

THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 660

SEVERN
TRENT
SERVICES

STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238-1330

Tel: 412 820 8380
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www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. UXB 7512-060

Dunn Field, Def Depot Memphis

Lot #: C0F020191

Frank Johnson

UXB International

SEVERN TRENT LABORATORIES, INC.



Dave Dunlap
Project Manager

June 30, 2000

CASE NARRATIVE
UXB International Inc.
Dunn Field

LOT # C0F020191

Sample Receiving:

Two coolers containing samples were received on June 2, 2000. Both cooler temperatures were outside of the acceptable range. Two voice mails were left for Randy Reed about the cooler temperatures.

Volatiles:

Vinyl chloride was above the control limits on the matrix spike duplicate. The relative percent difference between the matrix spike and the matrix spike duplicate for this compound was within the limits. The laboratory control sample had all compounds within the limits.

Semivolatiles:

There were no problems associated with the analyses.

Pesticides:

There were no problems associated with the analyses.

Herbicides:

There were no problems associated with the analyses.

Metals:

There were no problems associated with the analyses.

TCLP Metals:

There were no problems associated with the analyses.

General Chemistry:

The reactive cyanide and reactive sulfide analyses were completed at the STL North Canton, OH laboratory.

METHODS SUMMARY

660 3

COF020191

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Chlorinated Herbicides by GC	SW846 8151A	SW846 1311/8150
Ignitability	SW846 SECTION 7	SW846 SECTION 7
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 1311/3010
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 1311/7470
Organochlorine Pesticides	SW846 8081A	SW846 1311/3510
Reactive Cyanide	SW846 7.3.3	SW846 7.3.3
Reactive Sulfide	SW846 7.3.4	SW846 7.3.4
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 1311/3520
Soil and Waste pH	SW846 9045C	SW846 9045C
Total Residue as Percent Solids	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Volatile Organics by GC/MS	SW846 8260B	SW846 1311/5030

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C0F020191

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
DE44M	001	DF/S1/0153/SDC/006	06/01/00	08:40
DE44Q	002	DF/S1/0153/SDC/007	06/01/00	09:00

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Chain of Custody Record

Quanterra, Inc. - Pittsburgh PA Lab
450 William Pitt Way
Pittsburgh PA 15238



Project Manager **FRANK JOHNSON** Chain Of Custody Number **67225**

Telephone Number (Area Code)/Fax Number **(901) 545-4999**

State **TX** Zip Code **75381** Lab Number _____ Page _____ of _____

City **Memphis** Project Name **Dunn Field**

Carrier/Waybill Number _____

Project Name		State	Zip Code	Site Contact	Carrier/Waybill Number		Analysis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Client: UXB Int'l. Inc. Project: _____ Quote: _____Cooler Rec'd & Opened for Temp. Check on: 6-02-00Coolers Opened and Unpacked on: 6-02-00 By: Amber A. Hall
(Signature)STL Pittsburgh Lot Number: COF020/19/.

	Yes	No
1. Were custody seals on the outside of the cooler? _____	<u>X</u>	_____
If YES, how many and where? Quantity <u>2</u> Location <u>Front & Side</u>		
Were signatures and date correct? _____	<u>X</u>	_____
2. Were custody papers included inside the cooler? _____	<u>X</u>	_____
3. Were custody papers properly filled out (ink, signed, match labels)? _____	_____	_____
4. Did you sign the custody papers in the appropriate place? _____	<u>X</u>	_____
5. Was shippers packing slip attached to this form? _____	_____	_____
6. Were packing materials used? _____	<u>X</u>	_____
If YES, what type? <u>ice bags</u>		
7. Were the samples chilled? (Record temperatures on reverse side.) <u>Variance</u>	<u>X</u>	_____
8. Were the samples appropriately preserved? _____	<u>X</u>	_____
9. Were all bottles sealed in separate plastic bags? _____	<u>X</u>	_____
10. Did all bottles arrive in good condition (unbroken)? _____	<u>X</u>	_____
11. Were all bottle labels complete (sample ID, preservatives, etc.)? _____	<u>X</u>	_____
12. Did all bottle labels and/or tags agree with custody papers? _____	<u>X</u>	_____
13. Were correct bottles used for tests indicated? _____	<u>X</u>	_____
14. Were all VOA vials checked for the presence of air bubbles? _____	<u>X</u>	<u>X</u>
15. Was a sufficient amount of sample sent in each bottle? _____	<u>X</u>	_____
16. Samples received by: <u>FEDEX</u> UPS CLIENT DROP-OFF OTHER AIRBORNE		

Explain any discrepancies: _____

Level 2 Review _____
Was contacted on _____ by _____ to resolve discrepancies.

(1) "NUT" could include sample bottles for ammonia, chemical oxygen demand, nitrate/nitrite, TKN, or total phosphorus

[illegible][illegible]

* Please use an asterisk if bottle lot number was covered by the label.

FedEx Tracking Number **821277367369**

1 From **6/1/00** Date **6/1/00**

Sender's Name **Jim Woken** Phone **901745-4999**

Company **Wicks Int'l. Inc.**

Address **641 ELD Poplar Ave**

City **Memphis, TN** State **38119** ZIP **38119**

2 Your Internet Billing Reference

3 To Recipient's Name **Kathy Vicnic** Phone **412830-2091**

Company **Severn Trent**

Address **450 William Pitt Way**

City **Pittsburgh, PA** State **15238** ZIP **15238**



4a Express Package Service

☒ FedEx Priority Overnight ☐ FedEx Standard Overnight ☐ FedEx First Overnight

☐ FedEx 2Day ☐ FedEx Express Saver ☐ FedEx 30Day Freight

4b Express Freight Service

☒ FedEx 1Day Freight ☐ FedEx 2Day Freight ☐ FedEx 30Day Freight

5 Packaging

☒ FedEx Unit ☐ FedEx Pak ☐ Other Pkg

6 Special Handling

☐ Sunday Delivery ☐ Hold Weekend ☐ Hold Saturday at FedEx Location

7 Payment Bill to:

☒ Sender ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

8 Release Signature

Total Packages **2** Total Weight **20** Total Declared Value **\$00**

360

SBCCOM
Monitoring Branch Laboratory**CLEARANCE REPORT**

June-01, 2000

Dunn Field, Memphis Defense Depot

Results for CWM Soil Sample Analysis

Analyst: John L Schwarz

Sample#		1,4- Thioxane	1,4- Dithiane	TDG	Mustard	Lewisite
DF/S1/01 53/SDC/ 006		ND	ND	N/A	ND	ND
DF/S1/01 53/SDC/ 007		ND	ND	N/A	ND	ND

ND= Not-detected at or above the method detection limit (MDL)

MDL= 200 ppb

BDL= Below detection limit, results > 100ppb, but < 200 ppb

MS= matrix spike

MSD= matrix spike duplicate

DUP= duplicate

SBCCOM
Monitoring Branch Laboratory

660 11

CLEARANCE REPORT

June-01, 2000

Dunn Field, Memphis Defense Depot

Results for CWM Soil Sample Analysis

Analyst: John L Schwarz

Sample#		1,4- Thioxane	1,4- Dithiane	TDG	Mustard	Lewisite
DF/S1/01 53/SDC/ 006		ND	ND	N/A	ND	ND
DF/S1/01 53/SDC/ 007		ND	ND	N/A	ND	ND

ND= Not detected at or above the method detection limit (MDL)

MDL= 200 ppb

BDL= Below detection limit, results > 100ppb, but < 200 ppb

MS= matrix spike

MSD= matrix spike duplicate

DUP= duplicate

DATA SUMMARY PACKAGE

GC/MS VOLATILE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 06/02/00

Work Order: DE44M102

Date Extracted: 06/06/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.029	J B
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F020191 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/02/00
Work Order: DE44M11F Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: 14

QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.502	
78-93-3	2-Butanone	0.386	
56-23-5	Carbon tetrachloride	0.492	
108-90-7	Chlorobenzene	0.494	
67-66-3	Chloroform	0.507	
107-06-2	1,2-Dichloroethane	0.546	
75-35-4	1,1-Dichloroethene	0.464	
127-18-4	Tetrachloroethene	0.478	
79-01-6	Trichloroethene	0.487	
75-01-4	Vinyl chloride	0.568	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F020191 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/02/00
Work Order: DE44M11G Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: 14

QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.563	
78-93-3	2-Butanone	0.407	
56-23-5	Carbon tetrachloride	0.564	
108-90-7	Chlorobenzene	0.553	
67-66-3	Chloroform	0.552	
107-06-2	1,2-Dichloroethane	0.563	
75-35-4	1,1-Dichloroethene	0.545	
127-18-4	Tetrachloroethene	0.548	
79-01-6	Trichloroethene	0.547	
75-01-4	Vinyl chloride	0.681	a

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 06/02/00

Work Order: DE44Q102

Date Extracted: 06/06/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.020	J B
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

FORM I

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F060000 409
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/02/00
Work Order: DE91N101 Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: NA

QC Batch: 0158409

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.513	
78-93-3	2-Butanone	0.389	
56-23-5	Carbon tetrachloride	0.474	
108-90-7	Chlorobenzene	0.503	
67-66-3	Chloroform	0.503	
107-06-2	1,2-Dichloroethane	0.528	
75-35-4	1,1-Dichloroethene	0.465	
127-18-4	Tetrachloroethene	0.473	
79-01-6	Trichloroethene	0.484	
75-01-4	Vinyl chloride	0.567	

SW846 8260B SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	108	97	96	102	00
02	DF/S1/0153/SDC/007	109	103	97	104	00
03	METHOD BLK. DE7JW101	105	94	96	98	00
04	LCS DE91N101	104	100	103	101	00
05	DF/S1/0153/SDC/006 D	100	98	99	100	00
06	DF/S1/0153/SDC/006 S	106	101	99	103	00

SURROGATES

SRG01 = 1,2-Dichloroethane-d4
 SRG02 = Toluene-d8
 SRG03 = 4-Bromofluorobenzene
 SRG04 = Dibromofluoromethane

QC LIMITS

(77-120)
 (78-111)
 (80-114)
 (78-110)

Column to be used to flag recovery values
 * Values outside of required QC Limits
 D System monitoring Compound diluted out

FORM II

660 20 SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F060000

WO #: DE91N101

BATCH: 0158409

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2-Butanone	0.500	0.389	78	35- 156	
Carbon tetrachloride	0.500	0.474	95	72- 133	
Benzene	0.500	0.513	103	79- 116	
Chlorobenzene	0.500	0.503	101	81- 115	
Chloroform	0.500	0.503	101	81- 122	
1,2-Dichloroethane	0.500	0.528	106	73- 127	
1,1-Dichloroethene	0.500	0.465	93	65- 119	
Tetrachloroethene	0.500	0.473	95	78- 131	
Trichloroethene	0.500	0.484	97	80- 122	
Vinyl chloride	0.500	0.567	113	53- 134	

NOTES(S) :

* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M11F

BATCH: 0158409

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
2-Butanone	0.500	0.029	0.386	71	10 - 151	
Carbon tetrachloride	0.500	ND	0.492	98	61 - 143	
Benzene	0.500	ND	0.502	100	73 - 123	
Chlorobenzene	0.500	ND	0.494	99	70 - 122	
Chloroform	0.500	ND	0.507	101	65 - 131	
1,2-Dichloroethane	0.500	ND	0.546	109	67 - 132	
1,1-Dichloroethene	0.500	ND	0.464	93	57 - 138	
Tetrachloroethene	0.500	ND	0.478	96	70 - 130	
Trichloroethene	0.500	ND	0.487	97	58 - 141	
Vinyl chloride	0.500	ND	0.568	114	51 - 133	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 0 outside limitsSpike Recovery: 0 out of 10 outside limits

COMMENTS:

660 22 SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M11G

BATCH: 0158409

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS		QUAL
					RPD	REC	
Benzene	0.500	0.563	113	11	20	73 - 123	
2-Butanone	0.500	0.407	76	5.4	34	10 - 151	
Carbon tetrachloride	0.500	0.564	113	13	20	61 - 143	
Chlorobenzene	0.500	0.553	111	11	20	70 - 122	
Chloroform	0.500	0.552	110	8.5	20	65 - 131	
1,2-Dichloroethane	0.500	0.563	113	3.1	20	67 - 132	
1,1-Dichloroethene	0.500	0.545	109	16	20	57 - 138	
Tetrachloroethene	0.500	0.548	110	14	20	70 - 130	
Trichloroethene	0.500	0.547	109	12	20	58 - 141	
Vinyl chloride	0.500	0.681	136*	18	20	51 - 133	a

NOTES (S) :

a Spiked analyte recovery is outside stated control limits.

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

* Values outside of QC limits

RPD: 0 out of 10 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS:

FORM III

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE7JW101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: 4060608.d

Lot Number: C0F020191

Date Analyzed: 06/06/00

Time Analyzed: 16:55

Matrix: SOLID

Date Extracted: 06/06/00

GC Column: RTX-624 ID: .18

Extraction Method: 1311/5030B

Instrument ID: HP4

Level: (low/med) LOW

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

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DF/S1/0153/SDC/006	DE44M102	4060610.d	06/06/00	17:44
02	DF/S1/0153/SDC/006	DE44M11F S	4060611.d	06/06/00	18:09
03	DF/S1/0153/SDC/006	DE44M11G D	4060612.d	06/06/00	18:36
04	DF/S1/0153/SDC/007	DE44Q102	4060613.d	06/06/00	19:05
05	CHECK SAMPLE	DE91N101 C	4060609.d	06/06/00	17:20
06					
07					
08					
09					
10					
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29					
30					

COMMENTS:

FORM IV

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F060000 108
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 05/25/00
Work Order: DE7JW101 Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: NA

QC Batch: 0158409

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.027	J
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

660 25

Lab Name: STL-PITTSBURGH Contract:
Lab Code: STLPIT Case No.: SAS No.: 40325 SDG No.: C0F020191
Lab File ID (Standard): 4C40606 Date Analyzed: 06/06/00
Instrument ID: HP4 Time Analyzed: 1218
GC Column: DB 624 ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DCB)		IS3	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	170871	10.12	265089	12.46	726635	7.00
UPPER LIMIT	341742	10.32	530178	12.66	1453270	7.20
LOWER LIMIT	85436	9.92	132544	12.26	363318	6.80
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	165962	10.12	233107	12.46	700156	7.00
02 INTRA-LAB CH	166353	10.13	250101	12.45	686072	7.00
03 DF/S1/0153/S	159787	10.12	231941	12.46	726285	7.01
04 DF/S1/0153/S	163551	10.12	245912	12.46	719706	7.00
05 DF/S1/0153/S	172397	10.13	254411	12.46	717414	7.00
06 DF/S1/0153/S	158620	10.12	229972	12.46	744500	7.01
07						
08						
09						
10						
11						
12						
13						
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17						
18						
19						
20						
21						
22						

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DCB) = 1,4-Dichlorobenzene-d4
IS3 = Fluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.20 minutes of internal standard RT
RT LOWER LIMIT = - 0.20 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

GC/MS SEMIVOLATILE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M103

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M10W

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	mg/L
106-46-7	1,4-Dichlorobenzene	0.165	
121-14-2	2,4-Dinitrotoluene	0.203	
118-74-1	Hexachlorobenzene	0.194	
87-68-3	Hexachlorobutadiene	0.164	
67-72-1	Hexachloroethane	0.165	
98-95-3	Nitrobenzene	0.170	
87-86-5	Pentachlorophenol	0.168	
110-86-1	Pyridine	0.107	
95-95-4	2,4,5-Trichlorophenol	0.196	
88-06-2	2,4,6-Trichlorophenol	0.178	
1319-77-3	Cresols (total)	0.577	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M10X

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.169	
121-14-2	2,4-Dinitrotoluene	0.207	
118-74-1	Hexachlorobenzene	0.202	
87-68-3	Hexachlorobutadiene	0.171	
67-72-1	Hexachloroethane	0.167	
98-95-3	Nitrobenzene	0.173	
87-86-5	Pentachlorophenol	0.177	
110-86-1	Pyridine	0.107	
95-95-4	2,4,5-Trichlorophenol	0.193	
88-06-2	2,4,6-Trichlorophenol	0.184	
1319-77-3	Cresols (total)	0.577	

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44Q103

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F060000 105

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE7JQ102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.188	
121-14-2	2,4-Dinitrotoluene	0.197	
118-74-1	Hexachlorobenzene	0.177	
87-68-3	Hexachlorobutadiene	0.189	
67-72-1	Hexachloroethane	0.191	
98-95-3	Nitrobenzene	0.191	
87-86-5	Pentachlorophenol	0.142	
110-86-1	Pyridine	0.127	
95-95-4	2,4,5-Trichlorophenol	0.184	
88-06-2	2,4,6-Trichlorophenol	0.179	
1319-77-3	Cresols (total)	0.621	

SW846 8270C SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	64	65	83	56	64	71	00
02	DF/S1/0153/SDC/007	61	62	90	52	60	69	00
03	METHOD BLK. DE7JQ101	69	67	79	63	71	68	00
04	LCS DE7JQ102	73	69	78	67	76	71	00
05	DF/S1/0153/SDC/006 D	70	71	94	59	73	81	00
06	DF/S1/0153/SDC/006 S	68	69	89	58	72	79	00

SURROGATES

SRG01 = Nitrobenzene-d5
 SRG02 = 2-Fluorobiphenyl
 SRG03 = Terphenyl-d14
 SRG04 = 2-Fluorophenol
 SRG05 = Phenol-d5
 SRG06 = 2,4,6-Tribromophenol

QC LIMITS

(32-112)
 (30-110)
 (10-144)
 (13-110)
 (10-113)
 (21-122)

- # Column to be used to flag recovery values
 * Values outside of required QC Limits
 D System monitoring Compound diluted out

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F060000

WO #: DE7JQ102

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	0.188	75	28- 110	
2,4-Dinitrotoluene	0.250	0.197	79	47- 131	
Hexachlorobenzene	0.250	0.177	71	57- 128	
Hexachlorobutadiene	0.250	0.189	75	36- 116	
Hexachloroethane	0.250	0.191	76	30- 110	
Nitrobenzene	0.250	0.191	77	45- 130	
Pentachlorophenol	0.250	0.142	57	10- 140	
Pyridine	0.250	0.127	51	10- 148	
2,4,5-Trichlorophenol	0.250	0.184	74	41- 125	
2,4,6-Trichlorophenol	0.250	0.179	71	46- 135	
Cresols (total)	0.750	0.621	83	29- 144	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10W

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	ND	0.165	66	18 - 110	
2,4-Dinitrotoluene	0.250	ND	0.203	81	31 - 131	
Hexachlorobenzene	0.250	ND	0.194	78	36 - 132	
Hexachlorobutadiene	0.250	ND	0.164	66	18 - 116	
Hexachloroethane	0.250	ND	0.165	66	18 - 110	
Nitrobenzene	0.250	ND	0.170	68	10 - 211	
Pentachlorophenol	0.250	ND	0.168	67	10 - 140	
Pyridine	0.250	ND	0.107	43	10 - 148	
2,4,5-Trichlorophenol	0.250	ND	0.196	78	24 - 143	
2,4,6-Trichlorophenol	0.250	ND	0.178	71	36 - 135	
Cresols (total)	0.750	ND	0.577	77	25 - 144	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 0 outside limits
 Spike Recovery: 0 out of 11 outside limits

COMMENTS:

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10X

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS		QUAL
					RPD	REC	
1,4-Dichlorobenzene	0.250	0.169	67	2.1	36	18- 110	
2,4-Dinitrotoluene	0.250	0.207	83	2.0	32	31- 131	
Hexachlorobenzene	0.250	0.202	81	3.9	22	36- 132	
Hexachlorobutadiene	0.250	0.171	69	4.6	32	18- 116	
Hexachloroethane	0.250	0.167	67	0.73	33	18- 110	
Nitrobenzene	0.250	0.173	69	1.8	50	10- 211	
Pentachlorophenol	0.250	0.177	71	5.3	56	10- 140	
Pyridine	0.250	0.107	43	0.27	65	10- 148	
2,4,5-Trichlorophenol	0.250	0.193	77	1.2	22	24- 143	
2,4,6-Trichlorophenol	0.250	0.184	74	3.7	27	36- 135	
Cresols (total)	0.750	0.577	77	0.10	33	25- 144	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 11 outside limits
 Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE7JQ101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: D0607003.

Lot Number: C0F020191

Date Analyzed: 06/07/00

Time Analyzed: 12:49

Matrix: SOLID

Date Extracted: 06/05/00

GC Column: HP5MS ID: .25

Extraction Method: 1311/3520C

Instrument ID: 721

Level: (low/med) LOW

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

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	=====	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	DE44M10W S	D0607006.	06/07/00	14:16
02	DF/S1/0153/SDC/006	DE44M10X D	D0607007.	06/07/00	14:45
03	DF/S1/0153/SDC/006	DE44M103	D0607005.	06/07/00	13:47
04	DF/S1/0153/SDC/007	DE44Q103	D0607008.	06/07/00	15:14
05	CHECK SAMPLE	DE7JQ102 C	D0607004.	06/07/00	13:18
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07					
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27					
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29					
30					

COMMENTS:

FORM IV

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

660 37

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F060000 105

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE7JQ101

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Lab File ID (Standard): D0607CCC

Date Analyzed: 06/07/00

Instrument ID: 721

Time Analyzed: 1117

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	90150	4.43	325485	5.62	178265	8.12
UPPER LIMIT	180300	4.93	650970	6.12	356530	8.62
LOWER LIMIT	45075	3.93	162743	5.12	89133	7.62
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	88416	4.43	348305	5.61	201310	8.11
02 INTRA-LAB CH	88729	4.44	333317	5.62	199421	8.11
03 DF/S1/0153/S	90348	4.43	359406	5.61	199464	8.11
04 DF/S1/0153/S	90549	4.44	347336	5.62	196769	8.11
05 DF/S1/0153/S	91464	4.43	342886	5.62	197007	8.11
06 DF/S1/0153/S	92086	4.43	363270	5.62	201805	8.11
07						
08						
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17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

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 used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

660 39

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT Case No.:

SAS No.:

SDG No.: C0F020191

Lab File ID (Standard): D0607CCC

Date Analyzed: 06/07/00

Instrument ID: 721

Time Analyzed: 1117

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	342542	10.96	308337	16.78	252282	19.72
UPPER LIMIT	685084	11.46	616674	17.28	504564	20.22
LOWER LIMIT	171271	10.46	154169	16.28	126141	19.22
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	412044	10.95	372157	16.76	314545	19.72
02 INTRA-LAB CH	399186	10.96	360377	16.76	302782	19.72
03 DF/S1/0153/S	384527	10.95	332109	16.77	281676	19.72
04 DF/S1/0153/S	385413	10.96	329863	16.76	269280	19.72
05 DF/S1/0153/S	373714	10.96	313364	16.76	255283	19.72
06 DF/S1/0153/S	393368	10.95	328817	16.76	275377	19.72
07						
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19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = 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 used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

PESTICIDE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M104

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8081A
Pesticides (8081A)

Lab Sample ID: C0F020191 001

Sample WT/Vol: 100 / mL
Work Order: DE44M10P
Dilution factor: 1
Moisture %: 14

Date Received: 06/02/00
Date Extracted: 06/05/00
Date Analyzed: 06/06/00

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00208	
76-44-8	Heptachlor	0.00183	
1024-57-3	Heptachlor epoxide	0.00190	
58-89-9	Lindane	0.00157	
72-43-5	Methoxychlor	0.00212	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10Q

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00207	
76-44-8	Heptachlor	0.00185	
1024-57-3	Heptachlor epoxide	0.00192	
58-89-9	Lindane	0.00158	
72-43-5	Methoxychlor	0.00216	

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44Q104

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F050000 465

Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79F102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157465

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00236	
76-44-8	Heptachlor	0.00208	
1024-57-3	Heptachlor epoxide	0.00210	
58-89-9	Lindane	0.00176	
72-43-5	Methoxychlor	0.00226	

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	88	69	00
02	DF/S1/0153/SDC/007	92	78	00
03	METHOD BLK. DE79F101	87	78	00
04	LCS DE79F102	94	86	00
05	DF/S1/0153/SDC/006 D	89	77	00
06	DF/S1/0153/SDC/006 S	89	77	00

SURROGATES

SRG01 = Decachlorobiphenyl
 SRG02 = Tetrachloro-m-xylene

QC LIMITS

(10-147)
 (39-130)

- # Column to be used to flag recovery values
- * Values outside of required QC Limits
- D System monitoring Compound diluted out

FORM II

SW846 8081A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F050000

WO #: DE79F102

BATCH: 0157465

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00176	71	49 - 137	
Heptachlor	0.00250	0.00208	83	57 - 124	
Heptachlor epoxide	0.00250	0.00210	84	53 - 135	
Endrin	0.00250	0.00236	94	46 - 137	
Methoxychlor	0.00250	0.00226	90	12 - 154	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10P

BATCH: 0157465

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
Lindane	0.00250	ND	0.00157	63	30 - 148	
Heptachlor	0.00250	ND	0.00183	73	25 - 135	
Heptachlor epoxide	0.00250	ND	0.00190	76	38 - 138	
Endrin	0.00250	ND	0.00208	83	28 - 148	
Methoxychlor	0.00250	ND	0.00212	85	13 - 154	

NOTES (S) :

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

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10Q

BATCH: 0157465

COMPOUND	SPIKE	MSD	MSD		QC LIMITS		QUAL
	ADDED (mg/L)	CONCENT. (mg/L)	% REC	% RPD	RPD	REC	
Lindane	0.00250	0.00158	63	0.69	22	30 - 148	
Heptachlor	0.00250	0.00185	74	1.0	32	25 - 135	
Heptachlor epoxide	0.00250	0.00192	77	0.89	31	38 - 138	
Endrin	0.00250	0.00207	83	0.62	40	28 - 148	
Methoxychlor	0.00250	0.00216	86	2.0	29	13 - 154	

NOTES (S) :

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

* Values outside of QC limits

RPD: ___0___ out of ___5___ outside limits

Spike Recovery: ___0___ out of ___5___ outside limits

COMMENTS:

660 50

SW846 8081A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE79F101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: d-a3161.d

Lot Number: C0F020191

Matrix: SOLID

Extraction Method: 1311/3510

Date Analyzed(1): 06/06/00

Date Extracted: 06/05/00

Date Analyzed(2): N/A

Time Analyzed(1): 20:03

Time Analyzed(2): N/A

Instrument ID(1): G/H

Instrument ID(2): N/A

GC Column(1): DB608/1701 ID: 053 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED (1)	DATE ANALYZED (2)
01	DF/S1/0153/SDC/006	DE44M10P S	06/06/00	N/A
02	DF/S1/0153/SDC/006	DE44M10Q D	06/06/00	N/A
03	DF/S1/0153/SDC/006	DE44M104	06/06/00	N/A
04	DF/S1/0153/SDC/007	DE44Q104	06/06/00	N/A
05	CHECK SAMPLE	DE79F102 C	06/06/00	N/A
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 465

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79F101

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157465

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

HERBICIDE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M105

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:
Matrix: (soil/water) SOLID Lab Sample ID: C0F020191 001
Method: SW846 8151A
Herbicides (8151A)
Sample WT/Vol: 100 / mL Date Received: 06/02/00
Work Order: DE44M10R Date Extracted: 06/05/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: 14
QC Batch: 0157466
Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.152	
93-72-1	2,4,5-TP (Silvex)	0.0384	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10T

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.153	
93-72-1	2,4,5-TP (Silvex)	0.0388	

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44Q105

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 466

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79P102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157466

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.135	
93-72-1	2,4,5-TP (Silvex)	0.0356	

660 58

SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0153/SDC/006	75	00
02	DF/S1/0153/SDC/007	68	00
03	METHOD BLK. DE79P101	85	00
04	LCS DE79P102	91	00
05	DF/S1/0153/SDC/006 D	82	00
06	DF/S1/0153/SDC/006 S	81	00

SURROGATES
SRG01 = DCAA

QC LIMITS
(42-125)

- # Column to be used to flag recovery values
- * Values outside of required QC Limits
- D System monitoring Compound diluted out

FORM II

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F050000

WO #: DE79P102

BATCH: 0157466

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	0.160	0.135	84	28 - 136	
2,4,5-TP (Silvex)	0.0400	0.0356	89	50 - 128	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limitsCOMMENTS:

660 60 SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Lot #: C0F020191

WO #: DE44M10R

BATCH: 0157466

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
2,4-D	0.160	ND	0.152	95	35 - 133	
2,4,5-TP (Silvex)	0.0400	ND	0.0384	96	50 - 131	

NOTES (S) :

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

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Lot #: C0F020191

WO #: DE44M10T

BATCH: 0157466

COMPOUND	SPIKE	MSD	MSD		QC LIMITS		QUAL
	ADDED (mg/L)	CONCENT. (mg/L)	% REC	% RPD	RPD	REC	
2,4-D	0.160	0.153	96	1.2	20	35 - 133	
2,4,5-TP (Silvex)	0.0400	0.0388	97	1.0	20	50 - 131	

NOTES(S) :

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

* Values outside of QC limits

RPD: 0 out of 2 outside limitsSpike Recovery: 0 out of 2 outside limits

COMMENTS:

660 62

SW846 8151A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE79P101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: a-a30176.

Lot Number: C0F020191

Matrix: SOLID

Extraction Method:

Date Extracted: 06/05/00

Date Analyzed(1): 06/06/00

Date Analyzed(2): N/A

Time Analyzed(1): 17:51

Time Analyzed(2): N/A

Instrument ID(1): A/B

Instrument ID(2): N/A

GC Column(1): DB5/DB1701 ID: 053 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED (1)	DATE ANALYZED (2)
	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	DE44M10R S	06/06/00	N/A
02	DF/S1/0153/SDC/006	DE44M10T D	06/06/00	N/A
03	DF/S1/0153/SDC/006	DE44M105	06/06/00	N/A
04	DF/S1/0153/SDC/007	DE44Q105	06/06/00	N/A
05	CHECK SAMPLE	DE79P102 C	06/06/00	N/A
06				
07				
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09				
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13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 466

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79P101

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157466

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

METALS SUMMARY

STL-Pittsburgh

Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44M Client ID: DF/S1/0153/SDC/006
Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.30	1.2	8.7		1	ICPST	6/5/00	10:07

Comments: C0F020191001

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44Q Client ID: DF/S1/0153/SDC/007
Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
Weight: 1.00 Volume: 100 Percent Moisture: 16.04

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.31	1.2	9.0		1	ICPST	6/5/00	10:19

Comments: COF020191002

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST

Units: ug/L

Chart Number: T00605A.ARC

Standard Source: _____

Standard ID: _____

			ICB1 6/5/00 8:46 AM					
Element	WL/ Mass	Report Limit	Found	Q	Found	Q	Found	Q
Arsenic	189.042	10	2.6	U				

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/5/00 9:38 AM		CCB2 6/5/00 10:27 AM		CCB3 6/5/00 11:17 AM		Found	Q
			Found	Q	Found	Q	Found	Q		
Arsenic	189.042	10	2.6	U	2.6	U	2.6	U		

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE5W2B

Matrix: Soil **Units:** mg/kg **Prep Date:** 6/4/00 **Prep Batch:** 0156098

Weight: 1.00 **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	0.26	1.0	0.26	U	1	ICPST	6/5/00	9:58

Comments: _____

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MS
 Original Sample ID: DE44M Client ID: DF/S1/0153/SDC/006S
 Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
 Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	8.7		219		231.24	91.0	1	1	ICPST	6/5/00	10:07	6/5/00	10:15

Comments: _____

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated
 * Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MDOriginal Sample ID: DE44MClient ID: DF/S1/0153/SDC/006DMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	8.7		220		231.24	91.2	1	1	ICPST	6/5/00	10:07	6/5/00	10:32

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDMatrix Spike Sample ID: DE44MS Client ID: DF/S1/0153/SDC/006DMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	219		220		0.2 %	1	1	ICPST	6/5/00	10:15	6/5/00	10:32

Comments: _____

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated
 * Duplicate analysis RPD was not within limits

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE5W2CMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	200	207	103.3		80-120	1	ICPST	6/5/00	10:03

Comments: _____

Version 3 63.4

U Result is less than the MDL
 B Result is between MDL and RL

Form 7 Equivalent

TCLP METALS SUMMARY

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44MT **Client ID:** DF/S1/0153/SDC/006
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158093
Weight: NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000077	B	1	CVAA	6/6/00	9:33

Comments: _____

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44QT Client ID: DE/S1/0153/SDC/007
Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093
Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000053	B	1	CVAA	6/6/00	9:40

Comments: _____

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44MT Client ID: DF/S1/0153/SDC/006
 Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.17	B	1	ICP	6/7/00	10:23
Barium	493.41	0.00041	10.0	1.5	B	1	ICP	6/7/00	10:23
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:23
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:23
Lead	220.35	0.025	0.50	0.025	U	1	ICP	6/7/00	10:23
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	6/7/00	10:23
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:23

Comments: C0F020191001

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44QT **Client ID:** DF/S1/0153/SDC/007
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158172
Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.17	B	1	ICP	6/7/00	10:42
Barium	493.41	0.00041	10.0	1.3	B	1	ICP	6/7/00	10:42
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:42
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:42
Lead	220.35	0.025	0.50	0.025	U	1	ICP	6/7/00	10:42
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	6/7/00	10:42
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:42

Comments. C0F020191002

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRN

Standard Source: _____

Standard ID: _____

			ICB1 6/6/00 9:21 AM					
Element	WL/ Mass	Report Limit	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	B				

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00607A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICB1 6/7/00 9:12 AM							
			Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	193.696	500	30.3	U						
Barium	493.409	10000	0.4	U						
Cadmium	228.802	100	2.8	U						
Chromium	267.716	500	3.8	U						
Lead	220.353	500	24.6	U						
Selenium	196.026	250	67.4	U						
Silver	328.068	500	3.1	U						

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRN

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/6/00 9:25 AM		CCB2 6/6/00 9:50 AM					
			Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.0	U	0.0	U				

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00607A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/7/00 9:52 AM		CCB2 6/7/00 10:29 AM		CCB3 6/7/00 11:16 AM		Found	Q
			Found	Q	Found	Q	Found	Q		
Arsenic	193.696	500	30.3	U	41.3	B	30.3	U		
Barium	493.409	10000	0.4	U	0.4	U	0.4	U		
Cadmium	228.802	100	2.8	U	2.8	U	2.8	U		
Chromium	267.716	500	3.8	U	3.8	U	4.4	B		
Lead	220.353	500	24.6	U	24.6	U	-33.0	B		
Selenium	196.026	250	67.4	U	67.4	U	67.4	U		
Silver	328.068	500	3.1	U	3.1	U	3.1	U		

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE63RBT
Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093
Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000067	B	1	CVAA	6/6/00	9:32

Comments: _____

Version 3.63.4

STL Pittsburgh

U Result is less than the MDL
B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE7HKBTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000058	B	1	CVAA	6/6/00	9:27

Comments: _____

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE63RBT

Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172

Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.13	B	1	ICP	6/7/00	10:17
Barium	493.409	0.00041	10.0	0.0016	B	1	ICP	6/7/00	10:17
Cadmium	228.802	0.0028	0.10	-0.0032	B	1	ICP	6/7/00	10:17
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:17
Lead	220.353	0.025	0.50	0.025	U	1	ICP	6/7/00	10:17
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	6/7/00	10:17
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:17

Comments: _____

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE7QTBTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.034	B	1	ICP	6/7/00	10:14
Barium	493.409	0.00041	10.0	0.00041	U	1	ICP	6/7/00	10:14
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:14
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:14
Lead	220.353	0.025	0.50	0.025	U	1	ICP	6/7/00	10:14
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	6/7/00	10:14
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:14

Comments: _____

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MST
 Original Sample ID: DE44MT Client ID: DF/S1/0153/SDC/006S
 Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093
 Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Mercury	253.7	0.000077	B	0.0051		0.005	100.9	1	1	CVAA	6/6/00	9:33	6/6/00	9:35

Comments: _____

Version 3.63.4

- U Result is less than the MDL
 B Result is between MDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated
 * Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MDTOriginal Sample ID: DE44MT Client ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.000077	B	0.0051		0.005	99.5	1	1	CVAA	6/6/00	9:33	6/6/00	9:38

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MST
 Original Sample ID: DE44MT Client ID: DF/S1/0153/SDC/006S
 Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	193.7	0.17	B	4.8		5	92.1	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Barium	493.4	1.5	B	44.7		50	86.5	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Cadmium	228.8	0.0028	U	0.92		1	92.3	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Chromium	267.7	0.0038	U	4.2		5	84.8	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Lead	220.4	0.025	U	4.4		5	87.1	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Selenium	196.0	0.067	U	0.97		1	96.5	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Silver	328.1	0.0031	U	0.89		1	88.9	1	1	ICP	6/7/00	10:23	6/7/00	10:36

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form-5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MDTOriginal Sample ID: DE44MTClient ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.7	0.17	B	4.9		5	94.5	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Barium	493.4	1.5	B	45.9		50	88.8	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Cadmium	228.8	0.0028	U	0.94		1	94.2	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Chromium	267.7	0.0038	U	4.4		5	87.1	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Lead	220.4	0.025	U	4.5		5	89.4	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Selenium	196.0	0.067	U	0.99		1	99.4	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Silver	328.1	0.0031	U	0.91		1	91.3	1	1	ICP	6/7/00	10:23	6/7/00	10:39

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDTMatrix Spike Sample ID: DE44MST Client ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.0051		0.0051		1.4 %	1	1	CVAA	6/6/00	9:35	6/6/00	9:38

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDTMatrix Spike Sample ID: DE44MST Client ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.696	4.8		4.9		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Barium	493.409	44.7		45.9		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Cadmium	228.802	0.92		0.94		2.1 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Chromium	267.716	4.2		4.4		2.7 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Lead	220.353	4.4		4.5		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Selenium	196.026	0.97		0.99		3.0 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Silver	328.068	0.89		0.91		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 6 Equivalent

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE7HKCTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.0025	0.0026	104.4		80-120	1	CVAA	6/6/00	9:30

Comments: _____

Version 3.63.4

STL Pittsburgh

U Result is less than the MDL

B Result is between MDL and RL

Form 7 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE7QTCTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	2.0	2.0	101.5		80-120	1	ICP	6/7/00	10:20
Barium	493.409	2.0	1.8	87.4	B	80-120	1	ICP	6/7/00	10:20
Cadmium	228.802	0.050	0.041	82.9	B	80-120	1	ICP	6/7/00	10:20
Chromium	267.716	0.20	0.18	87.7	B	80-120	1	ICP	6/7/00	10:20
Lead	220.353	0.50	0.44	86.9	B	80-120	1	ICP	6/7/00	10:20
Selenium	196.026	2.0	2.0	100.6		80-120	1	ICP	6/7/00	10:20
Silver	328.068	0.050	0.047	93.4	B	80-120	1	ICP	6/7/00	10:20

Comments: _____

Version 3.63.4

STL Pittsburgh

U Result is less than the MDL

B Result is between MDL and RL

Form 7 Equivalent

GENERAL CHEMISTRY SUMMARY

/

Client Sample ID: DF/S1/0153/SDC/006

General Chemistry

Lot-Sample #....: C0F020191-001 Work Order #....: DE44M Matrix.....: SOLID
 Date Sampled....: 06/01/00 Date Received..: 06/02/00
 % Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.9		No Units	SW846 9045C	06/04/00	0156095
	Dilution Factor: 1		MS Run #.....: 0156004			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	06/05/00	0157277
	Dilution Factor: 1		MS Run #.....: 0157122			
Percent Solids	86.5		%	MCAWW 160.3 MOD	06/05-06/06/00	0157280
	Dilution Factor: 1		MS Run #.....: 0157125			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	06/07/00	0159471
	Dilution Factor: 1		MS Run #.....: 0159188			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	06/07/00	0159470
	Dilution Factor: 1		MS Run #.....: 0159187			

Client Sample ID: DF/S1/0153/SDC/007

General Chemistry

Lot-Sample #....: C0F020191-002 Work Order #....: DE44Q Matrix.....: SOLID
 Date Sampled...: 06/01/00 Date Received...: 06/02/00
 % Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.1		No Units	SW846 9045C	06/04/00	0156095
	Dilution Factor: 1			MS Run #.....: 0156004		
Ignitability	NO	--	No Units	SW846 SECTION 7.1	06/05/00	0157277
	Dilution Factor: 1			MS Run #.....: 0157122		
Percent Solids	84.0		%	MCAWW 160.3 MOD	06/05-06/06/00	0157280
	Dilution Factor: 1			MS Run #.....: 0157125		
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	06/07/00	0159471
	Dilution Factor: 1			MS Run #.....: 0159188		
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	06/07/00	0159470
	Dilution Factor: 1			MS Run #.....: 0159187		

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C0F020191

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide	ND	Work Order #: DEC9A101 200	mg/kg	MB Lot-Sample #: A0F070000-471 SW846 7.3.3	06/07/00	0159471
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: DEC99101 200	mg/kg	MB Lot-Sample #: A0F070000-470 SW846 7.3.4	06/07/00	0159470
		Dilution Factor: 1				

NOTE(S) :

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH	101	Work Order #: DE5VX101 (85 - 115)	LCS Lot-Sample#: C0F040000-095 SW846 9045C	06/04/00	0156095
Dilution Factor: 1					

NOTE(S) :

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

660 100

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191

Work Order #....: DE3F4-SMP
DE3F4-DUP

Matrix.....: SOLID

Date Sampled....: 05/25/00

Date Received...: 06/01/00

% Moisture.....: 0.95

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.0	6.8	No Units	2.7	(0-20)	SW846 9045C	06/04/00	0156095

SD Lot-Sample #: C0F020113-021
Dilution Factor: 1
Prep Date.....: 0156004 Analysis Date...: Prep Batch #....:

Client Lot #....: C0F020191 Work Order #....: DE3X1-SMP Matrix.....: SOLID

Date Sampled...: 06/01/00 Date Received...: 06/02/00

‡ Moisture.....: 13

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide						SD Lot-Sample #:	A0F020155-001	
ND	ND		mg/kg	0	(0-20)	SW846 7.3.3	06/07/00	0159471

Dilution Factor: 1

Prep Date.....: 0159188 Analysis Date...: Prep Batch #...:

Reactive Sulfide	ND	ND	mg/kg	0	(0-20)	SD Lot-Sample #: A0F020155-001	
						SW846 7.3.4	06/07/00 0159470

Dilution Factor: 1

Prep Date.....: 0159187 Analysis Date...: Prep Batch #....:

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191

Work Order #....: DE5KP-SMP
DE5KP-DUP

Matrix.....: SOLID

Date Sampled....: 05/31/00

Date Received...: 06/03/00

% Moisture.....: 1.4

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Solids	98.6	98.3	%	0.37	(0-20)	MCAWW 160.3 MOD	06/05-06/06/00	0157280

SD Lot-Sample #: C0F030143-004

Dilution Factor: 1

Prep Date.....: 0157125 Analysis Date...: Prep Batch #...:

GC/MS VOLATILE DATA

660 104

**GC/MS VOLATILE
QC SUMMARY**

SW846 8260B SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	108	97	96	102	00
02	DF/S1/0153/SDC/007	109	103	97	104	00
03	METHOD BLK. DE7JW101	105	94	96	98	00
04	LCS DE91N101	104	100	103	101	00
05	DF/S1/0153/SDC/006 D	100	98	99	100	00
06	DF/S1/0153/SDC/006 S	106	101	99	103	00

SURROGATES

SRG01 = 1,2-Dichloroethane-d4
 SRG02 = Toluene-d8
 SRG03 = 4-Bromofluorobenzene
 SRG04 = Dibromofluoromethane

QC LIMITS

(77-120)
 (78-111)
 (80-114)
 (78-110)

- # Column to be used to flag recovery values
 * Values outside of required QC Limits
 D System monitoring Compound diluted out

FORM II

660 106

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F060000

WO #: DE91N101

BATCH: 0158409

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Benzene	0.500	0.513	103	79- 116	
2-Butanone	0.500	0.389	78	35- 156	
Carbon tetrachloride	0.500	0.474	95	72- 133	
Chlorobenzene	0.500	0.503	101	81- 115	
Chloroform	0.500	0.503	101	81- 122	
1,2-Dichloroethane	0.500	0.528	106	73- 127	
1,1-Dichloroethene	0.500	0.465	93	65- 119	
Tetrachloroethene	0.500	0.473	95	78- 131	
Trichloroethene	0.500	0.484	97	80- 122	
Vinyl chloride	0.500	0.567	113	53- 134	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M11F

BATCH: 0158409

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
Benzene	0.500	ND	0.502	100	73 - 123	
2-Butanone	0.500	0.029	0.386	71	10 - 151	
Carbon tetrachloride	0.500	ND	0.492	98	61 - 143	
Chlorobenzene	0.500	ND	0.494	99	70 - 122	
Chloroform	0.500	ND	0.507	101	65 - 131	
1,2-Dichloroethane	0.500	ND	0.546	109	67 - 132	
1,1-Dichloroethene	0.500	ND	0.464	93	57 - 138	
Tetrachloroethene	0.500	ND	0.478	96	70 - 130	
Trichloroethene	0.500	ND	0.487	97	58 - 141	
Vinyl chloride	0.500	ND	0.568	114	51 - 133	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 0 outside limits
 Spike Recovery: 0 out of 10 outside limits

COMMENTS:

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M11G

BATCH: 0158409

COMPOUND	SPIKE	MSD	MSD	QC LIMITS		QUAL
	ADDED (mg/L)	CONCENT. (mg/L)	% REC	% RPD	RPD REC	
Benzene	0.500	0.563	113	11	20 73 - 123	
2-Butanone	0.500	0.407	76	5.4	34 10 - 151	
Carbon tetrachloride	0.500	0.564	113	13	20 61 - 143	
Chlorobenzene	0.500	0.553	111	11	20 70 - 122	
Chloroform	0.500	0.552	110	8.5	20 65 - 131	
1,2-Dichloroethane	0.500	0.563	113	3.1	20 67 - 132	
1,1-Dichloroethene	0.500	0.545	109	16	20 57 - 138	
Tetrachloroethene	0.500	0.548	110	14	20 70 - 130	
Trichloroethene	0.500	0.547	109	12	20 58 - 141	
Vinyl chloride	0.500	0.681	136*	18	20 51 - 133	a

NOTES (S) :

a Spiked analyte recovery is outside stated control limits.

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

* Values outside of QC limits

RPD: 0 out of 10 outside limitsSpike Recovery: 1 out of 10 outside limits

COMMENTS:

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE7JW101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: 4060608.d

Lot Number: C0F020191

Date Analyzed: 06/06/00

Time Analyzed: 16:55

Matrix: SOLID

Date Extracted: 06/06/00

GC Column: RTX-624 ID: .18

Extraction Method: 1311/5030B

Instrument ID: HP4

Level: (low/med) LOW

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

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DF/S1/0153/SDC/006	DE44M102	4060610.d	06/06/00	17:44
02	DF/S1/0153/SDC/006	DE44M11F S	4060611.d	06/06/00	18:09
03	DF/S1/0153/SDC/006	DE44M11G D	4060612.d	06/06/00	18:36
04	DF/S1/0153/SDC/007	DE44Q102	4060613.d	06/06/00	19:05
05	CHECK SAMPLE	DE91N101 C	4060609.d	06/06/00	17:20
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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21					
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24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

660 110 VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 40826D

Lab File ID: CF40606

BFB Injection Date: 06/06/00

Instrument ID: HP4

BFB Injection Time: 1058

GC Column: DB624 20M ID: 0.18 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	41.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	68.5
175	5.0 - 9.0% of mass 174	4.3 (6.2)1
176	95.0 - 101.0% of mass 174	65.4 (95.5)1
177	5.0 - 9.0% of mass 176	4.3 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD5	VSTD5	4A40606	06/06/00	1126
02	VSTD20	VSTD20	4B40606	06/06/00	1153
03	VSTD50	VSTD50	4C40606	06/06/00	1218
04	VSTD100	VSTD100	4D40606	06/06/00	1242
05	VSTD200	VSTD200	4E40606	06/06/00	1309
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.:

SAS No.: 40325 SDG No.: C0F020191

Lab File ID: CF40606

BFB Injection Date: 06/06/00

Instrument ID: HP4

BFB Injection Time: 1058

GC Column: DB624 20M ID: 0.18 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	41.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	68.5
175	5.0 - 9.0% of mass 174	4.3 (6.2)1
176	95.0 - 101.0% of mass 174	65.4 (95.5)1
177	5.0 - 9.0% of mass 176	4.3 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD5	VSTD5	4A40606	06/06/00	1126
02	VSTD20	VSTD20	4B40606	06/06/00	1153
03	VSTD50	VSTD50	4C40606	06/06/00	1218
04	VSTD100	VSTD100	4D40606	06/06/00	1242
05	VSTD200	VSTD200	4E40606	06/06/00	1309
06	INTRA-LAB BL	DE7JW101	4060608	06/06/00	1655
07	INTRA-LAB CH	DE91N101	4060609	06/06/00	1720
08	DF/S1/0153/S	DE44M102	4060610	06/06/00	1744
09	DF/S1/0153/S	DE44M11F	4060611	06/06/00	1809
10	DF/S1/0153/S	DE44M11G	4060612	06/06/00	1836
11	DF/S1/0153/S	DE44Q102	4060613	06/06/00	1905
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.:

SAS No.: 40325

SDG No.: C0F020191

Lab File ID (Standard): 4C40606

Date Analyzed: 06/06/00

Instrument ID: HP4

Time Analyzed: 1218

GC Column: DB 624 ID: 0.18 (mm)

Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DCB)		IS3	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	170871	10.12	265089	12.46	726635	7.00
UPPER LIMIT	341742	10.32	530178	12.66	1453270	7.20
LOWER LIMIT	85436	9.92	132544	12.26	363318	6.80
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	165962	10.12	233107	12.46	700156	7.00
02 INTRA-LAB CH	166353	10.13	250101	12.45	686072	7.00
03 DF/S1/0153/S	159787	10.12	231941	12.46	726285	7.01
04 DF/S1/0153/S	163551	10.12	245912	12.46	719706	7.00
05 DF/S1/0153/S	172397	10.13	254411	12.46	717414	7.00
06 DF/S1/0153/S	158620	10.12	229972	12.46	744500	7.01
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (CBZ) = Chlorobenzene-d5
 IS2 (DCB) = 1,4-Dichlorobenzene-d4
 IS3 = Fluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.20 minutes of internal standard RT
 RT LOWER LIMIT = - 0.20 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

**GC/MS VOLATILE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F020191 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 06/02/00

Work Order: DE44M102

Date Extracted: 06/06/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

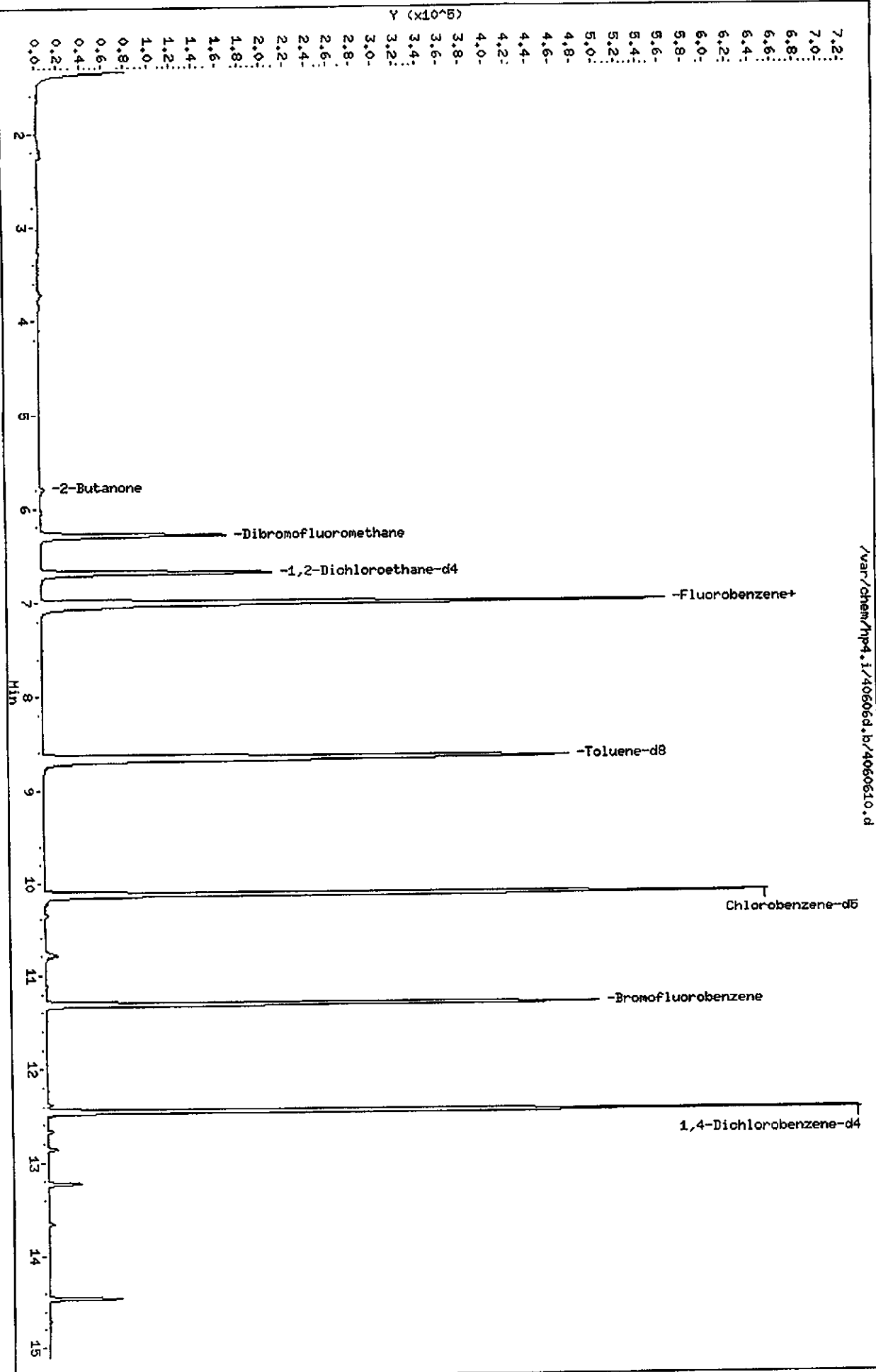
QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.029	J B
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

Data File: /var/chem/hp4.i/40606d.b/4060610.d
Date : 06-JUN-2000 17:44
Client ID: DF/S1/0153/SDC/006
Sample Info: c0f020191-001 (1ml/10ml)/5ml
Volume Injected (uL): 5.0
Column phase: DB 624

Instrument: hp4.i
Operator: 16528
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060610.d
 Report Date: 06-Jun-2000 19:18

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060610.d
 Lab Smp Id: DE44M102 Client Smp ID: DF/S1/0153/SDC/006
 Inj Date : 06-JUN-2000 17:44
 Operator : 16328 Inst ID: hp4.i
 Smp Info : c0f020191-001 (1ml/10ml)/5ml
 Misc Info : de44m102,40606d.b
 Comment :
 Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
 Meth Date : 06-Jun-2000 14:07 dudeckk Quant Type: ISTD
 Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
 Als bottle: 16
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: tc1p.sub
 Target Version: 3.40
 Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

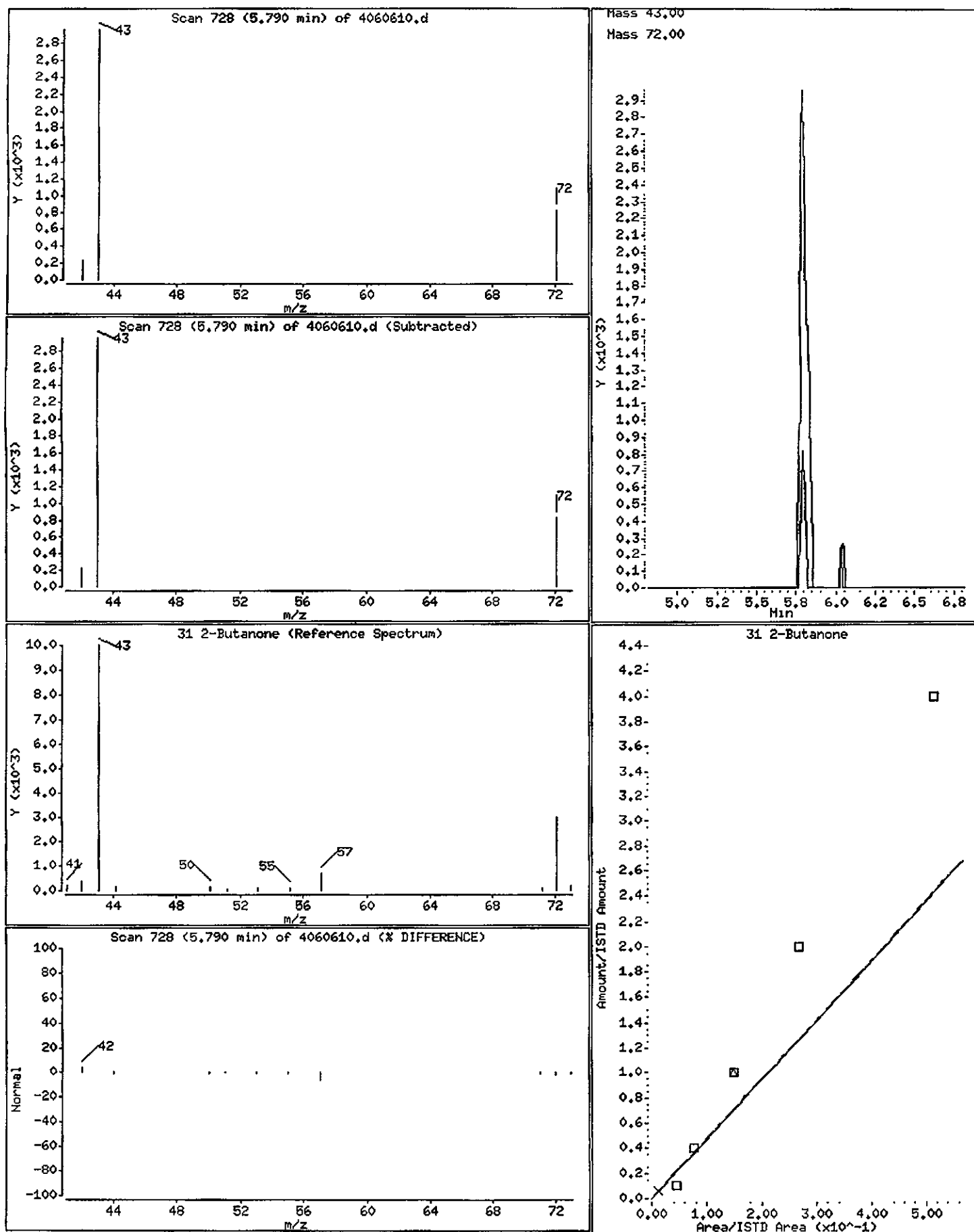
Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

pm 6/1/00

Compounds	QUANT SIG	CONCENTRATIONS					
		ON-COLUMN	FINAL				
	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(UG/L)
=====	----	--	-----	-----	-----	-----	-----
* 46 Fluorobenzene	96	7.006	7.000	(1.000)	726285		
* 69 Chlorobenzene-d5	119	10.124	10.130	(1.000)	159787		
* 92 1,4-Dichlorobenzene-d4	152	12.459	12.459	(1.000)	231941		
\$ 43 1,2-Dichloroethane-d4	65	6.688	6.688	(0.955)	151850	271.115	54.22
\$ 39 Dibromofluoromethane	113	6.291	6.290	(0.898)	134108	253.730	50.75
\$ 59 Toluene-d8	98	8.657	8.650	(0.855)	599711	242.635	48.53
\$ 80 Bromofluorobenzene	95	11.310	11.309	(1.117)	231255	240.520	48.10
3 Vinyl Chloride	62.00	Compound Not Detected					
12 1,1-Dichloroethene	96.00	Compound Not Detected					
31 2-Butanone	43	5.790	5.820	(0.826)	8965	14.4819	2.896
37 Chloroform	83.00	Compound Not Detected.					
41 Carbon Tetrachloride	117.00	Compound Not Detected.					
42 Benzene	78.00	Compound Not Detected					
45 1,2-Dichloroethane	62.00	Compound Not Detected.					
47 Trichloroethene	130.00	Compound Not Detected.					

Data File: /var/chem/hp4.i/40606d.b/4060610.d
Report Date: 06-Jun-2000 19:18

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ng)	(UG/L)
=====	=====	==	=====	=====	=====	=====	=====
65 Tetrachloroethene	164.00				Compound Not Detected.		
70 Chlorobenzene	112.00				Compound Not Detected.		



UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 06/02/00

Work Order: DE44Q102

Date Extracted: 06/06/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0158409

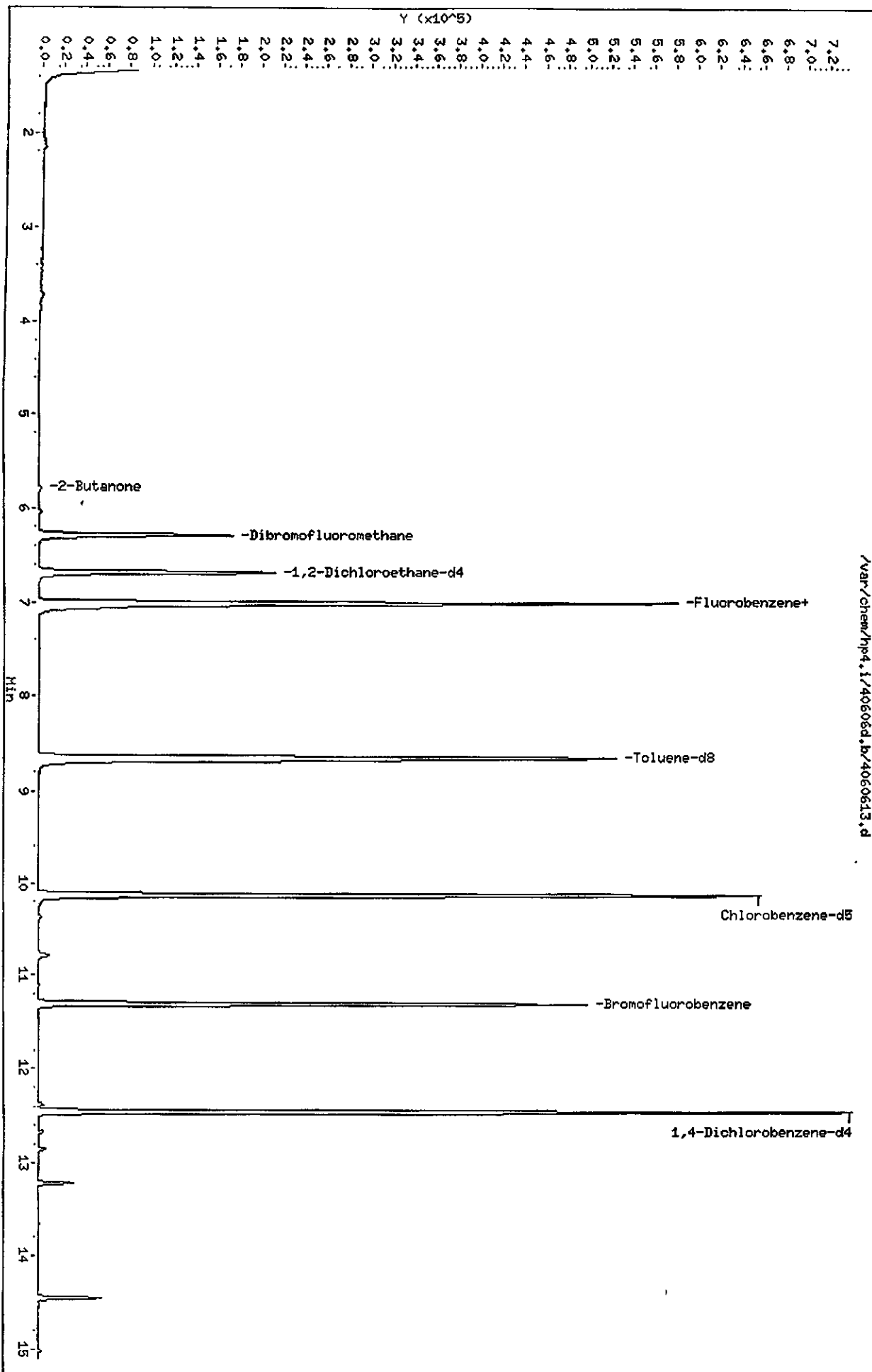
Client Sample Id: DF/S1/0153/SDC/007

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.020	J B
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

Data File: /var/chem/hp4.i/40606d.b/4060613.d
Date : 06-JUN-2000 19:05
Client ID: DF/SI/01E3/SDC/007
Sample Info: c0f020191-002 (4ml/10ml)/5ml
Volume Injected (ul): 5.0
Column phase: DB 624

Instrument: hp4.i
Operator: 034635
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060613.d
Report Date: 06-Jun-2000 19:23

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060613.d
Lab Smp Id: DE44Q102 Client Smp ID: DF/S1/0153/SDC/007
Inj Date : 06-JUN-2000 19:05
Operator : 034635 Inst ID: hp4.i
Smp Info : c0f020191-002 (1ml/10ml)/5ml
Misc Info : de44q102,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 14:07 dudeckk Quant Type: ISTD
Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tc1p.sub
Target Version: 3.40
Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

PSI 6/6/00

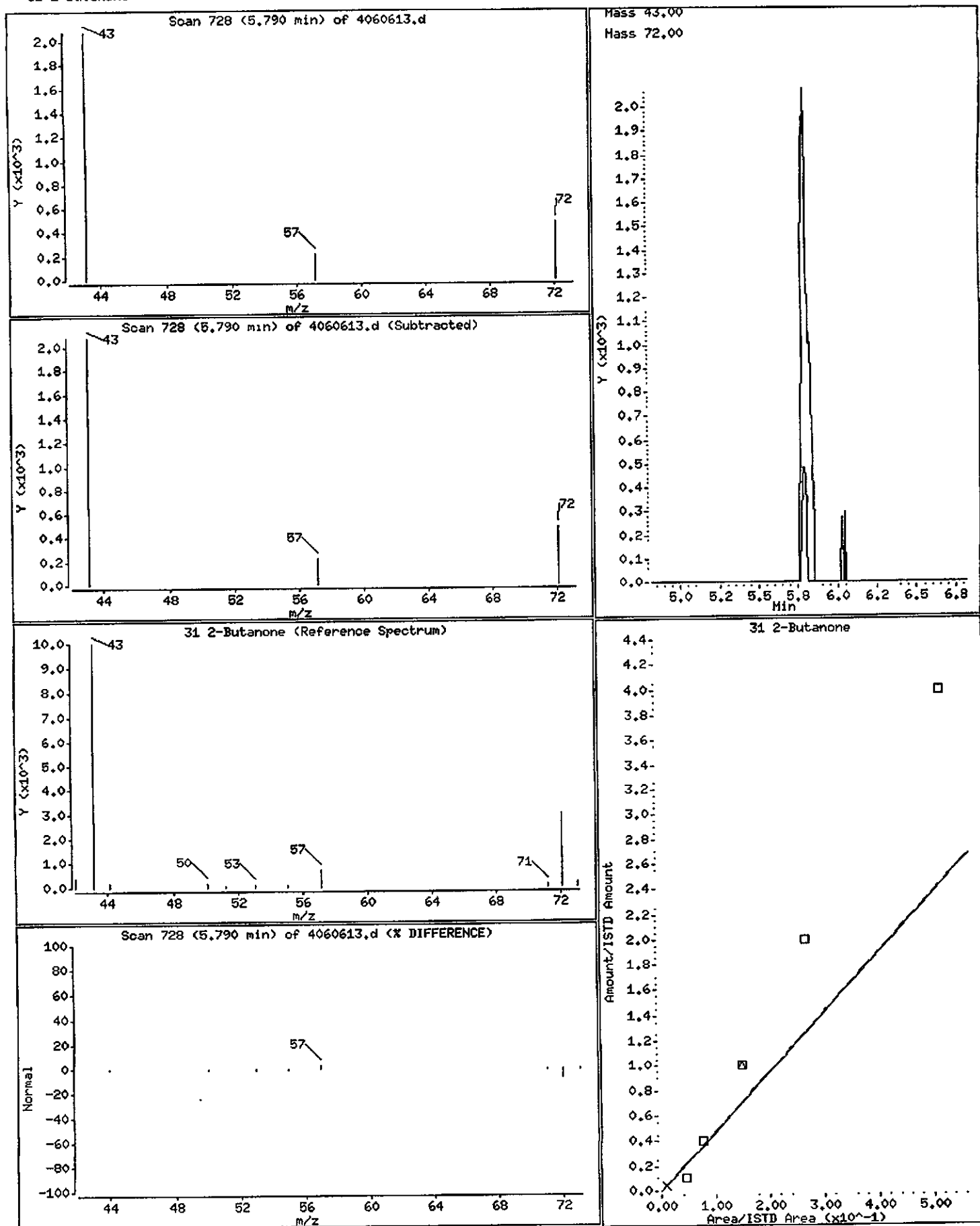
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (UG/L)
* 46 Fluorobenzene	96	7.007	7.000	(1.000)	744500		
* 69 Chlorobenzene-d5	119	10.124	10.130	(1.000)	158620		
* 92 1,4-Dichlorobenzene-d4	152	12.460	12.459	(1.000)	229972		
\$ 43 1,2-Dichloroethane-d4	65	6.689	6.688	(0.955)	155828	271.411	54.28
\$ 39 Dibromofluoromethane	113	6.291	6.290	(0.898)	140380	259.099	51.82
\$ 59 Toluene-d8	98	8.651	8.650	(0.854)	629905	256.726	51.34
\$ 80 Bromofluorobenzene	95	11.304	11.309	(1.117)	232503	243.598	48.72
3 Vinyl Chloride	62.00	Compound Not Detected.					
12 1,1-Dichloroethene	96.00	Compound Not Detected.					
31 2-Butanone	43	5.790	5.820	(0.826)	6398	10.0823	2.016
37 Chloroform	83.00	Compound Not Detected.					
41 Carbon Tetrachloride	117.00	Compound Not Detected.					
42 Benzene	78.00	Compound Not Detected.					
45 1,2-Dichloroethane	62.00	Compound Not Detected.					
47 Trichloroethene	130.00	Compound Not Detected.					

Data File: /var/chem/hp4.i/40606d.b/4060613.d
Report Date: 06-Jun-2000 19:23

Page 2

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ng)	(UG/L)
*****	****	**	*****	*****	*****	*****	*****
65 Tetrachloroethene	164.00				Compound Not Detected.		
70 Chlorobenzene	112 00				Compound Not Detected.		

31 2-Butanone



**GC/MS VOLATILE
CALIBRATION DATA**

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

660 125

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 40826D

Instrument ID: HP4

Calibration Date(s): 06/06/00 06/06/00

Heated Purge: (Y/N) N

Calibration Time(s): 1126 1309

GC Column: DB 624 ID: 0.18 (mm)

LAB FILE ID:		RRF5 =4A40606		RRF20 =4B40606			
RRF50 =4C40606		RRF100=4D40606		RRF200=4E40606			
COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Dichlorodifluoromethane	0.119	0.099	0.107	0.110	0.106	0.108	6.7
Chloromethane	* 0.376	0.268	0.272	0.267	0.261	0.289	17.0*
Vinyl Chloride	0.279	0.218	0.234	0.237	0.240	0.242	9.3
Bromomethane	0.035	0.023	0.025	0.028	0.030	0.028	16.2
Chloroethane	0.048	0.034	0.035	0.035	0.035	0.037	16.5
Trichlorofluoromethane	0.088	0.074	0.073	0.076	0.076	0.077	7.8
1,1-Dichloroethene	0.208	0.163	0.165	0.164	0.147	0.169	13.4
Methylene Chloride	0.253	0.197	0.201	0.199	0.185	0.207	12.8
trans-1,2-Dichloroethene	0.256	0.204	0.211	0.214	0.202	0.217	10.1
1,1-Dichloroethane	* 0.447	0.354	0.372	0.375	0.354	0.380	10.1*
cis-1,2-dichloroethene	0.300	0.230	0.247	0.251	0.237	0.253	10.9
Chloroform	0.416	0.326	0.340	0.345	0.323	0.350	10.8
Bromochloromethane	0.131	0.102	0.108	0.110	0.103	0.111	10.6
1,1,1-Trichloroethane	0.324	0.251	0.269	0.276	0.257	0.275	10.5
Carbon Tetrachloride	0.237	0.192	0.209	0.216	0.201	0.211	8.1
1,2-Dichloroethane	0.304	0.233	0.238	0.238	0.210	0.245	14.4
Benzene	1.197	0.941	0.978	0.983	0.895	0.999	11.7
Trichloroethene	0.283	0.228	0.234	0.240	0.223	0.242	10.0
1,2-Dichloropropane	0.286	0.229	0.239	0.243	0.228	0.245	9.7
Bromodichloromethane	0.277	0.220	0.243	0.253	0.237	0.246	8.6
cis-1,3-Dichloropropene	0.405	0.340	0.371	0.386	0.360	0.372	6.6
Toluene	5.783	4.556	4.692	4.648	4.030	4.742	13.5
trans-1,3-Dichloropropene	1.539	1.263	1.368	1.423	1.278	1.374	8.2
1,1,2-Trichloroethane	1.100	0.837	0.874	0.891	0.782	0.897	13.5
Tetrachloroethene	0.899	0.708	0.727	0.748	0.661	0.749	12.0
Dibromochloromethane	0.771	0.633	0.717	0.774	0.716	0.722	7.9
Chlorobenzene	* 3.751	2.862	2.941	2.977	2.639	3.034	13.9*
Ethylbenzene	2.098	1.640	1.670	1.646	1.374	1.686	15.4
Styrene	3.684	3.158	3.387	3.368	2.740	3.267	10.7
Bromoform	* 0.384	0.329	0.398	0.448	0.406	0.393	11.0*
1,1,2,2-Tetrachloroethane	* 0.915	0.720	0.764	0.787	0.677	0.773	11.7*
1,3-Dichlorobenzene	1.823	1.389	1.444	1.373	1.142	1.434	17.2
1,4-Dichlorobenzene	1.874	1.397	1.431	1.406	1.250	1.472	16.0
1,2-Dichlorobenzene	1.633	1.307	1.350	1.336	1.203	1.366	11.7
Dibromomethane	0.151	0.114	0.122	0.123	0.111	0.124	12.6
1,2-Dibromoethane	1.002	0.800	0.842	0.858	0.750	0.850	11.1
1,1,1,2-Tetrachloroethane	0.976	0.777	0.823	0.831	0.709	0.823	11.9

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 40826D

Instrument ID: HP4

Calibration Date(s): 06/06/00 06/06/00

Heated Purge: (Y/N) N

Calibration Time(s): 1126 1309

GC Column: DB 624 ID: 0.18 (mm)

LAB FILE ID: RRF5 =4A40606 RRF20 =4B40606 RRF50 =4C40606 RRF100=4D40606 RRF200=4E40606							
COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
1,2,3-Trichloropropane	0.255	0.206	0.216	0.220	0.183	0.216	12.2
1,2-Dibromo-3-chloropropane	0.079	0.094	0.100	0.115	0.099	0.097	13.3
2,2-Dichloropropane	0.320	0.261	0.279	0.286	0.273	0.284	7.8
1,1-Dichloropropene	0.342	0.270	0.284	0.289	0.263	0.290	10.7
1,3-Dichloropropane	1.960	1.522	1.547	1.577	1.375	1.596	13.6
n-Propylbenzene	1.156	0.924	0.963	0.957	0.828	0.966	12.4
Bromobenzene	0.834	0.649	0.711	0.735	0.692	0.724	9.5
1,3,5-Trimethylbenzene	3.222	2.524	2.628	2.599	2.260	2.647	13.3
2-Chlorotoluene	0.956	0.741	0.786	0.785	0.710	0.796	12.0
4-Chlorotoluene	1.021	0.773	0.812	0.793	0.686	0.817	15.2
tert-Butylbenzene	2.825	2.183	2.337	2.337	2.075	2.351	12.2
1,2,4-Trimethylbenzene	3.322	2.617	2.698	2.664	2.291	2.718	13.8
sec-Butylbenzene	4.352	3.430	3.571	3.512	3.030	3.579	13.4
4-Isopropyltoluene	3.520	2.830	2.890	2.771	2.232	2.849	16.1
n-Butylbenzene	3.650	2.874	2.927	2.937	2.659	3.009	12.5
1,2,4-Trichlorobenzene	0.674	0.588	0.623	0.688	0.667	0.648	6.4
Hexachlorobutadiene	0.382	0.301	0.304	0.335	0.351	0.335	10.1
Naphthalene	1.361	1.153	1.263	1.482	1.264	1.305	9.5
1,2,3-Trichlorobenzene	0.517	0.385	0.423	0.476	0.457	0.452	11.2
Acetone	0.069	0.050	0.052	0.052	0.051	0.055	14.5
Carbon Disulfide	0.491	0.499	0.528	0.531	0.478	0.505	4.6
2-Butanone	0.461	0.189	0.151	0.134	0.130	0.213	66.1
4-Methyl-2-Pentanone	0.728	0.799	0.933	1.008	0.978	0.889	13.5
2-Hexanone	0.497	0.529	0.638	0.700	0.660	0.605	14.4
Methyl tert-butyl ether	0.432	0.464	0.498	0.515	0.469	0.476	6.7
Isopropylbenzene	5.748	4.737	4.932	4.810	3.993	4.844	12.9
1,2-Dichloroethene (total)	0.278	0.218	0.229	0.232	0.220	0.235	10.5
Xylenes (total)	2.351	1.914	2.005	1.996	1.682	1.990	12.1
Dibromofluoromethane	0.178	0.202	0.188	0.176	0.166	0.182	7.5
1,2-Dichloroethane-d4	0.195	0.219	0.195	0.185	0.170	0.193	9.2
Toluene-d8	3.761	4.376	3.971	3.806	3.421	3.867	9.0
Bromofluorobenzene	1.533	1.709	1.559	1.457	1.264	1.504	10.8

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

INITIAL CALIBRATION REPORT

Instrument ID: hp4.i
Lab File ID: 4a40606.d
Analysis Type: WATER

Injection Date: 06-JUN-2000 11:26
Lab Sample ID: vstd5
Method File: /var/chem/hp4.i/40606d.b/8260bh2

COMPOUND	%RSD
Xylenes (total)	12.1
1,2-Dichloroethene (total)	10.5
Dichlorodifluoromethane	6.7
Chloromethane	17.0
Vinyl Chloride	9.3
Bromomethane	16.2
Chloroethane	16.5
Trichlorofluoromethane	7.8
1,1-Dichloroethene	13.4
Carbon Disulfide	4.6
Acetone	14.5
Methylene Chloride	12.8
trans-1,2-Dichloroethene	10.1
Methyl tert-butyl ether	6.7
1,1-Dichloroethane	10.1
2,2-Dichloropropane	7.8
cis-1,2-dichloroethene	10.9
2-Butanone	66.1
Bromochloromethane	10.6
Chloroform	10.8
1,1,1 Trichloroethane	10.5
Dibromofluoromethane	7.5
Carbon Tetrachloride	8.1
1,1-Dichloropropene	10.7
Benzene	11.7
1,2-Dichloroethane-d4	9.2
1,2-Dichloroethane	14.4
Trichloroethene	10.0
1,2-Dichloropropane	9.7
Dibromomethane	12.6
Bromodichloromethane	8.6
cis-1,3-Dichloropropene	6.6
4-Methyl-2-Pentanone	13.5
Toluene-d8	9.0
Toluene	13.5
trans-1,3-Dichloropropene	8.2
1,1,2-Trichloroethane	13.5
Tetrachloroethene	12.0
1,3-Dichloropropane	13.6

INITIAL CALIBRATION REPORT

Instrument ID: hp4.i
 Lab File ID: 4a40606.d
 Analysis Type: WATER

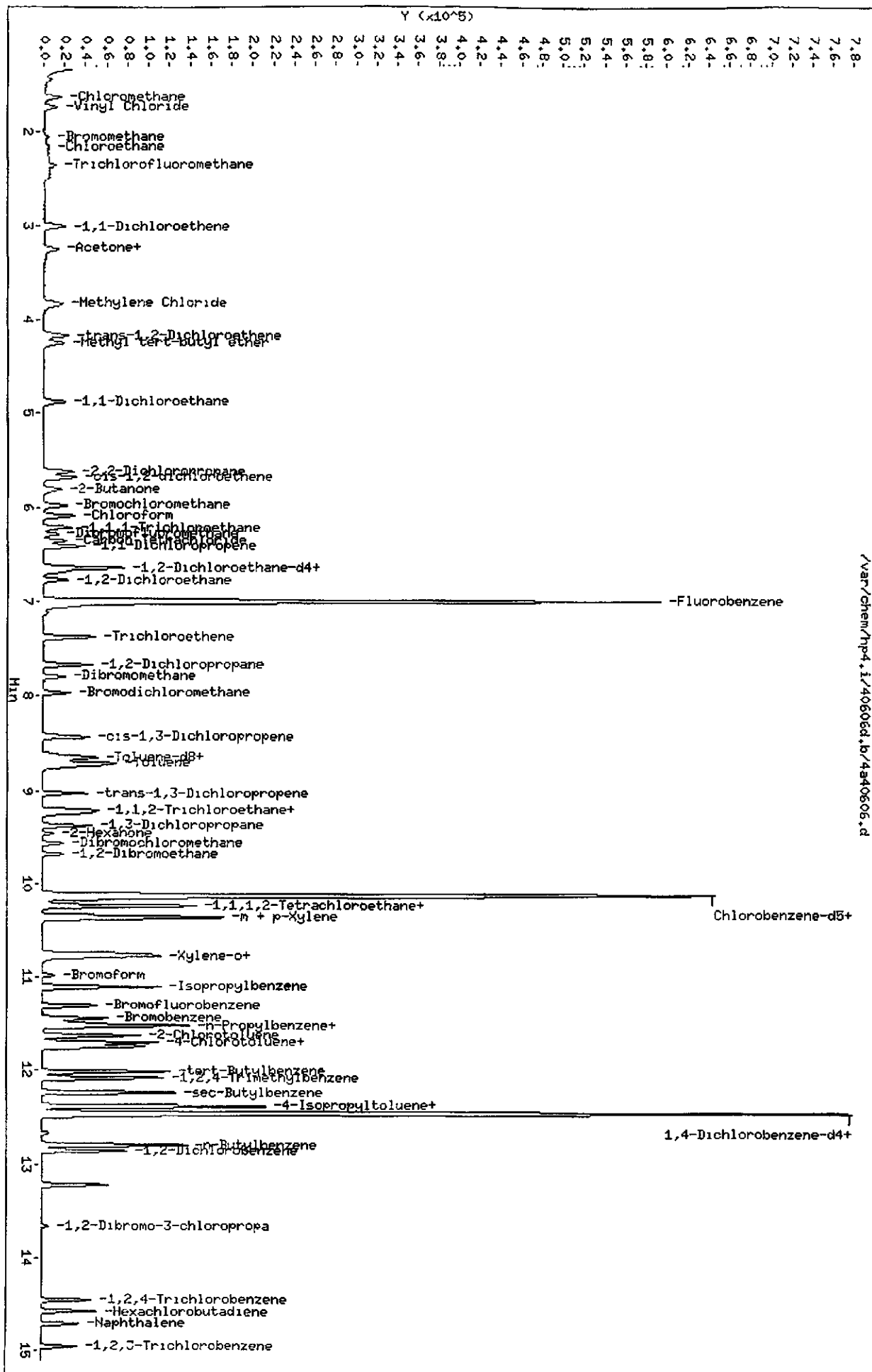
Injection Date: 06-JUN-2000 11:26
 Lab Sample ID: vstd5
 Method File: /var/chem/hp4.i/40606d.b/8260bh2

COMPOUND	%RSD
2-Hexanone	14.4
Dibromochloromethane	7.9
1,2-Dibromoethane	11.1
Chlorobenzene	13.9
Ethylbenzene	15.4
1,1,1,2-Tetrachloroethane	11.9
m + p-Xylene	17.3
Xylene-o	12.1
Styrene	10.7
Bromoform	11.0
Isopropylbenzene	12.9
Bromofluorobenzene	10.8
Bromobenzene	9.5
1,1,2,2-Tetrachloroethane	11.7
n-Propylbenzene	12.4
1,2,3-Trichloropropane	12.2
2-Chlorotoluene	12.0
1,3,5-Trimethylbenzene	13.3
4-Chlorotoluene	15.2
tert-Butylbenzene	12.2
1,2,4-Trimethylbenzene	13.8
sec-Butylbenzene	13.4
4-Isopropyltoluene	16.1
1,3-Dichlorobenzene	17.2
1,4-Dichlorobenzene	16.0
n-Butylbenzene	12.5
1,2-Dichlorobenzene	11.7
1,2-Dibromo-3-chloropropane	13.3
1,2,4-Trichlorobenzene	6.4
Hexachlorobutadiene	10.1
Naphthalene	9.5
1,2,3-Trichlorobenzene	11.2

The average of all %RSD's in the initial calibration is 12.3

Data File: /var/chem/hp4.1/40606d.b/4a40606.d
 Date: 06-JUN-2000 11:26
 Client ID: vstd5
 Sample Info: vstd5 Sm1
 Volume Injected (uL): 5.0
 Column phase: DB 624

Instrument: hp4.1
 Operator: 16328
 Column diameter: 0.18



STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4a40606.d
 Lab Smp Id: vstd5 Client Smp ID: vstd5
 Inj Date : 06-JUN-2000 11:26
 Operator : 16328 Inst ID: hp4.i
 Smp Info : vstd5 5ml
 Misc Info : ,40606d.b
 Comment :
 Method : /var/chem/hp4.i/40606d.b/8260bh2o.m *Ks 6/6/02*
 Meth Date : 06-Jun-2000 13:26 dudeckk Quant Type: ISTD
 Cal Date : 06-JUN-2000 11:26 Cal File: 4a40606.d
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 2-padep.sub
 Target Version: 3.40
 Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	FinalVolume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

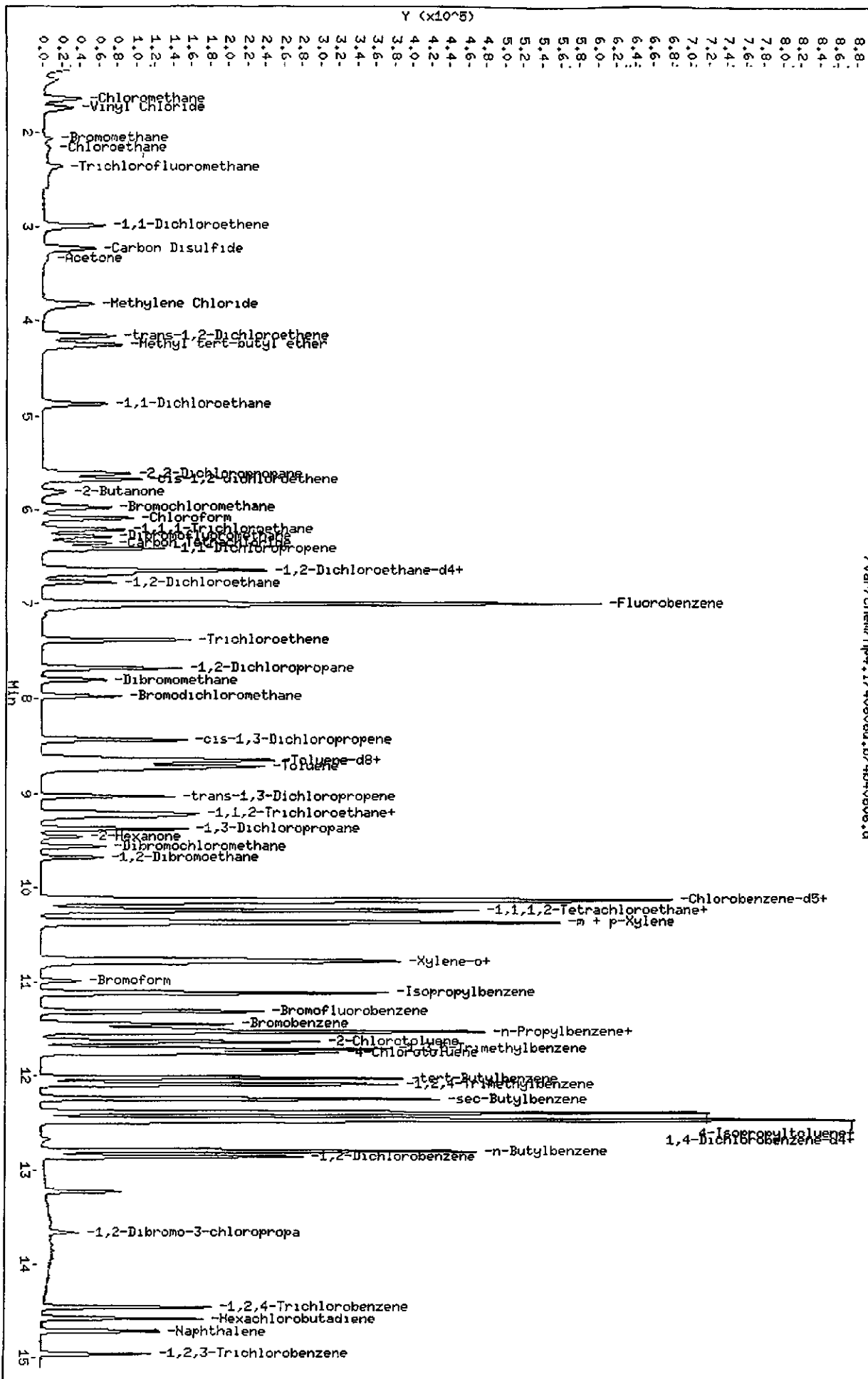
Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
						(ng)	(ng)
=====	=====	==	=====	=====	=====	=====	=====
* 46 Fluorobenzene	96	7.001	7.001	(1.000)	698464		
* 69 Chlorobenzene-d5	119	10.124	10.124	(1.000)	160086		
* 92 1,4-Dichlorobenzene-d4	152	12.460	12.460	(1.000)	247278		
\$ 39 Dibromofluoromethane	113	6.285	6.285	(0.898)	12421	25.0000	24.44
\$ 43 1,2-Dichloroethane-d4	65	6.689	6.689	(0.955)	13603	25.0000	25.25
\$ 59 Toluene-d8	98	8.657	8.657	(0.855)	60210	25.0000	24.31
\$ 80 Bromofluorobenzene	95	11.304	11.304	(1.117)	24543	25.0000	25.48
1 Dichlorodifluoromethane	85	1.450	1.450	(0.207)	8306	25.0000	27.52
2 Chloromethane	50	1.639	1.639	(0.234)	26297	25.0000	32.58
3 Vinyl Chloride	62	1.743	1.743	(0.249)	19489	25.0000	28.85
4 Bromomethane	94	2.055	2.055	(0.294)	2437	25.0000	30.88
5 Chloroethane	64	2.165	2.165	(0.309)	3360	25.0000	32.35
6 Trichlorofluoromethane	101	2.354	2.354	(0.336)	6130	25.0000	28.41
12 1,1-Dichloroethene	96	3.002	3.002	(0.429)	14516	25.0000	30.69
13 Acetone	43	3.326	3.326	(0.475)	4819	25.0000	31.47

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3 241	3 241	(0.463)	34329	25 0000	24 30
18 Methylene Chloride	84	3 828	3 828	(0.547)	17689	25.0000	30 58
19 trans-1,2-Dichloroethene	96	4.170	4 170	(0.596)	17882	25.0000	29 42
20 Methyl tert-butyl ether	73	4 250	4 250	(0.607)	30209	25 0000	22.73
24 1,1-Dichloroethane	63	4 879	4 879	(0.697)	31234	25 0000	29.39
27 2,2 Dichloropropane	77	5 619	5 619	(0.803)	22381	25.0000	28 21
28 cis-1,2 dichloroethene	96	5 680	5.680	(0.811)	20995	25.0000	29 68
M 29 1,2-Dichloroethene (total)	100				38877	50 0000	59.12
30 Bromochloromethane	128	5 980	5.980	(0.854)	9148	25 0000	29 53
31 2-Butanone	43	5 808	5.808	(0.830)	32231	25.0000	54 14
37 Chloroform	83	6 090	6 090	(0.870)	29027	25 0000	29 69
38 1,1,1-Trichloroethane	97	6.218	6 218	(0.888)	22659	25 0000	29 42
40 1,1-Dichloropropene	75	6 414	6 414	(0.916)	23867	25 0000	29 49
41 Carbon Tetrachloride	117	6 359	6 359	(0.908)	16556	25.0000	28 07
42 Benzene	78	6.646	6.646	(0.949)	83639	25 0000	29.97
45 1,2-Dichloroethane	62	6.774	6.774	(0.968)	21234	25 0000	31.08
47 Trichloroethene	130	7 380	7 380	(1.054)	19773	25 0000	29 30
49 1,2-Dichloropropane	63	7.673	7 673	(1.096)	19963	25 0000	29 18
50 Dibromomethane	93	7.795	7.795	(1.114)	10528	25 0000	30.30
53 Bromodichloromethane	83	7.966	7.966	(1.138)	19356	25 0000	28 15
57 cis-1,3-Dichloropropene	75	8 437	8 437	(1.205)	28262	25 0000	27 16
58 4-Methyl-2 Pentanone	43	8 621	8 621	(0.851)	11660	25.0000	20 48
60 Toluene	91	8.718	8 718	(0.861)	92578	25 0000	30.49
61 trans-1,3-Dichloropropene	75	9.030	9.030	(0.892)	24643	25 0000	28.00
63 1,3-Dichloropropane	76	9.379	9 379	(0.926)	31380	25 0000	30 70
64 1,1,2-Trichloroethane	97	9.207	9 207	(0.909)	17614	25 0000	30 67
65 Tetrachloroethene	164	9 238	9 238	(0.912)	14389	25 0000	30.02
66 2-Hexanone	43	9.458	9.458	(0.934)	7963	25 0000	20.56
67 Dibromochloromethane	129	9.562	9.562	(0.944)	12338	25.0000	26 68
68 1,2-Dibromoethane	107	9 678	9 678	(0.956)	16041	25.0000	29 45
70 Chlorobenzene	112	10 149	10 149	(1.002)	60054	25 0000	30 91
71 1,1,1,2-Tetrachloroethane	131	10 241	10 241	(1.011)	15619	25 0000	29.62
72 Ethylbenzene	106	10.241	10 241	(1.011)	33579	25 0000	31 11
73 m + p-Xylene	106	10 363	10 363	(1.024)	81266	50 0000	63 22
74 Xylene o	106	10 754	10 754	(1.062)	37635	25 0000	29.54
M 75 Xylenes (total)	106				118901	25 0000	93.34
76 Styrene	104	10.779	10.779	(1.065)	58977	25.0000	28 19
77 Bromoform	173	10 980	10 980	(1.085)	6143	25.0000	24 41
78 Isopropylbenzene	105	11 109	11 109	(1.097)	92015	25 0000	29 66
79 Bromobenzene	156	11 445	11 445	(0.919)	20623	25 0000	28.78
81 n-Propylbenzene	120	11 518	11 518	(0.924)	28596	25 0000	29 94
82 2-Chlorotoluene	126	11 628	11 628	(0.933)	23644	25 0000	30 05
83 1,1,2,2-Tetrachloroethane	83	11 488	11 488	(0.922)	22626	25 0000	29.61
84 1,2,3-Trichloropropane	110	11.537	11.537	(0.926)	6316	25.0000	29.57
85 4 Chlorotoluene	126	11.751	11 751	(0.943)	25254	25.0000	31 25
86 1,3,5-Trimethylbenzene	105	11 708	11 708	(0.940)	79680	25 0000	30 44
87 tert-Butylbenzene	119	12 014	12 014	(0.964)	69851	25 0000	30 03

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
	()	()	()	()	()	(ng)	(ng)
=====	=====	==	=====	=====	=====	=====	=====
88 1,2,4 Trimethylbenzene	105	12.081	12.081	(0.970)	82149	25.0000	30.55
89 sec-Butylbenzene	105	12.240	12.240	(0.982)	107623	25.0000	30.40
90 4-Isopropyltoluene	119	12.386	12.386	(0.994)	87049	25.0000	30.90
91 1,3-Dichlorobenzene	146	12.386	12.386	(0.994)	45082	25.0000	31.78
93 1,4-Dichlorobenzene	146	12.478	12.478	(1.001)	46351	25.0000	31.84
94 n-Butylbenzene	91	12.796	12.796	(1.027)	90255	25.0000	30.32
95 1,2-Dichlorobenzene	146	12.857	12.857	(1.032)	40377	25.0000	29.88
96 1,2-Dibromo-3-chloropropane	157	13.658	13.658	(1.096)	1958	25.0000	20.28
97 1,2,4-Trichlorobenzene	180	14.459	14.459	(1.160)	16659	25.0000	25.98
98 Hexachlorobutadiene	225	14.581	14.581	(1.170)	9443	25.0000	28.52
99 Naphthalene	128	14.710	14.710	(1.181)	33666	25.0000	26.08
100 1,2,3-Trichlorobenzene	180	14.960	14.960	(1.201)	12794	25.0000	28.63

Data File: /var/chem/hp4.1/40606d.b/4b40606.d
 Date: 06-JUN-2000 11:53
 Client ID: vstd20
 Sample Info: vstd20 5ml
 Volume Injected (ul): 5.0
 Column phase: DB 624

Instrument: hp4.1
 Operator: 16328
 Column diameter: 0.18



STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.1/40606d.b/4b40606.d
 Lab Smp Id: vstd20 Client Smp ID: vstd20
 Inj Date : 06-JUN-2000 11:53
 Operator : 16328 Inst ID: hp4.1
 Smp Info : vstd20 5ml
 Misc Info : ,40606d.b
 Comment :
 Method : /var/chem/hp4.1/40606d.b/8260bh2o.m
 Meth Date : 06-Jun-2000 13:26 dudeckk Quant Type: ISTD
 Cal Date : 06-JUN-2000 11:26 Cal File: 4a40606.d
 Als bottle: 3 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 2-padep.sub
 Target Version: 3.40
 Processing Host: hpuxcs21

K_c/K_v

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
								(ng)	(ng)
* 46 Fluorobenzene	96		6 998	6 998	(1 000)		713945		
* 69 Chlorobenzene-d5	119		10 122	10 122	(1 000)		164774		
* 92 1,4-Dichlorobenzene-d4	152		12 458	12 458	(1.000)		262689		
\$ 39 Dibromofluoromethane	113		6.283	6.283	(0 898)		57610	100 000	110.9
\$ 43 1,2-Dichloroethane-d4	65		6 687	6 687	(0 955)		62567	100 000	113.6
\$ 59 Toluene d8	98		8 649	8.649	(0.854)		288413	100.000	113 2
\$ 80 Bromofluorobenzene	95		11.308	11 308	(1 117)		112625	100 000	113.6
1 Dichlorodifluoromethane	85		1.448	1.448	(0 207)		28300	100 000	91.75
2 Chloromethane	50		1 649	1.649	(0 236)		76585	100.000	92.82
3 Vinyl Chloride	62		1 747	1 747	(0 250)		62195	100.000	90 07
4 Bromomethane	94		2.065	2 065	(0 295)		6667	100 000	82.65
5 Chloroethane	64		2.157	2 157	(0 308)		9568	100 000	90 13
6 Trichlorofluoromethane	101		2 358	2 358	(0 337)		21049	100 000	95 44
12 1,1-Dichloroethene	96		2 988	2 988	(0 427)		46664	100 000	96.51
13 Acetone	43		3 337	3 337	(0 477)		14321	100 000	91 50

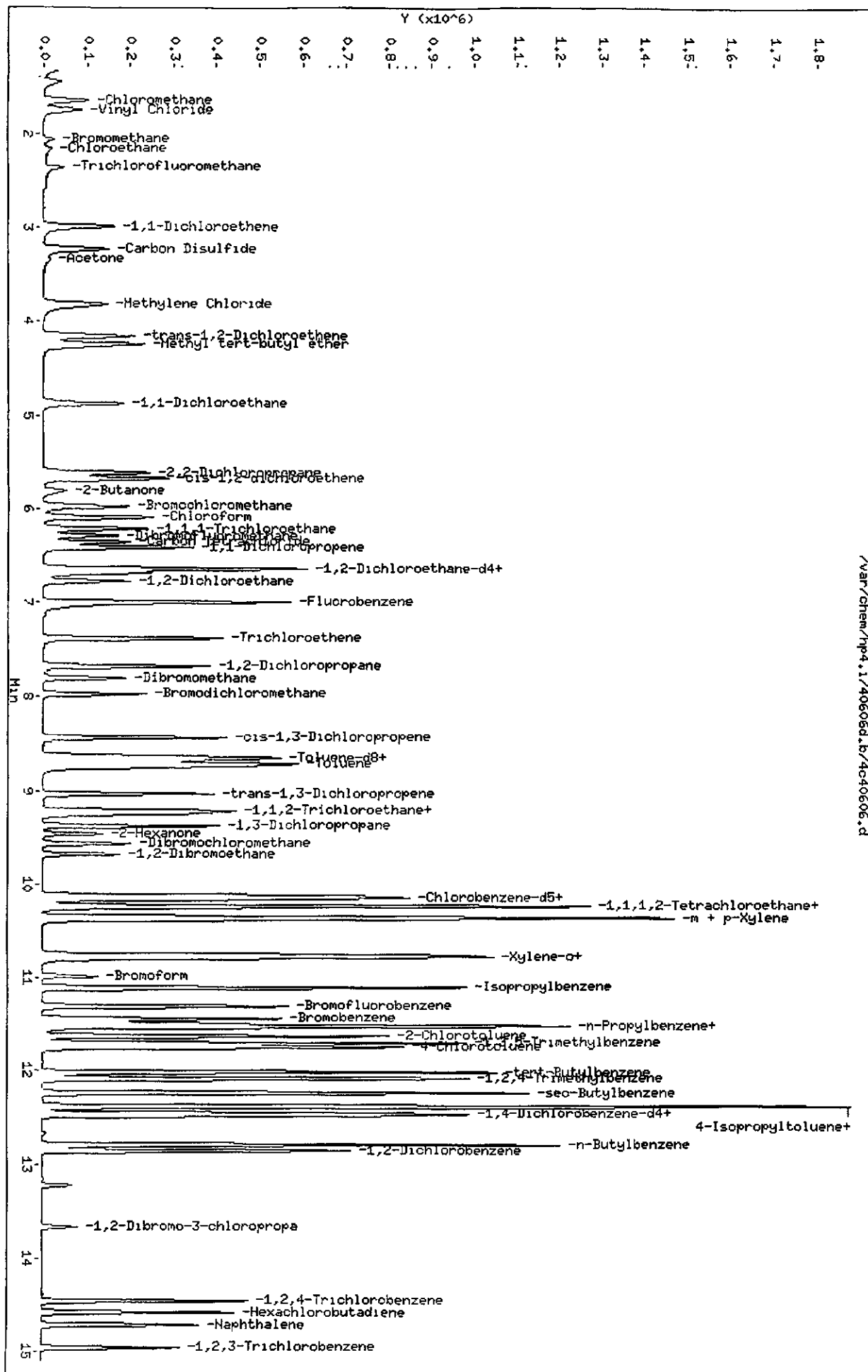
Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.227	3.227	(0.461)	142555	100.000	98.73
18 Methylene Chloride	84	3.820	3.820	(0.546)	56237	100.000	95.11
19 trans-1,2-Dichloroethene	96	4.156	4.156	(0.594)	58420	100.000	94.02
20 Methyl tert-butyl ether	73	4.247	4.247	(0.607)	132372	100.000	97.45
24 1,1-Dichloroethane	63	4.871	4.871	(0.696)	100985	100.000	92.97
27 2,2 Dichloropropane	77	5.611	5.611	(0.802)	74657	100.000	92.07
28 cis-1,2-dichloroethene	96	5.678	5.678	(0.811)	65848	100.000	91.07
M 29 1,2-Dichloroethene (total)	100				124268	200.000	184.9
30 Bromochloromethane	128	5.978	5.978	(0.854)	29082	100.000	91.85
31 2-Butanone	43	5.806	5.806	(0.830)	53969	100.000	88.69
37 Chloroform	83	6.088	6.088	(0.870)	93226	100.000	93.28
38 1,1,1-Trichloroethane	97	6.210	6.210	(0.887)	71717	100.000	91.11
40 1,1 Dichloropropene	75	6.412	6.412	(0.916)	77215	100.000	93.35
41 Carbon Tetrachloride	117	6.357	6.357	(0.908)	54948	100.000	91.14
42 Benzene	78	6.644	6.644	(0.949)	268831	100.000	94.24
45 1,2-Dichloroethane	62	6.772	6.772	(0.968)	66588	100.000	95.37
47 Trichloroethene	130	7.378	7.378	(1.054)	65077	100.000	94.34
49 1,2-Dichloropropane	63	7.671	7.671	(1.096)	65468	100.000	93.61
50 Dibromomethane	93	7.799	7.799	(1.114)	32677	100.000	92.01
53 Bromodichloromethane	83	7.971	7.971	(1.139)	62777	100.000	89.33
57 cis-1,3-Dichloropropene	75	8.435	8.435	(1.205)	97213	100.000	91.41
58 4 Methyl-2-Pentanone	43	8.619	8.619	(0.851)	52672	100.000	89.87
60 Toluene	91	8.716	8.716	(0.861)	300316	100.000	96.09
61 trans-1,3-Dichloropropene	75	9.028	9.028	(0.892)	83269	100.000	91.92
63 1,3-Dichloropropane	76	9.377	9.377	(0.926)	100317	100.000	95.34
64 1,1,2-Trichloroethane	97	9.205	9.205	(0.909)	55179	100.000	93.34
65 Tetrachloroethene	164	9.236	9.236	(0.912)	46657	100.000	94.57
66 2-Hexanone	43	9.462	9.462	(0.935)	34867	100.000	87.45
67 Dibromochloromethane	129	9.566	9.566	(0.945)	41748	100.000	87.70
68 1,2 Dibromoethane	107	9.682	9.682	(0.957)	52732	100.000	94.07
70 Chlorobenzene	112	10.153	10.153	(1.003)	188666	100.000	94.34
71 1,1,1,2-Tetrachloroethane	131	10.239	10.239	(1.011)	51215	100.000	94.37
72 Ethylbenzene	106	10.232	10.232	(1.011)	108106	100.000	97.31
73 m + p-Xylene	106	10.361	10.361	(1.024)	261213	200.000	197.4
74 Xylene o	106	10.752	10.752	(1.062)	126139	100.000	96.20
M 75 Xylenes (total)	106				387352	100.000	295.4
76 Styrene	104	10.783	10.783	(1.065)	208171	100.000	96.66
77 Bromoform	173	10.984	10.984	(1.085)	21664	100.000	83.64
78 Isopropylbenzene	105	11.107	11.107	(1.097)	312212	100.000	97.79
79 Bromobenzene	156	11.443	11.443	(0.919)	68222	100.000	89.64
81 n-Propylbenzene	120	11.522	11.522	(0.925)	97042	100.000	95.63
82 2-Chlorotoluene	126	11.626	11.626	(0.933)	77845	100.000	93.13
83 1,1,1,2,2-Tetrachloroethane	83	11.486	11.486	(0.922)	75655	100.000	93.19
84 1,2,3-Trichloropropane	110	11.535	11.535	(0.926)	21629	100.000	95.31
85 4 Chlorotoluene	126	11.749	11.749	(0.943)	81239	100.000	94.62
86 1,3,5-Trimethylbenzene	105	11.706	11.706	(0.940)	265220	100.000	95.37
87 tert-Butylbenzene	119	12.018	12.018	(0.965)	229420	100.000	92.84

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
88 1,2,4-Trimethylbenzene	105	12 079	12 079	(0 970)	274962	100 000	96 26
89 sec-Butylbenzene	105	12 238	12 238	(0.982)	360378	100.000	95 83
90 4 Isopropyltoluene	119	12 384	12.384	(0 994)	297317	100.000	99 33
91 1,3-Dichlorobenzene	146	12.384	12 384	(0 994)	145913	100 000	96 83
93 1,4-Dichlorobenzene	146	12 482	12 482	(1 002)	146826	100 000	94 94
94 n-Butylbenzene	91	12 794	12 794	(1 027)	301969	100.000	95.49
95 1,2-Dichlorobenzene	146	12 855	12 855	(1.032)	137355	100 000	95.70
96 1,2 Dibromo-3-chloropropane	157	13 662	13 662	(1 097)	9908	100 000	96 58
97 1,2,4-Trichlorobenzene	180	14 457	14.457	(1 160)	61836	100 000	90 78
98 Hexachlorobutadiene	225	14 579	14 579	(1 170)	31657	100 000	90 01
99 Naphthalene	128	14 713	14 713	(1.181)	121189	100.000	88.39
100 1,2,3 Trichlorobenzene	180	14.958	14 958	(1 201)	40464	100.000	85 23

Data File: /var/chem/hp4.1/40606d.b/4060606.d
 Date: 06-JUN-2000 12:18
 Client ID: vstd50
 Sample Info: vstd50 5ml
 Volume Injected (uL): 5.0
 Column phase: DB 624

Instrument: hp4.1
 Operator: 16328
 Column diameter: 0.18

/var/chem/hp4.1/40606d.b/4060606.d



660 138

Data File: /var/chem/hp4.i/40606d.b/4c40606.d
 Report Date: 06-Jun-2000 13:27

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4c40606.d
 Lab Smp Id: vstd50 Client Smp ID: vstd50
 Inj Date : 06-JUN-2000 12:18
 Operator : 16328 Inst ID: hp4.i
 Smp Info : vstd50 5ml
 Misc Info : ,40606d.b
 Comment :
 Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
 Meth Date : 06-Jun-2000 13:26 dudeckk Quant Type: ISTD
 Cal Date : 06-JUN-2000 11:26 Cal File: 4a40606.d
 Als bottle: 4 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 2-padep.sub
 Target Version: 3.40
 Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	FinalVolume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

