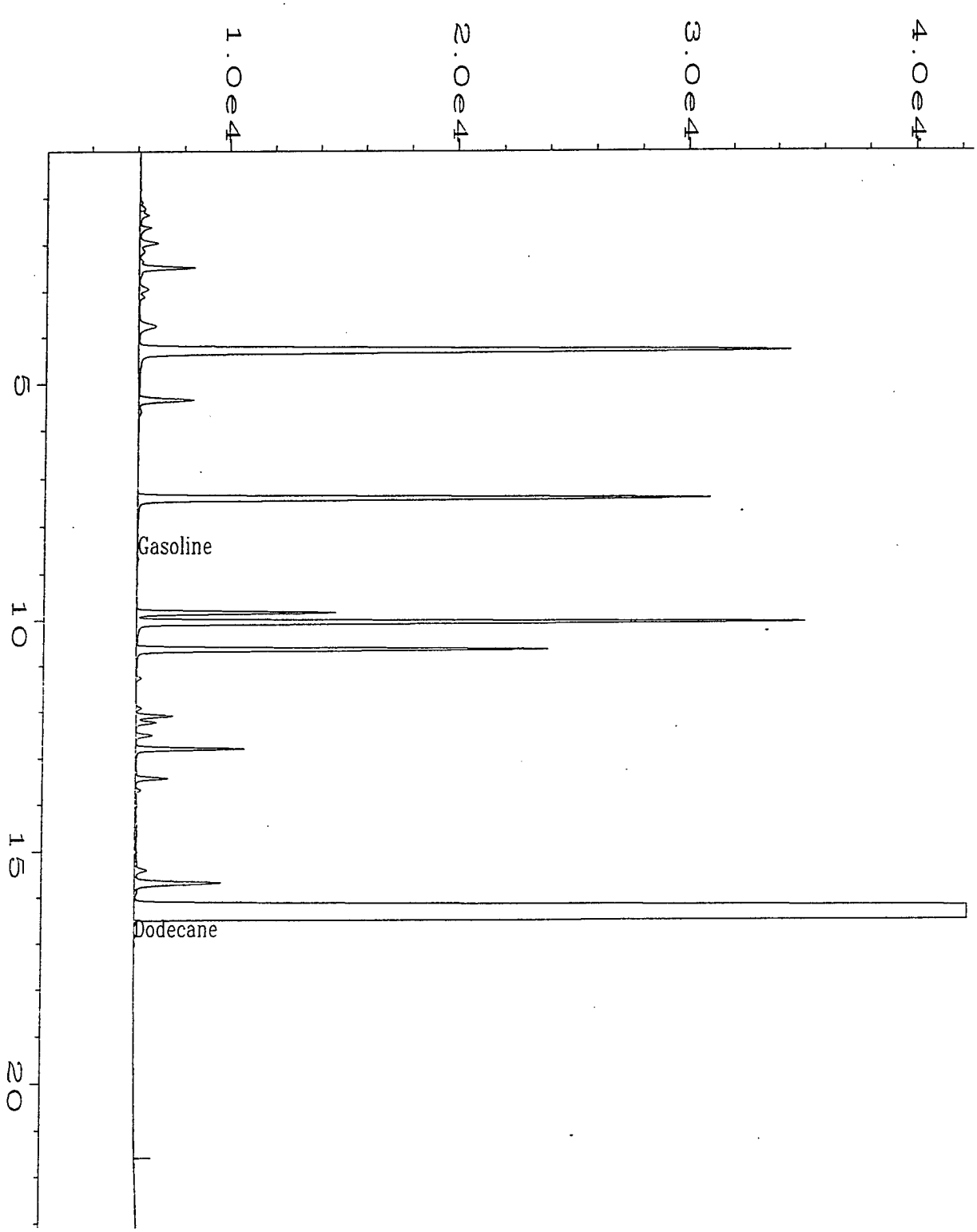
MW-7 dup



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\015F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 15
Sample Name	: X05831;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 03:28 AM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 03 May 95 05:41 PM	Analysis Method	: TVH0430.MTH
Last Recalib on	: 01 MAY 95 08:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

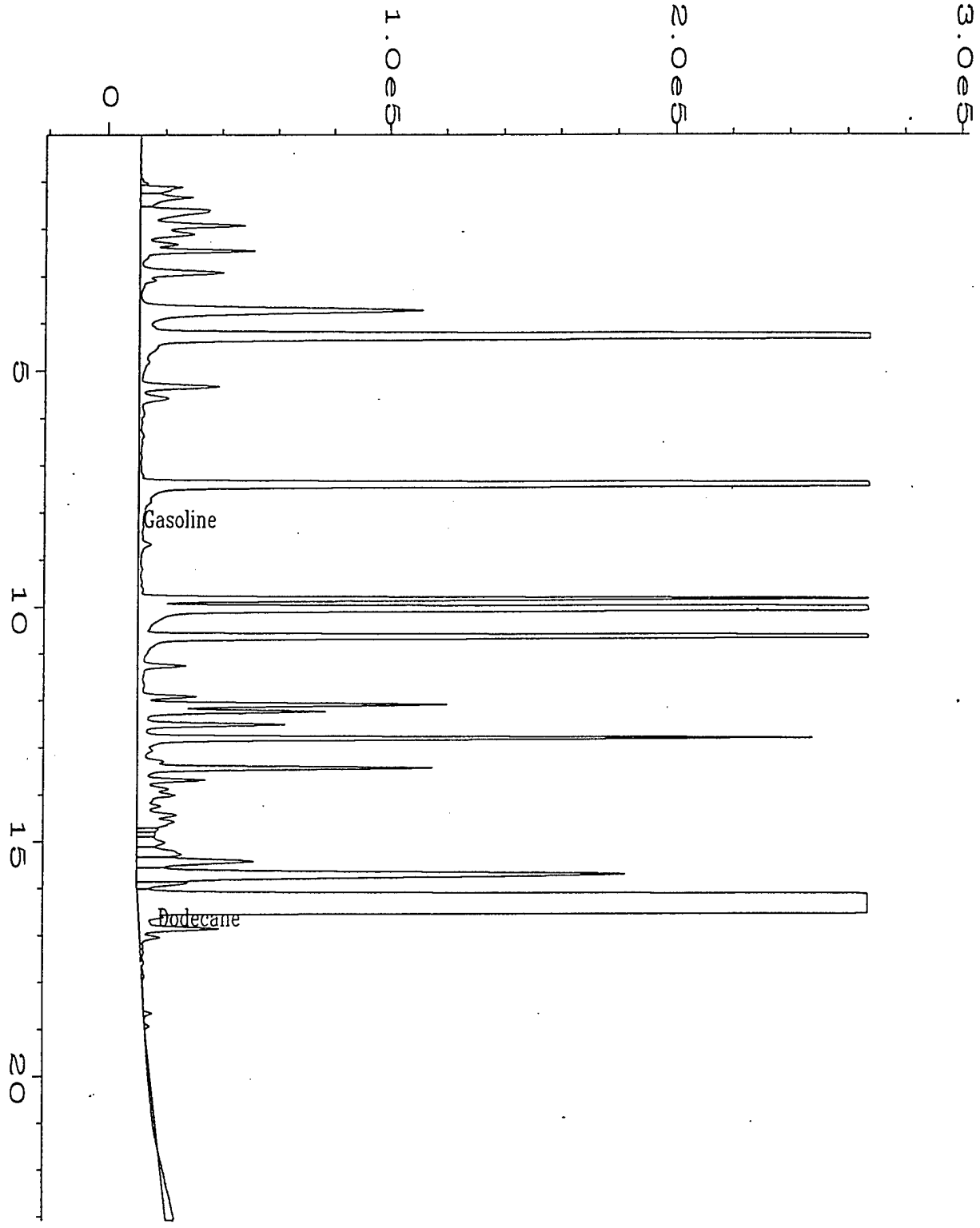
pm 5/10/95

MW-8/10



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\016F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 16
Sample Name	: X05832;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 04:03 AM	Instrument Method	: TVH1BAS[illegible]MT
Report Created on	: 03 May 95 05:42 PM	Analysis Method	: TVH0430[illegible]TH
Last Recalib on	: 01 MAY 95 08:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Mod-11



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\012F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 12
Sample Name	: X05834;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 09:38 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 01 May 95 10:03 PM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

CPT-16

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-6	Client Project No.	: 722450.2602
Lab Sample No.	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 4/18/95	Matrix	: SOIL
Date Prepared	: 5/1/95	Method Blank	: MB050195
Date Analyzed	: 5/1/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	1.76	88%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Gasoline	2.00	1.59	80%	10	50	60-140

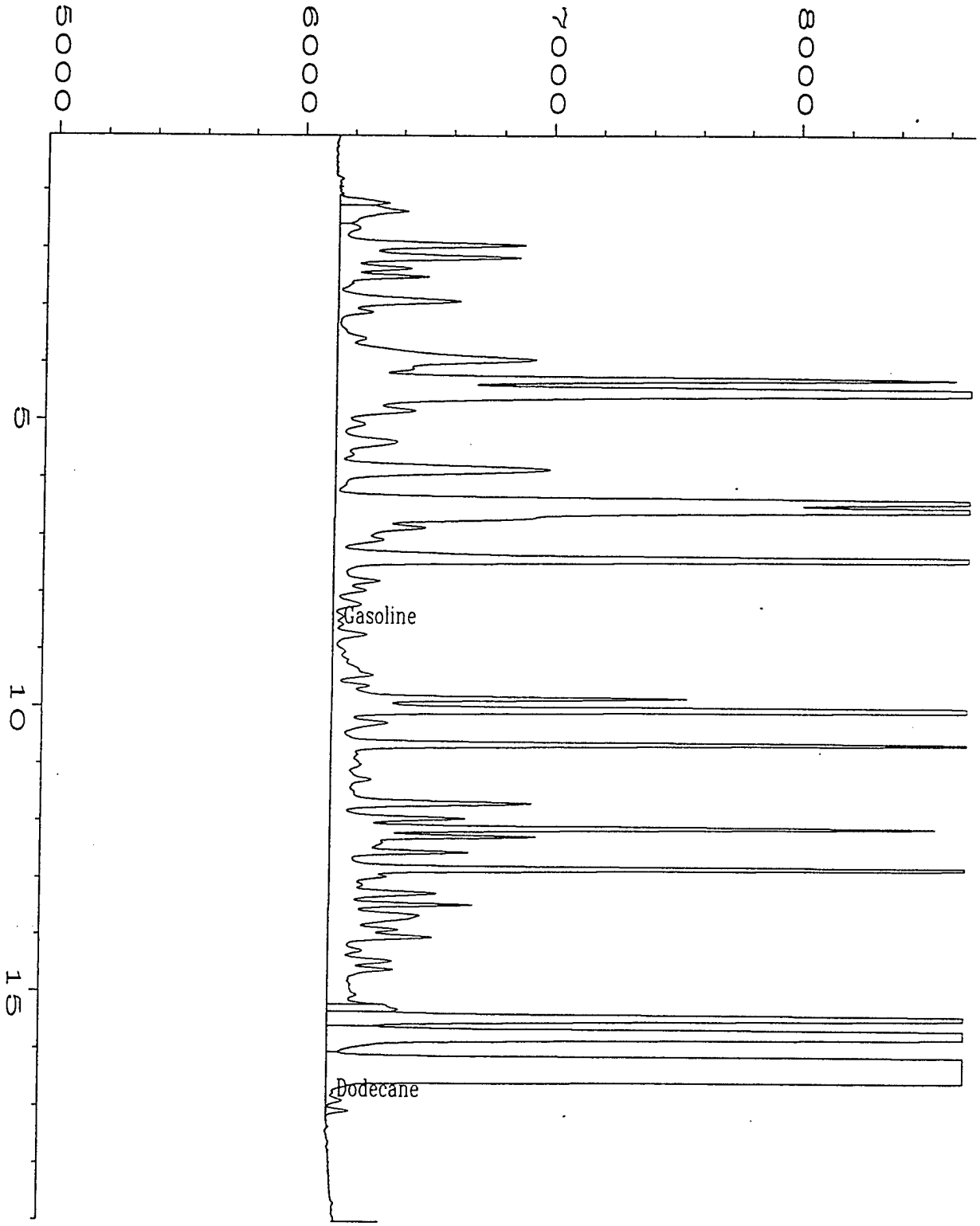
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NA = Not analyzed/not applicable.

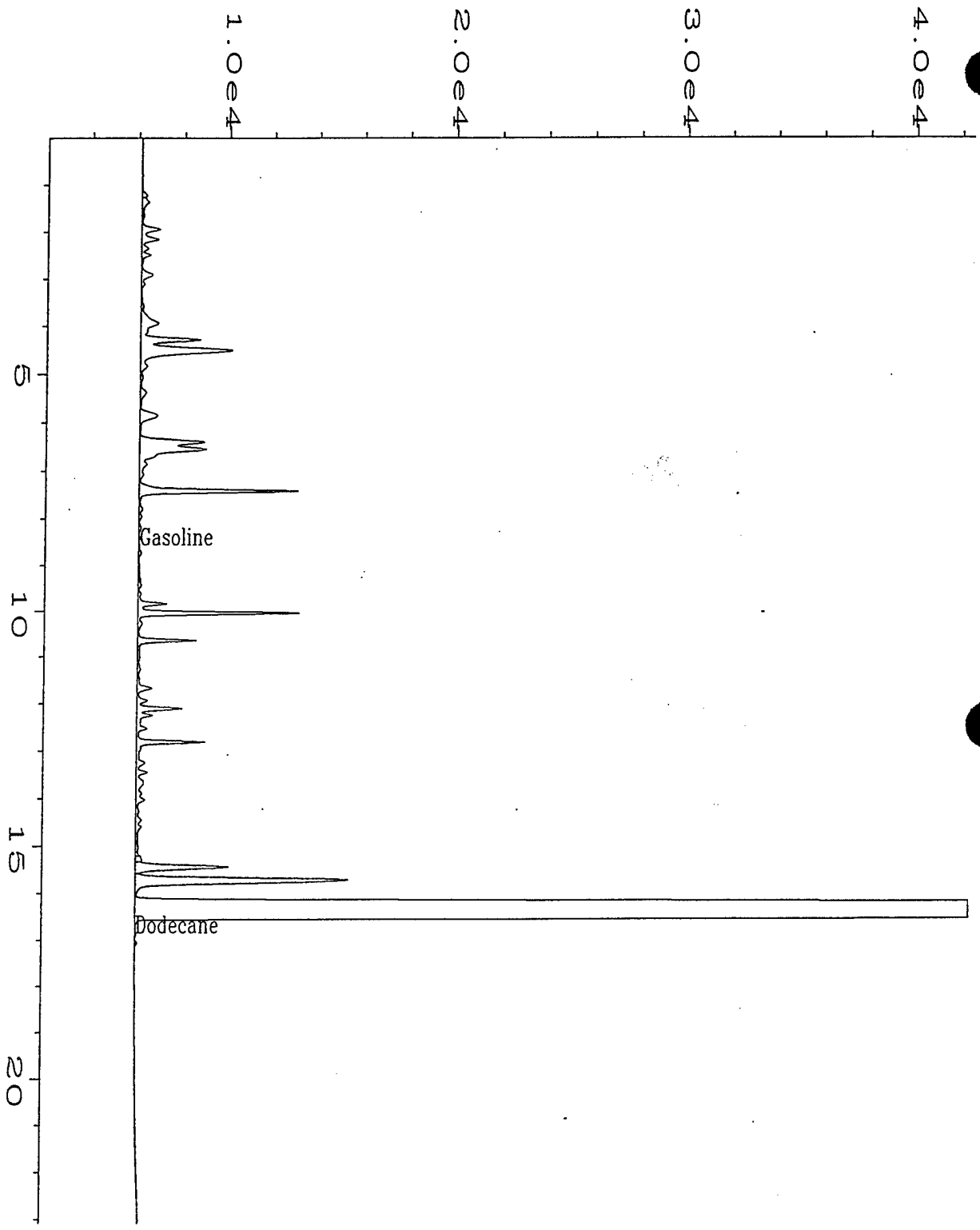
Comments:

K. Cone



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\011F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 11
Sample Name	: X05829MS	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 01:08 AM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 03 May 95 05:27 PM	Analysis Method	: TVH0430.MTH
Last Recalib on	: 01 MAY 95 08:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

MW-6 MS



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\012F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 12
Sample Name	: X05829MSD	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 01:43 AM	Instrument Method	: TVH1BA[redacted]M
Report Created on	: 03 May 95 05:28 PM	Analysis Method	: TVH0430.MT
Last Recalib on	: 01 MAY 95 08:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

MW-6 MSD

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

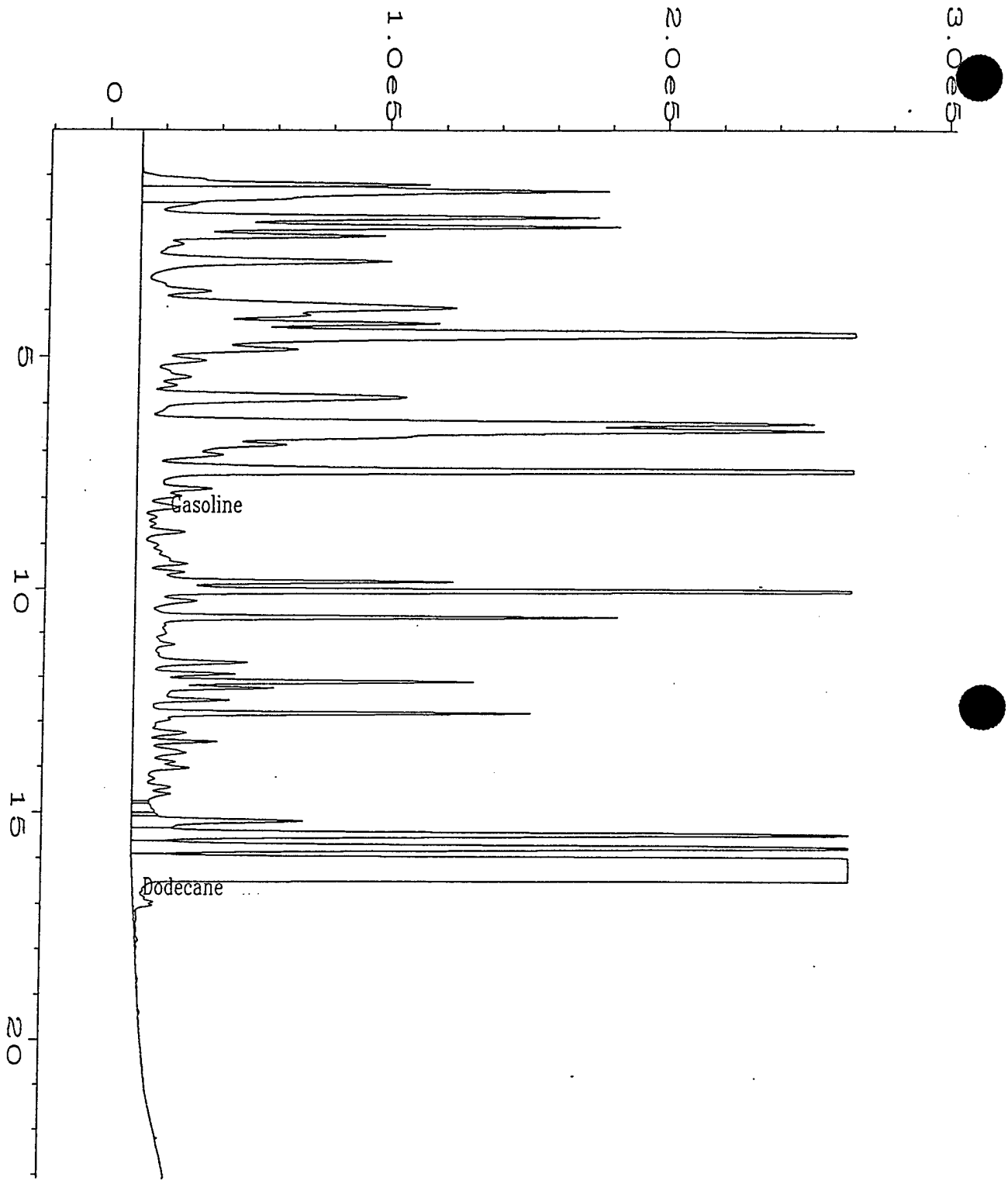
LCS Number	: LCS050195B	Matrix	: WATER
Date Prepared	: 5/1/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 5/1/95		
Sequence Number	: TVH0501007		

Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	5.11	102%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\007F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 7
Sample Name	: LCS050195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 06:44 PM	Instrument Method	: TVH1BAS[illegible]T
Report Created on	: 01 May 95 07:08 PM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

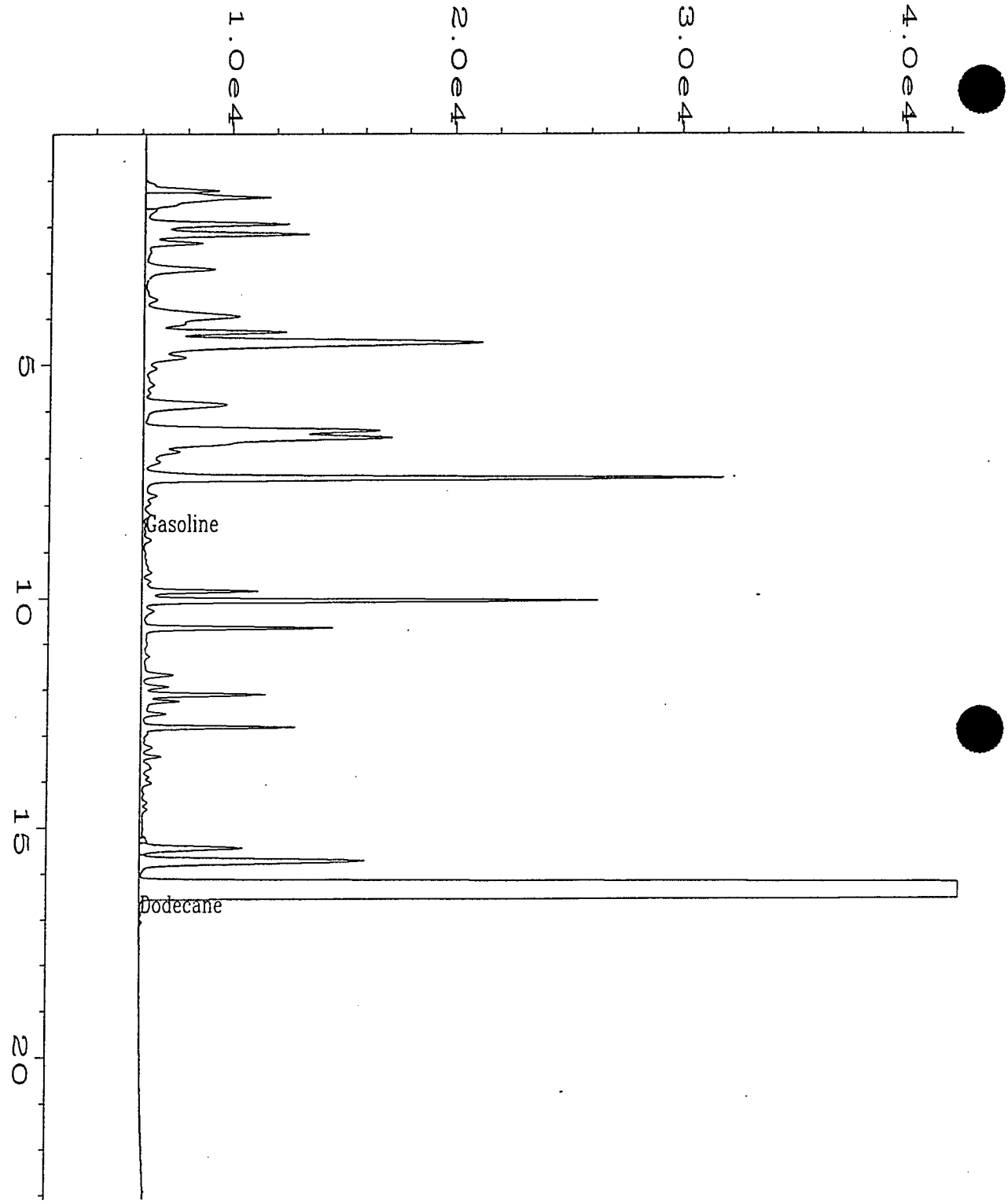
LCS Number	: LCS050195	Matrix	: WATER
Date Prepared	: 4/30/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 4/30/95		
Sequence Number	: TVH0430008		

Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	6.34	127%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\008F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 8
Sample Name	: LCS050195	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 30 Apr 95 11:23 PM	Instrument Method:	TVH1BA[redacted]M
port Created on:	03 May 95 05:29 PM	Analysis Method	: TVH043[redacted]MT
Last Recalib on	: 01 MAY 95 08:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
JET FUEL

Date Sampled	: 4/17/95	Client Project Number	: 722450.2602
Date Received	: 4/18/95	Lab Project Number	: 95-1240
Date Prepared	: 4/18/95	Matrix	: Water
Date Analyzed	: 4/20,21/95	Method Number	: 3500/Mod.8015

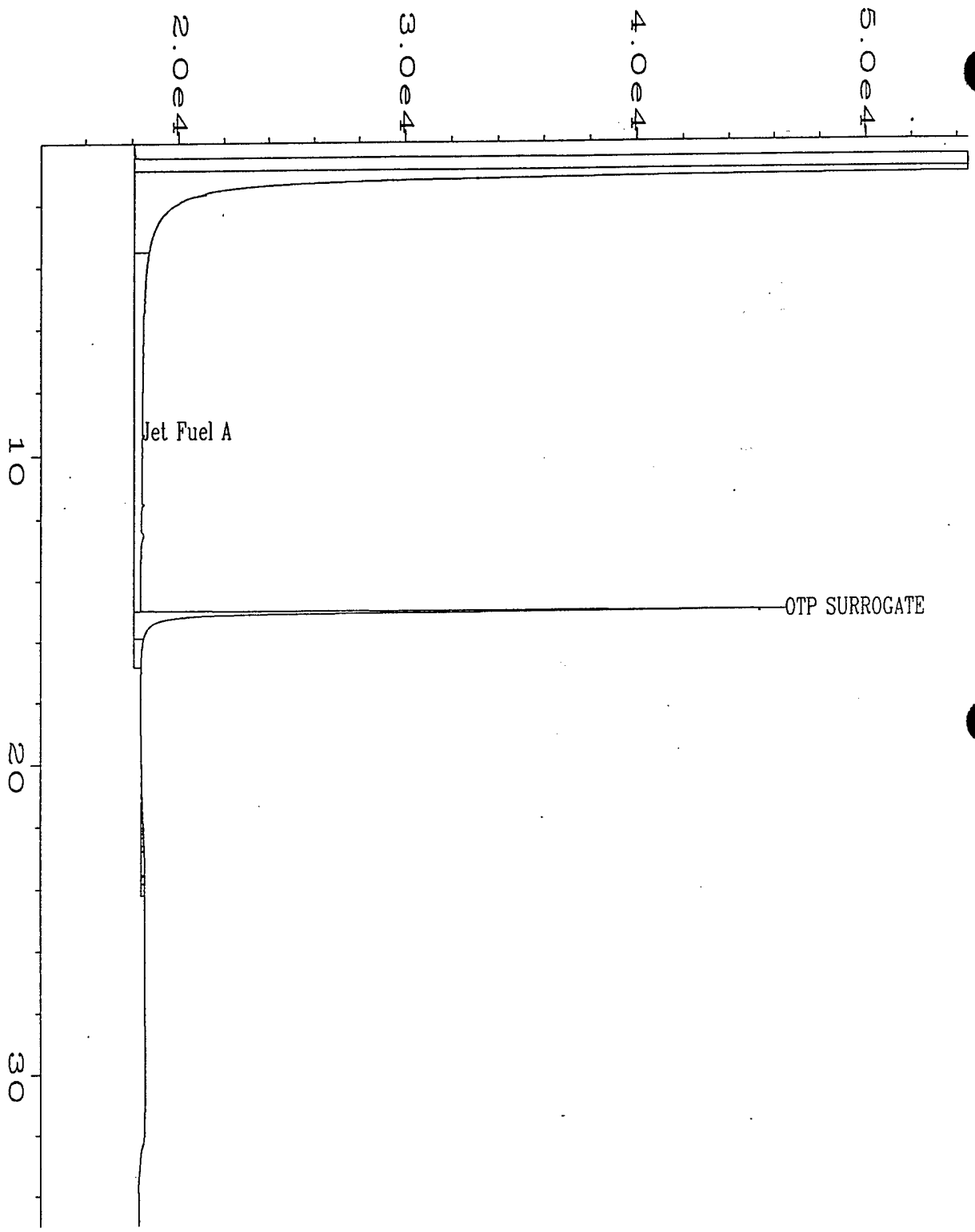
Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH mg/L	RL mg/L
MB041895	METHOD BLANK	84%	U	0.5
X05829	MW-6	93%	U	0.5
X05830	MW-7	89%	0.6	0.5
X05831	MW-10	91%	U	0.5
X05832	MW-11	95%	5.2	0.5
X05834	CPT-16	102%	14	0.5

QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank.
E = Extrapolated value.
RL = Reporting Limit

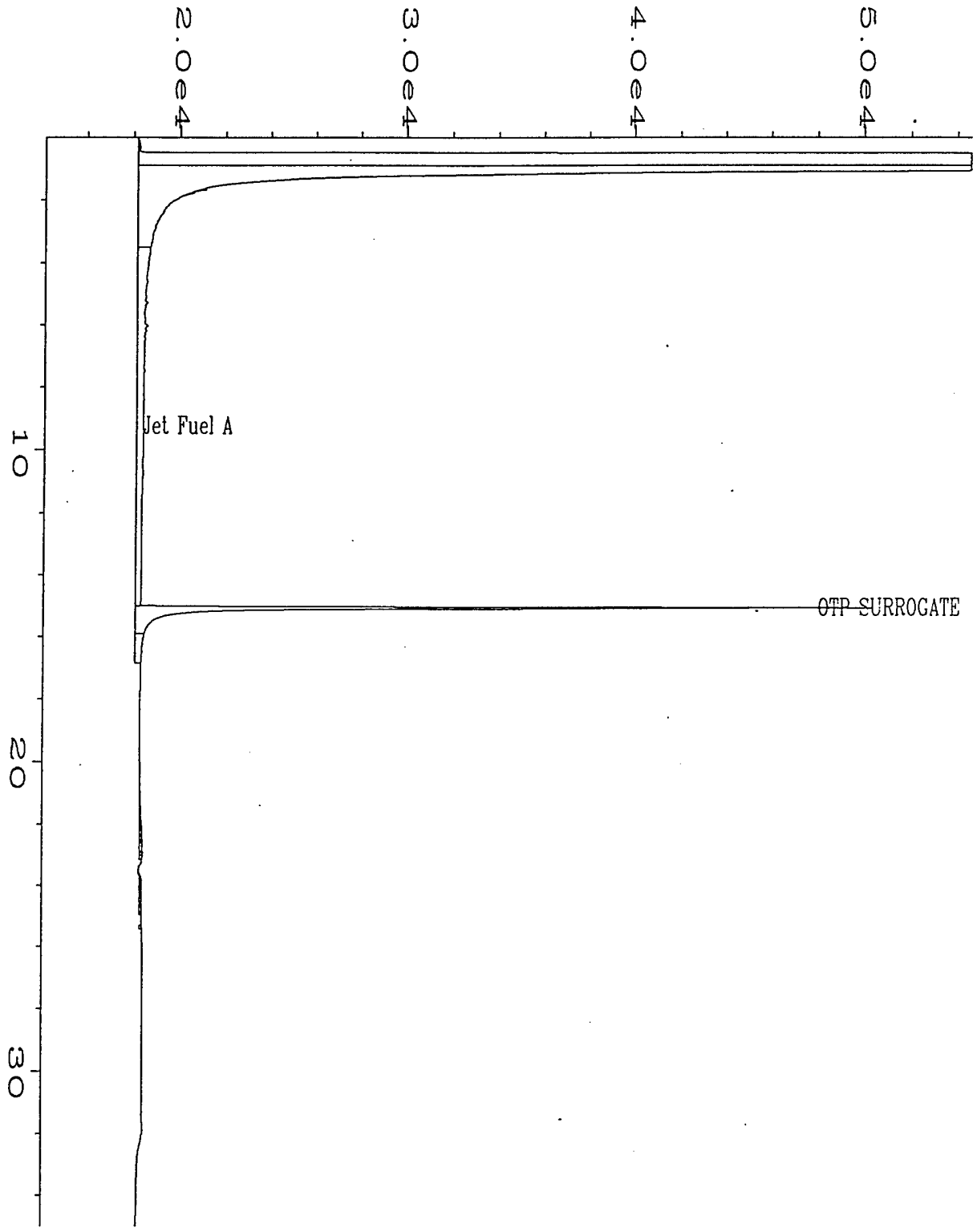
Analyst

Approved

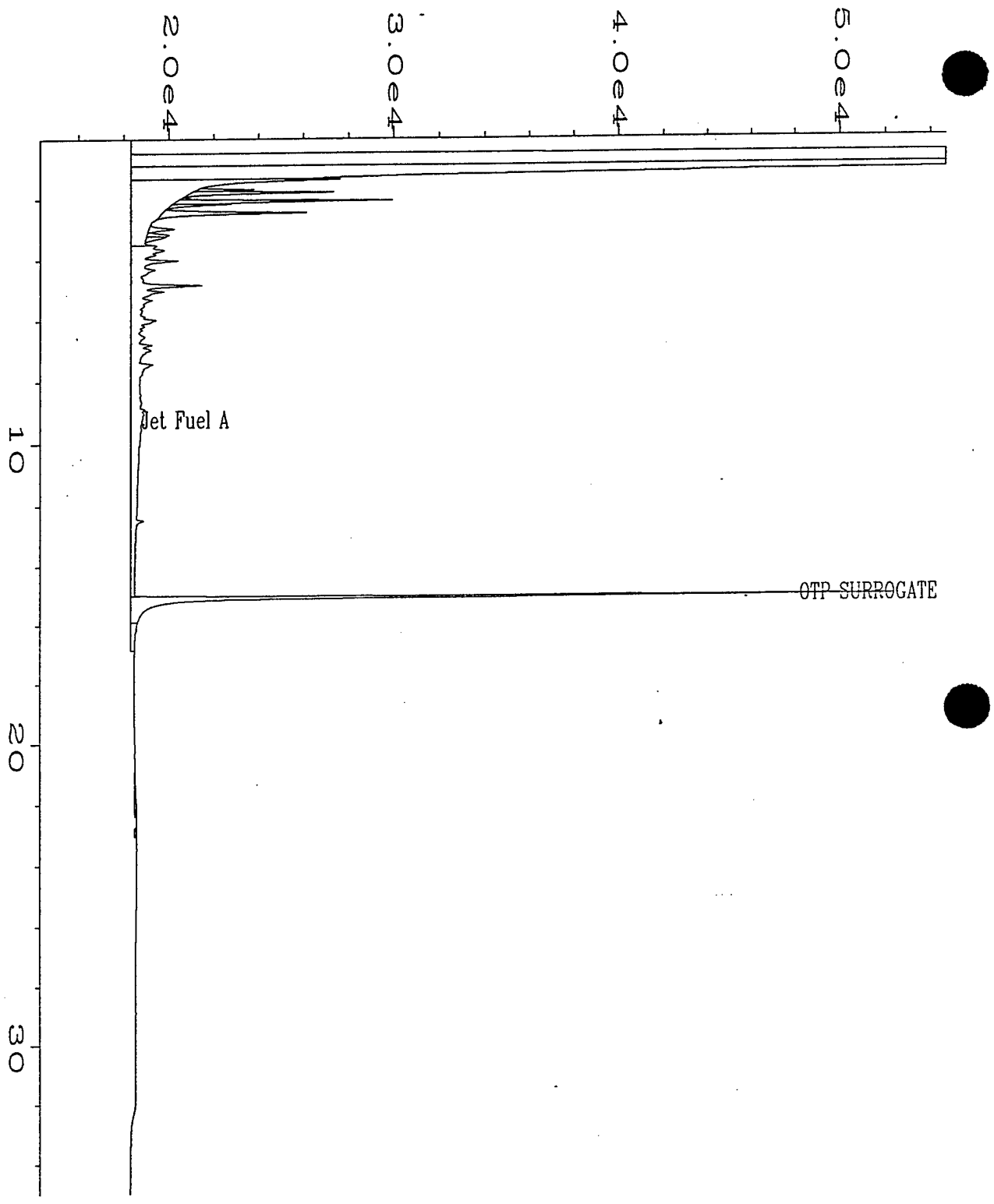
JET1240.XLS



Data File Name	: C:\HPCHEM\2\DATA\JET0420\009R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 9
Sample Name	: WB041895	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 08:28 PM	Instrument Method	: FID1BA[redacted]
Report Created on	: 21 Apr 95 09:32 AM	Analysis Method	: JET0420.M
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

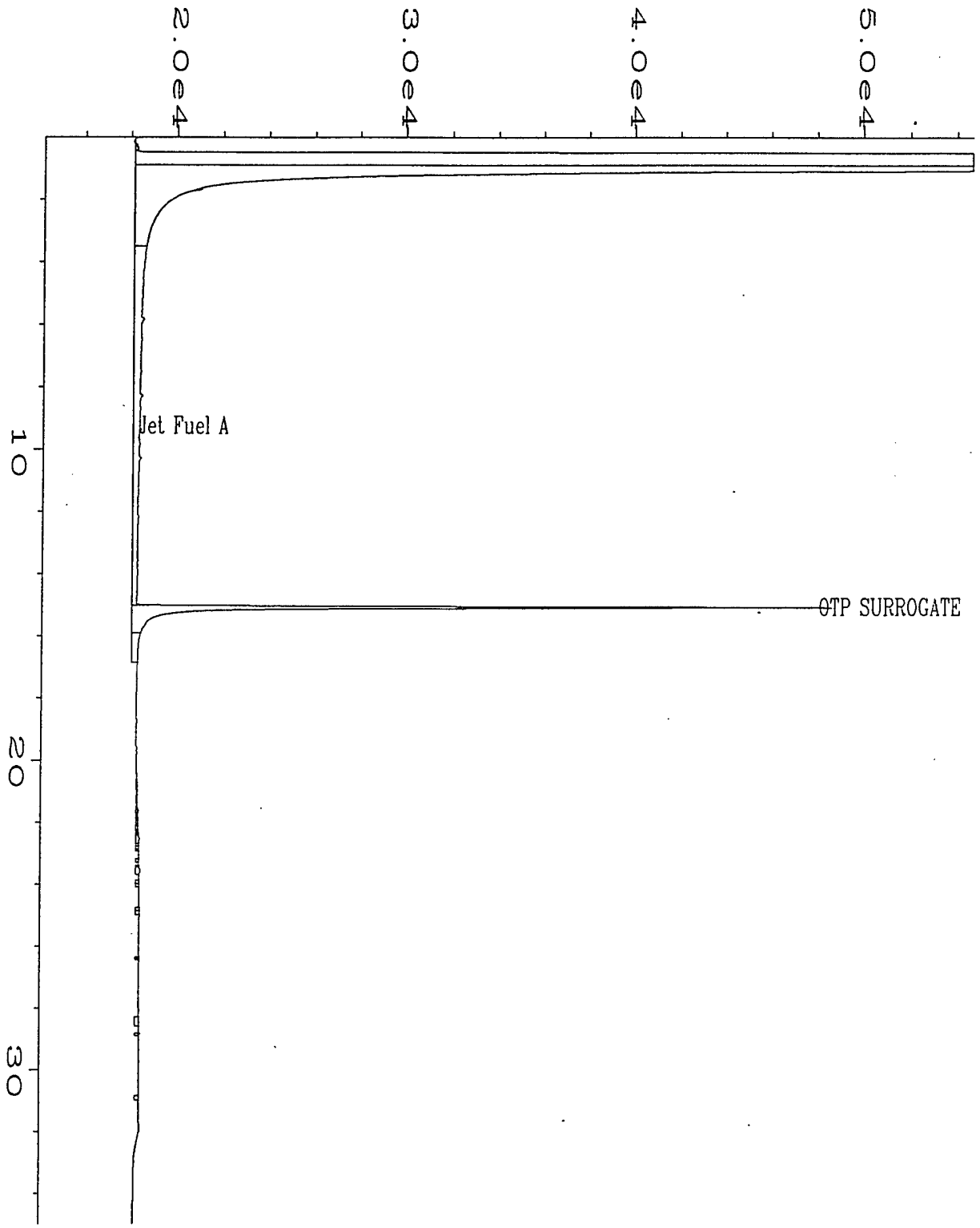


Data File Name	: C:\HPCHEM\2\DATA\JET0420\011R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 11
Sample Name	: X05829 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 10:00 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:32 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1240 CLIENT # MW-6 WATER		

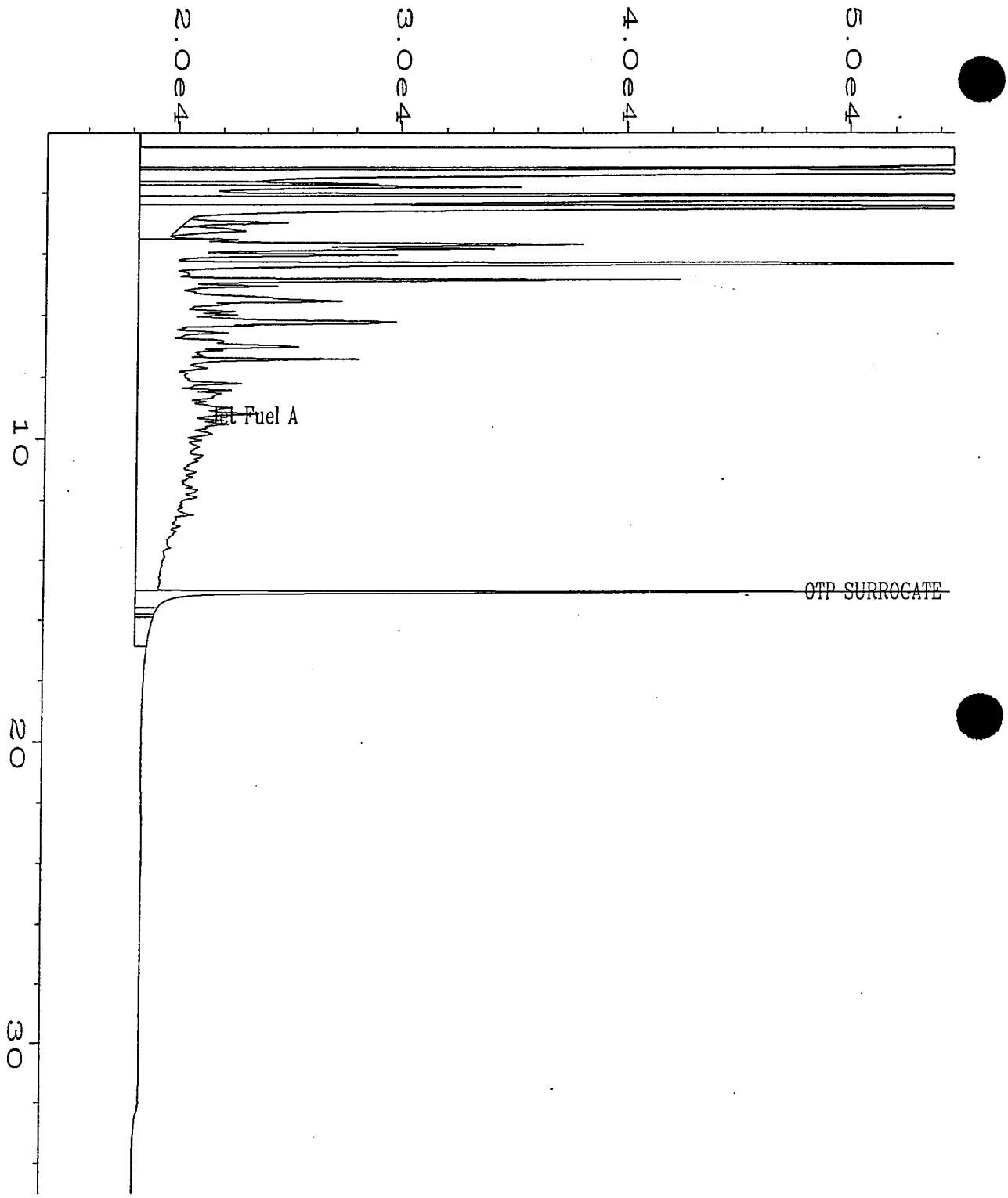


Data File Name : C:\HPCHEM\2\DATA\JET0420\012R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05830 DF=1
Run Time Bar Code:
Acquired on : 20 Apr 95 10:47 PM
Report Created on: 21 Apr 95 09:33 AM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1
Sample Info : PROJECT # 95-1240 CLIENT # MW-7 WATER

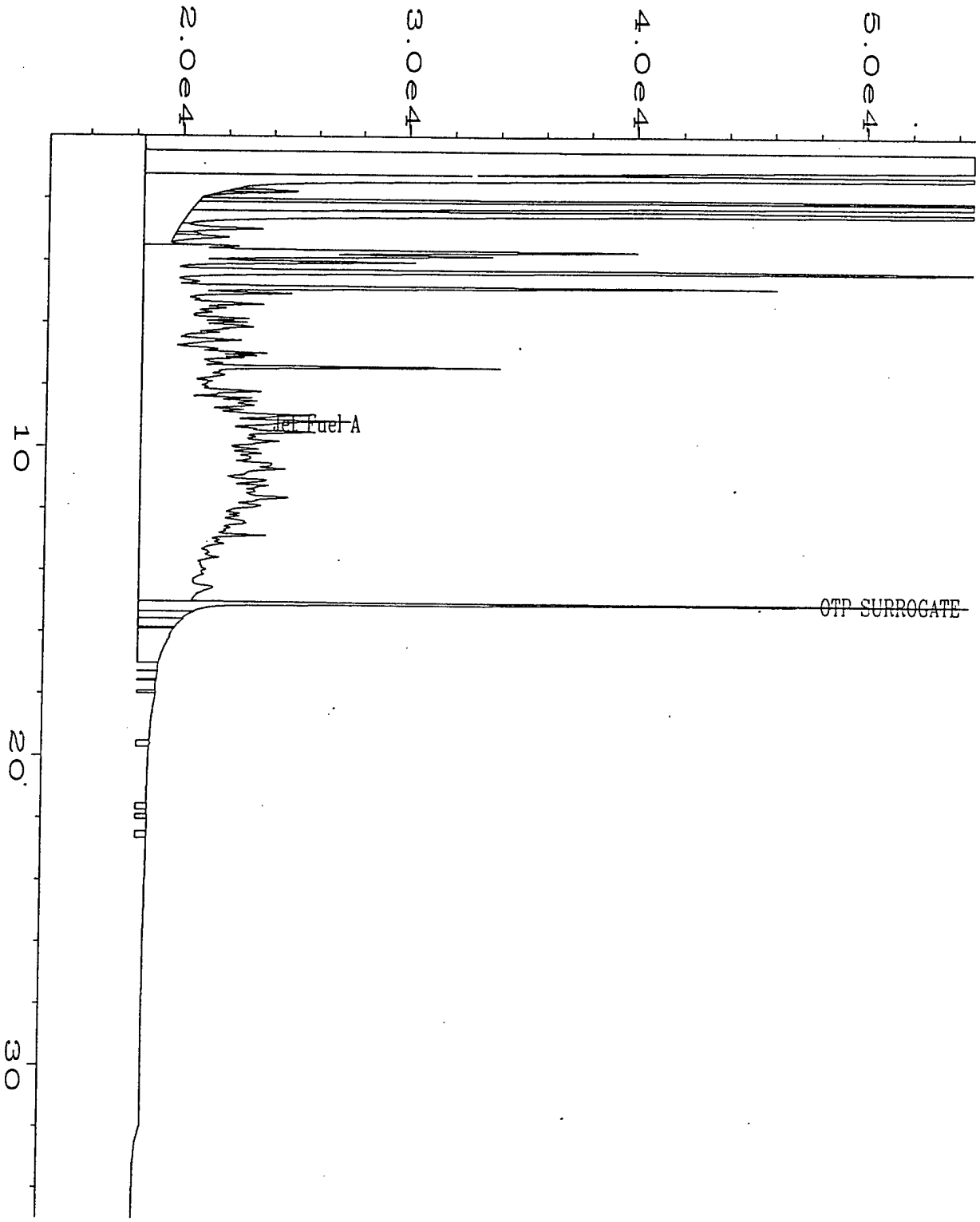
Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA[redacted]M
Analysis Method : JET0420.MT
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\JET0420\013R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 13
Sample Name	: X05831 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 11:33 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:33 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1240 CLIENT # MW-10 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\014R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 14
Sample Name	: X05832 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 21 Apr 95 00:19 AM	Instrument Method	: FID1BA[illegible]M
port Created on:	21 Apr 95 09:33 AM	Analysis Method	: JET0420.MT
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1240 CLIENT # MW-11 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\015R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 15
Sample Name	: X05834 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 01:06 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:33 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1240 CLIENT # CPT-16 WATER		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number	: LCS041895	Matrix	: WATER
Date Prepared	: 4/18/95	Method Number	: 5030/MOD.8015
Date Analyzed	: 4/20/95		
Sequence Number	: JET10		

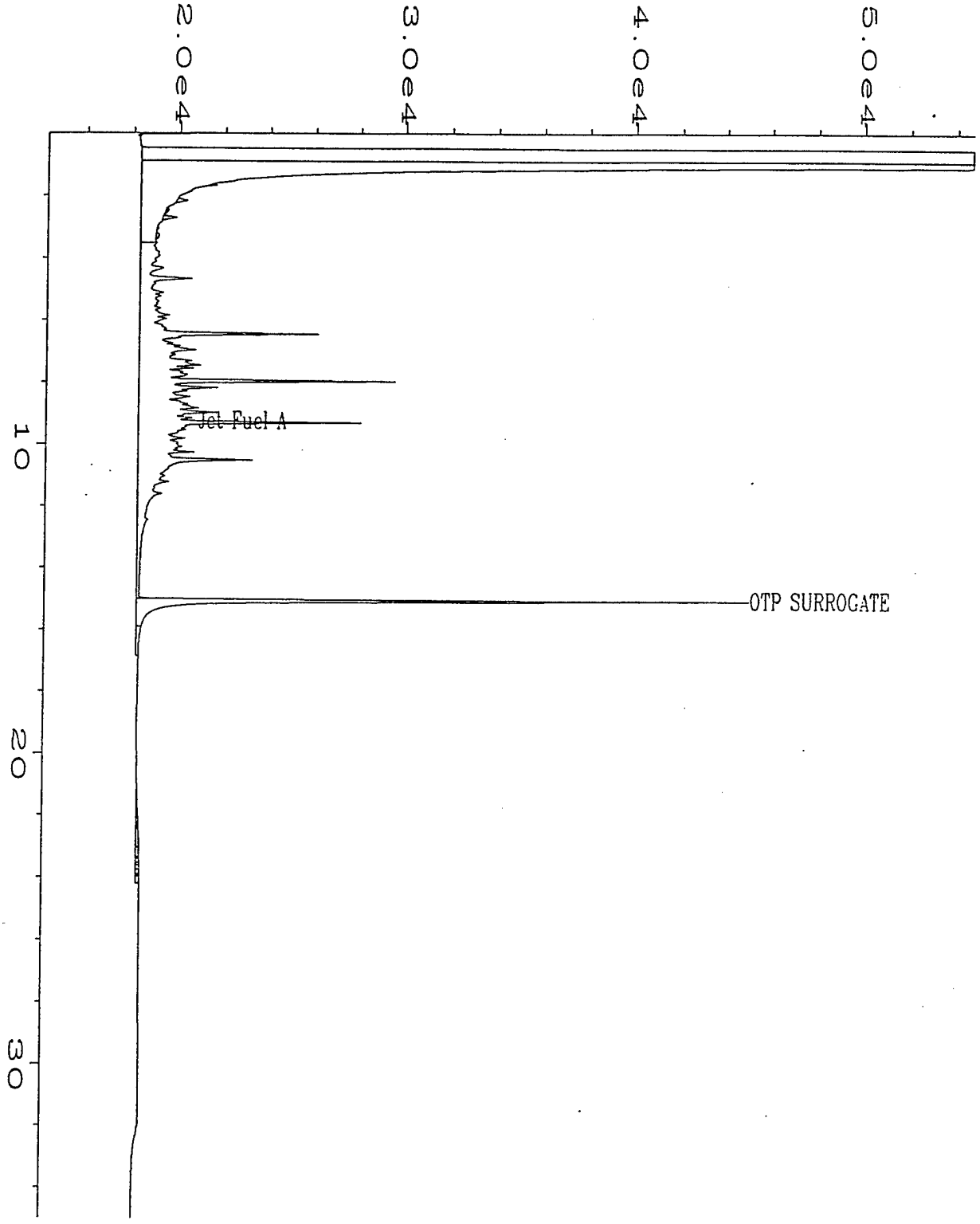
Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
JET FUEL	1000	820	82%	70%-130%

Surrogate Recovery: 79%

QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
E = Extrapolated value.
NA = Not Available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0420\010R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 10
Sample Name	: LCS041895	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 20 Apr 95 09:14 PM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:32 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303)425-6021

Methane Data Report

Client Project No.: 722450.2602
Date Sampled : 04/17/95
Lab Project No. : 95-1240
Date Received : 04/18/95
Dilution Factor : 1.00
Date Prepared : 05/01/95
Method : RSKSOP-175
Date Analyzed : 05/01/95
Matrix : Water

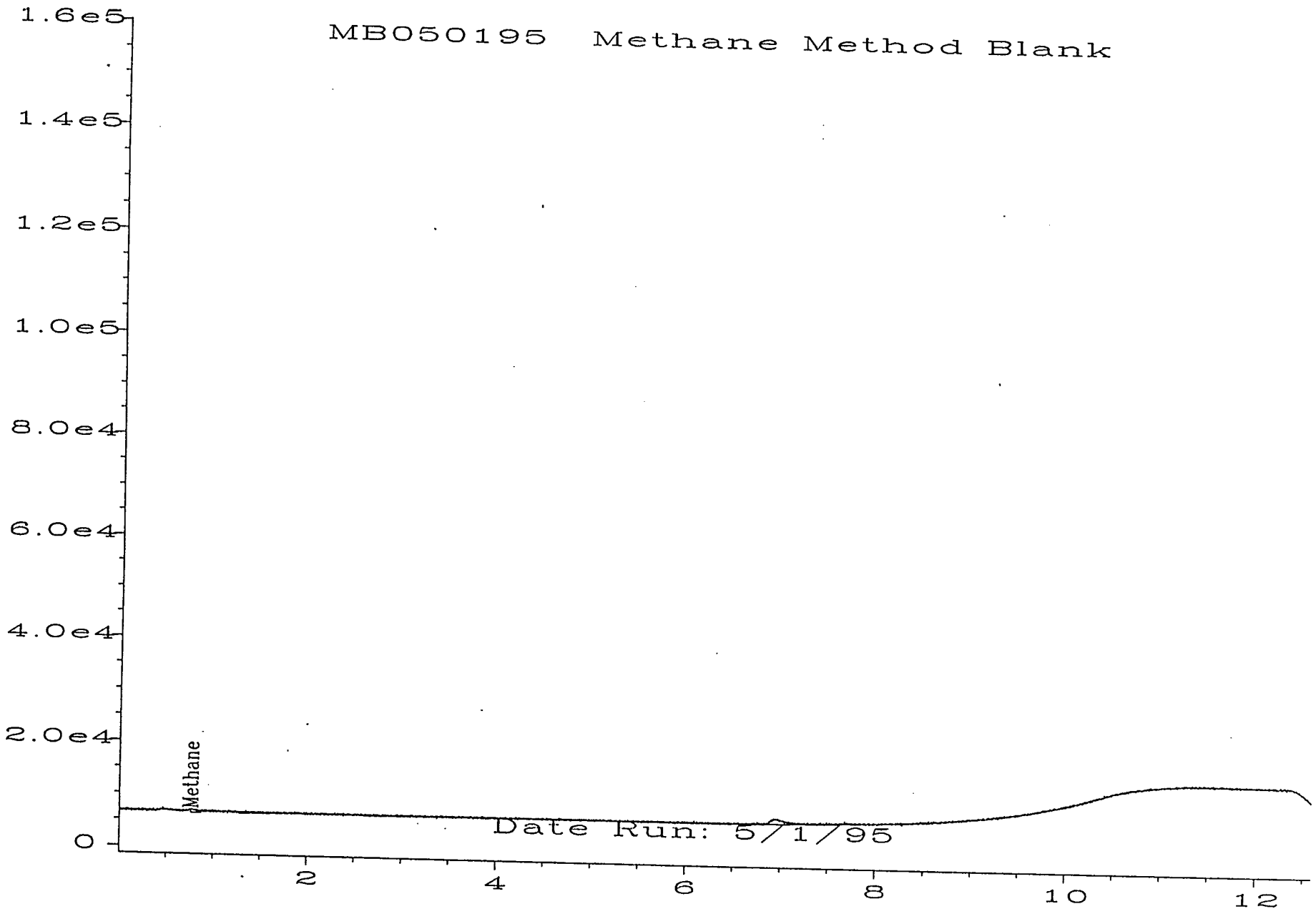
Evergreen Sample #	Client Sample #	Matrix	Concentration mg/L	EDL* mg/L
MB050195	Method Blank	Water	U	0.004
x05829	MW-6	Water	0.035	0.004
x05830	MW-7	Water	0.010	0.004
x05831	MW-10	Water	U	0.004
x05832	MW-11	Water	0.20	0.004
x05834	CPT-16	Water	0.037	0.004

QUALIFIERS:

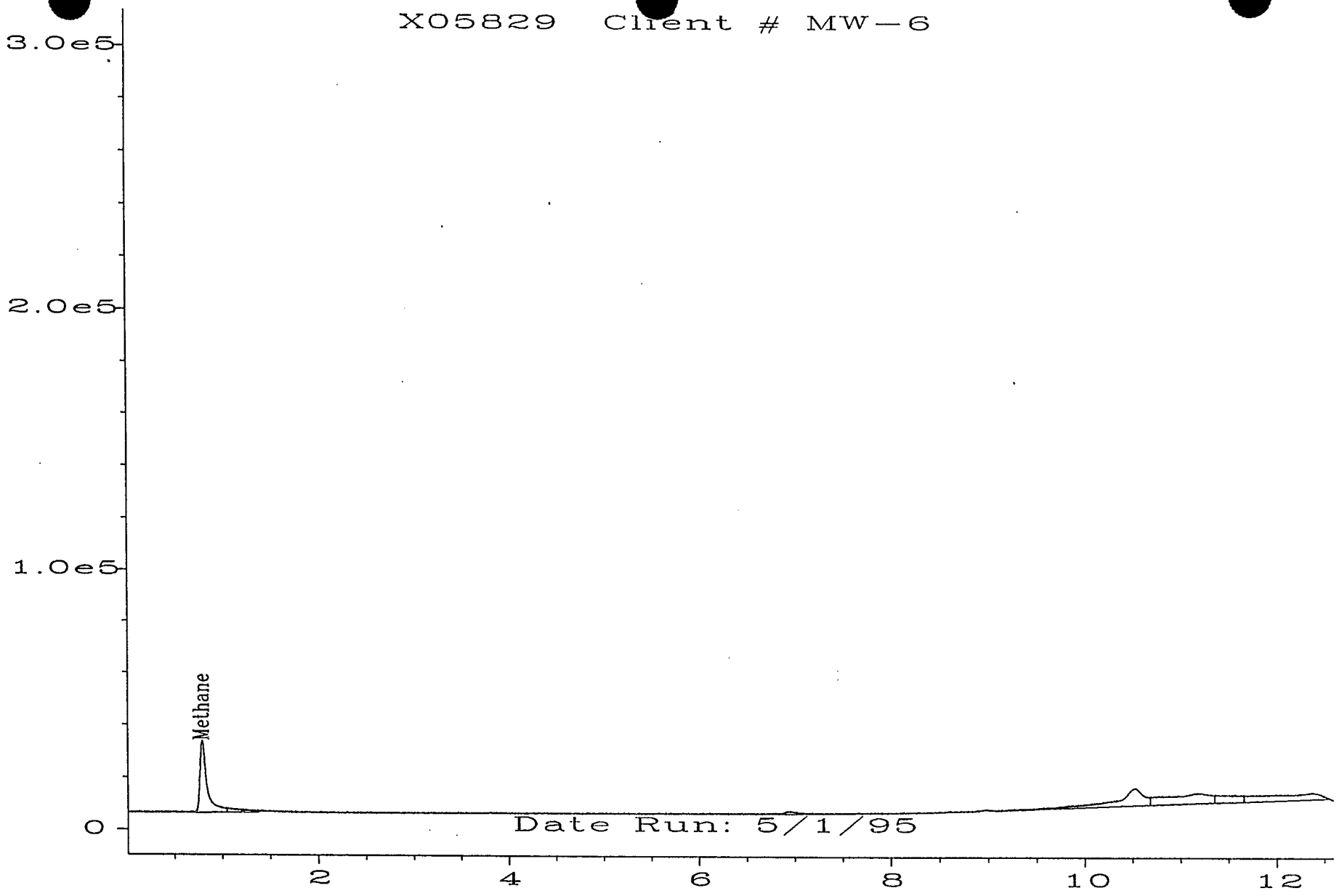
U = Compound analyzed for, but not detected above the Estimated Detection Limit.
B = Compound also found in the blank, blank data should be compared.
* = Indicates the Estimated Detection Limit.
E = Extrapolated value.

