United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 804A
Main Post-West Area

NJDEP UST Registration No. 0081533-130

OCTOBER 2001

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 804A

MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0081533-130

OCTOBER 2001

PREPARED FOR:

UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
BUILDING 167
FORT MONMOUTH, NJ 07703

PREPARED BY:

VERSAR
1900 FROST ROAD
SUITE 110
BRISTOL, PA 19007

PROJECT NO. 2491-308

804A.DOC

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TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 804A, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
A	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
B	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
C	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
D	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
E	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
F	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
G	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
H dup of F	11/15/95	11/16/95	Soil	Post-Excavation	TPH	OQA-QAM-025
A	11/30/95	12/01/95	Soil	Post-Excavation	TPH	OQA-QAM-025
B	11/30/95	12/01/95	Soil	Post-Excavation	TPH	OQA-QAM-025
B-dup	11/30/95	12/01/95	Soil	Post-Excavation	TPH	OQA-QAM-025
804	06/08/01	06/12/01	Aquious	Geoprobe groundwater	VOA+15, BN+15	EPA-624, EPA-3510/625
804	07/07/01	07/10/01	Aquious	Geoprobe Groundwater	VOA+15, BN+15	EPA-624, EPA-3510/625
804 dup	07/07/01	07/10/01	aquious	Geoprobe groundwater	VOA+15, BN+15	EPA-624, EPA-3510/625

Note:
* TPH Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 804A, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
A/2'=	1969.1	7/16/98	7/17/98	Total Solid	--	--	85	--	--
				TPH	100	Yes	283	10,000	No
B/4'=	1961.2	7/16/98	7/17/98	Total Solid	--	--	85	--	--
				TPH	100	Yes	130	10,000	No
C/5'=	1961.3	7/16/98	7/17/98	Total Solid	--	--	86	--	--
				TPH	100	Yes	160	10,000	No
D/5'=	1961.4	7/16/98	7/17/98	Total Solid	--	--	84	--	--
				TPH	100	Yes	ND	10,000	No
E/6'=	1961.5	7/16/98	7/17/98	Total Solid	--	--	86	--	--
				TPH	100	Yes	252	10,000	No
F/8'=	1961.6	7/16/98	7/17/98	Total Solid	--	--	92	--	--
				TPH	100	Yes	417	10,000	No
G/8'=	1961.7	7/16/98	7/17/98	Total Solid	--	--	94	--	--
				TPH	100	Yes	ND	10,000	No
H dup/8'=	1961.8	7/16/98	7/17/98	Total Solid	--	--	91	--	--
				TPH	100	Yes	586	10,000	No
A/9'=	1988.1	7/16/98	7/17/98	Total Solid	--	--	81	--	--
				TPH	100	Yes	779	10,000	No
B/9'=	1988.2	7/16/98	7/17/98	Total Solid	--	--	83	--	--
				TPH	100	Yes	665	10,000	No
B dup/9'=	1988.3	7/16/98	7/17/98	Total Solid	--	--	82	--	--
				TPH	100	Yes	673	10,000	No

Note:

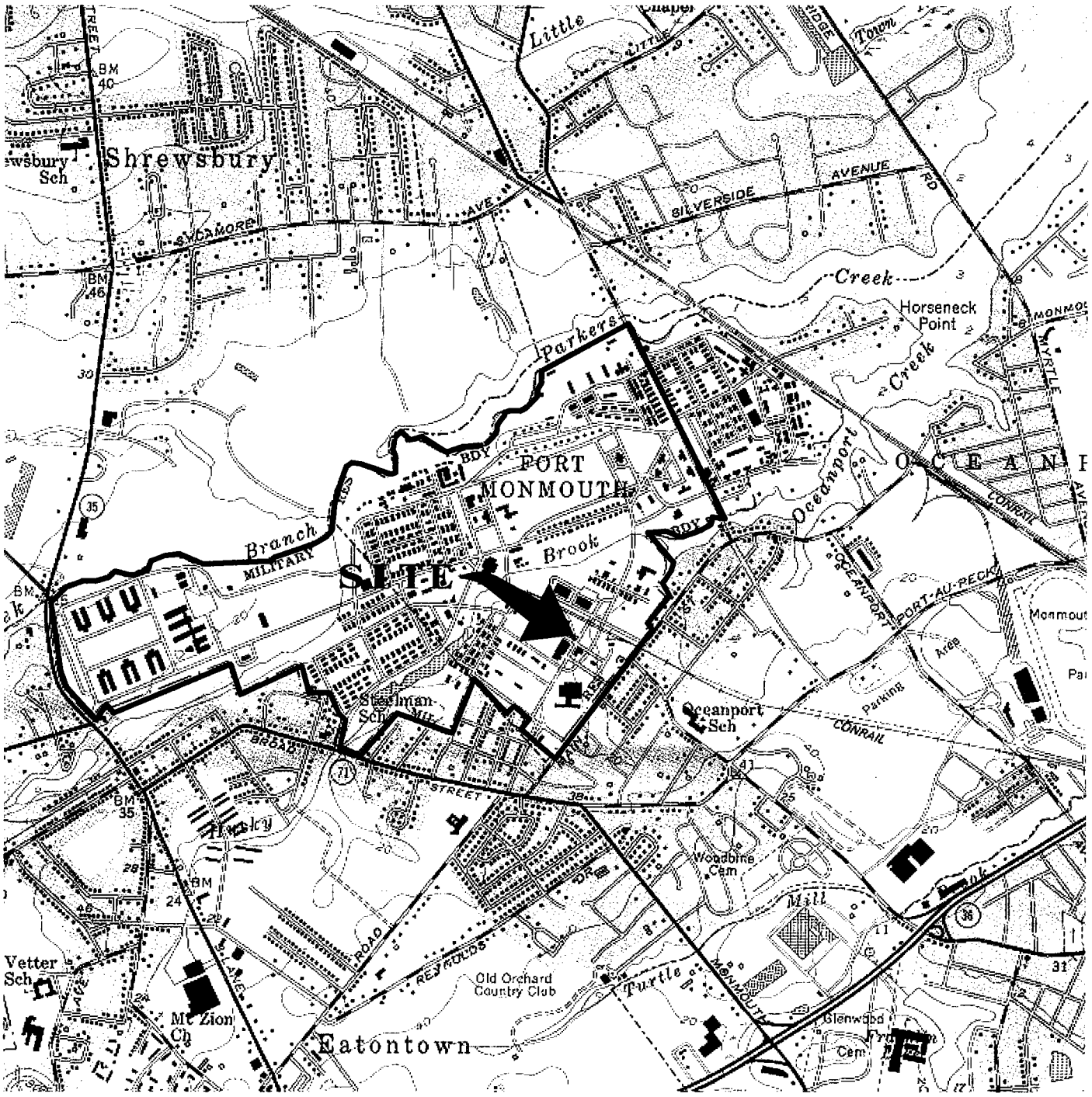
* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

-- Not detected above stated sample quantitation limit

TPH Total Petroleum Hydrocarbons

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

NEW JERSEY

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 804A
Main-Post West
Fort Monmouth Army Base
Monmouth County, NJ

VERSAR
Engineers, Managers, Scientists, & Planners
Bristol, PA

Scale: 1" = 2000'

Date: Nov. 1995

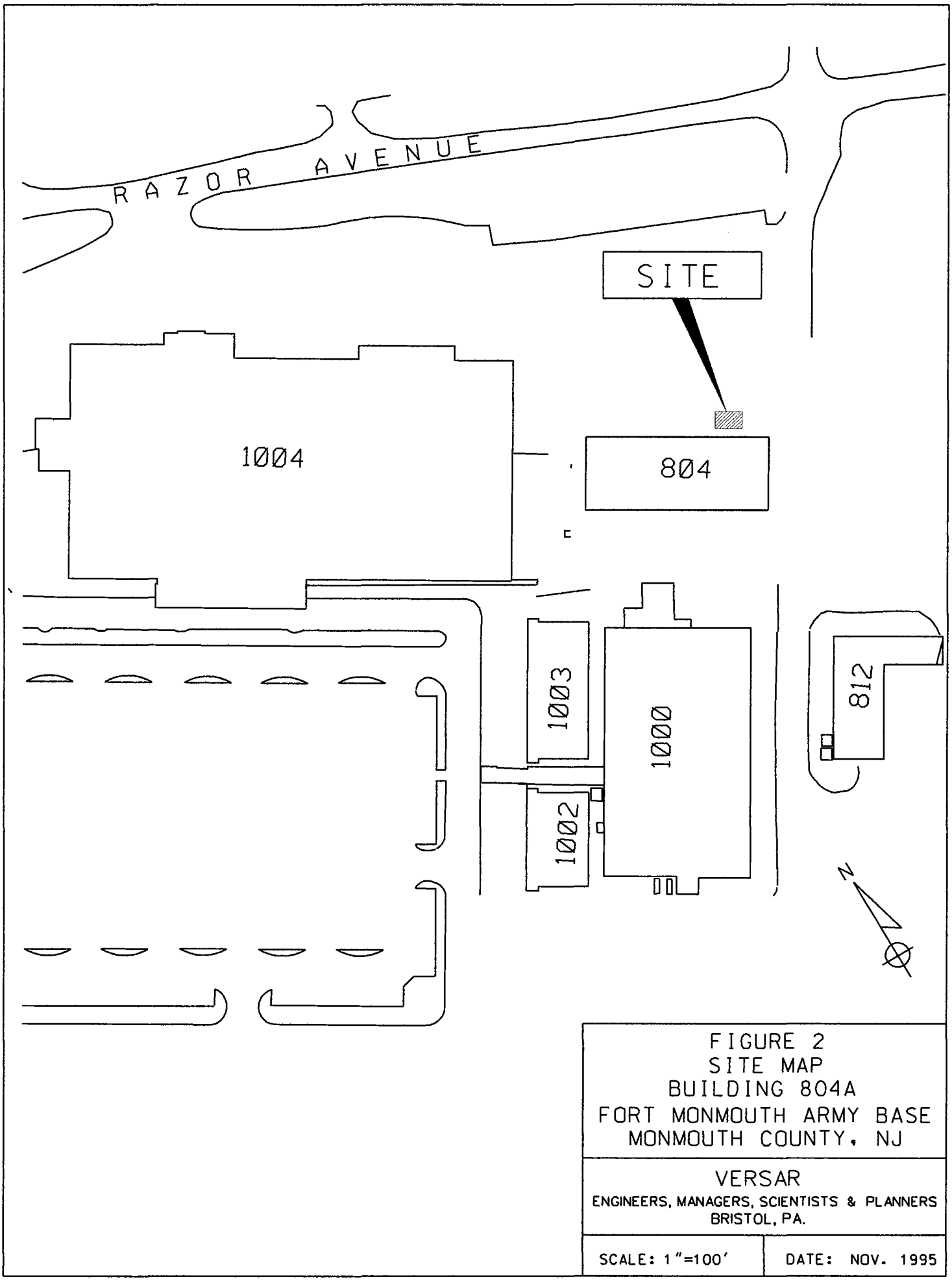


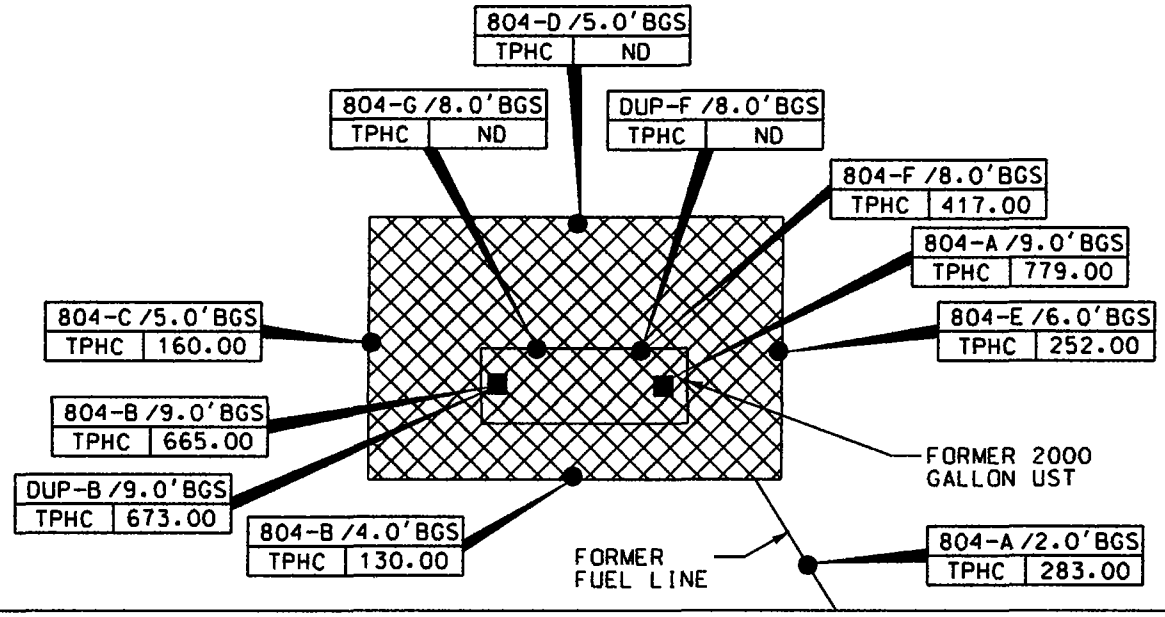
FIGURE 2
SITE MAP
BUILDING 804A
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=100'

DATE: NOV. 1995

804A FIG2



BUILDING 804

N

LEGEND

- SOIL SAMPLE LOCATION (NOVEMBER 15, 1995)
- SOIL SAMPLE LOCATION (NOVEMBER 30, 1995)
- LIMIT OF EXCAVATION (NOVEMBER 30, 1995)

NOTES:

1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

FIGURE 3
SOIL SAMPLING LOCATION MAP
BUILDING 804A
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=10' | DATE: OCT 2001

804A FIG4

APPENDIX A

NJDEP UST REPORT CERTIFICATION FORM

(12/97) **New Jersey Department of Environmental Protection**

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New Jersey
Facility Street Address : Directorate of Public Works Building 173
Municipality: Oceanport County: Monmouth

Block: _____ Lot(s): _____ Telephone Number : 732-532-6224

B. Owner (RP)'s Name: _____

Street Address: _____ City : _____

State: _____ Zip: _____ Telephone Number : _____

C. (Check as appropriate)

- ☐ Site Investigation Report (SIR) $500 Fee
- ☐ Remedial Investigation Report (RIR) $1000 Fee

D. (Complete all that apply)

- Assigned Case Manager: Ian Curtis, Federal Case Manager
- UST Registration Number : 0081533-130
- Incident Report Number : 95-11-9-1328-28
- Tank Closure Number: C-93-4298

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E .....Yes No

Name: Dinker Desai Signature: _____ UST Cert. No.: 0014537

Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: N/A – U.S. Army

Firm Address: Directorate of Public Works Buildings 173 City: Fort Monmouth

State:NJ Zip:07703 Telephone Number : 732-532-6224

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)]as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): James Ott Title: Directorate of Public Works

Signature: _____

Company Name: U.S. Army Fort Monmouth Date: _____

APPENDIX B

WASTE MANIFEST

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

* 2 2 7 7 6 5 1 *

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3211002059 Manifest Document No. 77651
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
U.S. ARMY COMMUNICATIONS ELECTRONICS COMMAND
MAIN POST C/O JAMES SHERIDAN BLDG 173
ATTN: SELFM-PW-EV FORT MONMOUTH, NJ 07703

4. Generator's Phone (908) 532-6223

A. State Manifest Document Number: NJA 2277651

B. State Generator's ID-(Gen. Site Address): SAME

5. Transporter 1 Company Name: LIONETTI OIL RECOVERY CO., INC.
6. US EPA ID Number: NJD084044064

C. State Trans. ID-NJDEPE: S6247
Decal No.-

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone: 908) 721-0900

E. State Trans. ID-NJDEPE
Decal No.-

9. Designated Facility Name and Site Address
LIONETTI OIL RECOVERY CO., INC./DBA LORCO PETROLEUM SVCS.
RUNYON & CHEESEQUAKE ROADS
OLD BRIDGE NJ 08857
10. US EPA ID Number: NJD084044064

F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (908) 721-0900

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X PETROLUEM OIL (PETROLEUM OIL) COMBUSTIBLE LIQUID UN 1270 PG III	001	TT	00950	G	X727
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. T,L PETROLEUM OIL 1 WATER 99 %
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04-FILTRATION
b.
c.
d.

15. Special Handling Instructions and Additional Information
NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NEW JERSEY 11a) 008153-130/8
24 HOUR EMERGENCY RESPONSE #(908)721-0900
DECAL#63477 ERG# 27 DEXSIL TEST KIT RESULTS <1000 %

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Eugene W Lesinski — Signature: EUGENE W LESINSKI — Month Day Year: 11 09 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DAN MacKay — Signature: D MacKay — Month Day Year: 11 09 95

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

1—TSD MAIL TO-TSD'S STATE

APPENDIX C

UST DISPOSAL CERTIFICATE

APPENDIX NOT AVAILABLE

AS OF THE DATE OF THIS REPORT

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab. ID #: 1969.1-.8
Sample Rec'd: 11/15/95
Analysis Start: 11/15/95
Analysis Comp: 11/16/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 804**

Lab ID.	Description		%Solid	Result (mg/Kg)	MDL
1969.1	A - Pipe run @ 2'	OVA=ND	85	283.	100
1969.2	B - Sidewall @ 4'	OVA=ND	85	130.	100
1969.3	C - Sidewall @ 5'	OVA=ND	86	160.	100
1969.4	D - Sidewall @ 5'	OVA=ND	84	ND.	100
1969.5	E - Sidewall @ 6'	OVA=ND	86	252.	100
1969.6	F - Excav. Floor @ 8'	OVA=ND	92	417.	100
1969.7	G - Excav. Floor @ 8'	OVA=ND	94	ND.	100
1969.8	H - Duplicate	OVA=ND	91	586.	100
M. Bl.	Method Blank		100	ND	100

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1969.4S=118%,1969.4SD=120%,RPD= 1.6%,1969.4Dup=100%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab. ID #: 1969.1-.8
Sample Rec'd: 11/15/95
Analysis Start: 11/16/95
Analysis Comp: 11/17/95

Analysis: Munsel

Lab ID#	Soil Color
1969.1	5Y 4/4 Olive
1969.2	5Y 3/4 Olive
1969.3	5Y 4/4 Olive
1969.4	2.5Y 5/4 Light Olive Brown
1969.5	5Y 3/2 Dark Olive
1969.6	2.5Y 4/3 Olive Brown
1969.7	2.5Y 5/4 Light Olive Brown
1969.8	2.5Y 5/4 Light Olive Brown

Brian K. McKee
Laboratory Director

SERV-AIR, INC. An E-SYSTEMS Co.

P.O. #: PWS-07

Chain of Custody

Project #:	Sampler: Gary DiMartinis	Date / Time 11-15-95 1300	Analysis Parameters	Start:
Customer: G. LESINSKI SELFM-PW-EV	Site Name: BLDG #804			Finish:
Phone: (908)532-0989				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsell	OVA	Remarks
1969.1	11-15-95 1359	804-A (Piping Run @ 2' BELOW GRADE)	SOIL	1	X	X	X	ND	
.2	1419	804-B (SIDE WALL @ 4')			X	X	X	ND	
.3	1426	804-C (SIDE Wall @ 5')			X	X	X	ND	* = SAMPLES
.4	1430	804-D (SIDE Wall @ 5')			X	X	X	ND	KEPT < 4°C
.5	1437	804-E (SIDE Wall @ 6')			X	X	X	ND	
.6	1442	804-F (EXCAVATION FLOOR @ 8')			X	X	X	ND	
.7	1445	804-G (EXCAVATION FLOOR @ 8')			X	X	X	ND	
.8	—	804-H DUPLICATE			X	X	X	ND	
NOTE: OVA CALIBRATED TO 95 PPM METER READING W/ 95 PPM CH4 & ZERO (0) AIR AT 1300 hrs. on 11-15-95 by G. DiMartinis (SERIAL # A52114)									

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
			HAND

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	11-15-95 1540	Sarah J. Hubbard	11/15/95 1540

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLE LOCATIONS.

Enviornmental Laboratory

Certification Number 13 :1

Sample Receipt Form

Date Received: 11-15-95 Lab Project ID #: _____

Site/Project Name: BLDG 804 Cooler Temp: <4°C

Received by: S Jat 11/15/95

Circle the appropriate answer

1. Did the samples come in a cooler?	(yes)	no
2. Were chain of custody papers filled out correctly and legibly?	(yes)	no
3. Did you sign the chain of custody in the appropriate place?	(yes)	no
4. Was the project identifiable from the chain of custody?	(yes)	no
5. Did all bottles arrive unbroken and were labels in good condition?	(yes)	no
6. Did all labels agree with the chain of custody?	(yes)	no
7. Were correct containers and/or preservatives used for the tests indicated?	(yes)	no
8. Were bubbles absent from aqueous VOC sample containers?	yes	no N/A

Fill out the following for each sample bottle.

Sample ID	Preservative	pH	Sample ID	Preservative	pH
all samples	<4°C	N/A			

Comments: _____

_____

_____

Samples Accepted By: Sarah J Hubbard 11/15/95

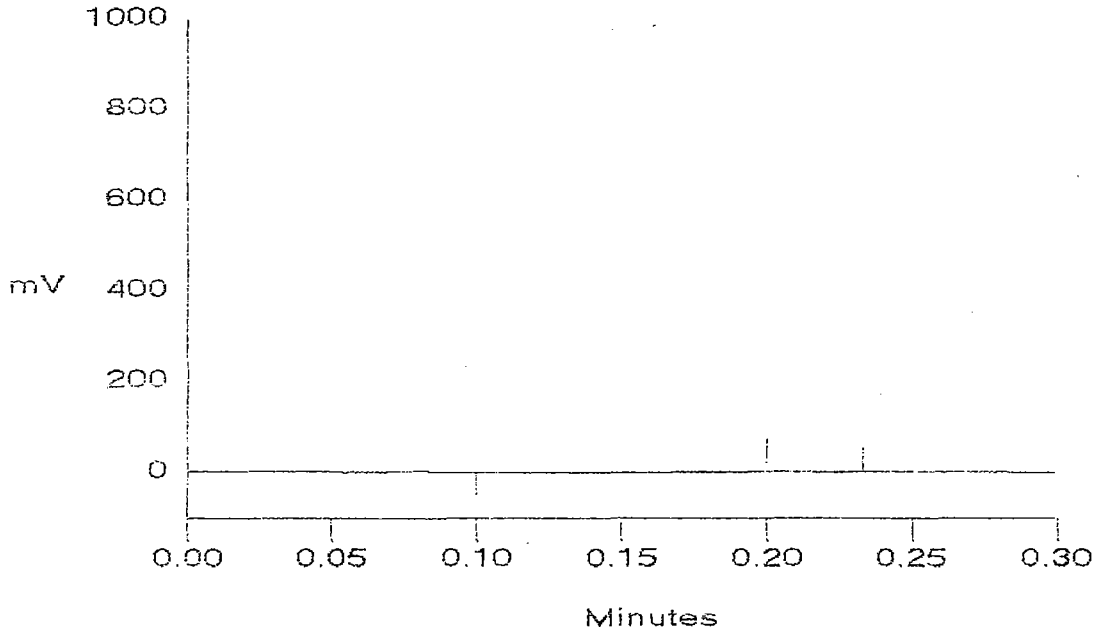
Sample Name: BLANK Date: 11/17/1995 13:42:18
Data File : C:\DX\DATA\11169531.D01
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 1 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0		

File: 11169531.D01 Sample: BLANK



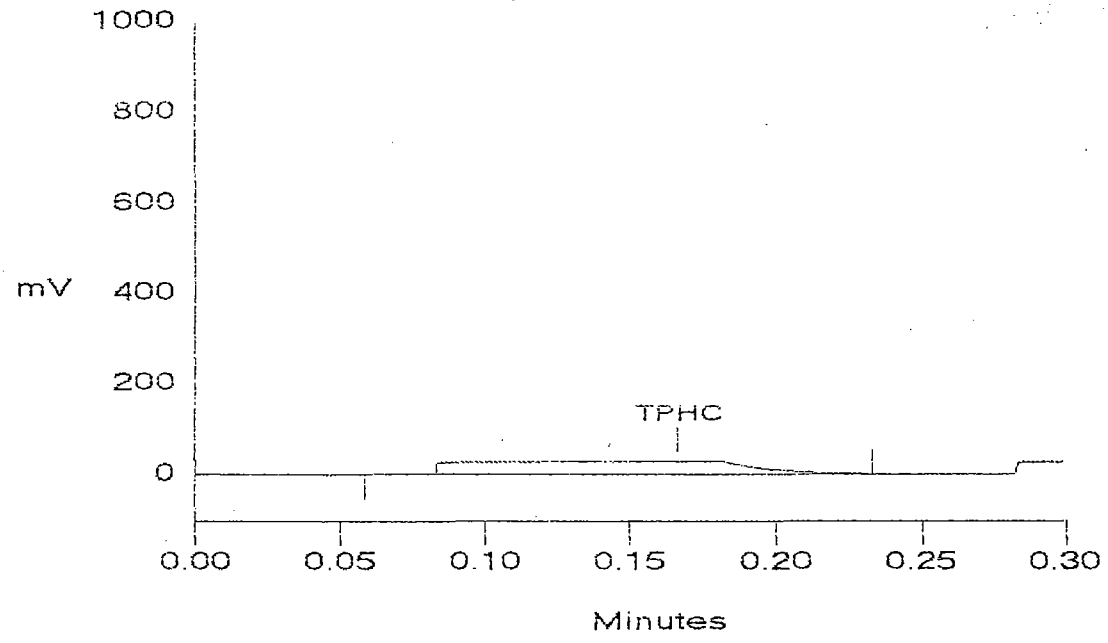
Sample Name: 1969.1 804( ) Date: ( )/17/1995 13:46:17
Data File : C:\DX\DATA\11169541.D03
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 3 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	18.065	26897	185230	1	0.00
		Totals	18.065	26897	185230		

File: 11169541.D03 Sample: 1969.1 804-A



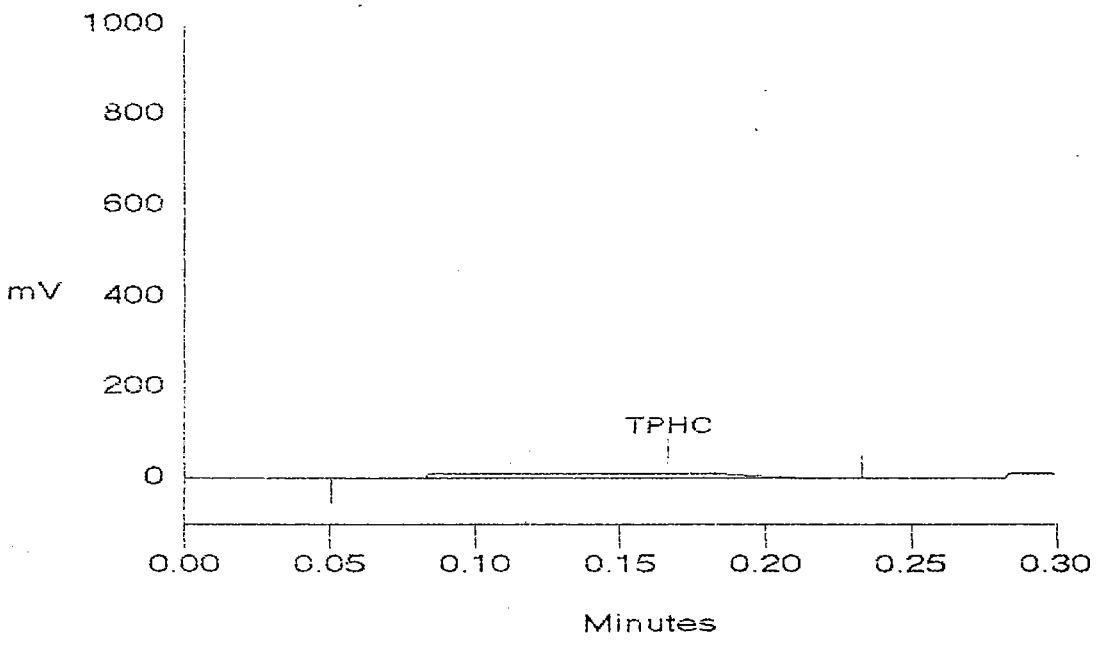
Sample Name: 1969.2 804( ) Date: ( )/17/1995 13:48:48
Data File : C:\DX\DATA\11169531.D04
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 4 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	7.337	10923	75514	1	0.00
		Totals	7.337	10923	75514		

File: 11169531.D04 Sample: 1969.2 804-B



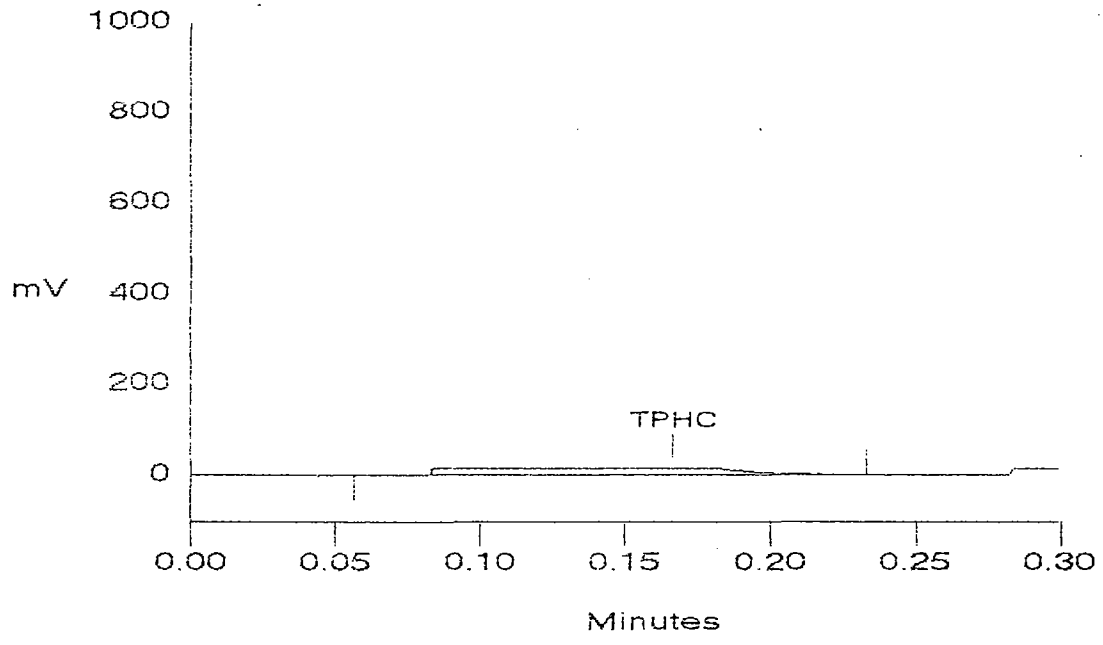
Sample Name: 1969.3 804( ) Date: ( )/17/1995 13:51:34
Data File : C:\DX\DATA\11169521.D05
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 5 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	9.212	13715	94422	1	0.00
		Totals	9.212	13715	94422		

File: 11169521.D05 Sample: 1969.3 804-C



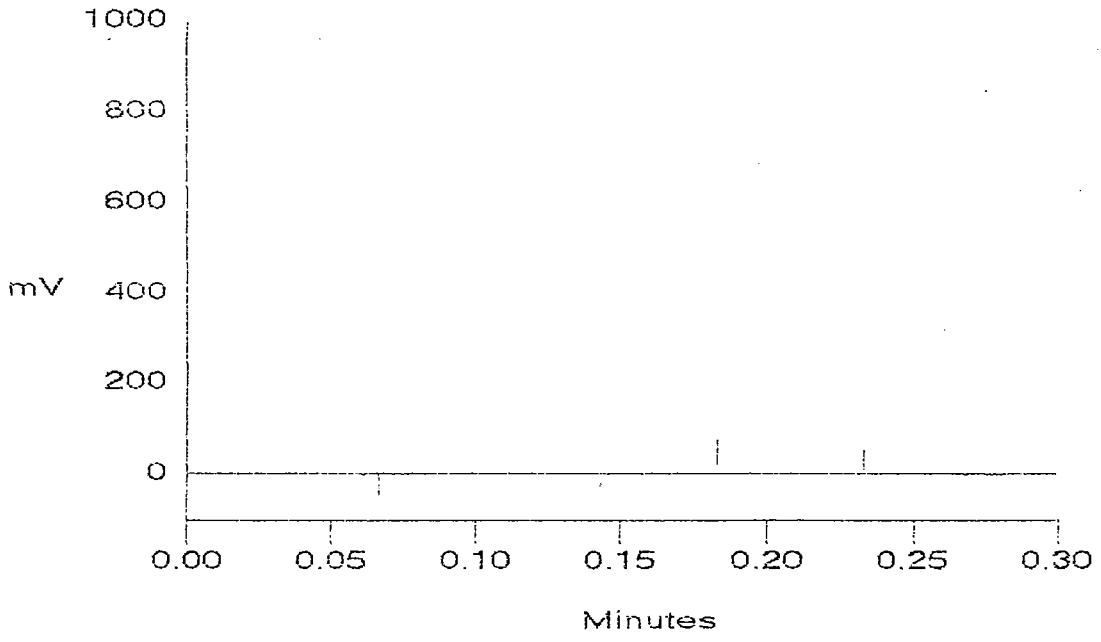
Sample Name: 1969.4 804( ) Date: ( )/17/1995 18:54:00
Data File : C:\DX\DATA\11169521.D06
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 6 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0		

File: 11169521.D06 Sample: 1969.4 804-D



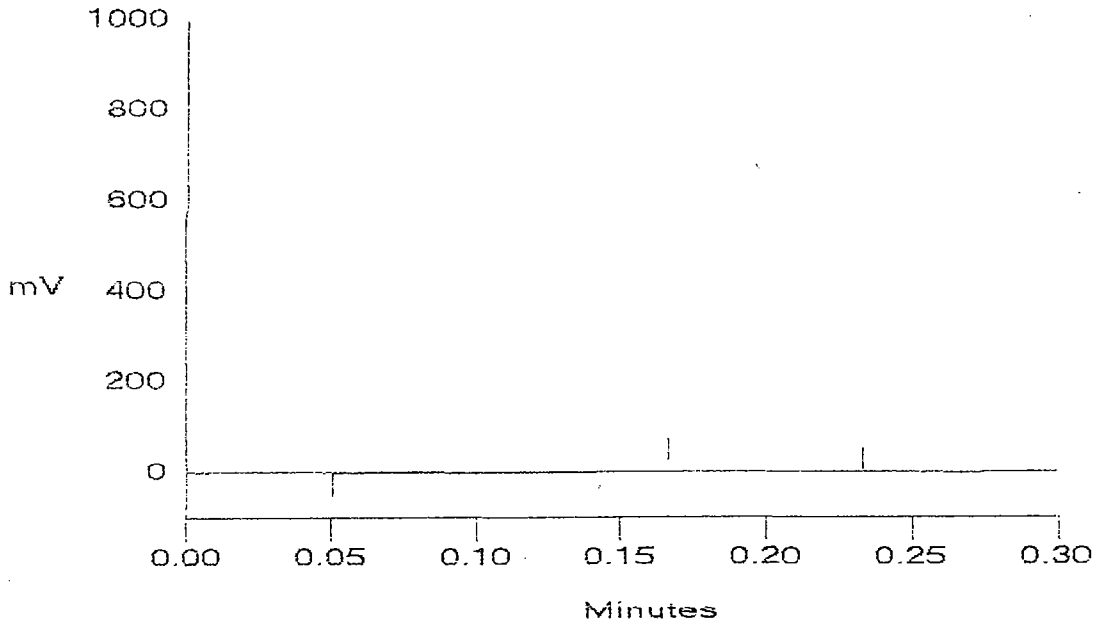
Sample Name: 1969.4 DUP Date: /17/1995 1:56:32
Data File : C:\DX\DATA\11169521.D07
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 7 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 11169521.D07 Sample: 1969.4 DUP