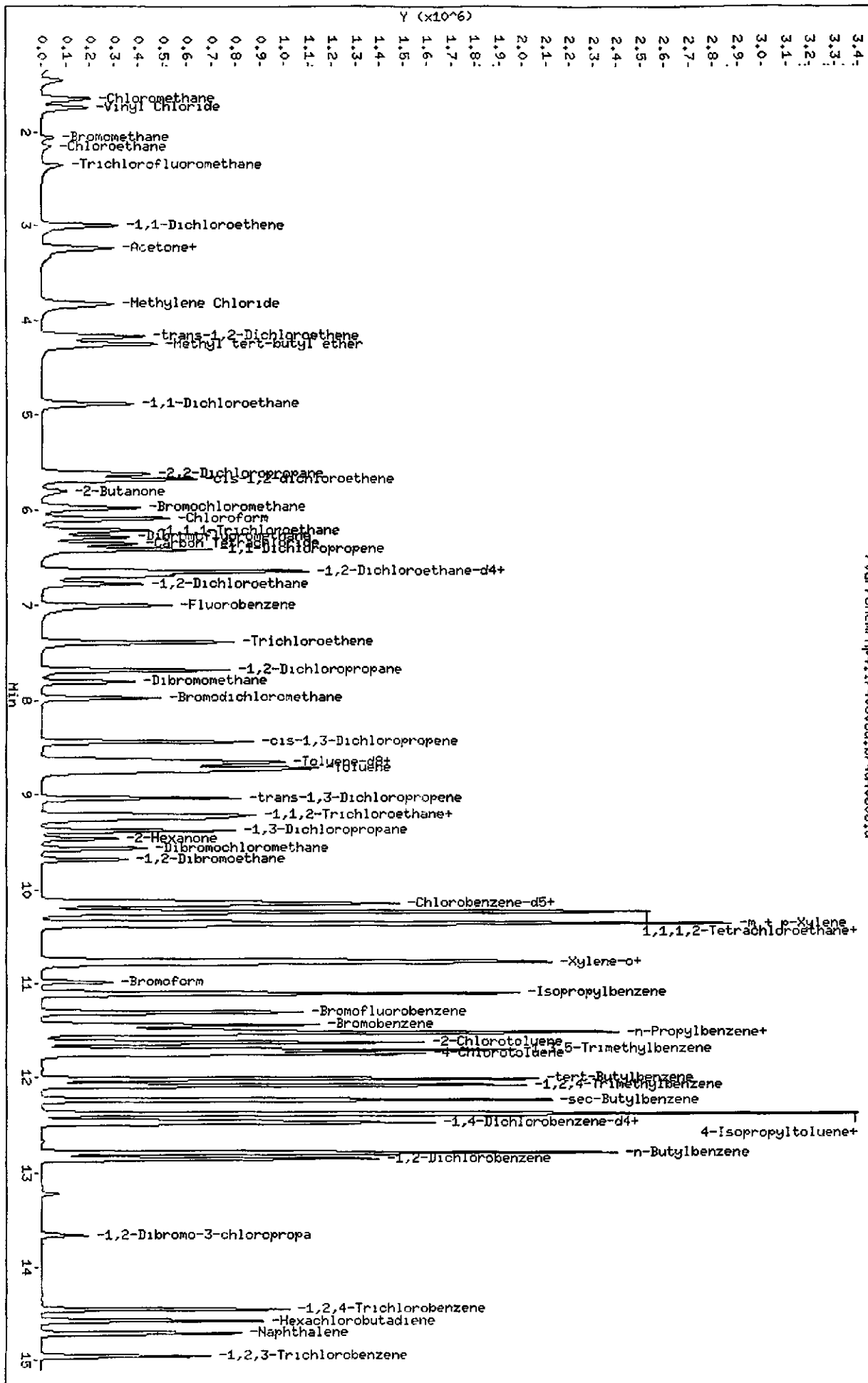
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL AMT (ng)	ON-COL (ng)
* 46 Fluorobenzene	96	6.998	6.998	(1.000)	726635		
* 69 Chlorobenzene-d5	119	10.122	10.122	(1.000)	170871		
* 92 1,4-Dichlorobenzene-d4	152	12.457	12.457	(1.000)	265089		
\$ 39 Dibromofluoromethane	113	6.289	6.289	(0.899)	136662	250.000	258.4
\$ 43 1,2-Dichloroethane-d4	65	6.686	6.686	(0.955)	141498	250.000	252.5
\$ 59 Toluene-d8	98	8.655	8.655	(0.855)	678594	250.000	256.7
\$ 80 Bromofluorobenzene	95	11.308	11.308	(1.117)	266355	250.000	259.0
1 Dichlorodifluoromethane	85	1.453	1.453	(0.208)	77470	250.000	246.8
2 Chloromethane	50	1.649	1.649	(0.236)	197770	250.000	235.5
3 Vinyl Chloride	62	1.741	1.741	(0.249)	170377	250.000	242.4
4 Bromomethane	94	2.065	2.065	(0.295)	18065	250.000	220.0
5 Chloroethane	64	2.163	2.163	(0.309)	25199	250.000	233.2
6 Trichlorofluoromethane	101	2.358	2.358	(0.337)	52886	250.000	235.6
12 1,1-Dichloroethene	96	2.994	2.994	(0.428)	119649	250.000	243.1
13 Acetone	43	3.349	3.349	(0.478)	37818	250.000	237.4

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3 232	3 232	(0 462)	383961	250.000	261 3
18 Methylene Chloride	84	3 819	3 819	(0 546)	145986	250 000	242 6
19 trans 1,2-Dichloroethene	96	4.162	4 162	(0 595)	153324	250 000	242 5
20 Methyl tert butyl ether	73	4.247	4 247	(0 607)	362279	250 000	262 0
24 1,1-Dichloroethane	63	4 877	4 877	(0 697)	270168	250.000	244 4
27 2,2-Dichloropropane	77	5 617	5 617	(0 803)	202514	250.000	245 4
28 cis-1,2 dichloroethene	96	5 678	5 678	(0 811)	179199	250 000	243 5
M 29 1,2-Dichloroethene (total)	100				332523	500 000	486 0
30 Bromochloromethane	128	5 983	5 983	(0 855)	78659	250 000	244 1
31 2-Butanone	43	5 812	5.812	(0.831)	109703	250 000	177.1
37 Chloroform	83	6.093	6 093	(0 871)	246766	250 000	242 6
38 1,1,1 Trichloroethane	97	6 216	6 216	(0 888)	195793	250 000	244.4
40 1,1-Dichloropropene	75	6.411	6 411	(0 916)	206556	250.000	245.4
41 Carbon Tetrachloride	117	6 356	6 356	(0 908)	151879	250.000	247 5
42 Benzene	78	6.644	6.644	(0.949)	710932	250.000	244 9
45 1,2-Dichloroethane	62	6.772	6.772	(0 968)	172761	250 000	243 1
47 Trichloroethene	130	7 383	7 383	(1.055)	169808	250.000	241.9
49 1,2-Dichloropropane	63	7.671	7 671	(1.096)	173794	250 000	244.2
50 Dibromomethane	93	7.799	7 799	(1 114)	89044	250.000	246 3
53 Bromodichloromethane	83	7 970	7 970	(1 139)	176885	250 000	247 3
57 cis-1,3-Dichloropropene	75	8 435	8 435	(1 205)	269631	250.000	249 1
58 4-Methyl-2-Pentanone	43	8 618	8 618	(0 851)	159465	250 000	262 4
60 Toluene	91	8.716	8 716	(0 861)	801711	250 000	247 4
61 trans-1,3-Dichloropropene	75	9.028	9.028	(0 892)	233736	250.000	248 8
63 1,3-Dichloropropane	76	9 376	9 376	(0 926)	264361	250.000	242.3
64 1,1,2-Trichloroethane	97	9 211	9 211	(0.910)	149402	250 000	243 7
65 Tetrachloroethene	164	9 242	9 242	(0 913)	124169	250 000	242 7
66 2-Hexanone	43	9.456	9.456	(0 934)	109074	250 000	263 8
67 Dibromochloromethane	129	9 566	9.566	(0.945)	122505	250.000	248 2
68 1,2-Dibromoethane	107	9 682	9 682	(0.957)	143948	250 000	247 6
70 Chlorobenzene	112	10 153	10 153	(1.003)	502582	250 000	242 3
71 1,1,1,2-Tetrachloroethane	131	10.244	10.244	(1 012)	140698	250.000	250.0
72 Ethylbenzene	106	10 238	10 238	(1 011)	285339	250.000	247 7
73 m + p-Xylene	106	10 361	10 361	(1.024)	690683	500 000	503 4
74 Xylene-o	106	10.758	10 758	(1 063)	342541	250 000	251 9
M 75 Xylenes (total)	106				1033224	250.000	759 9
76 Styrene	104	10 782	10.782	(1 065)	578786	250.000	259 2
77 Bromoform	173	10 984	10 984	(1 085)	68068	250 000	253 4
78 Isopropylbenzene	105	11 106	11 106	(1 097)	842711	250 000	254.5
79 Bromobenzene	156	11 449	11.449	(0 919)	188559	250 000	245.5
81 n-Propylbenzene	120	11 522	11.522	(0 925)	255228	250 000	249 2
82 2-Chlorotoluene	126	11 632	11 632	(0.934)	208404	250 000	247 1
83 1,1,2,2 Tetrachloroethane	83	11 485	11 485	(0.922)	202413	250 000	247 1
84 1,2,3-Trichloropropane	110	11 534	11 534	(0 926)	57138	250 000	249.5
85 4-Chlorotoluene	126	11 748	11 748	(0 943)	215285	250 000	248.5
86 1,3,5-Trimethylbenzene	105	11 705	11 705	(0 940)	696619	250 000	248 2
87 Tert-Butylbenzene	119	12 017	12 017	(0 965)	619640	250 000	248 5

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
88 1,2,4 Trimethylbenzene	105	12.084	12.084	(0.970)	715351	250.000	248.2
89 sec Butylbenzene	105	12.237	12.237	(0.982)	946530	250.000	249.4
90 4-Isopropyltoluene	119	12.384	12.384	(0.994)	766024	250.000	253.6
91 1,3-Dichlorobenzene	146	12.384	12.384	(0.994)	382769	250.000	251.7
93 1,4-Dichlorobenzene	146	12.482	12.482	(1.002)	379253	250.000	243.0
94 n-Butylbenzene	91	12.794	12.794	(1.027)	776005	250.000	243.2
95 1,2-Dichlorobenzene	146	12.855	12.855	(1.032)	358029	250.000	247.2
96 1,2-Dibromo-3-chloropropane	157	13.662	13.662	(1.097)	26552	250.000	256.5
97 1,2,4 Trichlorobenzene	180	14.463	14.463	(1.161)	165280	250.000	240.4
98 Hexachlorobutadiene	225	14.579	14.579	(1.170)	80652	250.000	227.2
99 Naphthalene	128	14.713	14.713	(1.181)	334725	250.000	241.9
100 1,2,3-Trichlorobenzene	180	14.958	14.958	(1.201)	112149	250.000	234.1

Data File: /var/chem/hp4.1/40606d.b/4d40606.d
 Date: 06-JUN-2000 12:42
 Client ID: vstd100
 Sample Info: vstd100 5ml
 Volume Injected (ul): 5.0
 Column phase: DB 624

Instrument: hp4.1
 Operator: 16328
 Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4d40606.d
Report Date: 06-Jun-2000 13:27

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STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4d40606.d
Lab Smp Id: vstd100 Client Smp ID: vstd100
Inj Date : 06-JUN-2000 12:42
Operator : 16328 Inst ID: hp4.i
Smp Info : vstd100 5ml
Misc Info : ,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 13:27 dudeck Quant Type: ISTD
Cal Date : 06-JUN-2000 11:26 Cal File: 4a40606.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-padep.sub
Target Version: 3.40
Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	FinalVolume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ng)	ON-COL (ng)
* 46 Fluorobenzene	96		7 001	7 001	(1.000)	745026			
* 69 Chlorobenzene d5	119		10 125	10 125	(1 000)	174098			
* 92 1,4 Dichlorobenzene d4	152		12 461	12.461	(1 000)	260775			
\$ 39 Dibromofluoromethane	113		6.286	6.286	(0 898)	262437	500.000	484.0	
\$ 43 1,2 Dichloroethane d4	65		6 690	6 690	(0 955)	275963	500 000	480 3	
\$ 59 Toluene-d8	98		8 652	8 652	(0 854)	1325209	500 000	492 1	
\$ 80 Bromofluorobenzene	95		11 311	11 311	(1 117)	507190	500 000	484 1	
1 Dichlorodifluoromethane	85		1 450	1 450	(0 207)	163690	500.000	508.5	
2 Chloromethane	50		1 652	1 652	(0.236)	398018	500 000	462.3	
3 Vinyl Chloride	62		1 744	1 744	(0.249)	353867	500.000	491 1	
4 Bromomethane	94		2.062	2 062	(0 294)	41525	500 000	493 3	
5 Chloroethane	64		2 160	2.160	(0 308)	51622	500 000	466 0	
6 Trichlorofluoromethane	101		2 361	2 361	(0 337)	112567	500.000	489.1	
12 1,1-Dichloroethene	96		3 003	3 003	(0.429)	243830	500 000	483 2	
13 Acetone	43		3.333	3 333	(0 476)	77513	500 000	474 6	

Data File: /var/chem/hp4.1/40606d.b/4d40606.d
Report Date: 06-Jun-2000 13:27

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.242	3.242	(0.463)	790980	500.000	525.0
18 Methylene Chloride	84	3.822	3.822	(0.546)	296636	500.000	480.8
19 trans-1,2-Dichloroethene	96	4.165	4.165	(0.595)	318507	500.000	491.2
20 Methyl tert butyl ether	73	4.250	4.250	(0.607)	766930	500.000	541.1
24 1,1-Dichloroethane	63	4.880	4.880	(0.697)	558364	500.000	492.6
27 2,2-Dichloropropane	77	5.620	5.620	(0.803)	426060	500.000	503.5
28 cis-1,2-dichloroethene	96	5.681	5.681	(0.811)	374402	500.000	496.2
M 29 1,2-Dichloroethene (total)	100				692909	1000.00	987.8
30 Bromochloromethane	128	5.980	5.980	(0.854)	163682	500.000	495.4
31 2-Butanone	43	5.809	5.809	(0.830)	200399	500.000	315.6
37 Chloroform	83	6.090	6.090	(0.870)	514240	500.000	493.0
38 1,1,1-Trichloroethane	97	6.219	6.219	(0.888)	411509	500.000	501.0
40 1,1-Dichloropropene	75	6.414	6.414	(0.916)	430454	500.000	498.7
41 Carbon Tetrachloride	117	6.359	6.359	(0.908)	322357	500.000	512.4
42 Benzene	78	6.647	6.647	(0.949)	1464299	500.000	491.9
45 1,2-Dichloroethane	62	6.775	6.775	(0.968)	354464	500.000	486.5
47 Trichloroethene	130	7.386	7.386	(1.055)	357698	500.000	496.9
49 1,2-Dichloropropane	63	7.674	7.674	(1.096)	361701	500.000	495.6
50 Dibromomethane	93	7.796	7.796	(1.113)	183337	500.000	494.7
53 Bromodichloromethane	83	7.967	7.967	(1.138)	376548	500.000	513.4
57 cis-1,3-Dichloropropene	75	8.438	8.438	(1.205)	574516	500.000	517.7
58 4-Methyl-2-Pentanone	43	8.621	8.621	(0.851)	350986	500.000	566.8
60 Toluene	91	8.719	8.719	(0.861)	1618296	500.000	490.1
61 trans-1,3-Dichloropropene	75	9.031	9.031	(0.892)	495569	500.000	517.8
63 1,3-Dichloropropane	76	9.379	9.379	(0.926)	549128	500.000	494.0
64 1,1,2-Trichloroethane	97	9.208	9.208	(0.909)	310195	500.000	496.6
65 Tetrachloroethene	164	9.239	9.239	(0.912)	260364	500.000	499.5
66 2-Hexanone	43	9.459	9.459	(0.934)	243744	500.000	578.6
67 Dibromochloromethane	129	9.569	9.569	(0.945)	269388	500.000	535.6
68 1,2-Dibromoethane	107	9.679	9.679	(0.956)	298846	500.000	504.6
70 Chlorobenzene	112	10.156	10.156	(1.003)	1036501	500.000	490.5
71 1,1,1,2-Tetrachloroethane	131	10.241	10.241	(1.011)	289484	500.000	504.8
72 Ethylbenzene	106	10.235	10.235	(1.011)	573240	500.000	488.4
73 m + p-Xylene	106	10.364	10.364	(1.024)	1344023	1000.00	961.4
74 Xylene o	106	10.755	10.755	(1.062)	694940	500.000	501.6
M 75 Xylenes (total)	106				2038963	500.000	1472
76 Styrene	104	10.785	10.785	(1.065)	1172818	500.000	515.4
77 Bromoform	173	10.981	10.981	(1.085)	155921	500.000	569.7
78 Isopropylbenzene	105	11.109	11.109	(1.097)	1674721	500.000	496.5
79 Bromobenzene	156	11.446	11.446	(0.919)	383204	500.000	507.2
81 n-Propylbenzene	120	11.525	11.525	(0.925)	499384	500.000	495.7
82 2-Chlorotoluene	126	11.635	11.635	(0.934)	409269	500.000	493.2
83 1,1,2,2-Tetrachloroethane	83	11.489	11.489	(0.922)	410671	500.000	509.6
84 1,2,3-Trichloropropane	110	11.537	11.537	(0.926)	114746	500.000	509.4
85 4-Chlorotoluene	126	11.751	11.751	(0.943)	413800	500.000	485.5
86 1,3,5-Trimethylbenzene	105	11.709	11.709	(0.940)	1355604	500.000	491.0
87 tert-Butylbenzene	119	12.014	12.014	(0.964)	1219099	500.000	497.0

660 144

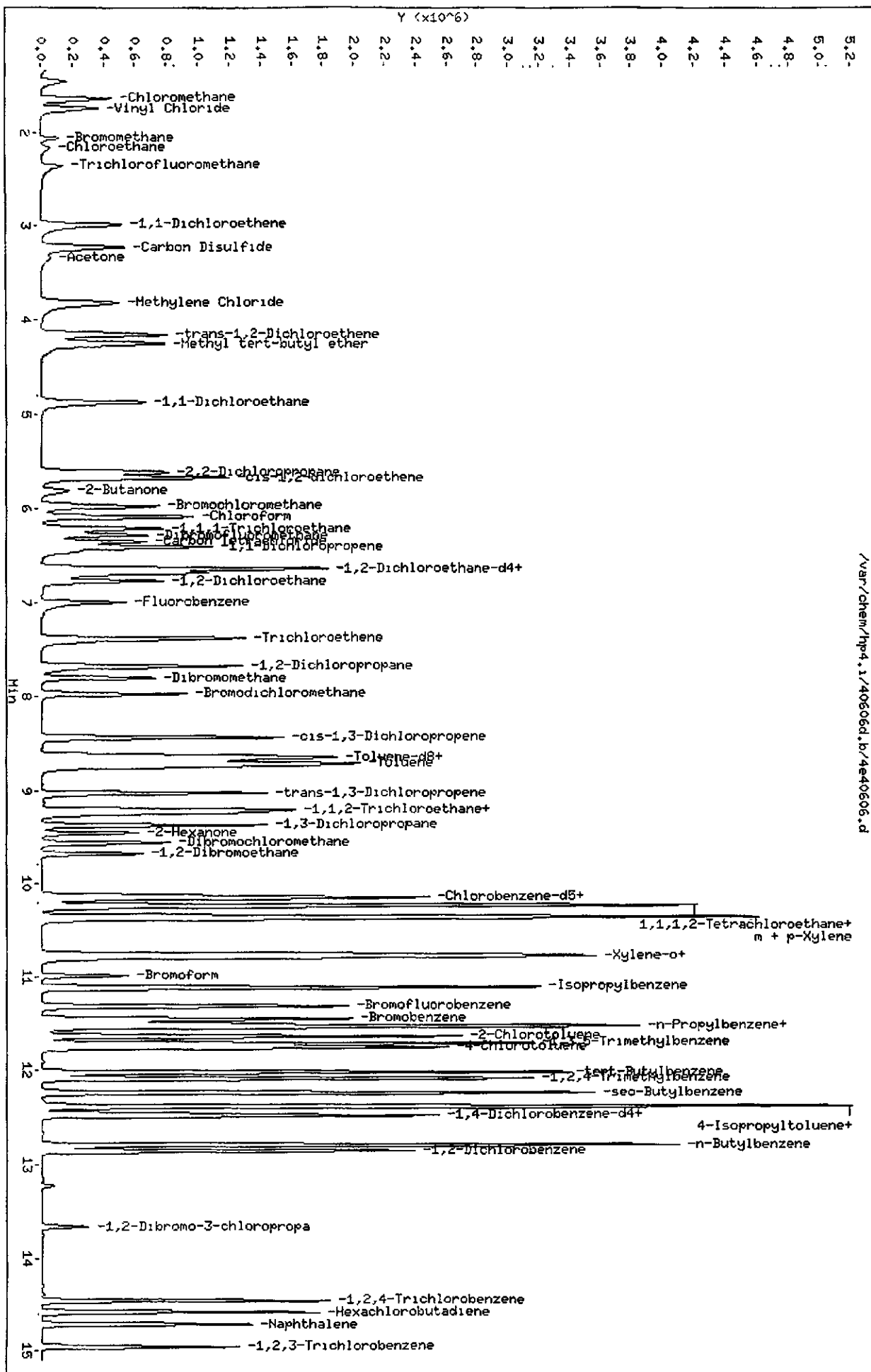
Data File: /var/chem/hp4.i/40606d.b/4d40606.d
Report Date: 06-Jun-2000 13:27

Page 3

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
88 1,2,4 Trimethylbenzene	105	12.081	12.081	(0.970)	1389420	500.000	490.0
89 sec-Butylbenzene	105	12.240	12.240	(0.982)	1831646	500.000	490.6
90 4 Isopropyltoluene	119	12.387	12.387	(0.994)	1445300	500.000	486.4
91 1,3-Dichlorobenzene	146	12.381	12.381	(0.994)	715958	500.000	478.6
93 1,4-Dichlorobenzene	146	12.485	12.485	(1.002)	733582	500.000	477.8
94 n-Butylbenzene	91	12.797	12.797	(1.027)	1531697	500.000	487.9
95 1,2-Dichlorobenzene	146	12.858	12.858	(1.032)	697072	500.000	489.2
96 1,2-Dibromo-3-chloropropane	157	13.659	13.659	(1.096)	60101	500.000	590.1
97 1,2,4 Trichlorobenzene	180	14.460	14.460	(1.160)	359017	500.000	531.0
98 Hexachlorobutadiene	225	14.582	14.582	(1.170)	174599	500.000	500.1
99 Naphthalene	128	14.710	14.710	(1.181)	773235	500.000	568.1
100 1,2,3-Trichlorobenzene	180	14.961	14.961	(1.201)	248361	500.000	527.0

Data File: /var/chem/hp4.1/40606d.b/4e40606.d
 Date: 06-JUN-2000 13:09
 Client ID: vstd200
 Sample Info: vstd200 5ml
 Volume Injected (ul): 5.0
 Column phase: DB 624

Instrument: hp4.1
 Operator: 16328
 Column diameter: 0.18



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Data File: /var/chem/hp4.i/40606d.b/4e40606.d
Report Date: 06-Jun-2000 13:27

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4e40606.d
Lab Smp Id: vstd200 Client Smp ID: vstd200
Inj Date : 06-JUN-2000 13:09
Operator : 16328 Inst ID: hp4.i
Smp Info : vstd200 5ml
Misc Info : ,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 13:27 dudeckk Quant Type: ISTD
Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-padep.sub
Target Version: 3.40
Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/V_i

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	FinalVolume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng)	ON COL (ng)
* 46 Fluorobenzene	96		7 000	7 000	(1.000)	749614		
* 69 Chlorobenzene-d5	119		10 130	10 130	(1 000)	178155		
* 92 1,4-Dichlorobenzene-d4	152		12.459	12.459	(1 000)	247348		
\$ 39 Dibromofluoromethane	113		6.290	6 290	(0 899)	497464	1000 00	911.9
\$ 43 1,2-Dichloroethane-d4	65		6 688	6 688	(0.955)	510311	1000 00	882 8
\$ 59 Toluene-d8	98		8.650	8 650	(0 854)	2438053	1000 00	884 7
\$ 80 Bromofluorobenzene	95		11 309	11.309	(1 116)	900917	1000 00	840 4
1 Dichlorodifluoromethane	85		1 455	1 455	(0 208)	316550	1000.00	977 4
2 Chloromethane	50		1 644	1 644	(0 235)	781533	1000.00	902 1
3 Vinyl Chloride	62		1 748	1 748	(0 250)	720178	1000 00	993 3
4 Bromomethane	94		2 066	2 066	(0 295)	90764	1000 00	1072
5 Chloroethane	64		2.158	2.158	(0 308)	104744	1000.00	939 7
6 Trichlorofluoromethane	101		2 366	2 366	(0 338)	228931	1000.00	988 6
12 1,1-Dichloroethene	96		2 989	2 989	(0 427)	440822	1000 00	868 3
13 Acetone	43		3 350	3 350	(0 479)	152391	1000 00	927 3

Data File: /var/chem/hp4.i/40606d.b/4e40606.d
Report Date: 06-Jun-2000 13:27

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.228	3 228	{0.461}	1433632	1000 00	945 6
18 Methylene Chloride	84	3 821	3 821	{0 546}	554818	1000 00	893 7
19 trans-1,2-Dichloroethene	96	4 157	4 157	{0 594}	607129	1000.00	930 7
20 Methyl tert-butyl ether	73	4 255	4 255	{0 608}	1405887	1000 00	985 8
24 1,1-Dichloroethane	63	4 878	4 878	{0.697}	1062678	1000 00	931 8
27 2,2-Dichloropropane	77	5.618	5.618	{0 803}	819273	1000 00	962.3
28 cis 1,2-dichloroethene	96	5 679	5.679	{0 811}	710367	1000.00	935 7
M 29 1,2-Dichloroethene (total)	100				1317496	2000 00	1867
30 Bromochloromethane	128	5.979	5 979	{0 854}	310176	1000 00	933 0
31 2-Butanone	43	5 820	5.820	{0 831}	388408	1000 00	607 9
37 Chloroform	83	6 095	6 095	{0 871}	968957	1000 00	923 3
38 1,1,1-Trichloroethane	97	6 217	6 217	{0 888}	770702	1000 00	932 5
40 1,1-Dichloropropene	75	6 413	6 413	{0.916}	788536	1000 00	907 9
41 Carbon Tetrachloride	117	6.358	6 358	{0 908}	602002	1000 00	951 0
42 Benzene	78	6 645	6 645	{0 949}	2682713	1000 00	895 6
45 1,2 Dichloroethane	62	6 773	6 773	{0 968}	628642	1000 00	857 5
47 Trichloroethene	130	7.385	7 385	{1.055}	668706	1000 00	923 3
49 1,2-Dichloropropane	63	7.672	7 672	{1 096}	682292	1000 00	929.1
50 Dibromomethane	93	7.800	7 800	{1 114}	333083	1000 00	893 2
53 Bromodichloromethane	83	7 972	7 972	{1 139}	711640	1000 00	964 4
57 cis-1,3-Dichloropropene	75	8.436	8 436	{1 205}	1080311	1000.00	967.5
58 4-Methyl-2-Pentanone	43	8.626	8.626	{0 852}	696650	1000.00	1099
60 Toluene	91	8 717	8.717	{0 861}	2871938	1000.00	849 9
61 trans-1,3-Dichloropropene	75	9 035	9.035	{0 892}	910834	1000 00	930 0
63 1,3-Dichloropropane	76	9 378	9 378	{0.926}	980136	1000 00	861.6
64 1,1,2-Trichloroethane	97	9.213	9.213	{0 909}	557381	1000 00	872 0
65 Tetrachloroethene	164	9 243	9.243	{0 912}	471324	1000 00	883 6
66 2-Hexanone	43	9 457	9.457	{0 934}	470160	1000 00	1091
67 Dibromochloromethane	129	9 567	9 567	{0.944}	510437	1000 00	991 8
68 1,2 Dibromoethane	107	9 683	9.683	{0 956}	534214	1000 00	881.4
70 Chlorobenzene	112	10 154	10.154	{1 002}	1880491	1000 00	869 7
71 1,1,1,2-Tetrachloroethane	131	10 246	10 246	{1 011}	505559	1000.00	861 6
72 Ethylbenzene	106	10 240	10 240	{1.011}	979097	1000 00	815.1
73 m + p-Xylene	106	10.362	10.362	{1 023}	2232892	2000 00	1561
74 Xylene-o	106	10.759	10.759	{1 062}	1198279	1000.00	845 2
M 75 Xylenes (total)	106				3431171	1000 00	2420
76 Styrene	104	10 784	10.784	{1.065}	1952281	1000.00	838 4
77 Bromoform	173	10 985	10 985	{1.084}	289624	1000.00	1034
78 Isopropylbenzene	105	11.108	11 108	{1 097}	2845240	1000.00	824 3
79 Bromobenzene	156	11.450	11.450	{0 919}	685004	1000 00	955 8
81 n-Propylbenzene	120	11 523	11 523	{0 925}	819536	1000.00	857 7
82 2-Chlorotoluene	126	11 633	11 633	{0 934}	702067	1000.00	892.0
83 1,1,2,2-Tetrachloroethane	83	11 487	11 487	{0 922}	669838	1000 00	876.3
84 1,2,3-Trichloropropane	110	11.536	11 536	{0 926}	181053	1000 00	847 3
85 4-Chlorotoluene	126	11 750	11 750	{0.943}	678330	1000.00	839 0
86 1,3,5-Trimethylbenzene	105	11 707	11 707	{0.940}	2235634	1000 00	853 8
87 tert-Butylbenzene	119	12 019	12 019	{0 965}	2053222	1000 00	882.4

660.148

Data File: /var/chem/hp4.i/40606d.b/4e40606.d
Report Date: 06-Jun-2000 13:27

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Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	====	==	=====	=====		=====	=====	=====
88 1,2,4-Trimethylbenzene	105	12.086	12 086	(0 970)		2266686	1000 00	842 7
89 sec-Butylbenzene	105	12 239	12 239	(0 982)		2998348	1000 00	846 7
90 4-Isopropyltoluene	119	12.385	12.385	(0 994)		2208468	1000.00	783.6
91 1,3-Dichlorobenzene	146	12 385	12 385	(0 994)		1129662	1000 00	796.2
93 1,4-Dichlorobenzene	146	12 483	12 483	(1 002)		1236429	1000 00	849.1
94 n-Butylbenzene	91	12.795	12.795	(1 027)		2631131	1000 00	883 7
95 1,2-Dichlorobenzene	146	12 856	12 856	(1 032)		1190070	1000 00	880.5
96 1,2-Dibromo-3-chloropropane	157	13 663	13 663	(1 097)		98242	1000 00	1017
97 1,2,4-Trichlorobenzene	180	14 458	14 458	(1.160)		660029	1000 00	1029
98 Hexachlorobutadiene	225	14.580	14 580	(1 170)		347670	1000 00	1050
99 Naphthalene	128	14 715	14.715	(1 181)		1250646	1000 00	968 8
100 1,2,3-Trichlorobenzene	180	14.959	14 959	(1 201)		452425	1000 00	1012

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0F020191

Instrument ID: HP4

Calibration Date: 06/06/00 Time: 1218

Lab File ID: 4C40606

Init. Calib. Date(s): 06/06/00 06/06/00

Heated Purge: (Y/N) N

Init. Calib. Times: 1126 1309

GC Column: DB 624 ID: 0.18 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.108	0.107	0.01	0.9	50.0
Chloromethane	0.289	0.272	0.1	5.9	50.0
Vinyl Chloride	0.242	0.234	0.01	3.3	20.0
Bromomethane	0.028	0.025	0.01	10.7	50.0
Chloroethane	0.037	0.035	0.01	5.4	50.0
Trichlorofluoromethane	0.077	0.073	0.01	5.2	50.0
1,1-Dichloroethene	0.169	0.165	0.01	2.4	20.0
Methylene Chloride	0.207	0.201	0.01	2.9	50.0
trans-1,2-Dichloroethene	0.217	0.211	0.01	2.8	50.0
1,1-Dichloroethane	0.380	0.372	0.1	2.1	50.0
cis-1,2-dichloroethene	0.253	0.247	0.01	2.4	50.0
Chloroform	0.350	0.340	0.01	2.8	20.0
Bromochloromethane	0.111	0.108	0.01	2.7	50.0
1,1,1-Trichloroethane	0.275	0.269	0.01	2.2	50.0
Carbon Tetrachloride	0.211	0.209	0.01	0.9	50.0
1,2-Dichloroethane	0.245	0.238	0.01	2.8	50.0
Benzene	0.999	0.978	0.01	2.1	50.0
Trichloroethene	0.242	0.234	0.01	3.3	50.0
1,2-Dichloropropane	0.245	0.239	0.01	2.4	20.0
Bromodichloromethane	0.246	0.243	0.01	1.2	50.0
cis-1,3-Dichloropropene	0.372	0.371	0.01	0.3	50.0
Toluene	4.742	4.692	0.01	1.0	20.0
trans-1,3-Dichloropropene	1.374	1.368	0.01	0.4	50.0
1,1,2-Trichloroethane	0.897	0.874	0.01	2.6	50.0
Tetrachloroethene	0.749	0.727	0.01	2.9	50.0
Dibromochloromethane	0.722	0.717	0.01	0.7	50.0
Chlorobenzene	3.034	2.941	0.3	3.1	50.0
Ethylbenzene	1.686	1.670	0.01	0.9	20.0
Styrene	3.267	3.387	0.01	3.7	50.0
Bromoform	0.393	0.398	0.1	1.3	50.0
1,1,2,2-Tetrachloroethane	0.773	0.764	0.3	1.2	50.0
1,3-Dichlorobenzene	1.434	1.444	0.01	0.7	50.0
1,4-Dichlorobenzene	1.472	1.431	0.01	2.8	50.0
1,2-Dichlorobenzene	1.366	1.350	0.01	1.2	50.0
Dibromomethane	0.124	0.122	0.01	1.6	50.0
1,2-Dibromoethane	0.850	0.842	0.01	0.9	50.0
1,1,1,2-Tetrachloroethane	0.823	0.823	0.01	0.0	50.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0F020191

Instrument ID: HP4

Calibration Date: 06/06/00

Time: 1218

Lab File ID: 4C40606

Init. Calib. Date(s): 06/06/00

06/06/00

Heated Purge: (Y/N) N

Init. Calib. Times: 1126

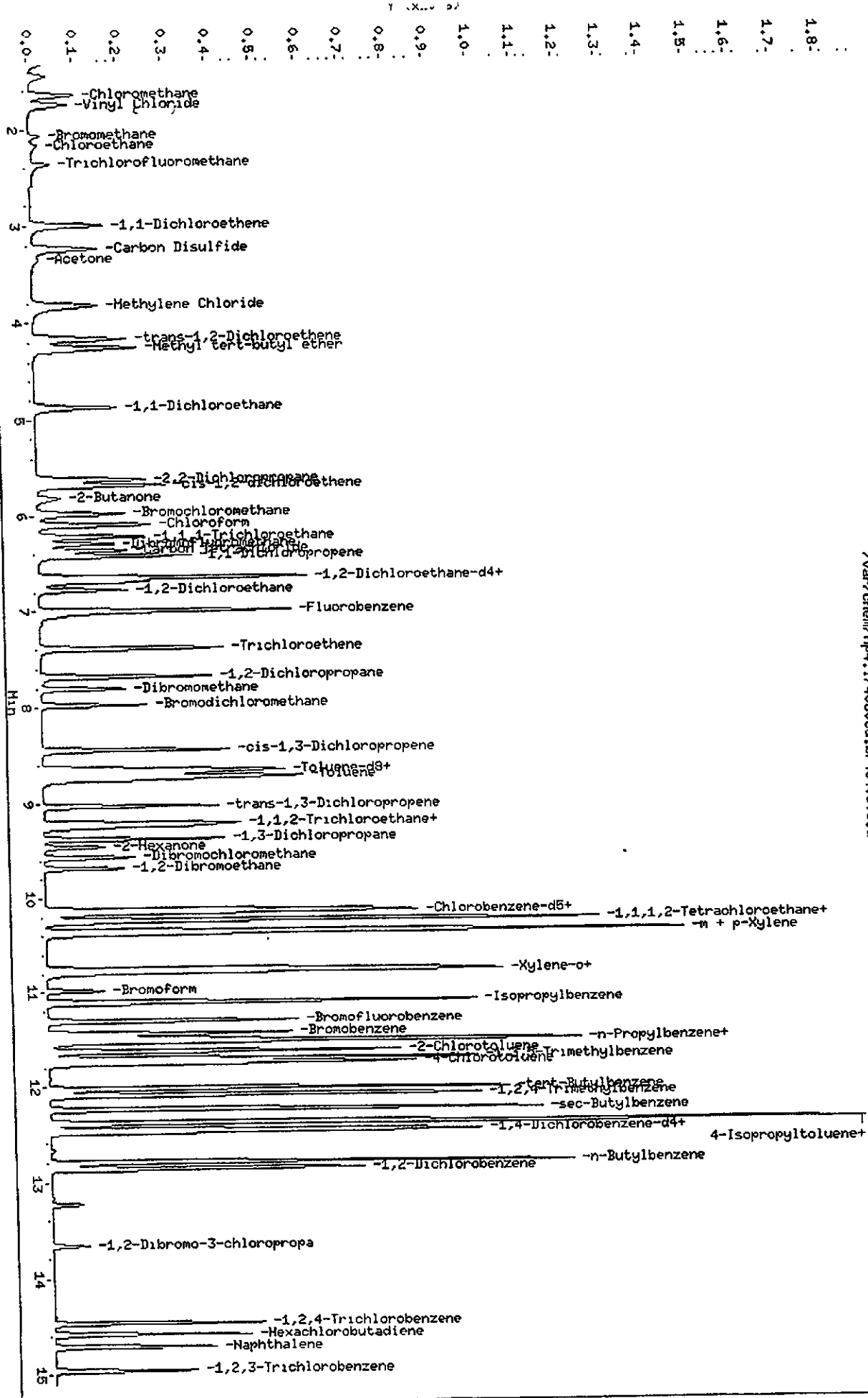
1309

GC Column: DB 624 ID: 0.18 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
1,2,3-Trichloropropane	0.216	0.216	0.01	0.0	50.0
1,2-Dibromo-3-chloropropane	0.049	0.050	0.01	2.0	50.0
2,2-Dichloropropane	0.284	0.279	0.01	1.8	50.0
1,1-Dichloropropene	0.290	0.284	0.01	2.1	50.0
1,3-Dichloropropane	1.596	1.547	0.01	3.1	50.0
n-Propylbenzene	0.966	0.963	0.01	0.3	50.0
Bromobenzene	0.724	0.711	0.01	1.8	50.0
1,3,5-Trimethylbenzene	2.647	2.628	0.01	0.7	50.0
2-Chlorotoluene	0.796	0.786	0.01	1.2	50.0
4-Chlorotoluene	0.817	0.812	0.01	0.6	50.0
tert-Butylbenzene	2.351	2.337	0.01	0.6	50.0
1,2,4-Trimethylbenzene	2.718	2.698	0.01	0.7	50.0
sec-Butylbenzene	3.579	3.571	0.01	0.2	50.0
4-Isopropyltoluene	2.849	2.890	0.01	1.4	50.0
n-Butylbenzene	3.009	2.927	0.01	2.7	50.0
1,2,4-Trichlorobenzene	0.648	0.623	0.01	3.8	50.0
Hexachlorobutadiene	0.335	0.304	0.01	9.2	50.0
Naphthalene	1.305	1.263	0.01	3.2	50.0
1,2,3-Trichlorobenzene	0.452	0.423	0.01	6.4	50.0
Acetone	0.055	0.052	0.01	5.4	50.0
Carbon Disulfide	0.505	0.528	0.01	4.6	50.0
2-Butanone	0.213	0.151	0.01	29.1	50.0
4-Methyl-2-Pentanone	0.889	0.933	0.01	4.9	50.0
2-Hexanone	0.605	0.638	0.01	5.4	50.0
Methyl tert-butyl ether	0.476	0.498	0.01	4.6	50.0
Isopropylbenzene	4.844	4.932	0.01	1.8	50.0
1,2-Dichloroethene (total)	0.235	0.229	0.01	2.6	50.0
Xylenes (total)	1.990	2.005	0.01	0.8	50.0
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	0.182	0.188	0.01	3.3	50.0
1,2-Dichloroethane-d4	0.193	0.195	0.01	1.0	50.0
Toluene-d8	3.867	3.971	0.01	2.7	50.0
Bromofluorobenzene	1.504	1.559	0.01	3.6	50.0

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Data File: /var/chem/hp4.i/40606d.b/4040606.d
Date: 06-JUN-2000 12:18
Client ID: vstd50
Sample Info: vstd50 5ml
Volume Injected (ul): 5.0
Column phase: DB 624

Instrument: hp4.i
Operator: 16328
Column diameter: 0.18



STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4c40606.d
Lab Smp Id: vstd50 Client Smp ID: vstd50
Inj Date : 06-JUN-2000 12:18
Operator : 16328 Inst ID: hp4.i
Smp Info : vstd50 5ml
Misc Info : ,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 13:26 dudeckk Quant Type: ISTD
Cal Date : 06-JUN-2000 11:26 Cal File: 4a40606.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 2-padep.sub
Target Version: 3.40
Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	FinalVolume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng)	ON-COL (ng)
* 46 Fluorobenzene	96	6.998	6.998	(1.000)	726635			
* 69 Chlorobenzene-d5	119	10.122	10.122	(1.000)	170871			
* 92 1,4-Dichlorobenzene-d4	152	12.457	12.457	(1.000)	265089			
\$ 39 Dibromofluoromethane	113	6.289	6.289	(0.899)	136662	250.000	258.4	
\$ 43 1,2-Dichloroethane-d4	65	6.686	6.686	(0.955)	141498	250.000	252.5	
\$ 59 Toluene-d8	98	8.655	8.655	(0.855)	678594	250.000	256.7	
\$ 80 Bromofluorobenzene	95	11.308	11.308	(1.117)	266355	250.000	259.0	
1 Dichlorodifluoromethane	85	1.453	1.453	(0.208)	77470	250.000	246.8	
2 Chloromethane	50	1.649	1.649	(0.236)	197770	250.000	235.5	
3 Vinyl Chloride	62	1.741	1.741	(0.249)	170377	250.000	242.4	
4 Bromomethane	94	2.065	2.065	(0.295)	18065	250.000	220.0	
5 Chloroethane	64	2.163	2.163	(0.309)	25199	250.000	233.2	
6 Trichlorofluoromethane	101	2.358	2.358	(0.337)	52886	250.000	235.6	
12 1,1-Dichloroethene	96	2.994	2.994	(0.428)	119649	250.000	243.1	
13 Acetone	43	3.349	3.349	(0.478)	37818	250.000	237.4	

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.232	3.232	(0.462)	383961	250.000	261.3
18 Methylene Chloride	84	3.819	3.819	(0.546)	145986	250.000	242.6
19 trans-1,2-Dichloroethene	96	4.162	4.162	(0.595)	153324	250.000	242.5
20 Methyl tert-butyl ether	73	4.247	4.247	(0.607)	362279	250.000	262.0
24 1,1-Dichloroethane	63	4.877	4.877	(0.697)	270168	250.000	244.4
27 2,2-Dichloropropane	77	5.617	5.617	(0.803)	202514	250.000	245.4
28 cis-1,2-dichloroethene	96	5.678	5.678	(0.811)	179199	250.000	243.5
M 29 1,2-Dichloroethene (total)	100				332523	500.000	486.0
30 Bromochloromethane	128	5.983	5.983	(0.855)	78659	250.000	244.1
31 2-Butanone	43	5.812	5.812	(0.831)	109703	250.000	177.1
37 Chloroform	83	6.093	6.093	(0.871)	246766	250.000	242.6
38 1,1,1-Trichloroethane	97	6.216	6.216	(0.888)	195793	250.000	244.4
40 1,1-Dichloropropene	75	6.411	6.411	(0.916)	206556	250.000	245.4
41 Carbon Tetrachloride	117	6.356	6.356	(0.908)	151879	250.000	247.5
42 Benzene	78	6.644	6.644	(0.949)	710932	250.000	244.9
45 1,2-Dichloroethane	62	6.772	6.772	(0.968)	172761	250.000	243.1
47 Trichloroethene	130	7.383	7.383	(1.055)	169808	250.000	241.9
49 1,2-Dichloropropane	63	7.671	7.671	(1.096)	173794	250.000	244.2
50 Dibromomethane	93	7.799	7.799	(1.114)	89044	250.000	246.3
53 Bromodichloromethane	83	7.970	7.970	(1.139)	176885	250.000	247.3
57 cis-1,3-Dichloropropene	75	8.435	8.435	(1.205)	269631	250.000	249.1
58 4-Methyl-2-Pentanone	43	8.618	8.618	(0.851)	159465	250.000	262.4
60 Toluene	91	8.716	8.716	(0.861)	801711	250.000	247.4
61 trans-1,3-Dichloropropene	75	9.028	9.028	(0.892)	233736	250.000	248.8
63 1,3-Dichloropropane	76	9.376	9.376	(0.926)	264361	250.000	242.3
64 1,1,2-Trichloroethane	97	9.211	9.211	(0.910)	149402	250.000	243.7
65 Tetrachloroethene	164	9.242	9.242	(0.913)	124169	250.000	242.7
66 2-Hexanone	43	9.456	9.456	(0.934)	109074	250.000	263.8
67 Dibromochloromethane	129	9.566	9.566	(0.945)	122505	250.000	248.2
68 1,2-Dibromoethane	107	9.682	9.682	(0.957)	143948	250.000	247.6
70 Chlorobenzene	112	10.153	10.153	(1.003)	502582	250.000	242.3
71 1,1,1,2-Tetrachloroethane	131	10.244	10.244	(1.012)	140698	250.000	250.0
72 Ethylbenzene	106	10.238	10.238	(1.011)	285339	250.000	247.7
73 m + p-Xylene	106	10.361	10.361	(1.024)	690683	500.000	503.4
74 Xylene-o	106	10.758	10.758	(1.063)	342541	250.000	251.9
M 75 Xylenes (total)	106				1033224	250.000	759.9
76 Styrene	104	10.782	10.782	(1.065)	578786	250.000	259.2
77 Bromoform	173	10.984	10.984	(1.085)	68068	250.000	253.4
78 Isopropylbenzene	105	11.106	11.106	(1.097)	842711	250.000	254.5
79 Bromobenzene	156	11.449	11.449	(0.919)	188559	250.000	245.5
81 n-Propylbenzene	120	11.522	11.522	(0.925)	255228	250.000	249.2
82 2-Chlorotoluene	126	11.632	11.632	(0.934)	208404	250.000	247.1
83 1,1,2,2-Tetrachloroethane	83	11.485	11.485	(0.922)	202413	250.000	247.1
84 1,2,3-Trichloropropane	110	11.534	11.534	(0.926)	57138	250.000	249.5
85 4-Chlorotoluene	126	11.748	11.748	(0.943)	215285	250.000	248.5
86 1,3,5-Trimethylbenzene	105	11.705	11.705	(0.940)	696619	250.000	248.2
87 tert-Butylbenzene	119	12.017	12.017	(0.965)	619640	250.000	248.5

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Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
88 1,2,4-Trimethylbenzene	105	12.084	12.084	(0.970)	715351	250.000	248.2
89 sec-Butylbenzene	105	12.237	12.237	(0.982)	946530	250.000	249.4
90 4-Isopropyltoluene	119	12.384	12.384	(0.994)	766024	250.000	253.6
91 1,3-Dichlorobenzene	146	12.384	12.384	(0.994)	382769	250.000	251.7
93 1,4-Dichlorobenzene	146	12.482	12.482	(1.002)	379253	250.000	243.0
94 n-Butylbenzene	91	12.794	12.794	(1.027)	776005	250.000	243.2
95 1,2-Dichlorobenzene	146	12.855	12.855	(1.032)	358029	250.000	247.2
96 1,2-Dibromo-3-chloropropane	157	13.662	13.662	(1.097)	26552	250.000	256.5
97 1,2,4-Trichlorobenzene	180	14.463	14.463	(1.161)	165280	250.000	240.4
98 Hexachlorobutadiene	225	14.579	14.579	(1.170)	80652	250.000	227.2
99 Naphthalene	128	14.713	14.713	(1.181)	334725	250.000	241.9
100 1,2,3-Trichlorobenzene	180	14.958	14.958	(1.201)	112149	250.000	234.1

**GC/MS VOLATILE
QC DATA**

Date : 06-JUN-2000 10:58

Client ID: 50NCBFB

Instrument: hp4.1

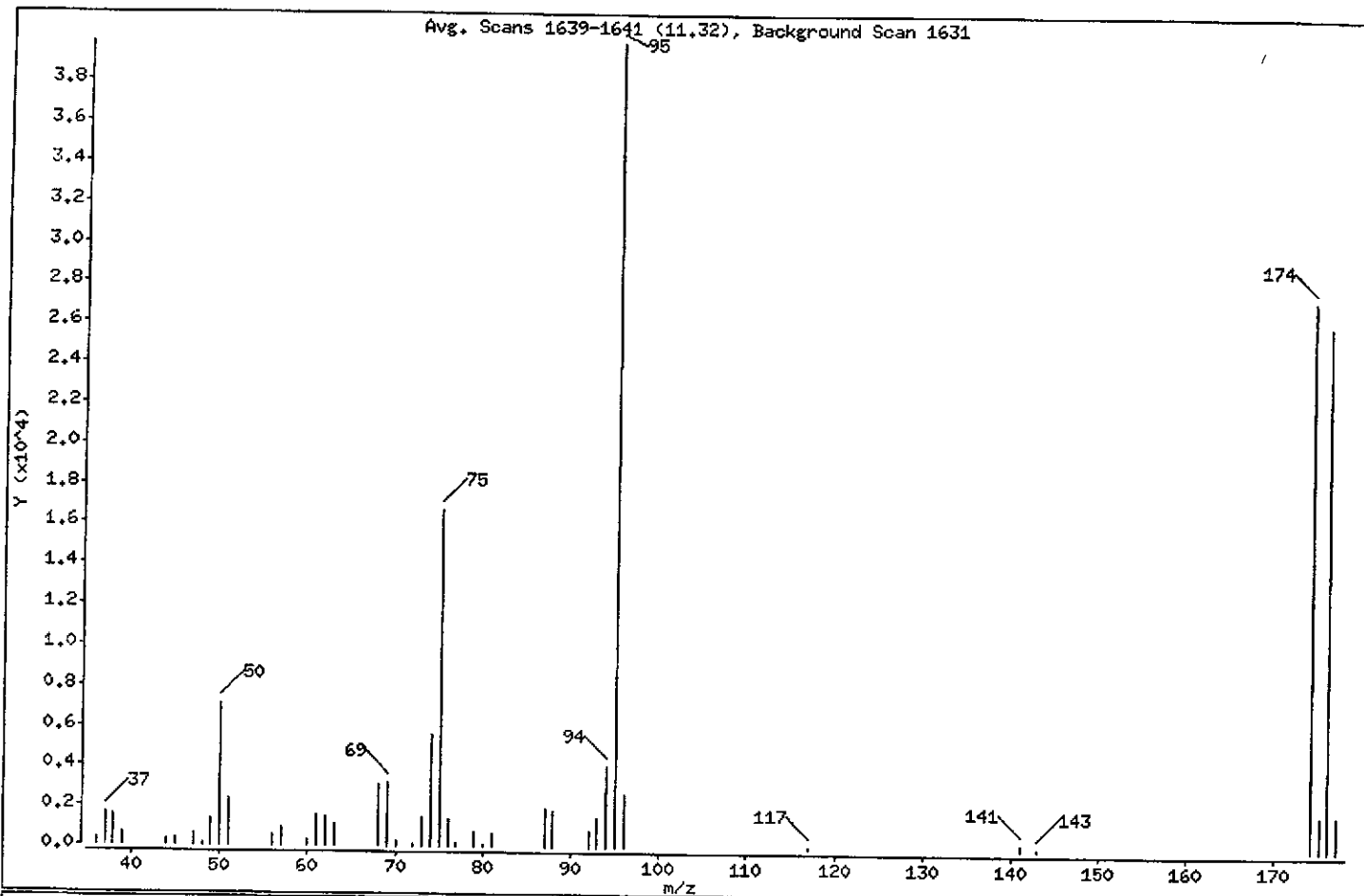
Sample Info: bfb 1ul inj

Operator: 16328

Column phase: DB624 20m

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.72
75	30.00 - 60.00% of mass 95	41.76
96	5.00 - 9.00% of mass 95	6.64
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	68.51
175	5.00 - 9.00% of mass 174	4.25 (6.21)
176	95.00 - 101.00% of mass 174	65.39 (95.46)
177	5.00 - 9.00% of mass 176	4.26 (6.52)

Data File: /var/chem/hp4.1/40606d.b/cf40606.d

Date : 06-JUN-2000 10:58

Client ID: 50NCBFB

Instrument: hp4.1

Sample Info: bfb 1ul inj

Operator: 16328

Column phase: DB624 20m

Column diameter: 0.18

Data File: cf40606.d

Spectrum: Avg. Scans 1639-1641 (11,32), Background Scan 1631

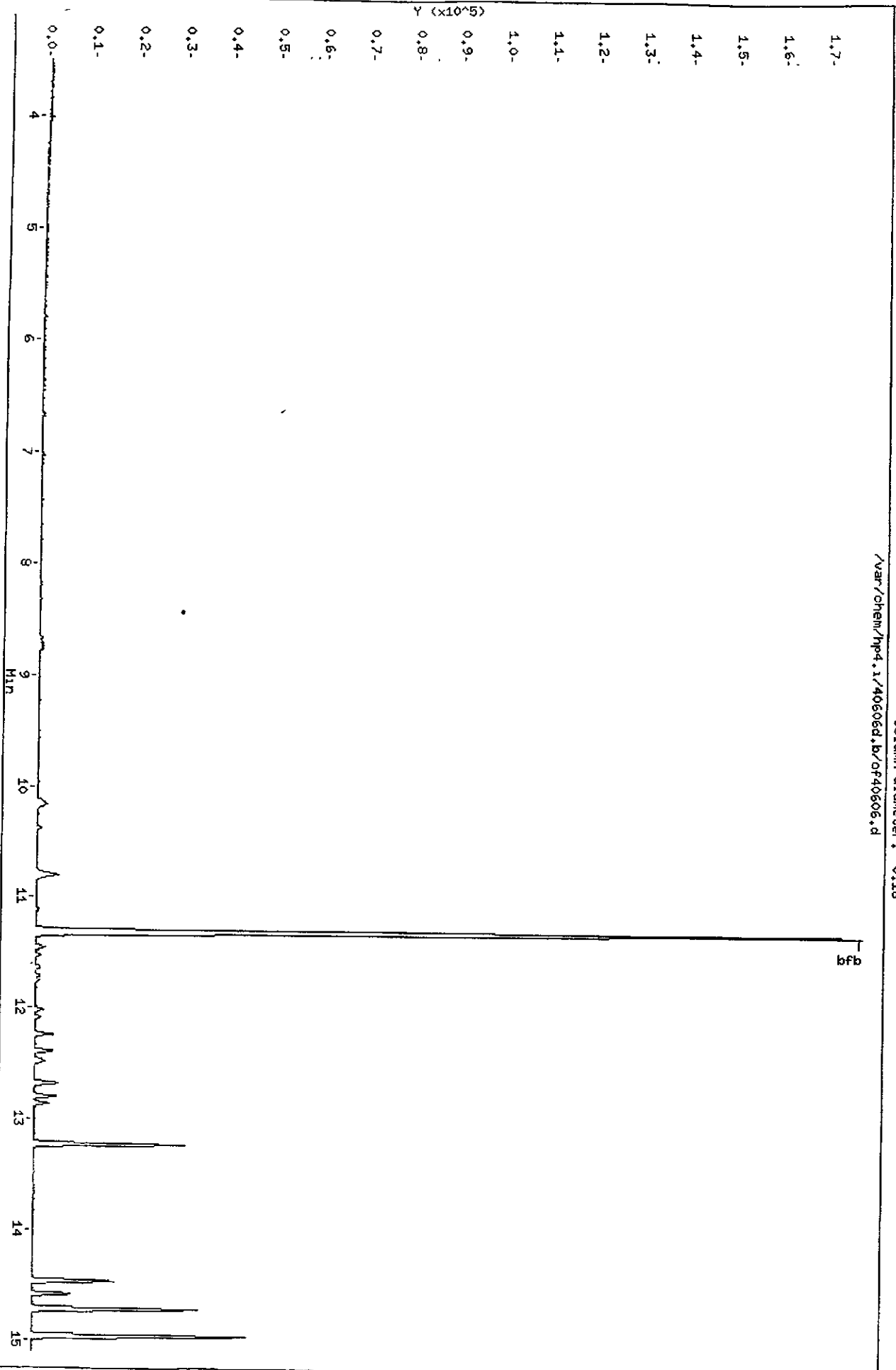
Location of Maximum: 95.00

Number of points: 43

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	331	56.00	563	74.00	5578	94.00	4000
37.00	1616	57.00	959	75.00	16648	95.00	39864
38.00	1599	60.00	233	76.00	1390	96.00	2646
39.00	649	61.00	1567	77.00	188	117.00	88
44.00	315	62.00	1487	79.00	722	141.00	267
45.00	325	63.00	1105	80.00	71	143.00	73
47.00	604	68.00	3097	81.00	617	174.00	27304
48.00	85	69.00	3200	87.00	1968	175.00	1696
49.00	1418	70.00	277	88.00	1796	176.00	26064
50.00	7064	72.00	111	92.00	851	177.00	1700
51.00	2389	73.00	1461	93.00	1464		

Data File: /var/chem/hp4.1/40606d.b/cf40606.d
Date: 06-JUL-2000 10:58
Client ID: SONGBFB
Sample Info: bfb tul inj
Column phase: DB624 20m

Instrument: hp4.1
Operator: 16328
Column diameter: 0.18



Date : 06-JUN-2000 10:58

Client ID: 50NCBFB

Sample Info: bfb 1ul inj

Instrument: hp4.i

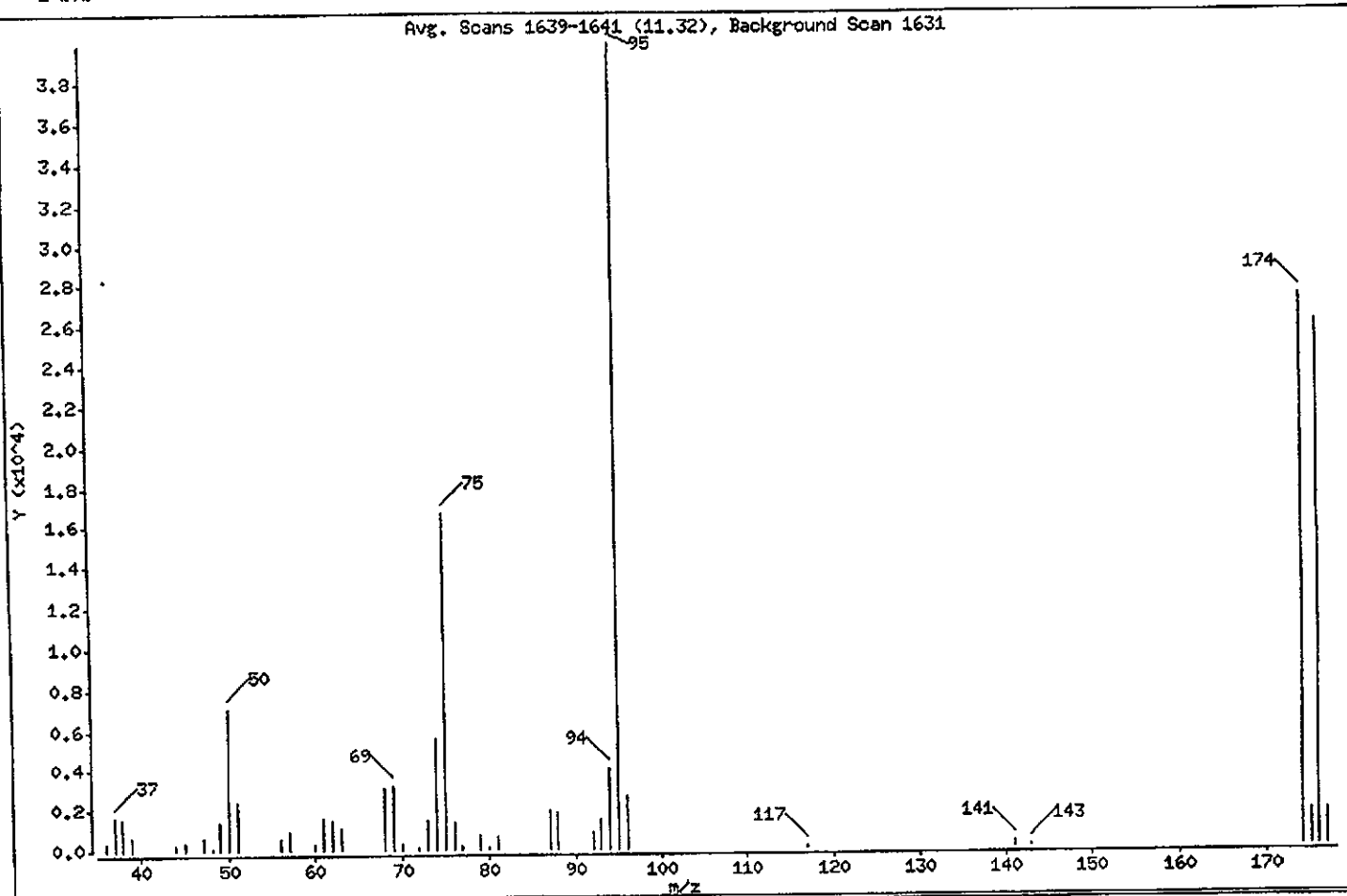
Operator: 16328

Column phase: DB624 20m

Column diameter: 0.18

1 bfb

660 159



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.72
75	30.00 - 60.00% of mass 95	41.76
96	5.00 - 9.00% of mass 95	6.64
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	68.51
175	5.00 - 9.00% of mass 174	4.25 (6.21)
176	95.00 - 101.00% of mass 174	65.39 (95.46)
177	5.00 - 9.00% of mass 176	4.26 (6.52)

Date : 06-JUN-2000 10:58

Client ID: 50NCBFB

Instrument: hp4.1

Sample Info: bfb 1ul inj

Operator: 16328

Column phase: DB624 20m

Column diameter: 0.18

Data File: cf40606.d

Spectrum: Avg. Scans 1639-1641 (11.32), Background Scan 1631

Location of Maximum: 95.00

Number of points: 43

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	331	56.00	563	74.00	5578	94.00	4000
37.00	1616	57.00	959	75.00	16648	95.00	39864
38.00	1599	60.00	233	76.00	1390	96.00	2646
39.00	649	61.00	1567	77.00	188	117.00	88
44.00	315	62.00	1487	79.00	722	141.00	267
45.00	325	63.00	1105	80.00	71	143.00	73
47.00	604	68.00	3097	81.00	617	174.00	27304
48.00	85	69.00	3200	87.00	1968	175.00	1696
49.00	1418	70.00	277	88.00	1796	176.00	26064
50.00	7064	72.00	111	92.00	851	177.00	1700
51.00	2389	73.00	1461	93.00	1464		

Data File: /var/chem/hp4.1/40606d.b/cf40606.d
Date: 06-JUN-2000 10:58
Client ID: SONGBFB
Sample Info: bfb 1u1 inj

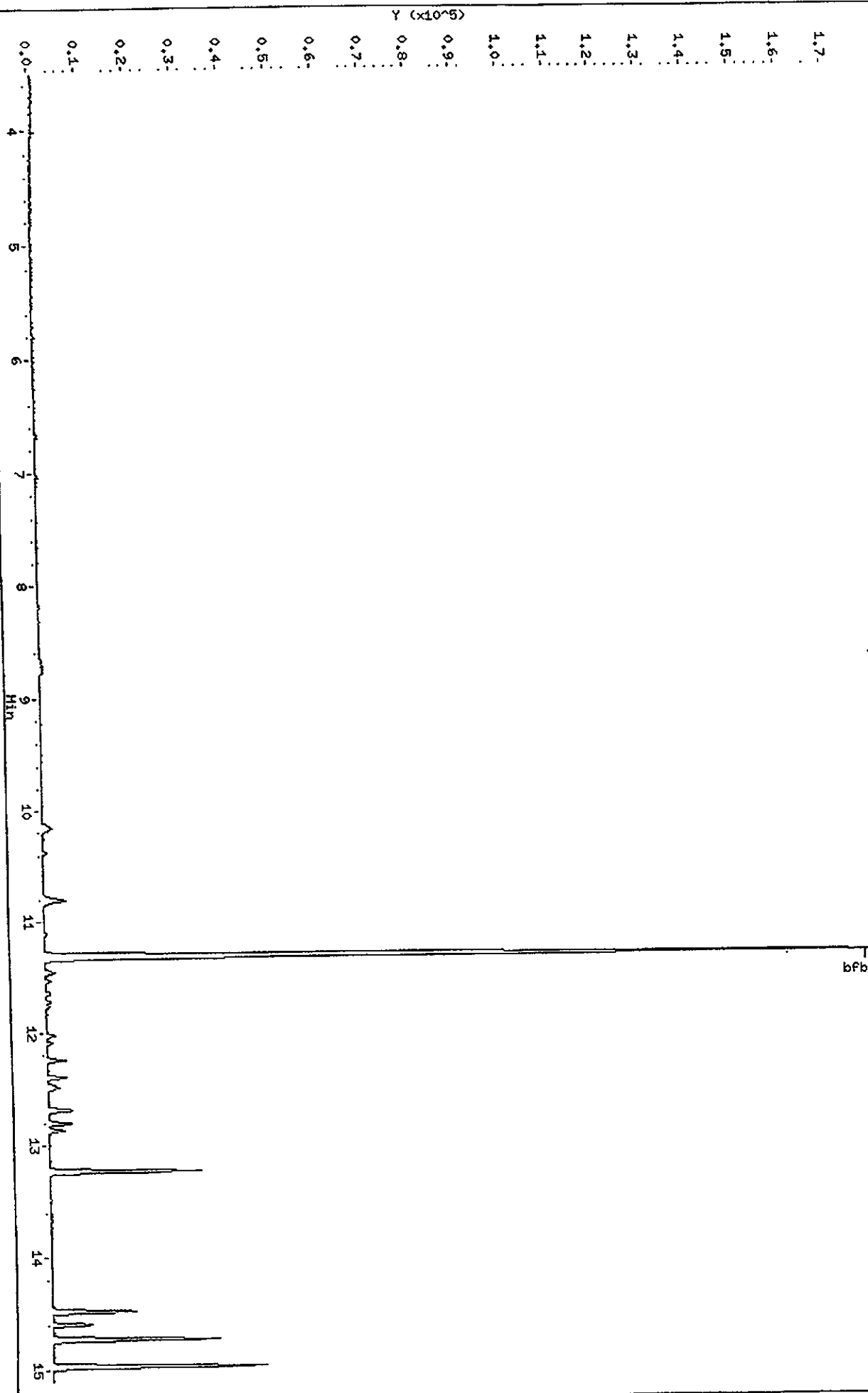
Instrument: hp4.1

Operator: 16528

Column diameter: 0.18

Column phase: DB624 20m

/var/chem/hp4.1/40606d.b/cf40606.d



UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F060000 108
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 05/25/00
Work Order: DE7JW101 Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: NA

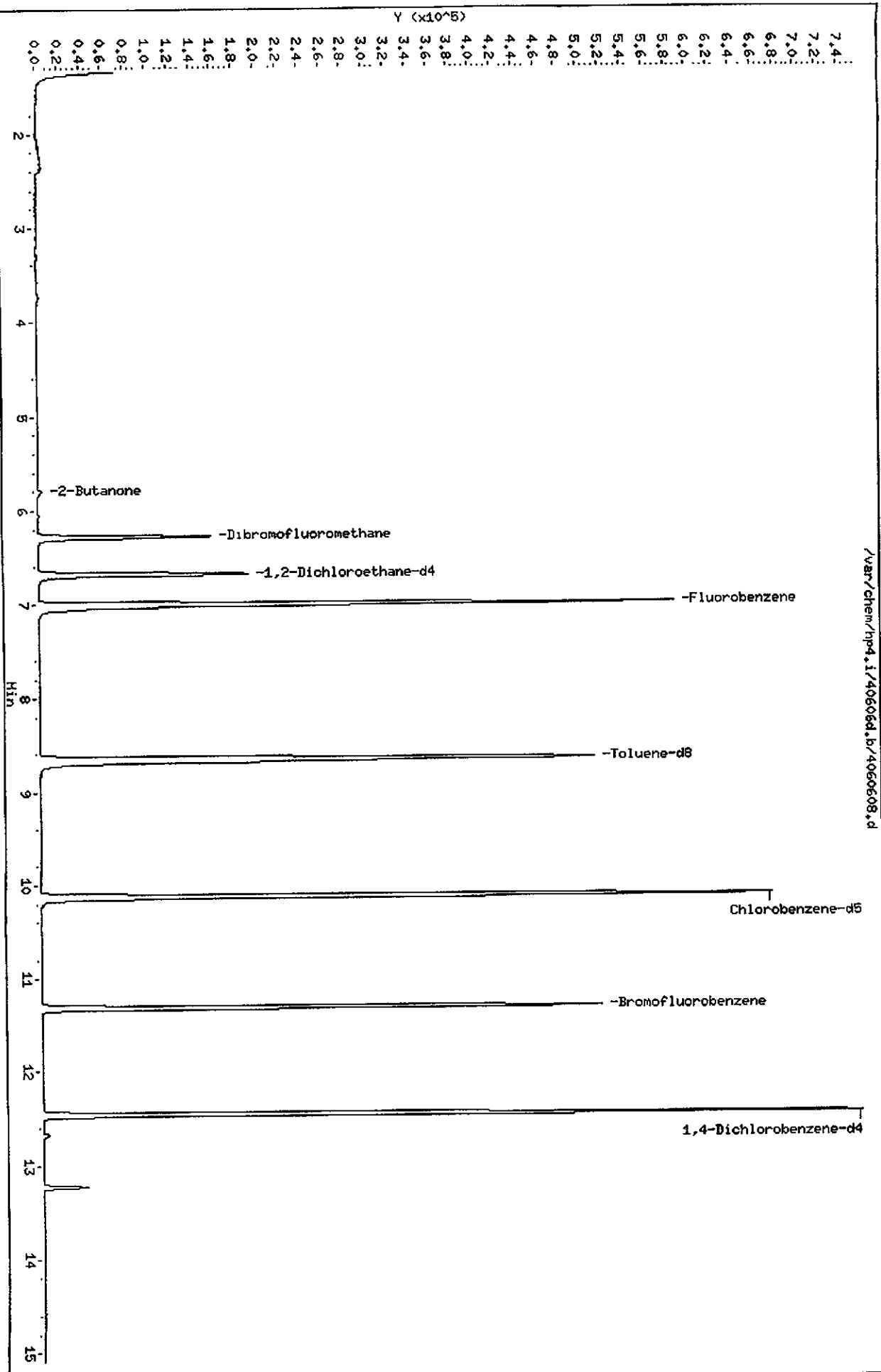
QC Batch: 0158409

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.050	U
78-93-3	2-Butanone	0.027	J
56-23-5	Carbon tetrachloride	0.050	U
108-90-7	Chlorobenzene	0.050	U
67-66-3	Chloroform	0.050	U
107-06-2	1,2-Dichloroethane	0.050	U
75-35-4	1,1-Dichloroethene	0.050	U
127-18-4	Tetrachloroethene	0.050	U
79-01-6	Trichloroethene	0.050	U
75-01-4	Vinyl chloride	0.050	U

Data File: /var/chem/hp4.i/40606d.b/4060608.d
Date : 06-JUN-2000 16:55
Client ID: INTRA-LAB BLANK
Sample Info: pb blk (1ml/10ml)/5ml
Volume Injected (uL): 5.0
Column phase: DB 624

Instrument: hp4.i
Operator: 16328
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060608.d
Report Date: 06-Jun-2000 17:15

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060608.d
Lab Smp Id: DE7JW101 Client Smp ID: INTRA-LAB BLANK
Inj Date : 06-JUN-2000 16:55
Operator : 16328 Inst ID: hp4.i
Smp Info : pb blk (1ml/10ml)/5ml
Misc Info : de7jw101,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 14:07 dudeckk Quant Type: ISTD
Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
Als bottle: 14 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tclp.sub
Target Version: 3.40
Processing Host: hpuxcs21

Kc/6/6

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

p/14/7/6

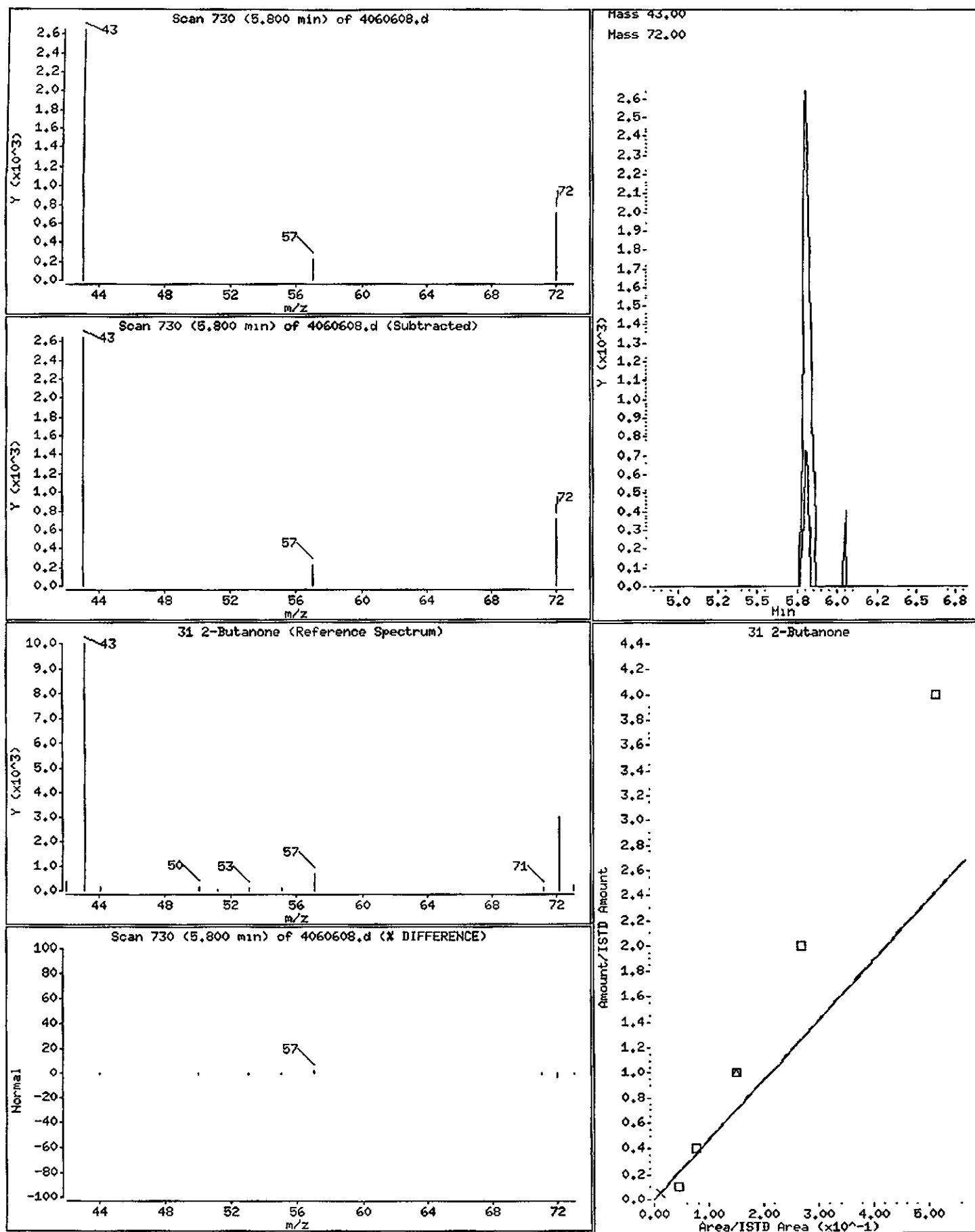
Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (UG/L)
* 46 Fluorobenzene	96	7.005	7.000	(1.000)	700156			
* 69 Chlorobenzene-d5	119	10.122	10.130	(1.000)	165962			
* 92 1,4-Dichlorobenzene-d4	152	12.458	12.459	(1.000)	233107			
\$ 43 1,2-Dichloroethane-d4	65	6.687	6.688	(0.955)	141235	261.574	52.31	
\$ 39 Dibromofluoromethane	113	6.283	6.290	(0.897)	124665	244.667	48.93	
\$ 59 Toluene-d8	98	8.649	8.650	(0.854)	605570	235.890	47.18	
\$ 80 Bromofluorobenzene	95	11.308	11.309	(1.117)	238728	239.055	47.81	
3 Vinyl Chloride	62.00	Compound Not Detected.						
12 1,1-Dichloroethene	96.00	Compound Not Detected.						
31 2-Butanone	43	5.800	5.820	(0.828)	8161	13.6751	2.735	
37 Chloroform	83.00	Compound Not Detected.						
41 Carbon Tetrachloride	117.00	Compound Not Detected.						
42 Benzene	78.00	Compound Not Detected.						
45 1,2-Dichloroethane	62.00	Compound Not Detected.						
47 Trichloroethene	130.00	Compound Not Detected.						

Data File: /var/chem/hp4.i/40606d.b/4060608.d
Report Date: 06-Jun-2000 17:15

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ng)	(UG/L)
=====	----	--	-----	-----	-----	-----	-----
65 Tetrachloroethene	164.00				Compound Not Detected.		
70 Chlorobenzene	112 00				Compound Not Detected.		

31 2-Butanone



UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F060000 409
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/02/00
Work Order: DE91N101 Date Extracted: 06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %: NA

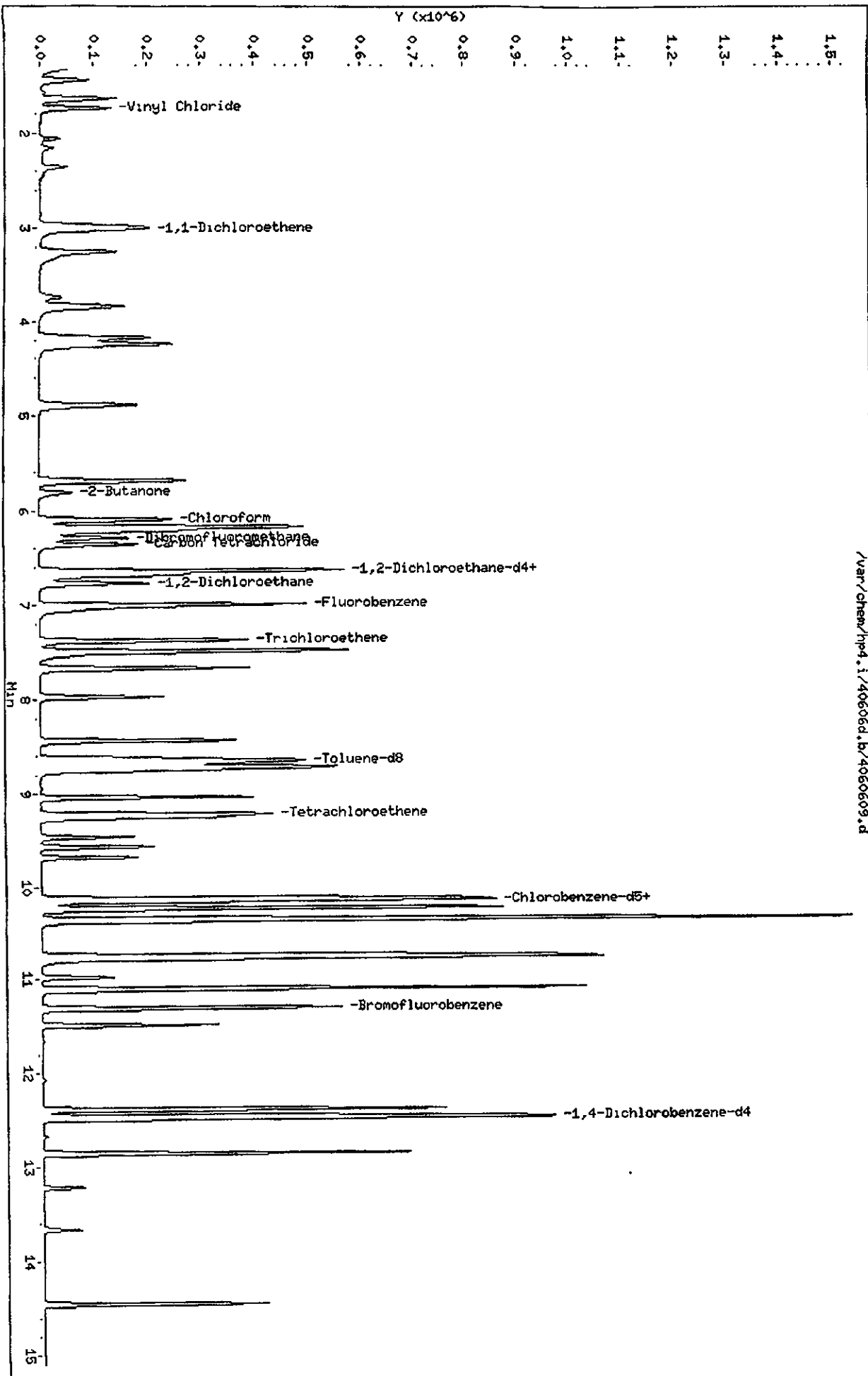
QC Batch: 0158409

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.513	
78-93-3	2-Butanone	0.389	
56-23-5	Carbon tetrachloride	0.474	
108-90-7	Chlorobenzene	0.503	
67-66-3	Chloroform	0.503	
107-06-2	1,2-Dichloroethane	0.528	
75-35-4	1,1-Dichloroethene	0.465	
127-18-4	Tetrachloroethene	0.473	
79-01-6	Trichloroethene	0.484	
75-01-4	Vinyl chloride	0.567	

Date File: /var/chem/hp4.i/40606d.b/4060609.d
Date : 06-JUN-2000 17:20
Client ID:
Sample Info: blk ms (4ml/10ml)/5ml
Volume injected (ul): 5.0
Column phase: DB 624

Instrument: hp4.i
Operator: 16328
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060609.d
Report Date: 06-Jun-2000 17:46

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060609.d
Lab Smp Id: de7jw102
Inj Date : 06-JUN-2000 17:20
Operator : 16328
Smp Info : blk ms (1ml/10ml)/5ml
Misc Info : de7jw102,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 14:07 dudeckk
Cal Date : 06-JUN-2000 13:09
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.40
Processing Host: hpuxcs21

Inst ID: hp4.i
Quant Type: ISTD
Cal File: 4e40606.d
Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

pn 6/6/00

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (UG/L)
*****	****	--	-----	-----	-----	-----	-----
* 46 Fluorobenzene	96	7.001	7.000	(1.000)	686072		
* 69 Chlorobenzene-d5	119	10.125	10.130	(1.000)	166353		
* 92 1,4-Dichlorobenzene-d4	152	12.455	12.459	(1.000)	250101		
\$ 43 1,2-Dichloroethane-d4	65	6.690	6.688	(0.955)	137367	259.633	51.93
\$ 39 Dibromofluoromethane	113	6.292	6.290	(0.899)	126608	253.581	50.72
\$ 59 Toluene-d8	98	8.658	8.650	(0.855)	643415	250.043	50.01
\$ 80 Bromofluorobenzene	95	11.305	11.309	(1.117)	257312	257.058	51.41
3 Vinyl Chloride	62	1.744	1.748	(0.249)	188159	283.566	56.71
12 1,1-Dichloroethene	96	3.016	2.989	(0.431)	107994	232.428	46.48
31 2-Butanone	43	5.803	5.820	(0.829)	113841	194.675	38.94
37 Chloroform	83	6.097	6.095	(0.871)	241448	251.392	50.28
41 Carbon Tetrachloride	117	6.360	6.358	(0.908)	137276	236.945	47.39
42 Benzene	78	6.647	6.645	(0.949)	703049	256.462	51.29
45 1,2-Dichloroethane	62	6.775	6.773	(0.968)	177048	263.871	52.77
47 Trichloroethene	130	7.387	7.385	(1.055)	160435	242.029	48.40

660 170

Data File: /var/chem/hp4.i/40606d.b/4060609.d
Report Date: 06-Jun-2000 17:46

Page 2

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (UG/L)
*****	****	??	*****	*****	*****	*****	*****
65 Tetrachloroethene	164	9.239	9.243	(0.912)	117742	236.397	47.28
70 Chlorobenzene	112	10.156	10.154	(1.003)	507692	251 462	50 29

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 06/02/00

Work Order: DE44M11F

Date Extracted: 06/06/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0158409

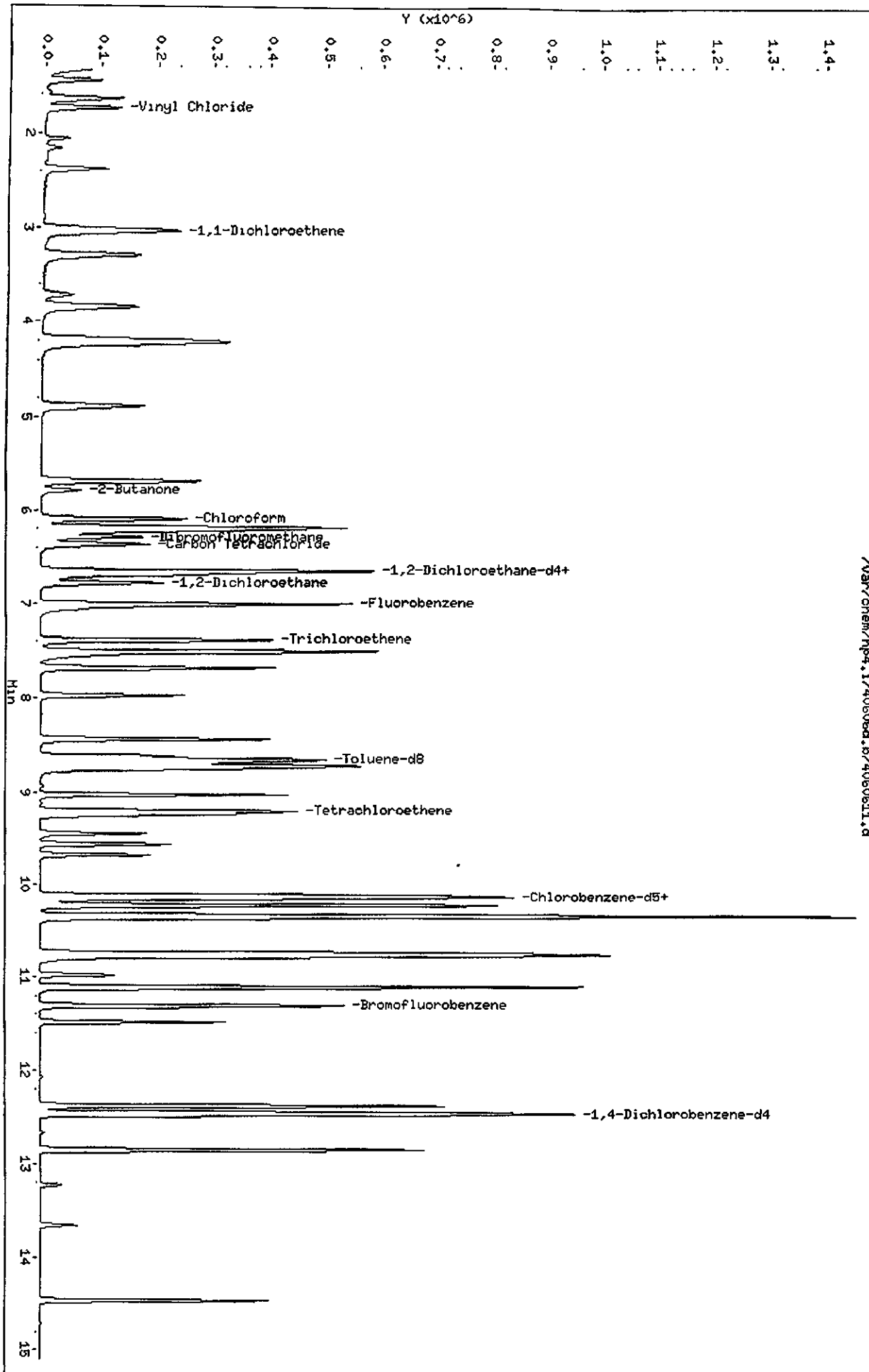
Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.502	
78-93-3	2-Butanone	0.386	
56-23-5	Carbon tetrachloride	0.492	
108-90-7	Chlorobenzene	0.494	
67-66-3	Chloroform	0.507	
107-06-2	1,2-Dichloroethane	0.546	
75-35-4	1,1-Dichloroethene	0.464	
127-18-4	Tetrachloroethene	0.478	
79-01-6	Trichloroethene	0.487	
75-01-4	Vinyl chloride	0.568	

Data File: /var/chem/hp4.1/40606d.b/40606d1.d
Date: 06-JUN-2000 18:09
Client ID: JF/S1/0153/SUC/006
Sample Info: 007020191-001ms (1ml/10ml)/5ml
Volume Injected (ul): 5.0
Column phase: DB 624

/var/chem/hp4.1/40606d.b/40606d1.d

Instrument: hp4.1
Operator: 16328
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060611.d
Report Date: 06-Jun-2000 19:13

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060611.d
Lab Smp Id: DE44M102 Client Smp ID: DF/S1/0153/SDC/006
Inj Date : 06-JUN-2000 18:09
Operator : 16328 Inst ID: hp4.i
Smp Info : c0f020191-001ms (1ml/10ml)/5ml
Misc Info : de44m102,40606d.b
Comment :
Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
Meth Date : 06-Jun-2000 14:07 dudeckk Quant Type: ISTD
Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tclp.sub
Target Version: 3.40
Processing Host: hpuxcs21

Concentration Formula: Amt * DF * (Vf/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

P116/6/m

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng)	(UG/L)
*****	----	==	=====	=====	=====	=====	=====	=====
* 46 Fluorobenzene		96	7.005	7.000	(1.000)	719706		
* 69 Chlorobenzene-d5		119	10.123	10.130	(1.000)	163551		
* 92 1,4-Dichlorobenzene-d4		152	12.458	12.459	(1.000)	245912		
\$ 43 1,2-Dichloroethane-d4		65	6.687	6.688	(0.955)	147451	265.668	53.13
\$ 39 Dibromofluoromethane		113	6.290	6.290	(0.898)	134560	256.913	51.38
\$ 59 Toluene-d8		98	8.656	8.650	(0.855)	636882	251.744	50.35
\$ 80 Bromofluorobenzene		95	11.309	11.309	(1.117)	244005	247.941	49.59
3 Vinyl Chloride		62	1.741	1.748	(0.249)	197640	283.935	56.79
12 1,1-Dichloroethene		96	3.050	2.989	(0.435)	113047	231.933	46.39
31 2-Butanone		43	5.782	5.820	(0.825)	118280	192.814	38.56
37 Chloroform		83	6.094	6.095	(0.870)	255459	253.550	50.71
41 Carbon Tetrachloride		117	6.369	6.358	(0.909)	149624	246.189	49.24
42 Benzene		78	6.650	6.645	(0.949)	721223	250.796	50.16
45 1,2-Dichloroethane		62	6.773	6.773	(0.967)	192167	273.019	54.60
47 Trichloroethene		130	7.390	7.385	(1.055)	169180	243.294	48.66

660 174

Data File: /var/chem/hp4.i/40606d.b/4060611.d
Report Date: 06-Jun-2000 19:13

Page 2

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
						(ng)	(UG/L)	
=====	====	==	=====	=====	=====	=====	=====	
65 Tetrachloroethene	164	9.242	9.243	(0.913)	117148	239.234	47.85	
70 Chlorobenzene	112	10.153	10.154	(1.003)	490624	247.171	49.43	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID Lab Sample ID: C0F020191 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/02/00

Work Order: DE44M11G Date Extracted: 06/06/00

Dilution factor: 1 Date Analyzed: 06/06/00

Moisture %: 14

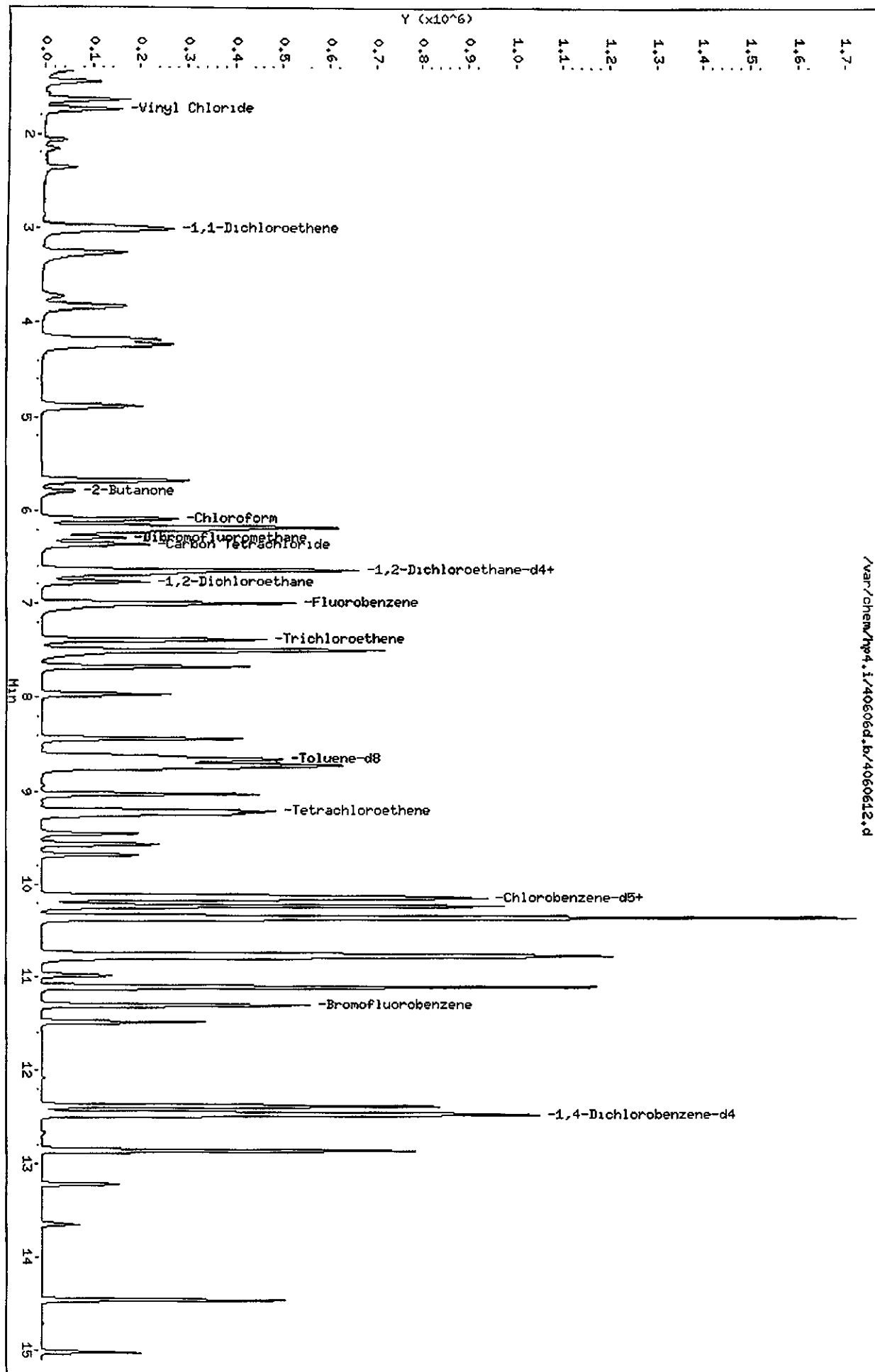
QC Batch: 0158409

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.563	
78-93-3	2-Butanone	0.407	
56-23-5	Carbon tetrachloride	0.564	
108-90-7	Chlorobenzene	0.553	
67-66-3	Chloroform	0.552	
107-06-2	1,2-Dichloroethane	0.563	
75-35-4	1,1-Dichloroethene	0.545	
127-18-4	Tetrachloroethene	0.548	
79-01-6	Trichloroethene	0.547	
75-01-4	Vinyl chloride	0.681	a

Data File: /var/chem/hp4.1/40606d.b/4060612.d
Date : 06-JUN-2000 18:36
Client ID: DF/S1/0153/SDC/006
Sample Info: 00f020191-001msd (1ml/10ml)/5ml
Volume Injected (ul): 5.0
Column phase: DB 624

Instrument: hp4.1
Operator: 034635
Column diameter: 0.18



Data File: /var/chem/hp4.i/40606d.b/4060612.d
 Report Date: 06-Jun-2000 19:13

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp4.i/40606d.b/4060612.d
 Lab Smp Id: DE44M102 Client Smp ID: DF/S1/0153/SDC/006
 Inj Date : 06-JUN-2000 18:36
 Operator : 034635 Inst ID: hp4.i
 Smp Info : c0f020191-001msd (1ml/10ml)/5ml
 Misc Info : de44m102,40606d.b
 Comment :
 Method : /var/chem/hp4.i/40606d.b/8260bh2o.m
 Meth Date : 06-Jun-2000 14:07 dudeckk Quant Type: ISTD
 Cal Date : 06-JUN-2000 13:09 Cal File: 4e40606.d
 Als bottle: 18
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: tclp.sub
 Target Version: 3.40
 Processing Host: hpuxcs21

Concentration Formula: $\text{Amt} * \text{DF} * (\text{Vf}/\text{Vo})/\text{Vi}$

Handwritten signature/initials

Name	Value	Description
DF	1.000	Dilution Factor
Vf	5.000	Final Volume
Vo	5.000	Sample Volume
Vi	5.000	Purge Volume

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (ug/L)
*****	=====	==	=====	=====	=====	=====	=====
* 46 Fluorobenzene	96	7.005	7.000	(1.000)	717414		
* 69 Chlorobenzene-d5	119	10.129	10.130	(1.000)	172397		
* 92 1,4-Dichlorobenzene-d4	152	12.458	12.459	(1.000)	254411		
\$ 43 1,2-Dichloroethane-d4	65	6.687	6.688	(0.955)	137646	248.794	49.76
\$ 39 Dibromofluoromethane	113	6.289	6.290	(0.898)	130965	250.848	50.17
\$ 59 Toluene-d8	98	8.655	8.650	(0.855)	655520	245.816	49.16
\$ 80 Bromofluorobenzene	95	11.308	11.309	(1.116)	255508	246.307	49.26
3 Vinyl Chloride	62	1.741	1.748	(0.249)	236115	340.293	68.06
12 1,1-Dichloroethene	96	3.025	2.989	(0.432)	132383	272.472	54.49
31 2-Butanone	43	5.794	5.820	(0.827)	124416	203.464	40.69
37 Chloroform	83	6.094	6.095	(0.870)	277289	276.096	55.22
41 Carbon Tetrachloride	117	6.363	6.358	(0.908)	170696	281.758	56.35
42 Benzene	78	6.650	6.645	(0.949)	806646	281.397	56.28
45 1,2-Dichloroethane	62	6.772	6.773	(0.967)	197567	281.588	56.32
47 Trichloroethene	130	7.384	7.385	(1.054)	189521	273.417	54.68

660 178

Data File: /var/chem/hp4.i/40606d.b/4060612.d
Report Date: 06-Jun-2000 19:13

Page 2

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
						(ng)	(UG/L)	
*****	****	**	*****	*****	*****	*****	*****	
65 Tetrachloroethene	164	9.242	9.243	(0.912)	141524	274.184	54.84	
70 Chlorobenzene	112	10.153	10.154	(1.002)	578786	276.625	55.32	

**GC/MS VOLATILE
MISCELLANEOUS**

Quanterra Environmental Services, Pittsburgh
GC/MS Logsheet

Log Book No.: M5000011

Analyst: Ko Reviewed by: _____ Date: _____

Method No.: 82400-H2O Instrument ID: _____ Methanol Lot No.: _____
Std.: 192-140-11 BFD Std.: 192-140-9 DMT Std.: 192-140-10 SW Std.: 192-140-10 K400 Std.: 192-144-1 C3 HMG
192-142-5 AA 192-142-4 20000 192-140-6 Vol/Adj 192-141-5 Agp1x 192-144-2 V/A

Date	Run No.	Lot No./ Sample No.	Vol./Wt	pH	Port No.	Comments
6/6/00	1. BFD406062	BFD	1.0			905
	2. CC406062	VSD50	5.0			VC, 11-000 1
	3. IC406062	VSD50 30005	5.0			
	4. 2C406062	VSD50	5.0			
	5. CF406060	BFD	1.0			1058
	6. 4A406060	VSD5	5.0			
	7. 4B406060	VSD20	5.0			
	8. 4C406060	VSD50	5.0			
	9. 4D406060	VSD100	5.0			
	10. 4E406060	VSD200	5.0			
	11.					
	12.					
	13.					
	14.					
	15.					
	16.					
	17.					
	18.					
	19.					
	20.					
	21.					
	22.					

PSR024 6/05/00 6:42:16 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: TROUTB

METHOD: QK Volatile Organics, GC/MS (8260B)

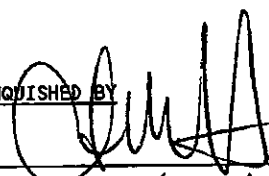
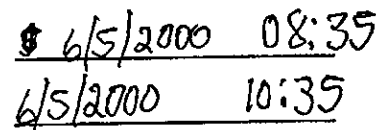
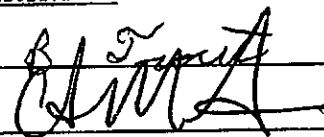
STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
6D,E CLP1	DDNW7-1-06	___	238259	416241	A-58-QK	COE250165	001	N	SOLID	0	8 1
6D,E CLP1	DDNW1-1-06	___	238260	416241	A-58-QK	COE250172	001	K	SOLID	0	8 1
8C,D CLP	DE44M-1-02	___	238257	399411	A-58-QK	COF020191	001	AA	SOLID	0	3 1
8C,D CLP	DE44Q-1-02	___	238258	399411	A-58-QK	COF020191	002	F	SOLID	0	3 1

B1K G

RELINQUISHED BY

RECEIVED BY

DATE/TIME


B Trout
6/5/2000 08:35
6/5/2000 10:35

***** END OF REPORT *****

GC/MS SEMIVOLATILE DATA

**GC/MS SEMIVOLATILE
QC SUMMARY**

SW846 8270C SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	64	65	83	56	64	71	00
02	DF/S1/0153/SDC/007	61	62	90	52	60	69	00
03	METHOD BLK. DE7JQ101	69	67	79	63	71	68	00
04	LCS DE7JQ102	73	69	78	67	76	71	00
05	DF/S1/0153/SDC/006 D	70	71	94	59	73	81	00
06	DF/S1/0153/SDC/006 S	68	69	89	58	72	79	00

SURROGATES

SRG01 = Nitrobenzene-d5
 SRG02 = 2-Fluorobiphenyl
 SRG03 = Terphenyl-d14
 SRG04 = 2-Fluorophenol
 SRG05 = Phenol-d5
 SRG06 = 2,4,6-Tribromophenol

QC LIMITS

(32-112)
 (30-110)
 (10-144)
 (13-110)
 (10-113)
 (21-122)

Column to be used to flag recovery values
 * Values outside of required QC Limits
 D System monitoring Compound diluted out

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F060000

WO #: DE7JQ102

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	0.188	75	28- 110	
2,4-Dinitrotoluene	0.250	0.197	79	47- 131	
Hexachlorobenzene	0.250	0.177	71	57- 128	
Hexachlorobutadiene	0.250	0.189	75	36- 116	
Hexachloroethane	0.250	0.191	76	30- 110	
Nitrobenzene	0.250	0.191	77	45- 130	
Pentachlorophenol	0.250	0.142	57	10- 140	
Pyridine	0.250	0.127	51	10- 148	
2,4,5-Trichlorophenol	0.250	0.184	74	41- 125	
2,4,6-Trichlorophenol	0.250	0.179	71	46- 135	
Cresols (total)	0.750	0.621	83	29- 144	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

660 188

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10W

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
1,4-Dichlorobenzene	0.250	ND	0.165	66	18 - 110	
2,4-Dinitrotoluene	0.250	ND	0.203	81	31 - 131	
Hexachlorobenzene	0.250	ND	0.194	78	36 - 132	
Hexachlorobutadiene	0.250	ND	0.164	66	18 - 116	
Hexachloroethane	0.250	ND	0.165	66	18 - 110	
Nitrobenzene	0.250	ND	0.170	68	10 - 211	
Pentachlorophenol	0.250	ND	0.168	67	10 - 140	
Pyridine	0.250	ND	0.107	43	10 - 148	
2,4,5-Trichlorophenol	0.250	ND	0.196	78	24 - 143	
2,4,6-Trichlorophenol	0.250	ND	0.178	71	36 - 135	
Cresols (total)	0.750	ND	0.577	77	25 - 144	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 0 outside limitsSpike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10X

BATCH: 0158105

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	REC	QUAL
=====	=====	=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	0.169	67	2.1	36	18- 110	
2,4-Dinitrotoluene	0.250	0.207	83	2.0	32	31- 131	
Hexachlorobenzene	0.250	0.202	81	3.9	22	36- 132	
Hexachlorobutadiene	0.250	0.171	69	4.6	32	18- 116	
Hexachloroethane	0.250	0.167	67	0.73	33	18- 110	
Nitrobenzene	0.250	0.173	69	1.8	50	10- 211	
Pentachlorophenol	0.250	0.177	71	5.3	56	10- 140	
Pyridine	0.250	0.107	43	0.27	65	10- 148	
2,4,5-Trichlorophenol	0.250	0.193	77	1.2	22	24- 143	
2,4,6-Trichlorophenol	0.250	0.184	74	3.7	27	36- 135	
Cresols (total)	0.750	0.577	77	0.10	33	25- 144	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 11 outside limits
 Spike Recovery: 0 out of 11 outside limits

COMMENTS:

660 190

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE7JQ101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: D0607003.

Lot Number: C0F020191

Date Analyzed: 06/07/00

Time Analyzed: 12:49

Matrix: SOLID

Date Extracted: 06/05/00

GC Column: HP5MS ID: .25

Extraction Method: 1311/3520C

Instrument ID: 721

Level: (low/med) LOW

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

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DF/S1/0153/SDC/006	DE44M10W S	D0607006.	06/07/00	14:16
02	DF/S1/0153/SDC/006	DE44M10X D	D0607007.	06/07/00	14:45
03	DF/S1/0153/SDC/006	DE44M103	D0607005.	06/07/00	13:47
04	DF/S1/0153/SDC/007	DE44Q103	D0607008.	06/07/00	15:14
05	CHECK SAMPLE	DE7JQ102 C	D0607004.	06/07/00	13:18
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: _

Lab File ID: D0525DF3

DFTPP Injection Date: 05/25/00

Instrument ID: 721

DFTPP Injection Time: 1854

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	54.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	22.8
365	Greater than 1.0% of mass 198	2.5
441	Present, but less than mass 443	11.3
442	Greater than 40.0% of mass 198	70.3
443	17.0 - 23.0% of mass 442	14.1 (20.1)2

1-Value is % of mass 69

2-Value is % of mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD020	SSTD20	D0525CC1	05/25/00	1915
02	SSTD050	SSTD50	D0525CC2	05/25/00	1945
03	SSTD080	SSTD80	D0525CC3	05/25/00	2015
04	SSTD120	SSTD120	D0525CC4	05/25/00	2045
05	SSTD160	SSTD160	D0525CC5	05/25/00	2115
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
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660 192

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Lab File ID: D0607DFT

DFTPP Injection Date: 06/07/00

Instrument ID: 721

DFTPP Injection Time: 1057

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.0
68	Less than 2.0% of mass 69	1.0 (1.9)1
69	Mass 69 relative abundance	54.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	46.4
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	7.4
275	10.0 - 30.0% of mass 198	20.7
365	Greater than 1.0% of mass 198	1.61
441	Present, but less than mass 443	8.6
442	Greater than 40.0% of mass 198	55.8
443	17.0 - 23.0% of mass 442	11.0 (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:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD50	D0607CCC	06/07/00	1117
02	INTRA-LAB BL	DE7JQ101	D0607003	06/07/00	1249
03	INTRA-LAB CH	DE7JQ102	D0607004	06/07/00	1318
04	DF/S1/0153/S	DE44M103	D0607005	06/07/00	1347
05	DF/S1/0153/S	DE44M10W	D0607006	06/07/00	1416
06	DF/S1/0153/S	DE44M10X	D0607007	06/07/00	1445
07	DF/S1/0153/S	DE44Q103	D0607008	06/07/00	1514
08					
09					
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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

660 193

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT Case No.:

SAS No.:

SDG No.: C0F020191

Lab File ID (Standard): D0607CCC

Date Analyzed: 06/07/00

Instrument ID: 721

Time Analyzed: 1117

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	90150	4.43	325485	5.62	178265	8.12
UPPER LIMIT	180300	4.93	650970	6.12	356530	8.62
LOWER LIMIT	45075	3.93	162743	5.12	89133	7.62
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	88416	4.43	348305	5.61	201310	8.11
02 INTRA-LAB CH	88729	4.44	333317	5.62	199421	8.11
03 DF/S1/0153/S	90348	4.43	359406	5.61	199464	8.11
04 DF/S1/0153/S	90549	4.44	347336	5.62	196769	8.11
05 DF/S1/0153/S	91464	4.43	342886	5.62	197007	8.11
06 DF/S1/0153/S	92086	4.43	363270	5.62	201805	8.11
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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 used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Lab File ID (Standard): D0607CCC

Date Analyzed: 06/07/00

Instrument ID: 721

Time Analyzed: 1117

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	342542	10.96	308337	16.78	252282	19.72
UPPER LIMIT	685084	11.46	616674	17.28	504564	20.22
LOWER LIMIT	171271	10.46	154169	16.28	126141	19.22
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	412044	10.95	372157	16.76	314545	19.72
02 INTRA-LAB CH	399186	10.96	360377	16.76	302782	19.72
03 DF/S1/0153/S	384527	10.95	332109	16.77	281676	19.72
04 DF/S1/0153/S	385413	10.96	329863	16.76	269280	19.72
05 DF/S1/0153/S	373714	10.96	313364	16.76	255283	19.72
06 DF/S1/0153/S	393368	10.95	328817	16.76	275377	19.72
07						
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22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = 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 used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

**GC/MS SEMIVOLATILE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M103

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

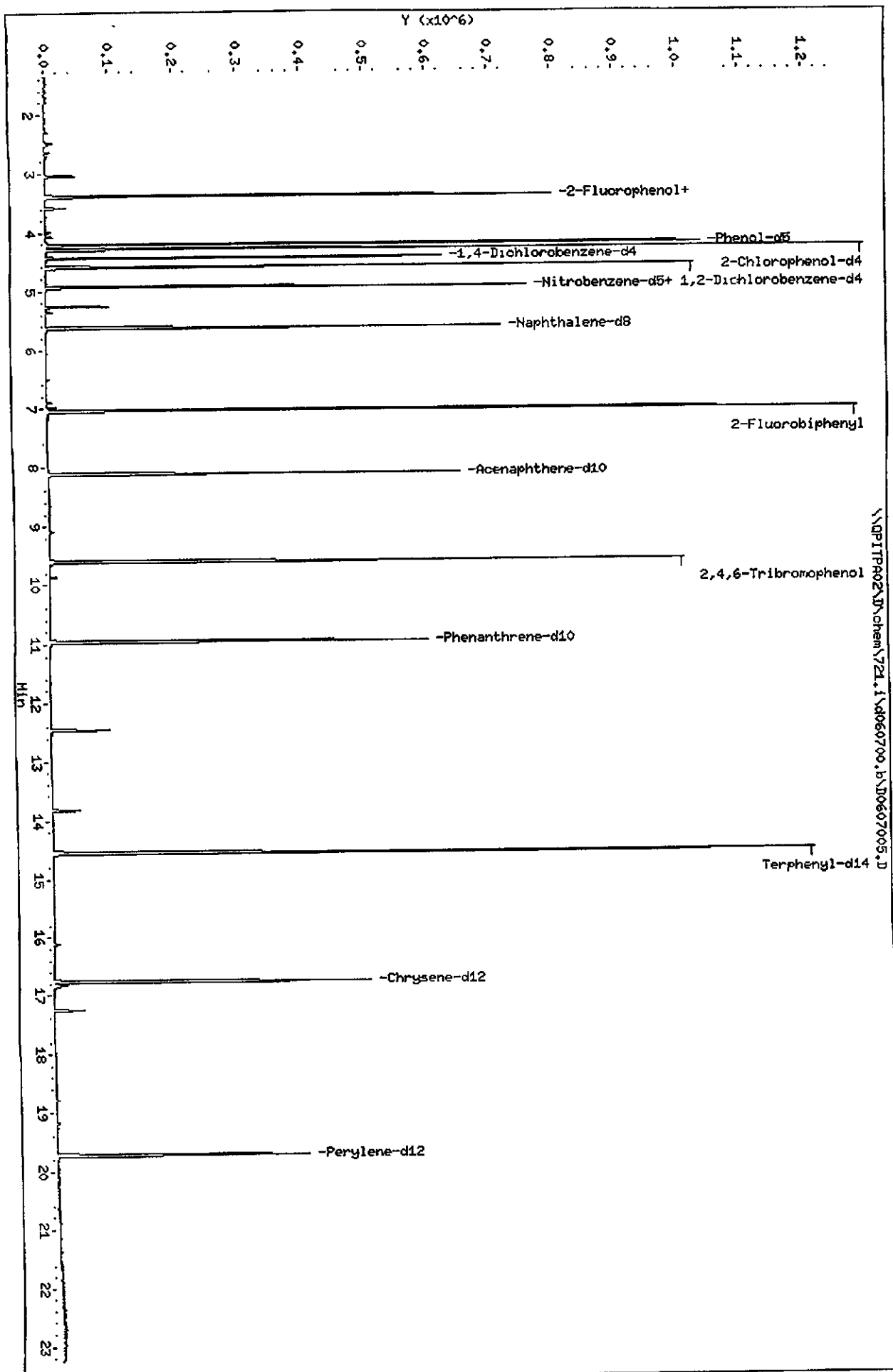
QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

Data File: \\APIPAC2\chem\721.1\060700.b\0607005.D
Date: 07-JUN-2000 13:47
Client ID: DF/S1/0153/SDC/006
Sample Info: 00020191-001 tolp 6/5/00 8270c
Volume Injected (uL): 2.0
Column phase: Hp5-MS

Instrument: 721.1
Operator: 001562, JLF
Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Opitpa02\D\chem\721.i\d060700.b\D0607005.D
 Lab Smp Id: DE44M103 Client Smp ID: DF/S1/0153/SDC/006
 Inj Date : 07-JUN-2000 13:47
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-001 tclp 6/5/00 8270c
 Misc Info : de44m103,d060700.b,8270c.m,tclp.sub
 Comment :
 Method : \\Opitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 7
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

DLF
6-9-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.431	4.434	(1.000)	90348	40.0000	(aQ)
* 2 Naphthalene-d8	136	5.613	5.623	(1.000)	359406	40.0000	(a)
* 3 Acenaphthene-d10	164	8.112	8.116	(1.000)	199464	40.0000	(a)
* 4 Phenanthrene-d10	188	10.954	10.957	(1.000)	384527	40.0000	(a)
* 5 Chrysene-d12	240	16.765	16.775	(1.000)	332109	40.0000	(a)
* 6 Perylene-d12	264	19.721	19.724	(1.000)	281676	40.0000	(a)
9 Pyridine	79	Compound Not Detected.					
27 1,4-Dichlorobenzene	146	Compound Not Detected.					
M 195 Cresols, total	100	Compound Not Detected.					
30 2-Methylphenol	108	Compound Not Detected.					
192 4-Methylphenol	108	Compound Not Detected.					
34 Hexachloroethane	117	Compound Not Detected.					
35 Nitrobenzene	77	Compound Not Detected.					
56 Hexachlorobutadiene	224	Compound Not Detected.					