Analyst

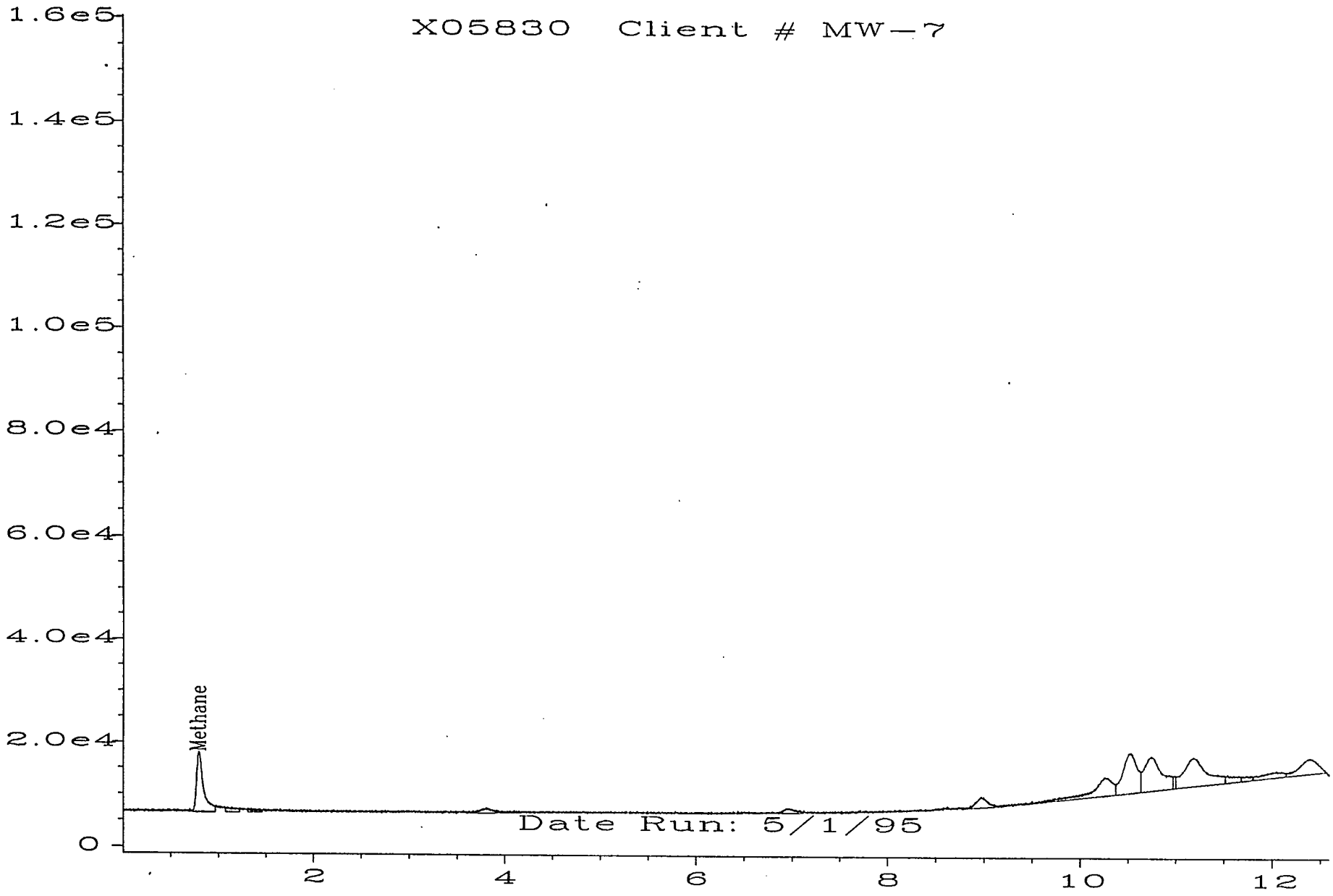
Approved



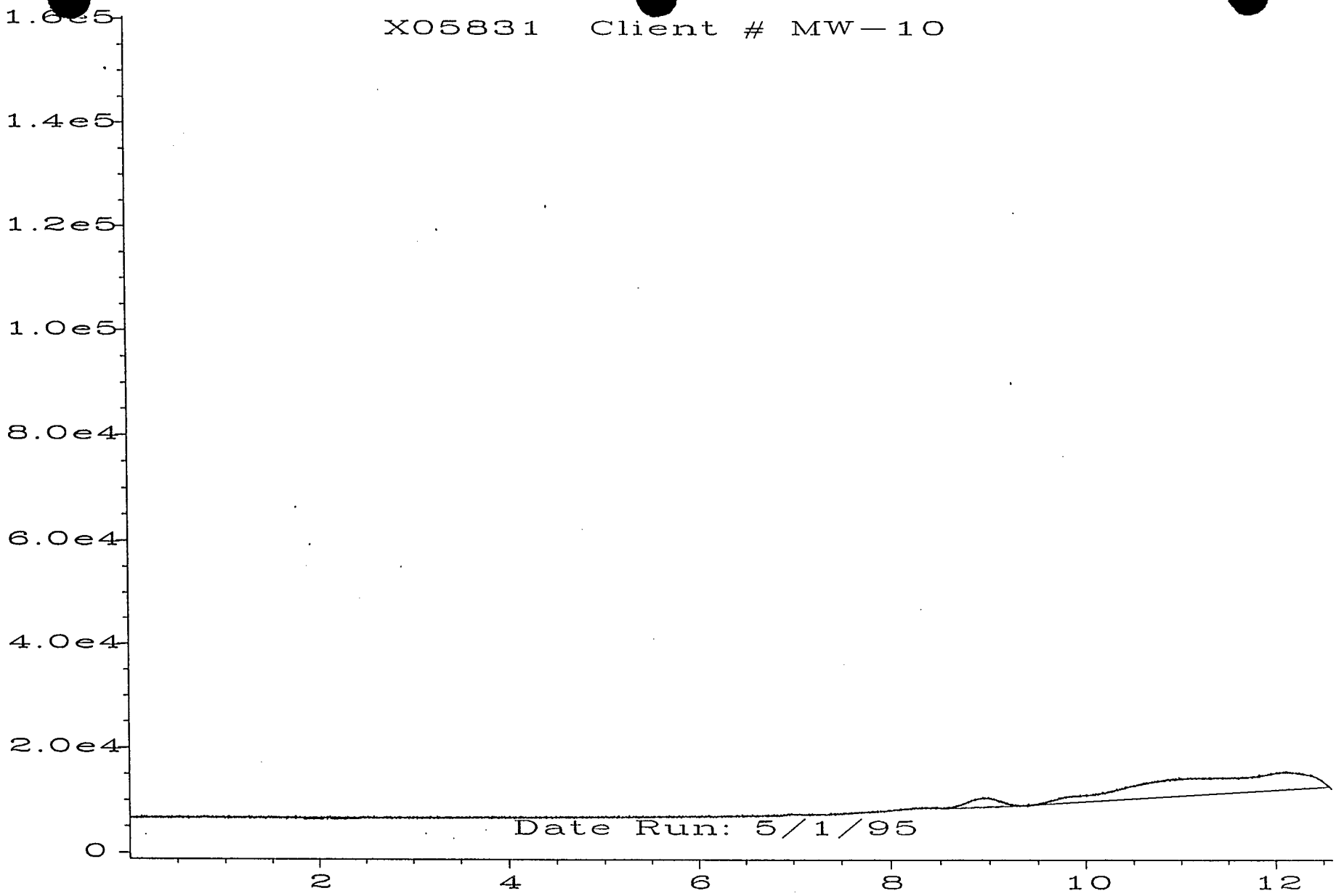
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\010R0101.D



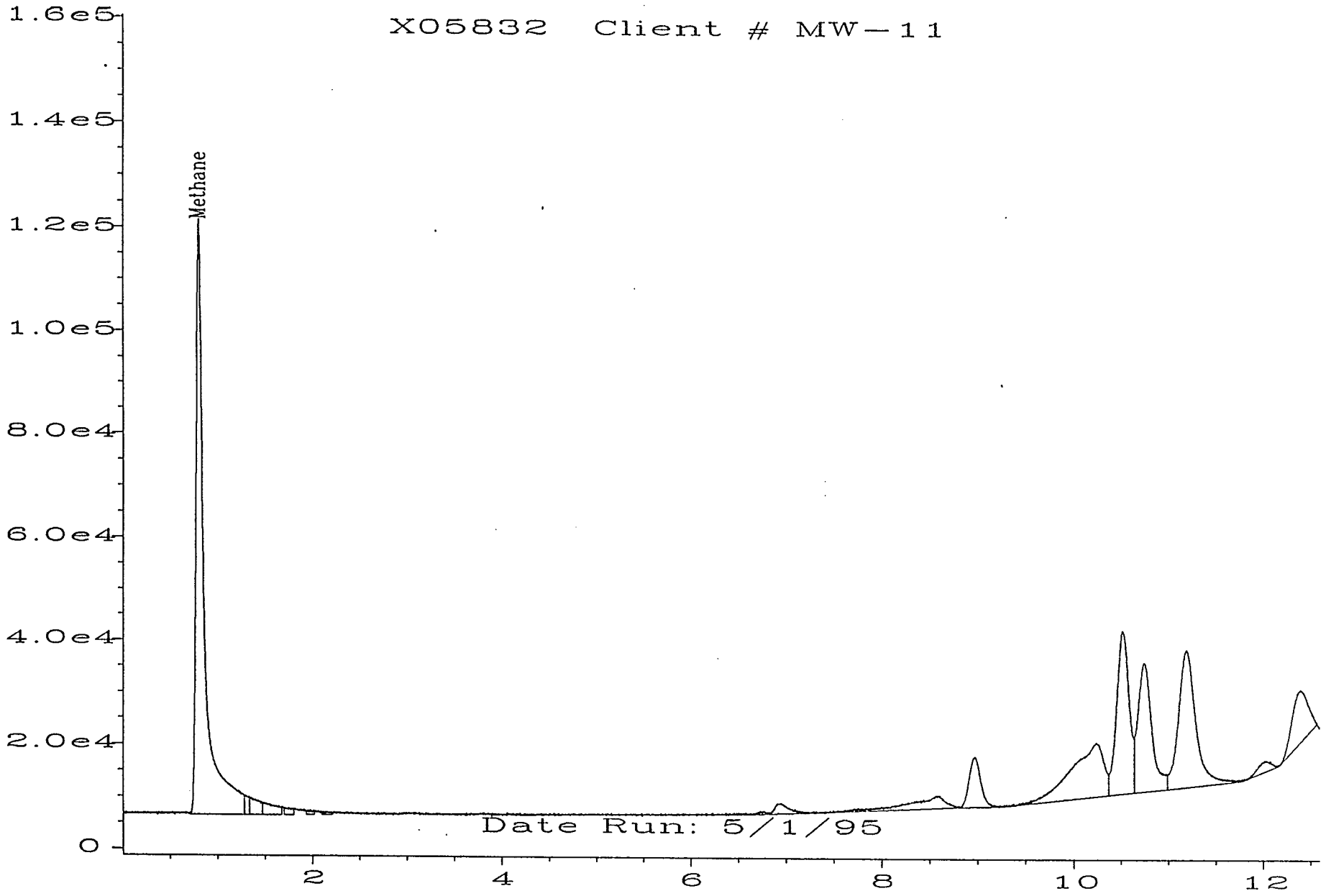
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\013R0101.D



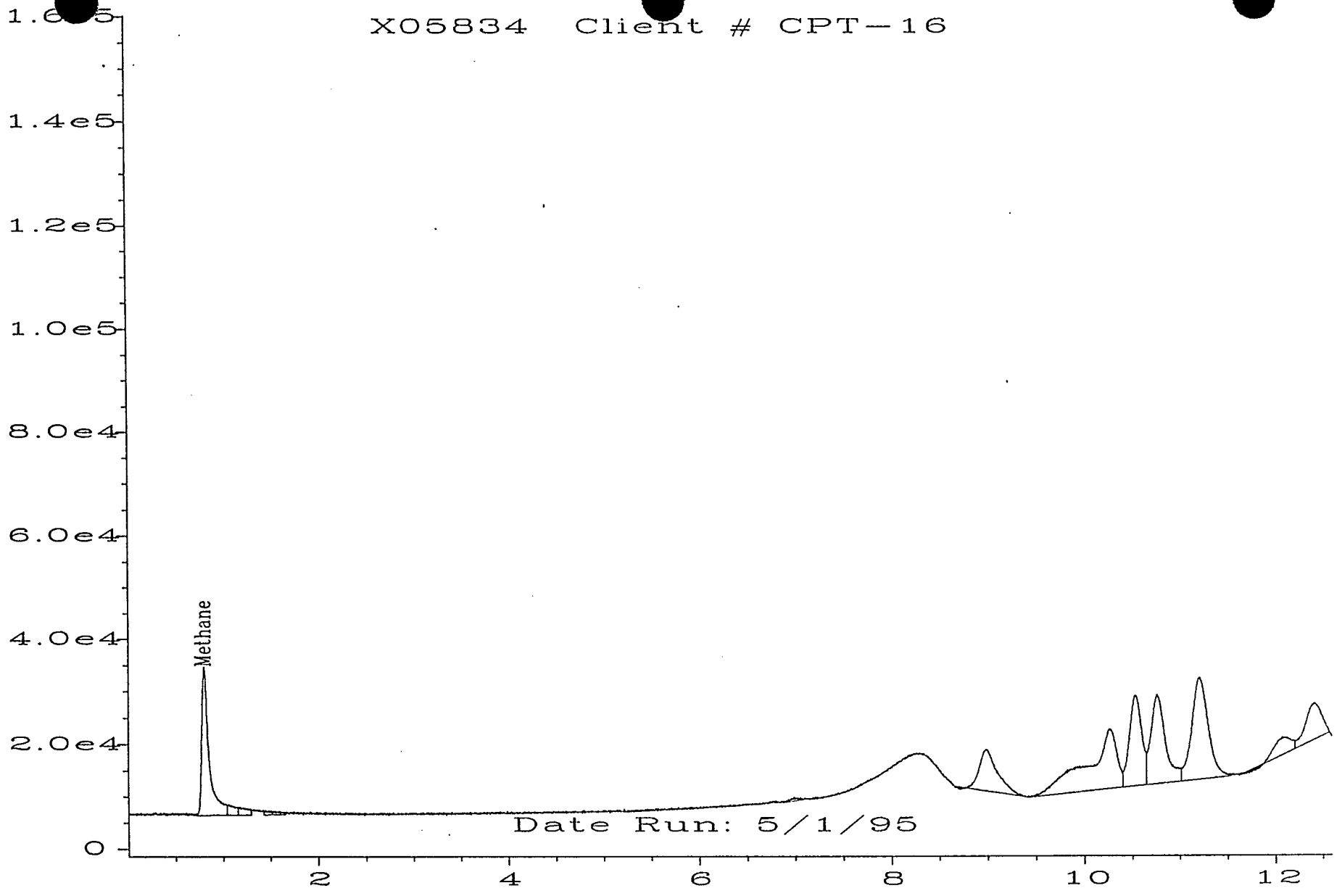
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\014R0101.D



Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\015R0101.D



Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\018R0101.D



Sig: 2 in C:\HPCHEM\2\DATA\GAS0430\019RO101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/18/95
Date Analyzed : 4/18/95

Client Project ID. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Detection limit : 0.250 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Chloride(mg/L)
X05829	MW-6	Water	13.1
X05829 Dup	MW-6 Dup	Water	13.2
X05831	MW-10	Water	4.97
Method Blank	4/18/95		<0.250

Quality Assurance

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot # J-I0N01134	20.0	18.9	94.5

Analyst

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/18/95
Date Analyzed : 4/18/95

Client Project ID. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Detection limit : 0.076 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Nitrite-N(mg/L)
X05829	MW-6	Water	<0.076
X05829 Dup	MW-6 Dup	Water	<0.076
X05830	MW-7	Water	<0.076
X05831	MW-10	Water	<0.076
X05832	MW-11	Water	<0.076
X05834	CPT-16	Water	<0.076
Method Blank	4/18/95		<0.076

Quality Assurance**

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot # J-I0N01134	21.0	19.9	94.8

** = Quality assurance results reported as Nitrite (NO_2)

Debra V. Byers
Analyst

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/18/95
Date Analyzed : 4/18/95

Client Project ID. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Detection limit : 0.056 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Nitrate-N(mg/L)
X05829	MW-6	Water	<0.056
X05829 Dup	MW-6 Dup	Water	<0.056
X05830	MW-7	Water	<0.056
X05831	MW-10	Water	1.17
X05832	MW-11	Water	<0.056
X05834	CPT-16	Water	<0.056
Method Blank	4/18/95		<0.056

Quality Assurance**

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot # J-I0N01134	20.0	18.7	93.5

** = Quality assurance results reported as Nitrate (NO_3)

Analyst

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/18/95
Date Analyzed : 4/18/95

Client Project ID. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Detection limit : 0.250 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Sulfate (mg/L)
X05829	MW-6	Water	4.46
X05829 Dup	MW-6 Dup	Water	4.49
X05830	MW-7	Water	8.47
X05831	MW-10	Water	7.02
X05832	MW-11	Water	1.92
X05834	CPT-16	Water	1.16
Method Blank	4/18/95		<0.250

Quality Assurance

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot # J-I0N01134	30.0	29.1	97.0

Debra L. Bryan
Analyst

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : 722450.2602/SJ AFB
Lab Project No. : 95-1240
Matrix : 5.00 $mgCaCO_3/L$
Method : EPA 310.1

Evergreen Sample #	Client Sample ID	Matrix	Total Alkalinity ($mgCaCO_3/L$)
X05830	MW-7	Water	25.4
X05830 Dup	MW-7 Dup	Water	24.7
X05831	MW-10	Water	<5.00
X05832	MW-11	Water	88.1
Method Blank	(4/20/95)		<5.00

Quality Assurance

	True Value ($mgCaCO_3/L$)	Result ($mgCaCO_3/L$)	% Recovery
APG Minerals reference Lot # 13862	11.8	11.5	97.5

Analyst

Approved

1240JJ.4

Evergreen Analytical Sample Log Sheet

Project # 95-1264

Date(s) Sampled: 4/18/95 COC
Date Received: 4/19/95 1000
Date Due: 4/24-UST,5/03-OTHERS
Holding Time(s): 05/02-VOA,BTEX,ALK.
4/25-BNA,TVH,TEH.
4/20-ANIONS

Client Project I.D. 722450.2602/SEYMORE JOHNSON AFB
Rush STANDARD

Client: Parsons Engineering Science, Inc.
Shipping Charges N/A

Address: 1700 Broadway Suite 900
Denver, CO 80290
E.A. Cooler # 602
Airbill # FEDEX-4306784941

Contact: TODD WIEDEMEIER
Custody Seal Intact? N
Cooler N/A Bottles N/A
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Client P.O. _____

Phone #831-8100 **Fax #**831-8208

Special Invoicing/Billing_____

Special Instructions ALL BTEX AND VOA SAMPLES ARE TO INCLUDE CHLOROBENZENE, TMB AND TEMB UNLESS OTHERWISE NOTED. AN MS/MSD AND LAB DUPLICATE IS TO BE ANALYZED ON X05931 BTEX. *SEE ATTACHED SHEET FOR VOA 624 INSTRUCTIONS.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05923A/B/C	CPT-18	* VOA 624	W	40V	9
X05926A/B/C	MW-4	* VOA 624	W	40V	9
X05928A/B/C	MW-12D	* VOA 624	W	40V	9
X05931A/B/C	MW-5	* VOA 624	W	40V	9
X05932A/B/C	MW-8	* VOA 624	W	40V	9
X05933A/B/C	MW-3	* VOA 624	W	40V	9
X05926D	MW-4	BNA 625	W	80A	D6
X05921A/B	TRIP BLANK	BTEX 602	W	40V	2
X05922A/B	CPT-17	BTEX 602	W	40V	2
X05923D/E	CPT-18	BTEX 602	W	40V	2
X05924A/B	FIELD BLANK	BTEX 602	W	40V	2
X05925A/B	CPT-19	BTEX 602	W	40V	2
X05926E/F	MW-4	BTEX 602	W	40V	2
X05926Q/R	MW-4 DUPE	BTEX 602	W	40V	2
X05928D/E	MW-12D	BTEX 602	W	40V	2
X05929A/B	TRIP BLANK	BTEX 602	W	40V	2
X05931D/E/F/G	MW-5 (+MS/MSD)	BTEX 602	W	40V	2
X05930A/B	MW-13	BTEX 602	LW	40V	10

R=Sample to be returned

Route GC/MS 2 GC 4 Metals 1 Wet Chem 3 SxPrep 3 Acctg 1
SxRec C QA/QC C Sales C File Orig

Page 1 of 1 Page(s)

Custodian/Date: LC 4/24/95
JM 4/24/95

R=Sample to be returned

AB ID	CLIENT ID	ANALYSIS	MTX	BTL	LOC
X05932D/E	MW-8	BTEX 602	W	40V	2
X05933D/E	MW-3	BTEX 602	W	40V	2
X05922C/D	CPT-17	TVPH	W	40V	2
X05923F/G	CPT-18	TVPH	W	40V	2
X05925C/D	CPT-19	TVPH	W	40V	2
X05926G/H	MW-4	TVPH	W	40V	2
X05926S/T	MW-4 DUPE	TVPH	W	40V	2
X05928F/G	MW-12D	TVPH	W	40V	2
X05931H/I	MW-5	TVPH	W	40V	9
X05932F/G	MW-8	TVPH	W	40V	9
X05933F/G	MW-3	TVPH	W	40V	9
)5922E	CPT-17	TEPH JET	W	1LA	D6
X05923H	CPT-18	TEPH JET	W	1LA	D6
X05925E	CPT-19	TEPH JET	W	1LA	D6
X05926I	MW-4	TEPH JET	W	1LA	D6
X05926U	MW-4 DUPE	TEPH JET	W	1LA	D6
X05928H	MW-12D	TEPH JET	W	1LA	D6
X05931J	MW-5	TEPH JET	W	1LA	D6
X05932H	MW-8	TEPH JET	W	1LA	D6
X05933H	MW-3	TEPH JET	W	1LA	D6
X05923I	CPT-18	ALKALINITY	W	125P	D6
X05926J	MW-4	ALKALINITY	W	125P	D6
X05928I	MW-12D	ALKALINITY	W	125P	D6
X05931K	MW-5	ALKALINITY	W	125P	D6

,5932I	MW-8	ALKALINITY	W	125P	D6
X05922F/G/H/I	CPT-17	METHANE	W	40V	2
X05923J/K/L/M	CPT-18	METHANE	W	40V	2
X05925F/G/H/I	CPT-19	METHANE	W	40V	2
X05926K/L/M/N	MW-4	METHANE	W	40V	2
X05928J/K/L/M	MW-12D	METHANE	W	40V	2
X05931L/M/N/O	MW-5	METHANE	W	40V	2
X05932J/K/L/M	MW-8	METHANE	W	40V	2
X05933I/J/K/L	MW-3	METHANE	W	40V	2
X05922J	CPT-17	CL-,SO4,NITRATE,NITRITE	W	125P	D6
X05923N	CPT-18	CL-,SO4,NITRATE,NITRITE	W	125P	D6
X05925J	CPT-19	CL-,SO4,NITRATE,NITRITE	W	125P	D6
X059260	MW-4	CL-,SO4,NITRATE,NITRITE	W	125P	D6
,5928N	MW-12D	SO4,NITRATE,NITRITE	W	125P	D6
X05931P	MW-5	SO4,NITRATE,NITRITE	W	125P	D6
X05932N	MW-8	SO4,NITRATE,NITRITE	W	125P	D6
X05933M	MW-3	SO4,NITRATE,NITRITE	W	125P	D6
X05926P	MW-4	3010 Pb	W	500P	D6
X059280	MW-12D	3010 Pb	W	500P	D6

PROJECT SPECIAL INSTRUCTIONS 95-~~94~~ 1264

Date: 4/20 EAL Contact: Patty Client Contact: Todd W. Parsons E.S

INSTRUCTIONS:

✓ X05923 - extra bottle for alkalinity (not on C.O.C) should be analyzed.

MTBE should not be analyzed w/ BTEX

X05923, X05926 - Method 624 should include MTBE, EDB, isopropyl ether, chlorobenzene, 1,2-DCB, 1,3-DCB, 1,4-DCB, dichlorodifluoromethane and trichlorofluoromethane.
X05928, X05931, X05932 & X05933 also.

✓ X05930 - free product. analyze for BTEX only

✓ - TVPH labeled as Jet should be gasoline

✓ - TEPH labeled as diesel should be Jet

Evergreen Analytical Sample Receipt/Check-In Record

Date & Time Rec'd: 4/19/95 Shipped Via: Fedex 806784941
(Airbill # if applicable)

Client : PRISONS ES

Client Project ID(s): 722450.2602

EAL Project #(s): 95- 1264 EAL Cooler(s): (Y) N

Cooler#	CHEST		6002						
Ice packs	(Y)	N	(Y)	N	Y	N	Y	N	Y	N
Temperature °C	3°		3°						

	Y	N	N/A
1. Custody seal(s) present:		✓	
Seals on cooler intact			✓
Seals on bottle intact			
2. Chain of Custody present:	✓		
3. Containers broken or leaking: (Comment on COC if Y)		✓	
4. Containers labeled:	✓		
5. COC agrees w/ bottles received: (Comment on COC if N)	✓		
6. COC agrees w/ labels: (Comment on COC if N)	✓		
7. Headspace in VOA vials-waters only (comment on COC if Y)		✓	N/A
8. VOA samples preserved:	✓		N/A
9. pH measured on metals, cyanide or phenolics*:			✓
List discrepancies			
*Non-EAL provided containers only, water samples only.			
10. Metal samples present:			✓
Total ____ , Dissolved ____			
D or PD to be filtered:			
T,TR,D,PD to be Preserved:			
11. Short holding times:		✓	
Specify parameters			
12. Multi-phase sample(s) present:		✓	
13. COC signed w/ date/time:	✓		

Comments: Bottle CPT-18 for alkalinity not on C.O.C. Free product sample is not assigned an analysis.

(Additional comments on back)
Custodian Signature/Date: Lee Cannon 4/19/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX (919) 677-0118 FAX RESULTS Y / N
Sampler Name:
(signature) Michael K Baskett
(print) MICHAEL K BASKETT
Evergreen Analytical Cooler No. 602
Cooler Received

CLIENT CONTACT (print)
PROJECT I.D. 772450.2602
EAL. QUOTE # P.O.#
TURNAROUND REQUIRED*
*expedited turnaround subject to additional fee

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle) MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline) Jet	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	Methane	Anions (SO4, nitrate, nitrite)	Anions (Cl, SO4, Nitrate, Nitrite)	3010 Lead			EAL Sample No.
trip blank	4/13/95		2	✓										2												
CPT-17	4/18/95	0730	10	✓										2		2	1				4		1			
CPT-18	4/18/95	0845	14	✓			3							2		2	1				4		1			
field blank	4/18/95	0930	2	✓										2			~~1~~ 2									
CPT-19	4/18/95	0930	10	✓										2		2	1				4		1			
MW-4	4/18/95	1115	16	✓			3	1						2		2	1			1	4		1	1		
MW-4 DUPE	4/18/95	1115	5	✓										2		2	1									
HT:																										Location
DD:																										Container Size

EAL use only
Do not write in shaded area
EAL Project #
Custodian

Instructions:

Relinquished by: (Signature) Date/Time Received by: (Signature)

CHAIN OF CUSTODY RECORD & ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.
4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd.
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX # (919) 677-0118 FAX RESULTS Y / N

CLIENT CONTACT (print) ____
PROJECT I.D. 722450.2602
EAL. QUOTE # ____ P.O.# ____
TURNAROUND REQUIRED* ____
*expedited turnaround subject to additional fee

Sampler Name:
(signature) Michael K Baskett
(print) MICHAEL K BASKETT

Evergreen Analytical Cooler No. 638
Cooler Received ____

Please **PRINT** all information:

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME	No. of Containers	MATRIX: Water-Drinking/Discharge/Ground (circle)	MATRIX: Soil / Solid	MATRIX: Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	Methane	Anions (Sol., nitrate, nitrite)	Anions (Cl, Sulfate, nitrate, nitrite)	3010 Lead	Free Product	EAL Sample No.
MW. 12D	4/18/95	1200	15	✓				3						2		2	1			1	4	1		1			
trip blank	4/18/95		2											2													
MW 13	4/18/95	1345	2	✓																					2		
MW-5 (+BTEX MS/MSD)	4/18/95	1400	14	✓				3						2		2	1			1	4	1					
MW-8	4/18/95	1500	14					3						2		2	1			1	4	1					
MW-3	4/18/95	1550	13					3						2		2	1				4	1					
HT:																										Location	
DD:																										Container Size	

EAL use only
Do not write in shaded area
EAL Project # ____
Custodian ____

Instructions: For Free Product sample - analyses to be determined

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	4/18/95						

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042195	**Client Project No.**	: 722450.26020
Date Prepared	: 4/21/95	**Lab Project No.**	: 95-1264
Date Analyzed	: 4/21/95	**Dilution Factor**	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042110

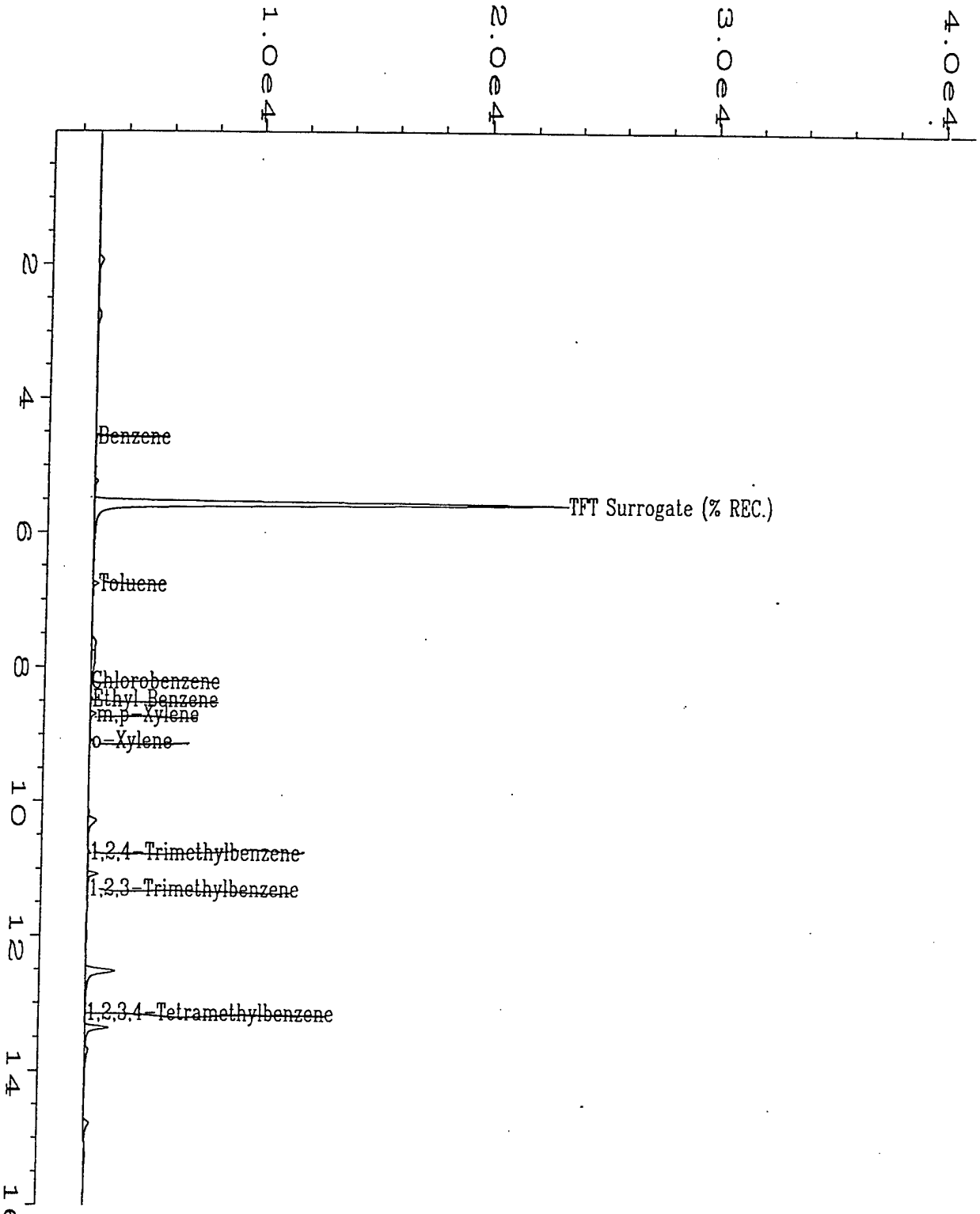
Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



user modified

Data File Name : C:\HPCHEM\2\DATA\BX20421\010R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : MB042195
Run Time Bar Code:
Acquired on : 21 Apr 95 03:07 PM
Report Created on: 21 Apr 95 03:29 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421.MTH
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

DM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042495	Client Project No.	: 722450.26020
Date Prepared	: 4/24/95	Lab Project No.	: 95-1264
Date Analyzed	: 4/25/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042410

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	0.7		0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4		0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	NA		NA
Surrogate Recovery (α,α,α-Trifluorotoluene):		81%		70%-130% (QC limits)

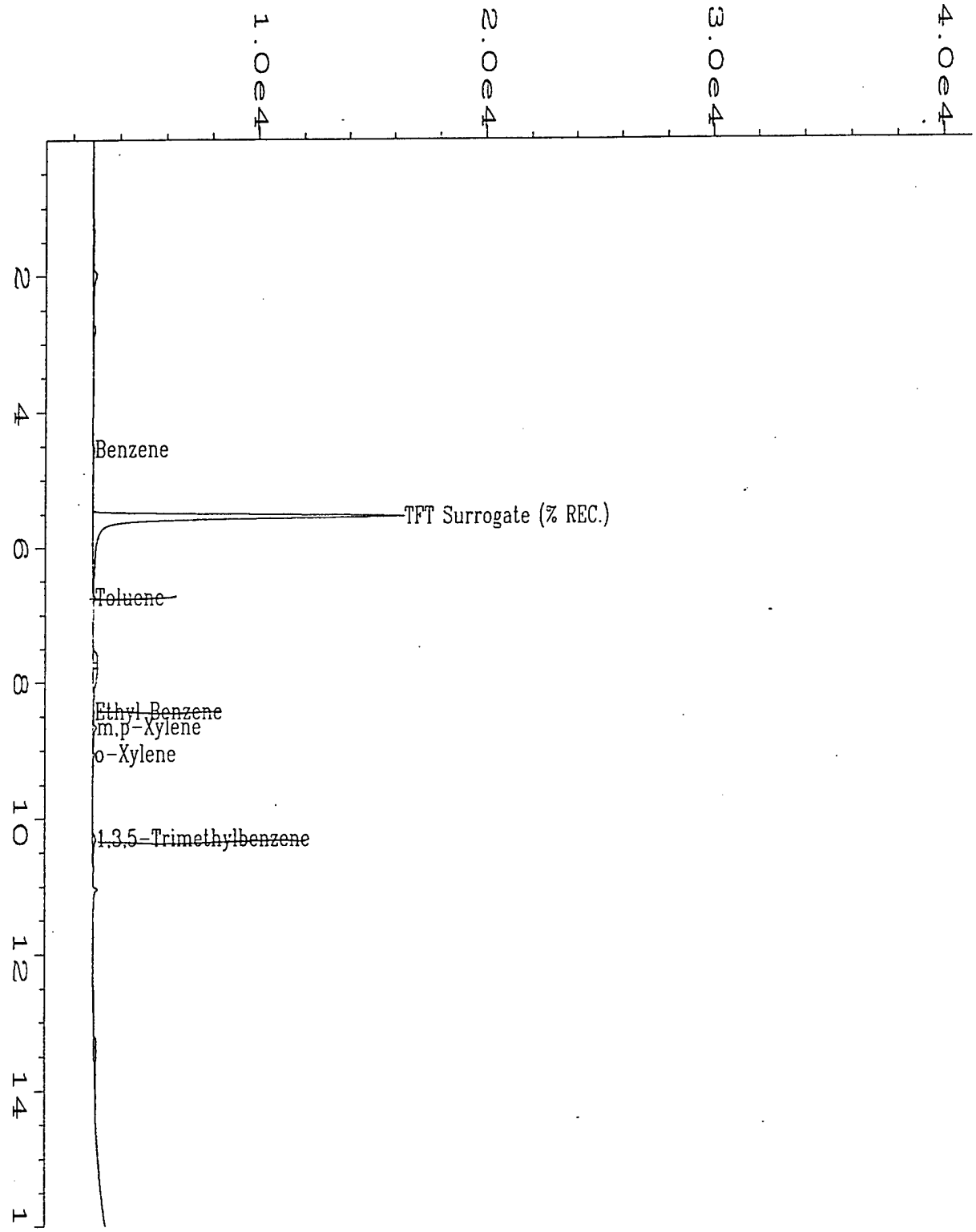
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



user modified

Data File Name : C:\HPCHEM\2\DATA\BX20424\010R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : MB042495
Run Time Bar Code:
Acquired on : 25 Apr 95 01:45 AM
Report Created on: 25 Apr 95 11:04 AM
Last Recalib on : 25 Apr 95 10:43 AM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20424.MTH
Analysis Method : BX20424.MTH
Sample Amount : 0
ISTD Amount :

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042595	Client Project No.	: 722450.26020
Date Prepared	: 4/25/95	Lab Project No.	: 95-1264
Date Analyzed	: 4/25/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042511

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5		0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	1.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		93%		70%-130% (QC limits

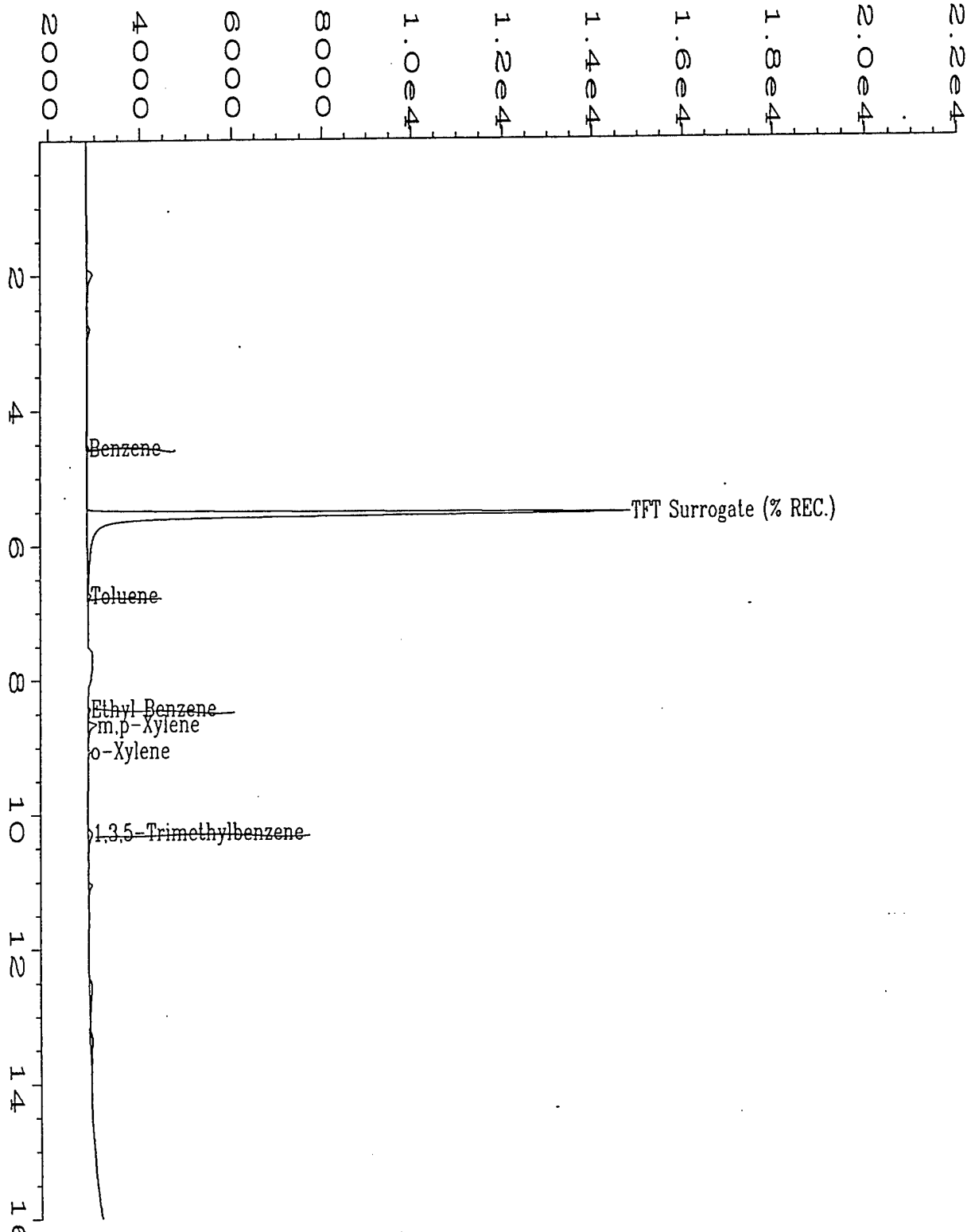
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClelland
Approved

BTEX1264.XLS



user modified

Data File Name : D:\2\DATA\BX20425\011R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : MB042595
Run Time Bar Code:
Acquired on : 25 Apr 95 03:02 PM
Report Created on: 01 May 95 02:46 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MEB2050295	Client Project No.	: 722450.2602/Seymo Johnson AFB
Date Extracted/Prepared	: 5/2/95	Lab Project No.	: 95-1264
Date Analyzed	: 5/2/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2050214

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5		0.4
3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4

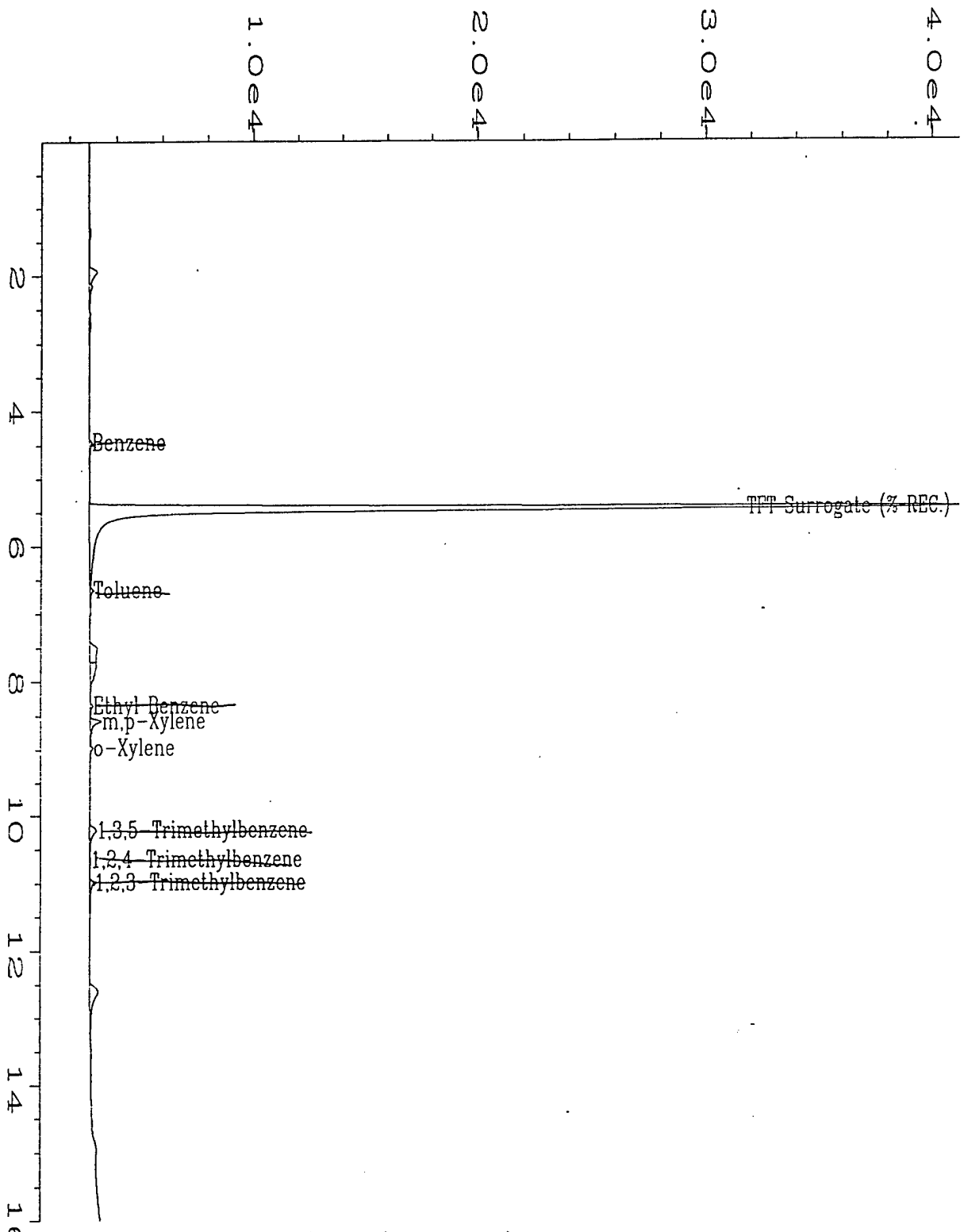
Surrogate Recovery (α,α,α-Trifluorotoluene):	101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
\ = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20502\014R1001.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 14
Sample Name	: MEB2050295	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 02 May 95 06:19 PM	Instrument Method	: BX20502.MTH
Report Created on	: 03 May 95 02:56 PM	Analysis Method	: BX20502A.MTH
Last Recalib on	: 03 MAY 95 02:37 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26020
Lab Sample Number	: X05921	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042116
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		101%		70%-130% (QC limits

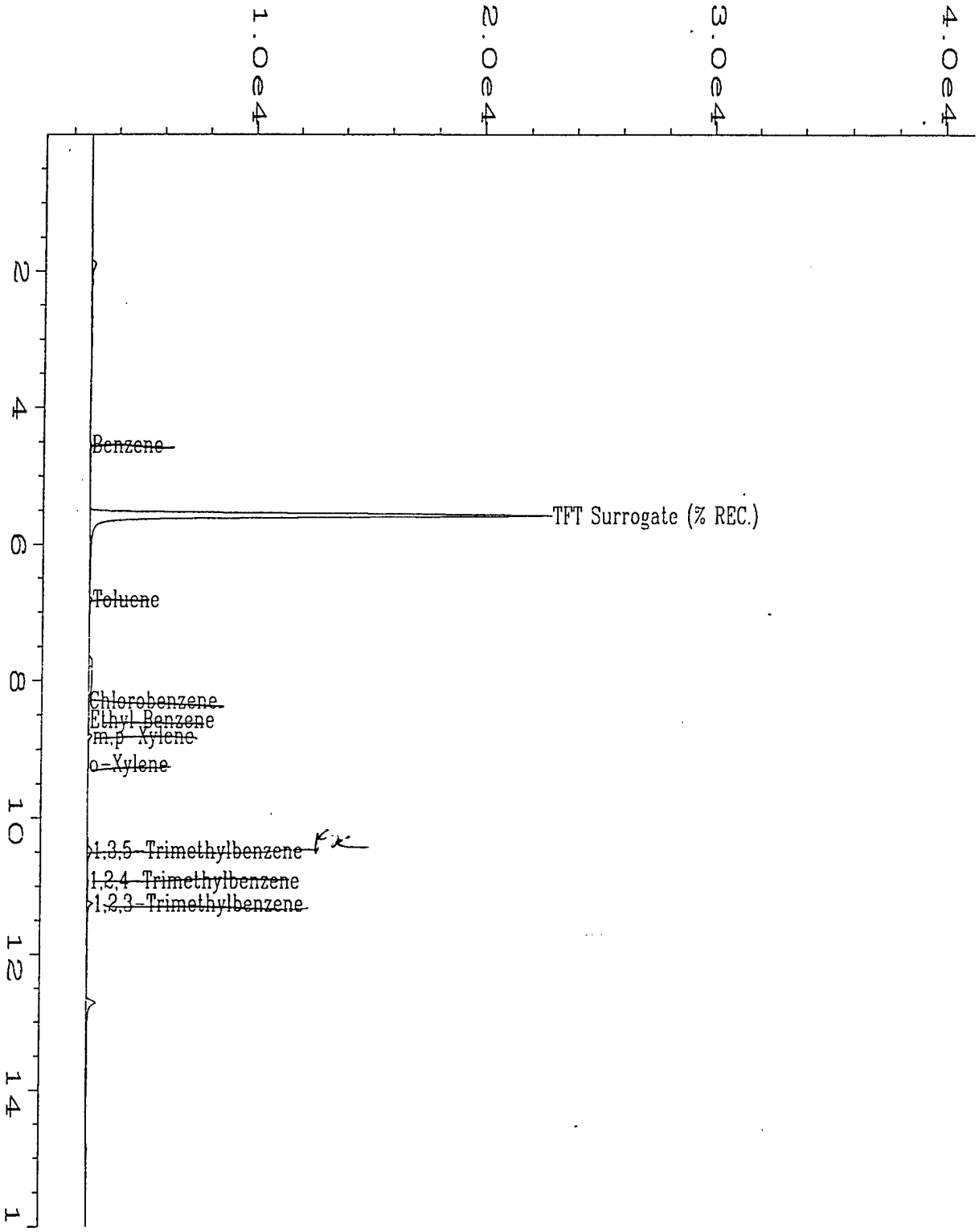
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\016R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 16
Sample Name	: X05921;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 06:54 PM	Instrument Method	: BX20421.MTH
Report Created on	: 21 Apr 95 07:10 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; TRIP BLANK; 5 ML WATER		

DM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-17	Client Project No.	: 722450.26020
Lab Sample Number	: X05922	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 20.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042416
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	61	B	8.0
Toluene	108-88-3	18		8.0
Chlorobenzene	108-90-7		U	8.0
Ethyl Benzene	100-41-4	88		8.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	260	B	8.0
1,3,5-Trimethylbenzene	108-67-8		U	8.0
1,2,4-Trimethylbenzene	95-63-6	53		8.0
1,2,3-Trimethylbenzene	526-73-8	15		8.0
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α-Trifluorotoluene):		74%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

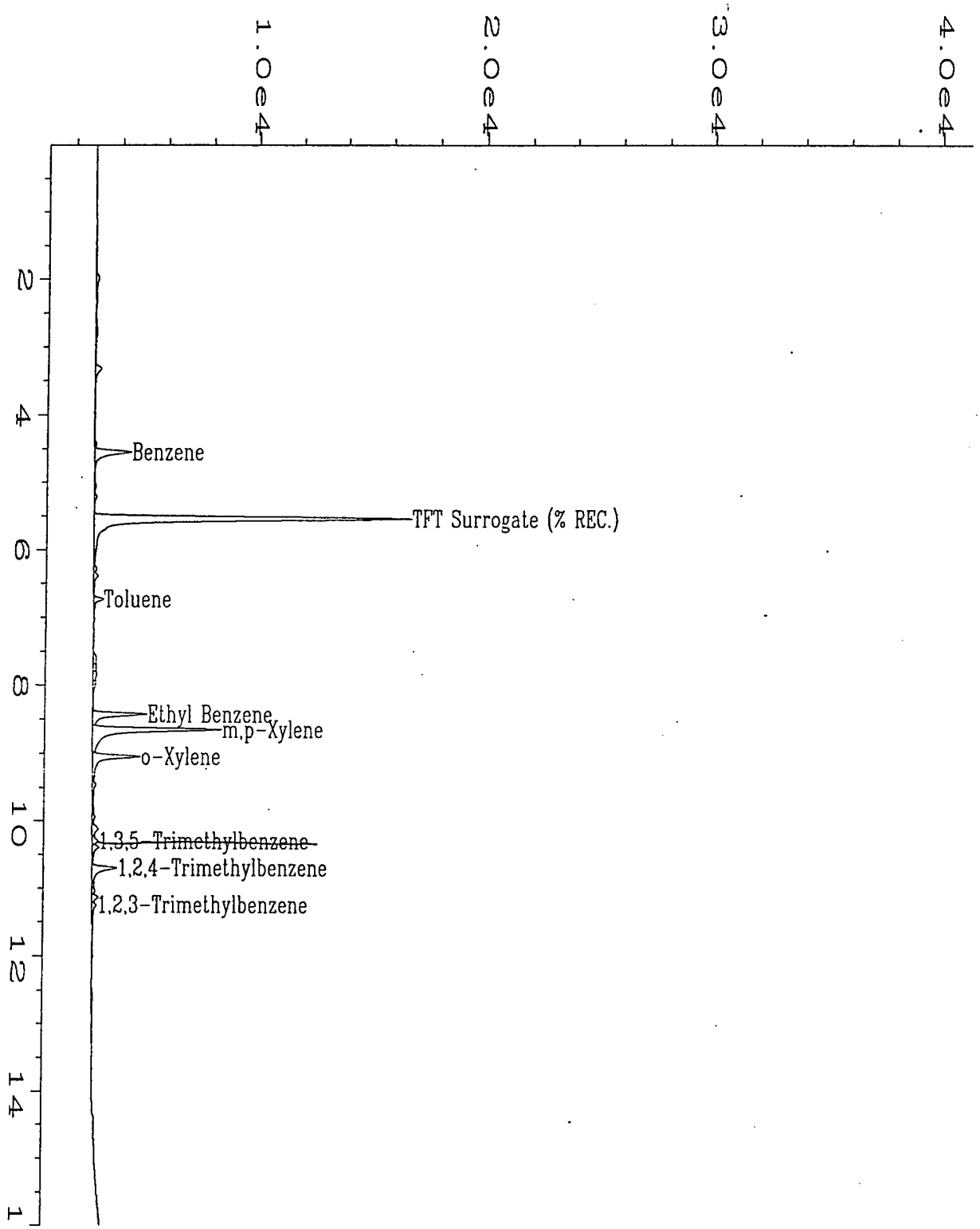
** = See DF=50, BX2042127.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20424\016R0901.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 16
Sample Name	: X05922;20;0.250	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 25 Apr 95 05:39 AM	Instrument Method	: BX20424.MTH
Report Created on	: 25 Apr 95 11:15 AM	Analysis Method	: BX20424.MTH
Last Recalib on	: 25 APR 95 10:43 AM	Sample Amount	: 0
Multiplier	: 20	ISTD Amount	:
Sample Info	: Project#: 95-1264	Client#: CPT-17	WATER

DM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-17	Client Project No.	: 722450.26020
Lab Sample Number	: X05922	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 50.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 2/21/95	Matrix	: Water
Date Analyzed	: 2/22/95	Lab File No.	: BX2042127
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	28	20
Surrogate Recovery (α,α,α-Trifluorotoluene):		94%	70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

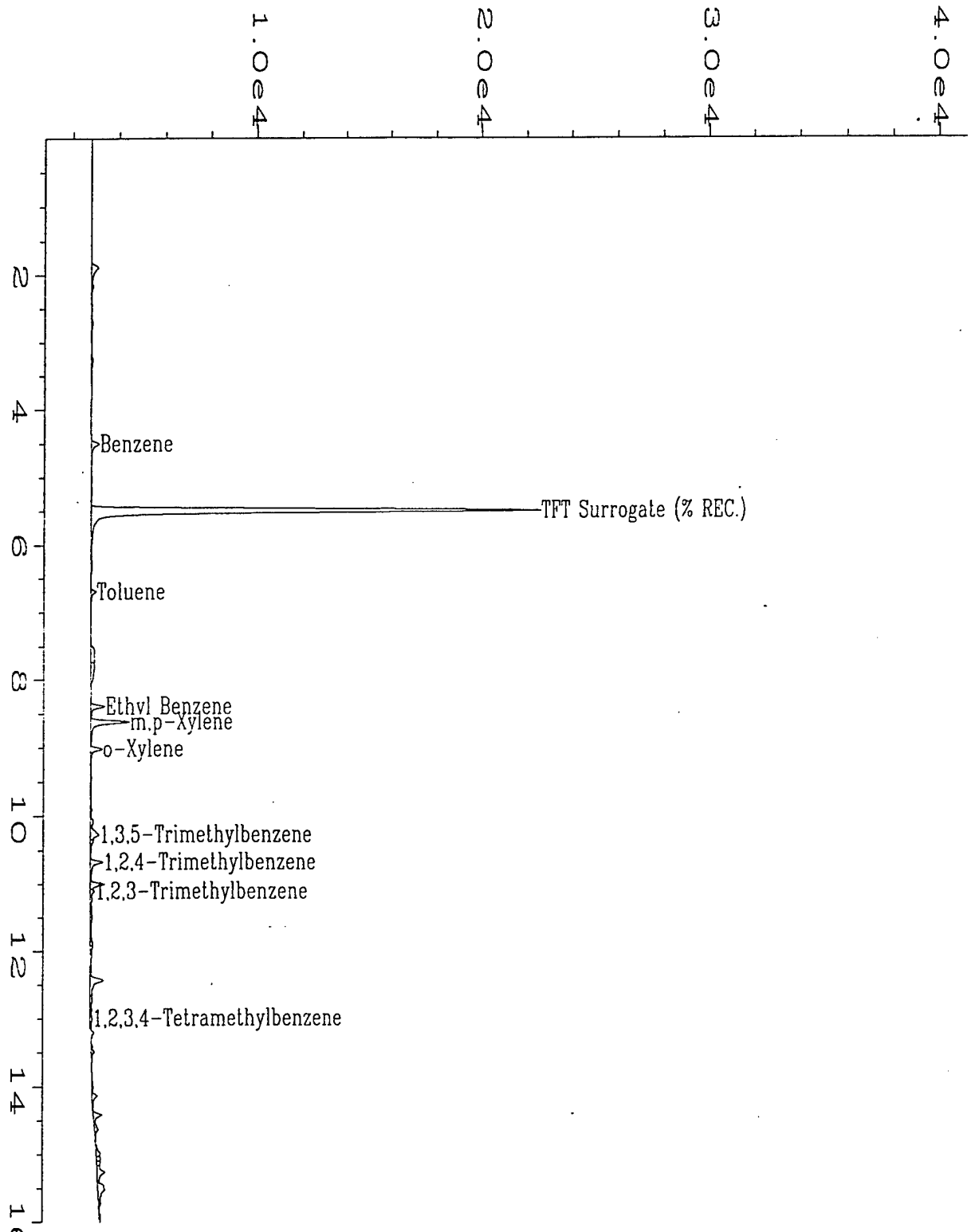
** = See DF=20, BX2042416.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

F. McClellan
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\027R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 27
Sample Name	: X05922;50;0.1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 01:29 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 01:32 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 50	ISTD Amount	:
Sample Info	: 95-1264; CPT-17; 0.100 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-18	Client Project No.	: 722450.26020
Lab Sample Number	: X05923	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042128
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	820	40
Toluene	108-88-3	200	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	170	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	500	40
1,3,5-Trimethylbenzene	108-67-8	72	40
1,2,4-Trimethylbenzene	95-63-6	220	40
1,2,3-Trimethylbenzene	526-73-8	74	40
1,2,3,4-Tetramethylbenzene	488-23-3	120	40
Surrogate Recovery (α,α,α-Trifluorotoluene):		93%	70%-130% (QC limits)

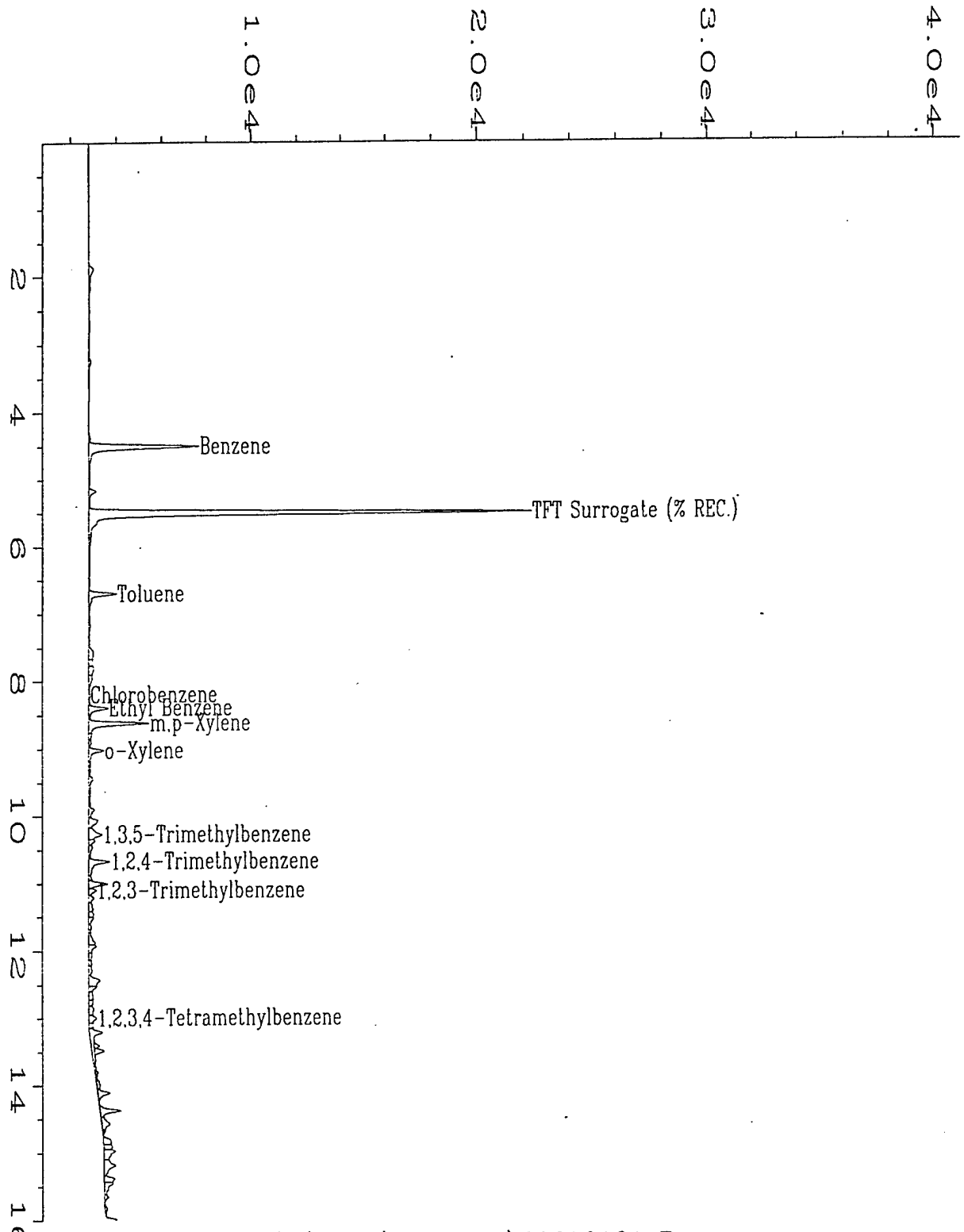
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClellan
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\028R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 28
Sample Name	: X05923;100;0.05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 02:05 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 02:21 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 100	ISTD Amount	:
Sample Info	: 95-1264; CPT-18; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Field Blank	Client Project No.	: 722450.26020
Lab Sample Number	: X05924	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042117
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		92%		70%-130% (QC limits

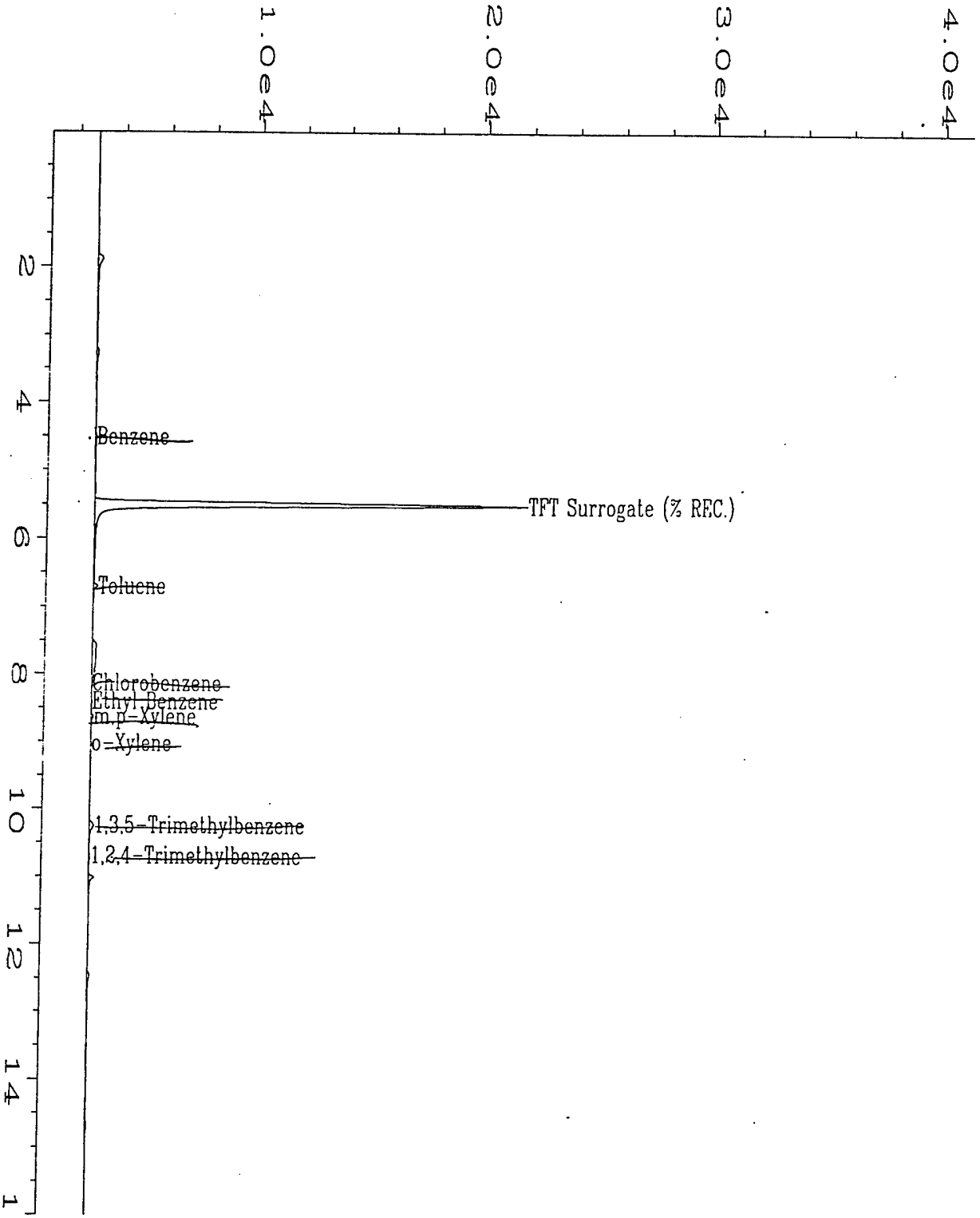
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

Approved

AFCEEW.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\017R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05924;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 07:30 PM
Report Created on: 21 Apr 95 07:46 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1
Sample Info : 95-1264; FIELD BLANK; 5 ML WATER

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421.MTH
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-19	Client Project No.	: 722450.26020
Lab Sample Number	: X05925	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042118
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		104%		70%-130% (QC limits)