Sample Name: 1969.4 SPK Date: 11/7/1995

Data File : C:\GX\Data\File9521.D08

Method : c:\gx\method\tph.met

Area: 1 System: 1 Injector: 5

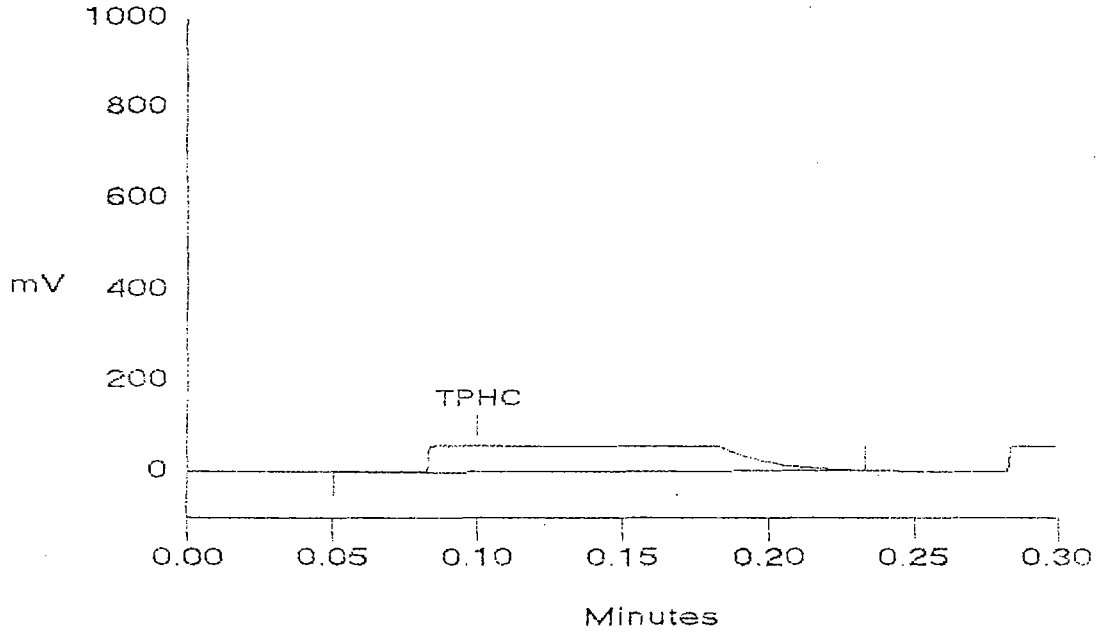
Analyst : EKM Column: 1A

Calibration	Volume	Dilution Factor	Rate	Area Reject	Slope Sensitivity
External	1	1	900 50Hz	0.00	0.30	30000

Component Report: Components Found

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	El. Code	%Delta
1	0.10	TPHC	38.452	57250	385666	1	0.00
		Totals	38.452	57250	385666		

File: 11169521.D08 Sample: 1969.4 SPK



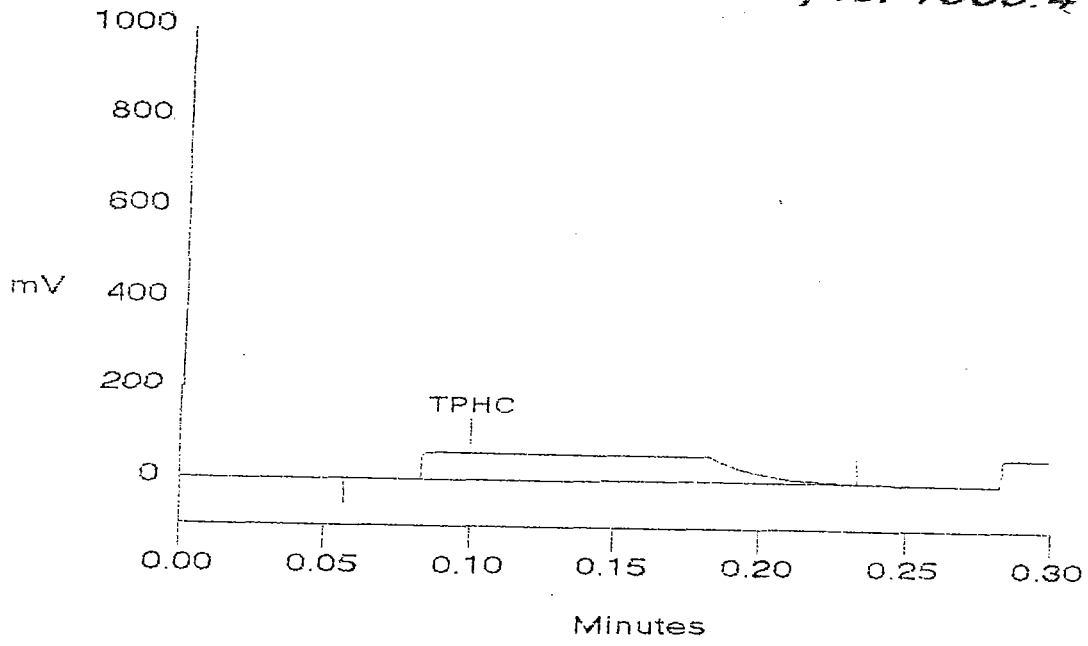
Sample Name: 1969.4 DUP SPK Date: 11/17/1995 14:19:01
Data File : C:\DX\DATA\11169521.D09
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 9 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.10	TPHC	39.077	58181	392224	1	0.00
		Totals	39.077	58181	392224		

File: 11169521.D09 Sample: 1969.4 DUP SPK



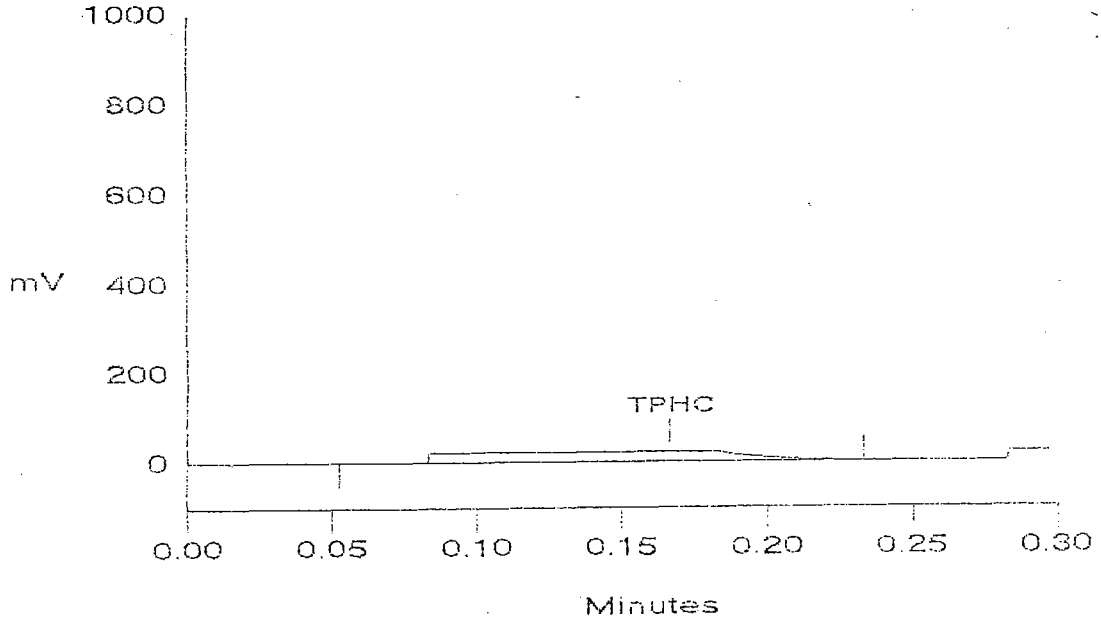
Data File : C:\DX\DATA\11169521.D10
Method : c:\dx\methodY\tph.met
ACI Address: 1 System: 1 Inject#: 10 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	14.466	21538	147175	1	0.00
		Totals	14.466	21538	147175		

File: 11169521.D10 Sample: 1969.5 804-E



Method : C:\KIM\METHOD\TPH.MTH

Data Address: 1 System: 1 Inject#: 11

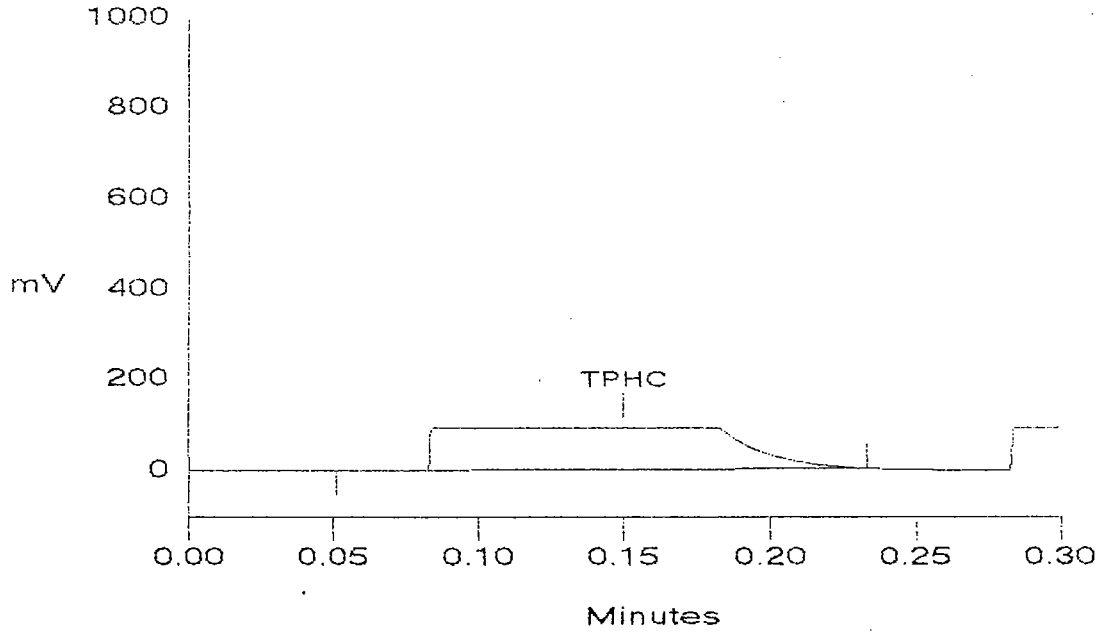
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.15	TPHC	61.383	91391	624447	1	0.00
		Totals	61.383	91391	624447		

File: 11169521.D11 Sample: 1969.6 804-F



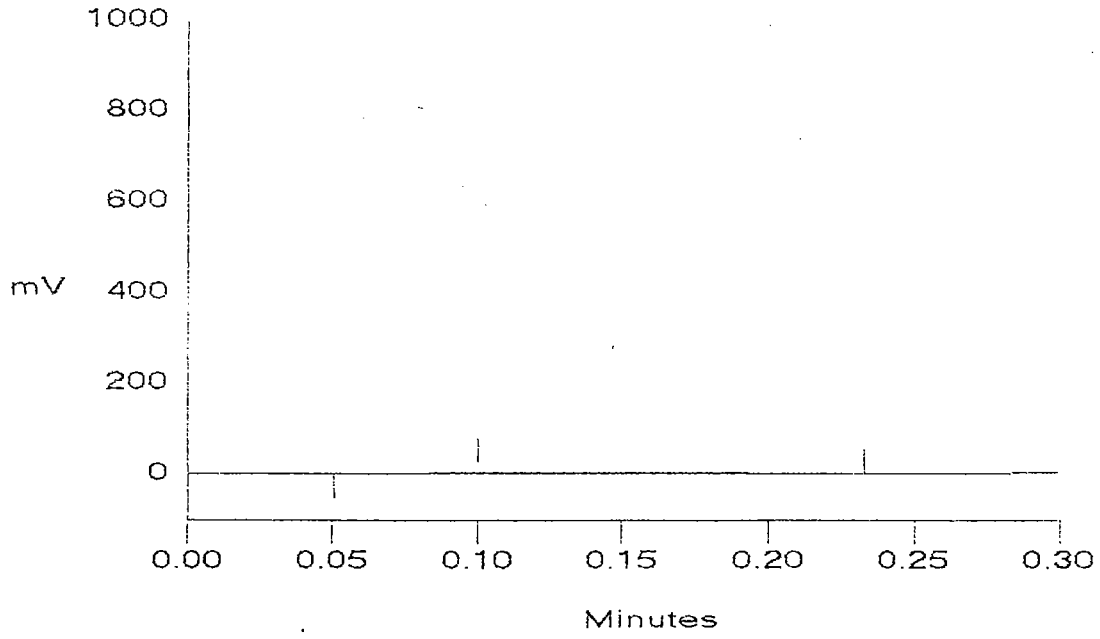
Sample Name: 1969.7 804-G Date: 11/17/1995 14:31:16
Data File : C:\DX\DATA\11169521.D12
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 12 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0		

File: 11169521.D12 Sample: 1969.7 804-G



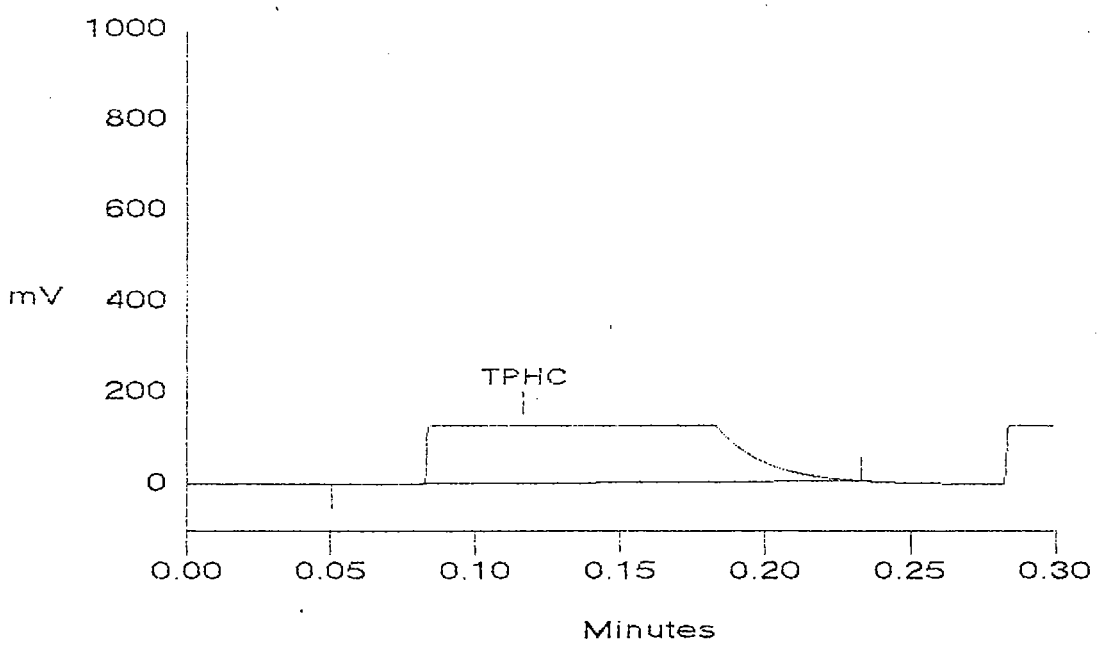
Sample Name: 1969.8 FIELD DUP Date: 11/17/1995 14:33:56
Data File : C:\DX\DATA\11169521.D13
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 13 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.12	TPHC	85.288	126982	861362	1	0.00
		Totals	85.288	126982	861362		

File: 11169521.D13 Sample: 1969.8 FIELD DUP



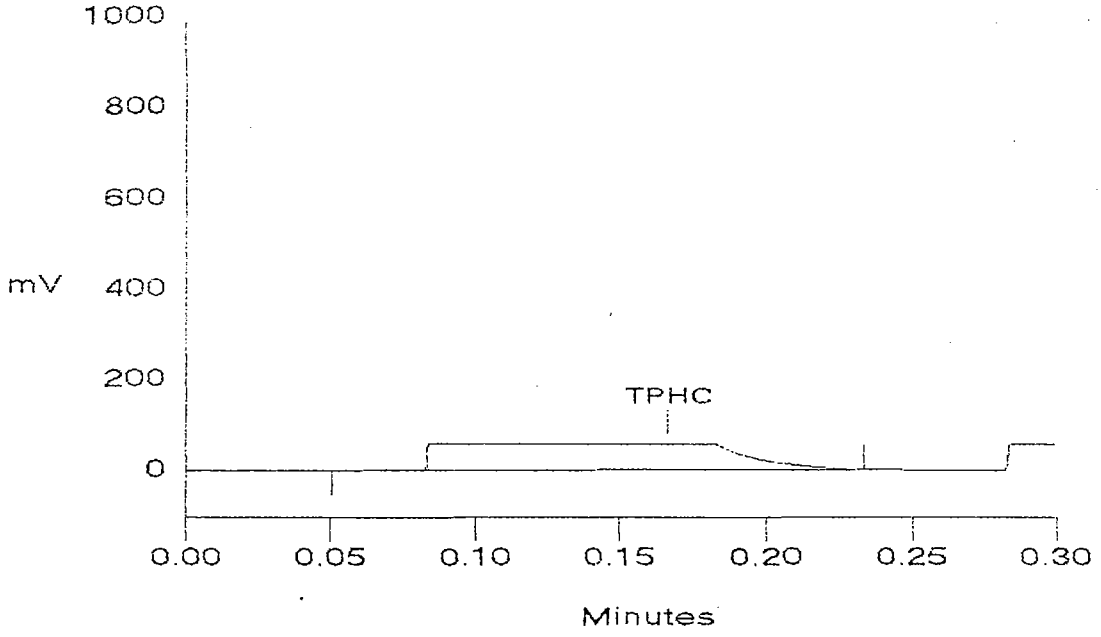
Sample Name: CALCK. Date: 11/17/1995 14:37:22
Data File : C:\DX\DATA\11169521.D14
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 14 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	38.319	57052	391237	1	0.00
		Totals	38.319	57052	391237		

File: 11169521.D14 Sample: CALCK.



PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
3. IR Spectra submitted for standards, blanks, & samples.		✓
4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		N/A
5. Extraction holding time met. (If not met, list number of days exceeded for each sample)		✓
6. Analysis holding time met. (If not met,list number of days exceeded for each sample)		✓

Comments: None

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Project #1969

Brian K. McKee
Laboratory Manager

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab. ID #: 1988.1-.3
Sample Rec'd: 11/30/95
Analysis Start: 11/30/95
Analysis Comp: 12/01/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 804A**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1988.1	804A-A Excav. Floor @ 9' OVA=ND	81	779.	100
1988.2	804A-B Excav. Floor @ 9' OVA=ND	83	665.	100
1988.3	Duplicate OVA=ND	82	673.	100
M. Bl.	Method Blank	100	ND	100

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1984.1S= 85%,1984.1SD= 93%,RPD= 1.6%,1984.1Dup=100%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab. ID #: 1988.1-.3
Sample Rec'd: 11/30/95
Analysis Start: 11/30/95
Analysis Comp: 12/01/95

Analysis: Munsel

Lab ID#	Soil Color
1988.1	5Y 5/4 Olive
1988.2	5Y 5/3 Olive
1988.3	5Y 5/4 Olive

Brian K. McKee
Laboratory Director

SERV-AIR, INC. An E-SYSTEMS Co.

P.O. #: PWS-7

Chain of Custody

Project #:	Sampler: GARY DiMartinis - SAI	Date / Time 11-30-95 900	Analysis Parameters	Start:
Customer: G. LESINSKI. SELFM-PW-EV	Site Name: BLDG. 804			Finish:
Phone: 908 532-0989				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% SOLIDS	MUNSEL	QUA	Remarks
1988.1	11-30-95 925	804-A (EXCAV. FLOOR @ 9')	SOIL	1	X	X	X	ND	*: SAMPLES KEPT BELOW 4°C. *
1988.2	945	804-B (EXCAV. FLOOR @ 9')	↓	↓	X	X	X	ND	*
1988.3	↓ —	DUPLICATE	↓	↓	X	X	X	ND	*
NOTE: QUA CALIBRATED TO 95 PPM METER READING W/95 PPM CH_4 + ZERO (0) AIR AT 900 HRS ON 11-30-95 BY G. DiMARTINIS. (SERIAL #A52114)									

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Gary DiMartinis	11-30-95 11:10	Sarah J. Hubbard	
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS.

Environmental Laboratory

Certification Number 12

Sample Receipt Form

Date Received: 11-30-95

Lab Project ID #: _____

Site/Project Name: BLDG. 804

Cooler Temp: 4°C

Received by: S. Hubbard

Circle the appropriate answer

1. Did the samples come in a cooler?	(yes)	no
2. Were chain of custody papers filled out correctly and legibly?	(yes)	no
3. Did you sign the chain of custody in the appropriate place?	(yes)	no
4. Was the project identifiable from the chain of custody?	(yes)	no
5. Did all bottles arrive unbroken and were labels in good condition?	(yes)	no
6. Did all labels agree with the chain of custody?	(yes)	no
7. Were correct containers and/or preservatives used for the tests indicated?	(yes)	no
8. Were bubbles absent from aqueous VOC sample containers?	yes	no N/A

Fill out the following for each sample bottle.

Sample ID	Preservative	pH	Sample ID	Preservative	pH
ALL SAMPLES	<4°C	N/A			

Comments: NONE

Samples Accepted By: Sarah J. Hubbard

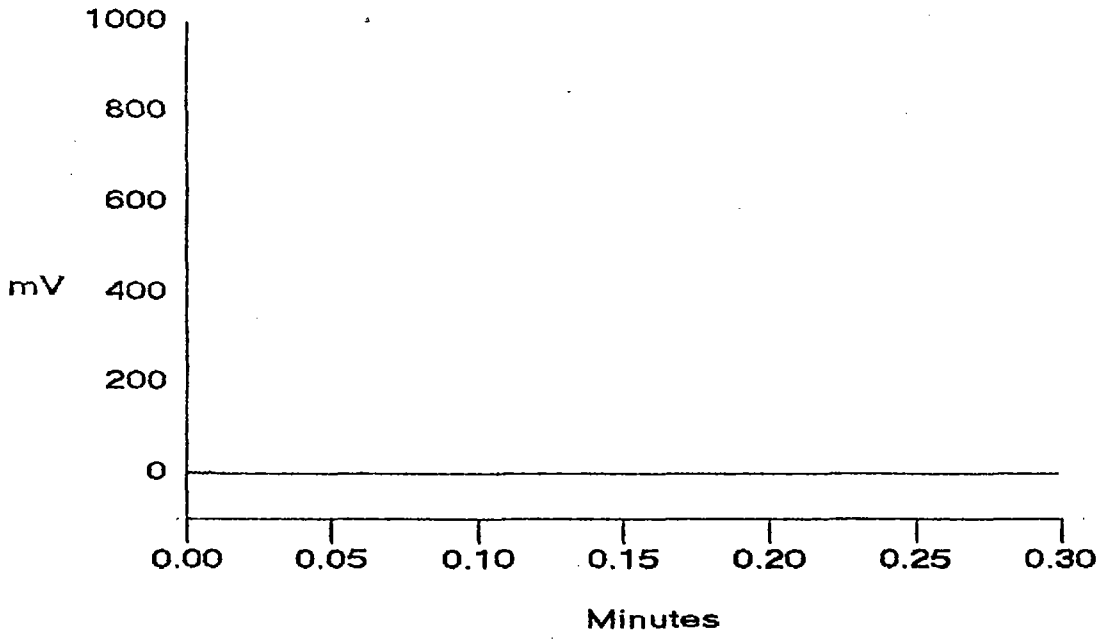
Sample Name: BLANK Date: 12/01/1995 10:07:51
Data File : C:\DX\DATA\11219531.D01
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 1 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 11219531.D01 Sample: BLANK



********** AUTOMATIC CALIBRATION UPDATE **********

Sample Name: AUTOCAL1 Date: Fri Dec 01 10:13:02 1995
Raw File : C:\DX\DATA\11219561.D02
Method : c:\dx\method\tph.met Calibration Level: 1
GPIB Address: 1 System : 1 Inject#: 2 Detector: OTHER

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	TPHC	0.17	0.17	0.17	6.223e+004	6.154e+004	6.154e+004

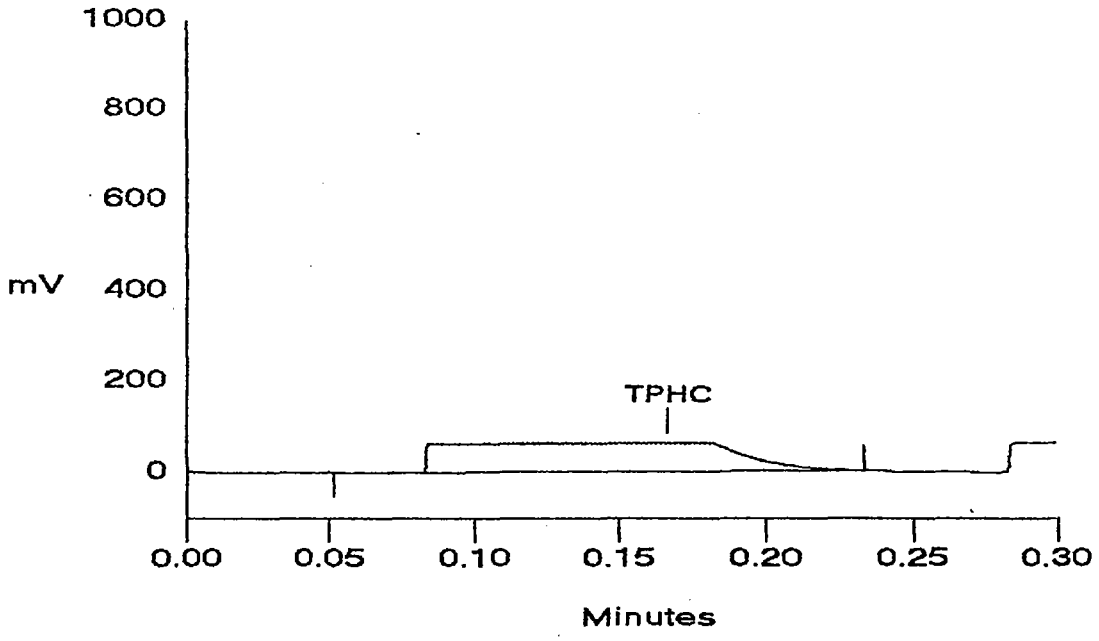
Sample Name: AUTOCAL1 Date: 12/01/1995 10:13:02
Data File : C:\DX\DATA\11219561.D02
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 2 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ernal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

K. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	40.750	61537	423774	1	0.00
		Totals	40.750	61537	423774		

File: 11219561.D02 Sample: AUTOCAL1



********** AUTOMATIC CALIBRATION UPDATE **********

Sample Name: AUTOCAL2 Date: Fri Dec 01 10:17:02 1995
Raw File : C:\DX\DATA\11219541.D03
Method : c:\dx\method\tph.met Calibration Level: 2
ACI Address: 1 System : 1 Inject#: 3 Detector: OTHER

********** COMPONENTS FOUND IN THIS RUN **********

COMP NUM	COMPONENT NAME	OLD RET.TIME	MEASURED RET.TIME	NEW RET.TIME	OLD RESPONSE	MEASURED RESPONSE	NEW RESPONSE
1	TPHC	0.17	0.13	0.13	1.213e+005	1.246e+005	1.246e+005

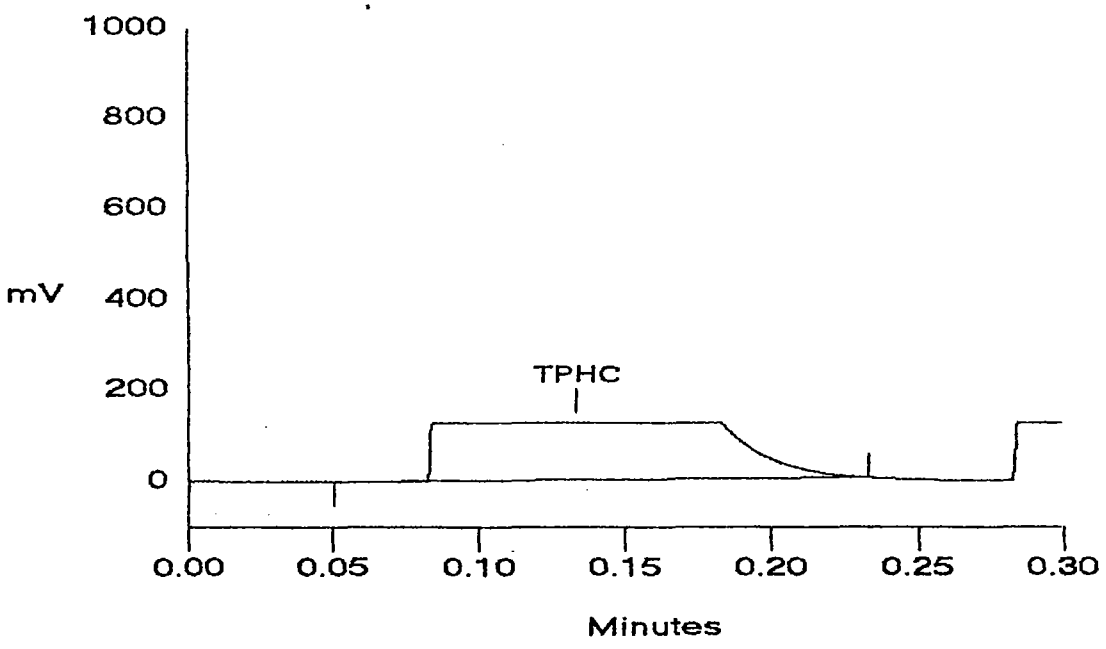
Sample Name: AUTOCAL2 Date: 12/01/1995 10:17:02
Data File : C:\DX\DATA\11219541.D03
Method : c:\dx\method\tph.met
GPIB Address: 1 System: 1 Inject#: 3 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

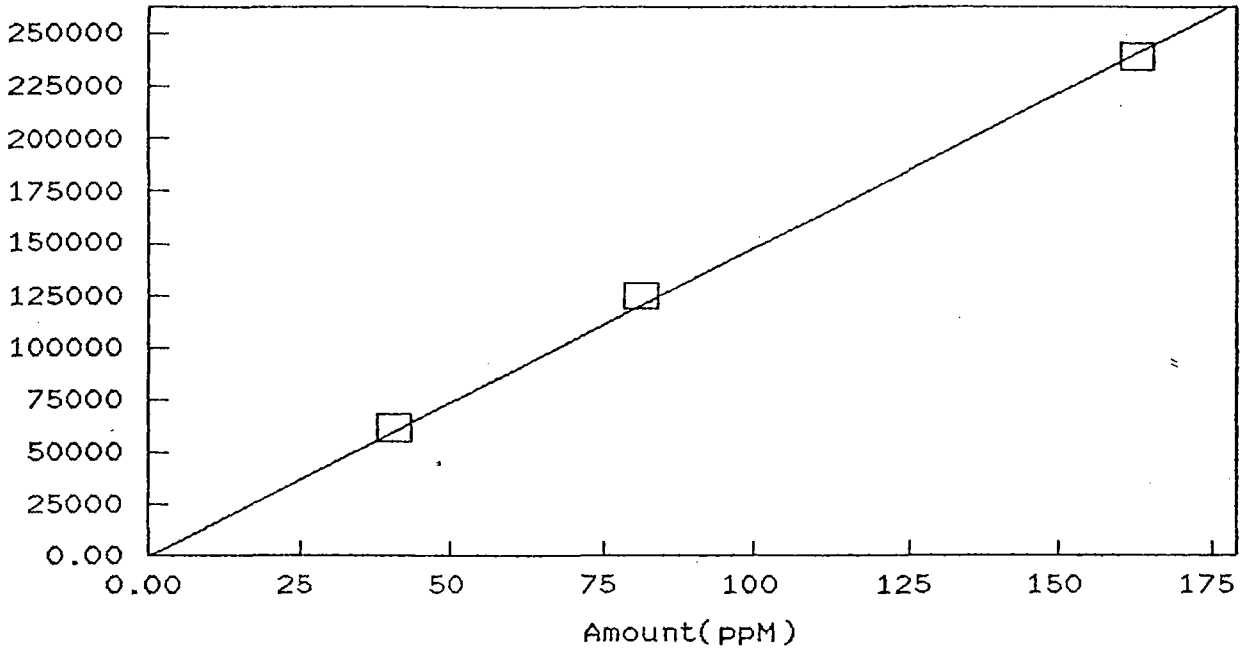
Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.13	TPHC	81.500	124648	851561	1	0.00
		Totals	81.500	124648	851561		

File: 11219541.D03 Sample: AUTOCAL2



-Method Updated: 0:20 on Fri, 01 Dec 1995

Component: TPHC
Fit Type: Linear
r^2 = 0.998616
Amt = Resp * 0.0006756 + 0
Resp = Amt * 1480 + 0
Standardization: External
Calibration: Height



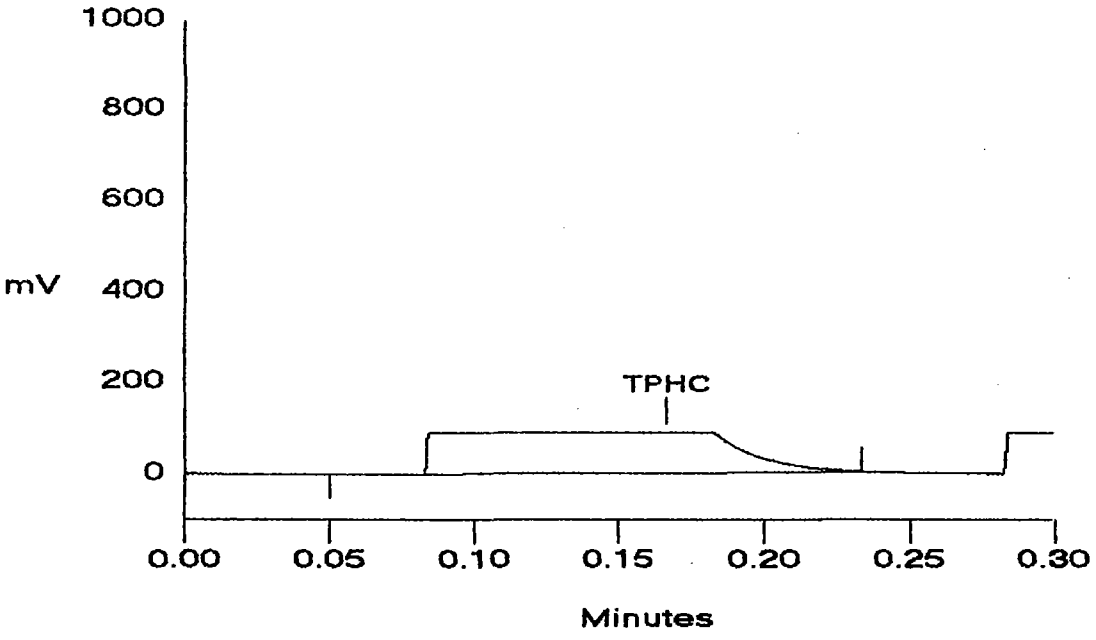
Sample Name: 1984.1 DUP. Date: 12/01/1995 11:02:11
Data File : C:\DX\DATA\12019521.D04
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 4 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	58.611	86750	600246	1	0.00
		Totals	58.611	86750	600246		

File: 12019521.D04 Sample: 1984.1 DUP.



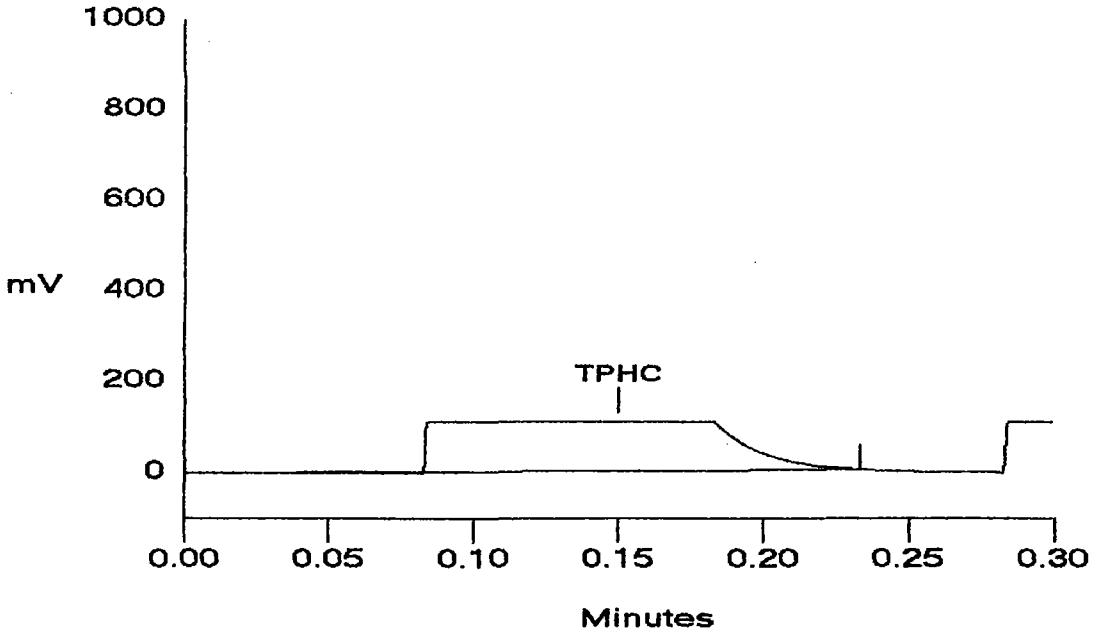
Sample Name: 1984.1 SPK. Date: 12/01/1995 11:04:47
Data File : C:\DX\DATA\12019521.D05
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 5 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

K. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.15	TPHC	72.473	107267	731389	1	0.00
		Totals	72.473	107267	731389		

File: 12019521.D05 Sample: 1984.1 SPK.