Data File: \\Opitpa02\D\chem\721.i\d060700.b\D0607005.D
 Report Date: 07-Jun-2000 15:03

Page 2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
=====	=====	==	=====	=====	=====	=====	=====
66 2,4,6-Trichlorophenol	196				Compound Not Detected.		
67 2,4,5-Trichlorophenol	196				Compound Not Detected.		
87 2,4-Dinitrotoluene	165				Compound Not Detected.		
107 Hexachlorobenzene	283				Compound Not Detected.		
111 Pentachlorophenol	265				Compound Not Detected.		
\$ 154 Nitrobenzene-d5	82	4.935	4.938	(0.879)	228249	64.2795	0.16070 (a)
\$ 155 2-Fluorobiphenyl	172	7.031	7.034	(0.867)	433951	64.7054	0.16176 (a)
\$ 156 Terphenyl-d14	244	14.555	14.544	(0.868)	656253	82.6547	0.20664 (a)
\$ 157 Phenol-d5	99	4.209	4.206	(0.950)	290891	96.5757	0.24144 (a)
\$ 158 2-Fluorophenol	112	3.390	3.386	(0.765)	230467	84.3064	0.21076 (a)
\$ 159 2,4,6-Tribromophenol	330	9.604	9.607	(0.877)	173325	106.605	0.26651 (a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44Q103

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

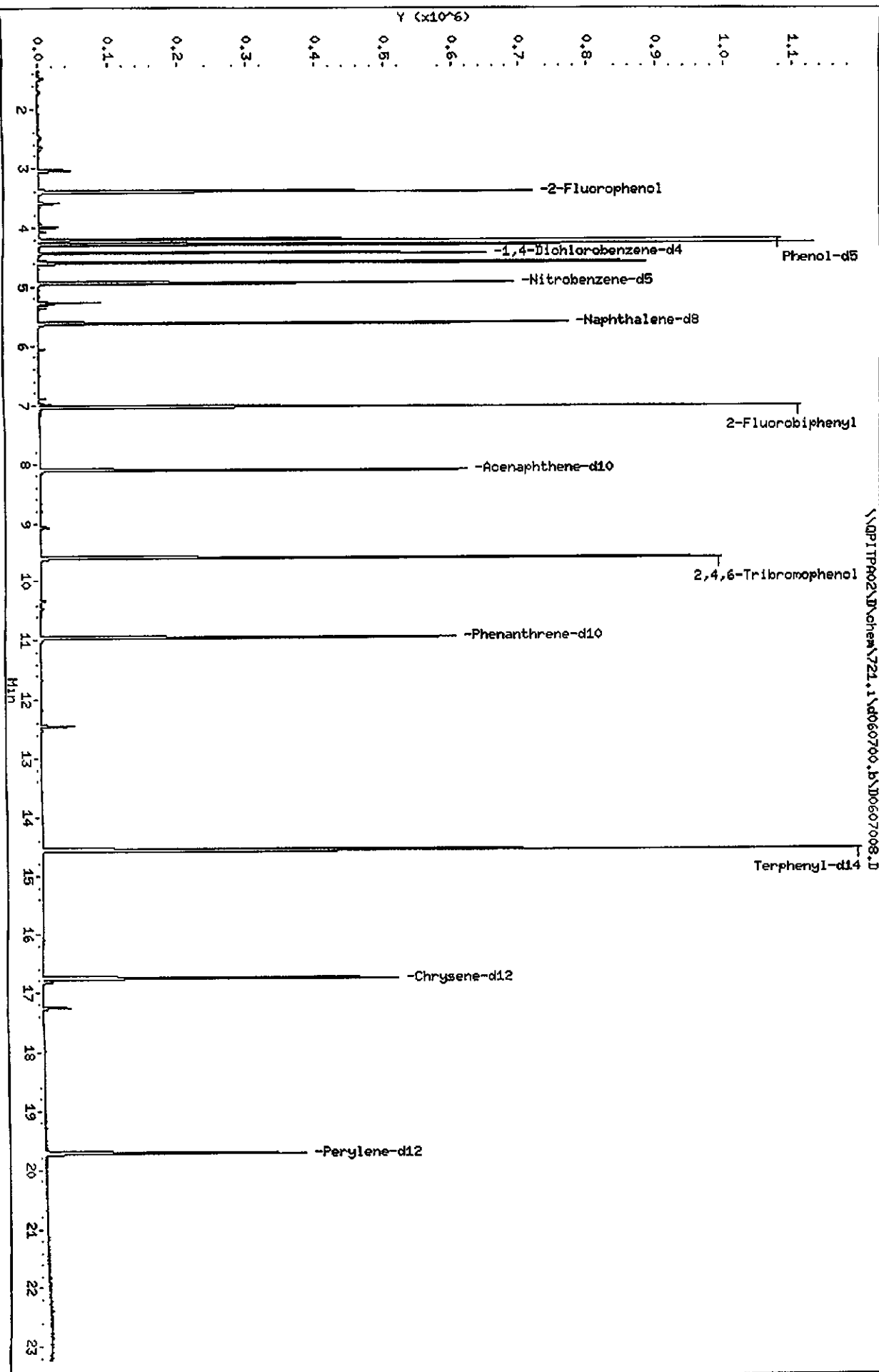
QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	mg/L
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

Data File: \\QPI\PRO2\N\chem\721.1\060700.b\0607008.D
Date: 07-JUN-2000 15:14
Client ID: DF/SL/0153/SDC/007
Sample Info: 00F020191-002 tolp 6/5/00 8270c
Volume Injected (uL): 2.0
Column phase: Hp5-MS

Instrument: 721.1
Operator: 001562, DLF
Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607008.D
 Lab Smp Id: DE44Q103 Client Smp ID: DF/S1/0153/SDC/007
 Inj Date : 07-JUN-2000 15:14
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-002 tclp 6/5/00 8270c
 Misc Info : de44q103,d060700.b,8270c.m,tclp.sub
 Comment :
 Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 10
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

SLH
6-7-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.434	4.434	(1.000)	92086	40.0000	(aQ)
* 2 Naphthalene-d8	136	5.616	5.623	(1.000)	363270	40.0000	(a)
* 3 Acenaphthene-d10	164	8.108	8.116	(1.000)	201805	40.0000	(a)
* 4 Phenanthrene-d10	188	10.950	10.957	(1.000)	393368	40.0000	(a)
* 5 Chrysene-d12	240	16.761	16.775	(1.000)	328817	40.0000	(a)
* 6 Perylene-d12	264	19.723	19.724	(1.000)	275377	40.0000	(a)
9 Pyridine	79	Compound Not Detected.					
27 1,4-Dichlorobenzene	146	Compound Not Detected.					
M 195 Cresols, total	100	Compound Not Detected.					
30 2-Methylphenol	108	Compound Not Detected.					
192 4-Methylphenol	108	Compound Not Detected.					
34 Hexachloroethane	117	Compound Not Detected.					
35 Nitrobenzene	77	Compound Not Detected.					
56 Hexachlorobutadiene	224	Compound Not Detected.					

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607008.D
 Report Date: 07-Jun-2000 15:42

Page 2

Compounds	QUANT SIG	CONCENTRATIONS					
		RT	EXP RT	RBL RT	RESPONSE	ON-COLUMN (NG)	FINAL (mg/L)
66 2,4,6-Trichlorophenol	196	Compound Not Detected.					
67 2,4,5-Trichlorophenol	196	Compound Not Detected.					
87 2,4-Dinitrotoluene	165	Compound Not Detected					
107 Hexachlorobenzene	283	Compound Not Detected					
111 Pentachlorophenol	265	Compound Not Detected.					
\$ 154 Nitrobenzene-d5	82	4.931	4.938	(0.878)	218686	60.9313	0.15233(a)
\$ 155 2-Fluorobiphenyl	172	7.033	7.034	(0.867)	419448	61.8174	0.15454(a)
\$ 156 Terphenyl-d14	244	14.557	14.544	(0.869)	710196	90.3444	0.22586(a)
\$ 157 Phenol-d5	99	4.205	4.206	(0.948)	278435	90.6957	0.22674(a)
\$ 158 2-Fluorophenol	112	3.392	3.386	(0.765)	217929	78.2153	0.19554(a)
\$ 159 2,4,6-Tribromophenol	330	9.606	9.607	(0.877)	172842	103.918	0.25980(a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

**GC/MS SEMIVOLATILE
CALIBRATION DATA**

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

660 205

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: _

Instrument ID: 721

Calibration Date(s): 05/25/00

Min $\overline{RRF}$ for SPCC(#) = 0.050

Max %RSD for CCC(*) = 30.0%

LAB FILE ID:		RRF1	=D0525CC1.D	RRF2	=D0525CC2.D			
RRF3		=D0525CC3.D	RRF4	=D0525CC4.D	RRF5	=D0525CC5.D		
COMPOUND		RRF1	RRF2	RRF3	RRF4	RRF5	$\overline{RRF}$	% RSD
Phenol	*	1.505	1.502	1.503	1.431	1.409	1.470	3.2*
bis(2-Chloroethyl) ether		1.119	1.126	1.110	1.070	1.060	1.097	2.7
2-Chlorophenol		1.415	1.481	1.441	1.402	1.381	1.424	2.7
1,3-Dichlorobenzene		1.504	1.564	1.553	1.506	1.492	1.524	2.1
1,4-Dichlorobenzene	*	1.571	1.605	1.585	1.528	1.540	1.566	2.0*
1,2-Dichlorobenzene		1.455	1.482	1.493	1.454	1.466	1.470	1.2
2-Methylphenol		1.020	1.055	1.048	1.009	0.989	1.024	2.7
2,2'-oxybis(1-Chloropropane		1.286	1.297	1.281	1.211	1.184	1.252	4.1
4-Methylphenol		1.075	1.114	1.113	1.073	1.079	1.091	1.9
Hexachloroethane		0.708	0.730	0.724	0.682	0.690	0.707	3.0
Nitrobenzene		0.391	0.404	0.409	0.400	0.402	0.401	1.6
Isophorone		0.614	0.634	0.635	0.622	0.646	0.630	1.9
2-Nitrophenol	*	0.219	0.229	0.232	0.222	0.229	0.226	2.3*
2,4-Dimethylphenol		0.346	0.375	0.375	0.367	0.379	0.368	3.6
bis(2-Chloroethoxy) methane		0.357	0.360	0.366	0.353	0.359	0.359	1.3
N-Nitroso-di-n-propylamine	#	0.816	0.867	0.871	0.825	0.821	0.840	3.2#
2,4-Dichlorophenol	*	0.295	0.310	0.303	0.296	0.306	0.302	2.1*
1,2,4-Trichlorobenzene		0.344	0.356	0.353	0.350	0.357	0.352	1.5
Naphthalene		1.038	1.060	1.080	1.062	1.089	1.066	1.9
4-Chloroaniline		0.419	0.439	0.433	0.415	0.423	0.426	2.4
Hexachlorobutadiene	*	0.232	0.240	0.246	0.243	0.253	0.243	3.0*
4-Chloro-3-Methylphenol		0.296	0.303	0.307	0.296	0.303	0.301	1.6
2-Methylnaphthalene		0.629	0.660	0.666	0.653	0.662	0.654	2.3
Hexachlorocyclopentadiene	#	0.559	0.571	0.584	0.594	0.608	0.583	3.3#
2,4,6-Trichlorophenol	*	0.446	0.450	0.451	0.452	0.464	0.453	1.5*
2,4,5-Trichlorophenol		0.475	0.486	0.467	0.471	0.482	0.476	1.6
2-Chloronaphthalene		1.202	1.221	1.229	1.229	1.256	1.227	1.6
2-Nitroaniline		0.413	0.413	0.420	0.418	0.416	0.416	0.7
Dimethylphthalate		1.434	1.468	1.472	1.460	1.459	1.459	1.0
Acenaphthylene		1.812	1.823	1.822	1.797	1.821	1.815	0.6
2,6-Dinitrotoluene		0.341	0.346	0.350	0.342	0.355	0.347	1.8
3-Nitroaniline		0.359	0.374	0.379	0.382	0.385	0.376	2.7
Acenaphthene	*	1.106	1.131	1.137	1.135	1.158	1.133	1.6*
2,4-Dinitrophenol	#	0.226	0.258	0.265	0.275	0.279	0.261	8.0#
4-Nitrophenol	#	0.290	0.305	0.309	0.314	0.328	0.309	4.4#
Dibenzofuran		1.615	1.665	1.687	1.655	1.684	1.661	1.7
2,4-Dinitrotoluene		0.439	0.456	0.462	0.460	0.462	0.456	2.1

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: _

Instrument ID: 721

Calibration Date(s): 05/25/00

Min $\overline{RRF}$ for SPCC(#) = 0.050

Max %RSD for CCC(*) = 30.0%

LAB FILE ID:	RRF1 =D0525CC1.D	RRF2 =D0525CC2.D					
RRF3 =D0525CC3.D	RRF4 =D0525CC4.D	RRF5 =D0525CC5.D					
COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	$\overline{RRF}$	% RSD
Diethylphthalate	1.537	1.573	1.576	1.612	1.645	1.589	2.6
4-Chlorophenyl-phenylether	0.671	0.685	0.701	0.698	0.717	0.694	2.5
Fluorene	1.275	1.305	1.313	1.325	1.340	1.312	1.9
4-Nitroaniline	0.336	0.358	0.356	0.361	0.366	0.355	3.3
4,6-Dinitro-2-methylphenol	0.158	0.179	0.181	0.190	0.190	0.180	7.4
N-Nitrosodiphenylamine (1) *	0.509	0.516	0.509	0.536	0.531	0.520	2.4*
4-Bromophenyl-phenylether	0.217	0.229	0.234	0.239	0.239	0.232	4.0
Hexachlorobenzene	0.274	0.289	0.294	0.293	0.293	0.289	2.8
Pentachlorophenol *	0.164	0.188	0.191	0.196	0.197	0.187	7.3*
Phenanthrene	0.946	0.992	1.005	0.999	0.998	0.988	2.4
Anthracene	0.970	1.014	1.012	1.017	1.018	1.006	2.0
Carbazole	0.851	0.900	0.900	0.912	0.913	0.895	2.8
Di-n-Butylphthalate	1.294	1.384	1.391	1.380	1.401	1.370	3.1
Fluoranthene *	0.983	1.057	1.071	1.082	1.095	1.058	4.2*
Pyrene	1.221	1.242	1.266	1.218	1.200	1.229	2.1
Butylbenzylphthalate	0.657	0.680	0.694	0.660	0.657	0.670	2.5
3,3'-Dichlorobenzidine	0.424	0.449	0.466	0.467	0.472	0.456	4.3
Benzo(a)Anthracene	1.039	1.080	1.114	1.087	1.095	1.083	2.6
Chrysene	0.995	1.030	1.054	1.032	1.047	1.032	2.2
bis(2-ethylhexyl)Phthalate	0.902	0.966	0.982	0.954	0.946	0.950	3.2
Di-n-octylphthalate *	1.719	1.801	1.833	1.752	1.718	1.765	2.9*
Benzo(b)fluoranthene	1.134	1.207	1.211	1.408	1.478	1.288	11.4
Benzo(k)fluoranthene	1.196	1.229	1.327	1.148	1.094	1.199	7.3
Benzo(a)pyrene *	1.020	1.102	1.135	1.133	1.148	1.108	4.7*
Indeno(1,2,3-cd)pyrene	0.994	1.112	1.188	1.245	1.302	1.168	10.3
Dibenz(a,h)anthracene	1.047	1.174	1.244	1.287	1.366	1.224	9.9
Benzo(g,h,i)perylene	1.035	1.165	1.229	1.266	1.341	1.207	9.5
Pyridine	1.182	1.119	1.131	1.108	1.084	1.125	3.2
N-Nitrosodimethylamine	0.667	0.668	0.685	0.652	0.640	0.662	2.6
Aniline	1.666	1.665	1.720	1.651	1.646	1.670	1.8
Benzyl Alcohol	0.770	0.787	0.790	0.757	0.772	0.775	1.7
Benzoic Acid	0.217	0.242	0.248	0.226	0.267	0.240	8.1
1-Methylnaphthalene	0.606	0.607	0.604	0.600	0.610	0.605	0.7
2,3,4,6-Tetrachlorophenol	0.381	0.387	0.402	0.396	0.419	0.397	3.8
2,3,5,6-Tetrachlorophenol	0.386	0.389	0.403	0.406	0.412	0.399	2.8

660 200

Data File: \\QPITPA02\D\chem\721.i\d052500.b/D0525CC5.D
Report Date: 05/25/2000

INITIAL CALIBRATION REPORT

Instrument ID: 721.i
Lab File ID: D0525CC5.D
Analysis Type: NONE

Injection Date: 25-MAY-2000 21:15
Lab Sample ID: sstd160
Method File: \\QPITPA02\D\chem\721.i\d052500.b

COMPOUND	%RSD
Benzo(b)fluoranthene	11.4
Benzo(k)fluoranthene	7.3
7,12-dimethylbenz(a)anthracene	6.9
Benzo(a)pyrene	4.7
Indeno(1,2,3-cd)pyrene	10.3
Dibenz(a,h)anthracene	9.9
Benzo(g,h,i)perylene	9.5

The average of all %RSD's in the initial calibration is 3.4

INITIAL CALIBRATION REPORT

Instrument ID: 721.i
 Lab File ID: D0525CC5.D
 Analysis Type: NONE

Injection Date: 25-MAY-2000 21:15
 Lab Sample ID: sstd160
 Method File: \\QPITPA02\D\chem\721.i\d052500.b

COMPOUND	%RSD
Pyridine	3.2
N-Nitrosodimethylamine	2.6
Methyl methanesulfonate	3.3
2-Fluorophenol	3.0
Phenol-d5	2.7
Phenol	3.2
Aniline	1.8
bis(2-Chloroethyl)ether	2.7
2-Chlorophenol-d4	1.9
2-Chlorophenol	2.7
1,3-Dichlorobenzene	2.1
1,4-Dichlorobenzene	2.0
Benzyl Alcohol	1.7
1,2-Dichlorobenzene-d4	1.8
1,2-Dichlorobenzene	1.2
2-Methylphenol	2.7
2,2'-oxybis(1-Chloropropane)	4.1
4-Methylphenol	1.9
N-Nitroso-di-n-propylamine	3.2
Hexachloroethane	3.0
Nitrobenzene-d5	2.5
Nitrobenzene	1.6
Isophorone	1.9
2-Nitrophenol	2.3
2,4-Dimethylphenol	3.6
bis(2-Chloroethoxy)methane	1.3
2,4-Dichlorophenol	2.1
Benzoic Acid	8.1
1,2,4-Trichlorobenzene	1.5
Naphthalene	1.9
4-Chloroaniline	2.4
Hexachlorobutadiene	3.0
4-Chloro-3-Methylphenol	1.6
2-Methylnaphthalene	2.3
1-Methylnaphthalene	0.7
Hexachlorocyclopentadiene	3.3
2,4,6-Trichlorophenol	1.5
2,4,5-Trichlorophenol	1.6
2-Fluorobiphenyl	1.9

660 210

Data File: \\QPITPA02\D\chem\721.i\d052500.b/D0525CC5.D
Report Date: 05/25/2000

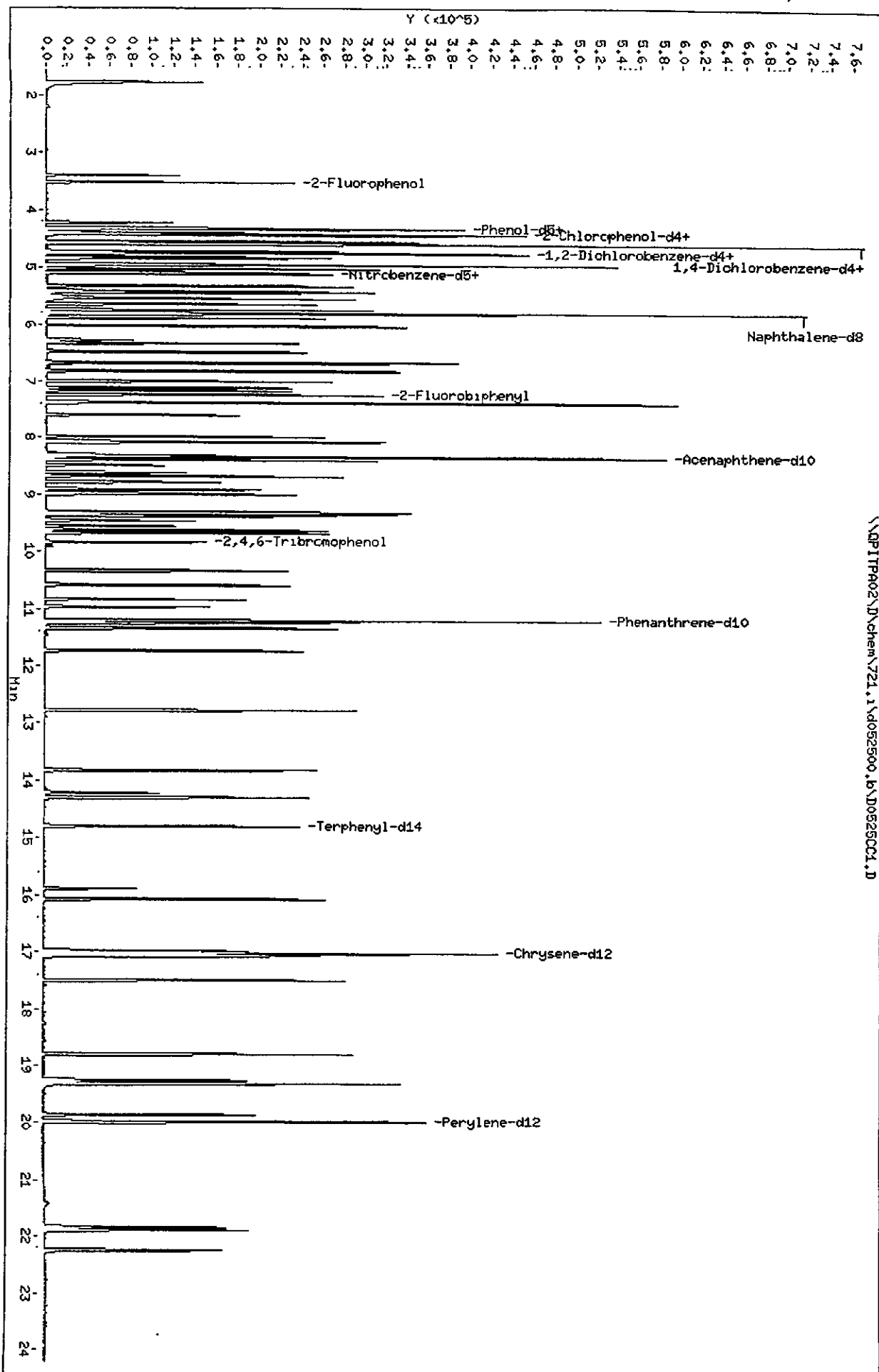
INITIAL CALIBRATION REPORT

Instrument ID: 721.i
Lab File ID: D0525CC5.D
Analysis Type: NONEInjection Date: 25-MAY-2000 21:15
Lab Sample ID: sstd160
Method File: \\QPITPA02\D\chem\721.i\d052500.b

COMPOUND	%RSD
=====	=====
2-Chloronaphthalene	1.6
2-Nitroaniline	0.7
Dimethylphthalate	1.0
Acenaphthylene	0.6
2,6-Dinitrotoluene	1.8
3-Nitroaniline	2.7
Acenaphthene	1.6
2,4-Dinitrophenol	8.0
4-Nitrophenol	4.4
Dibenzofuran	1.7
2,4-Dinitrotoluene	2.1
2,3,5,6-Tetrachlorophenol	2.8
2-Naphthylamine	13.1
2,3,4,6-Tetrachlorophenol	3.8
Diethylphthalate	2.6
Fluorene	1.9
4-Chlorophenyl-phenylether	2.5
4-Nitroaniline	3.3
4,6-Dinitro-2-methylphenol	7.4
N-Nitrosodiphenylamine (1)	2.4
1,2-Diphenylhydrazine	3.5
2,4,6-Tribromophenol	7.2
4-Bromophenyl-phenylether	4.0
Hexachlorobenzene	2.8
Pentachlorophenol	7.3
Phenanthrene	2.4
Anthracene	2.0
Carbazole	2.8
Di-n-Butylphthalate	3.1
Fluoranthene	4.2
Benzidine	4.7
Pyrene	2.1
Terphenyl-d14	2.7
Butylbenzylphthalate	2.5
Benzo(a)Anthracene	2.6
3,3'-Dichlorobenzidine	4.3
Chrysene	2.2
bis(2-ethylhexyl)Phthalate	3.2
Di-n-octylphthalate	2.9

Data File: \\QPIITPA02\chem\721.1\4052500.b\4052500C1.D
 Date : 26-May-2000 19:15
 Client ID: SST020
 Sample Info: sstd020 (10UC/ML) 194-175-10 8270/c1p/625
 Column phase: HP5-MS

Instrument: 721.1
 Operator: 001566, DLF
 Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\721.i\d052500.b\D0525CC1.D
 Lab Smp Id: sstd20 Client Smp ID: SST020
 Inj Date : 25-MAY-2000 19:15
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : sstd020 (10UG/ML) 194-175-10 8270/clp/625
 Misc Info : sstd20,d052500.b,8270c.m,3-root.sub,1,1
 Comment :
 Method : \\QPITPA02\D\chem\721.i\d052500.b\8270c.m
 Meth Date : 25-May-2000 21:25 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 20:45 Cal File: D0525CC4.D
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 3-root.sub
 Target Version: 4.03
 Processing Host: PITPC013

WJ
SP5/00

						AMOUNTS	
QUANT SIG						CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
=====	----	--	-----	-----	-----	-----	-----
* 1 1,4-Dichlorobenzene-d4	152	4.582	4.582	(1.000)	112066	40.0000	
* 2 Naphthalene-d8	136	5.799	5.799	(1.000)	394224	40.0000	
* 3 Acenaphthene-d10	164	8.345	8.345	(1.000)	194720	40.0000	
* 4 Phenanthrene-d10	188	11.208	11.208	(1.000)	358848	40.0000	
* 5 Chrysene-d12	240	17.033	17.033	(1.000)	293994	40.0000	
* 6 Perylene-d12	264	19.983	19.983	(1.000)	258675	40.0000	
10 N-Nitrosodimethylamine	74	1.760	1.760	(0.384)	37373	20.0000	21.352
9 Pyridine	79	1.760	1.760	(0.384)	66222	20.0000	22.184
16 Methyl methanesulfonate	80	3.393	3.393	(0.740)	54773	20.0000	20.260
21 Aniline	93	4.347	4.347	(0.949)	93371	20.0000	19.679
22 Phenol	94	4.327	4.327	(0.944)	84335	20.0000	20.268
23 bis(2-Chloroethyl)ether	93	4.394	4.394	(0.959)	62720	20.0000	19.815
24 2-Chlorophenol	128	4.435	4.435	(0.968)	79271	20.0000	19.847
26 1,3-Dichlorobenzene	146	4.549	4.549	(0.993)	84303	20.0000	19.781
27 1,4-Dichlorobenzene	146	4.596	4.596	(1.003)	88051	20.0000	20.106
28 1,2-Dichlorobenzene	146	4.757	4.757	(1.038)	81516	20.0000	19.823
29 Benzyl Alcohol	108	4.717	4.717	(1.029)	43171	20.0000	19.172
30 2-Methylphenol	108	4.824	4.824	(1.053)	57166	20.0000	19.256
31 2,2'-oxybis(1-Chloropropane)	45	4.851	4.851	(1.059)	72079	20.0000	20.720
32 N-Nitroso-di-n-propylamine	70	4.979	4.979	(1.087)	45707	20.0000	19.487
192 4-Methylphenol	108	4.945	4.945	(1.079)	60227	20.0000	19.046
34 Hexachloroethane	117	5.026	5.026	(1.097)	39663	20.0000	19.982
35 Nitrobenzene	77	5.106	5.106	(0.881)	77020	20.0000	19.881
41 Isophorone	82	5.328	5.328	(0.919)	121112	20.0000	19.434
42 2-Nitrophenol	139	5.416	5.416	(0.934)	43219	20.0000	19.604
43 2,4-Dimethylphenol	107	5.442	5.442	(0.939)	68182	20.0000	18.385

Data File: \\QPITPA02\D\chem\721.i\d052500.b\D0525CC1.D
 Report Date: 25-May-2000 21:26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
=====	=====	==	=====	=====	=====	=====	=====
44 bis(2-Chloroethoxy)methane	93	5 550	5 550	(0.957)	70387	20 0000	19 730
48 2,4-Dichlorophenol	162	5 651	5 651	(0.975)	58078	20.0000	19.130
49 Benzoic Acid	122	5 550	5.550	(0.957)	42822	20.0000	19 523 (H)
50 1,2,4-Trichlorobenzene	180	5 752	5 752	(0.992)	67725	20.0000	19.242
51 Naphthalene	128	5 819	5 819	(1.003)	204602	20 0000	19.651
52 4-Chloroaniline	127	5.893	5 893	(1.016)	82605	20 0000	19 475
56 Hexachlorobutadiene	225	6.027	6.027	(1.039)	45829	20 0000	19.272
59 4-Chloro-3-Methylphenol	107	6 484	6.484	(1.118)	58377	20 0000	19.113
62 2-Methylnaphthalene	142	6 672	6 672	(1.151)	123983	20 0000	19 319
63 1-Methylnaphthalene	142	6 827	6 827	(1.177)	119521	20.0000	19.833
64 Hexachlorocyclopentadiene	237	7 001	7 001	(0.839)	54391	20 0000	20.210
66 2,4,6-Trichlorophenol	196	7 116	7 116	(0.853)	43375	20.0000	20.155
67 2,4,5-Trichlorophenol	196	7 169	7 169	(0.859)	46230	20 0000	20.168
70 2-Chloronaphthalene	162	7.384	7.384	(0.885)	117038	20.0000	19.849
73 2-Nitroaniline	65	7 599	7.599	(0.911)	40209	20 0000	20 225
76 Dimethylphthalate	163	7.982	7 982	(0.957)	139636	20.0000	19.697
78 2,6-Dinitrotoluene	165	8.090	8 090	(0.969)	33168	20 0000	19.673
79 Acenaphthylene	152	8.070	8 070	(0.967)	176393	20 0000	20.281 (Q)
81 3-Nitroaniline	138	8 312	8.312	(0.996)	34940	20 0000	19 411
82 Acenaphthene	153	8 399	8 399	(1.006)	107685	20.0000	19 828
83 2,4-Dinitrophenol	184	8.493	8 493	(1.018)	22043	20 0000	17.926
85 4-Nitrophenol	109	8.627	8 627	(1.034)	28289	20 0000	19 700
86 Dibenzofuran	168	8.688	8 688	(1.041)	157255	20 0000	19.537
87 2,4-Dinitrotoluene	165	8.789	8.789	(1.053)	42760	20 0000	19.030
91 2,3,5,6-Tetrachlorophenol	232	8.916	8.916	(1.068)	37568	20 0000	20.123
88 2,3,4,6-Tetrachlorophenol	232	9 004	9 004	(1.079)	37062	20.0000	19.946
92 2-Naphthylamine	143	8.977	8 977	(1.076)	97309	20.0000	23.136
93 Diethylphthalate	149	9 313	9 313	(1.116)	149620	20 0000	19.776
94 Fluorene	166	9 333	9 333	(1.118)	124122	20 0000	19 623
95 4-Chlorophenyl-phenylether	204	9 373	9 373	(1.123)	65329	20.0000	19.605
96 4-Nitroaniline	138	9.461	9 461	(1.134)	32732	20.0000	19 065
98 4,6-Dinitro-2-methylphenol	198	9 555	9.555	(0.853)	28282	20 0000	17 833
99 N-Nitrosodiphenylamine (1)	169	9 622	9.622	(0.859)	91356	20 0000	19.620
100 1,2-Diphenylhydrazine	77	9 676	9.676	(0.863)	142863	20.0000	19.421
106 4-Bromophenyl-phenylether	248	10.334	10 334	(0.922)	38879	20.0000	18.904
107 Hexachlorobenzene	284	10 589	10 589	(0.945)	49261	20 0000	19.143
111 Pentachlorophenol	266	10.972	10 972	(0.979)	29372	20 0000	18 766 (Q)
115 Phenanthrene	178	11 255	11 255	(1.004)	169752	20 0000	19.157
116 Anthracene	178	11 342	11 342	(1.012)	174046	20 0000	19.351
119 Carbazole	167	11 725	11 725	(1.046)	152734	20 0000	18.983 (Q)
120 Di-n-Butylphthalate	149	12 773	12 773	(1.140)	232209	20 0000	19 173
123 Fluoranthene	202	13.821	13 821	(1.233)	176328	20 0000	18.855
124 Benzidine	184	14 211	14 211	(0.834)	67616	20 0000	18 584
125 Pyrene	202	14.292	14.292	(0.839)	179486	20 0000	19 975
131 Butylbenzylphthalate	149	16.072	16.072	(0.944)	96519	20.0000	19.711
135 3,3'-Dichlorobenzidine	252	17 060	17 060	(1.002)	62390	20 0000	18.764
136 Benzo(a)Anthracene	228	16 986	16 986	(0.997)	152733	20 0000	19.249

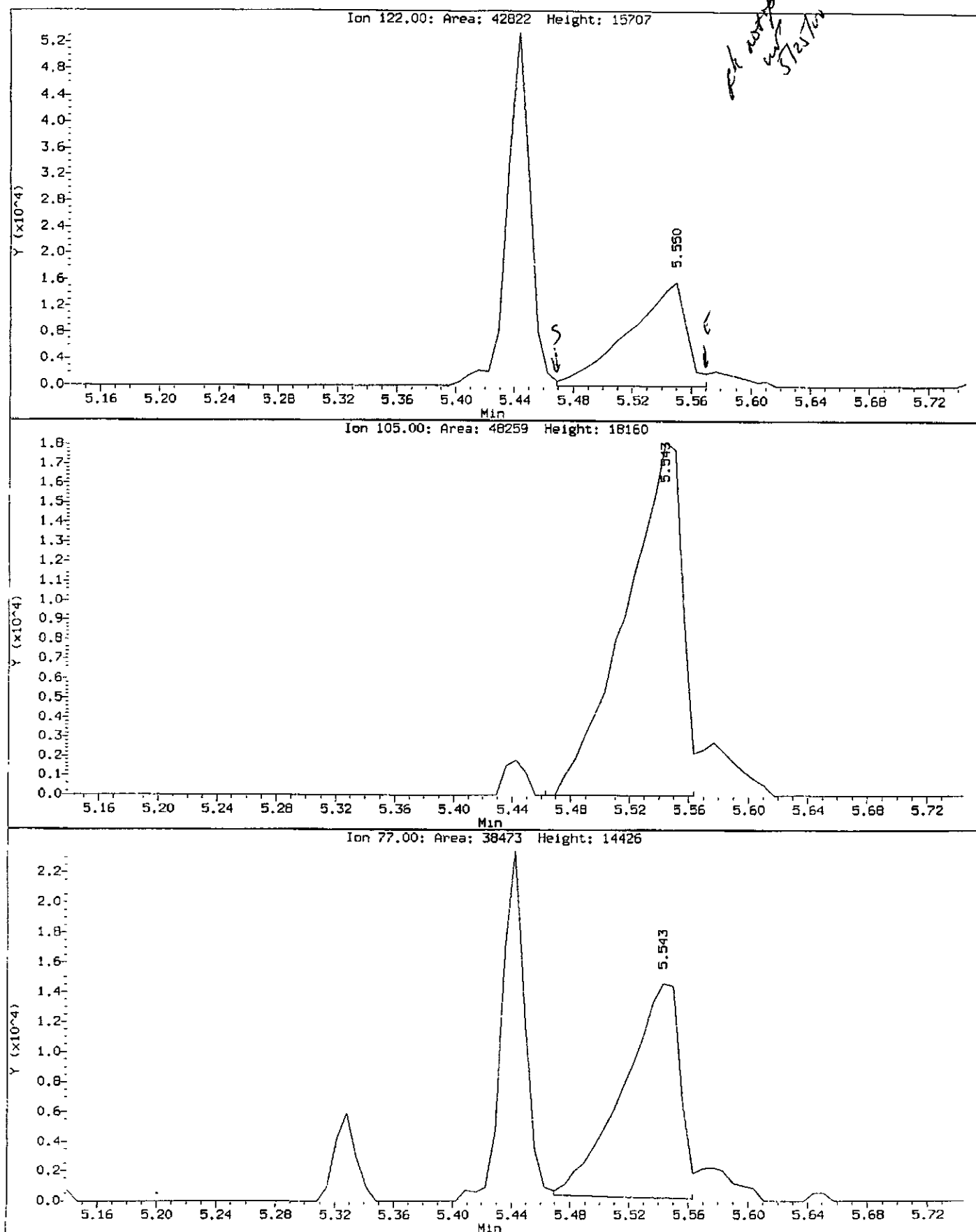
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
137 Chrysene	228	17.080	17.080	(1.003)	146226	20.0000	19.422
139 bis(2-ethylhexyl)Phthalate	149	17.497	17.497	(1.027)	132528	20.0000	19.212
140 Di-n-octylphthalate	149	18.807	18.807	(0.941)	222351	20.0000	19.693
141 Benzo(b)fluoranthene	252	19.257	19.257	(0.964)	146666	20.0000	17.531(H)
142 Benzo(k)fluoranthene	252	19.311	19.311	(0.966)	154708	20.0000	20.475
143 7,12-dimethylbenz[a]anthracen	256	19.324	19.324	(0.967)	66309	20.0000	18.324
146 Benzo(a)pyrene	252	19.862	19.862	(0.994)	131955	20.0000	18.576
149 Indeno(1,2,3-cd)pyrene	276	21.844	21.844	(1.093)	128549	20.0000	16.976(H)
150 Dibenz(a,h)anthracene	278	21.891	21.891	(1.095)	135400	20.0000	17.348
151 Benzo(g,h,i)perylene	276	22.247	22.247	(1.113)	133926	20.0000	17.410
\$ 154 Nitrobenzene-d5	82	5.093	5.093	(0.878)	74846	20.0000	19.402
\$ 155 2-Fluorobiphenyl	172	7.237	7.237	(0.867)	127148	20.0000	19.538
\$ 156 Terphenyl-d14	244	14.796	14.796	(0.869)	135906	20.0000	19.406
\$ 157 Phenol-d5	99	4.320	4.320	(0.943)	76275	20.0000	19.932
\$ 158 2-Fluorophenol	112	3.521	3.521	(0.768)	69977	20.0000	20.251
\$ 159 2,4,6-Tribromophenol	330	9.844	9.844	(0.878)	27036	20.0000	18.085
\$ 186 2-Chlorophenol-d4	132	4.421	4.421	(0.965)	72858	20.0000	20.091
\$ 187 1,2-Dichlorobenzene-d4	152	4.744	4.744	(1.035)	50462	20.0000	19.528

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

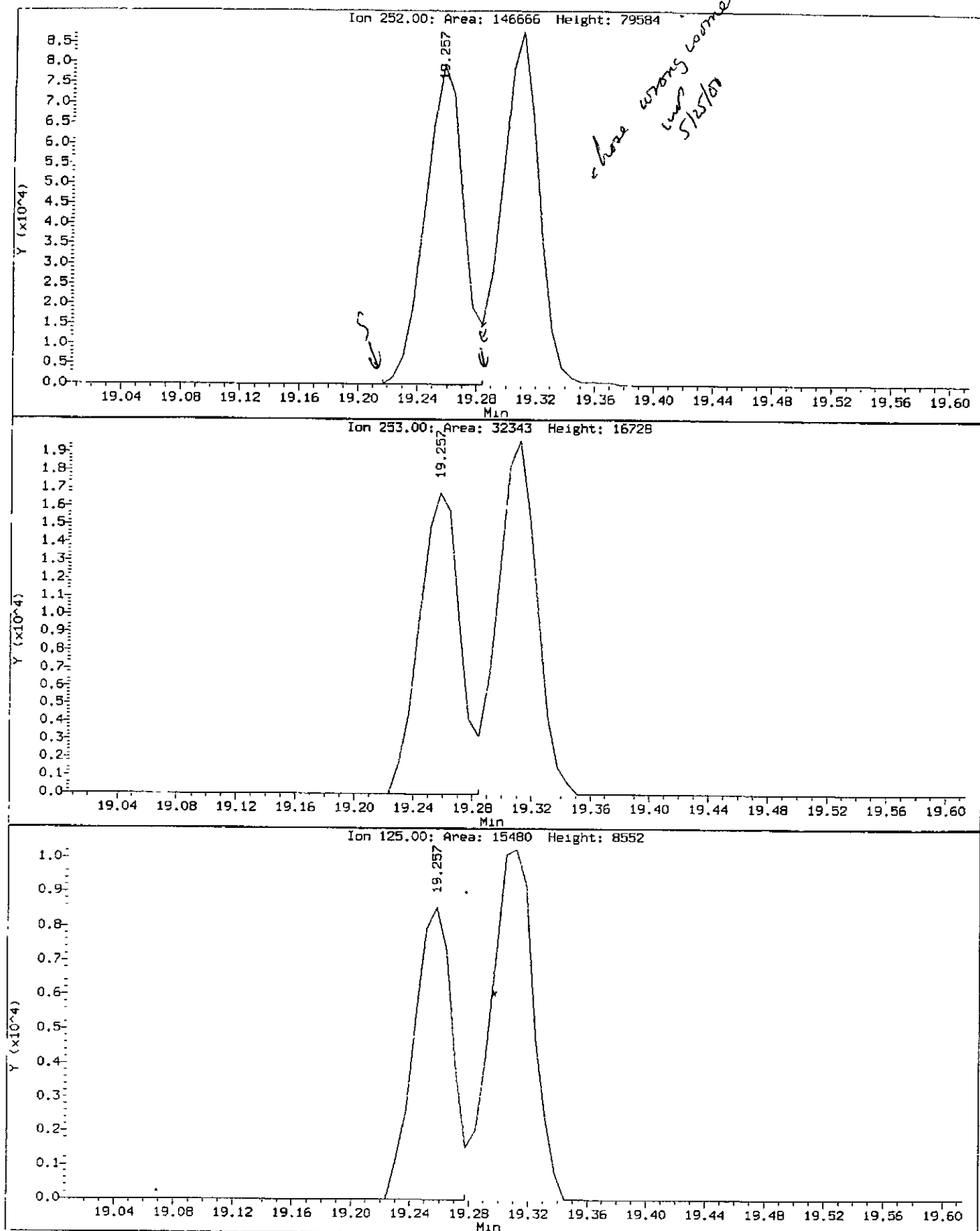
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Injection Date: 25-MAY-2000 19:15
Instrument: 721.1
Client Sample ID: SST0020

Compound: Benzoic Acid
CAS Number: 65-85-0



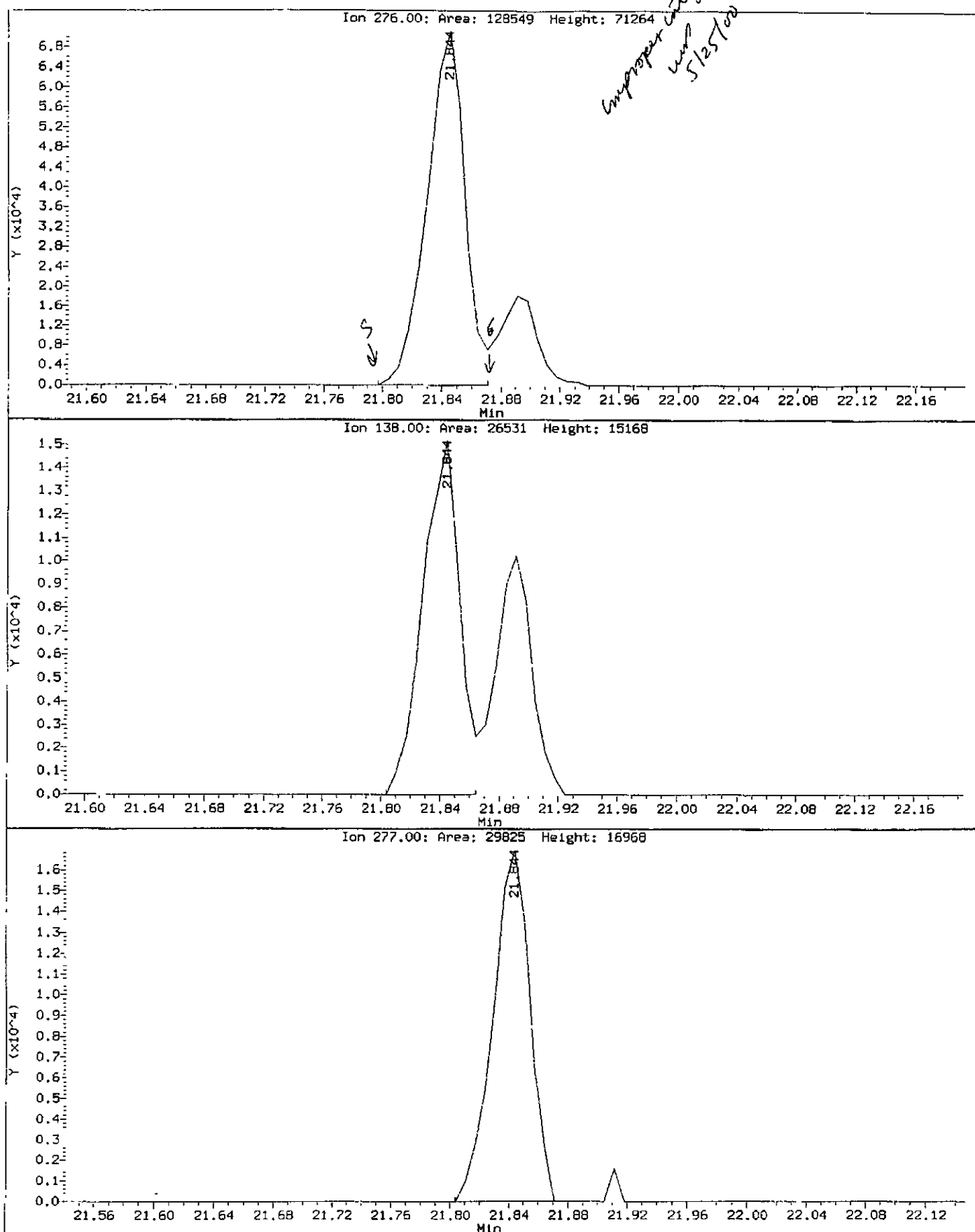
Data File: \\QPITPA02\ID\chem\721.i\nd052500.b\00525CC1.D
Injection Date: 25-MAY-2000 19:15
Instrument: 721.i
Client Sample ID: SST0020

Compound: Benzo(b)fluoranthene
CAS Number: 205-99-2



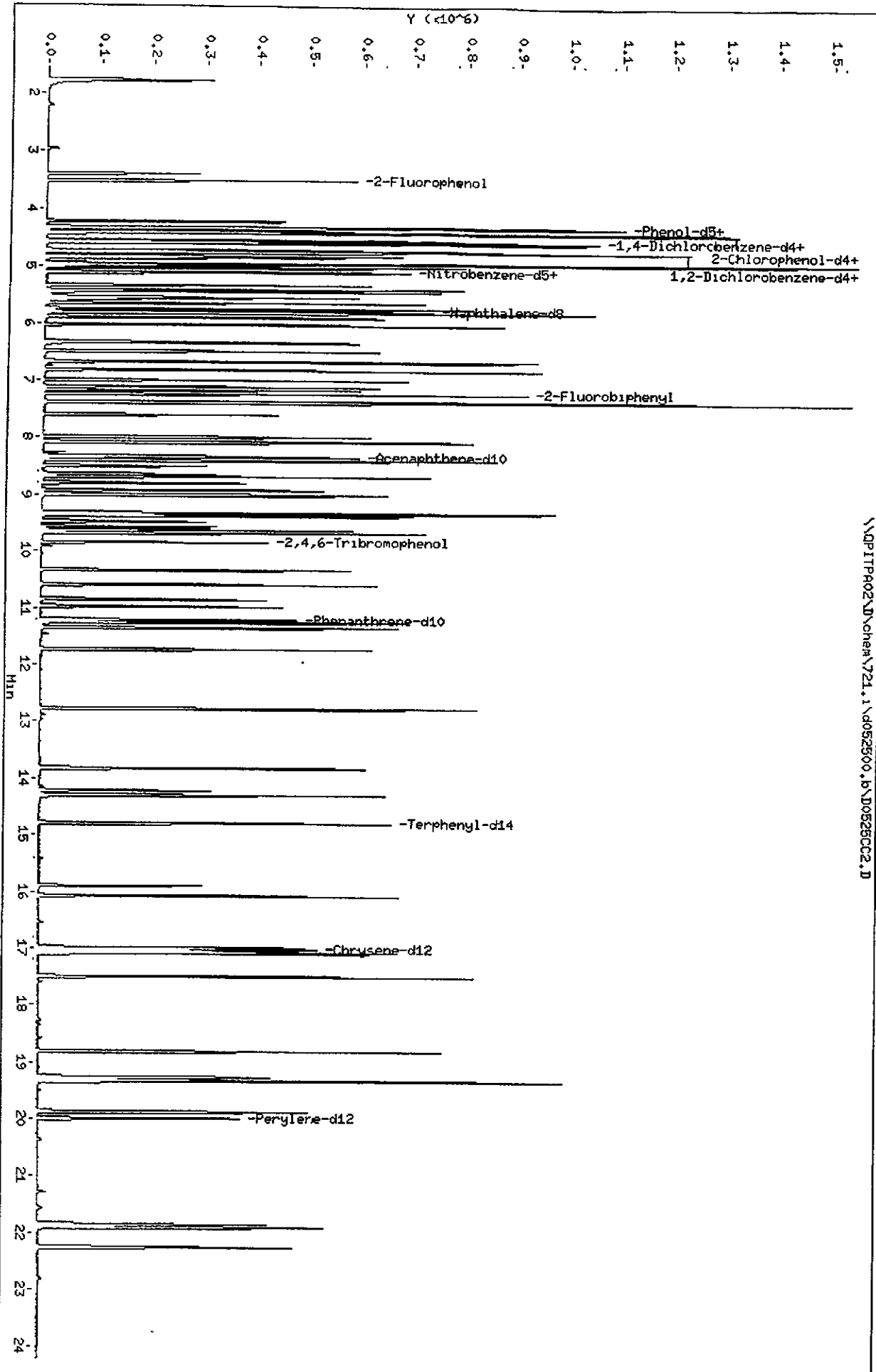
Data File: \\QPITPA02\D\chem\721.i\d052500.b\d0525CC1.D
Injection Date: 25-MAY-2000 19:15
Instrument: 721.i
Client Sample ID: SST0020

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5



Data File: \\QPI1P02\1\chem\721.1\4052500.1\40525002.D
 Date: 25-MAY-2000 19:45
 Client ID: SST0050
 Sample Info: sst0050 (25UG/ML) 194-176-9 8270/cip/625
 Column phase: Hp5-MS

Instrument: 721.1
 Operator: 001562, MLF
 Column diameter: 0.25



Data File: \\QPITPA02\D\chem\721.i\d052500.b\D0525CC2.D
Report Date: 25-May-2000 21:26

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\721.i\d052500.b\D0525CC2.D
Lab Smp Id: sstd50 Client Smp ID: SST050
Inj Date : 25-MAY-2000 19:45
Operator : 001562, DLF Inst ID: 721.i
Smp Info : sstd050 (25UG/ML) 194-176-9 8270/clp/625
Misc Info : sstd50,d052500.b,8270c.m,3-root.sub,1,2
Comment :
Method : \\QPITPA02\D\chem\721.i\d052500.b\8270c.m
Meth Date : 25-May-2000 21:26 ferguson Quant Type: ISTD
Cal Date : 25-MAY-2000 20:45 Cal File: D0525CC4.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.03
Processing Host: PITPC013

Compound Sublist: 3-root.sub

WJ
5/25/00

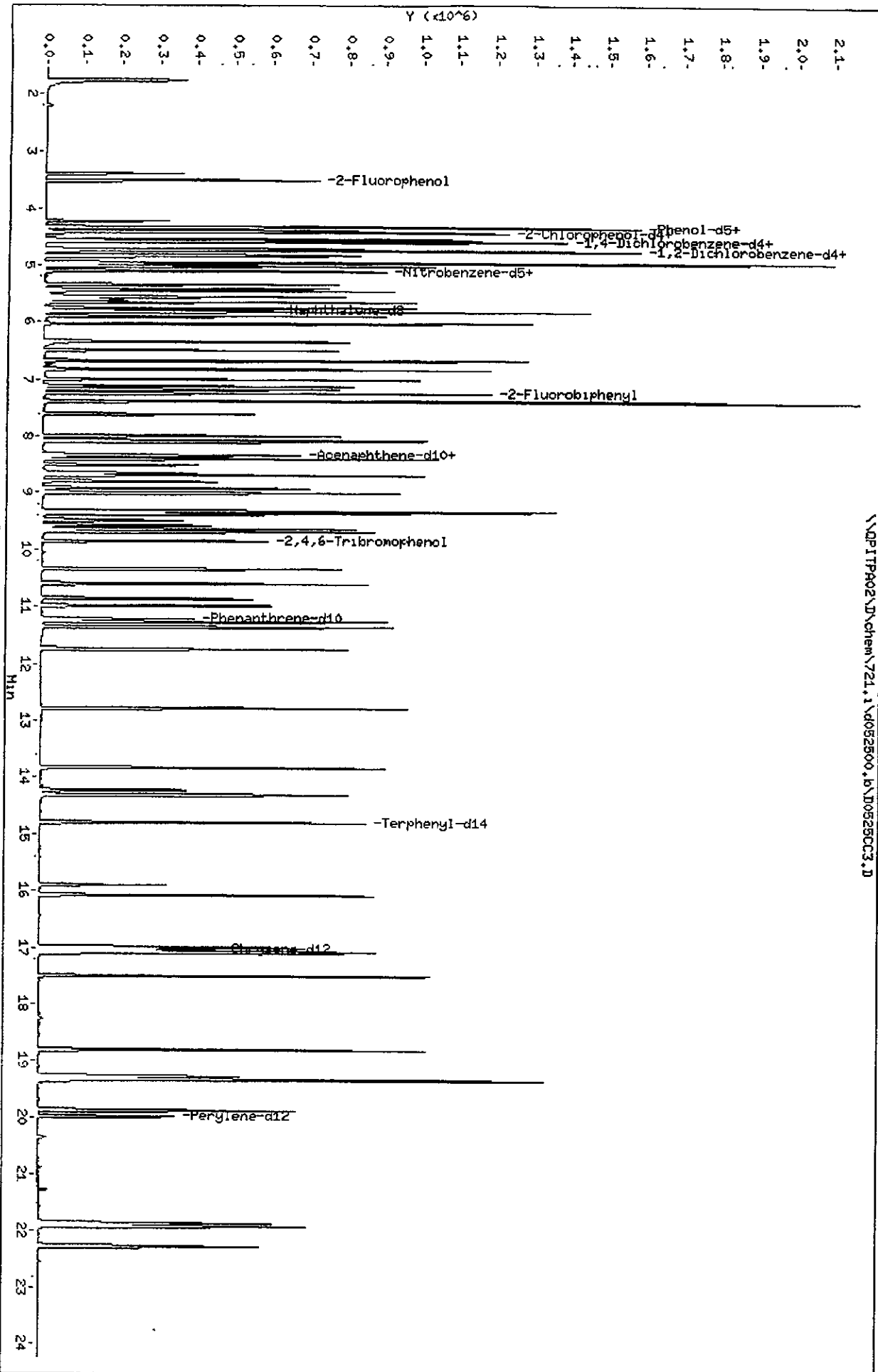
Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
							(NG)	(NG)
*****	****	==	=====	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4		152	4.585	4.585	(1.000)	113836	40.0000	
* 2 Naphthalene-d8		136	5.801	5.801	(1.000)	400510	40.0000	
* 3 Acenaphthene-d10		164	8.348	8.348	(1.000)	202701	40.0000	
* 4 Phenanthrene-d10		188	11.217	11.217	(1.000)	364515	40.0000	
* 5 Chrysene-d12		240	17.036	17.036	(1.000)	309899	40.0000	
* 6 Perylene-d12		264	19.992	19.992	(1.000)	277030	40.0000	
10 N-Nitrosodimethylamine		74	1.770	1.770	(0.386)	95052	50.0000	53.462
9 Pyridine		79	1.757	1.757	(0.383)	159271	50.0000	52.526
16 Methyl methanesulfonate		80	3.403	3.403	(0.742)	138873	50.0000	50.569
21 Aniline		93	4.350	4.350	(0.949)	236943	50.0000	49.161
22 Phenol		94	4.337	4.337	(0.946)	213729	50.0000	50.565
23 bis(2-Chloroethyl)ether		93	4.404	4.404	(0.960)	160200	50.0000	49.824
24 2-Chlorophenol		128	4.438	4.438	(0.968)	210799	50.0000	51.957
26 1,3-Dichlorobenzene		146	4.552	4.552	(0.993)	222553	50.0000	51.408
27 1,4-Dichlorobenzene		146	4.599	4.599	(1.003)	228378	50.0000	51.338
28 1,2-Dichlorobenzene		146	4.760	4.760	(1.038)	210839	50.0000	50.475
29 Benzyl Alcohol		108	4.720	4.720	(1.029)	111978	50.0000	48.955
30 2-Methylphenol		108	4.827	4.827	(1.053)	150073	50.0000	49.767
31 2,2'-oxybis(1-Chloropropane)		45	4.854	4.854	(1.059)	184605	50.0000	52.242
32 N-Nitroso-di-n-propylamine		70	4.989	4.989	(1.088)	123406	50.0000	51.794
192 4-Methylphenol		108	4.955	4.955	(1.081)	158584	50.0000	49.371
34 Hexachloroethane		117	5.029	5.029	(1.097)	103912	50.0000	51.536
35 Nitrobenzene		77	5.116	5.116	(0.882)	202019	50.0000	51.328
41 Isophorone		82	5.338	5.338	(0.920)	317624	50.0000	50.167
42 2-Nitrophenol		139	5.418	5.418	(0.934)	114767	50.0000	51.241
43 2,4-Dimethylphenol		107	5.452	5.452	(0.940)	187726	50.0000	49.824

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (NG)	ON-COL (NG)
=====	=====	==	=====	=====	=====	=====	=====
44 bis(2-Chloroethoxy)methane	93	5.553	5.553	(0.957)	180190	50.0000	49.717
48 2,4-Dichlorophenol	162	5.654	5.654	(0.975)	154998	50.0000	50.254
49 Benzoic Acid	122	5.600	5.600	(0.965)	121116	50.0000	54.351
50 1,2,4-Trichlorobenzene	180	5.755	5.755	(0.992)	178202	50.0000	49.837
51 Naphthalene	128	5.822	5.822	(1.003)	530975	50.0000	50.198
52 4-Chloroaniline	127	5.902	5.902	(1.017)	219665	50.0000	50.976
56 Hexachlorobutadiene	225	6.030	6.030	(1.039)	120274	50.0000	49.783
59 4-Chloro-3-Methylphenol	107	6.494	6.494	(1.119)	151591	50.0000	48.853
62 2-Methylnaphthalene	142	6.675	6.675	(1.151)	330538	50.0000	50.697
63 1-Methylnaphthalene	142	6.830	6.830	(1.177)	303776	50.0000	49.618
64 Hexachlorocyclopentadiene	237	7.004	7.004	(0.839)	144581	50.0000	51.606
66 2,4,6-Trichlorophenol	196	7.119	7.119	(0.853)	114153	50.0000	50.955
67 2,4,5-Trichlorophenol	196	7.172	7.172	(0.859)	123047	50.0000	51.566
70 2-Chloronaphthalene	162	7.394	7.394	(0.886)	309432	50.0000	50.413
73 2-Nitroaniline	65	7.609	7.609	(0.911)	104738	50.0000	50.608
76 Dimethylphthalate	163	7.999	7.999	(0.958)	372006	50.0000	50.408
78 2,6-Dinitrotoluene	165	8.100	8.100	(0.970)	87633	50.0000	49.931
79 Acenaphthylene	152	8.079	8.079	(0.968)	461823	50.0000	51.008
81 3-Nitroaniline	138	8.328	8.328	(0.998)	94853	50.0000	50.622
82 Acenaphthene	153	8.409	8.409	(1.007)	286585	50.0000	50.691
83 2,4-Dinitrophenol	184	8.509	8.509	(1.019)	65397	50.0000	51.089
85 4-Nitrophenol	109	8.644	8.644	(1.035)	77354	50.0000	51.749
86 Dibenzofuran	168	8.691	8.691	(1.041)	421895	50.0000	50.353
87 2,4-Dinitrotoluene	165	8.805	8.805	(1.055)	115496	50.0000	49.377
91 2,3,5,6-Tetrachlorophenol	232	8.926	8.926	(1.069)	98611	50.0000	50.739
88 2,3,4,6-Tetrachlorophenol	232	9.013	9.013	(1.080)	97979	50.0000	50.655
92 2-Naphthylamine	143	8.993	8.993	(1.077)	180654	50.0000	41.260
93 Diethylphthalate	149	9.322	9.322	(1.117)	398485	50.0000	50.597
94 Fluorene	166	9.342	9.342	(1.119)	330669	50.0000	50.218
95 4-Chlorophenyl-phenylether	204	9.383	9.383	(1.124)	173503	50.0000	50.017
96 4-Nitroaniline	138	9.490	9.490	(1.137)	90727	50.0000	50.764
98 4,6-Dinitro-2-methylphenol	198	9.578	9.578	(0.854)	81606	50.0000	50.656
99 N-Nitrosodiphenylamine (1)	169	9.638	9.638	(0.859)	235205	50.0000	49.728
100 1,2-Diphenylhydrazine	77	9.685	9.685	(0.863)	388816	50.0000	52.034
106 4-Bromophenyl-phenylether	248	10.344	10.344	(0.922)	104381	50.0000	49.964
107 Hexachlorobenzene	284	10.599	10.599	(0.945)	131620	50.0000	50.353
111 Pentachlorophenol	266	10.982	10.982	(0.979)	85591	50.0000	53.836
115 Phenanthrene	178	11.264	11.264	(1.004)	452085	50.0000	50.226
116 Anthracene	178	11.358	11.358	(1.013)	461942	50.0000	50.561
119 Carbazole	167	11.741	11.741	(1.047)	410000	50.0000	50.166
120 Di-n-Butylphthalate	149	12.783	12.783	(1.140)	630547	50.0000	51.254
123 Fluoranthene	202	13.831	13.831	(1.233)	481795	50.0000	50.718
124 Benzidine	184	14.221	14.221	(0.835)	203122	50.0000	52.963
125 Pyrene	202	14.301	14.301	(0.839)	481113	50.0000	50.796
131 Butylbenzylphthalate	149	16.082	16.082	(0.944)	263302	50.0000	51.012
135 3,3'-Dichlorobenzidine	252	17.070	17.070	(1.002)	174098	50.0000	49.674
136 Benzo(a)Anthracene	228	16.996	16.996	(0.998)	418454	50.0000	50.031

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)
=====	=====	=====	=====	=====	=====	=====	=====
137 Chrysene	228	17.096	17.096	(1.004)	399031	50.0000	50.279
139 bis(2-ethylhexyl)Phthalate	149	17.506	17.506	(1.028)	374112	50.0000	51.451
140 Di-n-octylphthalate	149	18.817	18.817	(0.941)	623827	50.0000	51.589
141 Benzo(b)fluoranthene	252	19.274	19.274	(0.964)	417856	50.0000	46.636
142 Benzo(k)fluoranthene	252	19.327	19.327	(0.967)	425479	50.0000	52.579
143 7,12-dimethylbenz(a)anthracen	256	19.341	19.341	(0.967)	189635	50.0000	48.931
146 Benzo(a)pyrene	252	19.885	19.885	(0.995)	381526	50.0000	50.152
149 Indeno(1,2,3-cd)pyrene	276	21.860	21.860	(1.093)	385083	50.0000	47.486
150 Dibenzo(a,h)anthracene	278	21.914	21.914	(1.096)	406371	50.0000	48.617
151 Benzo(g,h,i)perylene	276	22.270	22.270	(1.114)	403534	50.0000	48.984
\$ 154 Nitrobenzene-d5	82	5.096	5.096	(0.878)	197323	50.0000	50.350
\$ 155 2-Fluorobiphenyl	172	7.246	7.246	(0.868)	340193	50.0000	50.218
\$ 156 Terphenyl-d14	244	14.805	14.805	(0.869)	370385	50.0000	50.172
\$ 157 Phenol-d5	99	4.330	4.330	(0.944)	193786	50.0000	49.853
\$ 158 2-Fluorophenol	112	3.524	3.524	(0.768)	175525	50.0000	50.005
\$ 159 2,4,6-Tribromophenol	330	9.847	9.847	(0.878)	74809	50.0000	49.265
\$ 186 2-Chlorophenol-d4	132	4.424	4.424	(0.965)	187183	50.0000	50.815
\$ 187 1,2-Dichlorobenzene-d4	152	4.747	4.747	(1.035)	133768	50.0000	50.961

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 Client ID: SST0080
 Sample Info: sst0080 (40UG/ML) 194-175-12 8270(c)/p/625
 Column phase: Hp5-MS

Instrument: 721.1
 Operator: 001562, DLF
 Column diameter: 0.25



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STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\721.i\d052500.b\D0525CC3.D
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Inj Date : 25-MAY-2000 20:15
Operator : 001562, DLF Inst ID: 721.i
Smp Info : sstd80 (40UG/ML) 194-175-12 8270/clp/625
Misc Info : sstd80,d052500.b,8270c.m,3-root.sub,1,3
Comment :
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Meth Date : 25-May-2000 21:27 ferguson Quant Type: ISTD
Cal Date : 25-MAY-2000 20:45 Cal File: D0525CC4.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-root.sub
Target Version: 4.03
Processing Host: PITPC013

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						AMOUNTS	
QUANT SIG						CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(NG)	(NG)
=====	=====	==	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	4.583	4.583	(1.000)	96239	40.0000	
* 2 Naphthalene-d8	136	5.800	5.800	(1.000)	333815	40.0000	
* 3 Acenaphthene-d10	164	8.353	8.353	(1.000)	169433	40.0000	
* 4 Phenanthrene-d10	188	11.215	11.215	(1.000)	306214	40.0000	
* 5 Chrysene-d12	240	17.041	17.041	(1.000)	257576	40.0000	
* 6 Perylene-d12	264	19.991	19.991	(1.000)	235697	40.0000	
10 N-Nitrosodimethylamine	74	1.775	1.775	(0.387)	131922	80.0000	87.766
9 Pyridine	79	1.755	1.755	(0.383)	217725	80.0000	84.933
16 Methyl methanesulfonate	80	3.408	3.408	(0.743)	186494	80.0000	80.327
21 Aniline	93	4.355	4.355	(0.950)	331007	80.0000	81.235
22 Phenol	94	4.341	4.341	(0.947)	289241	80.0000	80.943
23 bis(2-Chloroethyl)ether	93	4.409	4.409	(0.962)	213686	80.0000	78.611
24 2-Chlorophenol	128	4.442	4.442	(0.969)	277420	80.0000	80.881
26 1,3-Dichlorobenzene	146	4.556	4.556	(0.994)	298874	80.0000	81.661
27 1,4-Dichlorobenzene	146	4.597	4.597	(1.003)	305029	80.0000	81.106
28 1,2-Dichlorobenzene	146	4.758	4.758	(1.038)	287367	80.0000	81.375
29 Benzyl Alcohol	108	4.724	4.724	(1.031)	151968	80.0000	78.586
30 2-Methylphenol	108	4.832	4.832	(1.054)	201763	80.0000	79.142
31 2,2'-oxybis(1-Chloropropane)	45	4.859	4.859	(1.060)	246612	80.0000	82.550
32 N-Nitroso-di-n-propylamine	70	4.993	4.993	(1.089)	167630	80.0000	83.220
192 4-Methylphenol	108	4.960	4.960	(1.082)	214222	80.0000	78.887
34 Hexachloroethane	117	5.027	5.027	(1.097)	139277	80.0000	81.706
35 Nitrobenzene	77	5.121	5.121	(0.883)	272830	80.0000	83.169
41 Isophorone	82	5.343	5.343	(0.921)	424021	80.0000	80.353
42 2-Nitrophenol	139	5.423	5.423	(0.935)	154633	80.0000	82.834
43 2,4-Dimethylphenol	107	5.457	5.457	(0.941)	250443	80.0000	79.750

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Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (NG)	ON-COL (NG)
=====	====	==	=====	=====	=====	=====	=====
44 bis(2-Chloroethoxy)methane	93	5.558	5.558	{0.958}	244276	80.0000	80.866
48 2,4-Dichlorophenol	162	5.658	5.658	{0.976}	202371	80.0000	78.723
49 Benzoic Acid	122	5.618	5.618	{0.969}	165474	80.0000	89.093
50 1,2,4-Trichlorobenzene	180	5.759	5.759	{0.993}	235852	80.0000	79.139
51 Naphthalene	128	5.826	5.826	{1.005}	721249	80.0000	81.809
52 4-Chloroaniline	127	5.900	5.900	{1.017}	289383	80.0000	80.572
56 Hexachlorobutadiene	225	6.028	6.028	{1.039}	163994	80.0000	81.441
59 4-Chloro-3-Methylphenol	107	6.498	6.498	{1.120}	205066	80.0000	79.290
62 2-Methylnaphthalene	142	6.680	6.680	{1.152}	444901	80.0000	81.872
63 1-Methylnaphthalene	142	6.834	6.834	{1.178}	403530	80.0000	79.080
64 Hexachlorocyclopentadiene	237	7.002	7.002	{0.838}	198076	80.0000	84.583
66 2,4,6-Trichlorophenol	196	7.123	7.123	{0.853}	152954	80.0000	81.680
67 2,4,5-Trichlorophenol	196	7.184	7.184	{0.860}	158134	80.0000	79.283
70 2-Chloronaphthalene	162	7.392	7.392	{0.885}	416406	80.0000	81.162
73 2-Nitroaniline	65	7.614	7.614	{0.912}	142208	80.0000	82.205
76 Dimethylphthalate	163	8.003	8.003	{0.958}	498695	80.0000	80.843
78 2,6-Dinitrotoluene	165	8.104	8.104	{0.970}	118793	80.0000	80.975
79 Acenaphthylene	152	8.077	8.077	{0.967}	617508	80.0000	81.595 (Q)
81 3-Nitroaniline	138	8.333	8.333	{0.998}	128469	80.0000	82.025
82 Acenaphthene	153	8.413	8.413	{1.007}	385324	80.0000	81.538
83 2,4-Dinitrophenol	184	8.514	8.514	{1.019}	89804	80.0000	83.932
85 4-Nitrophenol	109	8.655	8.655	{1.036}	104870	80.0000	83.932
86 Dibenzofuran	168	8.695	8.695	{1.041}	571688	80.0000	81.627
87 2,4-Dinitrotoluene	165	8.816	8.816	{1.056}	156750	80.0000	80.172
91 2,3,5,6-Tetrachlorophenol	232	8.931	8.931	{1.069}	136654	80.0000	84.120
88 2,3,4,6-Tetrachlorophenol	232	9.025	9.025	{1.080}	136396	80.0000	84.362
92 2-Naphthylamine	143	9.005	9.005	{1.078}	295414	80.0000	80.718
93 Diethylphthalate	149	9.327	9.327	{1.117}	533976	80.0000	81.114
94 Fluorene	166	9.347	9.347	{1.119}	444894	80.0000	80.832
95 4-Chlorophenyl-phenylether	204	9.381	9.381	{1.123}	237526	80.0000	81.917
96 4-Nitroaniline	138	9.502	9.502	{1.138}	120720	80.0000	80.809
98 4,6-Dinitro-2-methylphenol	198	9.582	9.582	{0.854}	111094	80.0000	82.091
99 N-Nitrosodiphenylamine (1)	169	9.643	9.643	{0.860}	311541	80.0000	78.408
100 1,2-Diphenylhydrazine	77	9.690	9.690	{0.864}	519565	80.0000	82.771
106 4-Bromophenyl-phenylether	248	10.348	10.348	{0.923}	143015	80.0000	81.491
107 Hexachlorobenzene	284	10.604	10.604	{0.945}	179794	80.0000	81.878
111 Pentachlorophenol	266	10.987	10.987	{0.980}	117213	80.0000	87.762 (Q)
115 Phenanthrene	178	11.269	11.269	{1.005}	615493	80.0000	81.400
116 Anthracene	178	11.363	11.363	{1.013}	619937	80.0000	80.773
119 Carbazole	167	11.746	11.746	{1.047}	551543	80.0000	80.334 (Q)
120 Di-n-Butylphthalate	149	12.788	12.788	{1.140}	851810	80.0000	82.422
123 Fluoranthene	202	13.836	13.836	{1.234}	656003	80.0000	82.205
124 Benzidine	184	14.225	14.225	{0.835}	256289	80.0000	80.401
125 Pyrene	202	14.313	14.313	{0.840}	652227	80.0000	82.850
131 Butylbenzylphthalate	149	16.087	16.087	{0.944}	357391	80.0000	83.306
135 3,3'-Dichlorobenzidine	252	17.074	17.074	{1.002}	240279	80.0000	82.484
136 Benzo(a)Anthracene	228	17.007	17.007	{0.998}	574112	80.0000	82.586

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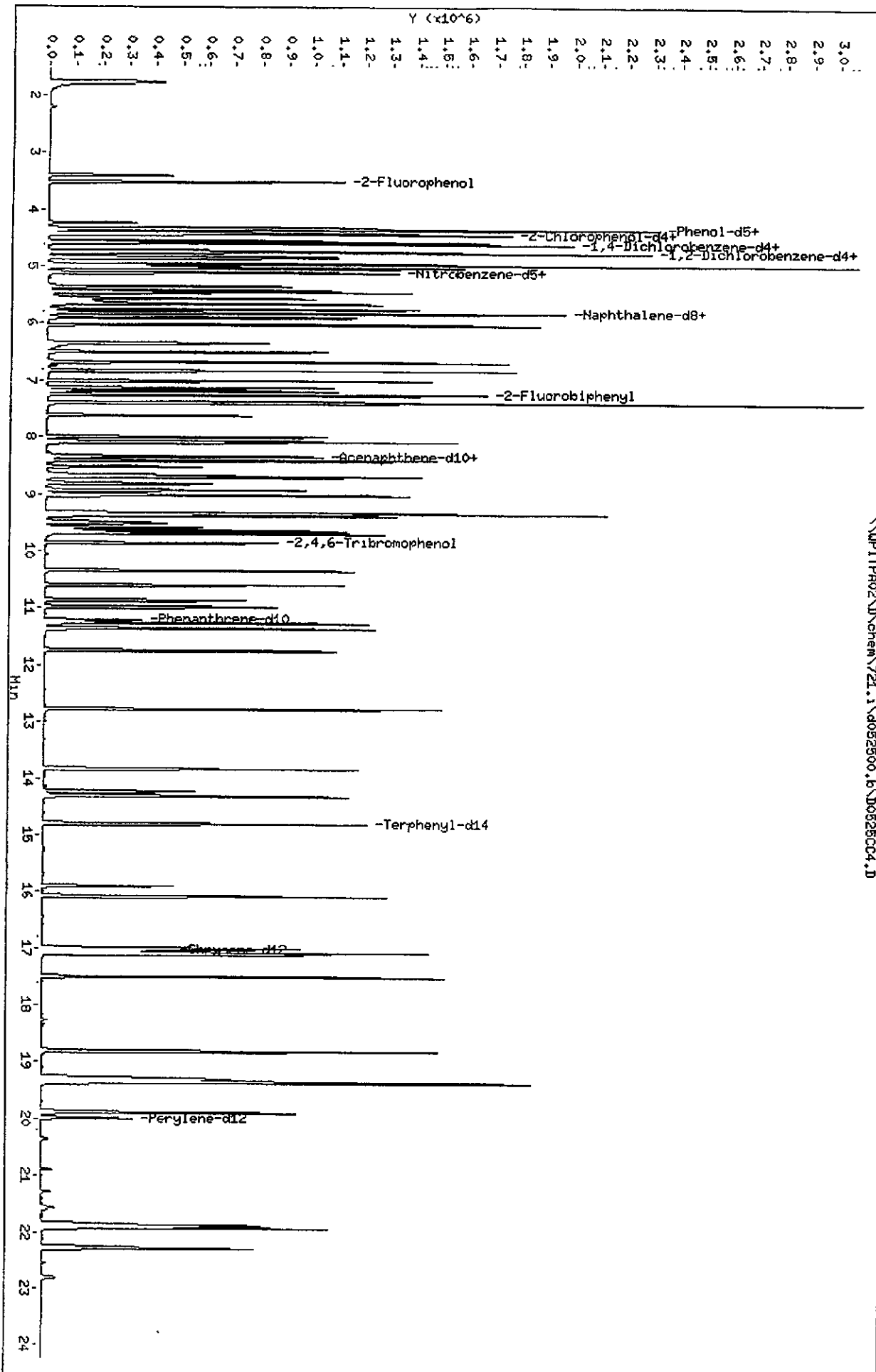
Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)
=====	=====	==	=====	=====	=====	=====	=====
137 Chrysene	228	17.101	17 101	(1.004)	542797	80.0000	82.287
139 bis(2-ethylhexyl)Phthalate	149	17 504	17 504	(1.027)	505880	80 0000	83 705
140 Di-n-octylphthalate	149	18 821	18 821	(0.942)	863997	80 0000	83.981
141 Benzo(b)fluoranthene	252	19.285	19 285	(0.965)	570940	80.0000	74.896
142 Benzo(k)fluoranthene	252	19 339	19 339	(0.967)	625665	80.0000	90 876
143 7,12-dimethylbenz[a]anthracen	256	19 352	19 352	(0.968)	276410	80 0000	83 829
146 Benzo(a)pyrene	252	19.890	19 890	(0.995)	535202	80.0000	82 690
149 Indeno(1,2,3-cd)pyrene	276	21.872	21.872	(1.094)	559898	80.0000	81 150
150 Dibenzo(a,h)anthracene	278	21 919	21.919	(1.096)	586391	80 0000	82 456
151 Benzo(g,h,i)perylene	276	22 282	22 282	(1.115)	579264	80 0000	82 646
\$ 154 Nitrobenzene-d5	82	5.101	5 101	(0.880)	268731	80.0000	82 271
\$ 155 2-Fluorobiphenyl	172	7 251	7 251	(0.868)	456137	80.0000	80 554
\$ 156 Terphenyl-d14	244	14 810	14.810	(0.869)	512551	80.0000	83.534
\$ 157 Phenol-d5	99	4.335	4.335	(0.946)	260519	80.0000	79 275
\$ 158 2-Fluorophenol	112	3 528	3.528	(0.770)	235331	80 0000	79 302
\$ 159 2,4,6-Tribromophenol	330	9 851	9 851	(0.878)	105138	80.0000	82 420
\$ 186 2-Chlorophenol-d4	132	4.429	4 429	(0.966)	252026	80.0000	80 928
\$ 187 1,2-Dichlorobenzene-d4	152	4.745	4 745	(1.035)	179896	80.0000	81 066

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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 Date: 25-MAY-2000 20:45
 Client ID: SSTID120
 Sample Info: std120 (60UG/ML) 194-175-13 8270/01p/625
 Column phase: Hp5-MS

Instrument: 724.1
 Operator: 001562, DLF
 Column diameter: 0.25



STL Pittsburgh

Semivolatle REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\721.i\d052500.b\D0525CC4.D
Lab Smp Id: sstd120 Client Smp ID: SSTD120
Inj Date : 25-MAY-2000 20:45
Operator : 001562, DLF Inst ID: 721.i
Smp Info : sstd120 (60UG/ML) 194-175-13 8270/clp/625
Misc Info : sstd120,d052500.b,8270c.m,3-root.sub,1,4
Comment :
Method : \\QPITPA02\D\chem\721.i\d052500.b\8270c.m
Meth Date : 25-May-2000 21:28 ferguson Quant Type: ISTD
Cal Date : 25-MAY-2000 20:45 Cal File: D0525CC4.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-root.sub
Target Version: 4.03
Processing Host: PITPC013

www
5/25/00

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (NG)	ON-COL (NG)	
*****	----	==	-----	-----	-----	-----	-----	
* 1 1,4-Dichlorobenzene-d4	152	4.586	4.586	(1.000)	98662	40.0000		(Q)
* 2 Naphthalene-d8	136	5.802	5.802	(1.000)	332346	40.0000		
* 3 Acenaphthene-d10	164	8.349	8.349	(1.000)	166003	40.0000		
* 4 Phenanthrene-d10	188	11.218	11.218	(1.000)	296932	40.0000		
* 5 Chrysene-d12	240	17.043	17.043	(1.000)	263521	40.0000		
* 6 Perylene-d12	264	20.000	20.000	(1.000)	243672	40.0000		
10 N-Nitrosodimethylamine	74	1.784	1.784	(0.389)	192930	120.000	125.20	
9 Pyridine	79	1.757	1.757	(0.383)	327882	120.000	124.76	
16 Methyl methanesulfonate	80	3.417	3.417	(0.745)	275497	120.000	115.75	
21 Aniline	93	4.357	4.357	(0.950)	488635	120.000	116.97	
22 Phenol	94	4.351	4.351	(0.949)	423516	120.000	115.61	
23 bis(2-Chloroethyl) ether	93	4.411	4.411	(0.962)	316639	120.000	113.62	
24 2-Chlorophenol	128	4.445	4.445	(0.969)	414877	120.000	117.98	
26 1,3-Dichlorobenzene	146	4.559	4.559	(0.994)	445882	120.000	118.84	
27 1,4-Dichlorobenzene	146	4.599	4.599	(1.003)	452243	120.000	117.30	
28 1,2-Dichlorobenzene	146	4.761	4.761	(1.038)	430454	120.000	118.90	
29 Benzyl Alcohol	108	4.727	4.727	(1.031)	224205	120.000	113.09	
30 2-Methylphenol	108	4.835	4.835	(1.054)	298581	120.000	114.24	
31 2,2'-oxybis(1-Chloropropane)	45	4.861	4.861	(1.060)	358412	120.000	117.03	(Q)
32 N-Nitroso-di-n-propylamine	70	5.003	5.003	(1.091)	244205	120.000	118.26	
192 4-Methylphenol	108	4.969	4.969	(1.084)	317710	120.000	114.12	
34 Hexachloroethane	117	5.029	5.029	(1.097)	201730	120.000	115.44	
35 Nitrobenzene	77	5.123	5.123	(0.883)	398701	120.000	122.08	
41 Isophorone	82	5.352	5.352	(0.922)	619914	120.000	117.99	
42 2-Nitrophenol	139	5.426	5.426	(0.935)	221165	120.000	119.00	
43 2,4-Dimethylphenol	107	5.459	5.459	(0.941)	366319	120.000	117.16	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
=====	=====	==	=====	=====	=====	=====	=====
44 bis(2-Chloroethoxy)methane	93	5.567	5.567	(0.959)	351701	120.000	116.94
48 2,4-Dichlorophenol	162	5.668	5.668	(0.977)	295571	120.000	115.48
49 Benzoic Acid	122	5.648	5.648	(0.973)	225479	120.000	121.94
50 1,2,4-Trichlorobenzene	180	5.762	5.762	(0.993)	349234	120.000	117.70
51 Naphthalene	128	5.829	5.829	(1.005)	1058985	120.000	120.65
52 4-Chloroaniline	127	5.910	5.910	(1.019)	413538	120.000	115.65
56 Hexachlorobutadiene	225	6.031	6.031	(1.039)	242468	120.000	120.94
59 4-Chloro-3-Methylphenol	107	6.508	6.508	(1.122)	295372	120.000	114.71
62 2-Methylnaphthalene	142	6.682	6.682	(1.152)	651549	120.000	120.43
63 1-Methylnaphthalene	142	6.837	6.837	(1.178)	597863	120.000	117.68
64 Hexachlorocyclopentadiene	237	7.005	7.005	(0.839)	295773	120.000	128.91
66 2,4,6-Trichlorophenol	196	7.133	7.133	(0.854)	225031	120.000	122.65
67 2,4,5-Trichlorophenol	196	7.193	7.193	(0.862)	234752	120.000	120.13
70 2-Chloronaphthalene	162	7.401	7.401	(0.887)	612216	120.000	121.79
73 2-Nitroaniline	65	7.623	7.623	(0.913)	208340	120.000	122.92
76 Dimethylphthalate	163	8.006	8.006	(0.959)	727231	120.000	120.33
78 2,6-Dinitrotoluene	165	8.114	8.114	(0.972)	170380	120.000	118.54 (Q)
79 Acenaphthylene	152	8.087	8.087	(0.969)	894891	120.000	120.69 (Q)
81 3-Nitroaniline	138	8.342	8.342	(0.999)	190127	120.000	123.90
82 Acenaphthene	153	8.416	8.416	(1.008)	565245	120.000	122.08
83 2,4-Dinitrophenol	184	8.523	8.523	(1.021)	136931	120.000	130.62
85 4-Nitrophenol	109	8.671	8.671	(1.039)	156189	120.000	127.59 (Q)
86 Dibenzofuran	168	8.705	8.705	(1.043)	824083	120.000	120.10
87 2,4-Dinitrotoluene	165	8.826	8.826	(1.057)	228983	120.000	119.54
91 2,3,5,6-Tetrachlorophenol	232	8.940	8.940	(1.071)	202232	120.000	127.06
88 2,3,4,6-Tetrachlorophenol	232	9.034	9.034	(1.082)	197217	120.000	124.50
92 2-Naphthylamine	143	9.014	9.014	(1.080)	403934	120.000	112.65
93 Diethylphthalate	149	9.336	9.336	(1.118)	802918	120.000	124.49
94 Fluorene	166	9.357	9.357	(1.121)	660086	120.000	122.41
95 4-Chlorophenyl-phenylether	204	9.390	9.390	(1.125)	347432	120.000	122.30
96 4-Nitroaniline	138	9.524	9.524	(1.141)	179890	120.000	122.90
98 4,6-Dinitro-2-methylphenol	198	9.605	9.605	(0.856)	168854	120.000	128.67
99 N-Nitrosodiphenylamine (1)	169	9.652	9.652	(0.860)	477765	120.000	124.00
100 1,2-Diphenylhydrazine	77	9.699	9.699	(0.865)	731798	120.000	120.22
106 4-Bromophenyl-phenylether	248	10.351	10.351	(0.923)	212829	120.000	125.06
107 Hexachlorobenzene	284	10.613	10.613	(0.946)	260820	120.000	122.49
111 Pentachlorophenol	266	10.989	10.989	(0.980)	174397	120.000	134.66 (Q)
115 Phenanthrene	178	11.278	11.278	(1.005)	889631	120.000	121.33
116 Anthracene	178	11.372	11.372	(1.014)	906263	120.000	121.77
119 Carbazole	167	11.755	11.755	(1.048)	812669	120.000	122.07 (Q)
120 Di-n-Butylphthalate	149	12.790	12.790	(1.140)	1229199	120.000	122.66
123 Fluoranthene	202	13.845	13.845	(1.234)	964075	120.000	124.59
124 Benzidine	184	14.235	14.235	(0.835)	399396	120.000	122.47
125 Pyrene	202	14.315	14.315	(0.840)	962703	120.000	119.53
131 Butylbenzylphthalate	149	16.089	16.089	(0.944)	521441	120.000	118.80
135 3,3'-Dichlorobenzidine	252	17.084	17.084	(1.002)	369428	120.000	123.96
136 Benzo(a)Anthracene	228	17.016	17.016	(0.998)	859588	120.000	120.86

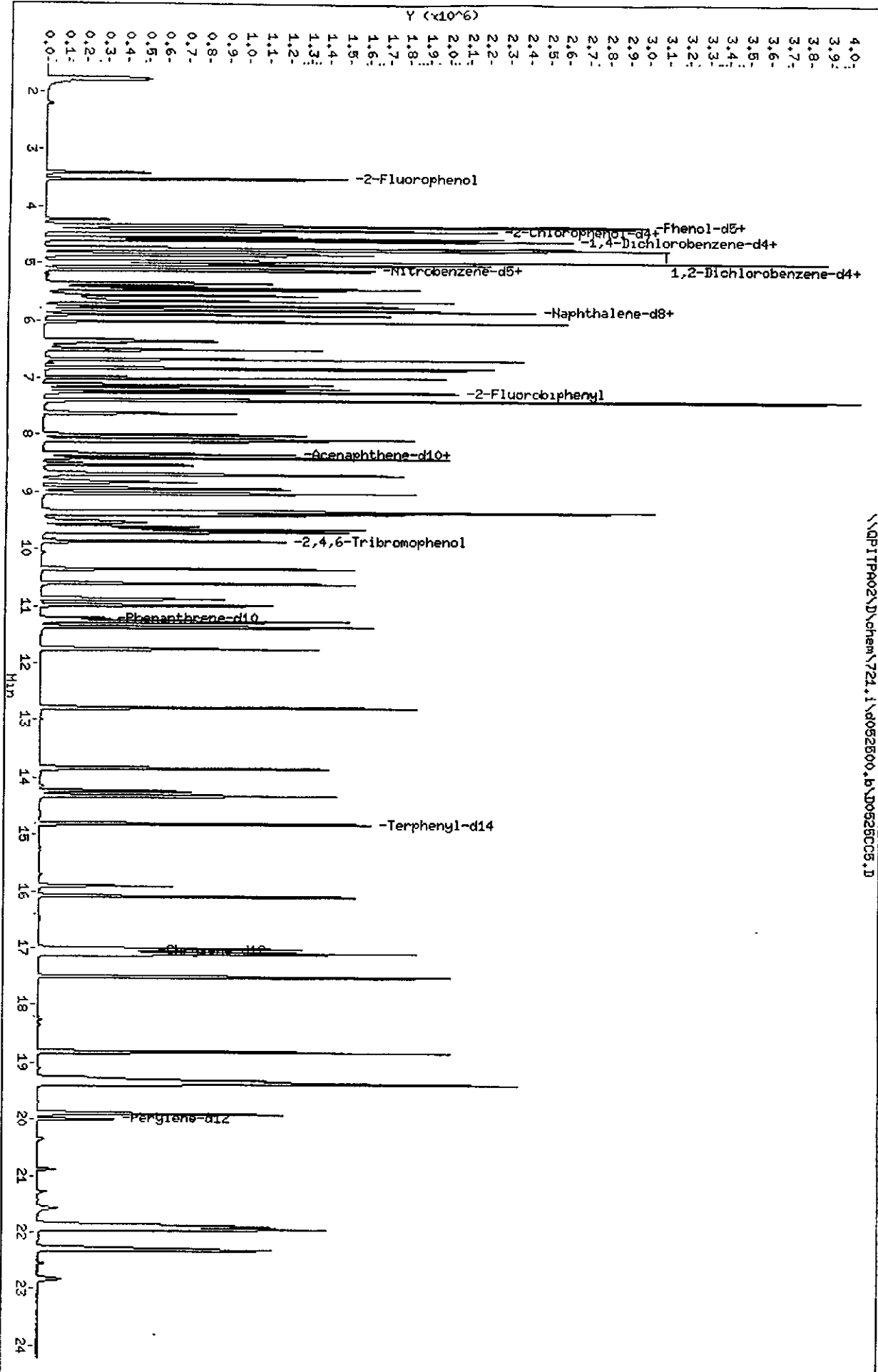
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
=====	=====	==	=====	=====	=====	=====	=====
137 Chrysene	228	17.111	17.111	(1.004)	815621	120.000	120.86
139 bis(2-ethylhexyl)Phthalate	149	17.507	17.507	(1.027)	753990	120.000	121.94
140 Di-n-octylphthalate	149	18.824	18.824	(0.941)	1280494	120.000	120.39
141 Benzo(b)fluoranthene	252	19.308	19.308	(0.965)	1028919	120.000	130.56
142 Benzo(k)fluoranthene	252	19.355	19.355	(0.968)	839128	120.000	117.89
143 7,12-dimethylbenz[a]anthracen	256	19.368	19.368	(0.969)	439415	120.000	128.90
146 Benzo(a)pyrene	252	19.906	19.906	(0.995)	828267	120.000	123.78
149 Indeno(1,2,3-cd)pyrene	276	21.888	21.888	(1.094)	910208	120.000	127.60
150 Dibenz(a,h)anthracene	278	21.935	21.935	(1.097)	941076	120.000	128.00
151 Benzo(g,h,i)perylene	276	22.298	22.298	(1.115)	925893	120.000	127.78
\$ 154 Nitrobenzene-d5	82	5.103	5.103	(0.880)	393901	120.000	121.12
\$ 155 2-Fluorobiphenyl	172	7.253	7.253	(0.869)	673712	120.000	121.44
\$ 156 Terphenyl-d14	244	14.813	14.813	(0.869)	747654	120.000	119.10
\$ 157 Phenol-d5	99	4.337	4.337	(0.946)	387643	120.000	115.06
\$ 158 2-Fluorophenol	112	3.531	3.531	(0.770)	351057	120.000	115.39
\$ 159 2,4,6-Tribromophenol	330	9.861	9.861	(0.879)	159701	120.000	129.11
\$ 186 2-Chlorophenol-d4	132	4.431	4.431	(0.966)	379070	120.000	118.73
\$ 187 1,2-Dichlorobenzene-d4	152	4.747	4.747	(1.035)	269486	120.000	118.45

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\QPIPPA02\chem\721.1\0052500.b\00525005.D
 Date: 25-MAY-2000 21:15
 Client ID: STD160
 Sample Info: std160 (800G/ML) 194-175-14 8270/cjp/625
 Column phase: hp5-HS

Instrument: 721.1
 Operator: 001562, DLF
 Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\721.i\d052500.b\D0525CC5.D
Lab Smp Id: sstd160 Client Smp ID: SSTD160
Inj Date : 25-MAY-2000 21:15
Operator : 001562, DLF Inst ID: 721.i
Smp Info : sstd160 (80UG/ML) 194-175-14 8270/clp/625
Misc Info : sstd160,d052500.b,8270c.m,3-root.sub,1,5
Comment :
Method : \\QPITPA02\D\chem\721.i\d052500.b\8270c.m
Meth Date : 25-May-2000 21:46 ferguson Quant Type: ISTD
Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-root.sub
Target Version: 4.03
Processing Host: PITPC013

*WMS
5/25/00*

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
						(NG)	(NG)	
* 1 1,4-Dichlorobenzene-d4	152	4.587	4.587	(1.000)	103331	40.0000		(Q)
* 2 Naphthalene-d8	136	5.810	5.810	(1.000)	337054	40.0000		
* 3 Acenaphthene-d10	164	8.350	8.350	(1.000)	169921	40.0000		
* 4 Phenanthrene-d10	168	11.219	11.219	(1.000)	304559	40.0000		
* 5 Chrysene-d12	240	17.051	17.051	(1.000)	276068	40.0000		
* 6 Perylene-d12	264	20.008	20.008	(1.000)	262256	40.0000		
10 N-Nitrosodimethylamine	74	1.792	1.792	(0.391)	264530	160.000	154.58	
9 Pyridine	79	1.751	1.751	(0.382)	447933	160.000	154.16	
16 Methyl methanesulfonate	80	3.418	3.418	(0.745)	374882	160.000	152.43	
21 Aniline	93	4.359	4.359	(0.950)	680430	160.000	157.75	
22 Phenol	94	4.359	4.359	(0.950)	582339	160.000	153.36	
23 bis(2-Chloroethyl)ether	93	4.419	4.419	(0.963)	438026	160.000	154.57(M)	
24 2-Chlorophenol	128	4.446	4.446	(0.969)	570839	160.000	155.17	
26 1,3-Dichlorobenzene	146	4.560	4.560	(0.994)	616523	160.000	156.61	
27 1,4-Dichlorobenzene	146	4.600	4.600	(1.003)	636513	160.000	157.36	
28 1,2-Dichlorobenzene	146	4.762	4.762	(1.038)	606087	160.000	159.60	
29 Benzyl Alcohol	108	4.735	4.735	(1.032)	319197	160.000	159.37	
30 2-Methylphenol	108	4.842	4.842	(1.056)	408962	160.000	154.56	
31 2,2'-oxybis(1-Chloropropane)	45	4.862	4.862	(1.060)	489543	160.000	151.36(Q)	
32 N-Nitroso-di-n-propylamine	70	5.017	5.017	(1.094)	339182	160.000	156.32	
192 4-Methylphenol	108	4.977	4.977	(1.085)	446010	160.000	158.26	
34 Hexachloroethane	117	5.030	5.030	(1.097)	285135	160.000	156.20	
35 Nitrobenzene	77	5.131	5.131	(0.883)	542239	160.000	160.48(A)	
41 Isophorone	82	5.360	5.360	(0.923)	870326	160.000	163.88(A)	
42 2-Nitrophenol	139	5.427	5.427	(0.934)	308491	160.000	161.88(A)	
43 2,4-Dimethylphenol	107	5.467	5.467	(0.941)	511635	160.000	164.74(A)	

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
						(NG)	(NG)
=====	=====	==	=====	=====	=====	=====	=====
44 bis(2-Chloroethoxy)methane	93	5.568	5.568	(0.958)	484635	160.000	160.20 (A)
48 2,4-Dichlorophenol	162	5.676	5.676	(0.977)	413150	160.000	162.32 (A)
49 Benzoic Acid	122	5.676	5.676	(0.977)	360498	160.000	178.18 (A)
50 1,2,4-Trichlorobenzene	180	5.763	5.763	(0.992)	480844	160.000	162.14 (A)
51 Naphthalene	128	5.837	5.837	(1.005)	1468531	160.000	163.48 (A)
52 4-Chloroaniline	127	5.911	5.911	(1.017)	570359	160.000	158.96
56 Hexachlorobutadiene	225	6.032	6.032	(1.038)	340737	160.000	166.50 (AQ)
59 4-Chloro-3-Methylphenol	107	6.522	6.522	(1.123)	408535	160.000	161.03 (A)
62 2-Methylnaphthalene	142	6.690	6.690	(1.152)	892470	160.000	161.90 (A)
63 1-Methylnaphthalene	142	6.838	6.838	(1.177)	823138	160.000	161.32 (A)
64 Hexachlorocyclopentadiene	237	7.006	7.006	(0.839)	413209	160.000	166.81 (A)
66 2,4,6-Trichlorophenol	196	7.133	7.133	(0.854)	315641	160.000	164.12 (A)
67 2,4,5-Trichlorophenol	196	7.201	7.201	(0.862)	327852	160.000	162.08 (A)
70 2-Chloronaphthalene	162	7.409	7.409	(0.887)	853507	160.000	163.69 (A)
73 2-Nitroaniline	65	7.631	7.631	(0.914)	282600	160.000	159.90
76 Dimethylphthalate	163	8.014	8.014	(0.960)	991782	160.000	160.05 (A)
78 2,6-Dinitrotoluene	165	8.121	8.121	(0.973)	241548	160.000	163.90 (AQ)
79 Acenaphthylene	152	8.088	8.088	(0.969)	1237728	160.000	160.54 (AQ)
81 3-Nitroaniline	138	8.356	8.356	(1.001)	261941	160.000	164.04 (A)
82 Acenaphthene	153	8.424	8.424	(1.009)	787364	160.000	163.51 (A)
83 2,4-Dinitrophenol	184	8.538	8.538	(1.023)	189418	160.000	171.08 (A)
85 4-Nitrophenol	109	8.692	8.692	(1.041)	222816	160.000	169.55 (AQ)
86 Dibenzofuran	168	8.713	8.713	(1.043)	1144836	160.000	162.22 (AQ)
87 2,4-Dinitrotoluene	165	8.840	8.840	(1.059)	313920	160.000	162.11 (A)
91 2,3,5,6-Tetrachlorophenol	232	8.948	8.948	(1.072)	279958	160.000	165.06 (A)
88 2,3,4,6-Tetrachlorophenol	232	9.042	9.042	(1.083)	285120	160.000	169.03 (A)
92 2-Naphthylamine	143	9.028	9.028	(1.081)	525125	160.000	148.29
93 Diethylphthalate	149	9.351	9.351	(1.120)	1118415	160.000	165.73 (A)
94 Fluorene	166	9.358	9.358	(1.121)	910585	160.000	163.43 (A)
95 4-Chlorophenyl-phenylether	204	9.398	9.398	(1.126)	487315	160.000	165.23 (A)
96 4-Nitroaniline	138	9.546	9.546	(1.143)	249140	160.000	164.90 (A)
98 4,6-Dinitro-2-methylphenol	198	9.620	9.620	(0.857)	232089	160.000	169.68 (A)
99 N-Nitrosodiphenylamine (1)	169	9.667	9.667	(0.862)	646612	160.000	163.24 (A)
100 1,2-Diphenylhydrazine	77	9.707	9.707	(0.865)	1061981	160.000	166.39 (A)
106 4-Bromophenyl-phenylether	248	10.359	10.359	(0.923)	291652	160.000	165.45 (A)
107 Hexachlorobenzene	284	10.614	10.614	(0.946)	357212	160.000	162.56 (A)
111 Pentachlorophenol	266	10.997	10.997	(0.980)	239957	160.000	168.41 (AQ)
115 Phenanthrene	178	11.286	11.286	(1.006)	1215322	160.000	161.57 (A)
116 Anthracene	178	11.380	11.380	(1.014)	1239896	160.000	161.83 (A)
119 Carbazole	167	11.763	11.763	(1.049)	1112605	160.000	163.19 (AQ)
120 Di-n-Butylphthalate	149	12.798	12.798	(1.141)	1706992	160.000	163.64 (A)
123 Fluoranthene	202	13.853	13.853	(1.235)	1333976	160.000	165.64 (A)
124 Benzidine	184	14.236	14.236	(0.835)	553168	160.000	161.07 (A)
125 Pyrene	202	14.323	14.323	(0.840)	1324894	160.000	156.16
131 Butylbenzylphthalate	149	16.097	16.097	(0.944)	725707	160.000	157.09
135 3,3'-Dichlorobenzidine	252	17.091	17.091	(1.002)	521357	160.000	165.68 (A)
136 Benzo(a)Anthracene	228	17.024	17.024	(0.998)	1208770	160.000	161.70 (A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
=====	=====	==	=====	=====	=====	=====	=====
137 Chrysene	228	17.125	17.125	(1.004)	1156301	160.000	162.43 (A)
139 bis(2-ethylhexyl)Phthalate	149	17.515	17.515	(1.027)	1044162	160.000	159.30
140 Di-n-octylphthalate	149	18.838	18.838	(0.942)	1802536	160.000	155.79
141 Benzo(b)fluoranthene	252	19.329	19.329	(0.966)	1550107	160.000	183.65 (A)
142 Benzo(k)fluoranthene	252	19.389	19.389	(0.969)	1147323	160.000	145.98 (M)
143 7,12-dimethylbenz[a]anthracen	256	19.389	19.389	(0.969)	632840	160.000	169.28 (A)
146 Benzo(a)pyrene	252	19.920	19.920	(0.996)	1204888	160.000	165.89 (A)
149 Indeno(1,2,3-cd)pyrene	276	21.902	21.902	(1.095)	1365464	160.000	178.29 (A)
150 Dibenz(a,h)anthracene	278	21.956	21.956	(1.097)	1432857	160.000	178.62 (A)
151 Benzo(g,h,i)perylene	276	22.319	22.319	(1.116)	1406556	160.000	177.68 (A)
\$ 154 Nitrobenzene-d5	82	5.111	5.111	(0.880)	545395	160.000	163.78 (A)
\$ 155 2-Fluorobiphenyl	172	7.261	7.261	(0.870)	935998	160.000	163.83 (A)
\$ 156 Terphenyl-d14	244	14.820	14.820	(0.869)	1060110	160.000	160.62 (A)
\$ 157 Phenol-d5	99	4.345	4.345	(0.947)	529627	160.000	153.74
\$ 158 2-Fluorophenol	112	3.532	3.532	(0.770)	479611	160.000	153.40
\$ 159 2,4,6-Tribromophenol	330	9.868	9.868	(0.880)	219070	160.000	170.12 (A)
\$ 186 2-Chlorophenol-d4	132	4.432	4.432	(0.966)	518510	160.000	155.35
\$ 187 1,2-Dichlorobenzene-d4	152	4.748	4.748	(1.035)	384809	160.000	161.33 (A)

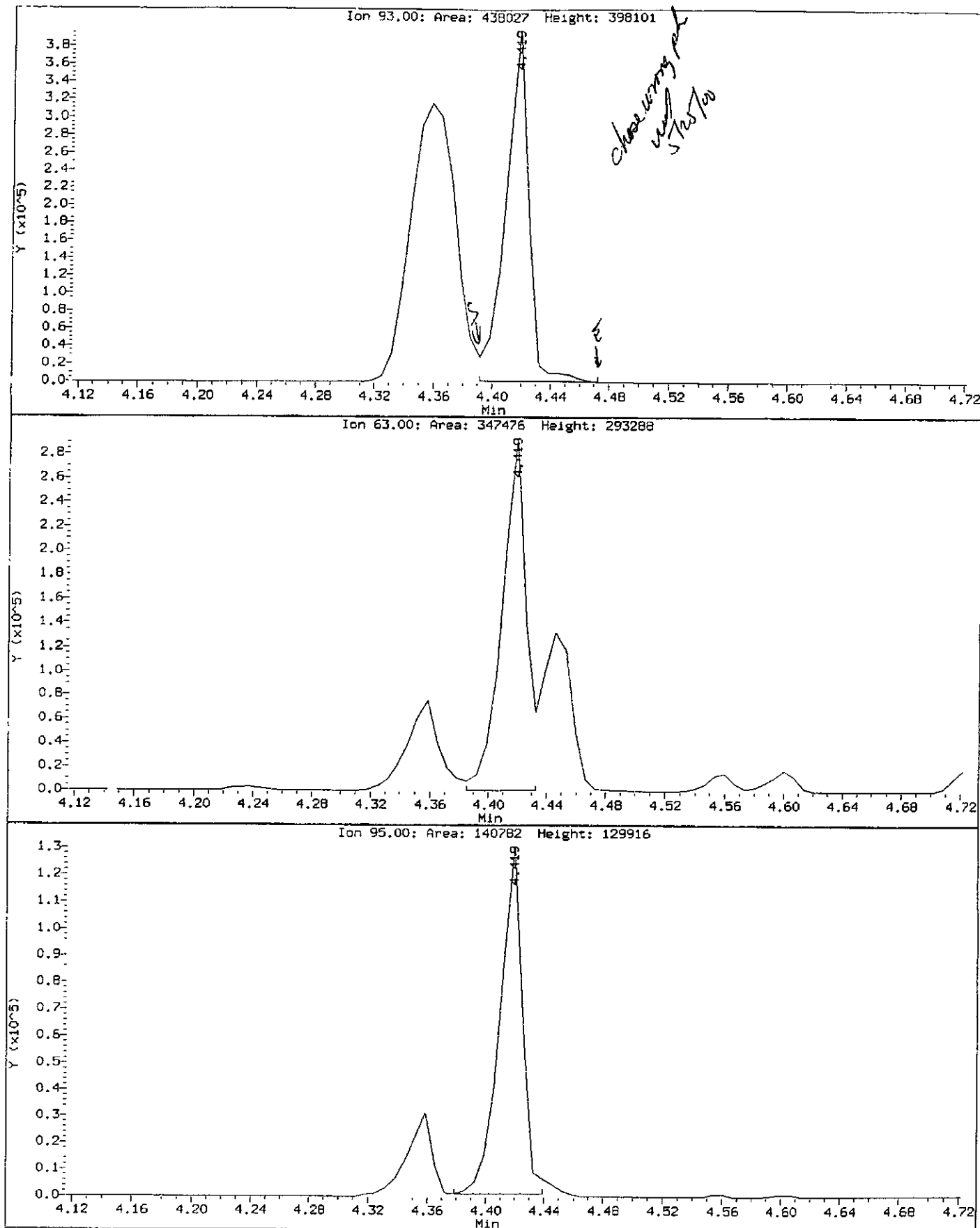
QC Flag Legend

- A - Target compound detected but, quantitated amount exceeded maximum amount.
- Q - Qualifier signal failed the ratio test.
- M - Compound response manually integrated.