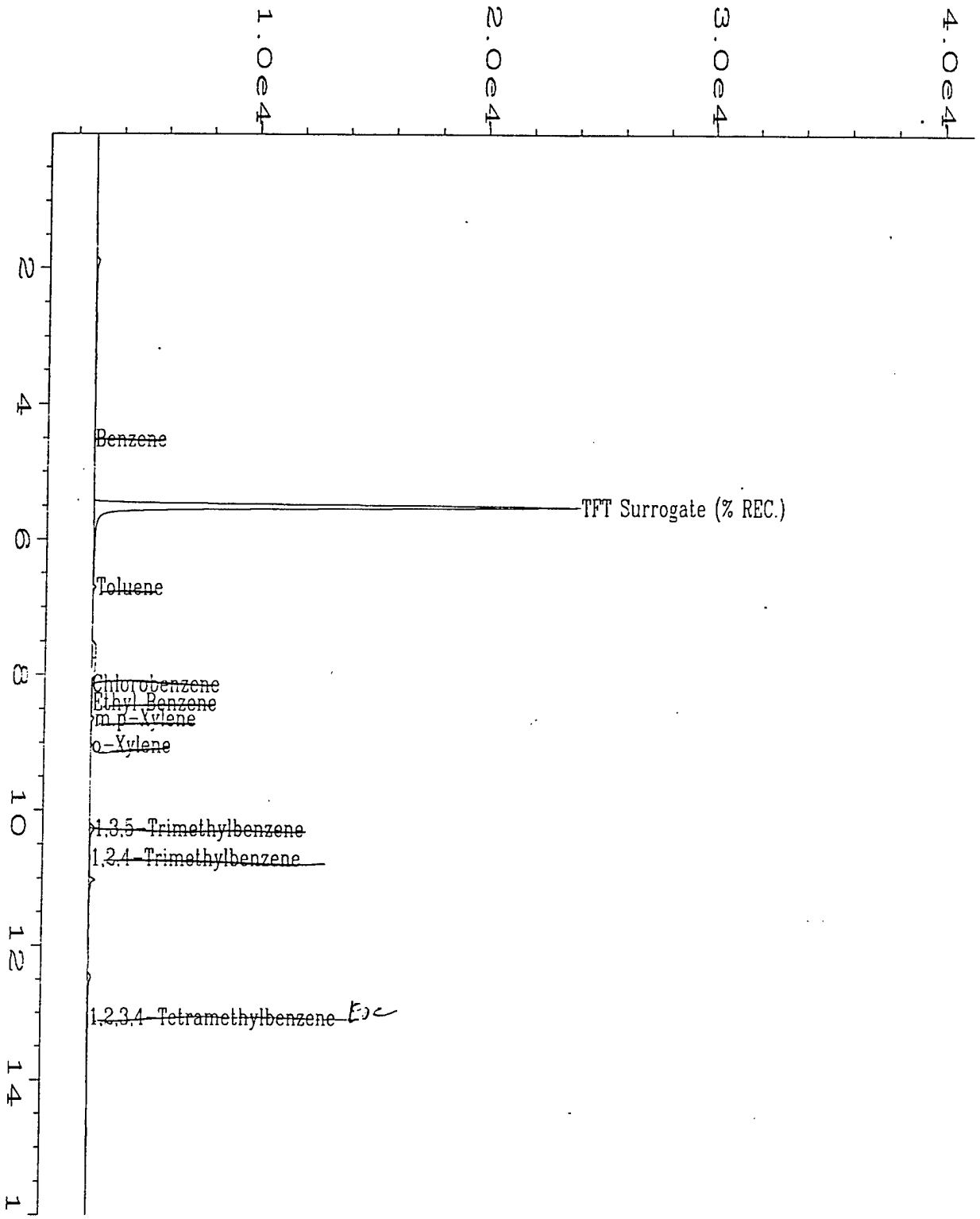
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\018R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 18
Sample Name	: X05925;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 08:06 PM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 12:55 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; CPT-19; 5 ML WATER		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-4	Client Project No.	: 722450.26020
Lab Sample Number	: X05926	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042126
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	2100		40
Toluene	108-88-3	3100		40
Chlorobenzene	108-90-7		U	40
Ethyl Benzene	100-41-4	980		40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	6400		40
1,3,5-Trimethylbenzene	108-67-8	200		40
1,2,4-Trimethylbenzene	95-63-6	830		40
1,2,3-Trimethylbenzene	526-73-8	170		40
1,2,3,4-Tetramethylbenzene	488-23-3	67		40
Surrogate Recovery (α,α,α-Trifluorotoluene):		89%		70%-130% (QC limits

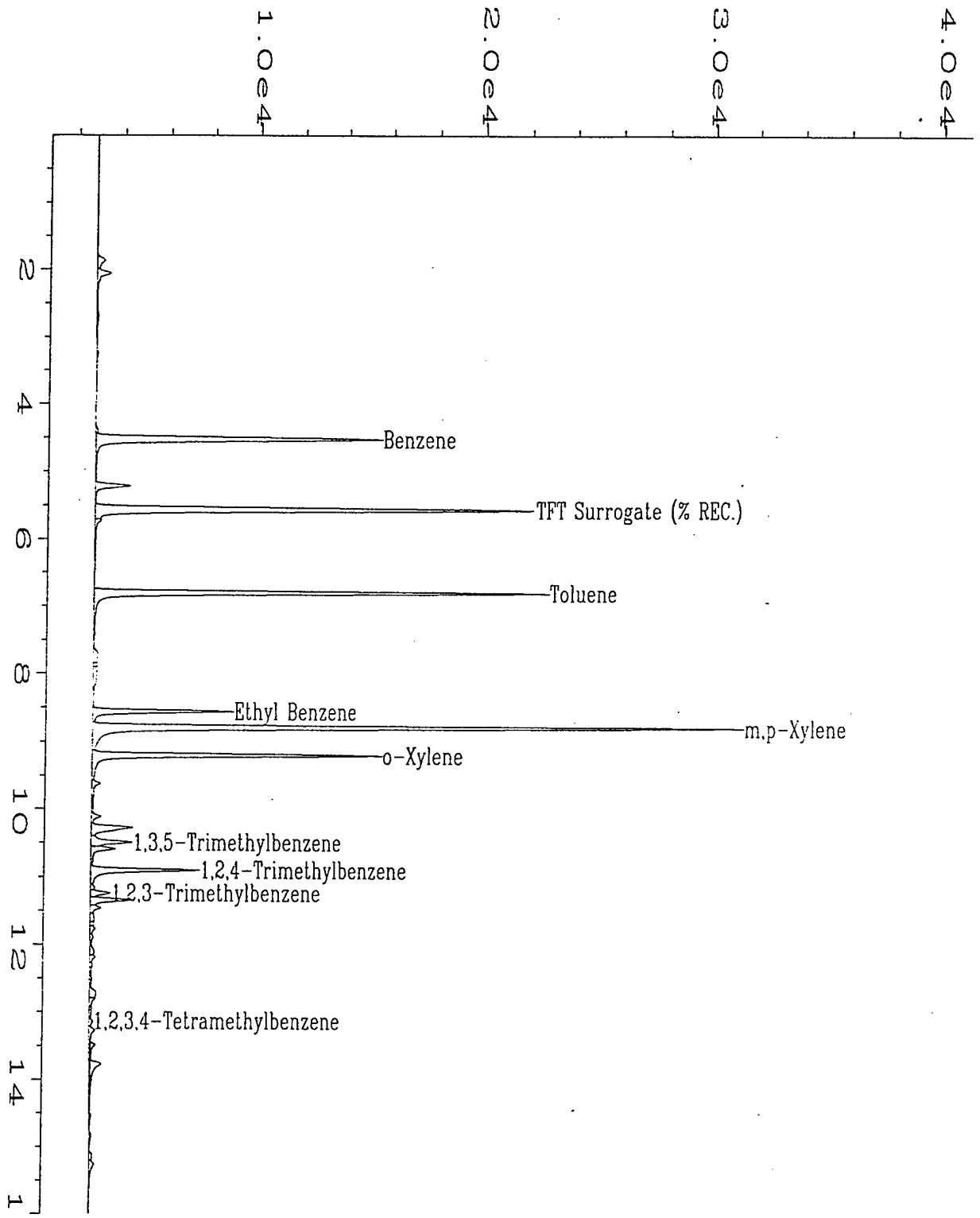
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClellan
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\026R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 26
Sample Name	: X05926;100;0.05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 00:53 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 01:09 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 100	ISTD Amount	:
Sample Info	: 95-1264; MW-4; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-4 Dupe	Client Project No.	: 722450.26020
Lab Sample Number	: X05927	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042129
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2300	40
Toluene	108-88-3	3300	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	1100	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	7100	40
1,3,5-Trimethylbenzene	108-67-8	210	40
1,2,4-Trimethylbenzene	95-63-6	890	40
1,2,3-Trimethylbenzene	526-73-8	370	40
1,2,3,4-Tetramethylbenzene	488-23-3	110	40
Surrogate Recovery (α,α,α-Trifluorotoluene):		93%	70%-130% (QC limits

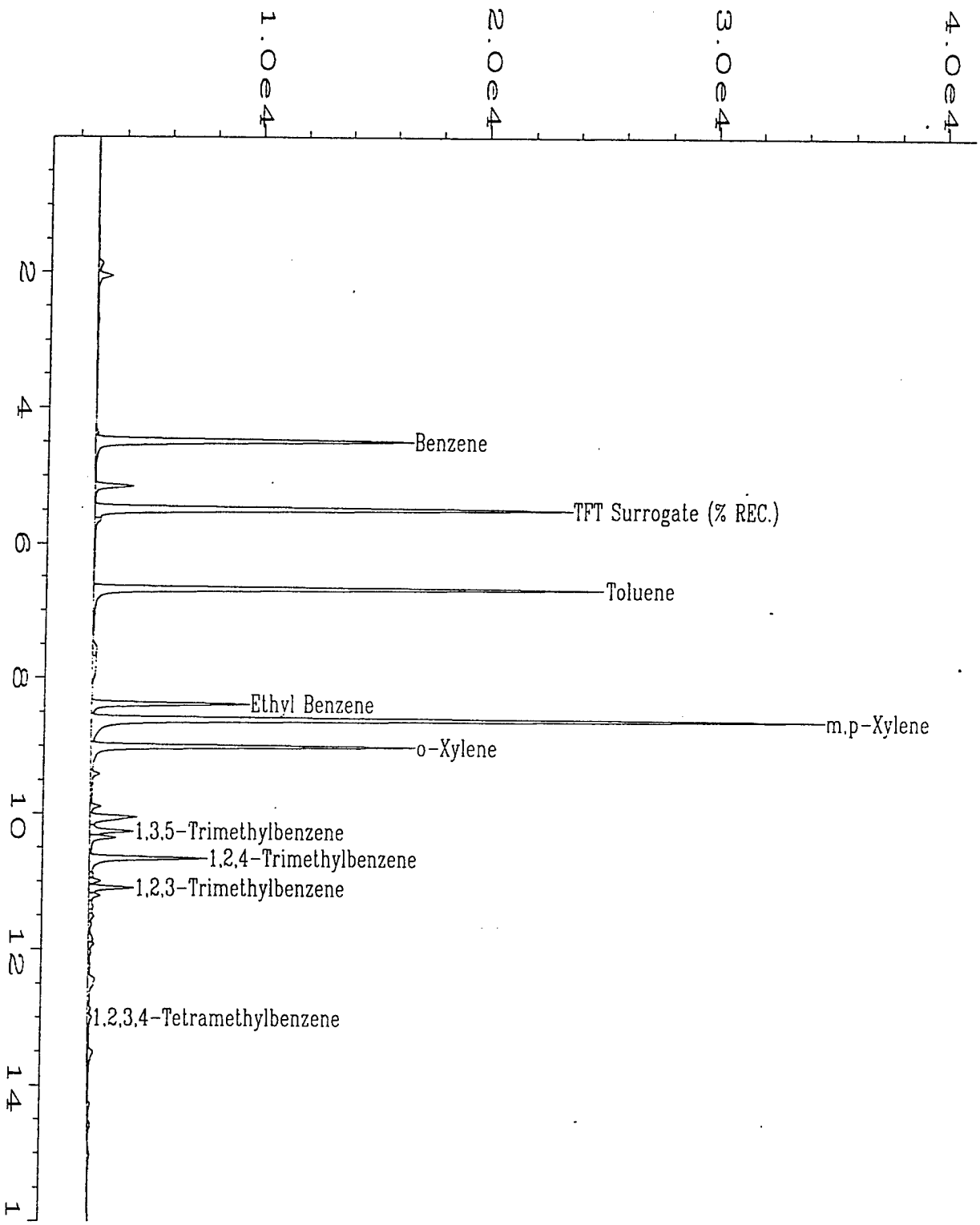
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClellan
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\029R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 29
Sample Name	: X05927;100;0.05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 02:41 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 02:57 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 100	ISTD Amount	:
Sample Info	: 95-1264; MW-4DUP; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-12D	Client Project No.	: 722450.26020
Lab Sample Number	: X05928	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042119
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	**		0.4
Toluene	108-88-3	40		0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4	12		0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	62		0.4
1,3,5-Trimethylbenzene	108-67-8	3.2		0.4
1,2,4-Trimethylbenzene	95-63-6	13		0.4
1,2,3-Trimethylbenzene	526-73-8	4.5		0.4
1,2,3,4-Tetramethylbenzene	488-23-3	2.6		0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

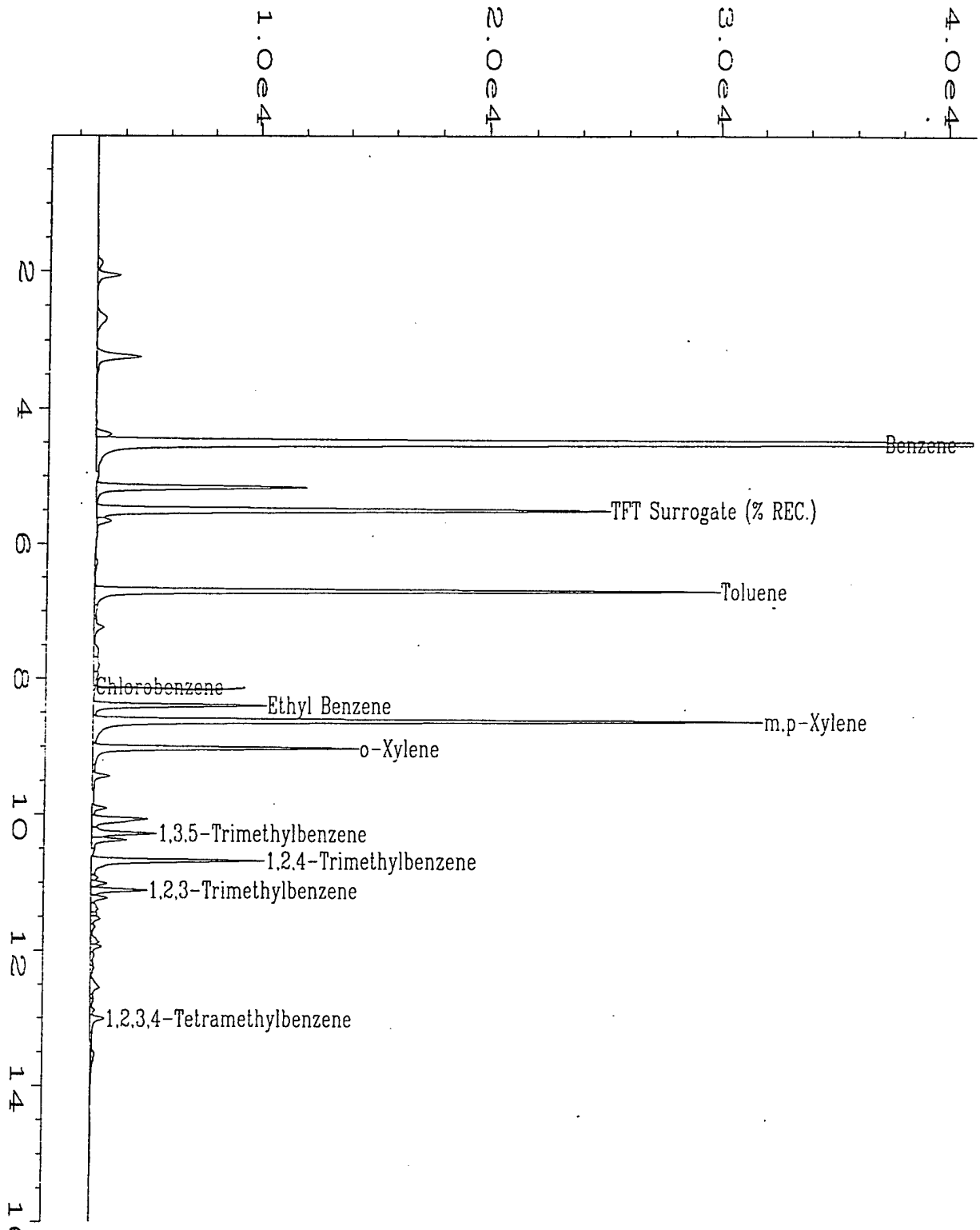
** = See BX2042512 (DF=20).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\019R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 19
Sample Name	: X05928;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 08:41 PM	Instrument Method	: BX20421.MTH
Report Created on	: 21 Apr 95 08:58 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; MW-12D; 5 ML WATER		

DM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-12D	Client Project No.	: 722450.26020
Lab Sample Number	: X05928	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 20.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/25/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042512
		Method Blank No.	: MB042595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	110	8.0
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α-Trifluorotoluene):		95%	70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

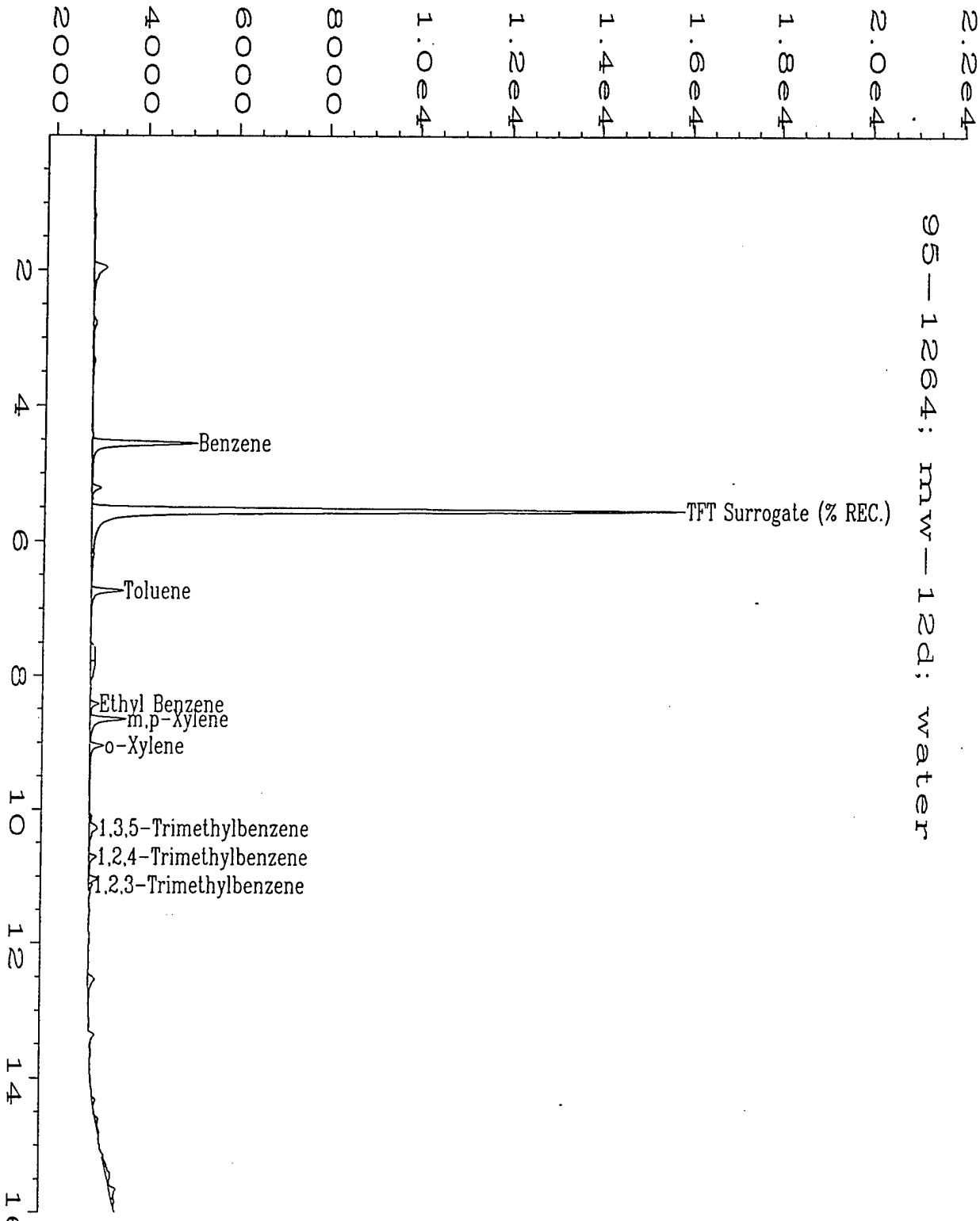
** = See BX2042119.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: D:\2\DATA\BX20425\012R0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 12
Sample Name	: x05928;20;0.25	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 25 Apr 95 03:40 PM	Instrument Method	: BX20425.MTH
Report Created on	: 01 May 95 02:53 PM	Analysis Method	: BX20425.MTH
Last Recalib on	: 26 APR 95 09:49 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26020
Lab Sample Number	: X05929	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042115
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2		U	0.4
Toluene	108-88-3		U	0.4
Chlorobenzene	108-90-7		U	0.4
Ethyl Benzene	100-41-4		U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6		U	0.4
1,3,5-Trimethylbenzene	108-67-8		U	0.4
1,2,4-Trimethylbenzene	95-63-6		U	0.4
1,2,3-Trimethylbenzene	526-73-8		U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3		U	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		91%		70%-130% (QC limits

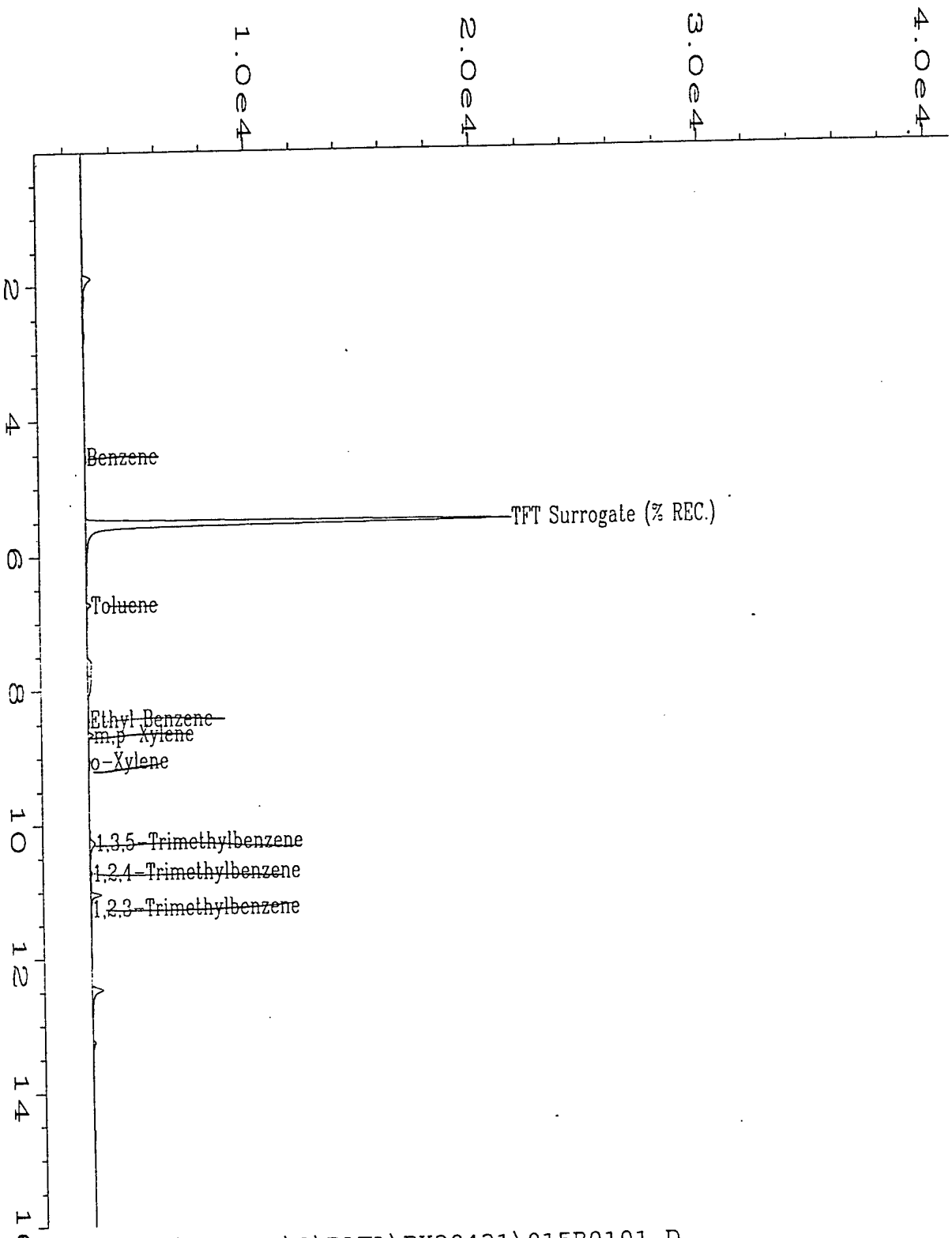
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved

AFCEEW.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\015R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05929;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 06:18 PM
Report Created on: 21 Apr 95 06:34 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1
Sample Info : 95-1264; TRIP BLANK; 5 ML WATER

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421.MTH
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

DM 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-13/Free Product	Client Project No.	: 722450.2602/Seymo
Lab Sample Number	: X05930	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 125000.00
Date Received	: 4/19/95	Method	: 602/8020
Date Extracted/Prepared	: 5/3/95	Matrix	: Product
Date Analyzed	: 5/3/95	Lab File No.	: BX2050313
% Moisture	NA	Method Blank No.	: MEB2050295

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	**		**
Toluene	108-88-3	3500000		50000
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	**		**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	7300000	B	50000
1,3,5-Trimethylbenzene	108-67-8	**		**
1,2,4-Trimethylbenzene	95-63-6	5100000		50000
1,2,3-Trimethylbenzene	526-73-8	**		**
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α-Trifluorotoluene):		66%		50%-150% (QC limits)

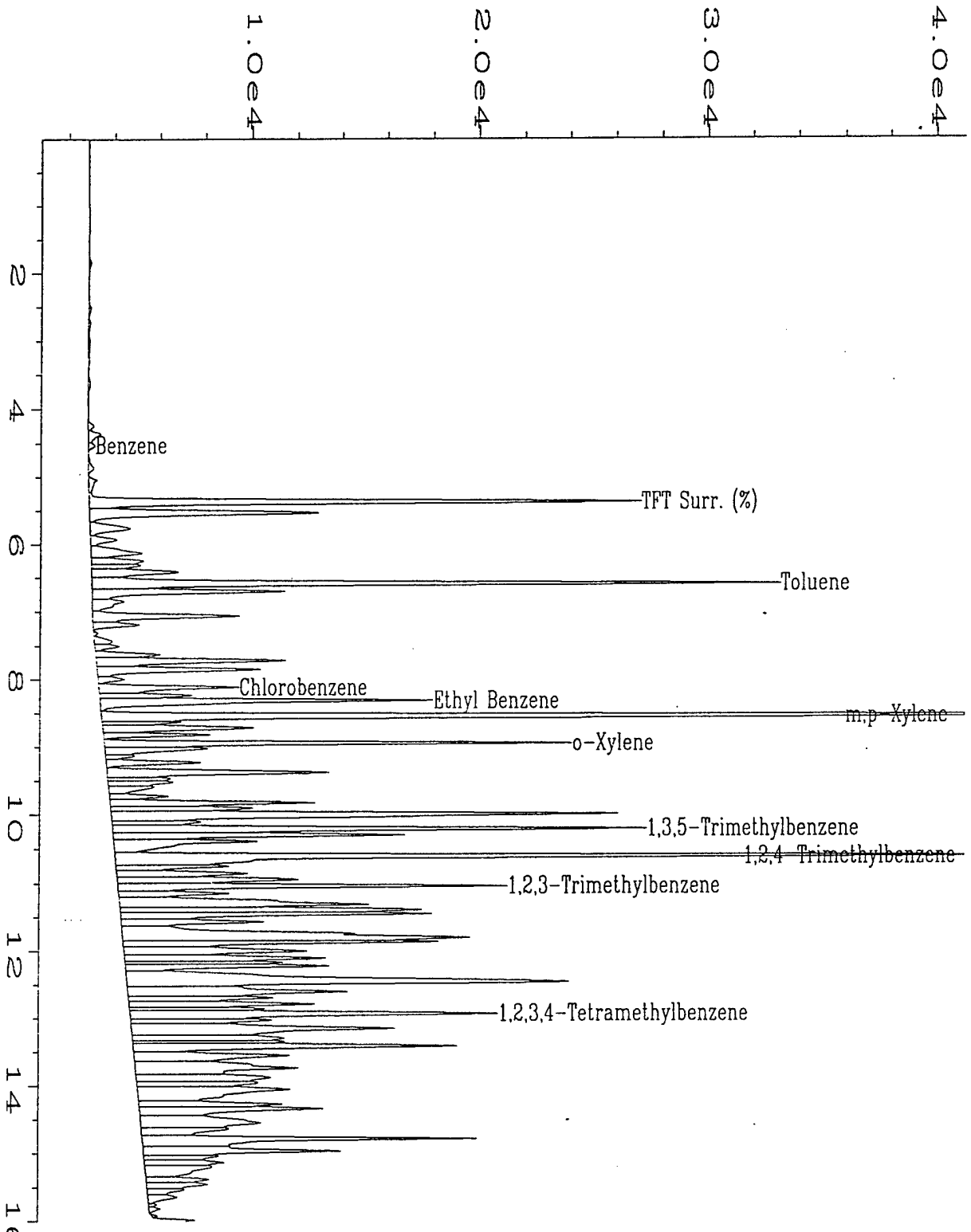
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2050216 for noted values, df=50000, 05/02/95.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
'. = Reporting Limit.
A = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20503\013R1001.D		
Operator	: C.J. Cook	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 13
Sample Name	: X05930;125000	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 03 May 95 06:21 PM	Instrument Method	: BX20503.MTH
Report Created on	: 04 May 95 08:56 AM	Analysis Method	: BX20503A.MTH
Last Recalib on	: 04 MAY 95 08:47 AM	Sample Amount	: 0
Multiplier	: 1.25e+005	ISTD Amount	:
Sample Info	: 95-1264;MW-13;100ul»10mlMeOH/4ul»5mlWater		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-13/Free Product	Client Project No.	: 722450.2602/Seymo
Lab Sample Number	: X05930	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 50000.00
Date Received	: 4/19/95	Method	: 602/8020
Date Extracted/Prepared	: 5/2/95	Matrix	: Product
Date Analyzed	: 5/2/95	Lab File No.	: BX2050216
% Moisture	NA	Method Blank No.	: MEB2050295

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	1000000	20000
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	780000	20000
Ethyl Benzene	100-41-4	2300000	20000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
,3,5-Trimethylbenzene	108-67-8	2300000	20000
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	2600000	20000
1,2,3,4-Tetramethylbenzene	488-23-3	3600000	20000
Surrogate Recovery (α,α,α-Trifluorotoluene):		106%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

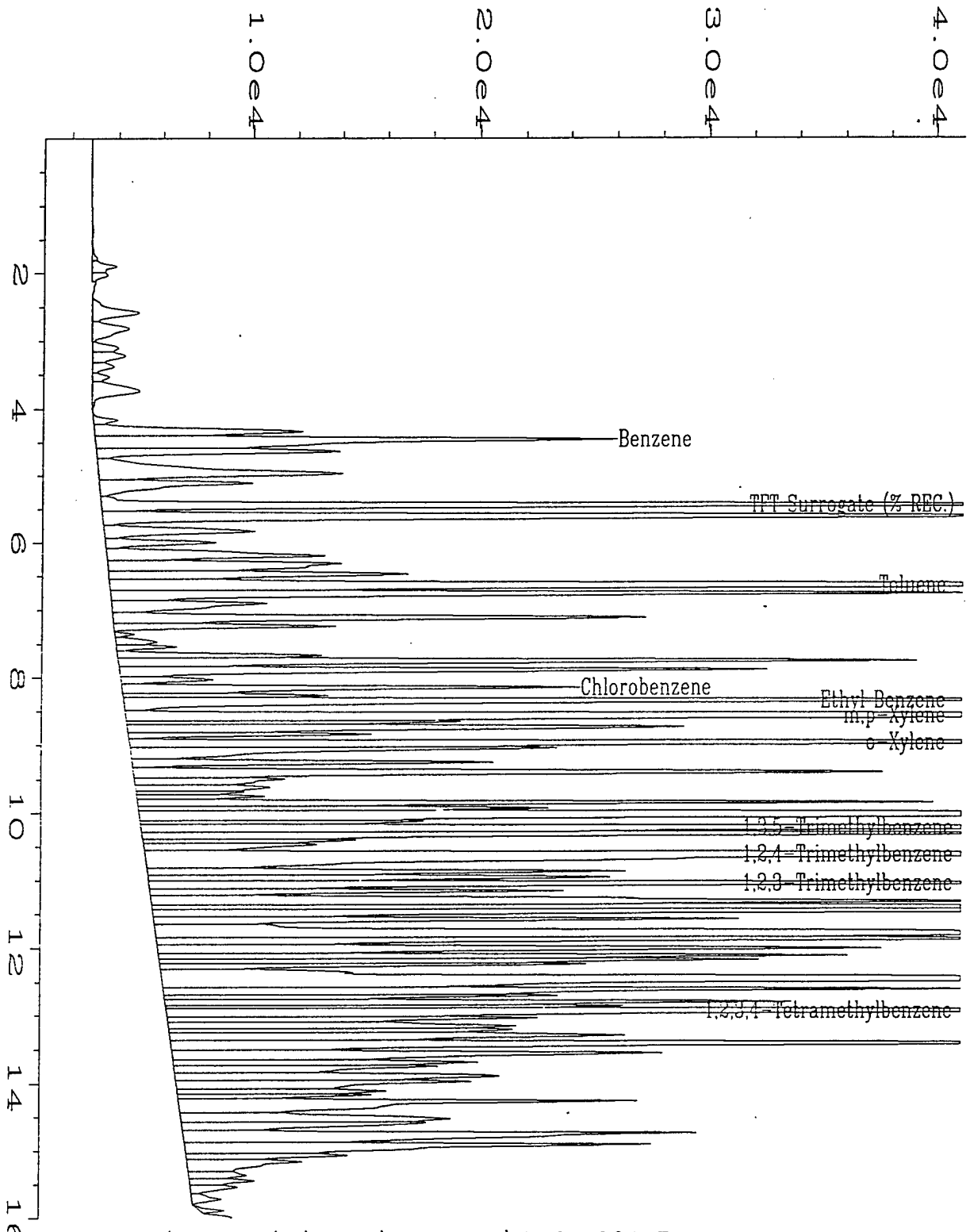
** = See BX2050313 for noted values, df = 125000, 05/03/95.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
RL = Reporting Limit.
\ = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20502\016R1001.D
Operator : C.J. Cook
Instrument : BTEX2
Sample Name : X05930;50000
Run Time Bar Code:
Acquired on : 02 May 95 07:36 PM
Report Created on: 03 May 95 02:57 PM
Last Recalib on : 03 MAY 95 02:37 PM
Multiplier : 5e+004
Sample Info : 95-1264;MW-13;100ul»10mlMeOH/10ul»5mlWater

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20502.MTH
Analysis Method : BX20502A.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	**Client Project No.**	: 722450.26020
Lab Sample Number	: X05931	**Lab Project No.**	: 95-1264
Date Sampled	: 4/18/95	**Dilution Factor**	: 12.50
Date Received	: 4/19/95	**Method**	: 602
Date Prepared	: 4/24/95	**Matrix**	: Water
Date Analyzed	: 4/25/95	**Lab File No.**	: BX2042411
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	240	B	5.0
Toluene	108-88-3	**		**
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	**		**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	95	B	5.0
1,3,5-Trimethylbenzene	108-67-8	**		**
1,2,4-Trimethylbenzene	95-63-6	20		5.0
1,2,3-Trimethylbenzene	526-73-8	**		**
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α-Trifluorotoluene):		88%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

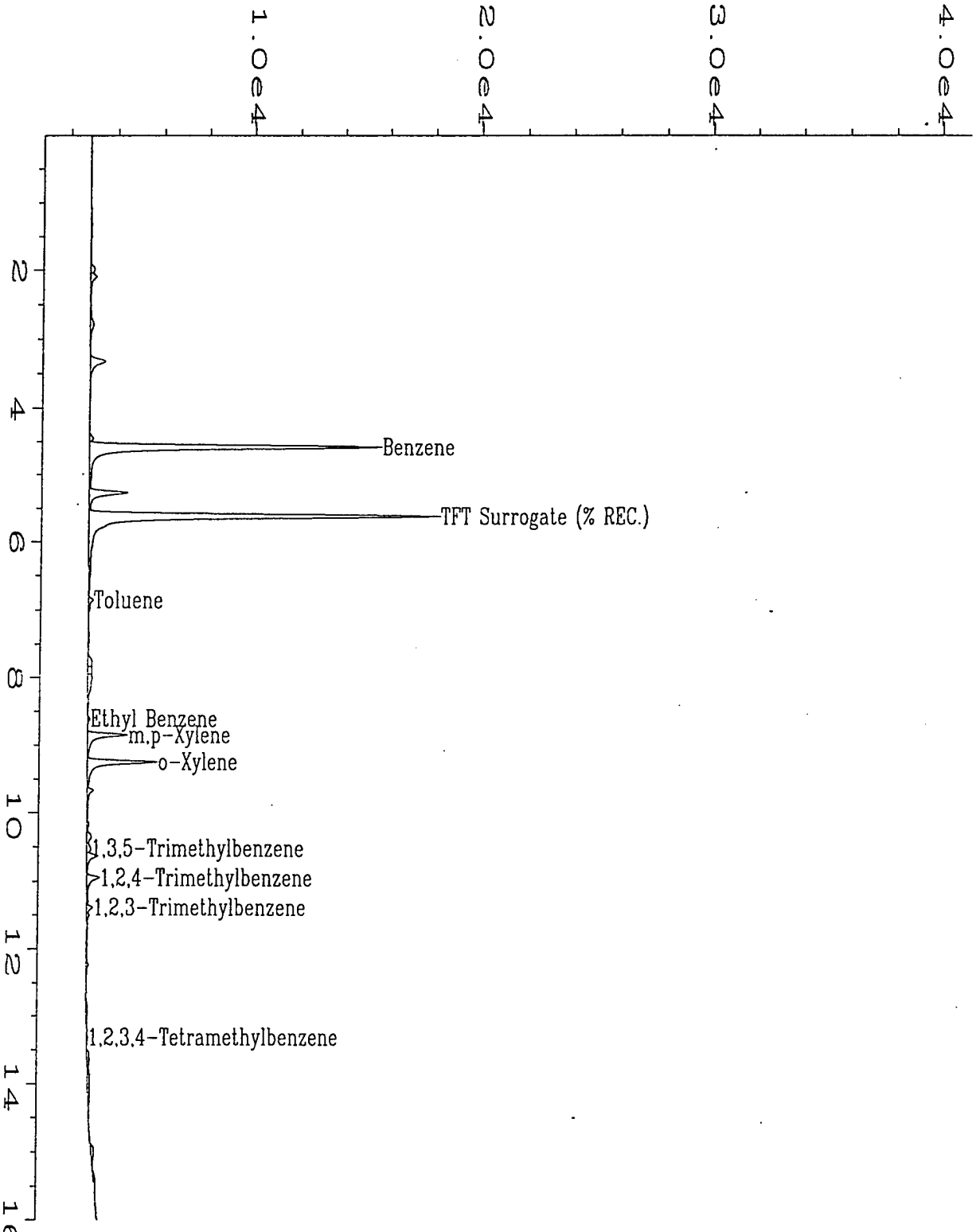
** = See BX2042122.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClella
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20424\011R0901.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 11
Sample Name	: X05931;12.5;0.4	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 25 Apr 95 02:24 AM	Instrument Method	: BX20424.MTH
Report Created on	: 25 Apr 95 11:13 AM	Analysis Method	: BX20424.MTH
Last Recalib on	: 25 APR 95 10:43 AM	Sample Amount	: 0
Multiplier	: 12.5	ISTD Amount	:
Sample Info	: Project#: 95-1264	Client#: MW-5(+BTEX MS/MSD)	WATER

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042122
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	4.6	0.4
Chlorobenzene	108-90-7	1.4	0.4
Ethyl Benzene	100-41-4	4.0	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	2.2	0.4
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	37	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	18	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		104%	70%-130% (QC limits

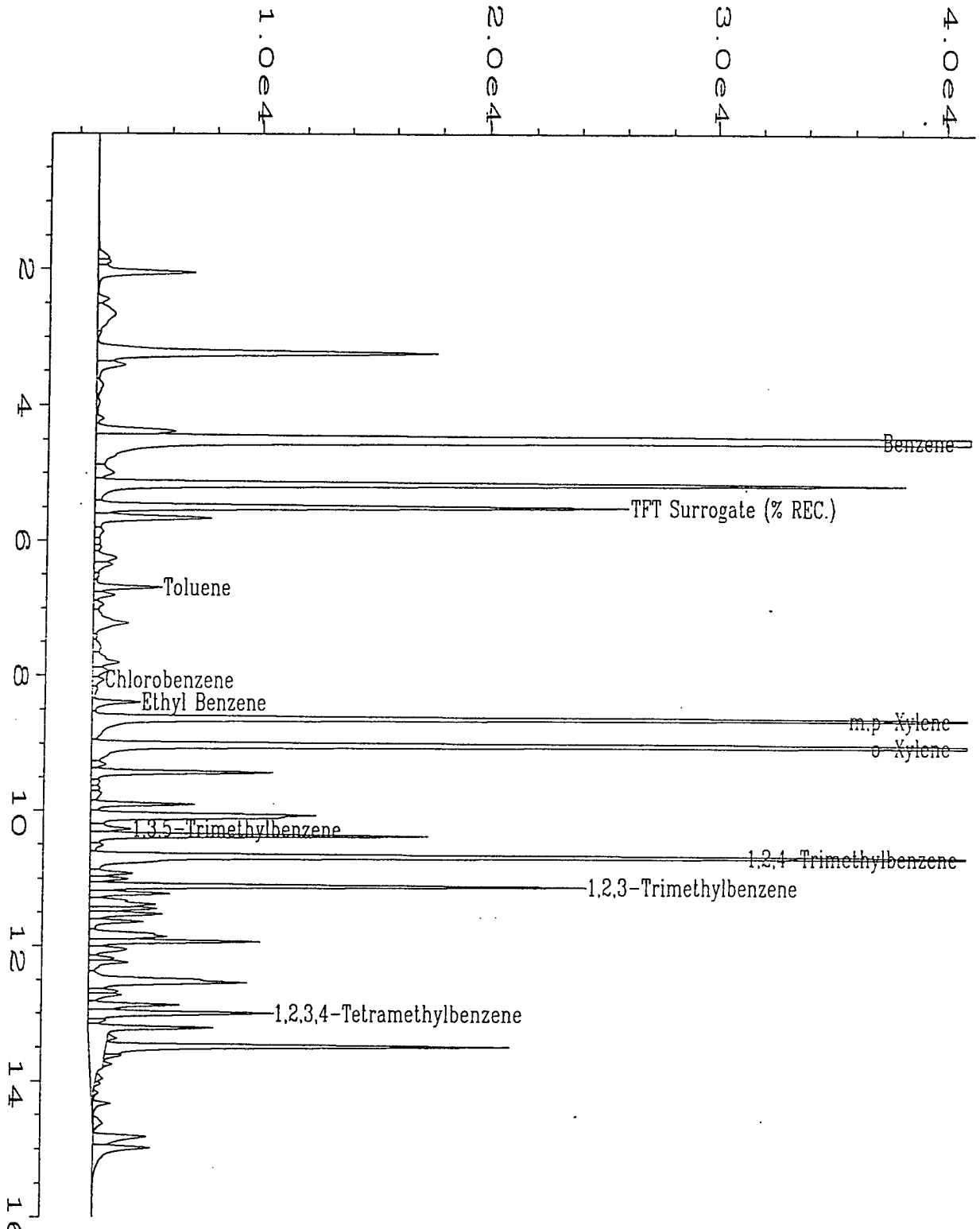
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042411 (DF=12.5).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P. McClellan
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\022R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 22
Sample Name	: X05931;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 10:29 PM	Instrument Method	: BX20421.MTH
Report Created on	: 21 Apr 95 10:46 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; MW-12D; 5 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931Dup	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 12.50
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042412
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	240	B	5.0
Toluene	108-88-3	**		**
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	**		**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	98	B	5.0
1,3,5-Trimethylbenzene	108-67-8	**		**
1,2,4-Trimethylbenzene	95-63-6	22		5.0
1,2,3-Trimethylbenzene	526-73-8	**		**
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α-Trifluorotoluene):		91%		70%-130% (QC limits

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

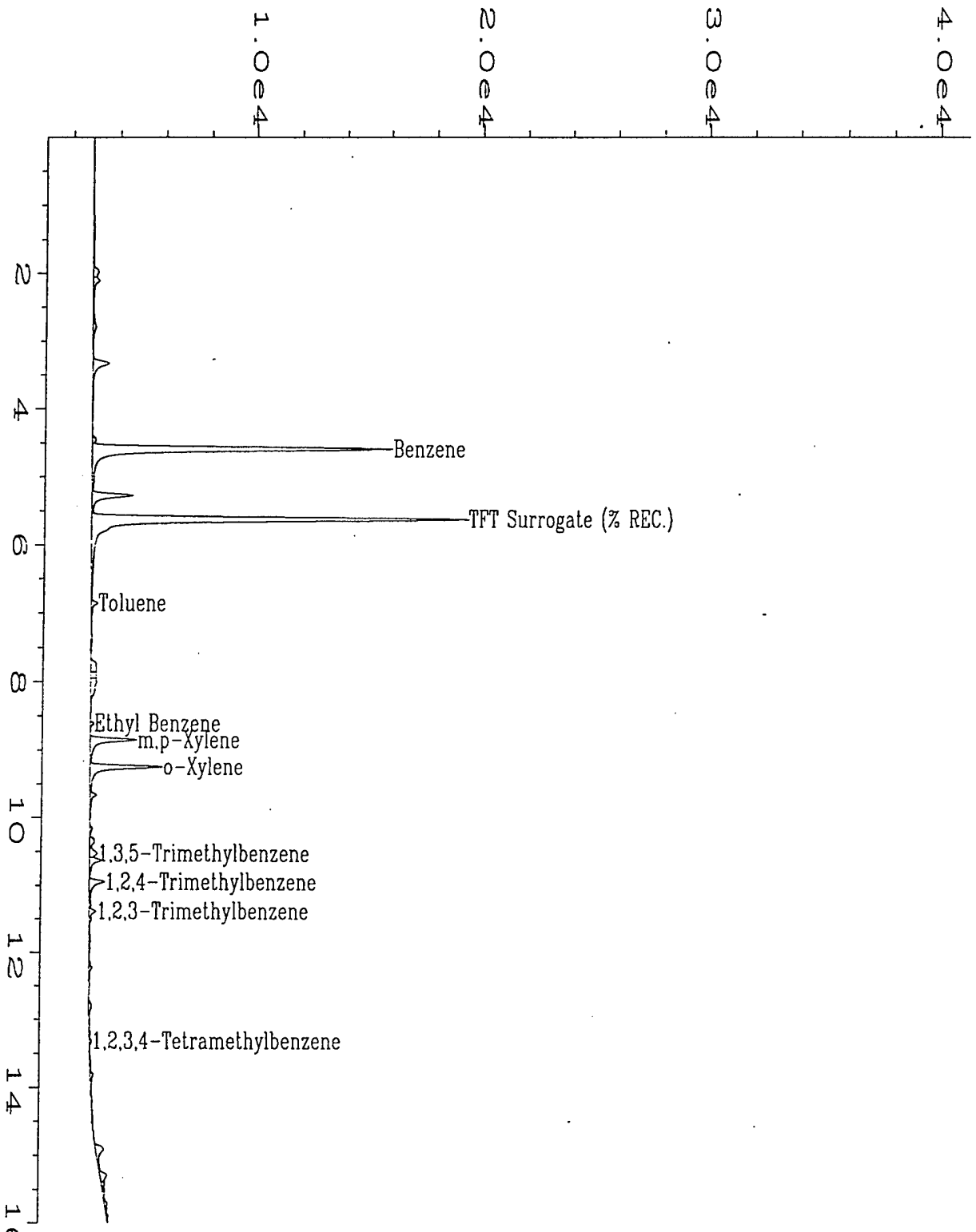
** = See BX2042123.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20424\012R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05931DUP12.5;.4
Run Time Bar Code:
Acquired on : 25 Apr 95 03:03 AM
Report Created on: 25 Apr 95 11:13 AM
Last Recalib on : 25 APR 95 10:43 AM
Multiplier : 12.5
Sample Info : Project#: 95-1264

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20424.MTH
Analysis Method : BX20424.MTH
Sample Amount : 0
ISTD Amount :
Client#: MW-5(+BTEX MS/MSD) WATER

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931Dup	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042123
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	4.0	0.4
Chlorobenzene	108-90-7	1.2	0.4
Ethyl Benzene	100-41-4	3.6	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	1.9	0.4
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	34	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	16	0.4
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

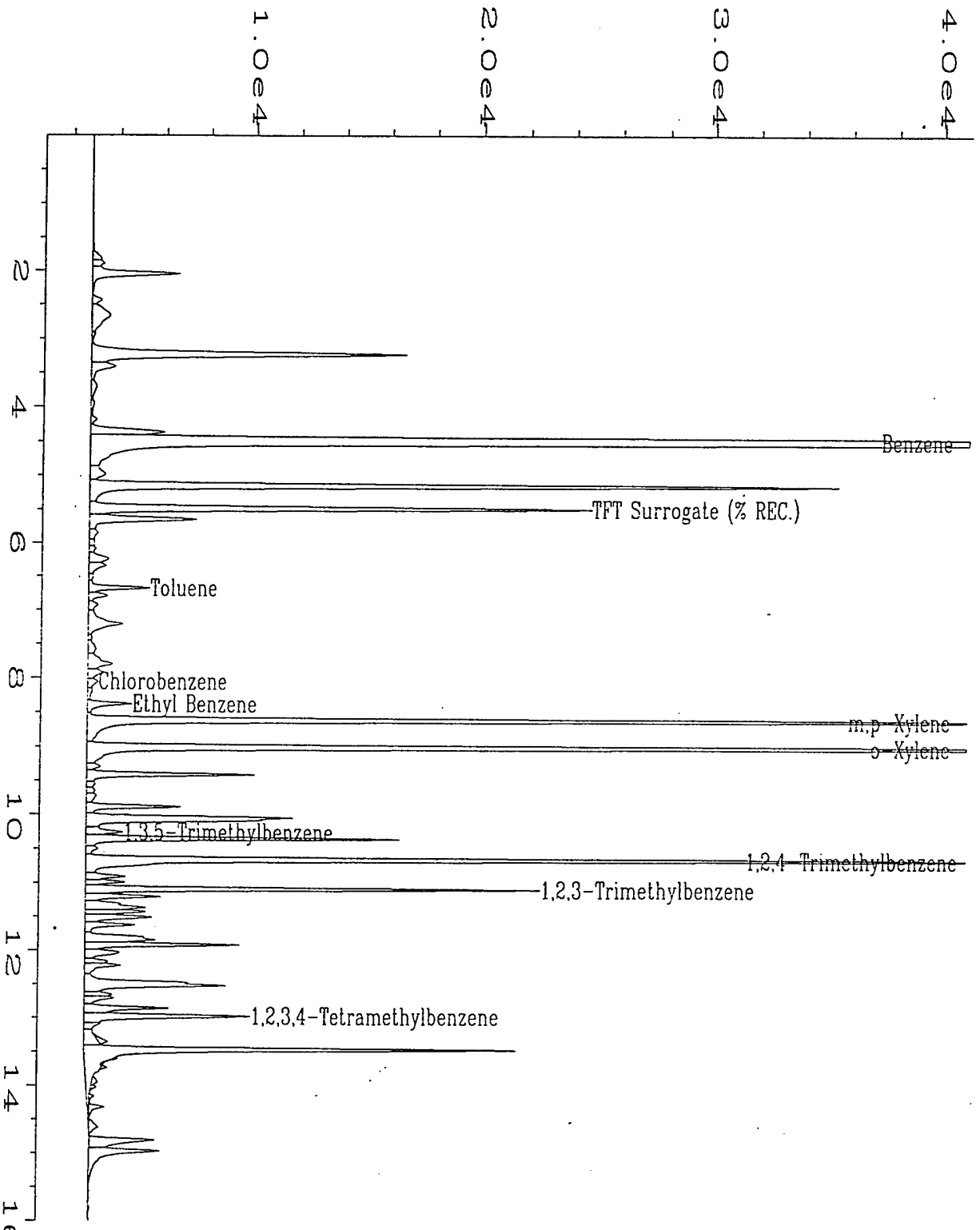
** = See BX2042412 (DF=12.5).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20421\023R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05931DUP;1;5
Run Time Bar Code:
Acquired on : 21 Apr 95 11:05 PM
Report Created on: 21 Apr 95 11:21 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1
Sample Info : 95-1264; MW-12D; 5 ML WATER

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421.MTH
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-8	Client Project No.	: 722450.26020
Lab Sample Number	: X05932	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042130
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	410	40
Toluene	108-88-3	120	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	260	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	540	40
1,3,5-Trimethylbenzene	108-67-8	63	40
1,2,4-Trimethylbenzene	95-63-6	170	40
1,2,3-Trimethylbenzene	526-73-8	70	40
1,2,3,4-Tetramethylbenzene	488-23-3	100	40
Surrogate Recovery (α,α,α-Trifluorotoluene):		88%	70%-130% (QC limits)

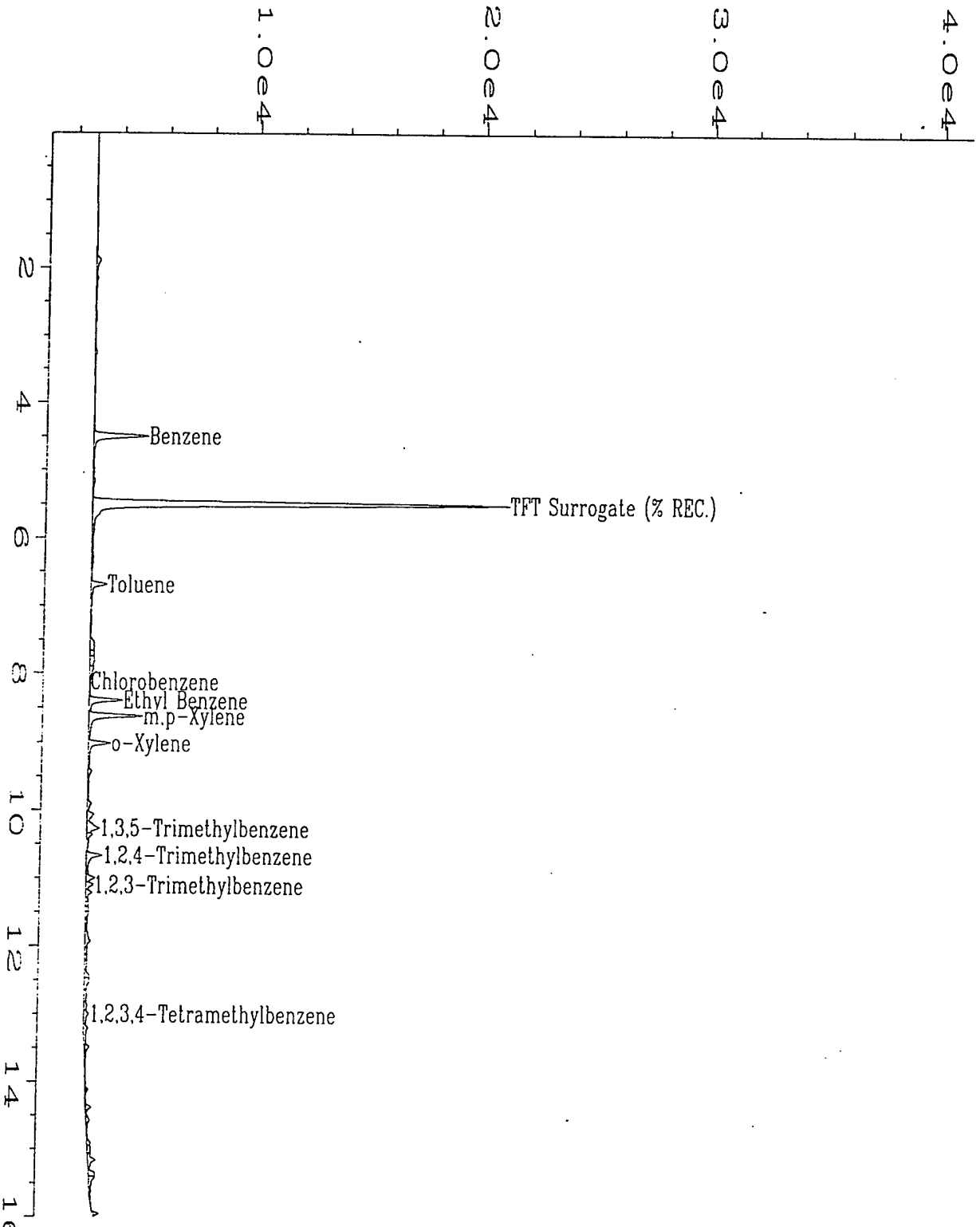
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\030R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 30
Sample Name	: X05932;100;0.05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 03:17 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 03:33 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 100	ISTD Amount	:
Sample Info	: 95-1264; MW-8; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-3	Client Project No.	: 722450.26020
Lab Sample Number	: X05933	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 10.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042417
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	280	B	4.0
Toluene	108-88-3	18		4.0
Chlorobenzene	108-90-7	U		4.0
Ethyl Benzene	100-41-4	140		4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	170	B	4.0
1,3,5-Trimethylbenzene	108-67-8	4.5		4.0
1,2,4-Trimethylbenzene	95-63-6	58		4.0
1,2,3-Trimethylbenzene	526-73-8	13		4.0
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α-Trifluorotoluene):		77%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

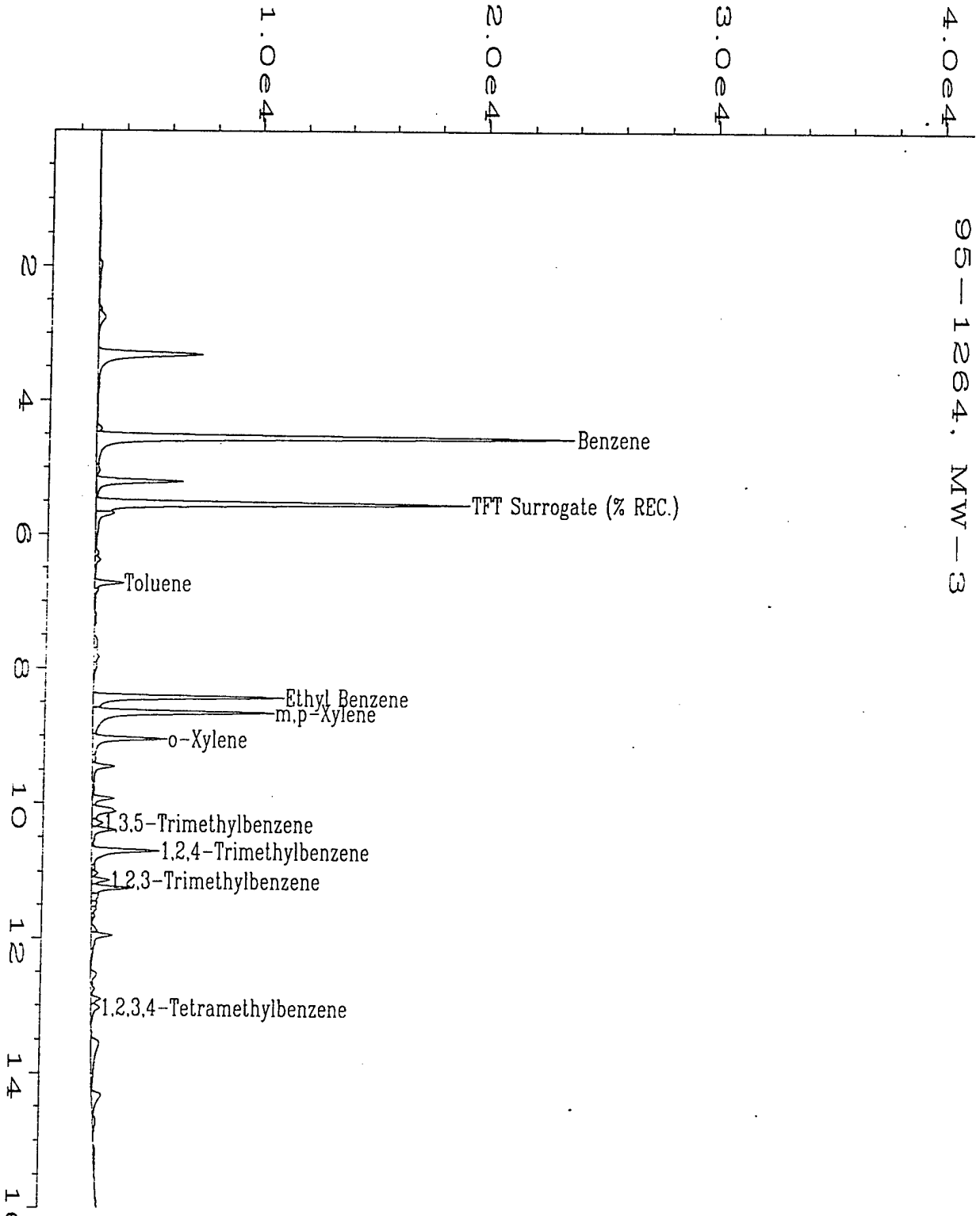
** = See BX2042131 (DF=100).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P McClellan
Approved

BTEX1264.XLS



95-1264, MW-3

Data File Name : C:\HPCHEM\2\DATA\BX20424\017R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05933;10;0.5
Run Time Bar Code:
Acquired on : 25 Apr 95 06:17 AM
Report Created on: 25 Apr 95 12:39 PM
Last Recalib on : 25 APR 95 10:43 AM
Multiplier : 1

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20424.MTH
Analysis Method : BX20424.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-3	Client Project No.	: 722450.26020
Lab Sample Number	: X05933	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042131
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	66	40
Surrogate Recovery (α,α,α-Trifluorotoluene):		88%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

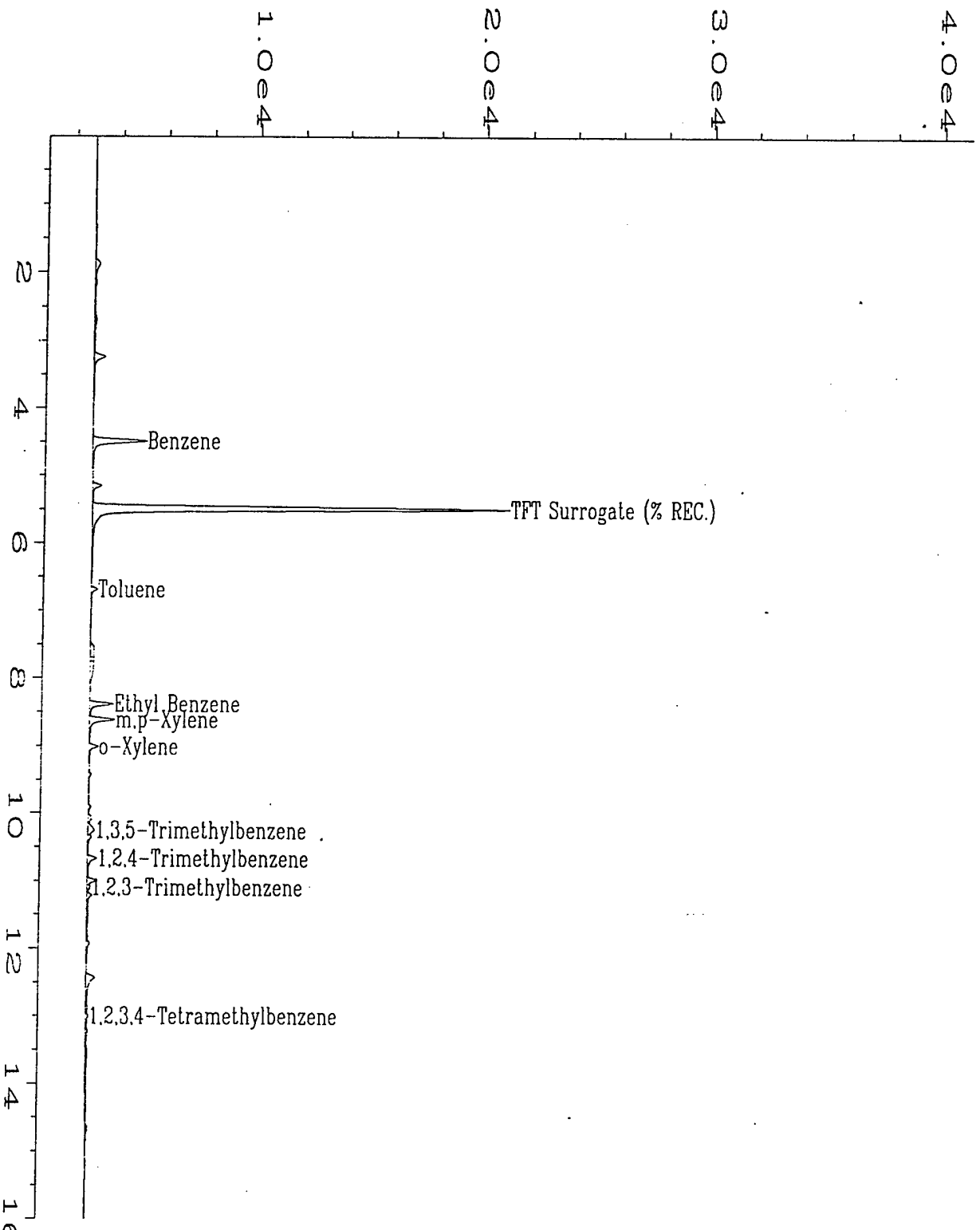
** = See BX2042417 (DF=10).