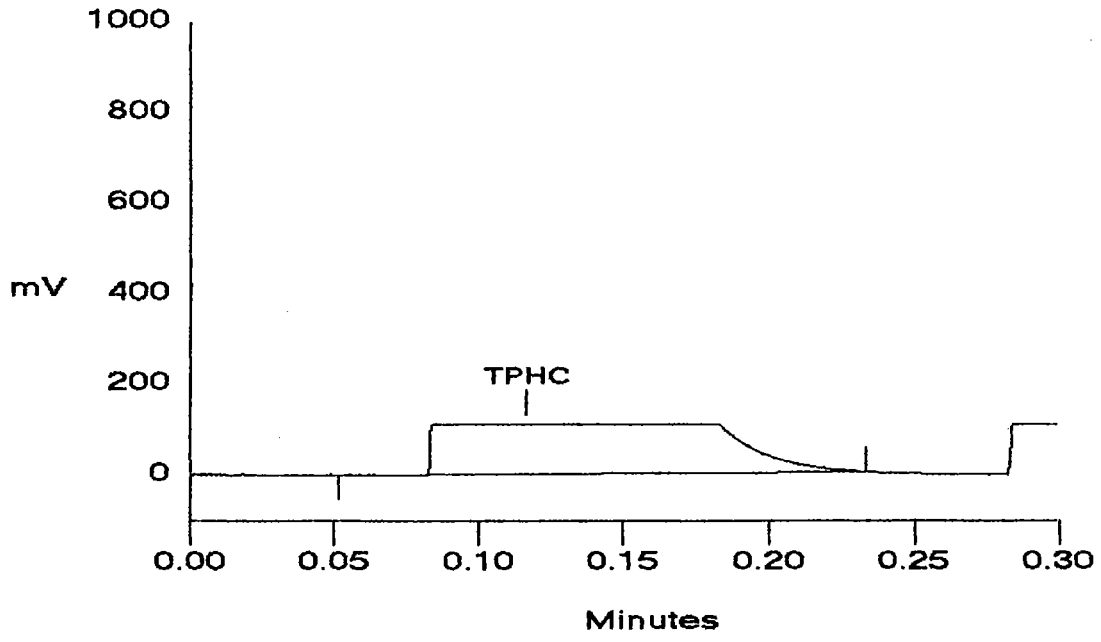
Sample Name: 1984.1 DUP. SPK. Date: 12/01/1995 11:06:58
Data File : C:\DX\DATA\12019521.D06
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 6 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

<. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.12	TPHC	73.704	109088	740269	1	0.00
		Totals	73.704	109088	740269		

File: 12019521.D06 Sample: 1984.1 DUP. SPK.



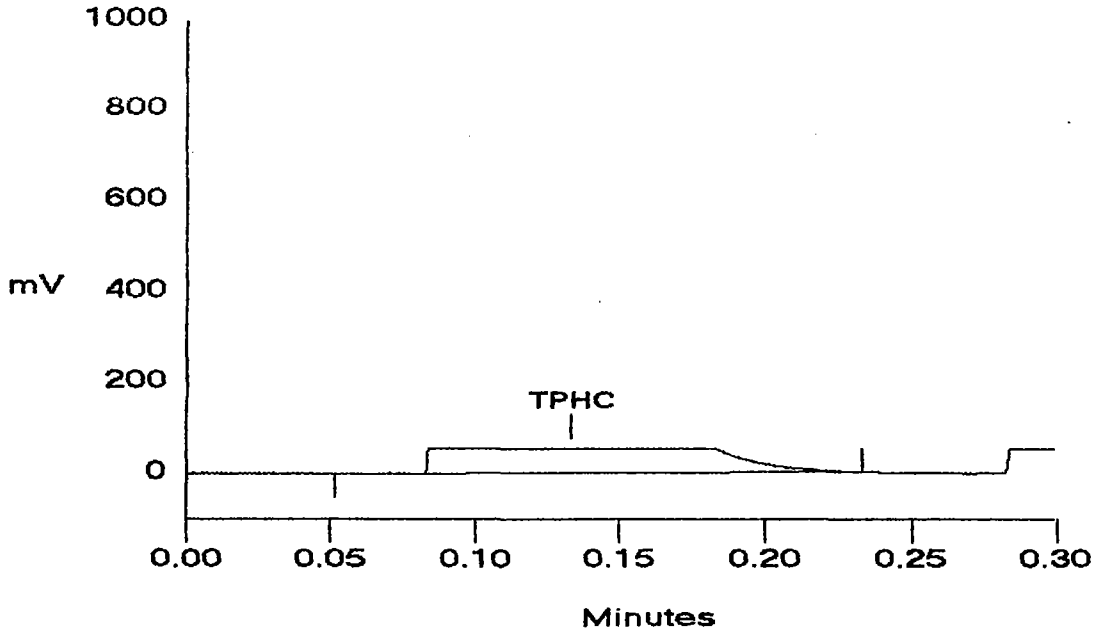
Sample Name: 1984.2 B801B-K Date: 12/01/1995 11:09:29
Data File : C:\DX\DATA\12019511.D07
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 7 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

K. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.13	TPHC	36.938	54671	372820	1	0.00
		Totals	36.938	54671	372820		

File: 12019511.D07 Sample: 1984.2 B801B-K



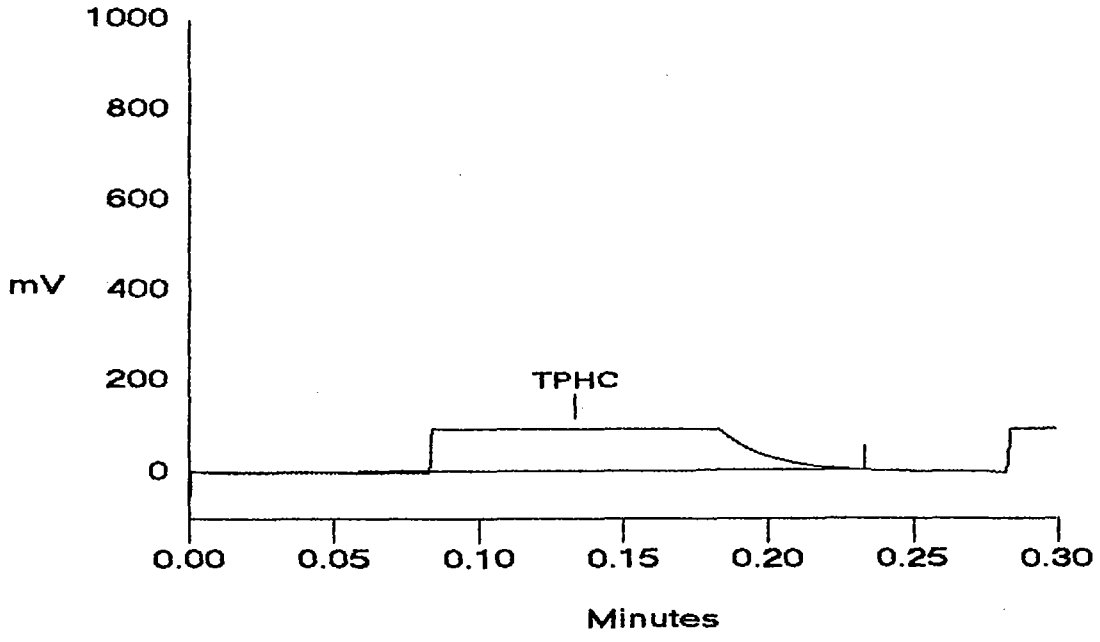
Sample Name: 1984.3 B801 DUP. Date: 12/01/1995 11:12:02
Data File : C:\DX\DATA\12019511.D08
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 8 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. .um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.13	TPHC	62.360	92297	623259	1	0.00
		Totals	62.360	92297	623259		

File: 12019511.D08 Sample: 1984.3 B801 DUP.



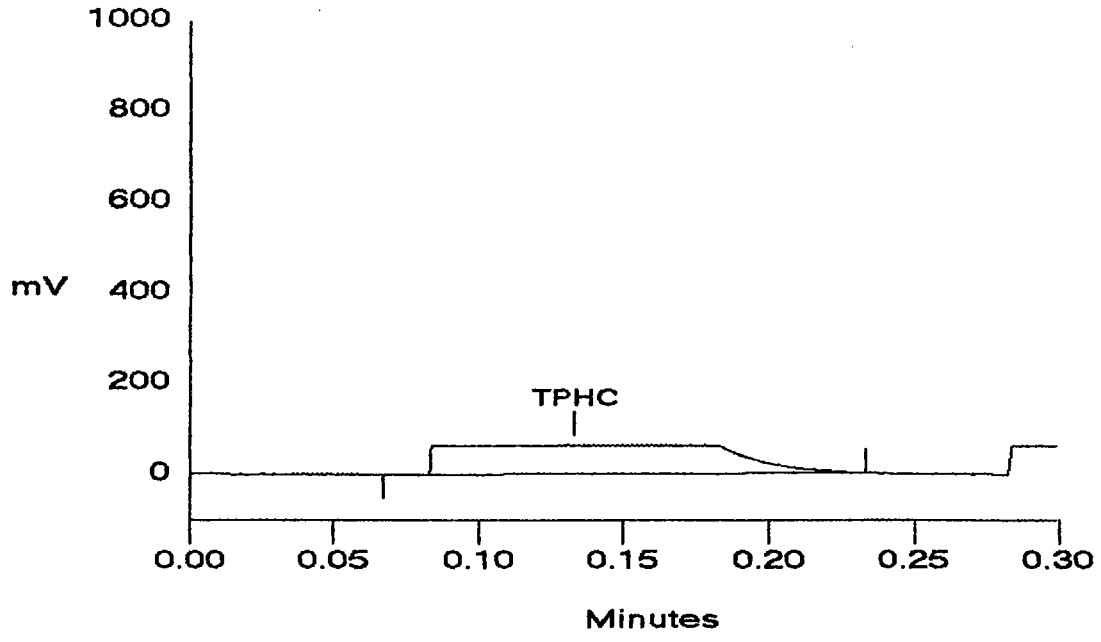
Sample Name: 1988.1 B804-A Date: 12/01/1995 11:14:23
Data File : C:\DX\DATA\12019511.D09
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 9 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.13	TPHC	42.083	62286	425499	1	0.00
		Totals	42.083	62286	425499		

File: 12019511.D09 Sample: 1988.1 B804-A



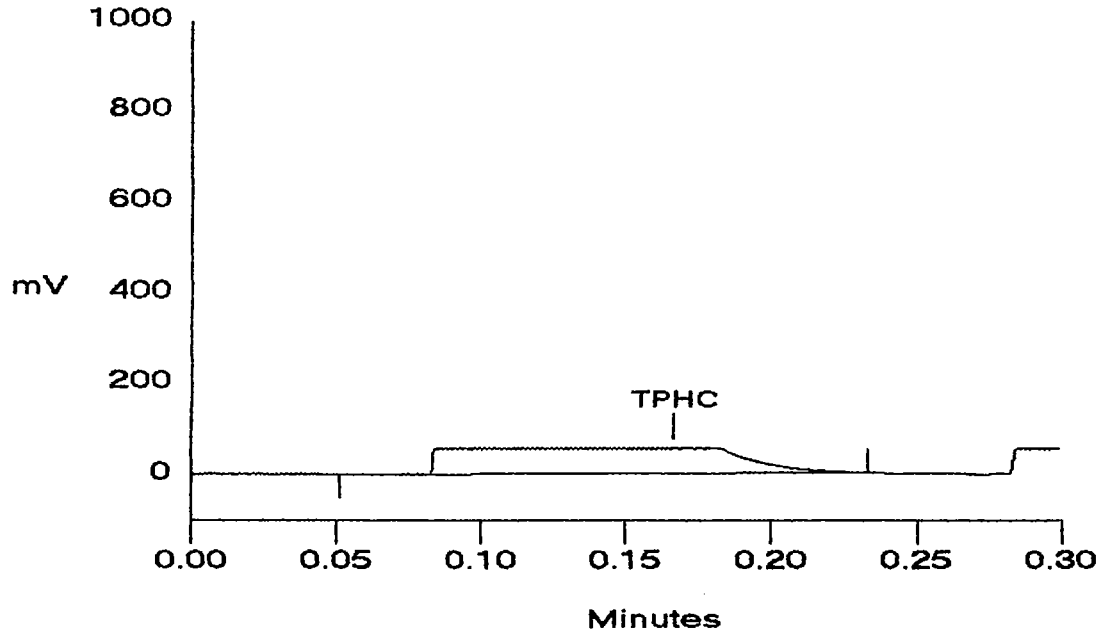
Sample Name: 1988.2 B804-B Date: 12/01/1995 11:16:48
Data File : C:\DX\DATA\12019511.D10
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 10 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	36.850	54542	376422	1	0.00
		Totals	36.850	54542	376422		

File: 12019511.D10 Sample: 1988.2 B804-B



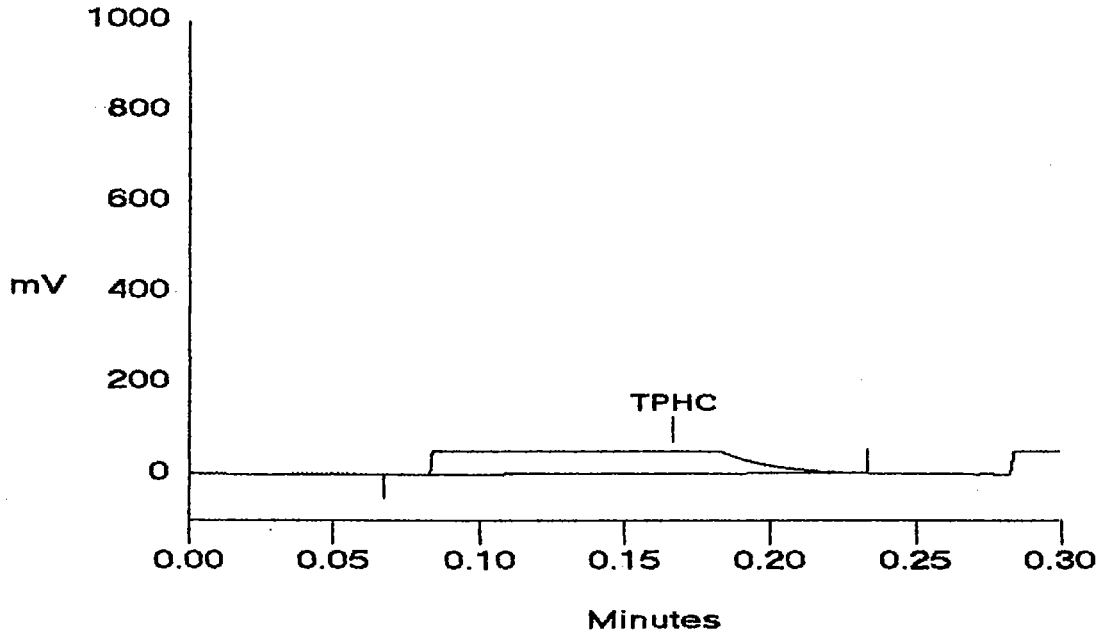
Sample Name: 1988.3 B804 DUP. Date: 12/01/1995 11:18:39
Data File : C:\DX\DATA\12019511.D11
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 11 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	33.078	48959	340109	1	0.00
		Totals	33.078	48959	340109		

File: 12019511.D11 Sample: 1988.3 B804 DUP.



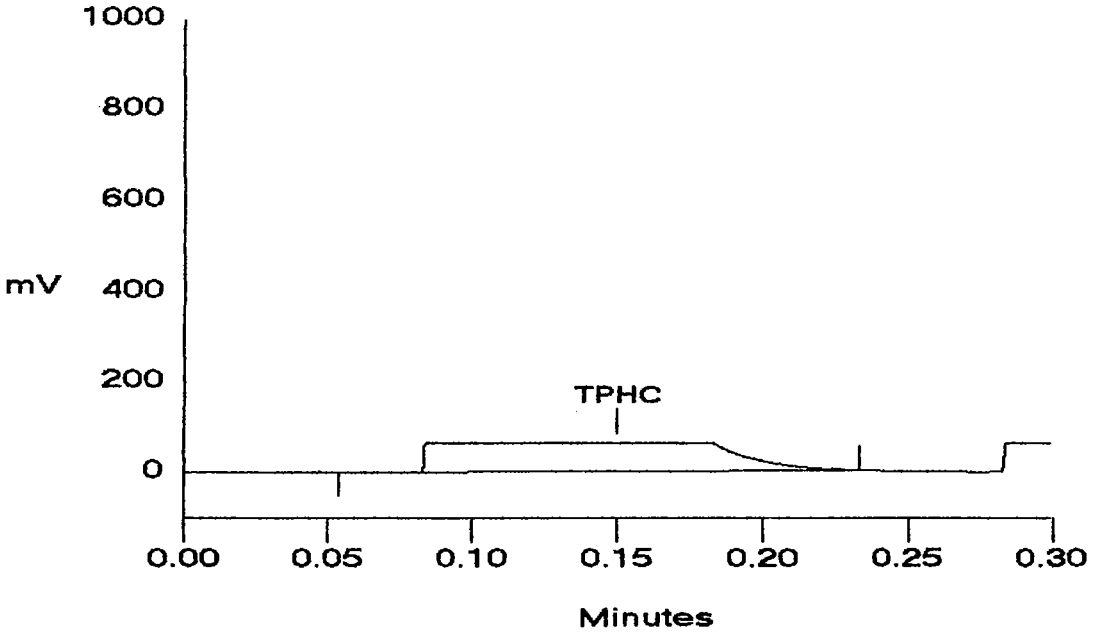
Sample Name: CALCK. Date: 12/01/1995 11:22:59
Data File : C:\DX\DATA\12019511.D12
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 12 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

k. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.15	TPHC	42.317	62632	430280	1	0.00
		Totals	42.317	62632	430280		

File: 12019511.D12 Sample: CALCK.



PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
3. IR Spectra submitted for standards, blanks, & samples		✓
4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		NA
5. Extraction holding time met. (If not met, list number of days exceeded for each sample)		✓
6. Analysis holding time met. (If not met,list number of days exceeded for each sample)		✓

Comments: None

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analysis. I have personally examined the information contained in this report, and to the best of my knowledge, I believe that the submitted information is true, accurate, complete, and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Project #1988

Brian K. McKee

Brian K. McKee
Laboratory Manager

APPENDIX E

GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: IJO# 01-0001

Bldg. 804

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
804 8.2'	16237.01	Aqueous	07-Jul-01 10:00	07/07/01
F.D.	16237.02	Aqueous	07-Jul-01	07/07/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15

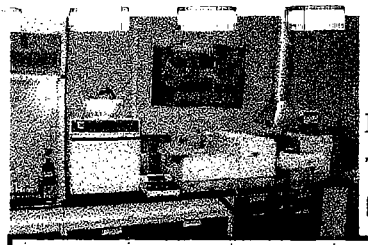
ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

8.8.01

Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: X21475
( )DERA (✓)OMA ( )Other:_____
Project No: 01-0001
Location: Bldg 804
Samplers Name / Company: MARK LAURA - TVS-PWS07

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: VOA+15	Analysis Parameters: BN+15	Comments: Remarks / Preservation Method
16237.01	804 8.2'	7-7-01	1000	AQ	3	X	X	HCl, 4°C
02	F.D.	"	~~1000~~	"	3	X	X	" , "

Relinquished by (Signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	7-9-01 800				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ____ Days, (_)ASAP Verbal ____ Hrs.

Remarks:

200002

print legibly

Coc.xls6/26/01

METHOD SUMMARY

Method Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5-ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/625
Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFORMANCE/NON CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — yes

2. Retention times for chromatograms provided — yes

3. GC/MS Tune Specifications
   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes

4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes

5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes

6. GC/MS Calibration requirements
   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes

7. Blank Contamination – If yes, List compounds and concentrations in each blank: — no
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

8. Surrogate Recoveries Meet Criteria — yes

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

   If not met, were the calculations checked and the results qualified as "estimated"? _____

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction N/A

11. Extraction Holding Time Met — Yes

If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met — Yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Laboratory Manager: _____ Date: 8-8-01

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16237 Site: Bldg. 804

	Date	Hold Time
Date Sampled	07/07/01	NA
Receipt/Refrigeration	07/09/01*	NA
Extractions		
1. BN	07/10/01	7 days
Analyses		
1. VOA	07/10,11/01	14 days
2. BN	07/11/01	40 days

* Sampled and Refrigerated on 07/07/01 rec'd on 07/09/01.

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006472.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**10-Jul-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

8/6/01 1:48 PM

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000012

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006490.D**	Sample Name	**1623701**
Operator	**Skelton**	Field ID	**804**
Date Aquired	**11-Jul-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

8/6/01 1:48 PM

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000014

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **804**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1623701

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006490.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: not dec. _____ Date Analyzed: 7/11/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006491.D**	Sample Name	**1623702**
Operator	**Skelton**	Field ID	**FD**
Date Aquired	**11-Jul-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

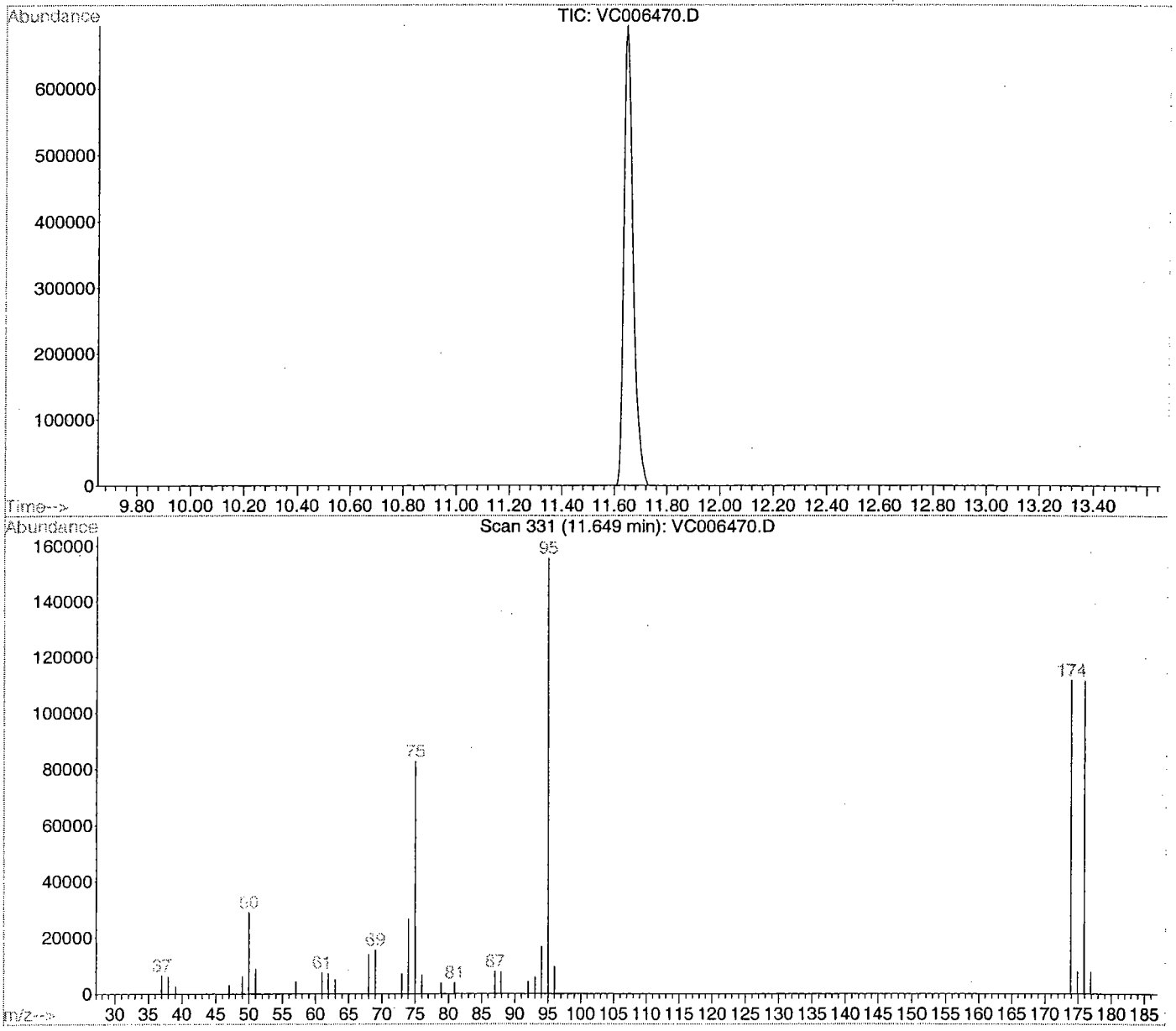
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

8/6/01 1:49 PM

D:\HPCHEM\CUSTRPT\VOLATILE\624FY00.CRT

000016

Data File : D:\HPCHEM\1\DATA\010710\VC006470.D Vial: 5
Acq On : 10 Jul 2001 9:39 am Operator: Skelton
Sample : BFB Tune Inst : GC/MS Ins
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362448.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 331

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	29056	PASS
75	95	30	60	53.1	82688	PASS
95	95	100	100	100.0	155584	PASS
96	95	5	9	6.3	9740	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.9	111848	PASS
175	174	5	9	7.1	7966	PASS
176	174	95	101	99.8	111616	PASS
177	176	5	9	7.0	7784	PASS

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\010710\VC006471.D Vial: 5
Acq On : 10 Jul 2001 11:29 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Multiple Level Calibration

Min. RRF : 0.025 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	83	0.00
2	t	Acrolein	0.395	0.080	79.7#	17#	0.02
3	t	Acrylonitrile	1.083	1.264	-16.7	92	0.00
4	t	tert-Butyl alcohol	0.116	0.102	12.1	68	0.01
5	t	Methyl-tert-Butyl ether	5.547	5.484	1.1	79	0.00
6	t	Di-isopropyl ether	1.677	1.674	0.2	78	0.02
7	T	Dichlorodifluoromethane	1.608	2.271	-41.2#	94	0.00
8	TP	Chloromethane	2.014	2.362	-17.3	85	0.00
9	TC	Vinyl Chloride	2.464	2.780	-12.8	83	0.00
10	T	Bromomethane	1.484	1.258	15.2	69	0.00
11	T	Chloroethane	1.513	1.624	-7.3	83	0.00
12	T	Trichlorofluoromethane	2.642	2.699	-2.2	79	0.00
13	MC	1,1-Dichloroethene	2.998	2.969	1.0	78	0.01
14	T	Acetone	1.611	2.175	-35.0#	141	0.00
15	T	Carbon Disulfide	6.265	6.473	-3.3	80	0.00
16	T	Methylene Chloride	2.382	2.429	-2.0	82	0.00
17	T	trans-1,2-Dichloroethene	3.100	3.071	0.9	80	0.00
18	TP	1,1-Dichloroethane	4.057	4.090	-0.8	82	0.00
19	T	Vinyl Acetate	3.608	4.121	-14.2	90	0.00
20	T	2-Butanone	0.851	0.864	-1.5	84	0.00
21	T	cis-1,2-Dichloroethene	3.018	3.039	-0.7	81	0.00
22	TC	Chloroform	3.957	3.946	0.3	81	0.00
23	T	1,1,1-Trichloroethane	3.066	2.787	9.1	74	0.00
24	T	Carbon Tetrachloride	2.638	2.419	8.3	74	0.00
25	S	1,2-Dichloroethane-d4	2.558	2.649	-3.6	89	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	82	0.00
27	TM	Benzene	1.377	1.372	0.4	78	0.00
28	T	1,2-Dichloroethane	0.421	0.454	-7.8	87	0.00
29	TM	Trichloroethene	0.386	0.351	9.1	73	0.00
30	TC	1,2-Dichloropropane	0.342	0.345	-0.9	80	0.00
31	T	Bromodichloromethane	0.380	0.382	-0.5	80	0.00
32	T	2-Chloroethyl vinyl ether	0.115	0.124	-7.8	85	0.00
33	T	cis-1,3-Dichloropropene	0.473	0.455	3.8	76	0.00
34	T	4-Methyl-2-Pentanone	0.098	0.103	-5.1	81	0.00
35	S	Toluene-d8	1.253	1.246	0.6	83	0.00
36	TCM	Toluene	1.389	1.347	3.0	76	0.01
37	I	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
38	T	trans-1,3-Dichloropropene	1.424	1.376	3.4	77	0.00
39	T	1,1,2-Trichloroethane	0.975	0.994	-1.9	82	0.00
40	T	Tetrachloroethene	0.963	0.885	8.1	73	0.00
41	T	2-Hexanone	0.463	0.460	0.6	85	0.01
42	T	Dibromochloromethane	0.830	0.823	0.8	80	0.00
43	TMP	Chlorobenzene	2.967	2.825	4.8	77	0.01
44	TC	Ethylbenzene	5.002	4.801	4.0	76	0.00
45	T	m+p-Xylenes	1.801	1.743	3.2	76	0.00
46	T	o-Xylene	3.253	3.154	3.0	76	0.00
47	T	Styrene	2.888	2.875	0.5	79	0.00
48	TP	Bromoform	0.514	0.514	0.0	79	0.00
49	S	Bromofluorobenzene	1.613	1.574	2.4	83	0.01
50	TP	1,1,2,2-Tetrachloroethane	0.781	0.868	-11.1	85	0.00
51	T	1,3-Dichlorobenzene	1.665	1.454	12.7	71	0.00
52	T	1,4-Dichlorobenzene	1.591	1.406	11.6	72	0.00
53	T	1,2-Dichlorobenzene	1.569	1.422	9.4	73	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID: **MB 2132**

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID: VC006472.D Lab Sample ID: MB

Date Analyzed: 7/10/01 Time Analyzed: 12:32

GC Column: RTX502. ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: VoaInst#3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	2133 MS	1621604 MS	VC006477.D	16:13
02	2134 MSD	1621604 MSD	VC006478.D	16:54
03	106	1623601	VC006489.D	0:27
04	804	1623701	VC006490.D	1:09
05	FD	1623702	VC006491.D	1:50
06	TB	1623801	VC006492.D	2:31
07	FB	1623802	VC006493.D	3:12
08	164	1623803	VC006494.D	3:54

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB 2132	109	98	85	0
02	2133 MS	105	100	99	0
03	2134 MSD	106	99	100	0
04	106	109	99	83	0
05	804	110	98	82	0
06	FD	111	98	80	0
07	TB	111	98	80	0
08	FB	111	98	79	0
09	164	112	99	85	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(88-110)
SMC3	BFB	=	Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	VC006477.D	Sample Name	1621604 MS
Date Aquired	10-Jul-01	Field ID	1621604 MS

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	59.64 ug/L	29.82
Acrylonitrile	200	256.72 ug/L	128.36
tert-Butyl alcohol	200	194.81 ug/L	97.40
Methyl-tert-Butyl ether	20	21.29 ug/L	106.46
Di-isopropyl ether	20	21.55 ug/L	107.74
Dichlorodifluoromethane	20	33.47 ug/L	167.34
Chloromethane	20	26.40 ug/L	131.99
Vinyl Chloride	20	26.46 ug/L	132.30
Bromomethane	20	19.69 ug/L	98.44
Chloroethane	20	24.53 ug/L	122.63
Trichlorofluoromethane	20	24.30 ug/L	121.52
1,1-Dichloroethene	20	23.31 ug/L	116.57
Acetone	20	24.95 ug/L	124.74
Carbon Disulfide	20	24.13 ug/L	120.64
Methylene Chloride	20	22.11 ug/L	110.55
trans-1,2-Dichloroethene	20	22.91 ug/L	114.53
1,1-Dichloroethane	20	22.55 ug/L	112.74
Vinyl Acetate	20	25.02 ug/L	125.09
2-Butanone	20	21.33 ug/L	106.63
cis-1,2-Dichloroethene	20	22.31 ug/L	111.55
Chloroform	20	21.96 ug/L	109.78
1,1,1-Trichloroethane	20	21.15 ug/L	105.74
Carbon Tetrachloride	20	21.76 ug/L	108.79
Benzene	20	22.39 ug/L	111.95
1,2-Dichloroethane	20	23.20 ug/L	116.02
Trichloroethene	20	20.91 ug/L	104.55
1,2-Dichloropropane	20	22.02 ug/L	110.12
Bromodichloromethane	20	22.22 ug/L	111.08
2-Chloroethyl vinyl ether	20	23.33 ug/L	116.65
cis-1,3-Dichloropropene	20	21.12 ug/L	105.61
4-Methyl-2-Pentanone	20	23.23 ug/L	116.17
Toluene	20	21.89 ug/L	109.44
trans-1,3-Dichloropropene	20	21.18 ug/L	105.90
1,1,2-Trichloroethane	20	22.03 ug/L	110.17
Tetrachloroethene	20	21.21 ug/L	106.03
2-Hexanone	20	21.97 ug/L	109.86
Dibromochloromethane	20	21.80 ug/L	109.02
Chlorobenzene	20	21.46 ug/L	107.31
Ethylbenzene	20	22.08 ug/L	110.38
m+p-Xylenes	40	45.21 ug/L	113.03
o-Xylene	20	22.68 ug/L	113.38
Styrene	20	22.74 ug/L	113.68
Bromoform	20	22.22 ug/L	111.10
1,1,2,2-Tetrachloroethane	20	23.49 ug/L	117.46
1,3-Dichlorobenzene	20	20.43 ug/L	102.16
1,4-Dichlorobenzene	20	20.56 ug/L	102.82
1,2-Dichlorobenzene	20	21.13 ug/L	105.65

Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	VC006478.D	Sample Name	1621604 MSD
Date Aquired	10-Jul-01	Field ID	1621604 MSD

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	98.97 ug/L	49.48
Acrylonitrile	200	253.18 ug/L	126.59
tert-Butyl alcohol	200	221.79 ug/L	110.90
Methyl-tert-Butyl ether	20	20.83 ug/L	104.16
Di-isopropyl ether	20	20.70 ug/L	103.52
Dichlorodifluoromethane	20	32.53 ug/L	162.67
Chloromethane	20	25.19 ug/L	125.97
Vinyl Chloride	20	24.96 ug/L	124.78
Bromomethane	20	18.94 ug/L	94.71
Chloroethane	20	23.10 ug/L	115.48
Trichlorofluoromethane	20	22.84 ug/L	114.18
1,1-Dichloroethene	20	21.96 ug/L	109.82
Acetone	20	35.25 ug/L	176.24
Carbon Disulfide	20	22.56 ug/L	112.78
Methylene Chloride	20	20.77 ug/L	103.87
trans-1,2-Dichloroethene	20	21.39 ug/L	106.95
1,1-Dichloroethane	20	21.16 ug/L	105.78
Vinyl Acetate	20	24.15 ug/L	120.75
2-Butanone	20	23.52 ug/L	117.58
cis-1,2-Dichloroethene	20	21.05 ug/L	105.25
Chloroform	20	20.61 ug/L	103.03
1,1,1-Trichloroethane	20	20.07 ug/L	100.34
Carbon Tetrachloride	20	20.59 ug/L	102.95
Benzene	20	20.79 ug/L	103.93
1,2-Dichloroethane	20	21.62 ug/L	108.11
Trichloroethene	20	19.85 ug/L	99.23
1,2-Dichloropropane	20	20.49 ug/L	102.44
Bromodichloromethane	20	20.24 ug/L	101.19
2-Chloroethyl vinyl ether	20	21.73 ug/L	108.66
cis-1,3-Dichloropropene	20	19.83 ug/L	99.17
4-Methyl-2-Pentanone	20	23.69 ug/L	118.45
Toluene	20	20.49 ug/L	102.43
trans-1,3-Dichloropropene	20	19.88 ug/L	99.40
1,1,2-Trichloroethane	20	20.85 ug/L	104.23
Tetrachloroethene	20	19.74 ug/L	98.70
2-Hexanone	20	24.46 ug/L	122.32
Dibromochloromethane	20	20.19 ug/L	100.97
Chlorobenzene	20	20.11 ug/L	100.53
Ethylbenzene	20	20.77 ug/L	103.85
m+p-Xylenes	40	43.22 ug/L	108.04
o-Xylene	20	21.89 ug/L	109.46
Styrene	20	21.97 ug/L	109.85
Bromoform	20	20.77 ug/L	103.85
1,1,2,2-Tetrachloroethane	20	22.14 ug/L	110.68
1,3-Dichlorobenzene	20	20.20 ug/L	101.00
1,4-Dichlorobenzene	20	20.43 ug/L	102.14
1,2-Dichlorobenzene	20	20.69 ug/L	103.44

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: 010001 Case No.: 16236 Location: 106 SDG No.:

Lab File ID (Standard): VC006471.D Date Analyzed: 7/10/01

Instrument ID: VoaInst#3 Time Analyzed: 11:29

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	414071	16.69	2947942	19.42	918837	27.25
	UPPER LIMIT	828142	17.19	5895884	19.92	1837674	27.75
	LOWER LIMIT	207036	16.19	1473971	18.92	459419	26.75
	FIELD ID:						
01	MB 2132	375351	16.70	2622817	19.42	817789	27.25
02	2133 MS	405343	16.70	2891473	19.42	903447	27.25
03	2134 MSD	416607	16.70	2993042	19.42	927096	27.25
04	106	381287	16.70	2702178	19.42	875873	27.26
05	804	380014	16.70	2685686	19.42	856282	27.25
06	FD	379028	16.70	2681996	19.42	842837	27.26
07	TB	374900	16.70	2639850	19.42	838656	27.26
08	FB	372199	16.70	2640076	19.42	831932	27.26
09	164	371132	16.70	2635595	19.42	850673	27.24

IS1 BCM = Bromochloromethane
IS2 DFB = 1,4-Difluorobenzene
IS3 CBZ = Chlorobenzene-d5