660 234

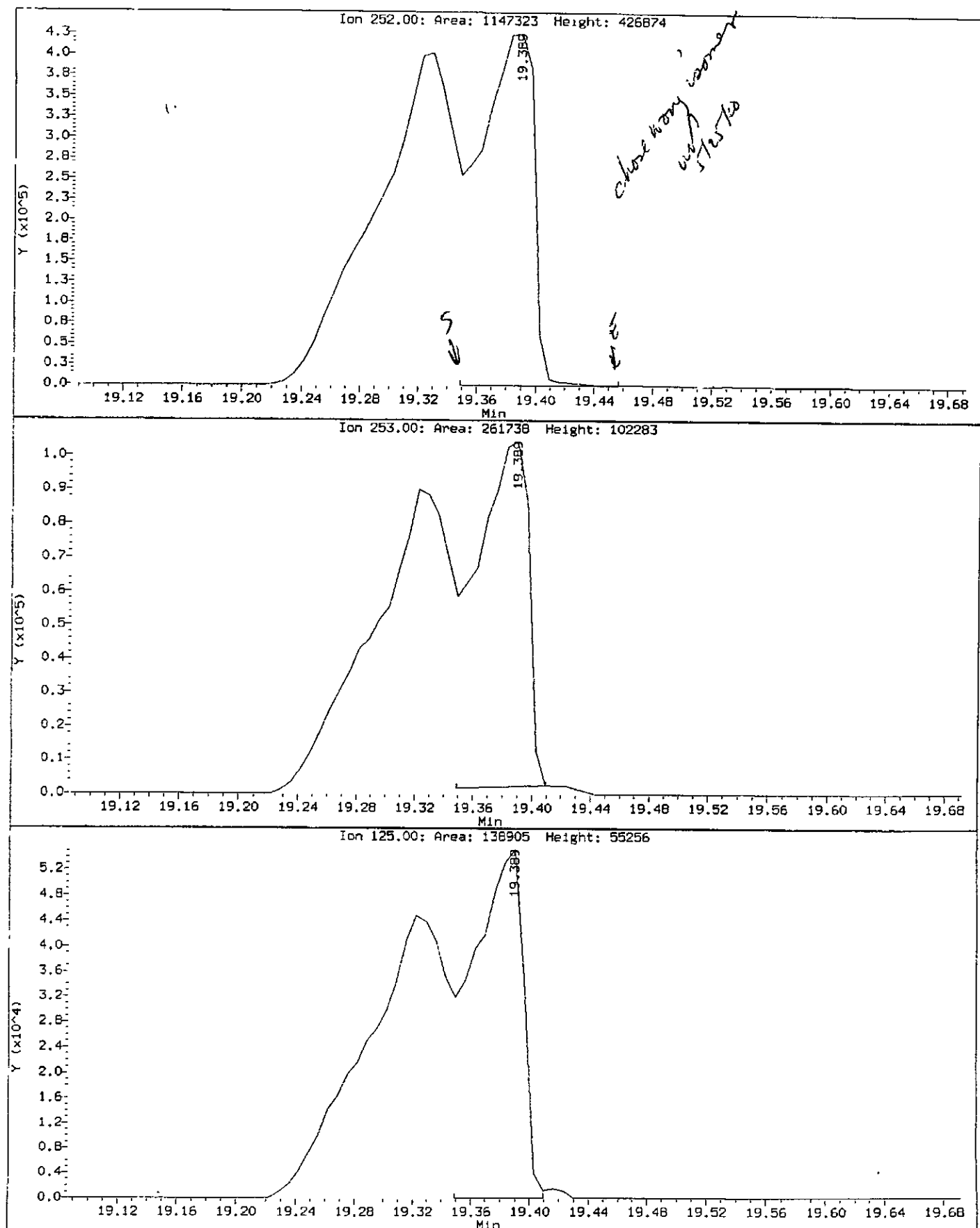
Data File: \\17FHC\0\chem\721.1\052500.b\0525005.D
Injection Date: 25-MAY-2000 21:15
Instrument: 721.1
Client Sample ID:

Compound: bis(2-Chloroethyl)ether
CAS Number: 111-44-4



Data File: \\QP1TPA02\J\chem\721.i\052500.b\0525CC5.D
Injection Date: 25-MAY-2000 21:15
Instrument: 721.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Instrument ID: 721

Calibration Date: 06/07/00 Time: 1117

Lab File ID: D0607CCC

Init. Calib. Date(s): 05/25/00 05/25/00

Init. Calib. Times: 1915 2115

GC Column: HP5-MS ID: 0.25 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.470	1.473	0.01	0.2	20.0
bis(2-Chloroethyl) ether	1.097	1.045	0.01	4.7	50.0
2-Chlorophenol	1.424	1.445	0.01	1.5	50.0
1,3-Dichlorobenzene	1.524	1.516	0.01	0.5	50.0
1,4-Dichlorobenzene	1.566	1.589	0.01	1.5	20.0
1,2-Dichlorobenzene	1.470	1.485	0.01	1.0	50.0
2-Methylphenol	1.024	0.997	0.01	2.6	50.0
2,2'-oxybis(1-Chloropropane)	1.252	1.117	0.01	10.8	50.0
4-Methylphenol	1.091	1.075	0.01	1.5	50.0
Hexachloroethane	0.707	0.702	0.01	0.7	50.0
Nitrobenzene	0.401	0.415	0.01	3.5	50.0
Isophorone	0.630	0.643	0.01	2.1	50.0
2-Nitrophenol	0.226	0.222	0.01	1.8	20.0
2,4-Dimethylphenol	0.368	0.371	0.01	0.8	50.0
bis(2-Chloroethoxy) methane	0.359	0.338	0.01	5.8	50.0
N-Nitroso-di-n-propylamine	0.840	0.875	0.05	4.2	50.0
2,4-Dichlorophenol	0.302	0.304	0.01	0.7	20.0
1,2,4-Trichlorobenzene	0.352	0.345	0.01	2.0	50.0
Naphthalene	1.066	1.040	0.01	2.4	50.0
4-Chloroaniline	0.426	0.430	0.01	0.9	50.0
Hexachlorobutadiene	0.243	0.248	0.01	2.0	20.0
4-Chloro-3-Methylphenol	0.301	0.317	0.01	5.3	20.0
2-Methylnaphthalene	0.654	0.684	0.01	4.6	50.0
Hexachlorocyclopentadiene	0.583	0.530	0.05	9.1	50.0
2,4,6-Trichlorophenol	0.453	0.437	0.01	3.5	20.0
2,4,5-Trichlorophenol	0.476	0.464	0.01	2.5	50.0
2-Chloronaphthalene	1.227	1.226	0.01	0.1	50.0
2-Nitroaniline	0.416	0.426	0.01	2.4	50.0
Dimethylphthalate	1.459	1.499	0.01	2.7	50.0
Acenaphthylene	1.815	1.845	0.01	1.6	50.0
2,6-Dinitrotoluene	0.347	0.354	0.01	2.0	50.0
3-Nitroaniline	0.376	0.375	0.01	0.3	50.0
Acenaphthene	1.133	1.143	0.01	0.9	20.0
2,4-Dinitrophenol	0.261	0.231	0.05	11.5	50.0
4-Nitrophenol	0.309	0.385	0.05	24.6	50.0
Dibenzofuran	1.661	1.695	0.01	2.0	50.0
2,4-Dinitrotoluene	0.456	0.473	0.01	3.7	50.0

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

660 237

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Instrument ID: 721

Calibration Date: 06/07/00 Time: 1117

Lab File ID: D0607CCC

Init. Calib. Date(s): 05/25/00 05/25/00

Init. Calib. Times: 1915 2115

GC Column: HP5-MS ID: 0.25 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.589	1.783	0.01	12.2	50.0
4-Chlorophenyl-phenylether	0.694	0.726	0.01	4.6	50.0
Fluorene	1.312	1.385	0.01	5.6	50.0
4-Nitroaniline	0.355	0.369	0.01	3.9	50.0
4,6-Dinitro-2-methylphenol	0.180	0.172	0.01	4.4	50.0
N-Nitrosodiphenylamine (1)	0.520	0.508	0.01	2.3	20.0
4-Bromophenyl-phenylether	0.232	0.225	0.01	3.0	50.0
Hexachlorobenzene	0.289	0.278	0.01	3.8	50.0
Pentachlorophenol	0.187	0.163	0.01	12.8	20.0
Phenanthrene	0.988	1.001	0.01	1.3	50.0
Anthracene	1.006	1.011	0.01	0.5	50.0
Carbazole	0.895	0.898	0.01	0.3	50.0
Di-n-Butylphthalate	1.370	1.445	0.01	5.5	50.0
Fluoranthene	1.058	1.102	0.01	4.2	20.0
Pyrene	1.229	1.221	0.01	0.6	50.0
Butylbenzylphthalate	0.670	0.682	0.01	1.8	50.0
3,3'-Dichlorobenzidine	0.456	0.459	0.01	0.6	50.0
Benzo (a) Anthracene	1.083	1.089	0.01	0.6	50.0
Chrysene	1.032	1.056	0.01	2.3	50.0
bis(2-ethylhexyl) Phthalate	0.950	0.955	0.01	0.5	50.0
Di-n-octylphthalate	1.765	1.970	0.01	11.6	20.0
Benzo (b) fluoranthene	1.288	1.249	0.01	3.0	50.0
Benzo (k) fluoranthene	1.199	1.308	0.01	9.1	50.0
Benzo (a) pyrene	1.108	1.116	0.01	0.7	20.0
Indeno (1,2,3-cd) pyrene	1.168	1.049	0.01	10.2	50.0
Dibenz (a,h) anthracene	1.224	1.121	0.01	8.4	50.0
Benzo (g,h,i) perylene	1.207	1.062	0.01	12.0	50.0
Pyridine	1.125	0.811	0.01	27.9	50.0
N-Nitrosodimethylamine	0.662	0.482	0.01	27.2	50.0
Aniline	1.670	1.623	0.01	2.8	50.0
Benzyl Alcohol	0.775	0.798	0.01	3.0	50.0
Benzoic Acid	0.240	0.192	0.01	20.0	50.0
1-Methylnaphthalene	0.605	0.643	0.01	6.3	50.0
2,3,4,6-Tetrachlorophenol	0.397	0.419	0.01	5.5	50.0
2,3,5,6-Tetrachlorophenol	0.399	0.424	0.01	6.3	50.0
1,2-Diphenylhydrazine	0.838	0.840	0.01	0.2	50.0
Benzidine	0.498	0.433	0.01	13.0	50.0

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FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.:

SDG No.: C0F020191

Instrument ID: 721

Calibration Date: 06/07/00

Time: 1117

Lab File ID: D0607CCC

Init. Calib. Date(s): 05/25/00 05/25/00

Init. Calib. Times: 1915

2115

GC Column: HP5-MS

ID: 0.25 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Methyl methanesulfonate	0.952	0.930	0.01	2.3	50.0
2-Naphthylamine	0.834	0.883	0.01	5.9	50.0
7,12-dimethylbenz[a]anthracene	0.570	0.613	0.01	7.5	50.0
Nitrobenzene-d5	0.395	0.408	0.01	3.3	50.0
2-Fluorobiphenyl	1.345	1.299	0.01	3.4	50.0
Terphenyl-d14	0.956	0.960	0.01	0.4	50.0
Phenol-d5	1.334	1.385	0.01	3.8	50.0
2-Fluorophenol	1.210	1.130	0.01	6.6	50.0
2,4,6-Tribromophenol	0.169	0.162	0.01	4.1	50.0
2-Chlorophenol-d4	1.292	1.331	0.01	3.0	50.0
1,2-Dichlorobenzene-d4	0.923	0.934	0.01	1.2	50.0

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: 721.i
Lab File ID: D0607CCC.D
Analysis Type: NONE

Injection Date: 07-JUN-2000 11:17
Lab Sample ID: sstd50
Method File: \\Qpitpa02\D\chem\721.i\d060700.b

8270c

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
66 Pyridine	50.0000	36.0566	27.9	50.0
67 N-Nitrosodimethylamine	50.0000	36.4133	27.2	50.0
87 Methyl methanesulfonate	50.0000	48.8354	2.3	50.0
185 2-Fluorophenol	50.0000	46.6687	6.7	50.0
68 Aniline	50.0000	48.6060	2.8	50.0
184 Phenol-d5	50.0000	51.9433	3.9	50.0
1 Phenol	50.0000	50.1009	0.2	20.0
2 bis(2-Chloroethyl) ether	50.0000	47.6517	4.7	50.0
187 2-Chlorophenol-d4	50.0000	51.5059	3.0	50.0
3 2-Chlorophenol	50.0000	50.7406	1.5	50.0
4 1,3-Dichlorobenzene	50.0000	49.7328	0.5	50.0
11 1,4-Dichlorobenzene-d4	40.0000	40.0000	0.0	50.0
5 1,4-Dichlorobenzene	50.0000	50.7496	1.5	20.0
69 Benzyl Alcohol	50.0000	51.4851	3.0	50.0
188 1,2-Dichlorobenzene-d4	50.0000	50.5794	1.2	50.0
6 1,2-Dichlorobenzene	50.0000	50.5228	1.0	50.0
7 2-Methylphenol	50.0000	48.6852	2.6	50.0
8 2,2'-oxybis(1-Chloropropane)	50.0000	44.6060	10.8	50.0
9 4-Methylphenol	50.0000	49.2578	1.5	50.0
18 N-Nitroso-di-n-propylamine	50.0000	52.1039	4.2	50.0
12 Hexachloroethane	50.0000	49.6674	0.7	50.0
181 Nitrobenzene-d5	50.0000	51.5821	3.2	50.0
13 Nitrobenzene	50.0000	51.7699	3.5	50.0
14 Isophorone	50.0000	51.0314	2.1	50.0
15 2-Nitrophenol	50.0000	49.0828	1.8	20.0
16 2,4-Dimethylphenol	50.0000	50.3471	0.7	50.0
17 bis(2-Chloroethoxy) methane	50.0000	47.1325	5.7	50.0
71 Benzoic Acid	50.0000	40.0133	20.0	50.0
18 2,4-Dichlorophenol	50.0000	50.3005	0.6	20.0
19 1,2,4-Trichlorobenzene	50.0000	49.0414	1.9	50.0
32 Naphthalene-d8	40.0000	40.0000	0.0	50.0
20 Naphthalene	50.0000	48.8029	2.4	50.0
21 4-Chloroaniline	50.0000	50.4383	0.9	50.0
22 Hexachlorobutadiene	50.0000	50.9609	1.9	20.0
23 4-Chloro-3-Methylphenol	50.0000	52.6223	5.2	20.0
24 2-Methylnaphthalene	50.0000	52.2625	4.5	50.0
72 1-Methylnaphthalene	50.0000	53.0899	6.2	50.0
25 Hexachlorocyclopentadiene	50.0000	45.4141	9.2	50.0
26 2,4,6-Trichlorophenol	50.0000	48.2480	3.5	20.0

660 240

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607CCC.D
 Report Date: 06/07/2000

CONTINUING CALIBRATION COMPOUNDS
 PERCENT DRIFT REPORT

Instrument ID: 721.i
 Lab File ID: D0607CCC.D
 Analysis Type: NONE

Injection Date: 07-JUN-2000 11:17
 Lab Sample ID: sstd50
 Method File: \\Qpitpa02\D\chem\721.i\d060700.b

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
27 2,4,5-Trichlorophenol	50.0000	48.6994	2.6	50.0
182 2-Fluorobiphenyl	50.0000	48.2998	3.4	50.0
28 2-Chloronaphthalene	50.0000	49.9304	0.1	50.0
29 2-Nitroaniline	50.0000	51.1804	2.4	50.0
30 Dimethylphthalate	50.0000	51.3796	2.8	50.0
31 Acenaphthylene	50.0000	50.8287	1.7	50.0
32 2,6-Dinitrotoluene	50.0000	50.9749	1.9	50.0
33 3-Nitroaniline	50.0000	49.8600	0.3	50.0
52 Acenaphthene-d10	40.0000	40.0000	0.0	50.0
34 Acenaphthene	50.0000	50.4114	0.8	20.0
35 2,4-Dinitrophenol	50.0000	44.4021	11.2	50.0
37 Dibenzofuran	50.0000	51.0237	2.0	50.0
36 4-Nitrophenol	50.0000	62.2051	24.4	50.0
38 2,4-Dinitrotoluene	50.0000	51.9183	3.8	50.0
77 2,3,5,6-Tetrachlorophenol	50.0000	53.0800	6.2	50.0
114 2-Naphthylamine	50.0000	52.9676	5.9	50.0
76 2,3,4,6-Tetrachlorophenol	50.0000	52.7585	5.5	50.0
39 Diethylphthalate	50.0000	56.1198	12.2	50.0
41 Fluorene	50.0000	52.8142	5.6	50.0
40 4-Chlorophenyl-phenylether	50.0000	52.3247	4.6	50.0
42 4-Nitroaniline	50.0000	51.9063	3.8	50.0
43 4,6-Dinitro-2-methylphenol	50.0000	48.0016	4.0	50.0
44 N-Nitrosodiphenylamine (1)	50.0000	48.7773	2.4	20.0
78 1,2-Diphenylhydrazine	50.0000	50.1041	0.2	50.0
186 2,4,6-Tribromophenol	50.0000	47.9500	4.1	50.0
45 4-Bromophenyl-phenylether	50.0000	48.6850	2.6	50.0
46 Hexachlorobenzene	50.0000	48.1761	3.6	50.0
47 Pentachlorophenol	50.0000	43.6683	12.7	20.0
78 Phenanthrene-d10	40.0000	40.0000	0.0	50.0
48 Phenanthrene	50.0000	50.6597	1.3	50.0
49 Anthracene	50.0000	50.2408	0.5	50.0
50 Carbazole	50.0000	50.1625	0.3	50.0
51 Di-n-Butylphthalate	50.0000	52.7542	5.5	50.0
52 Fluoranthene	50.0000	52.0788	4.2	20.0
79 Benzidine	50.0000	43.5195	13.0	50.0
53 Pyrene	50.0000	49.6548	0.7	50.0
183 Terphenyl-d14	50.0000	50.2184	0.4	50.0
54 Butylbenzylphthalate	50.0000	50.9077	1.8	50.0
56 Benzo(a)Anthracene	50.0000	50.2725	0.5	50.0

CONTINUING CALIBRATION COMPOUNDS
 PERCENT DRIFT REPORT

Instrument ID: 721.i
 Lab File ID: D0607CCC.D
 Analysis Type: NONE

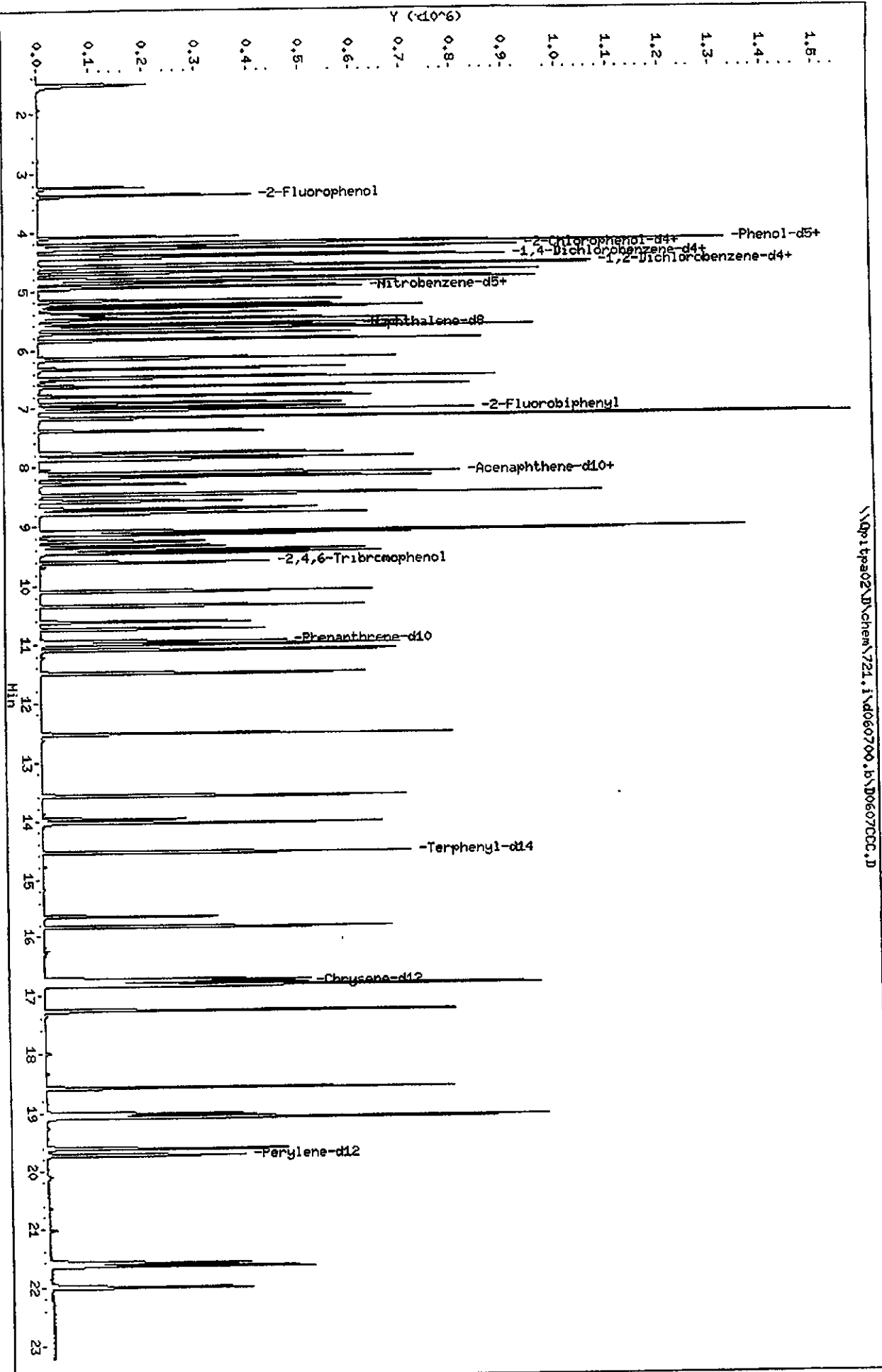
Injection Date: 07-JUN-2000 11:17
 Lab Sample ID: sstd50
 Method File: \\Qpitpa02\D\chem\721.i\d060700.b

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
90 Chrysene-d12	40.0000	40.0000	0.0	50.0
55 3,3'-Dichlorobenzidine	50.0000	50.3364	0.7	50.0
57 Chrysene	50.0000	51.2183	2.4	50.0
58 bis(2-ethylhexyl)Phthalate	50.0000	50.2569	0.5	50.0
59 Di-n-octylphthalate	50.0000	55.8114	11.6	20.0
60 Benzo(b)fluoranthene	50.0000	48.5054	3.0	50.0
61 Benzo(k)fluoranthene	50.0000	54.5520	9.1	50.0
143 7,12-dimethylbenz(a)anthracen	50.0000	53.7960	7.6	50.0
62 Benzo(a)pyrene	50.0000	50.3836	0.8	20.0
101 Perylene-d12	40.0000	40.0000	0.0	50.0
63 Indeno(1,2,3-cd)pyrene	50.0000	44.9091	10.2	50.0
64 Dibenzo(a,h)anthracene	50.0000	45.8248	8.4	50.0
65 Benzo(g,h,i)perylene	50.0000	43.9810	12.0	50.0

Data File: \\qptp02\\chem\\721.1\\060700.b\\060700.D
 Date: 07-JUN-2000 11:17
 Client ID: SSID050
 Sample Info: ssid050 (25UC/ML) 194-177-7 8270/olp/625
 Column phase: Hp5-MS

\\qptp02\\chem\\721.1\\060700.b\\060700.D

Instrument: 721.1
 Operator: 001562, JLF
 Column diameter: 0.25



Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607CCC.D
Report Date: 07-Jun-2000 11:49

Page 1

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607CCC.D
Lab Smp Id: sstd50 Client Smp ID: SSTD050
Inj Date : 07-JUN-2000 11:17
Operator : 001562, DLF Inst ID: 721.i
Smp Info : sstd050 (25UG/ML) 194-177-7 8270/clp/625
Misc Info : sstd50,d060700.b,8270c.m,3-root.sub,2
Comment :
Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3-root.sub
Target Version: 4.04
Processing Host: PITPC013

AKZ
6-7-00

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
*****	----	--	-----	-----	-----	-----	-----
* 1 1,4-Dichlorobenzene-d4	152	4.434	4.434	(1.000)	90150	40.0000	
* 2 Naphthalene-d8	136	5.623	5.623	(1.000)	325485	40.0000	
* 3 Acenaphthene-d10	164	8.116	8.116	(1.000)	178265	40.0000	
* 4 Phenanthrene-d10	188	10.957	10.957	(1.000)	342542	40.0000	
* 5 Chrysene-d12	240	16.775	16.775	(1.000)	308337	40.0000	
* 6 Perylene-d12	264	19.724	19.724	(1.000)	252282	40.0000	
10 N-Nitrosodimethylamine	74	1.519	1.519	(0.343)	54364	50.0000	36.413
9 Pyridine	79	1.505	1.505	(0.340)	91401	50.0000	36.057 (M)
16 Methyl methanesulfonate	80	3.245	3.245	(0.732)	104783	50.0000	48.835
21 Aniline	93	4.206	4.206	(0.948)	182905	50.0000	48.606
22 Phenol	94	4.219	4.219	(0.952)	165976	50.0000	50.101
23 bis(2-Chloroethyl)ether	93	4.259	4.259	(0.961)	117810	50.0000	47.652
24 2-Chlorophenol	128	4.300	4.300	(0.970)	162849	50.0000	50.741
26 1,3-Dichlorobenzene	146	4.407	4.407	(0.994)	170804	50.0000	49.733
27 1,4-Dichlorobenzene	146	4.448	4.448	(1.003)	179092	50.0000	50.750
28 1,2-Dichlorobenzene	146	4.602	4.602	(1.038)	167386	50.0000	50.523
29 Benzyl Alcohol	108	4.575	4.575	(1.032)	89966	50.0000	51.485
30 2-Methylphenol	108	4.696	4.696	(1.059)	112387	50.0000	48.685
31 2,2'-oxybis(1-Chloropropane)	45	4.703	4.703	(1.061)	125870	50.0000	44.606
32 N-Nitroso-di-n-propylamine	70	4.830	4.830	(1.089)	98630	50.0000	52.104
192 4-Methylphenol	108	4.817	4.817	(1.086)	121112	50.0000	49.258
34 Hexachloroethane	117	4.864	4.864	(1.097)	79098	50.0000	49.667
35 Nitrobenzene	77	4.951	4.951	(0.881)	168924	50.0000	51.770
41 Isophorone	82	5.166	5.166	(0.919)	261713	50.0000	51.031
42 2-Nitrophenol	139	5.254	5.254	(0.934)	90323	50.0000	49.083
43 2,4-Dimethylphenol	107	5.294	5.294	(0.941)	151000	50.0000	50.347

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (NG)	ON-COL (NG)
44 bis(2-Chloroethoxy)methane	93	5.388	5.388	(0.958)	137693	50.0000	47.132
46 2,4-Dichlorophenol	162	5.489	5.489	(0.976)	123630	50.0000	50.300
49 Benzoic Acid	122	5.455	5.455	(0.970)	78179	50.0000	40.013
50 1,2,4-Trichlorobenzene	180	5.576	5.576	(0.992)	140446	50.0000	49.041
51 Naphthalene	128	5.643	5.643	(1.004)	423347	50.0000	48.803
52 4-Chloroaniline	127	5.724	5.724	(1.018)	174767	50.0000	50.438
56 Hexachlorobutadiene	225	5.838	5.838	(1.038)	100708	50.0000	50.961(Q)
59 4-Chloro-3-Methylphenol	107	6.322	6.322	(1.124)	128919	50.0000	52.622
62 2-Methylnaphthalene	142	6.476	6.476	(1.152)	278215	50.0000	52.262
63 1-Methylnaphthalene	142	6.624	6.624	(1.178)	261596	50.0000	53.090
64 Hexachlorocyclopentadiene	237	6.792	6.792	(0.837)	118022	50.0000	45.414
66 2,4,6-Trichlorophenol	196	6.920	6.920	(0.853)	97348	50.0000	48.248
67 2,4,5-Trichlorophenol	196	6.980	6.980	(0.860)	103346	50.0000	48.699
70 2-Chloronaphthalene	162	7.168	7.168	(0.883)	273133	50.0000	49.930
73 2-Nitroaniline	65	7.397	7.397	(0.911)	94893	50.0000	51.180
76 Dimethylphthalate	163	7.773	7.773	(0.958)	334014	50.0000	51.380
78 2,6-Dinitrotoluene	165	7.880	7.880	(0.971)	78812	50.0000	50.975
79 Acenaphthylene	152	7.847	7.847	(0.967)	411128	50.0000	50.829(Q)
81 3-Nitroaniline	138	8.109	8.109	(0.999)	83528	50.0000	49.860
82 Acenaphthene	153	8.169	8.169	(1.007)	254664	50.0000	50.411
83 2,4-Dinitrophenol	184	8.283	8.283	(1.021)	51575	50.0000	44.402
85 4-Nitrophenol	109	8.465	8.465	(1.043)	85761	50.0000	62.205
86 Dibenzofuran	168	8.458	8.458	(1.042)	377767	50.0000	51.024
87 2,4-Dinitrotoluene	165	8.572	8.572	(1.056)	105475	50.0000	51.918
91 2,3,5,6-Tetrachlorophenol	232	8.700	8.700	(1.072)	94448	50.0000	53.080
88 2,3,4,6-Tetrachlorophenol	232	8.787	8.787	(1.083)	93362	50.0000	52.758
92 2-Naphthylamine	143	8.760	8.760	(1.079)	196774	50.0000	52.968
93 Diethylphthalate	149	9.090	9.090	(1.120)	397316	50.0000	56.120
94 Fluorene	166	9.096	9.096	(1.121)	308715	50.0000	52.814
95 4-Chlorophenyl-phenylether	204	9.143	9.143	(1.127)	161897	50.0000	52.325
96 4-Nitroaniline	138	9.258	9.258	(1.141)	82273	50.0000	51.906
98 4,6-Dinitro-2-methylphenol	198	9.338	9.338	(0.852)	73843	50.0000	48.002
99 N-Nitrosodiphenylamine (1)	169	9.399	9.399	(0.858)	217306	50.0000	48.777
100 1,2-Diphenylhydrazine	77	9.446	9.446	(0.862)	359661	50.0000	50.104
106 4-Bromophenyl-phenylether	248	10.097	10.097	(0.922)	96526	50.0000	48.685
107 Hexachlorobenzene	284	10.346	10.346	(0.944)	119065	50.0000	48.176
111 Pentachlorophenol	266	10.742	10.742	(0.980)	69981	50.0000	43.668(Q)
115 Phenanthrene	178	11.011	11.011	(1.005)	428585	50.0000	50.660
116 Anthracene	178	11.098	11.098	(1.013)	432929	50.0000	50.241
119 Carbazole	167	11.495	11.495	(1.049)	384657	50.0000	50.162(Q)
120 Di-n-Butylphthalate	149	12.536	12.536	(1.144)	618917	50.0000	52.754
123 Fluoranthene	202	13.570	13.570	(1.238)	471718	50.0000	52.079
124 Benzidine	184	13.967	13.967	(0.833)	166927	50.0000	43.520
125 Pyrene	202	14.041	14.041	(0.837)	470537	50.0000	49.655
131 Butylbenzylphthalate	149	15.834	15.834	(0.944)	262672	50.0000	50.908
135 3,3'-Dichlorobenzidine	252	16.815	16.815	(1.002)	176912	50.0000	50.336
136 Benzo(a)Anthracene	228	16.735	16.735	(0.998)	419736	50.0000	50.272

Data File: \\Opitpa02\D\chem\721.i\d060700.b\D0607CCC.D
 Report Date: 07-Jun-2000 11:49

Page 3

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)	(NG)
137 Chrysene	228	16.835	16.835	(1.004)	407235	50.0000	51.218
139 bis(2-ethylhexyl)Phthalate	149	17.265	17.265	(1.029)	367926	50.0000	50.257
140 Di-n-octylphthalate	149	18.575	18.575	(0.942)	621180	50.0000	55.811
141 Benzo(b)fluoranthene	252	19.019	19.019	(0.964)	393850	50.0000	48.505
142 Benzo(k)fluoranthene	252	19.066	19.066	(0.967)	412442	50.0000	54.552
143 7,12-dimethylbenz[a]anthracen	256	19.079	19.079	(0.967)	193468	50.0000	53.796
146 Benzo(a)pyrene	252	19.616	19.616	(0.995)	352026	50.0000	50.384
149 Indeno(1,2,3-cd)pyrene	276	21.598	21.598	(1.095)	330855	50.0000	44.909
150 Dibenz(a,h)anthracene	278	21.652	21.652	(1.098)	353620	50.0000	45.825
151 Benzo(g,h,i)perylene	276	22.008	22.008	(1.116)	334923	50.0000	43.981
\$ 154 Nitrobenzene-d5	82	4.938	4.938	(0.878)	165875	50.0000	51.582
\$ 155 2-Fluorobiphenyl	172	7.034	7.034	(0.867)	289499	50.0000	48.300
\$ 156 Terphenyl-d14	244	14.544	14.544	(0.867)	370179	50.0000	50.218
\$ 157 Phenol-d5	99	4.206	4.206	(0.948)	156113	50.0000	51.943
\$ 158 2-Fluorophenol	112	3.386	3.386	(0.764)	127298	50.0000	46.669
\$ 159 2,4,6-Tribromophenol	330	9.607	9.607	(0.877)	69448	50.0000	47.950
\$ 186 2-Chlorophenol-d4	132	4.286	4.286	(0.967)	149984	50.0000	51.506
\$ 187 1,2-Dichlorobenzene-d4	152	4.595	4.595	(1.036)	105256	50.0000	50.579

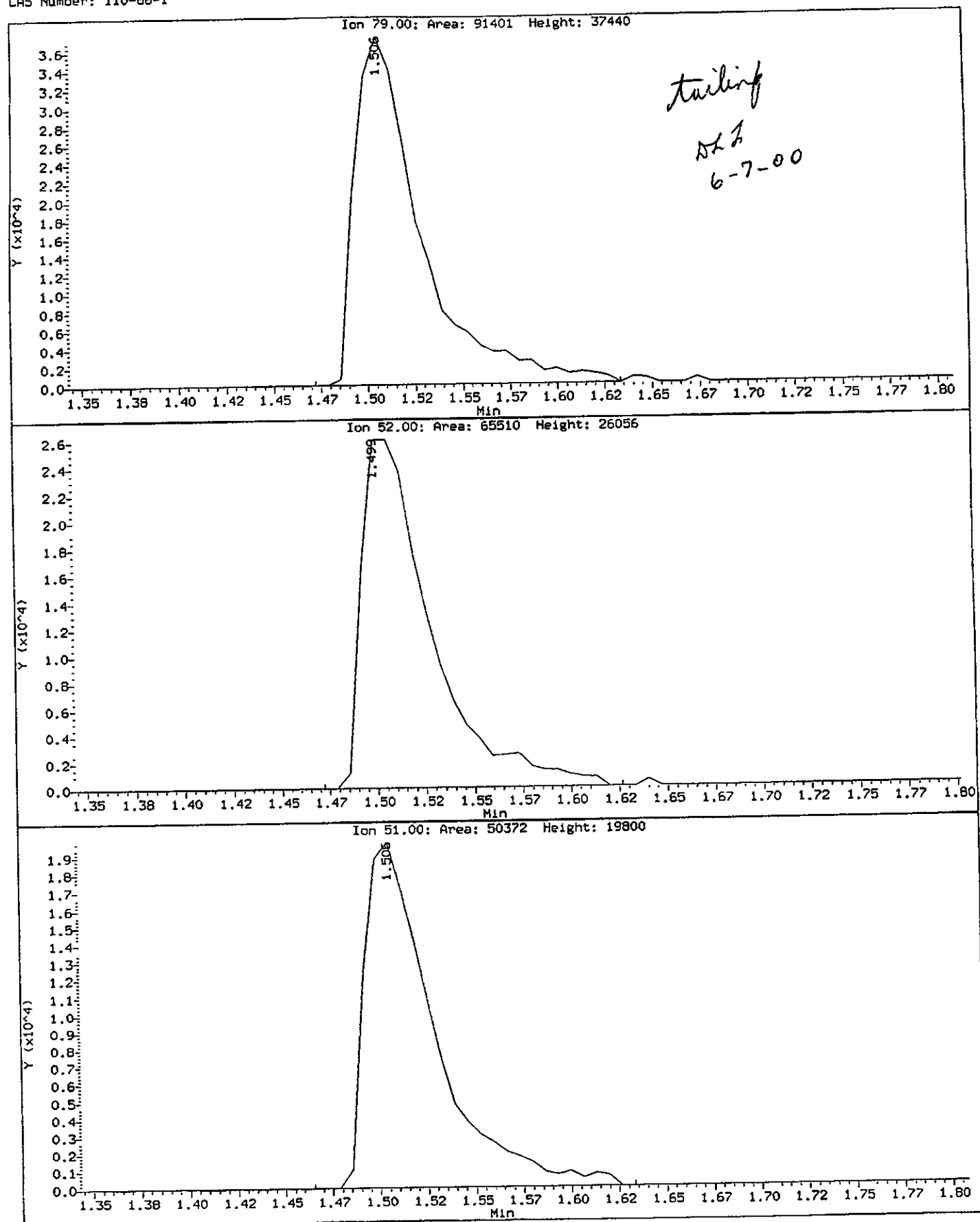
QC Flag Legend

Q - Qualifier signal failed the ratio test.
 M - Compound response manually integrated.

660 246

Data File: \\Qpitta02\chem\721.1\060700.b\0607CCC.D
Injection Date: 07-JUN-2000 11:17
Instrument: 721.1
Client Sample ID:

Compound: Pyridine
CAS Number: 110-86-1



**GC/MS SEMIVOLATILE
QC DATA**

660 248

Data File: \\QPITPA02\chem\721.i\d052500.b\D0525DF3.D

Page 3

Date : 25-MAY-2000 18:54

Client ID: DFTPP02

Instrument: 721.i

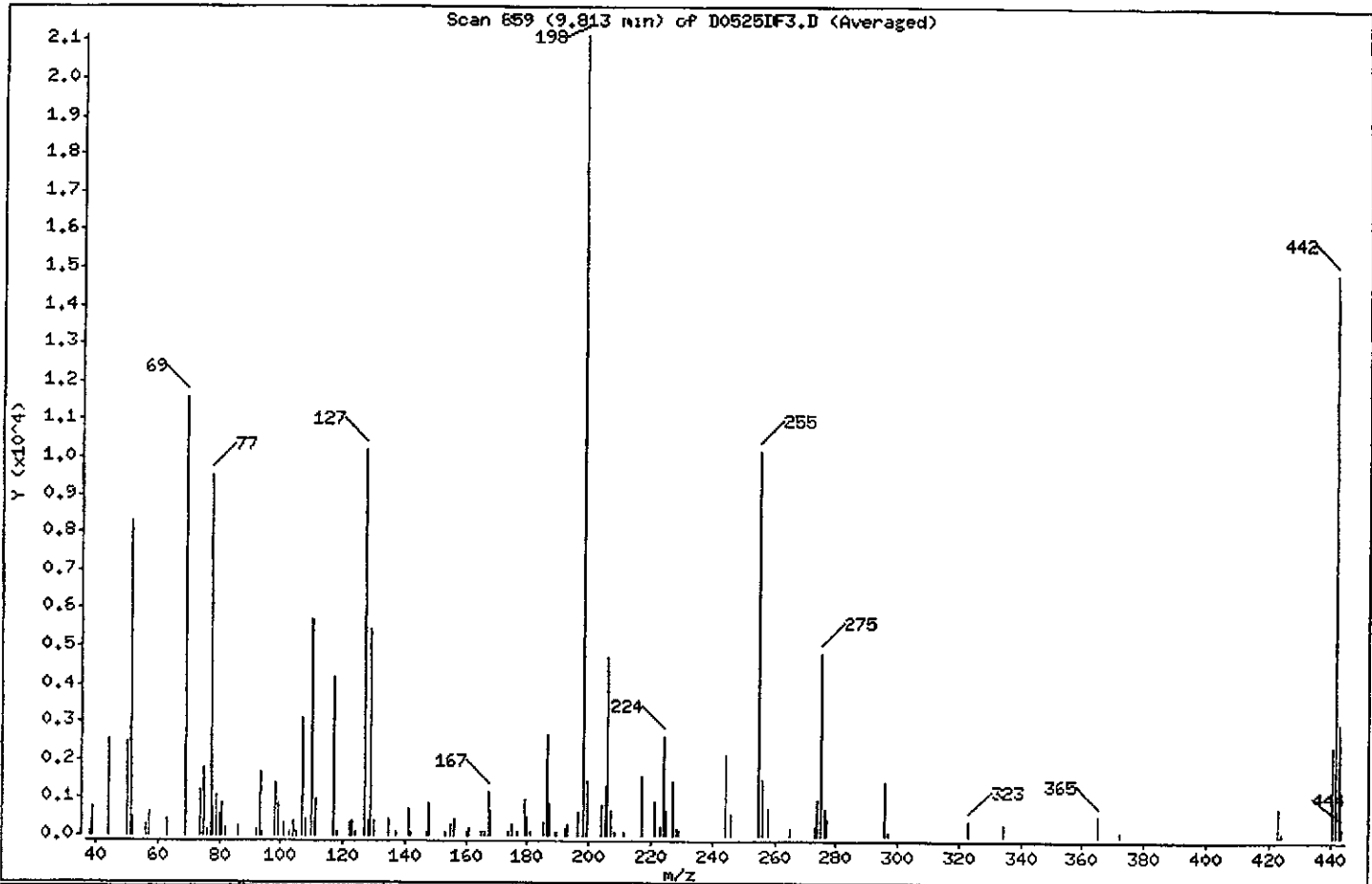
Sample Info: dftpp (25ug/ml) 194-175-8

Operator: 001562, ILF

Column phase:

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.34
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	54.82
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	48.34
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.96
275	10.00 - 30.00% of mass 198	22.82
365	Greater than 1.00% of mass 198	2.52
441	Present, but less than mass 443	11.27
442	Greater than 40.00% of mass 198	70.29
443	17.00 - 23.00% of mass 442	14.14 (20.11)

Data File: \\QPITPA02\N\chem\721.1\d052500.b\D0525DF3.D

Page 4

Date : 25-MAY-2000 18:54

Client ID: DFTPP02

Instrument: 721.1

Sample Info: dftpp (25ug/ml) 194-175-8

Operator: 001562, DLF

Column phase:

Column diameter: 0.25

Data File: D0525DF3.D

Spectrum: Scan 860 (9.813 min) of D0525DF3.D (Averaged)

Location of Maximum: 198.00

Number of points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y

38.00	103	105.00	91	168.00	665	228.00	204
39.00	793	107.00	3095	174.00	115	229.00	122
44.00	2545	108.00	436	175.00	310	244.00	2155
50.00	2489	110.00	5659	177.00	96	246.00	561
51.00	8307	111.00	949	179.00	965	255.00	10162

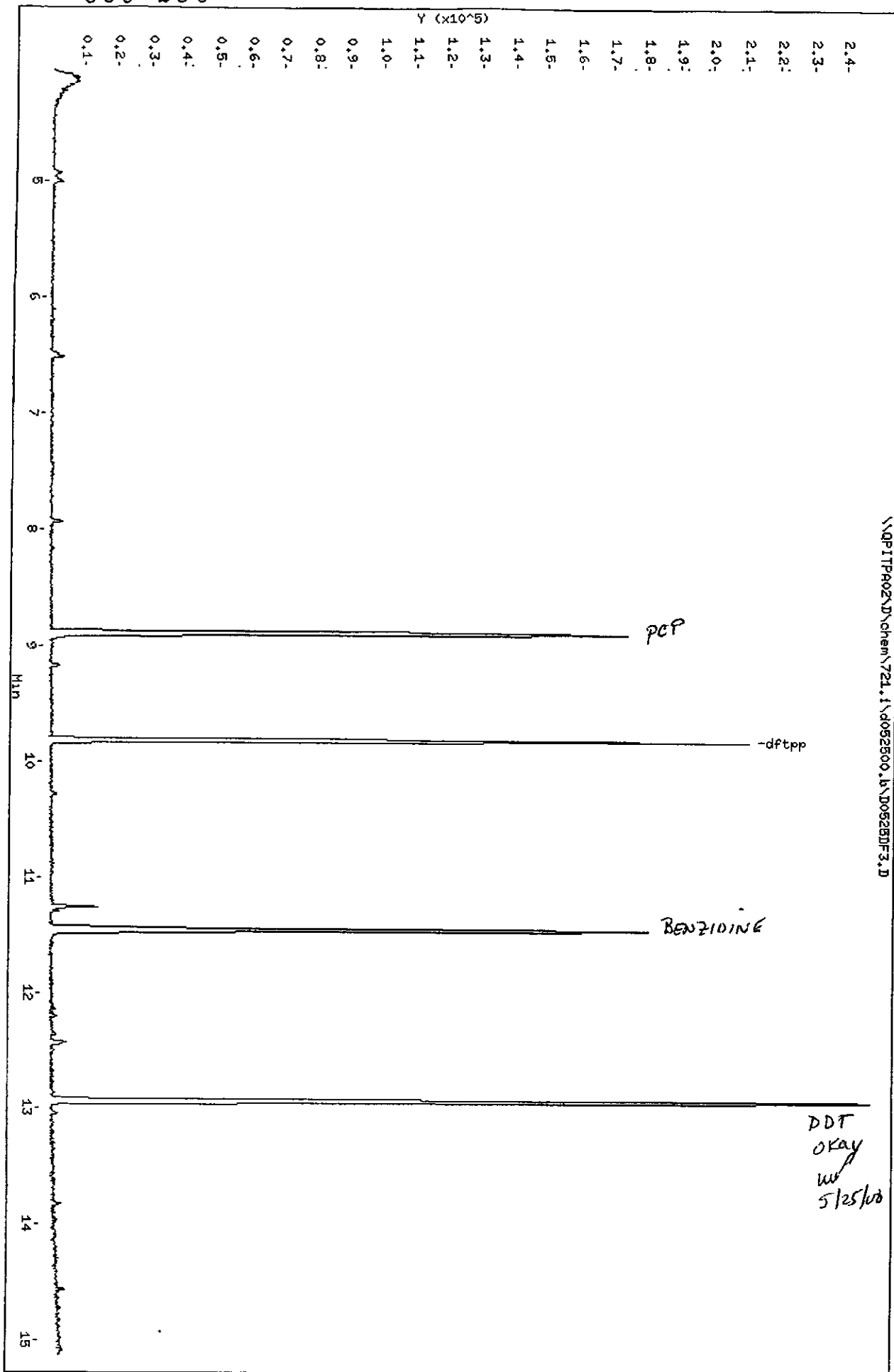
52.00	477	117.00	4187	180.00	502	256.00	1509
56.00	289	118.00	120	181.00	108	258.00	726
57.00	629	122.00	338	185.00	319	265.00	185
63.00	457	123.00	401	186.00	2683	273.00	252
69.00	11574	124.00	96	187.00	859	274.00	977

74.00	1210	127.00	10207	189.00	100	275.00	4818
75.00	1773	128.00	376	192.00	210	276.00	706
76.00	151	129.00	5451	193.00	277	277.00	457
77.00	9495	130.00	372	196.00	613	296.00	1456
78.00	709	135.00	443	198.00	21114	297.00	101

79.00	1070	137.00	117	199.00	1470	323.00	399
80.00	584	141.00	705	204.00	848	334.00	314
81.00	864	142.00	91	205.00	1305	365.00	532
82.00	184	147.00	106	206.00	4688	372.00	106
86.00	223	148.00	879	207.00	668	423.00	793

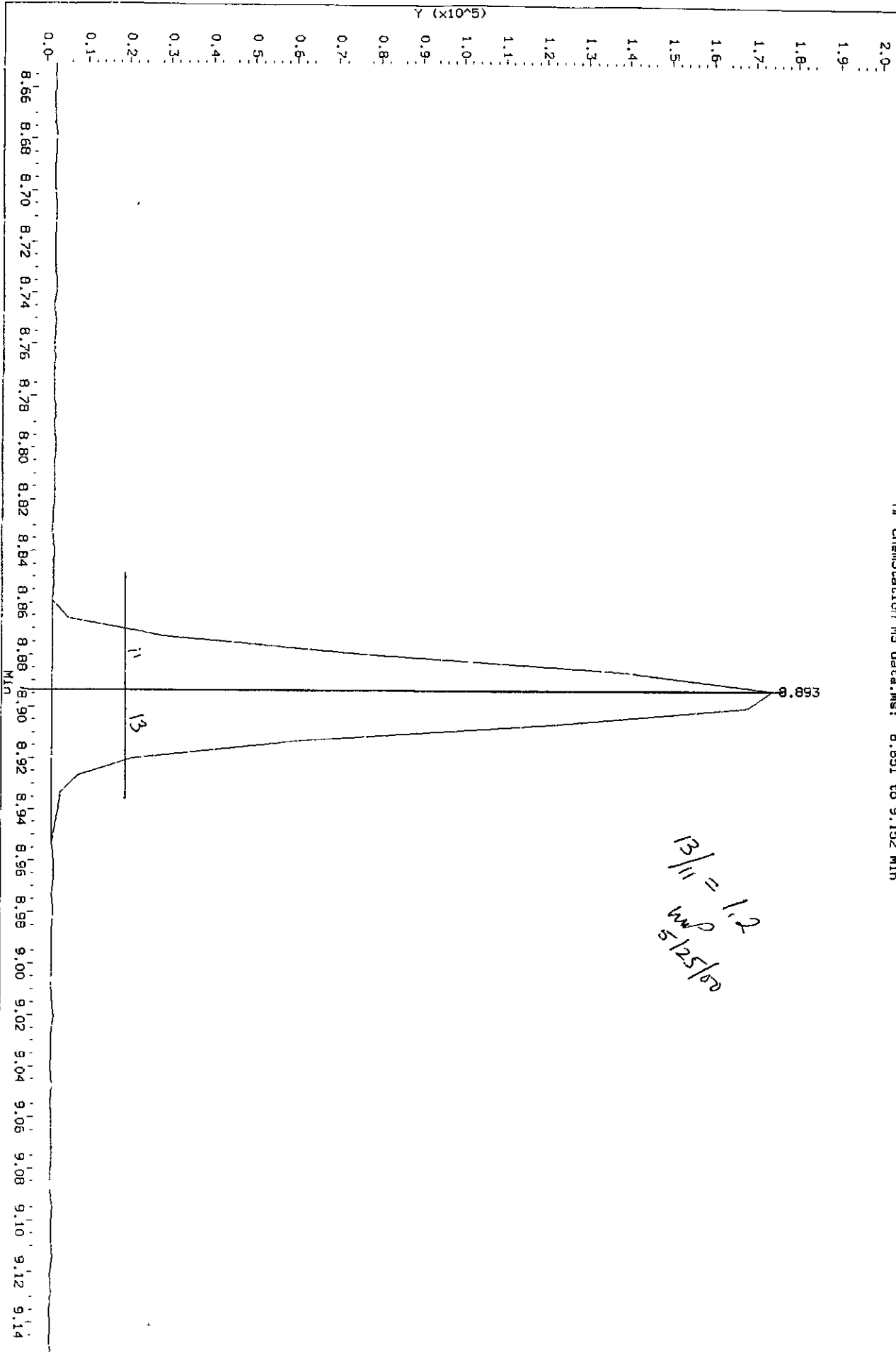
92.00	127	153.00	117	208.00	121	424.00	93
93.00	1687	155.00	315	211.00	103	441.00	2380
94.00	91	156.00	416	217.00	1580	442.00	14841
98.00	1402	160.00	101	221.00	931	443.00	2985
99.00	873	161.00	200	223.00	246	444.00	229

101.00	335	165.00	101	224.00	2602		
103.00	107	166.00	91	225.00	691		
104.00	394	167.00	1150	227.00	1476		



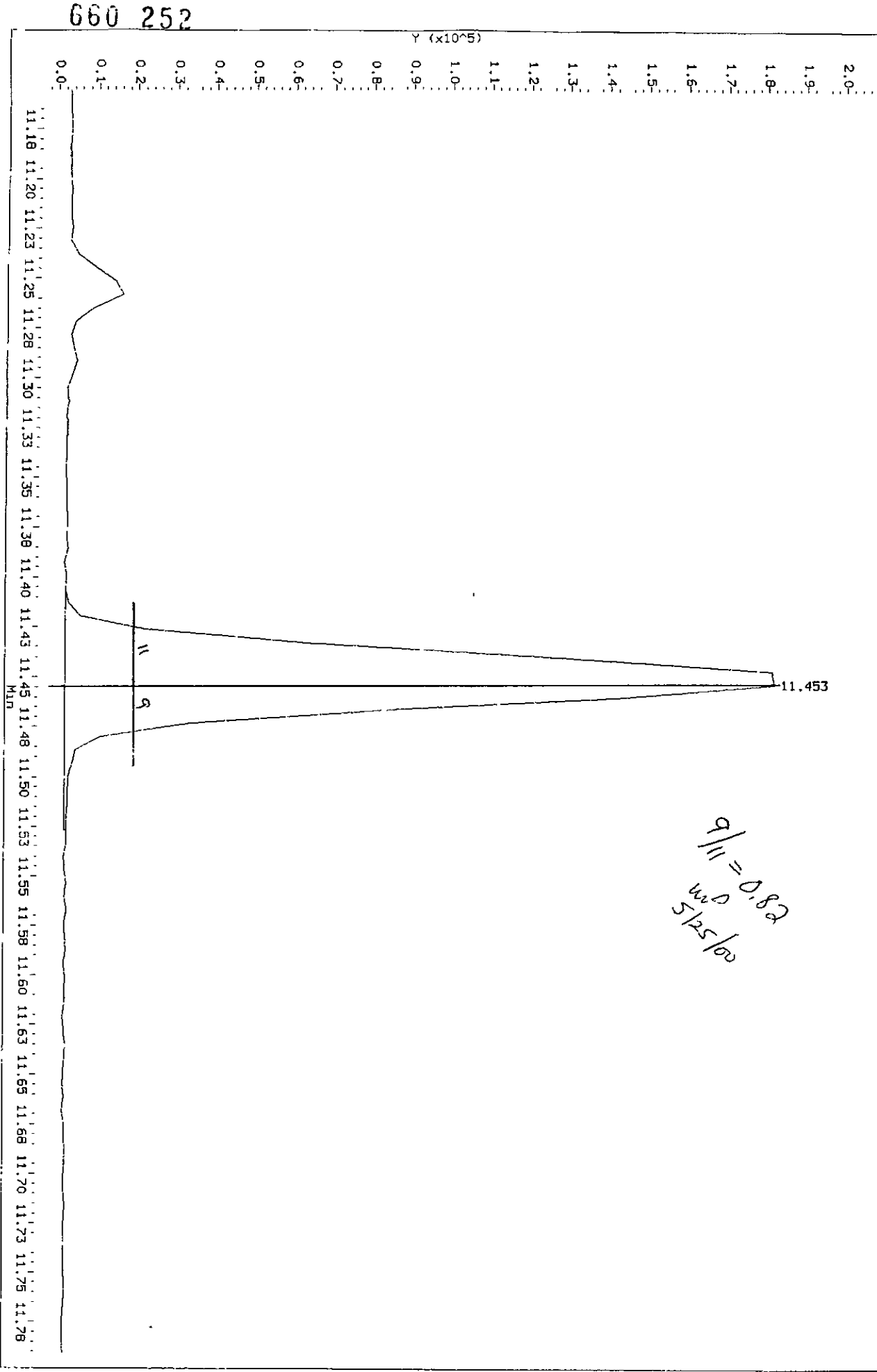
Data File: \\DPIPPA02\DI\chem\721.1\0052500.6\005250F3.D
 Injection Date: 25-May-2000 18:54
 Instrument: 721.1
 Client Sample ID: DFTPP02

HP ChemStation MS data.ms: 8.651 to 9.152 Min



Data File: \\GPITPA02\\D\\chem\\721_1\\0052500.B\\00525DF3.D
Injection Date: 25-MAY-2000 18:54
Instrument: 721.1
Client Sample ID: DFTPP02

HP ChemStation MS data.ms: 11.156 to 11.790 Min



Data File: \\QPIITPA02\D\chem\721.i\d060700.b\D0607DFT.D

Date : 07-JUN-2000 10:57

Client ID: DFTPP02

Instrument: 721.i

Sample Info: dftpp (25ug/ml) 194-175-8

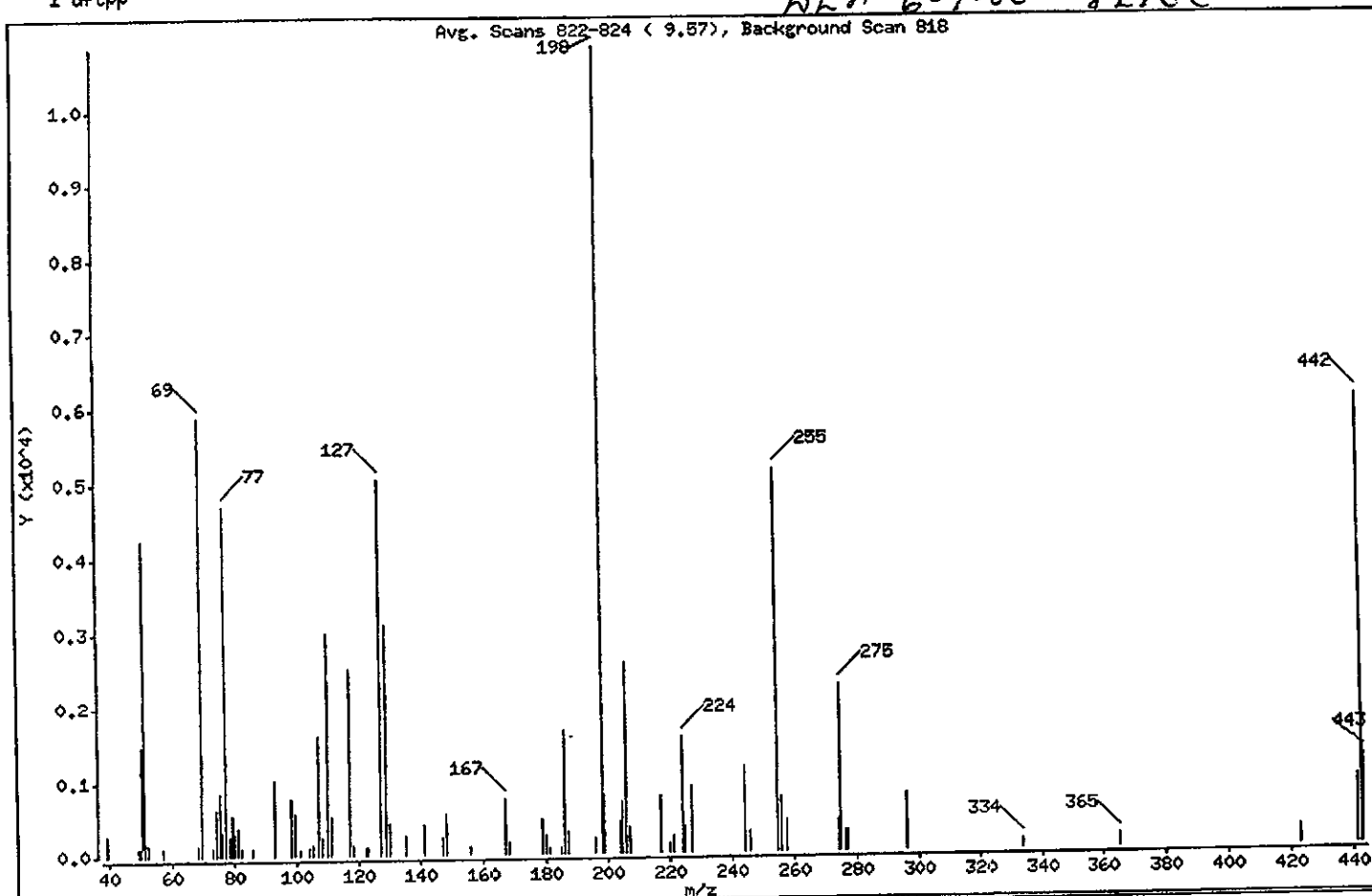
Operator: 001562, DLF

Column phase:

Column diameter: 0.25

1 dftpp

ALP 6-7-00 8270c



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.00
68	Less than 2.00% of mass 69	1.04 (1.92)
69	Mass 69 relative abundance	54.35
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	46.45
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.36
275	10.00 - 30.00% of mass 198	20.74
365	Greater than 1.00% of mass 198	1.61
441	Present, but less than mass 443	8.62
442	Greater than 40.00% of mass 198	55.76
443	17.00 - 23.00% of mass 442	10.99 (19.70)

Date : 07-JUN-2000 10:57

Client ID: DFTPP02

Instrument: 721.i

Sample Info: dftpp (25ug/ml) 194-175-8

Operator: 001562, DLF

Column phase:

Column diameter: 0.25

Data File: D0607DFT.D

Spectrum: Avg. Scans 822-824 (9.57), Background Scan 818

Location of Maximum: 198.00

Number of points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y

39.00	286	98.00	772	156.00	96	225.00	345
49.00	103	99.00	585	167.00	755	227.00	898
50.00	1464	101.00	85	168.00	152	244.00	1149
51.00	4232	104.00	94	179.00	480	246.00	277
52.00	156	105.00	118	180.00	243	255.00	5138

57.00	91	107.00	1585	181.00	86	256.00	742
68.00	113	108.00	226	185.00	87	258.00	428
69.00	5897	110.00	2994	186.00	1657	274.00	434
73.00	98	111.00	526	187.00	299	275.00	2251
74.00	614	117.00	2518	196.00	193	276.00	270

75.00	850	118.00	113	198.00	10851	277.00	274
76.00	320	122.00	105	199.00	799	296.00	772
77.00	4692	123.00	100	204.00	429	334.00	117
78.00	242	127.00	5040	205.00	698	365.00	175
79.00	537	129.00	3096	206.00	2564	423.00	254

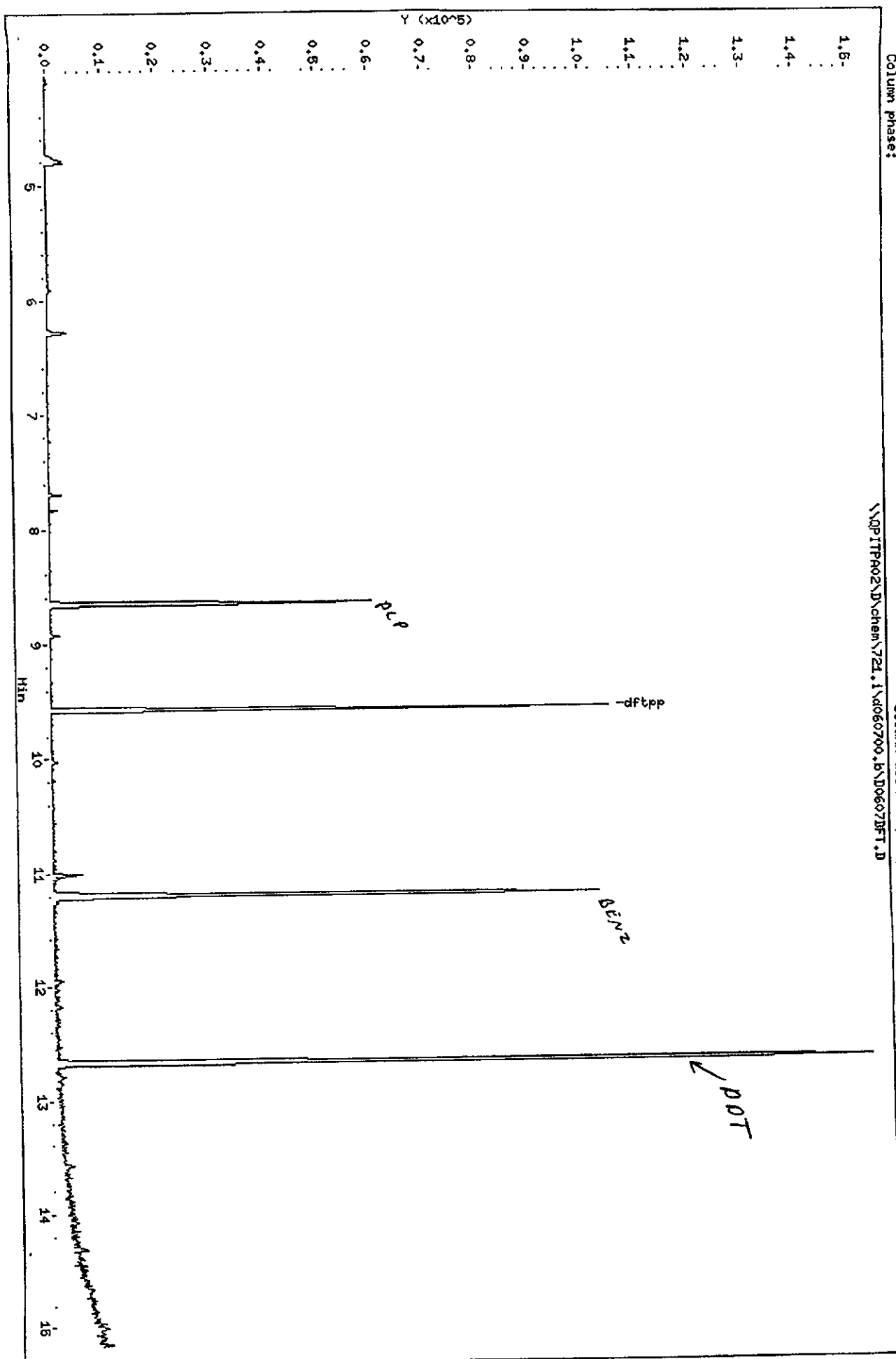
80.00	304	130.00	414	207.00	339	441.00	935
81.00	367	135.00	241	217.00	782	442.00	6051
82.00	107	141.00	402	220.00	125	443.00	1192
86.00	100	147.00	219	221.00	235		
93.00	1034	148.00	549	224.00	1549		

Data File: \\NPITPA02\\chem\\724.1\\060700.b\\0607DFT.D
Date: 07-JUN-2000 10:57
Client ID: DFTPP02
Sample Info: dftpp (25ug/ml) 194-175-8

Column phase:

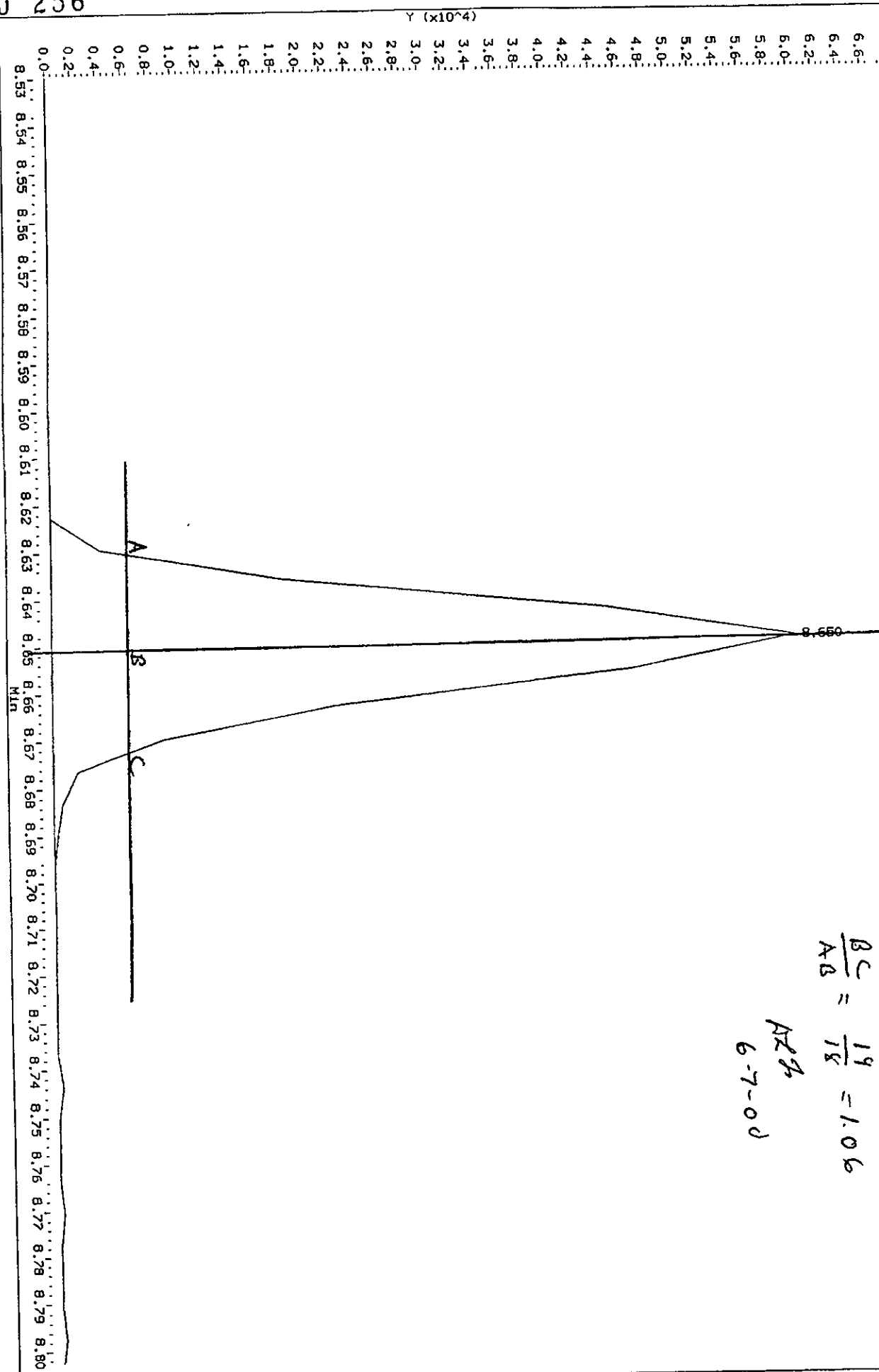
Instrument: 721.i
Operator: 001562, DLF
Column diameter: 0.25

\\NPITPA02\\chem\\724.1\\060700.b\\0607DFT.D



Data File: \\dpt2a02\1\chem\721.1\060700.b\0607DFT.D
 Injection Date: 07-JUN-2000 10:57
 Instrument: 721.1
 Client Sample ID: DFTPP02

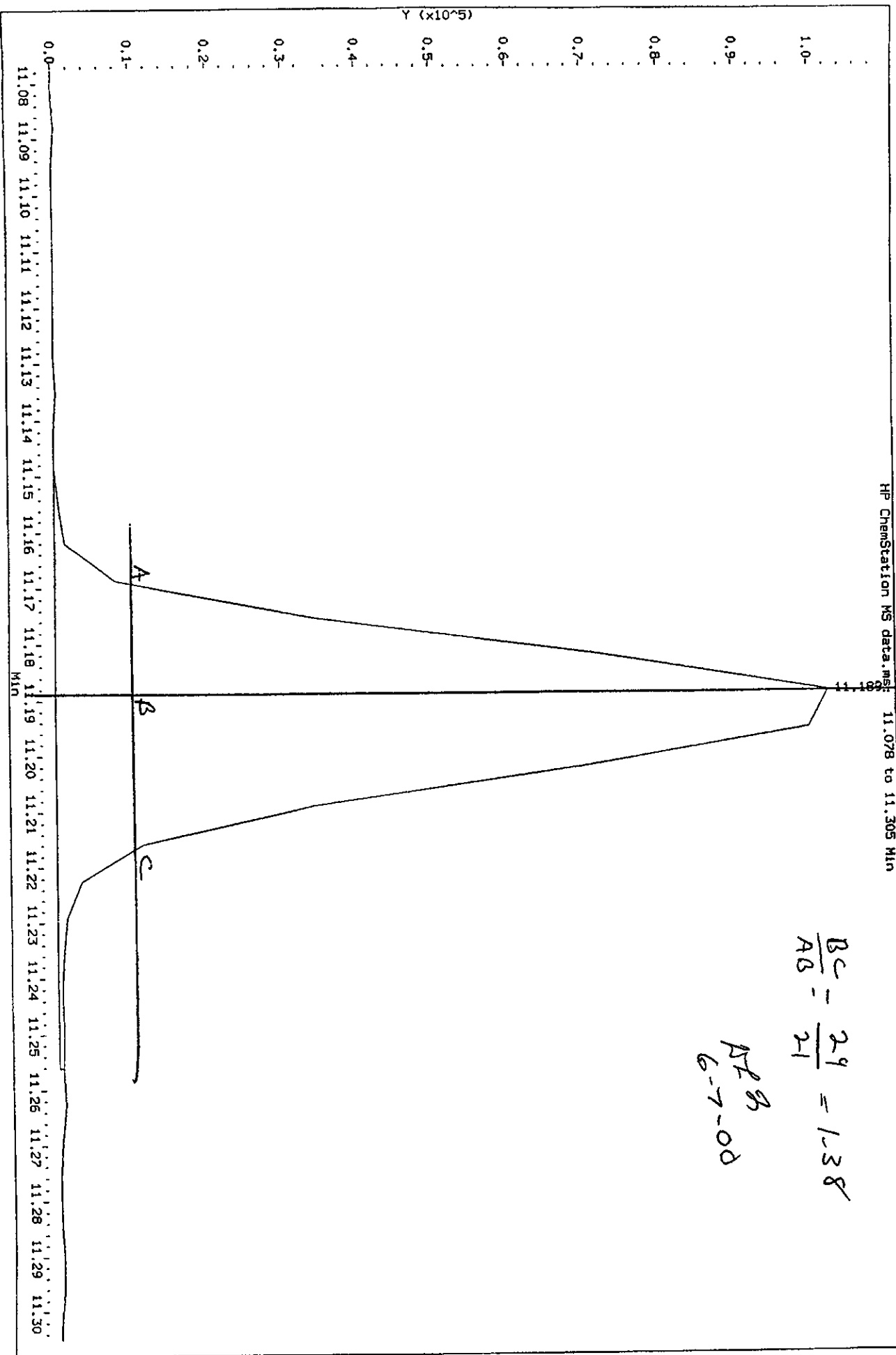
HP ChemStation MS data.ms: 8.530 to 8.803 Min



$$\frac{BC}{AB} = \frac{19}{18} = 1.06$$

AKA
6-7-00

Data File: \\qpltpa02\\chem\\721.1\\d060700.b\\D0607DFT.D
 Injection Date: 07-JUN-2000 10:57
 Instrument: 721.1
 Client Sample ID: DFTPP02



$$\frac{B-C}{A-B} = \frac{29}{21} = 1.38$$

AF 3
 6-7-00

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F060000 105

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE7JQ101

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

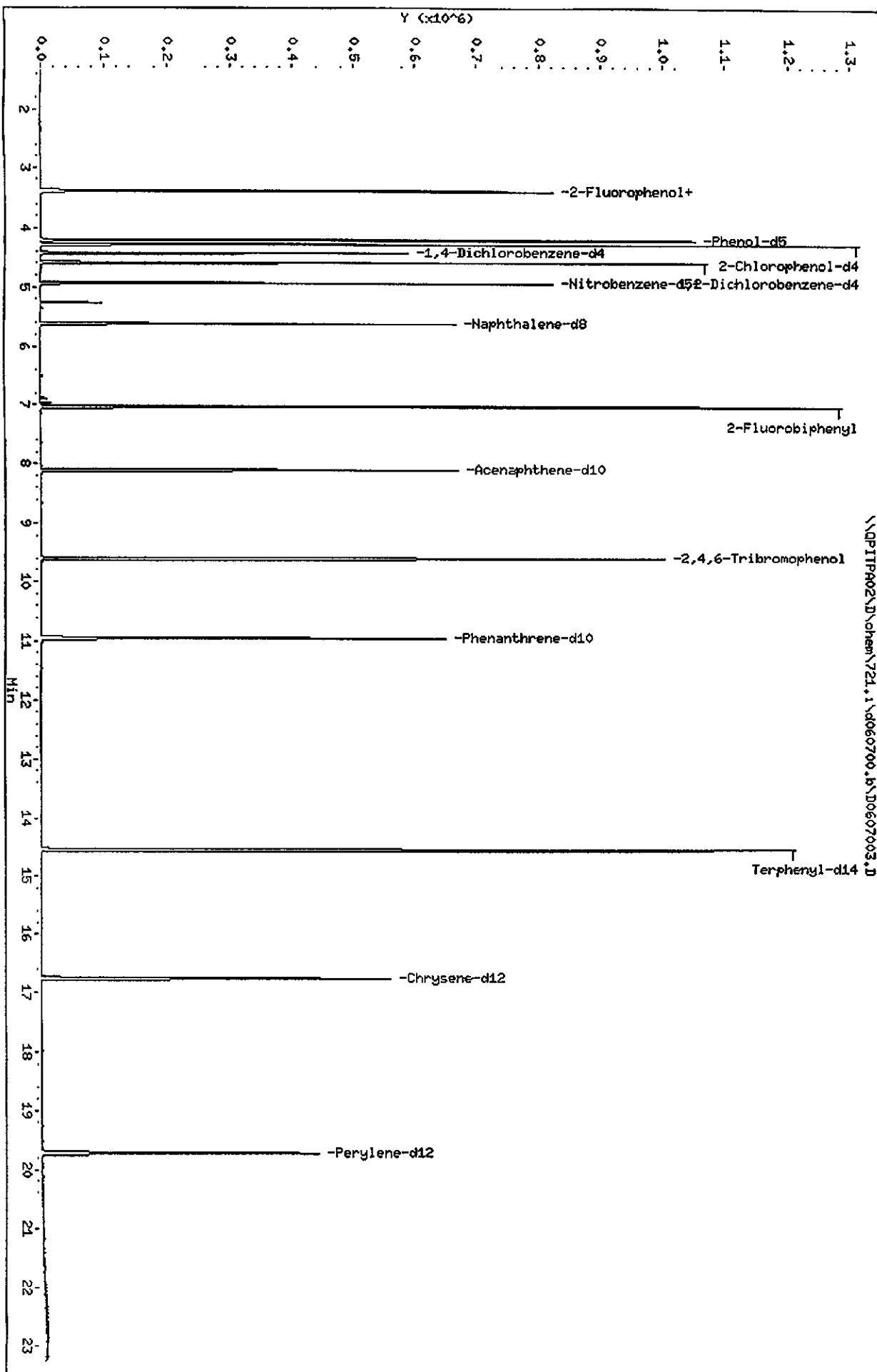
QC Batch: 0158105

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.25	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U
1319-77-3	Cresols (total)	0.050	U

Data File: \\QPI1P02\chem\721.1\060700.b\0607003.D
 Date: 07-JUN-2000 12:49
 Client ID: INTRA-LAB BLANK
 Sample Info: 00020194-sblk tolp 6/5/00 8270c
 Volume Injected (uL): 2.0
 Column phase: Hp5-MS

Instrument: 721.1
 Operator: 001562, DLF
 Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607003.D
 Lab Smp Id: DE7JQ101 Client Smp ID: INTRA-LAB BLANK
 Inj Date : 07-JUN-2000 12:49
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-sblk tclp 6/5/00 8270c
 Misc Info : de7jq101,d060700.b,8270c.m,tclp.sub
 Comment :
 Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 5 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

AKJ
6-7-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.430	4.434	(1.000)	88416	40.0000	(aQ)
* 2 Naphthalene-d8	136	5.612	5.623	(1.000)	348305	40.0000	(a)
* 3 Acenaphthene-d10	164	8.111	8.116	(1.000)	201310	40.0000	(a)
* 4 Phenanthrene-d10	188	10.953	10.957	(1.000)	412044	40.0000	(a)
* 5 Chrysene-d12	240	16.764	16.775	(1.000)	372157	40.0000	(a)
* 6 Perylene-d12	264	19.719	19.724	(1.000)	314545	40.0000	(a)
9 Pyridine	79	Compound Not Detected.					
27 1,4-Dichlorobenzene	146	Compound Not Detected					
M 195 Cresols, total	100	Compound Not Detected					
30 2-Methylphenol	108	Compound Not Detected.					
192 4-Methylphenol	108	Compound Not Detected					
34 Hexachloroethane	117	Compound Not Detected.					
35 Nitrobenzene	77	Compound Not Detected					
56 Hexachlorobutadiene	224	Compound Not Detected.					

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607003.D
 Report Date: 07-Jun-2000 15:02

Page 2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
=====	=====	==	=====	=====	=====	=====	=====
66 2,4,6-Trichlorophenol	196				Compound Not Detected.		
67 2,4,5-Trichlorophenol	196				Compound Not Detected.		
87 2,4-Dinitrotoluene	165				Compound Not Detected.		
107 Hexachlorobenzene	283				Compound Not Detected.		
111 Pentachlorophenol	265				Compound Not Detected.		
\$ 154 Nitrobenzene-d5	82	4.933	4.938	(0.879)	238033	69.1714	0.17293(a)
\$ 155 2-Fluorobiphenyl	172	7.029	7.034	(0.867)	455789	67.3384	0.16835(a)
\$ 156 Terphenyl-d14	244	14.553	14.544	(0.868)	705279	79.2706	0.19818(a)
\$ 157 Phenol-d5	99	4.208	4.206	(0.950)	316005	107.206	0.26802(a)
\$ 158 2-Fluorophenol	112	3.388	3.386	(0.765)	250870	93.7752	0.23444(a)
\$ 159 2,4,6-Tribromophenol	330	9.609	9.607	(0.877)	178511	102.462	0.25616(a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F060000 105

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE7JQ102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

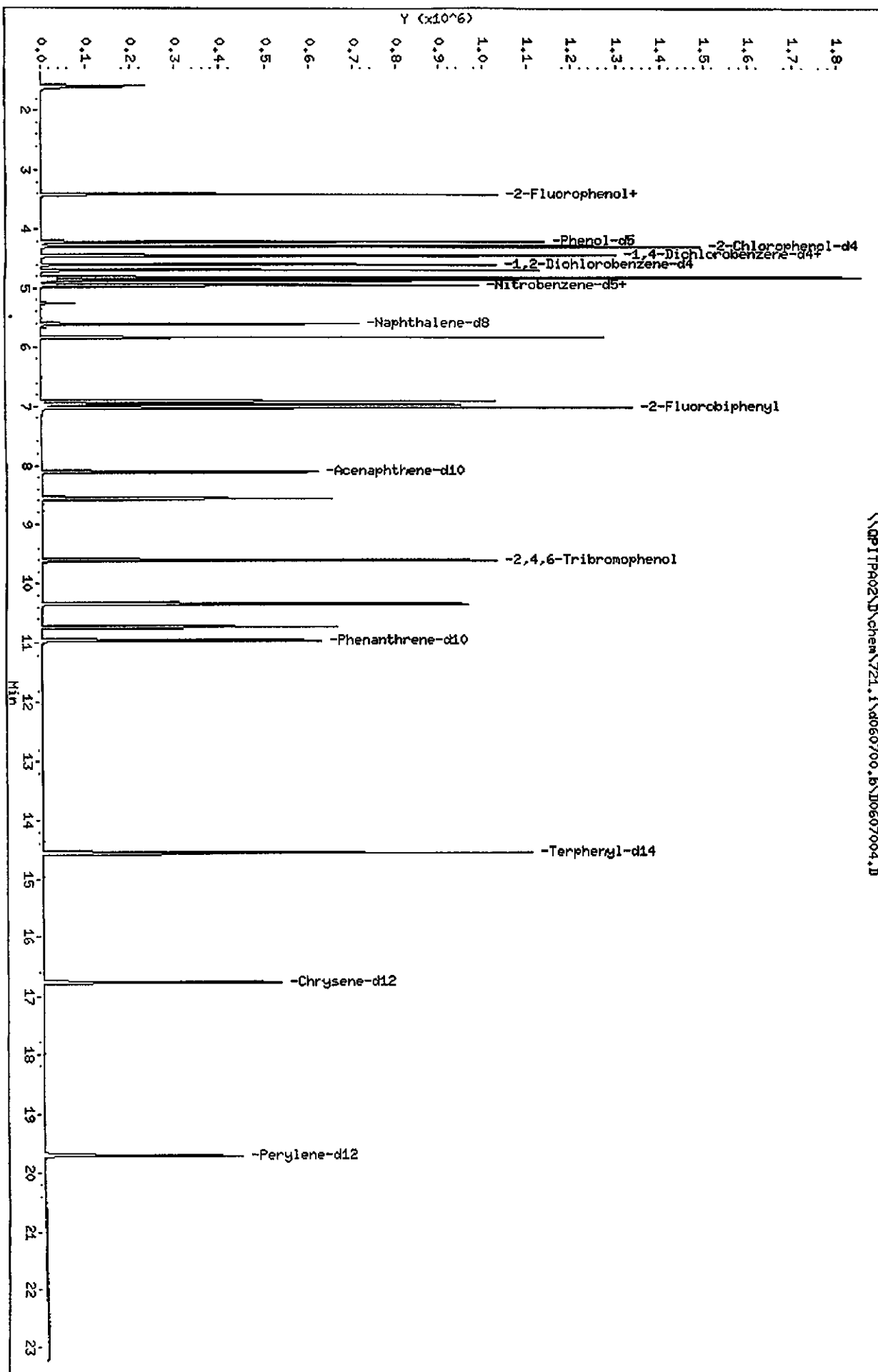
QC Batch: 0158105

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.188	
121-14-2	2,4-Dinitrotoluene	0.197	
118-74-1	Hexachlorobenzene	0.177	
87-68-3	Hexachlorobutadiene	0.189	
67-72-1	Hexachloroethane	0.191	
98-95-3	Nitrobenzene	0.191	
87-86-5	Pentachlorophenol	0.142	
110-86-1	Pyridine	0.127	
95-95-4	2,4,5-Trichlorophenol	0.184	
88-06-2	2,4,6-Trichlorophenol	0.179	
1319-77-3	Cresols (total)	0.621	

Data File: \\QPI1P002\N\chem\721.i\060700.b\0607004.D
Date: 07-JUN-2000 13:18
Client ID: INTR-LAB CHECK
Sample Info: 00020191-1cs tolp 6/E/00 8270c
Volume Injected (uL): 2.0
Column phase: Hp5-HS

Instrument: 721.i
Operator: 001B62, MLF
Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607004.D
 Lab Smp Id: DE7JQ102 Client Smp ID: INTRA-LAB CHECK
 Inj Date : 07-JUN-2000 13:18
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-lcs tclp 6/5/00 8270c
 Misc Info : de7jq102,d060700.b,8270c.m,tclp.sub
 Comment :
 Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 6 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

DLB
6-7-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt / (Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (NG)	FINAL (mg/L)
*****	****	--	*****	*****	*****	*****	*****
* 1 1,4-Dichlorobenzene-d4	152	4.441	4.434	(1.000)	88729	40.0000	(a)
* 2 Naphthalene-d8	136	5.616	5.623	(1.000)	333317	40.0000	(a)
* 3 Acenaphthene-d10	164	8.109	8.116	(1.000)	199421	40.0000	(a)
* 4 Phenanthrene-d10	188	10.957	10.957	(1.000)	399186	40.0000	(a)
* 5 Chrysene-d12	240	16.761	16.775	(1.000)	360377	40.0000	(a)
* 6 Perylene-d12	264	19.717	19.724	(1.000)	302782	40.0000	(a)
9 Pyridine	79	1.579	1.505	(0.356)	126367	50.6487	0.12662 (a)
27 1,4-Dichlorobenzene	146	4.454	4.448	(1.003)	261713	75.3498	0.18837 (a)
M 195 Cresols, total	100				589356	248.438	0.62110 (a)
30 2-Methylphenol	108	4.696	4.696	(1.057)	182148	80.1689	0.20042 (a)
192 4-Methylphenol	108	4.830	4.817	(1.088)	407208	168.269	0.42067 (a)
34 Hexachloroethane	117	4.870	4.864	(1.097)	119599	76.3016	0.19075 (a)
35 Nitrobenzene	77	4.958	4.951	(0.883)	255707	76.5247	0.19131 (a)
56 Hexachlorobutadiene	225	5.845	5.838	(1.041)	152598	75.4042	0.18851 (a)

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607004.D
 Report Date: 07-Jun-2000 15:02

Page 2

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (NG)	FINAL (mg/L)
*****	****	***	*****	*****	*****	*****	*****
66 2,4,6-Trichlorophenol	196	6.913	6.920	(0.853)	161309	71.4670	0.17867 (a)
67 2,4,5-Trichlorophenol	196	6.973	6.980	(0.860)	175056	73.7398	0.18435 (a)
87 2,4-Dinitrotoluene	165	8.565	8.572	(1.056)	179062	78.7898	0.19697 (a)
107 Hexachlorobenzene	284	10.352	10.346	(0.945)	204057	70.8496	0.17712 (a)
111 Pentachlorophenol	266	10.735	10.742	(0.980)	106122	56.8238	0.14206 (aQ)
\$ 154 Nitrobenzene-d5	82	4.944	4.938	(0.880)	241934	73.4663	0.18366 (a)
\$ 155 2-Fluorobiphenyl	172	7.034	7.034	(0.867)	460075	68.6155	0.17154 (a)
\$ 156 Terphenyl-d14	244	14.558	14.544	(0.869)	668243	77.5630	0.19391 (a)
\$ 157 Phenol-d5	99	4.219	4.206	(0.950)	337296	114.025	0.28506 (a)
\$ 158 2-Fluorophenol	112	3.413	3.386	(0.769)	269479	100.376	0.25094 (a)
\$ 159 2,4,6-Tribromophenol	330	9.607	9.607	(0.877)	178832	105.953	0.26488 (a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- A - Target compound detected but, quantitated amount
exceeded maximum amount.
- Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M10W

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.165	
121-14-2	2,4-Dinitrotoluene	0.203	
118-74-1	Hexachlorobenzene	0.194	
87-68-3	Hexachlorobutadiene	0.164	
67-72-1	Hexachloroethane	0.165	
98-95-3	Nitrobenzene	0.170	
87-86-5	Pentachlorophenol	0.168	
110-86-1	Pyridine	0.107	
95-95-4	2,4,5-Trichlorophenol	0.196	
88-06-2	2,4,6-Trichlorophenol	0.178	
1319-77-3	Cresols (total)	0.577	

Data File: \\NPITPA02\Jchem\721.i\0060700.b\00607006.D

Date : 07-JUN-2000 14:16

Client ID: DF/S1/0153/SDC/006

Sample Info: 006020191-001ms tolp 6/5/00 8270c

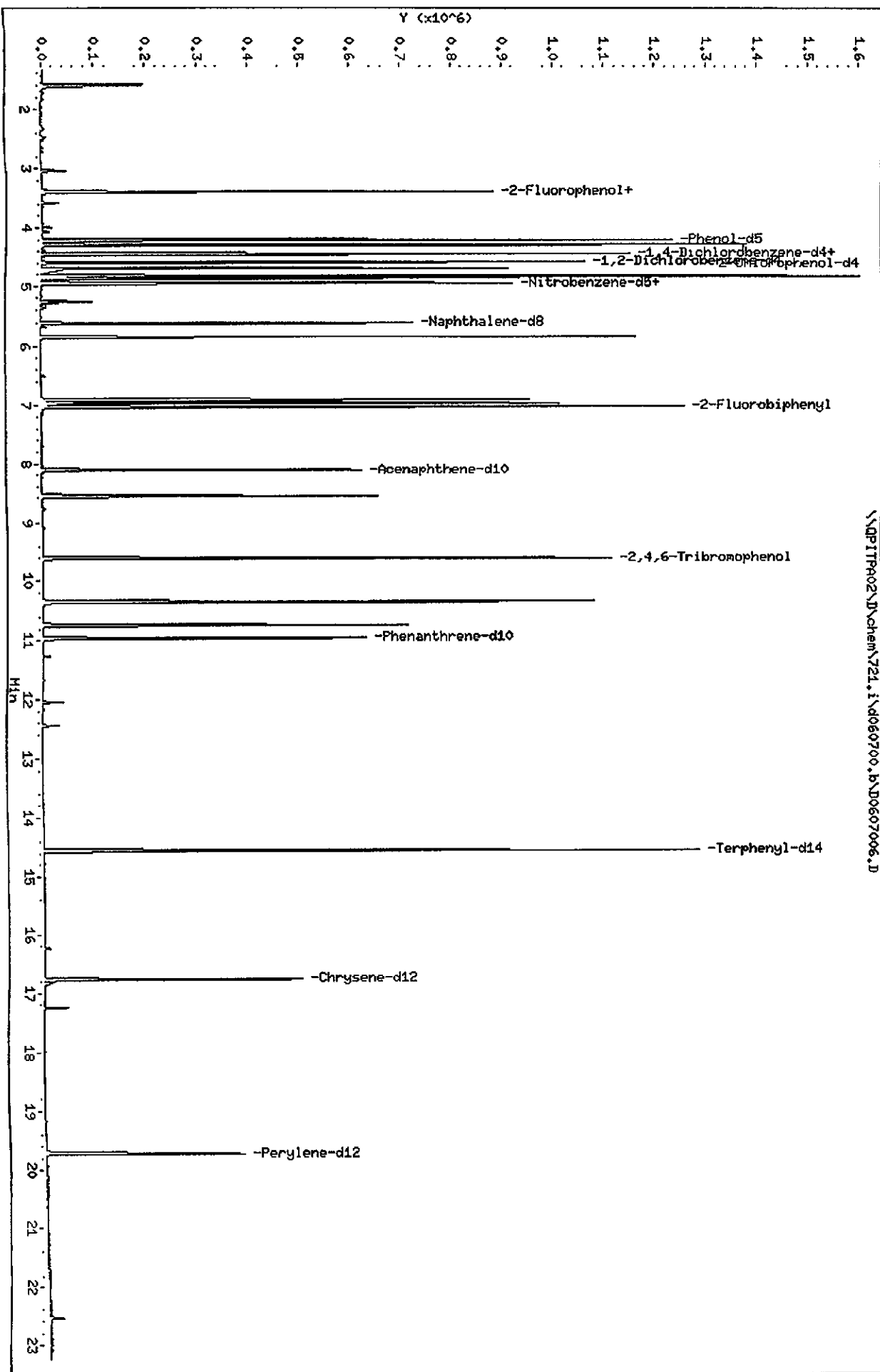
Volume Injected (uL): 2.0

Column phase: Hp5-MS

Instrument: 721.1

Operator: 001562, DLF

Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607006.D
 Lab Smp Id: DE44M10W Client Smp ID: DF/S1/0153/SDC/006M
 Inj Date : 07-JUN-2000 14:16
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-001ms tclp 6/5/00 8270c
 Misc Info : de44m10w,d060700.b,8270c.m,3-root.sub
 Comment :
 Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 8 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

DLJ
6-7-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG	CONCENTRATIONS					
		ON-COLUMN	FINAL				
	MASS	(NG)	(mg/L)	RT	EXP RT	REL RT	RESPONSE
* 1 1,4-Dichlorobenzene-d4	152	40.0000	(a)	4.440	4.434	(1.000)	90549
* 2 Naphthalene-d8	136	40.0000	(a)	5.615	5.623	(1.000)	347336
* 3 Acenaphthene-d10	164	40.0000	(a)	8.114	8.116	(1.000)	196769
* 4 Phenanthrene-d10	188	40.0000	(a)	10.956	10.957	(1.000)	385413
* 5 Chrysene-d12	240	40.0000	(a)	16.760	16.775	(1.000)	329863
* 6 Perylene-d12	264	40.0000	(a)	19.723	19.724	(1.000)	269280
9 Pyridine	79	42.9971	0.10749 (a)	1.584	1.505	(0.357)	109477
27 1,4-Dichlorobenzene	146	66.0221	0.16506 (a)	4.453	4.448	(1.003)	234019
M 195 Cresols, total	100	230.731	0.57683 (a)				558923
30 2-Methylphenol	108	72.1646	0.18041 (a)	4.695	4.696	(1.057)	167325
192 4-Methylphenol	108	158.566	0.39642 (a)	4.829	4.817	(1.088)	391598
34 Hexachloroethane	117	66.1690	0.16542 (a)	4.869	4.864	(1.097)	105844
35 Nitrobenzene	77	68.0053	0.17001 (a)	4.957	4.951	(0.883)	236797
56 Hexachlorobutadiene	225	65.5148	0.16379 (aQ)	5.844	5.838	(1.041)	138161

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607006.D
 Report Date: 07-Jun-2000 15:04

Page 2

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (NG)	FINAL (mg/L)
=====	----	--	-----	-----	-----	-----	-----
66 2,4,6-Trichlorophenol	196	6.912	6.920	(0.852)	158274	71.0675	0.17767 (a)
67 2,4,5-Trichlorophenol	196	6.972	6.980	(0.859)	183464	78.3231	0.19581 (a)
87 2,4-Dinitrotoluene	165	8.571	8.572	(1.056)	181852	81.0959	0.20274 (a)
107 Hexachlorobenzene	284	10.351	10.346	(0.945)	215814	77.6095	0.19402 (a)
111 Pentachlorophenol	266	10.734	10.742	(0.980)	120886	67.0424	0.16760 (aQ)
\$ 154 Nitrobenzene-d5	82	4.937	4.938	(0.879)	232701	67.8106	0.16953 (a)
\$ 155 2-Fluorobiphenyl	172	7.033	7.034	(0.867)	457119	69.0935	0.17273 (a)
\$ 156 Terphenyl-d14	244	14.557	14.544	(0.869)	703796	89.2463	0.22312 (a)
\$ 157 Phenol-d5	99	4.211	4.206	(0.949)	324010	107.332	0.26833 (a)
\$ 158 2-Fluorophenol	112	3.398	3.386	(0.765)	237215	86.5822	0.21646 (a)
\$ 159 2,4,6-Tribromophenol	330	9.606	9.607	(0.877)	193409	118.684	0.29671 (a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 06/02/00

Work Order: DE44M10X

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/07/00

QC Batch: 0158105

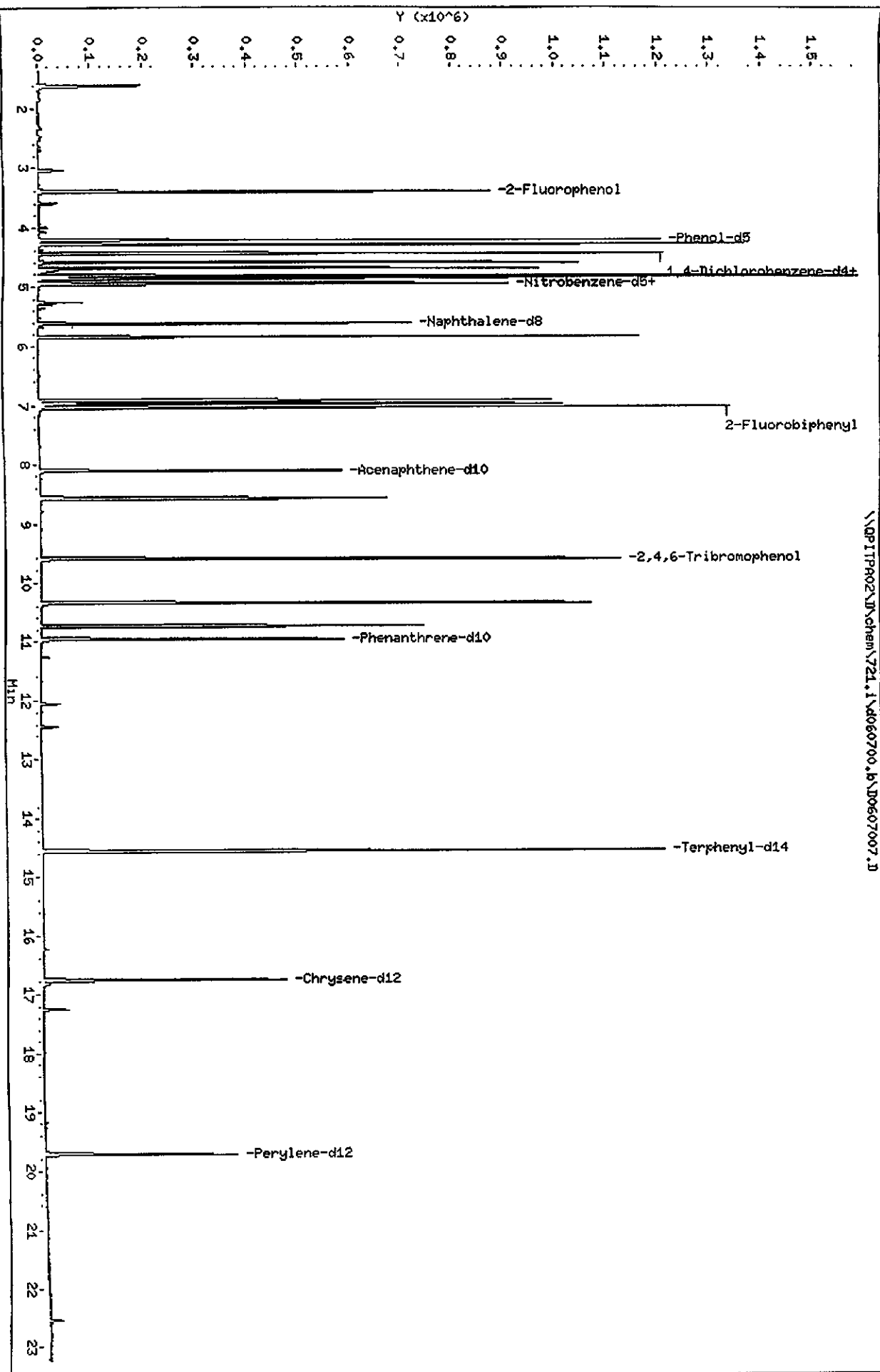
Client Sample Id: DF/S1/0153/SDC/006

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.169	
121-14-2	2,4-Dinitrotoluene	0.207	
118-74-1	Hexachlorobenzene	0.202	
87-68-3	Hexachlorobutadiene	0.171	
67-72-1	Hexachloroethane	0.167	
98-95-3	Nitrobenzene	0.173	
87-86-5	Pentachlorophenol	0.177	
110-86-1	Pyridine	0.107	
95-95-4	2,4,5-Trichlorophenol	0.193	
88-06-2	2,4,6-Trichlorophenol	0.184	
1319-77-3	Cresols (total)	0.577	

Data File: \QPI1P002\chem\721.i\060700.b\0607007.D
Date: 07-JUN-2000 14:45
Client ID: DF/S1/0153/SDC/006
Sample Info: 00F020191-001msd tolp 6/5/00 82700
Volume injected (uL): 2.0
Column phase: Hp5-HS

Instrument: 721.i
Operator: 001562, DLF
Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\721.i\d060700.b\D0607007.D
 Lab Smp Id: DE44M10X Client Smp ID: DF/S1/0153/SDC/006M
 Inj Date : 07-JUN-2000 14:45
 Operator : 001562, DLF Inst ID: 721.i
 Smp Info : c0f020191-001msd tclp 6/5/00 8270c
 Misc Info : de44m10x,d060700.b,8270c.m,tclp.sub
 Comment :
 Method : \\Qpitpa02\D\chem\721.i\d060700.b\8270c.m
 Meth Date : 07-Jun-2000 11:49 ferguson Quant Type: ISTD
 Cal Date : 25-MAY-2000 21:15 Cal File: D0525CC5.D
 Als bottle: 9 QC Sample: MSD
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.04
 Processing Host: PITPC013

PKZ
6-7-00

Compound Sublist: tclp.sub

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi)

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.001	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	200.000	Volume of sample extracted (mL)
Vi	2.000	Volume injected (uL)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (NG)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.433	4.434	(1.000)	91464	40.0000	(a)	
* 2 Naphthalene-d8	136	5.615	5.623	(1.000)	342886	40.0000	(a)	
* 3 Acenaphthene-d10	164	8.114	8.116	(1.000)	197007	40.0000	(a)	
* 4 Phenanthrene-d10	188	10.956	10.957	(1.000)	373714	40.0000	(a)	
* 5 Chrysene-d12	240	16.760	16.775	(1.000)	313364	40.0000	(a)	
* 6 Perylene-d12	264	19.716	19.724	(1.000)	255283	40.0000	(a)	
9 Pyridine	79	1.585	1.505	(0.358)	110273	42.8764	0.10719 (a)	
27 1,4-Dichlorobenzene	146	4.446	4.448	(1.003)	241445	67.4357	0.16859 (a)	
M 195 Cresols, total	100				564837	230.982	0.57746 (a)	
30 2-Methylphenol	108	4.688	4.696	(1.058)	174556	74.5301	0.18632 (a)	
192 4-Methylphenol	108	4.829	4.817	(1.089)	390281	156.452	0.39113 (a)	
34 Hexachloroethane	117	4.870	4.864	(1.098)	107704	66.6582	0.16664 (a)	
35 Nitrobenzene	77	4.957	4.951	(0.883)	238107	69.2690	0.17317 (a)	
56 Hexachlorobutadiene	225	5.844	5.838	(1.041)	142754	68.5713	0.17143 (aQ)	

Data File: \\Qpitpa02\D\chem\721.i\d060700.b\D0607007.D
 Report Date: 07-Jun-2000 15:14

Page 2

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (NG)	FINAL (mg/L)
=====	=====	==	=====	=====	=====	=====	=====
66 2,4,6-Trichlorophenol	196	6.912	6.920	(0.852)	164483	73.7662	0.18442 (a)
67 2,4,5-Trichlorophenol	196	6.972	6.980	(0.859)	181400	77.3484	0.19337 (a)
87 2,4-Dinitrotoluene	165	8.571	8.572	(1.056)	185725	82.7230	0.20681 (a)
107 Hexachlorobenzene	284	10.351	10.346	(0.945)	217558	80.6858	0.20171 (a)
111 Pentachlorophenol	266	10.741	10.742	(0.980)	123553	70.6665	0.17667 (aQ)
\$ 154 Nitrobenzene-d5	82	4.937	4.938	(0.879)	235646	69.5599	0.17390 (a)
\$ 155 2-Fluorobiphenyl	172	7.033	7.034	(0.867)	470635	71.0505	0.17763 (a)
\$ 156 Terphenyl-d14	244	14.557	14.544	(0.869)	703328	93.8828	0.23471 (a)
\$ 157 Phenol-d5	99	4.211	4.206	(0.950)	335398	109.993	0.27498 (a)
\$ 158 2-Fluorophenol	112	3.398	3.386	(0.767)	242975	87.7974	0.21949 (a)
\$ 159 2,4,6-Tribromophenol	330	9.606	9.607	(0.877)	193132	122.224	0.30556 (a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Q - Qualifier signal failed the ratio test.

660 274

**GC/MS SEMIVOLATILE
MISCELLANEOUS**

Submitted To Your Success

Unlimited To Your Success

Quanterra N:\QALOGBOOKS_PDFC\LL_EXT.DOC May-00

Log Book Number OP-00-0037

TCLP (Method 1311)

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238
412/826-5477 FAX: 412/826-5571



QUA-4181

By

Jeffrey D. Swartz

Date
6-4-00

Checked by

C. J. Mellick

Date

6-4-00

pH Instrument

Accumet AP7

Probe

SN902050

Balance

994817

Serial Number

049

Log Book Number

96-MT-526

Solution Number 1 - Log Book Number

004497-12

Solution Number 2 - Log Book Number

95-0P-220-35-1

Fluid Determination

Sample ID	Wgt/Vol	Init. pH	Final pH	Extract Fluid #1, or #2	Conc. HNO ₃ to Acidity (for Metals)	Sample ID	Wgt (g) Wet/Dry	Fluid Vol.	Final pH After Tumbling
DE44M	5.0g / 6.51	8.24	1.65	801#1	5mL	18-TC1P 6-4-00	100.00g	2000mL Glass	4.93
DE44Q	/	8.73	1.62	↓	5mL	2-DE44M	/	/	5.11
DE3F0	/	9.86	6.93	801#2	5mL	3-DE44M	/	/	5.06
DE3F2	/	11.22	6.77	↓	/	4-DE44Q	/	/	4.98
DE3F4	/	6.96	2.43	801#1	/	5-DE3F0	/	/	5.55
DE3F6	/	10.30	2.52	/	/	6-DE3F2	/	/	6.00
DE3F7	/	7.25	3.47	/	/	7-DE3F4	/	/	5.89
DE3F9	/	7.44	1.59	/	/	8-DE3F6	/	/	6.44
DE3FC	/	9.66	2.21	/	/	9-DE3F7	/	/	5.59
DE3FD	/	11.19	1.76	/	/	10-DE3F9	/	/	5.15
G/F		G/F		G/F		11-DE3FC	/	/	6.28
6-4-00		6-4-00		6-4-00		12-DE3FD	/	/	5.40
6-4-00		6-4-00		6-4-00		13-TC1P 6-4-00	/	/	2.82

Extract(s)

(Record line number from above)

Extract(s) Received

Extract(s) Relinquished

Extract(s)	Time	Analyst	Location	Date	Time	Analyst	% Solids
All Above	6:30	Jeffrey D. Swartz	Metals Recy	6-5-00	10:25	Jeffrey D. Swartz	30.4

* = Sample determined to have free liquid, % solid determination was performed.