QUALIFIERS:
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

P McClelland
Approved

BTEX1264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\031R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 31
Sample Name	: X05933;100;0.05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
uired on	: 22 Apr 95 03:53 AM	Instrument Method	: BX20421.MTH
ort Created on	: 22 Apr 95 04:09 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 100	ISTD Amount	:
Sample Info	: 95-1264; MW-3; 0.050 ML WATER		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: WATER
Date Prepared	: 4/21/95	Lab File Number(s)	: BX20421024,025
Date Analyzed	: 4/21/95	Method Blank	: MB2042195
		Dilution Factor	: 1

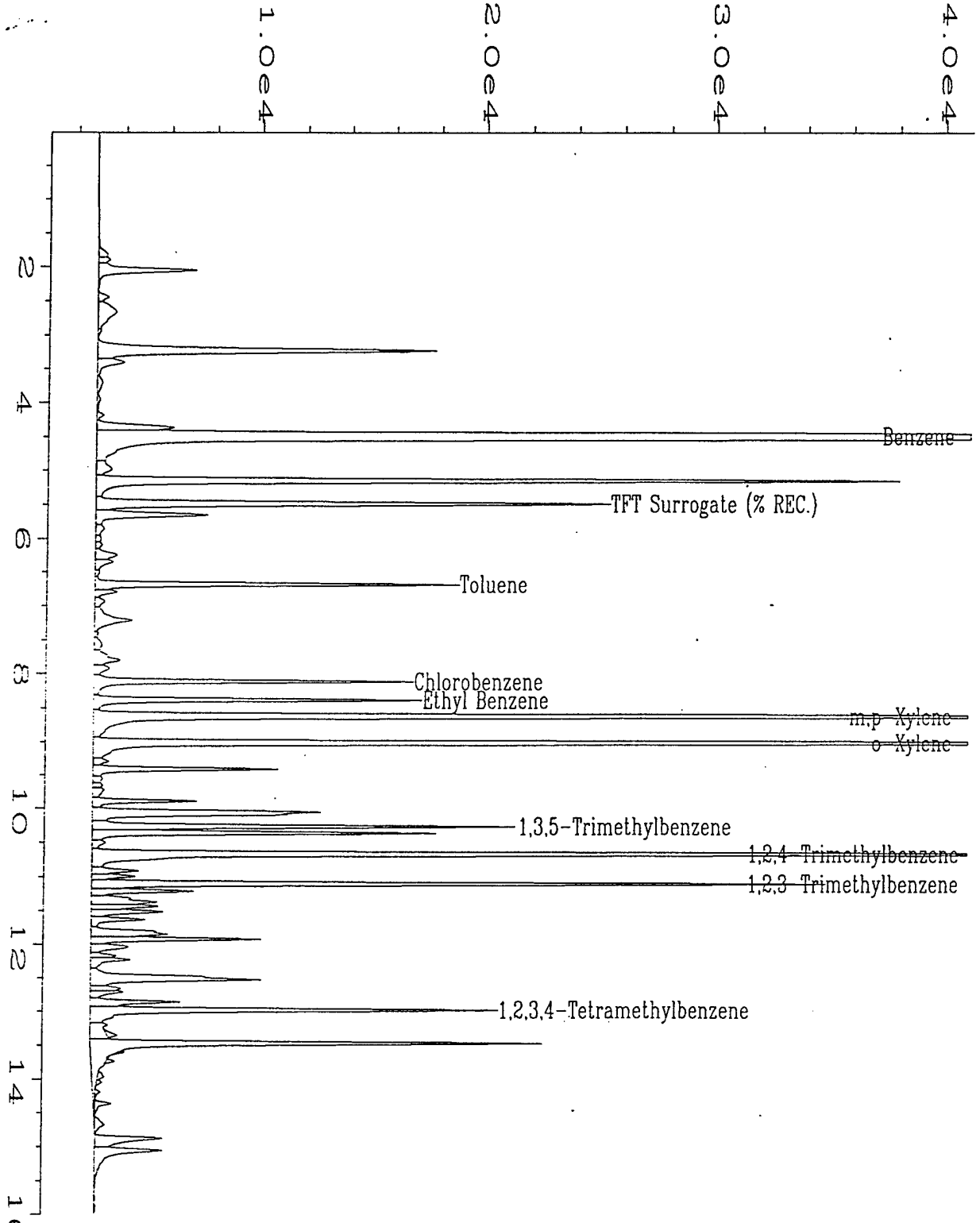
Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	**	**	**	50-150
Toluene	20.0	4.6	22.8	91.0	50-148
Ethyl Benzene	20.0	4.0	23.0	95.0	50-150
m,p-Xylene	40.0	75.0	109.3	85.8	50-150
o-Xylene	20.0	112.1 E **	127.2 E	75.5	50-150
Chlorobenzene	20.0	1.4	21.1	98.5	55-135
1,3,5-TMB	20.0	2.2	21.0	94.0	50-150
1,2,4-TMB	20.0	76.9 E **	93.6 E	83.5	50-150
1,2,3-TMB	20.0	36.8	55.0	91.0	50-1
1,2,3,4-TeMB	20.0	17.5	37.3	99.0	50-1

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Benzene	20.0	**	**	**	25	50-150
Toluene	20.0	22.1	87.5	3.9	25	50-148
Ethyl Benzene	20.0	22.3	91.5	3.8	25	50-150
m,p-Xylene	40.0	105.3	75.8	12.4	25	50-150
o-Xylene	20.0	123.1 E **	55.0	30.6 *	25	50-150
Chlorobenzene	20.0	22.8	107.0	8.3	25	55-135
1,3,5-TMB	20.0	20.6	92.0	2.2	25	50-150
1,2,4-TMB	20.0	91.1 E **	71.0	16.2	25	50-150
1,2,3-TMB	20.0	54.4	88.0	3.4	25	50-150
1,2,3,4-TeMB	20.0	38.4	104.5	5.4	25	50-150

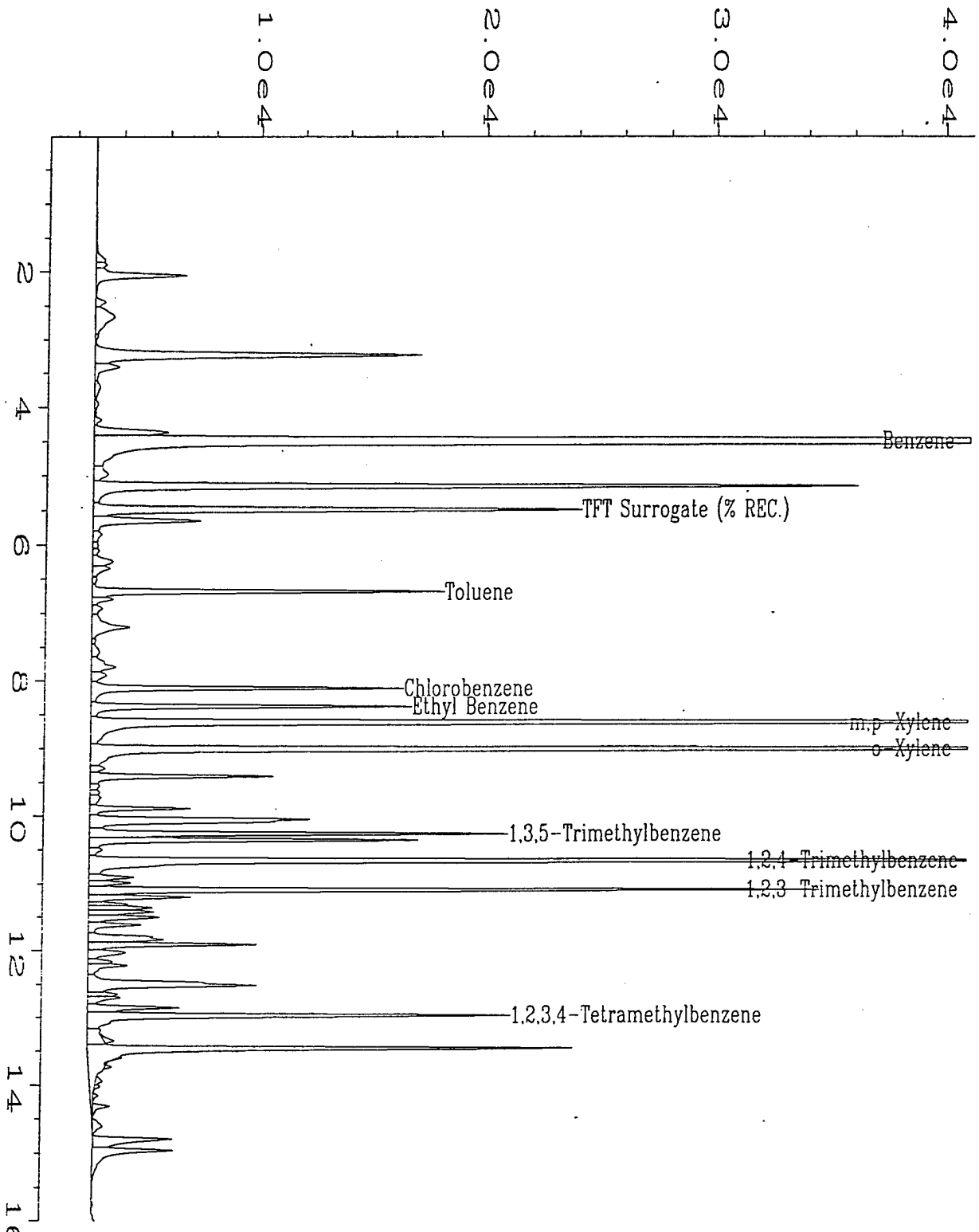
* = Values outside of QC limits.
RPD: 1 out of (9) outside limits.
Spike Recovery: 0 out of (18) outside limits.

Comments: E = The benzene, o-xylene, and 1,2,4-Trimethylbenzene results are off-scale. The o-xylene RPD is out for this set of MS/MSD probably due to the off-scaling. ** See DF-12.5 for these compounds.

Analyst K. Cone Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\024R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 24
Sample Name	: X05931MS;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 11:41 PM	Instrument Method	: BX20421.MTH
Report Created on	: 21 Apr 95 11:57 PM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; MW-12D; 5 ML WATER; 20 PPB SPIKE		



Data File Name	: C:\HPCHEM\2\DATA\BX20421\025R0101.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 25
Sample Name	: X05931MSD;1;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Apr 95 00:17 AM	Instrument Method	: BX20421.MTH
Report Created on	: 22 Apr 95 00:33 AM	Analysis Method	: BX20421.MTH
Last Recalib on	: 21 APR 95 02:28 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: 95-1264; MW-12D; 5 ML WATER; 20 PPB SPIKE		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: WATER
Date Prepared	: 4/24/95	Lab File Number(s)	: BX20424013,014
Date Analyzed	: 4/25/95	Method Blank	: MB2042495
		Dilution Factor	: 12.5

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	250.0	239.2	398.3	63.6	50-150
Toluene	250.0	6.0	193.7	75.1	50-148
Ethyl Benzene	250.0	0.0	194.2	77.7	50-150
m,p-Xylene	500.0	39.5	409.8	74.1	50-150
o-Xylene	250.0	55.4	218.6	65.3	50-150
Chlorobenzene	250.0	0.0	190.8	65.3	55-135
1,3,5-TMB	NA	NA	NA	NA	50-150
1,2,4-TMB	250.0	19.7	191.2	68.6	50-150
1,2,3-TMB	NA	NA	NA	NA	50-150
1,2,3,4-TeMB	NA	NA	NA	NA	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Benzene	250.0	398.1	63.6	0.1	25	50-150
Toluene	250.0	192.6	74.6	0.6	25	50-148
Ethyl Benzene	250.0	191.0	76.4	1.7	25	50-150
m,p-Xylene	500.0	386.6	69.4	6.5	25	50-150
o-Xylene	250.0	244.8	75.8	14.9	25	50-150
Chlorobenzene	250.0	186.1	74.4	2.5	25	55-135
1,3,5-TMB	NA	NA	NA	NA	25	50-150
1,2,4-TMB	250.0	155.2	54.2	23.5	25	50-150
1,2,3-TMB	NA	NA	NA	NA	25	50-150
1,2,3,4-TeMB	NA	NA	NA	NA	25	50-150

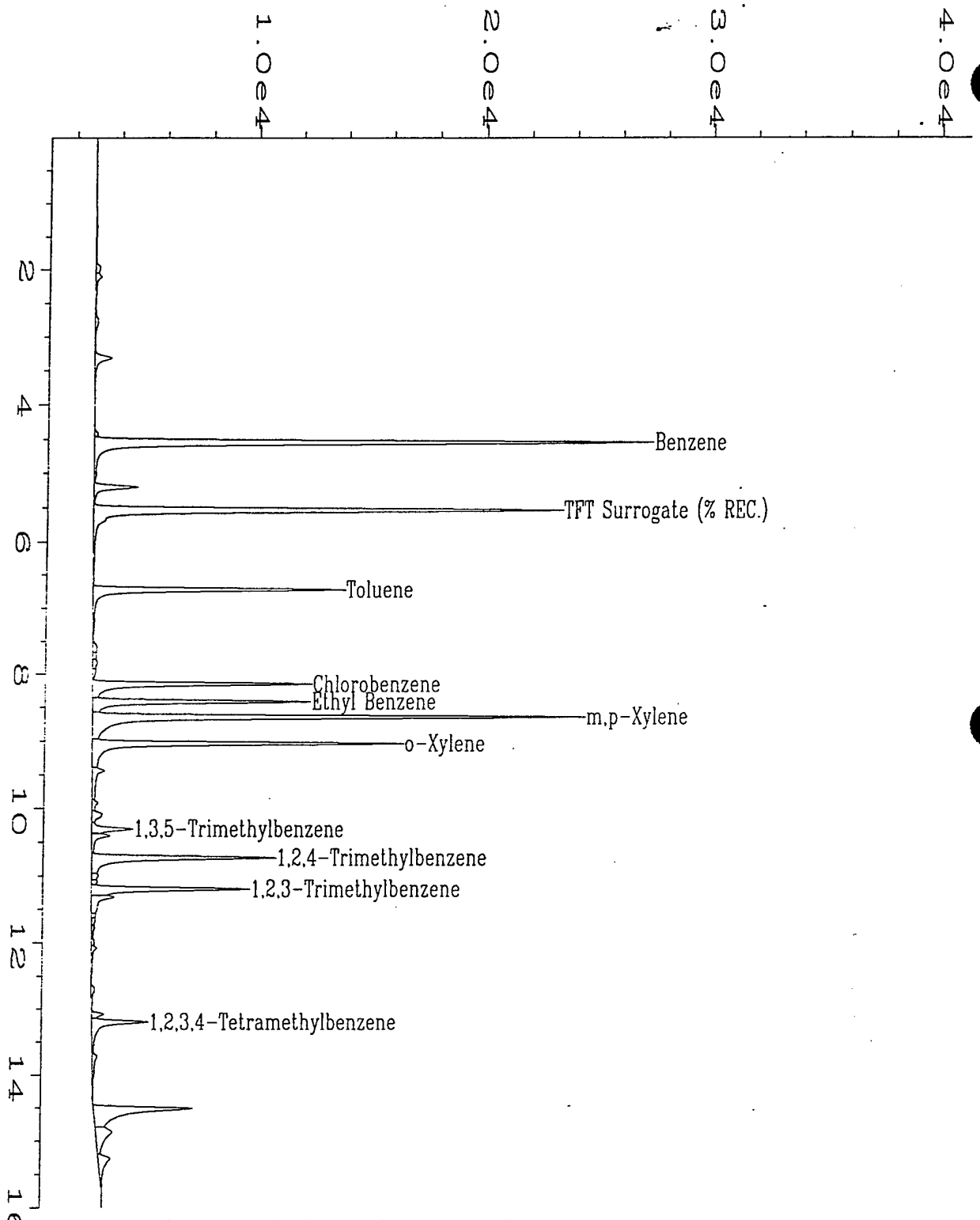
* = Values outside of QC limits.
RPD: 0 out of (7) outside limits.
Spike Recovery: 0 out of (14) outside limits.

Comments:

Analyst K. Cone

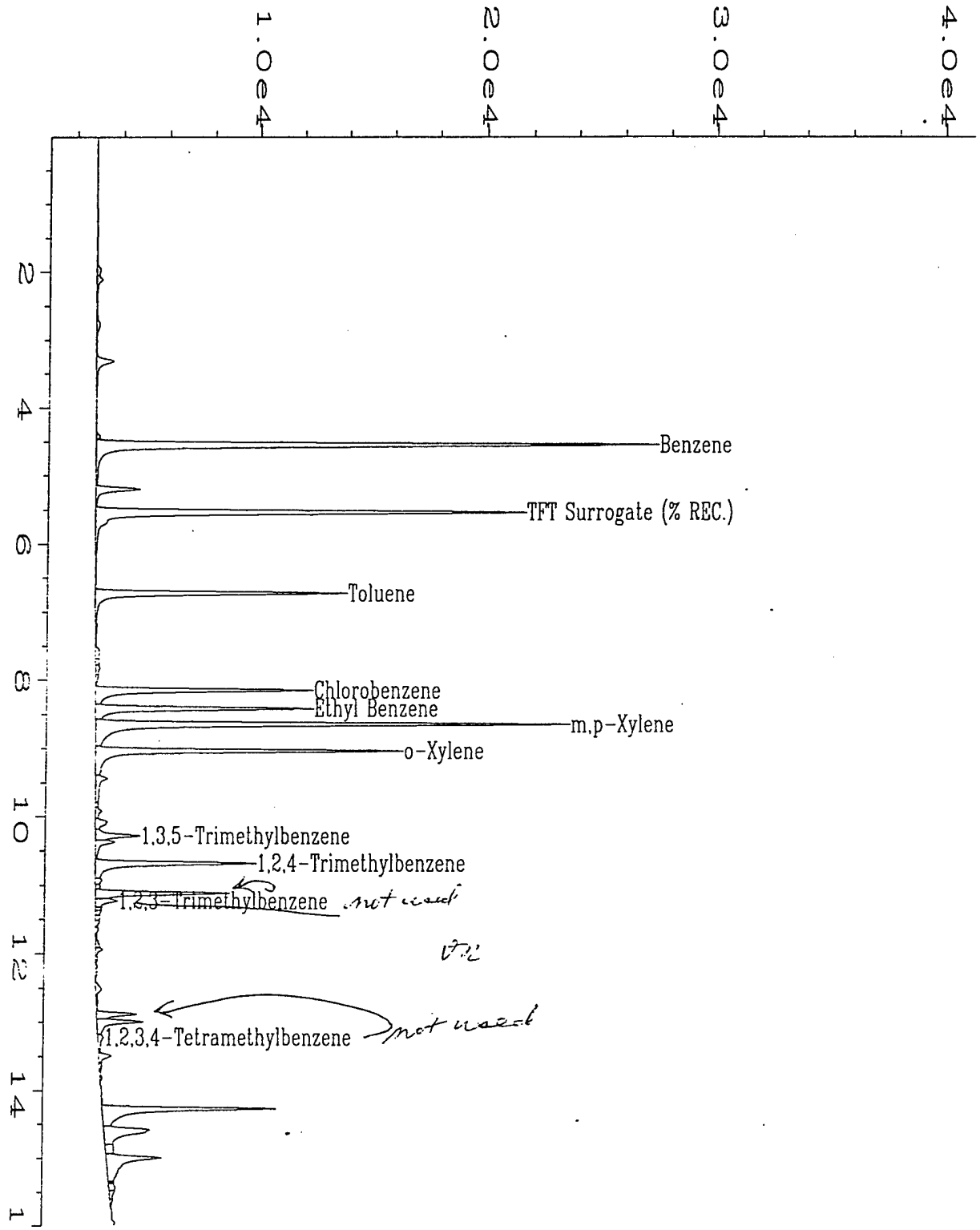
Approved

MS951264.XLS



Data File Name : C:\HPCHEM\2\DATA\BX20424\013R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05931MS;12.5;.4
Run Time Bar Code:
Acquired on : 25 Apr 95 03:42 AM
Report Created on: 25 Apr 95 11:14 AM
Last Recalib on : 25 APR 95 10:43 AM
Multiplier : 12.5
Sample Info : Project#: 95-1264 Client#: MW-5(+BTEX MS/MSD) WATER
20ppb STD REF #1656

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20424
Analysis Method : BX20424
Sample Amount : 0
ISTD Amount :



Data File Name : C:\HPCHEM\2\DATA\BX20424\014R0901.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : X05931MSD12.5;.4
Run Time Bar Code:
Acquired on : 25 Apr 95 04:21 AM
Report Created on: 25 Apr 95 11:14 AM
Last Recalib on : 25 APR 95 10:43 AM
Multiplier : 12.5
Sample Info : Project#: 95-1264
20ppb STD REF #1656

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 9
Instrument Method: BX20424.MTH
Analysis Method : BX20424.MTH
Sample Amount : 0
ISTD Amount :
Client#: MW-5(+BTEX MS/MSD) WATER

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042195	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/21/95	Method	: 602
Date Analyzed	: 4/21/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20421009

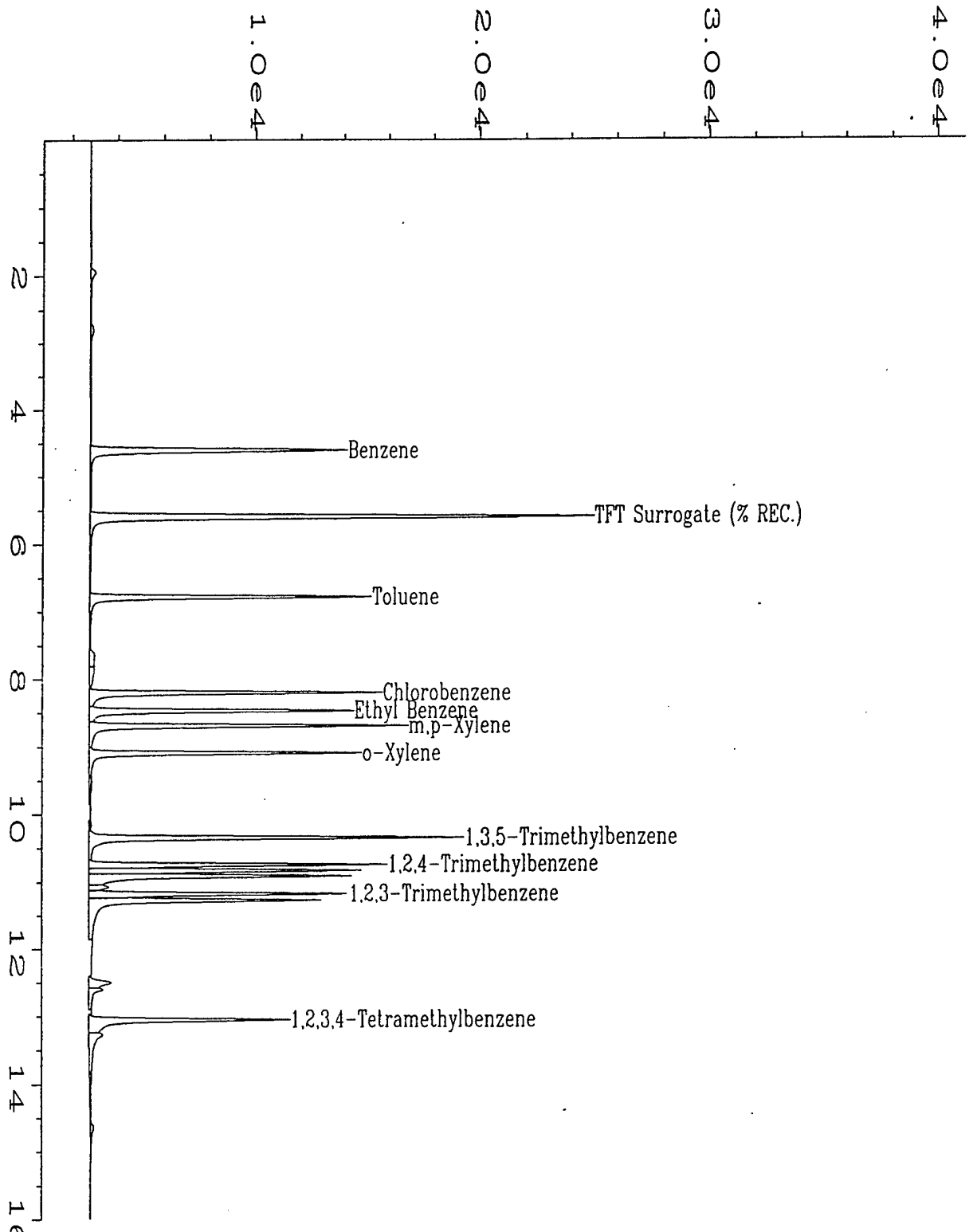
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.9	89.5	71.0-119.0*
Toluene	108-88-3	18.3	91.5	73.0-111.0*
Chlorobenzene	108-90-7	18.8	94.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3 106-42-3	19.6	98.0	75.0-114.0*
o-Xylene	95-47-6	18.8	94.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.7	93.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		100%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

K. Cone
Analyst

P. McClellan
Approved



Data File Name : D:\2\DATA\BX20421\009R0101.D
Operator : T.Lockwood
Instrument : BTEX2
Sample Name : LCS042195
Run Time Bar Code:
Acquired on : 21 Apr 95 02:25 PM
Report Created on: 01 May 95 03:27 PM
Last Recalib on : 21 APR 95 02:28 PM
Multiplier : 1

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20421.MTH
Analysis Method : BX20421.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042495	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/24/95	Method	: 602
Date Analyzed	: 4/25/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20424009

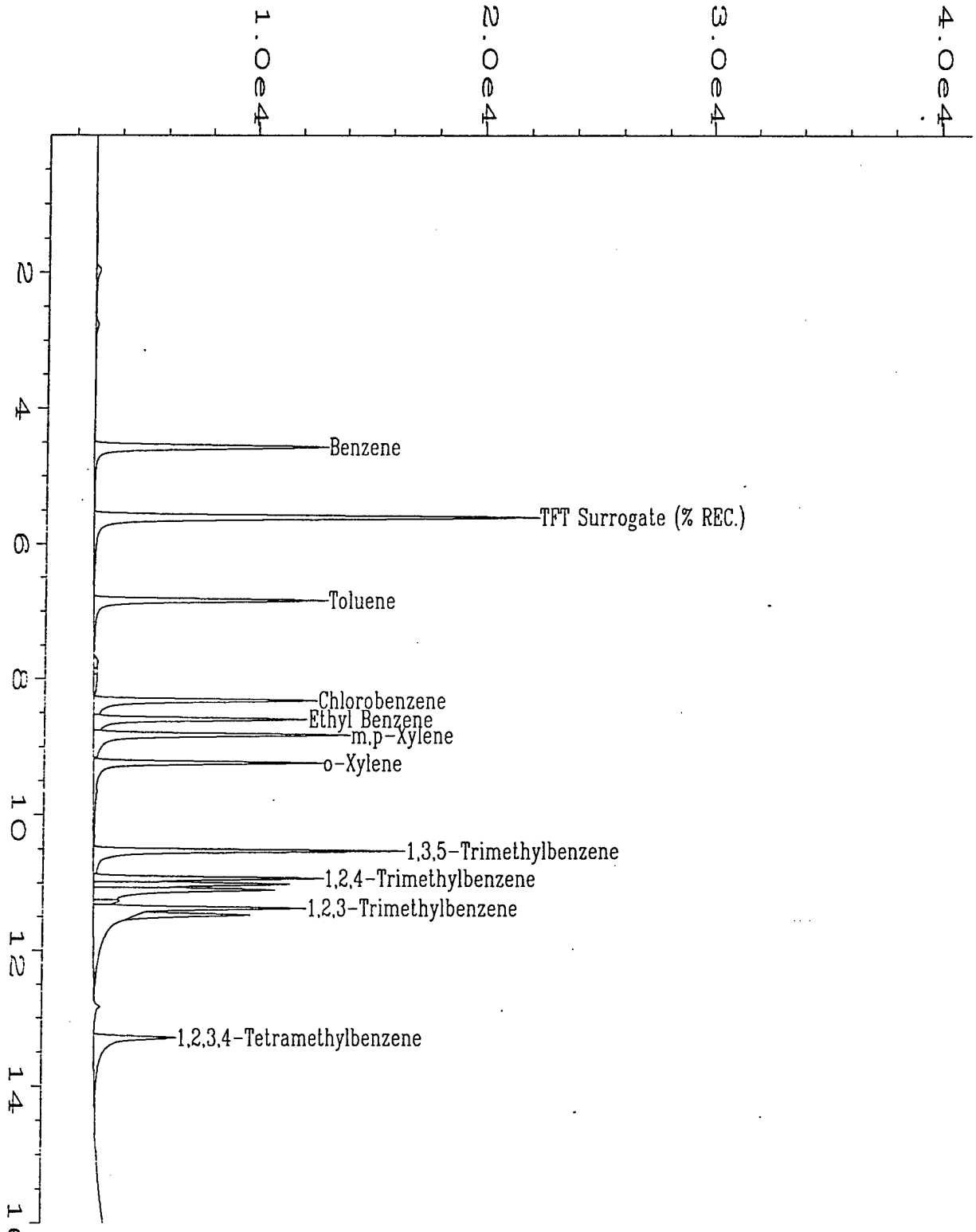
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	14.5	72.5	71.0-119.0*
Toluene	108-88-3	15.4	77.0	73.0-111.0*
Chlorobenzene	108-90-7	15.9	79.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.0	80.0	75.0-114.0*
m,p-Xylene	108-38-3	17.2	86.0	75.0-114.0*
o-Xylene	106-42-3 95-47-6	13.6	68.0	64.0-1[redacted]*
1,3,5-Trimethylbenzene	108-67-8	16.3	81.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	14.7	73.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	26.0	130.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	NA	NA	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		99%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

K. Cone
Analyst

Approved



user modified

Data File Name	: C:\HPCHEM\2\DATA\BX20424\009R0901.D		
Operator	: T.Lockwood	Page Number	: 1
Instrument	: BTEX2	Vial Number	: 9
Sample Name	: LCS042495	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 25 Apr 95 01:07 AM	Instrument Method	: BX20424.MTH
Report Created on	: 25 Apr 95 11:00 AM	Analysis Method	: BX20424.MTH
Last Recalib on	: 25 Apr 95 10:43 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042595	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/25/95	Method	: 602
Date Analyzed	: 4/25/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042510

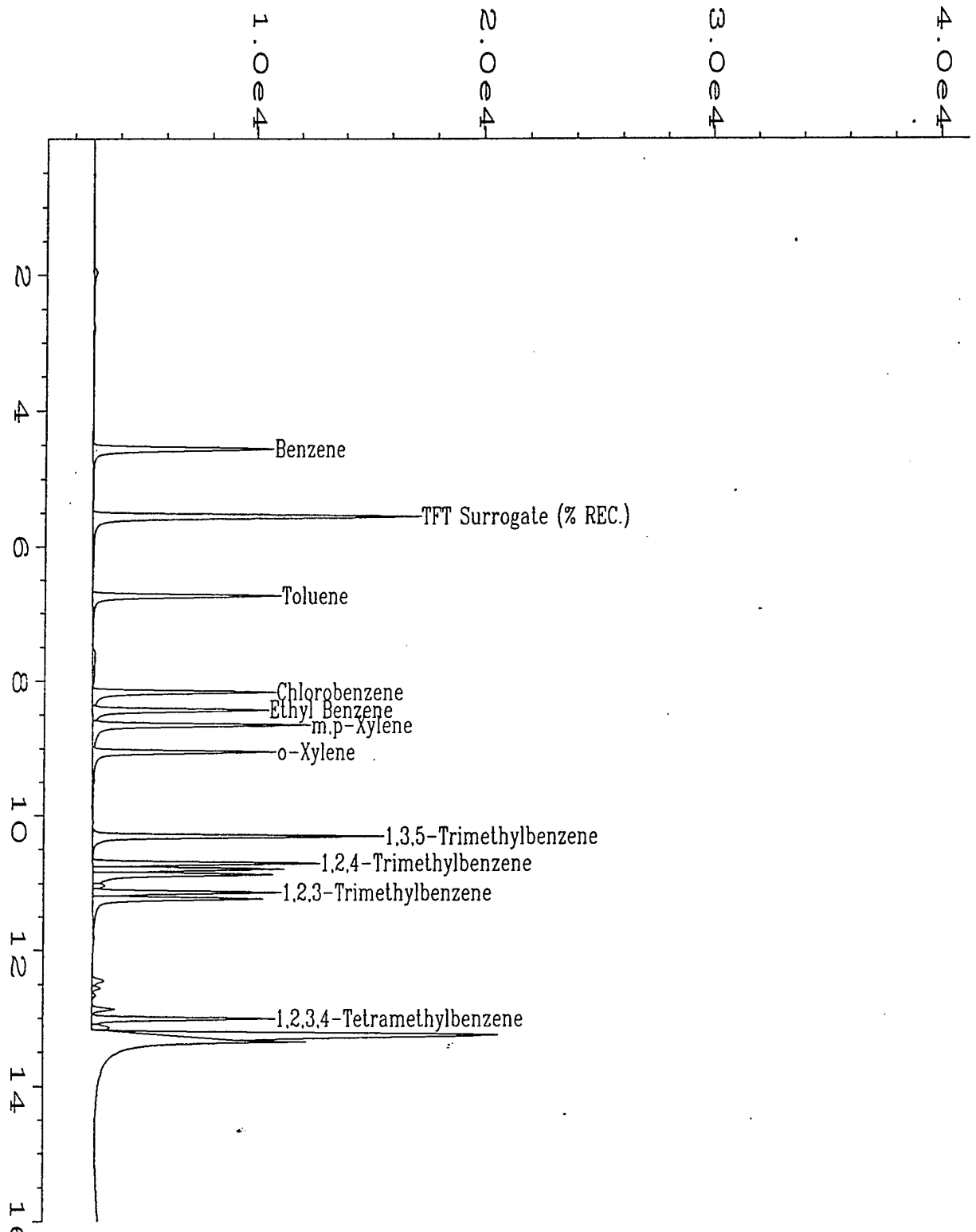
Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.9	84.5	71.0-119.0*
Toluene	108-88-3	17.0	85.0	73.0-111.0*
Chlorobenzene	108-90-7	17.7	88.5	64.0-119.0*
Ethyl Benzene	100-41-4	17.9	89.5	75.0-114.0*
m,p-Xylene	108-38-3	19.5	97.5	75.0-114.0*
o-Xylene	106-42-3 95-47-6	17.3	86.5	64.0-11[redacted]*
1,3,5-Trimethylbenzene	108-67-8	19.8	99.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.0	95.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	18.9	94.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	22.4	112.0	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).
NA = Not available/Not analyzed.

K. Cone
Analyst

P. McClelle
Approved



Data File Name : D:\2\DATA\BX20425\010R0101.D
Operator : S.W. Tyson
Instrument : BTEX2
Sample Name : LCS042595
Run Time Bar Code:
Acquired on : 25 Apr 95 02:23 PM
Report Created on: 01 May 95 02:51 PM
Last Recalib on : 26 APR 95 09:49 AM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 1
Instrument Method: BX20425.MTH
Analysis Method : BX20425.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS2050295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 5/2/95	Method	: 602
Date Analyzed	: 5/2/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2050212

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	14.9	74.5	71.0-119.0*
Toluene	108-88-3	15.6	78.0	73.0-111.0*
Chlorobenzene	108-90-7	16.7	83.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.4	82.0	75.0-114.0*
m,p-Xylene	108-38-3	17.0	85.0	75.0-114.0*
o-Xylene	106-42-3 95-47-6	15.6	78.0	64.0-11[illegible]*
1,3,5-Trimethylbenzene	108-67-8	16.8	84.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.8	89.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	16.7	83.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.9	94.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		90%	70%-130% (QC limits)	

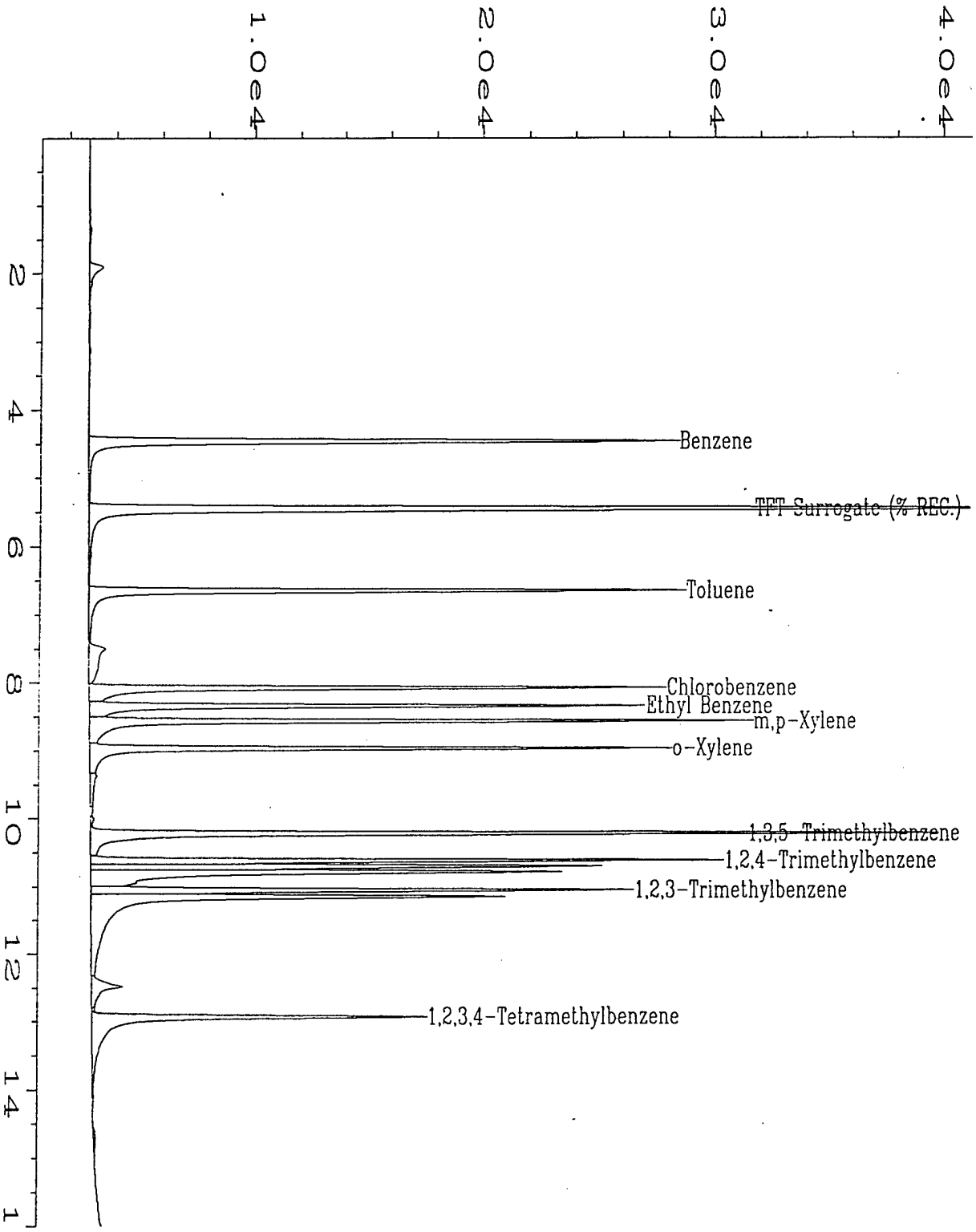
* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
NA = Not available/Not analyzed.

Analyst

Approved

LCSTMB1.XLS; 5/9/95



Data File Name : C:\HPCHEM\2\DATA\BX20502\012R1001.D
Operator : C.J. Cook
Instrument : BTEX2
Sample Name : LCS2050295
Run Time Bar Code:
Acquired on : 02 May 95 05:03 PM
Report Created on: 03 May 95 02:55 PM
Last Recalib on : 03 MAY 95 02:37 PM
Multiplier : 1
Sample Info : REF # 1667

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20502.MTH
Analysis Method : BX20502A.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS2050395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 5/3/95	Method	: 602
Date Analyzed	: 5/3/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2050310

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.2	86.0	71.0-119.0*
Toluene	108-88-3	18.1	90.5	73.0-111.0*
Chlorobenzene	108-90-7	19.5	97.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.2	91.0	75.0-114.0*
m,p-Xylene	108-38-3	18.2	91.0	75.0-114.0*
o-Xylene	106-42-3 95-47-6	16.8	84.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.4	102	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.4	92.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α-Trifluorotoluene):		98%	70%-130% (QC limits)	

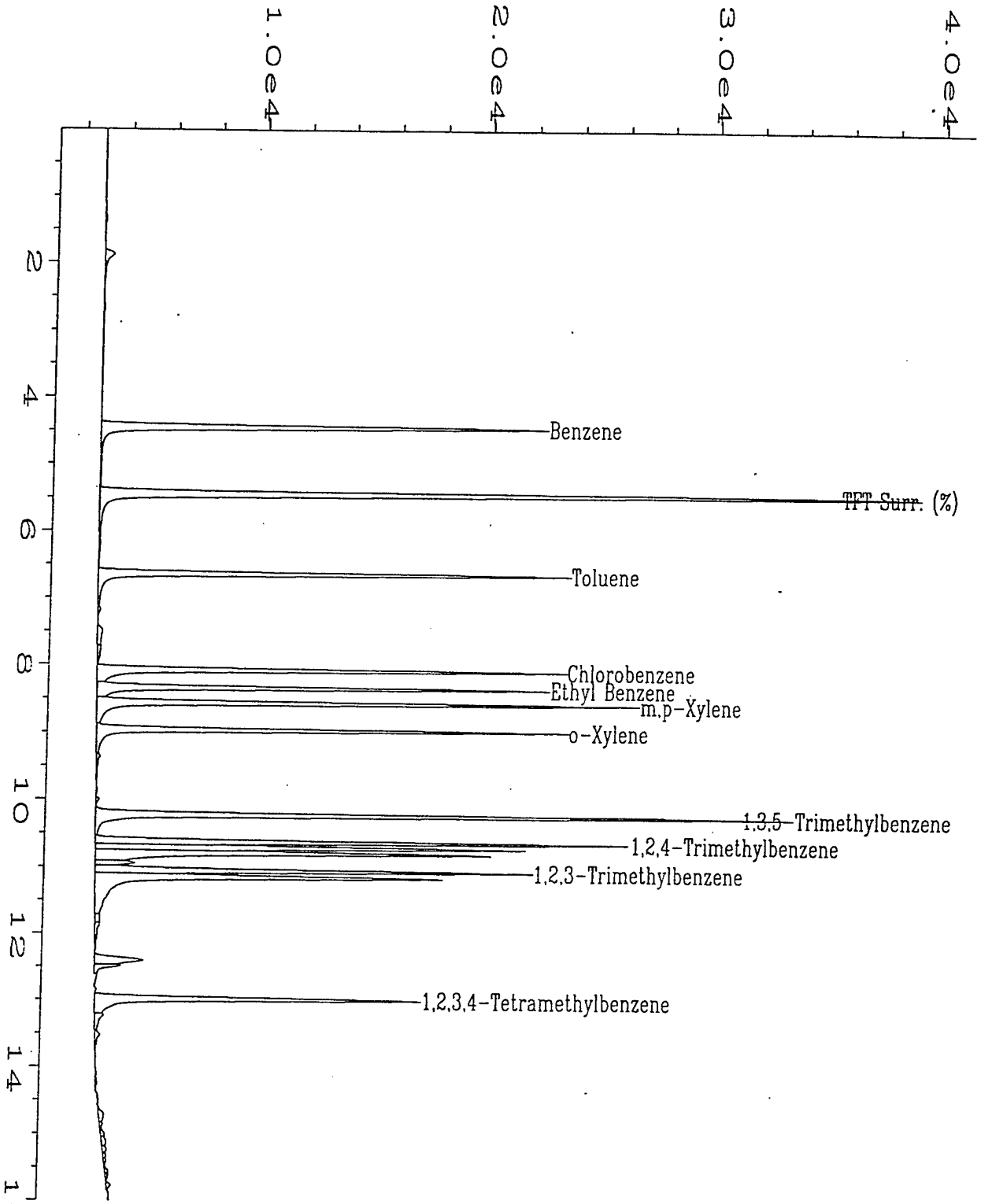
* = Limits established 4/3/95 KSC

QUALIFIERS:
E = Extrapolated value
U = Compound analyzed for, but not detected.
B = Compound found in blank and sample. Compare blank and sample data.
NA = Not available/Not analyzed.

Analyst

Approved

LCS20503.XLS; 5/12/95



Data File Name : C:\HPCHEM\2\DATA\BX20503\010R1001.D
Operator : C.J. Cook
Instrument : BTEX2
Sample Name : LCS2050395
Run Time Bar Code:
Acquired on : 03 May 95 04:25 PM
Data Created on: 04 May 95 08:55 AM
Last Recalib on : 04 MAY 95 08:47 AM
Multiplier : 1
Sample Info : REF # 1667

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 10
Instrument Method: BX20503.MTH
Analysis Method : BX20503A.MTH
Sample Amount : 0
ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 SEYMORE J[redacted]
ab Sample Number	: X05923		
ate Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0488
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	770	E	0.5
Toluene	108-88-3	11		0.5
Ethyl Benzene	100-41-4	96		0.5
Total Xylenes	1330-20-7	42		0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	4		0.5
1,2,4-Trimethylbenzene	526-73-8	13		0.5
1,2,3-Trimethylbenzene	108-67-8	5		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	25		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	8		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	28		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	90%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit
NA = Not applicable or not available.

Analyst

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 / SEYMORE JOHNSC
Lab Sample Number	: X05923		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0488
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	2	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	15		1.0
1,1-Dichloroethane	75-34-3	19		1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	30		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	16		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6	6		0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	84		1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	770	E	0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	11		0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	96		0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7	42		0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	90%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 SEYMORE
Lab Sample Number	: X05923		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0503
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	830		2.5
Toluene	108-88-3	9		2.5
Ethyl Benzene	100-41-4	98		2.5
Total Xylenes	1330-20-7	46		2.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6		U	2.5
1,2,4-Trimethylbenzene	526-73-8	13		2.5
1,2,3-Trimethylbenzene	108-67-8	6		2.5
1,2,3,4-Tetramethylbenzene	488-23-3	25		5.0
Methyl-t-butyl ether (MTBE)	156-60-5		U	5.0
Chlorobenzene	108-90-7		U	5.0
Styrene	100-42-5		U	5.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
ichlorodifluoromethane	75-71-8		U	5.0
sopropyl ether	108-20-3	28		5.0
1,2-Dibromoethane (EDB)	106-93-4		U	5.0
1,3-Dichlorobenzene	541-73-1		U	5.0
1,2-Dichlorobenzene	95-50-1		U	5.0
1,4-Dichlorobenzene	106-46-7		U	5.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	96%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 / SEYMORE JOHNSON
Lab Sample Number	: X05923		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0503
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	830	2.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	96%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-4	Client I.D.	: 722450.26 SEYMORE
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0489
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2		E	0.5
Toluene	108-88-3		E	0.5
Ethyl Benzene	100-41-4	930	E	0.5
Total Xylenes	1330-20-7		E	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	250		0.5
1,2,4-Trimethylbenzene	526-73-8	680	E	0.5
1,2,3-Trimethylbenzene	108-67-8	320		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	40		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	14		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	3		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	91%	(83-112)
Toluene-d8	93%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-4	Client I.D.	: 722450.2602 / SEYMORE JOHNSON
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0489
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	3	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	530	E	1.0
1,1-Dichloroethane	75-34-3	190		1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	26		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	40		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6		E	0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	460	E	1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2		E	0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4	3		1.0
Toluene	108-88-3		E	0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	930	E	0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7		E	0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	91%	(83-112)
Toluene-d8	93%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-4	Client I.D.	: 722450.26 SEYMORE J
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 10.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0504
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	2,200		5.0
Toluene	108-88-3	3,000		5.0
Ethyl Benzene	100-41-4	1,100		5.0
Total Xylenes	1330-20-7	6,600		5.0
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	69		5.0
1,2,4-Trimethylbenzene	526-73-8	770		5.0
1,2,3-Trimethylbenzene	108-67-8	330		5.0
1,2,3,4-Tetramethylbenzene	488-23-3	47		10.0
Methyl-t-butyl ether (MTBE)	156-60-5		U	10.0
Chlorobenzene	108-90-7		U	10.0
Styrene	100-42-5		U	10.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	10.0
Isopropyl ether	108-20-3		U	10.0
1,2-Dibromoethane (EDB)	106-93-4		U	10.0
1,3-Dichlorobenzene	541-73-1		U	10.0
1,2-Dichlorobenzene	95-50-1		U	10.0
1,4-Dichlorobenzene	106-46-7		U	10.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	96%	(83-112)
Toluene-d8	98%	(93-104)
Bromofluorobenzene	94%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-4	Client I.D.	: 722450.2602 / SEYMORE JOHNSON
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 10.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0504
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
1,1-Dichloroethene	75-35-4	760	10.0
1,1,1-Trichloroethane	71-55-6	3,800	5.0
Trichloroethene	79-01-6	520	10.0
Benzene	71-43-2	2,200	5.0
Toluene	108-88-3	3,000	5.0
Ethyl Benzene	100-41-4	1,100	5.0
Total Xylenes	1330-20-7	6,600	5.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	96%	(83-112)
Toluene-d8	98%	(93-104)
Bromofluorobenzene	94%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
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* = Reporting limits are roughly the method detection limits for reagent wate
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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-12D	Client I.D.	: 722450.2 SEYMORE
Lab Sample Number	: X05928		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0490
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	140		0.5
Toluene	108-88-3	44		0.5
Ethyl Benzene	100-41-4	14		0.5
Total Xylenes	1330-20-7	85		0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	5		0.5
1,2,4-Trimethylbenzene	526-73-8	16		0.5
1,2,3-Trimethylbenzene	108-67-8	7		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	2		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	1		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit ug/L
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	2		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	97%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	94%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-12D	Client I.D.	: 722450.2602 / SEYMORE JOHNSC
Lab Sample Number	: X05928		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0490
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	2	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	6		1.0
1,1-Dichloroethane	75-34-3	20		1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	9		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	3		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6	3		0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	28		1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	140		0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	44		0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	14		0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7	85		0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	97%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	94%	(87-105)

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-5	Client I.D.	: 722450.26 SEYMORE
Lab Sample Number	: X05931		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0491
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	380		0.5
Toluene	108-88-3	5		0.5
Ethyl Benzene	100-41-4	4		0.5
Total Xylenes	1330-20-7	200		0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	2		0.5
1,2,4-Trimethylbenzene	526-73-8	64		0.5
1,2,3-Trimethylbenzene	108-67-8	32		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	13		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	4		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5	3		1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	8		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	94%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-5	Client I.D.	: 722450.2602 / SEYMORE JOHNSO
Lab Sample Number	: X05931		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0491
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	2	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	31		1.0
1,1-Dichloroethane	75-34-3	16		1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	64		1.0
Chloroform	67-66-3	10	B	1.0
1,2-Dichloroethane	107-06-2	4		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6	85		0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	110		1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	380		0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	5		0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	4		0.5
Styrene	100-42-5	3		1.0
Total Xylenes	1330-20-7	200		0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	94%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-8	Client I.D.	: 722450.2[redacted] SEYMORE [redacted]N
Lab Sample Number	: X05932		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0492
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	440		0.5
Toluene	108-88-3	6		0.5
Ethyl Benzene	100-41-4	230		0.5
Total Xylenes	1330-20-7	16		0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	1		0.5
1,2,4-Trimethylbenzene	526-73-8	3		0.5
1,2,3-Trimethylbenzene	108-67-8	2		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	24		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	2		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/[redacted]
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	13		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	98%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-8	Client I.D.	: 722450.2602 / SEYMORE JOHNSON
Lab Sample Number	: X05932		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0492
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	2	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	1		1.0
1,1-Dichloroethane	75-34-3		U	1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	44		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	9		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6		U	0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	32		1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	440		0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	6		0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	230		0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7	16		0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	98%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-3	Client I.D.	: 722450.2 SEYMORE [redacted]N
Lab Sample Number	: X05933		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0493
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Benzene	71-43-2	450		0.5
Toluene	108-88-3	26		0.5
Ethyl Benzene	100-41-4	230		0.5
Total Xylenes	1330-20-7	320		0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	46		0.5
1,2,4-Trimethylbenzene	526-73-8	100		0.5
1,2,3-Trimethylbenzene	108-67-8	29		0.5
1,2,3,4-Tetramethylbenzene	488-23-3	30		1.0
Methyl-t-butyl ether (MTBE)	156-60-5	19		1.0
Chlorobenzene	108-90-7		U	1.0
Styrene	100-42-5		U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		U	1.0
Isopropyl ether	108-20-3	4		1.0
1,2-Dibromoethane (EDB)	106-93-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	1.0
1,2-Dichlorobenzene	95-50-1		U	1.0
1,4-Dichlorobenzene	106-46-7		U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	98%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wat
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-3	Client I.D.	: 722450.2602 / SEYMORE JOHNSO
Lab Sample Number	: X05933		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0493
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	2	B	1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4	1		1.0
1,1-Dichloroethane	75-34-3		U	1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2	300		1.0
Chloroform	67-66-3		U	1.0
1,2-Dichloroethane	107-06-2	4		1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6		U	0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4		U	1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6	160		1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2	450		0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3	26		0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4	230		0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7	320		0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	98%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wat
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
GC Confirmation and Additional Compounds

Method Blank Number	: RB050195	Client I.D.	: 722450.2
Date Extracted/Prepared	: 05/01/95		SEYMORE JOHN
Date Analyzed	: 05/01/95	Lab Project No.	: 95-1264
		Effective Dilution	: 1.00
		Method	: 624
		Lab File No.	: >L0486

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
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* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
Target Compound List

Method Blank Number : RB050195
Date Extracted/Prepared : 05/01/95
Date Analyzed : 05/01/95

Client I.D. : 722450.2602 / SEYMORE JOHNSO
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0486

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
GC Confirmation and Additional Compounds

Method Blank Number : RB050295
Date Extracted/Prepared : 05/02/95
Date Analyzed : 05/02/95

Client I.D. : 722450.2 SEYMORE J[illegible]N
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	103%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
Target Compound List

Method Blank Number : RB050295
Date Extracted/Prepared : 05/02/95
Date Analyzed : 05/02/95

Client I.D. : 722450.2602 / SEYMORE JOHNSO
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Chloromethane	74-87-3		U	1.0
Bromomethane	74-83-9	3		1.0
Vinyl Chloride	75-01-4		U	1.0
Chloroethane	75-00-3		U	1.0
Methylene Chloride	75-09-2		U	1.0
Acetone	67-64-1		U	10.0
Carbon Disulfide	75-15-0		U	1.0
1,1-Dichloroethene	75-35-4		U	1.0
1,1-Dichloroethane	75-34-3		U	1.0
Trans-1,2-Dichloroethene	156-60-5		U	1.0
Cis-1,2-Dichloroethene	156-59-2		U	1.0
Chloroform	67-66-3	2		1.0
1,2-Dichloroethane	107-06-2		U	1.0
2-Butanone	78-93-3		U	10.0
1,1,1-Trichloroethane	71-55-6		U	0.5
Carbon Tetrachloride	56-23-5		U	2.0
Bromodichloromethane	75-27-4	1		1.0
Vinyl Acetate	108-05-4		U	10.0
1,2-Dichloropropane	78-87-5		U	1.0
Trans-1,3-Dichloropropene	10061-02-6		U	2.0
Trichloroethene	79-01-6		U	1.0
1,1,2-Trichloroethane	79-00-5		U	1.0
Benzene	71-43-2		U	0.5
Dibromochloromethane	124-48-1		U	1.0
Cis-1,3-Dichloropropene	10061-01-5		U	1.0
2-Chloroethylvinyl Ether	110-75-8		U	5.0
Bromoform	75-25-2		U	1.0
4-Methyl-2-Pentanone	108-10-1		U	5.0
2-Hexanone	591-78-6		U	5.0
1,1,2,2-Tetrachloroethane	79-34-5		U	1.0
Tetrachloroethene	127-18-4		U	1.0
Toluene	108-88-3		U	0.5
Chlorobenzene	108-90-7		U	1.0
Ethyl Benzene	100-41-4		U	0.5
Styrene	100-42-5		U	1.0
Total Xylenes	1330-20-7		U	0.5
Trichlorofluoromethane	75-69-4		U	0.5

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	103%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-3 REF	Client I.D.	: 722450.26[redacted] SEYMORE [redacted]N
Lab Sample Number	: X05933MS		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		REC %
Benzene	71-43-2	480		152%
Toluene	108-88-3	45		95%
Ethyl Benzene	100-41-4	250		78%
Total Xylenes	1330-20-7	340		108%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	47	NS	---
1,2,4-Trimethylbenzene	526-73-8	110	NS	---
1,2,3-Trimethylbenzene	108-67-8	30	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	31	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	34		74%
Chlorobenzene	108-90-7	21		103%
Styrene	100-42-5	23		116%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		REC [redacted]
Dichlorodifluoromethane	75-71-8		NS	---
Isopropyl ether	108-20-3	4	NS	---
1,2-Dibromoethane (EDB)	106-93-4		NS	---
1,3-Dichlorobenzene	541-73-1	20		100%
1,2-Dichlorobenzene	95-50-1	21		103%
1,4-Dichlorobenzene	106-46-7	19		95%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	101%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
NS = **Not spiked.**
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-3 REF	Client I.D.	: 722450.2602 / SEYMORE JOHNSO
Lab Sample Number	: X05933MS		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	12		62%
Bromomethane	74-83-9	18	B	80%
Vinyl Chloride	75-01-4	12		60%
Chloroethane	75-00-3	17		85%
Methylene Chloride	75-09-2	22		110%
Acetone	67-64-1	24		120%
Carbon Disulfide	75-15-0	19		94%
1,1-Dichloroethene	75-35-4	23		110%
1,1-Dichloroethane	75-34-3	21		103%
Trans-1,2-Dichloroethene	156-60-5	20		98%
Cis-1,2-Dichloroethene	156-59-2	320		109%
Chloroform	67-66-3	25	B	123%
1,2-Dichloroethane	107-06-2	21		84%
2-Butanone	78-93-3	21		103%
1,1,1-Trichloroethane	71-55-6	18		88%
Carbon Tetrachloride	56-23-5	19		93%
Bromodichloromethane	75-27-4	19		95%
Vinyl Acetate	108-05-4	17		85%
1,2-Dichloropropane	78-87-5	22		108%
Trans-1,3-Dichloropropene	10061-02-6	10		48%
Trichloroethene	79-01-6	180		88%
1,1,2-Trichloroethane	79-00-5	21		105%
Benzene	71-43-2	480		152%
Dibromochloromethane	124-48-1	19		97%
Cis-1,3-Dichloropropene	10061-01-5	18		92%
2-Chloroethylvinyl Ether	110-75-8	1		7%
Bromoform	75-25-2	17		84%
4-Methyl-2-Pentanone	108-10-1	17		84%
2-Hexanone	591-78-6	23		113%
1,1,2,2-Tetrachloroethane	79-34-5	18		90%
Tetrachloroethene	127-18-4	20		99%
Toluene	108-88-3	45		95%
Chlorobenzene	108-90-7	21		103%
Ethyl Benzene	100-41-4	250		78%
Styrene	100-42-5	23		116%
Total Xylenes	1330-20-7	340		108%
Trichlorofluoromethane	75-69-4	18		91%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	101%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18 REF	Client I.D.	: 722450.26 SEYMORE
Lab Sample Number	: X05923MS		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0505
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L		REC %
Benzene	71-43-2	890		56%
Toluene	108-88-3	110		101%
Ethyl Benzene	100-41-4	190		92%
Total Xylenes	1330-20-7	120		74%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6		NS	---
1,2,4-Trimethylbenzene	526-73-8	13	NS	---
1,2,3-Trimethylbenzene	108-67-8	5	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	23	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	48		48%
Chlorobenzene	108-90-7	100		100%
Styrene	100-42-5	4		4%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8		NS	---
Isopropyl ether	108-20-3	28	NS	---
1,2-Dibromoethane (EDB)	106-93-4		NS	---
1,3-Dichlorobenzene	541-73-1	100		100%
1,2-Dichlorobenzene	95-50-1	100		100%
1,4-Dichlorobenzene	106-46-7	94		94%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wat
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: CPT-18 REF	Client I.D.	: 722450.2602 / SEYMORE JOHNSO
Lab Sample Number	: X05923MS		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0505
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	54		54%
Bromomethane	74-83-9	89	B	89%
Vinyl Chloride	75-01-4	61		61%
Chloroethane	75-00-3	89		89%
Methylene Chloride	75-09-2	110		110%
Acetone	67-64-1	142		142%
Carbon Disulfide	75-15-0	100		100%
1,1-Dichloroethene	75-35-4	130		130%
1,1-Dichloroethane	75-34-3	120		120%
Trans-1,2-Dichloroethene	156-60-5	99		99%
Cis-1,2-Dichloroethene	156-59-2	140		140%
Chloroform	67-66-3	130	B	130%
1,2-Dichloroethane	107-06-2	110		110%
2-Butanone	78-93-3	95		95%
1,1,1-Trichloroethane	71-55-6	97		97%
Carbon Tetrachloride	56-23-5	100		100%
Bromodichloromethane	75-27-4	96	B	96%
Vinyl Acetate	108-05-4	63		63%
1,2-Dichloropropane	78-87-5	100		100%
Trans-1,3-Dichloropropene	10061-02-6	54		54%
Trichloroethene	79-01-6	190		190%
1,1,2-Trichloroethane	79-00-5	100		100%
Benzene	71-43-2	890		56%
Dibromochloromethane	124-48-1	92		92%
Cis-1,3-Dichloropropene	10061-01-5	98		98%
2-Chloroethylvinyl Ether	110-75-8	21		21%
Bromoform	75-25-2	82		82%
4-Methyl-2-Pentanone	108-10-1	90		90%
2-Hexanone	591-78-6	82		82%
1,1,2,2-Tetrachloroethane	79-34-5	84		84%
Tetrachloroethene	127-18-4	110		110%
Toluene	108-88-3	110		110%
Chlorobenzene	108-90-7	100		100%
Ethyl Benzene	100-41-4	190		190%
Styrene	100-42-5	4		4%
Total Xylenes	1330-20-7	120		120%
Trichlorofluoromethane	75-69-4	94		94%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	97%	(93-104)
Bromofluorobenzene	96%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wate
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: 624 REF	Client I.D.	: 722450.2[redacted] SEYMORE [redacted]N
Lab Sample Number	: 624 REF		
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	22	109%
Toluene	108-88-3	21	105%
Ethyl Benzene	100-41-4	22	109%
Total Xylenes	1330-20-7	24	118%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	NS	---
1,2,3-Trimethylbenzene	108-67-8	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	8	40%
Chlorobenzene	108-90-7	23	114%
Styrene	100-42-5	22	110%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L[redacted]
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	22	108%
1,2-Dichlorobenzene	95-50-1	22	108%
1,4-Dichlorobenzene	106-46-7	20	102%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	107%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
NS = **Not spiked.**
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: 624 REF	Client I.D.	: 722450.2602 / SEYMORE JOHNSO
Lab Sample Number	: 624 REF		
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L		REC %
Chloromethane	74-87-3	11		56%
Bromomethane	74-83-9	19	B	97%
Vinyl Chloride	75-01-4	13		64%
Chloroethane	75-00-3	19		95%
Methylene Chloride	75-09-2	23		115%
Acetone	67-64-1	29		145%
Carbon Disulfide	75-15-0	21		107%
1,1-Dichloroethene	75-35-4	25		127%
1,1-Dichloroethane	75-34-3	22		111%
Trans-1,2-Dichloroethene	156-60-5	21		106%
Cis-1,2-Dichloroethene	156-59-2	23		116%
Chloroform	67-66-3	26	B	128%
1,2-Dichloroethane	107-06-2	23		115%
2-Butanone	78-93-3	22		108%
1,1,1-Trichloroethane	71-55-6	20		99%
Carbon Tetrachloride	56-23-5	22		112%
Bromodichloromethane	75-27-4	21	B	104%
Vinyl Acetate	108-05-4	6		32%
1,2-Dichloropropane	78-87-5	22		112%
Trans-1,3-Dichloropropene	10061-02-6	12		62%
Trichloroethene	79-01-6	25		124%
1,1,2-Trichloroethane	79-00-5	22		112%
Benzene	71-43-2	22		109%
Dibromochloromethane	124-48-1	21		103%
Cis-1,3-Dichloropropene	10061-01-5	22		112%
2-Chloroethylvinyl Ether	110-75-8	4		19%
Bromoform	75-25-2	18		89%
4-Methyl-2-Pentanone	108-10-1	22		110%
2-Hexanone	591-78-6	21		106%
1,1,2,2-Tetrachloroethane	79-34-5	19		94%
Tetrachloroethene	127-18-4	23		117%
Toluene	108-88-3	21		105%
Chlorobenzene	108-90-7	23		114%
Ethyl Benzene	100-41-4	22		109%
Styrene	100-42-5	22		110%
Total Xylenes	1330-20-7	24		118%
Trichlorofluoromethane	75-69-4	20		100%

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	107%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: TMB LFB	Client I.D.	: 722450.2 SEYMORE
Lab Sample Number	: TMB LFB		
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0507
		Method Blank No.	: TMB LFB

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	NS	---
Toluene	108-88-3	NS	---
Ethyl Benzene	100-41-4	NS	---
Total Xylenes	1330-20-7	NS	---
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	18	90%
1,2,4-Trimethylbenzene	526-73-8	17	85%
1,2,3-Trimethylbenzene	108-67-8	19	94%
1,2,3,4-Tetramethylbenzene	488-23-3	21	107%
Methyl-t-butyl ether (MTBE)	156-60-5	NS	---
Chlorobenzene	108-90-7	NS	---
Styrene	100-42-5	NS	---

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	NS	---
1,2-Dichlorobenzene	95-50-1	NS	---
1,4-Dichlorobenzene	106-46-7	NS	---

Surrogate Recoveries:		QC Limits
1,2 Dichloroethane-d4	106%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	99%	(87-105)

QUALIFIERS:
NS = **Not spiked.**
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit
NA = Not applicable or not available.