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010710\VC006472.D Vial: 5
Acq On : 10 Jul 2001 12:32 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 10 13:07 2001 Quant Results File: M362447.RES

Quant Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration
DataAcq Meth : M362447

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	375351	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2622817	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	817789	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	1045326	32.66	ug/L	-0.01
Spiked Amount 30.000	Range 70 - 121		Recovery = 108.87%			
35) Toluene-d8	23.43	98	3219427	29.40	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.00%			
49) Bromofluorobenzene	30.25	95	1125915	25.61	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 85.37%			

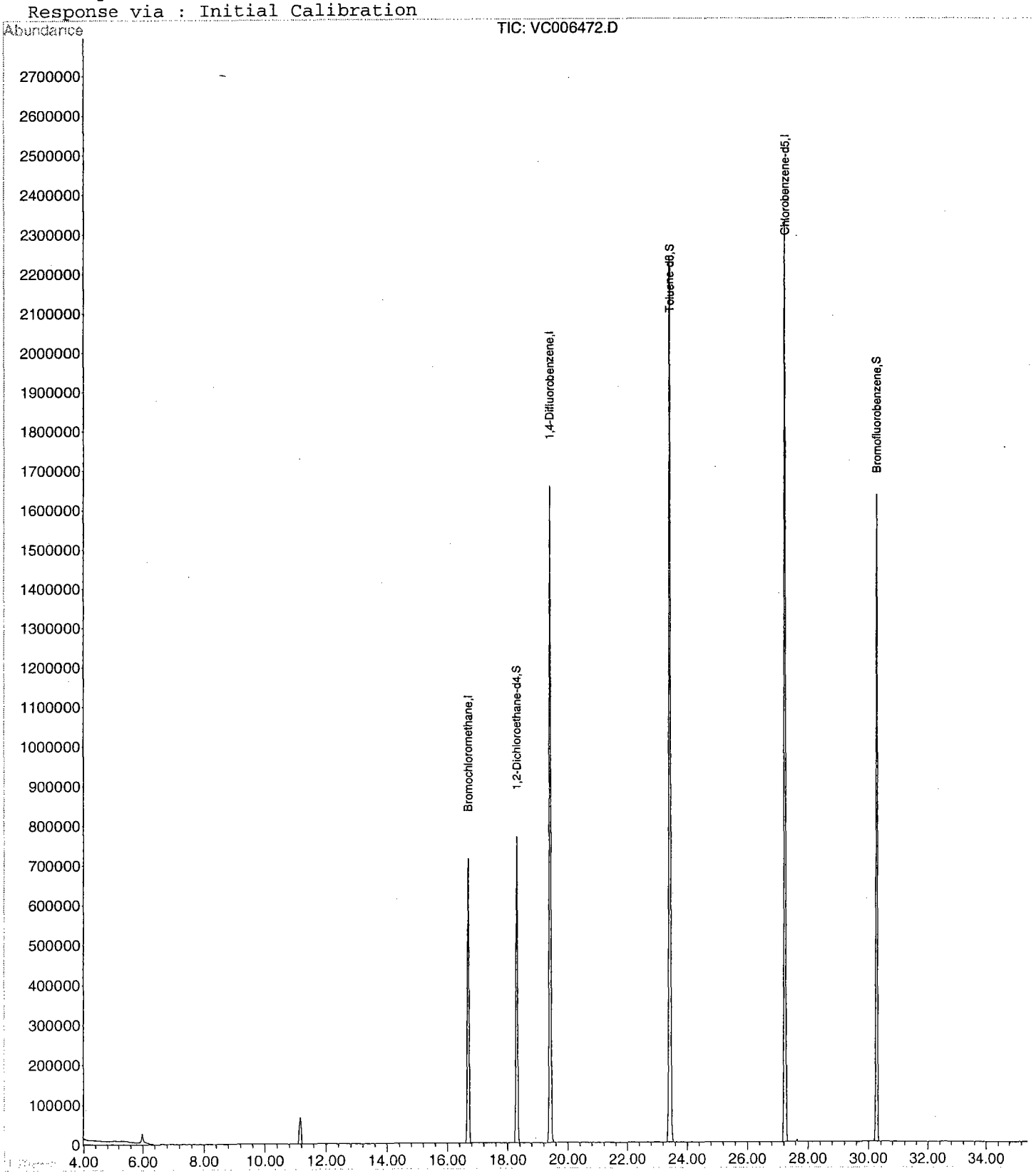
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010710\VC006472.D Vial: 5
Acq On : 10 Jul 2001 12:32 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 10 13:07 2001 Quant Results File: M362447.RES

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010710\VC006490.D Vial: 18
Acq On : 11 Jul 2001 1:09 am Operator: Skelton
Sample : 1623701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 1:44 2001 Quant Results File: M362447.RES

Quant Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration
DataAcq Meth : M362447

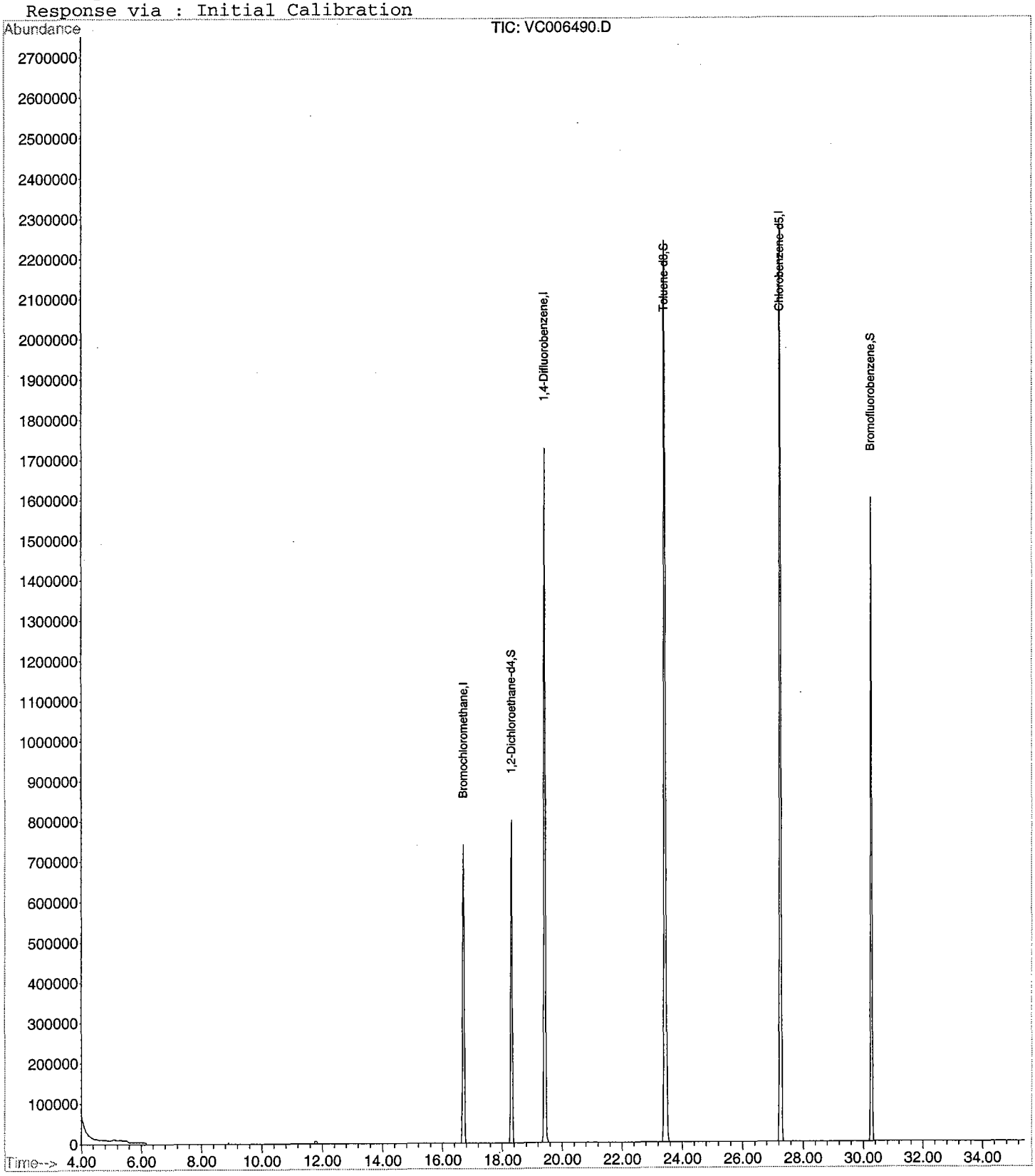
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	380014	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2685686	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	856282	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	1066593	32.92	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 109.73%			
35) Toluene-d8	23.42	98	3306724	29.49	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.30%			
49) Bromofluorobenzene	30.26	95	1130670	24.56	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 81.87%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010710\VC006490.D Vial: 18
Acq On : 11 Jul 2001 1:09 am Operator: Skelton
Sample : 1623701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 1:44 2001 Quant Results File: M362447.RES

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010710\VC006491.D Vial: 19
Acq On : 11 Jul 2001 1:50 am Operator: Skelton
Sample : 1623702 Inst : GC/MS Ins
Misc : FD Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 2:25 2001 Quant Results File: M362447.RES

Quant Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration
DataAcq Meth : M362447

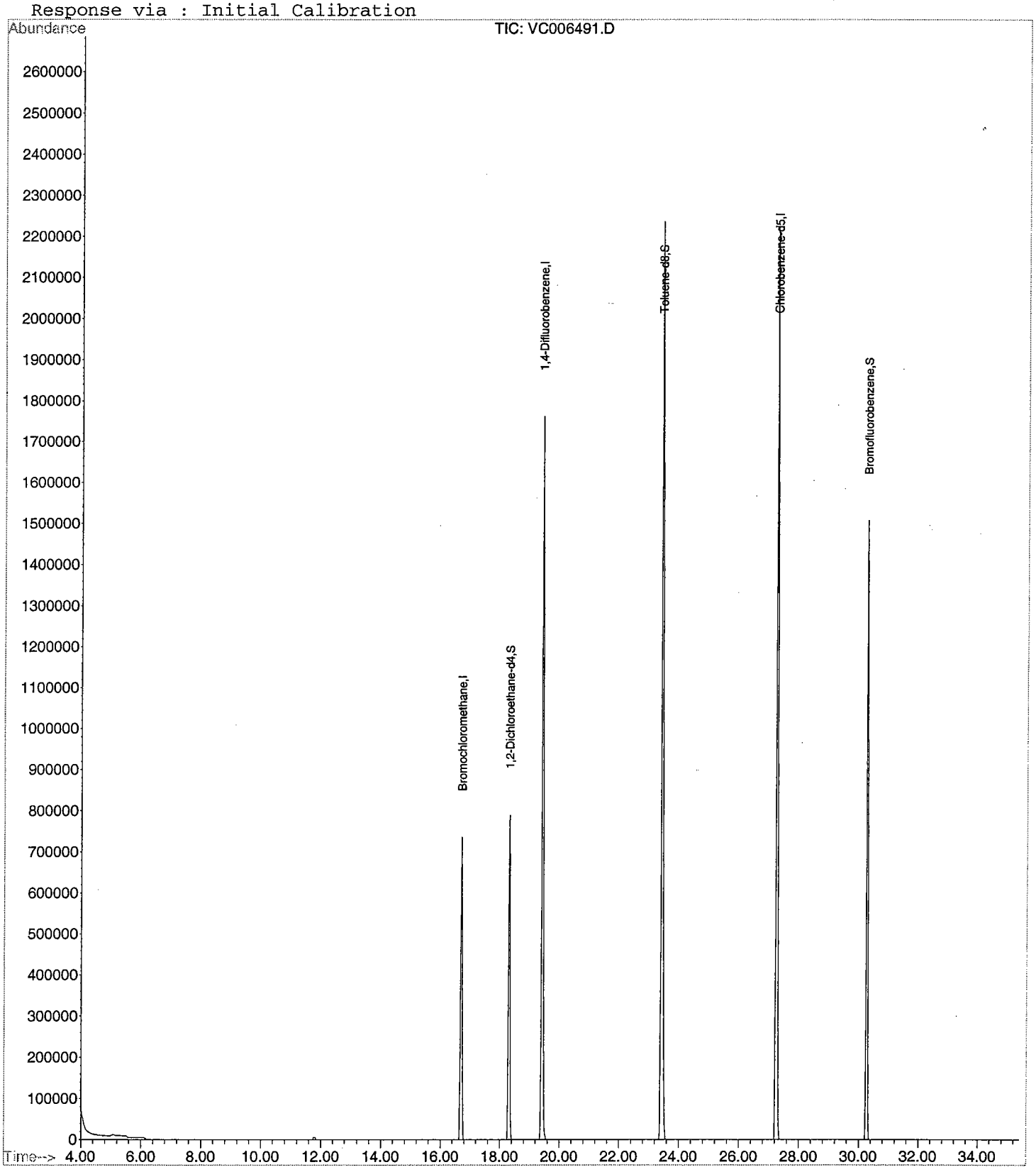
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	379028	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2681996	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.26	119	842837	30.00	ug/L	0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	1073134	33.20	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 110.67%			
35) Toluene-d8	23.42	98	3298961	29.46	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.20%			
49) Bromofluorobenzene	30.26	95	1085203	23.95	ug/L	0.01
Spiked Amount 30.000	Range 74 - 121		Recovery = 79.83%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010710\VC006491.D Vial: 19
Acq On : 11 Jul 2001 1:50 am Operator: Skelton
Sample : 1623702 Inst : GC/MS Ins
Misc : FD Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jul 11 2:25 2001 Quant Results File: M362447.RES

Method : D:\HPCHEM\1\METHODS\M362447.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jul 09 14:44:24 2001
Response via : Initial Calibration



BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05688.D**	Sample Name	**MB 1995**
Operator	**Skelton**	Misc Info	**7-10-2001**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05688.D**	Sample Name	**MB 1995**
Operator	**Skelton**	Misc Info	**7-10-2001**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB 1995**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 1995

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05688.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: decanted: (Y/N) N Date Extracted: 7/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/11/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05691.D**	Sample Name	**1623701**
Operator	**Skelton**	Misc Info	**804**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05691.D**	Sample Name	**1623701**
Operator	**Skelton**	Misc Info	**804**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **804**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1623701

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05691.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: decanted: (Y/N) N Date Extracted: 7/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/11/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05692.D**	Sample Name	**1623702**
Operator	**Skelton**	Misc Info	**FD**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05692.D**	Sample Name	**1623702**
Operator	**Skelton**	Misc Info	**FD**
Date Acquired	**11-Jul-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: FD

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1623702

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05692.D

Level: (low/med) LOW Date Received: 7/9/01

% Moisture: decanted: (Y/N) N Date Extracted: 7/10/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/11/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Lab File ID: BNA05601.D DFTPP Injection Date: 7/6/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 7:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	49.5
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Mass 69 Relative abundance	50.4
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	57.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	26.3
365	Greater than 0.75% of mass 198	4.0
441	Present, but less than mass 443	10.8
442	40.0 - 110.0% of mass 198	72.4
443	15.0 - 24.0% of mass 442	14.2 (19.7)2

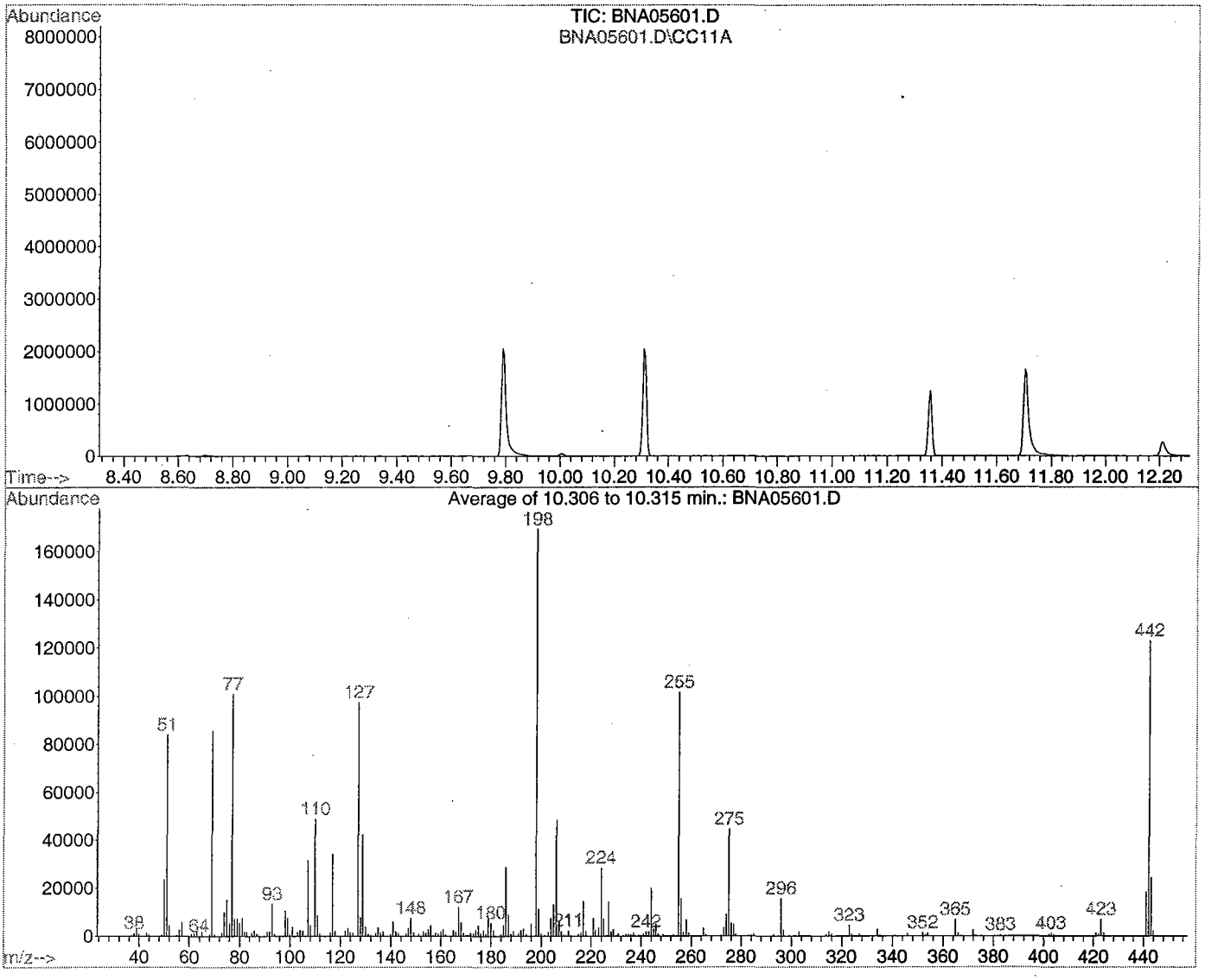
1-Value is % mass 69 2-Value is % mass 442

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	BNA05602.D	7/6/01	8:13
02	SSTD020	SSTD020	BNA05603.D	7/6/01	8:56
03	SSTD010	SSTD010	BNA05604.D	7/6/01	10:23
04	SSTD120	SSTD120	BNA05605.D	7/6/01	11:07
05	SSTD080	SSTD080	BNA05606.D	7/6/01	11:53

Data File : D:\DATA\010706\BNA05601.D
Acq On : 6 Jul 2001 7:50 am
Sample : DFTPP Tune
Misc : DFTPP Tune
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration

Vial: 99
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p



Spectrum Information: Average of 10.306 to 10.315 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.5	83976	PASS
68	69	0.00	2	0.8	722	PASS
69	198	0.00	100	50.4	85472	PASS
70	69	0.00	2	0.8	699	PASS
127	198	40	60	57.5	97456	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	169520	PASS
199	198	5	9	6.7	11379	PASS
275	198	10	30	26.3	44568	PASS
365	198	1	100	4.0	6804	PASS
441	443	1	99	75.5	18237	PASS
442	198	40	100	72.4	122808	PASS
443	442	17	23	19.7	24142	PASS

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05605.D 80 =BNA05606.D 50 =BNA05602.D
20 =BNA05603.D 10 =BNA05604.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD						
2)	T	Pyridine	1.230	1.225	1.236	1.224	1.126	1.208	3.82
3)	T	N-nitroso-dimethylami	0.658	0.663	0.630	0.577	0.561	0.618	7.58
4)	S	2-Fluorophenol	1.140	1.112	1.050	1.028	0.860	1.038	10.55
5)	T	Aniline	1.989	1.931	1.768	1.695	1.508	1.778	10.81
6)	S	Phenol-d6	1.637	1.548	1.429	1.363	1.261	1.448	10.25
7)	TCM	Phenol	1.651	1.753	1.444	1.471	1.218	1.507	13.67
8)	T	bis(2-Chloroethyl)eth	1.227	1.193	1.101	1.037	1.111	1.134	6.70
9)	TM	2-Chlorophenol	1.294	1.240	1.165	1.153	1.061	1.182	7.52
10)	T	1,3-Dichlorobenzene	1.490	1.415	1.337	1.329	1.258	1.366	6.51
11)	TCM	1,4-Dichlorobenzene	1.562	1.473	1.392	1.389	1.300	1.423	6.94
12)	T	Benzyl alcohol	0.870	0.821	0.763	0.708	0.626	0.758	12.63
13)	T	1,2-Dichlorobenzene	1.434	1.363	1.292	1.291	1.239	1.324	5.73
14)	T	2-Methylphenol	1.251	1.184	1.099	1.081	1.026	1.128	7.89
15)	T	bis(2-chloroisopropyl	1.106	1.107	1.033	1.070	1.028	1.069	3.57
16)	T	4-Methylphenol	1.393	1.250	1.164	1.156	0.979	1.188	12.73
17)	TPM	n-Nitroso-di-n-propyl	0.223	0.217	0.202	0.198	0.179	0.204	8.41
18)	T	Hexachloroethane	0.691	0.638	0.599	0.587	0.550	0.613	8.74
19)	I	Naphthalene-d8	ISTD						
20)	S	Nitrobenzene-d5	0.445	0.442	0.423	0.427	0.382	0.424	5.97
21)	T	Nitrobenzene	0.431	0.426	0.413	0.397	0.366	0.407	6.47
22)	T	Isophorone	0.700	0.704	0.678	0.687	0.632	0.680	4.24
23)	TC	2-Nitrophenol	0.185	0.180	0.167	0.166	0.144	0.168	9.43
24)	T	2,4-Dimethylphenol	0.399	0.382	0.358	0.347	0.321	0.361	8.44
25)	T	bis(2-Chloroethoxy)me	0.400	0.384	0.359	0.348	0.315	0.361	9.19
26)	TC	2,4-Dichlorophenol	0.272	0.247	0.206	0.250	0.233	0.242	9.97
27)	T	Benzoic Acid	0.253	0.253	0.211	0.157	0.169	0.208	21.68
28)	TM	1,2,4-Trichlorobenzen	0.334	0.317	0.302	0.297	0.280	0.306	6.79
29)	T	Naphthalene	1.070	1.018	0.953	0.932	0.897	0.974	7.16
30)	T	4-Chloroaniline	0.353	0.332	0.336	0.330	0.298	0.330	6.08
31)	TC	Hexachlorobutadiene	0.217	0.206	0.198	0.196	0.189	0.201	5.35
32)	TCM	4-Chloro-3-methylphen	0.353	0.334	0.312	0.306	0.270	0.315	9.92
33)	T	2-Methylnaphthalene	0.747	0.696	0.641	0.634	0.591	0.662	9.14
34)	I	Acenaphthene-d10	ISTD						
35)	TP	Hexachlorocyclopentad	0.350	0.313	0.270	0.238	0.205	0.275	20.98
36)	TC	2,4,6-Trichlorophenol	0.357	0.335	0.317	0.306	0.268	0.317	10.59
37)	T	2,4,5-Trichlorophenol	0.350	0.349	0.330	0.320	0.310	0.332	5.38
38)	S	2-Fluorobiphenyl	1.257	1.184	1.111	1.114	1.045	1.142	7.08
39)	T	2-Chloronaphthalene	1.039	0.978	0.912	0.899	0.851	0.936	7.84
40)	T	2-Nitroaniline	0.347	0.331	0.314	0.307	0.273	0.314	8.80
41)	T	Dimethylphthalate	1.221	1.176	1.117	1.131	1.053	1.139	5.54
42)	T	Acenaphthylene	1.761	1.667	1.557	1.523	1.420	1.586	8.30
43)	T	2,6-Dinitrotoluene	0.367	0.353	0.336	0.331	0.306	0.339	6.84
44)	T	3-Nitroaniline	0.330	0.286	0.265	0.250	0.218	0.270	15.48
45)	TCM	Acenaphthene	1.174	1.061	0.973	0.957	0.880	1.009	11.16
46)	TP	2,4-Dinitrophenol	0.188	0.178	0.156	0.131	0.085	0.147	27.95
47)	T	Dibenzofuran	1.466	1.394	1.325	1.323	1.258	1.353	5.84
48)	TMP	4-Nitrophenol	0.251	0.191	0.266	0.214	0.156	0.216	20.81
49)	TM	2,4-Dinitrotoluene	0.387	0.375	0.347	0.347	0.310	0.353	8.45
50)	T	Diethylphthalate	1.338	1.302	1.238	1.249	1.177	1.261	4.91
51)	T	Fluorene	1.315	1.224	1.133	1.129	1.065	1.173	8.32
52)	T	4-Chlorophenyl-phenyl	0.657	0.606	0.566	0.562	0.525	0.583	8.60
53)	T	4-Nitroaniline	0.268	0.249	0.242	0.257	0.218	0.247	7.54
54)	I	Phenanthrene-d10	ISTD						

(#) = Out of Range

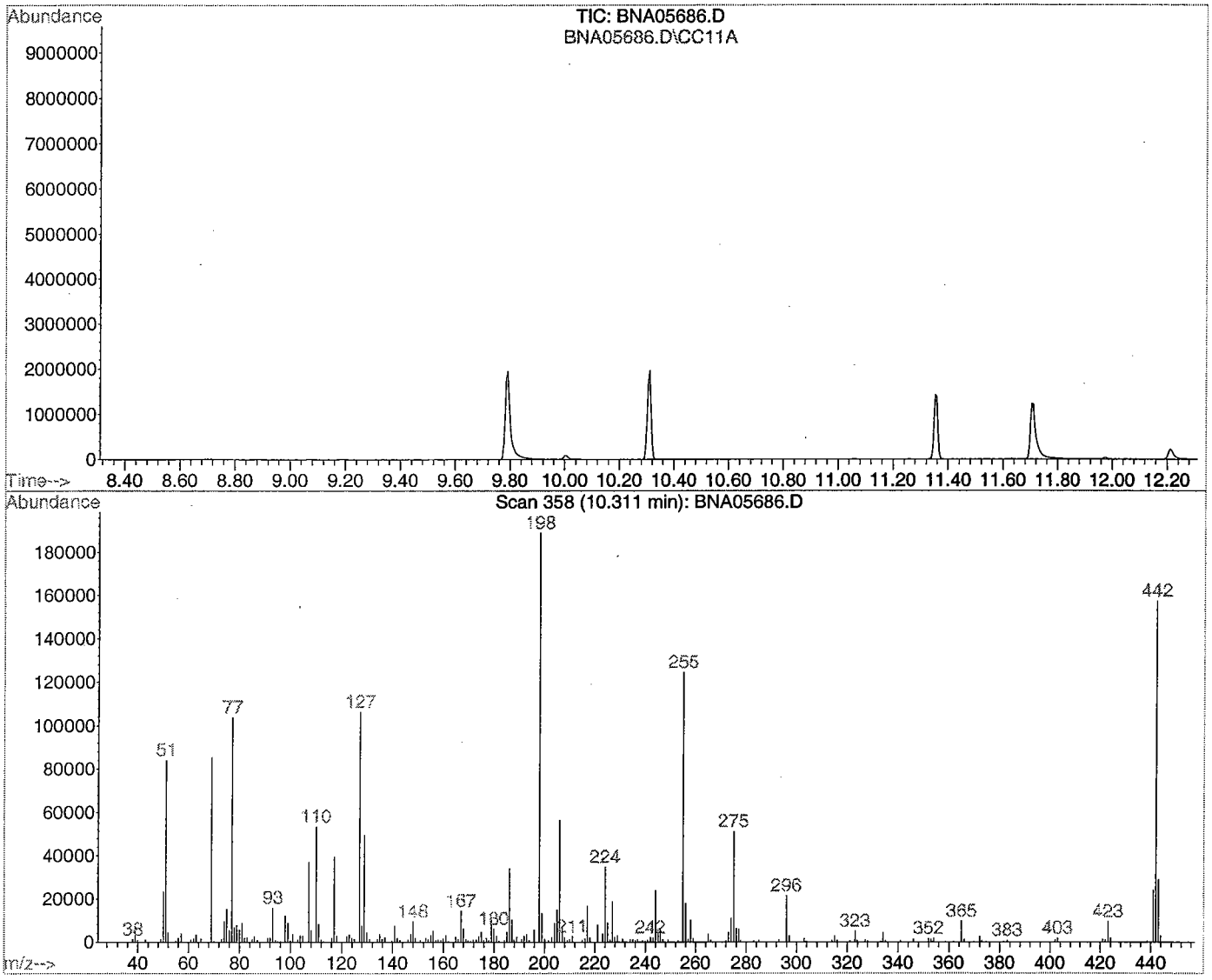
Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05605.D 80 =BNA05606.D 50 =BNA05602.D
20 =BNA05603.D 10 =BNA05604.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.129	0.125	0.115	0.104	0.085	0.111	16.11
56)	TC	n-Nitrosodiphenylamin	0.434	0.416	0.397	0.392	0.365	0.401	6.51
57)	T	Azobenzene	0.748	0.756	0.738	0.737	0.704	0.737	2.66
58)	S	2,4,6-Tribromophenol	0.099	0.092	0.087	0.080	0.072	0.086	12.52
59)	T	4-Bromophenyl-phenyle	0.191	0.179	0.169	0.161	0.152	0.170	8.96
60)	T	Hexachlorobenzene	0.210	0.196	0.186	0.177	0.168	0.188	8.79
61)	TCM	Pentachlorophenol	0.123	0.112	0.104	0.087	0.072	0.100	20.12
62)	T	Phenanthrene	0.951	0.923	0.877	0.864	0.814	0.886	6.03
63)	T	Anthracene	0.960	0.926	0.879	0.875	0.824	0.893	5.84
64)	T	Di-n-butylphthalate	1.095	1.070	1.034	1.025	0.952	1.035	5.25
65)	TC	Fluoranthene	1.037	1.005	0.963	0.943	0.881	0.966	6.22
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.187	0.198	0.230	0.219	0.198	0.207	8.53
68)	TM	Pyrene	0.813	0.879	0.881	0.985	0.952	0.902	7.47
69)	S	p-Terphenyl-d14	0.641	0.667	0.651	0.694	0.655	0.661	3.09
70)	T	Butylbenzylphthalate	0.424	0.449	0.447	0.487	0.455	0.453	5.02
71)	T	Benzo[a]anthracene	0.854	0.901	0.886	0.972	0.941	0.911	5.08
72)	T	3,3'-Dichlorobenzidin	0.359	0.365	0.370	0.368	0.321	0.357	5.74
73)	T	Chrysene	0.807	0.849	0.837	0.905	0.872	0.854	4.33
74)	T	bis(2-Ethylhexyl)phth	0.602	0.634	0.630	0.664	0.620	0.630	3.62
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.426	1.402	1.305	1.258	1.127	1.304	9.24
77)	T	Benzo[b]fluoranthene	1.195	1.131	1.034	0.989	0.904	1.051	10.95
78)	T	Benzo[k]fluoranthene	1.224	1.173	1.050	1.006	0.941	1.079	10.86
79)	TC	Benzo[a]pyrene	1.157	1.095	0.997	0.963	0.884	1.019	10.58
80)	T	Indeno[1,2,3-cd]pyren	1.329	1.093	0.979	1.117	1.004	1.104	12.50
81)	T	Dibenz[a,h]anthracene	1.235	1.125	1.017	0.963	0.870	1.042	13.62
82)	T	Benzo[g,h,i]perylene	1.035	1.011	0.937	0.905	0.851	0.948	8.00

(#) = Out of Range

Data File : D:\DATA\010711\BNA05686.D Vial: 99
Acq On : 11 Jul 2001 8:24 am Operator: Skelton
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 358

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.5	84144	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.2	85448	PASS
70	69	0.00	2	0.7	612	PASS
127	198	40	60	56.2	106320	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	189056	PASS
199	198	5	9	7.0	13323	PASS
275	198	10	30	27.1	51160	PASS
365	198	1	100	5.1	9683	PASS
441	443	1	99	83.4	24064	PASS
442	198	40	100	83.2	157376	PASS
443	442	17	23	18.3	28848	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010711\BNA05687.D Vial: 100
Acq On : 11 Jul 2001 8:47 am Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87	0.00
2	T	Pyridine	1.208	1.140	5.6	80	0.00
3	T	N-nitroso-dimethylamine	0.618	0.564	8.7	78	0.00
4	S	2-Fluorophenol	1.038	1.004	3.3	83	0.00
5	T	Aniline	1.778	1.739	2.2	85	0.00
6	S	Phenol-d6	1.448	1.366	5.7	83	0.00
7	TCM	Phenol	1.507	1.378	8.6	83	0.00
8	T	bis(2-Chloroethyl)ether	1.134	1.049	7.5	83	0.00
9	TM	2-Chlorophenol	1.182	1.117	5.5	83	0.00
10	T	1,3-Dichlorobenzene	1.366	1.289	5.6	84	0.00
11	TCM	1,4-Dichlorobenzene	1.423	1.340	5.8	84	0.00
12	T	Benzyl alcohol	0.758	0.718	5.3	82	0.00
13	T	1,2-Dichlorobenzene	1.324	1.247	5.8	84	0.00
14	T	2-Methylphenol	1.128	1.064	5.7	84	0.00
15	T	bis(2-chloroisopropyl)ether	1.069	0.981	8.2	83	0.00
16	T	4-Methylphenol	1.188	1.102	7.2	82	0.00
17	TPM	n-Nitroso-di-n-propylamine	0.204	0.195	4.4	84	0.00
18	T	Hexachloroethane	0.613	0.585	4.6	85	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	89	0.00
20	S	Nitrobenzene-d5	0.424	0.409	3.5	86	0.00
21	T	Nitrobenzene	0.407	0.394	3.2	85	0.00
22	T	Isophorone	0.680	0.647	4.9	85	0.00
23	TC	2-Nitrophenol	0.168	0.157	6.5	84	0.00
24	T	2,4-Dimethylphenol	0.361	0.344	4.7	85	0.00
25	T	bis(2-Chloroethoxy)methane	0.361	0.335	7.2	83	0.00
26	TC	2,4-Dichlorophenol	0.242	0.218	9.9	94	0.00
27	T	Benzoic Acid	0.208	0.182	12.5	77	0.00
28	TM	1,2,4-Trichlorobenzene	0.306	0.285	6.9	84	0.00
29	T	Naphthalene	0.974	0.897	7.9	83	0.00
30	T	4-Chloroaniline	0.330	0.317	3.9	84	0.00
31	TC	Hexachlorobutadiene	0.201	0.194	3.5	87	0.00
32	TCM	4-Chloro-3-methylphenol	0.315	0.292	7.3	83	0.00
33	T	2-Methylnaphthalene	0.662	0.603	8.9	83	0.00
34	I	Acenaphthene-d10	1.000	1.000	0.0	88	0.00
35	TP	Hexachlorocyclopentadiene	0.275	0.283	-2.9	93	0.00
36	TC	2,4,6-Trichlorophenol	0.317	0.302	4.7	84	0.00
37	T	2,4,5-Trichlorophenol	0.332	0.302	9.0	81	0.00
38	S	2-Fluorobiphenyl	1.142	1.053	7.8	84	0.00
39	T	2-Chloronaphthalene	0.936	0.867	7.4	84	0.00
40	T	2-Nitroaniline	0.314	0.293	6.7	83	0.00
41	T	Dimethylphthalate	1.139	1.048	8.0	83	0.00
42	T	Acenaphthylene	1.586	1.478	6.8	84	0.00
43	T	2,6-Dinitrotoluene	0.339	0.325	4.1	86	0.00
44	T	3-Nitroaniline	0.270	0.241	10.7	80	0.00
45	TCM	Acenaphthene	1.009	0.913	9.5	83	0.00
46	TP	2,4-Dinitrophenol	0.147	0.130	11.6	74	0.00
47	T	Dibenzofuran	1.353	1.249	7.7	83	0.00
48	TMP	4-Nitrophenol	0.216	0.226	-4.6	75	0.00
49	TM	2,4-Dinitrotoluene	0.353	0.330	6.5	84	0.00
50	T	Diethylphthalate	1.261	1.175	6.8	84	0.00
51	T	Fluorene	1.173	1.072	8.6	84	0.00
52	T	4-Chlorophenyl-phenylether	0.583	0.538	7.7	84	0.00
53	T	4-Nitroaniline	0.247	0.222	10.1	81	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\DATA\010711\BNA05687.D Vial: 100
Acq On : 11 Jul 2001 8:47 am Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	91	0.00
55	T	4,6-Dinitro-2-methylphenol	0.111	0.099	10.8	78	0.00
56	TC	n-Nitrosodiphenylamine	0.401	0.365	9.0	83	0.00
57	T	Azobenzene	0.737	0.690	6.4	85	0.00
58	S	2,4,6-Tribromophenol	0.086	0.082	4.7	86	0.00
59	T	4-Bromophenyl-phenylether	0.170	0.157	7.6	84	0.00
60	T	Hexachlorobenzene	0.188	0.176	6.4	86	0.00
61	TCM	Pentachlorophenol	0.100	0.099	1.0	86	0.00
62	T	Phenanthrene	0.886	0.815	8.0	84	0.00
63	T	Anthracene	0.893	0.814	8.8	84	0.00
64	T	Di-n-butylphthalate	1.035	0.965	6.8	85	0.00
65	TC	Fluoranthene	0.966	0.907	6.1	85	0.00
66	I	Chrysene-d12	1.000	1.000	0.0	89	0.00
67	T	Benzidine	0.207	0.246	-18.8	95	0.00
68	TM	Pyrene	0.902	0.834	7.5	84	0.00
69	S	p-Terphenyl-d14	0.661	0.630	4.7	86	0.00
70	T	Butylbenzylphthalate	0.453	0.419	7.5	84	0.00
71	T	Benzo[a]anthracene	0.911	0.853	6.4	86	0.00
72	T	3,3'-Dichlorobenzidine	0.357	0.356	0.3	86	0.00
73	T	Chrysene	0.854	0.800	6.3	85	0.00
74	T	bis(2-Ethylhexyl)phthalate	0.630	0.581	7.8	82	0.00
75	I	Perylene-d12	1.000	1.000	0.0	88	0.00
76	TC	Di-n-octylphthalate	1.304	1.235	5.3	83	0.00
77	T	Benzo[b]fluoranthene	1.051	1.002	4.7	85	0.00
78	T	Benzo[k]fluoranthene	1.079	1.018	5.7	85	0.00
79	TC	Benzo[a]pyrene	1.019	0.965	5.3	85	0.00
80	T	Indeno[1,2,3-cd]pyrene	1.104	1.072	2.9	96	0.00
81	T	Dibenz[a,h]anthracene	1.042	0.935	10.3	81	0.00
82	T	Benzo[g,h,i]perylene	0.948	0.861	9.2	81	0.00