<5 = Extraction Fluid No. 1 5.7 mL Glacial Acetic Acid dil 500 mL + 64.3 mL of 1N Na OH dil to 1L (pH 4.93 ± 0.05)

>5 = Extraction Fluid No. 2 5.7 mL Glacial Acetic Acid dil to 1L (pH 2.88 ± 0.05)

660

Room Temp 23°

Date/Time On	Date/Time Off	Agitation Apparatus RPMs
6-4-00 1330	6-5-00 0600	30 ± 2
6-4-00	pH Calibration	(4.0) (7.0) (10.0)
6-5-00		4.06 7.01 10.44
Comments		

660 277

Operator: 001562, DLF

Data Path: D:\HPCHEM\1\DATA\d052500.b\

Pre-Seq Cmd:

Post-Seq Cmd:

DL 7 5-25-00

On A Barcode Mismatch

(X) Full Method

(X) Inject Anyway

() Reprocessing Only

() Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	D0525WUP	70EARLY	25 warm up
2	Sample	100	D0525WU2	70EARLY	25 warm up
3	Sample	1	D0525DFT	DFTHP90	dftpp (25ug/ml) 194-175-8
4	Sample	1	D0525DF3	DFTHP90	dftpp (25ug/ml) 194-175-8
5	Sample	2	D0525CC1	70EARLY	sstd020 (10UG/ML) 194-175-10
6	Sample	3	D0525CC2	70EARLY	sstd050 (25UG/ML) 194-176-9 8
7	Sample	4	D0525CC3	70EARLY	sstd080 (40UG/ML) 194-175-12
8	Sample	5	D0525CC4	70EARLY	sstd120 (60UG/ML) 194-175-13
9	Sample	6	D0525CC5	70EARLY	sstd160 (80UG/ML) 194-175-14
10	Sample	7	D0525SV	70EARLY	std ver 194-174-9
11	Sample	8	D0525001	70EARLY	c0e170151-sblk tclp 5/22/00 8
12	Sample	9	D0525002	70EARLY	c0e170151-lcs tclp 5/22/00 82
13	Sample	10	D0525003	70EARLY	c0e130142-001 5x tclp 5/22/00
14	Sample	11	D0525004	70EARLY	c0e170155-001 20x tclp 5/22/00
15	Sample	12	D0525005	70EARLY	c0e120206-008 250x h2o 5/17/0
16	Sample	13	D0525006	70EARLY	blank

660 278

Sequence Name: D:\HPCHEM\1\SEQUENCE\060700.S

Comment: STL PITT HP5972-1 Log 2ul inj 100ul + 1ul IS

Operator: 001562, DLF

Data Path: D:\HPCHEM\1\DATA\d060700.b\

Pre-Seq Cmd:

Post-Seq Cmd:

AZ
6-7-00CLP
+
8270

Method Sections To Run

On A Barcode Mismatch

(X) Full Method

(X) Inject Anyway

() Reprocessing Only

() Don't Inject

I.S. = 194-174-1

Line Type	Vial	DataFile	Method	Sample Name

1 Sample	100	D0607WUP	70EARLY	25 warm up
2 Sample✓1057	1	D0607DFT	DFTHP90	dftpp (25ug/ml) 194-175-8
3 Sample✓CLP/82702	2	D0607CCC	70EARLY	sstd050 (25UG/ML) 194-177-7 8
4 Sample✓QT	3	D0607001	CLP	c0f060158-sblk h2o 6/6/00 DA0
5 Sample✓QT	4	D0607002	CLP	c0f060158-005 h2o 6/6/00 DA00
6 Sample✓PQ	5	D0607003	70EARLY✓	c0f020191-sblk tclp 6/5/00 82
7 Sample✓PQ	6	D0607004	70EARLY✓	c0f020191-lcs tclp 6/5/00 827
8 Sample✓PQ	7	D0607005	70EARLY✓	c0f020191-001 tclp 6/5/00 827
9 Sample✓PQ	8	D0607006	70EARLY✓	c0f020191-001ms tclp 6/5/00 8
10 Sample✓PQ	9	D0607007	70EARLY✓	c0f020191-001msd tclp 6/5/00
11 Sample✓PQ	10	D0607008	70EARLY✓	c0f020191-002 tclp 6/5/00 827
12 Sample✓PQ	11	D0607009	70EARLY	c0f020113-SBLK TCLP 6/5/00 82
13 Sample✓PQ	12	D0607010	70EARLY	c0f020113-LCS TCLP 6/5/00 827
14 Sample✓PQ	13	D0607011	70EARLY	c0f020113-019 TCLP 6/5/00 827
15 Sample✓PQ	14	D0607012	70EARLY	c0f020113-020 TCLP 6/5/00 827
16 Sample✓PQ	15	D0607013	70EARLY	c0f020113-020ms TCLP 6/5/00 8
17 Sample✓PQ	16	D0607014	70EARLY	c0f020113-020msd TCLP 6/5/00
18 Sample✓	17	D0607015	70EARLY	blank

PSR024 6/05/00 12:29:47 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: TROUTB

METHOD: QL Base/Neutrals and Acids (8270C)

STORAGE LOCATION	WORK ORDER #	PICKED	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	QTY
		CNTR#								RCVD	REQD
8C,D CLP	DE44M-1-03	___	238305	399411	A-59-QL	COF020191	001		SOLID	0	3 1
8C,D CLP	DE44Q-1-03	___	238306	399411	A-59-QL	COF020191	002		SOLID	0	3 1

RELINQUISHED BY

Eric L. Mahabadi
B Trout

RECEIVED BY

B Trout
E. L. Mahabadi

DATE/TIME

6/5/2000 10:15
6/5/2000 14:10

***** END OF REPORT *****

660 280

PESTICIDE DATA

**PESTICIDE
QC SUMMARY**

660 282

SW846 8081A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	88	69	00
02	DF/S1/0153/SDC/007	92	78	00
03	METHOD BLK. DE79F101	87	78	00
04	LCS DE79F102	94	86	00
05	DF/S1/0153/SDC/006 D	89	77	00
06	DF/S1/0153/SDC/006 S	89	77	00

SURROGATES

SRG01 = Decachlorobiphenyl
SRG02 = Tetrachloro-m-xylene

QC LIMITS

(10-147)
(39-130)

Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8081A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F050000

WO #: DE79F102

BATCH: 0157465

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00176	71	49 - 137	
Heptachlor	0.00250	0.00208	83	57 - 124	
Heptachlor epoxide	0.00250	0.00210	84	53 - 135	
Endrin	0.00250	0.00236	94	46 - 137	
Methoxychlor	0.00250	0.00226	90	12 - 154	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

660 284

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10P

BATCH: 0157465

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
Lindane	0.00250	ND	0.00157	63	30 - 148	
Heptachlor	0.00250	ND	0.00183	73	25 - 135	
Heptachlor epoxide	0.00250	ND	0.00190	76	38 - 138	
Endrin	0.00250	ND	0.00208	83	28 - 148	
Methoxychlor	0.00250	ND	0.00212	85	13 - 154	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: ____0 out of ____0 outside limits
Spike Recovery: ____0 out of ____5 outside limits

COMMENTS:

FORM III

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Level: (low/med) LOW

Lot #: C0F020191

WO #: DE44M10Q

BATCH: 0157465

COMPOUND	SPIKE	MSD	MSD		QC LIMITS		QUAL
	ADDED (mg/L)	CONCENT. (mg/L)	% REC	% RPD	RPD	REC	
=====	=====	=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00158	63	0.69	22	30 - 148	
Heptachlor	0.00250	0.00185	74	1.0	32	25 - 135	
Heptachlor epoxide	0.00250	0.00192	77	0.89	31	38 - 138	
Endrin	0.00250	0.00207	83	0.62	40	28 - 148	
Methoxychlor	0.00250	0.00216	86	2.0	29	13 - 154	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 5 outside limits

COMMENTS:

660 286

SW846 8081A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE79F101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: d-a3161.d

Lot Number: C0F020191

Matrix: SOLID

Extraction Method: 1311/3510

Date Extracted: 06/05/00

Date Analyzed(1): 06/06/00

Date Analyzed(2): N/A

Time Analyzed(1): 20:03

Time Analyzed(2): N/A

Instrument ID(1): G/H

Instrument ID(2): N/A

GC Column(1): DB608/1701 ID: 053 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
	=====	=====	=====	=====
01	DF/S1/0153/SDC/006	DE44M10P S	06/06/00	N/A
02	DF/S1/0153/SDC/006	DE44M10Q D	06/06/00	N/A
03	DF/S1/0153/SDC/006	DE44M104	06/06/00	N/A
04	DF/S1/0153/SDC/007	DE44Q104	06/06/00	N/A
05	CHECK SAMPLE	DE79F102 C	06/06/00	N/A
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

**PESTICIDE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M104

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

Data File: /var/chem/gc4.i/3060-G.b/d-a3157.d
 Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3157.d
 Lab Smp Id: DE44M104 Client Smp ID: DF/S1/0153/SDC/006
 Inj Date : 06-JUN-2000 18:11
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DE44M104,3060-G.b,, PEST.sub,,,
 Misc Info : F020191001
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

Concentration Formula: $\text{Amt} * \text{DF} * (\text{Vt}/\text{Vo})/\text{Vi}$

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC				Compound Not Detected		
4 HEXACHLORO BENZENE				Compound Not Detected		
6 gamma-BHC (Lindane)				Compound Not Detected.		
7 beta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor				Compound Not Detected.		
8 delta-BHC				Compound Not Detected.		
11 Aldrin				Compound Not Detected.		
12 Heptachlor epoxide				Compound Not Detected.		
13 gamma-Chlordane				Compound Not Detected.		
14 alpha-Chlordane				Compound Not Detected.		
15 Endosulfan I				Compound Not Detected		
16 4,4'-DDE				Compound Not Detected.		
17 Dieldrin	15.147	15.147	0.000	1829	0.000621	0.00006215(a)
20 Endrin				Compound Not Detected		
18 Toxaphene				Compound Not Detected.		

660 290

Data File: /var/chem/gc4.i/3060-G.b/d-a3157.d

Report Date: 07-Jun-2000 07:52

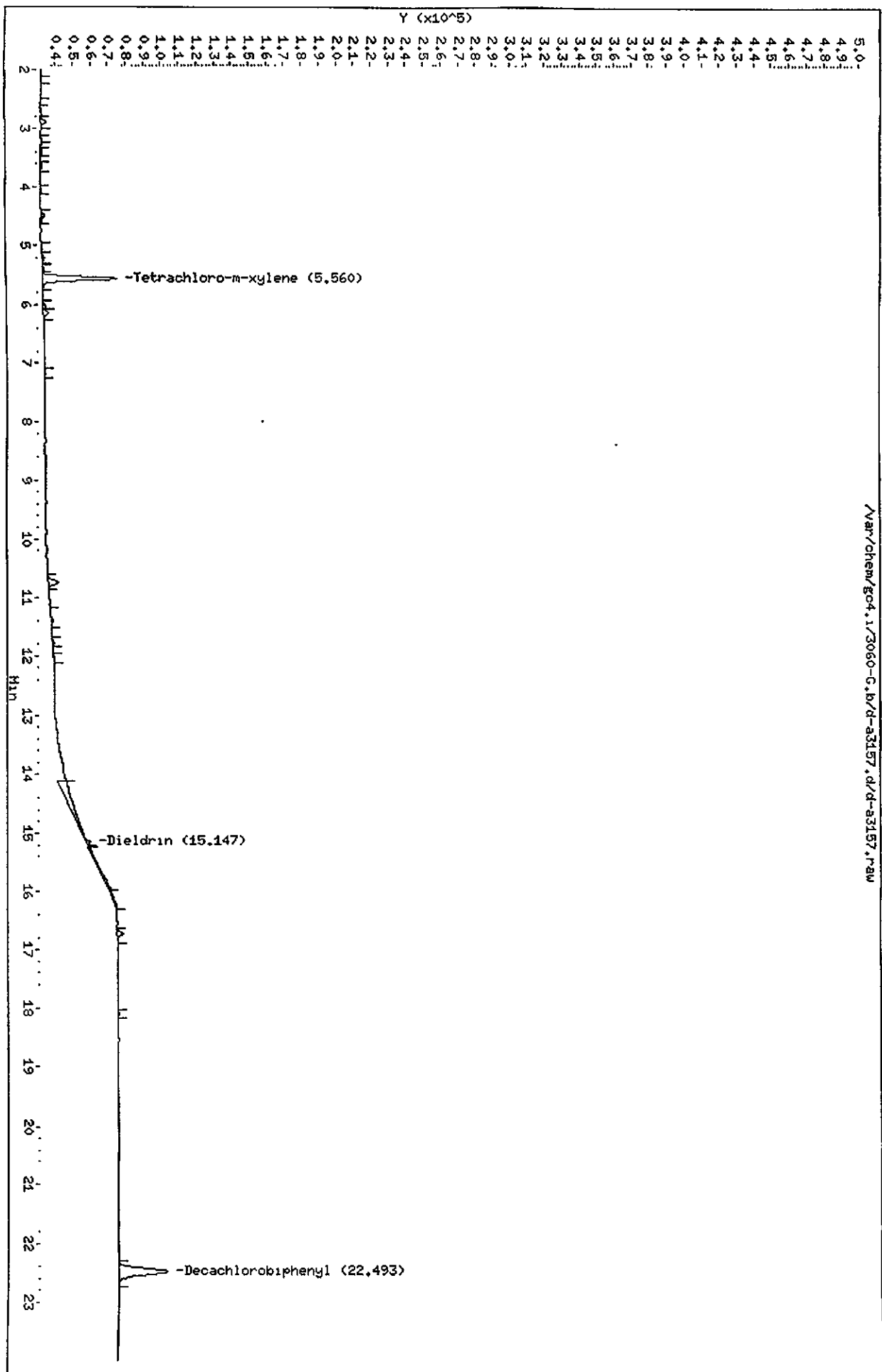
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD				Compound Not Detected.		
22 Endosulfan II				Compound Not Detected.		
23 4,4'-DDT				Compound Not Detected.		
24 Endrin aldehyde				Compound Not Detected.		
26 Endosulfan sulfate				Compound Not Detected.		
25 Methoxychlor				Compound Not Detected.		
27 Endrin ketone				Compound Not Detected		
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	42511	0.01383	0.001383(aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	27638	0.01766	0.001766(aR)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc04.1/3060-G.b/d-a3157.d
Date : 06-JUN-2000 18:11
Client ID: DF/S1/0153/SDC/006
Sample Info: DE44H104, 3060-G.b, PEST, sub.,,
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc04.i
Operator: 1891
Column diameter: 0.53



UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44Q104

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

Data File: /var/chem/gc4.i/3060-G.b/d-a3160.d
 Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3160.d
 Lab Smp Id: DE44Q104 Client Smp ID: DF/S1/0153/SDC/007
 Inj Date : 06-JUN-2000 19:35
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DE44Q104,3060-G.b,, PEST.sub,,,
 Misc Info : F020191002
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * (Vt/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
5 alpha-BHC				Compound Not Detected.		
4 HEXACHLORO BENZENE				Compound Not Detected.		
6 gamma-BHC (Lindane)				Compound Not Detected.		
7 beta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor				Compound Not Detected.		
8 delta-BHC				Compound Not Detected.		
11 Aldrin				Compound Not Detected.		
12 Heptachlor epoxide				Compound Not Detected.		
13 gamma-Chlordane				Compound Not Detected.		
14 alpha-Chlordane				Compound Not Detected.		
15 Endosulfan I				Compound Not Detected.		
16 4,4'-DDE				Compound Not Detected.		
17 Dieldrin	15 147	15 147	0.000	1968	0.000669	0 00006687(a)
20 Endrin				Compound Not Detected.		
18 Toxaphene				Compound Not Detected.		

Data File: /var/chem/gc4.i/3060-G.b/d-a3160.d

Report Date: 07-Jun-2000 07:52

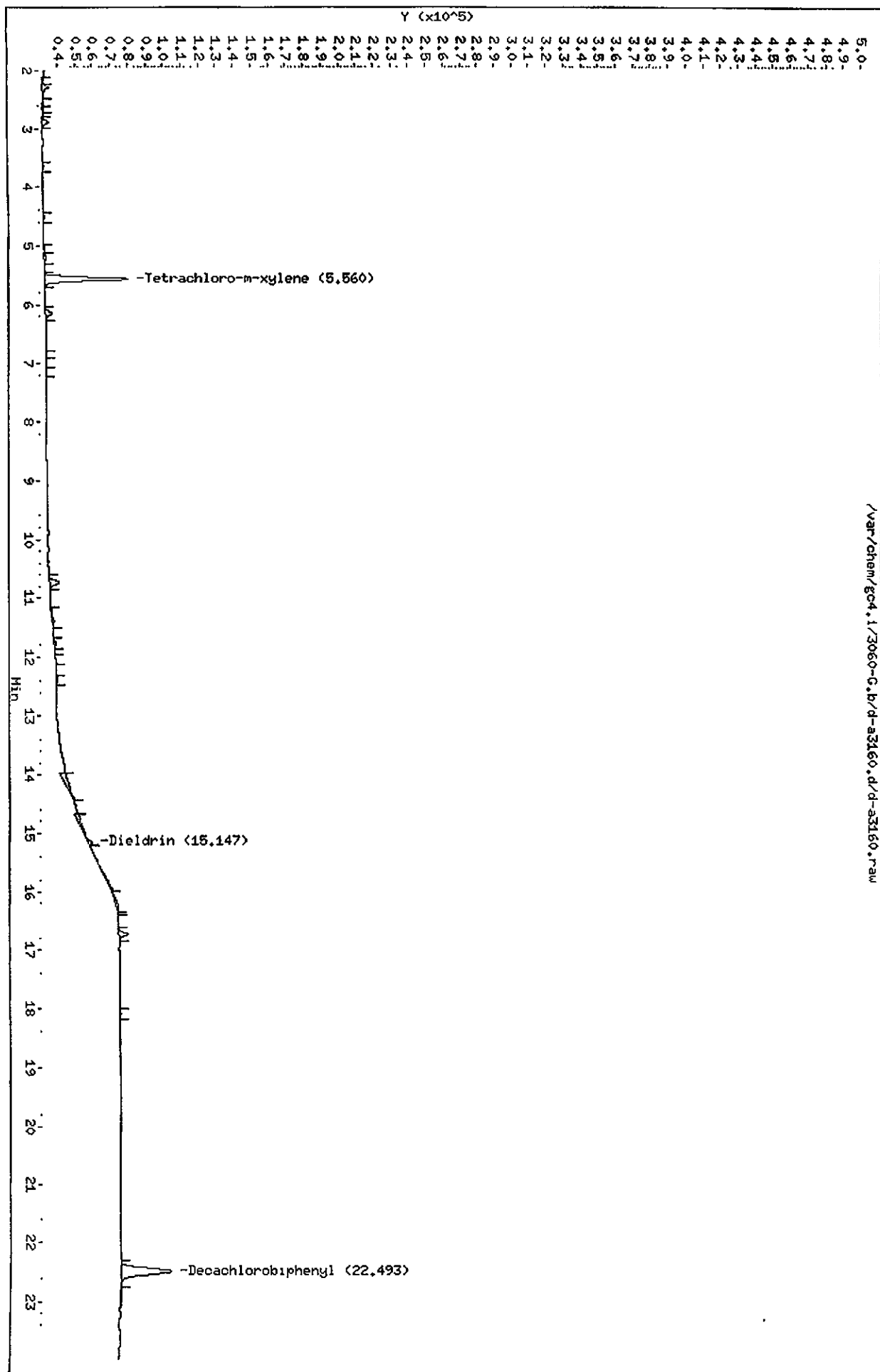
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD				Compound Not Detected.		
22 Endosulfan II				Compound Not Detected.		
23 4,4'-DDT				Compound Not Detected.		
24 Endrin aldehyde				Compound Not Detected.		
26 Endosulfan sulfate				Compound Not Detected		
25 Methoxychlor				Compound Not Detected.		
27 Endrin ketone				Compound Not Detected		
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	48004	0.01562	0.001562 (aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	28658	0.01831	0.001831 (aR)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc4.1/3060-G.b/d-a3160.d
Date : 06-JUN-2000 19:35
Client ID: DF/S1/0153/SDC/007
Sample Info: DE40104,3060-G.b,PEST,sub,,
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc4.i
Operator: 1891
Column diameter: 0.53



**PESTICIDE
CALIBRATION DATA**

Report Date : 06-Jun-2000 09:48

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc4.i/3060-G.b/PESTA.m
 Quant Method : ESTD Target Version : 3.40
 Last Update : 06-Jun-2000 09:48 Number of Cpnds : 30
 Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events Values

 Initial:Start Threshold 40.000000
 Initial:End Threshold 20.000000
 Initial:Area Threshold 1000.000000
 Initial:P-P Resolution 1.000000
 Initial:Bunch Factor 1.000000
 Initial:Negative Peaks ON
 Initial:Tension 0.000000

Compound	RT	RT Window	RF
\$ 1 Tetrachloro-m-xylene	5.567	5.517-5.617	3.073e+06
2 Diallate A	6.340	6.290-6.390	
3 Diallate B	6.620	6.570-6.670	
4 HEXACHLORO BENZENE	6.650	6.600-6.700	
5 alpha-BHC	7.873	7.823-7.923	3.511e+06
6 gamma-BHC (Lindane)	9.280	9.230-9.330	3.090e+06
7 beta-BHC	9.547	9.497-9.597	1.691e+06
8 delta-BHC	10.993	10.943-11.043	3.085e+06
9 Chlordane	9.927	9.877-9.977	7.634e+04
	10.553	10.503-10.603	1.335e+05
	14.067	14.017-14.117	2.420e+05
	14.460	14.410-14.510	2.019e+05
10 Heptachlor	10.553	10.503-10.603	2.514e+06
11 Aldrin	11.713	11.663-11.763	2.368e+06
12 Heptachlor epoxide	13.620	13.570-13.670	2.409e+06
13 gamma-Chlordane	14.060	14.010-14.110	2.712e+06
14 alpha-Chlordane	14.453	14.403-14.503	2.869e+06
15 Endosulfan I	14.513	14.463-14.563	2.618e+06
16 4,4'-DDE	15.000	14.950-15.050	3.059e+06
17 Dieldrin	15.147	15.097-15.197	2.943e+06
18 Toxaphene	15.840	15.790-15.890	6.259e+04
	15.973	15.923-16.023	6.713e+04
	16.507	16.457-16.557	6.410e+04
	17.720	17.670-17.770	5.264e+04

660 298

Report Date : 06-Jun-2000 09:48

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc4.i/3060-G.b/PESTA.m

Compound	RT	RT Window	RF
19 Isodrin	12.613	12.563-12.663	
20 Endrin	15.793	15.743-15.843	2.680e+06
21 4,4'-DDD	15.953	15.903-16.003	2.645e+06
22 Endosulfan II	16.087	16.037-16.137	2.880e+06
23 4,4'-DDT	16.460	16.410-16.510	2.580e+06
24 Endrin aldehyde	16.673	16.623-16.723	2.221e+06
25 Methoxychlor	18.267	18.217-18.317	1.106e+06
26 Endosulfan sulfate	16.900	16.850-16.950	2.306e+06
27 Endrin ketone	18.693	18.643-18.743	2.265e+06
28 Chlorobenzilate	15.313	15.263-15.363	
29 Kepone	15.533	15.483-15.583	
\$ 30 Decachlorobiphenyl	22.513	22.463-22.563	1.565e+06

Report Date : 06-Jun-2000 09:48

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUN-2000 02:55
 End Cal Date : 06-JUN-2000 08:00
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc4.i/3060-G.b/PESTA.m
 Cal Date : 06-Jun-2000 09:48 g
 Curve Type : Average

Calibration File Names:

Level 1: /var/chem/gc4.i/3060-G.b/d-a3131.d
 Level 2: /var/chem/gc4.i/3060-G.b/d-a3132.d
 Level 3: /var/chem/gc4.i/3060-G.b/d-a3133.d
 Level 4: /var/chem/gc4.i/3060-G.b/d-a3134.d
 Level 5: /var/chem/gc4.i/3060-G.b/d-a3135.d

Compound	0.00500 Level 1	0.01000 Level 2	0.02500 Level 3	0.05000 Level 4	0.10000 Level 5	RRF	% RSD
2 Diallylate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Diallylate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 HEXACHLOROBENZENE	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 alpha-BHC	3184600	3330500	3512160	3758340	3768860	3510892	7.356
6 gamma-BHC (Lindane)	2904800	2964300	3090520	3258380	3229980	3089596	5.067
7 beta-BHC	1743000	1811400	1682360	1637180	1579190	1690626	5.346
8 delta-BHC	2646800	2949000	3084880	3352420	3390310	3084682	9.929
9 Chlordane(1)	+++++	+++++	76344	+++++	+++++	76344	0.000
(2)	+++++	+++++	133516	+++++	+++++	133516	0.000
(3)	+++++	+++++	242040	+++++	+++++	242040	0.000
(4)	+++++	+++++	201856	+++++	+++++	201856	0.000
10 Heptachlor	2503800	2481500	2445600	2532900	2606520	2514064	2.416
11 Aldrin	2117200	2303700	2323160	2502360	2595870	2368458	7.871
12 Heptachlor epoxide	2197600	2362300	2377360	2511980	2595100	2408868	6.334
13 gamma-Chlordane	2513400	2717500	2685280	2790680	2852860	2711944	4.744
14 alpha-Chlordane	2698400	2905100	2849800	2932880	2957540	2868744	3.601
15 Endosulfan I	2528400	2553400	2586560	2697780	2722160	2617660	3.331
16 4,4'-DDE	2702800	2949300	3047000	3254780	3339550	3058686	8.272
17 Dieldrin	2703200	2779900	2895520	3092880	3242970	2942894	7.575
18 Toxaphene(1)	+++++	+++++	62594	+++++	+++++	62594	0.000
(2)	+++++	+++++	67128	+++++	+++++	67128	0.000
(3)	+++++	+++++	64100	+++++	+++++	64100	0.000
(4)	+++++	+++++	52639	+++++	+++++	52639	0.000
19 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Endrin	2466800	2777000	2595760	2721960	2840450	2680394	5.579
21 4,4'-DDD	2437800	2783500	2578320	2701120	2723580	2644864	5.208

660 300

LOE

Report Date : 06-Jun-2000 09:48

HPSC 048
DBAC

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUN-2000 02:55
 End Cal Date : 06-JUN-2000 08:00
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc4.i/3060-G.b/PESTA.m
 Cal Date : 06-Jun-2000 09:48 g
 Curve Type : Average

	0.00500	0.01000	0.02500	0.05000	0.10000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
22 Endosulfan II	2763800	2871600	2767480	2976380	3019240	2879700	4.069
23 4,4'-DDT	2384800	2684400	2506880	2631520	2694840	2580488	5.133
24 Endrin aldehyde	2132200	2275000	2176720	2252120	2267150	2220638	2.836
25 Methoxychlor	1110300	1101450	1092860	1110310	1113755	1105735	0.770
26 Endosulfan sulfate	2108200	2280700	2288080	2401700	2452150	2306166	5.761
27 Endrin ketone	2083000	2234800	2254760	2358540	2392050	2264630	5.364
28 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 1 Tetrachloro-m-xylene	3348200	3250100	3032480	2954680	2779380	3072968	7.438
\$ 30 Decachlorobiphenyl	1670600	1646800	1560600	1501840	1445430	1565054	6.074

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

660 301

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: T

GC Column: DB608 ID: 0.53 (mm) Init. Calib. Date(s): 06/06/00 06/06/00

EPA Sample No. (PIBLK): _____

Date Analyzed : _____

Lab Sample ID (PIBLK): _____

Time Analyzed : _____

EPA Sample No. (PEM): EVALB

Date Analyzed : 06/06/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 0227

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	15.79	15.74	15.84	0.02350	0.02500	-6.0
4,4'-DDT	16.47	16.41	16.51	0.02441	0.02500	-2.4

4,4'-DDT % breakdown (1):

0.3
~~0.23~~

Endrin % breakdown (1):

7.7
~~9.32~~

Combined % breakdown (1):

~~9.55~~ 9.0

8/6/00

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: B

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 06/06/00 06/06/00

EPA Sample No. (PIBLK): _____

Date Analyzed : _____

Lab Sample ID (PIBLK): _____

Time Analyzed : _____

EPA Sample No. (PEM): EVALB

Date Analyzed : 06/06/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 0923

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	15.79	15.74	15.84	0.02296	0.02500	-8.2
4,4'-DDT	16.46	16.41	16.51	0.02427	0.02500	-2.9

4,4'-DDT % breakdown (1):

0.4
~~0.33~~

Endrin % breakdown (1):

10.2
~~12.47~~

Combined % breakdown (1):

~~12.80~~ 10.6

Jel/6/cw

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

660 303

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: SDGA18738

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 06/06/00 06/06/00

EPA Sample No. (PIBLK): _____

Date Analyzed : _____

Lab Sample ID (PIBLK): _____

Time Analyzed : _____

EPA Sample No. (PEM):

Date Analyzed : 06/06/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 1744

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	15.79	15.74	15.84	0.02349	0.02500	-6.0
4,4'-DDT	16.45	16.41	16.51	0.02356	0.02500	-5.8

4,4'-DDT % breakdown (1):

0.5
0.42

Endrin % breakdown (1):

5.8
6.86

Combined % breakdown (1):

7.28
6.3

DE
67.00

FORM VII PEST-1

OLM03.0

660 304

7-

Data File: /var/chem/gc4.i/3060-G.b/d-a3148.d

Report Date: 06-Jun-2000 14:59 *HPC RUG*

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
 Lab File ID: d-a3148.d
 Analysis Type:
 Lab Sample ID: MEDA
 Quant Type: ESTD

Injection Date: 06-JUN-2000 14:01
 Init. Calibration Date(s): 06/06/0 06/06/0
 Init. Calibration Times: 02:55 08:00
 Method File: /var/chem/gc4.i/3060-G.b/PESTA.m

COMPOUND	RRF	RFO	MIN	MAX
1 Tetrachloro-m-xylene	3072968.000	2973160.000	0.000	3.2
5 alpha-BHC	3510892.000	3417960.000	0.010	2.6
6 gamma-BHC (Lindane)	3089596.000	2991000.000	0.010	3.2
10 Heptachlor	2514064.000	2388040.000	0.010	5.0
15 Endosulfan I	2617660.000	2477280.000	0.010	5.4
17 Dieldrin	2942894.000	2808640.000	0.010	4.6
20 Endrin	2680394.000	2715920.000	0.010	-1.3
21 4,4'-DDD	2644864.000	2569520.000	0.010	2.8
23 4,4'-DDT	2580488.000	2483360.000	0.010	3.8
25 Methoxychlor	1105735 000	1063680.000	0.010	3.8
30 Decachlorobiphenyl	1565054 000	1472880.000	0.010	5.9

TE
Data File: /var/chem/gc4.i/3060-G.b/d-a3149.d
Report Date: 06-Jun-2000 14:59 *HISROG DBLCC*

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
Lab File ID: d-a3149.d
Analysis Type:
Lab Sample ID: MEDB
Quant Type: ESTD

Injection Date: 06-JUN-2000 14:29
Init. Calibration Date(s): 06/06/0 06/06/0
Init. Calibration Times: 02:55 08:00
Method File: /var/chem/gc4.i/3060-G.b/PESTA.m

COMPOUND	RRF	RF0	MIN	MAX
11 Aldrin	2368458.000	2222680.000	0.010	6.2 15.0
7 beta-BHC	1690626.000	1599560.000	0.010	5.4 15.0
8 delta-BHC	3084682.000	2919400.000	0.010	5.4 15.0
12 Heptachlor epoxide	2408868.000	2272160.000	0.010	5.7 15.0
13 gamma-Chlordane	2711944.000	2570800.000	0.010	5.2 15.0
14 alpha-Chlordane	2868744.000	2669040.000	0.010	7.0 15.0
16 4,4'-DDE	3058686.000	2861960.000	0.010	6.4 15.0
22 Endosulfan II	2879700.000	2779440.000	0.010	3.5 15.0
24 Endrin aldehyde	2220638.000	2054960.000	0.010	7.5 15.0
26 Endosulfan sulfate	2306166.000	2215160.000	0.010	3.9 15.0
27 Endrin ketone	2264630.000	2166960.000	0.010	4.3 15.0

660 306

Data File: /var/chem/gc4.i/3060-G.b/d-a3163.d
Report Date: 07-Jun-2000 07:46

DB668

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
Lab File ID: d-a3163.d
Analysis Type:
Lab Sample ID: MEDA
Quant Type: ESTDInjection Date: 06-JUN-2000 20:58
Init. Calibration Date(s): 06/06/0 06/06/0
Init. Calibration Times: 02:55 08:00
Method File: /var/chem/gc4.i/3060-G.b/PESTA.m

COMPOUND	RRF	RFO	MIN	MAX
1 Tetrachloro-m-xylene	3072968.000	2963720.000	0.000	15.0
5 alpha-BHC	3510892.000	3434920.000	0.010	15.0
6 gamma-BHC (Lindane)	3089596.000	3031640.000	0.010	15.0
10 Heptachlor	2514064.000	2401400.000	0.010	15.0
15 Endosulfan I	2617660.000	2526440.000	0.010	15.0
17 Dieldrin	2942894.000	2841720.000	0.010	15.0
20 Endrin	2680394.000	2746800.000	0.010	15.0
21 4,4'-DDD	2644864.000	2630120.000	0.010	15.0
23 4,4'-DDT	2580488.000	2564640.000	0.010	15.0
25 Methoxychlor	1105735.000	1092120.000	0.010	15.0
30 Decachlorobiphenyl	1565054.000	1511800.000	0.010	15.0

72 H1687046
Data File: /var/chem/gc4.i/3060-G.b/d-a3164.d
Report Date: 07-Jun-2000 07:46 DB608

660 307

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
Lab File ID: d-a3164.d
Analysis Type:
Lab Sample ID: MEDB
Quant Type: ESTD

Injection Date: 06-JUN-2000 21:26
Init. Calibration Date(s): 06/06/0 06/06/0
Init. Calibration Times: 02:55 08:00
Method File: /var/chem/gc4.i/3060-G.b/PESTA.m

COMPOUND	RRF	RFO	MIN RRF	%D	MAX %D
11 Aldrin	2368458.000	2253040.000	0.010	4.9	15.0
7 beta-BHC	1690626.000	1610560.000	0.010	4.7	15.0
8 delta-BHC	3084682.000	2933960.000	0.010	4.9	15.0
12 Heptachlor epoxide	2408868.000	2290080.000	0.010	4.9	15.0
13 gamma-Chlordane	2711944.000	2580680.000	0.010	4.8	15.0
14 alpha-Chlordane	2868744.000	2736720.000	0.010	4.6	15.0
16 4,4'-DDE	3058686.000	2892720.000	0.010	5.4	15.0
22 Endosulfan II	2879700.000	2749920.000	0.010	4.5	15.0
24 Endrin aldehyde	2220638.000	2126640.000	0.010	4.2	15.0
26 Endosulfan sulfate	2306166.000	2251840.000	0.010	2.4	15.0
27 Endrin ketone	2264630.000	2182000.000	0.010	3.6	15.0

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0F020191

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 06/06/00 06/06/00

Instrument ID: GC4

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 5.57			DCB: 22.51		
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
=====	=====	=====	=====	=====	=====
01	EVALB	EVALB	06/06/00 0227	5.57	22.52
02	MEDTOX	MEDTOX	06/06/00 0255	5.57	22.52
03	MEDCHLOR	MEDCHLOR	06/06/00 0323	5.57	22.52
04	LOWA	LOWA	06/06/00 0350	5.57	22.52
05	MLOWA	MLOWA	06/06/00 0418	5.57	22.52
06	MEDA	MEDA	06/06/00 0446	5.57	22.52
07	MHIGHA	MHIGHA	06/06/00 0514	5.57	22.52
08	HIGHA	HIGHA	06/06/00 0541	5.57	22.51
09	LOWB	LOWB	06/06/00 0609		
10	MLOWB	MLOWB	06/06/00 0637		
11	MEDB	MEDB	06/06/00 0705		
12	MHIGHB	MHIGHB	06/06/00 0732		
13	HIGHB	HIGHB	06/06/00 0800		
14	2ND A	2ND A	06/06/00 0828	5.57	22.51
15	2ND B	2ND B	06/06/00 0856		
16	EVALB	EVALB	06/06/00 0923	5.57	22.51
17	MEDA	MEDA	06/06/00 1401	5.56	22.50
18	MEDB	MEDB	06/06/00 1429		
19	EVALB	EVALB	06/06/00 1744	5.56	22.49
20	DF/S1/0153/S	DE44M104	06/06/00 1811	5.56	22.49
21	DF/S1/0153/S	DE44M10P	06/06/00 1839	5.56	22.49
22	DF/S1/0153/S	DE44M10Q	06/06/00 1907	5.56	22.49
23	DF/S1/0153/S	DE44Q104	06/06/00 1935	5.56	22.49
24	PBLK	DE79F101	06/06/00 2003	5.55	22.49
25	LCS	DE79F102	06/06/00 2030	5.56	22.49
26		MEDA	06/06/00 2058	5.55	22.49
27		MEDB	06/06/00 2126		
28					
29					
30					
31					
32					

QC LIMITS

TCX = Tetrachloro-m-xylene (+/- 0.05 MINUTES)

DCB = Decachlorobiphenyl (+/- 0.05 MINUTES)

Column used to flag retention time values with an asterisk.

* Values outside of QC limits.

Data File: /var/chem/gc4.i/3060-G.b/d-a3123.d
 Report Date: 06-Jun-2000 09:54

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3123.d
 Lab Smp Id: EVALB Client Smp ID: EVALB
 Inj Date : 06-JUN-2000 02:27
 Operator : 1891 Inst ID: gc4.i
 Smp Info : EVALB,3060-G.b,,EVALBR.sub,,3,1
 Misc Info : 190-88-8
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: PEM
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: EVALBR.sub
 Target Version: 3.40

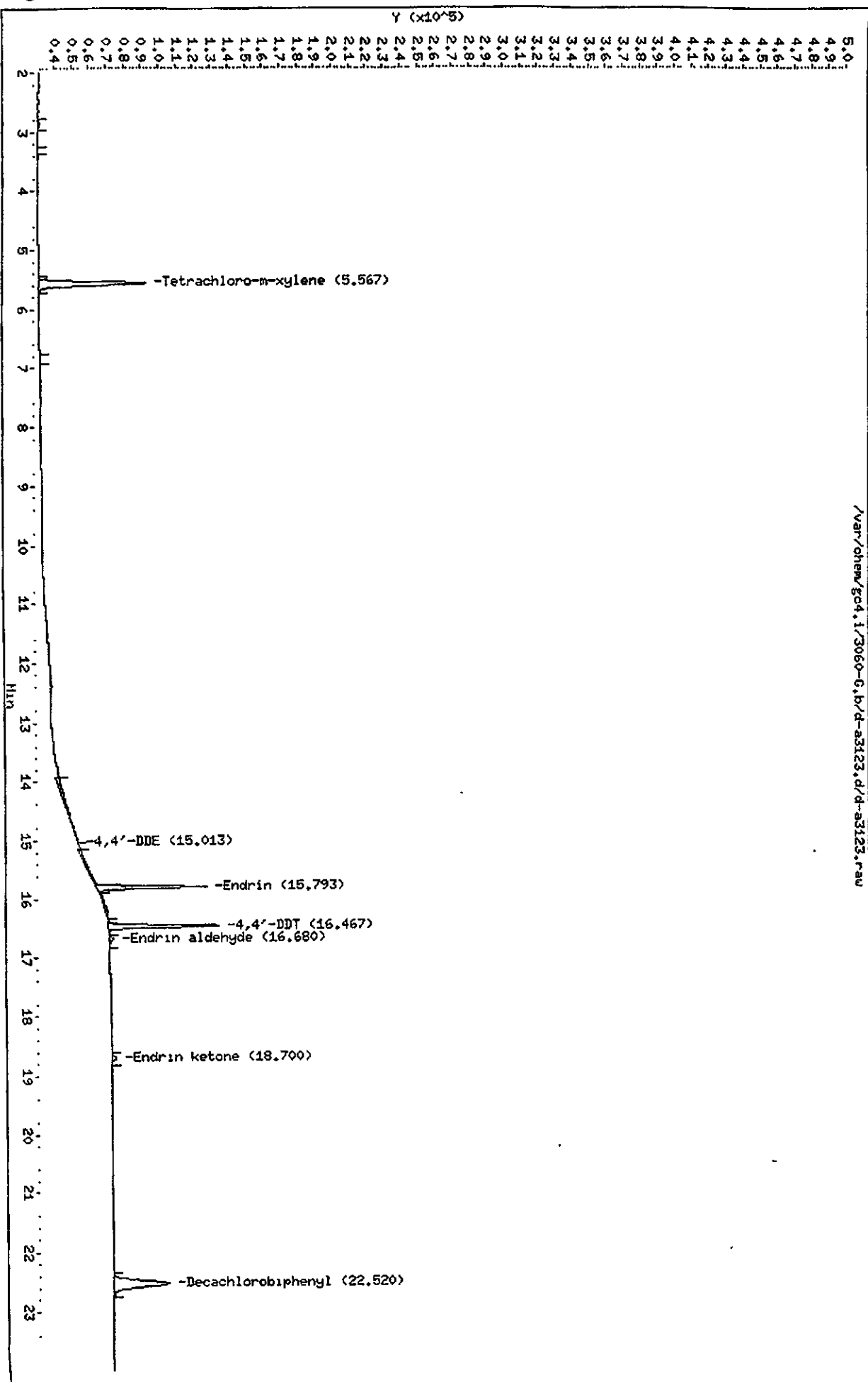
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (ng)
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	61038	0.01986	0.01986(R)
16 4,4'-DDE	15.013	15.000	0.013	176	<0.0	0.00005754(M)
20 Endrin	15.793	15.793	0.000	62995	0.02350	0.02350
21 4,4'-DDD	Compound Not Detected.					
23 4,4'-DDT	16.467	16.460	0.007	62987	0.02441	0.02441
24 Endrin aldehyde	16.680	16.673	0.007	2734	0.00123	0.001231
27 Endrin ketone	18.700	18.693	0.007	2487	0.00110	0.001098
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	30959	0.01978	0.01978(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

$$\text{Endrin Breakdown} = \frac{(2734 + 2487)}{(2734 + 2487 + 62995)} \times 100 = 7.7\%$$

$$\text{DDT Breakdown} = \frac{(176)}{(176 + 62995)} \times 100 = 0.3\%$$



Data File: /var/chem/gc4.1/3060-G,b/d-a3123.d
Date: 06-JUN-2000 02:27
Client ID: EVALB
Sample Info: EVALB,3060-G,b,EVALB,sub,,3,1
Column Phase: DB608

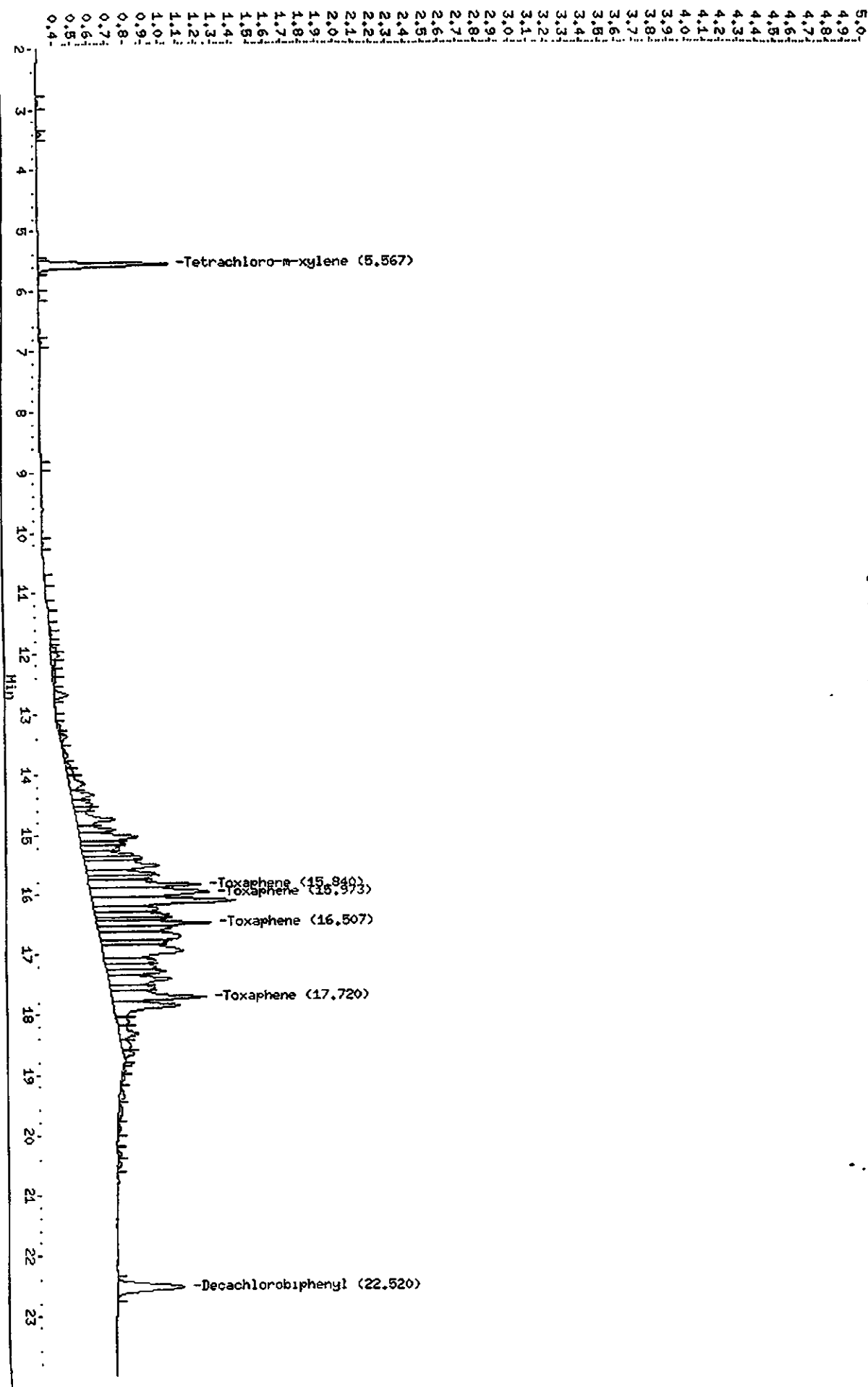
Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3124.d
 Report Date: 06-Jun-2000 09:54

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3124.d
 Lab Smp Id: MEDTOX Client Smp ID: MEDTOX
 Inj Date : 06-JUN-2000 02:55
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDTOX,3060-G.b,,1-TOX.sub,,1,3
 Misc Info : 190-84-13
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 02:55 Cal File: d-a3124.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 1-TOX.sub
 Target Version: 3.40

Compounds	AMOUNTS					ON-COL (ng)
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	
=====	==	=====	=====	=====	=====	=====
18 Toxaphene	15.840	15.840	0.000	62594	1.00000	1.000
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	73295	0.02500	0.02500
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	37636	0.02500	0.02500

$\gamma \times 10^5$ 

/var/chem/gc4.1/3060-G.b/d-a3124.d.raw

Data File: /var/chem/gc4.1/3060-G.b/d-a3124.d
Date: 06-JUN-2000 02:55
Client ID: HEDTOX
Sample Info: HEDTOX, 3060-G.b, 1-TOX, sub, 1.3
Column phase: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3125.d
 Report Date: 06-Jun-2000 09:55

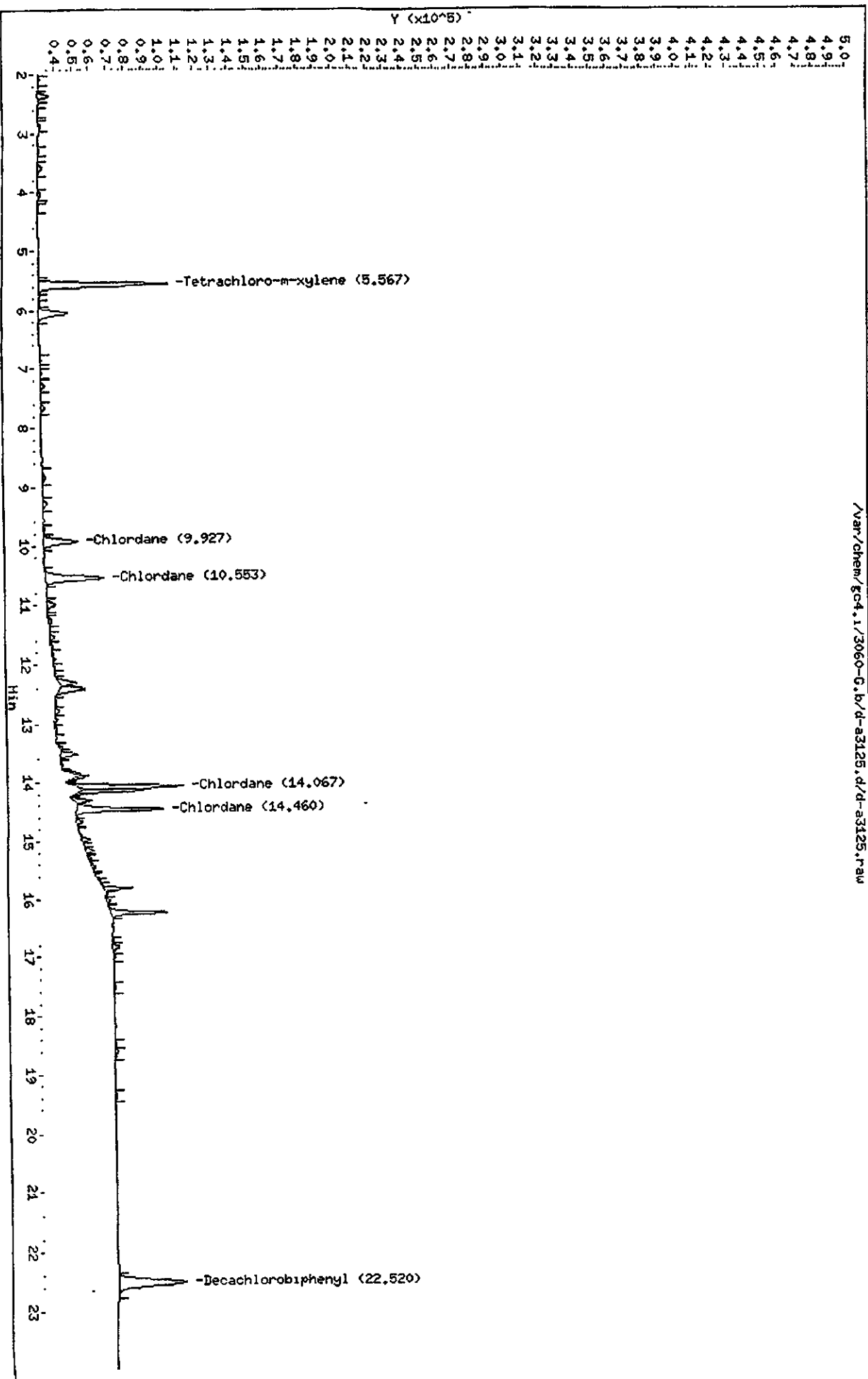
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3125.d
 Lab Smp Id: MEDCHLOR Client Smp ID: MEDCHLOR
 Inj Date : 06-JUN-2000 03:23 Inst ID: gc4.i
 Operator : 1891
 Smp Info : MEDCHLOR,3060-G.b,,2-CHLO.sub,,1,3
 Misc Info : 190-85-10
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 03:23 Cal File: d-a3125.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 2-CHLO.sub
 Target Version: 3.40

Compounds				RESPONSE	AMOUNTS	
	RT	EXP RT	DLT RT		CAL-AMT	ON-COL
	ss	*****	*****	*****	(ng)	(ng)
9 Chlordane	9.927	9.927	0.000	19086	0.25000	0.2500
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	74043	0.02500	0.02500
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	38671	0.02500	0.02500

Data File: /var/chem/gc4.1/3060-G.b/d-a3125.d
Date: 06-JUN-2000 03:23
Client ID: HEDCHLOR
Sample Info: HEDCHLOR,3060-G.b,,2-CHL0,sub,,1,3
Column phase: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

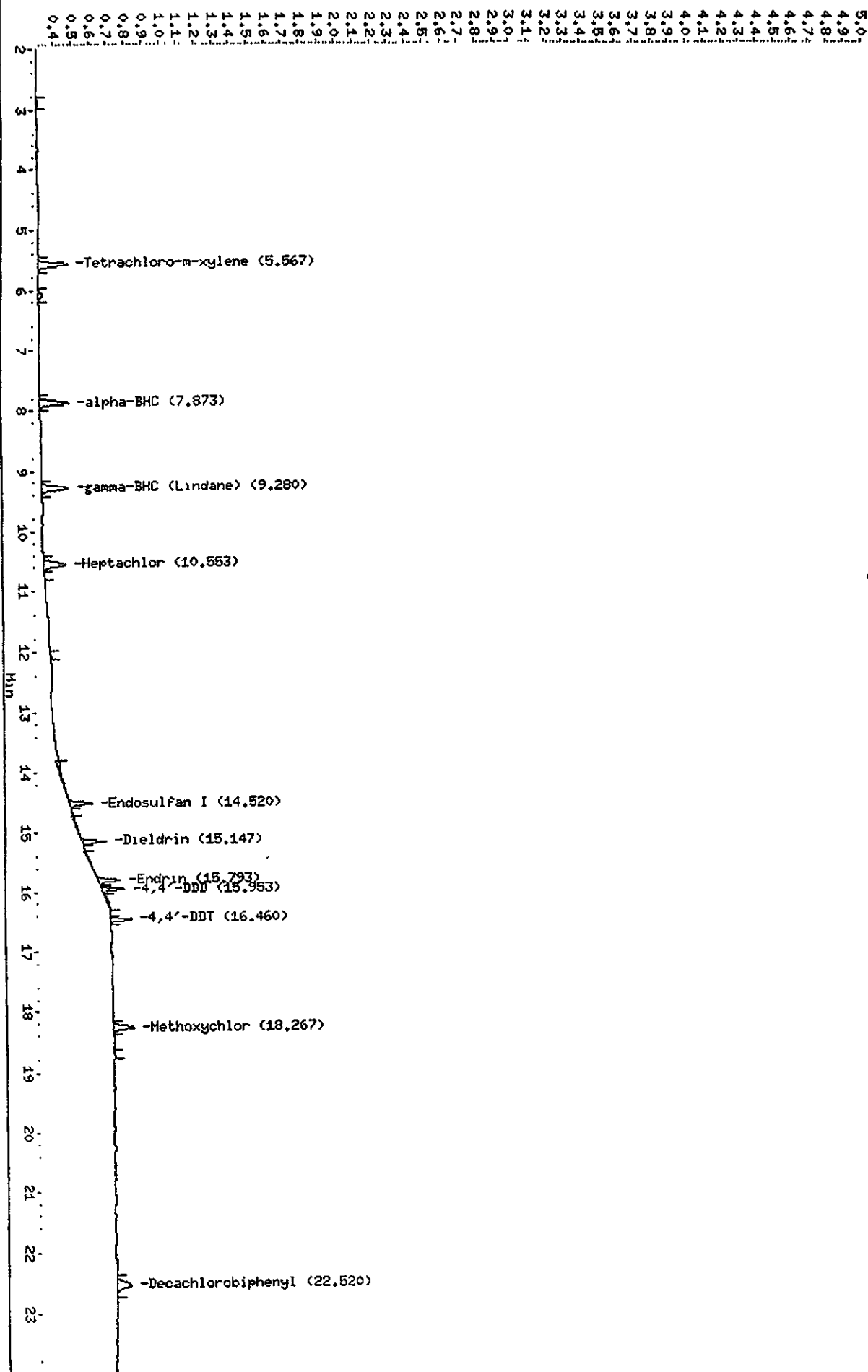


Data File: /var/chem/gc4.i/3060-G.b/d-a3126.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3126.d
 Lab Smp Id: LOWA Client Smp ID: LOWA
 Inj Date : 06-JUN-2000 03:50
 Operator : 1891 Inst ID: gc4.i
 Smp Info : LOWA,3060-G.b,,3-INDA.sub,,1,1
 Misc Info : 190-84-1
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 03:50 Cal File: d-a3126.d
 Als bottle: 1 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	*****	*****	*****	*****	*****	*****
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	16741	0.00500	0.005306
5 alpha-BHC	7.873	7.873	0.000	15923	0.00500	0.005000
6 gamma-BHC (Lindane)	9.280	9.280	0.000	14524	0.00500	0.005000
10 Heptachlor	10.553	10.553	0.000	12519	0.00500	0.005000
15 Endosulfan I	14.520	14.513	0.007	12642	0.00500	0.005000
17 Dieldrin	15.147	15.147	0.000	13516	0.00500	0.005000
20 Endrin	15.793	15.793	0.000	12334	0.00500	0.005000
21 4,4'-DDD	15.953	15.953	0.000	12189	0.00500	0.005000
23 4,4'-DDT	16.460	16.460	0.000	11924	0.00500	0.005000
25 Methoxychlor	18.267	18.267	0.000	11103	0.01000	0.010000
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	8353	0.00500	0.005192

$\gamma \times 10^{-5}$ 

/var/chem/gc4.i/3060-G.b/d-a3126.raw

Data File /var/chem/gc4.i/3060-G.b/d-a3126.d
Date: 06-JUN-2000 03:50
Client ID: LOMA
Sample Info: LOMA,3060-G.b,,3-INDR,sub,,1,1
Column phase: DB608

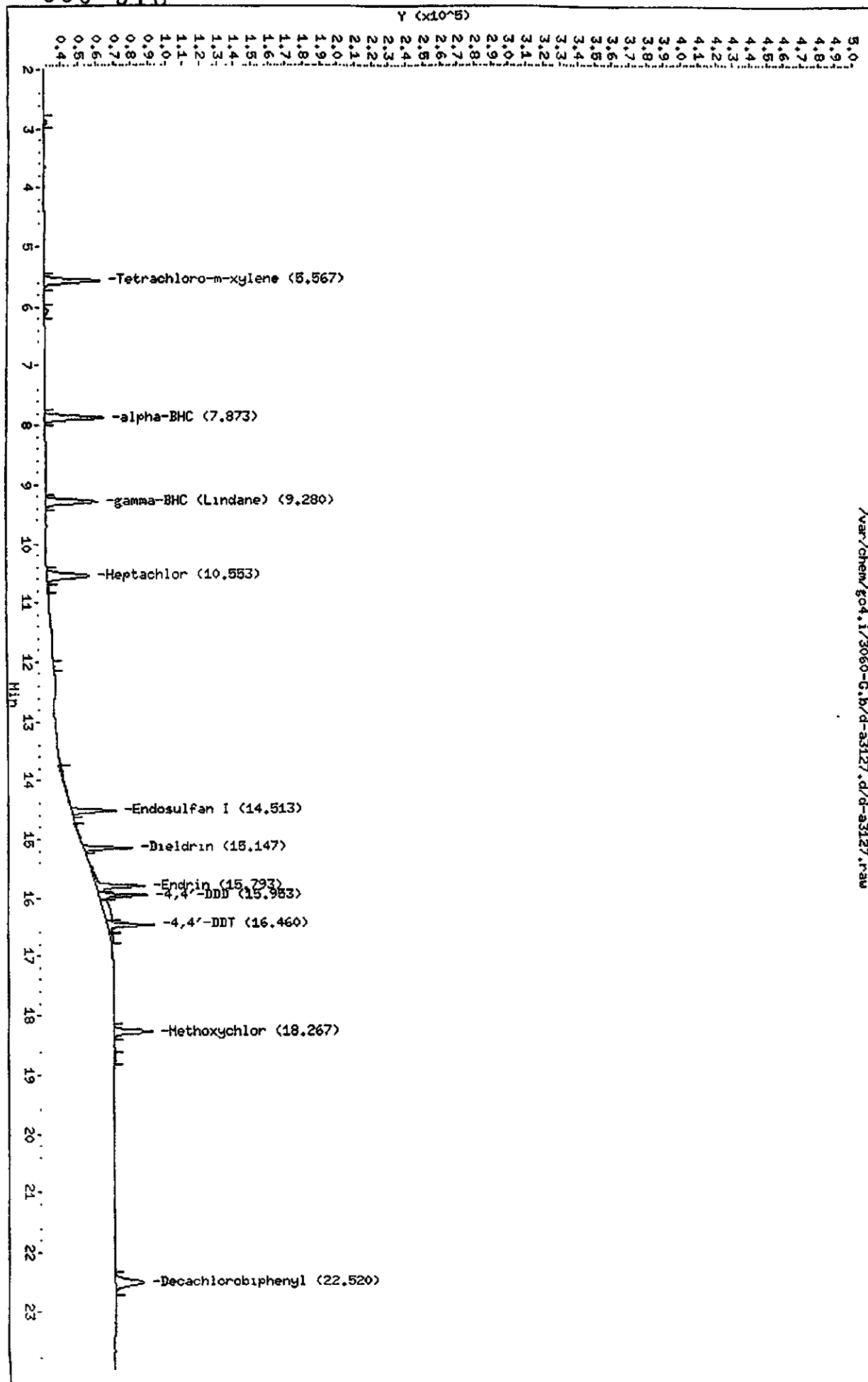
Instrument: gc4.i
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3127.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3127.d
 Lab Smp Id: MLOWA Client Smp ID: MLOWA
 Inj Date : 06-JUN-2000 04:18
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MLOWA,3060-G.b,,3-INDA.sub,,1,2
 Misc Info : 190-84-2
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 04:18 Cal File: d-a3127.d
 Als bottle: 1 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	32501	0.01000	0.01020
5 alpha-BHC	7.873	7.873	0.000	33305	0.01000	0.01022
6 gamma-BHC (Lindane)	9.280	9.280	0.000	29643	0.01000	0.01020
10 Heptachlor	10.553	10.553	0.000	24815	0.01000	0.009955
15 Endosulfan I	14.513	14.513	0.000	25534	0.01000	0.01005
17 Dieldrin	15.147	15.147	0.000	27799	0.01000	0.01014
20 Endrin	15.793	15.793	0.000	27770	0.01000	0.01059
21 4,4'-DDD	15.953	15.953	0.000	27835	0.01000	0.01066
23 4,4'-DDT	16.460	16.460	0.000	26844	0.01000	0.01059
25 Methoxychlor	18.267	18.267	0.000	22029	0.02000	0.01992
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	16468	0.01000	0.01016



Data File: /var/chem/gc4.i/3060-G.b/d-a3127.d
Date: 06-JUN-2000 04:18
Client ID: HLOHA
Sample Info: HLOHA,3060-G.b,,3-INDA,sub,,1,2
Column phase: DB608

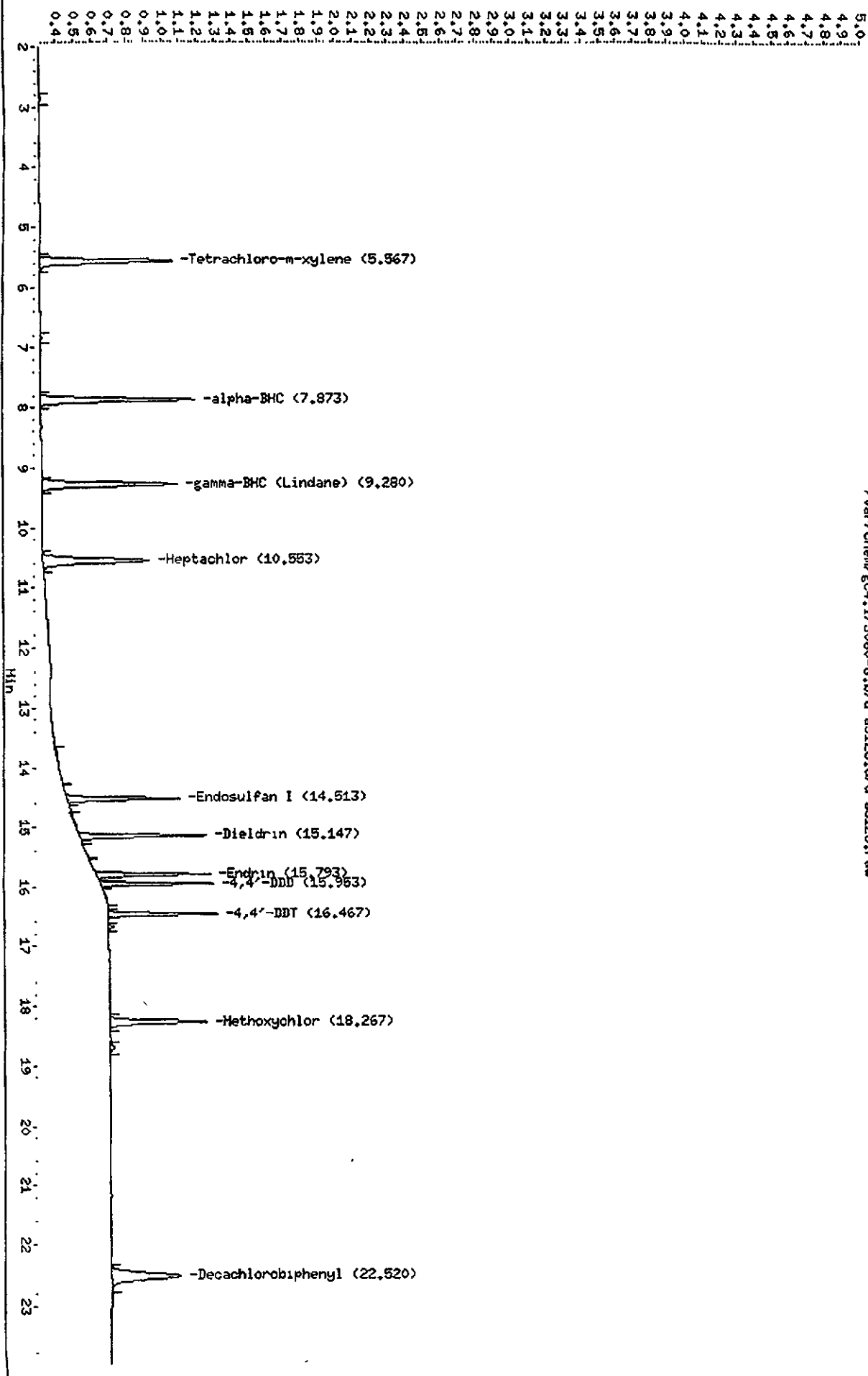
Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3128.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3128.d
 Lab Smp Id: MEDA Client Smp ID: MEDA
 Inj Date : 06-JUN-2000 04:46
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDA,3060-G.b,,3-INDA.sub,,1,3
 Misc Info : 190-84-3
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 04:46 Cal File: d-a3128.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	75812	0.02500	0.02362
5 alpha-BHC	7.873	7.873	0.000	87804	0.02500	0.02627
6 gamma-BHC (Lindane)	9.280	9.280	0.000	77263	0.02500	0.02587
10 Heptachlor	10.553	10.553	0.000	61140	0.02500	0.02468
15 Endosulfan I	14.513	14.513	0.000	64664	0.02500	0.02530
17 Dieldrin	15.147	15.147	0.000	72388	0.02500	0.02592
20 Endrin	15.793	15.793	0.000	64894	0.02500	0.02483
21 4,4'-DDD	15.953	15.953	0.000	64458	0.02500	0.02479
23 4,4'-DDT	16.467	16.460	0.007	62672	0.02500	0.02482
25 Methoxychlor	18.267	18.267	0.000	54643	0.05000	0.04961
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	39015	0.02500	0.02399

Y (x10⁻⁵)

/var/chem/gc4.i/3060-G.b/d-a3128.d/d-a3128.raw

Data File: /var/chem/gc4.i/3060-G.b/d-a3128.d

Date: 06-JUN-2000 04:16

Client ID: HEDR

Sample Info: HEDR,3060-G.b.,3-INDR.sub.,1,3

Column phase: DB608

Instrument: gc4.1

Operator: 1891

Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3129.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3129.d
 Lab Smp Id: MHIGHA Client Smp ID: MHIGHA
 Inj Date : 06-JUN-2000 05:14
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MHIGHA,3060-G.b,,3-INDA.sub,,1,4
 Misc Info : 190-84-4
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 05:14 Cal File: d-a3129.d
 Als bottle: 1 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

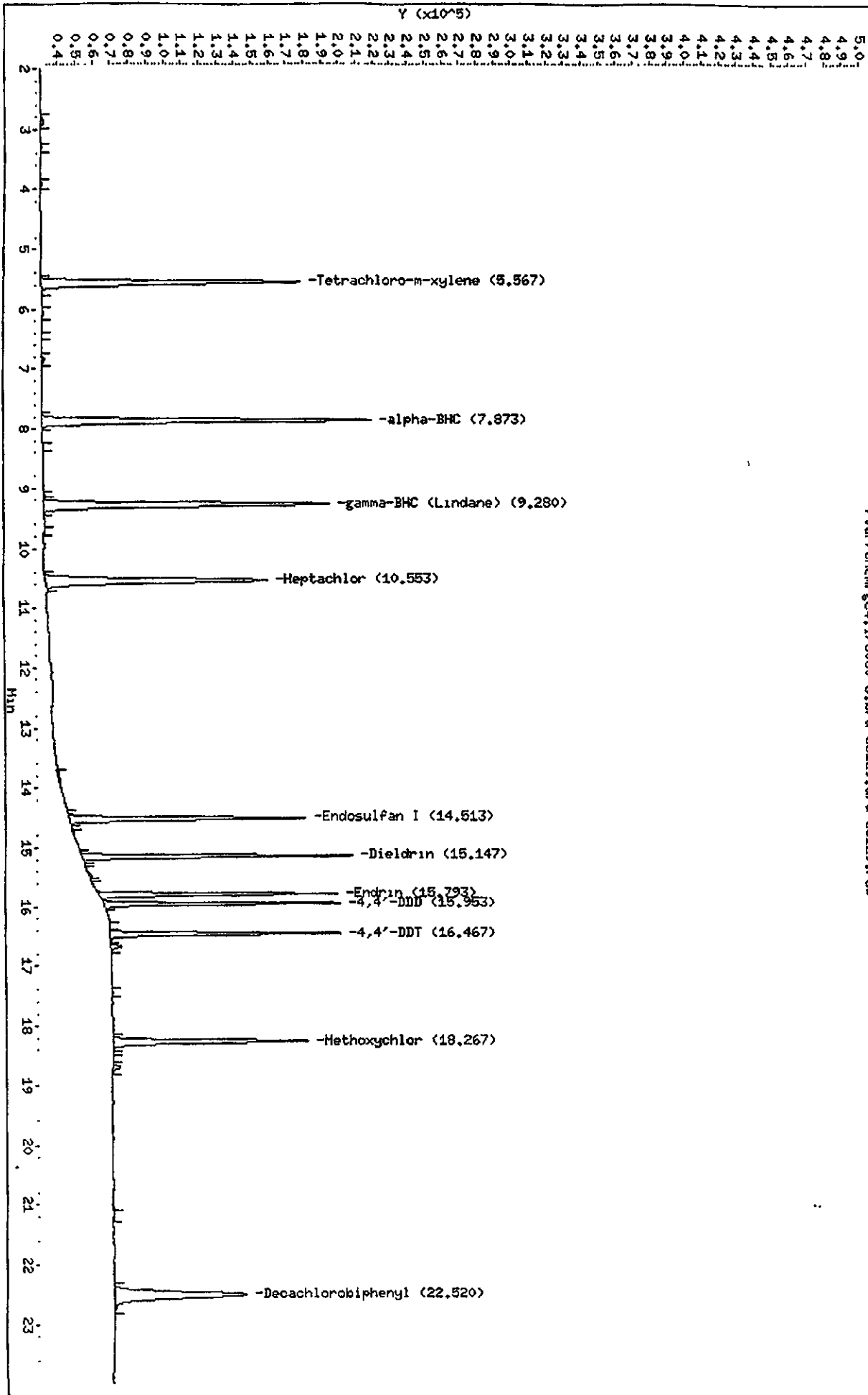
Compounds	AMOUNTS				CAL-AMT		ON-COL	
	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)	(ng)	(ng)
=====	==	=====	=====	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	147734	0.05000	0.04695		
5 alpha-BHC	7.873	7.873	0.000	187917	0.05000	0.05452		
6 gamma-BHC (Lindane)	9.280	9.280	0.000	162919	0.05000	0.05334		
10 Heptachlor	10.553	10.553	0.000	126645	0.05000	0.05084		
15 Endosulfan I	14.513	14.513	0.000	134889	0.05000	0.05205		
17 Dieldrin	15.147	15.147	0.000	154644	0.05000	0.05392		
20 Endrin	15.793	15.793	0.000	136098	0.05000	0.05154		
21 4,4'-DDD	15.953	15.953	0.000	135056	0.05000	0.05145		
23 4,4'-DDT	16.467	16.460	0.007	131576	0.05000	0.05156		
25 Methoxychlor	18.267	18.267	0.000	111031	0.10000	0.1006		
\$ 30 Decachlorobiphenyl	22.520	22.513	0.007	75092	0.05000	0.04708		

Data File: /var/chem/gc4.1/3060-G.b/d-a3129.d
Date: 06-JUN-2000 05:14
Client ID: HHIGHA
Sample Info: HHIGHA,3060-G.b,,3-INDA.sub,,1,4

Column phase: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

/var/chem/gc4.1/3060-G.b/d-a3129.d/d-a3129.raw



Data File: /var/chem/gc4.i/3060-G.b/d-a3130.d
 Report Date: 06-Jun-2000 09:55

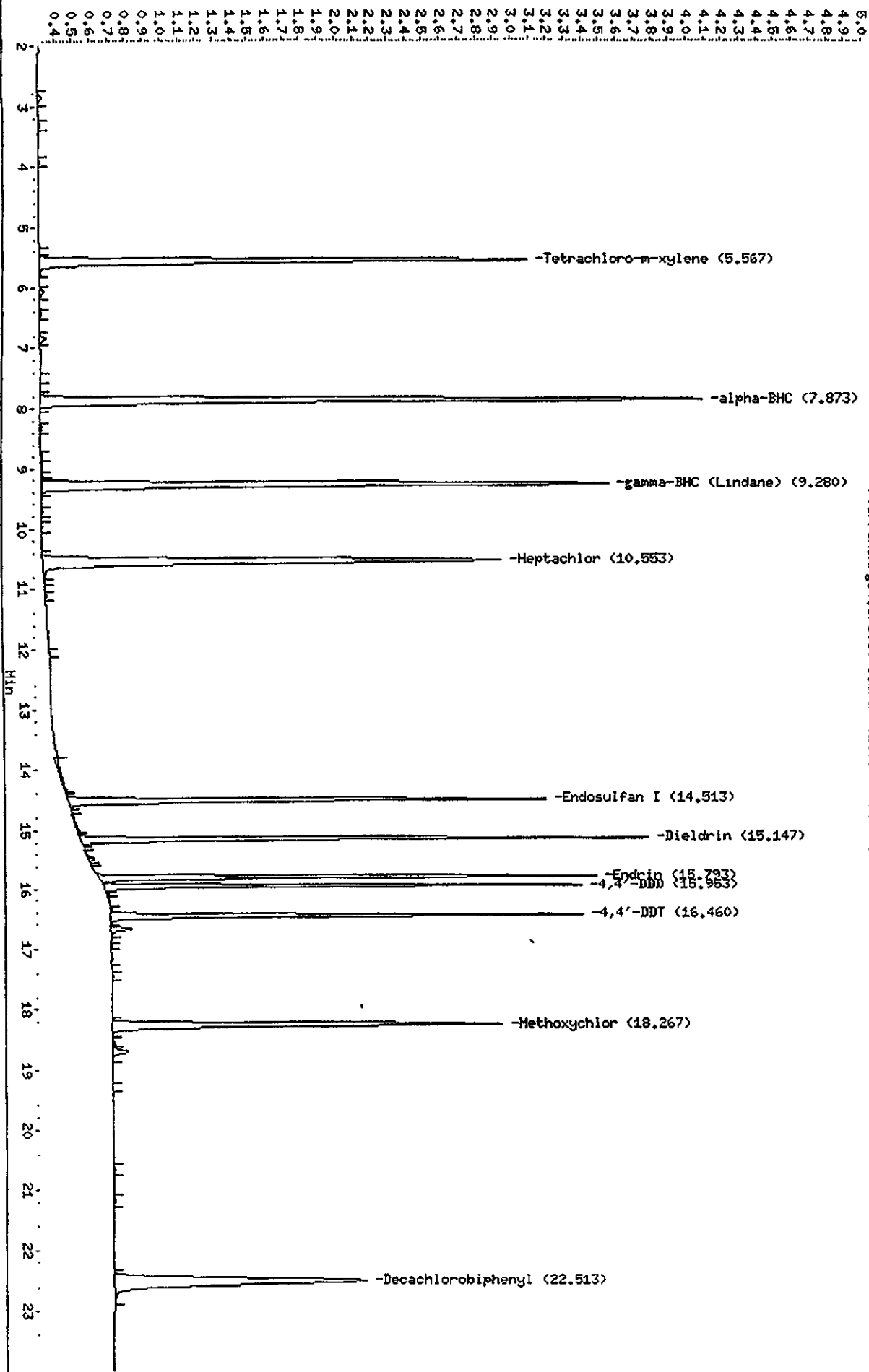
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3130.d
 Lab Smp Id: HIGHA Client Smp ID: HIGHA
 Inj Date : 06-JUN-2000 05:41
 Operator : 1891 Inst ID: gc4.i
 Smp Info : HIGHA,3060-G.b,,3-INDA.sub,,1,5
 Misc Info : 190-84-5
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 05:41 Cal File: d-a3130.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	277938	0.10000	0.09045
5 alpha-BHC	7.873	7.873	0.000	376886	0.10000	0.1073 (A)
6 gamma-BHC (Lindane)	9.280	9.280	0.000	322998	0.10000	0.1045 (A)
10 Heptachlor	10.553	10.553	0.000	260652	0.10000	0.1037 (A)
15 Endosulfan I	14.513	14.513	0.000	272216	0.10000	0.1040 (A)
17 Dieldrin	15.147	15.147	0.000	324297	0.10000	0.1102 (A)
20 Endrin	15.793	15.793	0.000	284045	0.10000	0.1060 (A)
21 4,4'-DDD	15.953	15.953	0.000	272358	0.10000	0.1030 (A)
23 4,4'-DDT	16.460	16.460	0.000	269484	0.10000	0.1044 (A)
25 Methoxychlor	18.267	18.267	0.000	222751	0.20000	0.2014 (A)
\$ 30 Decachlorobiphenyl	22.513	22.513	0.000	144543	0.10000	0.09236

QC Flag Legend

A - Target compound detected but, quantitated amount
 exceeded maximum amount.

Y (x10⁻⁵)

/var/chem/gc4.1/3060-G.b/d-a3130.d.d-a3130.raw

Data File: /var/chem/gc4.1/3060-G.b/d-a3130.d
Date: 06-JUN-2000 05:41
Client ID: HIGHA
Sample Info: HIGHA, 3060-G.b, 3-INDA, sub, 1, 5
Column phases: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3131.d
 Report Date: 06-Jun-2000 09:55

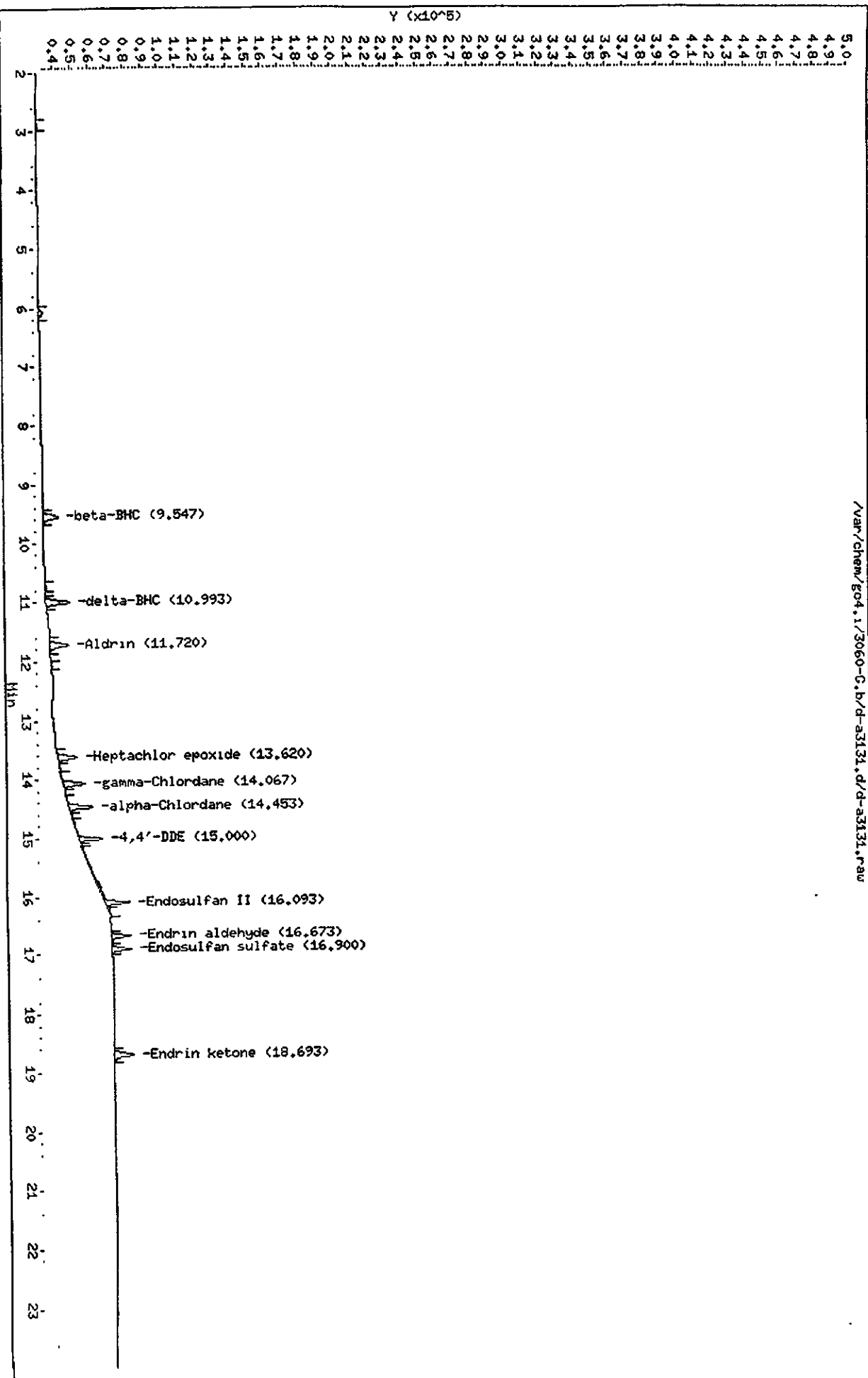
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3131.d
 Lab Smp Id: LOWB Client Smp ID: LOWB
 Inj Date : 06-JUN-2000 06:09
 Operator : 1891 Inst ID: gc4.i
 Smp Info : LOWB,3060-G.b,,4-INDB.sub,,1,1
 Misc Info : 190-84-7
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 06:09 Cal File: d-a3131.d
 Als bottle: 1 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds						AMOUNTS	
	RT	EXP RT	DLT RT	RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====	=====
11 Aldrin	11.720	11.713	0.007		10586	0.00500	0.005000
7 beta-BHC	9.547	9.547	0.000		8715	0.00500	0.005000
8 delta-BHC	10.993	10.993	0.000		13234	0.00500	0.005000
12 Heptachlor epoxide	13.620	13.620	0.000		10988	0.00500	0.005000
13 gamma-Chlordane	14.067	14.060	0.007		12567	0.00500	0.005000
14 alpha-Chlordane	14.453	14.453	0.000		13492	0.00500	0.005000
16 4,4'-DDE	15.000	15.000	0.000		13514	0.00500	0.005000
22 Endosulfan II	16.093	16.087	0.006		13819	0.00500	0.005000
24 Endrin aldehyde	16.673	16.673	0.000		10661	0.00500	0.005000
26 Endosulfan sulfate	16.900	16.900	0.000		10541	0.00500	0.005000
27 Endrin ketone	18.693	18.693	0.000		10415	0.00500	0.005000

Data File: /var/chem/ec4.1/3060-G.b/d-a3131.d
Date: 06-JUN-2000 06:09
Client ID: LOHB
Sample Info: LOHB, 3060-G.b, 4-INDB, sub, 1,1
Column phase: DB608

Instrument: ec4.i
Operator: 1891
Column diameter: 0.53



Data File: /var/chem/gc4.i/3060-G.b/d-a3132.d
 Report Date: 06-Jun-2000 09:55

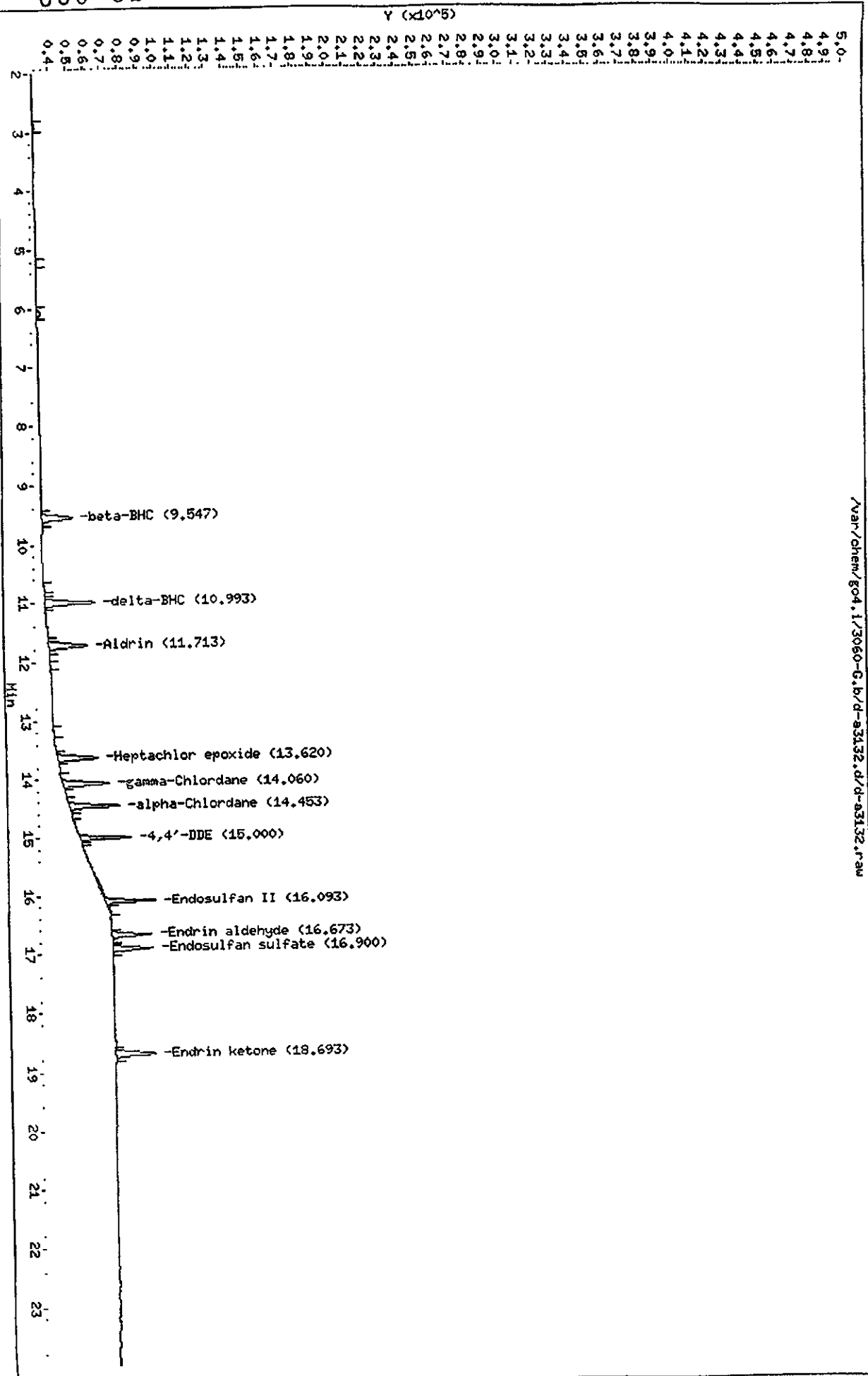
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3132.d
 Lab Smp Id: MLOWB Client Smp ID: MLOWB
 Inj Date : 06-JUN-2000 06:37
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MLOWB,3060-G.b,,4-INDB.sub,,1,2
 Misc Info : 190-84-8
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 06:37 Cal File: d-a3132.d
 Als bottle: 1 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds						AMOUNTS	
	RT	EXP RT	DLT RT	RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====	=====
11 Aldrin	11.713	11.713	0.000		23037	0.01000	0.01042
7 beta-BHC	9.547	9.547	0.000		18114	0.01000	0.01019
8 delta-BHC	10.993	10.993	0.000		29490	0.01000	0.01054
12 Heptachlor epoxide	13.620	13.620	0.000		23623	0.01000	0.01036
13 gamma-Chlordane	14.060	14.060	0.000		27175	0.01000	0.01039
14 alpha-Chlordane	14.453	14.453	0.000		29051	0.01000	0.01037
16 4,4'-DDE	15.000	15.000	0.000		29493	0.01000	0.01044
22 Endosulfan II	16.093	16.087	0.006		28716	0.01000	0.01019
24 Endrin aldehyde	16.673	16.673	0.000		22750	0.01000	0.01032
26 Endosulfan sulfate	16.900	16.900	0.000		22807	0.01000	0.01029
27 Endrin ketone	18.693	18.693	0.000		22348	0.01000	0.01035

Data File: /var/chem/gc4.1/3060-G.b/d-a3132.d
Date: 06-JUN-2000 06:37
Client ID: HLOMB
Sample Info: HLOMB,3060-G.b,,4-INDB,sub,,1,2
Column phase: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

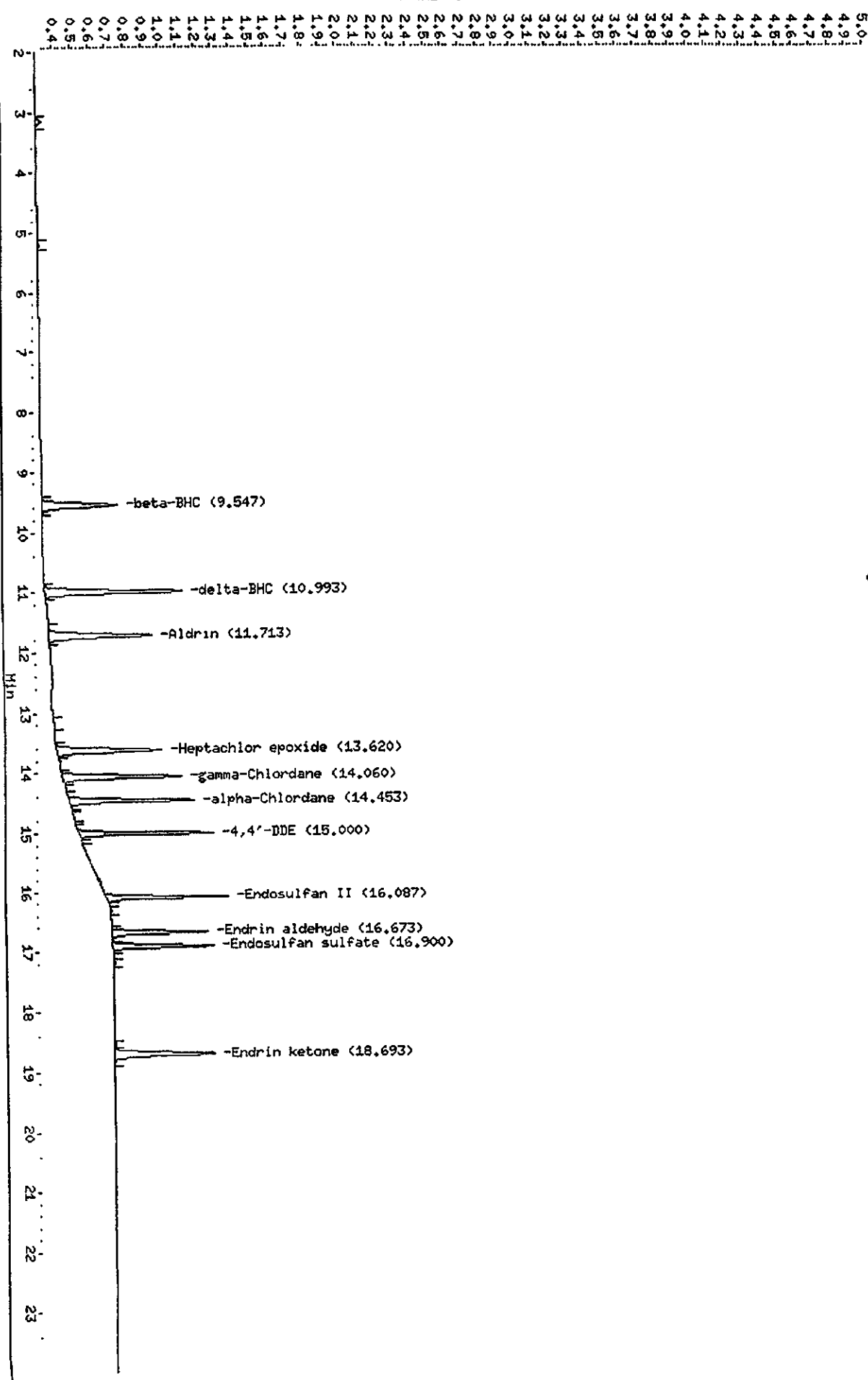


Data File: /var/chem/gc4.i/3060-G.b/d-a3133.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3133.d
 Lab Smp Id: MEDB Client Smp ID: MEDB
 Inj Date : 06-JUN-2000 07:05
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDB,3060-G.b,,4-INDB.sub,,1,3
 Misc Info : 190-84-9
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 07:05 Cal File: d-a3133.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT	ON-COL
					(ng)	(ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	11.713	11.713	0.000	58079	0.02500	0.02584
7 beta-BHC	9.547	9.547	0.000	42059	0.02500	0.02409
8 delta-BHC	10.993	10.993	0.000	77122	0.02500	0.02665
12 Heptachlor epoxide	13.620	13.620	0.000	59434	0.02500	0.02570
13 gamma-Chlordane	14.060	14.060	0.000	67132	0.02500	0.02544
14 alpha-Chlordane	14.453	14.453	0.000	71245	0.02500	0.02528
16 4,4'-DDE	15.000	15.000	0.000	76175	0.02500	0.02627
22 Endosulfan II	16.087	16.087	0.000	69187	0.02500	0.02470
24 Endrin aldehyde	16.673	16.673	0.000	54418	0.02500	0.02480
26 Endosulfan sulfate	16.900	16.900	0.000	57202	0.02500	0.02570
27 Endrin ketone	18.693	18.693	0.000	56369	0.02500	0.02573

Y (x10⁵)

/var/chem/gc04.1/3060-G,b,d-a3133.d

Data File: /var/chem/gc04.1/3060-G,b,d-a3133.d

Date: 06-JUN-2000 07:05

Client ID: HEDB

Sample Info: HEDB,3060-G,b,,4-INDB,sub,,1.3

Column phase: DB608

Instrument: gc04.i

Operator: 1891

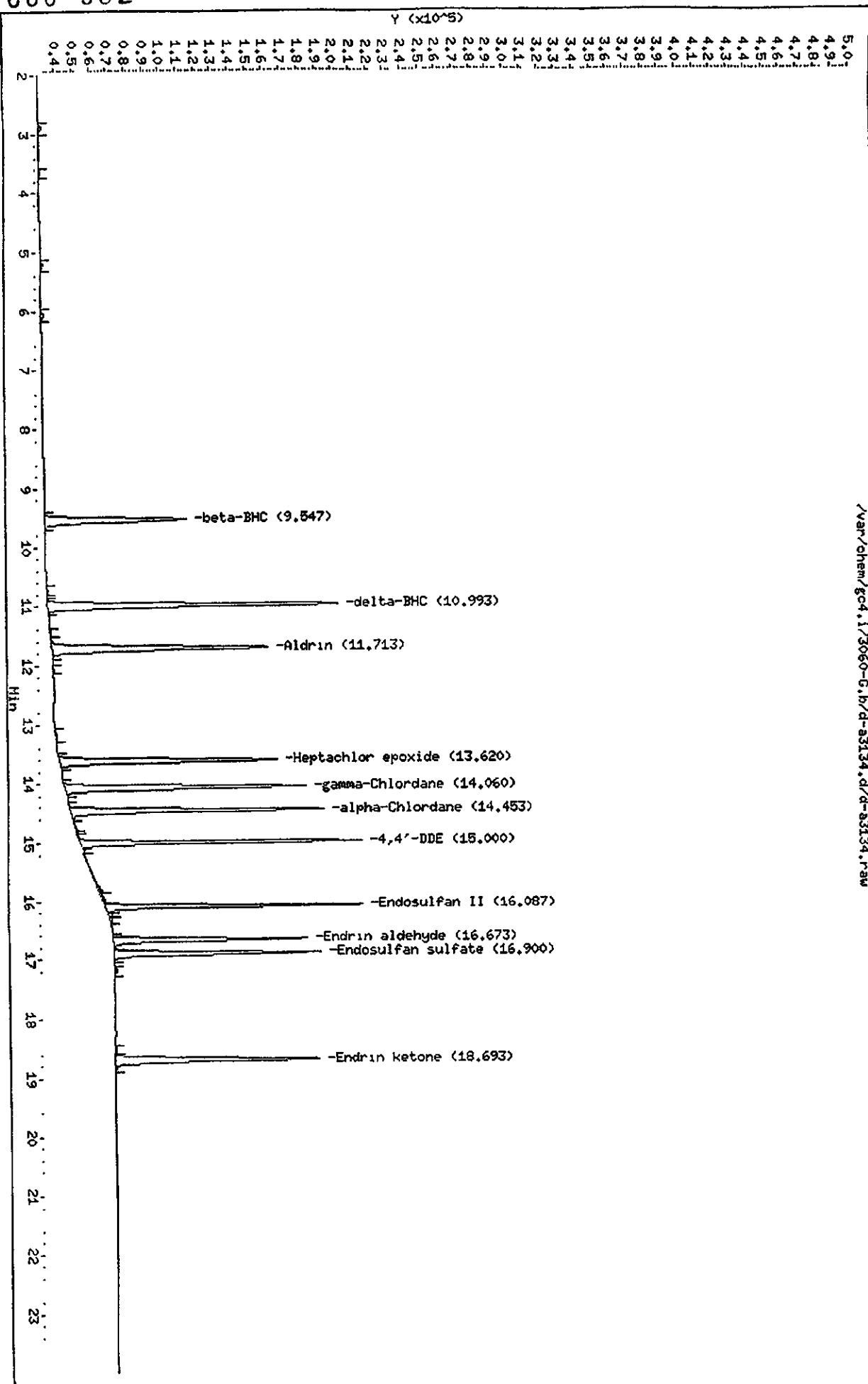
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3134.d
 Report Date: 06-Jun-2000 09:55

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3134.d
 Lab Smp Id: MHIGHB Client Smp ID: MHIGHB
 Inj Date : 06-JUN-2000 07:32
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MHIGHB,3060-G.b,,4-INDB.sub,,1,4
 Misc Info : 190-84-10
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 07:32 Cal File: d-a3134.d
 Als bottle: 1 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	***	*****	*****	*****	*****	*****
11 Aldrin	11.713	11.713	0.000	125118	0.05000	0.05413
7 beta-BHC	9.547	9.547	0.000	81859	0.05000	0.04763
8 delta-BHC	10.993	10.993	0.000	167621	0.05000	0.05572
12 Heptachlor epoxide	13.620	13.620	0.000	125599	0.05000	0.05317
13 gamma-Chlordane	14.060	14.060	0.000	139534	0.05000	0.05213
14 alpha-Chlordane	14.453	14.453	0.000	146644	0.05000	0.05152
16 4,4'-DDE	15.000	15.000	0.000	162739	0.05000	0.05446
22 Endosulfan II	16.087	16.087	0.000	148819	0.05000	0.05231
24 Endrin aldehyde	16.673	16.673	0.000	112606	0.05000	0.05098
26 Endosulfan sulfate	16.900	16.900	0.000	120085	0.05000	0.05291
27 Endrin ketone	18.693	18.693	0.000	117927	0.05000	0.05282



/var/chem/gc4.1/3060-G.b/d-a3134.raw

Data File: /var/chem/gc4.1/3060-G.b/d-a3134.d
Date: 06-JUN-2000 07:32
Client ID: NHICHB
Sample Info: NHICHB,3060-G.b,4-INDB,sub,1,4
Column phase: DB608

Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3135.d
 Report Date: 06-Jun-2000 09:55

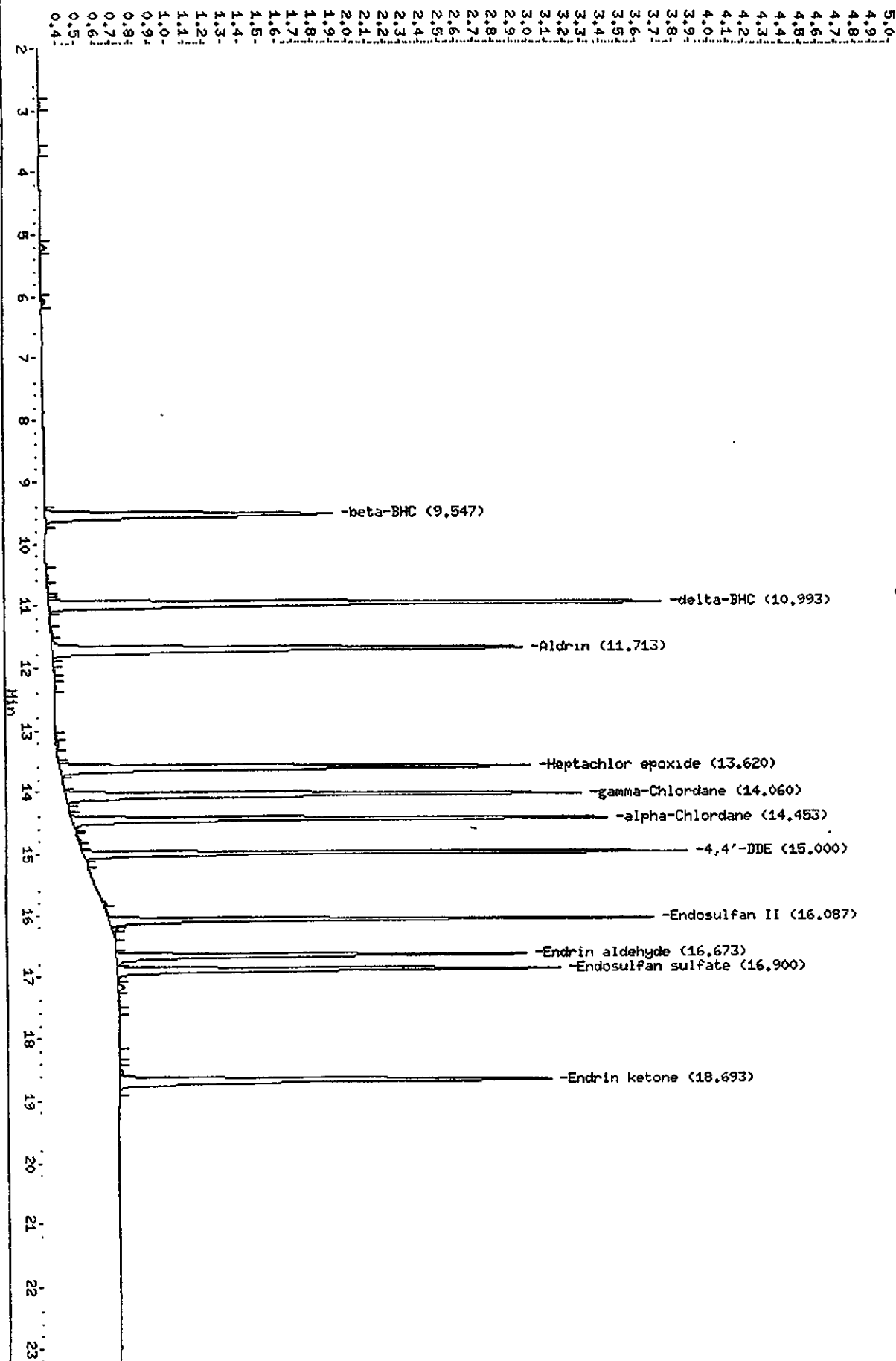
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3135.d
 Lab Smp Id: HIGHB Client Smp ID: HIGHB
 Inj Date : 06-JUN-2000 08:00
 Operator : 1891 Inst ID: gc4.i
 Smp Info : HIGHB,3060-G.b,,4-INDB.sub,,1,5
 Misc Info : 190-84-11
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 09:54 colussyj Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	11.713	11.713	0.000	259587	0.10000	0.1096(A)
7 beta-BHC	9.547	9.547	0.000	157919	0.10000	0.09341
8 delta-BHC	10.993	10.993	0.000	339031	0.10000	0.1099(A)
12 Heptachlor epoxide	13.620	13.620	0.000	259510	0.10000	0.1077(A)
13 gamma-Chlordane	14.060	14.060	0.000	285286	0.10000	0.1052(A)
14 alpha-Chlordane	14.453	14.453	0.000	295754	0.10000	0.1031(A)
16 4,4'-DDE	15.000	15.000	0.000	333955	0.10000	0.1092(A)
22 Endosulfan II	16.087	16.087	0.000	301924	0.10000	0.1048(A)
24 Endrin aldehyde	16.673	16.673	0.000	226715	0.10000	0.1021(A)
26 Endosulfan sulfate	16.900	16.900	0.000	245215	0.10000	0.1063(A)
27 Endrin ketone	18.693	18.693	0.000	239205	0.10000	0.1056(A)

QC Flag Legend

A - Target compound detected but, quantitated amount
 exceeded maximum amount.

Y (x10⁵)

/var/chem/g04.i/3060-G.b/d-a3135.d

Column phase: DB608

Data File: /var/chem/g04.i/3060-G.b/d-a3135.d
Date: 06-JUN-2000 08:00
Client ID: HICHB
Sample Info: HICHB,3060-G.b,4-INDB,sub,1,5

Instrument: g04.i
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3136.d
 Report Date: 06-Jun-2000 12:42

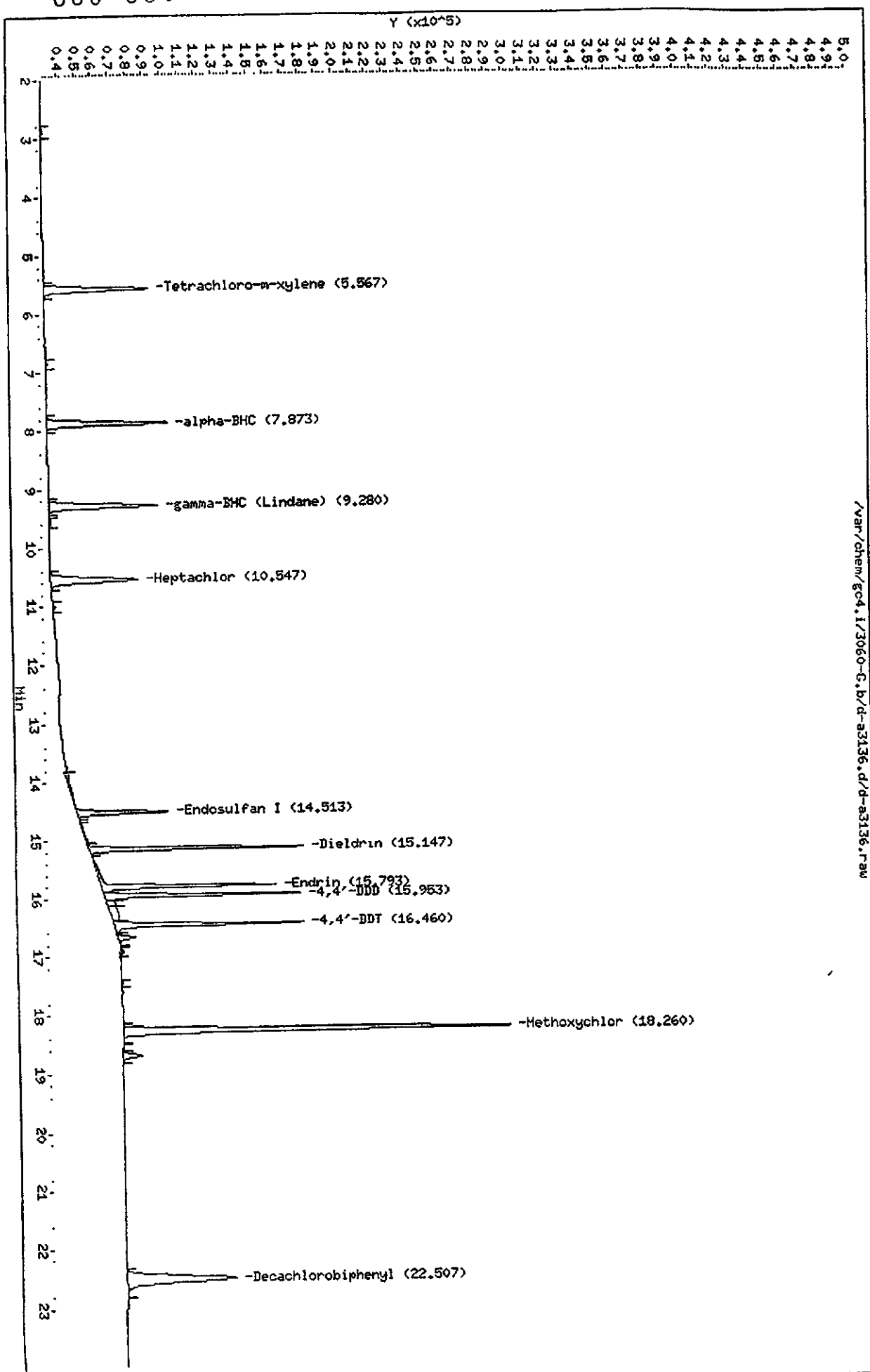
STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3136.d
 Lab Smp Id: 2ND A Client Smp ID: 2ND A
 Inj Date : 06-JUN-2000 08:28
 Operator : 1891 Inst ID: gc4.i
 Smp Info : 2ND A,3060-G.b,,INDA.sub,,2,3
 Misc Info : 190-82-2
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 12:36 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	60220	0.02500	0.01960
5 alpha-BHC	7.873	7.873	0.000	69941	0.02500	0.01992
6 gamma-BHC (Lindane)	9.280	9.280	0.000	62672	0.02500	0.02028
10 Heptachlor	10.547	10.553	-0.006	50187	0.02500	0.01996
15 Endosulfan I	14.513	14.513	0.000	52360	0.02500	0.02000
17 Dieldrin	15.147	15.147	0.000	123764	0.02500	0.04206
20 Endrin	15.793	15.793	0.000	100773	0.02500	0.03760
21 4,4'-DDD	15.953	15.953	0.000	112837	0.02500	0.04266
23 4,4'-DDT	16.460	16.460	0.000	109624	0.02500	0.04248
25 Methoxychlor	18.260	18.267	-0.007	227325	0.05000	0.2056(A)
\$ 30 Decachlorobiphenyl	22.507	22.513	-0.006	62412	0.02500	0.03988

QC Flag Legend

A - Target compound detected but, quantitated amount
 exceeded maximum amount.