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Semivolatile Analysis Data Report
Page 1

Client Sample Number	: MW-4	Client I.D.	: 722450.2602 / SEYMORE JOHNS
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28585
		Method Blank No.	: WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
bis(2-Chloroethyl)Ether	111-44-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	0.5
1,4-Dichlorobenzene	106-46-7		U	0.5
1,2-Dichlorobenzene	95-50-1		U	0.5
bis(2-chloroisopropyl)Ether	108-60-1		U	1.0
N-Nitroso-Di-n-Propylamine	621-64-7		U	1.0
Hexachloroethane	67-72-1		U	0.5
Nitrobenzene	98-95-3		U	1.0
Isophorone	78-59-1		U	1.0
bis(2-Chloroethoxy)Methane	111-91-1		U	1.0
1,2,4-Trichlorobenzene	120-82-1		U	0.5
Naphthalene	91-20-3	180		0.5
4-Chloroaniline	106-47-8		U	2.0
Hexachlorobutadiene	87-68-3		U	0.5
2-Methylnaphthalene	91-57-6	57	B	0.5
Hexachlorocyclopentadiene	77-47-4		U	2.0
2-Chloronaphthalene	91-58-7		U	0.5
2-Nitroaniline	88-74-4		U	2.0
Dimethylphthalate	131-11-3		U	0.5
2,6-Dinitrotoluene	606-20-2		U	2.0
Acenaphthylene	208-96-8	2		0.5
3-Nitroaniline	99-09-2		U	2.0
Acenaphthene	83-32-9	5		0.5
Dibenzofuran	132-64-9		U	0.5
2,4-Dinitrotoluene	121-14-2		U	2.0
Diethylphthalate	84-66-2		U	0.5
4-Chlorophenyl-phenylether	7005-72-3		U	0.5
Fluorene	86-73-7	5		0.5
4-Nitroaniline	100-01-6		U	2.0
N-Nitrosodiphenylamine	86-30-6		U	0.5
4-Bromophenyl-phenylether	101-55-3		U	0.5
Hexachlorobenzene	118-74-1		U	0.5
Phenanthrene	85-01-8	11		0.5
Anthracene	120-12-7	3		0.5
Di-n-Butylphthalate	84-74-2		U	0.5
Fluoranthene	206-44-0	2		0.5
Pyrene	129-00-0	1		0.5
Butylbenzylphthalate	85-68-7		U	0.5
3,3'-Dichlorobenzidine	91-94-1		U	2.0
Benzo(a)Anthracene	56-55-3		U	0.5
bis(2-Ethylhexyl)Phthalate	117-81-7	1	B	0.5
Chrysene	218-01-9		U	0.5
Di-n-Octyl Phthalate	117-84-0		U	0.5
Benzo(b)Fluoranthene	205-99-2		U	0.5
Benzo(k)Fluoranthene	207-08-9		U	0.5
Benzo(a)Pyrene	50-32-8		U	0.5
Indeno(1,2,3-cd)Pyrene	193-39-5		U	0.5
Dibenz(a,h)Anthracene	53-70-3		U	0.5
Benzo(g,h,i)Perylene	191-24-2		U	0.5

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Semivolatile Analysis Data Report
Page 2

Client Sample Number	: MW-4	Client I.D.	: 722450.[redacted]2 SEYMORE[redacted]O.
Lab Sample Number	: X05926		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28585
		Method Blank No.	: WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Phenol	108-95-2		U	2.0
2-Chlorophenol	95-57-8		U	2.0
Benzylalcohol	100-51-6		U	5.0
2-Methylphenol	95-48-7	11		1.0
4-Methylphenol	106-44-5	11		1.0
2-Nitrophenol	88-75-5		U	2.0
2,4-Dimethylphenol	105-67-9	10		2.0
Benzoic Acid	65-85-0		U	5.0
2,4-Dichlorophenol	120-83-2		U	2.0
4-Chloro-3-Methylphenol	59-50-7		U	2.0
2,4,6-Trichlorophenol	88-06-2		U	2.0
2,4-Dinitrophenol	51-28-5		U	10.0
4-Nitrophenol	100-02-7		U	5.0
4,6-Dinitro-2-Methylphenol	534-52-1		U	10.0
Pentachlorophenol	87-86-5		U	5.0
2,4,5-Trichlorophenol	95-95-4		U	2.0

Expected Surrogate Recoveries:		Actual Recoveries:		QC Limit
Nitrobenzene-d5	100	ug/L	37%	(35-107)
2-Fluorobiphenyl	100	ug/L	70%	(45-105)
Terphenyl-d14	100	ug/L	60%	(33- 104)
Phenol-d6	200	ug/L	57%	(20- 94)
2-Fluorophenol	200	ug/L	64%	(22- 88)
2,4,6 Tribromophenol	200	ug/L	74%	(17- 90)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
Unless otherwise noted concentrations for soils are reported on a dry weight basis. (NA = not applicable or not available)

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

Semivolatile Analysis Data Report
Page 1

Client Sample Number	: MW-4 REF	Client I.D.	: 722450.2602 / SEYMORE JOHNS
Lab Sample Number	: X05926 REF		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28586
		Method Blank No.	: WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L		REC %
bis(2-Chloroethyl)Ether	111-44-4	61		61%
1,3-Dichlorobenzene	541-73-1	80		80%
1,4-Dichlorobenzene	106-46-7	84		84%
1,2-Dichlorobenzene	95-50-1	84		84%
bis(2-chloroisopropyl)Ether	108-60-1	99		99%
N-Nitroso-Di-n-Propylamine	621-64-7	120		120%
Hexachloroethane	67-72-1	70		70%
Nitrobenzene	98-95-3	45		45%
Isophorone	78-59-1	85		85%
bis(2-Chloroethoxy)Methane	111-91-1	100		100%
1,2,4-Trichlorobenzene	120-82-1	90		90%
Naphthalene	91-20-3	260		75%
4-Chloroaniline	106-47-8		NS	---
Hexachlorobutadiene	87-68-3	89		89%
2-Methylnaphthalene	91-57-6		NS	---
Hexachlorocyclopentadiene	77-47-4	58		58%
2-Chloronaphthalene	91-58-7	100		100%
2-Nitroaniline	88-74-4		NS	---
Dimethylphthalate	131-11-3	18		18%
2,6-Dinitrotoluene	606-20-2	72		72%
Acenaphthylene	208-96-8	110		108%
3-Nitroaniline	99-09-2		NS	---
Acenaphthene	83-32-9	120		115%
Dibenzofuran	132-64-9		NS	---
2,4-Dinitrotoluene	121-14-2	73		73%
Diethylphthalate	84-66-2	68		68%
4-Chlorophenyl-phenylether	7005-72-3	110		110%
Fluorene	86-73-7	120		115%
4-Nitroaniline	100-01-6		NS	---
N-Nitrosodiphenylamine	86-30-6	110		110%
4-Bromophenyl-phenylether	101-55-3	100		100%
Hexachlorobenzene	118-74-1	96		96%
Phenanthrene	85-01-8	110		99%
Anthracene	120-12-7	100		97%
Di-n-Butylphthalate	84-74-2	100	B	100%
Fluoranthene	206-44-0	110		108%
Pyrene	129-00-0	100		99%
Butylbenzylphthalate	85-68-7	100		100%
3,3'-Dichlorobenzidine	91-94-1		U	0%
Benzo(a)Anthracene	56-55-3	110		110%
bis(2-Ethylhexyl)Phthalate	117-81-7	120	B	119%
Chrysene	218-01-9	100		100%
Di-n-Octyl Phthalate	117-84-0	150		150%
Benzo(b)Fluoranthene	205-99-2	110		110%
Benzo(k)Fluoranthene	207-08-9	110		110%
Benzo(a)Pyrene	50-32-8	100		100%
Indeno(1,2,3-cd)Pyrene	193-39-5	85		85%
Dibenz(a,h)Anthracene	53-70-3	85		85%
Benzo(g,h,i)Perylene	191-24-2	79		79%

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Semivolatile Analysis Data Report
Page 2

Client Sample Number	: MW-4 REF	Client I.D.	: 722450.26 SEYMORE
Lab Sample Number	: X05926 REF		
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28586
		Method Blank No.	: WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L		REC %
Phenol	108-95-2	68		66%
2-Chlorophenol	95-57-8	82		82%
Benzylalcohol	100-51-6		NS	---
2-Methylphenol	95-48-7	90		80%
4-Methylphenol	106-44-5	220		209%
2-Nitrophenol	88-75-5		NS	---
2,4-Dimethylphenol	105-67-9	120		120%
Benzoic Acid	65-85-0		NS	---
2,4-Dichlorophenol	120-83-2	110		110%
4-Chloro-3-Methylphenol	59-50-7	130		130%
2,4,6-Trichlorophenol	88-06-2	110		110%
2,4-Dinitrophenol	51-28-5		U	0%
4-Nitrophenol	100-02-7	27		27%
4,6-Dinitro-2-Methylphenol	534-52-1		U	0%
Pentachlorophenol	87-86-5	150		150%
2,4,5-Trichlorophenol	95-95-4	140		140%

Expected Surrogate Recoveries:		Actual Recoveries:		QC Limits
Nitrobenzene-d5	100 ug/L	1%	X	(35-107)
2-Fluorobiphenyl	100 ug/L	68%		(45-105)
Terphenyl-d14	100 ug/L	49%		(33- 104)
Phenol-d6	200 ug/L	50%		(20- 94)
2-Fluorophenol	200 ug/L	60%		(22- 88)
2,4,6 Tribromophenol	200 ug/L	71%		(17- 90)

QUALIFIERS:
NS = **Not spiked.**
X = **Surrogates not quantifiable due to matrix interferences.**
U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
Unless otherwise noted concentrations for soils are reported on a dry weight basis. (NA = not applicable or not available)

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4036 Youngfield Wheat Ridge CO 80033
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Semivolatile Analysis Data Report
Page 1

Client Sample Number	: DI REF	Client I.D.	: 722450.2602 / SEYMORE JOHNS
Lab Sample Number	: DI REF		
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28587
		Method Blank No.	: WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L		REC %
bis(2-Chloroethyl)Ether	111-44-4	96		96%
1,3-Dichlorobenzene	541-73-1	80		80%
1,4-Dichlorobenzene	106-46-7	81		81%
1,2-Dichlorobenzene	95-50-1	82		82%
bis(2-chloroisopropyl)Ether	108-60-1	96		96%
N-Nitroso-Di-n-Propylamine	621-64-7	110		110%
Hexachloroethane	67-72-1	77		77%
Nitrobenzene	98-95-3	190		190%
Isophorone	78-59-1	26		26%
bis(2-Chloroethoxy)Methane	111-91-1	110		110%
1,2,4-Trichlorobenzene	120-82-1	88		88%
Naphthalene	91-20-3	90		90%
4-Chloroaniline	106-47-8		NS	---
Hexachlorobutadiene	87-68-3	84		84%
2-Methylnaphthalene	91-57-6		NS	---
Hexachlorocyclopentadiene	77-47-4	42		42%
2-Chloronaphthalene	91-58-7	95		95%
2-Nitroaniline	88-74-4		NS	---
Dimethylphthalate	131-11-3	8		8%
2,6-Dinitrotoluene	606-20-2	100		100%
Acenaphthylene	208-96-8	96		96%
3-Nitroaniline	99-09-2		NS	---
Acenaphthene	83-32-9	96		96%
Dibenzofuran	132-64-9		NS	---
2,4-Dinitrotoluene	121-14-2	96		96%
Diethylphthalate	84-66-2	51		51%
4-Chlorophenyl-phenylether	7005-72-3	97		97%
Fluorene	86-73-7	100		100%
4-Nitroaniline	100-01-6		NS	---
N-Nitrosodiphenylamine	86-30-6	100		100%
4-Bromophenyl-phenylether	101-55-3	99		99%
Hexachlorobenzene	118-74-1	92		92%
Phenanthrene	85-01-8	98		98%
Anthracene	120-12-7	98		98%
Di-n-Butylphthalate	84-74-2	98	B	98%
Fluoranthene	206-44-0	100		100%
Pyrene	129-00-0	93		93%
Butylbenzylphthalate	85-68-7	98		98%
3,3'-Dichlorobenzidine	91-94-1	110		110%
Benzo(a)Anthracene	56-55-3	97		97%
bis(2-Ethylhexyl)Phthalate	117-81-7	110	B	110%
Chrysene	218-01-9	96		96%
Di-n-Octyl Phthalate	117-84-0	130		130%
Benzo(b)Fluoranthene	205-99-2	110		110%
Benzo(k)Fluoranthene	207-08-9	100		100%
Benzo(a)Pyrene	50-32-8	97		97%
Indeno(1,2,3-cd)Pyrene	193-39-5	81		81%
Dibenz(a,h)Anthracene	53-70-3	80		80%
Benzo(g,h,i)Perylene	191-24-2	76		76%

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

Semivolatile Analysis Data Report
Page 2

Client Sample Number	: DI REF	Client I.D.	: 722450.26 SEYMORE JOH
Lab Sample Number	: DI REF		
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28587
		Method Blank No.	: WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L		REC %
Phenol	108-95-2	120		120%
2-Chlorophenol	95-57-8	110		110%
Benzylalcohol	100-51-6		NS	---
2-Methylphenol	95-48-7	120		120%
4-Methylphenol	106-44-5	190		190%
2-Nitrophenol	88-75-5		NS	---
2,4-Dimethylphenol	105-67-9	110		110%
Benzoic Acid	65-85-0		NS	---
2,4-Dichlorophenol	120-83-2	120		120%
4-Chloro-3-Methylphenol	59-50-7	130		130%
2,4,6-Trichlorophenol	88-06-2	120		120%
2,4-Dinitrophenol	51-28-5	88		88%
4-Nitrophenol	100-02-7	160		160%
4,6-Dinitro-2-Methylphenol	534-52-1	110		110%
Pentachlorophenol	87-86-5	70		70%
2,4,5-Trichlorophenol	95-95-4	120		120%

Expected Surrogate Recoveries:		Actual Recoveries:		QC Limits
Nitrobenzene-d5	100 ug/L		72%	(35-107)
2-Fluorobiphenyl	100 ug/L		63%	(45-105)
Terphenyl-d14	100 ug/L		64%	(33- 104)
Phenol-d6	200 ug/L		74%	(20- 94)
2-Fluorophenol	200 ug/L		62%	(22- 88)
2,4,6 Tribromophenol	200 ug/L		62%	(17- 90)

QUALIFIERS:
NS = **Not spiked.**
U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
Unless otherwise noted concentrations for soils are reported on a dry weight basis. (NA = not applicable or not available)

Analyst

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021
Semivolatile Analysis Data Report
Method Blank Report

Method Blank Number : WB042195
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.2602 / SEYMORE JOHNS
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28584

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
bis(2-Chloroethyl)Ether	111-44-4		U	1.0
1,3-Dichlorobenzene	541-73-1		U	0.5
1,4-Dichlorobenzene	106-46-7		U	0.5
1,2-Dichlorobenzene	95-50-1		U	0.5
bis(2-chloroisopropyl)Ether	108-60-1		U	1.0
N-Nitroso-Di-n-Propylamine	621-64-7		U	1.0
Hexachloroethane	67-72-1		U	0.5
Nitrobenzene	98-95-3		U	1.0
Isophorone	78-59-1		U	1.0
bis(2-Chloroethoxy)Methane	111-91-1		U	1.0
1,2,4-Trichlorobenzene	120-82-1		U	0.5
Naphthalene	91-20-3		U	0.5
4-Chloroaniline	106-47-8		U	2.0
Hexachlorobutadiene	87-68-3		U	0.5
2-Methylnaphthalene	91-57-6	1		0.5
Hexachlorocyclopentadiene	77-47-4		U	2.0
2-Chloronaphthalene	91-58-7		U	0.5
2-Nitroaniline	88-74-4		U	2.0
Dimethylphthalate	131-11-3		U	0.5
2,6-Dinitrotoluene	606-20-2		U	2.0
Acenaphthylene	208-96-8		U	0.5
3-Nitroaniline	99-09-2		U	2.0
Acenaphthene	83-32-9		U	0.5
Dibenzofuran	132-64-9		U	0.5
2,4-Dinitrotoluene	121-14-2		U	2.0
Diethylphthalate	84-66-2		U	0.5
4-Chlorophenyl-phenylether	7005-72-3		U	0.5
Fluorene	86-73-7		U	0.5
4-Nitroaniline	100-01-6		U	2.0
N-Nitrosodiphenylamine	86-30-6		U	0.5
4-Bromophenyl-phenylether	101-55-3		U	0.5
Hexachlorobenzene	118-74-1		U	0.5
Phenanthrene	85-01-8		U	0.5
Anthracene	120-12-7		U	0.5
Di-n-Butylphthalate	84-74-2	1		0.5
Fluoranthene	206-44-0		U	0.5
Pyrene	129-00-0		U	0.5
Butylbenzylphthalate	85-68-7		U	0.5
3,3'-Dichlorobenzidine	91-94-1		U	2.0
Benzo(a)Anthracene	56-55-3		U	0.5
bis(2-Ethylhexyl)Phthalate	117-81-7	1		0.5
Chrysene	218-01-9		U	0.5
Di-n-Octyl Phthalate	117-84-0		U	0.5
Benzo(b)Fluoranthene	205-99-2		U	0.5
Benzo(k)Fluoranthene	207-08-9		U	0.5
Benzo(a)Pyrene	50-32-8		U	0.5
Indeno(1,2,3-cd)Pyrene	193-39-5		U	0.5
Dibenz(a,h)Anthracene	53-70-3		U	0.5
Benzo(g,h,i)Perylene	191-24-2		U	0.5

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4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

Method Blank Report

Method Blank Number	: WB042195	Client I.D.	: 722450.2602 SEYMORE JOH
Date Extracted/Prepared	: 04/21/95		
Date Analyzed	: 04/25/95	Lab Project No.	: 95-1264
		Effective Dilution	: 1.00
		Method	: 625
		Matrix	: WATER
		Lab File No.	: >28584

ACIDS

Compound Name	Cas Number	Conc. ug/L		Reporting Limit* ug/L
Phenol	108-95-2		U	2.0
2-Chlorophenol	95-57-8		U	2.0
Benzylalcohol	100-51-6		U	5.0
2-Methylphenol	95-48-7		U	1.0
4-Methylphenol	106-44-5		U	1.0
2-Nitrophenol	88-75-5		U	2.0
2,4-Dimethylphenol	105-67-9		U	2.0
Benzoic Acid	65-85-0		U	5.0
2,4-Dichlorophenol	120-83-2		U	2.0
4-Chloro-3-Methylphenol	59-50-7		U	2.0
2,4,6-Trichlorophenol	88-06-2		U	2.0
2,4-Dinitrophenol	51-28-5		U	10.0
4-Nitrophenol	100-02-7		U	5.0
4,6-Dinitro-2-Methylphenol	534-52-1		U	10.0
Pentachlorophenol	87-86-5		U	5.0
2,4,5-Trichlorophenol	95-95-4		U	2.0

Expected Surrogate Recoveries:		Actual Recoveries:		QC Limit
Nitrobenzene-d5	100	ug/L	69%	(35-107)
2-Fluorobiphenyl	100	ug/L	62%	(45-105)
Terphenyl-d14	100	ug/L	61%	(33- 104)
Phenol-d6	200	ug/L	76%	(20- 94)
2-Fluorophenol	200	ug/L	59%	(22- 88)
2,4,6 Tribromophenol	200	ug/L	55%	(17- 90)

QUALIFIERS:
U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit.
Unless otherwise noted concentrations for soils are reported on a dry weight basis. (NA = not applicable or not available)

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4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/18/95	Client Project Number	: 722450.2602
Date Received	: 4/19/95	Lab Project Number	: 95-1264
Date Prepared	: 5/1,2/95	Matrix	: Water
Date Analyzed	: 5/1,2/95	Method Number	: EPA 5030/8015 Modified

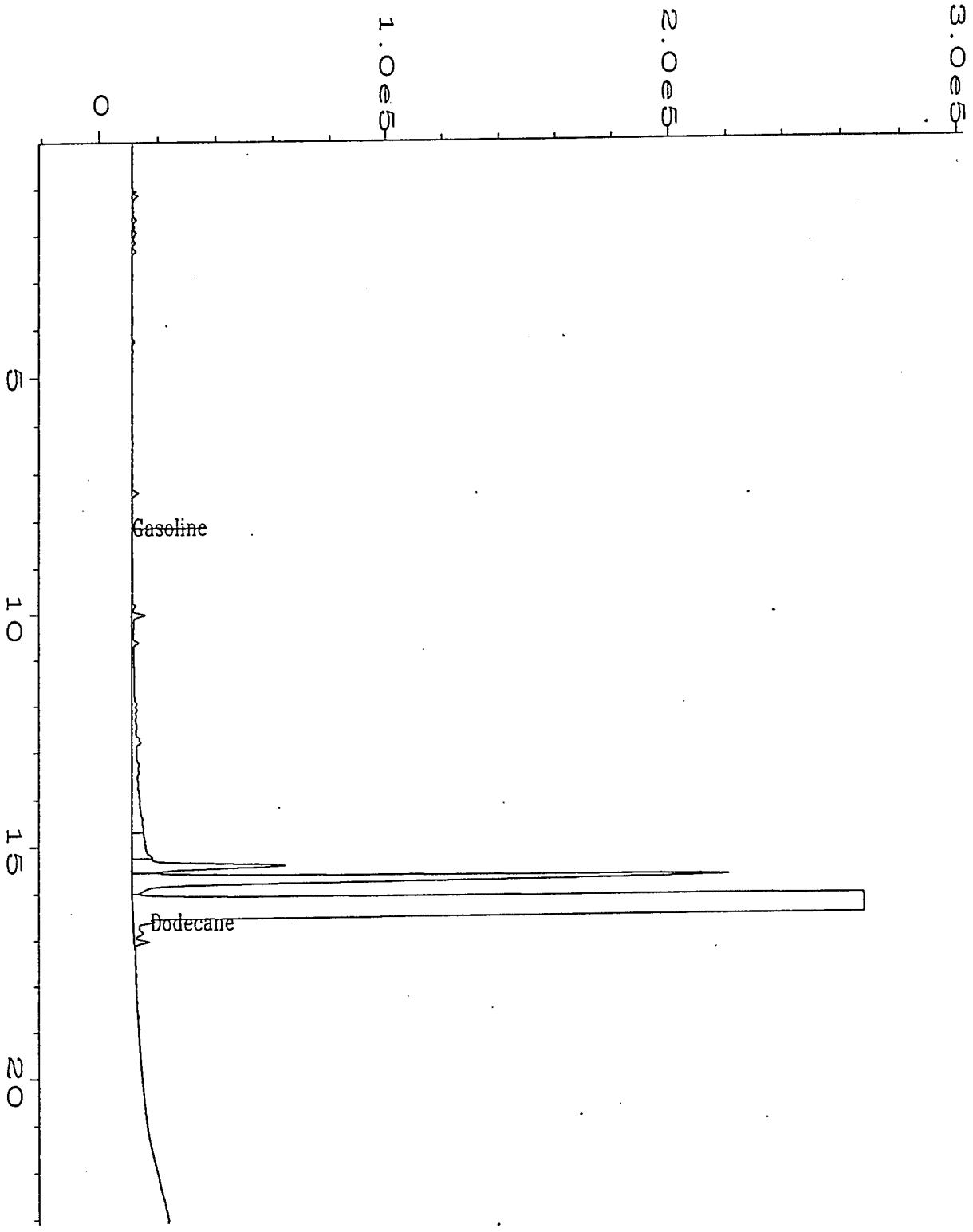
Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH mg/L	RL mg/L
MB050195	METHOD BLANK	100%	U	0.1
X05922	CPT-17	103%	1.8	0.1
X05923	CPT-18	116%	2.8	0.1
X05925	CPT-19	95%	U	0.1
X05926	MW-4	109%	17	0.5
X05927	MW-4 DUP	106%	17	0.5
X05928	MW-12D	102%	0.2	0.1
X05931	MW-5	103%	1.0	0.1
X05931 DUP	MW-5	102%	1.1	0.1
X05932	MW-8	107%	2.4	0.1
X05933	MW-3	108%	3.2	0.1

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH found in blan also.
E = Extrapolated value.
RL = Reporting Limit.

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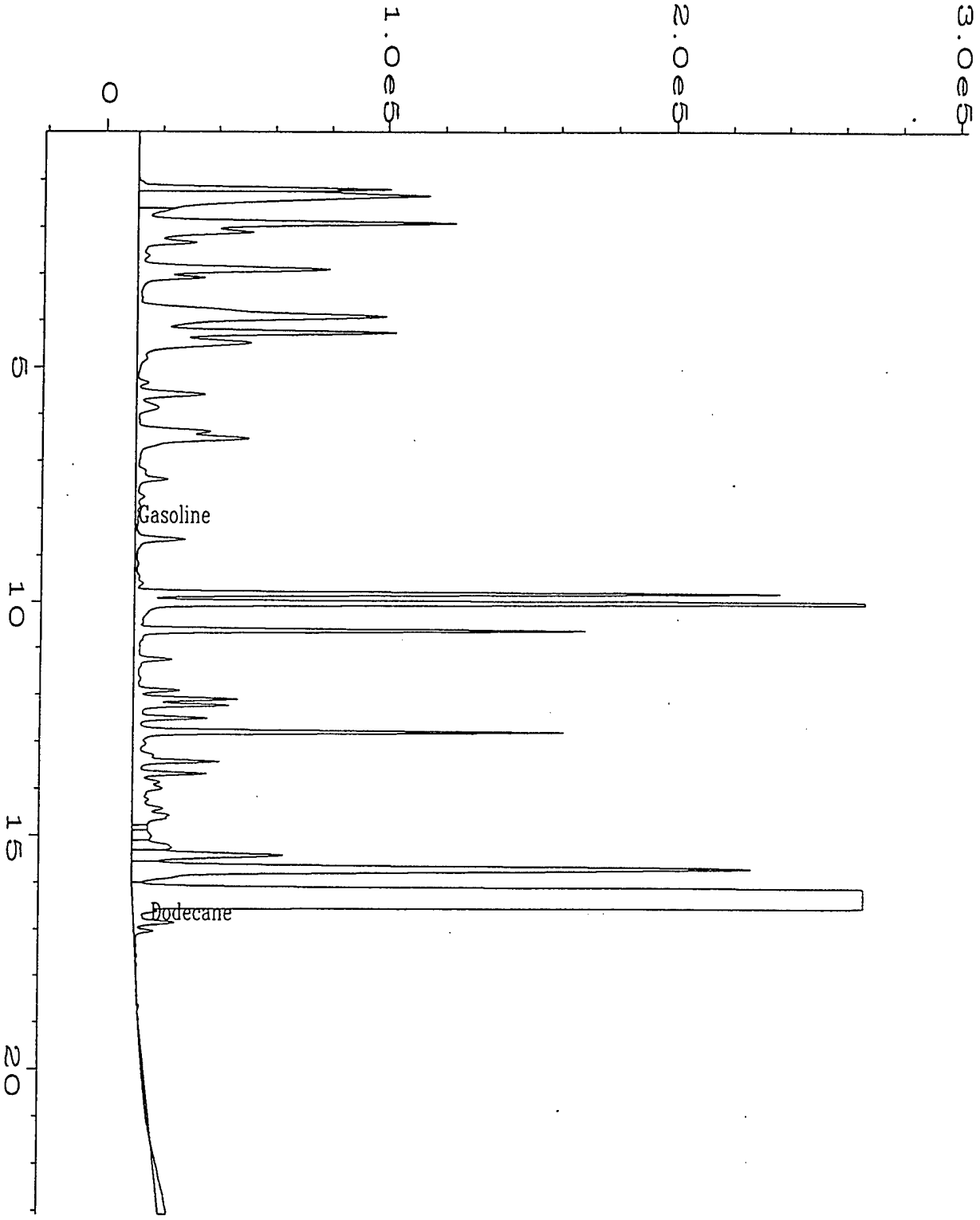
TVHWATER.XLS



Data File Name : C:\HPCHEM\1\DATA\TVH0501\008F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : MB050195
Run Time Bar Code:
Acquired on : 01 May 95 07:19 PM
Report Created on: 01 May 95 07:46 PM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

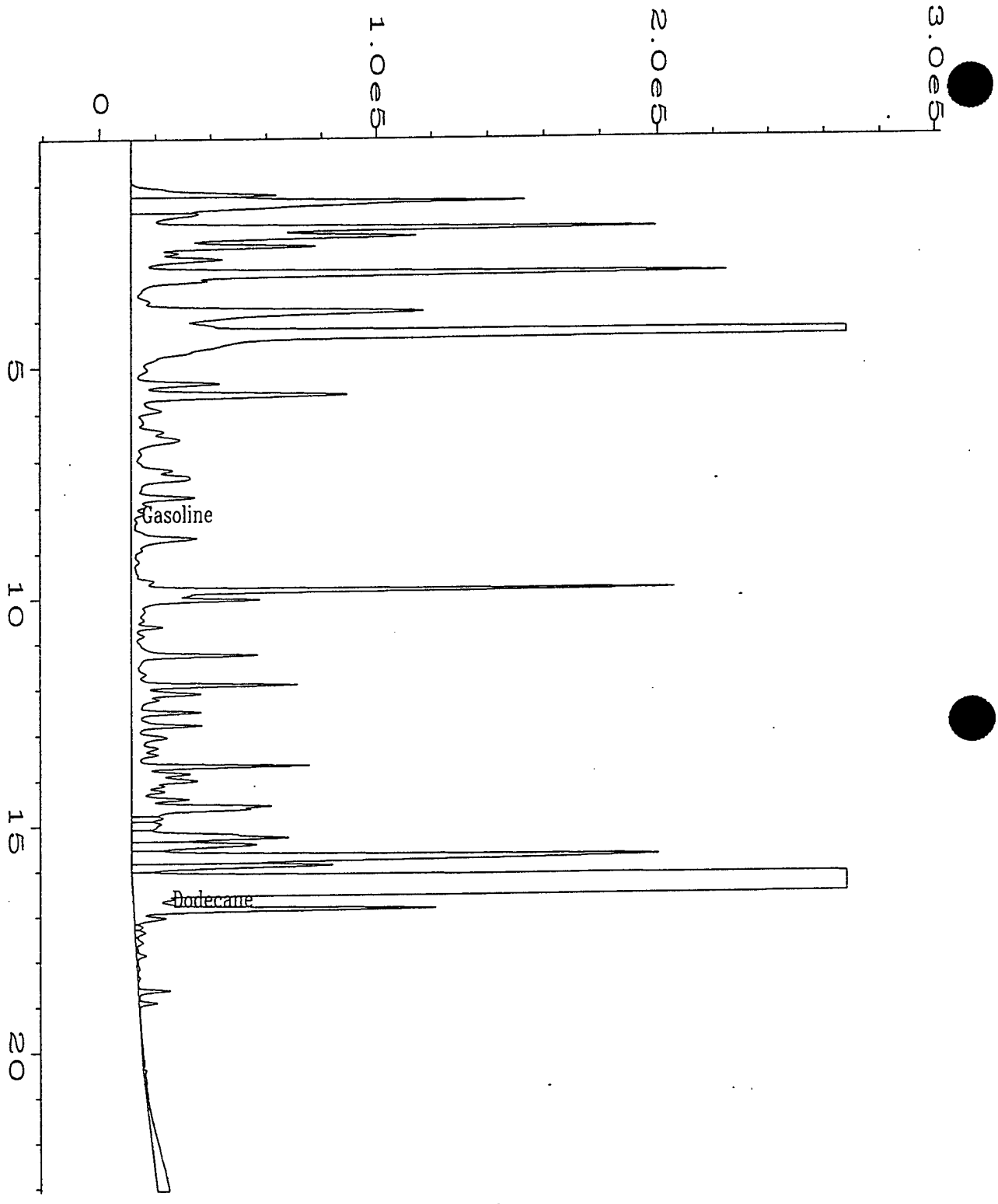
Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BAS[redacted]T
Analysis Method : TVH0501.M[redacted]H
Sample Amount : 0
ISTD Amount :

DM 5/11/95



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\013F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 13
Sample Name	: X05922;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 10:13 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 02 May 95 07:57 AM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

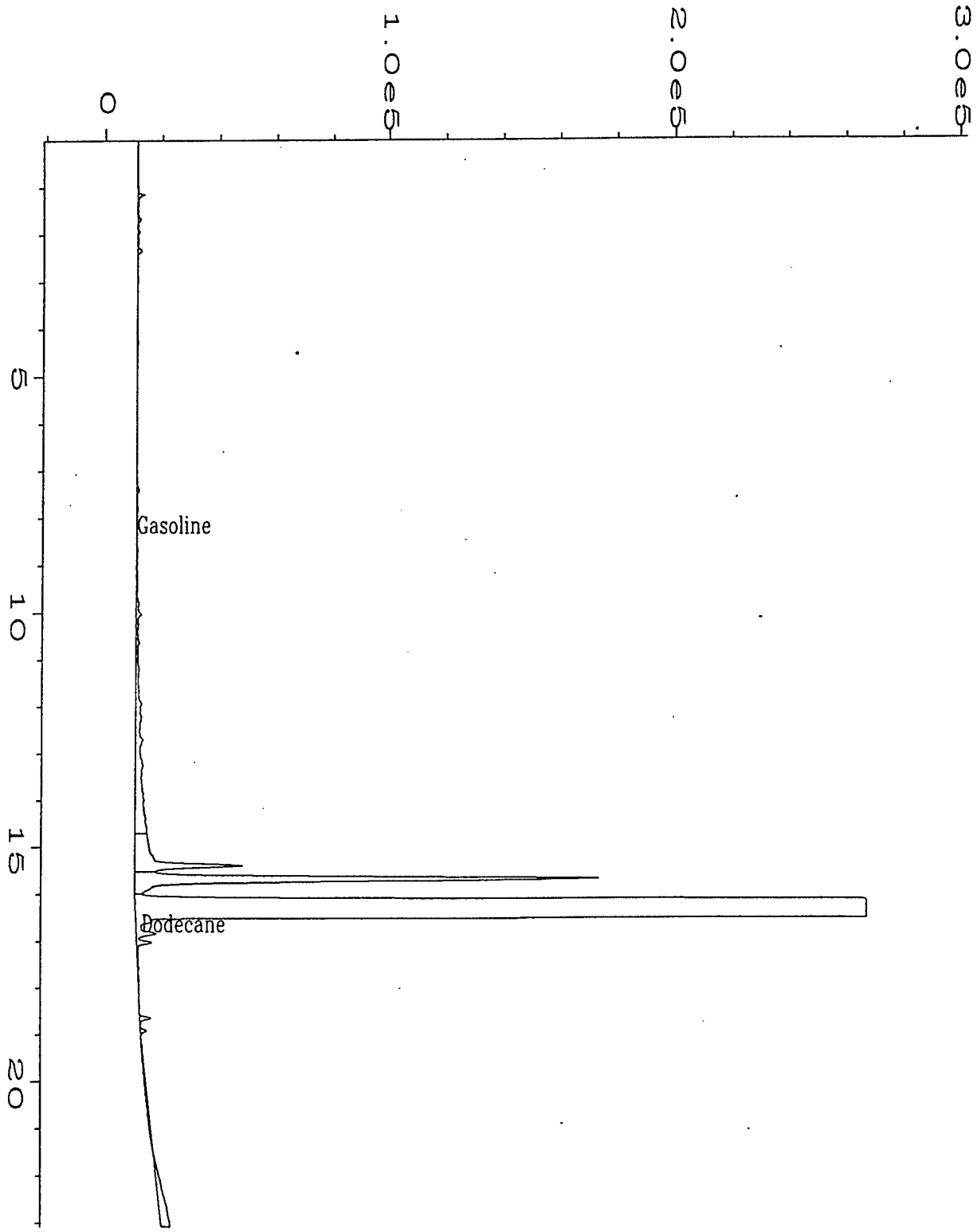
CPT-17



Data File Name : C:\HPCHEM\1\DATA\TVH0501\014F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05923;1
Run Time Bar Code:
Acquired on : 01 May 95 10:48 PM
Report Created on: 02 May 95 07:58 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

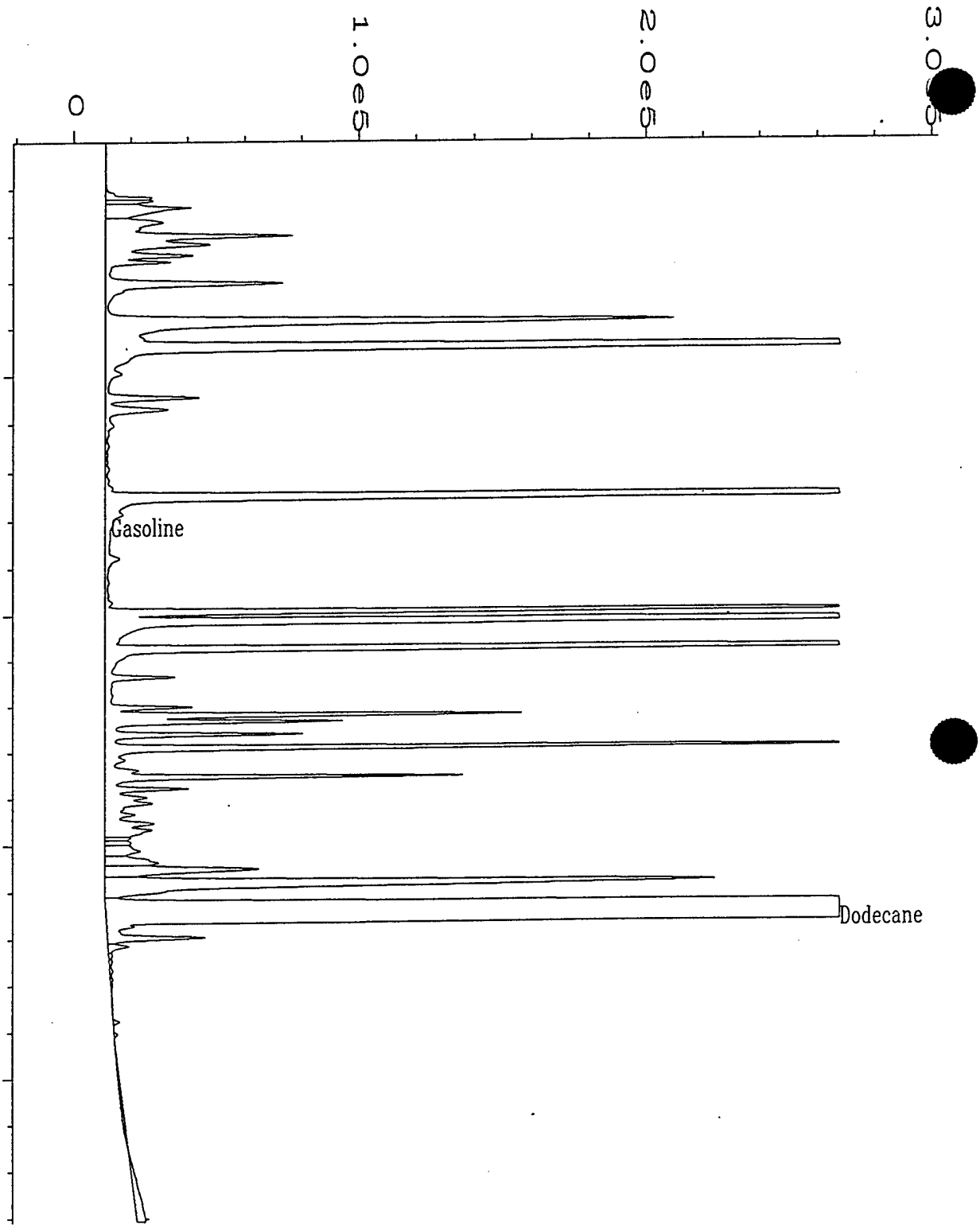
Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BA[redacted]M
Analysis Method : TVH050[redacted]I
Sample Amount : 0
ISTD Amount :

CPT-18

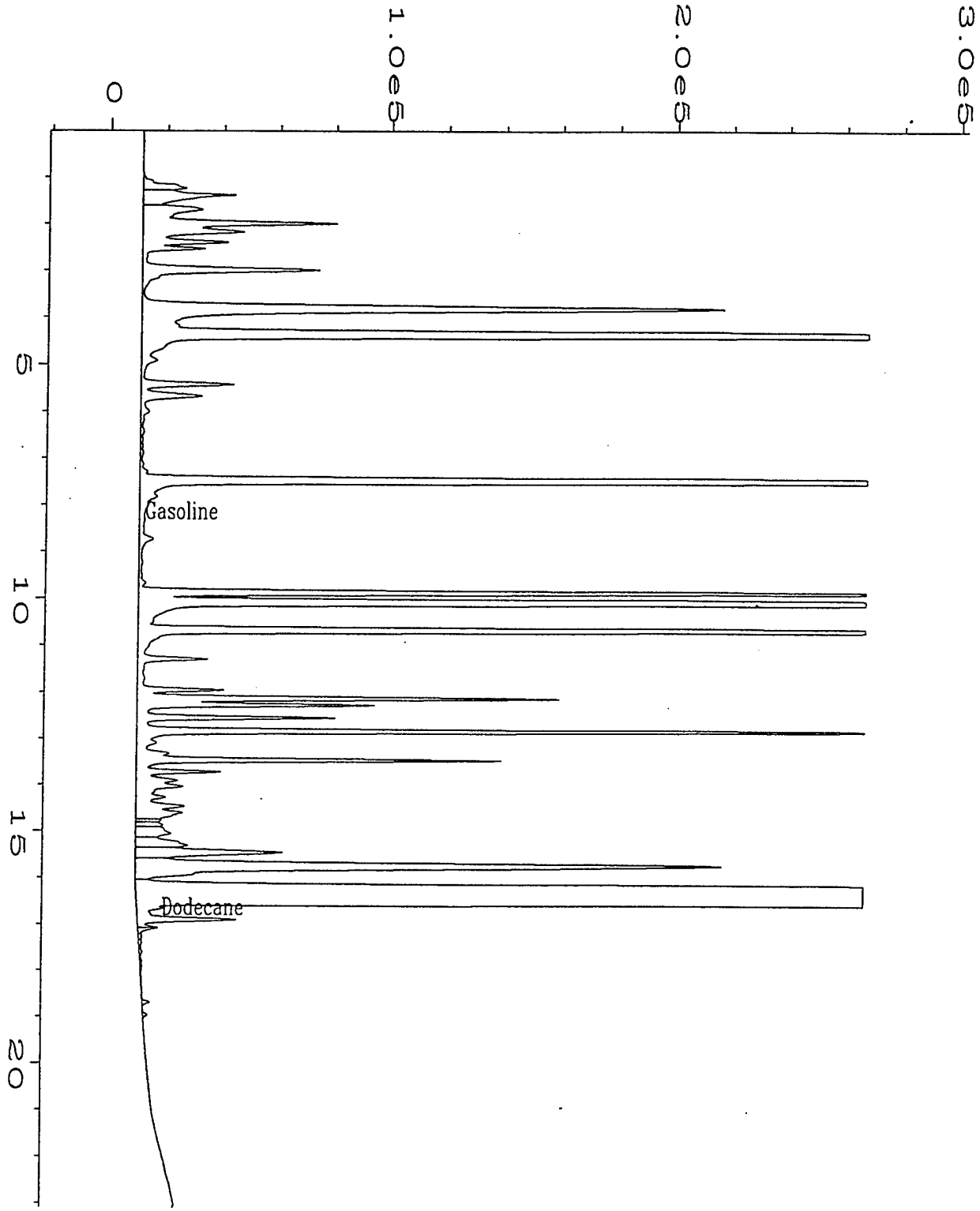


Data File Name	: C:\HPCHEM\1\DATA\TVH0501\015F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 15
Sample Name	: X05925;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 01 May 95 11:23 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 02 May 95 07:59 AM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

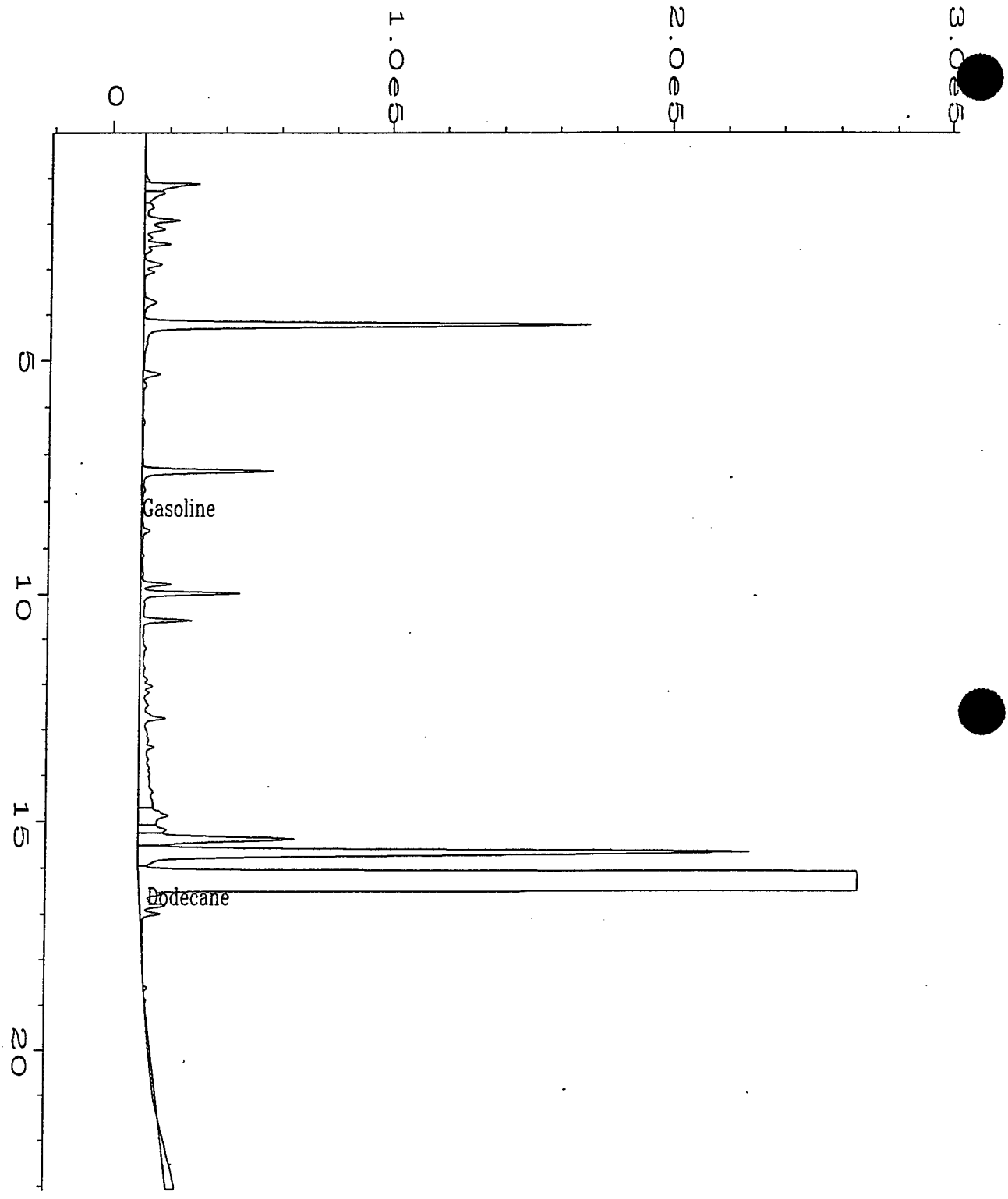
CPT-19



Data File Name	: C:\HPCHEM\1\DATA\tvh0501\038F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 38
Sample Name	: X05926;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 02 May 95 02:02 PM	Instrument Method	: TVH1BA.M
eport Created on	: 02 May 95 03:02 PM	Analysis Method	: TVH05.M
Last Recalib on	: 01 MAY 95 05:39 PM	Sample Amount	: 0
Multiplier	: 5	ISTD Amount	:
Sample Info	: 95-1264;MW-4;1 ml water		

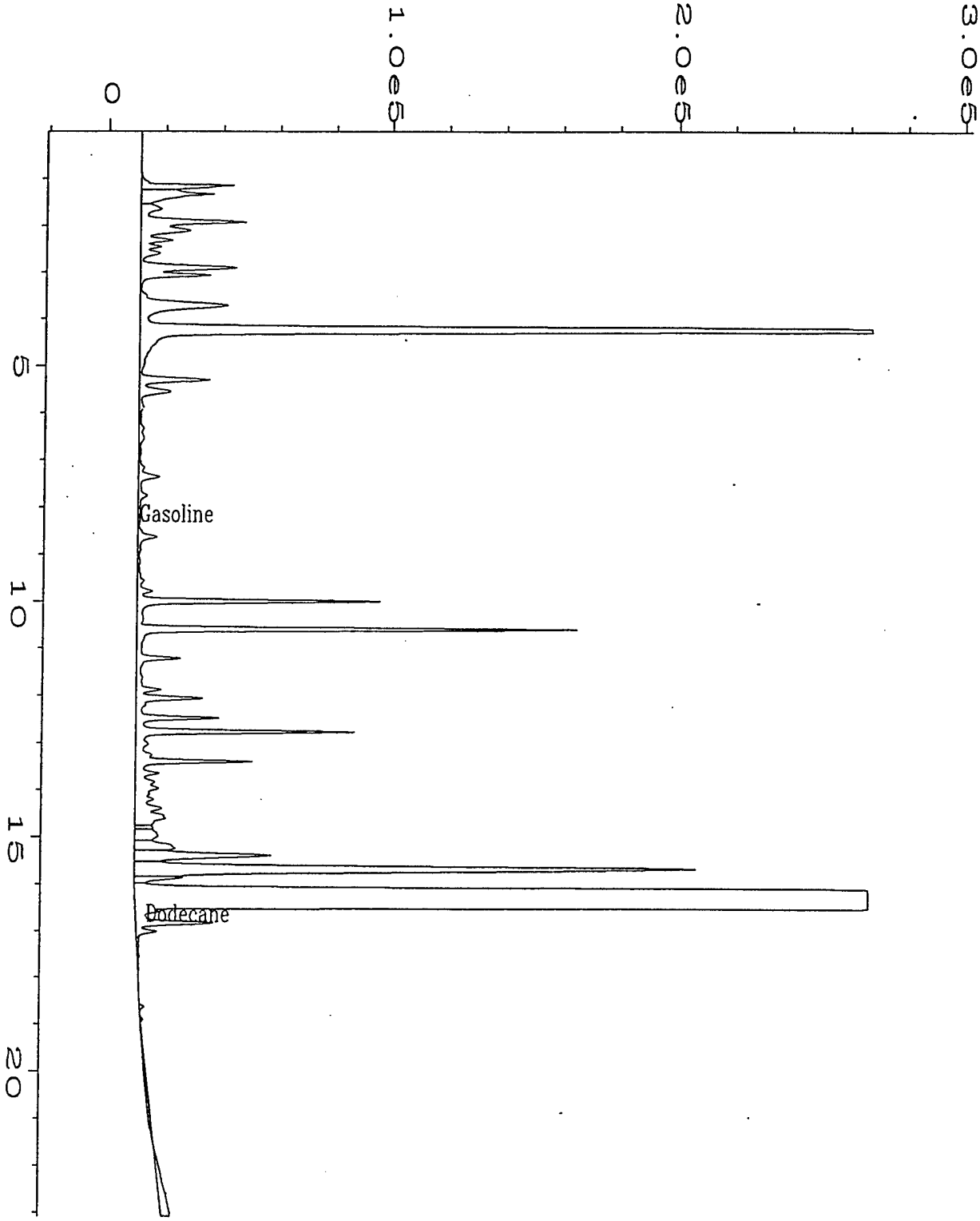


Data File Name	: C:\HPCHEM\1\DATA\tvh0501\039F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 39
Sample Name	: X05927;5	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 02 May 95 02:37 PM	Instrument Method	: TVH1BASE.MTH
Report Created on	: 02 May 95 03:02 PM	Analysis Method	: TVH0501.MTH
Last Recalib on	: 01 MAY 95 05:39 PM	Sample Amount	: 0
Multiplier	: 5	ISTD Amount	:
Sample Info	: 95-1264;MW-4 Dupe; 1 ml water		



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\019F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 19
Sample Name	: X05928;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 02 May 95 01:43 AM	Instrument Method	: TVH1BA[illegible]M
Report Created on	: 02 May 95 08:02 AM	Analysis Method	: TVH0501.MT[illegible]
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

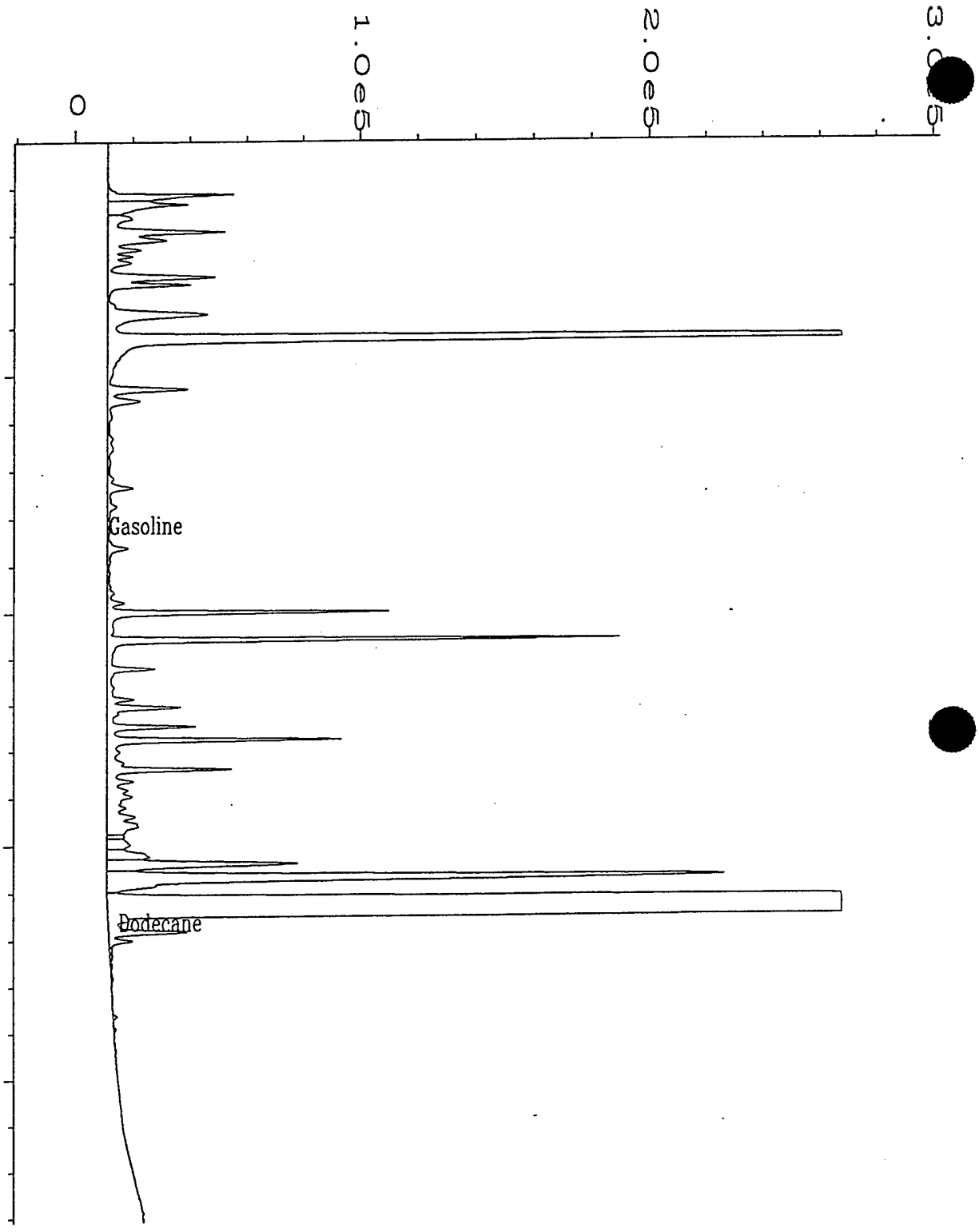
MW-12D



Data File Name : C:\HPCHEM\1\DATA\TVH0501\020F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05931;1
Run Time Bar Code:
Acquired on : 02 May 95 02:18 AM
Report Created on: 02 May 95 08:03 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 20
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.MTH
Analysis Method : TVH0501.MTH
Sample Amount : 0
ISTD Amount :

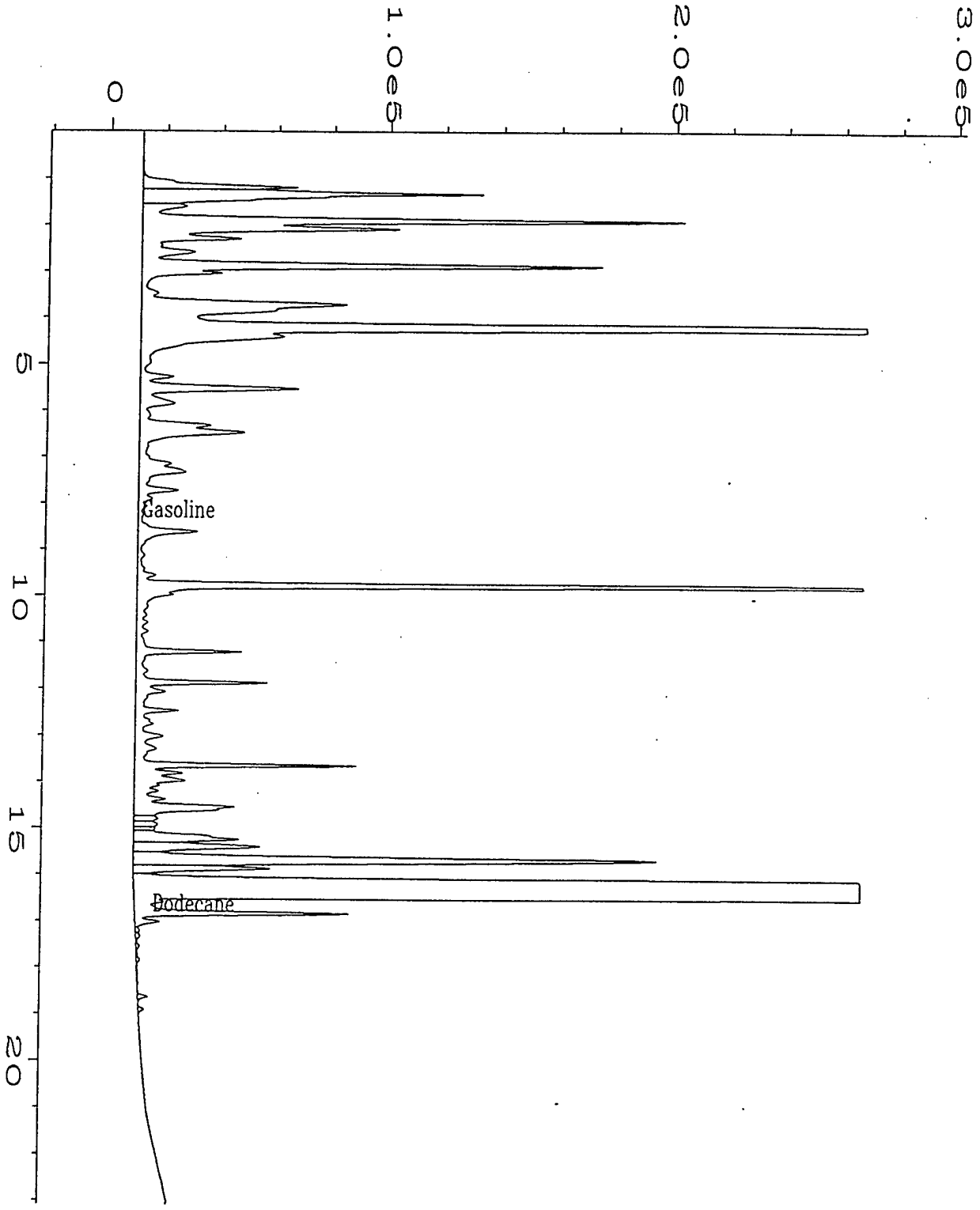
MW-5



Data File Name : C:\HPCHEM\1\DATA\TVH0501\021F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05931Dup;1
Run Time Bar Code:
quired on : 02 May 95 02:53 AM
...eport Created on: 02 May 95 08:03 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1B[redacted].M
Analysis Method : TVH0501.M
Sample Amount : 0
ISTD Amount :

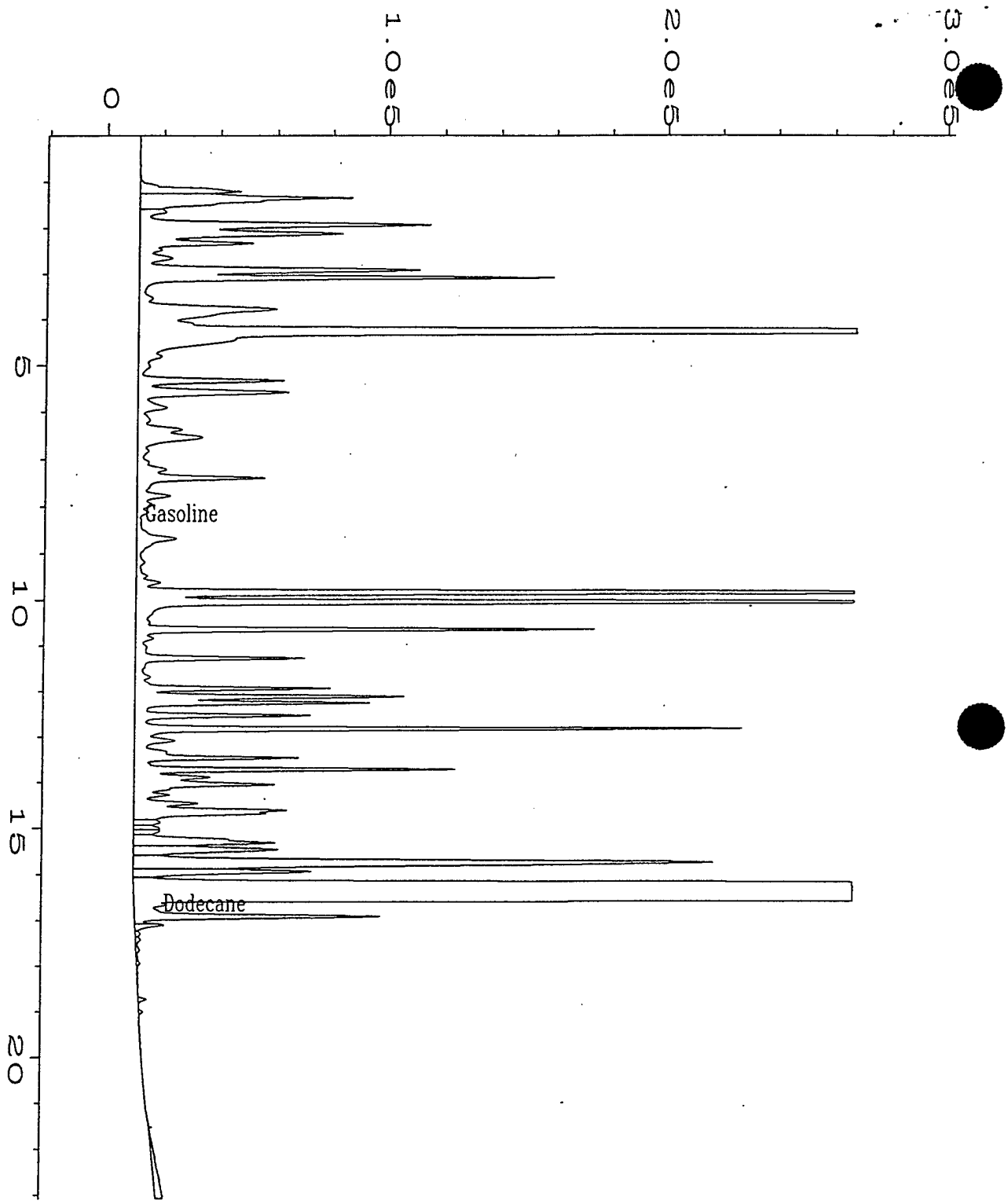
MW-5



Data File Name : C:\HPCHEM\1\DATA\TVH0501\024F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05932;1
Run Time Bar Code:
Acquired on : 02 May 95 04:38 AM
Report Created on: 02 May 95 08:05 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 24
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.MTH
Analysis Method : TVH0501.MTH
Sample Amount : 0
ISTD Amount :

MW-8



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\026F0101.D		
Operator	: S.W. Tyson	Page Number	: 1
Instrument	: TVH	Vial Number	: 26
Sample Name	: X05933;1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 02 May 95 05:48 AM	Instrument Method	: TVH1BAS[illegible]
ort Created on	: 02 May 95 07:45 AM	Analysis Method	: TVH0501[illegible]
Last Recalib on	: 01 May 95 05:39 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

MW-3

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 4/19/95	Matrix	: Water
Date Prepared	: 5/1/95	Method Blank	: MB050195
Date Analyzed	: 5/2/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	1.12	2.99	94%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits RPD	QC Limits %REC
Gasoline	2.00	3.30	109%	15	50	60-140

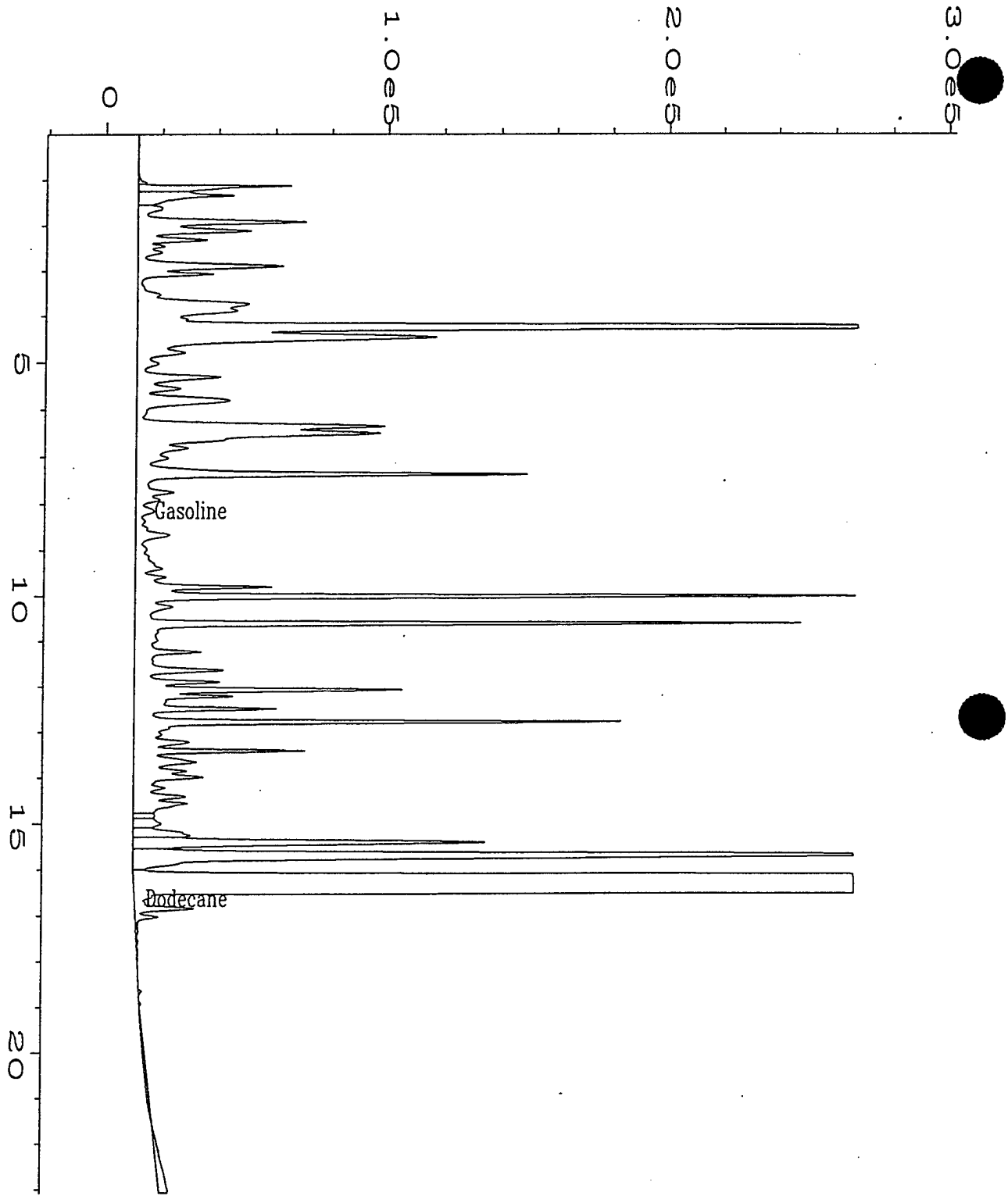
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NA = Not analyzed/not applicable.