4B

Field Id: **MB 1995**

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Lab File ID: BNA05688.D Lab Sample ID: MB 1995

Instrument ID: GC/MS Ins Date Extracted: 7/10/01

Matrix: (soil/water) WATER Date Analyzed: 7/11/01

Level: (low/med) LOW Time Analyzed: 9:30

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1996	LCS 1996	BNA05689.D	7/11/01
02	804	1623701	BNA05691.D	7/11/01
03	FD	1623702	BNA05692.D	7/11/01

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.: _____

	Field Id:	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	MB 1995	62	70	85	0
02	LCS 1996	75	82	85	0
03	804	60	72	37	0
04	FD	53	59	35	0

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(35-114)
S2	2FP	=	2-Fluorobiphenyl	(43-116)
S3	TPL	=	p-Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05689.D** Sample Name **LCS 1996**

Date Acquired **11-Jul-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		8.02 ug/L	40.09
62-75-9	N-nitroso-dimethylamine		7.59 ug/L	37.94
62-53-3	Aniline		11.13 ug/L	55.65
111-44-4	bis(2-Chloroethyl)ether		11.68 ug/L	58.38
541-73-1	1,3-Dichlorobenzene		11.68 ug/L	58.41
106-46-7	1,4-Dichlorobenzene		11.57 ug/L	57.83
100-51-6	Benzyl alcohol		10.32 ug/L	51.62
95-50-1	1,2-Dichlorobenzene		11.86 ug/L	59.29
39638-32-9	bis(2-chloroisopropyl)ether		18.84 ug/L	94.18
621-64-7	n-Nitroso-di-n-propylamine		13.50 ug/L	67.48
67-72-1	Hexachloroethane		11.18 ug/L	55.92
98-95-3	Nitrobenzene		13.64 ug/L	68.19
78-59-1	Isophorone		15.69 ug/L	78.45
111-91-1	bis(2-Chloroethoxy)methane		13.65 ug/L	68.24
120-82-1	1,2,4-Trichlorobenzene		12.43 ug/L	62.14
91-20-3	Naphthalene		12.52 ug/L	62.59
106-47-8	4-Chloroaniline		12.82 ug/L	64.12
87-68-3	Hexachlorobutadiene		12.08 ug/L	60.38
91-57-6	2-Methylnaphthalene		13.28 ug/L	66.39
77-47-4	Hexachlorocyclopentadiene		9.99 ug/L	49.93
91-58-7	2-Chloronaphthalene		15.00 ug/L	75.02
88-74-4	2-Nitroaniline		10.23 ug/L	51.15
131-11-3	Dimethylphthalate		16.32 ug/L	81.59
208-96-8	Acenaphthylene		14.88 ug/L	74.42
606-20-2	2,6-Dinitrotoluene		16.43 ug/L	82.13
99-09-2	3-Nitroaniline		11.30 ug/L	56.51
83-32-9	Acenaphthene		14.96 ug/L	74.82
132-64-9	Dibenzofuran		15.94 ug/L	79.72
121-14-2	2,4-Dinitrotoluene		16.29 ug/L	81.45
84-66-2	Diethylphthalate		16.12 ug/L	80.59
86-73-7	Fluorene		15.33 ug/L	76.65
7005-72-3	4-Chlorophenyl-phenylether		15.73 ug/L	78.65
100-01-6	4-Nitroaniline		5.20 ug/L	26.00
86-30-6	n-Nitrosodiphenylamine		16.46 ug/L	82.32
103-33-3	Azobenzene		16.82 ug/L	84.10
101-55-3	4-Bromophenyl-phenylether		16.21 ug/L	81.05
118-74-1	Hexachlorobenzene		16.27 ug/L	81.37
85-01-8	Phenanthrene		16.52 ug/L	82.59
120-12-7	Anthracene		16.18 ug/L	80.92
84-74-2	Di-n-butylphthalate		16.82 ug/L	84.09
206-44-0	Fluoranthene		16.50 ug/L	82.52
129-00-0	Pyrene		18.30 ug/L	91.48
85-68-7	Butylbenzylphthalate		17.76 ug/L	88.82
56-55-3	Benzo[a]anthracene		17.46 ug/L	87.29
218-01-9	Chrysene		14.89 ug/L	74.44
117-81-7	bis(2-Ethylhexyl)phthalate		17.21 ug/L	86.04
117-84-0	Di-n-octylphthalate		18.70 ug/L	93.50
205-99-2	Benzo[b]fluoranthene		18.92 ug/L	94.62
207-08-9	Benzo[k]fluoranthene		19.03 ug/L	95.13
50-32-8	Benzo[a]pyrene		18.19 ug/L	90.95
193-39-5	Indeno[1,2,3-cd]pyrene		18.84 ug/L	94.19
53-70-3	Dibenz[a,h]anthracene		15.88 ug/L	79.42
191-24-2	Benzo[g,h,i]perylene		18.25 ug/L	91.26

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Lab File ID (Standard): BNA05687.D Date Analyzed: 7/11/01

Instrument ID: GC_BNA_2 Time Analyzed: 8:47

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	334169	10.06	1349951	12.99	913813	17.22
	UPPER LIMIT	668338	10.56	2699902	13.49	1827626	17.72
	LOWER LIMIT	167085	9.56	674976	12.49	456907	16.72
	Field Id:						
01	MB 1995	243980	10.07	956738	12.99	587096	17.22
02	LCS 1996	265823	10.06	1056547	12.99	638164	17.22
03	804	250668	10.07	984906	12.99	599664	17.22
04	FD	226143	10.07	870549	12.99	558439	17.22

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = Perylene-d12

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16237 Location: 804 SDG No.:

Lab File ID (Standard): BNA05687.D Date Analyzed: 07/11/01

Instrument ID: GC_BNA_2 Time Analyzed: 08:47

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1840557	20.81	1972299	27.27	1581041	30.50
	UPPER LIMIT	3681114	20.31	3944598	26.77	3162082	30.00
	LOWER LIMIT	920279	21.31	986150	27.77	790521	31.00
	EPA SAMPLE NO.						
01	MB 1995	1144934	20.81	1134540	27.26	844103	30.48
02	LCS 1996	1250479	20.81	1258358	27.26	894189	30.48
03	804	1168336	20.81	1206398	27.26	898631	30.49
04	FD	1077722	20.81	1121130	27.26	830856	30.49

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = Perylene-d12

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010711\BNA05688.D Vial: 1
Acq On : 11 Jul 2001 9:30 am Operator: Skelton
Sample : MB 1995 Inst : GC/MS Ins
Misc : 7-10-2001 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 23 11:55 2001 Quant Results File: M262547.RES

Quant Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration
DataAcq Meth : M262547

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.07	152	243980	40.00	ug/L	0.00
19) Naphthalene-d8	12.99	136	956738	40.00	ug/L	0.00
34) Acenaphthene-d10	17.22	164	587096	40.00	ug/L	0.00
54) Phenanthrene-d10	20.81	188	1144934	40.00	ug/L	0.00
66) Chrysene-d12	27.26	240	1134540	40.00	ug/L	0.00
75) Perylene-d12	30.48	264	844103	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.38	112	292024	46.12	ug/L	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery = 46.12%			
6) Phenol-d6	9.47	99	191432	21.68	ug/L	0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 21.68%			
20) Nitrobenzene-d5	11.40	82	313783	30.95	ug/L	0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 61.90%			
38) 2-Fluorobiphenyl	15.63	172	590477	35.22	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 70.44%			
58) 2,4,6-Tribromophenol	19.17	330	205887	83.66	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 83.66%			
69) p-Terphenyl-d14	24.75	244	798446	42.56	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 85.12%			
Target Compounds						Qvalue
50) Diethylphthalate	18.42	149	23315	1.26	ug/L	98

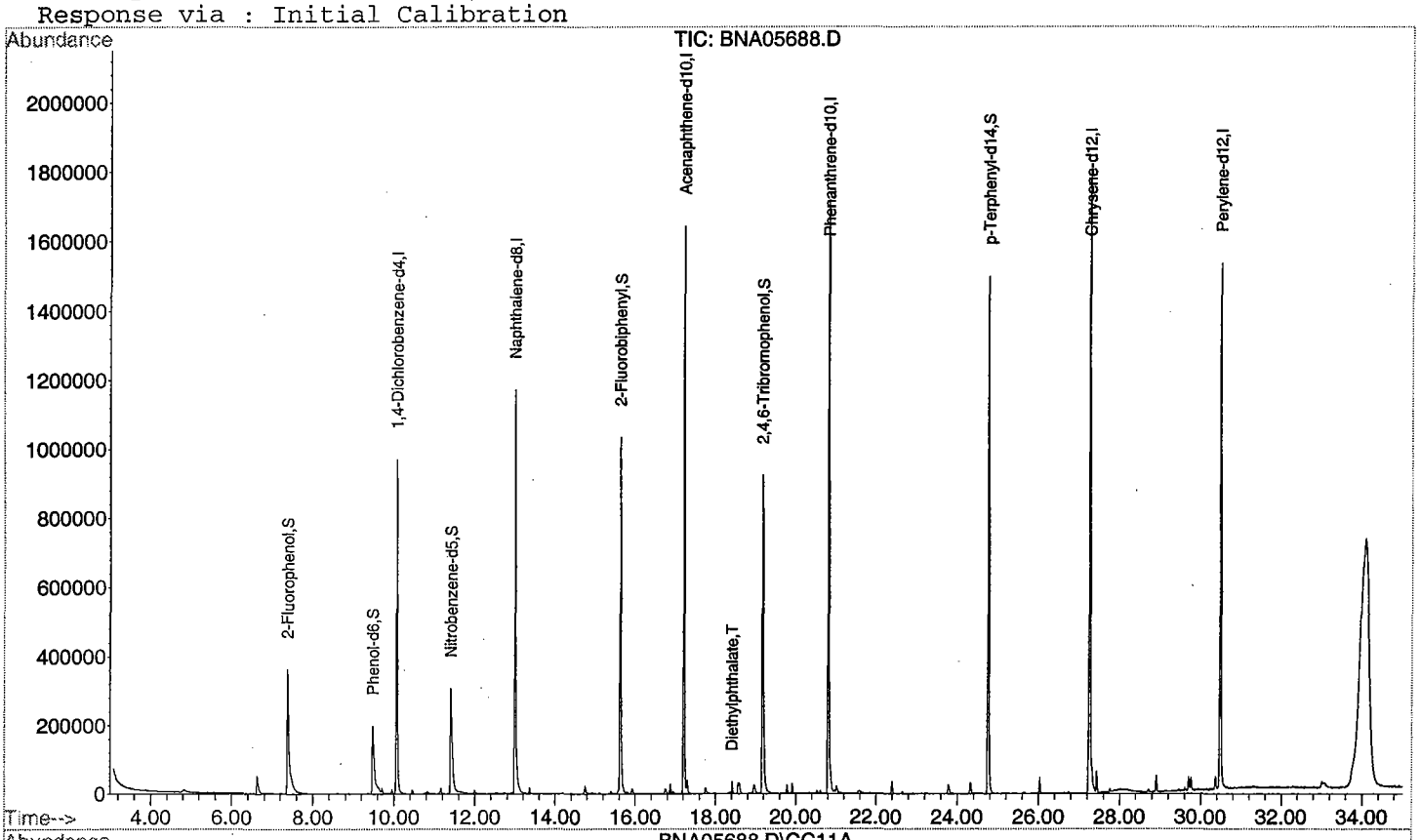
(#) = qualifier out of range (m) = manual integration

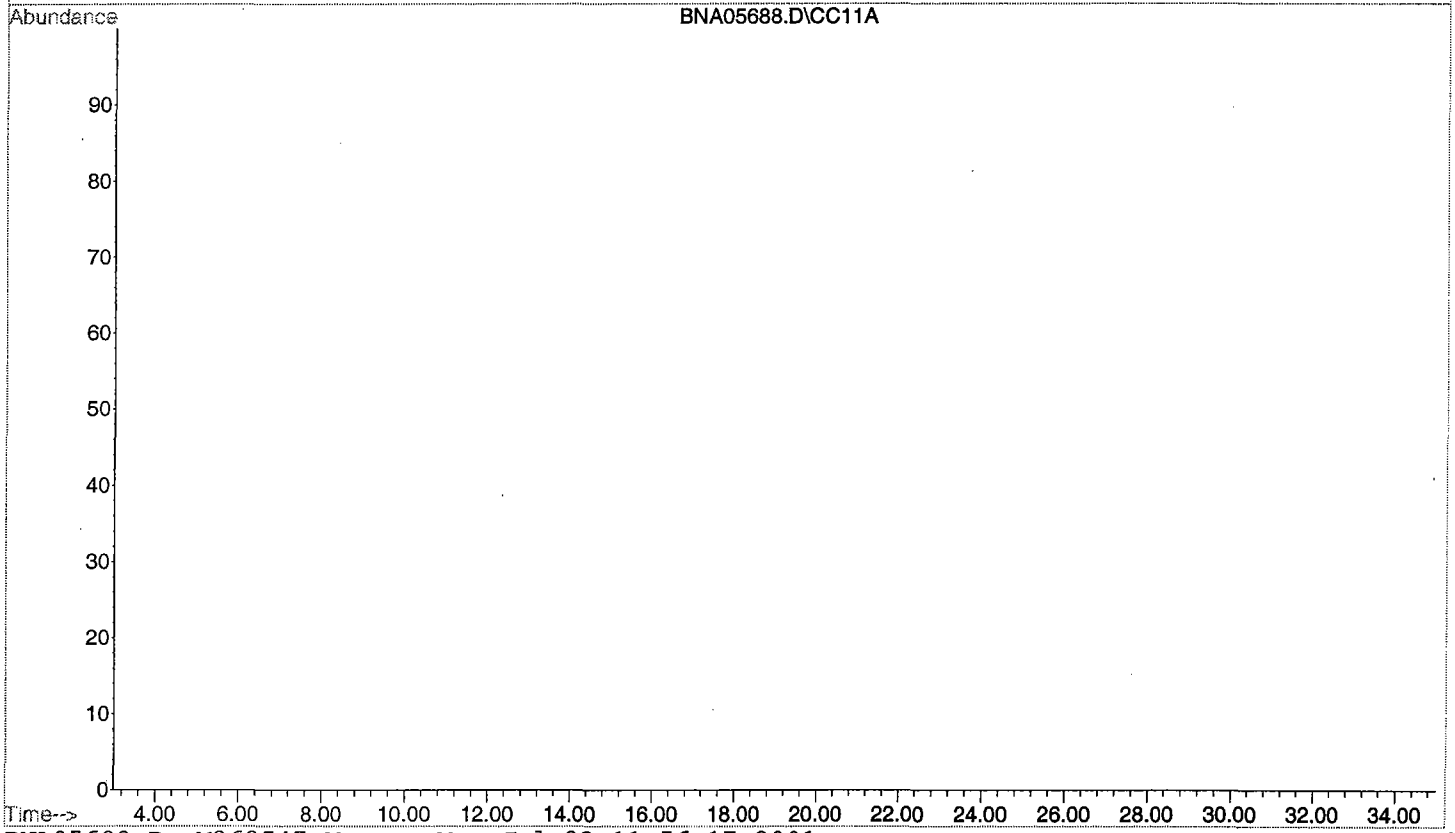
Quantitation Report

Data File : D:\DATA\010711\BNA05688.D
Acq On : 11 Jul 2001 9:30 am
Sample : MB 1995
Misc : 7-10-2001
MS Integration Params: RTEINT.P
Quant Time: Jul 23 11:55 2001

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262547.RES

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data File : D:\DATA\010711\BNA05691.D Vial: 4
Acq On : 11 Jul 2001 11:42 am Operator: Skelton
Sample : 1623701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 11 12:17 2001 Quant Results File: M262547.RES

Quant Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration
DataAcq Meth : M262547

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.07	152	250668	40.00	ug/L	0.00
19) Naphthalene-d8	12.99	136	984906	40.00	ug/L	0.00
34) Acenaphthene-d10	17.22	164	599664	40.00	ug/L	0.00
54) Phenanthrene-d10	20.81	188	1168336	40.00	ug/L	0.00
66) Chrysene-d12	27.26	240	1206398	40.00	ug/L	0.00
75) Perylene-d12	30.49	264	898631	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery = 0.00%#			
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery = 0.00%#			
20) Nitrobenzene-d5	11.41	82	315507	30.23	ug/L	0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 60.46%			
38) 2-Fluorobiphenyl	15.63	172	614973	35.92	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 71.84%			
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery = 0.00%#			
69) p-Terphenyl-d14	24.75	244	365218	18.31	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 36.62%			

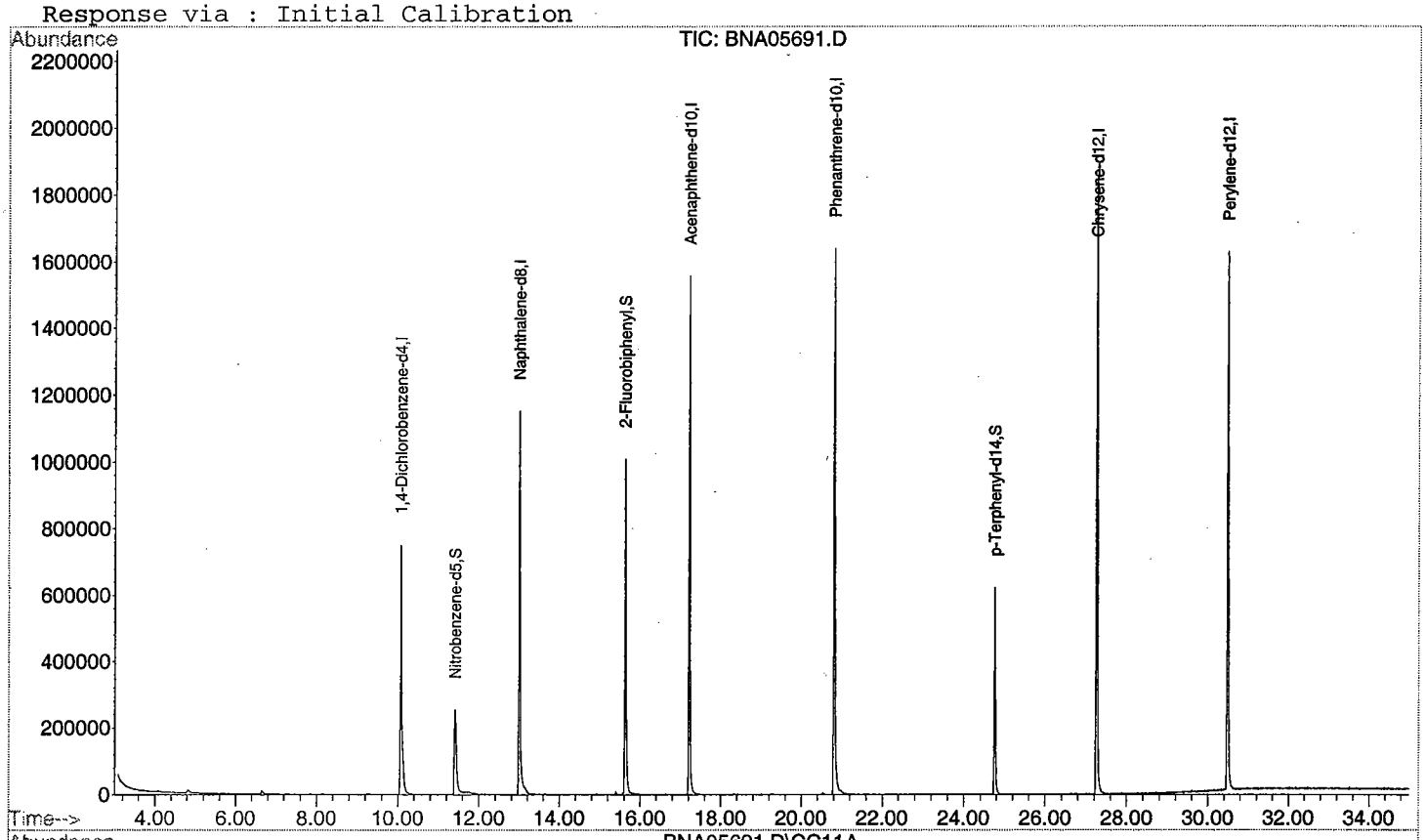
Target Compounds Qvalue

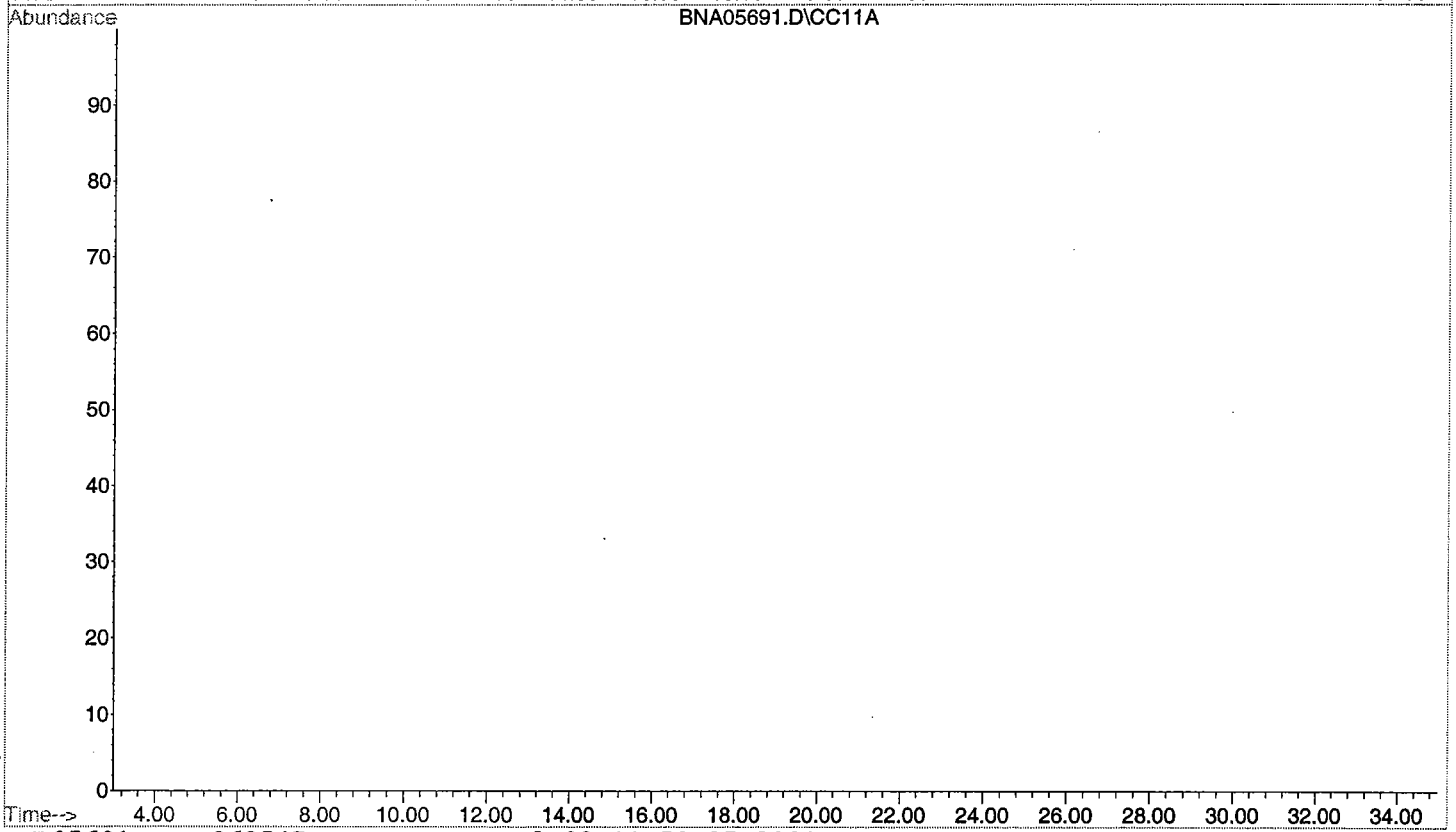
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\010711\BNA05691.D Vial: 4
Acq On : 11 Jul 2001 11:42 am Operator: Skelton
Sample : 1623701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 11 12:17 2001 Quant Results File: M262547.RES

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration





000061

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010711\BNA05692.D Vial: 5
Acq On : 11 Jul 2001 12:26 pm Operator: Skelton
Sample : 1623702 Inst : GC/MS Ins
Misc : FD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jul 11 13:01 2001 Quant Results File: M262547.RES

Quant Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration
DataAcq Meth : M262547

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.07	152	226143	40.00	ug/L	0.00
19) Naphthalene-d8	12.99	136	870549	40.00	ug/L	0.00
34) Acenaphthene-d10	17.22	164	558439	40.00	ug/L	0.00
54) Phenanthrene-d10	20.81	188	1077722	40.00	ug/L	0.00
66) Chrysene-d12	27.26	240	1121130	40.00	ug/L	0.00
75) Perylene-d12	30.49	264	830856	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery = 0.00%#			
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery = 0.00%#			
20) Nitrobenzene-d5	11.43	82	246051	26.67	ug/L	0.04
Spiked Amount 50.000	Range 35 - 114		Recovery = 53.34%			
38) 2-Fluorobiphenyl	15.63	172	473025	29.67	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 59.34%			
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery = 0.00%#			
69) p-Terphenyl-d14	24.76	244	325012	17.53	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 35.06%			

Target Compounds Qvalue

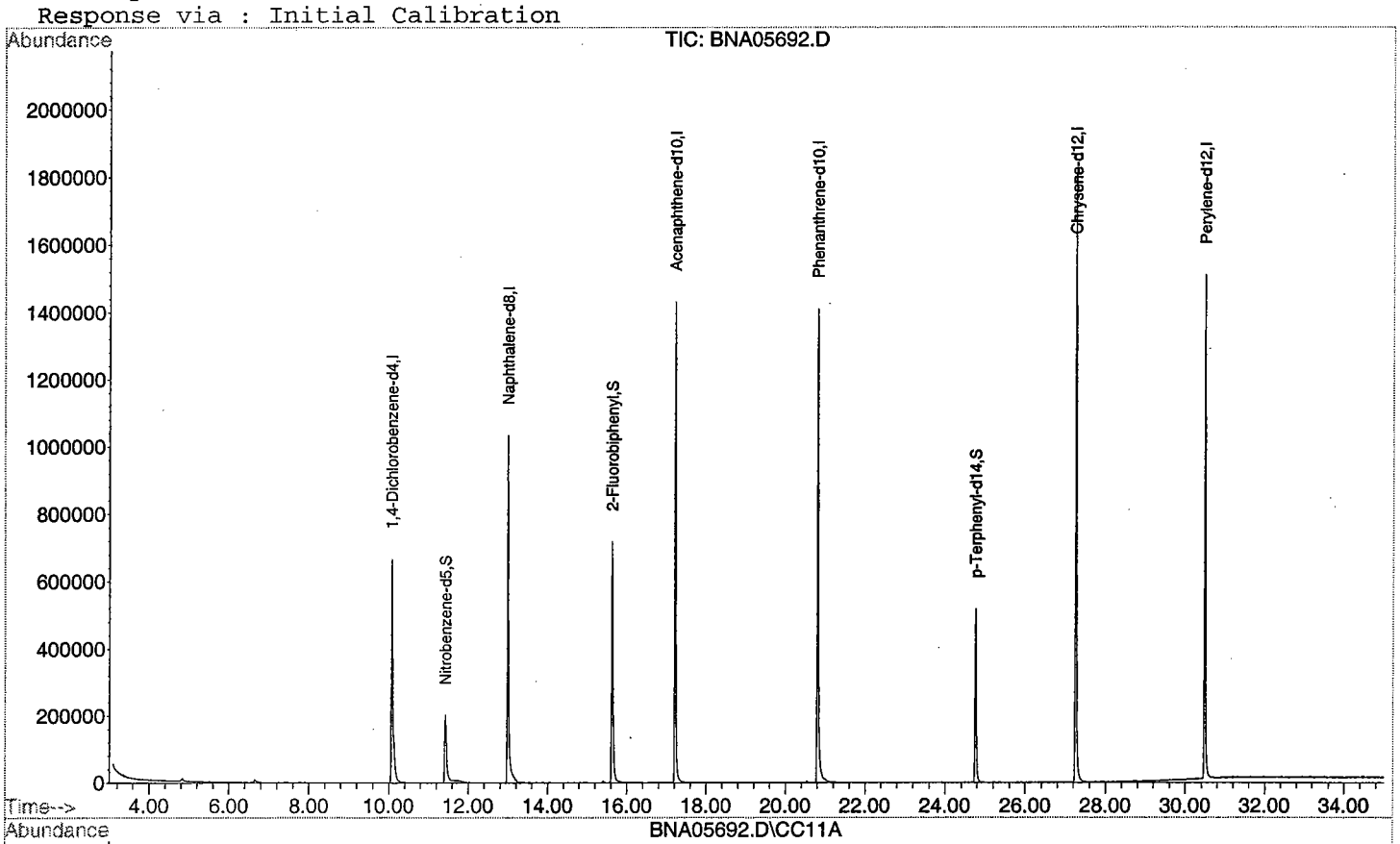
(#) = qualifier out of range (m) = manual integration

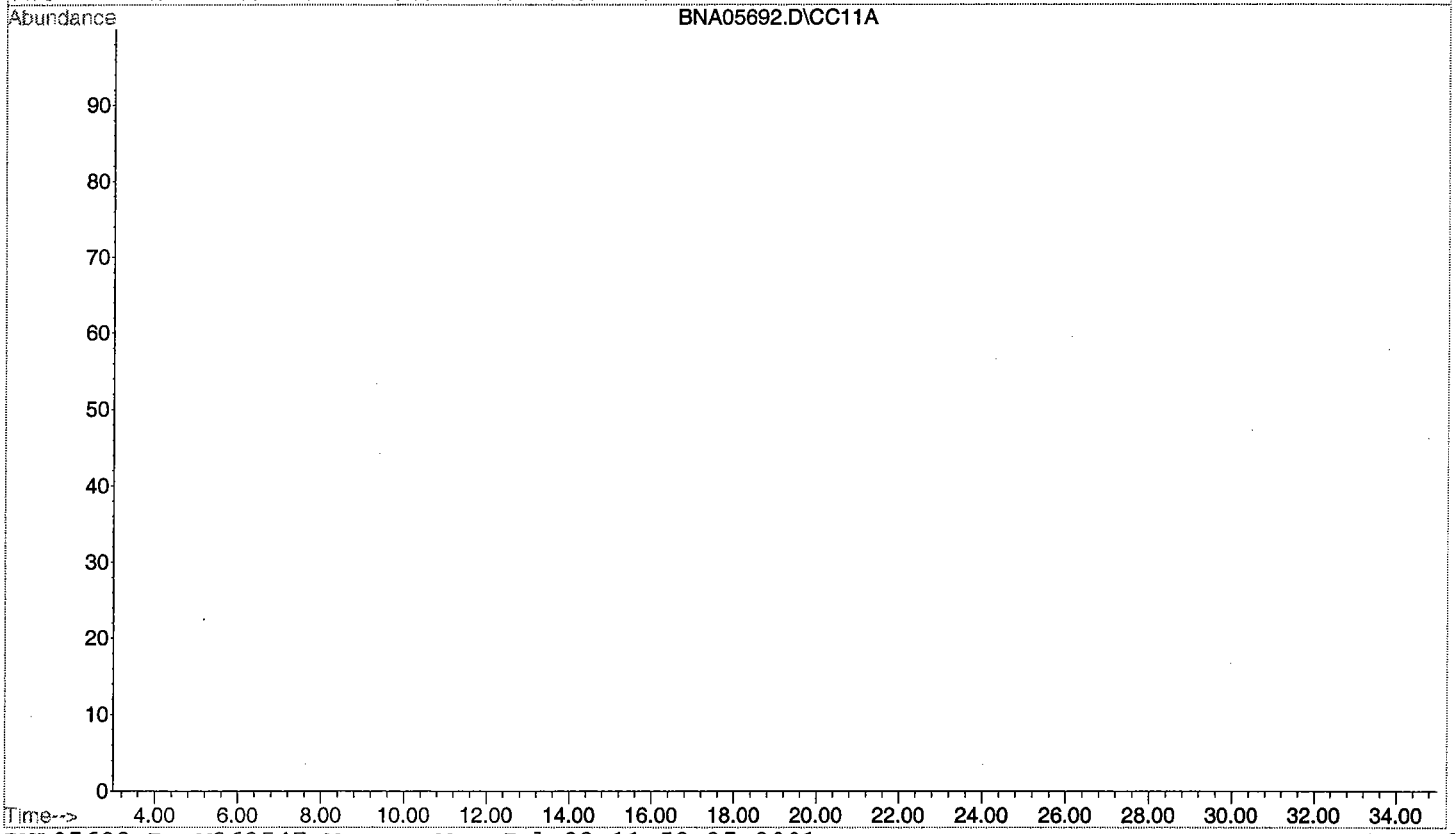
Quantitation Report

Data File : D:\DATA\010711\BNA05692.D
Acq On : 11 Jul 2001 12:26 pm
Sample : 1623702
Misc : FD
MS Integration Params: RTEINT.P
Quant Time: Jul 11 13:01 2001

Vial: 5
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262547.RES

Method : C:\HPCHEM\1\METHODS\M262547.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Jul 09 09:29:51 2001
Response via : Initial Calibration





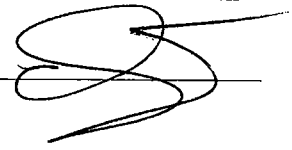
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1.	Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted	✓
2.	Table of Contents submitted	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	✓
4.	Document paginated and legible	✓
5.	Chain of Custody submitted	✓
6.	Samples submitted to lab within 48 hours of sample collection	✓
7.	Methodology Summary submitted	✓
8.	Laboratory Chronicle and Holding Time Check submitted	✓
9.	Results submitted on a dry weight basis	NA
10.	Method Detection Limits submitted	✓
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	✓

Laboratory Manager or Environmental Consultant's Signature 

Date 4/8/01

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: IJO# 01-0001

Bldg. 804

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
804 8.2'	16177.01	Aqueous	08-Jun-01 14:20	06/08/01
Field DUP. 8.2'	16177.02	Aqueous	08-Jun-01	06/08/01

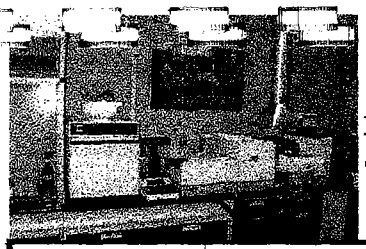
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

7-5-01
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI - VERSAR
Phone #: X2 1475
( )DERA ( )OMA ( )Other:_____

Project No: 01-0001
Location: BLDG. 804*

Samplers Name / Company: MARK LALIMA ITS

Lims Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA + 15	BN + 15							Comments: Remarks / Preservation Method
16177. 1	804 - 8.2'	6-8-01	1420	AQ.	3	X	X							HCL, <4°C
2	Field DUPE-8.2'	"	"	"	"	X	X							" , "

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	6-8-01 800				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ___ Days, (_)ASAP Verbal ___ Hrs.