/var/chem/gc4.i/3060-G.b/d-a3136.raw

Column phase: DB608

Data File: /var/chem/gc4.i/3060-G.b/d-a3136.d
Date: 06-JUN-2000 08:28
Client ID: 2ND A
Sample Info: 2ND A, 3060-G.b, INDA, sub., 2,3

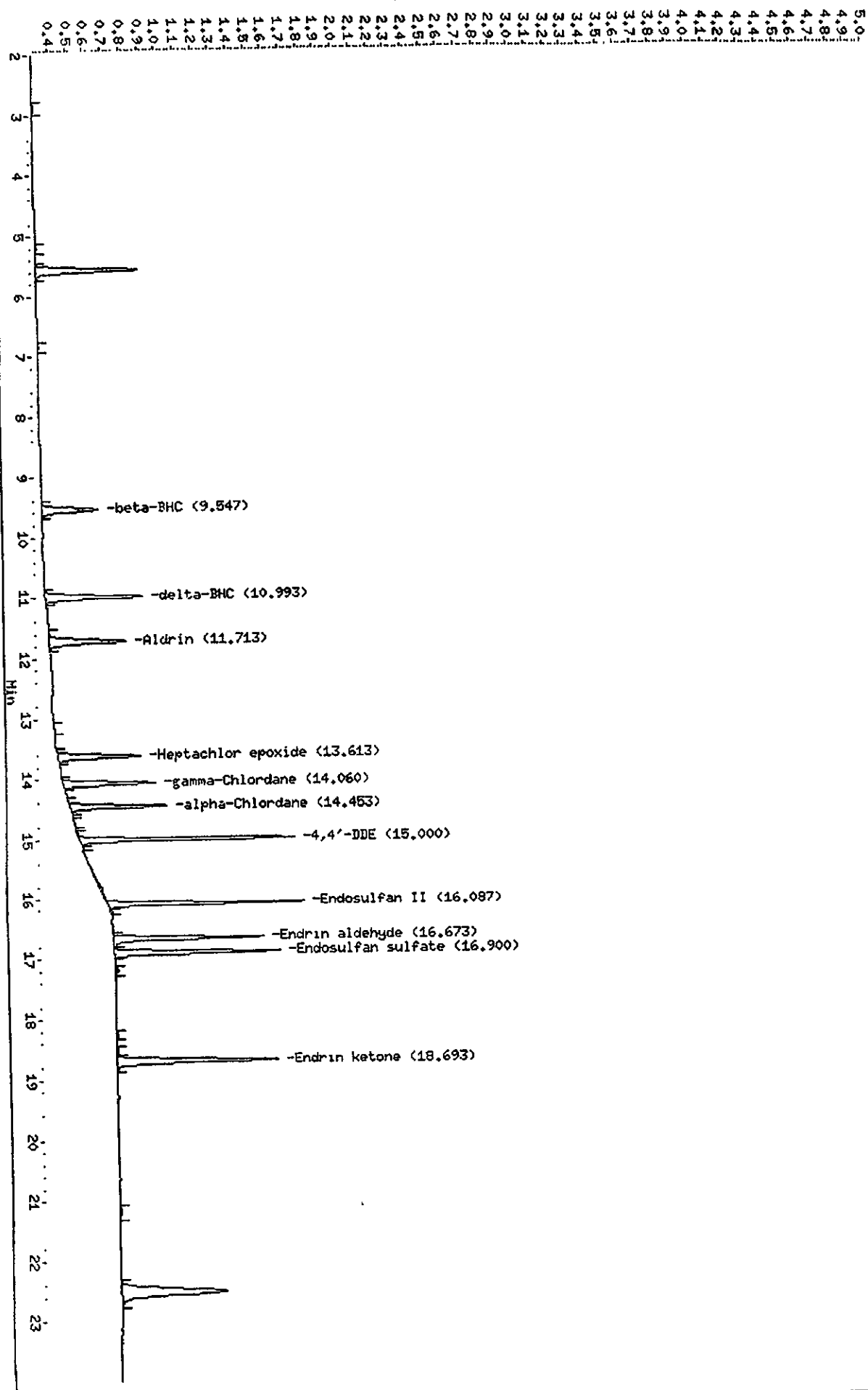
Instrument: gc4.i
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3137.d
 Report Date: 06-Jun-2000 12:42

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3137.d
 Lab Smp Id: 2ND B Client Smp ID: 2ND B
 Inj Date : 06-JUN-2000 08:56
 Operator : 1891 Inst ID: gc4.i
 Smp Info : 2ND B,3060-G.b,,INDB.sub,,2,3
 Misc Info : 190-82-5
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 12:36 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDB.sub
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
11 Aldrin	11.713	11.713	0.000	43503	0.02500	0.01837
7 beta-BHC	9.547	9.547	0.000	32010	0.02500	0.01893
8 delta-BHC	10.993	10.993	0.000	54770	0.02500	0.01776
12 Heptachlor epoxide	13.613	13.620	-0.007	46472	0.02500	0.01929
13 gamma-Chlordane	14.060	14.060	0.000	51187	0.02500	0.01887
14 alpha-Chlordane	14.453	14.453	0.000	54689	0.02500	0.01906
16 4,4'-DDE	15.000	15.000	0.000	120586	0.02500	0.03942
22 Endosulfan II	16.087	16.087	0.000	111033	0.02500	0.03856
24 Endrin aldehyde	16.673	16.673	0.000	83994	0.02500	0.03782
26 Endosulfan sulfate	16.900	16.900	0.000	92742	0.02500	0.04021
27 Endrin ketone	18.693	18.693	0.000	90502	0.02500	0.03996

Y (x10⁻⁵)

/var/chem/gc04.i/3060-G.b/d-a3137.rnw

Column phase: DB608

Data File: /var/chem/gc04.i/3060-G.b/d-a3137.d
Date: 06-JUN-2000 08:56
Client ID: ZND B
Sample Info: ZND B,3060-G.b,,INDB,sub,,2,3

Instrument: gc04.i
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3138.d
 Report Date: 06-Jun-2000 12:42

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3138.d
 Lab Smp Id: EVALB Client Smp ID: EVALB
 Inj Date : 06-JUN-2000 09:23
 Operator : 1891 Inst ID: gc4.i
 Smp Info : EVALB,3060-G.b,,EVALBR.sub,,3,1
 Misc Info : 190-88-8
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 12:36 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: PEM
 Dil Factor: 1.00000 Compound Sublist: EVALBR.sub
 Integrator: Falcon
 Target Version: 3.40

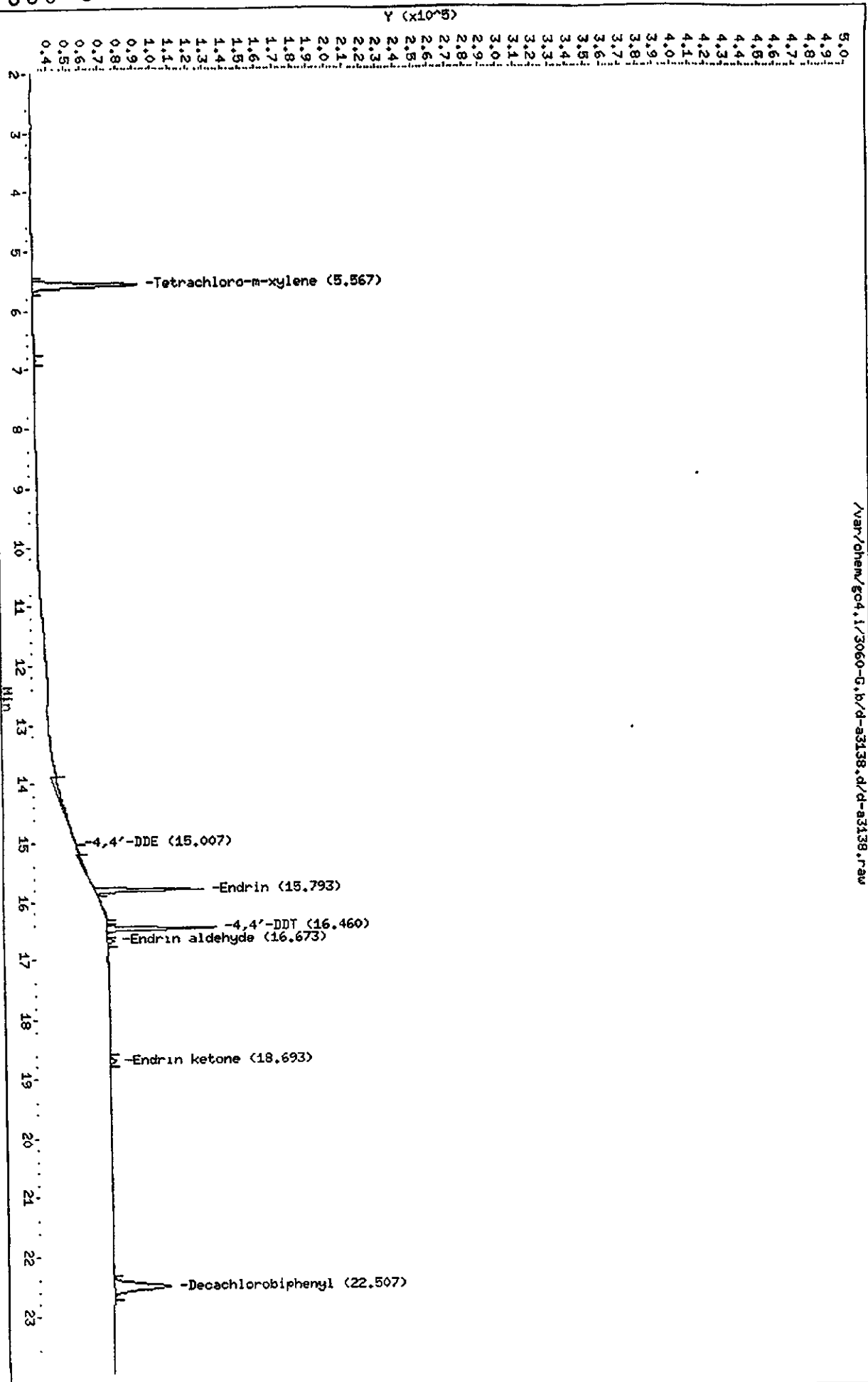
Compounds	CONCENTRATIONS					
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ng)	FINAL (ng)
\$ 1 Tetrachloro-m-xylene	5.567	5.567	0.000	60269	0.01961	0.01961(R)
16 4,4'-DDE	15.007	15.000	0.007	251	<0.0	0.00008206(M)
20 Endrin	15.793	15.793	0.000	61553	0.02296	0.02296
21 4,4'-DDD	Compound Not Detected.					
23 4,4'-DDT	16.460	16.460	0.000	62628	0.02427	0.02427
24 Endrin aldehyde	16.673	16.673	0.000	4013	0.00181	0.001807
27 Endrin ketone	18.693	18.693	0.000	2967	0.00131	0.001310
\$ 30 Decachlorobiphenyl	22.507	22.513	-0.006	31519	0.02014	0.02014(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

$$\text{Endrin Breakdown} = \frac{(4013 + 2967) \times 100}{(4013 + 2967 + 61553)} = 10.20\%$$

$$\text{DDT Breakdown} = \frac{(251 + 62628) \times 100}{(251 + 62628)} = 0.4\%$$



Data File: /var/chem/gc04.1/3060-G,b/d-a3138.d
Date: 06-JUN-2000 09:23
Client ID: EVALB
Sample Info: EVALB,3060-G,b,EVALBR,sub,3,1
Column phase: DB608

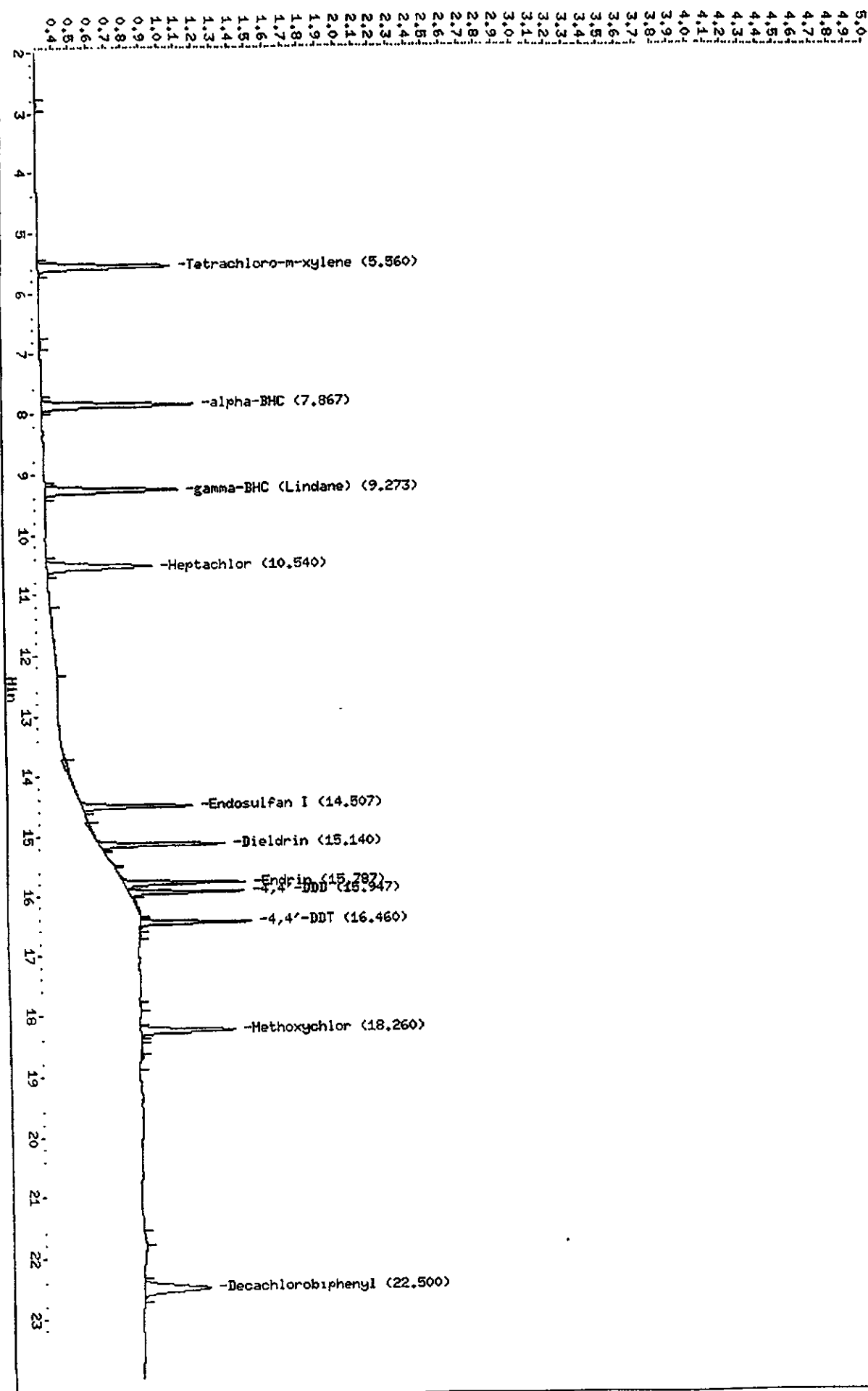
Instrument: gc04.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3148.d
 Report Date: 06-Jun-2000 15:01

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3148.d
 Lab Smp Id: MEDA Client Smp ID: MEDA
 Inj Date : 06-JUN-2000 14:01
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDA,3060-G.b,,INDA.sub,,2,3
 Misc Info : 190-84-3
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 14:59 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDA.sub
 Target Version: 3.40

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
*****	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	74329	0.02500	0.02419
5 alpha-BHC	7.867	7.873	-0.006	85449	0.02500	0.02434
6 gamma-BHC (Lindane)	9.273	9.280	-0.007	74775	0.02500	0.02420
10 Heptachlor	10.540	10.553	-0.013	59701	0.02500	0.02375
15 Endosulfan I	14.507	14.513	-0.006	61932	0.02500	0.02366
17 Dieldrin	15.140	15.147	-0.007	70216	0.02500	0.02386
20 Endrin	15.787	15.793	-0.006	67898	0.02500	0.02533
21 4,4'-DDD	15.947	15.953	-0.006	64238	0.02500	0.02429
23 4,4'-DDT	16.460	16.460	0.000	62084	0.02500	0.02406
25 Methoxychlor	18.260	18.267	-0.007	53184	0.05000	0.04810
\$ 30 Decachlorobiphenyl	22.500	22.513	-0.013	36822	0.02500	0.02353

Y (x10⁻⁸)

/var/chem/gc4.1/3060-G.b/d-a3148.d/d-a3148.raw

Column phase: DB608

Data File: /var/chem/gc4.1/3060-G.b/d-a3148.d
Date: 06-JUN-2000 14:01
Client ID: HEDA
Sample Info: HEDA,3060-G.b., INDA.sub.,2,3

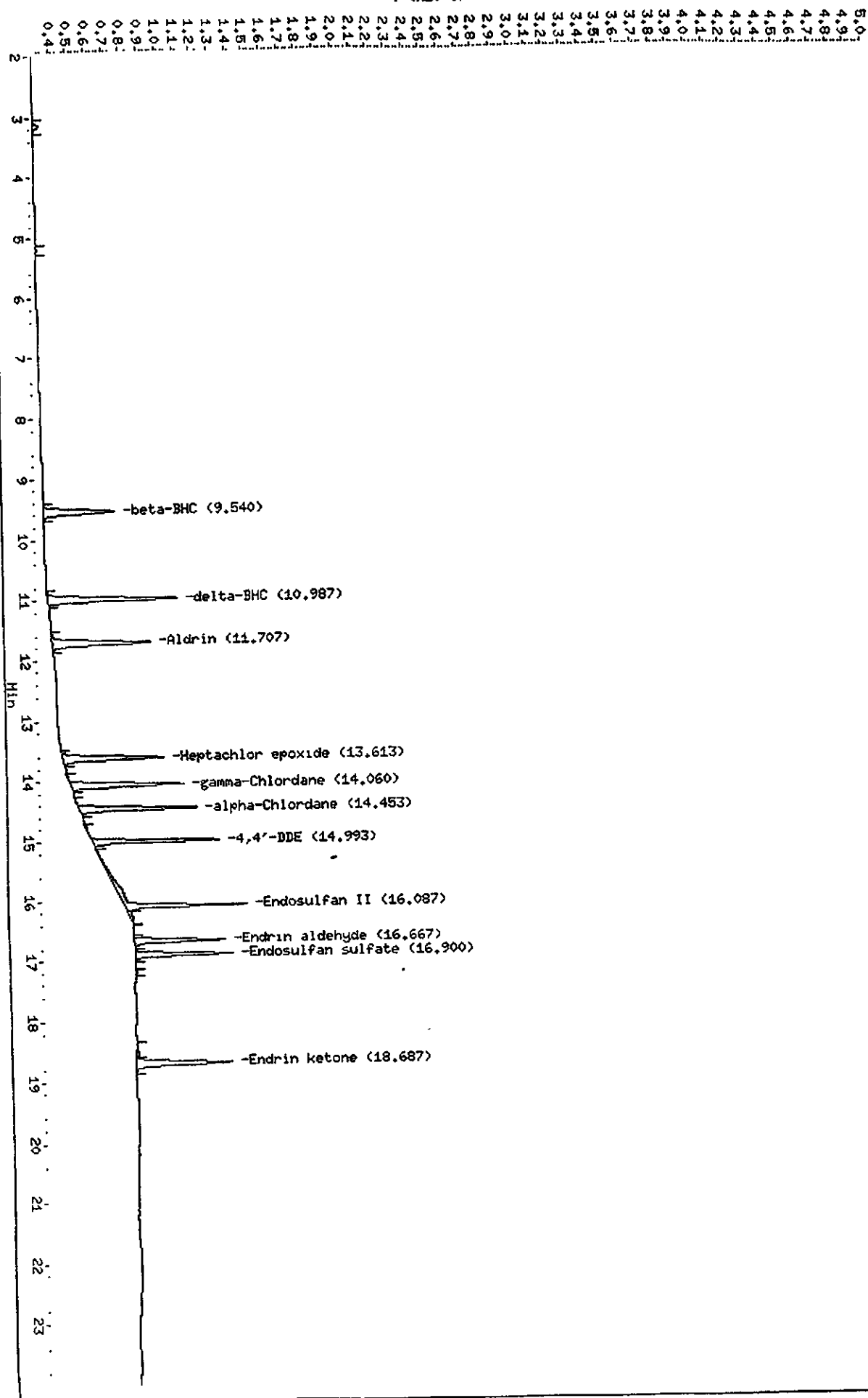
Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3149.d
 Report Date: 06-Jun-2000 15:01

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3149.d
 Lab Smp Id: MEDB Client Smp ID: MEDB
 Inj Date : 06-JUN-2000 14:29
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDB,3060-G.b,,INDB.sub,,2,3
 Misc Info : 190-84-9
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 06-Jun-2000 14:59 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDB.sub
 Target Version: 3.40

Compounds						AMOUNTS	
	RT	EXP RT	DLT RT	RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====	=====
11 Aldrin	11.707	11.713	-0.006		55567	0.02500	0.02346
7 beta-BHC	9.540	9.547	-0.007		39989	0.02500	0.02365
8 delta-BHC	10.987	10.993	-0.006		72985	0.02500	0.02366
12 Heptachlor epoxide	13.613	13.620	-0.007		56804	0.02500	0.02358
13 gamma-Chlordane	14.060	14.060	0.000		64270	0.02500	0.02370
14 alpha-Chlordane	14.453	14.453	0.000		66726	0.02500	0.02326
16 4,4'-DDE	14.993	15.000	-0.007		71549	0.02500	0.02339
22 Endosulfan II	16.087	16.087	0.000		69486	0.02500	0.02413
24 Endrin aldehyde	16.667	16.673	-0.006		51374	0.02500	0.02313
26 Endosulfan sulfate	16.900	16.900	0.000		55379	0.02500	0.02401
27 Endrin ketone	18.687	18.693	-0.006		54174	0.02500	0.02392

Y (x10⁻⁵)

/var/chem/gc04.1/3060-G,b/d-a3149.d

Column phase: DB608

Data File: /var/chem/gc04.1/3060-G,b/d-a3149.d
Date: 06-JUN-2000 14:29
Client ID: HEDB
Sample Info: HEDB,3060-G,b,,1NDB,sub,,2,3

Instrument: gc04.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3156.d
 Report Date: 07-Jun-2000 07:48

STL-PITTSBURGH

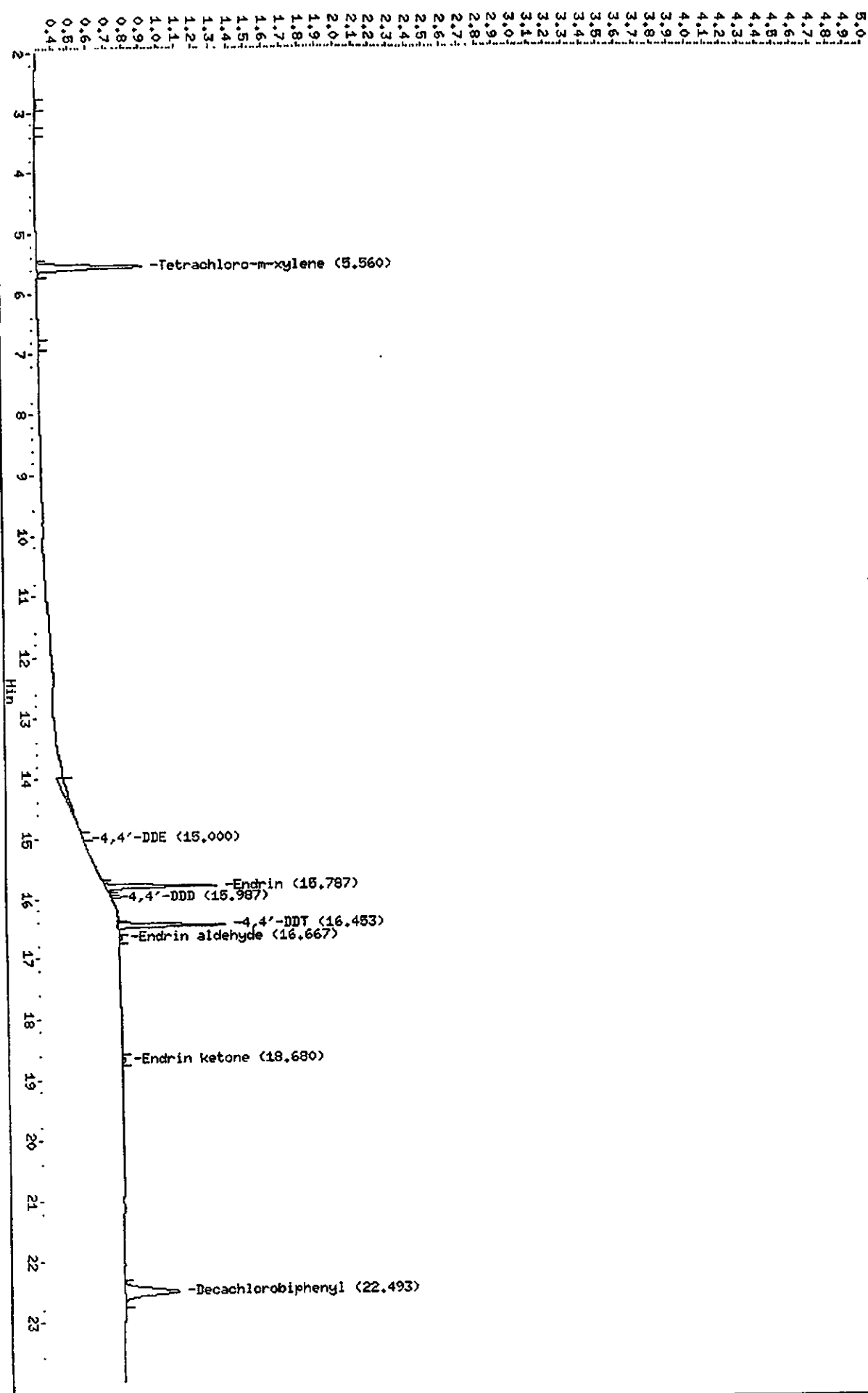
Data file : /var/chem/gc4.i/3060-G.b/d-a3156.d
 Lab Smp Id: EVALB
 Inj Date : 06-JUN-2000 17:44
 Operator : 1891 Inst ID: gc4.i
 Smp Info : EVALB,3060-G.b,,EVALBR.sub,,3,1
 Misc Info : 190-88-8
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: PEM
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: EVALBR.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	59514	0.01937	0.01937 (R)
16 4,4'-DDE	15.000	15.000	0.000	322	0.000105	0.0001053 (M)
20 Endrin	15.787	15.793	-0.006	62975	0.02349	0.02349 (M)
21 4,4'-DDD	15.987	15.953	0.034	0		(M)
23 4,4'-DDT	16.453	16.460	-0.007	60798	0.02356	0.02356 (M)
24 Endrin aldehyde	16.667	16.673	-0.006	1897	0.000854	0.0008542 (M)
27 Endrin ketone	18.680	18.693	-0.013	1949	0.000861	0.0008606
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	30578	0.01954	0.01954 (R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

DDT 0.5%
 ENDRIN 5.8%

Y (x10⁵)

/var/chem/gc04.1/3060-G.b/d-a3156.d

Column phase: DB608

Data File: /var/chem/gc04.1/3060-G.b/d-a3156.d
Date: 06-JUN-2000 17:44
Client ID:
Sample Info: EVALB,3060-G.b,EVAL BR,sub,,3,1

Instrument: gc04.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/3060-G.b/d-a3163.d
 Report Date: 07-Jun-2000 07:46

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3163.d
 Lab Smp Id: MEDA
 Inj Date : 06-JUN-2000 20:58
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDA,3060-G.b,,INDA.sub,,2,3
 Misc Info : 190-84-3
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.553	5.567	-0.014	74093	0.02500	0.02411
5 alpha-BHC	7.860	7.873	-0.013	85873	0.02500	0.02446
6 gamma-BHC (Lindane)	9.267	9.280	-0.013	75791	0.02500	0.02453
10 Heptachlor	10.533	10.553	-0.020	60035	0.02500	0.02388
15 Endosulfan I	14.507	14.513	-0.006	63161	0.02500	0.02413
17 Dieldrin	15.140	15.147	-0.007	71043	0.02500	0.02414
20 Endrin	15.787	15.793	-0.006	68670	0.02500	0.02562
21 4,4'-DDD	15.947	15.953	-0.006	65753	0.02500	0.02486
23 4,4'-DDT	16.453	16.460	-0.007	64116	0.02500	0.02485
25 Methoxychlor	18.253	18.267	-0.014	54606	0.05000	0.04938
\$ 30 Decachlorobiphenyl	22.487	22.513	-0.026	37795	0.02500	0.02415

660 348

Data File: /var/chem/gc4.1/3060-G.b/d-a3163.d

Date: 06-JUN-2000 20:58

Client ID:

Sample Info: HED, 3060-G.b, INDR.sub, 2,3

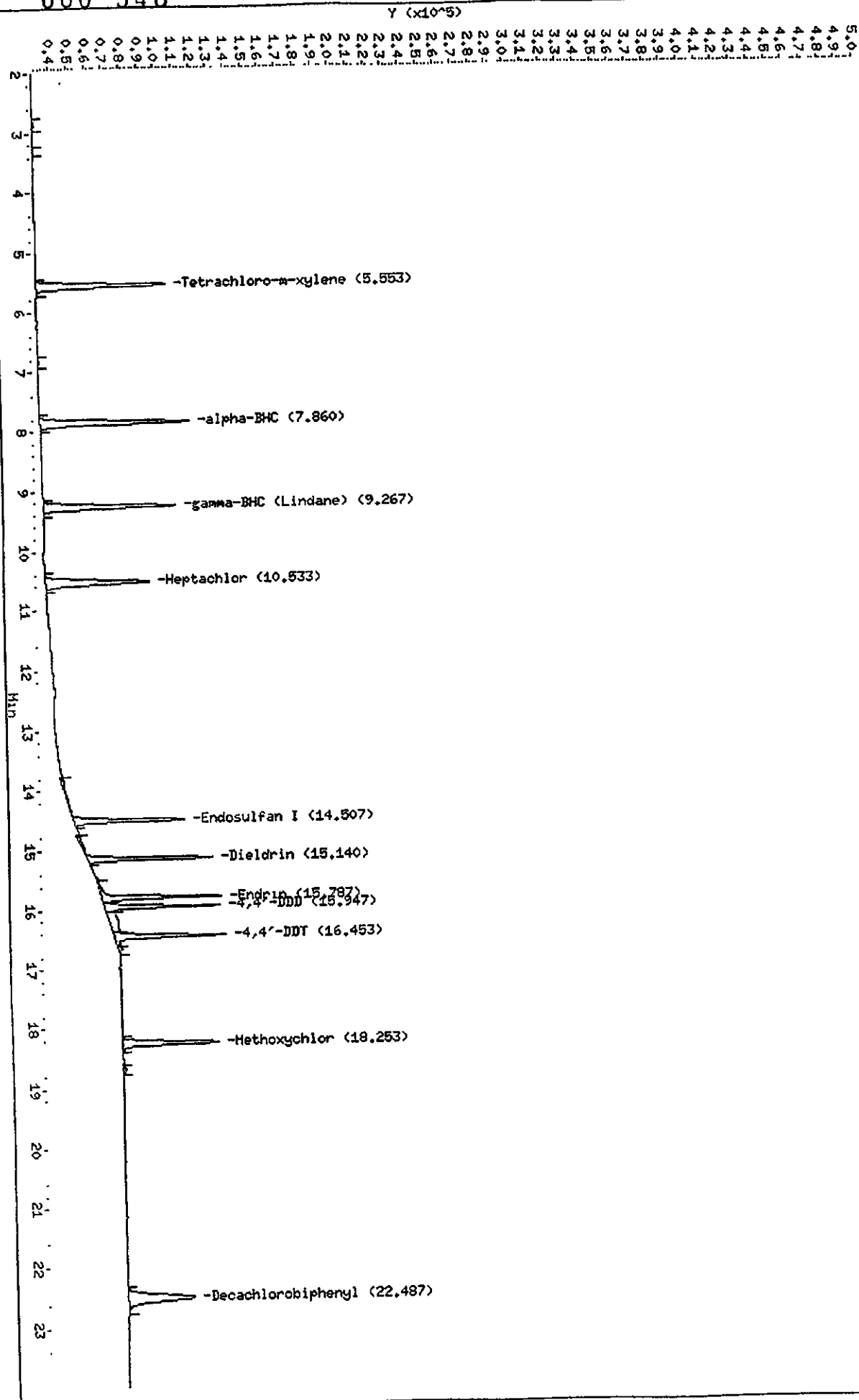
Column phase: DB608

Instrument: gc4.1

Operator: 1891

Column diameter: 0.53

/var/chem/gc4.1/3060-G.b/d-a3163.d/d-a3163.raw



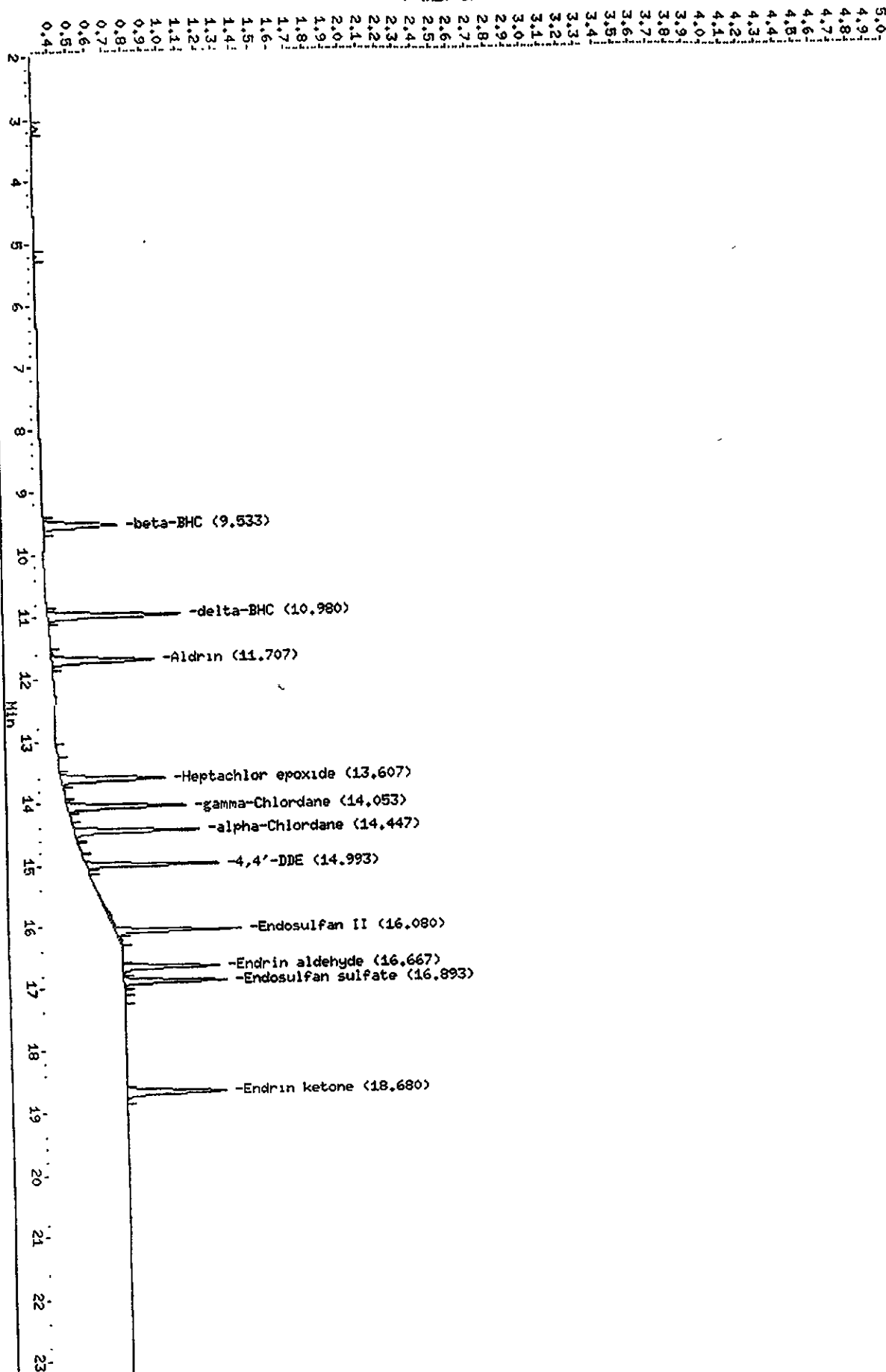
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 Report Date: 07-Jun-2000 07:46

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3164.d
 Lab Smp Id: MEDB
 Inj Date : 06-JUN-2000 21:26
 Operator : 1891
 Smp Info : MEDB,3060-G.b,,INDB.sub,,2,3
 Misc Info : 190-84-9
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g
 Cal Date : 06-JUN-2000 08:00
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc4.i
 Quant Type: ESTD
 Cal File: d-a3135.d
 Continuing Calibration Sample
 Compound Sublist: INDB.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AWT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	11.707	11.713	-0.006	56326	0.02500	0.02378
7 beta-BHC	9.533	9.547	-0.014	40264	0.02500	0.02382
8 delta-BHC	10.980	10.993	-0.013	73349	0.02500	0.02378
12 Heptachlor epoxide	13.607	13.620	-0.013	57252	0.02500	0.02377
13 gamma-Chlordane	14.053	14.060	-0.007	64517	0.02500	0.02379
14 alpha-Chlordane	14.447	14.453	-0.006	68418	0.02500	0.02385
16 4,4'-DDE	14.993	15.000	-0.007	72318	0.02500	0.02364
22 Endosulfan II	16.080	16.087	-0.007	68748	0.02500	0.02387
24 Endrin aldehyde	16.667	16.673	-0.006	53166	0.02500	0.02394
26 Endosulfan sulfate	16.893	16.900	-0.007	56296	0.02500	0.02441
27 Endrin ketone	18.680	18.693	-0.013	54550	0.02500	0.02409

Y (x10⁵)

Data File: /var/chem/gc4.i/3060-G.b/d-a3164.d
Date: 06-JUN-2000 21:26
Client ID:
Sample Info: HEDB.3060-G.b, IHDB.sub./2.3
Column phase: DB608

/var/chem/gc4.i/3060-G.b/d-a3164.d raw

Instrument: gc4.i
Operator: 1891
Column diameter: 0.53

**PESTICIDE
QC DATA**

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 465

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79F101

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157465

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
57-74-9	Chlordane (technical)	0.0050	U
72-20-8	Endrin	0.00050	U
76-44-8	Heptachlor	0.00050	U
1024-57-3	Heptachlor epoxide	0.00050	U
58-89-9	Lindane	0.00050	U
72-43-5	Methoxychlor	0.0010	U
8001-35-2	Toxaphene	0.020	U

Data File: /var/chem/gc4.i/3060-G.b/d-a3161.d
 Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3161.d
 Lab Smp Id: DE79F101 Client Smp ID: PBLK
 Inj Date : 06-JUN-2000 20:03
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DE79F101,3060-G.b,,PEST.sub,,3,
 Misc Info : F020191BLK
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

Concentration Formula: $\text{Amt} * \text{DF} * (\text{Vt}/\text{Vo})/\text{Vi}$

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT	RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
						(ng)	(mg/L)
5 alpha-BHC					Compound Not Detected		
4 HEXACHLORO BENZENE					Compound Not Detected.		
6 gamma-BHC (Lindane)					Compound Not Detected.		
7 beta-BHC					Compound Not Detected		
9 Chlordane					Compound Not Detected.		
10 Heptachlor					Compound Not Detected.		
8 delta-BHC					Compound Not Detected.		
11 Aldrin					Compound Not Detected.		
12 Heptachlor epoxide					Compound Not Detected.		
13 gamma-Chlordane					Compound Not Detected.		
14 alpha-Chlordane					Compound Not Detected.		
15 Endosulfan I					Compound Not Detected.		
16 4,4'-DDE					Compound Not Detected.		
17 Dieldrin					Compound Not Detected		
20 Endrin					Compound Not Detected.		
18 Toxaphene					Compound Not Detected.		

660 354

Data File: /var/chem/gc4.i/3060-G.b/d-a3161.d
 Report Date: 07-Jun-2000 07:52

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD				Compound Not Detected.		
22 Endosulfan II				Compound Not Detected		
23 4,4'-DDT				Compound Not Detected.		
24 Endrin aldehyde				Compound Not Detected.		
26 Endosulfan sulfate				Compound Not Detected		
25 Methoxychlor				Compound Not Detected.		
27 Endrin ketone				Compound Not Detected.		
\$ 1 Tetrachloro-m-xylene	5.553	5.567	-0.014	47823	0.01556	0.001556(aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	27352	0.01748	0.001748(aR)

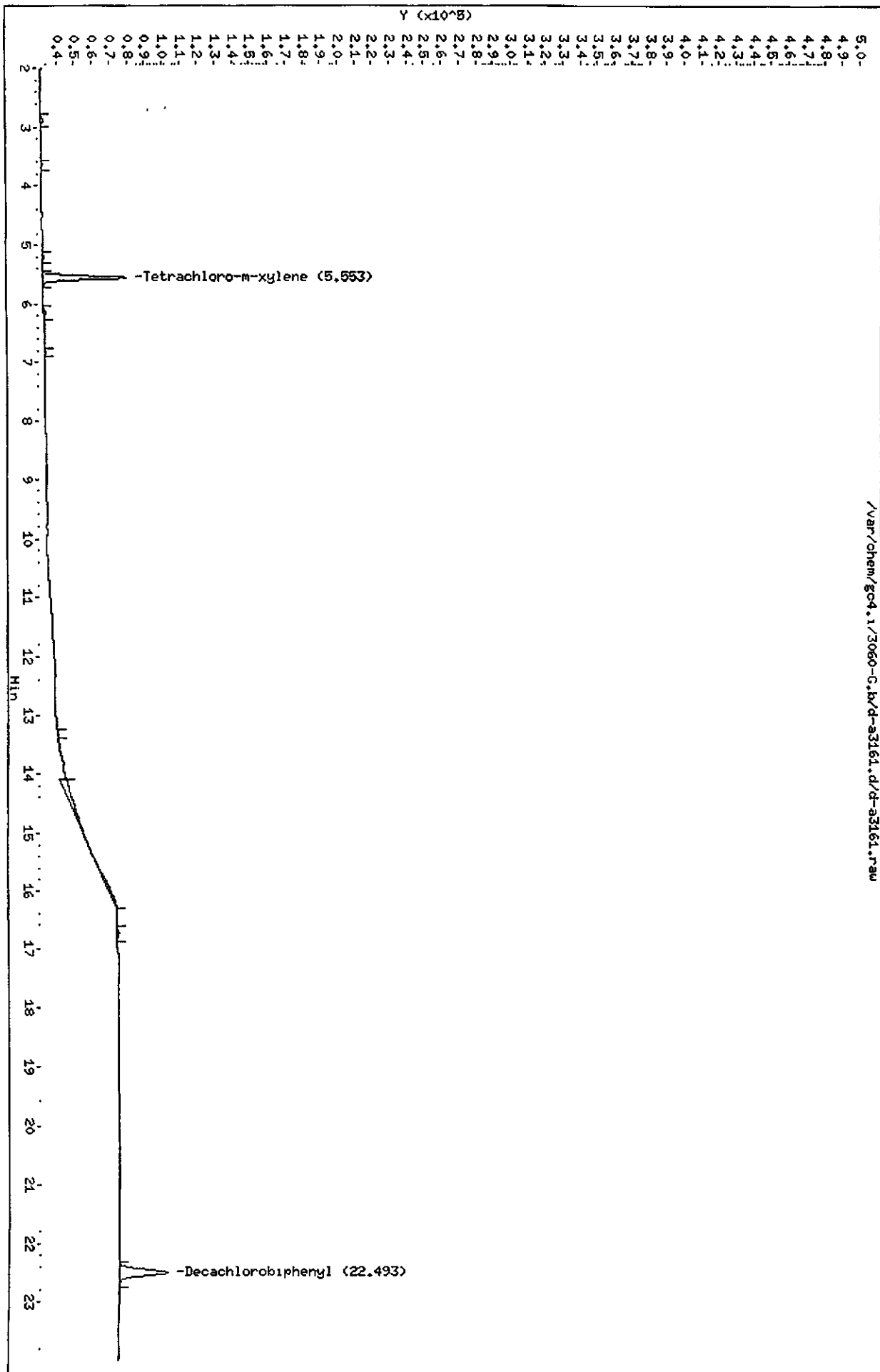
QC Flag Legend

- a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc4.1/3060-G,b/d-a3161.d
Date : 06-JUN-2000 20:03
Client ID: PBLK
Sample Info: DE79F101,3060-G,b,PST,sub,3,
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc4.i
Operator: 1891
Column diameter: 0.53

/var/chem/gc4.1/3060-G,b/d-a3161.d/d-a3161.raw



UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 465

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79F102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157465

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00236	
76-44-8	Heptachlor	0.00208	
1024-57-3	Heptachlor epoxide	0.00210	
58-89-9	Lindane	0.00176	
72-43-5	Methoxychlor	0.00226	

Data File: /var/chem/gc4.i/3060-G.b/d-a3162.d
Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3162.d
Lab Smp Id: DE79F102 Client Smp ID: LCS
Inj Date : 06-JUN-2000 20:30
Operator : 1891 Inst ID: gc4.i
Smp Info : DE79F102,3060-G.b,,PEST.sub,,3,
Misc Info : F020191LCS
Comment :
Method : /var/chem/gc4.i/3060-G.b/PESTA.m
Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PEST.sub
Target Version: 3.40

Concentration Formula: Amt * DF * (Vt/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.860	7.873	-0.013	50966	0.01452	0.001452 (a)
4 HEXACHLORO BENZENE	Compound Not Detected					
6 gamma-BHC (Lindane)	9.267	9.280	-0.013	54533	0.01765	0.001765 (aR)
7 beta-BHC	9.533	9.547	-0.014	35054	0.02073	0.002073 (a)
9 Chlordane	9.887	9.927	-0.040	272	0.23867	0.02387 (a)
10 Heptachlor	10.533	10.553	-0.020	52249	0.02078	0.002078 (aR)
8 delta-BHC	10.980	10.993	-0.013	4141	0.00134	0.0001342 (a)
11 Aldrin	11.707	11.713	-0.006	48116	0.02032	0.002032 (aR)
12 Heptachlor epoxide	13.607	13.620	-0.013	50594	0.02100	0.002100 (a)
13 gamma-Chlordane	14.053	14.060	-0.007	59013	0.02176	0.002176 (a)
14 alpha-Chlordane	14.447	14.453	-0.006	63779	0.02223	0.002223 (a)
15 Endosulfan I	14.500	14.513	-0.013	61668	0.02356	0.002356 (a)
16 4,4'-DDE	14.993	15.000	-0.007	68863	0.02251	0.002251 (a)
17 Dieldrin	15.140	15.147	-0.007	62706	0.02131	0.002131 (aR)
20 Endrin	15.787	15.793	-0.006	63166	0.02357	0.002356 (aR)
18 Toxaphene	Compound Not Detected.					

Data File: /var/chem/gc4.i/3060-G.b/d-a3162.d
 Report Date: 07-Jun-2000 07:52

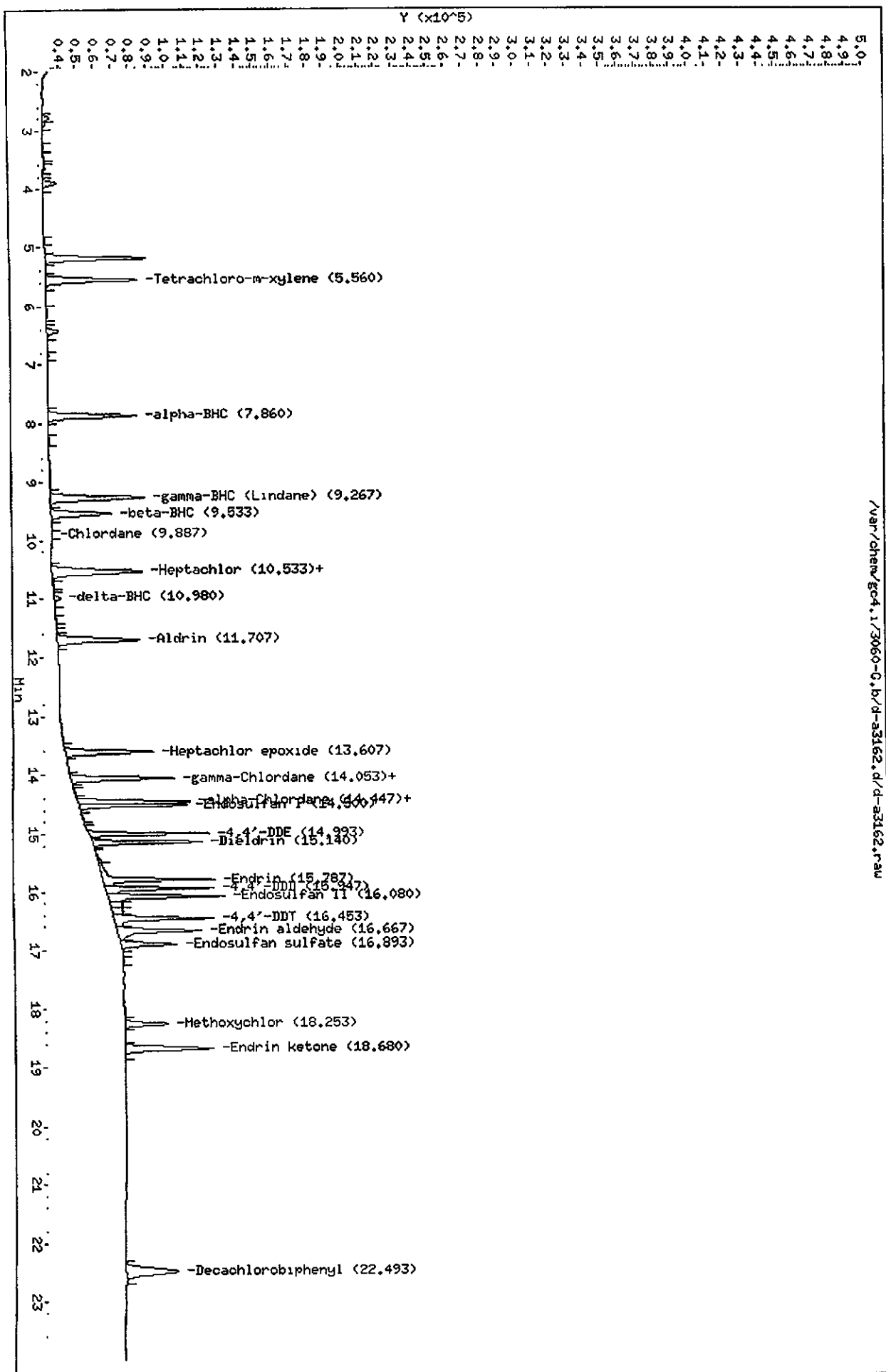
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD	15.947	15.953	-0.006	61298	0.02318	0.002318(a)
22 Endosulfan II	16.080	16.087	-0.007	66393	0.02306	0.002306(a)
23 4,4'-DDT	16.453	16.460	-0.007	56595	0.02193	0.002193(aR)
24 Endrin aldehyde	16.667	16.673	-0.006	48191	0.02170	0.002170(a)
26 Endosulfan sulfate	16.893	16.900	-0.007	31308	0.01358	0.001358(a)
25 Methoxychlor	18.253	18.267	-0.014	24972	0.02258	0.002258(a)
27 Endrin ketone	18.680	18.693	-0.013	50465	0.02228	0.002228(a)
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	52934	0.01723	0.001722(aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	29288	0.01872	0.001871(aR)

QC Flag Legend

- a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc4.1/3060-G.b/d-a3162.d
 Date : 06-JUN-2000 20:30
 Client ID: LCS
 Sample Info: DE79F102,3060-G.b,,PEST,sub,,3,
 Volume Injected (uL): 1.0
 Column phase: DB608

Instrument: gc4.1
 Operator: 1891
 Column diameter: 0.53



UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10P

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00208	
76-44-8	Heptachlor	0.00183	
1024-57-3	Heptachlor epoxide	0.00190	
58-89-9	Lindane	0.00157	
72-43-5	Methoxychlor	0.00212	

Data File: /var/chem/gc4.i/3060-G.b/d-a3158.d
 Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3158.d
 Lab Smp Id: DE44M10P Client Smp ID: DF/S1/0153/SDC/MS
 Inj Date : 06-JUN-2000 18:39
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DE44M10P,3060-G.b,,PEST.sub,,3,
 Misc Info : 020191001S
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * (Vt/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.860	7.873	-0.013	45125	0.01285	0.002285(a)
4 HEXACHLOROBBENZENE	Compound Not Detected.					
6 gamma-BHC (Lindane)	9.267	9.280	-0.013	48562	0.01572	0.001572(aR)
7 beta-BHC	9.533	9.547	-0.014	32267	0.01909	0.001908(a)
9 Chlordane	Compound Not Detected					
10 Heptachlor	10.533	10.553	-0.020	46120	0.01834	0.001834(aR)
8 delta-BHC	10.980	10.993	-0.013	3851	0.00125	0.0001248(a)
11 Aldrin	11.707	11.713	-0.006	42959	0.01814	0.001814(aR)
12 Heptachlor epoxide	13.607	13.620	-0.013	45724	0.01898	0.001898(a)
13 gamma-Chlordane	14.053	14.060	-0.007	53589	0.01976	0.001976(a)
14 alpha-Chlordane	14.453	14.453	0.000	57540	0.02006	0.002006(a)
15 Endosulfan I	14.500	14.513	-0.013	55223	0.02110	0.002110(a)
16 4,4'-DDE	14.993	15.000	-0.007	62507	0.02044	0.002044(a)
17 Dieldrin	15.140	15.147	-0.007	59147	0.02010	0.002010(aR)
20 Endrin	15.787	15.793	-0.006	55801	0.02082	0.002082(aR)
18 Toxaphene	Compound Not Detected					

Data File: /var/chem/gc4.i/3060-G.b/d-a3158.d
 Report Date: 07-Jun-2000 07:52

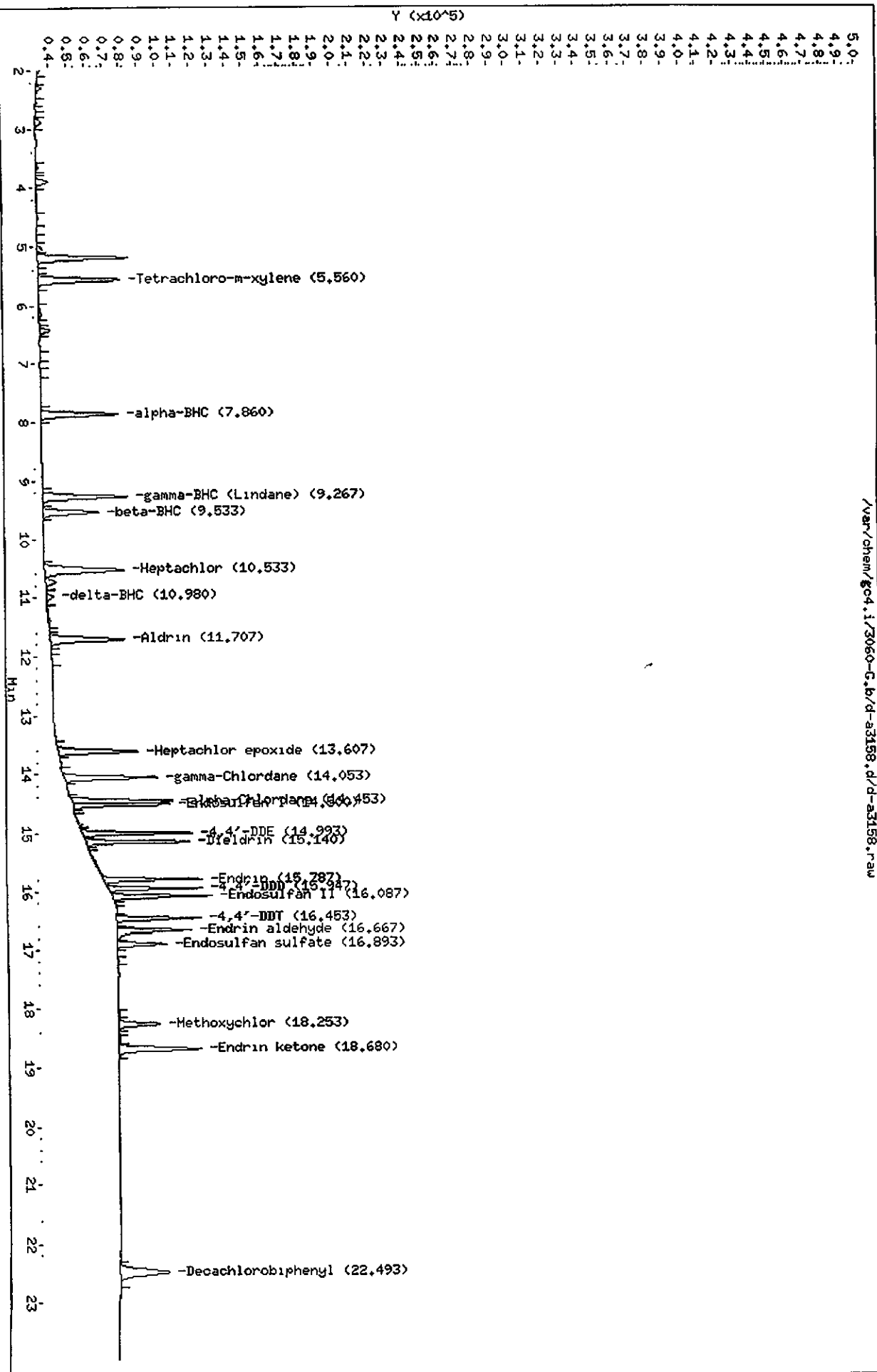
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
*****	**	=====	*****	*****	*****	*****
21 4,4'-DDD	15.947	15.953	-0.006	53277	0.02014	0.002014(a)
22 Endosulfan II	16.087	16.087	0.000	56734	0.01970	0.001970(a)
23 4,4'-DDT	16.453	16.460	-0.007	48095	0.01864	0.001864(aR)
24 Endrin aldehyde	16.667	16.673	-0.006	42451	0.01912	0.001912(a)
26 Endosulfan sulfate	16.893	16.900	-0.007	28395	0.01231	0.001231(a)
25 Methoxychlor	18.253	18.267	-0.014	23393	0.02116	0.002116(a)
27 Endrin ketone	18.680	18.693	-0.013	47032	0.02077	0.002077(a)
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	47512	0.01546	0.001546(aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	27830	0.01778	0.001778(aR)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc04.i/3060-G.b/d-a3158.d
 Date: 06-JUN-2000 18:39
 Client ID: DF/SL/0153/SID/MS
 Sample Info: DE44H10P,3060-G.b./PEST,sub,,3,
 Volume Injected (ul): 1.0
 Column phase: DB608

Instrument: gc04.1
 Operator: 1691
 Column diameter: 0.53



UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix. (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10Q

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157465

Client Sample Id: DF/S1/0153/SDC/006

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00207	
76-44-8	Heptachlor	0.00185	
1024-57-3	Heptachlor epoxide	0.00192	
58-89-9	Lindane	0.00158	
72-43-5	Methoxychlor	0.00216	

Data File: /var/chem/gc4.i/3060-G.b/d-a3159.d
 Report Date: 07-Jun-2000 07:52

STL-PITTSBURGH

Data file : /var/chem/gc4.i/3060-G.b/d-a3159.d
 Lab Smp Id: DE44M10Q Client Smp ID: DF/S1/0153/SDC/MSD
 Inj Date : 06-JUN-2000 19:07
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DE44M10Q,3060-G.b,,PEST.sub,,3,
 Misc Info : 020191001D
 Comment :
 Method : /var/chem/gc4.i/3060-G.b/PESTA.m
 Meth Date : 07-Jun-2000 07:46 g Quant Type: ESTD
 Cal Date : 06-JUN-2000 08:00 Cal File: d-a3135.d
 Als bottle: 1 QC Sample: MSD
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * (Vt/Vo)/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.860	7.873	-0.013	45350	0.01292	0.001292 (a)
4 HEXACHLOROBENZENE	Compound Not Detected.					
6 gamma-BHC (Lindane)	9.267	9.280	-0.013	48910	0.01583	0.001583 (aR)
7 beta-BHC	9.533	9.547	-0.014	32036	0.01895	0.001895 (a)
9 Chlordane	Compound Not Detected.					
10 Heptachlor	10.533	10.553	-0.020	46594	0.01853	0.001853 (aR)
8 delta-BHC	10.980	10.993	-0.013	3963	0.00128	0.0001285 (a)
11 Aldrin	11.707	11.713	-0.006	43182	0.01823	0.001823 (aR)
12 Heptachlor epoxide	13.607	13.620	-0.013	46132	0.01915	0.001915 (a)
13 gamma-Chlordane	14.053	14.060	-0.007	53775	0.01983	0.001983 (a)
14 alpha-Chlordane	14.447	14.453	-0.006	55791	0.01945	0.001945 (a)
15 Endosulfan I	14.500	14.513	-0.013	53860	0.02058	0.002058 (a)
16 4,4'-DDE	14.993	15.000	-0.007	63013	0.02060	0.002060 (a)
17 Dieldrin	15.140	15.147	-0.007	60169	0.02045	0.002044 (aR)
20 Endrin	15.787	15.793	-0.006	55457	0.02069	0.002069 (aR)
18 Toxaphene	Compound Not Detected.					

Data File: /var/chem/gc4.i/3060-G.b/d-a3159.d
 Report Date: 07-Jun-2000 07:52

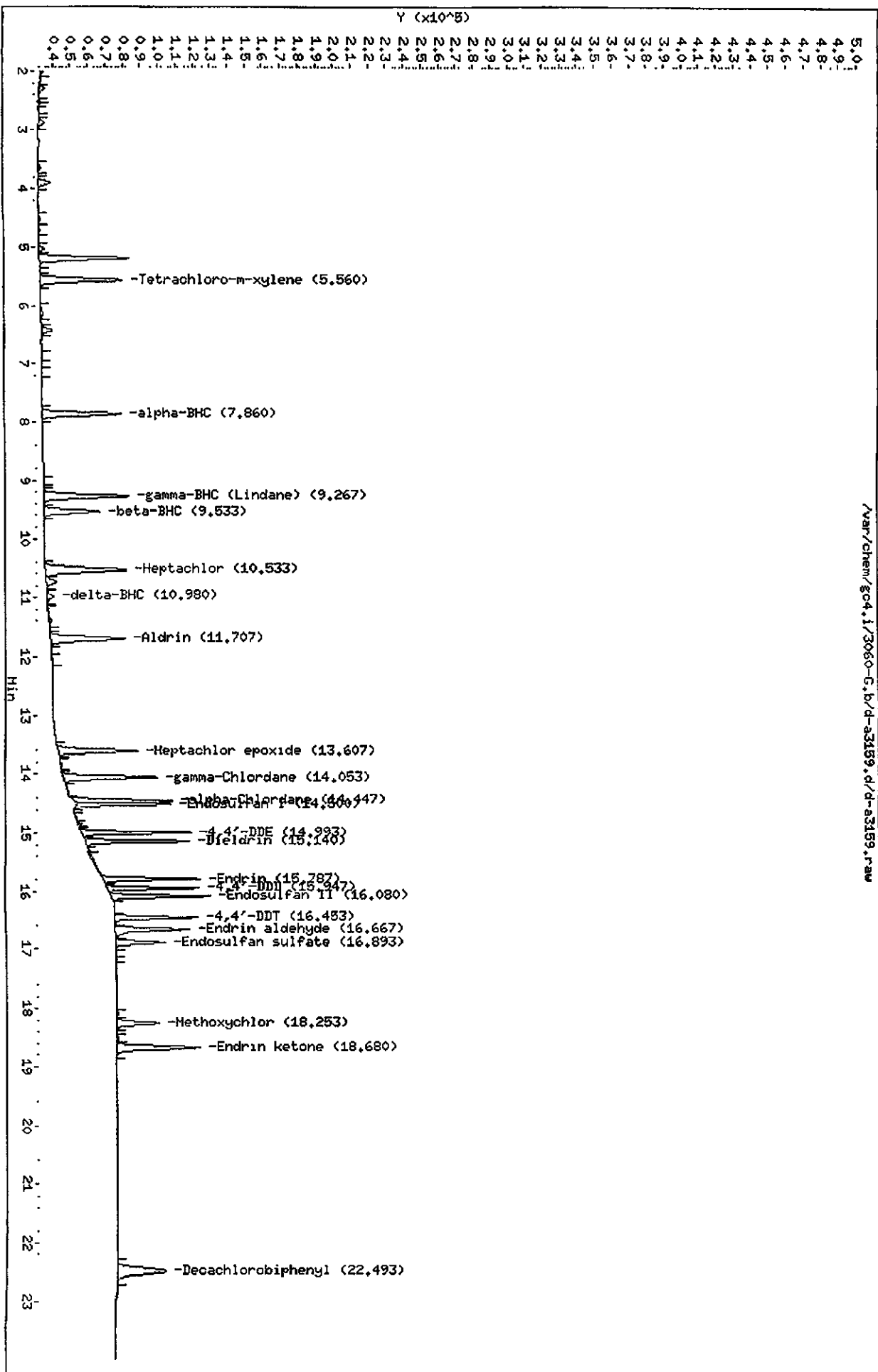
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD	15.947	15.953	-0.006	52527	0.01986	0.001986(a)
22 Endosulfan II	16.080	16.087	-0.007	56862	0.01975	0.001974(a)
23 4,4'-DDT	16.453	16.460	-0.007	48117	0.01865	0.001865(aR)
24 Endrin aldehyde	16.667	16.673	-0.006	42948	0.01934	0.001934(a)
26 Endosulfan sulfate	16.893	16.900	-0.007	28730	0.01246	0.001246(a)
25 Methoxychlor	18.253	18.267	-0.014	23861	0.02158	0.002158(a)
27 Endrin ketone	18.680	18.693	-0.013	47517	0.02098	0.002098(a)
\$ 1 Tetrachloro-m-xylene	5.560	5.567	-0.007	47268	0.01538	0.001538(aR)
\$ 30 Decachlorobiphenyl	22.493	22.513	-0.020	27931	0.01785	0.001785(aR)

QC Flag Legend

- a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation (BLOQ).
 R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc4.1/3060-G.b/d-a3159.d
 Date : 06-JUN-2000 19:07
 Client ID: DF/SI/0153/SDC/MSD
 Sample Info: DE44H10Q,3060-G.b,,PEST,sub,,3,
 Volume Injected (uL): 1.0
 Column phase: DB608

Instrument: gc4.1
 Operator: 1891
 Column diameter: 0.53



660 368

**PESTICIDE
MISCELLANEOUS**

0

B# 0157465

Committed to Your Success

STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238
412-820-8380

TRP

Hayans

5) 7.1.10

15A-16A

Clean up After You

Date Extraction Began	Date Completed	Parameter	Method	Solvent	Solvent Lot #	Source vials				
6-5-00	6-6-00	pH	35101	MREPL-3	108286	Baker				
Lot Number	Sample ID	Client ID	pH	Sample Volume (mL)	Final Volume (mL)	Surrogate Number	Surrogate Volume (mL)	Matrix Spike No.	Matrix Spike Volume (mL)	Cleanup Date
19E020191	BLB CPS	N/A	5	100	10.0	190-90-8	1.0	N/A	1.0	N/A
2.	001MS		5					N/A		
3.	001MSD		5					N/A		
4.	001		5					N/A		
5.	002		5					N/A		
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										
21.										
22.										
23.										
24.										
Analyst	Extract(s)	Extract(s) Received	Location	Date	Time	Analyst	Extract(s) Relinquished	Location	Date	Time
PY	PY	PY	KG	PY	PY	PY	PY	PY	PY	PY
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst	Location	Date	Time
A-28 A-2028	6-5-00	2015	F. Guadalupe	6-5-00	2025	F. Guadalupe	6-5-00	2025	6-5-00	2025
All Above	6-6-00	0406	R. Guadalupe	6-6-00	0740	R. Guadalupe	6-6-00	0740	6-6-00	0740
	010100	1530	J. Guadalupe	6-6-00	1530	J. Guadalupe	6-6-00	1530	6-6-00	1530
Sodium Sulfate Mfg.	Baker	Lot Number	NA8533	Reviewed By	Ker	Signature	Date	6-6-00		

TCLP (Method 1311)

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238
412/826-5477 FAX: 412/826-5571



QUA-4181

By Jeffrey O. Savant Date 6-4-00 Checked by Dr. Z. Meltz Filter lot # 85202010

Project Number

12820191
COF02013

Client Codes

367970, 399411

Serial Number 049 Log Book Number 96-M1-526

Date 6-4-00 pH Instrument Accumet AP91 Probe SN902050 Balance 294817

Solution Number 1 - Log Book Number 004497-12

Solution Number 2 - Log Book Number 95-09-220-33-1

Fluid Determination

TCLP Extraction

Sample ID	Wgt/Vol	Init. pH	Final pH	Extract Fluid #1, or #2	Conc.: HNO ₃ to Acidity (for Metals)	Sample ID	Wgt (g) Weighy	Fluid Vol.	Final pH After Tumbling
DE44M	50g / 6.5 ml	8.29	1.65	501#1	5 ml	18-TCLP 6-4-00	100.00g	2000 ml Glass	4.93
DE44Q	✓	8.73	1.62	↓	5 ml	2-DE44M	✓	✓	5.11
DE3F0	✓	9.86	6.93	501#2	5 ml	3-DE44M	✓	✓	5.06
DE3F2	✓	11.22	6.77	↓	5 ml	4-DE44Q	✓	✓	4.98
DE3F4	✓	6.96	2.43	501#1	✓	5-DE3F0	✓	✓	5.55
DE3F6	✓	10.30	2.52	✓	✓	6-DE3F2	✓	✓	6.00
DE3F7	✓	7.25	3.47	✓	✓	7-DE3F4	✓	✓	5.89
DE3F9	✓	7.44	1.59	✓	✓	8-DE3F6	✓	✓	6.44
DE3FC	✓	9.66	2.21	✓	✓	9-DE3F7	✓	✓	5.59
DE3FD	✓	11.19	1.76	✓	✓	10-DE3F9	✓	✓	5.15
	✓	✓	✓	✓	✓	11-DE3FC	✓	✓	6.28
	✓	✓	✓	✓	✓	12-DE3FD	✓	✓	5.40
	✓	✓	✓	✓	✓	13-TCLP 6-4-00	✓	✓	2.82

Extract(s)
(Record line number from above)

Extract(s) Received

Location

Date

Time

Analyst

Extract(s) Relinquished

All Above

6-4-00

Jeffrey O. Savant

Metals Inc

1025

Jeffrey O. Savant

* = Sample determined to have free-liquid, % solid determination was performed
<5 = Extraction Fluid No. 1 5.7 mL Glacial Acetic Acid dil 500 mL + 64.3 mL of 1N Na OH dil to 1L (pH 4.93 ± 0.05)
>5 = Extraction Fluid No. 2 5.7 mL Glacial Acetic Acid dil to 1L (pH 2.88 ± 0.05)

Room Temp 23°

Date/Time On	Date/Time Off	Agitation Apparatus RPMs
6-4-00 1330	6-5-00 0600	30 ± 2
6-4-00	pH Calibration	(4.0) (7.0) (10.0)
6-5-00		4.00 7.01 10.03
6-5-00		4.00 7.01 10.04

Turbochrom Sequence File : H:\ACQUIRE\MET_SEQ\3060-G.SEQ
 Created by : DE11/02/98 on : 6/5/00 17:21
 Edited by : JC06/06/00 on : 6/6/00 15:51
 Description : QUANTERRA PGH 8081 RUN ON GC#4 DB608/DB1701
 REVIEWED BY:

Number of Times Edited : 2

Sequence File Header Information:

Number of Rows : 32
 Instrument Type : 760 / 900 Series Intelligent Interface
 Injection Type : SINGLE

Row	Type	Sample Name	Sample Number	Sequence Sample Descriptions - Channel A			Dil. Factor	Mult	Divisor	Addend	Norm factor
				Study Name	Sample Amount	ISTD Amount					
1	Std Check	EVALB, 3060-G.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	0.000	100.000
2	Cal:Replace	MEDTOX, 3060-G.b	190-84-13		1.000	1.000	1.000	1.000	1.000	0.000	100.000
3	Cal:Replace	MEDCHLOR, 3060-G	190-85-10		1.000	1.000	1.000	1.000	1.000	0.000	100.000
4	Cal:Replace	LOWA, 3060-G.b,,	190-84-1		1.000	1.000	1.000	1.000	1.000	0.000	100.000
5	Cal:Replace	MLOWA, 3060-G.b,	190-84-2		1.000	1.000	1.000	1.000	1.000	0.000	100.000
6	Cal:Replace	MEDA, 3060-G.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	0.000	100.000
7	Cal:Replace	MHIGHA, 3060-G b	190-84-4		1.000	1.000	1.000	1.000	1.000	0.000	100.000
8	Cal:Replace	HIGHA, 3060-G.b,	190-84-5		1.000	1.000	1.000	1.000	1.000	0.000	100.000
9	Cal:Replace	LOWB, 3060-G b,,	190-84-7		1.000	1.000	1.000	1.000	1.000	0.000	100.000
10	Cal:Replace	MLOWB, 3060-G.b,	190-84-8		1.000	1.000	1.000	1.000	1.000	0.000	100.000
11	Cal:Replace	MEDB, 3060-G.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	0.000	100.000
12	Cal:Replace	MHIGHB, 3060-G.b	190-84-10		1.000	1.000	1.000	1.000	1.000	0.000	100.000
13	Cal:Replace	HIGHB, 3060-G.b,	190-84-11		1.000	1.000	1.000	1.000	1.000	0.000	100.000
14	Std Check	2ND A, 3060-G.b,	190-82-2		1.000	1.000	1.000	1.000	1.000	0.000	100.000
15	Std Check	2ND B, 3060-G.b,	190-82-5		1.000	1.000	1.000	1.000	1.000	0.000	100.000
16	Std Check	EVALB, 3060-G.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	0.000	100.000
17	Sample	DDNNA103, 3060-G	E250133001		1.000	1.000	1.000	1.000	1.000	0.000	100.000
18	Sample	DDNNA116, 3060-G	250133001S		1.000	1.000	1.000	1.000	1.000	0.000	100.000
19	Sample	DDNNA117, 3060-G	250133001S		1.000	1.000	1.000	1.000	1.000	0.000	100.000
20	Sample	DDTR3101, 3060-G	E250133BLK		1.000	1.000	1.000	1.000	1.000	0.000	100.000
21	Sample	DDTR3102, 3060-G	E250133LCS		1.000	1.000	1.000	1.000	1.000	0.000	100.000
22	Std Check	MEDA, 3060-G.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	0.000	100.000
23	Std Check	MEDB, 3060-G.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	0.000	100.000
24	Std Check	EVALB, 3060-G.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	0.000	100.000
25	Sample	DE44M104, 3060-G	F020191001		1.000	1.000	1.000	1.000	1.000	0.000	100.000
26	Sample	DE44M10P, 3060-G	020191001S		1.000	1.000	1.000	1.000	1.000	0.000	100.000
27	Sample	DE44M10Q, 3060-G	020191001D		1.000	1.000	1.000	1.000	1.000	0.000	100.000
28	Sample	DE44Q104, 3060-G	F020191002		1.000	1.000	1.000	1.000	1.000	0.000	100.000
29	Sample	DE79F101, 3060-G	F020191BLK		1.000	1.000	1.000	1.000	1.000	0.000	100.000
30	Sample	DE79F102, 3060-G	F020191LCS		1.000	1.000	1.000	1.000	1.000	0.000	100.000
31	Std Check	MEDA, 3060-G.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	0.000	100.000
32	Std Check	MEDB, 3060-G.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	0.000	100.000

Sequence Process Information - Channel A													
Row	Site	Rack	Vial	Inst Method	Process Method	Calib Method	Report Format	Raw File	Result File	Baseline File	Modified Raw File	Cal Rpt	Level Name
1	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A3123	D-A3123	-	D-A3123	-	-
2	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3124	D-A3124	-	D-A3124	N	MED
3	-	1	3	GEN4C	GEN4A	122190A	TOX	D-A3125	D-A3125	-	D-A3125	N	MED
4	-	1	4	GEN4C	GEN4A	122190A	INDA	D-A3126	D-A3126	-	D-A3126	N	LOW
5	-	1	5	GEN4C	GEN4A	122190A	INDA	D-A3127	D-A3127	-	D-A3127	N	MLOW
6	-	1	6	GEN4C	GEN4A	122190A	INDA	D-A3128	D-A3128	-	D-A3128	N	MLOW
7	-	1	7	GEN4C	GEN4A	122190A	INDA	D-A3129	D-A3129	-	D-A3129	N	MLOW
8	-	1	8	GEN4C	GEN4A	122190A	INDA	D-A3130	D-A3130	-	D-A3130	N	MLOW
9	-	1	9	GEN4C	GEN4A	122190A	INDA	D-A3131	D-A3131	-	D-A3131	N	LOW
10	-	1	10	GEN4C	GEN4A	122190A	INDA	D-A3132	D-A3132	-	D-A3132	N	MLOW
11	-	1	11	GEN4C	GEN4A	122190A	INDA	D-A3133	D-A3133	-	D-A3133	N	MLOW
12	-	1	12	GEN4C	GEN4A	122190A	INDA	D-A3134	D-A3134	-	D-A3134	N	MLOW
13	-	1	13	GEN4C	GEN4A	122190A	INDA	D-A3135	D-A3135	-	D-A3135	N	MLOW
14	-	1	23	GEN4C	GEN4A	122190A	INDA	D-A3136	D-A3136	-	D-A3136	-	-
15	-	1	24	GEN4C	GEN4A	122190A	INDA	D-A3137	D-A3137	-	D-A3137	-	-
16	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A3138	D-A3138	-	D-A3138	-	-
17	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A3143	D-A3143	-	D-A3143	-	-
18	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3144	D-A3144	-	D-A3144	-	-
19	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3145	D-A3145	-	D-A3145	-	-
20	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3146	D-A3146	-	D-A3146	-	-

660 372

21	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A3147	D-A3147	D-A3147	-	-	-	LPT1
22	-	1	6	GEN4C	GEN4A	122190A	INDA	D-A3148	D-A3148	D-A3148	-	-	-	LPT1
23	-	1	11	GEN4C	GEN4A	122190A	INDA	D-A3149	D-A3149	D-A3149	-	-	-	LPT1
24	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A3156	D-A3156	D-A3156	-	-	-	LPT1
25	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3157	D-A3157	D-A3157	-	-	-	LPT1, LPT1
26	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3158	D-A3158	D-A3158	-	-	-	LPT1, LPT1
27	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3159	D-A3159	D-A3159	-	-	-	LPT1, LPT1
28	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3160	D-A3160	D-A3160	-	-	-	LPT1, LPT1
29	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3161	D-A3161	D-A3161	-	-	-	LPT1, LPT1
30	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A3162	D-A3162	D-A3162	-	-	-	LPT1, LPT1
31	-	1	6	GEN4C	GEN4A	122190A	INDA	D-A3163	D-A3163	D-A3163	-	-	-	LPT1
32	-	1	11	GEN4C	GEN4A	122190A	INDA	D-A3164	D-A3164	D-A3164	-	-	-	LPT1

PSR024 6/05/00 13:37:05 NT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: PINOB

METHOD: QJ Pesticides (8081A)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8C,D CLP	DE44M-1-04	___	238317	399411	A-36-QJ	COF020191	001		SOLID	0	3
8C,D CLP	DE44Q-1-04	___	238318	399411	A-36-QJ	COF020191	002		SOLID	0	3

RELINQUISHED BY

RECEIVED BY

DATE/TIME

<i>P. Zushinski</i>	<i>P. Zushinski</i>	<i>6-5-00 1540</i>
<i>P. Zushinski</i>	<i>P. Zushinski</i>	<i>6-5-00 2230</i>

***** END OF REPORT *****

660 374

HERBICIDE DATA

**HERBICIDE
QC SUMMARY**

660 376

SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0F020191

	CLIENT ID.	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0153/SDC/006	75	00
02	DF/S1/0153/SDC/007	68	00
03	METHOD BLK. DE79P101	85	00
04	LCS DE79P102	91	00
05	DF/S1/0153/SDC/006 D	82	00
06	DF/S1/0153/SDC/006 S	81	00

SURROGATES
SRG01 = DCAA

QC LIMITS
(42-125)

- # Column to be used to flag recovery values
- * Values outside of required QC Limits
- D System monitoring Compound diluted out

FORM II

SW846 8151A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0F050000

WO #: DE79P102

BATCH: 0157466

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	0.160	0.135	84	28 - 136	
2,4,5-TP (Silvex)	0.0400	0.0356	89	50 - 128	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

660 378

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Lot #: C0F020191

WO #: DE44M10R

BATCH: 0157466

COMPOUND'	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
2,4-D	0.160	ND	0.152	95	35 - 133	
2,4,5-TP (Silvex)	0.0400	ND	0.0384	96	50 - 131	

NOTES (S) :

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: ___0___ out of ___0___ outside limits
Spike Recovery: ___0___ out of ___2___ outside limits

COMMENTS:

FORM III

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0153/SDC/006

Lot #: C0F020191

WO #: DE44M10T

BATCH: 0157466

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD		QC LIMITS		QUAL
			% REC	% RPD	RPD	REC	
2,4-D	0.160	0.153	96	1.2	20	35 - 133	
2,4,5-TP (Silvex)	0.0400	0.0388	97	1.0	20	50 - 131	

NOTES(S) :

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits

RPD: 0 out of 2 outside limits
 Spike Recovery: 0 out of 2 outside limits

COMMENTS:

660 380

SW846 8151A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE79P101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: a-a30176.

Lot Number: C0F020191

Matrix: SOLID

Extraction Method:

Date Extracted: 06/05/00

Date Analyzed(1): 06/06/00

Date Analyzed(2): N/A

Time Analyzed(1): 17:51

Time Analyzed(2): N/A

Instrument ID(1): A/B

Instrument ID(2): N/A

GC Column(1): DB5/DB1701 ID: 053 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	DF/S1/0153/SDC/006	DE44M10R S	06/06/00	N/A
02	DF/S1/0153/SDC/006	DE44M10T D	06/06/00	N/A
03	DF/S1/0153/SDC/006	DE44M105	06/06/00	N/A
04	DF/S1/0153/SDC/007	DE44Q105	06/06/00	N/A
05	CHECK SAMPLE	DE79P102 C	06/06/00	N/A
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

**HERBICIDE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M105

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

Data File: /var/chem/gc1.i/3010c.b/a-a30172.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30172.d
 Lab Smp Id: DE44M105 Client Smp ID: DF/S1/0153/SDC/006
 Inj Date : 06-JUN-2000 15:54
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE44M105,3010c.b
 Misc Info : 020191001
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 12
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: $\text{Amt} * \text{DF} * 20 * \text{Vt} / \text{Vo} / \text{Vi}$

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON				Compound Not Detected.		
\$ 2 DCAA	10.598	10.592	0.006	9977286	0.03774	0.07548 (a)
3 MCPP				Compound Not Detected.		
4 DICAMBA				Compound Not Detected.		
5 MCPA				Compound Not Detected.		
6 DICHLOROPROP				Compound Not Detected.		
7 2,4-D				Compound Not Detected.		
8 PENTACHLOROPHENOL				Compound Not Detected.		
9 2,4,5-TP(SILVEX)				Compound Not Detected.		
10 2,4,5-T				Compound Not Detected.		
11 DINOSEB				Compound Not Detected.		
12 2,4-DB	18.538	18.576	-0.038	1286345	0.00809	0.01617 (a)

660 384

Data File: /var/chem/gc1.i/3010c.b/a-a30172.d

Report Date: 07-Jun-2000 07:08

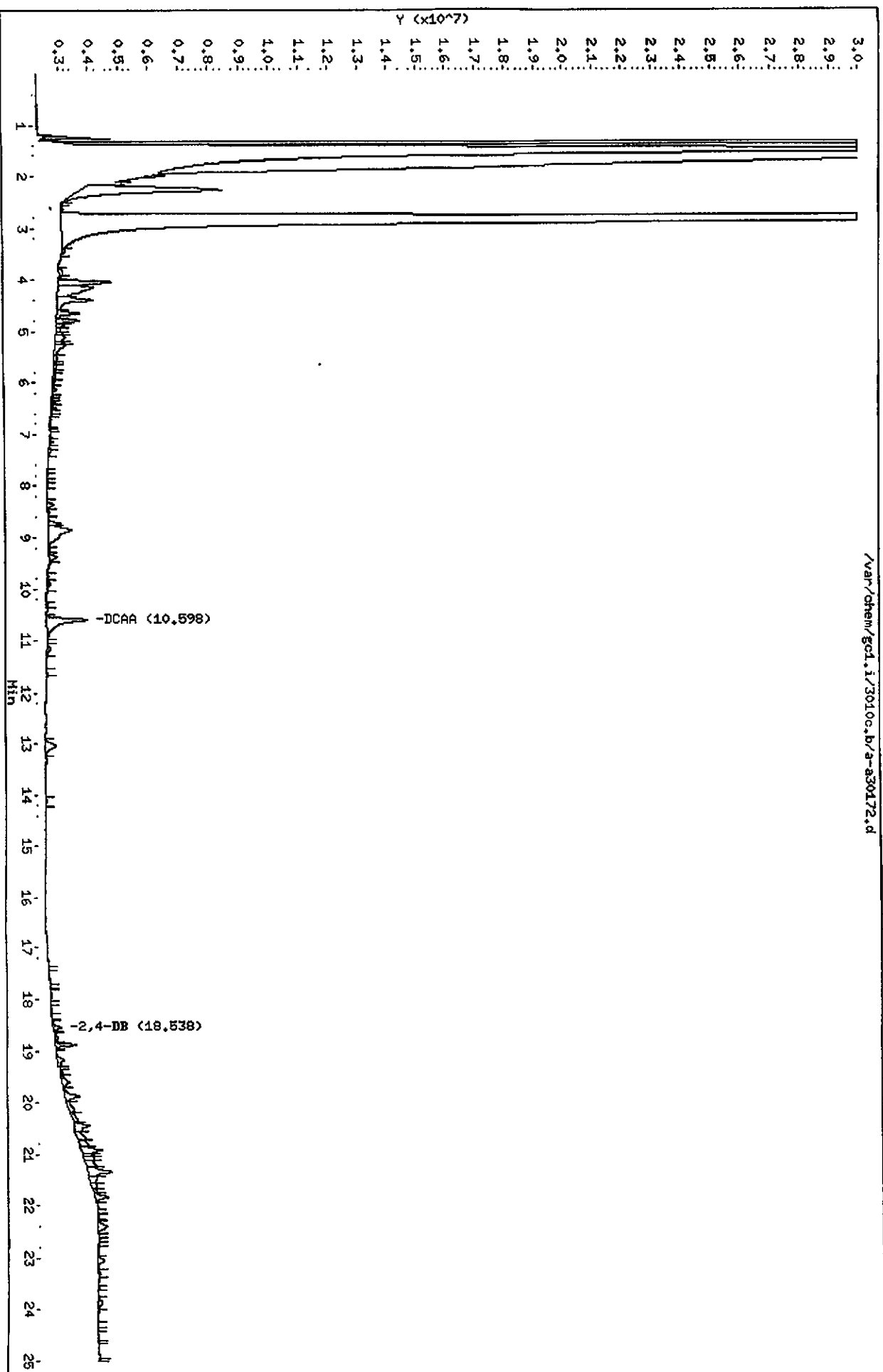
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

.

Date File: /var/chem/gc1.i/3010c.b/a-a30172.d
Date : 06-JUN-2000 15:54
Client ID: DF/SL/0153/SDC/006
Sample Info: DE44H105.3010c.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53



UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 002

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44Q105

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 16

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/007

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

Data File: /var/chem/gc1.i/3010c.b/a-a30175.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30175.d
 Lab Smp Id: DE44Q105 Client Smp ID: DF/S1/0153/SDC/007
 Inj Date : 06-JUN-2000 17:21
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE44Q105,3010c.b
 Misc Info : 020191002
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 15
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON				Compound Not Detected.		
\$ 2 DCAA	10.597	10.592	0.005	8930727	0.03378	0.06756(a)
3 MCPP				Compound Not Detected		
4 DICAMBA				Compound Not Detected.		
5 MCPA				Compound Not Detected.		
6 DICHLOROPROP				Compound Not Detected.		
7 2,4-D				Compound Not Detected.		
8 PENTACHLOROPHENOL				Compound Not Detected		
9 2,4,5-TP(SILVEX)				Compound Not Detected.		
10 2,4,5-T	17.896	17.905	-0.009	798589	0.000688	0.001376(a)
11 DINOSEB				Compound Not Detected.		
12 2,4-DB	18.539	18.576	-0.037	1237081	0.00778	0.01555(a)

660 388

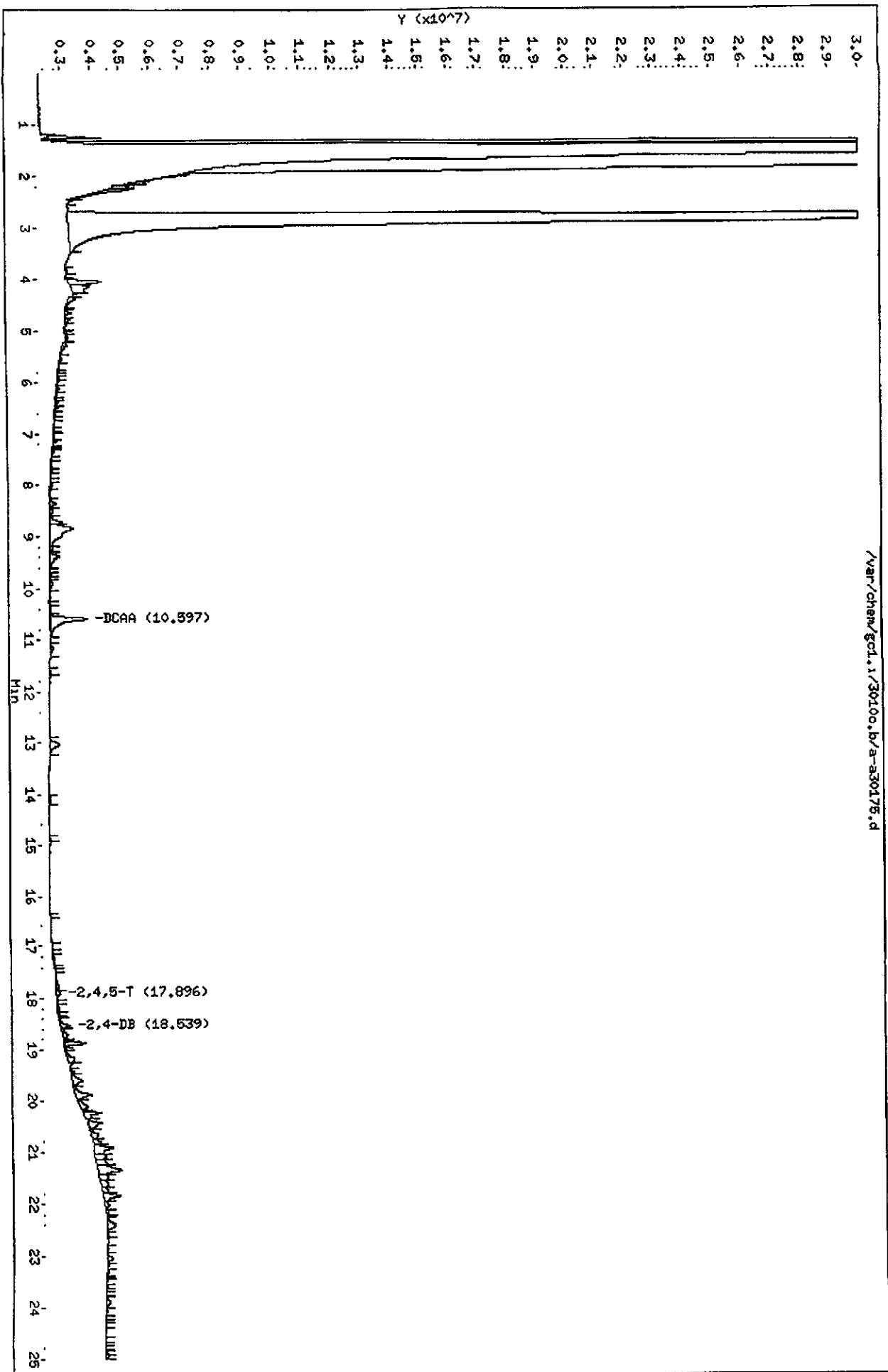
Data File: /var/chem/gc1.i/3010c.b/a-a30175.d
Report Date: 07-Jun-2000 07:08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gc1.1/3010c.b/a-a30175.d
Date: 06-JUN-2000 17:21
Client ID: DF/SL/0153/SDC/007
Sample Info: DE44Q105.3010c.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.1
Operator: 01797
Column diameter: 0.53



**HERBICIDE
CALIBRATION DATA**

61
68801A

660 391

660 392

Report Date : 06-Jun-2000 12:48

61)
HP68901A
DB608

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc1.i/3010c.b/LONGH.m
 Quant Method : ESTD
 Last Update : 06-Jun-2000 12:48
 Data Type : GC MULTI COMP

Target Version : 3.40
 Number of Cpnds : 12

Global Integrator : Falcon
 Chromat Events

Values

 Initial:Start Threshold 3608.000000
 Initial:End Threshold 1804.000000
 Initial:Area Threshold 36080.000000
 Initial:P-P Resolution 1.000000
 Initial:Bunch Factor 10.000000
 Initial:Negative Peaks ON
 Initial:Tension 0.200000

Compound	RT	RT Window	RF
1 DALAPON	3.735	3.665-3.805	8.113e+07
\$ 2 DCAA	10.592	10.522-10.662	2.644e+08
3 MCPP	11.029	10.959-11.099	3.795e+05
4 DICAMBA	11.206	11.136-11.276	1.923e+08
5 MCPA	11.996	11.926-12.066	4.459e+05
6 DICHLOROPROP	12.829	12.759-12.899	4.918e+07
7 2,4-D	14.345	14.275-14.415	3.176e+08
8 PENTACHLOROPHENOL	15.566	15.496-15.636	4.766e+08
9 2,4,5-TP (SILVEX)	16.789	16.719-16.859	1.450e+09
10 2,4,5-T	17.905	17.835-17.975	1.161e+09
11 DINOSEB	18.081	18.011-18.151	1.143e+09
12 2,4-DB	18.576	18.506-18.646	1.591e+08

Report Date : 01-Jun-2000 09:40

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-2000 15:39
 End Cal Date : 31-MAY-2000 17:35
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc1.i/3010c.b/LONGH.m
 Cal Date : 01-Jun-2000 09:40 g
 Curve Type : Average

Calibration File Names:

Level 1: /var/chem/gc1.i/3010c.b/a-a30095.d
 Level 2: /var/chem/gc1.i/3010c.b/a-a30096.d
 Level 3: /var/chem/gc1.i/3010c.b/a-a30097.d
 Level 4: /var/chem/gc1.i/3010c.b/a-a30098.d
 Level 5: /var/chem/gc1.i/3010c.b/a-a30099.d

	0.00500	0.01000	0.02500	0.05000	0.10000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
1 DALAPON	75123545	73457045	87657927	84486800	84919523	81128968	7.873
3 MCPP	478740	439600	420373	317835	240994	379508	25.722<-
4 DICAMBA	165590849	167983099	212810941	206767098	208554000	192341197	12.190
5 MCPA	557498	513916	485004	371683	301577	445936	23.771<-
6 DICHLOROPROP	43086745	44208538	54945153	53150694	50505395	49179305	10.789
7 2,4-D	286698910	290203906	351534771	338129788	321405621	317594599	9.034
8 PENTACHLOROPHENOL	379116541	390910714	507677162	547355921	557836052	476579278	17.994
9 2,4,5-TP(SILVEX)	1.258e+09	1.248e+09	1.566e+09	1.578e+09	1.602e+09	1.450e+09	12.450
10 2,4,5-T	955456926	1.035e+09	1.237e+09	1.281e+09	1.297e+09	1.161e+09	13.396
11 DINOSEB	1.035e+09	1.075e+09	1.244e+09	1.183e+09	1.178e+09	1.143e+09	7.470
12 2,4-DB	189281991	154931517	156059302	150202692	144834186	159061938	10.981
\$ 2 DCAA	252824554	245658612	291601269	273605135	258217200	264381354	6.944

Ave = 13.2

660 394

Data File: /var/chem/gcl.i/3010c.b/a-a30162.d
 Report Date: 06-Jun-2000 12:47

7E HP68901A
 DB608

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcl.i
 Lab File ID: a-a30162.d
 Analysis Type:
 Lab Sample ID: Mherb
 Quant Type: ESTD

Injection Date: 06-JUN-2000 11:03
 Init. Calibration Date(s): 05/31/0 05/31/0
 Init. Calibration Times: 15:39 17:35
 Method File: /var/chem/gcl.i/3010c.b/LONGH.m

COMPOUND	RRF	RFO	MIN	MAX
-----	----	-----	----	-----
1 DALAPON	81128968.058	78987813.212	0.010	2.6 15.0
\$ 2 DCAA	264381354.029	255158237.368	0.010	3.5 15.0
3 MCPP	379508.258	377046.127	0.010	0.6 15.0
4 DICAMBA	192341197.271	185018470.588	0.010	3.8 15.0
5 MCPA	445935.512	442403.154	0.010	0.8 15.0
6 DICHLOROPROP	49179305.144	46687665.094	0.010	5.1 15.0
7 2,4-D	317594599.103	299179659.224	0.010	5.8 15.0
8 PENTACHLOROPHENOL	476579278.010	454125751.880	0.010	4.7 15.0
9 2,4,5-TP (SILVEX)	1450398976.265	1374913175.355	0.010	5.2 15.0
10 2,4,5-T	1160890209.212	1046151042.654	0.010	9.9 15.0
11 DINOSZB	1142854655.953	1152804645.669	0.010	-0.9 15.0
12 2,4-DB	159061937.516	135825408.284	0.010	14.6 15.0

Data File: /var/chem/gc1.i/3010c.b/a-a30178.d
 Report Date: 07-Jun-2000 07:06

7E HP68901A
 DB608

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc1.i
 Lab File ID: a-a30178.d
 Analysis Type:
 Lab Sample ID: Mherb
 Quant Type: ESTD

Injection Date: 06-JUN-2000 18:49
 Init. Calibration Date(s): 05/31/0 05/31/0
 Init. Calibration Times: 15:39 17:35
 Method File: /var/chem/gc1.i/3010c.b/LONGH.m

COMPOUND	RRF	RFO	MIN	MAX
RRF	RFO	RRF	%D	%D
1 DALAPON	81128968.058	88620751.708	0.010	-9.2 15.0
2 DCAA	264381354.029	288710293.772	0.010	-9.2 15.0
3 MCPP	379508.258	408548.592	0.010	-7.7 15.0
4 DICAMBA	192341197.271	207363458.824	0.010	-7.8 15.0
5 MCPA	445935.512	476627.570	0.010	-6.9 15.0
6 DICHLOROPROP	49179305.144	52667948.113	0.010	-7.1 15.0
7 2,4-D	317594599.103	343023772.033	0.010	-8.0 15.0
8 PENTACHLOROPHENOL	476579278.010	507780263.158	0.010	-6.5 15.0
9 2,4,5-TP(SILVEX)	1450398976.265	1551427251.185	0.010	-7.0 15.0
10 2,4,5-T	1160890209.212	1195923270.142	0.010	-3.0 15.0
11 DINOSEB	1142854655.953	1324333700.787	0.010	-15.9 15.0
12 2,4-DB	159061937.516	150511786.982	0.010	5.4 15.0

N/A

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0F020191

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 05/31/00 05/31/00

Instrument ID: GC1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION S1 : 10.59					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
=====	=====	=====	=====	=====	=====
01	LHERB	05/31/00	1539	10.60	
02	MLHERB	05/31/00	1608	10.60	
03	MHERB	05/31/00	1637	10.60	
04	MHHERB	05/31/00	1706	10.59	
05	HHERB	05/31/00	1735	10.59	
06	MHERB	06/06/00	1103	10.59	
07	DF/S1/0153/S DE44M105	06/06/00	1554	10.60	
08	DF/S1/0153/S DE44M10R	06/06/00	1623	10.59	
09	DF/S1/0153/S DE44M10T	06/06/00	1652	10.60	
10	DF/S1/0153/S DE44Q105	06/06/00	1721	10.60	
11	PBLK	06/06/00	1751	10.60	
12	LCS	06/06/00	1820	10.59	
13	MHERB	06/06/00	1849	10.59	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

S1 = DCAA

QC LIMITS
(+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /var/chem/gc1.i/3010c.b/a-a30095.d
 Report Date: 01-Jun-2000 12:38

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30095.d
 Lab Smp Id: Lherb
 Inj Date : 31-MAY-2000 15:39
 Operator : 01797
 Smp Info : Lherb,3010c.b
 Misc Info : 190-80-1
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 01-Jun-2000 11:27 derubeij
 Cal Date : 31-MAY-2000 15:39
 Als bottle: 2
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

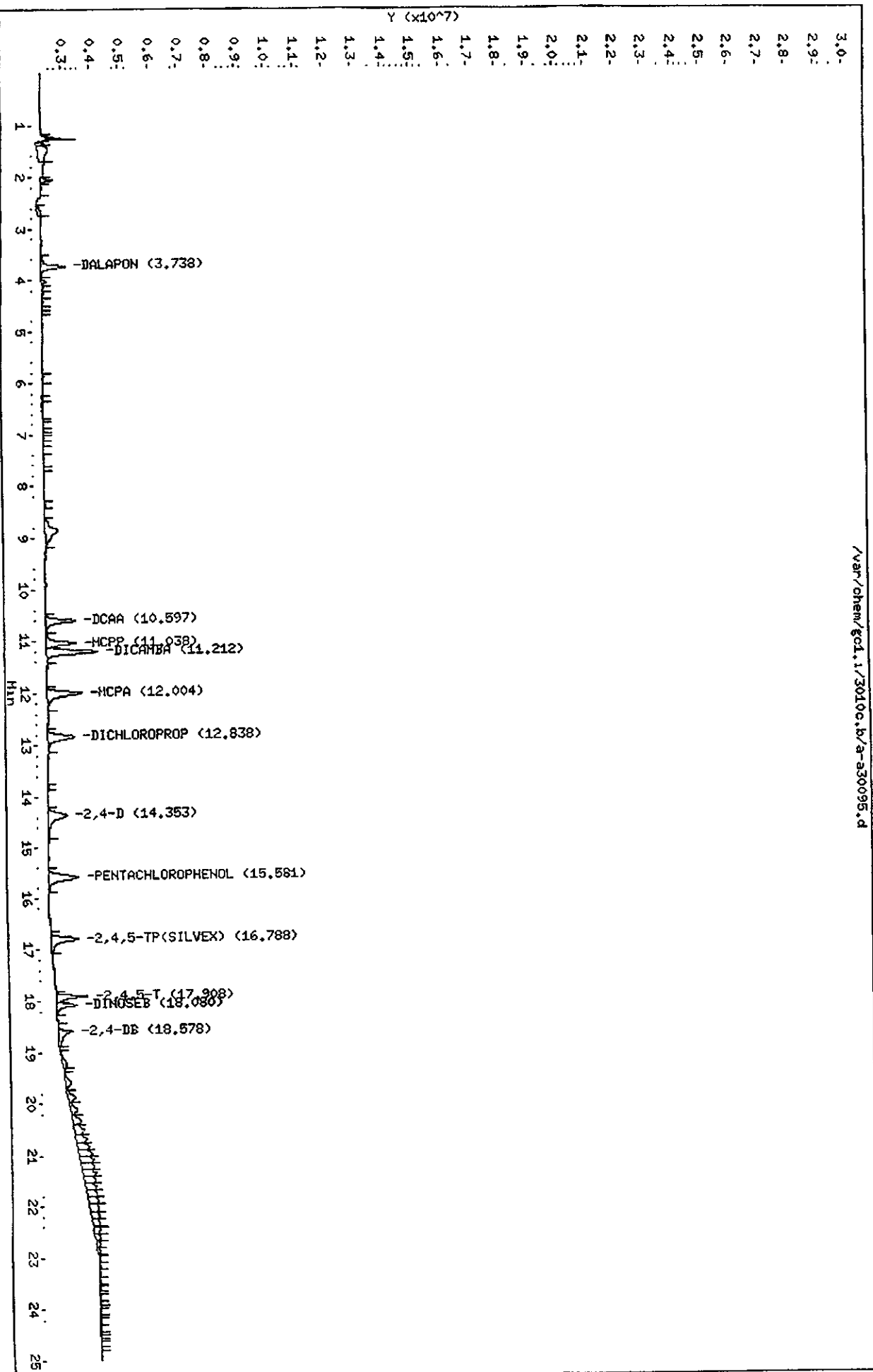
Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30095.d
 Calibration Sample, Level: 1
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
1 DALAPON	3.738	3.740	-0.002	826359	0.01100	0.01015
\$ 2 DCAA	10.597	10.596	0.001	5385163	0.02130	0.01978
3 MCPP	11.038	11.036	0.002	1014928	2.12000	2.258
4 DICAMBA	11.212	11.212	0.000	1755263	0.01060	0.009277
5 MCPA	12.004	12.001	0.003	1193046	2.14000	2.289
6 DICHLOROPROP	12.838	12.834	0.004	913439	0.02120	0.01864
7 2,4-D	14.353	14.347	0.006	6049347	0.02110	0.01896
8 PENTACHLOROPHENOL	15.581	15.577	0.004	1008450	0.00266	0.002274
9 2,4,5-TP(SILVBK)	16.788	16.795	-0.007	6603587	0.00525	0.004677
10 2,4,5-T	17.908	17.907	0.001	5035258	0.00527	0.004594
11 DINOSEB	18.080	18.079	0.001	3282480	0.00317	0.002880
12 2,4-DB	18.578	18.578	0.000	3993850	0.02110	0.02313

Data File: /var/chem/gc1.1/3010c.b/a-a30095.d
Date: 31-MAY-2000 15:39
Client ID:
Sample Info: Lherb,3010c.b

Column phase: DB608

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53



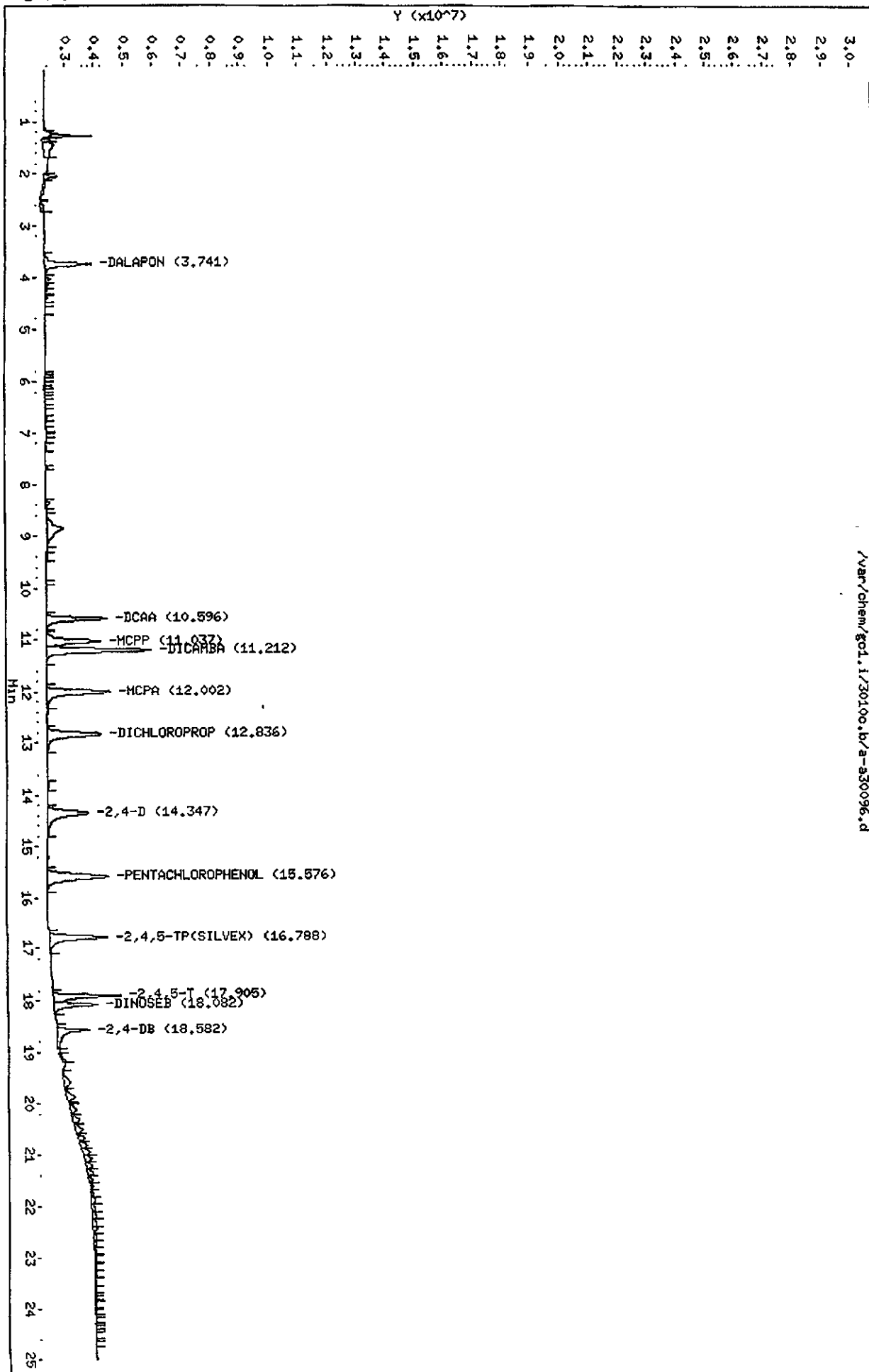
Data File: /var/chem/gc1.i/3010c.b/a-a30096.d
 Report Date: 01-Jun-2000 12:38

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30096.d
 Lab Smp Id: MLherb
 Inj Date : 31-MAY-2000 16:08
 Operator : 01797
 Smp Info : MLherb,3010c.b
 Misc Info : 190-80-2
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 01-Jun-2000 11:27 derubeij
 Cal Date : 31-MAY-2000 15:39
 Als bottle: 3
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30095.d
 Calibration Sample, Level: 2
 Compound Sublist: all.sub

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.741	3.740	0.001	1616055	0.02200	0.02052
\$ 2 DCAA	10.596	10.596	0.000	10440491	0.04250	0.03964
3 MCPP	11.037	11.036	0.001	1872698	4.26000	4.197
4 DICAMBA	11.212	11.212	0.000	3578040	0.02130	0.01964
5 MCPA	12.002	12.001	0.001	2199559	4.28000	4.240
6 DICHLOROPROP	12.836	12.834	0.002	1874442	0.04240	0.03953
7 2,4-D	14.347	14.347	0.000	12333666	0.04250	0.03985
8 PENTACHLOROPHENOL	15.576	15.577	-0.001	2079645	0.00532	0.004883
9 2,4,5-TP(SILVEX)	16.788	16.795	-0.007	13108624	0.01050	0.009657
10 2,4,5-T	17.905	17.907	-0.002	10864238	0.01050	0.01010
11 DINOSEB	18.082	18.079	0.003	6824911	0.00635	0.006104
12 2,4-DB	18.582	18.578	0.004	6538110	0.04220	0.03921



Data File: /var/chem/gc1.i/3010c.b/a-s30096.d
Date: 31-MAY-2000 16:08
Client ID:
Sample Info: MLherb,3010c.b
Column phase: DB608