Comments:

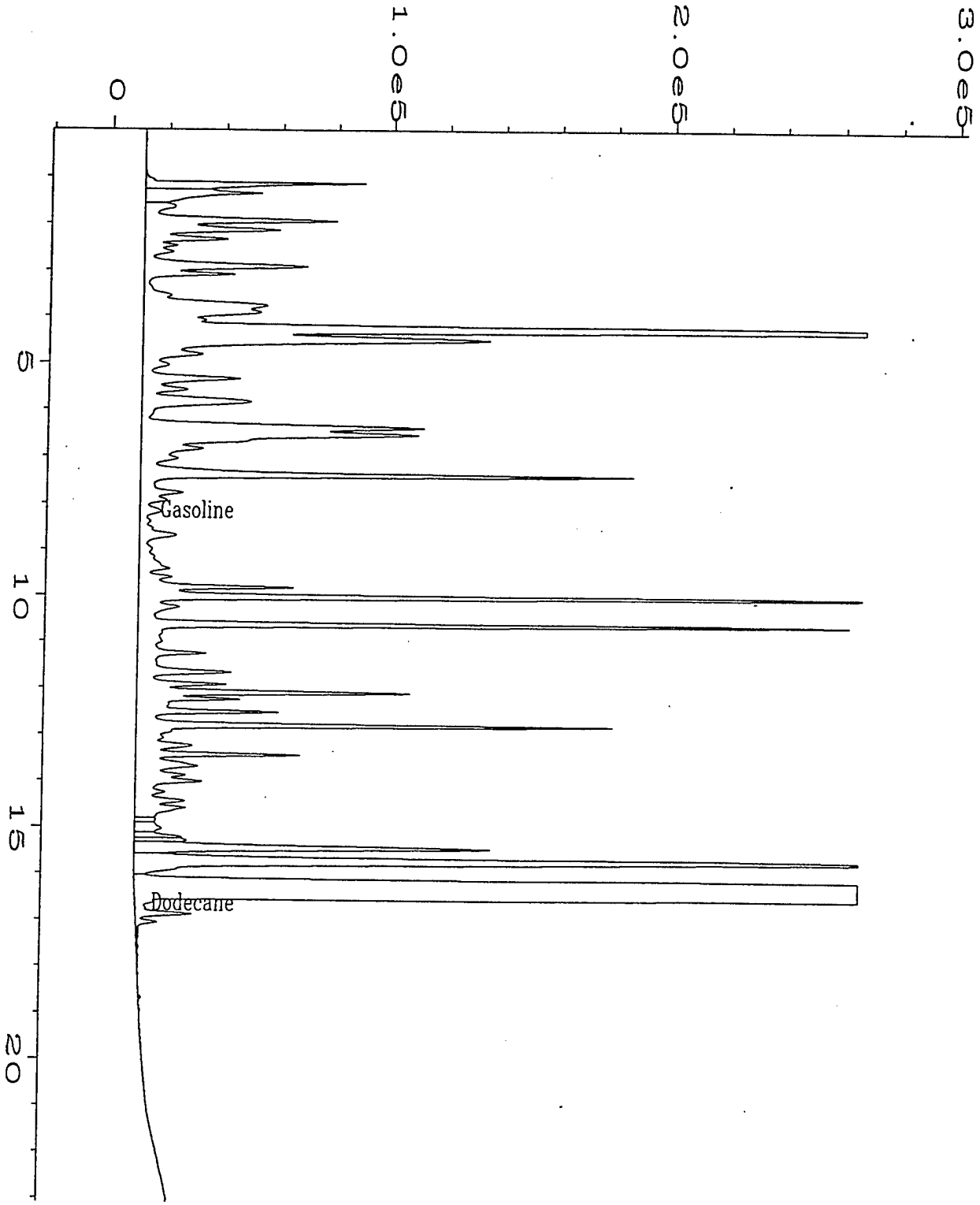
K. Conc



Data File Name : C:\HPCHEM\1\DATA\TVH0501\022F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05931MS
Run Time Bar Code:
Acquired on : 02 May 95 03:28 AM
Report Created on: 02 May 95 08:04 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 22
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BAS[redacted]
Analysis Method : TVH0501[redacted]
Sample Amount : 0
ISTD Amount :

MW5 MS



Data File Name : C:\HPCHEM\1\DATA\TVH0501\023F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : X05931MSD
Run Time Bar Code:
Acquired on : 02 May 95 04:03 AM
Report Created on: 02 May 95 08:04 AM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.MTH
Analysis Method : TVH0501.MTH
Sample Amount : 0
ISTD Amount :

MW 5 MSD

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

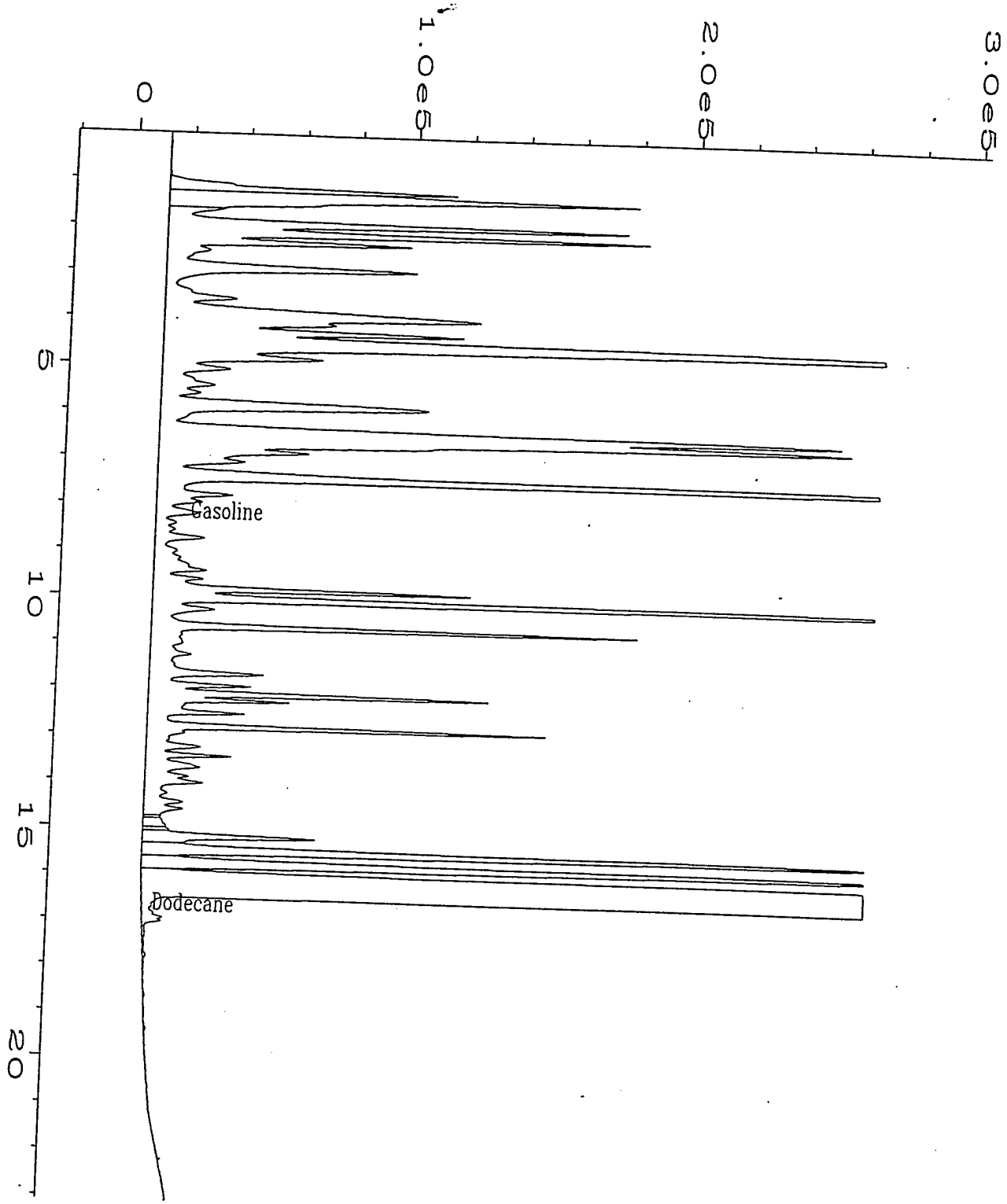
LCS Number	: LCS050195	Matrix	: WATER
Date Prepared	: 5/1/95	Method Numbers	: EPA 5030/8015 Modified
Date Analyzed	: 5/1/95		
Sequence Number	: TVH7		

Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
Gasoline	5.00	5.11	102%	70%-130%

QUALIFIERS
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name : C:\HPCHEM\1\DATA\TVH0501\007F0101.D
Operator : S.W. Tyson
Instrument : TVH
Sample Name : LCS050195
Run Time Bar Code:
Created on : 01 May 95 06:44 PM
Edit Created on: 01 May 95 07:08 PM
Last Recalib on : 01 May 95 05:39 PM
Multiplier : 1

Page Number : 1
Vial Number : 7
Injection Number : 1
Sequence Line : 1
Instrument Method: TVH1BASE.MTH
Analysis Method : TVH0501.MTH
Sample Amount : 0
ISTD Amount :

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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
JET FUEL

Date Sampled	: 4/18/95	Client Project Number	: 722450.2602
Date Received	: 4/19/95	Lab Project Number	: 95-1264
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/21/95	Method Number	: 3500/Mod.8015

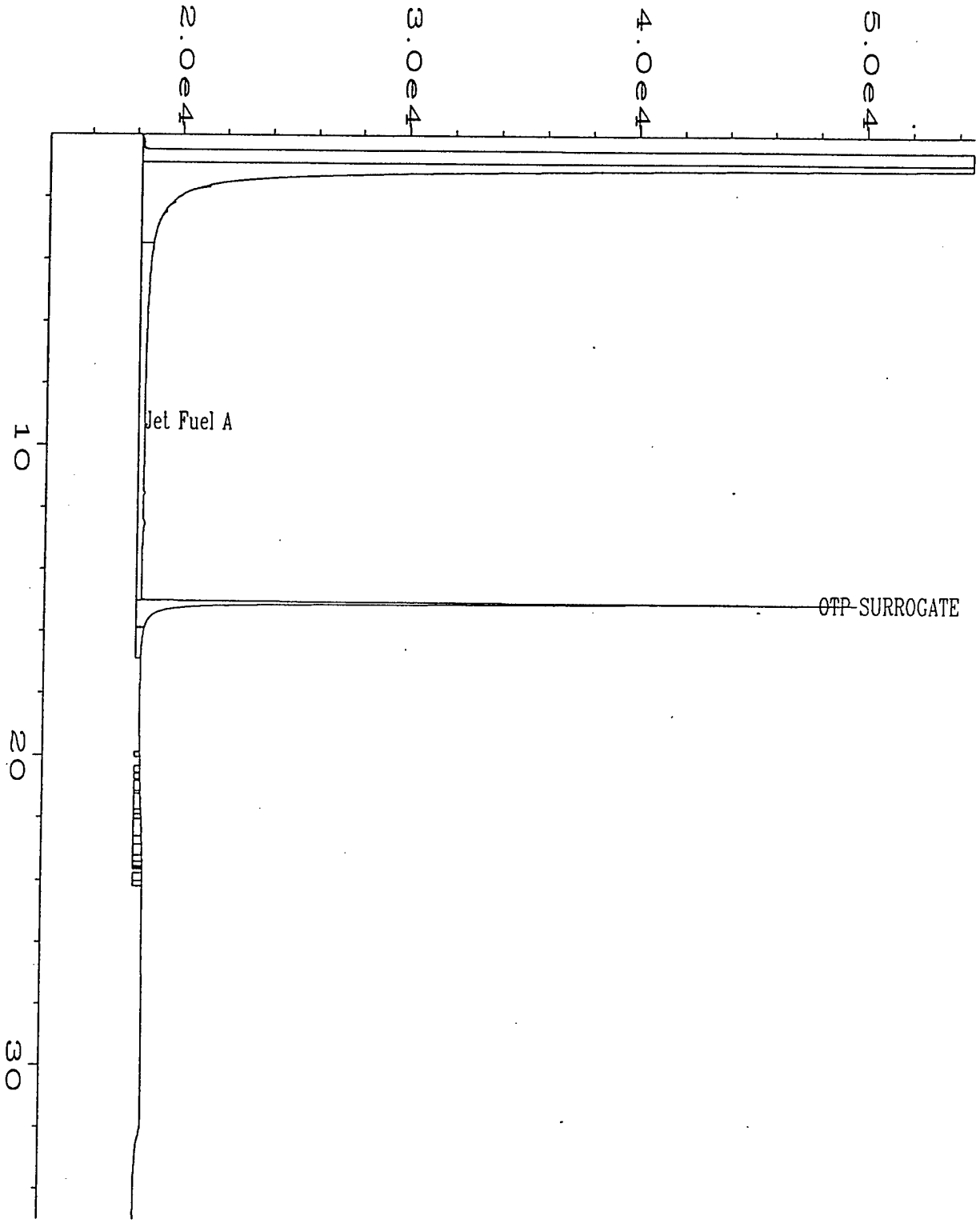
Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH mg/L	RL mg/L
WB042095	WATER METHOD BLANK	89%	U	0.5
X05922	CPT-17	61%	1.3	0.5
X05922-R	CPT-17	60%	1.2	0.5
X05923	CPT-18	81%	1.8	0.5
X05925	CPT-19	82%	U	0.5
X05926	MW-4	109%	8.2	0.5
X05927	MW-4 DUP	106%	7.3	0.5
X05928	MW-12D	75%	U	0.5
X05931	MW-5	76%	1.4	0.5
X05932	MW-8	45%	2.5	0.5
X05932-R	MW-8	43%	2.4	0.5
X05933	MW-3	46%	2.6	0.5
X05933-R	MW-3	68%	2.8	0.5

R = Second run.
QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank.
E = Extrapolated value.
RL = Reporting Limit

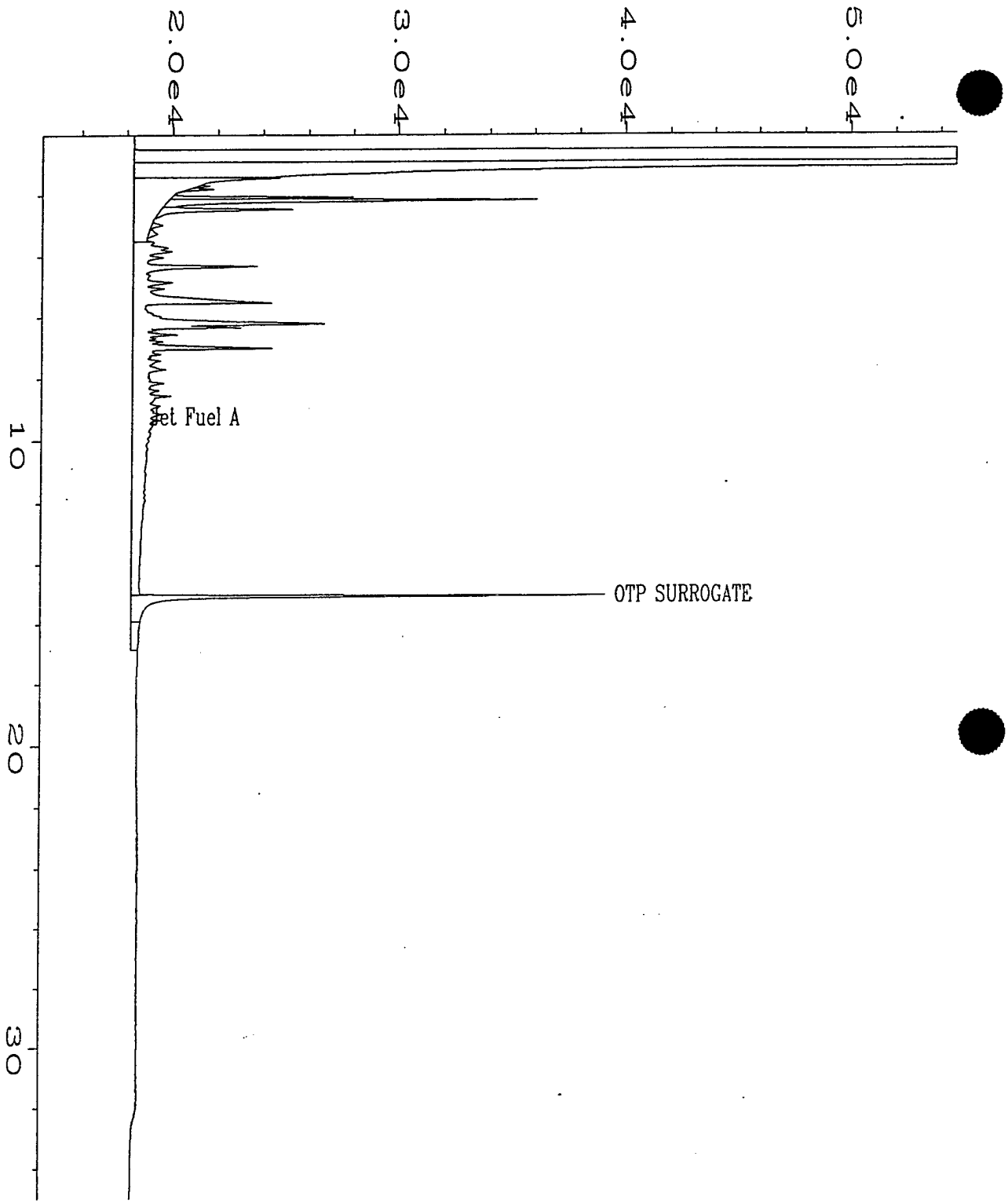
Analyst

Approved

JET1264.XLS

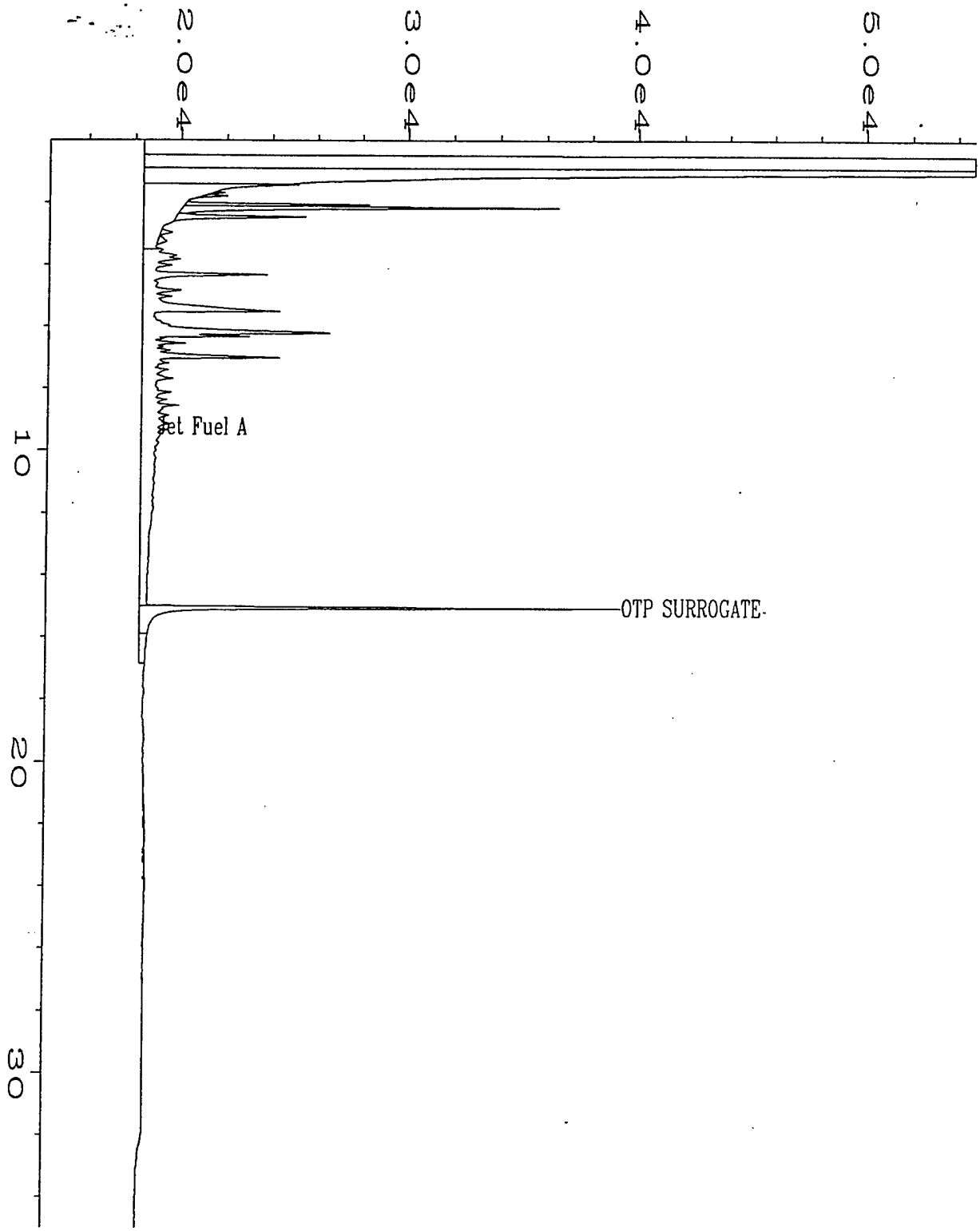


Data File Name	: C:\HPCHEM\2\DATA\JET0420\016R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 16
Sample Name	: WB042095	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 01:52 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:33 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



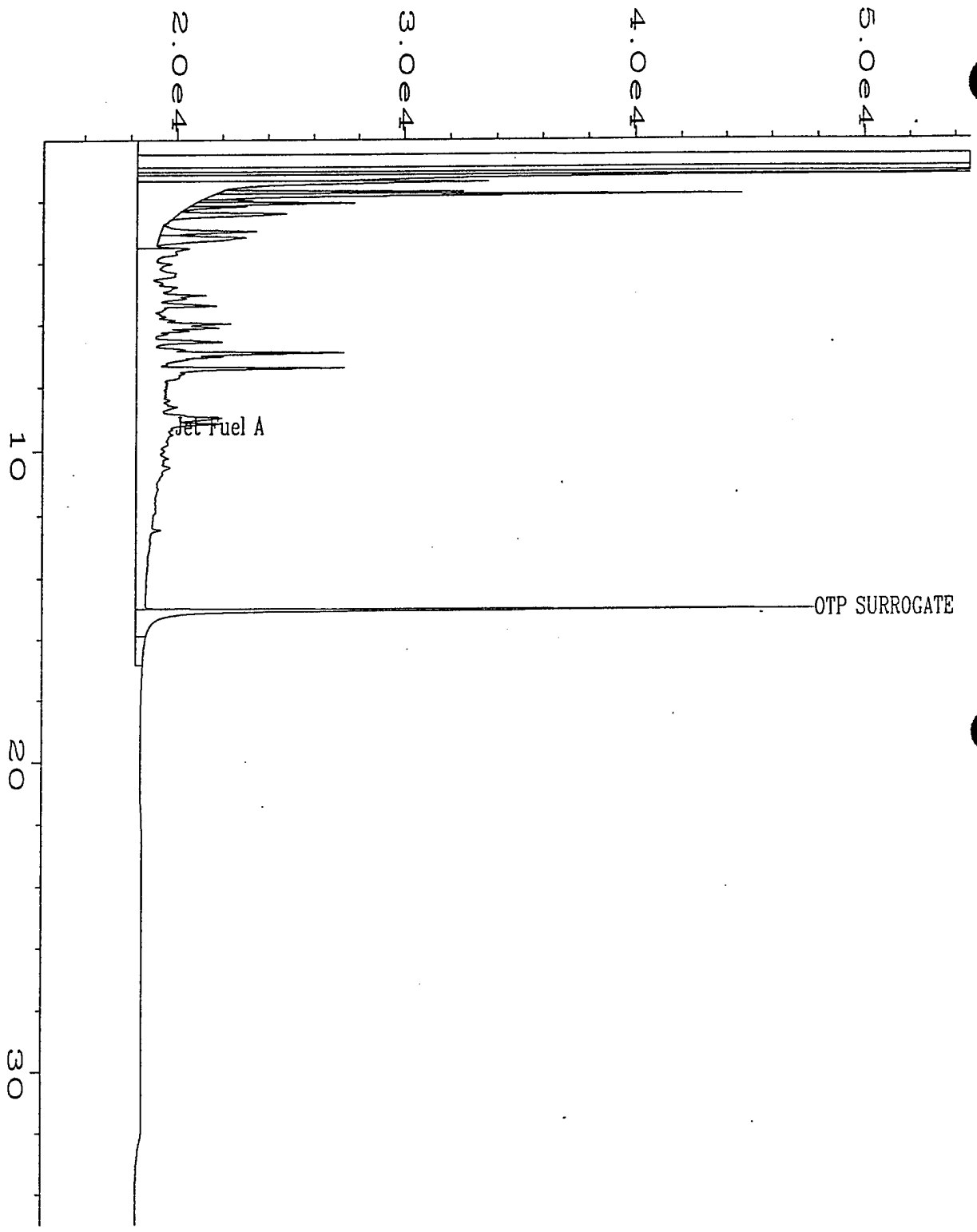
Data File Name	: C:\HPCHEM\2\DATA\JET0420\018R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 18
Sample Name	: X05922 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 03:25 AM	Instrument Method	: FID1BAS[redacted]MT
ort Created on	: 21 Apr 95 03:52 PM	Analysis Method	: JET042[redacted]TH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

CPT-17

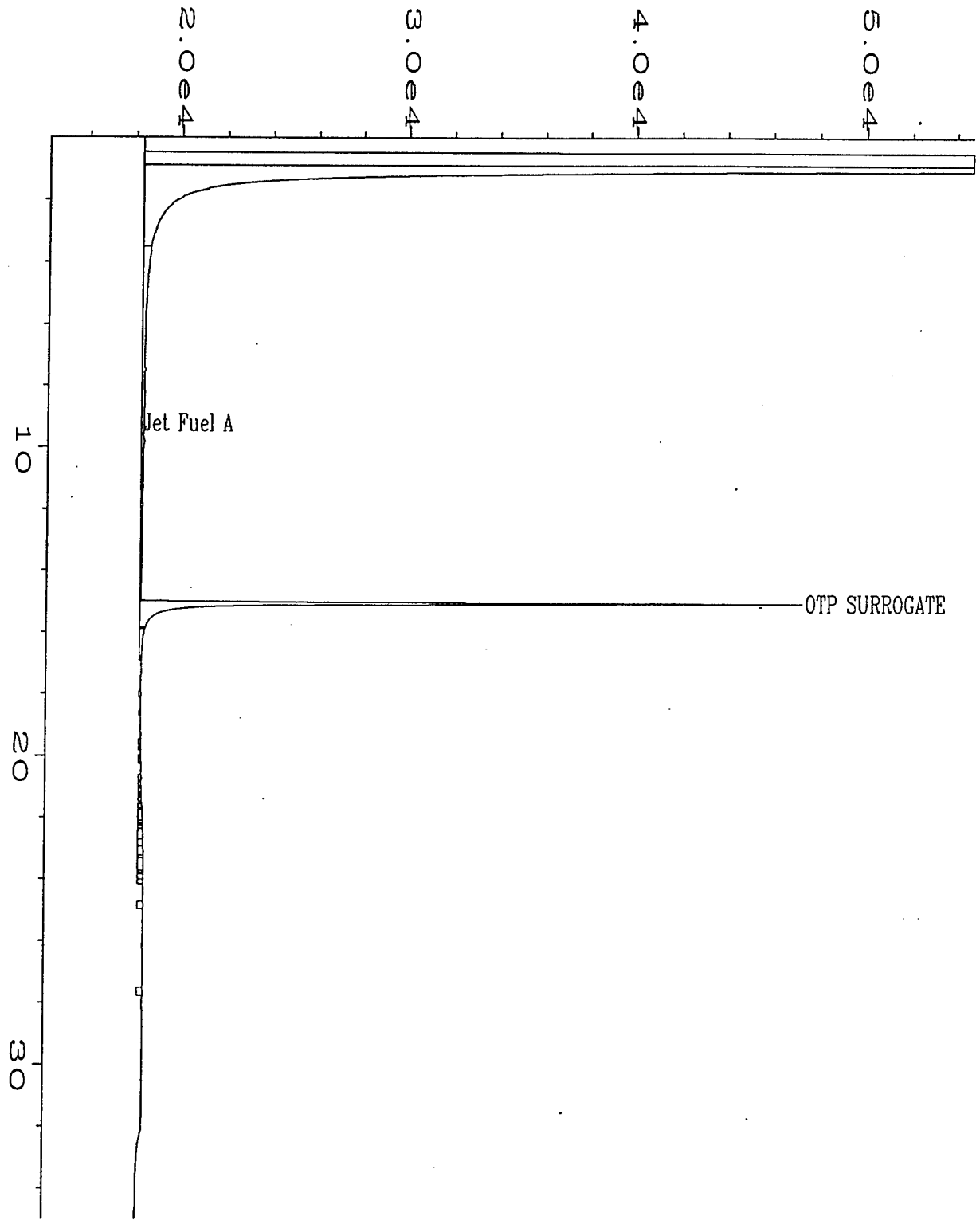


Data File Name	: C:\HPCHEM\2\DATA\JET0420\028R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 28
Sample Name	: X05922 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 11:11 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 03:20 PM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

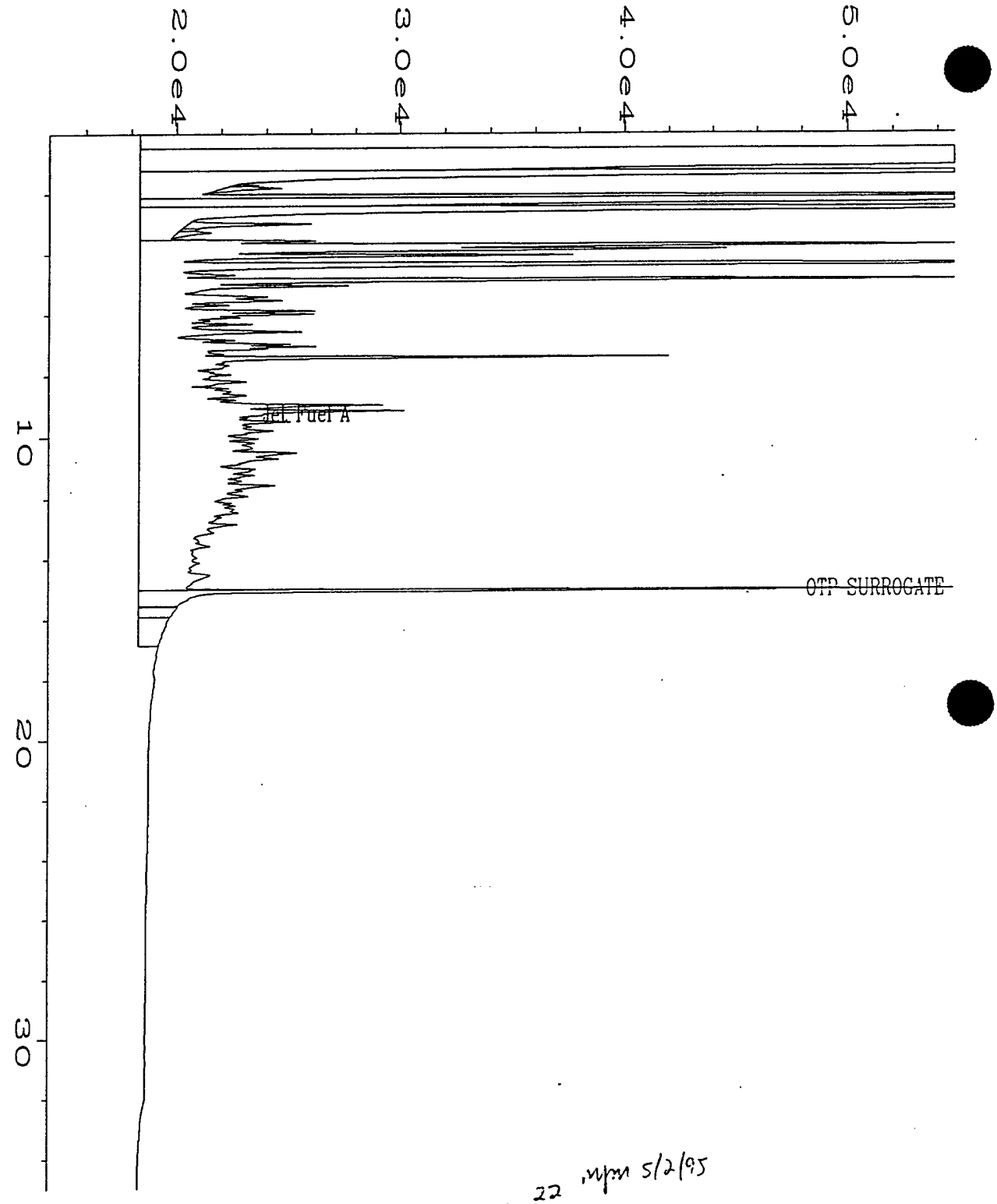
CPT-17 (Second Run)



Data File Name	: C:\HPCHEM\2\DATA\JET0420\020R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 20
Sample Name	: X05923 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
quired on	: 21 Apr 95 04:57 AM	Instrument Method	: FID1BA[redacted]M
port Created on	: 21 Apr 95 10:22 AM	Analysis Method	: JET0420.MT
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1264 CLIENT # CPT-18 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\021R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 21
Sample Name	: X05925 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 05:44 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 10:22 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1264 CLIENT # CPT-19 WATER		

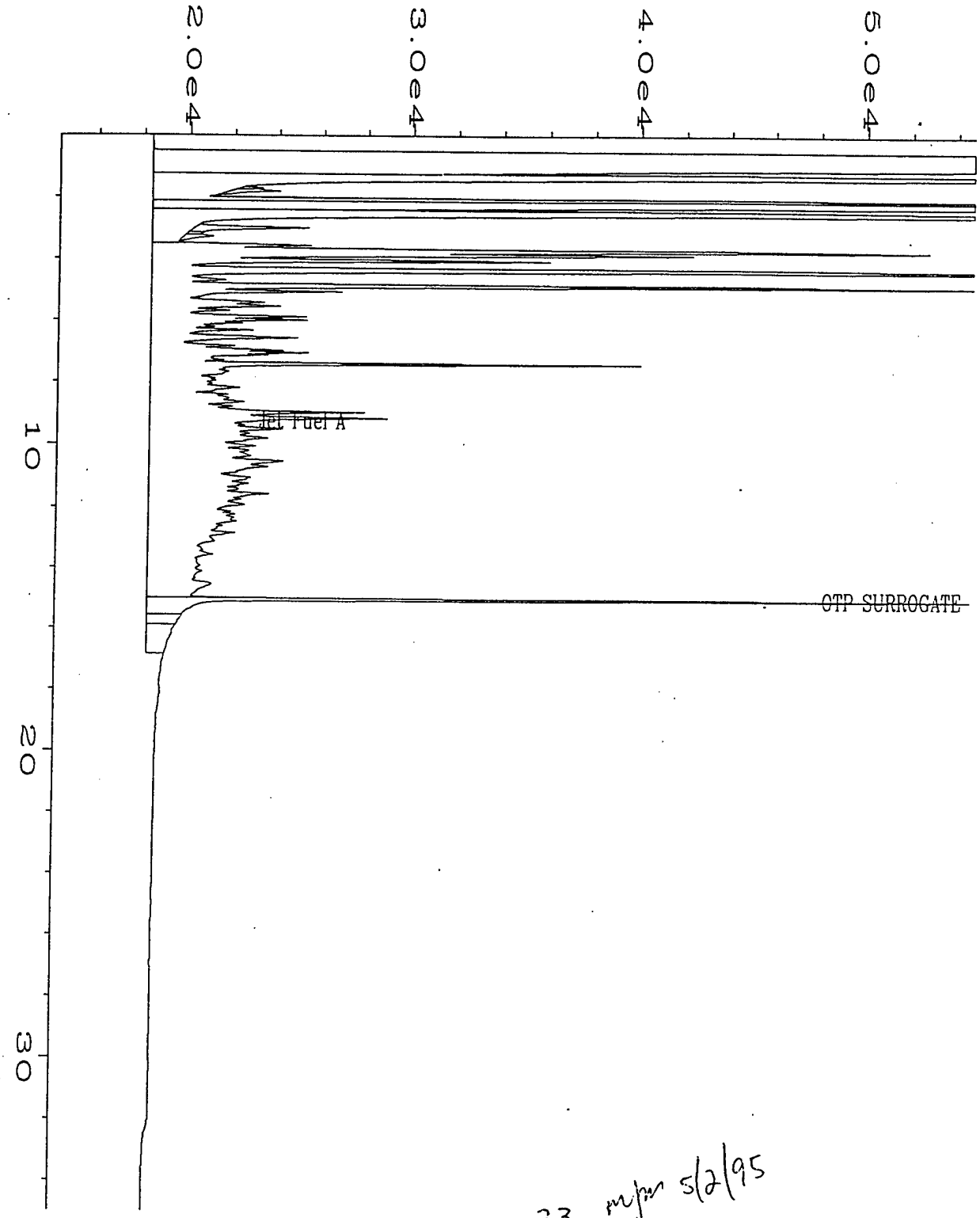


mpm 5/2/95

Data File Name : C:\HPCHEM\2\DATA\JET0420\022R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05926 DF=1
Run Time Bar Code:
Acquired on : 21 Apr 95 01:32 PM
Report Created on: 21 Apr 95 03:20 PM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1

Page Number : 1
Vial Number : 31
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA[redacted].M
Analysis Method : JET0420.MT
Sample Amount : 0
ISTD Amount :

MW-4

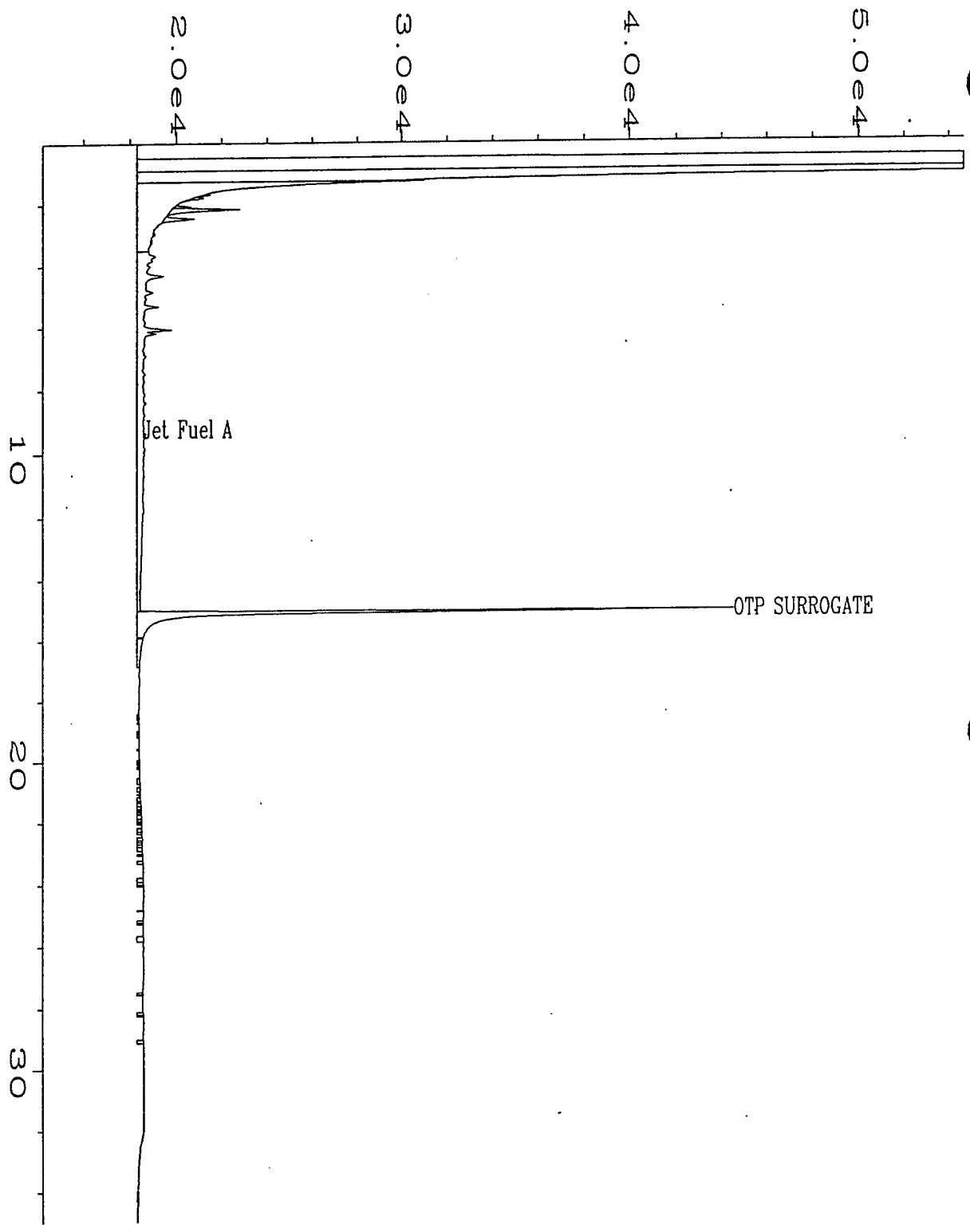


23 mjp 5/2/95

Data File Name : C:\HPCHEM\2\DATA\JET0420\032R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05927 DF=1
Run Time Bar Code:
Acquired on : 21 Apr 95 02:19 PM
Report Created on: 21 Apr 95 03:20 PM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1

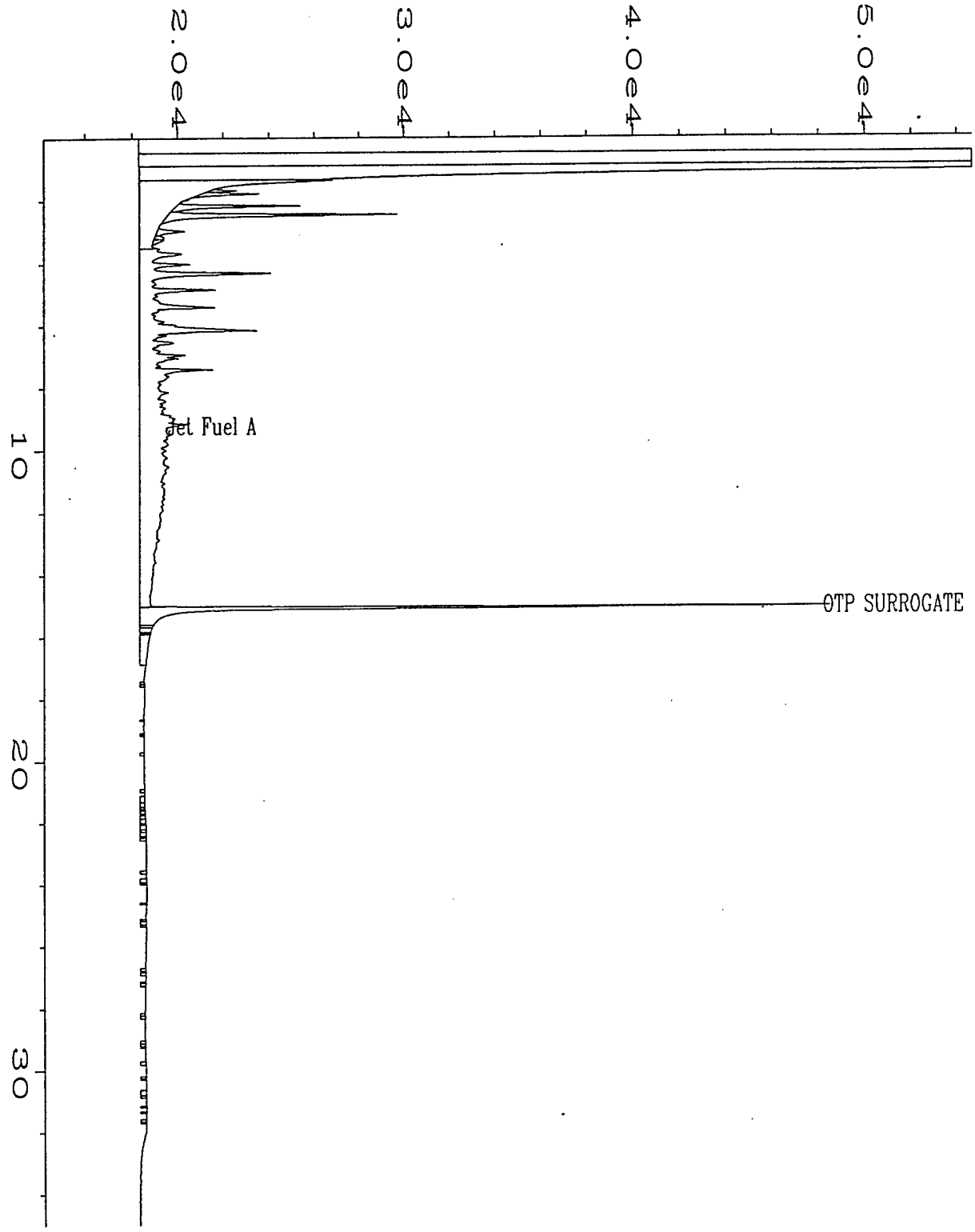
Page Number : 1
Vial Number : 32
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BASE.MTH
Analysis Method : JET0420.MTH
Sample Amount : 0
ISTD Amount :

MW-4 DUPE

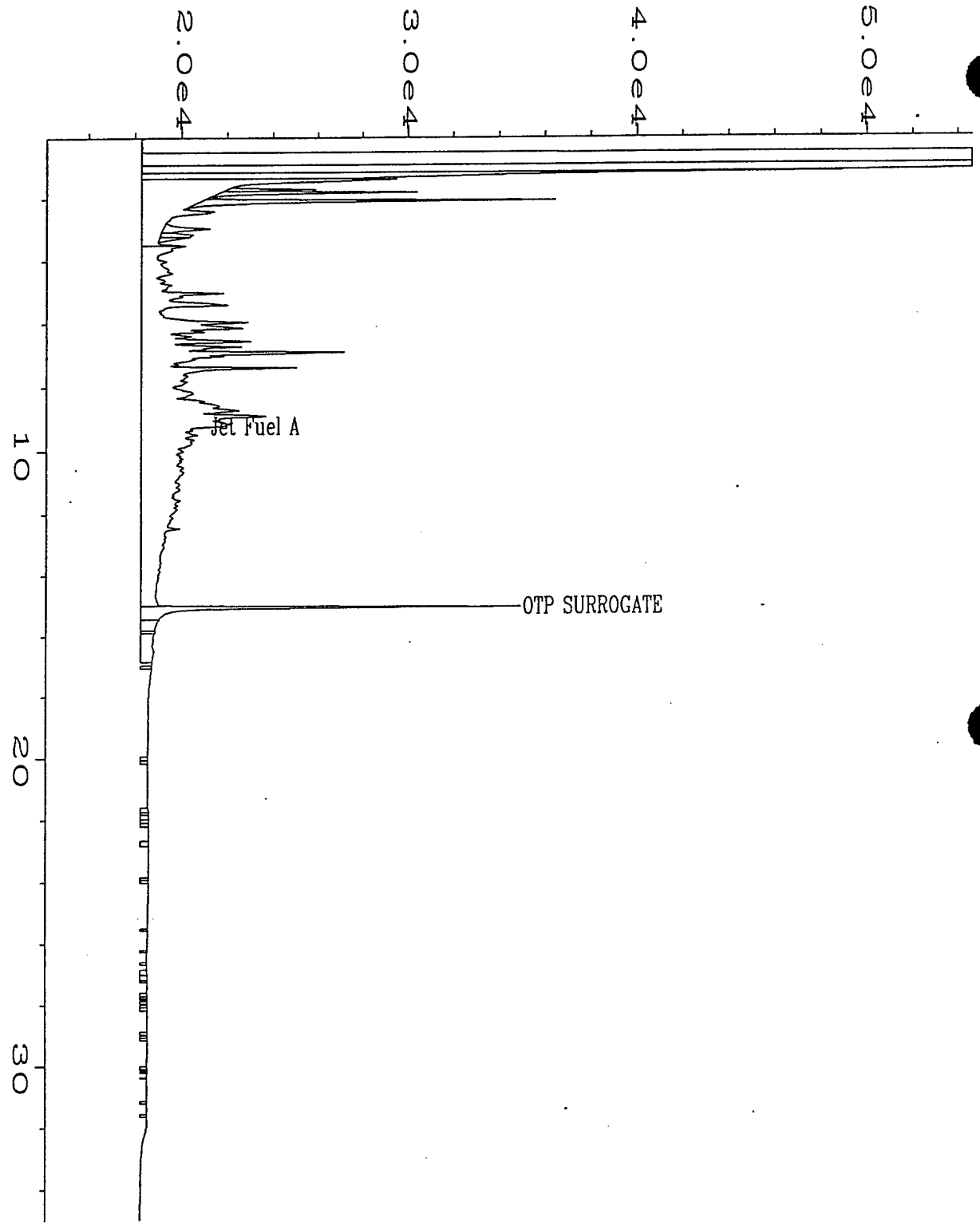


Data File Name : C:\HPCHEM\2\DATA\JET0420\024R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05928 DF=1
Run Time Bar Code:
...quired on : 21 Apr 95 08:03 AM
...eport Created on: 21 Apr 95 10:22 AM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1
Sample Info : PROJECT # 95-1264 CLIENT # MW-12D WATER

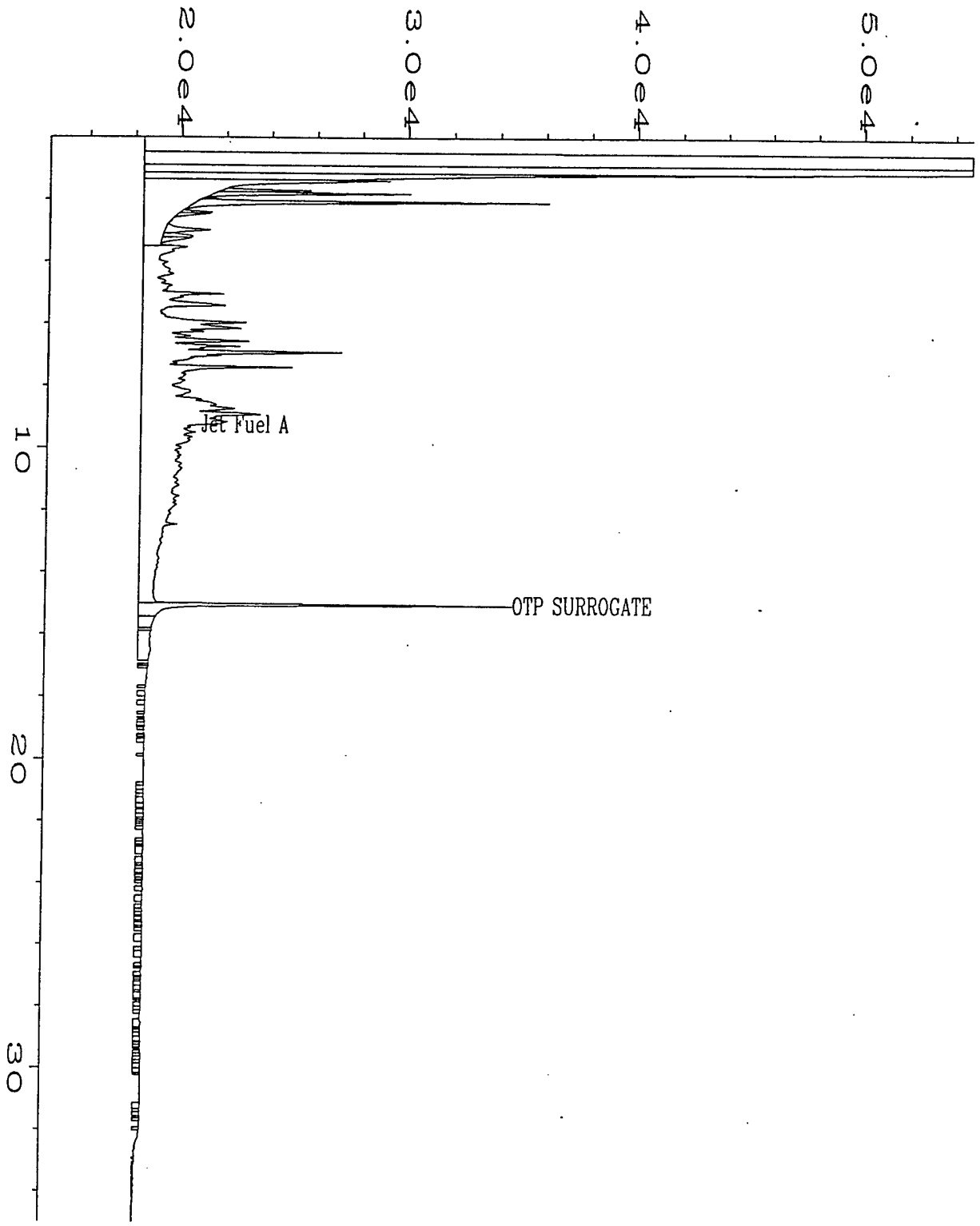
Page Number : 1
Vial Number : 24
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BA...N
Analysis Method : JET042...MT
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\2\DATA\JET0420\025R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 25
Sample Name	: X05931 DF=1	Injection Number	: 1
n Time Bar Code:		Sequence Line	: 1
quired on	: 21 Apr 95 08:49 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 10:22 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1264 CLIENT # MW-5 WATER		

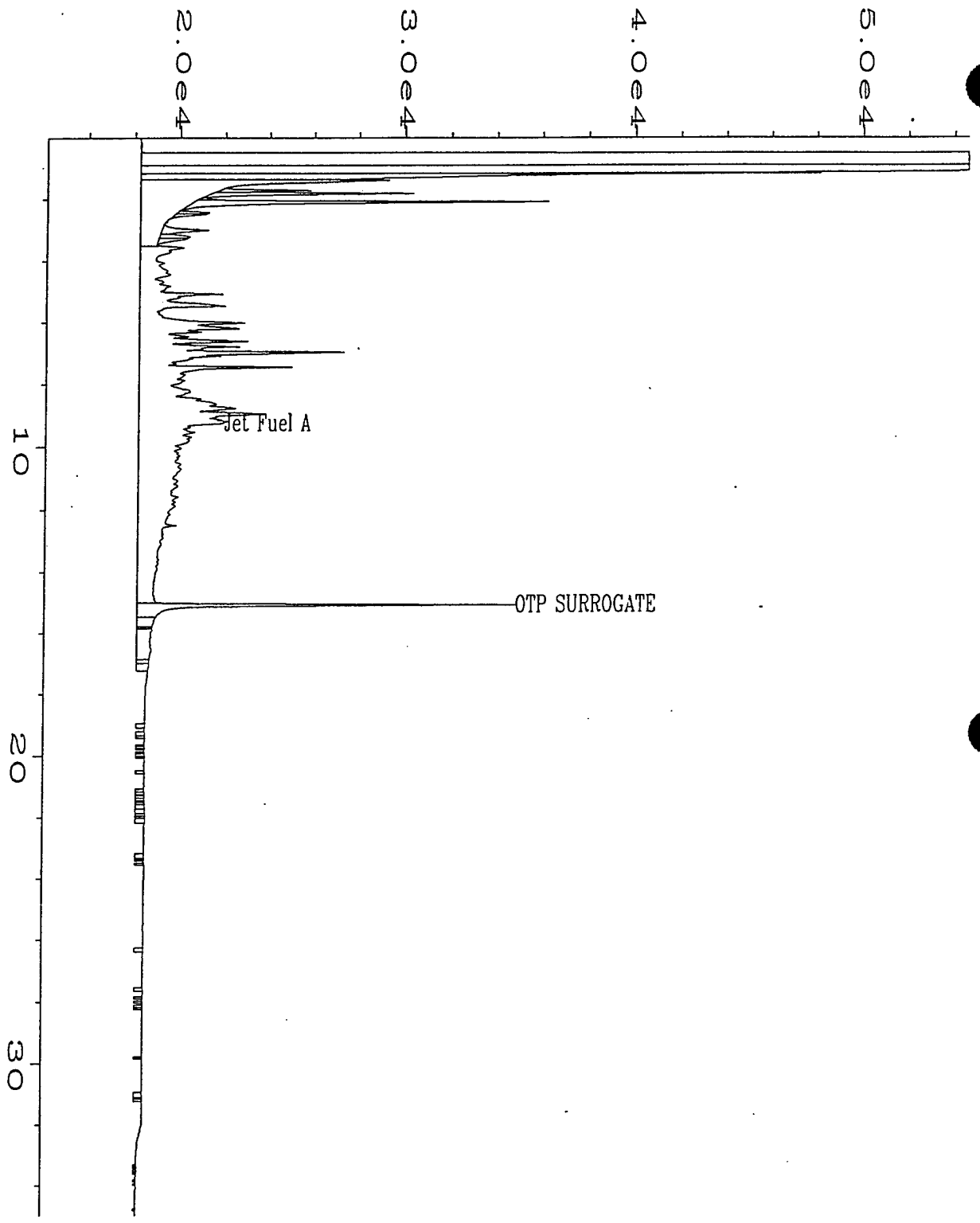


Data File Name	: C:\HPCHEM\2\DATA\JET0420\026R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 26
Sample Name	: X05932 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 09:35 AM	Instrument Method	: FID1BA[redacted]
Report Created on	: 21 Apr 95 03:53 PM	Analysis Method	: JET0420.M[redacted]
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:
Sample Info	: PROJECT # 95-1264 CLIENT # MW-8 WATER		