Remarks: * BLDG. DEMOLISHED - COMMISSARY @ AOC. PRESENTLY SHARED T.B. + F.B. W/BLDG. 106 - SAME DAY

200002

print legibly

Coc.xls2/6/01

METHOD SUMMARY

Method Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5-ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA Method 3510/625
Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene chloride using a separatory funnel. The extract concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFORMANCE/NON CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — yes
2. Retention times for chromatograms provided — yes
3. GC/MS Tune Specifications
   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes
6. GC/MS Calibration requirements
   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank: — no
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A
8. Surrogate Recoveries Meet Criteria — yes

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction N/A

11. Extraction Holding Time Met — yes

If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met — yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Laboratory Manager: _____ Date: 7-5-01

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16177

Site: Bldg. 804

	Date	Hold Time
Date Sampled	06/08/01	NA
Receipt/Refrigeration	06/08/01	NA
Extractions		
1. BN	06/13/01	7 days
Analyses		
1. Volatile Organics	6/11,12/01	14 days
2. BN	06/15/01	40 days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006097.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**11-Jun-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichlorpethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.: _____

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006097.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. _____ Date Analyzed: 6/11/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006113.D**	Sample Name	**1617701**
Operator	**Skelton**	Field ID	**804**
Date Aquired	**12-Jun-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **804**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617701

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006113.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. Date Analyzed: 6/12/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006114.D**	Sample Name	**1617702**
Operator	**Skelton**	Field ID	**Field Dupe**
Date Aquired	**12-Jun-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Field Dupe**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1617702

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC006114.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: not dec. _____ Date Analyzed: 6/12/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.:

Lab File ID: VC005963.D BFB Injection Date: 5/30/01

Instrument ID: VoaInst#3 BFB Injection Time: 13:52

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.8
75	30.0 - 66.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	67.6
175	4.0 - 9.0% of mass 174	5.0 (7.4)1
176	93.0 - 101.0% of mass 174	66.1 (97.9)1
177	5.0 - 9.0% of mass 176	4.4 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

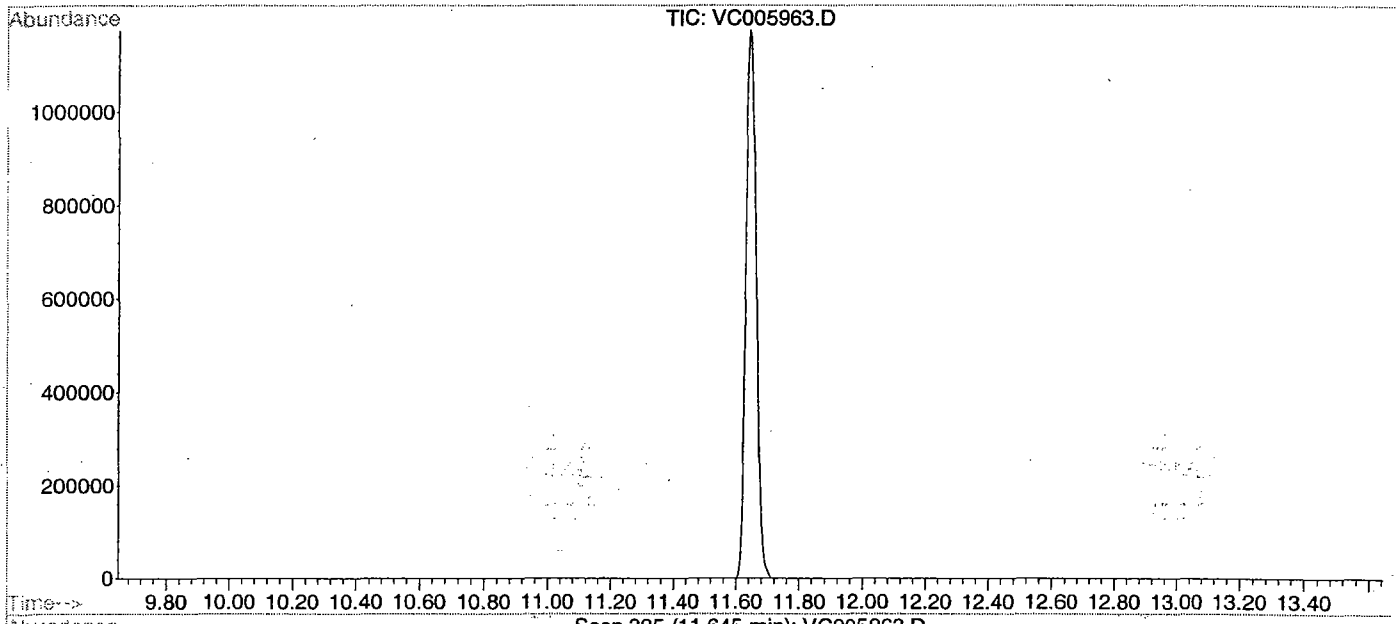
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

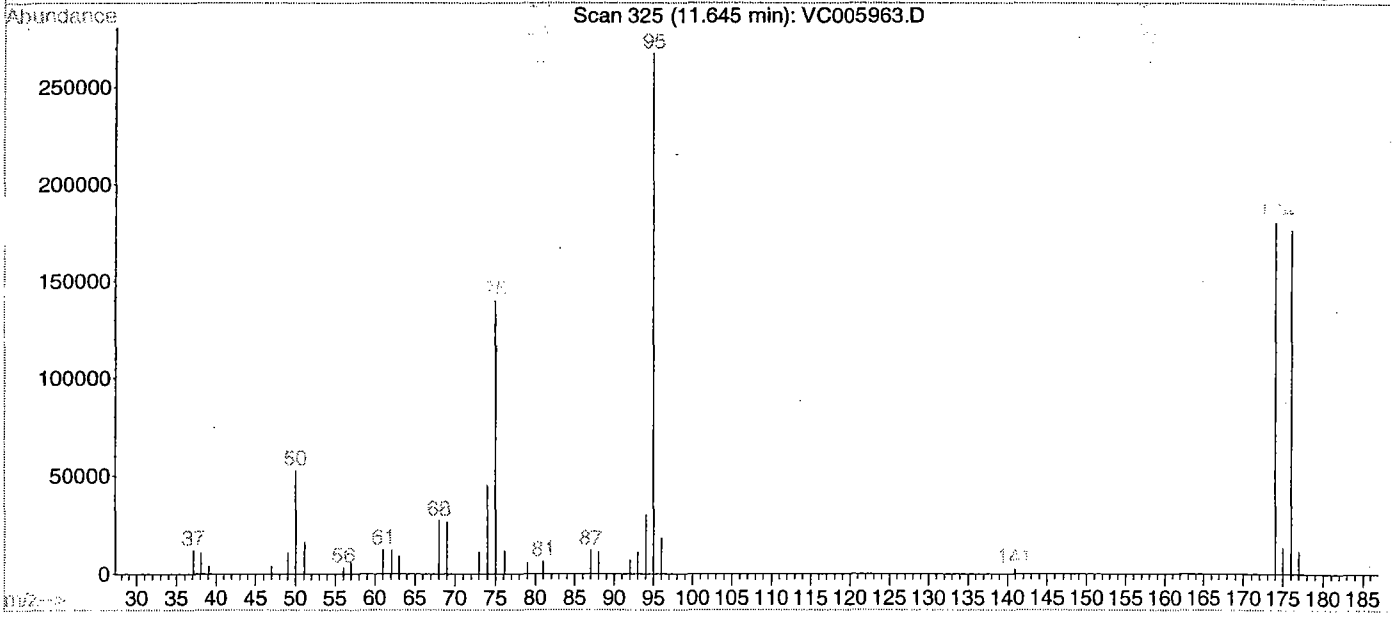
	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD100	VSTD100	VC005964.D	5/30/01	14:21
02	VSTD050	VSTD050	VC005965.D	5/30/01	15:03
03	VSTD020	VSTD020	VC005966.D	5/30/01	15:44
04	VSTD010	VSTD010	VC005967.D	5/30/01	16:25
05	VSTD005	VSTD005	VC005968.D	5/30/01	17:06

BFB

Data File : D:\HPCHEM\1\DATA\010530\VC005963.D
Acq On : 30 May 2001 1:52 pm
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Vial: 2
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00





Spectrum Information: Scan 325

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	52848	PASS
75	95	30	60	52.4	140096	PASS
95	95	100	100	100.0	267520	PASS
96	95	5	9	6.9	18496	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	67.6	180736	PASS
175	174	5	9	7.4	13443	PASS
176	174	95	101	97.9	176896	PASS
177	176	5	9	6.6	11645	PASS

Response Factor Report GC/MS Ins

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration

Calibration Files
50 =VC005965.D 5 =VC005968.D 10 =VC005967.D
20 =VC005966.D 100 =VC005964.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.655	0.600	0.650	0.602	0.627	0.627	4.14
3)	t	Acrylonitrile	1.332	1.316	1.406	1.285	1.236	1.315	4.75
4)	t	tert-Butyl alcohol	0.269	0.190	0.235	0.230	0.285	0.242	15.22
5)	t	Methyl-tert-Butyl eth	7.186	6.328	6.860	6.596	7.107	6.815	5.24
6)	t	Di-isopropyl ether	1.946	1.637	1.831	1.812	1.925	1.830	6.68
7)	T	Dichlorodifluorometha	2.492	2.322	2.337	2.309	2.439	2.380	3.40
8)	TP	Chloromethane	2.152	2.189	2.197	2.036	2.105	2.136	3.11
9)	TC	Vinyl Chloride	1.918	2.114	2.032	1.874	1.810	1.950	6.29
10)	T	Bromomethane	1.479	1.516	1.508	1.421	1.416	1.468	3.23
11)	T	Chloroethane	1.714	1.654	1.680	1.610	1.700	1.672	2.47
12)	T	Trichlorofluoromethan	3.002	2.910	2.946	2.835	2.913	2.921	2.08
13)	MC	1,1-Dichloroethene	3.457	3.282	3.392	3.241	3.395	3.353	2.65
14)	T	Acetone	0.954	1.353	1.152	0.932	1.069	1.092	15.64
15)	T	Carbon Disulfide	6.478	5.906	6.262	6.140	6.406	6.239	3.64
16)	T	Methylene Chloride	2.206	2.134	2.248	2.110	2.175	2.175	2.54
17)	T	trans-1,2-Dichloroeth	3.358	3.243	3.357	3.193	3.283	3.287	2.19
18)	TP	1,1-Dichloroethane	4.191	4.040	4.181	3.965	4.094	4.094	2.33
19)	T	Vinyl Acetate	5.818	4.756	5.355	5.281	5.680	5.378	7.68
20)	T	2-Butanone	1.373	1.129	1.279	1.215	1.480	1.295	10.53
21)	T	cis-1,2-Dichloroethen	3.293	3.124	3.303	3.130	3.203	3.211	2.67
22)	TC	Chloroform	3.802	3.710	3.816	3.627	3.678	3.726	2.18
23)	T	1,1,1-Trichloroethane	3.189	2.877	3.074	2.971	3.116	3.045	4.03
24)	T	Carbon Tetrachloride	2.661	2.394	2.481	2.447	2.651	2.527	4.84
25)	S	1,2-Dichloroethane-d4	2.823	2.824	2.794	2.806	2.806	2.811	0.46
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.341	1.358	1.398	1.312	1.259	1.334	3.90
28)	T	1,2-Dichloroethane	0.482	0.509	0.511	0.471	0.468	0.488	4.21
29)	TM	Trichloroethene	0.331	0.319	0.331	0.317	0.325	0.324	2.03
30)	TC	1,2-Dichloropropane	0.365	0.353	0.367	0.349	0.357	0.358	2.24
31)	T	Bromodichloromethane	0.386	0.337	0.367	0.361	0.388	0.368	5.74
32)	T	2-Chloroethyl vinyl e	0.130	0.129	0.133	0.126	0.128	0.129	2.04
33)	T	cis-1,3-Dichloroprope	0.530	0.438	0.486	0.487	0.529	0.494	7.67
34)	T	4-Methyl-2-Pentanone	0.166	0.130	0.156	0.149	0.171	0.154	10.28
35)	S	Toluene-d8	1.212	1.214	1.207	1.208	1.219	1.212	0.40
36)	TCM	Toluene	1.318	1.368	1.388	1.304	1.227	1.321	4.76
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.731	1.351	1.568	1.586	1.730	1.593	9.78
39)	T	1,1,2-Trichloroethane	0.985	0.956	1.014	0.958	0.958	0.974	2.60
40)	T	Tetrachloroethene	1.006	0.992	1.028	0.977	0.973	0.995	2.26
41)	T	2-Hexanone	0.872	0.628	0.787	0.779	0.902	0.794	13.43
42)	T	Dibromochloromethane	0.887	0.680	0.789	0.791	0.905	0.810	11.16
43)	TMP	Chlorobenzene	2.876	2.962	3.067	2.866	2.749	2.904	4.08
44)	TC	Ethylbenzene	5.054	5.148	5.347	5.082	4.595	5.045	5.48
45)	T	m+p-Xylenes	1.927	1.979	2.049	1.933	1.805	1.939	4.59
46)	T	o-Xylene	3.958	3.815	4.074	3.912	3.732	3.898	3.38
47)	T	Styrene	3.339	3.010	3.346	3.248	3.212	3.231	4.22
48)	TP	Bromoform	0.571	0.373	0.469	0.486	0.596	0.499	17.81
49)	S	Bromofluorobenzene	1.669	1.658	1.672	1.672	1.694	1.673	0.77
50)	TP	1,1,2,2-Tetrachloroet	1.303	1.248	1.365	1.289	1.273	1.295	3.36
51)	T	1,3-Dichlorobenzene	2.092	1.991	2.132	2.050	2.001	2.053	2.91
52)	T	1,4-Dichlorobenzene	2.078	1.952	2.102	2.033	1.989	2.031	3.05
53)	T	1,2-Dichlorobenzene	1.966	1.847	1.999	1.933	1.881	1.925	3.22

(#) = Out of Range

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.:

Lab File ID: VC006095.D BFB Injection Date: 6/11/01

Instrument ID: VoaInst#3 BFB Injection Time: 13:33

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	16.0
75	30.0 - 66.0% of mass 95	46.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	58.8
175	4.0 - 9.0% of mass 174	4.2 (7.2)1
176	93.0 - 101.0% of mass 174	56.7 (96.4)1
177	5.0 - 9.0% of mass 176	4.0 (7.0)2

1-Value is % mass 174 2-Value is % mass 176

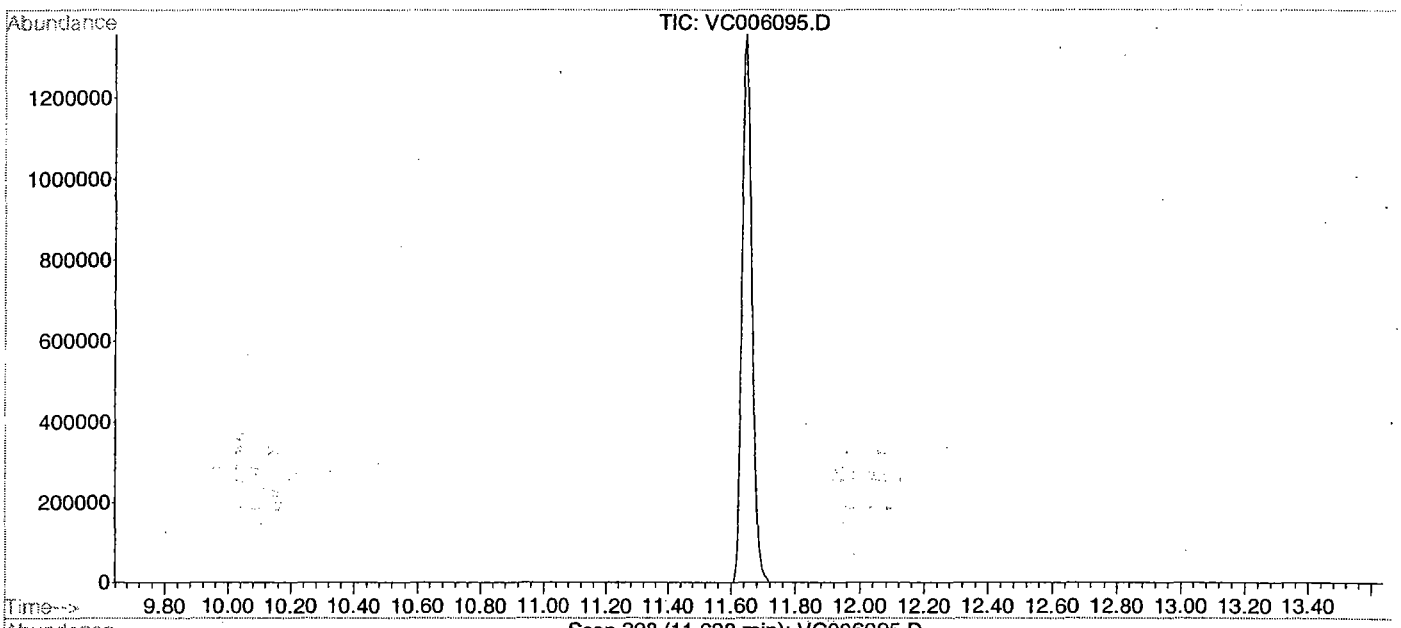
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

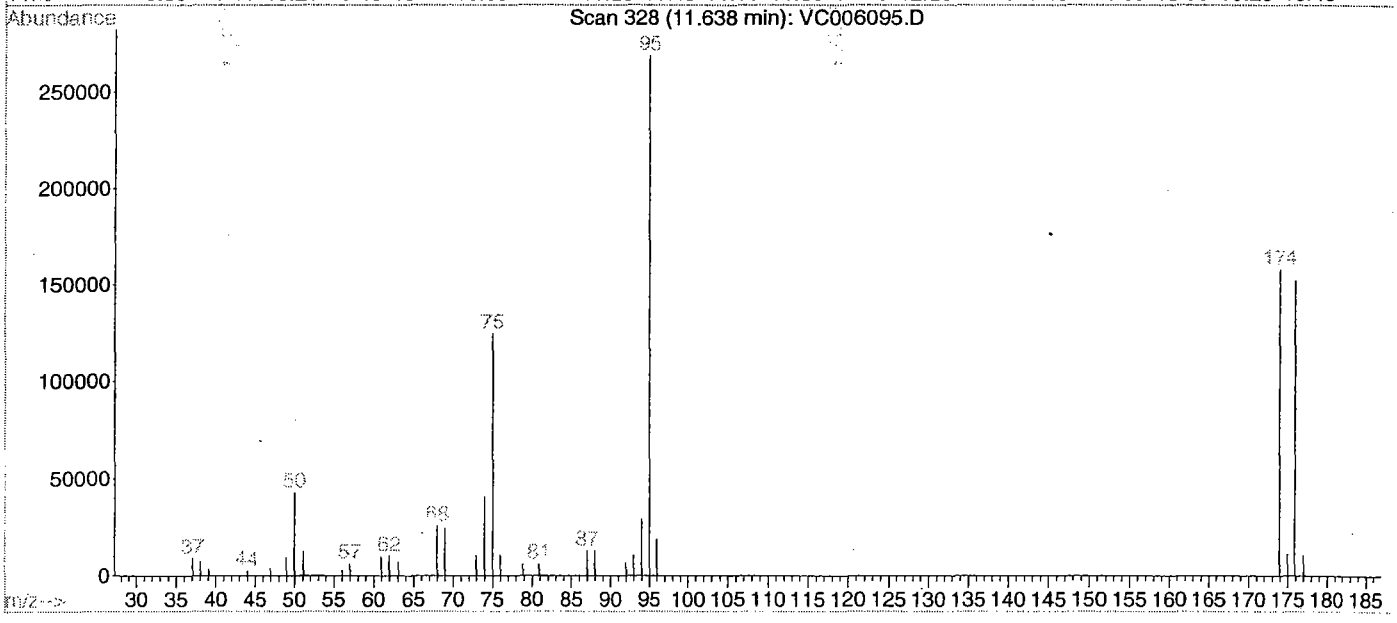
	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VC006096.D	6/11/01	14:03
02	MB	MB	VC006097.D	6/11/01	14:53
03	1617601 MS	1617601 MS	VC006111.D	6/12/01	0:45
04	1617601 MSD	1617601 MSD	VC006112.D	6/12/01	1:26
05	804	1617701	VC006113.D	6/12/01	2:07
06	FIELD DUPE	1617702	VC006114.D	6/12/01	2:48

BFB

Data File : D:\HPCHEM\1\DATA\010611\VC006095.D
Acq On : 11 Jun 2001 1:33 pm
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Vial: 1
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00





Spectrum Information: Scan 328

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.0	43008	PASS
75	95	30	60	46.4	124624	PASS
95	95	100	100	100.0	268864	PASS
96	95	5	9	7.0	18776	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	58.8	158208	PASS
175	174	5	9	7.2	11341	PASS
176	174	95	101	96.4	152448	PASS
177	176	5	9	7.0	10680	PASS

VC006095.D M362444.M Thu Jun 21 09:48:57 2001

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\010611\VC006096.D Vial: 2
Acq On : 11 Jun 2001 2:03 pm Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Multiple Level Calibration

Min. RRF : 0.025 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	129	0.00
2	t	Acrolein	0.627	0.576	8.1	124	0.00
3	t	Acrylonitrile	1.315	1.249	5.0	126	0.00
4	t	tert-Butyl alcohol	0.242	0.162	33.1#	91	-0.01
5	t	Methyl-tert-Butyl ether	6.815	5.783	15.1	113	-0.01
6	t	Di-isopropyl ether	1.830	1.741	4.9	124	0.01
7	T	Dichlorodifluoromethane	2.380	2.667	-12.1	149	0.00
8	TP	Chloromethane	2.136	2.140	-0.2	136	0.00
9	TC	Vinyl Chloride	1.950	2.158	-10.7	149	0.00
10	T	Bromomethane	1.468	1.447	1.4	132	0.00
11	T	Chloroethane	1.672	1.621	3.1	130	0.00
12	T	Trichlorofluoromethane	2.921	2.824	3.3	129	-0.01
13	MC	1,1-Dichloroethene	3.353	2.994	10.7	120	0.00
14	T	Acetone	1.092	0.783	28.3#	109	0.00
15	T	Carbon Disulfide	6.239	6.547	-4.9	138	0.00
16	T	Methylene Chloride	2.175	2.346	-7.9	144	0.00
17	T	trans-1,2-Dichloroethene	3.287	3.024	8.0	123	0.00
18	TP	1,1-Dichloroethane	4.094	3.891	5.0	127	0.00
19	T	Vinyl Acetate	5.378	3.951	26.5#	97	0.01
20	T	2-Butanone	1.295	0.908	29.9#	97	0.00
21	T	cis-1,2-Dichloroethene	3.211	2.901	9.7	120	0.00
22	TC	Chloroform	3.726	3.769	-1.2	134	0.00
23	T	1,1,1-Trichloroethane	3.045	2.989	1.8	130	0.01
24	T	Carbon Tetrachloride	2.527	2.614	-3.4	138	0.00
25	S	1,2-Dichloroethane-d4	2.811	2.297	18.3	106	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	129	0.00
27	TM	Benzene	1.334	1.430	-7.2	141	0.01
28	T	1,2-Dichloroethane	0.488	0.422	13.5	116	0.00
29	TM	Trichloroethene	0.324	0.344	-6.2	140	0.00
30	TC	1,2-Dichloropropane	0.358	0.343	4.2	127	-0.01
31	T	Bromodichloromethane	0.368	0.386	-4.9	138	0.00
32	T	2-Chloroethyl vinyl ether	0.129	0.120	7.0	123	-0.01
33	T	cis-1,3-Dichloropropene	0.494	0.487	1.4	129	0.00
34	T	4-Methyl-2-Pentanone	0.154	0.134	13.0	116	-0.01
35	S	Toluene-d8	1.212	1.195	1.4	128	0.00
36	TCM	Toluene	1.321	1.443	-9.2	143	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	127	0.00
38	T	trans-1,3-Dichloropropene	1.593	1.559	2.1	125	0.00
39	T	1,1,2-Trichloroethane	0.974	1.115	-14.5	148	0.00
40	T	Tetrachloroethene	0.995	1.009	-1.4	131	0.00
41	T	2-Hexanone	0.794	0.611	23.0	99	0.00
42	T	Dibromochloromethane	0.810	0.914	-12.8	146	0.00
43	TMP	Chlorobenzene	2.904	3.252	-12.0	144	0.01
44	TC	Ethylbenzene	5.045	5.591	-10.8	140	0.00
45	T	m+p-Xylenes	1.939	2.093	-7.9	137	0.01
46	T	o-Xylene	3.898	3.960	-1.6	128	0.00
47	T	Styrene	3.231	3.486	-7.9	136	0.00
48	TP	Bromoform	0.499	0.568	-13.8	148	0.00
49	S	Bromofluorobenzene	1.673	1.580	5.6	120	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.295	1.431	-10.5	141	0.00
51	T	1,3-Dichlorobenzene	2.053	2.003	2.4	124	0.00
52	T	1,4-Dichlorobenzene	2.031	1.970	3.0	123	0.00
53	T	1,2-Dichlorobenzene	1.925	1.898	1.4	125	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

4A

FIELD ID:

MB

VOLATILE METHOD BLANK SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.:

Lab File ID: VC006097.D Lab Sample ID: MB

Date Analyzed: 6/11/01 Time Analyzed: 14:53

GC Column: RTX502. ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: VoaInst#3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	1617601 MS	1617601 MS	VC006111.D	0:45
02	1617601 MSD	1617601 MSD	VC006112.D	1:26
03	804	1617701	VC006113.D	2:07
04	FIELD DUPE	1617702	VC006114.D	2:48

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB	83	98	89	0
02	1617601 MS	88	99	97	0
03	1617601 MSD	87	99	97	0
04	804	88	98	94	0
05	FIELD DUPE	89	98	92	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(88-110)
SMC3	BFB	=	Bromofluorobenzene	(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	**VC006111.D**	Sample Name	**1617601 MS**
Date Aquired	**12-Jun-01**	Field ID	**164 MS**

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	153.37 ug/L	76.68
Acrylonitrile	200	188.58 ug/L	94.29
tert-Butyl alcohol	200	107.16 ug/L	53.58
Methyl-tert-Butyl ether	20	17.27 ug/L	86.33
Di-isopropyl ether	20	19.36 ug/L	96.82
Dichlorodifluoromethane	20	21.41 ug/L	107.05
Chloromethane	20	19.53 ug/L	97.67
Vinyl Chloride	20	22.59 ug/L	112.95
Bromomethane	20	19.83 ug/L	99.16
Chloroethane	20	19.61 ug/L	98.06
Trichlorofluoromethane	20	19.55 ug/L	97.77
1,1-Dichloroethene	20	18.60 ug/L	92.99
Acetone	20	13.52 ug/L	67.62
Carbon Disulfide	20	20.22 ug/L	101.08
Methylene Chloride	20	21.16 ug/L	105.81
trans-1,2-Dichloroethene	20	19.01 ug/L	95.06
1,1-Dichloroethane	20	19.38 ug/L	96.89
Vinyl Acetate	20	13.62 ug/L	68.09
2-Butanone	20	15.28 ug/L	76.42
cis-1,2-Dichloroethene	20	19.01 ug/L	95.06
Chloroform	20	20.52 ug/L	102.58
1,1,1-Trichloroethane	20	19.65 ug/L	98.23
Carbon Tetrachloride	20	19.70 ug/L	98.50
Benzene	20	21.36 ug/L	106.78
1,2-Dichloroethane	20	18.56 ug/L	92.81
Trichloroethene	20	22.73 ug/L	113.67
1,2-Dichloropropane	20	19.51 ug/L	97.57
Bromodichloromethane	20	20.21 ug/L	101.05
2-Chloroethyl vinyl ether	20	19.49 ug/L	97.45
cis-1,3-Dichloropropene	20	18.74 ug/L	93.69
4-Methyl-2-Pentanone	20	17.26 ug/L	86.30
Toluene	20	21.32 ug/L	106.59
trans-1,3-Dichloropropene	20	18.19 ug/L	90.96
1,1,2-Trichloroethane	20	21.43 ug/L	107.15
Tetrachloroethene	20	19.95 ug/L	99.76
2-Hexanone	20	16.39 ug/L	81.97
Dibromochloromethane	20	20.76 ug/L	103.79
Chlorobenzene	20	21.39 ug/L	106.93
Ethylbenzene	20	21.96 ug/L	109.79
m+p-Xylenes	40	41.34 ug/L	103.35
o-Xylene	20	20.49 ug/L	102.47
Styrene	20	20.09 ug/L	100.44
Bromoform	20	20.14 ug/L	100.70
1,1,2,2-Tetrachloroethane	20	18.11 ug/L	90.55
1,3-Dichlorobenzene	20	20.93 ug/L	104.63
1,4-Dichlorobenzene	20	21.04 ug/L	105.19
1,2-Dichlorobenzene	20	22.00 ug/L	110.00

6/21/01 9:50 AM

D:\HPCHEM\Custrpt\Volatile\624ms00.crt

000026

Volatile Matrix Spike Duplicate Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	VC006112.D	Sample Name	1617601 MSD
Date Aquired	12-Jun-01	Field ID	164 MSD

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	152.06 ug/L	76.03
Acrylonitrile	200	184.98 ug/L	92.49
tert-Butyl alcohol	200	110.71 ug/L	55.36
Methyl-tert-Butyl ether	20	17.68 ug/L	88.41
Di-isopropyl ether	20	19.59 ug/L	97.93
Dichlorodifluoromethane	20	20.31 ug/L	101.57
Chloromethane	20	18.95 ug/L	94.77
Vinyl Chloride	20	21.23 ug/L	106.14
Bromomethane	20	18.96 ug/L	94.80
Chloroethane	20	19.13 ug/L	95.65
Trichlorofluoromethane	20	18.65 ug/L	93.26
1,1-Dichloroethene	20	17.97 ug/L	89.84
Acetone	20	13.81 ug/L	69.06
Carbon Disulfide	20	19.58 ug/L	97.91
Methylene Chloride	20	20.97 ug/L	104.84
trans-1,2-Dichloroethene	20	18.33 ug/L	91.64
1,1-Dichloroethane	20	19.04 ug/L	95.21
Vinyl Acetate	20	13.77 ug/L	68.83
2-Butanone	20	15.21 ug/L	76.03
cis-1,2-Dichloroethene	20	18.69 ug/L	93.47
Chloroform	20	20.13 ug/L	100.67
1,1,1-Trichloroethane	20	19.14 ug/L	95.68
Carbon Tetrachloride	20	19.07 ug/L	95.34
Benzene	20	20.84 ug/L	104.19
1,2-Dichloroethane	20	18.54 ug/L	92.72
Trichloroethene	20	21.80 ug/L	108.98
1,2-Dichloropropane	20	19.55 ug/L	97.74
Bromodichloromethane	20	20.19 ug/L	100.93
2-Chloroethyl vinyl ether	20	18.99 ug/L	94.93
cis-1,3-Dichloropropene	20	18.66 ug/L	93.29
4-Methyl-2-Pentanone	20	17.39 ug/L	86.93
Toluene	20	20.94 ug/L	104.72
trans-1,3-Dichloropropene	20	18.27 ug/L	91.36
1,1,2-Trichloroethane	20	21.75 ug/L	108.75
Tetrachloroethene	20	19.37 ug/L	96.84
2-Hexanone	20	16.93 ug/L	84.65
Dibromochloromethane	20	21.17 ug/L	105.83
Chlorobenzene	20	21.10 ug/L	105.48
Ethylbenzene	20	21.43 ug/L	107.17
m+p-Xylenes	40	40.32 ug/L	100.81
o-Xylene	20	20.14 ug/L	100.70
Styrene	20	19.94 ug/L	99.68
Bromoform	20	20.32 ug/L	101.62
1,1,2,2-Tetrachloroethane	20	18.50 ug/L	92.50
1,3-Dichlorobenzene	20	20.56 ug/L	102.79
1,4-Dichlorobenzene	20	20.73 ug/L	103.66
1,2-Dichlorobenzene	20	21.88 ug/L	109.42

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16177 Location: B804 SDG No.:

Lab File ID (Standard): VC006096.D Date Analyzed: 6/11/01

Instrument ID: VoaInst#3 Time Analyzed: 14:03

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
	12 HOUR STD	757601	16.70	5102597	19.42	1476091	27.25
	UPPER LIMIT	1515202	17.20	10205194	19.92	2952182	27.75
	LOWER LIMIT	378801	16.20	2551299	18.92	738046	26.75
	FIELD ID:						
01	MB	703030	16.70	4701478	19.42	1338453	27.25
02	1617601 MS	824248	16.70	5552281	19.42	1647161	27.25
03	1617601 MSD	840438	16.70	5657440	19.42	1673464	27.24
04	804	822099	16.71	5521705	19.42	1639565	27.25
05	FIELD DUPE	813303	16.70	5487179	19.42	1621304	27.25

IS1 BCM = Bromochloromethane
IS2 DFB = 1,4-Difluorobenzene
IS3 CBZ = Chlorobenzene-d5

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006097.D Vial: 2
Acq On : 11 Jun 2001 2:53 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 11 15:29 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	703030	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	4701478	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1338453	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	1639305	24.89	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 82.97%			
35) Toluene-d8	23.42	98	5563271	29.29	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 97.63%			
49) Bromofluorobenzene	30.25	95	1985282	26.60	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 88.67%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

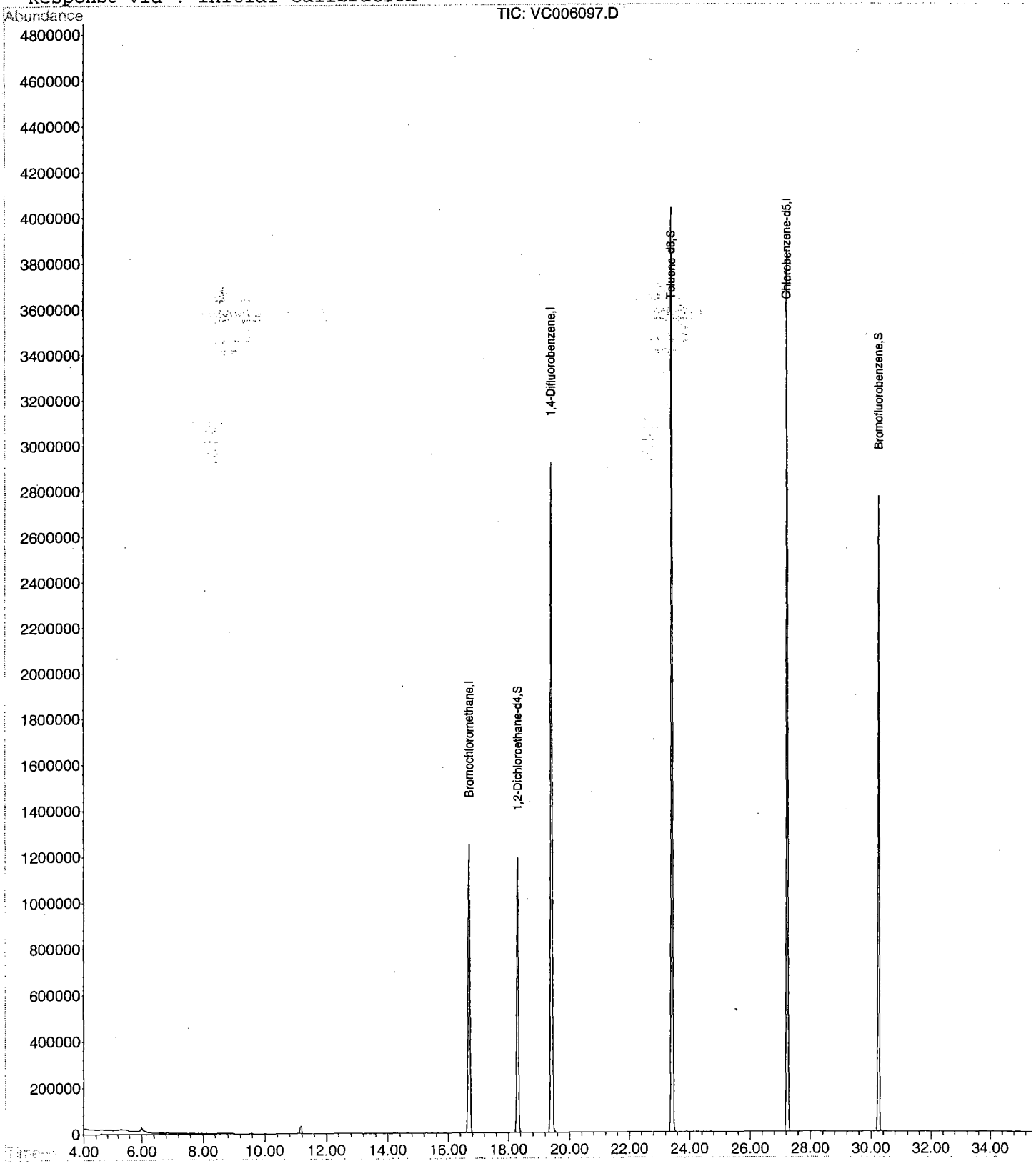
Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006097.D
Acq On : 11 Jun 2001 2:53 pm
Sample : MB
Misc : MB
MS Integration Params: ACETONE.P
Quant Time: Jun 11 15:29 2001