/var/chem/gc1.i/3010c.b/a-s30096.d

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

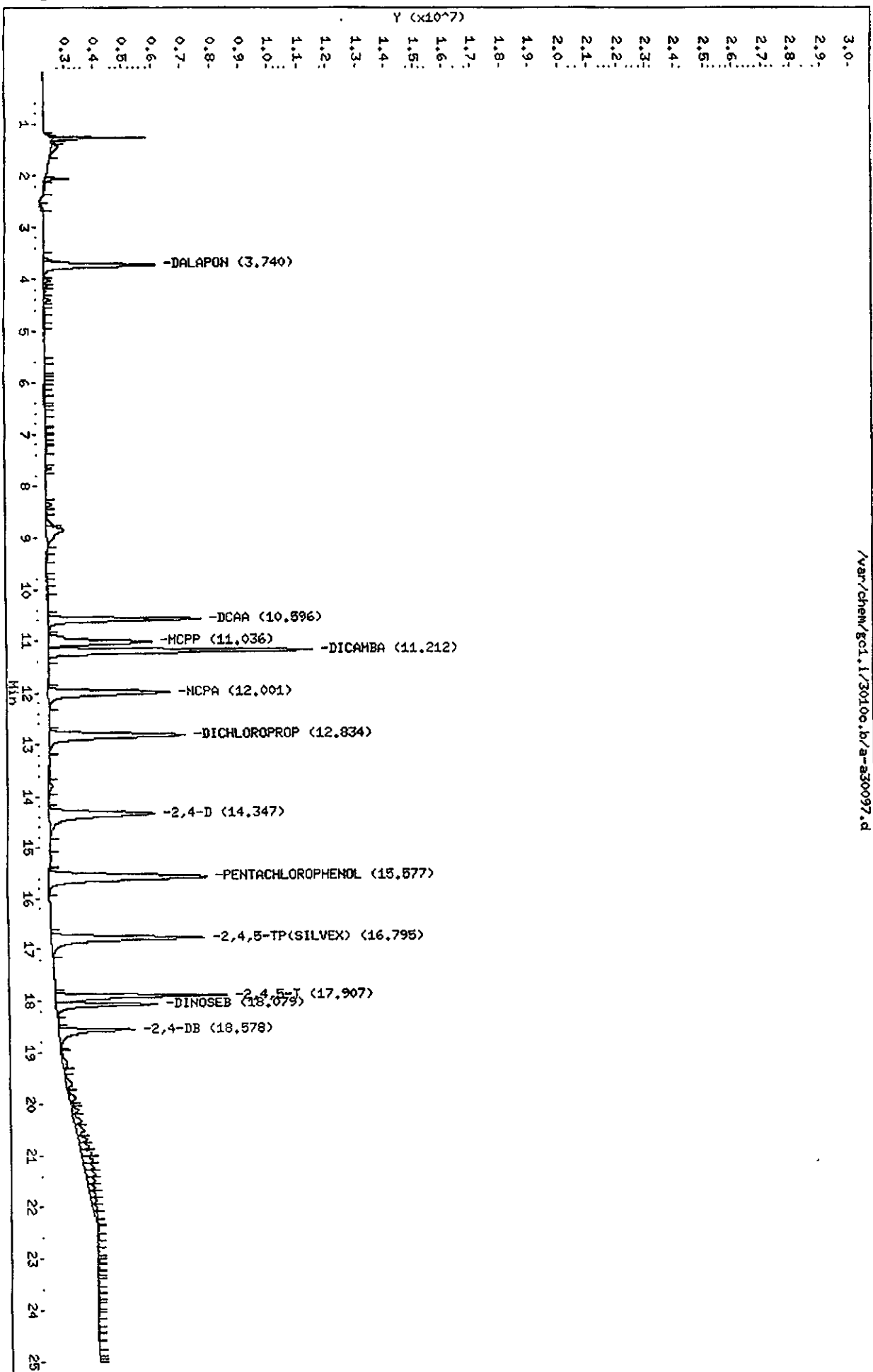
Data File: /var/chem/gc1.i/3010c.b/a-a30097.d
 Report Date: 01-Jun-2000 12:38

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30097.d
 Lab Smp Id: Mherb
 Inj Date : 31-MAY-2000 16:37
 Operator : 01797
 Smp Info : Mherb,3010c.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 01-Jun-2000 11:27 derubeij
 Cal Date : 31-MAY-2000 16:37
 Als bottle: 4
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30097.d
 Calibration Sample, Level: 3
 Compound Sublist: all.sub

						AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT	ON-COL	
					(ng)	(ng)	
	====	=====	=====	=====	=====	=====	
1 DALAPON	3.740	3.740	0.000	3848183	0.04390	0.04390	
\$ 2 DCAA	10.596	10.596	0.000	24815268	0.08510	0.08510	
3 MCPP	11.036	11.036	0.000	3581575	8.52000	8.520	
4 DICAMBA	11.212	11.212	0.000	9044465	0.04250	0.04250	
5 MCPA	12.001	12.001	0.000	4151638	8.56000	8.560	
6 DICHLOROPROP	12.834	12.834	0.000	4659349	0.08480	0.08480	
7 2,4-D	14.347	14.347	0.000	29915609	0.08510	0.08510	
8 PENTACHLOROPHENOL	15.577	15.577	0.000	5401685	0.01064	0.01064	
9 2,4,5-TP(SILVEX)	16.795	16.795	0.000	33043773	0.02110	0.02110	
10 2,4,5-T	17.907	17.907	0.000	26092633	0.02110	0.02110	
11 DINOSEB	18.079	18.079	0.000	15797723	0.01270	0.01270	
12 2,4-DB	18.578	18.578	0.000	13187011	0.08450	0.08450	



/var/chem/gol.i/3010c.b/a-a30097.d

Data File: /var/chem/gol.i/3010c.b/a-a30097.d
Date: 31-MAY-2000 16:37
Client ID:
Sample Info: Mherb,3010c.b
Column phase: DB608

Instrument: gol.i
Operator: 01797
Column diameter: 0.63

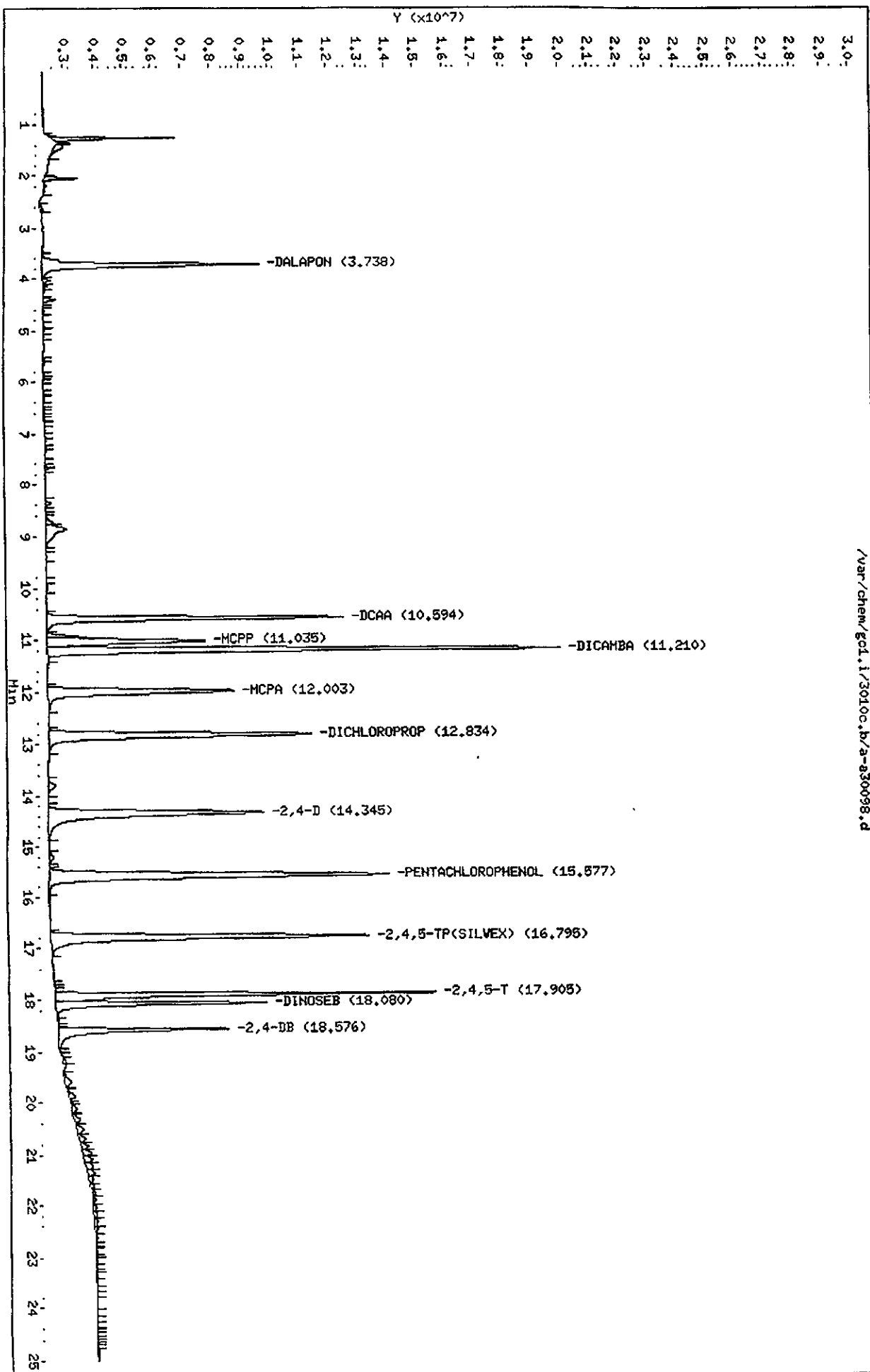
Data File: /var/chem/gc1.i/3010c.b/a-a30098.d
 Report Date: 01-Jun-2000 12:38

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30098.d
 Lab Smp Id: MHherb
 Inj Date : 31-MAY-2000 17:06
 Operator : 01797
 Smp Info : MHherb,3010c.b
 Misc Info : 190-80-4
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 01-Jun-2000 11:27 derubeij
 Cal Date : 31-MAY-2000 17:06
 Als bottle: 5
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30098.d
 Calibration Sample, Level: 4
 Compound Sublist: all.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.738	3.740	-0.002	7417941	0.08780	0.09251
\$ 2 DCAA	10.594	10.596	-0.002	46512873	0.17000	0.1749
3 MCFP	11.035	11.036	-0.001	5403191	17.0000	13.05
4 DICAMBA	11.210	11.212	-0.002	17595880	0.08510	0.09345
5 MCPA	12.003	12.001	0.002	6355776	17.1000	13.18
6 DICHLOROPROP	12.834	12.834	0.000	9035618	0.17000	0.1850
7 2,4-D	14.345	14.347	-0.002	57482064	0.17000	0.1815
8 PENTACHLOROPHENOL	15.577	15.577	0.000	11647734	0.02128	0.02553
9 2,4,5-TP(SILVEX)	16.795	16.795	0.000	66414167	0.04210	0.04702
10 2,4,5-T	17.905	17.907	-0.002	54059197	0.04220	0.04797
11 DINOSEB	18.080	18.079	0.001	30036981	0.02540	0.02648
12 2,4-DB	18.576	18.578	-0.002	25384255	0.16900	0.1561



Data File: /var/chem/gcl.i/3010c.b/a-a30098.d
Date: 31-MAY-2000 17:06
Client ID:
Sample Info: Hherb,3010c.b
Column phase: DB608

/var/chem/gcl.i/3010c.b/a-a30098.d

Instrument: gcl.i
Operator: 01797
Column diameter: 0.53

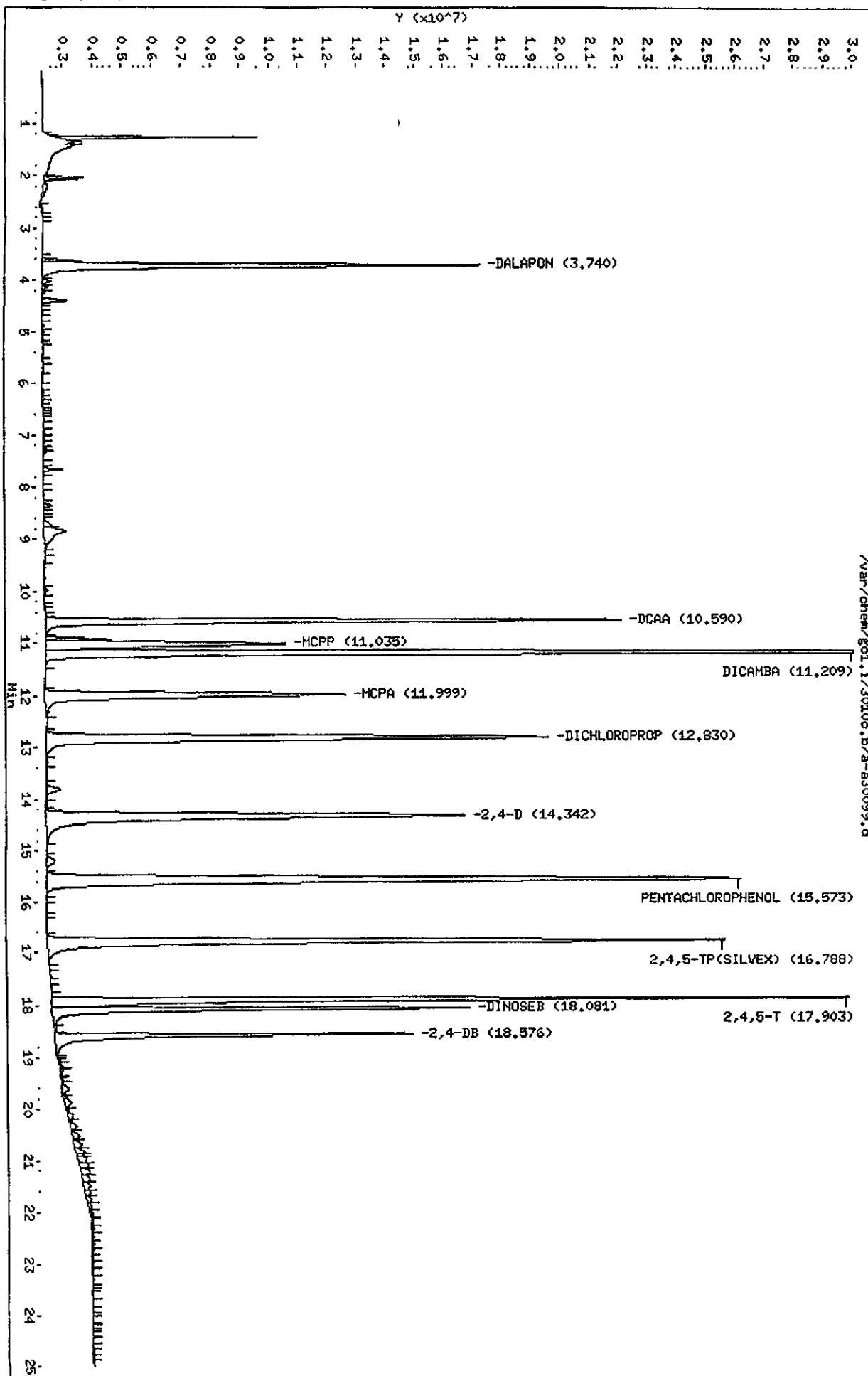
Data File: /var/chem/gc1.i/3010c.b/a-a30099.d
 Report Date: 01-Jun-2000 12:38

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30099.d
 Lab Smp Id: Hherb
 Inj Date : 31-MAY-2000 17:35
 Operator : 01797
 Smp Info : Hherb,3010c.b
 Misc Info : 190-80-5
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 01-Jun-2000 11:27 derubeij
 Cal Date : 31-MAY-2000 17:35
 Als bottle: 6
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30099.d
 Calibration Sample, Level: 5
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.740	3.740	0.000	14945836	0.17600	0.1842
\$ 2 DCAA	10.590	10.596	-0.006	87793848	0.34000	0.3321
3 MCPP	11.035	11.036	-0.001	8217888	34.1000	21.65
4 DICAMBA	11.209	11.212	-0.003	35454180	0.17000	0.1843
5 MCPA	11.999	12.001	-0.002	10253602	34.0000	22.99
6 DICHLOROPROP	12.830	12.834	-0.004	17121329	0.33900	0.3481
7 2,4-D	14.342	14.347	-0.005	109277911	0.34000	0.3441
8 PENTACHLOROPHENOL	15.573	15.577	-0.004	23735924	0.04255	0.04980
9 2,4,5-TP(SILVEX)	16.788	16.795	-0.007	134579689	0.08400	0.09279
10 2,4,5-T	17.903	17.907	-0.004	109438398	0.08440	0.09427
11 DINOSEB	18.081	18.079	0.002	59818422	0.05080	0.05234
12 2,4-DB	18.576	18.578	-0.002	48953955	0.33800	0.3078



Column phase: DB608

Data File: /var/chem/gc1.i/3010c.b/a-a30099.d
Date: 31-MAY-2000 17:35
Client ID:
Sample Info: Herb, 3010c.b

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/3010c.b/a-a30162.d
 Report Date: 06-Jun-2000 12:48

STL-PITTSBURGH

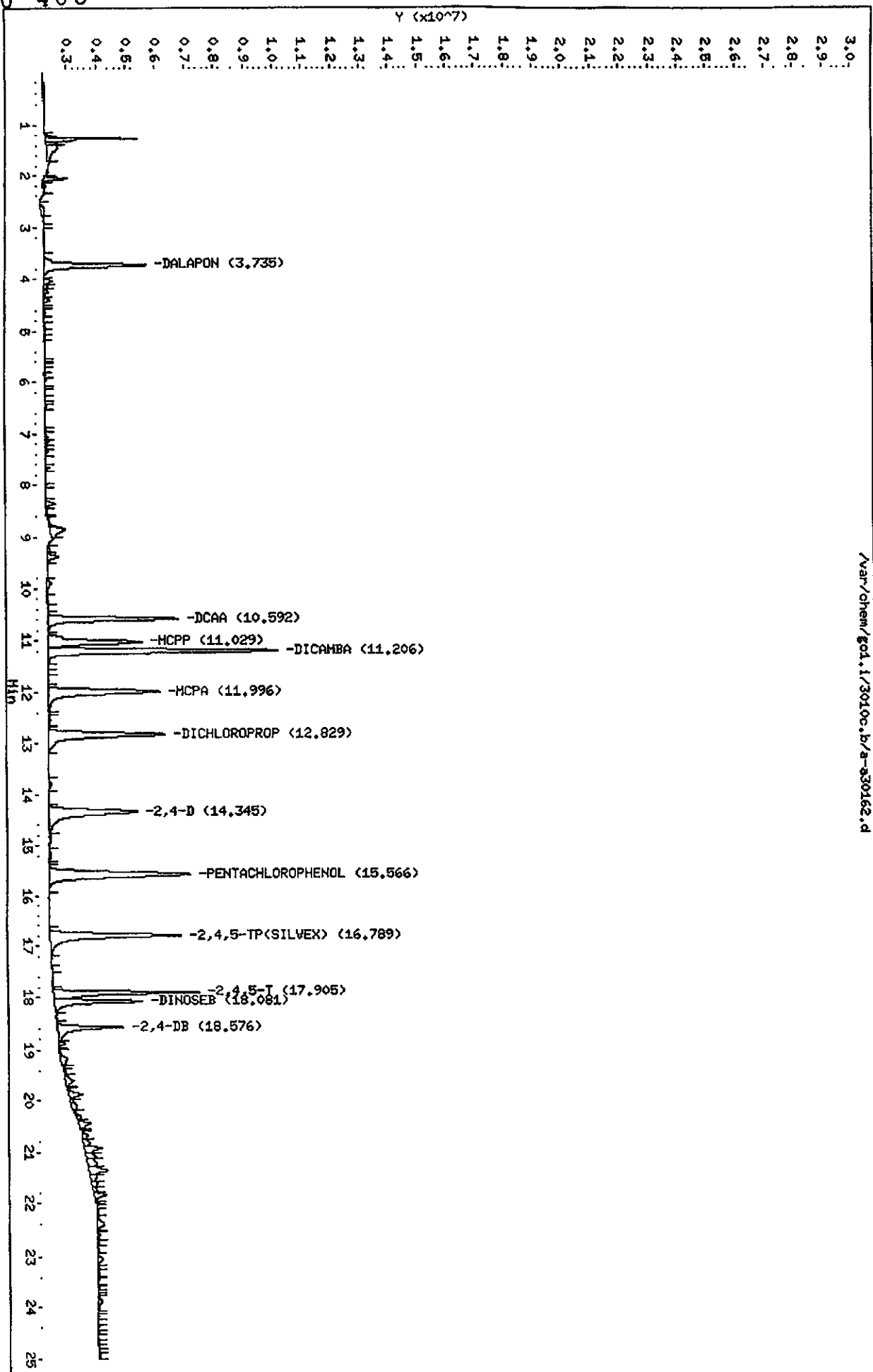
Data file : /var/chem/gc1.i/3010c.b/a-a30162.d
 Lab Smp Id: Mherb
 Inj Date : 06-JUN-2000 11:03
 Operator : 01797
 Smp Info : Mherb,3010c.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 06-Jun-2000 12:48 eppinged
 Cal Date : 31-MAY-2000 17:35
 Als bottle: 2
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40
 Processing Host: hpuxcs21

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30099.d
 Continuing Calibration Sample
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	**	*****	*****	*****	*****	*****
1 DALAPON	3.735	3.735	0.000	3467565	0.04390	0.04274
\$ 2 DCAA	10.592	10.592	0.000	21713966	0.08510	0.08213
3 MCPP	11.029	11.029	0.000	3212433	8.52000	8.465
4 DICAMBA	11.206	11.206	0.000	7863285	0.04250	0.04088
5 MCPA	11.996	11.996	0.000	3786971	8.56000	8.492
6 DICHLOROPROP	12.829	12.829	0.000	3959114	0.08480	0.08050
7 2,4-D	14.345	14.345	0.000	25460189	0.08510	0.08016
8 PENTACHLOROPHENOL	15.566	15.566	0.000	4831898	0.01064	0.01014
9 2,4,5-TP(SILVEX)	16.789	16.789	0.000	29010668	0.02110	0.02000
10 2,4,5-T	17.905	17.905	0.000	22073787	0.02110	0.01901
11 DINOSEB	18.081	18.081	0.000	14640619	0.01270	0.01281
12 2,4-DB	18.576	18.576	0.000	11477247	0.08450	0.07216

Data File: /var/chem/gc1.1/3010c.b/a-a30162.d
Date: 06-JUN-2000 11:03
Client ID:
Sample Info: Herb, 3010c.b
Column phase: DB608

Instrument: gc1.1
Operator: 01797
Column diameter: 0.53



Data File: /var/chem/gc1.i/3010c.b/a-a30178.d
 Report Date: 07-Jun-2000 07:06

STL-PITTSBURGH

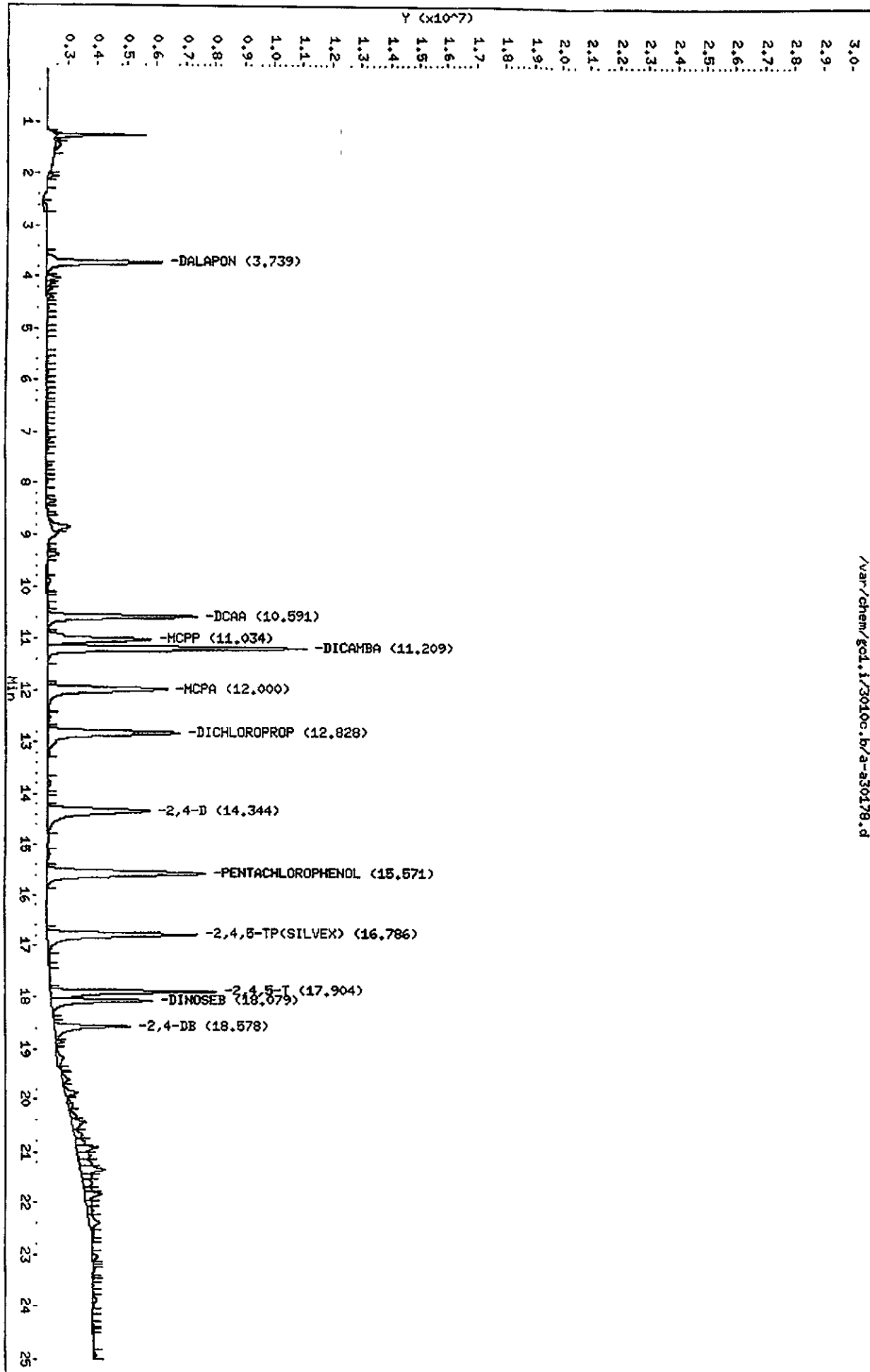
Data file : /var/chem/gc1.i/3010c.b/a-a30178.d
 Lab Smp Id: Mherb
 Inj Date : 06-JUN-2000 18:49
 Operator : 01797
 Smp Info : Mherb,3010c.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g
 Cal Date : 31-MAY-2000 17:35
 Als bottle: 18
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30099.d
 Continuing Calibration Sample
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
1 DALAPON	3.739	3.735	0.004	3890451	0.04390	0.04795
\$ 2 DCAA	10.591	10.592	-0.001	24569246	0.08510	0.09293
3 MCPP	11.034	11.029	0.005	3480834	8.52000	9.172
4 DICAMBA	11.209	11.206	0.003	8812947	0.04250	0.04582
5 MCPA	12.000	11.996	0.004	4079932	8.56000	9.149
6 DICHLOROPROP	12.828	12.829	-0.001	4466242	0.08480	0.09082
7 2,4-D	14.344	14.345	-0.001	29191323	0.08510	0.09191
8 PENTACHLOROPHENOL	15.571	15.566	0.005	5402782	0.01064	0.01134
9 2,4,5-TP(SILVEX)	16.786	16.789	-0.003	32735115	0.02110	0.02257
10 2,4,5-T	17.904	17.905	-0.001	25233981	0.02110	0.02174
11 DINOSEB	18.079	18.081	-0.002	16819038	0.01270	0.01472
12 2,4-DB	18.578	18.576	0.002	12718246	0.08450	0.07996

Data File: /var/chem/gcd.i/3010c.b/a-a30178.d
Date: 06-JUN-2000 18:49
Client ID:
Sample Info: Mherb,3010c.b
Column phase: DB608

Instrument: gcd.i
Operator: 01797
Column diameter: 0.53



HERBICIDE
QC DATA

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8151A
Herbicides (8151A)

Lab Sample ID: C0F050000 466

Sample WT/Vol: 100 / mL
Work Order: DE79P101
Dilution factor: 1
Moisture %: NADate Received: 06/02/00
Date Extracted: 06/05/00
Date Analyzed: 06/06/00

QC Batch: 0157466

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.040	U
93-72-1	2,4,5-TP (Silvex)	0.010	U

Data File: /var/chem/gc1.i/3010c.b/a-a30176.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30176.d
 Lab Smp Id: DE79P101 Client Smp ID: PBLK
 Inj Date : 06-JUN-2000 17:51
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE79P101,3010c.b
 Misc Info : 020191BLK
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 16 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: $\text{Amt} * \text{DF} * 20 * \text{Vt} / \text{Vo} / \text{Vi}$

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON						
\$ 2 DCAA	10.597	10.592	0.005	11265729	0.04261	0.08522(a)
3 MCPP						
4 DICAMBA	11.160	11.206	-0.046	153849	0.00080	0.001600(a)
5 MCPA						
6 DICHLOROPROP						
7 2,4-D						
8 PENTACHLOROPHENOL						
9 2,4,5-TP(SILVEX)						
10 2,4,5-T	17.893	17.905	-0.012	606394	0.000522	0.001045(a)
11 DINOSEB						
12 2,4-DB	18.535	18.576	-0.041	1372135	0.00863	0.01725(a)

660 414

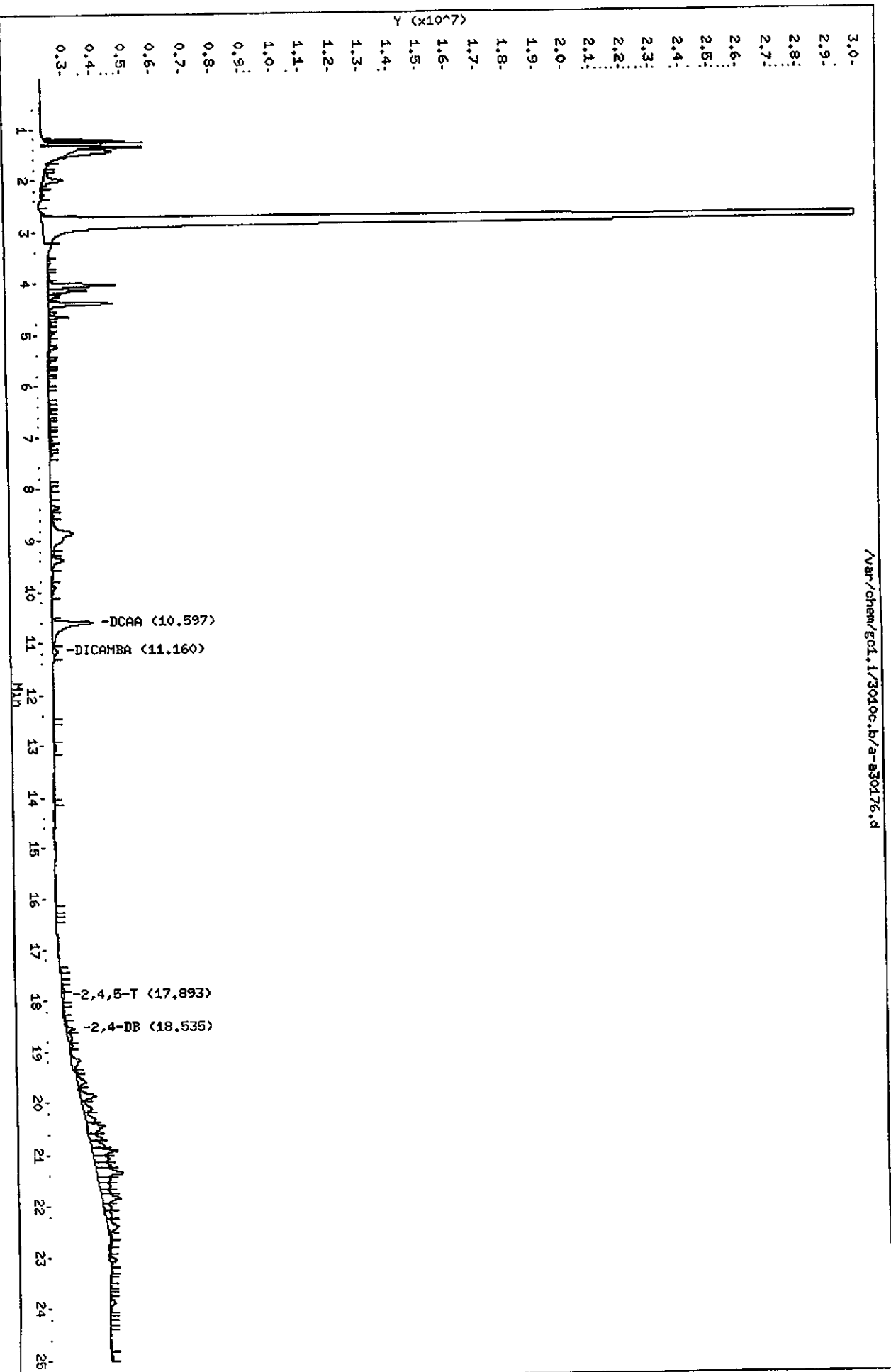
Data File: /var/chem/gcl.i/3010c.b/a-a30176.d
Report Date: 07-Jun-2000 07:08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gc1.i/3010c.b/a-a30176.d
Date : 06-JUN-2000 17:51
Client ID: PBLK
Sample Info: DE79P101.3010c.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53



UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F050000 466

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE79P102

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: NA

QC Batch: 0157466

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.135	
93-72-1	2,4,5-TP (Silvex)	0.0356	

Data File: /var/chem/gc1.i/3010c.b/a-a30177.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30177.d
 Lab Smp Id: DE79P102 Client Smp ID: LCS
 Inj Date : 06-JUN-2000 18:20
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE79P102,3010c.b
 Misc Info : 020191LCS
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 17 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON	3.743	3.735	0.008	2124397	0.02619	0.05237(aR)
\$ 2 DCAA	10.595	10.592	0.003	12078461	0.04569	0.09137(a)
3 MCPP	11.033	11.029	0.004	2933141	7.72879	15.46
4 DICAMBA	11.207	11.206	0.001	7319750	0.03806	0.07611(a)
5 MCPA	12.003	11.996	0.007	3310962	7.42476	14.85
6 DICHLOROPROP	12.836	12.829	0.007	3466407	0.07049	0.1410(a)
7 2,4-D	14.348	14.345	0.003	21457750	0.06756	0.1351(aR)
8 PENTACHLOROPHENOL	15.576	15.566	0.010	4625207	0.00971	0.01941(a)
9 2,4,5-TP(SILVEX)	16.791	16.789	0.002	25788820	0.01778	0.03556(aR)
10 2,4,5-T	17.904	17.905	-0.001	19275205	0.01660	0.03321(aR)
11 DINOSEB	18.079	18.081	-0.002	11356757	0.00994	0.01987(a)
12 2,4-DB	18.577	18.576	0.001	10279748	0.06463	0.1292(a)

660 418

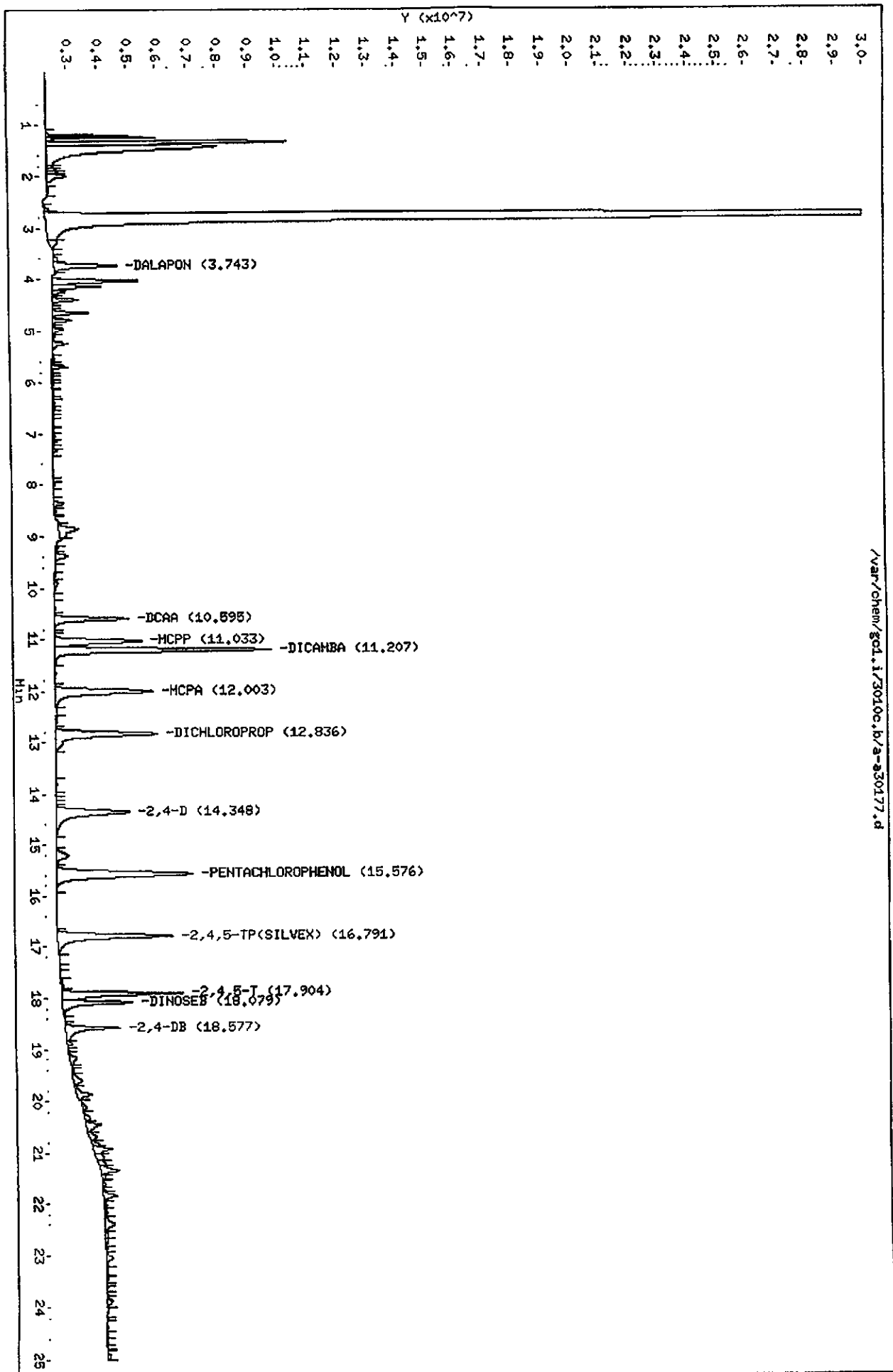
Data File: /var/chem/gc1.i/3010c.b/a-a30177.d
Report Date: 07-Jun-2000 07:08

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Date File: /var/chem/gc1.i/3010c.b/a-a30177.d
Date : 06-JUN-2000 18:20
Client ID: LCS
Sample Info: DE79P102,3010c.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53



UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10R

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.152	
93-72-1	2,4,5-TP (Silvex)	0.0384	

Data File: /var/chem/gc1.i/3010c.b/a-a30173.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30173.d
 Lab Smp Id: DE44M10R Client Smp ID: DF/S1/0153/SDC/MS
 Inj Date : 06-JUN-2000 16:23
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE44M10R,3010c.b
 Misc Info : 020191001S
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 13 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON	3.739	3.735	0.004	2219067	0.02735	0.05470 (aR)
2 DCAA	10.593	10.592	0.001	10666459	0.04034	0.08069 (a)
3 MCPP	11.034	11.029	0.005	3050810	8.03885	16.08
4 DICAMBA	11.211	11.206	0.005	7714809	0.04011	0.08022 (a)
5 MCPA	12.001	11.996	0.005	3507411	7.86529	15.73
6 DICHLOROPROP	12.836	12.829	0.007	3717245	0.07559	0.1512 (a)
7 2,4-D	14.341	14.345	-0.004	24067406	0.07578	0.1516 (aR)
8 PENTACHLOROPHENOL	15.574	15.566	0.008	1592761	0.00334	0.006684 (a)
9 2,4,5-TP(SILVEX)	16.789	16.789	0.000	27856500	0.01921	0.03841 (aR)
10 2,4,5-T	17.906	17.905	0.001	23228546	0.02001	0.04002 (aR)
11 DINOSEB				Compound Not Detected.		
12 2,4-DB	18.577	18.576	0.001	10311315	0.06483	0.1296 (a)

660 422

Data File: /var/chem/gc1.i/3010c.b/a-a30173.d
Report Date: 07-Jun-2000 07:08

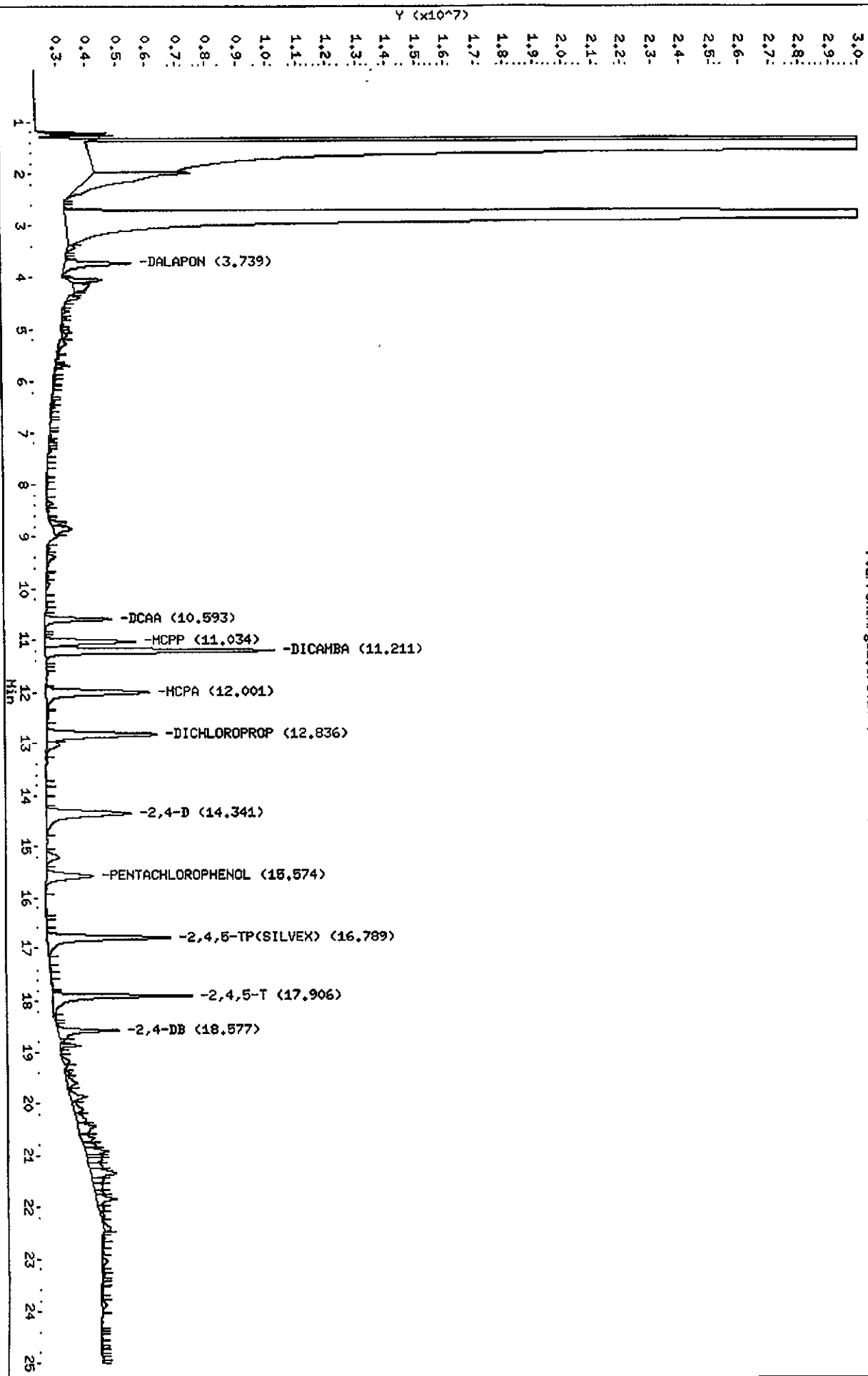
QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc1.1/30100.b/a-a30173.d
Date: 06-JUN-2000 16:23
Client ID: IF/SI/0153/SDC/HS
Sample Info: DE44H10R,3010c.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.1
Operator: 01797
Column diameter: 0.53

/var/chem/gc1.1/30100.b/a-a30173.d



660 424

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0F020191 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 06/02/00

Work Order: DE44M10T

Date Extracted: 06/05/00

Dilution factor: 1

Date Analyzed: 06/06/00

Moisture %: 14

QC Batch: 0157466

Client Sample Id: DF/S1/0153/SDC/006

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	mg/L	
94-75-7	2,4-D	0.153		
93-72-1	2,4,5-TP (Silvex)	0.0388		

Data File: /var/chem/gc1.i/3010c.b/a-a30174.d
 Report Date: 07-Jun-2000 07:08

STL-PITTSBURGH

Data file : /var/chem/gc1.i/3010c.b/a-a30174.d
 Lab Smp Id: DE44M10T Client Smp ID: DF/S1/0153/SDC/MSD
 Inj Date : 06-JUN-2000 16:52
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DE44M10T,3010c.b
 Misc Info : 020191001D
 Comment :
 Method : /var/chem/gc1.i/3010c.b/LONGH.m
 Meth Date : 07-Jun-2000 07:06 g Quant Type: ESTD
 Cal Date : 31-MAY-2000 17:35 Cal File: a-a30099.d
 Als bottle: 14 QC Sample: MSD
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Volume of final extract (uL)
Vo	100.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
1 DALAPON	3.740	3.735	0.005	2224807	0.02742	0.05485(aR)
2 DCAA	10.596	10.592	0.004	10833045	0.04098	0.08195(a)
3 MCPP	11.036	11.029	0.007	3037798	8.00456	16.01
4 DICAMBA	11.210	11.206	0.004	7782825	0.04046	0.08093(a)
5 MCPA	12.000	11.996	0.004	3530320	7.91666	15.83
6 DICHLOROPROP	12.831	12.829	0.002	3731927	0.07588	0.1518(a)
7 2,4-D	14.342	14.345	-0.003	24360068	0.07670	0.1534(aR)
8 PENTACHLOROPHENOL	15.572	15.566	0.006	1833429	0.00385	0.007694(a)
9 2,4,5-TP(SILVEX)	16.787	16.789	-0.002	28142846	0.01940	0.03881(aR)
10 2,4,5-T	17.902	17.905	-0.003	21823700	0.01880	0.03760(aR)
11 DINOSEB	Compound Not Detected					
12 2,4-DB	18.576	18.576	0.000	12032239	0.07564	0.1513(a)

660 426

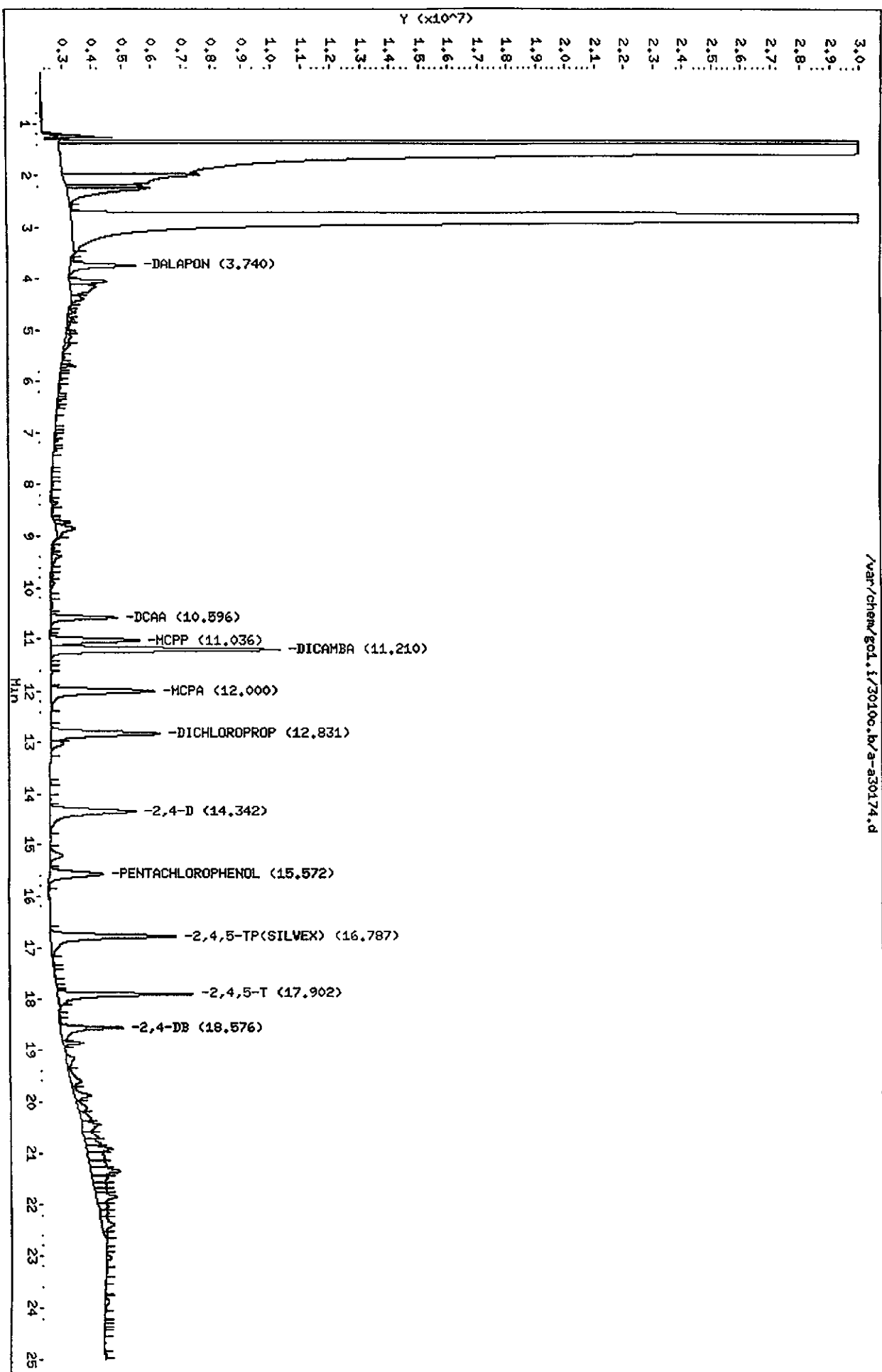
• Data File: /var/chem/gc1.i/3010c.b/a-a30174.d
Report Date: 07-Jun-2000 07:08

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc1.i/30100.b/a-a30174.d
Date : 06-JUN-2000 16:52
Client ID: DF/S1/0153/SDC/MSD
Sample Info: DE44H107,30100.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.i
Operator: 04797
Column diameter: 0.53



**HERBICIDE
MISCELLANEOUS**

704
05-6-00

Hex-A-VUE

Exposure to their innocent

4056

Date Extraction Began		Date Completed		Parameter		Method		Solvent		Solvent Lot		Solvent Mfg		Clean up Method	
6-5-00		6-6-00		N250-8151A		3510A		Methanol		108286		Baker		N/A	
Lot Number	Sample ID	Client ID	pH	Sample Volume (mL)	Final Volume (mL)	Surrogate Number	Surrogate Volume (mL)	Matrix Spike No.	Matrix Spike Volume (mL)	Clean up Date					
1	POE020191	BPE	N/A	5112	100	10-0	190-91-4	1.0	N/A	N/A					
2	LE5			5111					N/A						
3	001MS			5111					N/A						
4	001MSD			5111					N/A						
5	001			5111					N/A						
6	002			5111					N/A						
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Sodium Sulfate Mfg: Baker
 Lot Number: A18523
 Reviewed By: James W. L.

Sequence Table (Front Injector):

Vial Information Part:

Line	Vial	Vial Information
====	====	=====
1	1	RINSE
2	2	190-80-1 95
3	3	190-80-2 96
4	4	190-80-3 97
5	5	190-80-4 98
6	6	190-80-5 99
~~7~~	~~7~~	~~C0E240180001~~
8	8	C0E240180002 10/6/1/00
9	9	C0E240180MS 001
10	10	C0E240180MSD 001
11	11	C0E240180LCS
12	12	C0E240180BLK
~~13~~	~~13~~	~~190-80-3~~

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	===	=====	=====	=====
1	1	HEXANE	HERB	1	Sample		
2	2	Lherb,3010c.b	HERB	1	Sample		
3	3	MLherb,3010c.b	HERB	1	Sample		
4	4	Mherb,3010c.b	HERB	1	Sample		
5	5	MHherb,3010c.b	HERB	1	Sample		
6	6	Hherb,3010c.b	HERB	1	Sample		
7	7	DDLX3105,3010c.b	HERB	1	Sample		
8	8	DDLX6105,3010c.b	HERB	1	Sample		
9	9	DDLX310P,3010c.b	HERB	1	Sample		
10	10	DDLX310Q,3010c.b	HERB	1	Sample		
11	11	DDTMQ102,3010c.b	HERB	1	Sample		
12	12	DDTMQ101,3010c.b	HERB	1	Sample		
13	13	Mherb,3010c.b	HERB	1	Sample		

Sequence Table (Back Injector):

Vial Information Part:

A

Sequence Table (Front Injector):

Vial Information Part:

Line	Vial	Vial Information
=====	=====	=====
1	1	RINSE
2	2	190-80-3 162
3	3	020179001
4	4	020179002
5	5	020179002S 165
6	6	020179002D
7	7	020174001
8	8	030135001
9	9	030135002
10	10	020179BLK 170
11	11	020179LCS
12	12	020191001
13	13	020191001S
14	14	020191001D
15	15	020191002 175
16	16	020191BLK
17	17	020191LCS
18	18	190-80-3 178

1 conf. rigid

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
=====	=====	=====	=====	=====	=====	=====	=====
1	1	HEXANE	HERB	1	Sample		
2	2	Mherb,3010c.b	HERB	1	Sample		
3	3	DE42F102,3010c.b	HERB	1	Sample		
4	4	DE42J102,3010c.b	HERB	1	Sample		
5	5	DE42J104,3010c.b	HERB	1	Sample		
6	6	DE42J105,3010c.b	HERB	1	Sample		
7	7	DE428102,3010c.b	HERB	1	Sample		
8	8	DE5HT102,3010c.b	HERB	1	Sample		
9	9	DE5HV102,3010c.b	HERB	1	Sample		

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	==	=====	=====	=====
10	10	DE60P101,3010c.b	HERB	1	Sample		
11	11	DE60P102,3010c.b	HERB	1	Sample		
12	12	DE44M105,3010c.b	HERB	1	Sample		
13	13	DE44M10R,3010c.b	HERB	1	Sample		
14	14	DE44M10T,3010c.b	HERB	1	Sample		
15	15	DE44Q105,3010c.b	HERB	1	Sample		
16	16	DE79P101,3010c.b	HERB	1	Sample		
17	17	DE79P102,3010c.b	HERB	1	Sample		
18	18	Mherb,3010c.b	HERB	1	Sample		

Sequence Table (Back Injector):

Vial Information Part:

Line	Vial	Vial Information
====	====	=====

1	100	RINSE
2	1	RINSE
3	2	190-80-3
4	3	020179001
5	4	020179002
6	5	020179002S
7	6	020179002D
8	7	020174001
9	8	030135001
10	9	030135002
11	10	020179BLK
12	11	020179LCS
13	12	020191001
14	13	020191001S
15	14	020191001D
16	15	020191002
17	16	020191BLK
18	17	020191LCS
19	18	190-80-3

DE
66-00

660 434

PSR024 6/05/00 13:36:09 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: PINOB

METHOD: QS Herbicides (8151A)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8C,D CLP	DE44M-1-05	___	238315	399411	A-64-QS	C0F020191	001		SOLID	0	3 1
8C,D CLP	DE44Q-1-05	___	238316	399411	A-64-QS	C0F020191	002		SOLID	0	3 1

RELINQUISHED BY

P. Zyrushinski
P. Zyrushinski

RECEIVED BY

P. Zyrushinski
P. Zyrushinski

DATE/TIME

6-5-00 1540
6-5-00 2230

***** END OF REPORT *****

METALS DATA

STL-Pittsburgh

Cover Page - Inorganic Analysis Data Package

Client ID	Lab Sample ID:
DF/S1/0153/SDC/006	DE44M
DF/S1/0153/SDC/006D	DE44MD
DF/S1/0153/SDC/006S	DE44MS
DF/S1/0153/SDC/007	DE44Q

Comments: UXB, DUNN FIELD
COF020191
6010B

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
Date: _____ Title: _____

REVIEWED BY: mtw
DATE: 6-6-00

**METALS
RESULTS**

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44M Client ID: DF/S1/0153/SDC/006
Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.30	1.2	8.7		1	ICPST	6/5/00	10:07

Comments: C0F020191001

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44Q **Client ID:** DF/S1/0153/SDC/007
Matrix: Soil **Units:** mg/kg **Prep Date:** 6/4/00 **Prep Batch:** 0156098
Weight: 1.00 **Volume:** 100 **Percent Moisture:** 16.04

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.31	1.2	9.0		1	ICPST	6/5/00	10:19

Comments: C0F020191002

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-110-4

Element	WL/ Mass	True Conc	ICV3-1 6/5/00 8:41 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	250.0	258.90	103.6								

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-110-3

Element	WL/ Mass	True Conc	CCV3-1 6/5/00 9:33 AM		CCV3-2 6/5/00 10:23 AM		CCV3-3 6/5/00 11:13 AM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	500.0	520.06	104.0	521.51	104.3	515.61	103.1		

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARC

Standard Source: _____

Standard ID: _____

			ICB1 6/5/00 8:46 AM				
Element	WL/ Mass	Report Limit	Found Q	Found Q	Found Q	Found Q	Found Q
Arsenic	189.042	10	2.6 U				

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/5/00 9:38 AM	CCB2 6/5/00 10:27 AM	CCB3 6/5/00 11:17 AM		
			Found Q	Found Q	Found Q	Found Q	Found Q
Arsenic	189.042	10	2.6 U	2.6 U	2.6 U		

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE5W2BMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	0.26	1.0	0.26	U	1	ICPST	6/5/00	9:58

Comments: _____

STL-Pittsburgh

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARCAcceptable Range: 0% - 0%Standard Source: Inorganic VenturesStandard ID: 0014-088-12

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 6/5/00 8:50 AM				
				Found	Found	Found	Found	Found
Arsenic	189.042	10		2				

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPSTUnits: ug/LChart Number: T00605A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-075-12

Element	WL/ Mass	True Conc	ICSAB 6/5/00 8:54 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	1000	1026.8	102.7								

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MS
 Original Sample ID: DE44M Client ID: DF/S1/0153/SDC/006S
 Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
 Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	8.7		219		231.24	91.0	1	1	ICPST	6/5/00	10:07	6/5/00	10:15

Comments: _____

Version 3.63.4

- U Result is less than the MDL
- B Result is between MDL and RL
- N Spike recovery failed
- NC Percent recovery was not calculated
- * Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MD
 Original Sample ID: DE44M Client ID: DF/S1/0153/SDC/006D
 Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098
 Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	8.7		220		231.24	91.2	1	1	ICPST	6/5/00	10.07	6/5/00	10:32

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDMatrix Spike Sample ID: DE44MS Client ID: DF/S1/0153/SDC/006DMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	219		220		0.2 %	1	1	ICPST	6/5/00	10:15	6/5/00	10:32

Comments: _____

Version 3.63.4

- U Result is less than the MDL
- B Result is between MDL and RL
- N Spike recovery failed
- NC Percent recovery was not calculated
- * Duplicate analysis RPD was not within limits

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE5W2CMatrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	200	207	103.3		80-120	1	ICPST	6/5/00	10:03

Comments: _____

STL-Pittsburgh

Metals Data Reporting Form

Serial Dilution RPD Report

Serial Dilution Sample ID: DE44MPOriginal Sample ID: DE44M Client ID: DF/S1/0153/SDC/006Matrix: Soil Units: mg/kg Prep Date: 6/4/00 Prep Batch: 0156098Weight: 1.00 Volume: 100 Percent Moisture: 13.51

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Arsenic	189.042	8.7		9.7			1	5	ICPST	6/5/00	10:07	6/5/00	10:11

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 9 Equivalent

B Result is between MDL and RL

E Serial dilution percent difference not within limits

STL-Pittsburgh

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPSTUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Arsenic	189.04	10	2.6	4/1/00

STL-Pittsburgh

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICPSTDate of IEC's: 5/30/00

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	Pb(0.000457), Se(0.00001), Tl(-0.00002)
Aluminum	308.215	Pb(-0.000157), Se(0.000011)
Chromium	267.716	Sb(0.006664)
Chromium	267.716	As(-0.002441), Sb(0.010481)
Cobalt	228.616	Se(-0.000324)
Cobalt	228.616	Cd(-0.000111), Fe(0.08869), Ni(-0.00066), Se(0.000351), Tl(0.002179)
Iron	271.441	Cd(0.000111), Pb(0.000107), Sb(0.000019), Se(-0.000024), V(-0.000349), Zn(0.000127)
Iron	271.441	Pb(0.000054), Sb(0.000021), Se(-0.000313)
Magnesium	279.078	Fe(-0.000306)
Manganese	257.61	Tl(-0.006029)
Molybdenum	202.03	Pb(-0.00068), Sb(-0.009237)
Molybdenum	202.03	Al(0.011136), As(-0.002441), Cr(-0.000312), Pb(-0.000307), Sb(-0.002657)
Nickel	231.604	Pb(0.000247), Sb(-0.000886), Zn(0.004557)
Nickel	231.604	Pb(0.000124)
Vanadium	292.402	Al(0.02185), Be(-0.0083), Cr(-0.000183), Fe(0.007812), Sb(-0.007991), Se(0.000216), Tl(0.001386)
Vanadium	292.402	Pb(-0.000475), Se(0.000099)

STL-Pittsburgh
Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPST

Units: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Arsenic	189.04	10000	3/15/00

Metals Data Reporting Form

Preparation LogPreparation Batch: 0156098 Instrument: ICP Matrix: Soil

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DE5W2B	6/4/00	1.00	100	NA
DE5W2C	6/4/00	1.00	100	NA
DE44M	6/4/00	1.00	100	13.51
DE44MD	6/4/00	1.00	100	13.51
DE44MS	6/4/00	1.00	100	13.51
DE44Q	6/4/00	1.00	100	16.04

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPSTChart Number: T00605A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	6/5/00	7:52 AM
ZZZZZZ	6/5/00	7:57 AM
ZZZZZZ	6/5/00	8:01 AM
ZZZZZZ	6/5/00	8:05 AM
ZZZZZZ	6/5/00	8:09 AM
ZZZZZZ	6/5/00	8:13 AM
ZZZZZZ	6/5/00	8:17 AM
STD1	6/5/00	8:29 AM
STD6	6/5/00	8:34 AM
STD7	6/5/00	8:38 AM
ICV3-1	6/5/00	8:41 AM
ICB1	6/5/00	8:46 AM
ICSA	6/5/00	8:50 AM
ICSAB	6/5/00	8:54 AM
ZZZZZZ	6/5/00	9:00 AM
ZZZZZZ	6/5/00	9:04 AM
ZZZZZZ	6/5/00	9:09 AM
ZZZZZZ	6/5/00	9:13 AM
ZZZZZZ	6/5/00	9:17 AM
ZZZZZZ	6/5/00	9:21 AM
ZZZZZZ	6/5/00	9:25 AM
ZZZZZZ	6/5/00	9:29 AM
CCV3-1	6/5/00	9:33 AM
CCB1	6/5/00	9:38 AM
ZZZZZZ	6/5/00	9:42 AM
ZZZZZZ	6/5/00	9:46 AM
ZZZZZZ	6/5/00	9:50 AM
ZZZZZZ	6/5/00	9:54 AM
DE5W2B	6/5/00	9:58 AM
DE5W2C	6/5/00	10:03 AM
DE44M	6/5/00	10:07 AM
DE44MP	6/5/00	10:11 AM
DE44MS	6/5/00	10:15 AM
DE44Q	6/5/00	10:19 AM
CCV3-2	6/5/00	10:23 AM
CCB2	6/5/00	10:27 AM
DE44MD	6/5/00	10:32 AM
ZZZZZZ	6/5/00	10:36 AM
ZZZZZZ	6/5/00	10:40 AM
ZZZZZZ	6/5/00	10:44 AM
ZZZZZZ	6/5/00	10:48 AM

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPSTChart Number: T00605A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	6/5/00	10:52 AM
ZZZZZZ	6/5/00	10:56 AM
ZZZZZZ	6/5/00	11:01 AM
ZZZZZZ	6/5/00	11:09 AM
CCV3-3	6/5/00	11:13 AM
CCB3	6/5/00	11:17 AM

660 458

**METALS
RAW DATA**

CCF020191

660 459

Analysis Report *duob* Averages

06/05/00 11:26:24 AM

page 2

Sample Name *Remix 6500* AS

1	STD1	-.01421
2	STD6	6.31302
3	STD7	
4	ICV3-1 0014-110-4	.25890
5	ICB1	.00087
6	ICSA 0014-088-12	.00229
7	ICSAB 0014-075-12	1.0268
8	DEQ1QB	-.00031
9	DEQ1QC	1.8388
10	DDVK3	.07060
11	DDVK3P5	.01491
12	DDVK3S	1.8716
13	DDVK3D	1.8990
14	DDVK4	.03701
15	DDVK5	.12089
16	CCV3-1 0014-110-3	.52006
17	CCB1	.00041
18	DDVK6	.04671
19	DDVK7	.11183
20	DDVK8	.03351
21	DDVQC	.17675
22	DE5W2B	.00111
23	DE5W2C	2.0668
24	DE44M	.07527
25	DE44MP5	.01669
26	DE44MS	1.8960
27	DE44MD	.07556
28	CCV3-2	.52151
29	CCB2	.00077
30	DE44MD	1.8992
31	DE3QGB	.00030
32	DE3QGC	2.1222
33	DEQ22	.08201
34	DEQ22P5	.01801
35	DEQ22S	1.9056
36	DEQ22D	~~-.00219~~
37	CCV3-3	~~1.00196~~
38	DEQ22D	1.8795
39	CCV3-3	.51561
40	CCB3	.00096

Note: samples DE44MD & DE44Q mislabeled during prep.
 Review of data indicated mix-up and sample ID's
 were corrected on run. Also, no samples were in autosampler
 tray for analyses of seq # 36 & 37. Tray was loaded upon discovery,
 and DEQ22D, CCV33, CCB3 were analyzed.
RB 6500

RB 6500

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	T00605A	METTRA	06/05/00	08:29		X	IR
2	STD6	T00605A	METTRA	06/05/00	08:34		X	IR
3	STD7	T00605A	METTRA	06/05/00	08:38		X	IR
4	ICV3-1 0014-110-4	T00605A	METTRA	06/05/00	08:41	RJG	S	CONC
5	ICB1	T00605A	METTRA	06/05/00	08:46	RJG	S	CONC
6	ICSA 0014-088-12	T00605A	METTRA	06/05/00	08:50	RJG	Q	CONC
7	ICSAB 0014-075-12	T00605A	METTRA	06/05/00	08:54	RJG	Q	CONC
8	DEQ1QB	T00605A	METTRA	06/05/00	09:00	RJG	S	CONC
9	DEQ1QC	T00605A	METTRA	06/05/00	09:04	RJG	S	CONC
10	DDVK3	T00605A	METTRA	06/05/00	09:09	RJG	S	CONC
11	DDVK3P5	T00605A	METTRA	06/05/00	09:13	RJG	S	CONC
12	DDVK3S	T00605A	METTRA	06/05/00	09:17	RJG	S	CONC
13	DDVK3D	T00605A	METTRA	06/05/00	09:21	RJG	S	CONC
14	DDVK4	T00605A	METTRA	06/05/00	09:25	RJG	S	CONC
15	DDVK5	T00605A	METTRA	06/05/00	09:29	RJG	S	CONC
16	CCV3-1 0014-110-3	T00605A	METTRA	06/05/00	09:33	RJG	S	CONC
17	CCB1	T00605A	METTRA	06/05/00	09:38	RJG	S	CONC
18	DDVK6	T00605A	METTRA	06/05/00	09:42	RJG	S	CONC
19	DDVK7	T00605A	METTRA	06/05/00	09:46	RJG	S	CONC
20	DDVK8	T00605A	METTRA	06/05/00	09:50	RJG	S	CONC
21	DDVQC	T00605A	METTRA	06/05/00	09:54	RJG	S	CONC
22	DE5W2B	T00605A	METTRA	06/05/00	09:58	RJG	S	CONC
23	DE5W2C	T00605A	METTRA	06/05/00	10:03	RJG	S	CONC
24	DE44M	T00605A	METTRA	06/05/00	10:07	RJG	S	CONC
25	DE44MP5	T00605A	METTRA	06/05/00	10:11	RJG	S	CONC
26	DE44MS	T00605A	METTRA	06/05/00	10:15	RJG	S	CONC
27	DE44MD	T00605A	METTRA	06/05/00	10:19	RJG	S	CONC
28	CCV3-2	T00605A	METTRA	06/05/00	10:23	RJG	S	CONC
29	CCB2	T00605A	METTRA	06/05/00	10:27	RJG	S	CONC
30	DE44MD	T00605A	METTRA	06/05/00	10:32	RJG	S	CONC
31	DE3QGB	T00605A	METTRA	06/05/00	10:36	RJG	S	CONC
32	DE3QGC	T00605A	METTRA	06/05/00	10:40	RJG	S	CONC
33	DEQ22	T00605A	METTRA	06/05/00	10:44	RJG	S	CONC
34	DEQ22P5	T00605A	METTRA	06/05/00	10:48	RJG	S	CONC
35	DEQ22S	T00605A	METTRA	06/05/00	10:52	RJG	S	CONC
36	DEQ22D	T00605A	METTRA	06/05/00	10:56	RJG	S	CONC
37	CCV3-3	T00605A	METTRA	06/05/00	11:01	RJG	S	CONC
38	DEQ22D	T00605A	METTRA	06/05/00	11:09	RJG	S	CONC
39	CCV3-3	T00605A	METTRA	06/05/00	11:13	RJG	S	CONC
40	CCB3	T00605A	METTRA	06/05/00	11:17	RJG	S	CONC

VOID: NO samples
in autosampler
residuals
RB 6500

Standardization Rpt.

06/05/00 08:33:57 AM

page 1

Method: METTRA Standard: STD1
Run Time: 06/05/00 08:29:51

Elem	AG	AL	AS	BA	BE	CA	CD
Avge	.00003	.11121	-.01421	.00039	-.06921	.00413	.00157
SDev	.00214	.00095	.00958	.00011	.00012	.00000	.00078
%RSD	6956.5	.85216	67.418	28.274	.17802	.01112	49.904
#1	.00154	.11188	-.00744	.00046	-.06930	.00413	.00213
#2	-.00148	.11054	-.02098	.00031	-.06913	.00414	.00102
Elem	CO	CR	CU	FE	MG	MN	MO
Avge	-.00117	.00043	.01381	-.00105	.00015	.00123	.00148
SDev	.00035	.00253	.00011	.00035	.00039	.00017	.00052
%RSD	29.784	586.07	.80119	33.286	254.58	14.131	35.345
#1	-.00093	.00222	.01373	-.00080	.00043	.00136	.00185
#2	-.00142	-.00136	.01389	-.00130	-.00012	.00111	.00111
Elem	NI	PB/1	PB/2	SB/1	SB/2	SE/1	SE/2
Avge	.00000	.04372	-.01429	-.03635	.00901	-.10640	.08720
SDev	.00000	.01121	.00179	.02941	.00445	.00726	.00688
%RSD	.00000	25.639	12.534	80.908	49.391	6.8197	7.8957
#1	.00000	.05165	-.01302	-.05714	.01216	-.10127	.09207
#2	.00000	.03580	-.01555	-.01555	.00586	-.11153	.08233
Elem	TL	V	ZN				
Avge	-.04320	.00000	-.00000				
SDev	.00053	.00000	.00004				
%RSD	1.2233	.00000	1797000.				
#1	-.04283	.00000	.00003				
#2	-.04357	.00000	-.00003				

660 462'

Standardization Rpt.

06/05/00 08:33:57 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16204	--	--	--	--	--	--
SDev	1.802984	--	--	--	--	--	--
%RSD	.0111270	--	--	--	--	--	--
#1	16205	--	--	--	--	--	--
#2	16202	--	--	--	--	--	--

Standardization Rpt.,

06/05/00 08:38:07 AM

page 1

Method: METTRA Standard: STD6
 Run Time: 06/05/00 08:34:02

0014-087-8

Elem	AG	AS	CD	PB/1	PB/2	SB/1	SB/2
Avge	11.531	6.3130	15.954	6.4762	8.3345	10.965	7.1327
SDev	.001	.0122	.032	.0104	.0392	.093	.0048
%RSD	.01224	.19330	.19810	.16014	.47041	.84616	.06689

#1	11.532	6.3217	15.977	6.4835	8.3068	10.899	7.1361
#2	11.530	6.3044	15.932	6.4689	8.3622	11.030	7.1293

Elem	SE/1	SE/2	TL
Avge	5.8211	5.8502	4.7126
SDev	.0343	.0277	.0162
%RSD	.58875	.47272	.34272

#1	5.7968	5.8307	4.7241
#2	5.8453	5.8698	4.7012

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16354	--	--	--	--	--	--
SDev	.5303301	--	--	--	--	--	--
%RSD	.0032428	--	--	--	--	--	--
#1	16354	--	--	--	--	--	--
#2	16354	--	--	--	--	--	--

660 464

Standardization Rpt.

06/05/00 08:41:48 AM

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Method: METTRA Standard: STD7
 Run Time: 06/05/00 08:38:12

0014.087.9

Elem	AL	BA	BE	CA	CO	CR	CU
Avge	7.3686	13.984	14.069	5.6243	3.6073	14.000	3.6252
SDev	.0100	.003	.008	.0072	.0077	.016	.0032
%RSD	.13509	.02118	.05506	.12750	.21256	.11706	.08761
#1	7.3616	13.987	14.063	5.6192	3.6019	13.988	3.6230
#2	7.3757	13.982	14.074	5.6294	3.6127	14.011	3.6275
Elem	FE	MG	MN	MO	NI	V	ZN
Avge	4.7106	15.965	11.816	2.5998	2.9007	.94922	3.5117
SDev	.0071	.016	.014	.0154	.0012	.00071	.0030
%RSD	.15000	.10007	.11690	.59183	.04039	.07508	.08678
#1	4.7056	15.954	11.806	2.5889	2.9015	.94872	3.5095
#2	4.7156	15.977	11.825	2.6107	2.8998	.94972	3.5138
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15998	--	--	--	--	--	--
SDev	14.99080	--	--	--	--	--	--
%RSD	.0937019	--	--	--	--	--	--
#1	16009	--	--	--	--	--	--
#2	15988	--	--	--	--	--	--

Standardization

Report

06/05/00 08:41:49 AM

page 1

Method: METTRA

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD6	STD1	.173444	-.000005	06/05/00 08:38:12
AL	308.215	STD7	STD1	6.90766	-.768196	06/05/00 08:38:12
AS	189.042	STD6	STD1	.158047	.002246	06/05/00 08:38:12
BA	493.409	STD7	STD1	.286039	-.000110	06/05/00 08:38:12
BE	313.042	STD7	STD1	.280582	.019420	06/05/00 08:38:12
CA	317.933	STD7	STD1	17.7931	-.073572	06/05/00 08:38:12
CD	226.502	STD6	STD1	.062685	-.000099	06/05/00 08:38:12
CO	228.616	STD7	STD1	1.10850	.001300	06/05/00 08:38:12
CR	267.716	STD7	STD1	.285587	-.000123	06/05/00 08:38:12
CU	324.753	STD7	STD1	1.10760	-.015294	06/05/00 08:38:12
FE	271.441	STD7	STD1	10.6874	.011213	06/05/00 08:38:12
MG	279.078	STD7	STD1	6.26364	-.000966	06/05/00 08:38:12
MN	257.610	STD7	STD1	.338572	-.000418	06/05/00 08:38:12
MO	202.030	STD7	STD1	1.53946	-.002280	06/05/00 08:38:12
NI	231.604	STD7	STD1	1.37808	.000000	06/05/00 08:38:12
PB/1	220.351	STD6	STD1	.155461	-.006797	06/05/00 08:38:12
PB/2	220.352	STD6	STD1	.119778	.001711	06/05/00 08:38:12
PB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SB/1	206.831	STD6	STD1	.090901	.003304	06/05/00 08:38:12
SB/2	206.832	STD6	STD1	.140377	-.001265	06/05/00 08:38:12
SB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SE/1	196.021	STD6	STD1	.168706	.017950	06/05/00 08:38:12
SE/2	196.022	STD6	STD1	.173520	-.015131	06/05/00 08:38:12
SE	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
TL	190.864	STD6	STD1	.420536	.018167	06/05/00 08:38:12
V	292.402	STD7	STD1	4.19559	.000000	06/05/00 08:38:12
ZN	213.856	STD7	STD1	1.14606	.000000	06/05/00 08:38:12

660 466

Analysis Report

06/05/00 08:45:59 AM

page 1

Method: METTRA Sample Name: ICV3-1 0014-110-4 Operator: RJG
 Run Time: 06/05/00 08:41:53
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Rehurged
6500

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51438	12.002	.25890	1.0011	.99775	25.210	.25263
SDev	.00001	.001	.00002	.0007	.00357	.092	.00025
%RSD	.00220	.00802	.00690	.07195	.35799	.36559	.10046

#1	.51437	12.002	.25891	1.0006	1.0003	25.275	.25281
#2	.51438	12.001	.25889	1.0016	.99522	25.145	.25245

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55000	13.750	.27500	1.1000	1.1000	27.500	.27500
Low	.45000	11.250	.22500	.90000	.90000	22.500	.22500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0193	1.0240	.97274	12.519	24.222	.99533	1.0225
SDev	.0006	.0009	.00040	.005	.021	.00029	.0026
%RSD	.05842	.08641	.04062	.04251	.08724	.02916	.25578

#1	1.0197	1.0246	.97246	12.515	24.237	.99553	1.0207
#2	1.0189	1.0233	.97302	12.523	24.207	.99512	1.0244

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	1.1000	1.1000	13.750	27.500	1.1000	1.1000
Low	.90000	.90000	.90000	11.250	22.500	.90000	.90000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0172	.25632	.25604	.25613	.25770	.25587	.25648
SDev	.0097	.00123	.00061	.00081	.00227	.00135	.00166
%RSD	.95181	.47841	.23705	.31748	.88019	.52775	.64567

#1	1.0241	.25719	.25647	.25671	.25609	.25492	.25531
#2	1.0104	.25546	.25561	.25556	.25930	.25683	.25765

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	1.1000			.27500			.27500
Low	.90000			.22500			.22500

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25892	.26154	.26067	.51202	1.0055	1.0375
SDev	.00174	.00026	.00075	.00231	.0014	.0038
%RSD	.67273	.09932	.28899	.45136	.13932	.36282

#1	.25769	.26136	.26014	.51039	1.0065	1.0401
#2	.26016	.26173	.26120	.51366	1.0045	1.0348

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			.27500	.55000	1.1000	1.1000
Low			.22500	.45000	.90000	.90000

Analysis Report

06/05/00 08:45:59 AM

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IntStd'	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16178	--	--	--	--	--	--
SDev	25.63262	--	--	--	--	--	--
%RSD	.1584390	--	--	--	--	--	--
#1	16160	--	--	--	--	--	--
#2	16196	--	--	--	--	--	--

Method: METTRA Sample Name: ICB1

Operator: RJG

Run Time: 06/05/00 08:46:02

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	.01623	.00088	.00042	.00034	.00044	.00000
SDev	.00003	.00121	.00045	.00018	.00010	.00355	.00007
%RSD	113.26	7.4420	51.381	44.239	28.965	807.59	12563.
#1	-.00005	.01708	.00120	.00029	.00041	-.00207	-.00005
#2	-.00001	.01538	.00056	.00055	.00027	.00295	.00005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00023	.00001	-.00032	-.00638	.00156	.00034	.00407
SDev	.00004	.00026	.00040	.00130	.00084	.00015	.00071
%RSD	18.200	2262.1	125.06	20.394	53.692	45.111	17.347
#1	.00020	-.00017	-.00061	-.00730	.00097	.00023	.00457
#2	.00026	.00020	-.00004	-.00546	.00216	.00045	.00357
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	-.00065	.00010	-.00014	.00136	-.00087	-.00013
SDev	.00006	.00021	.00076	.00044	.00276	.00132	.00004
%RSD	140.98	33.044	725.67	301.72	202.98	151.44	27.501
#1	.00000	-.00080	.00064	.00016	.00331	-.00181	-.00011
#2	.00009	-.00049	-.00043	-.00045	-.00059	.00006	-.00016
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-.00232	-.00008	-.00083	-.00026	-.00000	.00048	
SDev	.00153	.00056	.00014	.00041	.00000	.00013	
%RSD	65.773	680.57	16.307	158.24	20.394	26.622	
#1	-.00340	.00031	-.00092	-.00055	-.00000	.00039	
#2	-.00124	-.00048	-.00073	.00003	-.00000	.00057	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

06/05/00 08:50:08 AM

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Analysis Report

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16110	--	--	--	--	--	--
SDev	93.33810	--	--	--	--	--	--
%RSD	.5793942	--	--	--	--	--	--
#1	16176	--	--	--	--	--	--
#2	16044	--	--	--	--	--	--

Method: METTRA Sample Name: ICSA 0014-088-12 Operator: RJG
 Run Time: 06/05/00 08:50:11
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00039	526.51	.00230	.00202	-.00091	489.82	-.00288
SDev	.00060	3.53	.00022	.00006	.00007	1.51	.00021
%RSD	155.88	.67090	9.4045	3.0183	7.5420	.30824	7.1196
#1	.00081	524.01	.00215	.00206	-.00086	488.76	-.00303
#2	-.00004	529.01	.00245	.00198	-.00096	490.89	-.00274
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		500.00				500.00	
Range		20.000				20.000	
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00095	.00206	-.00118	204.58	533.66	.00810	.00029
SDev	.00003	.00083	.00014	1.25	2.85	.00017	.00249
%RSD	2.6055	40.289	11.694	.61153	.53480	2.0638	847.49
#1	.00094	.00265	-.00128	203.69	531.65	.00821	.00206
#2	.00097	.00148	-.00109	205.46	535.68	.00798	-.00147
Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value				200.00	500.00		
Range				20.000	20.000		
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00380	.01973	-.01596	-.00407	-.00547	.00799	.00351
SDev	.00076	.01196	.00840	.00162	.01439	.00862	.00096
%RSD	19.951	60.604	52.635	39.777	263.23	107.90	27.309
#1	.00434	.02819	-.02190	-.00522	-.01564	.01408	.00419
#2	.00326	.01128	-.01002	-.00293	.00471	.00189	.00283
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.00667	-.00981	-.00432	.00040	.01219	-.00052	
SDev	.01266	.01023	.00261	.00215	.00205	.00012	
%RSD	189.92	104.34	60.388	539.92	16.817	23.301	
#1	.01562	-.01704	-.00617	-.00112	.01364	-.00061	
#2	-.00229	-.00257	-.00248	.00192	.01074	-.00044	
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	
Value							
Range							

Analysis Report

QC Standard

06/05/00 08:54:17 AM

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15229	--	--	--	--	--	--
SDev	38.53732	--	--	--	--	--	--
%RSD	.2530497	--	--	--	--	--	--
#1	15256	--	--	--	--	--	--
#2	15202	--	--	--	--	--	--

Method: METTRA Sample Name: ICSAB 0014-075-12 Operator: RJG
 Run Time: 06/05/00 08:54:21
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1124	523.63	1.0268	.52509	.49051	486.67	.93102
SDev	.0035	2.61	.0089	.00309	.00241	2.61	.00464
%RSD	.31733	.49840	.87133	.58823	.49134	.53557	.49811
#1	1.1149	525.47	1.0332	.52727	.49222	488.52	.93429
#2	1.1099	521.78	1.0205	.52291	.48881	484.83	.92774
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	500.00	1.0000	.50000	.50000	500.00	1.0000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48883	.50255	.54448	203.87	530.11	.50719	.98495
SDev	.00146	.00113	.00350	.77	1.70	.00152	.00258
%RSD	.29954	.22451	.64262	.37618	.32016	.29913	.26189
#1	.48986	.50335	.54695	204.41	531.31	.50826	.98677
#2	.48779	.50175	.54200	203.32	528.91	.50611	.98312
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	.50000	.50000	200.00	500.00	.50000	1.0000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98943	1.0486	.97898	1.0022	1.0530	1.0513	1.0519
SDev	.00984	.0058	.01299	.0067	.0207	.0064	.0026
%RSD	.99506	.55112	1.3268	.67251	1.9654	.60754	.25018
#1	.99639	1.0526	.96979	.99738	1.0384	1.0559	1.0500
#2	.98247	1.0445	.98816	1.0069	1.0677	1.0468	1.0538
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	1.0000			1.0000			1.0000
Range	20.000			20.000			20.000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.0288	1.0434	1.0386	1.0494	.51439	1.0455	
SDev	.0098	.0124	.0050	.0082	.00263	.0063	
%RSD	.95088	1.1875	.48210	.78206	.51078	.60566	
#1	1.0357	1.0347	1.0350	1.0552	.51625	1.0500	
#2	1.0219	1.0522	1.0421	1.0436	.51253	1.0410	
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	
Value			1.0000	1.0000	.50000	1.0000	
Range			20.000	20.000	20.000	20.000	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15336	--	--	--	--	--	--
SDev	14.70837	--	--	--	--	--	--
%RSD	.0959094	--	--	--	--	--	--
#1	15325	--	--	--	--	--	--
#2	15346	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ1QB Operator: RJG
 Run Time: 06/05/00 09:00:47
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00011	.06231	-.00032	.00119	.00033	.35882	.00023
SDev	.00024	.00483	.00087	.00006	.00010	.00672	.00006
%RSD	219.98	7.7433	274.38	5.2626	30.983	1.8731	24.115
#1	-.00027	.05890	-.00093	.00114	.00040	.35406	.00027
#2	.00006	.06572	.00030	.00123	.00026	.36357	.00019
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00044	.00058	.00081	.06091	.06875	.00112	.00073
SDev	.00053	.00064	.00042	.01050	.00664	.00002	.00035
%RSD	119.97	111.10	51.512	17.232	9.6644	1.9669	48.377
#1	.00007	.00012	.00051	.05349	.06405	.00111	.00048
#2	.00082	.00103	.00110	.06833	.07344	.00114	.00098
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00179	.00067	.00179	.00142	.00102	.00081	.00088
SDev	.00047	.00148	.00128	.00135	.00128	.00325	.00174
%RSD	26.458	220.36	71.700	95.229	125.04	402.21	197.72
#1	.00213	-.00038	.00088	.00046	.00193	-.00149	-.00035
#2	.00146	.00172	.00269	.00237	.00012	.00310	.00211
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00212	-.00038	-.00096	.00148	.00002	.01343	
SDev	.00048	.00022	.00031	.00299	.00000	.00004	
%RSD	22.767	57.029	31.849	201.76	17.232	.29174	
#1	-.00246	-.00054	-.00118	.00360	.00002	.01340	
#2	-.00178	-.00023	-.00074	-.00063	.00002	.01346	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 09:04:52 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16132	--	--	--	--	--	--
SDev	76.15485	--	--	--	--	--	--
%RSD	.4720820	--	--	--	--	--	--
#1	16186	--	--	--	--	--	--
#2	16078	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ1QC Operator: RJG
 Run Time: 06/05/00 09:04:56
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04581	1.6731	1.8388	1.7605	.04574	L.47034	.04583
SDev	.00083	.0166	.0084	.0036	.00007	.00682	.00035
%RSD	1.8183	.98978	.45606	.20530	.14671	1.4504	.75981
#1	.04522	1.6613	1.8328	1.7579	.04569	L.46551	.04558
#2	.04640	1.6848	1.8447	1.7630	.04579	L.47516	.04608
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	.06000	2.4000	2.4000	2.4000	.06000	60.000	.06000
Low	.04000	1.6000	1.6000	1.6000	.04000	40.000	.04000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46422	.18429	.21462	.93908	L.04728	.45016	L.00029
SDev	.00263	.00153	.00112	.01245	.00943	.00283	.00029
%RSD	.56721	.83242	.52311	1.3259	19.952	.62874	99.989
#1	.46236	.18321	.21382	.93027	L.04061	.44816	L.00009
#2	.46608	.18538	.21541	.94788	L.05395	.45216	L.00050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46184	.45515	.45511	.45512	-.00176	.00119	L.00021
SDev	.00176	.00459	.00774	.00669	.00247	.00100	.00016
%RSD	.38162	1.0075	1.6998	1.4692	140.49	84.118	75.856
#1	.46060	.45191	.44964	.45039	-.00001	.00048	L.00032
#2	.46309	.45839	.46058	.45985	-.00350	.00189	L.00010
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8579	1.8588	1.8585	1.8190	.44537	.48988	
SDev	.0186	.0281	.0250	.0062	.00184	.00287	
%RSD	1.0007	1.5142	1.3433	.33901	.41384	.58672	
#1	1.8448	1.8389	1.8408	1.8146	.44407	.48784	
#2	1.8711	1.8787	1.8762	1.8234	.44668	.49191	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			2.4000	2.4000	.60000	.60000	
Low			1.6000	1.6000	.40000	.40000	

Analysis Report

06/05/00 09:09:01 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16178	--	--	--	--	--	--
SDev	133.5016	--	--	--	--	--	--
%RSD	.8252251	--	--	--	--	--	--
#1	16272	--	--	--	--	--	--
#2	16083	--	--	--	--	--	--

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Analysis Report

06/05/00 09:13:09 AM

page 1

Method: METTRA Sample Name: DDVK3

Operator: RJG

Run Time: 06/05/00 09:09:04

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00049	74.848	.07060	.68777	.00887	10.175	-.00251
SDev	.00057	.221	.00042	.00063	.00001	.007	.00009
%RSD	116.73	.29587	.59875	.09194	.08542	.07231	3.6669
#1	.00009	74.691	.07090	.68733	.00887	10.170	-.00257
#2	.00089	75.005	.07030	.68822	.00888	10.180	-.00244
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11633	.17538	.31579	312.24	29.925	4.7834	.00588
SDev	.00042	.00104	.00139	.69	.068	.0080	.00006
%RSD	.35656	.59129	.44119	.22009	.22665	.16728	.98289
#1	.11604	.17465	.31480	311.75	29.877	4.7778	.00592
#2	.11663	.17611	.31677	312.72	29.973	4.7891	.00584
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22386	.27047	.25809	.26221	.00417	.00455	.00442
SDev	.00194	.00019	.00141	.00088	.00056	.00145	.00115
%RSD	.86779	.07128	.54706	.33467	13.422	31.779	26.021
#1	.22523	.27061	.25709	.26159	.00377	.00353	.00361
#2	.22248	.27033	.25909	.26283	.00456	.00558	.00524
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.00354	.01090	.00845	.00460	.17376	.90487	
SDev	.00143	.00013	.00039	.00106	.00092	.00042	
%RSD	40.311	1.2053	4.5930	23.021	.52982	.04594	
#1	.00456	.01081	.00873	.00535	.17441	.90458	
#2	.00253	.01099	.00818	.00385	.17311	.90517	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 09:13:09 AM

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17271	--	--	--	--	--	--
SDev	11.17146	--	--	--	--	--	--
%RSD	.0646845	--	--	--	--	--	--
#1	17279	--	--	--	--	--	--
#2	17263	--	--	--	--	--	--

Analysis Report

06/05/00 09:17:18 AM

page 1

Method: METTRA Sample Name: DDVK3P5 Operator: RJG
 Run Time: 06/05/00 09:13:13
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00000	15.082	.01491	.14460	.00227	2.1749	-.00061
SDev	.00061	.089	.00045	.00079	.00016	.0079	.00005
%RSD	16410.	.59184	3.0071	.54778	7.2825	.36329	8.5606

#1	-.00044	15.019	.01459	.14404	.00238	2.1693	-.00065
#2	.00043	15.145	.01523	.14516	.00215	2.1805	-.00057

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02557	.03743	.06257	66.342	6.2632	1.0028	.00058
SDev	.00008	.00058	.00084	.362	.0327	.0057	.00021
%RSD	.30860	1.5423	1.3356	.54535	.52190	.56712	36.837

#1	.02552	.03702	.06197	66.086	6.2401	.99882	.00043
#2	.02563	.03784	.06316	66.597	6.2864	1.0069	.00073

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04866	.05558	.05612	.05594	.00220	.00104	.00143
SDev	.00008	.00241	.00013	.00089	.00214	.00294	.00125
%RSD	.15581	4.3333	.23155	1.5886	97.213	282.76	87.690

#1	.04861	.05387	.05603	.05531	.00371	-.00104	.00054
#2	.04872	.05728	.05621	.05657	.00069	.00312	.00231

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00106	.00277	.00150	-.00046	.03569	.19586
SDev	.00391	.00037	.00154	.00009	.00017	.00060
%RSD	370.03	13.239	103.10	18.856	.47571	.30699

#1	-.00382	.00251	.00041	-.00053	.03581	.19543
#2	.00171	.00303	.00259	-.00040	.03557	.19628

Analysis Report

06/05/00 09:17:18 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16417	--	--	--	--	--	--
SDev	85.66626	--	--	--	--	--	--
%RSD	.5218230	--	--	--	--	--	--
#1	16477	--	--	--	--	--	--
#2	16356	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK3S

Operator: RJG

Run Time: 06/05/00 09:17:21

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04769	85.460	1.8716	2.6068	.05432	15.962	.04019
SDev	.00032	.110	.0019	.0007	.00015	.032	.00046
%RSD	.66145	.12848	.10229	.02581	.28588	.20038	1.1541
#1	.04792	85.382	1.8729	2.6073	.05443	15.985	.03987
#2	.04747	85.537	1.8702	2.6063	.05421	15.940	.04052
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.58661	.36867	.51881	444.76	32.086	6.2835	.00921
SDev	.00006	.00030	.00000	.14	.012	.0001	.00032
%RSD	.00936	.08058	.00045	.03232	.03681	.00123	3.4158
#1	.58657	.36846	.51881	444.66	32.094	6.2835	.00943
#2	.58665	.36888	.51881	444.86	32.077	6.2834	.00899
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.73948	.67807	.66138	.66694	.00088	.00418	.00308
SDev	.00484	.00479	.00358	.00079	.00330	.00204	.00026
%RSD	.65456	.70639	.54118	.11880	373.48	48.754	8.5066
#1	.74290	.68146	.65885	.66638	-.00145	.00563	.00327
#2	.73605	.67468	.66391	.66750	.00322	.00274	.00290
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8782	1.9003	1.8930	1.8524	.61814	1.2917	
SDev	.0055	.0108	.0054	.0007	.00263	.0015	
%RSD	.29429	.57029	.28463	.03743	.42535	.11430	
#1	1.8821	1.8927	1.8892	1.8519	.62000	1.2928	
#2	1.8743	1.9080	1.8968	1.8528	.61628	1.2907	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 09:21:26 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17481	--	--	--	--	--	--
SDev	5.054709	--	--	--	--	--	--
%RSD	.0289150	--	--	--	--	--	--
#1	17478	--	--	--	--	--	--
#2	17485	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK3D

Operator: RJG

Run Time: 06/05/00 09:21:30

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04788	74.170	1.8990	2.3915	.05454	10.773	.04207
SDev	.00003	.095	.0031	.0028	.00022	.024	.00011
%RSD	.05312	.12833	.16115	.11638	.40411	.22544	.25448
#1	.04787	74.103	1.9012	2.3935	.05470	10.790	.04215
#2	.04790	74.237	1.8969	2.3896	.05439	10.756	.04200
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.58851	.35105	.45390	366.44	27.546	5.2312	.00869
SDev	.00019	.00076	.00031	.10	.008	.0012	.00044
%RSD	.03291	.21615	.06826	.02613	.03075	.02388	5.0732
#1	.58837	.35051	.45368	366.38	27.552	5.2303	.00838
#2	.58864	.35158	.45412	366.51	27.540	5.2321	.00901
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.73922	.70921	.69437	.69931	.00495	.00518	.00510
SDev	.00316	.00163	.00677	.00397	.00066	.00184	.00101
%RSD	.42797	.22969	.97487	.56808	13.315	35.564	19.794
#1	.74146	.71037	.68958	.69651	.00448	.00649	.00582
#2	.73699	.70806	.69916	.70212	.00541	.00388	.00439
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8760	1.8926	1.8870	1.8539	.59992	1.3114	
SDev	.0057	.0162	.0089	.0037	.00352	.0027	
%RSD	.30373	.85356	.47045	.19744	.58684	.20545	
#1	1.8800	1.8812	1.8808	1.8564	.60241	1.3133	
#2	1.8719	1.9040	1.8933	1.8513	.59743	1.3095	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17183	--	--	--	--	--	--
SDev	3.676403	--	--	--	--	--	--
%RSD	.0213953	--	--	--	--	--	--
#1	17181	--	--	--	--	--	--
#2	17186	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK4

Operator: RJG

Run Time: 06/05/00 09:25:38

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00033	68.454	.03701	1.1623	.01001	419.81	-.00227
SDev	.00011	.632	.00145	.0081	.00011	2.17	.00034
%RSD	34.235	.92325	3.9252	.69936	1.0872	.51742	15.091
#1	.00025	68.007	.03598	1.1565	.01009	418.27	-.00251
#2	.00041	68.901	.03804	1.1680	.00994	421.35	-.00203
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10280	.10276	.27515	226.50	54.368	H10.772	-.00030
SDev	.00065	.00049	.00245	1.79	.369	.081	.00057
%RSD	.63414	.47760	.89153	.79068	.67929	.75298	191.71
#1	.10234	.10241	.27342	225.23	54.106	H10.714	-.00070
#2	.10326	.10310	.27689	227.76	54.629	H10.829	.00011
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.23421	.14139	.13600	.13780	.00220	.00272	.00255
SDev	.00076	.00315	.00402	.00163	.00088	.00011	.00037
%RSD	.32446	2.2317	2.9526	1.1812	40.148	4.1988	14.526
#1	.23368	.14362	.13316	.13664	.00158	.00264	.00229
#2	.23475	.13916	.13884	.13895	.00282	.00281	.00281
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.00702	.00780	.00754	.00403	.13081	.51857	
SDev	.00265	.00422	.00193	.00213	.00067	.00199	
%RSD	37.710	54.101	25.641	52.898	.51451	.38412	
#1	.00889	.00482	.00617	.00554	.13129	.51716	
#2	.00515	.01078	.00891	.00252	.13034	.51998	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17477	--	--	--	--	--	--
SDev	77.50001	--	--	--	--	--	--
%RSD	.4434298	--	--	--	--	--	--
#1	17532	--	--	--	--	--	--
#2	17423	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK5

Operator: RJG

Run Time: 06/05/00 09:29:47

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00233	72.981	.12090	.66224	.00889	22.933	.01138
SDev	.00018	.305	.00055	.00158	.00007	.015	.00040
%RSD	7.6376	.41795	.45633	.23872	.75456	.06707	3.4988
#1	.00245	72.765	.12051	.66113	.00894	22.922	.01109
#2	.00220	73.197	.12129	.66336	.00884	22.944	.01166
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08113	.23340	.70866	369.58	15.012	2.8508	.02446
SDev	.00017	.00006	.00148	.81	.035	.0083	.00026
%RSD	.20877	.02592	.20900	.22025	.23200	.29170	1.0516
#1	.08125	.23336	.70761	369.00	14.988	2.8449	.02428
#2	.08101	.23344	.70971	370.15	15.037	2.8567	.02464
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5671	.94096	.91660	.92471	.00432	.00520	.00491
SDev	.0115	.00203	.01068	.00645	.00197	.00153	.00036
%RSD	.44712	.21539	1.1655	.69756	45.552	29.398	7.4119
#1	2.5752	.94239	.90905	.92015	.00293	.00628	.00517
#2	2.5589	.93953	.92415	.92927	.00572	.00412	.00465
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.01029	.01343	.01238	.00194	.17475	1.6772	
SDev	.00423	.00212	.00001	.00205	.00229	.0003	
%RSD	41.087	15.787	.05009	105.66	1.3127	.01633	
#1	.01328	.01193	.01238	.00340	.17637	1.6770	
#2	.00730	.01492	.01239	.00049	.17312	1.6774	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17212	--	--	--	--	--	--
SDev	2.757993	--	--	--	--	--	--
%RSD	.0160238	--	--	--	--	--	--
#1	17214	--	--	--	--	--	--
#2	17210	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-1 0014-110-3 Operator: RJG
Run Time: 06/05/00 09:33:55
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0495	24.147	.52006	1.9869	2.0363	50.796	.50110
SDev	.0018	.059	.00023	.0011	.0006	.055	.00014
%RSD	.17048	.24591	.04350	.05427	.02769	.10891	.02810
#1	1.0483	24.105	.52022	1.9862	2.0359	50.757	.50100
#2	1.0508	24.189	.51990	1.9877	2.0367	50.835	.50120
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	27.500	.55000	2.2000	2.2000	55.000	.55000
Low	.90000	22.500	.45000	1.8000	1.8000	45.000	.45000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0334	2.0387	1.9708	25.123	49.720	1.9976	2.0487
SDev	.0050	.0032	.0005	.086	.076	.0050	.0133
%RSD	.24357	.15559	.02558	.34152	.15249	.24922	.65129
#1	2.0299	2.0365	1.9704	25.063	49.666	1.9941	2.0393
#2	2.0369	2.0410	1.9711	25.184	49.774	2.0011	2.0581
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	2.2000	2.2000	27.500	55.000	2.2000	2.2000
Low	1.8000	1.8000	1.8000	22.500	45.000	1.8000	1.8000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0347	.51492	.51436	.51455	.52460	.51778	.52005
SDev	.0021	.00158	.00387	.00311	.00639	.00002	.00214
%RSD	.10197	.30724	.75189	.60371	1.2183	.00437	.41215
#1	2.0362	.51380	.51163	.51235	.52008	.51776	.51853
#2	2.0333	.51604	.51709	.51674	.52912	.51779	.52157
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	2.2000			.55000			.55000
Low	1.8000			.45000			.45000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.52339	.52612	.52521	1.0588	2.0176	2.0622	
SDev	.00121	.00522	.00389	.0029	.0005	.0008	
%RSD	.23148	.99264	.74005	.27833	.02259	.04122	
#1	.52253	.52242	.52246	1.0609	2.0173	2.0628	
#2	.52425	.52981	.52796	1.0568	2.0180	2.0616	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.55000	1.1000	2.2000	2.2000	
Low			.45000	.90000	1.8000	1.8000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16026	--	--	--	--	--	--
SDev	16.68745	--	--	--	--	--	--
%RSD	.1041244	--	--	--	--	--	--
#1	16038	--	--	--	--	--	--
#2	16015	--	--	--	--	--	--

Method: METTRA Sample Name: CCB1

Operator: RJG

Run Time: 06/05/00 09:38:04

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00010	.09276	.00041	.00055	.00093	.00964	.00010
SDev	.00017	.00070	.00130	.00010	.00003	.00319	.00014
%RSD	163.61	.75859	314.34	18.426	3.8121	33.049	143.92
#1	-.00002	.09326	-.00051	.00048	.00095	.00739	.00019
#2	.00022	.09226	.00133	.00062	.00090	.01189	-.00000
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00042	.00054	-.00264	.02117	.00216	.00079	.00501
SDev	.00007	.00023	.00028	.00565	.00055	.00012	.00190
%RSD	17.395	42.153	10.455	26.703	25.673	15.292	37.816
#1	.00037	.00038	-.00283	.01718	.00177	.00070	.00636
#2	.00047	.00070	-.00244	.02517	.00255	.00087	.00367
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00120	.00030	.00175	.00127	.00065	.00171	.00135
SDev	.00121	.00070	.00055	.00013	.00257	.00068	.00040
%RSD	100.96	231.41	31.470	10.515	396.30	39.982	29.557
#1	.00206	-.00019	.00214	.00136	.00246	.00122	.00164
#2	.00034	.00080	.00136	.00117	-.00117	.00219	.00107
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.00041	-.00040	-.00013	.00387	.00001	.00180	
SDev	.00293	.00001	.00098	.00158	.00000	.00013	
%RSD	709.83	1.2655	754.92	40.942	26.703	7.3584	
#1	.00248	-.00040	.00056	.00499	.00001	.00170	
#2	-.00166	-.00040	-.00082	.00275	.00001	.00189	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 09:42:10 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16037	--	--	--	--	--	--
SDev	9.192388	--	--	--	--	--	--
%RSD	.0573184	--	--	--	--	--	--
#1	16044	--	--	--	--	--	--
#2	16031	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK6

Operator: RJG

Run Time: 06/05/00 09:42:13

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00014	64.996	.04671	.66634	.00990	134.02	-.00180
SDev	.00017	.116	.00021	.00057	.00000	.50	.00016
%RSD	125.40	.17816	.45216	.08509	.00868	.37222	9.1410
#1	-.00002	64.914	.04686	.66674	.00990	134.37	-.00192
#2	-.00026	65.078	.04657	.66594	.00990	133.66	-.00168
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09880	.10763	.23368	165.56	29.366	4.3624	.00156
SDev	.00017	.00071	.00017	.01	.038	.0034	.00127
%RSD	.17600	.65746	.07342	.00561	.12937	.07717	81.403
#1	.09892	.10813	.23380	165.55	29.393	4.3648	.00246
#2	.09868	.10713	.23356	165.56	29.339	4.3600	.00066
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.23833	.11190	.10470	.10710	.00321	.00212	.00248
SDev	.00280	.00268	.00179	.00030	.00274	.00087	.00033
%RSD	1.1740	2.3972	1.7099	.28087	85.329	41.168	13.340
#1	.24031	.11380	.10343	.10689	.00127	.00274	.00225
#2	.23635	.11000	.10597	.10731	.00515	.00150	.00272
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00016	.00339	.00221	-.00091	.12288	.41664	
SDev	.00440	.00368	.00099	.00271	.00040	.00192	
%RSD	2812.7	108.50	44.828	298.90	.32815	.46135	
#1	.00295	.00079	.00151	.00101	.12259	.41800	
#2	-.00326	.00599	.00291	-.00282	.12316	.41528	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 09:46:19 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17247	--	--	--	--	--	--
SDev	30.75915	--	--	--	--	--	--
%RSD	.1783408	--	--	--	--	--	--
#1	17226	--	--	--	--	--	--
#2	17269	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK7 Operator: RJG
Run Time: 06/05/00 09:46:23
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00007	59.955	.11183	.48736	.01011	2.4086	-.00330
SDev	.00015	.468	.00031	.00315	.00010	.0124	.00015
%RSD	208.75	.78082	.28074	.64563	.99668	.51526	4.6313

#1	.00018	59.624	.11161	.48514	.01018	2.3998	-.00341
#2	-.00004	60.286	.11205	.48959	.01004	2.4174	-.00319

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07028	.16546	.17005	223.51	16.417	2.0788	.00534
SDev	.00033	.00097	.00156	1.48	.087	.0127	.00123
%RSD	.47596	.58568	.91619	.66316	.53272	.60940	22.969

#1	.07004	.16478	.16894	222.46	16.355	2.0699	.00621
#2	.07051	.16615	.17115	224.56	16.479	2.0878	.00447

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.14049	.16935	.15898	.16243	.00710	.00261	.00410
SDev	.00068	.00153	.00220	.00096	.00503	.00209	.00028
%RSD	.48428	.90254	1.3841	.59022	70.782	80.363	6.7620

#1	.14097	.17043	.15742	.16175	.00355	.00409	.00391
#2	.14001	.16827	.16054	.16311	.01066	.00113	.00430

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02366	.01492	.01783	.01088	.19746	.47770
SDev	.00340	.00271	.00067	.00045	.00196	.00180
%RSD	14.363	18.140	3.7797	4.1104	.99396	.37589

#1	.02606	.01301	.01736	.01120	.19885	.47644
#2	.02126	.01684	.01831	.01057	.19607	.47897

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			10.000	10.000	50.000	5.0000
Low			-.00500	-.01000	-.05000	-.02000

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17373	--	--	--	--	--	--
SDev	61.51829	--	--	--	--	--	--
%RSD	.3541090	--	--	--	--	--	--
#1	17416	--	--	--	--	--	--
#2	17329	--	--	--	--	--	--

Method: METTRA Sample Name: DDVK8 Operator: RJG
Run Time: 06/05/00 09:50:32
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1'

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	90.526	.03352	.88065	.01018	10.732	-.00104
SDev	.00005	.061	.00123	.00193	.00013	.016	.00002
%RSD	99.871	.06703	3.6749	.21928	1.2990	.14804	2.1863

#1	.00001	90.569	.03439	.88202	.01027	10.721	-.00102
#2	.00008	90.483	.03265	.87928	.01008	10.743	-.00105

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09835	.16164	.51449	263.43	28.683	5.4085	.00604
SDev	.00012	.00063	.00101	.61	.061	.0133	.00008
%RSD	.12620	.39165	.19561	.23001	.21414	.24592	1.3339

#1	.09826	.16119	.51520	263.00	28.640	5.3991	.00599
#2	.09844	.16209	.51378	263.86	28.727	5.4179	.00610

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21700	.33175	.32027	.32409	.00495	.00224	.00314
SDev	.00242	.00145	.00343	.00277	.00086	.00372	.00219
%RSD	1.1159	.43829	1.0712	.85543	17.454	166.13	69.808

#1	.21872	.33072	.31784	.32213	.00434	.00487	.00469
#2	.21529	.33277	.32269	.32605	.00556	-.00039	.00159

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00585	.00828	.00747	-.00229	.19677	1.0076
SDev	.00400	.00370	.00113	.00017	.00346	.0015
%RSD	68.405	44.695	15.194	7.5315	1.7595	.15226

#1	.00868	.00566	.00667	-.00217	.19922	1.0065
#2	.00302	.01089	.00827	-.00241	.19432	1.0087

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			10.000	10.000	50.000	5.0000
Low			-.00500	-.01000	-.05000	-.02000

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	17475	--	--	--	--	--	--
SDev	38.50141	--	--	--	--	--	--
%RSD	.2203193	--	--	--	--	--	--
#1	17502	--	--	--	--	--	--
#2	17448	--	--	--	--	--	--

Method: METTRA Sample Name: DDVQC

Operator: RJG

Run Time: 06/05/00 09:54:42

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00003	33.567	.17675	.52298	.00526	2.6818	-.00392
SDev	.00026	1.061	.00488	.01528	.00047	.0790	.00024
%RSD	927.17	3.1606	2.7610	2.9225	8.8728	2.9459	6.1326
#1	-.00021	32.817	.17330	.51217	.00559	2.6259	-.00409
#2	.00016	34.317	.18020	.53378	.00493	2.7376	-.00375
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03801	.12426	.15198	258.26	11.472	.70179	.00445
SDev	.00090	.00381	.00507	7.82	.331	.02206	.00059
%RSD	2.3797	3.0699	3.3341	3.0268	2.8885	3.1440	13.147
#1	.03737	.12156	.14840	252.74	11.237	.68619	.00404
#2	.03865	.12696	.15557	263.79	11.706	.71740	.00487
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07544	.16187	.15530	.15749	.00655	.00477	.00536
SDev	.00206	.00329	.00609	.00516	.00430	.00071	.00096
%RSD	2.7266	2.0346	3.9234	3.2769	65.596	14.923	17.835
#1	.07399	.15954	.15099	.15384	.00351	.00527	.00468
#2	.07690	.16420	.15961	.16114	.00959	.00426	.00604
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.01262	.01672	.01535	.00323	.15839	.28481	
SDev	.00027	.00083	.00047	.00268	.00641	.00797	
%RSD	2.1247	4.9733	3.0302	82.885	4.0502	2.7971	
#1	.01243	.01731	.01568	.00512	.15385	.27918	
#2	.01281	.01613	.01503	.00134	.16292	.29044	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16251	--	--	--	--	--	--
SDev	443.1094	--	--	--	--	--	--
%RSD	2.726722	--	--	--	--	--	--
#1	16564	--	--	--	--	--	--
#2	15937	--	--	--	--	--	--