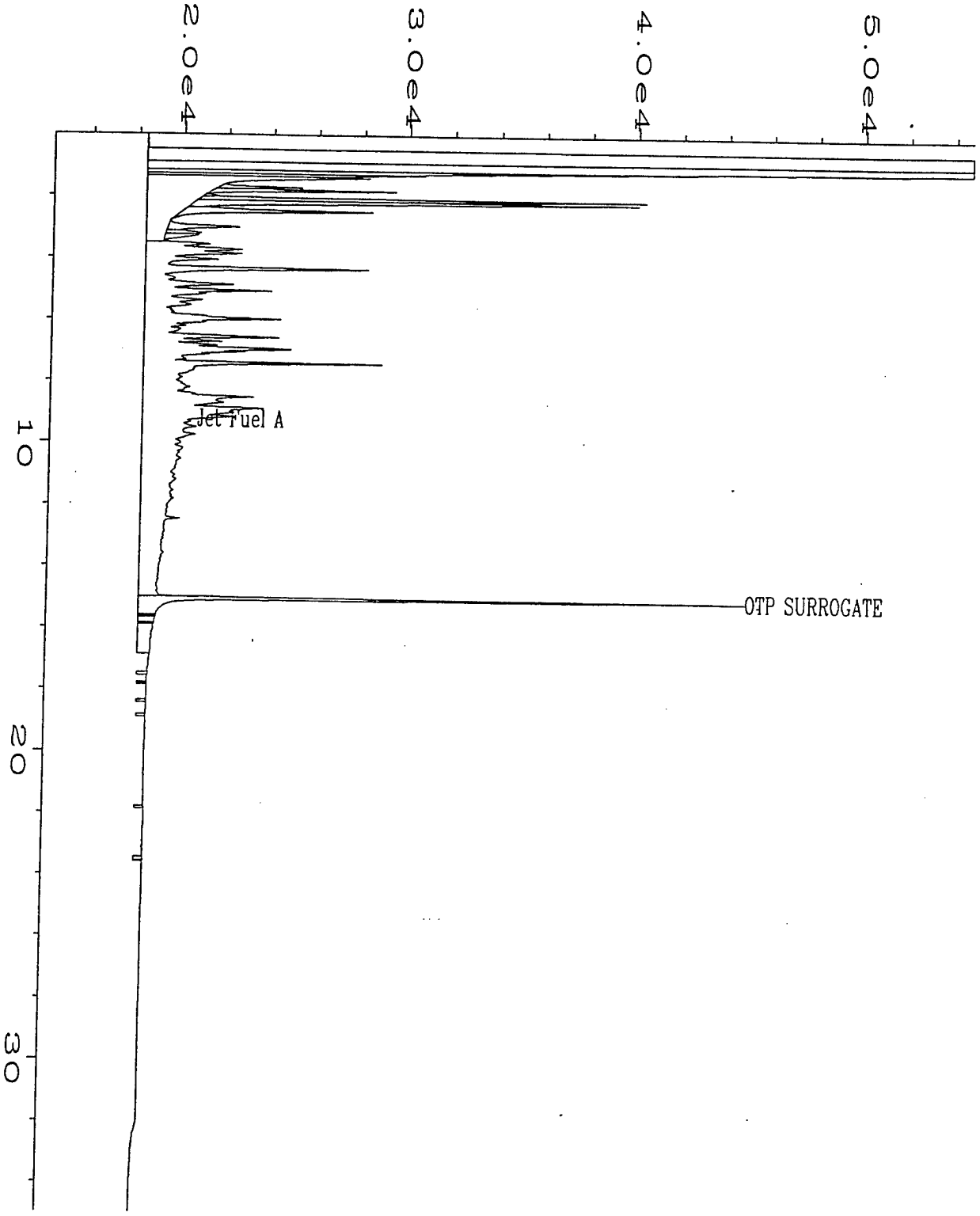
Data File Name	: C:\HPCHEM\2\DATA\JET0420\029R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 29
Sample Name	: X05932 DF=1	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 11:58 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 03:20 PM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

MW-8 (Second Run)



Data File Name : C:\HPCHEM\2\DATA\JET0420\027R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05933 DF=1
Run Time Bar Code:
Acquired on : 21 Apr 95 10:24 AM
Report Created on: 21 Apr 95 03:53 PM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1
Sample Info : PROJECT # 95-1264 CLIENT # MW-3 WATER

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BAS[illegible]
Analysis Method : JET0420[illegible]
Sample Amount : 0
ISTD Amount :



Data File Name : C:\HPCHEM\2\DATA\JET0420\033R0101.D
Operator : Dawn N. Guildner
Instrument : TEH
Sample Name : X05933 DF=1
Run Time Bar Code:
uired on : 21 Apr 95 03:06 PM
ort Created on: 21 Apr 95 03:55 PM
Last Recalib on : 21 APR 95 09:09 AM
Multiplier : 1

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 1
Instrument Method: FID1BASE.MTH
Analysis Method : JET0420.MTH
Sample Amount : 0
ISTD Amount :

MW-3 (Second Run)

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TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Matrix	: WATER
Date Prepared	: 4/20/95	Method Number	: 5030/MOD.8015
Date Analyzed	: 4/21/95		
Sequence Number	: JET17		

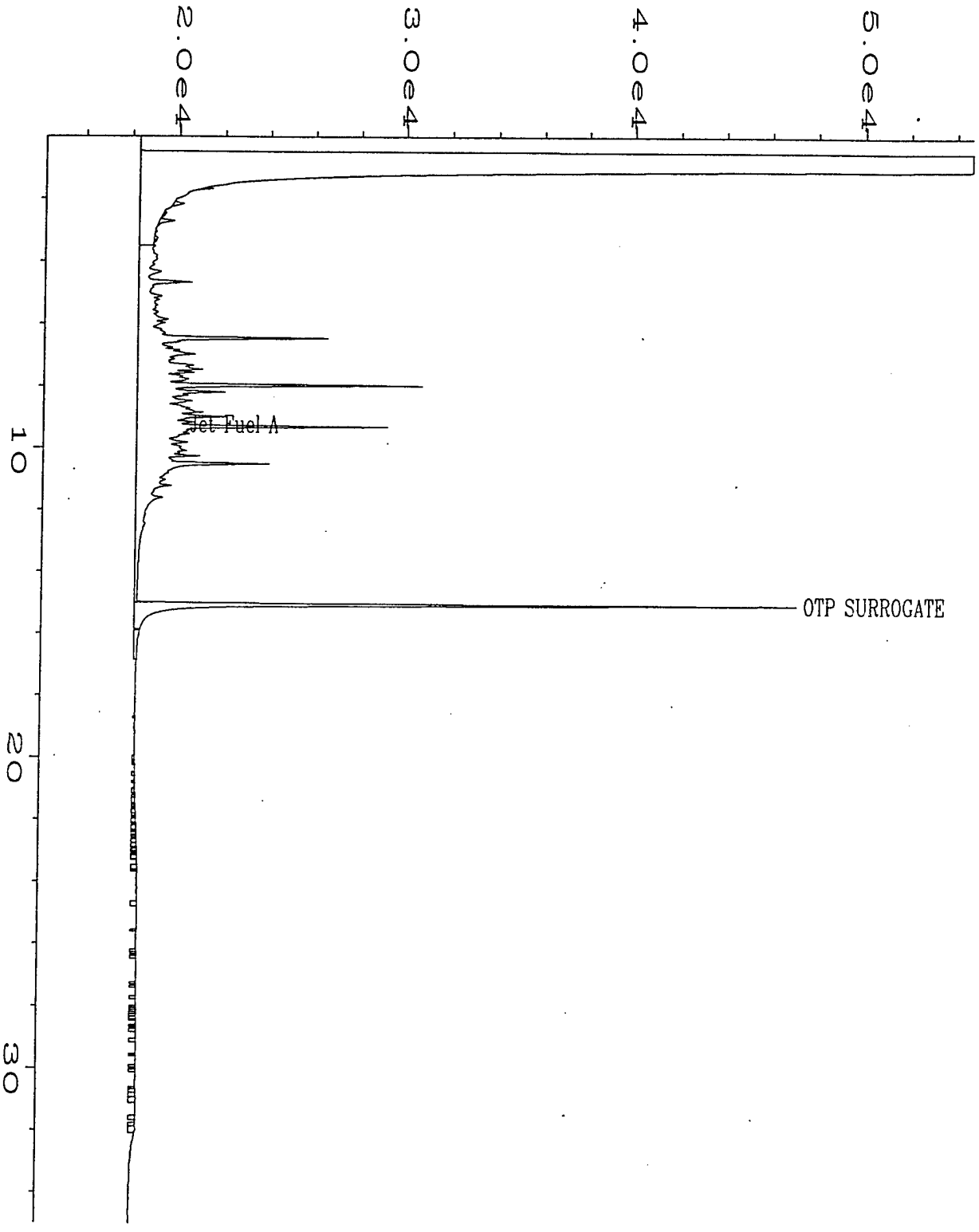
Compound Name	Theoretical Concentration mg/L	LCS Concentration mg/ L	LCS % Recovery	QC Limit % Recovery
JET FUEL	1000	854	85%	70%-130%

Surrogate Recovery (OTP): 81%

QUALIFIERS
U = TEH analyzed for but not detected.
B = TEH found in blank as well as sample (blank data should be compared).
E = Extrapolated value.
NA = Not Available.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0420\017R0101.D		
Operator	: Dawn N. Guildner	Page Number	: 1
Instrument	: TEH	Vial Number	: 17
Sample Name	: LCS042095	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 21 Apr 95 02:38 AM	Instrument Method	: FID1BASE.MTH
Report Created on	: 21 Apr 95 09:34 AM	Analysis Method	: JET0420.MTH
Last Recalib on	: 21 APR 95 09:09 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

EVERGREEN ANALYTICAL, INC.
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(303)425-6021

Methane Data Report

		Client Project No.	: 722450.2602
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Dilution Factor	: 1.00
Date Prepared	: 05/02/95	Method	: RSKSOP-175
Date Analyzed	: 05/02/95	Matrix	: Water

Evergreen Sample #	Client Sample #	Matrix	Concentration mg/L	EDL* mg/L
MB050295	Method Blank	Water	U	0.004
x05922	CPT-17	Water	0.12	0.004
x05923	CPT-18	Water	0.15	0.004
x05925	CPT-19	Water	U	0.004
x05926	MW-4	Water	U	0.004
x05928	MW-12D	Water	0.13	0.004
x05931	MW-5	Water	0.15	0.004
x05932	MW-8	Water	2.70	0.02*
x05933	MW-3	Water	1.92	0.02*

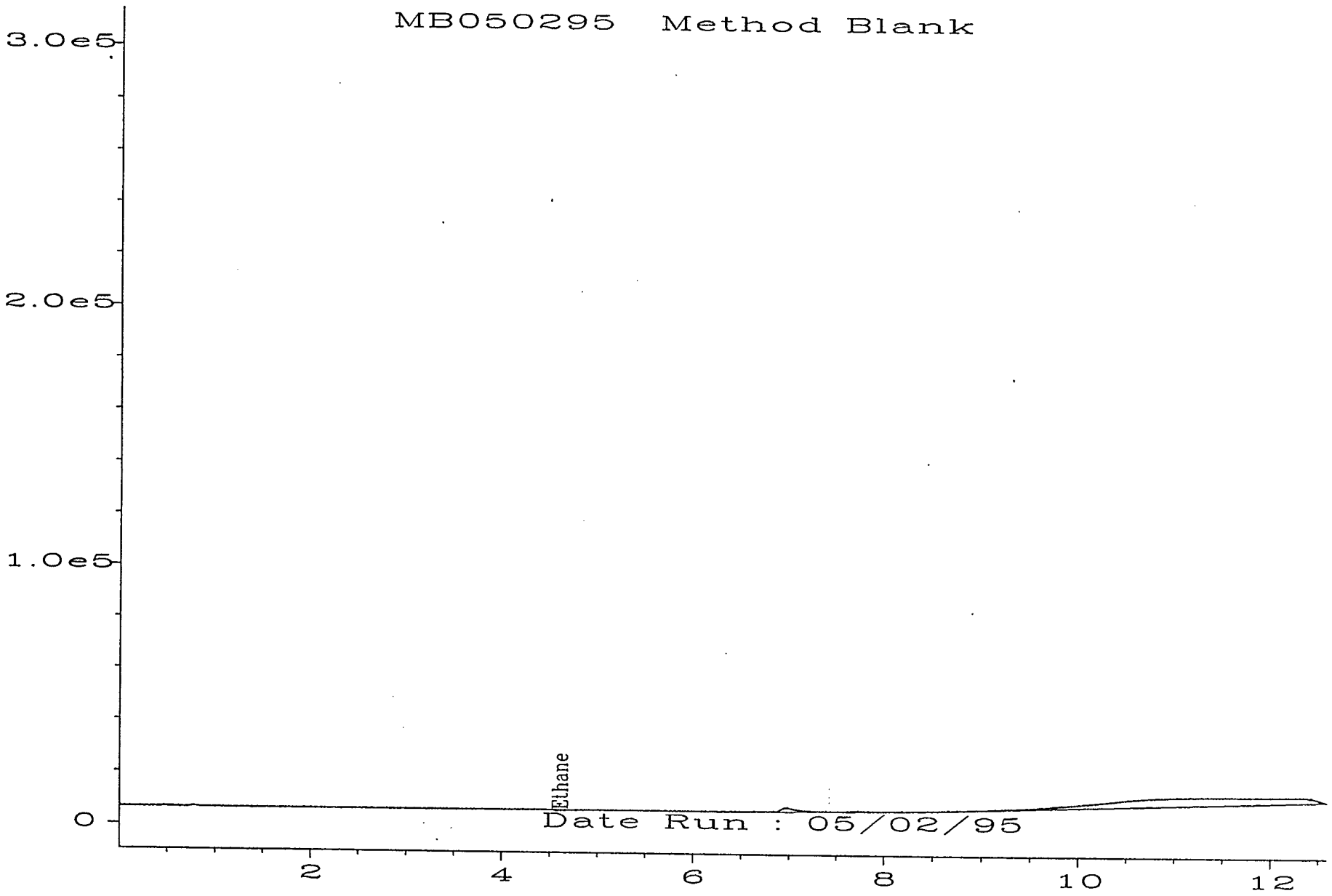
* DF=5 (100 ul of sample injected versus 500 ul for DF=1)

QUALIFIERS:

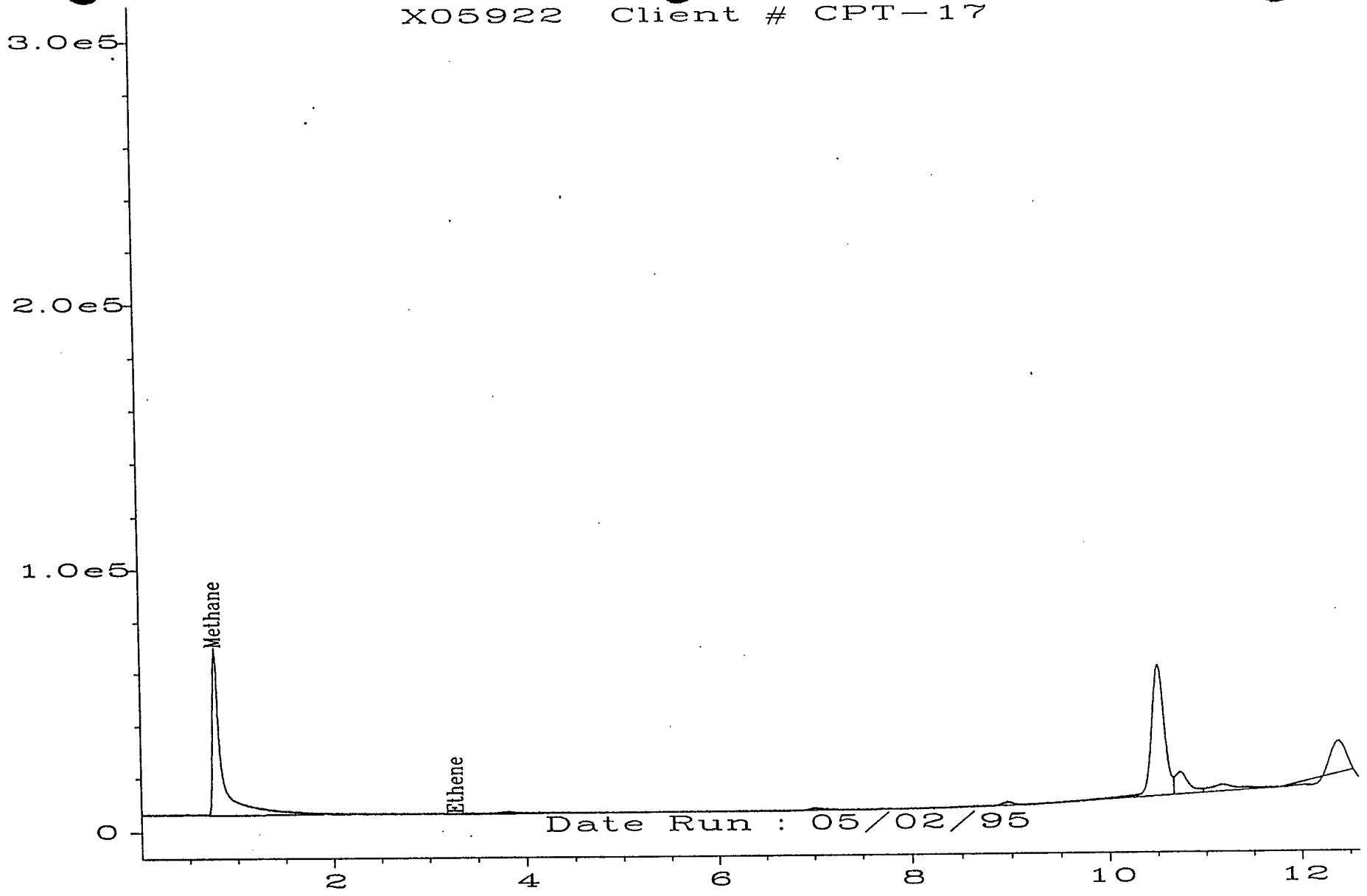
U = Compound analyzed for, but not detected above the Estimated Detection Limit.
B = Compound also found in the blank, blank data should be compared.
* = Indicates the Estimated Detection Limit.
E = Extrapolated value.

Analyst

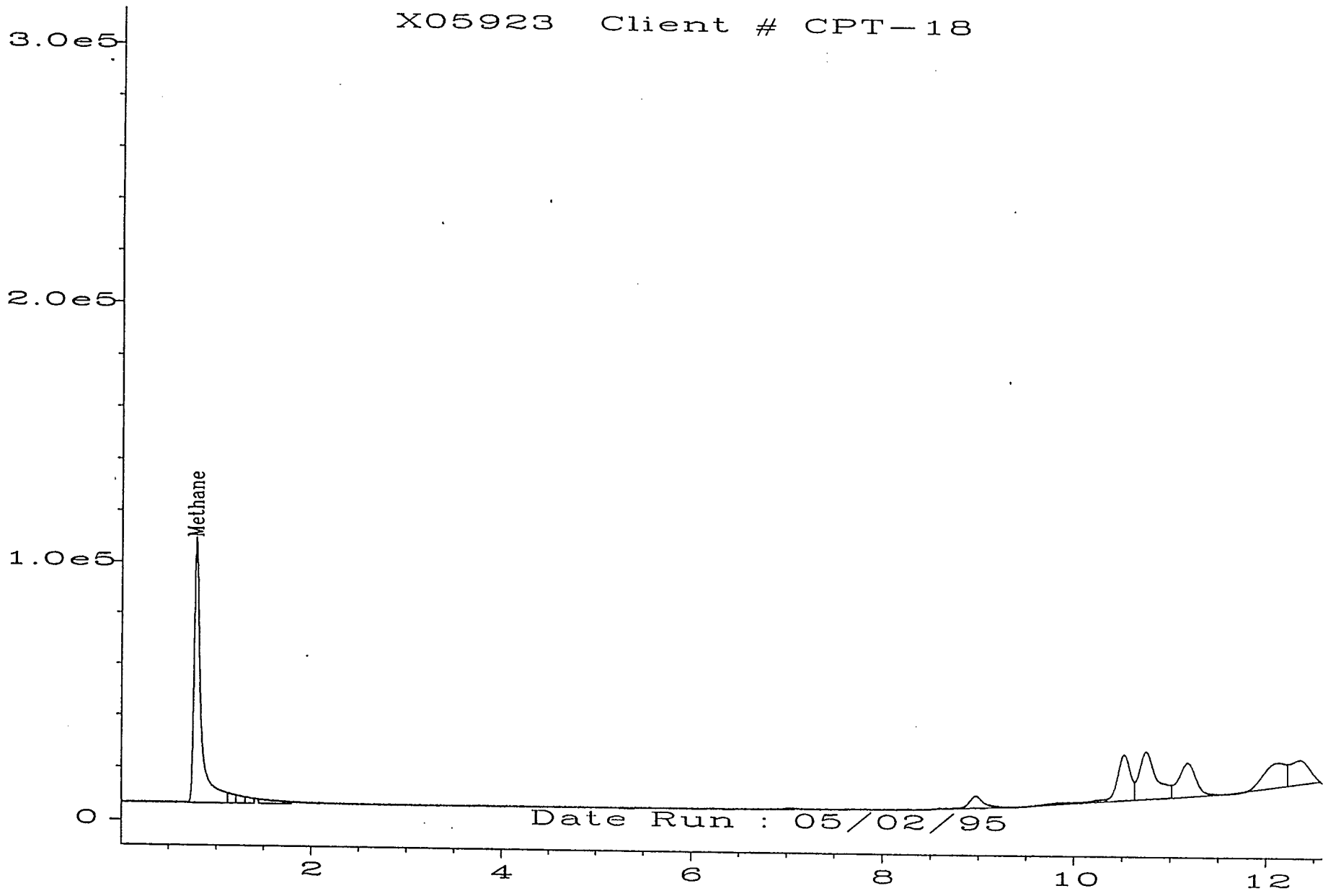
Approved



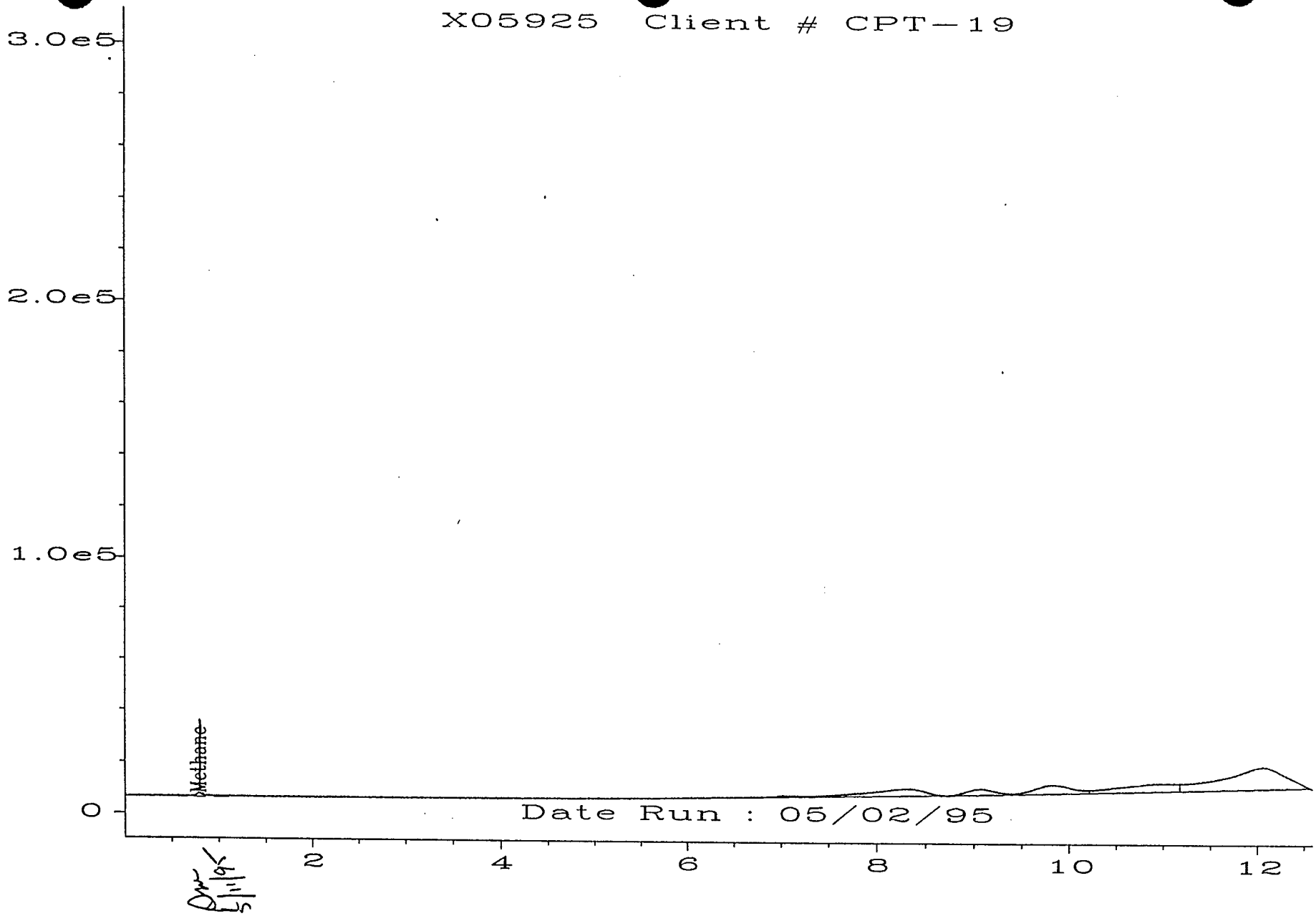
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\003R0101.D



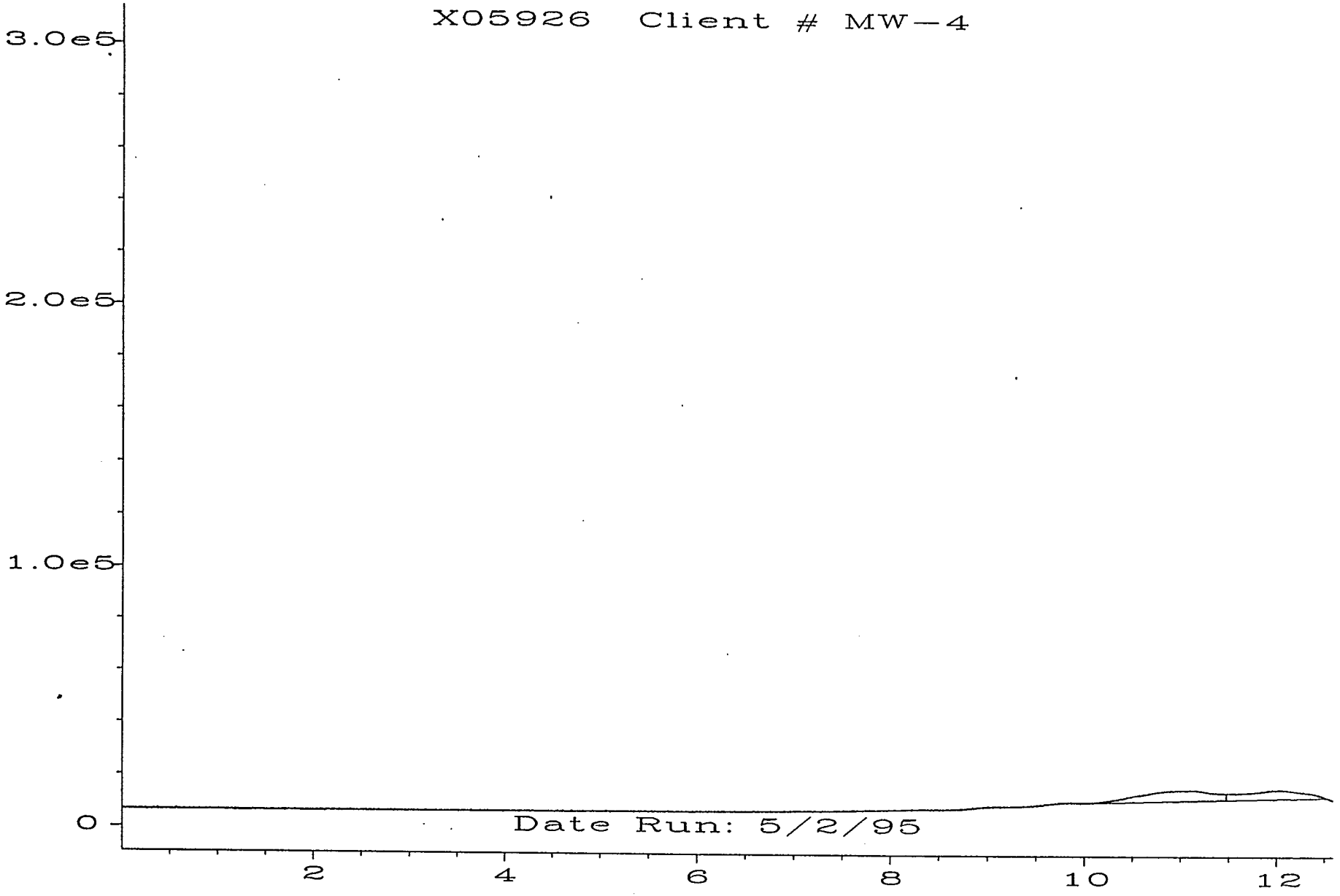
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\004R0101.D



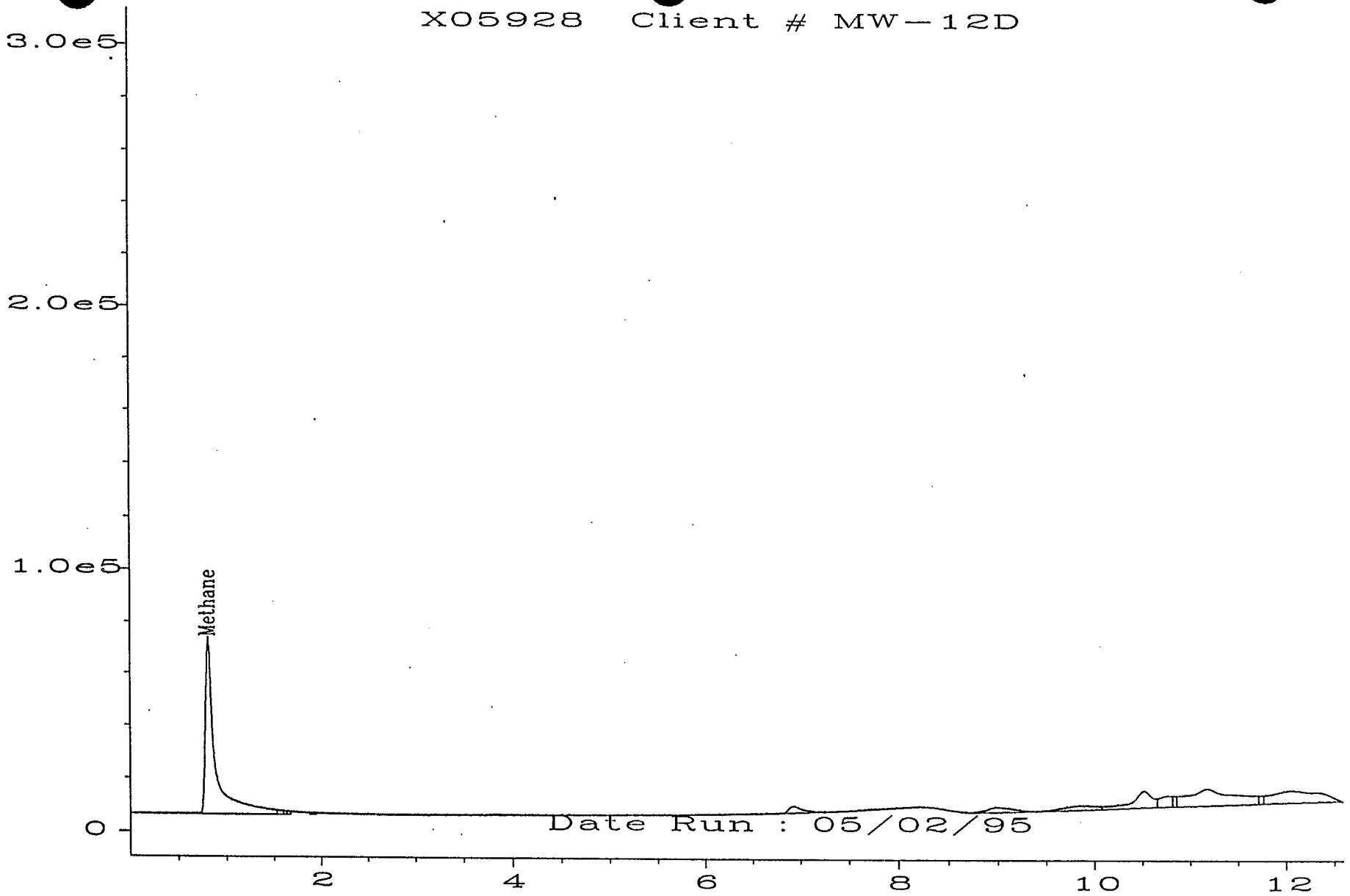
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\005R0101.D



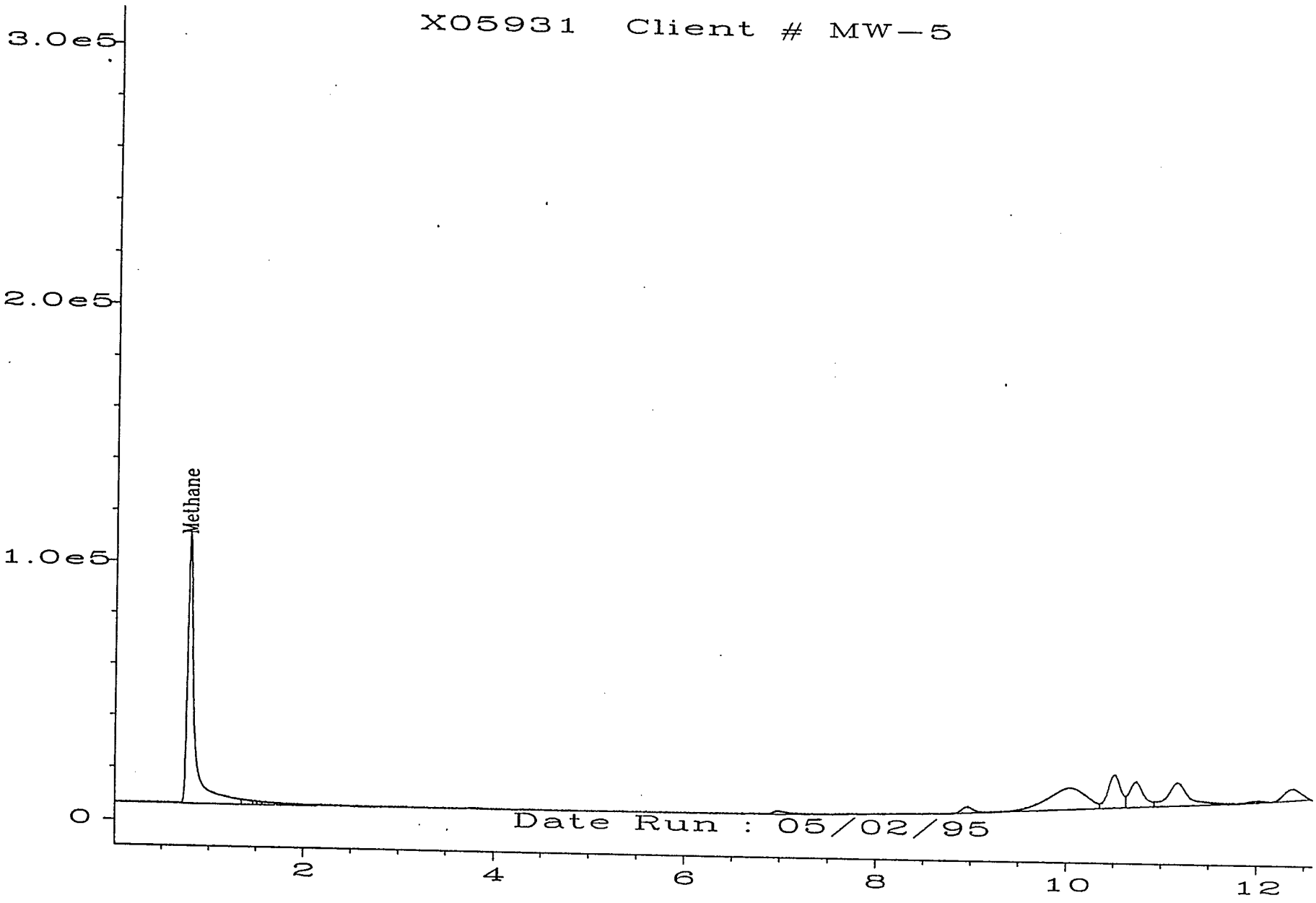
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\006R0101.D



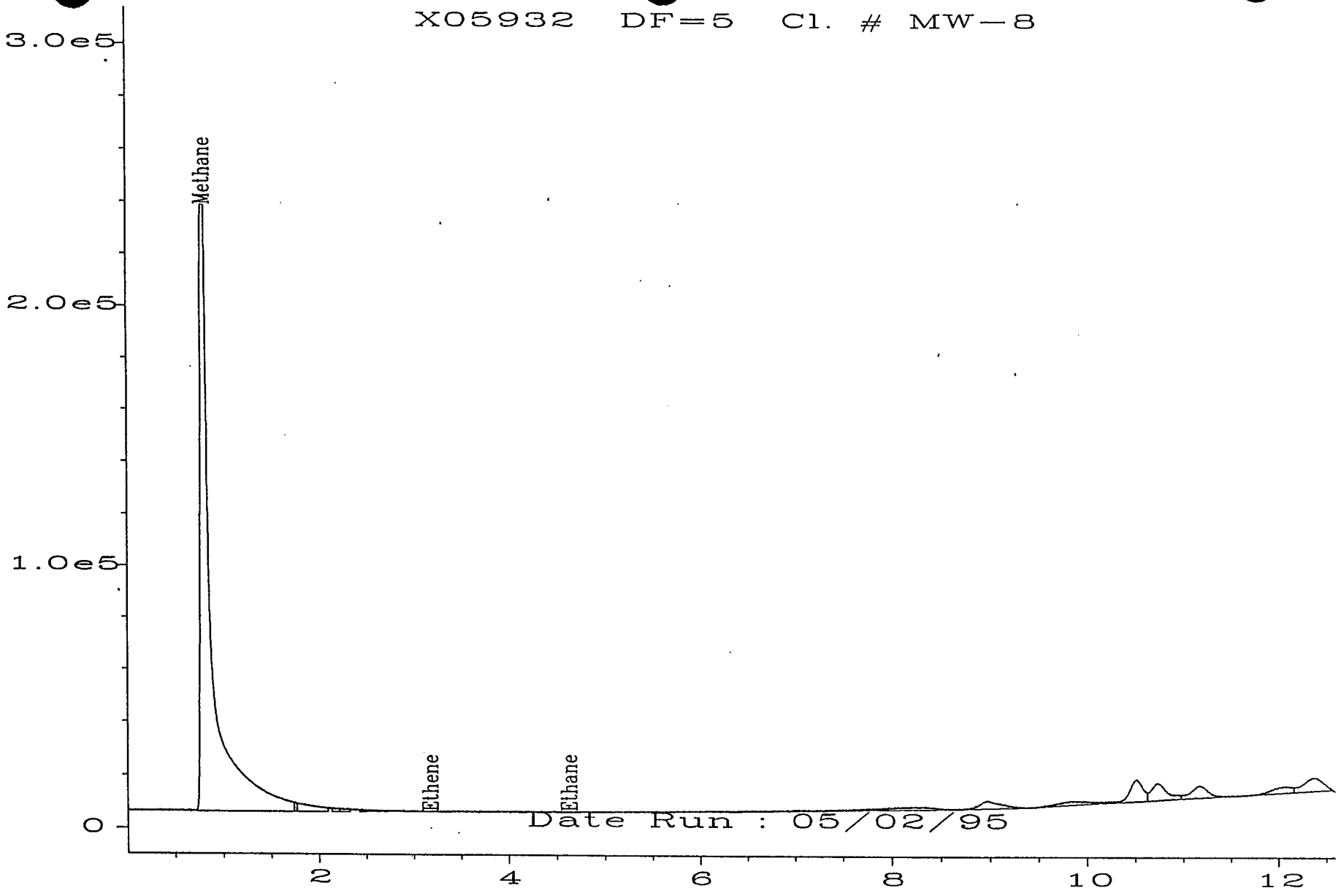
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\012R0101.D



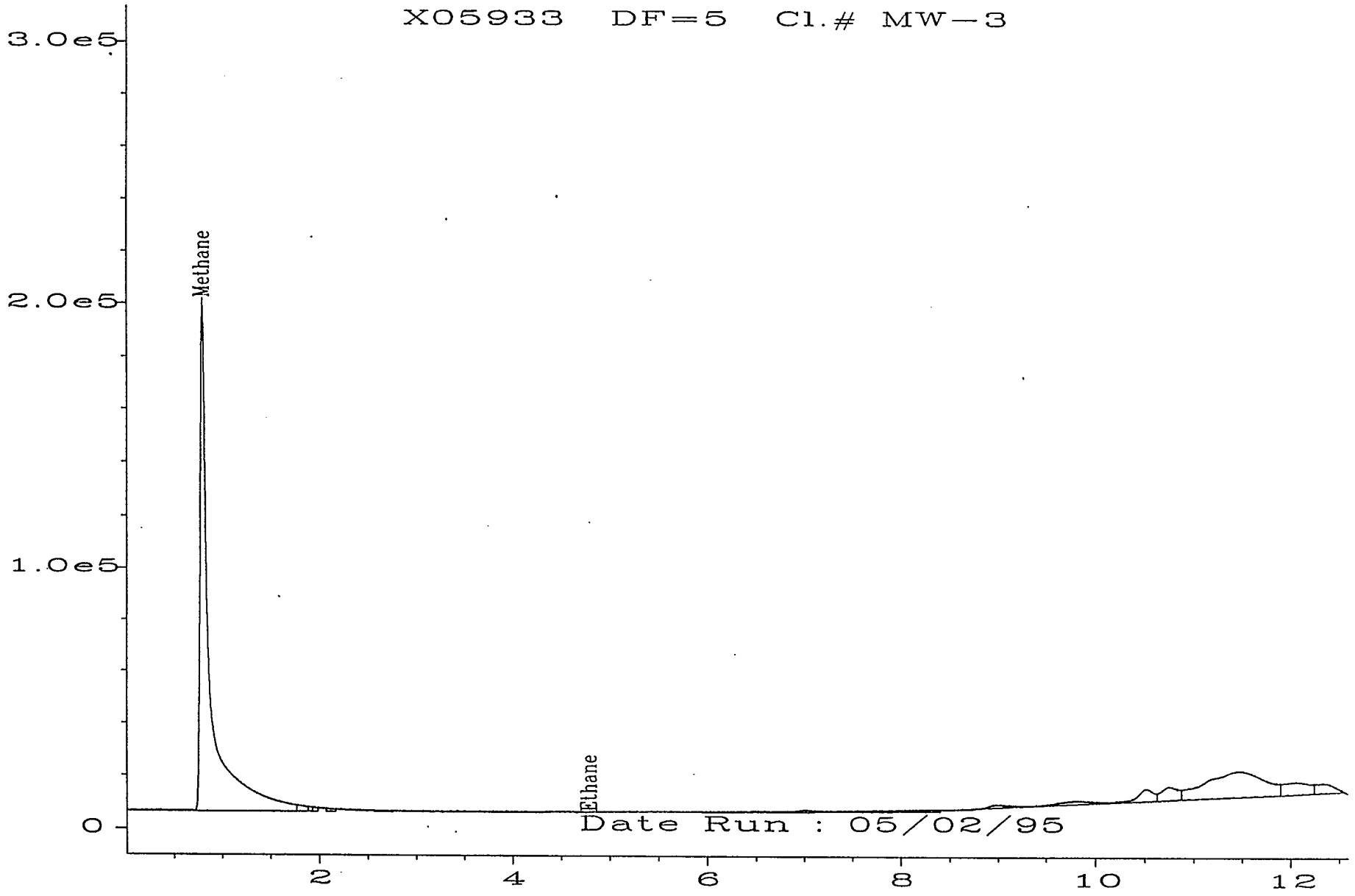
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\008R0101.D



Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\009R0101.D



Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\010R0101.D



Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\011R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.250 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Chloride (mg/L)
X05922	CPT-17	Water	14.0
X05922 Dup	CPT-17 Dup	Water	14.3
X05923	CPT-18	Water	17.0
X05925	CPT-19	Water	4.98
X05926	MW-4	Water	22.1

Method Blank 4/20/95 <0.250

Quality Assurance

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot #J-IONO1134	20.0	19.1	95.5

Analyst

Approved

1264tm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.076 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Nitrite-N (mg/L)
X05922	CPT-17	Water	<0.076
X05922 Dup	CPT-17 Dup	Water	<0.076
X05923	CPT-18	Water	<0.076
X05925	CPT-19	Water	<0.076
X05926	MW-4	Water	<0.076
X05928	MW-12D	Water	<0.076
X05931	MW-5	Water	<0.076
X05932	MW-8	Water	<0.076
X05933	MW-3	Water	<0.076
Method Blank 4/20/95			<0.076

Quality Assurance**

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot #J-IONO1134	21.0	20.7	98.6

** = Quality Assurance results reported as Nitrite (NO_2)

Analyst

Approved

1264tm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.056 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Nitrate-N (mg/L)
X05922	CPT-17	Water	<0.056
X05922 Dup	CPT-17 Dup	Water	<0.056
X05923	CPT-18	Water	<0.056
X05925	CPT-19	Water	0.058
X05926	MW-4	Water	<0.056
X05928	MW-12D	Water	<0.056
X05931	MW-5	Water	<0.056
X05932	MW-8	Water	<0.056
X05933	MW-3	Water	<0.056
Method Blank 4/20/95			<0.056

Quality Assurance**

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot #J-IONO1134	20.0	18.9	94.5

** = Quality Assurance results reported as Nitrate (NO_3)

Debra K. Boyer
Analyst

Approved

1264tm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.250 mg/L
Method : EPA 300.0

Evergreen Sample #	Client Sample ID	Matrix	Sulfate (mg/L)
X05922	CPT-17	Water	2.04
X05922 Dup	CPT-17 Dup	Water	2.06
X05923	CPT-18	Water	3.68
X05925	CPT-19	Water	14.1
X05926	MW-4	Water	11.6
X05928	MW-12D	Water	4.00
X05931	MW-5	Water	11.6
X05932	MW-8	Water	6.35
X05933	MW-3	Water	3.95
Method Blank 4/20/95			<0.250

Quality Assurance

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot #J-IONO1134	30.0	29.0	96.7

Deba V. Byer
Analyst

Approved

1264tm.4

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(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 5.00 $mgCaCO_3/L$
Method : EPA 310.1

Evergreen Sample #	Client Sample ID	Matrix	Total Alkalinity ($mgCaCO_3/L$)
X05923	CPT-18	Water	54.1
X05923 Dup	CPT-18 Dup	Water	51.8
X05926	MW-4	Water	68.4
X05928	MW-12D	Water	<5.00
X05931	MW-5	Water	<5.00
X05932	MW-8	Water	<5.00
Method Blank 4/20/95			<5.00

Quality Assurance

	True Value ($mgCaCO_3/L$)	Result ($mgCaCO_3/L$)	% Recovery
APG Minerals reference Lot #13862	11.8	11.5	97.5

Debra L. Byers
Analyst

Approved

1264tm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
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INORGANIC ANALYSIS DATA SHEET

722450.2602

Date Sampled :4/18/95	Client Project :Seymore Johnson AFB
Date Received:4/19/95	Lab Project No.:95-1264
Date Prepared:4/28/95	Method :600/4-79-020, 200.7
Date Analyzed:5/1/95	Matrix :Water

Units: mg/L Basis: Total Metal

Client Sample#	MW-4	MW-12D		
Evergreen Sample#	X05926P	X05928O	Reagent Blank	Reporting Limits
Pb	< 0.055	< 0.055	< 0.055	0.055

Digested Reference: Inorganic Ventures Lead Lot # J-PB02038	True Value (mg/L)	Result (mg/L)	% Recovery
	2.00	1.67	83.5

M.C.
Analyst

DC
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

INORGANIC ANALYSIS DATA SHEET
MATRIX SPIKE REPORT

Client Sample #:	MW-4		722450.2602
Lab Sample #	:X05926MS	Client Project	:Seymore Johnson AFB
Date Sampled	:4/18/95	Lab Project #	:95-1264
Date Received	:4/19/95	Method	:600/4-79-020, 200.7
Date Prepared	:4/28/95	Matrix	:Water
Date Analyzed	:5/1/95	Basis	:Total Metal

Element	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spiked Amount (mg/L)	Percent Recovery
Pb	0.93	< 0.055	1.00	93

M.C
Analyst

DC
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

INORGANIC ANALYSIS DATA SHEET
MATRIX SPIKE DUPLICATE REPORT

Client Sample #	:MW-4		722450.2602
Lab Sample #	:X05926MSD	Client Project	:Seymore Johnson AFB
Date Sampled	:4/18/95	Lab Project #	:95-1264
Date Received	:4/19/95	Method	:600/4-79-020, 200.7
Date Prepared	:4/28/95	Matrix	:Water
Date Analyzed	:5/1/95	Basis	:Total Metal

Element	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spiked Amount (mg/L)	Percent Recovery	Relative % Difference
Pb	0.904	< 0.055	1.00	90.4	2.8

M.C.
Analyst

DC
Approved

APPENDIX C

GRIDDED MODEL INPUT AND CALIBRATION RESULTS

FOR BIOPLUME II MODEL

Sensitivity Analysis Along Column 13 (x=13)

			Concentration (ug/l)								
		Final Calibration	Dispersivity		Conductivity		Anaerobic Decay Coefficient		Retardation		
y	Distance (ft)	Setup16 z	sen-b01 z	sen-b10 z	sen-k01 z	sen-k10 z	sen-a01 z	sen-a10 z	sen-r0 z	sen-r10 z	
		Calibrated Model	Dispersivity x.1	Dispersivity x 10	K x 0.1	K x 10	Anaerobic Decay Coef	Anaerobic Decay Co	R = 1	R = 19.3	Gridded BTEX Plume
2	100	0	0	0	0	0	0	0	0	0	0
3	150	0	0	0	0	0	0	0	0	0	0
4	200	0	0	0	0	0	0	0	0	0	0
5	250	0	0	348	0	0	0	0	0	0	500
6	300	11506	12301	6116	35819	772	28076	2015	15829	1355	10000
7	350	4405	4526	3615	0	864	22877	0	8988	0	10000
8	400	1342	1290	1424	0	1186	18273	0	3798	0	5000
9	450	317	45	457	0	625	12553	0	2177	0	0
10	500	0	0	0	0	713	6822	0	1060	0	0
11	550	0	0	0	0	746	1670	0	521	0	0
12	600	0	0	0	0	708	227	0	232	0	0
13	650	0	0	0	0	668	0	0	0	0	0
14	700	0	0	0	0	605	0	0	0	0	0
15	750	0	0	0	0	515	0	0	0	0	0
16	800	0	0	0	0	403	0	0	0	0	0
17	850	0	0	0	0	270	0	0	0	0	0
18	900	0	0	0	0	147	0	0	0	0	0
19	950	0	0	0	0	57	0	0	0	0	0
20	1000	0	0	0	0	0	0	0	0	0	0
21	1050	0	0	0	0	0	0	0	0	0	0
22	1100	0	0	0	0	0	0	0	0	0	0
23	1150	0	0	0	0	0	0	0	0	0	0
24	1200	0	0	0	0	0	0	0	0	0	0
25	1250	0	0	0	0	0	0	0	0	0	0
26	1300	0	0	0	0	0	0	0	0	0	0
27	1350	0	0	0	0	0	0	0	0	0	0
28	1400	0	0	0	0	0	0	0	0	0	0
29	1450	0	0	0	0	0	0	0	0	0	0

Seymour Johnson AFB
Groundwater Model Calibration Error
Setup-2

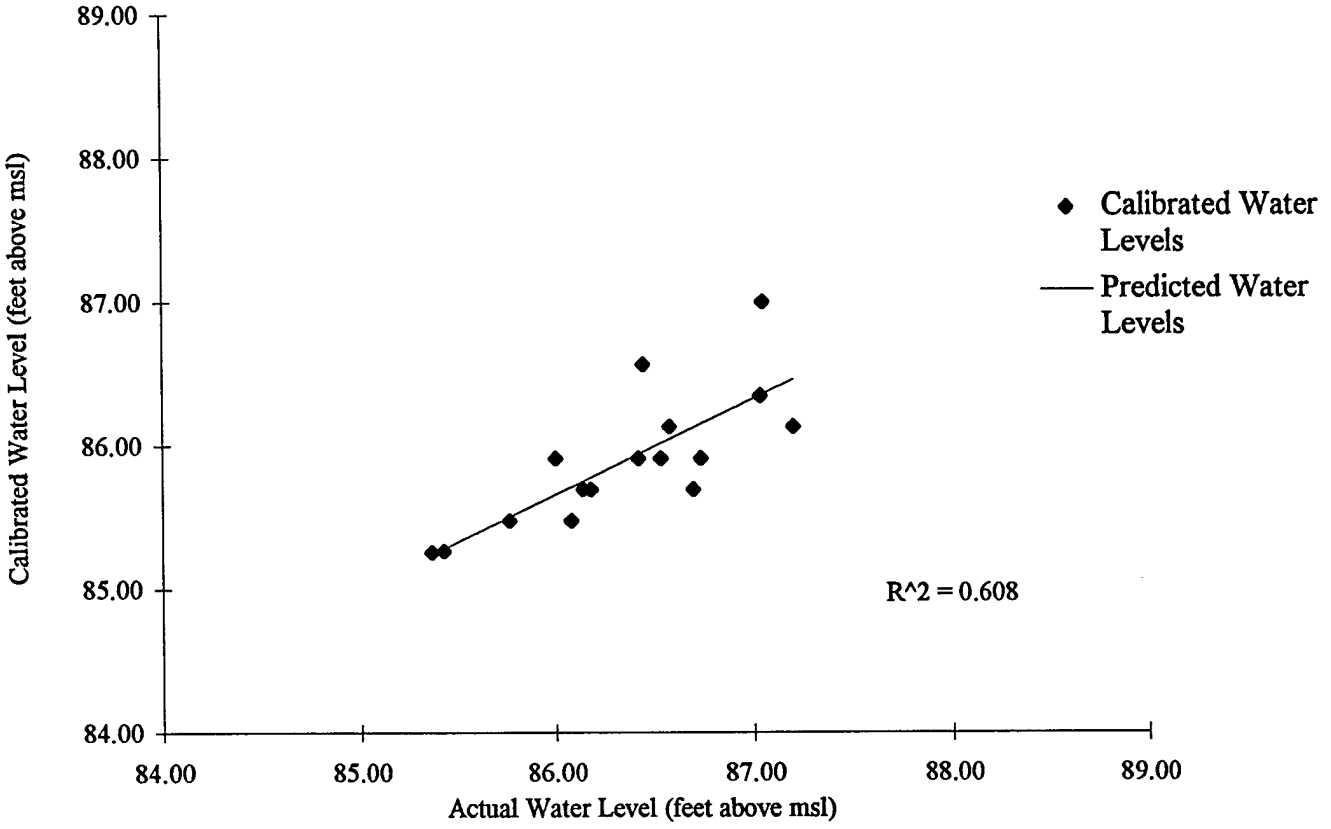
Location	Average Water Level	Calibrated Water Level	Deviation from Mean		
			h_m-h_s	$abs(h_m-h_s)$	$(h_m-h_s)^2$
MW-3	87.20	86.13	-1.07	1.07	1.15
MW-4	86.54	85.91	-0.62	0.62	0.39
MW-5	86.14	85.70	-0.45	0.45	0.20
MW-6	85.77	85.48	-0.29	0.29	0.09
MW-7	86.00	85.91	-0.09	0.09	0.01
MW-8	87.04	86.35	-0.69	0.69	0.48
MW-11	86.42	85.91	-0.51	0.51	0.26
MW-14	86.70	85.70	-1.00	1.00	1.01
MW-15	86.08	85.48	-0.60	0.60	0.36
MW-16	85.43	85.26	-0.17	0.17	0.03
MW-17	85.37	85.26	-0.11	0.11	0.01
MW-18	86.45	86.56	0.11	0.11	0.01
MW-19	87.05	87.00	-0.05	0.05	0.00
CPT-16	86.18	85.69	-0.49	0.49	0.24
CPT-17	86.74	85.91	-0.83	0.83	0.68
CPT-18	86.58	86.13	-0.45	0.45	0.20
		Totals:	-7.32	7.5	5.1

n=	16
ME=	-0.457
MAE=	0.47
RMS=	0.57

hm = Calibrated Water Level
hs = Actual Water Level
n = Number of Observations
$ME = 1/n * \text{å}(h_m-h_s)$
$MAE = 1/n * \text{å}|(h_m-h_s)|$
$RMS = (1/n * \text{å}(h_m-h_s)^2)^{0.5}$

Draft

Groundwater Model Water Table Calibration



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.780323519
R Square	0.608904794
Adjusted R Square	0.580969422
Standard Error	0.301888784
Observations	16

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1.986501483	1.986501483	21.79691029	0.000362007
Residual	14	1.275915733	0.091136838		
Total	15	3.262417216			

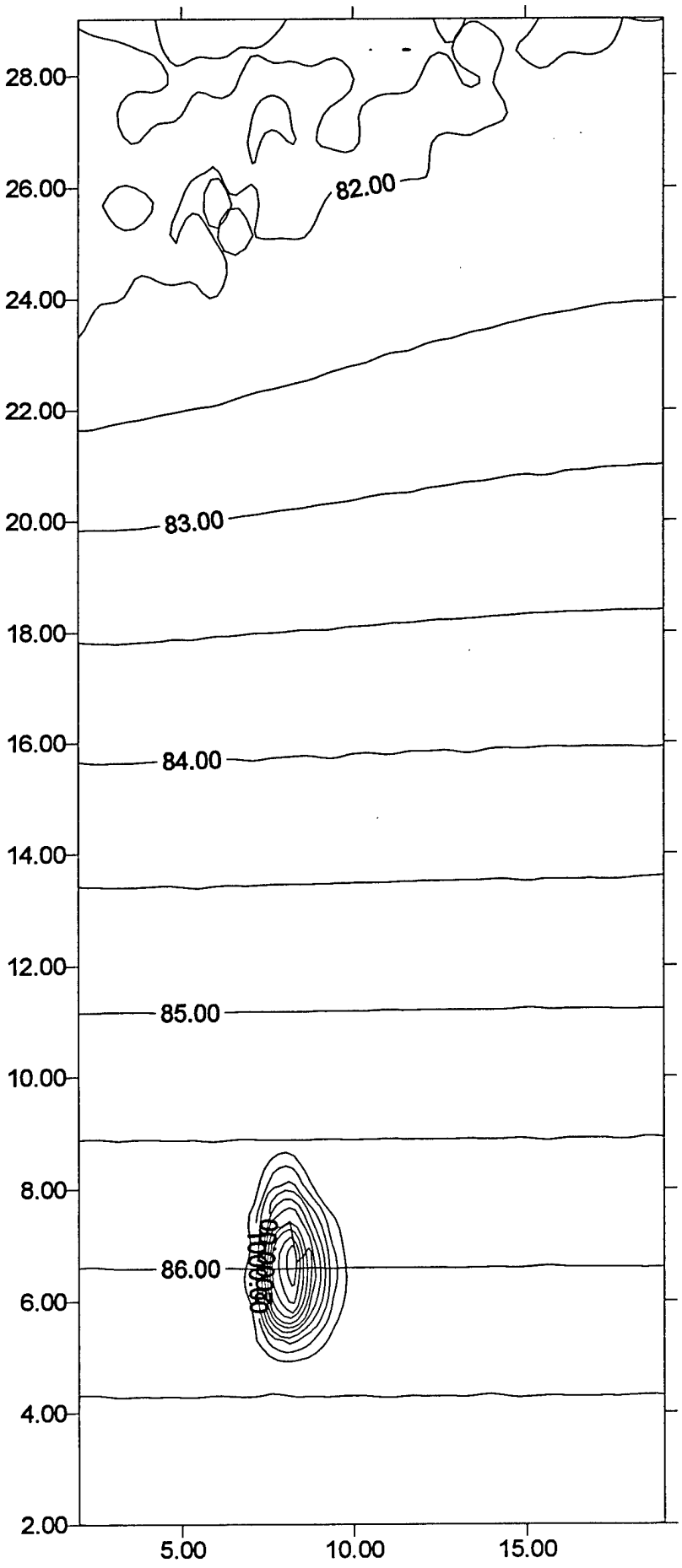
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	28.3606218	12.32438089	2.301180242	0.037266777	1.927430217	54.79381338	1.927430217	54.79381338
X Variable 1	0.666287568	0.142713232	4.668716129	0.000362007	0.360197855	0.97237728	0.360197855	0.97237728

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	86.46311865	-0.333218654	-1.103779508
2	86.01892694	-0.106736942	-0.353563787
3	85.75685383	-0.061543832	-0.203862598
4	85.50810647	-0.031226473	-0.103437011
5	85.66357357	0.247786427	0.820787126
6	86.35207073	-0.005050726	-0.016730418
7	85.94341435	-0.031674351	-0.104920595
8	86.12775391	-0.431013911	-1.427724161
9	85.71465562	-0.235705619	-0.780769713
10	85.2815687	-0.0209087	-0.069259613
11	85.24159145	0.013988554	0.046336778
12	85.96118202	0.602947981	1.997252008
13	86.36095456	0.63904544	2.116824054
14	85.78128438	-0.086434376	-0.286311982
15	86.15440541	-0.241525414	-0.800047655
16	86.0477994	0.081270597	0.269207076

Seymour Johnson AFB
Head Comparison
Setup-2

Well	Cell (X,Y)	Groundwater Elevation April,26	Groundwater Elevation May,18	Groundwater Elevation July,19	Average Elevation	Model Elevation
MW-2	(13,7)	87.04	87.78	87.5	87.44	85.91219
MW-3	(14,6)	87.09	86.92	87.6	87.20333333	86.1299
MW-4	(13,7)	86.51	86.21	86.89	86.53666667	85.91219
MW-5	(14,8)	86.13	85.86	86.44	86.14333333	85.69531
MW-6	(12,9)	85.82	85.55	85.94	85.77	85.47688
MW-7	(11,7)	86	85.73	86.28	86.00333333	85.91136
MW-8	(12,5)	86.89	86.82	87.4	87.03666667	86.34702
MW-11	(12,7)	86.39	86.14	86.74	86.42333333	85.91174
MW-14	(18,8)			86.7	86.7	85.69674
MW-15	(15,9)			86.08	86.08	85.47895
MW-16	(13,10)			85.43	85.43	85.26066
MW-17	(8,10)			85.37	85.37	85.25558
MW-18	(8,4)			86.45	86.45	86.56413
MW-19	(10,2)			87.05	87.05	87
CPT-16	(13,8)	86.18	85.9	86.46	86.18	85.69485
CPT-17	(15,7)	86.64	86.47	87.11	86.74	85.91288
CPT-18	(11,6)	86.72	86.56	86.46	86.58	86.12907
CPT-19	(14,5)	85.08	85.01	84.97	85.02	86.3474



Seymour Johnson AFB Setup-2, Initial Steady-state Conditions

ESTIMATION OF LONGITUDINAL DISPERSIVITY

Assumptions: A. Plume migration is sufficiently aligned along the longitudinal axis of the grid to calculate a longitudinal moment.

B. Longitudinal dispersivity is 1/10 of the distance from the contaminant source to the center of contamination.

From Appendix D2, an estimate for the center of mass along the plume center line will be taken by calculating the longitudinal moment around MW-13, which is near the source of contamination.

	Mass (ug/l)	Distance From MW-13 (ft)	Mass x Distance (ug-ft/L)
	13,800	67	924,600
	10,000	90	900,000
	8,860	93	823,980
	1,000	108	108,000
	26	135	3,510
	10	190	1,900
Totals:	33,696		2,761,990

Now, estimate the longintudinal centroid of the plume:

Σ(mass x distance)/Σ(mass) in feet:	81.97
Estimated distance from cell (10,3) to the centroid in feet:	81.97
Estimated Longitudinal Dispersivity (Dist. x 0.1) in feet:	8.20

APPENDIX D

BIOPLUME II MODEL OUTPUT

APPENDIX E

ANALYTICAL MODELS

APPENDIX E

ANALYTICAL MODELS

One-dimensional analytical models based on the works of Bear (1979) and vanGenuchten and Alves (1982) were used during the modeling effort. The models incorporate advection, dispersion, retardation, and first-order decay in order to simulate one-dimensional contaminant fate and transport. Analytical models were first used to screen potential value ranges for select parameters prior to incorporation into the Bioplume II model. Afterwards, analytical model results were used for comparison to calibrated and predictive Bioplume II models to help confirm the results of the numerical models. Analytical model results are presented in Appendix F.