Vial: 2
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006113.D Vial: 16
Acq On : 12 Jun 2001 2:07 am Operator: Skelton
Sample : 1617701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 12 2:42 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

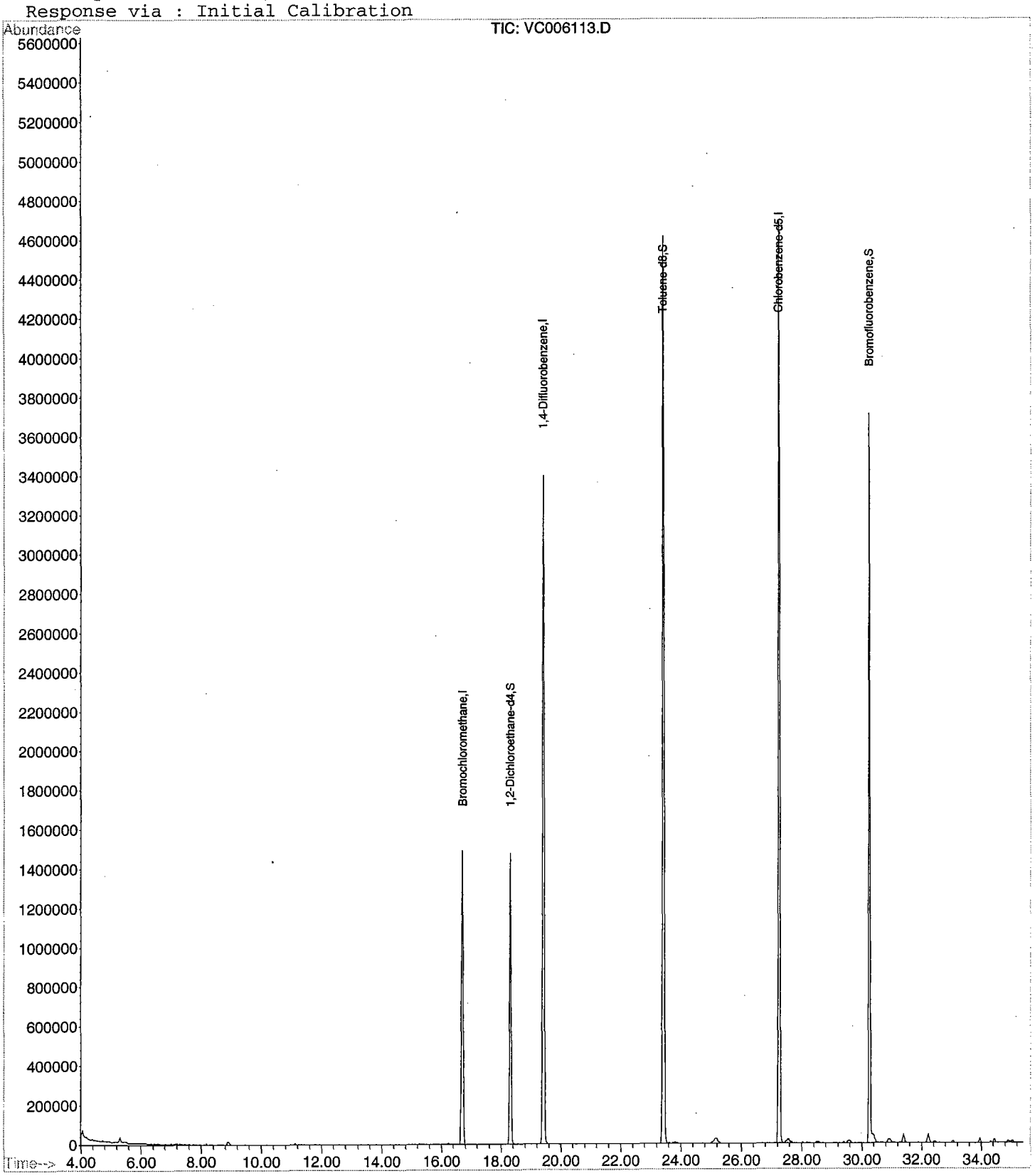
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.71	128	822099	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5521705	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1639565	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2035407	26.43	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 88.10%			
35) Toluene-d8	23.42	98	6587721	29.54	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.47%			
49) Bromofluorobenzene	30.25	95	2571242	28.12	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 93.73%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006113.D Vial: 16
Acq On : 12 Jun 2001 2:07 am Operator: Skelton
Sample : 1617701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 12 2:42 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



000032

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010611\VC006114.D Vial: 17
Acq On : 12 Jun 2001 2:48 am Operator: Skelton
Sample : 1617702 Inst : GC/MS Ins
Misc : Field Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 12 3:24 2001 Quant Results File: M362444.RES

Quant Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Jun 11 14:41:14 2001
Response via : Initial Calibration
DataAcq Meth : M362444

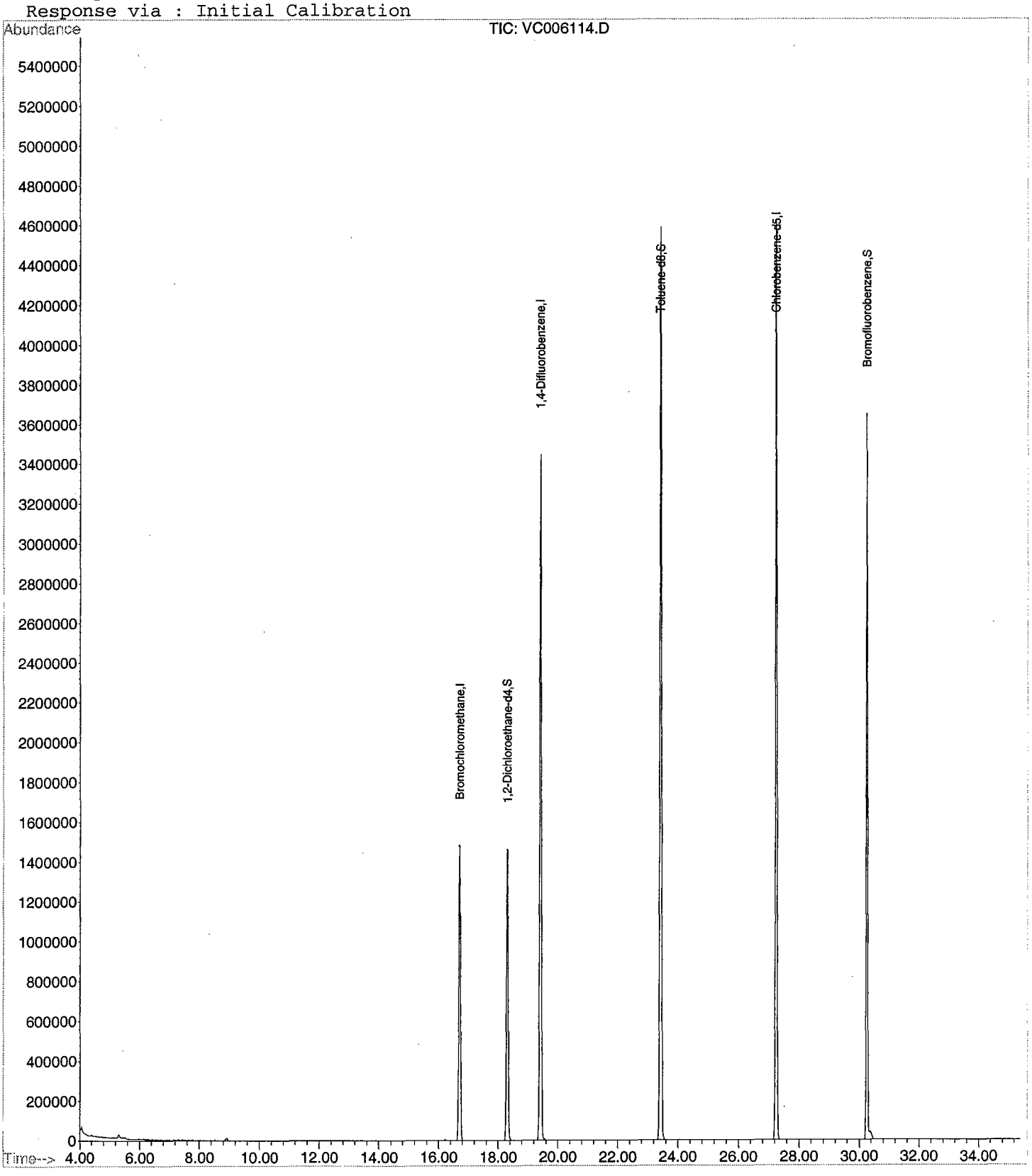
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	813303	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5487179	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1621304	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2036239	26.72	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 89.07%			
35) Toluene-d8	23.42	98	6522517	29.43	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.10%			
49) Bromofluorobenzene	30.25	95	2508037	27.74	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 92.47%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010611\VC006114.D Vial: 17
Acq On : 12 Jun 2001 2:48 am Operator: Skelton
Sample : 1617702 Inst : GC/MS Ins
Misc : Field Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Jun 12 3:24 2001 Quant Results File: M362444.RES

Method : D:\HPCHEM\1\METHODS\M362444.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Jun 20 14:04:20 2001
Response via : Initial Calibration



000034

BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05439.D**	Sample Name	**MB 1892**
Operator	**Bhaskar**	Misc Info	**12June2001**
Date Acquired	**12-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05439.D**	Sample Name	**MB 1892**
Operator	**Bhaskar**	Misc Info	**12June2001**
Date Acquired	**12-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB 1892**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 1892

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05439.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: decanted: (Y/N) N Date Extracted: 6/15/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/12/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05449.D**	Sample Name	**1617701**
Operator	**Bhaskar**	Misc Info	**804**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05449.D**	Sample Name	**1617701**
Operator	**Bhaskar**	Misc Info	**804**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **804**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16177 Location: 804 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1617701

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05449.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: _____ decanted: (Y/N) N Date Extracted: 6/15/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/13/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05450.D**	Sample Name	**1617702**
Operator	**Bhaskar**	Misc Info	**Field Dupe**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05450.D**	Sample Name	**1617702**
Operator	**Bhaskar**	Misc Info	**Field Dupe**
Date Acquired	**13-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **Field Dupe**

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16177 Location: 804 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1617702

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05450.D

Level: (low/med) LOW Date Received: 6/8/01

% Moisture: decanted: (Y/N) N Date Extracted: 6/15/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/13/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05123.D DFTPP Injection Date: 3/27/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 8:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.3
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	53.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	23.7
365	Greater than 0.75% of mass 198	2.7
441	Present, but less than mass 443	10.0
442	40.0 - 110.0% of mass 198	68.7
443	15.0 - 24.0% of mass 442	13.7 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	120 PPM CAL	BNA05124.D	3/27/01	9:08
02	SSTD010	10 PPM CAL	BNA05125.D	3/27/01	9:55
03	SSTD050	50 PPM CAL	BNA05126.D	3/27/01	10:42
04	SSTD080	80 PPM CAL	BNA05127.D	3/27/01	11:28
05	SSTD020	20 PPM CAL	BNA05128.D	3/27/01	12:13

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.463	1.406	1.422	1.443	1.442	1.435	1.51
3)	T	N-nitroso-dimethylami	0.781	0.744	0.751	0.733	0.740	0.750	2.47
4)	S	2-Fluorophenol	1.158	1.132	1.141	1.133	1.124	1.137	1.13
5)	T	Aniline	1.794	1.806	1.875	1.892	1.891	1.852	2.57
6)	S	Phenol-d6	1.412	1.409	1.440	1.456	1.453	1.434	1.56
7)	TCM	Phenol	1.590	1.610	1.683	1.694	1.713	1.658	3.28
8)	T	bis(2-Chloroethyl)eth	1.192	1.165	1.186	1.231	1.228	1.201	2.37
9)	TM	2-Chlorophenol	1.154	1.146	1.172	1.191	1.186	1.170	1.66
10)	T	1,3-Dichlorobenzene	1.223	1.237	1.278	1.304	1.339	1.276	3.75
11)	TCM	1,4-Dichlorobenzene	1.235	1.256	1.305	1.344	1.379	1.304	4.59
12)	T	Benzyl alcohol	0.775	0.763	0.777	0.748	0.747	0.762	1.87
13)	T	1,2-Dichlorobenzene	1.117	1.134	1.197	1.242	1.280	1.194	5.79
14)	T	2-Methylphenol	1.051	1.047	1.081	1.098	1.107	1.077	2.50
15)	T	bis(2-chloroisopropyl	1.215	1.194	1.233	1.244	1.288	1.235	2.83
16)	T	4-Methylphenol	1.085	1.101	1.143	1.156	1.147	1.126	2.78
17)	TPM	n-Nitroso-di-n-propyl	0.187	0.192	0.195	0.195	0.188	0.191	1.93
18)	T	Hexachloroethane	0.489	0.488	0.499	0.503	0.514	0.498	2.16
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.399	0.393	0.401	0.404	0.412	0.402	1.70
21)	T	Nitrobenzene	0.389	0.391	0.400	0.411	0.424	0.403	3.62
22)	T	Isophorone	0.668	0.657	0.669	0.684	0.701	0.676	2.54
23)	TC	2-Nitrophenol	0.185	0.185	0.185	0.185	0.178	0.184	1.82
24)	T	2,4-Dimethylphenol	0.330	0.328	0.337	0.345	0.353	0.339	3.12
25)	T	bis(2-Chloroethoxy)me	0.388	0.389	0.397	0.409	0.412	0.399	2.74
26)	TC	2,4-Dichlorophenol	0.242	0.245	0.249	0.234	0.208	0.235	6.97
27)	T	Benzoic Acid	0.259	0.240	0.219	0.216	0.198	0.226	10.40
28)	TM	1,2,4-Trichlorobenzen	0.271	0.276	0.286	0.297	0.306	0.287	5.12
29)	T	Naphthalene	0.813	0.882	0.948	1.011	1.054	0.942	10.28
30)	T	4-Chloroaniline	0.357	0.377	0.388	0.389	0.384	0.379	3.44
31)	TC	Hexachlorobutadiene	0.147	0.153	0.159	0.165	0.170	0.159	6.03
32)	TCM	4-Chloro-3-methylphen	0.287	0.289	0.294	0.290	0.288	0.289	0.93
33)	T	2-Methylnaphthalene	0.554	0.579	0.614	0.644	0.666	0.612	7.47
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.255	0.261	0.251	0.214	0.167	0.230	17.16
36)	TC	2,4,6-Trichlorophenol	0.307	0.312	0.320	0.317	0.313	0.314	1.58
37)	T	2,4,5-Trichlorophenol	0.337	0.338	0.346	0.326	0.315	0.332	3.58
38)	S	2-Fluorobiphenyl	0.986	1.046	1.128	1.184	1.222	1.113	8.73
39)	T	2-Chloronaphthalene	0.884	0.917	0.965	1.011	1.029	0.961	6.37
40)	T	2-Nitroaniline	0.370	0.366	0.375	0.360	0.345	0.363	3.21
41)	T	Dimethylphthalate	1.010	1.049	1.104	1.148	1.172	1.097	6.17
42)	T	Acenaphthylene	1.345	1.438	1.568	1.680	1.734	1.553	10.46
43)	T	2,6-Dinitrotoluene	0.266	0.270	0.285	0.291	0.295	0.281	4.59
44)	T	3-Nitroaniline	0.263	0.279	0.289	0.289	0.280	0.280	3.86
45)	TCM	Acenaphthene	0.892	0.925	0.986	1.031	1.065	0.980	7.32
46)	TP	2,4-Dinitrophenol	0.186	0.177	0.164	0.124	0.096	0.149	25.46
47)	T	Dibenzofuran	1.169	1.233	1.341	1.417	1.470	1.326	9.43
48)	TMP	4-Nitrophenol	0.239	0.203	0.198	0.199	0.186	0.205	9.69
49)	TM	2,4-Dinitrotoluene	0.356	0.355	0.362	0.366	0.354	0.359	1.40
50)	T	Diethylphthalate	1.025	1.063	1.120	1.162	1.196	1.113	6.27
51)	T	Fluorene	0.998	1.040	1.117	1.173	1.206	1.107	7.92
52)	T	4-Chlorophenyl-phenyl	0.489	0.507	0.534	0.549	0.564	0.529	5.75
53)	T	4-Nitroaniline	0.296	0.288	0.291	0.283	0.292	0.290	1.74
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.143	0.142	0.139	0.129	0.114	0.133	9.09
56)	TC	n-Nitrosodiphenylamin	0.435	0.452	0.471	0.496	0.510	0.473	6.47
57)	T	Azobenzene	0.729	0.777	0.819	0.855	0.879	0.812	7.39
58)	S	2,4,6-Tribromophenol	0.090	0.090	0.091	0.090	0.089	0.090	0.84
59)	T	4-Bromophenyl-phenyle	0.172	0.175	0.182	0.190	0.194	0.182	5.12
60)	T	Hexachlorobenzene	0.184	0.188	0.193	0.202	0.212	0.196	5.74
61)	TCM	Pentachlorophenol	0.124	0.123	0.122	0.109	0.103	0.116	8.31
62)	T	Phenanthrene	0.841	0.901	0.974	1.046	1.102	0.973	10.83
63)	T	Anthracene	0.863	0.922	0.991	1.063	1.107	0.989	10.08
64)	T	Di-n-butylphthalate	0.955	1.039	1.108	1.177	1.200	1.096	9.21
65)	TC	Fluoranthene	0.895	0.950	1.019	1.096	1.136	1.019	9.80
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.361	0.366	0.394	0.424	0.434	0.396	8.29
68)	TM	Pyrene	1.050	1.100	1.153	1.229	1.263	1.159	7.59
69)	S	p-Terphenyl-d14	0.751	0.772	0.793	0.823	0.844	0.797	4.74
70)	T	Butylbenzylphthalate	0.562	0.570	0.574	0.574	0.565	0.569	0.96
71)	T	Benzo[a]anthracene	1.023	1.057	1.094	1.125	1.162	1.092	5.02
72)	T	3,3'-Dichlorobenzidin	0.334	0.346	0.353	0.368	0.366	0.354	4.06
73)	T	Chrysene	0.964	1.001	1.031	1.071	1.116	1.037	5.74
74)	T	bis(2-Ethylhexyl)phth	0.760	0.780	0.791	0.792	0.772	0.779	1.72
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.214	1.325	1.400	1.410	1.374	1.345	5.98
77)	T	Benzo[b]fluoranthene	1.045	1.067	1.130	1.144	1.184	1.114	5.12
78)	T	Benzo[k]fluoranthene	1.001	1.043	1.117	1.192	1.220	1.115	8.40
79)	TC	Benzo[a]pyrene	0.993	1.031	1.084	1.117	1.139	1.073	5.65
80)	T	Indeno[1,2,3-cd]pyren	1.131	1.093	1.092	1.069	1.043	1.086	3.01
81)	T	Dibenz[a,h]anthracene	1.065	1.095	1.119	1.128	1.111	1.104	2.24
82)	T	Benzo[g,h,i]perylene	1.073	1.079	1.100	1.107	1.120	1.096	1.77

(#) = Out of Range

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05425.D DFTPP Injection Date: 6/12/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 9:15

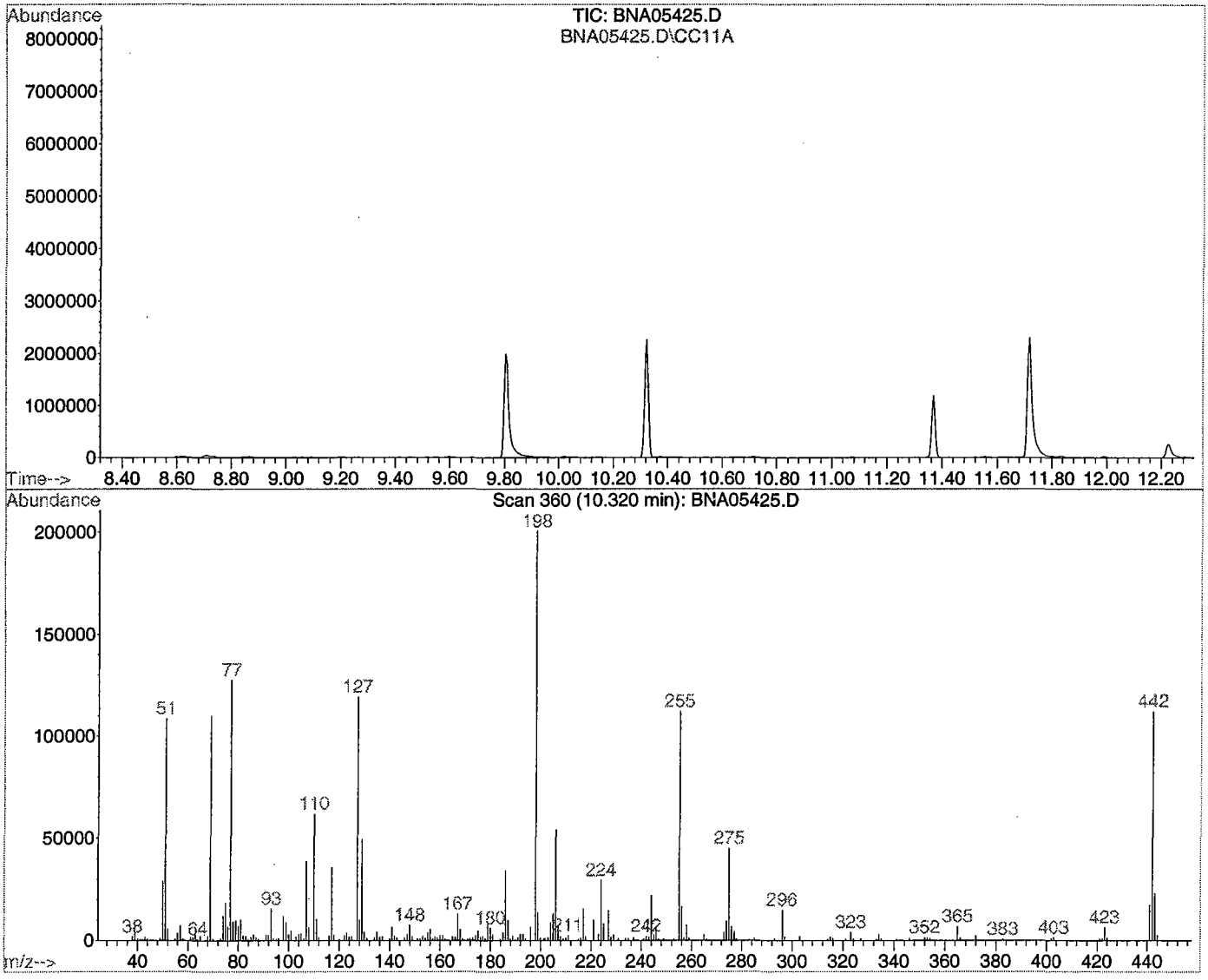
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	43.1
68	Less than 2.0% of mass 69	1.0 (2.1)1
69	Mass 69 Relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	54.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	26.7
365	Greater than 0.75% of mass 198	4.1
441	Present, but less than mass 443	12.4
442	40.0 - 110.0% of mass 198	82.2
443	15.0 - 24.0% of mass 442	15.9 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	BNA05426.D	6/12/01	9:38
02	MB 1892	MB 1892	BNA05439.D	6/12/01	19:20
03	LCS 1893	LCS 1893	BNA05440.D	6/12/01	20:03
04	FB	1617502	BNA05447.D	6/13/01	1:06
05	106	1617503	BNA05448.D	6/13/01	1:49
06	804	1617701	BNA05449.D	6/13/01	2:33
07	FIELD DUPE	1617702	BNA05450.D	6/13/01	3:16

Data File : D:\DATA\010612\BNA05425.D Vial: 99
Acq On : 12 Jun 2001 9:15 am Operator: Bhaskar
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 360

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.2	108632	PASS
68	69	0.00	2	1.9	2078	PASS
69	198	0.00	100	54.8	109896	PASS
70	69	0.00	2	0.6	696	PASS
127	198	40	60	59.5	119216	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	200512	PASS
199	198	5	9	6.8	13586	PASS
275	198	10	30	22.4	44944	PASS
365	198	1	100	3.4	6819	PASS
441	443	1	99	74.4	17176	PASS
442	198	40	100	55.9	112144	PASS
443	442	17	23	20.6	23096	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010612\BNA05426.D Vial: 100
Acq On : 12 Jun 2001 9:38 am Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	63	-0.04
2	T	Pyridine	1.435	1.227	14.5	54	-0.02
3	T	N-nitroso-dimethylamine	0.750	0.657	12.4	55	-0.02
4	S	2-Fluorophenol	1.137	1.086	4.5	60	0.05
5	T	Aniline	1.852	1.868	-0.9	62	-0.02
6	S	Phenol-d6	1.434	1.427	0.5	62	0.05
7	TCM	Phenol	1.658	1.518	8.4	57	0.05
8	T	bis(2-Chloroethyl)ether	1.201	1.139	5.2	60	-0.04
9	TM	2-Chlorophenol	1.170	1.182	-1.0	63	0.00
10	T	1,3-Dichlorobenzene	1.276	1.334	-4.5	65	-0.05
11	TCM	1,4-Dichlorobenzene	1.304	1.387	-6.4	67	-0.04
12	T	Benzyl alcohol	0.762	0.773	-1.4	62	-0.01
13	T	1,2-Dichlorobenzene	1.194	1.282	-7.4	67	-0.04
14	T	2-Methylphenol	1.077	1.126	-4.5	65	0.03
15	T	bis(2-chloroisopropyl)ether	1.235	1.084	12.2	55	-0.04
16	T	4-Methylphenol	1.126	1.173	-4.2	64	0.03
17	TPM	n-Nitroso-di-n-propylamine	0.191	0.201	-5.2	65	-0.04
18	T	Hexachloroethane	0.498	0.574	-15.3	72	-0.05
19	I	Naphthalene-d8	1.000	1.000	0.0	71	-0.04
20	S	Nitrobenzene-d5	0.402	0.395	1.7	70	-0.04
21	T	Nitrobenzene	0.403	0.383	5.0	68	-0.04
22	T	Isophorone	0.676	0.635	6.1	68	-0.04
23	TC	2-Nitrophenol	0.184	0.169	8.2	65	-0.04
24	T	2,4-Dimethylphenol	0.339	0.338	0.3	71	0.00
25	T	bis(2-Chloroethoxy)methane	0.399	0.352	11.8	63	-0.04
26	TC	2,4-Dichlorophenol	0.235	0.229	2.6	66	0.01
27	T	Benzoic Acid	0.226	0.124	45.1#	41#	0.02
28	TM	1,2,4-Trichlorobenzene	0.287	0.286	0.3	71	-0.05
29	T	Naphthalene	0.942	0.928	1.5	70	-0.05
30	T	4-Chloroaniline	0.379	0.334	11.9	61	-0.03
31	TC	Hexachlorobutadiene	0.159	0.175	-10.1	79	-0.05
32	TCM	4-Chloro-3-methylphenol	0.289	0.293	-1.4	71	0.03
33	T	2-Methylnaphthalene	0.612	0.619	-1.1	72	-0.05
34	I	Acenaphthene-d10	1.000	1.000	0.0	79	-0.05
35	TP	Hexachlorocyclopentadiene	0.230	0.269	-17.0	85	-0.05
36	TC	2,4,6-Trichlorophenol	0.314	0.301	4.1	74	-0.02
37	T	2,4,5-Trichlorophenol	0.332	0.317	4.5	72	0.03
38	S	2-Fluorobiphenyl	1.113	1.081	2.9	76	-0.05
39	T	2-Chloronaphthalene	0.961	0.899	6.5	73	-0.05
40	T	2-Nitroaniline	0.363	0.318	12.4	67	-0.02
41	T	Dimethylphthalate	1.097	1.069	2.6	76	-0.04
42	T	Acenaphthylene	1.553	1.522	2.0	77	-0.05
43	T	2,6-Dinitrotoluene	0.281	0.299	-6.4	83	-0.04
44	T	3-Nitroaniline	0.280	0.270	3.6	74	-0.02
45	TCM	Acenaphthene	0.980	0.941	4.0	75	-0.05
46	TP	2,4-Dinitrophenol	0.149	0.149	0.0	72	-0.03
47	T	Dibenzofuran	1.326	1.269	4.3	75	-0.05
48	TMP	4-Nitrophenol	0.205	0.210	-2.4	83	0.12
49	TM	2,4-Dinitrotoluene	0.359	0.338	5.8	74	-0.03
50	T	Diethylphthalate	1.113	1.138	-2.2	80	-0.05
51	T	Fluorene	1.107	1.082	2.3	76	-0.05
52	T	4-Chlorophenyl-phenylether	0.529	0.528	0.2	78	-0.05
53	T	4-Nitroaniline	0.290	0.258	11.0	70	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\DATA\010612\BNA05426.D Vial: 100
Acq On : 12 Jun 2001 9:38 am Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	90	-0.05
55	T	4,6-Dinitro-2-methylphenol	0.133	0.116	12.8	75	-0.03
56	TC	n-Nitrosodiphenylamine	0.473	0.399	15.6	76	-0.04
57	T	Azobenzene	0.812	0.687	15.4	76	-0.05
58	S	2,4,6-Tribromophenol	0.090	0.081	10.0	79	-0.04
59	T	4-Bromophenyl-phenylether	0.182	0.159	12.6	78	-0.05
60	T	Hexachlorobenzene	0.196	0.172	12.2	80	-0.05
61	TCM	Pentachlorophenol	0.116	0.095	18.1	70	-0.03
62	T	Phenanthrene	0.973	0.842	13.5	78	-0.05
63	T	Anthracene	0.989	0.854	13.7	78	-0.05
64	T	Di-n-butylphthalate	1.096	0.989	9.8	80	-0.05
65	TC	Fluoranthene	1.019	0.924	9.3	82	-0.05
66	I	Chrysene-d12	1.000	1.000	0.0	104	-0.05
67	T	Benzidine	0.396	0.336	15.2	89	-0.03
68	TM	Pyrene	1.159	0.902	22.2	82	-0.05
69	S	p-Terphenyl-d14	0.797	0.654	17.9	86	-0.05
70	T	Butylbenzylphthalate	0.569	0.460	19.2	83	-0.05
71	T	Benzo[a]anthracene	1.092	0.904	17.2	86	-0.05
72	T	3,3'-Dichlorobenzidine	0.354	0.370	-4.5	109	-0.04
73	T	Chrysene	1.037	0.855	17.6	86	-0.05
74	T	bis(2-Ethylhexyl)phthalate	0.779	0.643	17.5	85	-0.06
75	I	Perylene-d12	1.000	1.000	0.0	96	-0.05
76	TC	Di-n-octylphthalate	1.345	1.249	7.1	86	-0.06
77	T	Benzo[b]fluoranthene	1.114	0.999	10.3	85	-0.05
78	T	Benzo[k]fluoranthene	1.115	1.012	9.2	87	-0.05
79	TC	Benzo[a]pyrene	1.073	0.961	10.4	85	-0.05
80	T	Indeno[1,2,3-cd]pyrene	1.086	0.932	14.2	82	-0.08
81	T	Dibenz[a,h]anthracene	1.104	0.962	12.9	83	-0.08
82	T	Benzo[g,h,i]perylene	1.096	0.895	18.3	78	-0.08

4B

Field Id: **MB 1892**

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID: BNA05439.D Lab Sample ID: MB 1892

Instrument ID: GC/MS Ins Date Extracted: 6/15/01

Matrix: (soil/water) WATER Date Analyzed: 6/12/01

Level: (low/med) LOW Time Analyzed: 19:20

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1893	LCS 1893	BNA05440.D	6/12/01
02	FB	1617502	BNA05447.D	6/13/01
03	106	1617503	BNA05448.D	6/13/01
04	804	1617701	BNA05449.D	6/13/01
05	FIELD DUPE	1617702	BNA05450.D	6/13/01

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.: _____

	Field Id:	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	MB 1892	53	60	59	0
02	LCS 1893	63	71	69	0
03	FB	89	104	121	0
04	106	61	103	80	0
05	804	53	66	39	0
06	FIELD DUPE	54	66	43	0

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(35-114)
S2	2FP	=	2-Fluorobiphenyl	(43-116)
S3	TPL	=	p-Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05440.D** Sample Name **LCS 1893**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		4.71 ug/L	23.56
62-75-9	N-nitroso-dimethylamine		6.53 ug/L	32.64
62-53-3	Aniline		9.45 ug/L	47.26
111-44-4	bis(2-Chloroethyl)ether		10.73 ug/L	53.66
541-73-1	1,3-Dichlorobenzene		12.35 ug/L	61.73
106-46-7	1,4-Dichlorobenzene		12.41 ug/L	62.06
100-51-6	Benzyl alcohol		9.22 ug/L	46.10
95-50-1	1,2-Dichlorobenzene		12.67 ug/L	63.33
39638-32-9	bis(2-chloroisopropyl)ether		15.16 ug/L	75.82
621-64-7	n-Nitroso-di-n-propylamine		13.04 ug/L	65.18
67-72-1	Hexachloroethane		12.92 ug/L	64.61
98-95-3	Nitrobenzene		11.85 ug/L	59.27
78-59-1	Isophorone		13.00 ug/L	65.00
111-91-1	bis(2-Chloroethoxy)methane		10.64 ug/L	53.21
120-82-1	1,2,4-Trichlorobenzene		12.10 ug/L	60.49
91-20-3	Naphthalene		12.05 ug/L	60.27
106-47-8	4-Chloroaniline		10.63 ug/L	53.16
87-68-3	Hexachlorobutadiene		13.26 ug/L	66.31
91-57-6	2-Methylnaphthalene		13.01 ug/L	65.03
77-47-4	Hexachlorocyclopentadiene		9.91 ug/L	49.56
91-58-7	2-Chloronaphthalene		13.61 ug/L	68.06
88-74-4	2-Nitroaniline		12.48 ug/L	62.42
131-11-3	Dimethylphthalate		15.14 ug/L	75.70
208-96-8	Acenaphthylene		13.80 ug/L	69.01
606-20-2	2,6-Dinitrotoluene		15.53 ug/L	77.66
99-09-2	3-Nitroaniline		11.48 ug/L	57.42
83-32-9	Acenaphthene		14.26 ug/L	71.28
132-64-9	Dibenzofuran		14.73 ug/L	73.66
121-14-2	2,4-Dinitrotoluene		14.32 ug/L	71.59
84-66-2	Diethylphthalate		16.07 ug/L	80.34
86-73-7	Fluorene		14.78 ug/L	73.91
7005-72-3	4-Chlorophenyl-phenylether		15.09 ug/L	75.45
100-01-6	4-Nitroaniline		11.26 ug/L	56.30
86-30-6	n-Nitrosodiphenylamine		13.43 ug/L	67.14
103-33-3	Azobenzene		13.37 ug/L	66.87
101-55-3	4-Bromophenyl-phenylether		13.29 ug/L	66.45
118-74-1	Hexachlorobenzene		13.45 ug/L	67.26
85-01-8	Phenanthrene		13.82 ug/L	69.10
120-12-7	Anthracene		13.52 ug/L	67.61
84-74-2	Di-n-butylphthalate		14.50 ug/L	72.52
206-44-0	Fluoranthene		14.08 ug/L	70.38
129-00-0	Pyrene		13.25 ug/L	66.23
85-68-7	Butylbenzylphthalate		13.30 ug/L	66.48
56-55-3	Benzo[a]anthracene		13.61 ug/L	68.04
218-01-9	Chrysene		11.89 ug/L	59.43
117-81-7	bis(2-Ethylhexyl)phthalate		13.14 ug/L	65.69
117-84-0	Di-n-octylphthalate		16.26 ug/L	81.31
205-99-2	Benzo[b]fluoranthene		16.09 ug/L	80.45
207-08-9	Benzo[k]fluoranthene		16.40 ug/L	82.00
50-32-8	Benzo[a]pyrene		15.57 ug/L	77.84
193-39-5	Indeno[1,2,3-cd]pyrene		14.33 ug/L	71.65
53-70-3	Dibenz[a,h]anthracene		14.84 ug/L	74.20
191-24-2	Benzo[g,h,i]perylene		14.71 ug/L	73.54