To verify the results of model SETUP16, Parsons ES compared numerical results obtained from Bioplume II to results obtained from a steady-state one-dimensional analytical model (Bear, 1979), which incorporates one-dimensional advection, dispersion, retardation, and first-order decay. Using hydrogeologic parameters and contaminant decay kinetics as calibrated in the numerical model, the analytical model predicted dissipation of the BTEX plume within 400 feet of the source area.

Source decay combined with the contaminant decay kinetics and hydrogeologic parameters used to calibrate the numerical model was used in a one-dimensional analytical model to verify the Bioplume II model results for model SR5. Assuming a 95-percent reduction of BTEX concentration at the source over the 5-year source removal time frame, the first-order decay coefficient for the BTEX source is 0.000028 day^{-1}. The selected analytical model (vanGenuchten and Alves, 1982) incorporates advection, dispersion, retardation, and first-order decay of both the source and the solute concentrations. Results from this analytical model, were compared to BTEX concentrations observed from the 1995 data and the numerical model results from Bioplume II. This model predicted that the creek would never be impacted. Using a BTEX decay rate of 0.00359 day^{-1} (which is approximately equal to the calibrated decay rate in the Bioplume II numerical models), the maximum predicted BTEX concentration at the creek was 2×10^{-7} µg/L.

Bioplume II results for model SR3 were compared to results from the analytical model described above using a BTEX source decay rate of 0.0000468 day^{-1}. This rate assumes a 95-percent reduction of BTEX concentration at the source over the 3-year source removal time frame. The one-dimensional analytical model results using this source decay coefficient were nearly identical to those compared to model SR5; however, as would be expected, the model with the more rapid source decay rate also predicts BTEX concentrations decaying toward zero more rapidly.

First-Order Rate Constant Calculation
Calculated Along the Primary Southeastern Groundwater Flow Path
Using 0.005 ft/ft Gradient
Former AGE Fueling Facility Site Intrinsic Remediation EE/CA
Seymour Johnson AFB, North Carolina

Compound	Monitoring Point Location							
	MW-13 Measured Concentration (µg/L)	MW-13 Equilibrium Concentration[a/] (µg/L)	MW-4 Measured Concentration (µg/L)	MW-4 Corrected Concentration[b/] (µg/L)	First Order Rate Constant Between B and C[c/] ($week^{-1}$)	CPT-16 Measured Concentration (µg/L)	CPT-16 Corrected Concentration[b/] (µg/L)	First Order Rate Constant Between C and D[c/] ($week^{-1}$)
benzene	1000000	9280	2300	1361	0.0251	2100	3216	-0.0089
toluene	3500000	8490	3300	1953	0.0192	2100	3216	0.0007
ethylbenzene	2300000	670	1100	651	0.0004	560	858	0.0066
Total xylenes	7300000	1171	7100	4202	-0.0167	4100	6278	0.0033
Total BTEX	14100000	19611	13800	8167	0.0114	8860	13568	0.0004
trimethylbenzene	10000000	870	1470	870		960	1470	

Overall Maximum	0.0251
Overall Minimum	-0.0167
Overall Average	0.0041

[a/] Corrected for LNAPL in sample by methods in Wiedemeier et al. (1995).
[b/] See text for calculation of corrected concentration.
[c/] See text for calculation of first order rate constant.
Assuming 0.125 ft/day velocity (K = 7.5 ft/day).

Distance between MW-13 and MW-4 is 67 ft., travel time of 76.6 weeks.
Distance between MW-4 and CPT-16 is 33 ft., travel time of 37.8 weeks.

RATE CONSTANT CALCULATIONS
FORMER AGE FUELING FACILITY SITE
INTRINSIC REMEDIATION EE/CA
SEYMOUR JOHNSON AFB, NORTH CAROLINA

Compound	Y Intercept (b)[a/]	Slope [a/]	R^2 [a/]	First-order Rate Constant[a/] (day^{-1})
Benzene[b/]	877520	-0.0327	0.96	0.0016
Toluene[b/]	5501224	-0.0459	0.95	0.0019
Ethylbenzene[b/]	3004431	-0.0478	0.96	0.0019
Xylene[b/]	16509596	-0.0505	0.92	0.0019
Total BTEX[b/]	14896685	-0.0406	0.97	0.0018
			Overall Maximum:	0.0019
			Overall Minimum:	0.0016
			Overall Average:	0.0018

[a/] Calculated by linear regression of site data using Buscheck and Alcantar (1995) method.

[b/] Calculated by using data from MW-4, MW-6, MW-13, and CPT-16

DATA USED FOR FIRST-ORDER RATE CONSTANT CALCULATIONS
FORMER AGE FUELING FACILITY SITE
INTRINSIC REMEDIATION EE/CA
SEYMOUR JOHNSON AFB, NORTH CAROLINA

Sample Location	Distance Downgradient	Travel Time from Location MW-13	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-13	0	0	1000000	3500000	2300000	7300000	14100000
MW-4	67	536	2300	3300	1100	7100	13800
CPT-16	94	752	2100	2100	560	4100	8860
MW-6	135	1080	25	1	0.4	0.4	26.8

FUEL HYDROCARBON COMPOUNDS DETECTED IN GROUNDWATER
FORMER AGE FUELING FACILITY SITE
INTRINSIC REMEDIATION EE/CA
SEYMOUR JOHNSON AFB, NORTH CAROLINA

Sample Location	Distance Downgradient	Travel Time from Location MW-13	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-13	0	0	6.00	6.544	6.36	6.86	7.15
MW-4	67	536	3.36	3.519	3.04	3.85	4.14
CPT-16	94	752	3.32	3.322	2.75	3.61	3.95
MW-6	135	1080	1.40	0.000	-0.40	-0.40	1.43

velocity (ft/day)= 0.125

benzene

0	6.00
67	3.36
94	3.32
135	1.40

toluene

0	6.544068044
67	3.51851394
94	3.322219295
135	0

ethylbenzene

0	6.361727836
67	3.041392685
94	2.748188027
135	-0.39794001

xylenes

0	6.86332286
67	3.851258349
94	3.612783857
135	-0.39794001

BTEX

0	7.15
67	4.14
94	3.95
135	1.43

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.984149
R Square	0.96855
Adjusted	0.952825
Standard	0.508507
Observati	4

ANOVA

	df	*SS*	*MS*	*F*	*gnificance F*
Regressio	1	15.9268	15.9268	61.59337	0.015851
Residual	2	0.517159	0.25858		
Total	3	16.44396			

	Coefficient	*ndard Err*	*t Stat*	*P-value*	*ower 95*	*pper 95*	*ower 95.0*	*pper 95.0*
Intercept	7.17309	0.459826	15.59958	0.004084	5.194618	9.151562	5.194618	9.151562
X Variabl	-0.04063	0.005178	-7.84814	0.015851	-0.06291	-0.01836	-0.06291	-0.01836

RESIDUAL OUTPUT

bservatio	*redicted*	*Residuals*
1	7.17309	-0.02387
2	4.450605	-0.31073
3	3.353485	0.593949
4	1.687487	-0.25935

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.982214
R Square	0.964744
Adjusted	0.947116
Standard	0.434664
Observati	4

ANOVA

	df	*SS*	*MS*	*F*	*gnificance F*
Regressio	1	10.33984	10.33984	54.72749	0.017786
Residual	2	0.377866	0.188933		
Total	3	10.71771			

	Coefficient	*ndard Err*	*t Stat*	*P-value*	*ower 95*	*pper 95*	*ower 95.0*	*pper 95.0*
Intercept	5.943257	0.393052	15.12079	0.004345	4.252089	7.634425	4.252089	7.634425
X Variabl	-0.03274	0.004426	-7.3978	0.017786	-0.05178	-0.0137	-0.05178	-0.0137

RESIDUAL OUTPUT

bservatio	*redicted*	*Residuals*
1	5.943257	0.056743
2	3.749654	-0.38793
3	2.865665	0.456554
4	1.523311	-0.12537

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.972604
R Square	0.945958
Adjusted	0.918937
Standard	0.761379
Observati	4

ANOVA

	df	*SS*	*MS*	*F*	*gnificance F*
Regressio	1	20.29429	20.29429	35.00838	0.027396
Residual	2	1.159396	0.579698		
Total	3	21.45368			

	Coefficient	*ndard Err*	*t Stat*	*P-value*	*ower 95*	*pper 95*	*ower 95.0*	*pper 95.0*
Intercept	6.740459	0.688489	9.790223	0.010273	3.778129	9.70279	3.778129	9.70279
X Variabl	-0.04587	0.007752	-5.91679	0.027396	-0.07922	-0.01251	-0.07922	-0.01251

RESIDUAL OUTPUT

bservatio	*redicted*	*Residuals*
1	6.740459	-0.19639
2	3.667279	-0.14876
3	2.428833	0.893386
4	0.54823	-0.54823

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.981711
R Square	0.963756
Adjusted	0.945634
Standard	0.64416
Observati	4

ANOVA

	df	*SS*	*MS*	*F*	*gnificance F*
Regressio	1	22.06724	22.06724	53.18142	0.018289
Residual	2	0.829885	0.414943		
Total	3	22.89713			

	Coefficient	*ndard Err*	*t Stat*	*P-value*	*ower 95*	*pper 95*	*ower 95.0*	*pper 95.0*
Intercept	6.477762	0.582492	11.12077	0.007989	3.971499	8.984026	3.971499	8.984026
X Variabl	-0.04783	0.006559	-7.29256	0.018289	-0.07605	-0.01961	-0.07605	-0.01961

RESIDUAL OUTPUT

bservatio	*redicted*	*Residuals*
1	6.477762	-0.11603
2	3.273152	-0.23176
3	1.981742	0.766446
4	0.020712	-0.41865

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.960418
R Square	0.922403
Adjusted	0.883605
Standard	1.016671
Observati	4

ANOVA

	df	*SS*	*MS*	*F*	*gnificance F*
Regressio	1	24.5735	24.5735	23.77422	0.039582
Residual	2	2.067239	1.03362		
Total	3	26.64073			

	Coefficient	*ndard Err*	*t Stat*	*P-value*	*ower 95*	*pper 95*	*ower 95.0*	*pper 95.0*
Intercept	7.217364	0.919341	7.850588	0.015841	3.261758	11.17297	3.261758	11.17297
X Variabl	-0.05047	0.010352	-4.87588	0.039582	-0.09501	-0.00593	-0.09501	-0.00593

RESIDUAL OUTPUT

bservatio	*redicted*	*Residuals*
1	7.217364	-0.35404
2	3.835668	0.01559
3	2.472895	1.139889
4	0.403498	-0.80144

STEADY-STATE SOLUTION TO THE ADVECTIVE-DISPERSIVE EQUATION
ONE DIMENSIONAL FLOW, TYPE ONE BOUNDARY CONDITION
(CONSTANT SOURCE WITH 0.00359 DAY-1 FIRST-ORDER DECAY)
PRIMARY SOUTHEASTERN FLOW PATH TOWARD CREEK

Hydrogeologic Data

Hydraulic conductivtiy	$K := 8.68 \cdot 10^{-5} \cdot \frac{ft}{sec}$ $K = 7.5 \cdot \frac{ft}{day}$
Hydraulic gradient	$I := 0.005 \cdot \frac{ft}{ft}$
Effective porosity (Baker, 1994)	$n_e := 0.30$
Total porosity	$n := 0.30$
Longitudinal dispersivity (Parsons ES, 1985)	$\alpha_x := 8.2 \cdot ft$

Retardation Coefficient Calculation

Maximum Contaminant Concentration	$C_o := 14.1 \cdot \frac{mg}{liter}$
Contaminant Decay Rate	$\lambda := .00359 \cdot \frac{1}{day}$
Minimum soil sorption coefficient (Wiedemeier et al., 1994)	$K_{oc} := 79 \cdot \frac{mL}{gm}$
Particle mass density (Freeze and Cherry, 1979)	$\rho_s := 2.28 \cdot \frac{gm}{cm^3}$
Bulk density (Freeze and Cherry, 1979)	$\rho_b := \rho_s \cdot (1 - n)$ $\rho_b = 1.596 \cdot \frac{gm}{cm^3}$
Minimum organic carbon content	$f_{oc} := 0.06 \cdot \%$
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$ $R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$ $v_x = 45.652 \cdot \frac{ft}{yr}$
Contaminant velocity	$v_c := \frac{v_x}{R}$ $v_c = 36.459 \cdot \frac{ft}{yr}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$ $D_x = 1.025 \cdot \frac{ft^2}{day}$

The measured distance from MW-13 (the center of the source area) to the Drainage Creek is 850 feet. This analytical solution is used to confirm Bioplume II predicted concentrations.

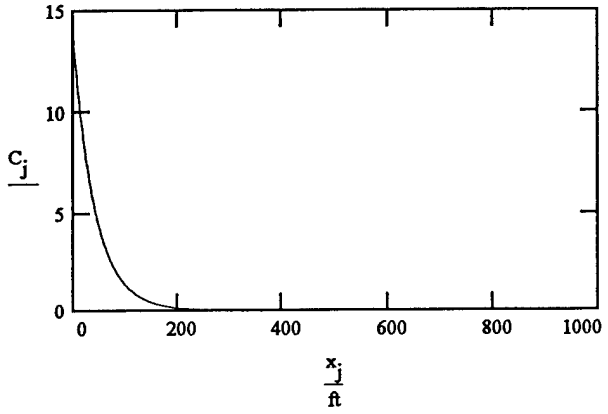
$j := 0..850$

$\Delta x := 1 \cdot ft$

$x_j := \Delta x \cdot j$

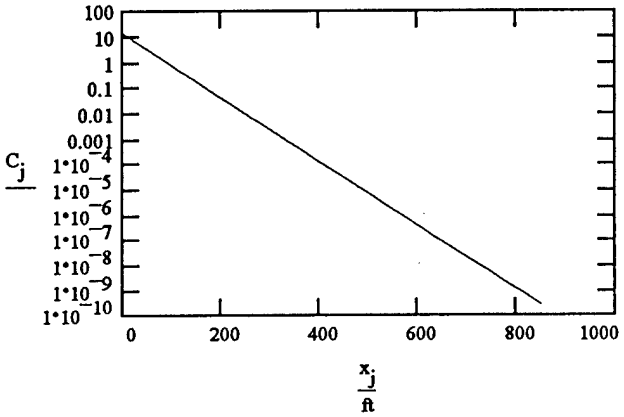
For Unretarded Flow with Biodegradation (Bear, 1979, p. 642, Domenico and Schwartz, 1990)

$$C_j := (C_o) \cdot 1000 \cdot \exp\left[\frac{x_j}{2 \cdot \alpha_x} \cdot \left[1 - \sqrt{1 + \left[\frac{4 \cdot \lambda \cdot \alpha_x}{(v_x)}\right]}\right]\right] \text{ in mg/L.}$$



For Retarded Flow with Biodegradation (Wexler, 1992 p. 20, eq. 62)

$$C_j := C_o \cdot 1000 \cdot \exp\left[\frac{x_j}{2 \cdot \frac{D_x}{R}} \cdot \left[\frac{v_x}{R} - \sqrt{\left(\frac{v_x}{R}\right)^2 + 4 \cdot \lambda \cdot \frac{D_x}{R}}\right]\right] \text{ in mg/L.}$$



STEADY-STATE SOLUTION TO THE ADVECTIVE-DISPERSIVE EQUATION
ONE DIMENSIONAL FLOW, TYPE ONE BOUNDARY CONDITION
(CONSTANT SOURCE WITH 0.00059 DAY-1 FIRST-ORDER DECAY)
PRIMARY SOUTHEASTERN FLOW PATH TOWARD CREEK

Hydrogeologic Data

Hydraulic conductivtiy	$K := 8.68 \cdot 10^{-5} \cdot \frac{ft}{sec}$	$K = 7.5 \cdot \frac{ft}{day}$
Hydraulic gradient	$I := 0.005 \cdot \frac{ft}{ft}$	
Effective porosity (Baker, 1994)	$n_e := 0.30$	
Total porosity	$n := 0.30$	
Longitudinal dispersivity (Parsons ES, 1985)	$\alpha_x := 8.2 \cdot ft$	

Retardation Coefficient Calculation

Maximum Contaminant Concentration	$C_o := 14.1 \cdot \frac{mg}{liter}$	
Contaminant Decay Rate	$\lambda := .00059 \cdot \frac{1}{day}$	
Minimum soil sorption coefficient (Wiedemeier et al., 1994)	$K_{oc} := 79 \cdot \frac{mL}{gm}$	
Particle mass density (Freeze and Cherry, 1979)	$\rho_s := 2.28 \cdot \frac{gm}{cm^3}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := \rho_s \cdot (1 - n)$	$\rho_b = 1.596 \cdot \frac{gm}{cm^3}$
Minimum organic carbon content	$f_{oc} := 0.06 \cdot \%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 45.652 \cdot \frac{ft}{yr}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 36.459 \cdot \frac{ft}{yr}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \cdot \frac{ft^2}{day}$

The measured distance from MW-13 (the center of the source area) to the Drainage Creek is 850 feet. This analytical solution is used to confirm Bioplume II predicted concentrations.

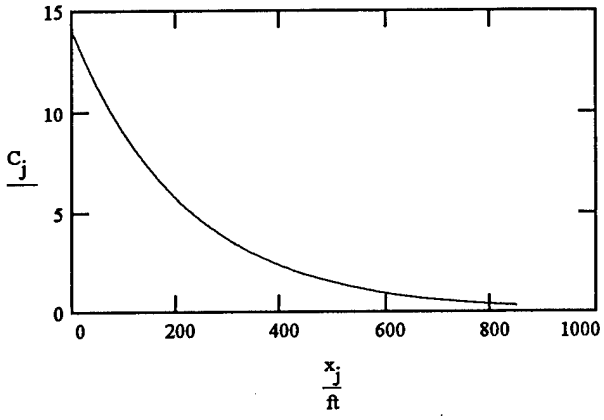
$j := 0..850$

$\Delta x := 1 \cdot ft$

$x_j := \Delta x \cdot j$

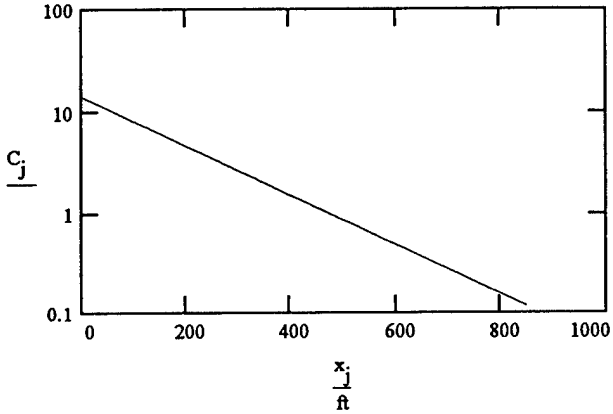
For Unretarded Flow with Biodegradation (Bear, 1979, p. 642, Domenico and Schwartz, 1990)

$$C_j := (C_o) \cdot 1000 \cdot \exp\left[\frac{x_j}{2 \cdot \alpha_x} \cdot \left[1 - \sqrt{1 + \left[\frac{4 \cdot \lambda \cdot \alpha_x}{(v_x)}\right]}\right]\right] \text{ in mg/L.}$$



For Retarded Flow with Biodegradation (Wexler, 1992 p. 20, eq. 62)

$$C_j := C_o \cdot 1000 \cdot \exp\left[\frac{x_j}{2 \cdot \frac{D_x}{R}} \cdot \left[\frac{v_x}{R} - \sqrt{\left(\frac{v_x}{R}\right)^2 + 4 \cdot \lambda \cdot \frac{D_x}{R}}\right]\right] \text{ in mg/L.}$$



PARSONS ENGINEERING SCIENCE, INC.

Client Seymour Johnson AFB | Job No. 7221/50.26030 | Sheet 1 of ____

Subject First Order Decay Coefficient | By TCR | Date 9/11/95

Checked ____ | Rev. ____

$$\frac{C}{C_o} = e^{-\alpha t}$$

Assume $\frac{C}{C_o} = 0.95$

time: 3 yrs = 1096 days

5 yrs = 1826 days

$$0.95 = e^{-\alpha (1096 \text{ days})}$$

$$-0.05 = -\alpha (1096 \text{ days})$$

$$\alpha = 0.0000468 \text{ day}^{-1} \quad (SR3)$$

$$0.95 = e^{-\alpha (1826 \text{ days})}$$

$$-0.05 = -\alpha (1826 \text{ days})$$

$$\alpha = 0.0000281 \text{ day}^{-1} \quad (SR5)$$

Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek

Hydrogeologic Data

Hydraulic conductivtiy $K := 7.5 \cdot \frac{ft}{day}$

Hydraulic gradient $I := 0.005 \cdot \frac{ft}{ft}$

Effective porosity $n_e := 0.3$

Total porosity $n := 0.3$

Longitudinal dispersivity (EPRI, 1985) $\alpha_x := 8.2 \cdot ft$

Concentration of Injected Contaminant $C_s := 13.8 \cdot \frac{mg}{liter}$

Initial Dissolved Contaminant Concentration $C_o := 0. \cdot \frac{mg}{liter}$

Retardation Coefficient Calculation

Solute Decay Rate $\lambda := 0.00059 \cdot \frac{1}{day}$

Source Decay Rate $\gamma := 0.0000281 \cdot \frac{1}{day}$

Soil sorption coefficient (EPA, 1990) $K_{oc} := 79. \cdot \frac{mL}{gm}$

Bulk density (Freeze and Cherry, 1979) $\rho_b := 1.596 \cdot \frac{gm}{cm^3}$

Organic carbon content $f_{oc} := 0.06 \cdot \%$

Retardation coefficient $R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$ $R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water) $v_x := \frac{K \cdot I}{n_e}$ $v_x = 0.125 \cdot \frac{ft}{day}$

Contaminant velocity $v_c := \frac{v_x}{R}$ $v_c = 0.1 \cdot \frac{ft}{day}$

Longitudinal dispersion coefficient $D_x := \alpha_x \cdot v_x$ $D_x = 1.025 \cdot \frac{ft^2}{day}$

Initial Plume Distribution Calculation

year := 365·day i := 1 .. 100 x := 850·ft

Δt := 1·year ug := $\frac{mg}{1000}$

$t_i := \Delta t \cdot i$

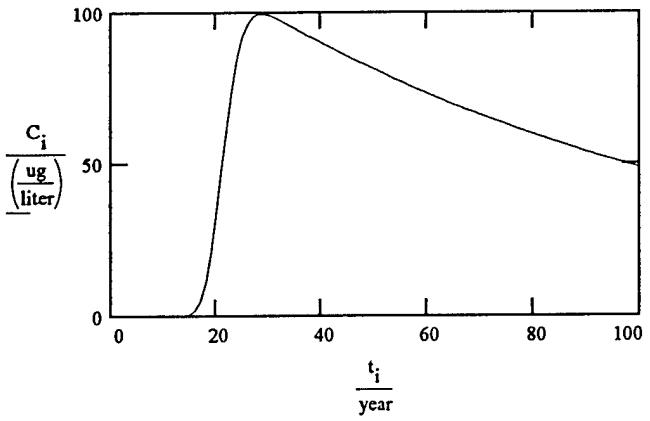
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_o \cdot \exp\left(-\lambda \cdot t_i\right) \cdot \left[1 - \frac{1}{2} \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x - v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \left(\frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \right) \cdot \exp\left[- \frac{\left(R \cdot x - v_x \cdot t_i \right)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \cdot \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp\left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \ldots$$

$$+ C_s \cdot \exp\left(-\gamma \cdot t_i\right) \cdot \left[\left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x - t_i \cdot \left[v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right]}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots$$

$$\left. + \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \right] \cdot \exp\left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek

Hydrogeologic Data

Hydraulic conductivtiy $K := 7.5 \cdot \frac{ft}{day}$

Hydraulic gradient $I := 0.005 \cdot \frac{ft}{ft}$

Effective porosity $n_e := 0.3$

Total porosity $n := 0.3$

Longitudinal dispersivity (EPRI, 1985) $\alpha_x := 8.2 \cdot ft$

Concentration of Injected Contaminant $C_s := 13.8 \cdot \frac{mg}{liter}$

Initial Dissolved Contaminant Concentration $C_o := 0. \cdot \frac{mg}{liter}$

Retardation Coefficient Calculation

Solute Decay Rate $\lambda := 0.00359 \cdot \frac{1}{day}$

Source Decay Rate $\gamma := 0.0000281 \cdot \frac{1}{day}$

Soil sorption coefficient (EPA, 1990) $K_{oc} := 79. \cdot \frac{mL}{gm}$

Bulk density (Freeze and Cherry, 1979) $\rho_b := 1.596 \cdot \frac{gm}{cm^3}$

Organic carbon content $f_{oc} := 0.06 \cdot \%$

Retardation coefficient $R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$ $R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water) $v_x := \frac{K \cdot I}{n_e}$ $v_x = 0.125 \cdot \frac{ft}{day}$

Contaminant velocity $v_c := \frac{v_x}{R}$ $v_c = 0.1 \cdot \frac{ft}{day}$

Longitudinal dispersion coefficient $D_x := \alpha_x \cdot v_x$ $D_x = 1.025 \cdot \frac{ft^2}{day}$

Initial Plume Distribution Calculation

$year := 365 \cdot day$ $\quad i := 1 .. 100$ $\quad x := 850 \cdot ft$

$\Delta t := 1 \cdot year$ $\quad ug := \frac{mg}{1000}$

$t_i := \Delta t \cdot i$

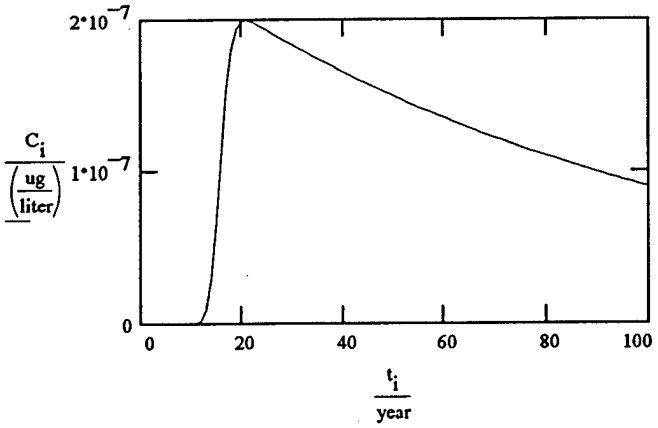
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_0 \cdot \exp\left(-\lambda \cdot t_i\right) \cdot \left[1 - \frac{1}{2} \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x - v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}}\right)\right) - \left(\frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R}\right) \cdot \exp\left[-\frac{\left(R \cdot x - v_x \cdot t_i\right)^2}{4 \cdot D_x \cdot R \cdot t_i}\right] + \frac{1}{2} \cdot \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R}\right) \cdot \exp\left(\frac{v_x \cdot x}{D_x}\right) \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}}\right)\right)\right] \ldots$$

$$+ C_s \cdot \exp\left(-\gamma \cdot t_i\right) \cdot \left[\left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}\right] \cdot \exp\left[\frac{\left[v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}\right] \cdot x}{2 \cdot D_x}\right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x - t_i \cdot \left[v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}\right]}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}}\right]\right] \ldots\right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}\right] \cdot \exp\left[\frac{\left[v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}\right] \cdot x}{2 \cdot D_x}\right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}}\right]\right] \ldots$$

$$\left.+ \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)}\right] \cdot \exp\left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i\right] \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}}\right)\right)\right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek, 3 yr

Hydrogeologic Data

Hydraulic conductivtiy	$K := 7\,5 \cdot \frac{ft}{day}$
Hydraulic gradient	$I := 0\,005 \cdot \frac{ft}{ft}$
Effective porosity	$n_e := 0\,3$
Total porosity	$n := 0\,3$
Longitudinal dispersivity (EPRI, 1985)	$\alpha_x := 8\,2 \cdot ft$
Concentration of Injected Contaminant	$C_s := 13\,8 \cdot \frac{mg}{liter}$
Initial Dissolved Contaminant Concentration	$C_o := 0. \cdot \frac{mg}{liter}$

Retardation Coefficient Calculation

Solute Decay Rate	$\lambda := 0\,00059 \cdot \frac{1}{day}$
Source Decay Rate	$\gamma := 0\,0000468 \cdot \frac{1}{day}$
Soil sorption coefficient (EPA, 1990)	$K_{oc} := 79. \frac{mL}{gm}$
Bulk density (Freeze and Cherry, 1979)	$\rho_b := 1\,596 \cdot \frac{gm}{cm^3}$
Organic carbon content	$f_{oc} := 0\,06 \cdot \%$
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$ $\quad R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 0.125 \cdot \frac{ft}{day}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 0.1 \cdot \frac{ft}{day}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \cdot \frac{ft^2}{day}$

Initial Plume Distribution Calculation

$year := 365 \cdot day$ $\quad i := 1 .. 100$ $\quad x := 850 \cdot ft$

$\Delta t := 1 \cdot year$ $\quad ug := \frac{mg}{1000}$

$t_i := \Delta t \cdot i$

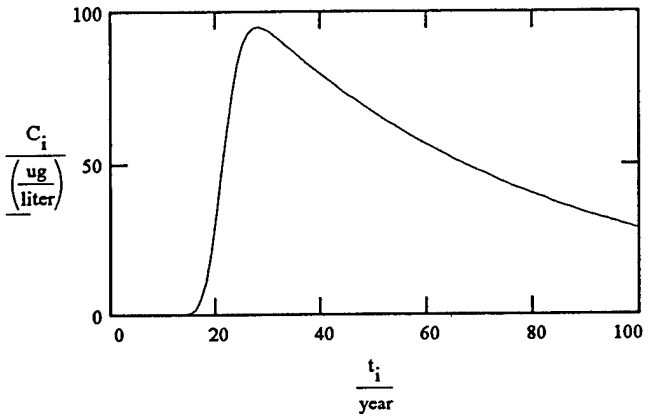
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_o \cdot \exp\left(-\lambda \cdot t_i\right) \cdot \left[1 - \frac{1}{2} \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x - v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \left(\frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \right) \cdot \exp\left[- \frac{\left(R \cdot x - v_x \cdot t_i \right)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \cdot \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp\left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \ldots$$

$$+ C_s \cdot \exp\left(-\gamma \cdot t_i\right) \cdot \left[\left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x - t_i \cdot \left[v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right]}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots$$

$$\left. + \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \right] \cdot \exp\left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek, 3yr

Hydrogeologic Data

Hydraulic conductivtiy $K := 7.5 \cdot \frac{ft}{day}$

Hydraulic gradient $I := 0.005 \cdot \frac{ft}{ft}$

Effective porosity $n_e := 0.3$

Total porosity $n := 0.3$

Longitudinal dispersivity (EPRI, 1985) $\alpha_x := 8.2 \cdot ft$

Concentration of Injected Contaminant $C_s := 13.8 \cdot \frac{mg}{liter}$

Initial Dissolved Contaminant Concentration $C_o := 0. \cdot \frac{mg}{liter}$

Retardation Coefficient Calculation

Solute Decay Rate $\lambda := 0.00359 \cdot \frac{1}{day}$

Source Decay Rate $\gamma := 0.0000468 \cdot \frac{1}{day}$

Soil sorption coefficient (EPA, 1990) $K_{oc} := 79. \cdot \frac{mL}{gm}$

Bulk density (Freeze and Cherry, 1979) $\rho_b := 1.596 \cdot \frac{gm}{cm^3}$

Organic carbon content $f_{oc} := 0.06 \cdot \%$

Retardation coefficient $R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$ $R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water) $v_x := \frac{K \cdot I}{n_e}$ $v_x = 0.125 \cdot \frac{ft}{day}$

Contaminant velocity $v_c := \frac{v_x}{R}$ $v_c = 0.1 \cdot \frac{ft}{day}$

Longitudinal dispersion coefficient $D_x := \alpha_x \cdot v_x$ $D_x = 1.025 \cdot \frac{ft^2}{day}$

Initial Plume Distribution Calculation

$year := 365 \cdot day$ $\quad i := 1 .. 100$ $\quad x := 850 \cdot ft$

$\Delta t := 1 \cdot year$ $\quad ug := \frac{mg}{1000}$

$t_i := \Delta t \cdot i$

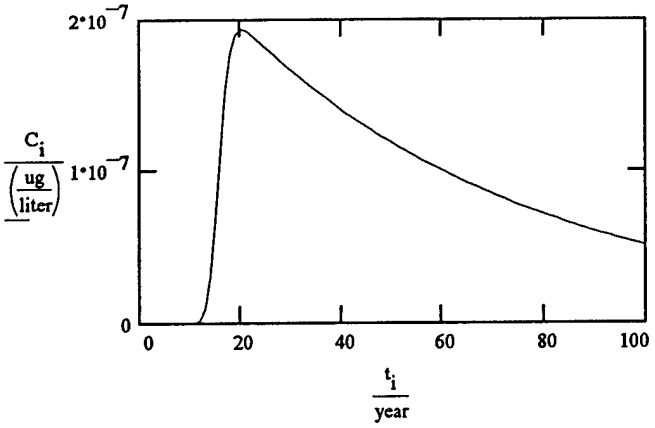
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_0 \cdot \exp\left(-\lambda \cdot t_i\right) \cdot \left[1 - \frac{1}{2} \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x - v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \left(\frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \right) \cdot \exp\left[- \frac{\left(R \cdot x - v_x \cdot t_i \right)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \cdot \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp\left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \ldots$$

$$+ C_s \cdot \exp\left(-\gamma \cdot t_i\right) \cdot \left[\left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x - t_i \cdot \left[v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right]}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \right] \cdot \exp\left[\left[v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \right] \cdot \frac{x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf}\left[\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right] \right] \ldots$$

$$\left. + \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \right] \cdot \exp\left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf}\left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



TRANSPORT SIMULATION OF BTEX AT THE SEYMOUR JOHNSON AFB FORMER AGE FUELING SITE USING A ONE-DIMENSIONAL SOLUTE TRANSPORT MODEL (Foc = 0.06%)

Hydrogeologic Data

Hydraulic conductivity $K := 2.646 \cdot 10^{-3} \cdot \frac{cm}{sec}$ $K = 7.5 \cdot \frac{ft}{day}$

Hydraulic gradient $I := 0.005 \cdot \frac{ft}{ft}$

Effective porosity $n_e := 0.3$

Total porosity $n := 0.3$

Longitudinal dispersivity $\alpha_L := 2.4995 \cdot m$ $\alpha_L = 8.2 \cdot ft$

Retardation Coefficient Calculation

Organic carbon partition coefficient (EPA, 1990) $K_{oc} := 79 \cdot \frac{mL}{gm}$

Particle mass density (Freeze and Cherry, 1979) $\rho_s := 2.28 \cdot \frac{gm}{cm^3}$

Bulk density (Freeze and Cherry, 1979) $\rho_b := \rho_s \cdot (1 - n)$ $\rho_b = 1.596 \cdot \frac{gm}{cm^3}$

Organic carbon fraction content $f_{oc} := 0.06 \cdot \%$

Retardation coefficient $R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$

$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (Darcy) $v_d := K \cdot I$ $v_d = 0.038 \cdot \frac{ft}{day}$

Groundwater velocity (pore-water) $v_p := \frac{v_d}{n_e}$ $v_p = 0.125 \cdot \frac{ft}{day}$

Constituent velocity $v_c := \frac{v_p}{R}$ $v_c = 0.1 \cdot \frac{ft}{day}$

Longitudinal dispersion coefficient $D_L := \alpha_L \cdot v_c$ $D_L = 0.819 \cdot \frac{ft^2}{day}$

Initial Plume Distribution Calculation

Constituent concentration at source location (MW-13)

$$C_{source} := 1.38 \cdot 10^{-2} \cdot \frac{gm}{liter}$$

Idealized length of the constituent plume (assumed) $L := 50 \cdot ft$

Time required to form a plume of length, L, and source (maximum) concentration, Csource (Fischer, 1979)

$$\tau := \frac{\left(\frac{L}{6}\right)^2}{2 \cdot D_L} \qquad \tau = 42.413 \cdot day$$

Distance required to form a plume of length, L, and source (maximum) concentration, Csource

$$\delta := v_c \cdot \tau \qquad \delta = 4.234 \cdot ft$$

Idealized mass introduced per unit area (saturated thickness by width of porous media)

$$M := C_{source} \cdot n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot \tau} \qquad M = 0.002 \cdot \frac{kg}{ft^2}$$

Spatial limits for the graph of initial constitient distribution

$$\Delta x := \frac{2 \cdot L}{200} \qquad j := 1..201$$

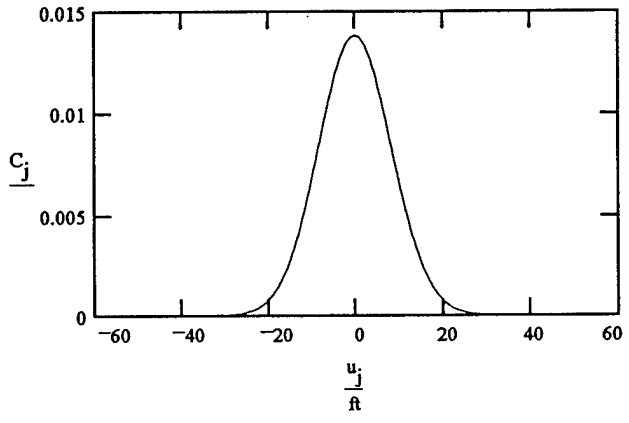
$$x_j := \Delta x \cdot j - (L + \Delta x - \delta)$$

$$u_j := x_j - \delta$$

One-dimensional advective-dispersive solute transport solution (Bear, 1979)

$$C_j := \frac{M}{n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot \tau}} \cdot \exp\left[-\frac{\left(x_j - v_c \cdot \tau\right)^2}{4 \cdot D_L \cdot \tau}\right]$$

INITIAL CONSTITUENT DISTRIBUTION (Concentration vs. Distance where u=0 represents the actual location of the consituent source)



Constituent Arrival at Drainage Creek

Distance from the source (MW-13) to the receptor $d_r := 850 \cdot ft$ $d_r = 259.08 \cdot m$

Temporal limits of arrival curve graph at the receptor location

$j := 1..7500$

$\Delta T := 2 \cdot day$

$T_j := j \cdot \Delta T$

Transformation of time and distance scales to include intial plume distribution

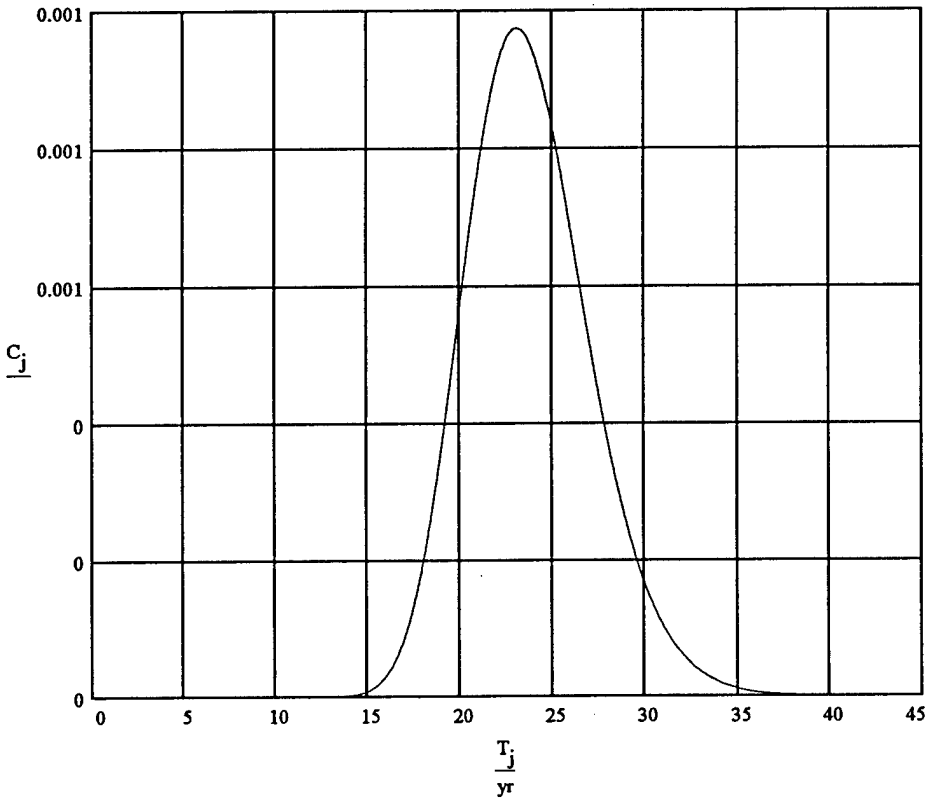
$x := \delta + d_r$

$t_j := \tau + T_j$

One-dimensional advective-dispersive solute transport solution (Bear, 1979)

$$C_j := \frac{M}{n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot t_j}} \cdot \exp\left[- \frac{\left(x - v_c \cdot t_j\right)^2}{4 \cdot D_L \cdot t_j} \right]$$

ARRIVAL OF BTEX AT CREEK



Peak Concentration and Peak Arrival Time Calculations

The peak arrival time is calculated by setting the time derivative of the 1-D solute transport solution (Bear, 1979) to zero and solving for the time variable.

Initial estimate for arrival of peak at the receptor $t_a := \frac{d_r}{v_c}$

Given

$$0 \cdot \frac{gm}{liter \cdot day} = -\frac{1}{4} \cdot \frac{M}{\left[n \cdot \left[\sqrt{\pi} \cdot \left[\sqrt{D_L \cdot t_a}\left(\frac{3}{2}\right)\right]\right]\right]} \cdot \exp\left[\frac{-1}{4} \cdot \frac{(x - v_c \cdot t_a)^2}{(D_L \cdot t_a)}\right] \ldots$$

$$+ \frac{1}{2} \cdot \frac{M}{\left[n \cdot \left[\sqrt{\pi} \cdot \left(\sqrt{D_L} \cdot \sqrt{t_a}\right)\right]\right]} \cdot \left[\frac{1}{2} \cdot \frac{(x - v_c \cdot t_a)}{(D_L \cdot t_a)} \cdot v_c + \frac{1}{4} \cdot \frac{(x - v_c \cdot t_a)^2}{(D_L \cdot t_a^2)}\right] \cdot \exp\left[\frac{-1}{4} \cdot \frac{(x - v_c \cdot t_a)^2}{(D_L \cdot t_a)}\right]$$

$t_p := \text{find}(t_a)$

Peak arrival time at Creek

$t_{peak} := t_p - \tau$ $\quad t_{peak} = 23.087 \cdot yr$

Peak concentration at Creek

$$C_{peak} := \frac{M}{n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot t_p}} \cdot \exp\left[-\frac{(x - v_c \cdot t_p)^2}{4 \cdot D_L \cdot t_p}\right] \qquad C_{peak} = 9.739 \cdot 10^{-4} \cdot \frac{gm}{liter}$$

$ppb := C_{peak} \cdot 10^6$

$ppb = 973.907 \cdot kg \cdot m^{-3}$

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EPA, Basics of Pump-and-Treat Ground-Water Technology, EPA/600/8-90/003, March 1990.

Electric Power Research Institute (EPRI), A Review of Field-Scale Physical Solute Transport Processes in Saturated and Unsaturated Porous Media (EPRI EA-4190), prepared by Tennessee Valley Authority, August 1985.

Fischer, H. B., et al, Mixing in Inland and Coastal Waters, Academic Press, 1979.

Freeze, R. A. and J. A. Cherry, Groundwater, Prentice-Hall, 1979.

APPENDIX F

COSTING WORKSHEETS AND PRESENT WORTH CALCULATIONS

Present Worth Analysis

Annual Inflation Factor = 7%

Alternative 1: Continued Mobile LNAPL Removal, Intrinsic Remediation, and Institutional Controls with LTM	years	Present Worth ($)	Cost ($) at Year Indicated Year: 1	2	3	4	5
LNAPL Recovery							
LNAPL Recovery System Install	1	$55,382	$59,259	$0	$0	$0	$0
Monthly Site Work	3	$46,765	$17,820	$17,820	$17,820	$0	$0
Base Support/System Monitoring	3	$13,122	$5,000	$5,000	$5,000	$0	$0
Annual Reports	3	$6,647	$2,533	$2,533	$2,533	$0	$0
Subtotal Present Worth ($)		$121,917					
Maintain Institutional Controls	15	$22,770	$2,500	$2,500	$2,500	$2,500	$2,500
Long-term Monitoring							
Install New POC Wells	1	$8,294	$8,875	$0	$0	$0	$0
Annual Sampling	15	$56,560	$6,210	$6,210	$6,210	$6,210	$6,210
Annual Reporting	15	$30,065	$3,301	$3,301	$3,301	$3,301	$3,301
Subtotal Present Worth ($)		$117,690					

Total Present Worth Cost ($): $239,606

Cost ($) at Year Indicated										
6	7	8	9	10	11	12	13	14	15	16
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$6,210	$6,210	$6,210	$6,210	$6,210	$6,210	$6,210	$6,210	$6,210	$6,210	$0
$3,301	$3,301	$3,301	$3,301	$3,301	$3,301	$3,301	$3,301	$3,301	$3,301	$0

Present Worth Analysis Annual Inflation Factor = 7%

Alternative 2: Continued Mobile LNAPL Removal, Bioslurping/Bioventing in the Source Area Intrinsic Remediation, and Institutional Controls with LTM	years	Present Worth ($)	Cost ($) at Year Indicated Year: 1	2	3	4	5
Bioslurping/Bioventing System Design, Installation, and Operation (5 years)							
Develop Work Plan	1	$6,513	$6,969	$0	$0	$0	$0
Install Test Wells, Conduct Pilot	1	$18,234	$19,510	$0	$0	$0	$0
Design System	1	$11,233	$12,019	$0	$0	$0	$0
Prepare Bid Package	1	$4,878	$5,219	$0	$0	$0	$0
Install System	1	$127,238	$136,145	$0	$0	$0	$0
Bioslurping Annual Costs (yrs 1,	2	$103,580	$57,289	$57,289	$0	$0	$0
Bioventing Annual Costs (yrs 3,4	3	$19,548	$0	$0	$8,528	$8,528	$8,528
Base Support/System Monitoring	5	$20,501	$5,000	$5,000	$5,000	$0	$0
PM/Reporting Annual Costs Costs	5	$20,985	$5,118	$5,118	$5,118	$5,118	$5,118
Subtotal Present Worth ($)		$332,708					
Maintain Institutional Controls	10	$17,559	$2,500	$2,500	$2,500	$2,500	$2,500
Long-term Monitoring							
Install New POC Wells	1	$8,294	$8,875	$0	$0	$0	$0
Annual Sampling	10	$43,616	$6,210	$6,210	$6,210	$6,210	$6,210
Annual Reporting	10	$23,185	$3,301	$3,301	$3,301	$3,301	$3,301
Subtotal Present Worth ($)		$92,655					

Total Present Worth Cost ($): $425,363

Cost ($) at Year Indicated										
6	7	8	9	10	11	12	13	14	15	16
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$2,500	$2,500	$2,500	$2,500	$2,500	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$6,210	$6,210	$6,210	$6,210	$6,210	$0	$0	$0	$0	$0	$0
$3,301	$3,301	$3,301	$3,301	$3,301	$0	$0	$0	$0	$0	$0

Present Worth Analysis Annual Inflation Factor = 7%

Alternative 3: Soil Excavation in the LNAPL Area, combined with Bioventing at the fringes of the Source Area, Intrinsic Remediation and Institutional Controls with LTM	years	Present Worth ($)	Cost ($) at Year Indicated Year: 1	2	3	4	5
Soil Excavation, Bioventing System Design, Installation, and Operation							
Develop Work Plan	1	$6,513	$6,969	$0	$0	$0	$0
Install Test Wells, Conduct Pilot	1	$12,467	$13,340	$0	$0	$0	$0
Design System	1	$11,233	$12,019	$0	$0	$0	$0
Prepare Bid Package	1	$4,878	$5,219	$0	$0	$0	$0
Soil Excavation/Install System	1	$129,379	$138,435	$0	$0	$0	$0
Bioventing Annual Costs	3	$22,380	$8,528	$8,528	$8,528	$0	$0
Base Support/System Monitoring	3	$13,122	$5,000	$5,000	$5,000	$0	$0
PM/Annual Reporting	3	$13,431	$5,118	$5,118	$5,118	$0	$0
		$213,402					
Maintain Institutional Controls	8	$14,928	$2,500	$2,500	$2,500	$2,500	$2,500
Long-term Monitoring							
Install New POC Wells	1	$8,294	$8,875	$0	$0	$0	$0
Annual Sampling	8	$37,082	$6,210	$6,210	$6,210	$6,210	$6,210
Annual Reporting	8	$19,711	$3,301	$3,301	$3,301	$3,301	$3,301
Subtotal Present Worth ($)		$80,016					

Total Present Worth Cost ($): $293,418

Cost ($) at Year Indicated										
6	7	8	9	10	11	12	13	14	15	16
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$2,500	$2,500	$2,500	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$6,210	$6,210	$6,210	$0	$0	$0	$0	$0	$0	$0	$0
$3,301	$3,301	$3,301	$0	$0	$0	$0	$0	$0	$0	$0

Alternative 1: LNAPL Recovery

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1 (hrs)	Install Recovey Sys ($)	Task 2 (hrs)	Monthly Site Work ($)	Task 3 (hrs)	Annual Reports ($)
Word Processor 88/(15)	$30	8	$240	0	$0	4	$120
CADD Operator 58/(25)	$47	16	$752	0	$0	8	$376
Technician 42/(50)	$40	40	$1,600	144	$5,760	0	$0
Staff Level 16/(65)	$57	60	$3,420	0	$0	20	$1,140
Project Level 12/(70)	$65	60	$3,900	24	$1,560	8	$520
Senior Level 10/(80)	$85	4	$340	0	$0	0	$0
Principal 02/(85)	$97	1	$97	0	$0	1	$97
Total Labor (hrs|$)		189	$10,349	168	$7,320	41	$2,253
ODCs							
Phone			$60		$60		$20
Photocopy			$50		$20		$40
Mail/Shipping			$200		$240		$20
Computer			$100		$0		$100
CAD			$160		$0		$80
WP			$40		$0		$20
Travel			$1,300		$2,280		$0
Eqpt. & Supplies			$500		$1,200		$0
Total ODCs			$2,410		$3,800		$280
Outside Services							
Recovery System Installation			$46,500		$0		$0
Product Hauling/Disposal ($1,500/load of 7,000 gallon)			$0		$6,000		$0
Electrical Costs			$0		$500		$0
Laboratory Fees			$0		$200		$0
Other			$0		$0		$0
Total Outside Services			$46,500		$6,700		$0

Proposal Estimate	Task 1	Task 2	Task 3
Labor	$10,349	$7,320	$2,253
ODC's	$2,410	$3,800	$280
Outside Services	$46,500	$6,700	$0
Total by Task	$59,259	$17,820	$2,533

Total Labor	$19,922
Total ODCs	$6,490
Total Outside Services	$53,200
Total Project	$79,612

Task 1: LNAPL Recovery System Design and Construction
Task 2: Monthly Site Time and Travel Costs (per year)
Task 3: Report Preparation and Product Disposal

Alternatives 1, 2, and 3: Long-Term Monitoring

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1 (hrs)	Install New POC Wells ($)	Task 2 (hrs)	Annual Sampling ($)	Task 3 (hrs)	Annual Reporting and PM ($)
Word Processor 88/(15)	$30	0	$0	0	$0	8	$240
CADD Operator 58/(25)	$47	0	$0	0	$0	4	$188
Technician 42/(50)	$40	5	$200	24	$960	0	$0
Staff Level 16/(65)	$57	50	$2,850	20	$1,140	24	$1,368
Project Level 12/(70)	$65	4	$260	4	$260	16	$1,040
Senior Level 10/(80)	$85	1	$85	0	$0	2	$170
Principal 02/(85)	$97	0	$0	0	$0	0	$0
Total Labor (hrs|$)		60	$3,395	48	$2,360	54	$3,006
ODCs							
Phone			$20		$10		$20
Photocopy			$10		$10		$50
Mail			$50		$50		$25
Computer			$0		$0		$60
CAD			$0		$0		$100
WP			$0		$0		$40
Travel			$560		$580		$0
Eqpt. & Supplies			$500		$200		$0
Total ODCs			$1,140		$850		$295
Outside Services							
Drilling Cost (4 wells to @ $45/ft) + mobe			$3,900		$0		$0
			$0		$0		$0
			$0		$0		$0
Laboratory Fees (BTEX/TVH), $150ea, 2 sets/yr		soil	$440	6 LTM, 4 POC, 2qa/qc	$3,000		$0
Other: Maintain Institutional Controls			$0		$0		$0
Total Outside Services			$4,340		$3,000		$0

Proposal Estimate	Task 1	Task 2	Task 3
Labor	$3,395	$2,360	$3,006
ODC's	$1,140	$850	$295
Outside Services	$4,340	$3,000	$0
Total by Task	$8,875	$6,210	$3,301

Total Labor	$8,761
Total ODCs	$2,285
Total Outside Services	$7,340
Total Project	$18,386

Task 1: Install New POC Wells
Task 2: Annual Sampling
Task 3: Annual Reporting and PM

Alternative 2: Bioslurping/Bioventing System Design and Installation

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1	Work Plan ($)	Task 2	Pilot Study ($)	Task 3	Design ($)	Task 4	Bid ($)	Task 5	Installation ($)	Task 6	Bioslurping Annual Costs ($)	Task 7	Bioventing Annual Costs ($)	Task 8	PM/Report Annual Costs ($)
Word Processor 88/(15)	30	20	$600	0	$0	40	$1,200	20	$600	5	$150	0	$0	0	$0	8	$240
CADD Operator 58/(25)	47	10	$470	0	$0	40	$1,880	0	$0	0	$0	0	$0	0	$0	8	$376
Technician 42/(50)	40	0	$0	80	$3,200	0	$0	0	$0	80	$3,200	0	$0	0	$0	8	$320
Staff Level 16/(65)	57	60	$3,420	80	$4,560	80	$4,560	40	$2,280	80	$4,560	416	$23,712	48	$2,736	40	$2,280
Project Level 12/(70)	65	20	$1,300	50	$3,250	40	$2,600	20	$1,300	40	$2,600	26	$1,690	16	$1,040	16	$1,040
Senior Level 10/(80)	85	4	$340	4	$340	5	$425	5	$425	10	$850	2	$170	2	$170	2	$170
Principal 02/(85)	97	2	$194	0	$0	2	$194	2	$194	5	$485	1	$97	1	$97	1	$97
Total Labor (hrs|$)		116	$6,324	214	$11,350	207	$10,859	87	$4,799	220	$11,845	445	$25,669	67	$4,043	83	$4,523
ODCs																	
Phone			$20		$20		$30		$20		$40		$120		$20		$60
Photocopy			$30		$0		$100		$100		$0		$0		$0		$100
Mail/Shipping			$45		$0		$30		$0		$0		$1,040		$80		$75
Computer			$200		$0		$500		$200		$0		$0		$0		$200
CAD			$150		$0		$300		$0		$0		$0		$0		$80
WP			$200		$0		$200		$100		$0		$0		$0		$80
Travel			$0		$1,890		$0		$0		$1,260		$15,080		$1,160		$0
Eqpt. & Supplies			$0		$800		$0		$0		$50,000		$2,080		$400		$0
Total ODCs			$645		$2,710		$1,160		$420		$51,300		$18,320		$1,660		$595
Outside Services																	
Drilling Cost			$0	1-VW, 3	$4,750		$0		$0	8 VWs,	$26,000		$0		$0		$0
Electrical Costs			$0		$0		$0		$0		$0		$1,300		$325		$0
Natural Gas Costs			$0		$0		$0		$0		$0		$0		$0		$0
Laboratory Fees			$0		$700		$0		$0		$5,000		$6,000		$2,500		$0
Construction Costs			$0		$0		$0		$0		$42,000		$0		$0		$0
Total Outside Services			$0		$5,450		$0		$0		$73,000		$7,300		$2,825		$0

Proposal Estimate	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 6
Labor	$6,324	$11,350	$10,859	$4,799	$11,845	$25,669	$4,043	$4,523
ODC's	$645	$2,710	$1,160	$420	$51,300	$18,320	$1,660	$595
Outside Services	$0	$5,450	$0	$0	$73,000	$7,300	$2,825	$0
Total by Task	$6,969	$19,510	$12,019	$5,219	$136,145	$51,289	$8,528	$5,118

Total Labor	$70,846
Total ODCs	$74,555
Total Outside Services	$85,750
Total Project	$231,151

Task 1: Work Plan Development
Task 2: Bioslurping/Bioventing Pilot Study
Task 3: Design
Task 4: Prepare and Solicit Bids
Task 5: System Installation
Task 6: Bioslurping System Operation, Maintenance, Annual Monitoring, and Project Management
Task 7: Bioventing System Operation, Maintenance, Annual Monitoring, and Project Management
Task 8: Annual Report/Project Management

Alternative 3: Soil Excavation in LNAPL Area with Bioventing at Plume Fringes System Design and Insta

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1	Work Plan ($)	Task 2	Pilot Studies ($)	Task 3	Design ($)	Task 4	Bid ($)	Task 5	Excavation/ Installation ($)	Task 6	Bioventing Annual Costs ($)	Task 7	Bioventing Annual Costs ($)
Word Processor 88/(15)	$30	20	$600	0	$0	40	$1,200	20	$600	5	$150	0	$0	8	$240
CADD Operator 58/(25)	$47	10	$470	0	$0	40	$1,880	0	$0	0	$0	0	$0	8	$376
Technician 42/(50)	$40	0	$0	40	$1,600	0	$0	0	$0	80	$3,200	0	$0	8	$320
Staff Level 16/(65)	$57	60	$3,420	40	$2,280	80	$4,560	40	$2,280	80	$4,560	48	$2,736	40	$2,280
Project Level 12/(70)	$65	20	$1,300	20	$1,300	40	$2,600	20	$1,300	40	$2,600	16	$1,040	16	$1,040
Senior Level 10/(80)	$85	4	$340	4	$340	5	$425	5	$425	10	$850	2	$170	2	$170
Principal 02/(85)	$97	2	$194	0	$0	2	$194	2	$194	5	$485	1	$97	1	$97
Total Labor (hrs|$)		116	$6,324	104	$5,520	207	$10,859	87	$4,799	220	$11,845	67	$4,043	83	$4,523
ODCs															
Phone			$20		$20		$30		$20		$40		$20		$60
Photocopy			$30		$0		$100		$100		$0		$0		$100
Mail			$45		$0		$30		$0		$0		$80		$75
Computer			$200		$0		$500		$200		$0		$0		$200
CAD			$150		$0		$300		$0		$0		$0		$80
WP			$200		$0		$200		$100		$0		$0		$80
Travel			$0		$1,100		$0		$0		$1,550		$1,160		$0
Eqpt. & Supplies			$0		$600		$0		$0		$750		$400		$0
Total ODCs			$645		$1,720		$1,160		$420		$2,340		$1,660		$595
Outside Services															
Drilling Cost			$0	1-VW, 3	$5,000		$0		$0	7 VWs,	$21,250		$0		$0
Electrical Costs			$0		$0		$0		$0		$0		$325		$0
Soil Excavation			$0		$0		$0		$0	1,000 y	$50,000		$0		$0
Soil Disposal			$0		$0		$0		$0		$12,000		$0		$0
Laboratory Fees			$0		$1,100		$0		$0		$11,000		$2,500		$0
Bioventing Construction Costs			$0		$0		$0		$0		$30,000		$0		$0
Total Outside Services			$0		$6,100		$0		$0		$124,250		$2,825		$0

Proposal Estimate	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7
Labor	$6,324	$5,520	$10,859	$4,799	$11,845	$4,043	$4,523
ODC's	$645	$1,720	$1,160	$420	$2,340	$1,660	$595
Outside Services	$0	$6,100	$0	$0	$124,250	$2,825	$0
Total by Task	$6,969	$13,340	$12,019	$5,219	$138,435	$8,528	$5,118

Total Labor	$43,390
Total ODCs	$7,945
Total Outside Services	$133,175
Total Project	$184,510

Task 1: Work Plan Development
Task 2: Bioventing Pilot Study
Task 3: Design
Task 4: Prepare and Solicit Bids
Task 5: Soil Excavation / Bioventing System Installation
Task 6: Bioventing System Operation, Maintenance, and Annual Monitoring
Task 7: Project Management/Annual Reporting

Seymour Johnson AFB Backup Calculations

Misc calculations

Recovery System

Number of LNAPL recovery wells:		
Area to be covered:	2,400	sq ft
Well radius of influence:	15	ft
Area of influence:	707	sq ft
Number of wells:	3	
Depth each:	20	ft
Trench Volume/Area		
Width:	12	in
Depth:	4	ft
Length:	500	ft
Volume:	2,000	cf
	74	cy
Surface Area:	500	sf
	56	sy
Concrete Volume/Area		
Length:	100	lf
Width:	6	in
Thickness:	6	in
Volume:	25	cf
	1	cy
Area:	50	sf
	6	sy

Groundwater Treatment

Groundwater treatment wells		
Number:	-	
Depth:	-	ft
Trench Volume/Area		
Width:	-	in
Depth:	-	ft
Length:	-	ft
Volume:	-	cf
	-	cy
Surface Area:	-	sf
	-	sy

Cost calculations

Description	Unit	Quantity	Unit Price	Subtotal	Total	
Recovery System Installation						
Well Installation					$ 3,400	
Mobilization	ea	1	$ 300	$ 300		
Well Installation	ln ft	60	$ 45	$ 2,700		
Soil Disposal	drum	4	$ 100	$ 400		
Trenching/Piping					$ 13,316	
Mob/Demob	ea	1	$ 1,000	$ 1,000		
Concrete Cutting	ln ft	100	$ 18.80	$ 1,880		Means 020 728 0420
Trenching	cy	74	$ 5.05	$ 374		Means 022 254 0050
Pipe laying	ln ft	600	$ 13.05	$ 7,830		Means 151 701 0550/026 686 2800
Backfill	cy	74	$ 17.20	$ 1,273		Means 022 204 0600
Compaction	cy	74	$ 5.10	$ 377		Means 022 204 0600
Pavement Base	sy	56	$ 5.25	$ 294		Means 022 308 0100
Concrete repair	cy	1	$ 97.00	$ 97		Means 033 130 4700
Reseeding	sy	100	$ 1.91	$ 191		Means 029 304 0310
System Installation					$ 29,775	
Skimmers	ea	10	$ 500	$ 5,000		WAG
Compressors	ea	2	$ 3,000	$ 6,000		Colonial Quotes
Tank	ea	1	$ 5,725	$ 5,725		Means 132 151 5540
Piping	lf	250	$ 9.30	$ 2,325		Means 151 551 1880
Mechanical	man hr	80	$ 38.83	$ 3,106		Means Q-1 crew
Electrical	ls	1	$ 2,500	$ 2,500		WAG
Slab	cy	2	$ 97.00	$ 194		Means 033 130 4700
Building	ea	1	$ 4,925	$ 4,925		Means 131 221 0010
Recovery System Installation Total					**$ 46,491**	
Groundwater Treatment System						
Well Installation					$ -	
Mobilization	ea	-	$ 1,000	$ -		
Well Installation	ln ft	-	$ 45	$ -		
Soil Disposal	drum	-	$ 100	$ -		
Trenching/Piping					$ -	
Mob/Demob	ea	-	$ 1,000	$ -		
Trenching	cy	-	$ 5.05	$ -		Means 022 254 0050
Pipe laying	ln ft	-	$ 13.05	$ -		Means 026 686 2800
Backfill	cy	-	$ 17.20	$ -		Means 022 204 0600
Compaction	cy	-	$ 5.10	$ -		Means 022 204 0600
Reseeding	sy	-	$ 1.91	$ -		Means 029 304 0310
System Installation					$ -	
Pumps	ea	-	$ 700	$ -		Means 026 704 1600
Air Stripper	ea	-	$ 20,000	$ -		Colonial Quotes
Piping	lf	-	$ 9.30	$ -		Means 151 551 1880
Mechanical	man hr	-	$ 38.83	$ -		Means Q-1 crew
Electrical	ls	-	$ 2,500	$ -		WAG
Slab	cy	-	$ 97.00	$ -		Means 033 130 4700
Building	ea	-	$ 4,925	$ -		Means 131 221 0010
Groundwater Treatment System					**$ -**	