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05421.D** Sample Name **1615108 MS**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		5.36 ug/L	26.79
62-75-9	N-nitroso-dimethylamine		6.88 ug/L	34.40
62-53-3	Aniline		10.36 ug/L	51.78
111-44-4	bis(2-Chloroethyl)ether		10.61 ug/L	53.06
541-73-1	1,3-Dichlorobenzene		11.85 ug/L	59.25
106-46-7	1,4-Dichlorobenzene		11.93 ug/L	59.67
100-51-6	Benzyl alcohol		9.00 ug/L	45.00
95-50-1	1,2-Dichlorobenzene		12.33 ug/L	61.66
39638-32-9	bis(2-chloroisopropyl)ether		14.89 ug/L	74.45
621-64-7	n-Nitroso-di-n-propylamine		12.90 ug/L	64.52
67-72-1	Hexachloroethane		12.14 ug/L	60.68
98-95-3	Nitrobenzene		12.09 ug/L	60.47
78-59-1	Isophorone		13.01 ug/L	65.04
111-91-1	bis(2-Chloroethoxy)methane		10.68 ug/L	53.38
120-82-1	1,2,4-Trichlorobenzene		11.74 ug/L	58.69
91-20-3	Naphthalene		11.91 ug/L	59.57
106-47-8	4-Chloroaniline		11.04 ug/L	55.20
87-68-3	Hexachlorobutadiene		12.65 ug/L	63.27
91-57-6	2-Methylnaphthalene		13.33 ug/L	66.63
77-47-4	Hexachlorocyclopentadiene		8.51 ug/L	42.54
91-58-7	2-Chloronaphthalene		13.52 ug/L	67.58
88-74-4	2-Nitroaniline		11.01 ug/L	55.05
131-11-3	Dimethylphthalate		15.66 ug/L	78.31
208-96-8	Acenaphthylene		13.99 ug/L	69.93
606-20-2	2,6-Dinitrotoluene		15.97 ug/L	79.85
99-09-2	3-Nitroaniline		13.14 ug/L	65.71
83-32-9	Acenaphthene		14.18 ug/L	70.91
132-64-9	Dibenzofuran		15.04 ug/L	75.21
121-14-2	2,4-Dinitrotoluene		14.99 ug/L	74.93
84-66-2	Diethylphthalate		16.94 ug/L	84.68
86-73-7	Fluorene		15.41 ug/L	77.06
7005-72-3	4-Chlorophenyl-phenylether		15.23 ug/L	76.16
100-01-6	4-Nitroaniline		12.19 ug/L	60.95
86-30-6	n-Nitrosodiphenylamine		14.11 ug/L	70.56
103-33-3	Azobenzene		13.68 ug/L	68.38
101-55-3	4-Bromophenyl-phenylether		14.01 ug/L	70.04
118-74-1	Hexachlorobenzene		14.41 ug/L	72.06
85-01-8	Phenanthrene		14.57 ug/L	72.83
120-12-7	Anthracene		14.21 ug/L	71.05
84-74-2	Di-n-butylphthalate		15.31 ug/L	76.57
206-44-0	Fluoranthene		14.86 ug/L	74.32
129-00-0	Pyrene		13.57 ug/L	67.85
85-68-7	Butylbenzylphthalate		13.62 ug/L	68.10
56-55-3	Benzo[a]anthracene		14.15 ug/L	70.77
218-01-9	Chrysene		12.45 ug/L	62.27
117-81-7	bis(2-Ethylhexyl)phthalate		13.88 ug/L	69.42
117-84-0	Di-n-octylphthalate		17.05 ug/L	85.26
205-99-2	Benzo[b]fluoranthene		16.99 ug/L	84.96
207-08-9	Benzo[k]fluoranthene		17.75 ug/L	88.76
50-32-8	Benzo[a]pyrene		16.55 ug/L	82.76
193-39-5	Indeno[1,2,3-cd]pyrene		15.73 ug/L	78.67
53-70-3	Dibenz[a,h]anthracene		15.69 ug/L	78.47
191-24-2	Benzo[g,h,i]perylene		16.06 ug/L	80.32

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05422.D** Sample Name **1615108 MSD**

Date Acquired **12-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		3.06 ug/L	15.31
62-75-9	N-nitroso-dimethylamine		7.78 ug/L	38.88
62-53-3	Aniline		8.84 ug/L	44.20
111-44-4	bis(2-Chloroethyl)ether		11.93 ug/L	59.65
541-73-1	1,3-Dichlorobenzene		13.23 ug/L	66.17
106-46-7	1,4-Dichlorobenzene		13.48 ug/L	67.42
100-51-6	Benzyl alcohol		10.08 ug/L	50.40
95-50-1	1,2-Dichlorobenzene		14.14 ug/L	70.69
39638-32-9	bis(2-chloroisopropyl)ether		16.50 ug/L	82.48
621-64-7	n-Nitroso-di-n-propylamine		14.56 ug/L	72.79
67-72-1	Hexachloroethane		13.73 ug/L	68.66
98-95-3	Nitrobenzene		12.86 ug/L	64.29
78-59-1	Isophorone		14.46 ug/L	72.32
111-91-1	bis(2-Chloroethoxy)methane		12.10 ug/L	60.50
120-82-1	1,2,4-Trichlorobenzene		13.08 ug/L	65.40
91-20-3	Naphthalene		13.44 ug/L	67.20
106-47-8	4-Chloroaniline		9.89 ug/L	49.47
87-68-3	Hexachlorobutadiene		14.39 ug/L	71.94
91-57-6	2-Methylnaphthalene		14.70 ug/L	73.52
77-47-4	Hexachlorocyclopentadiene		11.74 ug/L	58.68
91-58-7	2-Chloronaphthalene		15.00 ug/L	75.02
88-74-4	2-Nitroaniline		13.94 ug/L	69.70
131-11-3	Dimethylphthalate		16.74 ug/L	83.69
208-96-8	Acenaphthylene		15.29 ug/L	76.47
606-20-2	2,6-Dinitrotoluene		17.14 ug/L	85.70
99-09-2	3-Nitroaniline		12.95 ug/L	64.75
83-32-9	Acenaphthene		15.51 ug/L	77.55
132-64-9	Dibenzofuran		16.24 ug/L	81.21
121-14-2	2,4-Dinitrotoluene		15.57 ug/L	77.83
84-66-2	Diethylphthalate		17.50 ug/L	87.49
86-73-7	Fluorene		16.38 ug/L	81.92
7005-72-3	4-Chlorophenyl-phenylether		16.38 ug/L	81.90
100-01-6	4-Nitroaniline		12.05 ug/L	60.25
86-30-6	n-Nitrosodiphenylamine		14.99 ug/L	74.94
103-33-3	Azobenzene		14.69 ug/L	73.46
101-55-3	4-Bromophenyl-phenylether		15.00 ug/L	75.01
118-74-1	Hexachlorobenzene		14.95 ug/L	74.75
85-01-8	Phenanthrene		15.20 ug/L	75.98
120-12-7	Anthracene		14.75 ug/L	73.75
84-74-2	Di-n-butylphthalate		15.99 ug/L	79.94
206-44-0	Fluoranthene		15.32 ug/L	76.58
129-00-0	Pyrene		14.37 ug/L	71.84
85-68-7	Butylbenzylphthalate		14.45 ug/L	72.23
56-55-3	Benzo[a]anthracene		14.91 ug/L	74.55
218-01-9	Chrysene		13.21 ug/L	66.07
117-81-7	bis(2-Ethylhexyl)phthalate		14.58 ug/L	72.92
117-84-0	Di-n-octylphthalate		17.72 ug/L	88.62
205-99-2	Benzo[b]fluoranthene		17.76 ug/L	88.79
207-08-9	Benzo[k]fluoranthene		17.93 ug/L	89.66
50-32-8	Benzo[a]pyrene		17.18 ug/L	85.92
193-39-5	Indeno[1,2,3-cd]pyrene		16.54 ug/L	82.70
53-70-3	Dibenz[a,h]anthracene		16.52 ug/L	82.60
191-24-2	Benzo[g,h,i]perylene		16.46 ug/L	82.28

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID (Standard): BNA05426.D Date Analyzed: 6/12/01

Instrument ID: GC_BNA_2 Time Analyzed: 9:38

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	602693	10.08	2407192	13.01	1561204	17.24
	UPPER LIMIT	1205386	10.58	4814384	13.51	3122408	17.74
	LOWER LIMIT	301347	9.58	1203596	12.51	780602	16.74
	Field Id:						
01	MB 1892	509471	10.08	1986354	13.01	1132004	17.23
02	LCS 1893	526889	10.08	2051839	13.01	1161068	17.23
03	FB	324776	10.08	1280999	13.00	719072*	17.23
04	106	576285	10.08	2260589	13.00	871075	17.23
05	804	577743	10.08	2292681	13.01	1307751	17.23
06	FIELD DUPE	573238	10.08	2285663	13.00	1294734	17.23
07	FB	321959	10.08	1235742	13.00	715388*	17.23

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = Perylene-d12

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 010001 Case No.: 16175 Location: 106 SDG No.:

Lab File ID (Standard): BNA05426.D Date Analyzed: 06/12/01

Instrument ID: GC_BNA_2 Time Analyzed: 09:38

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2944443	20.83	3021758	27.29	2613074	30.51
	UPPER LIMIT	5888886	20.33	6043516	26.79	5226148	30.01
	LOWER LIMIT	1472222	21.33	1510879	27.79	1306537	31.01
	EPA SAMPLE NO.						
01	MB 1892	2105806	20.83	2084350	27.28	1584440	30.51
02	LCS 1893	2175953	20.83	2134466	27.28	1598915	30.51
03	FB	1318744*	20.82	1240702*	27.27	927838*	30.50
04	106	2181593	20.82	1760462	27.27	318564*	30.49
05	804	2406232	20.82	2370602	27.27	1766100	30.50
06	FIELD DUPE	2394107	20.82	2385039	27.27	1767444	30.50
07	FB	1334688*	20.82	1327761*	27.27	988829*	30.49

IS1 DCB = 1,4-Dichlorobenzene-d4
IS2 NAP = Naphthalene-d8
IS3 ANE = Acenaphthene-d10
IS4 PNE = Phenanthrene-d10
IS5 CYS = Chrysene-d12
IS6 PRL = Perylene-d12

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010612\BNA05439.D Vial: 13
Acq On : 12 Jun 2001 7:20 pm Operator: Bhaskar
Sample : MB 1892 Inst : GC/MS Ins
Misc : 12June2001 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 12 19:55 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.08	152	509471	40.00	ug/L	-0.04
19) Naphthalene-d8	13.01	136	1986354	40.00	ug/L	-0.04
34) Acenaphthene-d10	17.23	164	1132004	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.83	188	2105806	40.00	ug/L	-0.05
66) Chrysene-d12	27.28	240	2084350	40.00	ug/L	-0.06
75) Perylene-d12	30.51	264	1584440	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.42	112	576735	39.81	ug/L	0.06
Spiked Amount 100.000	Range 21 - 100		Recovery = 39.81%			
6) Phenol-d6	9.52	99	391758	21.45	ug/L	0.09
Spiked Amount 100.000	Range 10 - 94		Recovery = 21.45%			
20) Nitrobenzene-d5	11.41	82	529453	26.54	ug/L	-0.02
Spiked Amount 50.000	Range 35 - 114		Recovery = 53.08%			
38) 2-Fluorobiphenyl	15.64	172	950654	30.18	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery = 60.36%			
58) 2,4,6-Tribromophenol	19.19	330	287783	60.63	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 60.63%			
69) p-Terphenyl-d14	24.77	244	1219483	29.38	ug/L	-0.05
Spiked Amount 50.000	Range 33 - 141		Recovery = 58.76%			

Target Compounds Qvalue

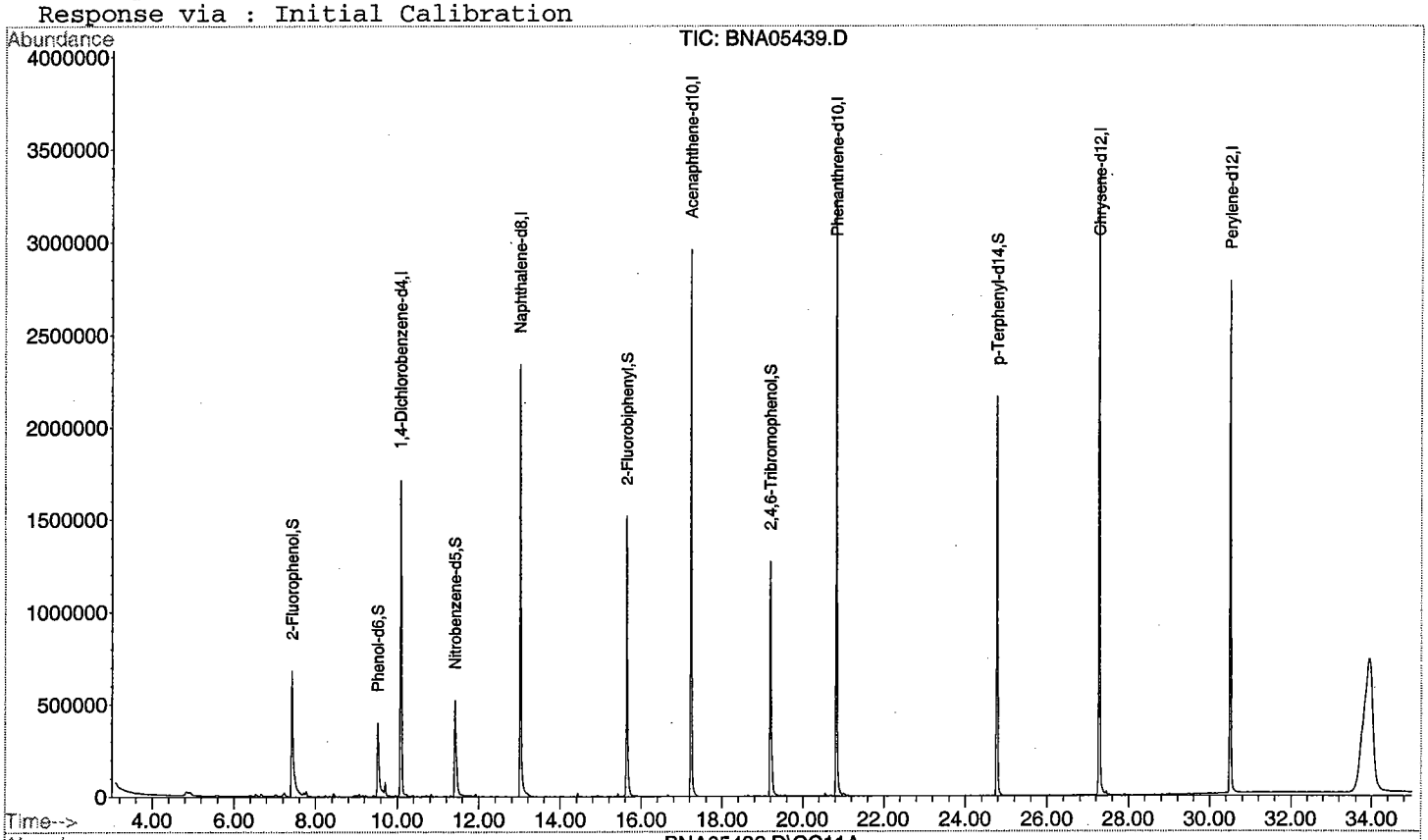
(#) = qualifier out of range (m) = manual integration

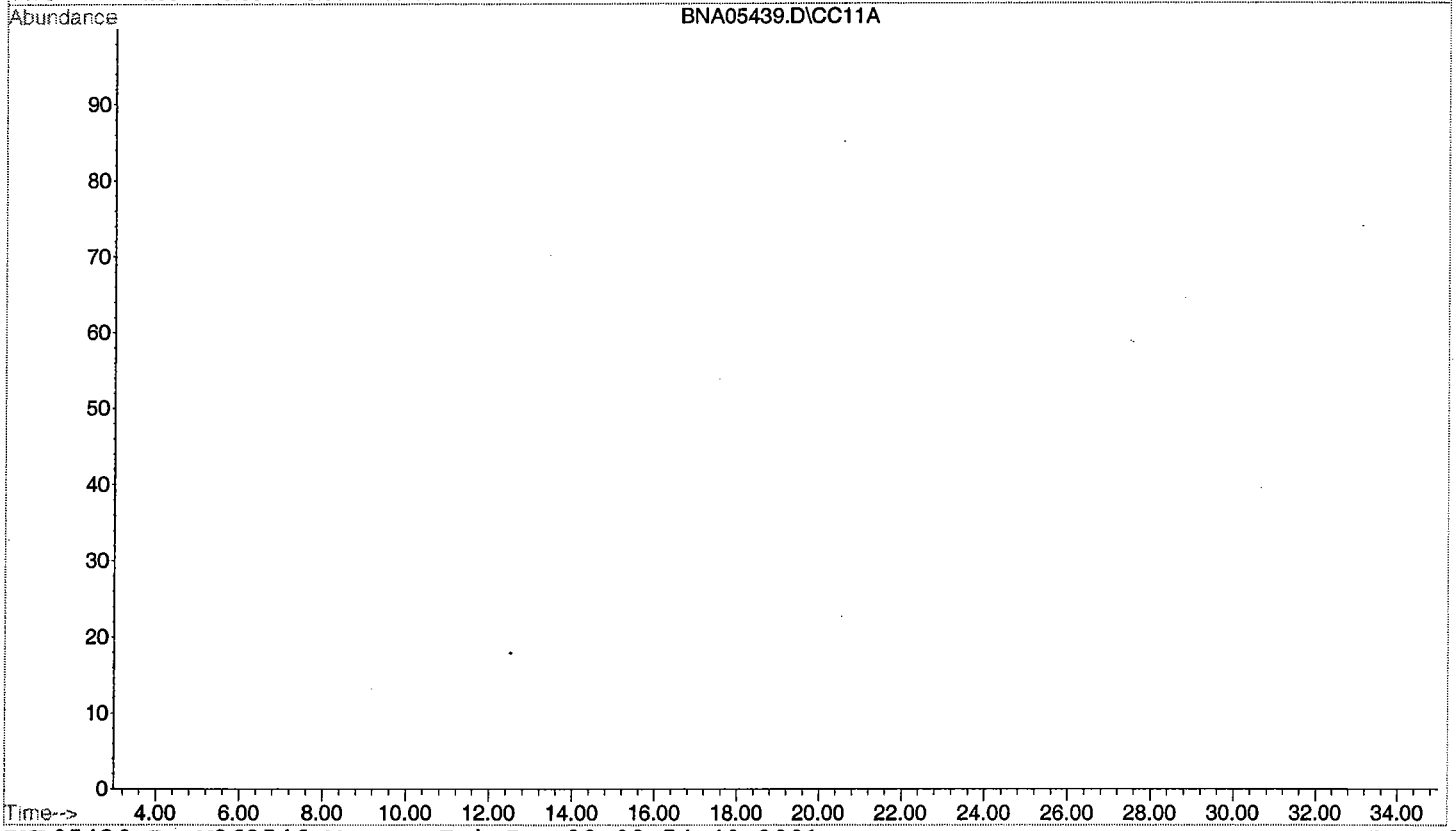
Quantitation Report

Data File : D:\DATA\010612\BNA05439.D
Acq On : 12 Jun 2001 7:20 pm
Sample : MB 1892
Misc : 12June2001
MS Integration Params: RTEINT.P
Quant Time: Jun 12 19:55 2001

Vial: 13
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000060

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010612\BNA05449.D Vial: 23
Acq On : 13 Jun 2001 2:33 am Operator: Bhaskar
Sample : 1617701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 3:08 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.08	152	577743	40.00	ug/L	-0.04
19) Naphthalene-d8	13.01	136	2292681	40.00	ug/L	-0.05
34) Acenaphthene-d10	17.23	164	1307751	40.00	ug/L	-0.05
54) Phenanthrene-d10	20.82	188	2406232	40.00	ug/L	-0.05
66) Chrysene-d12	27.27	240	2370602	40.00	ug/L	-0.06
75) Perylene-d12	30.50	264	1766100	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.41	82	610250	26.50	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery =	53.00%		
38) 2-Fluorobiphenyl	15.64	172	1194560	32.83	ug/L	-0.05
Spiked Amount 50.000	Range 43 - 116		Recovery =	65.66%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.77	244	925148	19.59	ug/L	-0.06
Spiked Amount 50.000	Range 33 - 141		Recovery =	39.18%		

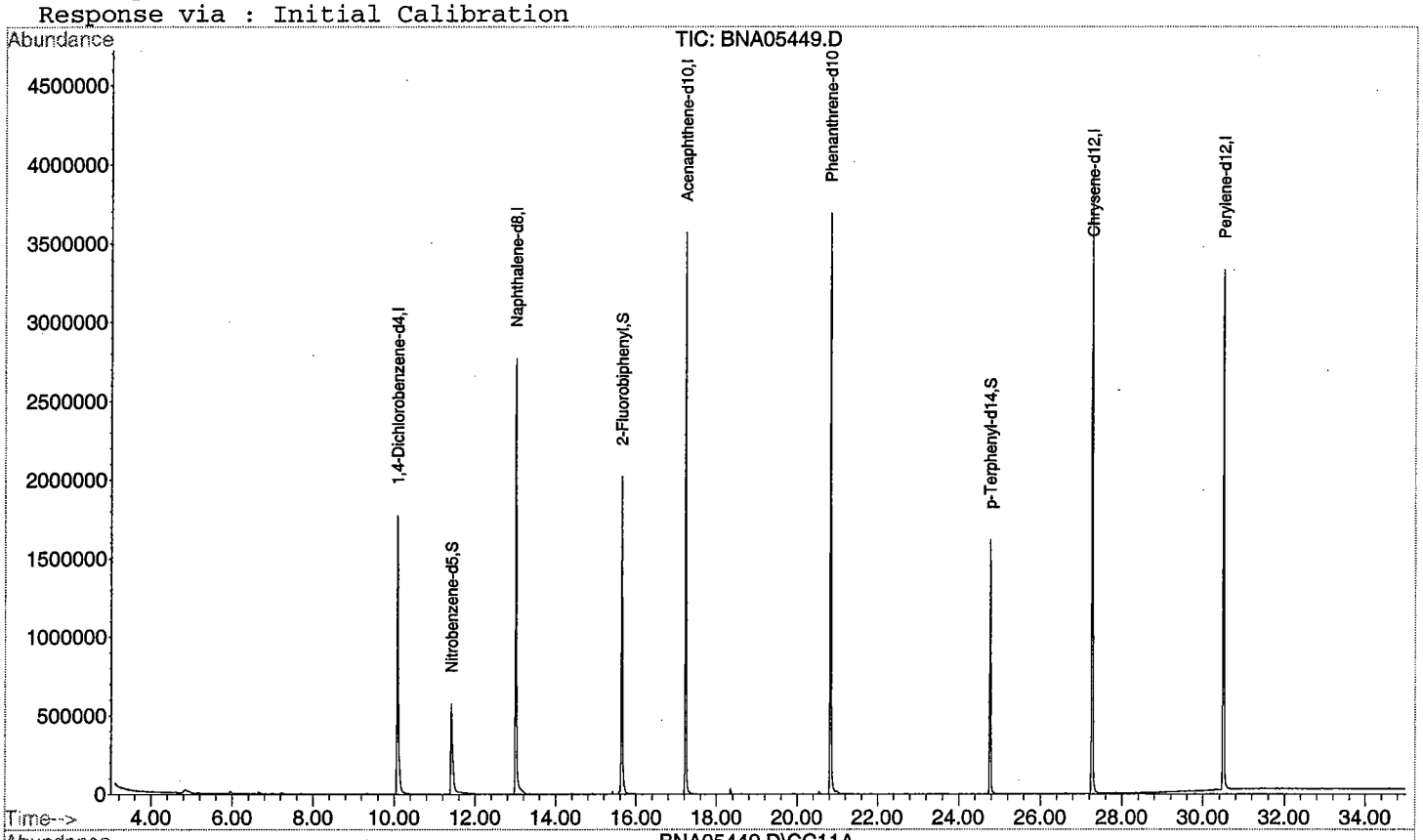
Target Compounds Qvalue

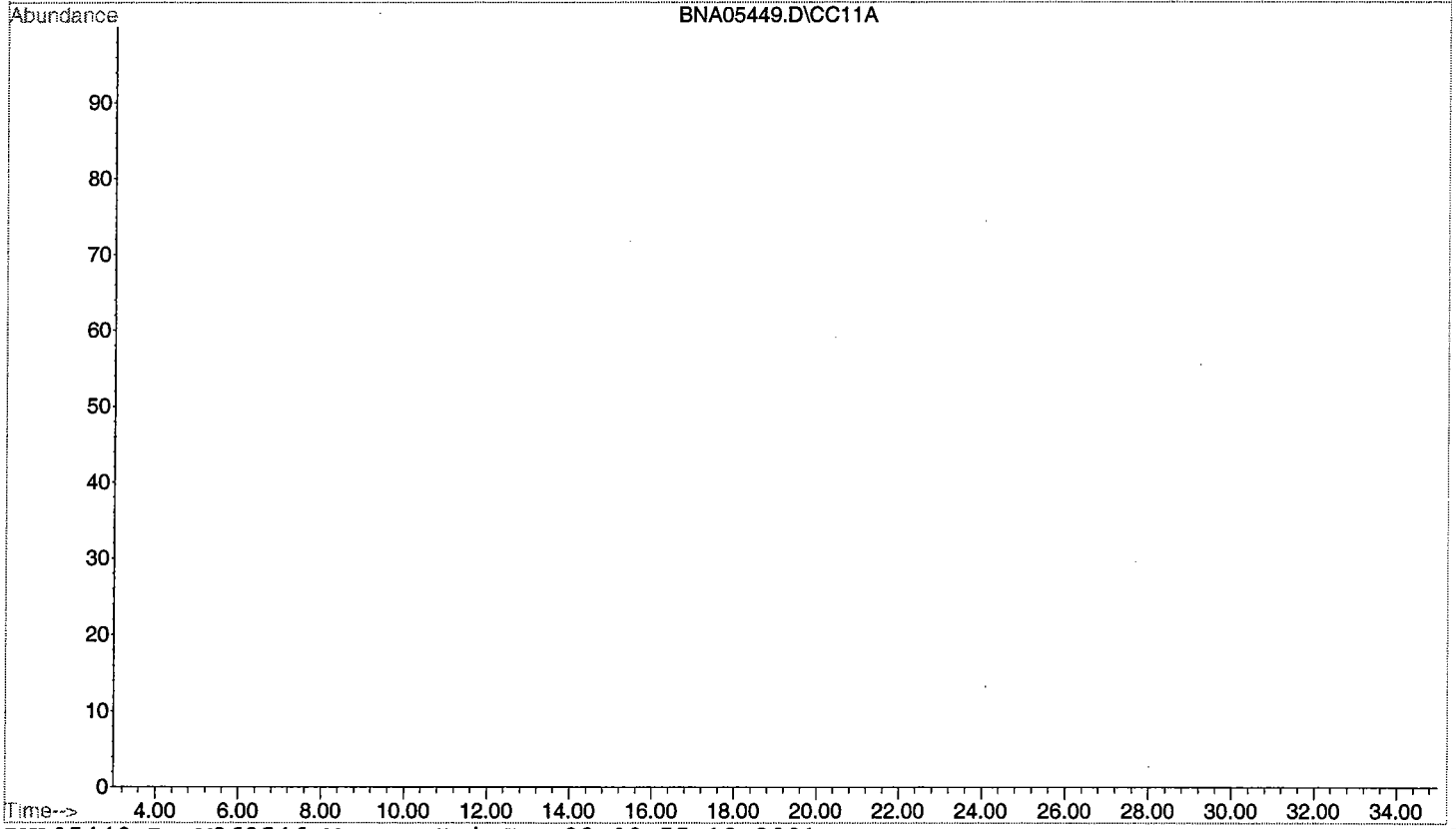
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\010612\BNA05449.D Vial: 23
Acq On : 13 Jun 2001 2:33 am Operator: Bhaskar
Sample : 1617701 Inst : GC/MS Ins
Misc : 804 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 3:08 2001 Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000062

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010612\BNA05450.D Vial: 24
Acq On : 13 Jun 2001 3:16 am Operator: Bhaskar
Sample : 1617702 Inst : GC/MS Ins
Misc : Field Dupe Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 3:51 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

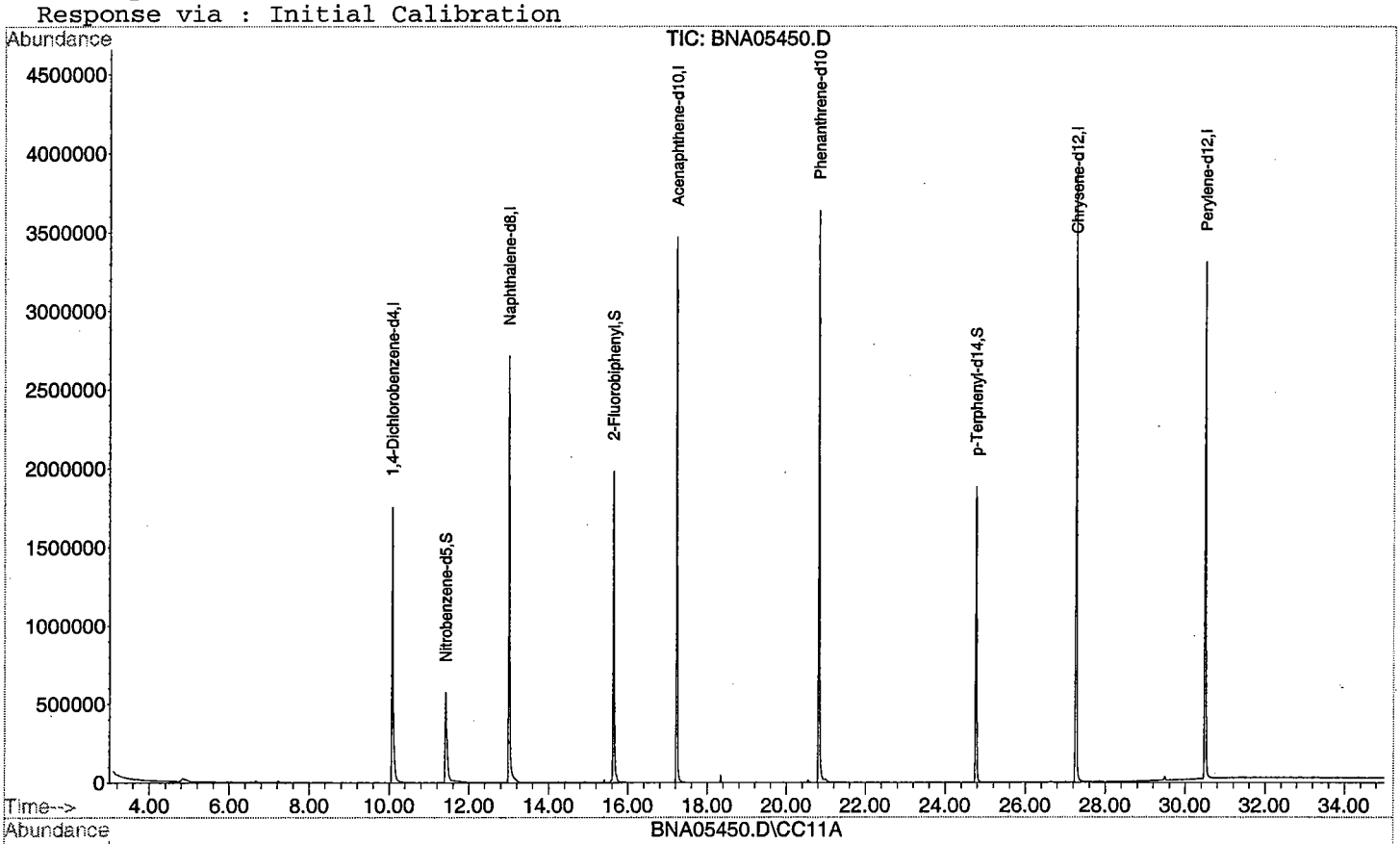
Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4			10.08	152	573238	40.00	ug/L	-0.04
19) Naphthalene-d8			13.00	136	2285663	40.00	ug/L	-0.05
34) Acenaphthene-d10			17.23	164	1294734	40.00	ug/L	-0.05
54) Phenanthrene-d10			20.82	188	2394107	40.00	ug/L	-0.06
66) Chrysene-d12			27.27	240	2385039	40.00	ug/L	-0.07
75) Perylene-d12			30.50	264	1767444	40.00	ug/L	-0.06
System Monitoring Compounds								
4) 2-Fluorophenol			0.00	112	0	0.00	ug/L	
Spiked Amount	100.000	Range 21 - 100			Recovery =	0.00%#		
6) Phenol-d6			0.00	99	0	0.00	ug/L	
Spiked Amount	100.000	Range 10 - 94			Recovery =	0.00%#		
20) Nitrobenzene-d5			11.41	82	615232	26.80	ug/L	-0.03
Spiked Amount	50.000	Range 35 - 114			Recovery =	53.60%		
38) 2-Fluorobiphenyl			15.64	172	1179879	32.75	ug/L	-0.05
Spiked Amount	50.000	Range 43 - 116			Recovery =	65.50%		
58) 2,4,6-Tribromophenol			0.00	330	0	0.00	ug/L	
Spiked Amount	100.000	Range 10 - 123			Recovery =	0.00%#		
69) p-Terphenyl-d14			24.77	244	1022599	21.53	ug/L	-0.06
Spiked Amount	50.000	Range 33 - 141			Recovery =	43.06%		
Target Compounds								Qvalue

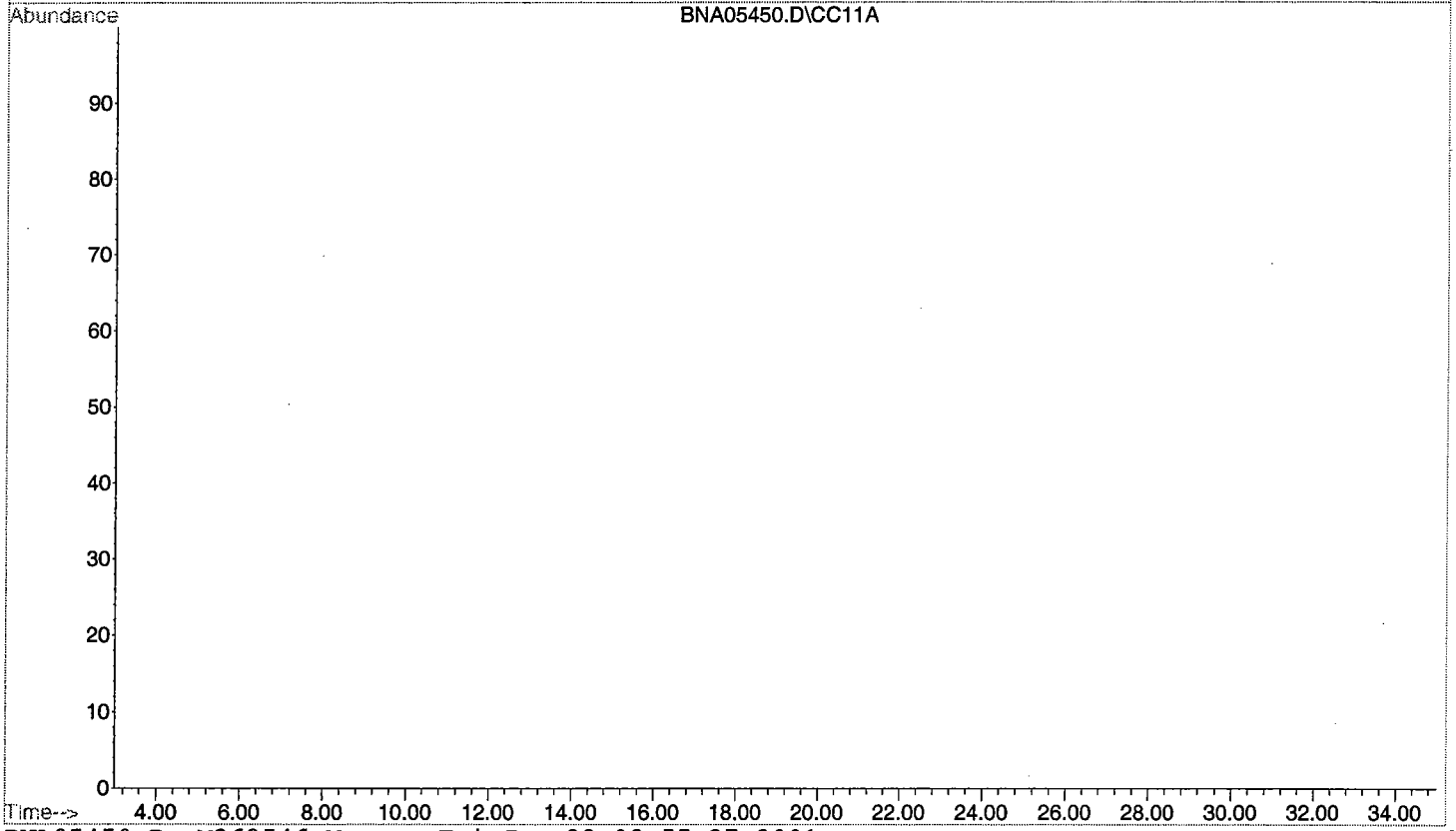
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\010612\BNA05450.D Vial: 24
Acq On : 13 Jun 2001 3:16 am Operator: Bhaskar
Sample : 1617702 Inst : GC/MS Ins
Misc : Field Dupe Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 13 3:51 2001 Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





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LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package <u>and</u> in the main body of the report.

1. Cover page, Title Page listing Lab Certification #, facility name and address, & date of report submitted ✓
2. Table of Contents submitted ✓
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted ✓
4. Document paginated and legible ✓
5. Chain of Custody submitted ✓
6. Samples submitted to lab within 48 hours of sample collection ✓
7. Methodology Summary submitted —
8. Laboratory Chronicle and Holding Time Check submitted ✓
9. Results submitted on a dry weight basis NA
10. Method Detection Limits submitted ✓
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP ✓

Laboratory Manager or Environmental Consultant's Signature _____

Date 7/5/01

Laboratory Certification #13461

*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Daniel K. Wright
Laboratory Manager

APPENDIX G

PHOTOGRAPHS

APPENDIX NOT AVAILABLE

AS OF THE DATE OF THIS REPORT