Method: METTRA Sample Name: DE5W2B Operator: RJG
Run Time: 06/05/00 09:58:51
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	.13072	.00111	.00055	.00061	.01486	-.00003
SDev	.00019	.01382	.00086	.00003	.00020	.00006	.00003
%RSD	306.50	10.570	77.644	4.8398	32.411	.42620	87.715

#1	-.00020	.14049	.00173	.00054	.00047	.01482	-.00005
#2	.00007	.12095	.00050	.00057	.00074	.01491	-.00001

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00073	.00014	-.00340	.07403	.00064	.00112	.00004
SDev	.00022	.00007	.00010	.00782	.00056	.00001	.00051
%RSD	29.995	47.109	2.9458	10.559	86.898	1.1534	1205.4

#1	-.00088	.00019	-.00333	.07955	.00025	.00113	.00040
#2	-.00057	.00010	-.00347	.06850	.00103	.00111	-.00032

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00061	.00758	-.00028	.00234	-.00130	.00114	.00033
SDev	.00087	.00065	.00105	.00048	.00135	.00270	.00135
%RSD	141.56	8.5770	371.65	20.599	104.12	236.84	412.71

#1	-.00000	.00804	-.00102	.00200	-.00226	.00305	.00128
#2	.00123	.00712	.00046	.00268	-.00034	-.00077	-.00063

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00872	.00197	-.00159	-.00321	.00003	.00214
SDev	.00307	.00169	.00215	.00317	.00000	.00005
%RSD	35.166	85.776	134.99	98.882	10.559	2.1999

#1	-.00655	.00316	-.00007	-.00545	.00003	.00217
#2	-.01089	.00077	-.00311	-.00097	.00002	.00210

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			.00500	.01000	.05000	.02000
Low			-.00500	-.01000	-.05000	-.02000

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15593	--	--	--	--	--	--
SDev	131.0979	--	--	--	--	--	--
%RSD	.8407644	--	--	--	--	--	--
#1	15500	--	--	--	--	--	--
#2	15685	--	--	--	--	--	--

Method: METTRA Sample Name: DE5W2C

Operator: RJG

Run Time: 06/05/00 10:03:00

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05153	1.9404	2.0668	1.9664	.05320	L.02308	.05207
SDev	.00054	.0025	.0014	.0000	.00034	.00012	.00003
%RSD	1.0451	.12938	.06707	.00046	.63146	.53402	.06131
#1	.05115	1.9422	2.0678	1.9664	.05344	L.02316	.05209
#2	.05191	1.9386	2.0658	1.9665	.05296	L.02299	.05204
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	.06000	2.4000	2.4000	2.4000	.06000	60.000	.06000
Low	.04000	1.6000	1.6000	1.6000	.04000	40.000	.04000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52941	.21144	.24524	1.0414	L-.00097	.51124	L-.00009
SDev	.00086	.00010	.00048	.0038	.00336	.00072	.00048
%RSD	.16270	.04724	.19736	.36549	346.65	.14154	525.83
#1	.52880	.21137	.24490	1.0387	L-.00334	.51072	L.00025
#2	.53002	.21151	.24559	1.0441	L.00141	.51175	L-.00043
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53086	.52084	.51567	.51739	.00112	.00159	L.00143
SDev	.00092	.00221	.00643	.00503	.00046	.00179	.00104
%RSD	.17370	.42527	1.2473	.97172	40.921	113.23	73.067
#1	.53152	.51927	.51112	.51384	.00144	.00032	L.00069
#2	.53021	.52240	.52022	.52095	.00080	.00285	L.00217
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	2.0267	2.0356	2.0327	2.0781	.50532	.53658	
SDev	.0024	.0411	.0282	.0021	.00120	.00043	
%RSD	.11601	2.0200	1.3878	.10172	.23839	.07973	
#1	2.0250	2.0065	2.0127	2.0796	.50617	.53688	
#2	2.0283	2.0647	2.0526	2.0766	.50446	.53628	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			2.4000	2.4000	.60000	.60000	
Low			1.6000	1.6000	.40000	.40000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15833	--	--	--	--	--	--
SDev	20.18776	--	--	--	--	--	--
%RSD	.1275073	--	--	--	--	--	--
#1	15818	--	--	--	--	--	--
#2	15847	--	--	--	--	--	--

Method: METTRA Sample Name: DE44M Operator: RJG
Run Time: 06/05/00 10:07:09
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00096	166.51	.07528	2.6453	.00791	H707.21	-.00133
SDev	.00014	1.36	.00292	.0145	.00012	4.76	.00013
%RSD	14.545	.81711	3.8829	.54707	1.4882	.67294	9.5877
#1	.00106	165.55	.07734	2.6351	.00799	H703.85	-.00142
#2	.00086	167.47	.07321	2.6555	.00782	H710.58	-.00124
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05333	.19247	.19398	137.90	19.727	4.1733	.00640
SDev	.00021	.00156	.00180	1.19	.127	.0326	.00053
%RSD	.39849	.80971	.93053	.86582	.64203	.78181	8.2450
#1	.05318	.19137	.19270	137.05	19.638	4.1502	.00677
#2	.05348	.19357	.19525	138.74	19.817	4.1964	.00602
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.12740	.43283	.40626	.41510	.01109	.01004	.01039
SDev	.00035	.00342	.01493	.00882	.00512	.00484	.00153
%RSD	.27168	.79047	3.6756	2.1249	46.194	48.255	14.685
#1	.12765	.43525	.39570	.40887	.00746	.01346	.01146
#2	.12716	.43041	.41681	.42134	.01471	.00661	.00931
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.00171	.00451	.00358	.00596	.29647	.66599	
SDev	.00815	.00348	.00039	.00083	.00275	.00453	
%RSD	475.79	77.091	11.012	13.872	.92711	.68029	
#1	.00747	.00205	.00386	.00538	.29453	.66279	
#2	-.00405	.00697	.00330	.00654	.29842	.66920	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16938	--	--	--	--	--	--
SDev	99.31397	--	--	--	--	--	--
%RSD	.5863305	--	--	--	--	--	--
#1	17008	--	--	--	--	--	--
#2	16868	--	--	--	--	--	--

Method: METTRA Sample Name: DE44MP5 Operator: RJG
 Run Time: 06/05/00 10:11:18
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00011	33.898	.01670	.56332	.00274	161.94	-.00029
SDev	.00015	.105	.00026	.00188	.00002	.92	.00016
%RSD	134.62	.31042	1.5696	.33443	.64597	.56516	52.847
#1	.00001	33.973	.01651	.56465	.00275	162.59	-.00040
#2	.00022	33.824	.01688	.56199	.00273	161.29	-.00018

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01253	.04251	.03616	29.655	4.1956	.89435	.00028
SDev	.00046	.00005	.00002	.098	.0159	.00311	.00055
%RSD	3.6896	.11336	.06493	.32926	.37823	.34743	198.26
#1	.01285	.04248	.03614	29.724	4.2068	.89654	.00066
#2	.01220	.04254	.03617	29.586	4.1844	.89215	-.00011

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02868	.09409	.09170	.09250	.00414	.00400	.00405
SDev	.00055	.00042	.00188	.00112	.00027	.00119	.00070
%RSD	1.9317	.44753	2.0555	1.2076	6.4834	29.700	17.376
#1	.02907	.09439	.09037	.09171	.00433	.00316	.00355
#2	.02829	.09379	.09304	.09329	.00395	.00484	.00454

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00116	.00068	.00007	-.00026	.06438	.14589
SDev	.00304	.00094	.00038	.00189	.00011	.00069
%RSD	262.86	137.70	544.93	726.63	.16326	.47127
#1	.00099	.00002	.00034	-.00159	.06446	.14638
#2	-.00331	.00135	-.00020	.00107	.06431	.14541

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16269	--	--	--	--	--	--
SDev	76.29641	--	--	--	--	--	--
%RSD	.4689651	--	--	--	--	--	--
#1	16215	--	--	--	--	--	--
#2	16323	--	--	--	--	--	--

Method: METTRA Sample Name: DE44MS Operator: RJG
Run Time: 06/05/00 10:15:26
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05027	182.00	1.8960	4.6904	.05281	H775.93	.04043
SDev	.00002	1.01	.0046	.0172	.00005	1.58	.00014
%RSD	.03546	.55736	.24384	.36678	.09310	.20408	.34088
#1	.05028	181.29	1.8928	4.6783	.05285	H774.81	.04053
#2	.05026	182.72	1.8993	4.7026	.05278	H777.05	.04033
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48811	.36980	.46405	151.40	20.826	3.7771	.00905
SDev	.00108	.00152	.00155	.77	.069	.0163	.00014
%RSD	.22139	.41220	.33426	.50821	.33323	.43026	1.5448
#1	.48734	.36873	.46295	150.86	20.777	3.7656	.00915
#2	.48887	.37088	.46515	151.95	20.875	3.7886	.00895
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.57505	.99746	.95375	.96830	.01968	.01571	.01703
SDev	.00146	.00010	.01589	.01063	.00602	.00472	.00114
%RSD	.25411	.00948	1.6661	1.0979	30.621	30.040	6.7039
#1	.57609	.99740	.94251	.96079	.01542	.01905	.01784
#2	.57402	.99753	.96498	.97582	.02394	.01238	.01623
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8075	1.8354	1.8261	1.9208	.75482	1.0552	
SDev	.0005	.0267	.0180	.0128	.00003	.0021	
%RSD	.02521	1.4541	.98314	.66813	.00459	.19687	
#1	1.8072	1.8166	1.8134	1.9118	.75484	1.0537	
#2	1.8078	1.8543	1.8388	1.9299	.75479	1.0566	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16849	--	--	--	--	--	--
SDev	15.73313	--	--	--	--	--	--
%RSD	.0933757	--	--	--	--	--	--
#1	16838	--	--	--	--	--	--
#2	16860	--	--	--	--	--	--

Method: METTRA Sample Name: DE44^Q
Run Time: 06/05/00 10:19:35 ²⁶⁶⁵⁰⁰
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00971	136.72	.07557	1.7430	.00765	394.44	-.00071
SDev	.00037	.39	.00107	.0031	.00002	.35	.00010
%RSD	3.8047	.28484	1.4143	.17909	.27113	.08833	14.216

#1	.00945	136.45	.07481	1.7408	.00763	394.19	-.00064
#2	.00998	137.00	.07633	1.7452	.00766	394.69	-.00078

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05864	.30599	.56009	148.00	22.256	3.7069	.00491
SDev	.00014	.00038	.00035	.38	.032	.0084	.00001
%RSD	.23244	.12276	.06237	.25387	.14390	.22551	.11142

#1	.05873	.30572	.55984	147.73	22.233	3.7010	.00491
#2	.05854	.30625	.56033	148.26	22.278	3.7128	.00491

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.14015	.56826	.54562	.55316	.01508	.01220	.01316
SDev	.00114	.00186	.00559	.00311	.00096	.00221	.00116
%RSD	.81591	.32818	1.0253	.56229	6.3812	18.146	8.7829

#1	.14096	.56958	.54167	.55096	.01440	.01376	.01397
#2	.13935	.56694	.54958	.55536	.01576	.01063	.01234

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00420	.00223	.00009	.00748	.28195	.70103
SDev	.00605	.00237	.00044	.00234	.00162	.00018
%RSD	144.12	106.29	501.23	31.252	.57539	.02506

#1	.00008	.00055	.00040	.00583	.28310	.70091
#2	-.00848	.00390	-.00022	.00913	.28081	.70116

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			10.000	10.000	50.000	5.0000
Low			-.00500	-.01000	-.05000	-.02000

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16917	--	--	--	--	--	--
SDev	12.87017	--	--	--	--	--	--
%RSD	.0760790	--	--	--	--	--	--
#1	16908	--	--	--	--	--	--
#2	16926	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-2

Operator: RJG

Run Time: 06/05/00 10:23:44

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0521	23.835	.52152	1.9561	2.0405	50.995	.50323
SDev	.0007	.019	.00318	.0019	.0018	.024	.00082
%RSD	.06284	.08052	.61066	.09528	.08765	.04703	.16325
#1	1.0516	23.821	.52377	1.9547	2.0417	51.012	.50381
#2	1.0525	23.848	.51926	1.9574	2.0392	50.978	.50265
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	27.500	.55000	2.2000	2.2000	55.000	.55000
Low	.90000	22.500	.45000	1.8000	1.8000	45.000	.45000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0367	2.0465	1.9591	25.015	50.107	2.0039	2.0620
SDev	.0017	.0008	.0013	.018	.012	.0010	.0103
%RSD	.08285	.03957	.06812	.07056	.02412	.05019	.50133
#1	2.0379	2.0459	1.9600	25.003	50.115	2.0032	2.0546
#2	2.0355	2.0471	1.9581	25.028	50.098	2.0046	2.0693
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	2.2000	2.2000	27.500	55.000	2.2000	2.2000
Low	1.8000	1.8000	1.8000	22.500	45.000	1.8000	1.8000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0338	.51928	.52081	.52030	.53427	.52168	.52587
SDev	.0029	.00154	.00267	.00229	.00262	.00098	.00153
%RSD	.14428	.29745	.51184	.44059	.49041	.18866	.29075
#1	2.0359	.51818	.51893	.51868	.53241	.52099	.52479
#2	2.0317	.52037	.52269	.52192	.53612	.52238	.52695
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	2.2000			.55000			.55000
Low	1.8000			.45000			.45000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.52825	.53699	.53408	1.0653	2.0123	2.0674	
SDev	.00074	.00176	.00093	.0011	.0032	.0029	
%RSD	.14000	.32798	.17384	.10490	.15817	.14054	
#1	.52773	.53824	.53474	1.0645	2.0145	2.0694	
#2	.52877	.53575	.53343	1.0661	2.0100	2.0653	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.55000	1.1000	2.2000	2.2000	
Low			.45000	.90000	1.8000	1.8000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16052	--	--	--	--	--	--
SDev	9.263514	--	--	--	--	--	--
%RSD	.0577090	--	--	--	--	--	--
#1	16046	--	--	--	--	--	--
#2	16059	--	--	--	--	--	--

Method: METTRA Sample Name: CCB2

Operator: RJG

Run Time: 06/05/00 10:27:52

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00080	.14466	.00078	.00061	.00184	.03492	.00017
SDev	.00020	.00096	.00054	.00019	.00003	.00784	.00018
%RSD	24.568	.66031	69.401	30.876	1.7575	22.442	105.26
#1	.00066	.14533	.00116	.00048	.00181	.02938	.00004
#2	.00094	.14398	.00039	.00074	.00186	.04046	.00031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00037	.00064	-.00393	.01352	.01002	.00077	.00561
SDev	.00034	.00040	.00072	.00707	.00562	.00019	.00158
%RSD	92.107	61.995	18.192	52.297	56.045	24.460	28.150
#1	.00013	.00036	-.00444	.00852	.00605	.00064	.00672
#2	.00060	.00092	-.00343	.01852	.01399	.00090	.00449
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00031	.00140	.00037	.00071	-.00115	.00404	.00231
SDev	.00104	.00065	.00057	.00017	.00035	.00138	.00081
%RSD	339.88	46.237	156.24	23.357	30.546	34.309	34.931
#1	-.00043	.00094	.00077	.00083	-.00090	.00306	.00174
#2	.00104	.00186	-.00004	.00059	-.00139	.00501	.00288
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00041	-.00101	-.00081	.00222	.00368	.00233	
SDev	.00055	.00000	.00018	.00316	.00077	.00036	
%RSD	134.02	.10835	22.645	142.34	20.927	15.699	
#1	-.00002	-.00101	-.00068	-.00001	.00314	.00207	
#2	-.00080	-.00101	-.00094	.00445	.00422	.00259	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 10:31:58 AM

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15994	--	--	--	--	--	--
SDev	111.6518	--	--	--	--	--	--
%RSD	.6980721	--	--	--	--	--	--
#1	16073	--	--	--	--	--	--
#2	15915	--	--	--	--	--	--

Method: METTRA

Sample Name: DE442

Operator: RJG

Run Time: 06/05/00 10:32:01

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04991	181.66	1.8992	4.3641	.05344	H689.33	.04055
SDev	.00049	1.75	.0120	.0325	.00019	5.06	.00002
%RSD	.97736	.96249	.63191	.74519	.35924	.73377	.05207
#1	.04957	180.42	1.8907	4.3411	.05331	H685.75	.04054
#2	.05026	182.90	1.9077	4.3871	.05358	H692.90	.04057
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49859	.40494	.43842	153.45	22.034	4.4629	.01001
SDev	.00460	.00305	.00415	1.53	.184	.0418	.00122
%RSD	.92347	.75393	.94659	.99968	.83646	.93671	12.211
#1	.49533	.40279	.43549	152.36	21.903	4.4334	.01087
#2	.50184	.40710	.44136	154.53	22.164	4.4925	.00915
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.58760	.81197	.77283	.78586	.01217	.01127	.01157
SDev	.00047	.00175	.02046	.01306	.00419	.00224	.00009
%RSD	.08039	.21554	2.6470	1.6621	34.457	19.835	.81423
#1	.58793	.81320	.75837	.77663	.00920	.01285	.01163
#2	.58726	.81073	.78730	.79510	.01513	.00969	.01150
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8078	1.8363	1.8268	1.9278	.76592	1.1042	
SDev	.0004	.0473	.0317	.0218	.00418	.0075	
%RSD	.02121	2.5740	1.7328	1.1327	.54606	.68256	
#1	1.8075	1.8029	1.8044	1.9123	.76296	1.0989	
#2	1.8080	1.8698	1.8492	1.9432	.76887	1.1095	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16781	--	--	--	--	--	--
SDev	102.5664	--	--	--	--	--	--
%RSD	.6112227	--	--	--	--	--	--
#1	16853	--	--	--	--	--	--
#2	16708	--	--	--	--	--	--

Method: METTRA Sample Name: DE3QGB

Operator: RJG

Run Time: 06/05/00 10:36:10

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00005	.16436	.00030	.00189	.00150	.39689	-.00011
SDev	.00014	.00822	.00109	.00010	.00004	.00970	.00009
%RSD	284.39	5.0003	361.95	5.2822	2.6498	2.4428	83.180
#1	-.00015	.17017	.00108	.00196	.00153	.40375	-.00004
#2	.00005	.15855	-.00047	.00182	.00147	.39004	-.00017
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00050	.00011	-.00403	.03337	.05145	.00125	.00076
SDev	.00000	.00021	.00001	.01006	.00020	.00007	.00027
%RSD	.54666	181.68	.19444	30.164	.39333	5.8828	36.013
#1	-.00050	-.00003	-.00403	.04049	.05159	.00130	.00095
#2	-.00050	.00026	-.00404	.02625	.05131	.00120	.00056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00114	.00728	.00017	.00254	-.00108	.00077	.00015
SDev	.00112	.00386	.00112	.00054	.00333	.00126	.00027
%RSD	98.014	52.987	664.81	21.228	309.41	164.09	172.09
#1	.00035	.00455	.00096	.00216	.00128	-.00012	.00034
#2	.00193	.01001	-.00062	.00292	-.00343	.00166	-.00003
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00590	.00290	-.00003	.00010	.00001	.01804	
SDev	.00384	.00246	.00036	.00281	.00000	.00028	
%RSD	64.968	84.891	1067.9	2823.7	30.164	1.5598	
#1	-.00862	.00463	.00022	.00209	.00001	.01784	
#2	-.00319	.00116	-.00029	-.00189	.00001	.01824	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 10:40:15 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15714	--	--	--	--	--	--
SDev	23.82964	--	--	--	--	--	--
%RSD	.1516444	--	--	--	--	--	--
#1	15731	--	--	--	--	--	--
#2	15697	--	--	--	--	--	--

Method: METTRA Sample Name: DE3QGC

Operator: RJG

Run Time: 06/05/00 10:40:19

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05338	2.0127	2.1222	1.9822	.05537	L.55364	.05385
SDev	.00012	.0015	.0007	.0044	.00000	.00239	.00042
%RSD	.21931	.07536	.03076	.22429	.00180	.43232	.78833
#1	.05330	2.0138	2.1218	1.9791	.05537	L.55195	.05355
#2	.05346	2.0117	2.1227	1.9854	.05537	L.55533	.05415
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	.06000	2.4000	2.4000	2.4000	.06000	60.000	.06000
Low	.04000	1.6000	1.6000	1.6000	.04000	40.000	.04000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53915	.21526	.24864	1.0808	L.06150	.52308	L.00010
SDev	.00090	.00064	.00124	.0033	.00391	.00126	.00034
%RSD	.16695	.29789	.49891	.30231	6.3621	.24156	342.09
#1	.53851	.21481	.24776	1.0785	L.06426	.52218	L.00034
#2	.53979	.21572	.24952	1.0831	L.05873	.52397	L-.00014
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54010	.53664	.53988	.53880	.00021	.00289	L.00200
SDev	.00165	.00113	.00226	.00113	.00186	.00065	.00019
%RSD	.30557	.21010	.41768	.20947	871.19	22.385	9.3456
#1	.54127	.53744	.53829	.53801	-.00110	.00334	L.00187
#2	.53894	.53585	.54148	.53960	.00152	.00243	L.00213
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	2.1184	2.1384	2.1317	2.1531	.51768	.57995	
SDev	.0029	.0176	.0127	.0078	.00132	.00024	
%RSD	.13467	.82466	.59633	.36195	.25519	.04108	
#1	2.1164	2.1259	2.1227	2.1476	.51675	.58012	
#2	2.1204	2.1508	2.1407	2.1586	.51862	.57978	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			2.4000	2.4000	.60000	.60000	
Low			1.6000	1.6000	.40000	.40000	

Analysis Report

06/05/00 10:44:24 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15844	--	--	--	--	--	--
SDev	.2824284	--	--	--	--	--	--
%RSD	.0017826	--	--	--	--	--	--
#1	15844	--	--	--	--	--	--
#2	15844	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ22

Operator: RJG

Run Time: 06/05/00 10:44:28

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00253	202.69	.08201	3.2326	.00907	H955.41	-.00130
SDev	.00013	.34	.00085	.0062	.00008	1.50	.00005
%RSD	5.0290	.16983	1.0319	.19222	.89554	.15708	3.4700
#1	.00262	202.45	.08141	3.2282	.00913	H956.47	-.00127
#2	.00244	202.93	.08261	3.2370	.00901	H954.35	-.00133
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05255	.26890	.27164	142.61	20.532	3.7520	.00748
SDev	.00016	.00065	.00090	.28	.014	.0031	.00050
%RSD	.30823	.24149	.33030	.19407	.06955	.08294	6.7223
#1	.05243	.26844	.27101	142.42	20.522	3.7498	.00784
#2	.05266	.26935	.27228	142.81	20.542	3.7542	.00713
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12283	.55314	.52224	.53253	.01655	.01284	.01408
SDev	.00174	.00275	.00813	.00450	.00683	.00328	.00008
%RSD	1.4168	.49767	1.5561	.84572	41.239	25.568	.58486
#1	.12406	.55508	.51649	.52934	.01172	.01517	.01402
#2	.12160	.55119	.52799	.53571	.02138	.01052	.01414
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.00789	-.00014	.00253	.01162	.31711	.74730	
SDev	.00459	.00080	.00100	.00088	.00060	.00014	
%RSD	58.153	571.62	39.352	7.5791	.18863	.01877	
#1	.01113	-.00070	.00324	.01100	.31753	.74720	
#2	.00464	.00042	.00183	.01225	.31669	.74740	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 10:48:33 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16872	--	--	--	--	--	--
SDev	22.73376	--	--	--	--	--	--
%RSD	.1347387	--	--	--	--	--	--
#1	16889	--	--	--	--	--	--
#2	16856	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ22P5 Operator: RJG
 Run Time: 06/05/00 10:48:37
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00053	41.336	.01802	.69251	.00314	224.98	-.00034
SDev	.00011	.180	.00058	.00334	.00016	1.13	.00000
%RSD	20.266	.43560	3.2256	.48169	5.1177	.50217	1.2280

#1	.00061	41.464	.01843	.69486	.00326	225.78	-.00034
#2	.00046	41.209	.01761	.69015	.00303	224.18	-.00034

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01145	.05972	.05152	30.524	4.3566	.80450	.00107
SDev	.00063	.00015	.00021	.113	.0127	.00234	.00013
%RSD	5.5062	.25167	.39988	.37049	.29094	.29055	11.803

#1	.01100	.05982	.05167	30.604	4.3656	.80615	.00098
#2	.01189	.05961	.05137	30.444	4.3476	.80285	.00116

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02730	.12140	.11472	.11694	.00437	.00198	.00278
SDev	.00074	.00229	.00219	.00070	.00202	.00084	.00011
%RSD	2.7117	1.8859	1.9090	.59718	46.333	42.404	4.0897

#1	.02782	.12301	.11317	.11645	.00294	.00258	.00270
#2	.02677	.11978	.11627	.11744	.00580	.00139	.00286

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00026	-.00055	-.00045	.00364	.06922	.16378
SDev	.00335	.00176	.00006	.00196	.00112	.00132
%RSD	1277.7	321.40	12.525	53.840	1.6194	.80609

#1	.00211	-.00179	-.00049	.00225	.07001	.16471
#2	-.00263	.00070	-.00041	.00503	.06843	.16284

Analysis Report

06/05/00 10:52:42 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16084	--	--	--	--	--	--
SDev	43.73428	--	--	--	--	--	--
%RSD	.2719104	--	--	--	--	--	--
#1	16053	--	--	--	--	--	--
#2	16115	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ22S

Operator: RJG

Run Time: 06/05/00 10:52:46

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05020	168.23	1.9056	4.3129	.05309	H773.36	.04051
SDev	.00010	.83	.0000	.0116	.00006	.36	.00010
%RSD	.20634	.49045	.00004	.26997	.10624	.04623	.25242
#1	.05027	167.64	1.9056	4.3047	.05313	H773.62	.04044
#2	.05013	168.81	1.9056	4.3212	.05305	H773.11	.04059
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48112	.41391	.53244	148.54	17.486	3.6845	.00552
SDev	.00069	.00011	.00153	.36	.010	.0045	.00025
%RSD	.14369	.02602	.28672	.23962	.05676	.12250	4.4522
#1	.48063	.41398	.53136	148.29	17.479	3.6813	.00534
#2	.48161	.41383	.53352	148.80	17.493	3.6877	.00569
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55806	.95401	.92275	.93316	.01611	.01289	.01396
SDev	.00180	.00990	.00639	.00096	.00407	.00428	.00150
%RSD	.32271	1.0378	.69195	.10308	25.261	33.217	10.750
#1	.55934	.96102	.91824	.93248	.01323	.01592	.01502
#2	.55679	.94701	.92727	.93384	.01898	.00986	.01290
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8697	1.9040	1.8926	1.9228	.72036	1.4607	
SDev	.0072	.0069	.0022	.0021	.00088	.0005	
%RSD	.38484	.36055	.11534	.11001	.12265	.03588	
#1	1.8748	1.8991	1.8910	1.9213	.72099	1.4603	
#2	1.8646	1.9089	1.8941	1.9243	.71974	1.4610	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 10:56:52 AM

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IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16779	--	--	--	--	--	--
SDev	29.73301	--	--	--	--	--	--
%RSD	.1772003	--	--	--	--	--	--
#1	16758	--	--	--	--	--	--
#2	16800	--	--	--	--	--	--

530 UAD no sample in autosampler position. 266500

660 Method: METTRA Sample Name: DEQ22D Operator: RJG
Run Time: 06/05/00 10:56:56
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00032	L-.55070	.00220	.00020	.01539	.03016	.00001
SDev	.00011	.01077	.00029	.00007	.00008	.02739	.00002
%RSD	34.660	1.9552	13.184	33.534	.53721	90.823	142.79
#1	.00024	L-.54309	.00199	.00025	.01533	.04952	-.00000
#2	.00040	L-.55832	.00240	.00016	.01545	.01079	.00003
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00052	.00015	-.01339	.02928	.00159	.00003	-.00119
SDev	.00026	.00014	.00015	.00211	.00036	.00010	.00005
%RSD	50.360	93.105	1.1153	7.2181	22.761	338.63	4.5145
#1	.00034	.00005	-.01349	.03078	.00133	.00010	-.00115
#2	.00071	.00025	-.01328	.02779	.00184	-.00004	-.00123
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00028	-.00104	.00203	.00101	.00315	-.00013	.00097
SDev	.00006	.00050	.00003	.00019	.00013	.00007	.00009
%RSD	22.537	48.169	1.3900	18.485	3.9839	59.207	9.4657
#1	.00024	-.00069	.00205	.00114	.00306	-.00018	.00090
#2	.00033	-.00140	.00201	.00088	.00324	-.00007	.00103
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.00519	-.00703	-.00296	.00892	.00001	-.00071	
SDev	.00017	.00050	.00027	.00093	.00000	.00002	
%RSD	3.2833	7.0645	9.2706	10.445	7.2181	2.5041	
#1	.00531	-.00738	-.00315	.00958	.00001	-.00072	
#2	.00507	-.00668	-.00277	.00826	.00001	-.00069	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41650	--	--	--	--	--	--
SDev	1051.540	--	--	--	--	--	--
%RSD	2.524684	--	--	--	--	--	--
#1	40907	--	--	--	--	--	--
#2	42394	--	--	--	--	--	--

532
660

WAD: no sample in autosampler position TR6650

Analysis Report

06/05/00 11:05:11 AM

page 1

Method: METTRA Sample Name: CCV3-3 Operator: RJG
 Run Time: 06/05/00 11:01:05
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00005	L-.56160	L.00197	L-.00006	L.01551	L-.01523	L-.00010
SDev	.00007	.00795	.00011	.00001	.00016	.00143	.00003
%RSD	149.93	1.4163	5.3214	9.4088	1.0107	9.4054	28.027

#1	L-.00009	L-.55598	L.00204	L-.00006	L.01540	L-.01422	L-.00012
#2	L.00000	L-.56723	L.00189	L-.00007	L.01562	L-.01624	L-.00008

Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	1.1000	27.500	.55000	2.2000	2.2000	55.000	.55000
Low	.90000	22.500	.45000	1.8000	1.8000	45.000	.45000

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00054	L-.00018	L-.01358	L.02347	L-.00127	L-.00020	L-.00152
SDev	.00020	.00012	.00010	.00325	.00105	.00001	.00029
%RSD	37.745	66.072	.70992	13.822	82.542	5.8204	19.026

#1	L.00040	L-.00027	L-.01365	L.02118	L-.00202	L-.00021	L-.00173
#2	L.00068	L-.00010	L-.01351	L.02577	L-.00053	L-.00019	L-.00132

Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	2.2000	2.2000	2.2000	27.500	55.000	2.2000	2.2000
Low	1.8000	1.8000	1.8000	22.500	45.000	1.8000	1.8000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00007	-.00069	.00182	L.00098	.00232	-.00041	L.00050
SDev	.00000	.00033	.00064	.00031	.00054	.00004	.00015
%RSD	2.2359	48.346	35.100	31.992	23.395	10.732	30.223

#1	L.00007	-.00093	.00227	L.00120	.00271	-.00044	L.00061
#2	L.00006	-.00045	.00136	L.00076	.00194	-.00038	L.00040

Errors	LC Low	NOCHECK	NOCHECK	LC Low	NOCHECK	NOCHECK	LC Low
High	2.2000			.55000			.55000
Low	1.8000			.45000			.45000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00687	-.00821	L-.00319	L.00919	L.00011	L-.00077
SDev	.00174	.00114	.00018	.00040	.00000	.00000
%RSD	25.340	13.897	5.6838	4.4033	1.2101	.07869

#1	.00564	-.00740	L-.00306	L.00947	L.00011	L-.00077
#2	.00810	-.00901	L-.00332	L.00890	L.00011	L-.00077

Errors	NOCHECK	NOCHECK	LC Low	LC Low	LC Low	LC Low
High			.55000	1.1000	2.2000	2.2000
Low			.45000	.90000	1.8000	1.8000

Analysis Report

06/05/00 11:05:11 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42403	--	--	--	--	--	--
SDev	1040.933	--	--	--	--	--	--
%RSD	2.454837	--	--	--	--	--	--
#1	41667	--	--	--	--	--	--
#2	43139	--	--	--	--	--	--

Method: METTRA Sample Name: DEQ22D

Operator: RJG

Run Time: 06/05/00 11:09:31

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05049	192.46	1.8795	4.4997	.05344	H803.38	.04009
SDev	.00039	.61	.0016	.0078	.00009	.83	.00031
%RSD	.77407	.31699	.08470	.17238	.17105	.10314	.77526
#1	.05076	192.03	1.8784	4.4942	.05351	H803.96	.03987
#2	.05021	192.89	1.8807	4.5051	.05338	H802.79	.04031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48139	.42012	.54523	144.68	19.965	4.4146	.00737
SDev	.00083	.00013	.00150	.19	.013	.0023	.00149
%RSD	.17242	.03015	.27535	.12928	.06388	.05275	20.287
#1	.48080	.42003	.54417	144.55	19.956	4.4130	.00842
#2	.48197	.42020	.54629	144.81	19.974	4.4163	.00631
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55532	.93846	.89997	.91279	.01427	.01271	.01323
SDev	.00188	.00812	.00830	.00283	.00750	.00449	.00050
%RSD	.33876	.86517	.92175	.30998	52.546	35.354	3.7887
#1	.55665	.94420	.89411	.91079	.00897	.01589	.01359
#2	.55399	.93272	.90584	.91479	.01957	.00953	.01288
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.8232	1.8655	1.8514	1.9194	.75015	1.1320	
SDev	.0092	.0118	.0048	.0015	.00157	.0019	
%RSD	.50242	.62993	.25859	.07764	.20908	.17189	
#1	1.8297	1.8572	1.8481	1.9205	.75126	1.1333	
#2	1.8168	1.8738	1.8548	1.9184	.74904	1.1306	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			10.000	10.000	50.000	5.0000	
Low			-.00500	-.01000	-.05000	-.02000	

Analysis Report

06/05/00 11:13:37 AM

660 535
page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16605	--	--	--	--	--	--
SDev	89.66031	--	--	--	--	--	--
%RSD	.5399483	--	--	--	--	--	--
#1	16542	--	--	--	--	--	--
#2	16669	--	--	--	--	--	--

Analysis Report

06/05/00 11:17:46 AM

page 1

Method: METTRA Sample Name: CCV3-3

Operator: RJG

Run Time: 06/05/00 11:13:41

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0474	23.439	.51562	1.9340	2.0093	49.947	.49314
SDev	.0102	.284	.00552	.0183	.0202	.531	.00557
%RSD	.97008	1.2099	1.0700	.94704	1.0077	1.0625	1.1301
#1	1.0402	23.238	.51172	1.9210	1.9950	49.572	.48920
#2	1.0545	23.639	.51952	1.9469	2.0236	50.322	.49708
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	27.500	.55000	2.2000	2.2000	55.000	.55000
Low	.90000	22.500	.45000	1.8000	1.8000	45.000	.45000
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0015	2.0168	1.9506	24.502	49.639	1.9806	2.0427
SDev	.0206	.0214	.0189	.272	.516	.0207	.0343
%RSD	1.0314	1.0605	.97114	1.1096	1.0403	1.0444	1.6813
#1	1.9869	2.0017	1.9372	24.310	49.274	1.9660	2.0184
#2	2.0161	2.0320	1.9640	24.694	50.004	1.9952	2.0670
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	2.2000	2.2000	27.500	55.000	2.2000	2.2000
Low	1.8000	1.8000	1.8000	22.500	45.000	1.8000	1.8000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9994	.50677	.51117	.50970	.53250	.52053	.52452
SDev	.0136	.00681	.00579	.00613	.00930	.00740	.00803
%RSD	.67778	1.3428	1.1337	1.2029	1.7458	1.4217	1.5313
#1	1.9898	.50196	.50707	.50537	.52593	.51530	.51884
#2	2.0090	.51158	.51526	.51404	.53907	.52576	.53020
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	2.2000			.55000			.55000
Low	1.8000			.45000			.45000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.52653	.53300	.53085	1.0614	1.9832	2.0395	
SDev	.00472	.00887	.00749	.0165	.0192	.0212	
%RSD	.89626	1.6644	1.4107	1.5510	.97053	1.0413	
#1	.52320	.52673	.52555	1.0498	1.9696	2.0245	
#2	.52987	.53927	.53614	1.0731	1.9968	2.0545	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.55000	1.1000	2.2000	2.2000	
Low			.45000	.90000	1.8000	1.8000	

Analysis Report

06/05/00 11:17:46 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15854	--	--	--	--	--	--
SDev	134.2446	--	--	--	--	--	--
%RSD	.8467329	--	--	--	--	--	--
#1	15949	--	--	--	--	--	--
#2	15760	--	--	--	--	--	--

Method: METTRA Sample Name: CCB3 Operator: RJG
Run Time: 06/05/00 11:17:50
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00015	H.20943	.00097	.00048	.00223	.02496	-.00001
SDev	.00011	.00153	.00125	.00002	.00002	.00079	.00008
%RSD	73.255	.73223	128.65	3.9839	1.0129	3.1755	634.72

#1	.00023	H.20834	.00009	.00050	.00222	.02440	-.00007
#2	.00007	H.21051	.00185	.00047	.00225	.02552	.00004

Errors	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00018	.00052	-.00571	.00951	.00538	.00048	.00551
SDev	.00020	.00017	.00037	.00237	.00280	.00003	.00152
%RSD	111.82	32.056	6.5050	24.930	52.133	6.2793	27.492

#1	.00032	.00064	-.00597	.01118	.00339	.00046	.00659
#2	.00004	.00040	-.00545	.00783	.00736	.00050	.00444

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.02500	.10000	5.0000	.01500	.04000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00022	.00090	.00090	.00090	-.00053	-.00018	-.00029
SDev	.00043	.00077	.00051	.00008	.00099	.00119	.00047
%RSD	197.94	85.189	56.356	9.3128	187.17	670.28	158.83

#1	.00052	.00144	.00054	.00084	-.00123	.00067	.00004
#2	-.00009	.00036	.00126	.00096	.00017	-.00102	-.00063

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.04000			.00300			.06000
Low	-.04000			-.00300			-.06000

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00090	.00025	.00047	.00280	.00027	.00237
SDev	.00179	.00193	.00188	.00088	.00038	.00008
%RSD	198.33	777.32	404.18	31.479	139.98	3.3335

#1	-.00036	-.00112	-.00087	.00343	.00053	.00232
#2	.00217	.00161	.00180	.00218	.00000	.00243

Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High			.00500	.01000	.05000	.02000
Low			-.00500	-.01000	-.05000	-.02000

Analysis Report

06/05/00 11:21:56 AM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15802	--	--	--	--	--	--
SDev	.6007646	--	--	--	--	--	--
%RSD	.0038019	--	--	--	--	--	--
#1	15801	--	--	--	--	--	--
#2	15802	--	--	--	--	--	--

Metals Preparation Log



STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238
412-820-8380

Submitted To Your Success

Method: 3050B		Matrix: SO1		Start Time: 1645		SDG: _____		Balance# C94817		Reagents: 10ml 1.1 HNO ₃ , 5ml 15.0% HNO ₃ , 10ml 30% H ₂ O ₂ , 10ml conc. HCl		0014-110-5, 6623N35058Kallundroff, 5240N44407Kallundroff, 5387N44407Kallundroff	
August 30, 2008		Date: 6-4-00		Lot Number: C0F600191		Lab Lot No. (book page, line): 0014-089-1							
Requested By: [Signature]		Date: 6-4-00				MS MS-61REV							

Sample ID	Init Wt/Vol g/mL	Final Vol mL	Comments	Color		Clarity		Texture		Artifacts	Artifact Codes
				Pre	Post	Pre	Post	Pre	Post		
1. DE44M	1.00g	100ml	MS-61REV								S-Stones
2. DE44H S			MS-61REV								O=Organic
3. DE44H D			MS-61REV								(plant mat)
4. DE44Q			MS-61REV								W=free H ₂ O
5. DESW2 B			MS-61REV								G=Glass
6. DESW2 C			MS-61REV								M=Metal Fragments
7.											R=Rubber/Plastic
8.											C=Cloth
9.											P=Paper
10.											I=Insects
11.											
12.											
13.											
14.											
15.											
16.											
17.											
18.											
19.											
20.											
21.											
22.											
23.											
24.											

Digestate(s)	Digestate(s) Received			Digestate(s) Relinquished			Hot plate /Block Temp	Correction Factor	Color
	Date	Time	Analyst	Date	Time	Analyst			
1. DE44M	6-4-00	12:15	W. J. [Signature]	6-4-00	12:20	W. J. [Signature]	45°C	-0.7%	R=Red, BL=Blue, BR=Brown, BLK=Black, Y=Yellow, O=Orange, V=Violet, P=Pink, W=White, GY=Gray, GN=Green, C=Colorless
2. DE44H S									
3. DE44H D									
4. DE44Q									
5. DESW2 B									
6. DESW2 C									
7.									
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PSR024 6/04/00 8:02:16 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: FAUSTG

METHOD: QO Inductively Coupled Plasma (6010B)

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	
										RCVD	REQD
8B	DE3F0	---	237985	367970	A-34-QO C0F020113	019			SOLID	0	2 1
8B	DE3F2	---	237986	367970	A-34-QO C0F020113	020			SOLID	0	2 1
8B	DE3F4	---	237987	367970	A-34-QO C0F020113	021			SOLID	0	2 1
8B	DE3F6	---	237988	367970	A-34-QO C0F020113	022			SOLID	0	2 1
8B	DE3F7	---	237989	367970	A-34-QO C0F020113	023			SOLID	0	2 1
8B	DE3F9	---	237990	367970	A-34-QO C0F020113	024			SOLID	0	2 1
8B	DE3FC	---	237991	367970	A-34-QO C0F020113	025			SOLID	0	2 1
8B	DE3FD	---	237992	367970	A-34-QO C0F020113	026			SOLID	0	2 1
8C,D CLP	DE44M	---	237983	399411	A-34-QO C0F020191	001			SOLID	0	3 1
8C,D CLP	DE44Q	---	237984	399411	A-34-QO C0F020191	002			SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

Geoffrey O. Braust
Geoffrey O. Braust

Geoffrey O. Braust
Geoffrey O. Braust

6-4-00 1055
6-4-00 1120

***** END OF REPORT *****

**TCLP
METALS DATA**

STL-Pittsburgh**Cover Page - Inorganic Analysis Data Package**

<u>Client ID</u>	<u>Lab Sample ID:</u>
<u>DF/S1/0153/SDC/006</u>	<u>DE44MT</u>
<u>DF/S1/0153/SDC/006D</u>	<u>DE44MDT</u>
<u>DF/S1/0153/SDC/006S</u>	<u>DE44MST</u>
<u>DF/S1/0153/SDC/007</u>	<u>DE44QT</u>

Comments: UXB/DUNN FIELD
C0F020191
TCLP-6010B, 7470A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

REVIEWED BY: mtw
DATE: 6-8-00

**TCLP
METALS
RESULTS**

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44MT **Client ID:** DF/S1/0153/SDC/006
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158093
Weight: NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000077	B	1	CVAA	6/6/00	9:33

Comments: _____

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44QT Client ID: DF/S1/0153/SDC/007
Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093
Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000053	B	1	CVAA	6/6/00	9:40

Comments: _____

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44MT Client ID: DF/S1/0153/SDC/006
 Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.17	B	1	ICP	6/7/00	10:23
Barium	493.41	0.00041	10.0	1.5	B	1	ICP	6/7/00	10:23
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:23
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:23
Lead	220.35	0.025	0.50	0.025	U	1	ICP	6/7/00	10:23
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	6/7/00	10:23
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:23

Comments: C0F020191001

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL

Form 1 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DE44QT **Client ID:** DF/S1/0153/SDC/007
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158172
Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.17	B	1	ICP	6/7/00	10:42
Barium	493.41	0.00041	10.0	1.3	B	1	ICP	6/7/00	10:42
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:42
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:42
Lead	220.35	0.025	0.50	0.025	U	1	ICP	6/7/00	10:42
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	6/7/00	10:42
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:42

Comments: C0F020191002

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRNAcceptable Range: 90% - 110%Standard Source: UltraStandard ID: 0014-122-9 ¹²⁵⁻¹⁴ ₆₋₈₋₀₀ ^{NTW}

Element	WL/ Mass	True Conc	ICV5-1 6/6/00 9:19 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2.5	2.59	103.6								

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPUnits: ug/LChart Number: J00607A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-119-2

Element	WL/ Mass	True Conc	ICV2-1 6/7/00 9:09 AM		Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
			Found	% Rec								
Arsenic	193.696	1000.0	993.23	99.3								
Barium	493.409	1000.0	995.44	99.5								
Cadmium	228.802	1000.0	1004.44	100.4								
Chromium	267.716	1000.0	1007.78	100.8								
Lead	220.353	1000.0	1008.67	100.9								
Selenium	196.026	1000.0	978.68	97.9								
Silver	328.068	500.0	505.64	101.1								

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRNAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-122-11 ¹²⁵⁻¹⁵ ^{MTW} ₆₋₈₋₀₀

Element	WL/ Mass	True Conc	CCV5-1 6/6/00 9:23 AM		CCV5-2 6/6/00 9:48 AM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	5.06	101.2	4.94	98.8						

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPUnits: ug/LChart Number: J00607A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-087-7

Element	WL/ Mass	True Conc	CCV2-1 6/7/00 9:49 AM		CCV2-2 6/7/00 10:26 AM		CCV2-3 6/7/00 11:13 AM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	193.696	5000.0	5080.01	101.6	4987.87	99.8	4879.57	97.6		
Barium	493.409	5000.0	5004.05	100.1	4872.42	97.4	4708.21	94.2		
Cadmium	228.802	5000.0	4936.72	98.7	5025.59	100.5	4941.00	98.8		
Chromium	267.716	5000.0	4846.06	96.9	4844.96	96.9	4824.96	96.5		
Lead	220.353	5000.0	4889.31	97.8	4916.36	98.3	4778.30	95.6		
Selenium	196.026	5000.0	5013.11	100.3	4953.92	99.1	4849.48	97.0		
Silver	328.068	1000.0	988.13	98.8	985.78	98.6	965.98	96.6		

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRN

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICB1 6/6/00 9:21 AM							
			Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	B						

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00607A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICB1 6/7/00 9:12 AM							
			Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	193.696	500	30.3	U						
Barium	493.409	10000	0.4	U						
Cadmium	228.802	100	2.8	U						
Chromium	267.716	500	3.8	U						
Lead	220.353	500	24.6	U						
Selenium	196.026	250	67.4	U						
Silver	328.068	500	3.1	U						

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0606HGA.PRN

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/6/00 9:25 AM		CCB2 6/6/00 9:50 AM					
			Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.0	U	0.0	U				

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00607A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 6/7/00 9:52 AM		CCB2 6/7/00 10:29 AM		CCB3 6/7/00 11:16 AM		Found	Q
			Found	Q	Found	Q	Found	Q		
Arsenic	193.696	500	30.3	U	41.3	B	30.3	U		
Barium	493.409	10000	0.4	U	0.4	U	0.4	U		
Cadmium	228.802	100	2.8	U	2.8	U	2.8	U		
Chromium	267.716	500	3.8	U	3.8	U	4.4	B		
Lead	220.353	500	24.6	U	24.6	U	-33.0	B		
Selenium	196.026	250	67.4	U	67.4	U	67.4	U		
Silver	328.068	500	3.1	U	3.1	U	3.1	U		

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results**Lab Sample ID:** DE63RBT**Matrix:** Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158093**Weight:** NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000067	B	1	CVAA	6/6/00	9:32

Comments: _____

Version 3.63.4

U Result is less than the MDL
B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results**Lab Sample ID:** DE7HKBT**Matrix:** Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158093**Weight:** NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000058	B	1	CVAA	6/6/00	9:27

Comments: _____

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results
Lab Sample ID: DE63RBT
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158172
Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.13	B	1	ICP	6/7/00	10:17
Barium	493.409	0.00041	10.0	0.0016	B	1	ICP	6/7/00	10:17
Cadmium	228.802	0.0028	0.10	-0.0032	B	1	ICP	6/7/00	10:17
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:17
Lead	220.353	0.025	0.50	0.025	U	1	ICP	6/7/00	10:17
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	6/7/00	10:17
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:17

Comments: _____

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE7QTBTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.034	B	1	ICP	6/7/00	10:14
Barium	493.409	0.00041	10.0	0.00041	U	1	ICP	6/7/00	10:14
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	6/7/00	10:14
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	6/7/00	10:14
Lead	220.353	0.025	0.50	0.025	U	1	ICP	6/7/00	10:14
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	6/7/00	10:14
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	6/7/00	10:14

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPUnits: ug/LChart Number: J00607A.ARCAcceptable Range: 0% - 0%Standard Source: Inorganic VenturesStandard ID: 0014-088-12

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 6/7/00 9:15 AM				
				Found	Found	Found	Found	Found
Arsenic	193.696	500		12				
Barium	493.409	10000		2				
Cadmium	228.802	100		-3				
Chromium	267.716	500		-1				
Lead	220.353	500		84				
Selenium	196.026	250		-92				
Silver	328.068	500		-1				

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPUnits: ug/LChart Number: J00607A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-104-1

Element	WL/ Mass	True Conc	ICSAB 6/7/00 9:18 AM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	193.696	1000	919.7	92.0						
Barium	493.409	500	454.8	91.0						
Cadmium	228.802	1000	959.8	96.0						
Chromium	267.716	500	440.3	88.1						
Lead	220.353	1000	1001.7	100.2						
Selenium	196.026	1000	848.0	84.8						
Silver	328.068	1000	945.0	94.5						

STL-Pittsburgh
Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MST
Original Sample ID: DE44MT **Client ID:** DF/S1/0153/SDC/006S
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158093
Weight: NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Mercury	253.7	0.000077	B	0.0051		0.005	100.9	1	1	CVAA	6/6/00	9:33	6/6/00	9:35

Comments: _____

Version 3.63.4

- U Result is less than the MDL
- B Result is between MDL and RL
- N Spike recovery failed
- NC Percent recovery was not calculated
- * Duplicate analysis RPD was not within limits

Form 5A Equivalent

660 564

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MDT

Original Sample ID: DE44MT

Client ID: DF/S1/0153/SDC/006D

Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093

Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.000077	B	0.0051		0.005	99.5	1	1	CVAA	6/6/00	9:33	6/6/00	9.38

Comments:

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DE44MST
Original Sample ID: DE44MT **Client ID:** DF/S1/0153/SDC/006S
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158172
Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	193.7	0.17	B	4.8		5	92.1	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Barium	493.4	1.5	B	44.7		50	86.5	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Cadmium	228.8	0.0028	U	0.92		1	92.3	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Chromium	267.7	0.0038	U	4.2		5	84.8	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Lead	220.4	0.025	U	4.4		5	87.1	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Selenium	196.0	0.067	U	0.97		1	96.5	1	1	ICP	6/7/00	10:23	6/7/00	10:36
Silver	328.1	0.0031	U	0.89		1	88.9	1	1	ICP	6/7/00	10:23	6/7/00	10:36

Comments: _____

Version 3.63.4

U Result is less than the MDL
 B Result is between MDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated
 * Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DE44MDT

Original Sample ID: DE44MT

Client ID: DF/S1/0153/SDC/006D

Matrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172

Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.7	0.17	B	4.9		5	94.5	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Barium	493.4	1.5	B	45.9		50	88.8	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Cadmium	228.8	0.0028	U	0.94		1	94.2	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Chromium	267.7	0.0038	U	4.4		5	87.1	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Lead	220.4	0.025	U	4.5		5	89.4	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Selenium	196.0	0.067	U	0.99		1	99.4	1	1	ICP	6/7/00	10:23	6/7/00	10:39
Silver	328.1	0.0031	U	0.91		1	91.3	1	1	ICP	6/7/00	10:23	6/7/00	10:39

Comments:

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDTMatrix Spike Sample ID: DE44MST Client ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.0051		0.0051		1.4 %	1	1	CVAA	6/6/00	9:35	6/6/00	9:38

Comments: _____

Version 3.63.4

- U Result is less than the MDL
 B Result is between MDL and RL
 N Spike recovery failed
 NC Percent recovery was not calculated
 * Duplicate analysis RPD was not within limits

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DE44MDTMatrix Spike Sample ID: DE44MST Client ID: DF/S1/0153/SDC/006DMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.696	4.8		4.9		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Barium	493.409	44.7		45.9		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Cadmium	228.802	0.92		0.94		2.1 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Chromium	267.716	4.2		4.4		2.7 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Lead	220.353	4.4		4.5		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Selenium	196.026	0.97		0.99		3.0 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39
Silver	328.068	0.89		0.91		2.6 %	1	1	ICP	6/7/00	10:36	6/7/00	10:39

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 6 Equivalent

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE7HKCTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158093Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.0025	0.0026	104.4		80-120	1	CVAA	6/6/00	9:30

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 7 Equivalent

B Result is between MDL and RL

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DE7QTCTMatrix: Water Units: mg/L Prep Date: 6/6/00 Prep Batch: 0158172Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	2.0	2.0	101.5		80-120	1	ICP	6/7/00	10:20
Barium	493.409	2.0	1.8	87.4	B	80-120	1	ICP	6/7/00	10:20
Cadmium	228.802	0.050	0.041	82.9	B	80-120	1	ICP	6/7/00	10:20
Chromium	267.716	0.20	0.18	87.7	B	80-120	1	ICP	6/7/00	10:20
Lead	220.353	0.50	0.44	86.9	B	80-120	1	ICP	6/7/00	10:20
Selenium	196.026	2.0	2.0	100.6		80-120	1	ICP	6/7/00	10:20
Silver	328.068	0.050	0.047	93.4	B	80-120	1	ICP	6/7/00	10:20

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 7 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Serial Dilution RPD Report
Serial Dilution Sample ID: DE44MPT
Original Sample ID: DE44MT **Client ID:** DF/S1/0153/SDC/006
Matrix: Water **Units:** mg/L **Prep Date:** 6/6/00 **Prep Batch:** 0158172
Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Arsenic	193.696	0.17	B	0.16	B	5.0 %	1	5	ICP	6/7/00	10:23	6/7/00	10:33
Barium	493.409	1.5	B	1.5	B		1	5	ICP	6/7/00	10:23	6/7/00	10:33
Cadmium	228.802	0.0028	U	0.014	U		1	5	ICP	6/7/00	10:23	6/7/00	10:33
Chromium	267.716	0.0038	U	0.019	U		1	5	ICP	6/7/00	10:23	6/7/00	10:33
Lead	220.353	0.025	U	0.12	U		1	5	ICP	6/7/00	10:23	6/7/00	10:33
Selenium	196.026	0.067	U	0.34	U		1	5	ICP	6/7/00	10:23	6/7/00	10:33
Silver	328.068	0.0031	U	0.016	U		1	5	ICP	6/7/00	10:23	6/7/00	10:33

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 9 Equivalent

B Result is between MDL and RL

E Serial dilution percent difference not within limits

STL-Pittsburgh
Metals Data Reporting Form

Instrument Detection Limits

Instrument: CVAA**Units:** ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Mercury	253.70	0.2	0.045	3/20/00

STL-Pittsburgh
Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICP**Units:** ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Arsenic	193.70	500	30.3	4/1/00
Barium	493.41	10000	0.41	4/1/00
Cadmium	228.80	100	2.8	4/1/00
Chromium	267.72	500	3.8	4/1/00
Lead	220.35	500	24.6	4/1/00
Selenium	196.03	250	67.4	4/1/00
Silver	328.07	500	3.1	4/1/00

STL-Pittsburgh

Metals Data Reporting Form

Inter-Element Correction FactorsInstrument: ICPDate of IEC's: 3/27/00

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	As(0.008365), Mn(0.00002), Pb(0.000527)
Antimony	206.838	Ni(-0.000449), Pb(-0.001338), Sn(-0.004668)
Arsenic	193.696	Cd(0.011196)
Barium	493.409	Co(0.000506)
Beryllium	313.042	Cd(0.008625)
Cadmium	228.802	Co(0.002633)
Chromium	267.716	Pb(-0.000686), Sb(0.008213), V(-0.001979)
Cobalt	228.616	Al(-0.014067), B(0.00201), Cd(-0.004523), Cu(-0.00091), Pb(-0.027395), Sb(-0.003935), Ti(0.007862)
Copper	324.754	Zn(0.00466)
Iron	259.94	Ag(-0.000239), As(0.001314), B(-0.001921), Cd(-0.000034), Cu(-0.00008), Mn(-0.000288), Mo(-0.00015), Pb(0.000225), Se(-0.003656), Sn(-0.00019), Ti(0.010326), Zn(0.000098)
Manganese	257.61	Ag(0.000201), Ti(-0.005634)
Molybdenum	202.03	Al(0.008699), Cr(-0.000292), Mn(-0.00033), Sb(0.005808), V(-0.019318)
Nickel	231.604	Cd(-0.000409), Sb(-0.009092), Zn(0.003263)
Tin	189.989	Sb(0.002262)
Titanium	334.941	Co(0.001637), Fe(-0.003475), Sb(0.001696), Sn(0.003624)
Vanadium	292.402	Ag(-0.005069), Al(0.012877), As(0.017242), Be(0.00265), Cd(0.000094), Cr(0.000568), Sb(-0.003793), Si(-0.012762), Ti(0.007148), Zn(-0.004494)

STL-Pittsburgh

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: CVAAUnits: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Mercury	253.70	10	1/15/00

STL-Pittsburgh
Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICP**Units:** ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Arsenic	193.70	100000	4/5/00
Barium	493.41	100000	4/5/00
Cadmium	228.80	100000	4/5/00
Chromium	267.72	100000	4/5/00
Lead	220.35	100000	4/5/00
Selenium	196.03	100000	4/5/00
Silver	328.07	2000	4/5/00

Metals Data Reporting Form

Preparation LogPreparation Batch: 0158093 Instrument: CVAA Matrix: Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DE63RBT	6/6/00	NA	100	NA
DE7HKBT	6/6/00	NA	100	NA
DE7HKCT	6/6/00	NA	100	NA
DE44MDT	6/6/00	NA	100	NA
DE44MST	6/6/00	NA	100	NA
DE44MT	6/6/00	NA	100	NA
DE44QT	6/6/00	NA	100	NA

Metals Data Reporting Form

Preparation Log

Preparation Batch: 0158172 Instrument: ICP Matrix: Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DE63RBT	6/6/00	NA	50	NA
DE7QTBT	6/6/00	NA	50	NA
DE7QTCT	6/6/00	NA	50	NA
DE44MDT	6/6/00	NA	50	NA
DE44MST	6/6/00	NA	50	NA
DE44MT	6/6/00	NA	50	NA
DE44QT	6/6/00	NA	50	NA

STL-Pittsburgh

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAAChart Number: 0606HGA.PRN

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	6/6/00	9:00 AM
Std2Rep1	6/6/00	9:02 AM
Std3Rep1	6/6/00	9:04 AM
Std4Rep1	6/6/00	9:06 AM
Std5Rep1	6/6/00	9:09 AM
Std6Rep1	6/6/00	9:11 AM
ICV5-1	6/6/00	9:19 AM
ICB1	6/6/00	9:21 AM
CCV5-1	6/6/00	9:23 AM
CCB1	6/6/00	9:25 AM
DE7HKBT	6/6/00	9:27 AM
DE7HKCT	6/6/00	9:30 AM
DE63RBT	6/6/00	9:32 AM
DE44MT	6/6/00	9:33 AM
DE44MST	6/6/00	9:35 AM
DE44MDT	6/6/00	9:38 AM
DE44QT	6/6/00	9:40 AM
ZZZZZZ	6/6/00	9:42 AM
ZZZZZZ	6/6/00	9:44 AM
ZZZZZZ	6/6/00	9:46 AM
CCV5-2	6/6/00	9:48 AM
CCB2	6/6/00	9:50 AM
ZZZZZZ	6/6/00	9:52 AM
ZZZZZZ	6/6/00	9:54 AM
ZZZZZZ	6/6/00	9:56 AM
ZZZZZZ	6/6/00	9:58 AM
ZZZZZZ	6/6/00	10:00 AM
ZZZZZZ	6/6/00	10:02 AM
ZZZZZZ	6/6/00	10:04 AM
ZZZZZZ	6/6/00	10:06 AM
ZZZZZZ	6/6/00	10:09 AM
ZZZZZZ	6/6/00	10:11 AM
ZZZZZZ	6/6/00	10:13 AM
ZZZZZZ	6/6/00	10:15 AM
ZZZZZZ	6/6/00	10:17 AM
ZZZZZZ	6/6/00	10:19 AM
ZZZZZZ	6/6/00	10:21 AM
ZZZZZZ	6/6/00	10:23 AM
ZZZZZZ	6/6/00	10:25 AM
ZZZZZZ	6/6/00	10:28 AM
ZZZZZZ	6/6/00	10:29 AM

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STL-Pittsburgh

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0606HGA.PRN

Sample Name	Date of Analysis	Time of Analysis

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPChart Number: J00607A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	6/7/00	7:55 AM
ZZZZZZ	6/7/00	7:59 AM
ZZZZZZ	6/7/00	8:03 AM
ZZZZZZ	6/7/00	8:06 AM
ZZZZZZ	6/7/00	8:09 AM
ZZZZZZ	6/7/00	8:14 AM
ZZZZZZ	6/7/00	8:18 AM
ZZZZZZ	6/7/00	8:21 AM
ZZZZZZ	6/7/00	8:24 AM
ZZZZZZ	6/7/00	8:32 AM
ZZZZZZ	6/7/00	8:35 AM
ZZZZZZ	6/7/00	8:38 AM
ZZZZZZ	6/7/00	8:45 AM
ZZZZZZ	6/7/00	8:48 AM
ZZZZZZ	6/7/00	8:51 AM
ZZZZZZ	6/7/00	8:54 AM
STD1	6/7/00	9:00 AM
STD5A	6/7/00	9:03 AM
STD5B	6/7/00	9:06 AM
ICV2-1	6/7/00	9:09 AM
ICB1	6/7/00	9:12 AM
ICSA	6/7/00	9:15 AM
ICSAB	6/7/00	9:18 AM
ZZZZZZ	6/7/00	9:24 AM
ZZZZZZ	6/7/00	9:27 AM
ZZZZZZ	6/7/00	9:30 AM
ZZZZZZ	6/7/00	9:33 AM
ZZZZZZ	6/7/00	9:36 AM
ZZZZZZ	6/7/00	9:39 AM
ZZZZZZ	6/7/00	9:43 AM
ZZZZZZ	6/7/00	9:46 AM
CCV2-1	6/7/00	9:49 AM
CCB1	6/7/00	9:52 AM
ZZZZZZ	6/7/00	9:55 AM
ZZZZZZ	6/7/00	9:58 AM
ZZZZZZ	6/7/00	10:01 AM
ZZZZZZ	6/7/00	10:04 AM
ZZZZZZ	6/7/00	10:08 AM
ZZZZZZ	6/7/00	10:11 AM
DE7QBT	6/7/00	10:14 AM
DE63RBT	6/7/00	10:17 AM

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPChart Number: J00607A.ARC

Sample Name	Date of Analysis	Time of Analysis
DE7QTCT	6/7/00	10:20 AM
DE44MT	6/7/00	10:23 AM
CCV2-2	6/7/00	10:26 AM
CCB2	6/7/00	10:29 AM
DE44MPT	6/7/00	10:33 AM
DE44MST	6/7/00	10:36 AM
DE44MDT	6/7/00	10:39 AM
DE44QT	6/7/00	10:42 AM
ZZZZZZ	6/7/00	10:45 AM
ZZZZZZ	6/7/00	10:52 AM
ZZZZZZ	6/7/00	10:55 AM
ZZZZZZ	6/7/00	11:04 AM
ZZZZZZ	6/7/00	11:07 AM
ZZZZZZ	6/7/00	11:10 AM
CCV2-3	6/7/00	11:13 AM
CCB3	6/7/00	11:16 AM
ZZZZZZ	6/7/00	11:19 AM
ZZZZZZ	6/7/00	11:25 AM
ZZZZZZ	6/7/00	11:29 AM
ZZZZZZ	6/7/00	11:33 AM
ZZZZZZ	6/7/00	11:36 AM
ZZZZZZ	6/7/00	11:40 AM
ZZZZZZ	6/7/00	11:43 AM
ZZZZZZ	6/7/00	11:46 AM
ZZZZZZ	6/7/00	11:49 AM
ZZZZZZ	6/7/00	11:52 AM
ZZZZZZ	6/7/00	11:55 AM
ZZZZZZ	6/7/00	11:58 AM

**TCLP
METALS
RAW DATA**

Reanalyzed 6/7/00

#	Sample Name	AG	AS	BA	CD	CR	PB
1	STD1		-.00069	-.00104	.00007	.00008	.00065
2	STD5A		.28299	.5777	4.35116	.97244	3.99655
3	STD5B						.2767
4	ICV2-1 0014-119-2		.50564	.99323	.99544	1.0044	1.0078
5	ICB1		-.00103	-.02281	-.00004	-.00067	-.00062
6	ICSA 0014-088-12		-.00113	.01178	.00186	-.00334	-.00100
7	ICSAB 0014-104-1		.94502	.91967	.45480	.95980	.44032
8	DE5XJB		.00034	.01487	.00027	.00026	-.00100
9	DE5XJC	L-	.00136	L.01227	L.00016	L-.00106	L-.00125
10	DE1TE		-.00617	.00932	.68595	-.00136	-.00400
11	DE1TEP5		-.00307	.02074	.15044	-.00071	-.00400
12	DE1TES		-.00411	.03246	.69749	-.00088	-.00375
13	DE1TED		-.00548	.02169	.70237	-.00099	-.00437
14	DE1TJ		-.00376	.03469	.70195	-.00130	-.00512
15	DE1TN		.00070	.00413	.00523	-.00043	.00338
16	CCV2-1 0014-087-7		.98813	5.0800	5.0041	4.9367	4.8461
17	CCB1		.00034	.01401	.00027	.00078	-.00112
18	DE5XLB		.00139	.00425	.00027	-.00145	.00112
19	DE5XLC		.04828	1.9060	1.9154	.04501	.19013
20	DDNV3		-.00084	.00847	.12181	-.00142	-.00112
21	DDNV3P5		-.00065	.01905	.02459	-.00301	.00000
22	DDNV3S		.04669	1.8865	2.0275	.04385	.18450
23	DDNV3D		.04568	1.9082	2.0616	.04246	.18450
24	DE7QTBT		.00033	.03424	.00034	-.00069	-.00062
25	DE63RBT		.00000	.12638	.00162	-.00316	.00062
26	DE7QTCT		.04670	2.0290	1.7478	.04143	.17548
27	DE44MT		-.00064	.17243	1.4691	-.00082	.00200
28	CCV2-2		.98578	4.9879	4.8724	5.0256	4.8450
29	CCB2		.00069	.04128	.00020	.00008	-.00175
30	DE44MP5T		.00104	.03157	.30839	-.00149	.00100
31	DE44MST		.88935	4.7761	44.737	.92300	4.2391
32	DE44MDT		.91272	4.8990	45.861	.94229	4.3534
33	DE44QT		.00039	.16719	1.3164	-.00164	.00237
34	DE3F4T		.01484	H296.35	.02206	.78248	H788.39
35	DE3F6T		-.00417	3.0085	.11526	3.7354	38.247
36	DE3F7T		.00597	1.0411	.04428	.44748	H420.30
37	DE3F9T		-.00004	.14195	.79729	.00177	.01639
38	DE3FCT		-.00206	1.0016	71.011	.48909	.58463
39	DE3FDT		-.00252	1.5678	9.8144	3.3787	3.3700
40	CCV2-3		.96598	4.8796	4.7082	4.9410	4.8250
41	CCB3		-.00034	.02287	.00006	.00112	.00438
42	DE3F4T/5 As		.00299	58.724	.00454	.12384	H181.99
43	DE3F4T/10 Cr		-.00141	28.419	.00231	.05833	90.837
44	DE3F7T/10 Cr		.00109	.14420	.00482	.04262	46.721
45	DE1TE/10 Ca		-.00170	.04215	.07403	-.00262	.00112
46	DE1TEP50 Ca		-.00101	.04867	.01551	-.00248	.00262
47	DE1TES/10 Ca		-.00205	.02721	.07414	-.00080	-.00100
48	DE1TED/10 Ca		-.00446	.02027	.07306	.00019	-.00087
49	DE1TJ/10 Ca		-.00307	.05587	.07359	-.00185	-.00200
50	DE1TN/10 Na		.00034	.01209	.00064	-.00114	.00312
51	DE1TN/25 Na		.00103	.00872	.00016	.00001	.00112
52	CCV2-4		.95808	4.8154	4.6693	4.8859	4.7810
53	CCB4		.00002	.02889	.00029	-.00084	.00187

#	Sample Name	SE

1	STD1	.00165
2	STD5A	.55984
3	STD5B	
4	ICV2-1 0014-119-2	.97868
5	ICB1	-.04836
6	ICSA 0014-088-12	-.09159
7	ICSAB 0014-104-1	.84799
8	DE5XJB	-.00440
9	DE5XJC	L-.08686
10	DE1TE	-.06622
11	DE1TEP5	-.04568
12	DE1TES	-.02682
13	DE1TED	-.02950
14	DE1TJ	-.01612
15	DE1TN	-.01678
16	CCV2-1 0014-087-7	5.0131
17	CCB1	-.03492
18	DE5XLB	-.03850
19	DE5XLC	1.9134
20	DDNV3	-.03908
21	DDNV3P5	-.02714
22	DDNV3S	1.9119
23	DDNV3D	1.9271
24	DE7QTBT	-.03396
25	DE63RBT	-.02680
26	DE7QTCT	2.0117
27	DE44MT	-.06468
28	CCV2-2	4.9539
29	CCB2	-.05373
30	DE44MP5T	-.03120
31	DE44MST	.96456
32	DE44MDT	.99402
33	DE44QT	-.02446
34	DE3F4T	.03042
35	DE3F6T	1.1293
36	DE3F7T	.38841
37	DE3F9T	-.01772
38	DE3FCT	.12631
39	DE3FDT	.16689
40	CCV2-3	4.8495
41	CCB3	-.03493
42	DE3F4T/5 As	-.01164
43	DE3F4T/10 Cr	-.02867
44	DE3F7T/10 Cr	.02959
45	DE1TE/10 Ca	-.03224
46	DE1TEP50 Ca	-.02777
47	DE1TES/10 Ca	-.02776
48	DE1TED/10 Ca	-.04836
49	DE1TJ/10 Ca	-.02956
50	DE1TN/10 Na	-.04028
51	DE1TN/25 Na	-.04836
52	CCV2-4	4.7578
53	CCB4	-.03223

266700

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	J00607A	QUANMET	06/07/00	09:00		X	IR
2	STD5A	J00607A	QUANMET	06/07/00	09:03		X	IR
3	STD5B	J00607A	QUANMET	06/07/00	09:06		X	IR
4	ICV2-1 0014-119-2	J00607A	QUANMET	06/07/00	09:09	RJG	S	CONC
5	ICB1	J00607A	QUANMET	06/07/00	09:12	RJG	S	CONC
6	ICSA 0014-088-12	J00607A	QUANMET	06/07/00	09:15	RJG	Q	CONC
7	ICSAB 0014-104-1	J00607A	QUANMET	06/07/00	09:18	RJG	Q	CONC
8	DE5XJB	J00607A	QUANMET	06/07/00	09:24	RJG	S	CONC
9	DE5XJC	J00607A	QUANMET	06/07/00	09:27	RJG	S	CONC
10	DE1TE	J00607A	QUANMET	06/07/00	09:30	RJG	S	CONC
11	DE1TEP5	J00607A	QUANMET	06/07/00	09:33	RJG	S	CONC
12	DE1TES	J00607A	QUANMET	06/07/00	09:36	RJG	S	CONC
13	DE1TED	J00607A	QUANMET	06/07/00	09:39	RJG	S	CONC
14	DE1TJ	J00607A	QUANMET	06/07/00	09:43	RJG	S	CONC
15	DE1TN	J00607A	QUANMET	06/07/00	09:46	RJG	S	CONC
16	CCV2-1 0014-087-7	J00607A	QUANMET	06/07/00	09:49	RJG	S	CONC
17	CCB1	J00607A	QUANMET	06/07/00	09:52	RJG	S	CONC
18	DE5XLB	J00607A	QUANMET	06/07/00	09:55	RJG	S	CONC
19	DE5XLC	J00607A	QUANMET	06/07/00	09:58	RJG	S	CONC
20	DDNV3	J00607A	QUANMET	06/07/00	10:01	RJG	S	CONC
21	DDNV3P5	J00607A	QUANMET	06/07/00	10:04	RJG	S	CONC
22	DDNV3S	J00607A	QUANMET	06/07/00	10:08	RJG	S	CONC
23	DDNV3D	J00607A	QUANMET	06/07/00	10:11	RJG	S	CONC
24	DE7QTBT	J00607A	QUANMET	06/07/00	10:14	RJG	S	CONC
25	DE63RBT	J00607A	QUANMET	06/07/00	10:17	RJG	S	CONC
26	DE7QTCT	J00607A	QUANMET	06/07/00	10:20	RJG	S	CONC
27	DE44MT	J00607A	QUANMET	06/07/00	10:23	RJG	S	CONC
28	CCV2-2	J00607A	QUANMET	06/07/00	10:26	RJG	S	CONC
29	CCB2	J00607A	QUANMET	06/07/00	10:29	RJG	S	CONC
30	DE44MP5T	J00607A	QUANMET	06/07/00	10:33	RJG	S	CONC
31	DE44MST	J00607A	QUANMET	06/07/00	10:36	RJG	S	CONC
32	DE44MDT	J00607A	QUANMET	06/07/00	10:39	RJG	S	CONC
33	DE44QT	J00607A	QUANMET	06/07/00	10:42	RJG	S	CONC
34	DE3F4T	J00607A	QUANMET	06/07/00	10:45	RJG	S	CONC
35	DE3F6T	J00607A	QUANMET	06/07/00	10:52	RJG	S	CONC
36	DE3F7T	J00607A	QUANMET	06/07/00	10:55	RJG	S	CONC
37	DE3F9T	J00607A	QUANMET	06/07/00	11:04	RJG	S	CONC
38	DE3FCT	J00607A	QUANMET	06/07/00	11:07	RJG	S	CONC
39	DE3FDT	J00607A	QUANMET	06/07/00	11:10	RJG	S	CONC
40	CCV2-3	J00607A	QUANMET	06/07/00	11:13	RJG	S	CONC
41	CCB3	J00607A	QUANMET	06/07/00	11:16	RJG	S	CONC
42	DE3F4T/5 As	J00607A	QUANMET	06/07/00	11:19	RJG	S	CONC
43	DE3F4T/10 Cr	J00607A	QUANMET	06/07/00	11:25	RJG	S	CONC
44	DE3F7T/10 Cr	J00607A	QUANMET	06/07/00	11:29	RJG	S	CONC
45	DE1TE/10 Ca	J00607A	QUANMET	06/07/00	11:33	RJG	S	CONC
46	DE1TEP50 Ca	J00607A	QUANMET	06/07/00	11:36	RJG	S	CONC
47	DE1TES/10 Ca	J00607A	QUANMET	06/07/00	11:40	RJG	S	CONC
48	DE1TED/10 Ca	J00607A	QUANMET	06/07/00	11:43	RJG	S	CONC
49	DE1TJ/10 Ca	J00607A	QUANMET	06/07/00	11:46	RJG	S	CONC
50	DE1TN/10 Na	J00607A	QUANMET	06/07/00	11:49	RJG	S	CONC
51	DE1TN/25 Na	J00607A	QUANMET	06/07/00	11:52	RJG	S	CONC
52	CCV2-4	J00607A	QUANMET	06/07/00	11:55	RJG	S	CONC
53	CCB4	J00607A	QUANMET	06/07/00	11:58	RJG	S	CONC

Method: QUANMET Standard: STD1
Run Time: 06/07/00 09:00:02

Elem	AG	AL	AS	B_	BA	BE	CA
Avge	-.00070	.01170	-.00105	.00096	.00007	.00335	-.00035
SDev	.00020	.00062	.00150	.00049	.00005	.00010	.00033
%RSD	28.571	5.3147	142.86	51.132	70.711	2.9851	96.138

#1	-.00080	.01100	-.00180	.00146	.00012	.00340	-.00018
#2	-.00080	.01140	-.00180	.00109	.00000	.00340	-.00076
#3	-.00040	.01240	.00120	.00102	.00008	.00320	.00000
#4	-.00080	.01200	-.00180	.00028	.00008	.00340	-.00045

Elem	CD	CO	CR	CU	FE	K_	LI
Avge	.00009	.00030	.00065	.00000	.00060	-.01940	-.00056
SDev	.00013	.00035	.00044	.00000	.00052	.00588	.00035
%RSD	148.67	115.47	68.226	.00000	86.066	30.315	62.546

#1	-.00008	.00060	.00100	.00000	.00080	-.01160	-.00073
#2	.00008	-.00020	.00080	.00000	.00000	-.02580	-.00096
#3	.00024	.00040	.00000	.00000	.00120	-.01940	-.00040
#4	.00012	.00040	.00080	.00000	.00040	-.02080	-.00016

Elem	MG	MN	MO	NA	NI	PB	SB
Avge	-.00045	.00000	.00005	.06035	-.00084	.00070	.00030
SDev	.00047	.00000	.00019	.00439	.00110	.00068	.00035
%RSD	105.02	.00000	382.97	7.2726	131.95	97.590	115.47

#1	-.00040	.00000	-.00020	.05800	.00036	.00140	.00060
#2	-.00080	.00000	.00000	.05640	-.00226	-.00020	.00000
#3	-.00080	.00000	.00020	.06640	-.00045	.00100	.00060
#4	.00020	.00000	.00020	.06060	-.00100	.00060	.00000

Elem	SE	SI	SN	SR	TI	TL	V_
Avge	.00165	.00000	-.00000	-.00002	.00180	-.00015	.00000
SDev	.00211	.00000	.00138	.00013	.00016	.00072	.00000
%RSD	127.66	.00000	7565e6	640.36	9.0722	479.20	.00000

#1	-.00040	.00000	-.00200	.00012	.00180	.00080	.00000
#2	.00120	.00000	.00080	-.00020	.00160	-.00080	.00000
#3	.00120	.00000	.00020	.00000	.00200	.00000	.00000
#4	.00460	.00000	.00100	.00000	.00180	-.00060	.00000

Elem	ZN
Avge	.00033
SDev	.00011
%RSD	32.549

#1	.00044
#2	.00024
#3	.00024
#4	.00040

Method: QUANMET Standard: STD5A
Run Time: 06/07/00 09:03:10

0040722

Elem	AG	AS	B	BA	BE	CD	CO
Avge	.28300	.57770	.64216	4.3512	16.511	.97244	1.5789
SDev	.00082	.00773	.00292	.0350	.065	.00361	.0047
%RSD	.28851	1.3380	.45386	.80503	.39643	.37122	.29840

#1	.28360	.58560	.64120	4.3834	16.514	.96980	1.5748
#2	.28220	.57580	.64399	4.3578	16.498	.96888	1.5782
#3	.28240	.56780	.63851	4.3014	16.437	.97520	1.5768
#4	.28380	.58160	.64496	4.3621	16.596	.97588	1.5856

Elem	CR	CU	LI	MN	MO	NI	PB
Avge	3.9966	2.4135	4.1479	2.1469	.44450	1.9234	.27670
SDev	.0110	.0176	.0581	.0047	.00118	.0081	.00109
%RSD	.27505	.72780	1.4016	.21947	.26619	.42294	.39369

#1	3.9848	2.4258	4.1849	2.1450	.44440	1.9184	.27780
#2	3.9916	2.4158	4.1366	2.1456	.44360	1.9146	.27680
#3	3.9994	2.3880	4.0705	2.1432	.44380	1.9312	.27520
#4	4.0104	2.4244	4.1994	2.1538	.44620	1.9293	.27700

Elem	SB	SE	SI	SN	SR	TI	TL
Avge	.21220	.55985	.36290	1.0793	8.5001	6.4809	.38250
SDev	.00119	.00540	.00344	.0085	.0589	.0244	.00265
%RSD	.56024	.96405	.94657	.78684	.69344	.37617	.69170

#1	.21240	.56260	.35880	1.0810	8.5547	6.4976	.38140
#2	.21140	.55180	.36260	1.0736	8.5046	6.4818	.37960
#3	.21120	.56320	.36300	1.0720	8.4173	6.4462	.38320
#4	.21380	.56180	.36720	1.0906	8.5239	6.4982	.38580

Elem	V	ZN
Avge	1.7300	1.6192
SDev	.0049	.0076
%RSD	.28119	.46685

#1	1.7336	1.6134
#2	1.7302	1.6147
#3	1.7230	1.6188
#4	1.7330	1.6300

Standardization Rpt.

06/07/00 09:09:25 AM

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Method: QUANMET Standard: STD5B

Run Time: 06/07/00 09:06:20

0014.0723

Elem	AL	CA	FE	K ₋	MG	NA
Avge	11.695	26.576	31.473	2.2405	7.7758	49.834
SDev	.039	.105	.065	.0213	.0173	.444
%RSD	.33654	.39420	.20674	.95194	.22276	.89076
#1	11.680	26.536	31.378	2.2692	7.7578	50.295
#2	11.709	26.579	31.493	2.2430	7.7838	49.940
#3	11.650	26.718	31.495	2.2200	7.7656	49.229
#4	11.742	26.470	31.526	2.2298	7.7960	49.872

Method: QUANMET

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD5A	STD1	6.87813	.004815	06/07/00 09:06:20
AL	308.215	STD5B	STD1	8.55908	-.100141	06/07/00 09:06:20
AS	193.696	STD5A	STD1	17.5765	.018455	06/07/00 09:06:20
B	249.600	STD5A	STD1	15.6271	-.015076	06/07/00 09:06:20
B _A	493.409	STD5A	STD1	2.29827	-.000162	06/07/00 09:06:20
BE	313.042	STD5A	STD1	.607370	-.002035	06/07/00 09:06:20
CA	317.933	STD5B	STD1	3.76280	.001306	06/07/00 09:06:20
CD	228.802	STD5A	STD1	10.4384	-.000921	06/07/00 09:06:20
CO	228.616	STD5A	STD1	6.36518	-.001910	06/07/00 09:06:20
CR	267.716	STD5A	STD1	2.50326	-.001627	06/07/00 09:06:20
CU	324.754	STD5A	STD1	4.13959	.000000	06/07/00 09:06:20
FE	259.940	STD5B	STD1	3.17740	-.001906	06/07/00 09:06:20
K	766.491	STD5B	STD1	44.2497	.858445	06/07/00 09:06:20
L _I	670.789	STD5A	STD1	2.41056	.001361	06/07/00 09:06:20
MG	279.079	STD5B	STD1	12.8597	.005787	06/07/00 09:06:20
MN	257.610	STD5A	STD1	4.65634	.000000	06/07/00 09:06:20
MO	202.030	STD5A	STD1	22.4997	-.001125	06/07/00 09:06:20
NA	588.995	STD5B	STD1	2.00910	-.121249	06/07/00 09:06:20
NI	231.604	STD5A	STD1	5.19452	.004339	06/07/00 09:06:20
PB	220.353	STD5A	STD1	35.1660	-.024616	06/07/00 09:06:20
SB	206.838	STD5A	STD1	47.2468	-.014174	06/07/00 09:06:20
SE	196.026	STD5A	STD1	17.9147	-.029559	06/07/00 09:06:20
SI	288.158	STD5A	STD1	27.2041	.000000	06/07/00 09:06:20
SN	189.989	STD5A	STD1	9.25560	.000000	06/07/00 09:06:20
SR	409.552	STD5A	STD1	1.17645	.000024	06/07/00 09:06:20
TI	334.941	STD5A	STD1	1.54341	-.002778	06/07/00 09:06:20
TL	190.864	STD5A	STD1	52.5121	.007877	06/07/00 09:06:20
V	292.402	STD5A	STD1	5.65741	.000000	06/07/00 09:06:20
ZN	213.856	STD5A	STD1	6.19819	-.002024	06/07/00 09:06:20

Analysis Report

06/07/00 09:12:34 AM

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Method: QUANMET Sample Name: ICV2-1 0014-119-2 Operator: RJG
 Run Time: 06/07/00 09:09:28
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50564	25.424	.99323	1.0049	.99545	.98475	25.619
SDev	.00110	.135	.01539	.0008	.00603	.00409	.055
%RSD	.21822	.53288	1.5497	.07802	.60570	.41571	.21560
#1	.50430	25.544	.97626	1.0057	1.0020	.98862	25.592
#2	.50564	25.532	1.0011	1.0043	.99883	.98742	25.554
#3	.50562	25.272	1.0104	1.0042	.98899	.97965	25.661
#4	.50701	25.347	.98515	1.0055	.99193	.98329	25.668
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55000	27.500	1.1000	1.1000	1.1000	1.1000	27.500
Low	.45000	22.500	.90000	.90000	.90000	.90000	22.500
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0044	.99617	1.0078	.98907	26.365	24.860	.99289
SDev	.0034	.00502	.0018	.00814	.049	.265	.01333
%RSD	.34295	.50418	.17837	.82315	.18539	1.0652	1.3427
#1	1.0039	.99394	1.0069	1.0007	26.423	25.249	1.0038
#2	.99979	.99013	1.0104	.98741	26.385	24.762	1.0050
#3	1.0069	1.0003	1.0074	.98161	26.312	24.656	.98022
#4	1.0072	1.0003	1.0064	.98658	26.341	24.771	.98254
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	1.1000	1.1000	1.1000	27.500	27.500	1.1000
Low	.90000	.90000	.90000	.90000	22.500	22.500	.90000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.594	1.0050	.98493	25.300	1.0063	1.0087	.98164
SDev	.131	.0014	.00769	.325	.0130	.0357	.03146
%RSD	.51371	.13984	.78042	1.2835	1.2873	3.5421	3.2053
#1	25.738	1.0057	.99281	25.608	1.0147	1.0402	1.0053
#2	25.666	1.0057	.97481	25.549	.99302	.96273	.97680
#3	25.450	1.0029	.98380	24.971	.99771	.99828	.93900
#4	25.522	1.0057	.98830	25.074	1.0198	1.0335	1.0054
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	1.1000	1.1000	27.500	1.1000	1.1000	1.1000
Low	22.500	.90000	.90000	22.500	.90000	.90000	.90000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97868	1.0546	.99081	.99173	.98686	4.8988	.99014
SDev	.03174	.0031	.02399	.00610	.00273	.0549	.00278
%RSD	3.2435	.29554	2.4214	.61533	.27625	1.1207	.28026
#1	.96635	1.0519	.97611	.99832	.98933	4.8825	.99425
#2	.94471	1.0518	.99264	.99526	.98840	4.8514	.98938

#3	.98386	1.0573	1.0239	.98514	.98315	4.9781	.98842
#4	1.0198	1.0573	.97056	.98820	.98655	4.8833	.98850
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	1.1000	1.1000	1.1000	1.1000	5.5000	1.1000
Low	.90000	.90000	.90000	.90000	.90000	4.5000	.90000

Elem	ZN
Units	ppm
Avge	.99990
SDev	.00041
%RSD	.04127

#1	.99928
#2	1.0001
#3	1.0001
#4	1.0000

Errors	LC Pass
High	1.1000
Low	.90000

Method: QUANMET Sample Name: ICB1

Operator: RJG

Run Time: 06/07/00 09:12:37

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00103	-.00434	-.02282	.00056	-.00005	.00000	.00041
SDev	.00173	.00726	.02833	.00934	.00028	.00006	.00108
%RSD	167.90	167.21	124.18	1680.4	585.31	152e6	262.80
#1	-.00069	.00083	-.06241	-.00570	-.00016	.00003	.00188
#2	.00069	.00072	.00438	.00589	.00003	-.00009	-.00020
#3	-.00344	-.01463	-.02009	-.00882	-.00035	.00003	-.00055
#4	-.00069	-.00430	-.01315	.01085	.00030	.00003	.00051
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00067	-.00159	-.00062	-.00000	.00048	-.10177	-.00047
SDev	.00254	.00335	.00116	.00000	.00061	.34906	.00050
%RSD	377.89	210.55	185.07	215.93	127.84	342.97	107.68
#1	-.00057	.00318	-.00162	.00000	.00064	.28320	-.00057
#2	-.00099	-.00445	.00038	-.00000	.00127	-.30090	-.00017
#3	-.00365	-.00317	-.00163	-.00000	-.00000	-.47790	.00000
#4	.00253	-.00192	.00038	-.00000	.00000	.08850	-.00113
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00129	.00000	.00450	.00522	.00467	-.02292	-.01417
SDev	.01351	.00000	.00431	.00705	.01078	.00896	.02320
%RSD	1050.4	87.607	95.743	135.05	230.93	39.090	163.68
#1	.02122	.00000	.00787	.01577	.01840	-.01045	.01428
#2	-.00193	.00000	.00788	.00211	-.00642	-.03179	-.01431
#3	-.00707	.00000	.00337	.00211	.00745	-.02472	-.01413
#4	-.00707	-.00000	-.00112	.00090	-.00075	-.02472	-.04254
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04837	.00000	.00641	.00006	-.00015	.03414	.00009
SDev	.01586	.00000	.00710	.00016	.00059	.05322	.00008
%RSD	32.785	96.355	110.72	275.41	382.97	155.90	96.355
#1	-.03314	.00000	.01673	.00026	.00031	-.00266	.00015
#2	-.03672	.00000	.00549	.00012	-.00031	.01840	.00015

#3	-.06539	.00000	.00179	-.00007	-.00093	.11293	.00006
#4	-.05822	-.00000	.00165	-.00007	.00031	.00789	-.00002

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem	ZN
Units	ppm
Avge	-.00031
SDev	.00095
%RSD	311.48

#1	.00113
#2	-.00076
#3	-.00081
#4	-.00078

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: ICSA 0014-088-12 Operator: RJG
 Run Time: 06/07/00 09:15:45
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00113	499.62	.01179	-.03286	.00187	-.00004	484.88
SDev	.00241	1.76	.23824	.00263	.00000	.00007	2.52
%RSD	212.27	.35209	2021.1	8.0050	.00000	164.24	.52023
#1	-.00196	498.04	.30964	-.03677	.00187	-.00010	481.65
#2	-.00187	498.26	-.26564	-.03111	.00187	-.00010	484.14
#3	.00238	500.56	.04837	-.03195	.00187	.00002	487.19
#4	-.00308	501.63	-.04521	-.03161	.00187	.00002	486.55
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value		500.00					500.00
Range		20.000					20.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00334	.00768	-.00100	-.01082	185.43	-.24780	.00146
SDev	.00388	.00164	.00175	.00004	.49	.31974	.00040
%RSD	116.05	21.317	174.64	.35555	.26164	129.03	27.115
#1	-.00119	.00959	.00087	-.01087	184.85	-.71685	.00176
#2	-.00360	.00578	-.00313	-.01084	185.21	-.04425	.00088
#3	-.00868	.00706	-.00163	-.01080	185.73	-.18585	.00164
#4	.00011	.00831	-.00013	-.01078	185.91	-.04425	.00156
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value					200.00		
Range					20.000		
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	492.50	.00848	.00748	.00774	-.00651	.08373	-.03059
SDev	1.51	.00053	.01127	.00441	.00885	.02583	.02236
%RSD	.30651	6.2044	150.64	57.064	135.98	30.854	73.079
#1	491.27	.00881	-.00498	.00613	-.01450	.12167	-.03298
#2	491.26	.00798	.02207	.01376	-.00754	.06506	-.06133
#3	493.12	.00808	.00415	.00332	.00604	.07790	-.01393
#4	494.34	.00904	.00868	.00774	-.01003	.07030	-.01412
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	500.00						
Range	20.000						
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.09159	.09935	-.05553	.01352	-.02307	.25662	.00467
SDev	.07451	.02448	.01517	.00005	.00039	.18088	.00021
%RSD	81.346	24.644	27.322	.38658	1.6834	70.484	4.5975
#1	-.08115	.08710	-.05010	.01348	-.02315	.33606	.00443
#2	-.13000	.08711	-.07793	.01356	-.02346	-.00370	.00495

#3	.00806	.13607	-.04984	.01356	-.02253	.28496	.00460
#4	-.16327	.08711	-.04426	.01346	-.02315	.40915	.00469

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	ZN
Units	ppm
Avge	-.00137
SDev	.00263
%RSD	191.86

#1	.00099
#2	.00071
#3	-.00288
#4	-.00431

Errors	NOCHECK
Value	
Range	

Method: QUANMET Sample Name: ICSAB 0014-104-1 Operator: RJG
 Run Time: 06/07/00 09:18:53
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.94502	489.40	.91967	.91486	.45481	.44979	478.19
SDev	.00138	2.90	.17536	.01739	.00377	.00193	1.87
%RSD	.14631	.59248	19.068	1.9012	.82914	.42850	.39115

#1	.94465	487.54	1.1594	.91094	.45216	.44879	479.71
#2	.94611	491.15	.88626	.89861	.45814	.45122	477.23
#3	.94610	492.51	Q.73784	.93952	.45795	.45158	476.02
#4	.94322	486.39	.89517	.91037	.45097	.44757	479.79

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	500.00	1.0000	1.0000	.50000	.50000	500.00
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.95980	.44170	.44033	.47284	182.48	9.6487	.95914
SDev	.00481	.00394	.00513	.00865	.27	.1569	.01725
%RSD	.50095	.89179	1.1648	1.8295	.14560	1.6260	1.7984

#1	.95262	.44204	.44446	.46538	182.42	9.8146	.94803
#2	.96264	.43818	.43695	.47948	182.70	9.4783	.96794
#3	.96226	.44709	.43495	.48114	182.66	9.5579	.97886
#4	.96170	.43947	.44496	.46536	182.12	9.7438	.94173

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	.50000	.50000	.50000	200.00	10.000	1.0000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	481.42	.45257	.88340	9.8675	.87097	1.0017	.92525
SDev	1.93	.00143	.00261	.1126	.00365	.0298	.03816
%RSD	.40141	.31583	.29577	1.1410	.41884	2.9796	4.1247

#1	480.59	.45376	.88564	9.7784	.87053	1.0063	.92980
#2	482.45	.45376	.88568	9.9315	.86603	.98316	.97726
#3	483.50	.45186	.88118	9.9934	.87430	.97555	.89227
#4	479.16	.45090	.88110	9.7667	.87302	1.0420	.90167

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.00	.50000	1.0000	10.000	1.0000	1.0000	1.0000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.84800	1.1211	.84430	.91784	.87234	9.2075	.44649
SDev	.06073	.0063	.04042	.00607	.00303	.1393	.00138
%RSD	7.1619	.55930	4.7879	.66103	.34791	1.5126	.30967

#1	.92035	1.1265	.89847	.91472	.87110	9.1897	.44456
#2	.85688	1.1156	.80617	.92154	.87450	9.0923	.44681

#3	.84240	1.1156	.85019	.92413	.87511	9.4077	.44785
#4	Q.77236	1.1265	.82239	.91096	.86863	9.1402	.44673

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	10.000	.50000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem ZN
Units ppm
Avge .92121
SDev .00314
%RSD .34121

#1 .92264
#2 .91754
#3 .92474
#4 .91990

Errors QC Pass
Value 1.0000
Range 20.000

Analysis Report

06/07/00 09:27:21 AM

Method: QUANMET Sample Name: DE5XJB
Run Time: 06/07/00 09:24:16
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
Mode: CONC Corr. Factor: 1

Operator: RJG

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00035	.00424	.01488	-.00832	.00028	-.00003	.01525
SDev	.00069	.00805	.03474	.00241	.00034	.00012	.00112
%RSD	197.12	189.86	233.55	28.914	124.27	400.00	7.3282
#1	.00069	.00595	.05002	-.01191	.00003	.00003	.01587
#2	-.00068	-.00437	-.01669	-.00694	.00003	-.00021	.01410
#3	.00069	.01453	.03940	-.00694	.00076	.00003	.01649
#4	.00069	.00085	-.01322	-.00750	.00030	.00003	.01454
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00026	-.00127	-.00100	.00000	.02049	.04204	.00034
SDev	.00311	.00265	.00103	.00000	.00167	.32173	.00033
%RSD	1191.8	208.20	103.15	508.03	8.1556	765.34	95.984
#1	-.00357	-.00063	-.00113	.00000	.01970	.02655	.00000
#2	.00048	-.00446	-.00213	-.00000	.01906	-.34515	.00020
#3	.00403	-.00192	-.00113	.00000	.02288	.44250	.00040
#4	.00010	.00191	.00038	.00000	.02034	.04425	.00077
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01029	.00001	.00225	.04028	.00557	.00697	-.01649
SDev	.01490	.00000	.00225	.00333	.00258	.02326	.01189
%RSD	144.88	6.7306	99.853	8.2659	46.306	333.77	72.102
#1	.01350	.00001	.00338	.03546	.00916	.01051	-.01408
#2	-.00964	.00001	.00338	.04068	.00562	.01041	-.01415
#3	.02636	.00001	-.00112	.04229	.00329	.03154	-.03304
#4	.01093	.00001	.00338	.04269	.00421	-.02457	-.00470
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00440	.06665	-.00100	.00002	-.00000	-.01070	.00004
SDev	.01629	.00685	.00573	.00000	.00025	.05240	.00004
%RSD	369.99	10.272	574.28	.00000	739e6	489.53	105.13
#1	-.00082	.06529	-.00932	.00002	.00031	.02868	.00006
#2	-.02591	.05985	.00179	.00002	-.00031	-.08681	.00006

#3	.01352	.07617	.00355	.00002	-.00000	-.00285	-.00002
#4	-.00440	.06529	-.00002	.00002	-.00000	.01815	.00007

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem	ZN
Units	ppm
Avge	.00594
SDev	.00109
%RSD	18.420

#1	.00538
#2	.00685
#3	.00467
#4	.00686

Errors	LC Pass
High	.02000
Low	-.02000

Analysis Report

06/07/00 09:30:29 AM

page 1

Method: QUANMET Sample Name: DE5XJC Operator: RJG
 Run Time: 06/07/00 09:27:24
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00137	L.00041	L.01227	-.01161	L.00016	L-.00003	51.005
SDev	.00287	.00981	.01734	.00841	.00029	.00007	.216
%RSD	209.40	2390.8	141.28	72.408	176.91	200.50	.42436
#1	L-.00066	L.00766	L-.00982	-.01764	L.00030	L.00002	51.180
#2	L-.00206	L-.00430	L.01497	-.01764	L.00003	L.00003	51.029
#3	L.00207	L.00939	L.03243	-.01138	L.00049	L-.00009	51.117
#4	L-.00481	L-.01112	L.01151	.00020	L-.00016	L-.00009	50.694
Errors	LC Low	LC Low	LC Low	NOCHECK	LC Low	LC Low	LC Pass
High	.06000	2.4000	2.4000		2.4000	.06000	60.000
Low	.04000	1.6000	1.6000		1.6000	.04000	40.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00106	L-.00095	L-.00125	L.00786	L.00619	48.323	.00006
SDev	.00191	.00191	.00229	.00373	.00151	.884	.00077
%RSD	180.06	201.79	182.89	47.460	24.321	1.8300	1364.4
#1	L-.00327	L.00065	L-.00163	L.01076	L.00635	48.834	.00048
#2	L-.00110	L-.00190	L-.00163	L.00993	L.00507	48.577	.00068
#3	L-.00128	L.00064	L.00188	L.00248	L.00826	47.011	.00011
#4	L.00140	L-.00318	L-.00363	L.00828	L.00507	48.869	-.00105
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	NOCHECK
High	.06000	.60000	.24000	.30000	1.2000	60.000	
Low	.04000	.40000	.16000	.20000	.80000	40.000	
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.670	L.00093	-.00112	48.619	L.00214	L-.01765	L-.02592
SDev	.519	.00076	.00367	1.048	.00760	.00989	.02365
%RSD	1.0247	81.592	326.88	2.1562	354.69	56.027	91.265
#1	50.696	L.00186	-.00112	48.681	L-.00282	L-.02462	L-.01418
#2	50.758	L.00093	-.00112	49.021	L-.00217	L-.00365	L-.06139
#3	49.984	L.00093	.00338	47.158	L.00018	L-.02462	L-.01417
#4	51.244	L-.00000	-.00562	49.618	L.01338	L-.01769	L-.01392
Errors	LC Pass	LC Low	NOCHECK	LC Pass	LC Low	LC Low	LC Low
High	60.000	.60000		60.000	.60000	.60000	.60000
Low	40.000	.40000		40.000	.40000	.40000	.40000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.08686	.07755	-.01261	.00155	-.00270	L.01832	L.00111
SDev	.03666	.00930	.01822	.00014	.00102	.06066	.00226
%RSD	42.203	11.993	144.57	9.0120	37.760	331.11	204.44
#1	L-.12269	.08167	.01105	.00144	-.00247	L-.05523	L.00450
#2	L-.07612	.07617	-.01323	.00144	-.00278	L.00784	L-.00002

#3	L-.04028	.08705	-.01487	.00163	-.00154	L.02880	L.00007
#4	L-.10837	.06529	-.03337	.00171	-.00401	L.09187	L-.00012

Errors	LC Low	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Low	LC Low
High	2.4000					2.4000	.60000
Low	1.6000					1.6000	.40000

Elem	ZN
Units	ppm
Avge	L.00362
SDev	.00122
%RSD	33.802

#1	L.00240
#2	L.00508
#3	L.00416
#4	L.00285

Errors	LC Low
High	.60000
Low	.40000

Method: QUANMET Sample Name: DElTE

Operator: RJG

Run Time: 06/07/00 09:30:32

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00618	3.2834	.00932	-.01505	.68596	.00011	S.00131
SDev	.00251	.0303	.02536	.00000	.00490	.00006	.00000
%RSD	40.596	.92154	272.01	.02974	.71461	55.999	.00000
#1	-.00343	3.2599	.00163	-.01504	.68348	.00002	S.00131
#2	-.00893	3.2908	-.02323	-.01505	.68670	.00014	S.00131
#3	-.00754	3.2599	.02967	-.01505	.68118	.00013	S.00131
#4	-.00481	3.3232	.02922	-.01504	.69248	.00014	S.00131
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00136	-.00024	-.00400	.00041	.01516	311.07	.00376
SDev	.00151	.00122	.00269	.00048	.00141	3.54	.00104
%RSD	110.65	500.92	67.249	115.26	9.2911	1.1376	27.728
#1	-.00009	-.00184	-.00112	-.00000	.01563	308.38	.00340
#2	-.00029	.00071	-.00363	.00083	.01309	313.16	.00417
#3	-.00174	.00071	-.00363	.00000	.01564	307.77	.00252
#4	-.00334	-.00056	-.00763	.00083	.01626	314.95	.00496
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.29899	.10448	.01913	27.224	.00477	-.02108	.00277
SDev	.00364	.00089	.00260	.311	.00668	.00351	.01954
%RSD	1.2165	.85398	13.584	1.1438	140.13	16.630	704.40
#1	.29384	.10518	.02138	26.973	.00060	-.01937	-.01384
#2	.30156	.10425	.01688	27.432	.01266	-.01927	.02411
#3	.30156	.10332	.01688	26.942	-.00196	-.02634	-.01379
#4	.29899	.10518	.02138	27.548	.00777	-.01934	.01462
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.06623	.39182	.00372	4.5555	L-.25543	.03452	.00602
SDev	.01992	.02914	.00564	.0317	.00177	.05035	.00224
%RSD	30.085	7.4375	151.81	.69615	.69421	145.86	37.130
#1	-.04742	.34828	.00086	4.5395	L-.25559	.08180	.00494
#2	-.07967	.40268	.00845	4.5594	L-.25559	-.02322	.00484

#3	-.08683	.40818	-.00285	4.5251	L-.25312	.07124	.00937
#4	-.05100	.40812	.00841	4.5982	L-.25744	.00827	.00492
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00728
SDev .00145
%RSD 19.871

#1 .00696
#2 .00933
#3 .00692
#4 .00592

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 09:36:44 AM

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Page 1

Method: QUANMET Sample Name: DE1TEP5

Operator: RJG

Run Time: 06/07/00 09:33:39

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00308	.66239	.02074	-.01411	.15045	.00002	789.44
SDev	.00132	.00636	.04564	.00327	.00069	.00000	1.70
%RSD	42.811	.96083	220.00	23.187	.45828	1.4729	.21516

#1	-.00342	.66500	-.00476	-.01507	.15125	.00002	787.09
#2	-.00204	.66494	.04796	-.01820	.14987	.00002	791.04
#3	-.00480	.65292	.06916	-.01067	.15079	.00002	790.22
#4	-.00205	.66669	-.02938	-.01250	.14987	.00002	789.40

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00072	.00033	-.00401	.00414	.00046	61.596	.00140
SDev	.00142	.00121	.00144	.00068	.00187	.410	.00087
%RSD	197.52	373.08	35.900	16.341	404.89	.66641	62.015

#1	.00037	.00064	-.00363	.00331	.00110	61.339	.00088
#2	.00064	.00191	-.00213	.00497	.00237	62.118	.00088
#3	-.00207	-.00062	-.00513	.00414	-.00208	61.720	.00116
#4	-.00182	-.00063	-.00513	.00414	.00046	61.206	.00269

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07523	.02374	.00338	5.5064	.00674	-.01090	-.00454
SDev	.00891	.00093	.00520	.0373	.00465	.04023	.02040
%RSD	11.843	3.9209	153.95	.67802	69.103	369.13	448.90

#1	.06237	.02420	-.00112	5.5155	.01161	-.06014	-.01395
#2	.07780	.02420	.00788	5.5364	.00967	.03138	.02379
#3	.08294	.02234	.00787	5.5219	.00177	.01018	-.00457
#4	.07780	.02420	-.00112	5.4520	.00390	-.02502	-.02344

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04568	.08983	-.00123	.99911	-.04985	-.03141	.00458
SDev	.01885	.00314	.01240	.00425	.00040	.06025	.00010
%RSD	41.257	3.4969	1009.1	.42520	.79938	191.80	2.2097

#1	-.02956	.09255	.01122	1.0031	-.05001	.04997	.00450
#2	-.06538	.09255	.00214	.99487	-.04970	-.06558	.00467
#3	-.05823	.08711	-.01835	1.0024	-.05032	-.08653	.00467
#4	-.02956	.08711	.00007	.99605	-.04939	-.02353	.00449

Elem	ZN
Units	ppm
Avge	.00209
SDev	.00140
%RSD	66.898

#1	.00290
#2	.00363
#3	.00067

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Analysis Report

06/07/00 09:36:44 AM

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#4 .00117

Analysis Report

06/07/00 09:39:52 AM

660 607
page 1

Method: QUANMET Sample Name: DELTES

Operator: RJG

Run Time: 06/07/00 09:36:47

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00411	3.3537	.03246	-.01303	.69750	.00007	S.00131
SDev	.00239	.0171	.03596	.00113	.00461	.00012	.00000
%RSD	58.117	.50849	110.78	8.6959	.66087	155.65	.00000
#1	-.00343	3.3353	.00100	-.01321	.69570	.00002	S.00131
#2	-.00756	3.3490	.03605	-.01377	.69911	.00002	S.00131
#3	-.00343	3.3541	.08168	-.01138	.69221	.00001	S.00131
#4	-.00203	3.3763	.01113	-.01376	.70297	.00025	S.00131
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00088	.00008	-.00375	.00393	.01212	367.29	.00376
SDev	.00210	.00127	.00025	.00041	.00287	2.20	.00080
%RSD	237.46	1678.8	6.6782	10.492	23.657	.60024	21.181
#1	.00116	-.00057	-.00363	.00414	.01244	365.34	.00474
#2	-.00219	-.00056	-.00413	.00414	.00799	368.24	.00281
#3	.00063	.00198	-.00363	.00331	.01371	365.62	.00360
#4	-.00314	-.00056	-.00363	.00414	.01435	369.95	.00389
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	46.711	.10634	.01688	76.135	.00312	-.00704	.00520
SDev	.147	.00047	.00367	.483	.00503	.01055	.01095
%RSD	.31552	.43817	21.773	.63388	161.29	149.87	210.66
#1	46.645	.10704	.01688	75.856	.00960	-.01231	.01472
#2	46.738	.10610	.01238	76.301	-.00268	.00878	.01464
#3	46.558	.10611	.02138	75.650	.00287	-.01227	-.00429
#4	46.902	.10611	.01688	76.734	.00269	-.01236	-.00428
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02683	.39454	-.02032	4.6252	L-.26022	-.02320	.00626
SDev	.03301	.02830	.01264	.0208	.00091	.04775	.00216
%RSD	123.05	7.1724	62.226	.44988	.34922	205.79	34.487
#1	-.07251	.38636	-.03231	4.6173	L-.25929	-.08620	.00484
#2	.00630	.37004	-.02860	4.6269	L-.26145	.01886	.00476

#3	-.02234	.38638	-.01573	4.6037	L-.26022	-.03374	.00606
#4	-.01876	.43539	-.00463	4.6530	L-.25991	.00826	.00937
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00410
SDev .00156
%RSD 37.983

#1 .00239
#2 .00316
#3 .00542
#4 .00543

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 09:42:59 AM

660 609
page 1

Method: QUANMET Sample Name: DELETED

Operator: RJG

Run Time: 06/07/00 09:39:54

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00548	3.3784	.02169	-.01394	.70237	.00007	S.00131
SDev	.00265	.0186	.04294	.00147	.00492	.00007	.00000
%RSD	48.234	.55040	197.92	10.550	.70091	97.449	.00000
#1	-.00893	3.4053	-.01013	-.01503	.70876	.00014	S.00131
#2	-.00618	3.3763	.00769	-.01376	.70251	.00002	S.00131
#3	-.00341	3.3677	.00417	-.01504	.70141	.00013	S.00131
#4	-.00341	3.3644	.08505	-.01193	.69681	.00001	S.00131
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00099	-.00247	-.00438	.00372	.01386	372.26	.00409
SDev	.00322	.00396	.00119	.00107	.00032	2.80	.00105
%RSD	324.35	160.62	27.186	28.666	2.2783	.75110	25.780
#1	.00370	-.00694	-.00363	.00496	.01433	376.14	.00301
#2	-.00310	-.00055	-.00613	.00414	.01370	371.26	.00417
#3	-.00308	-.00437	-.00413	.00248	.01370	372.10	.00369
#4	-.00150	.00199	-.00363	.00331	.01371	369.55	.00550
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	47.789	.10681	.01800	77.920	-.00116	-.01593	-.00430
SDev	.298	.00047	.00675	.656	.00337	.03122	.03450
%RSD	.62425	.43698	37.496	.84213	290.07	196.05	802.17
#1	48.183	.10704	.02588	78.878	-.00478	-.02664	-.02336
#2	47.759	.10704	.02138	77.604	-.00273	-.04044	.03351
#3	47.756	.10704	.01238	77.783	-.00018	-.02650	.01462
#4	47.458	.10611	.01238	77.414	.00304	.02987	-.04198
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02951	.40815	-.01758	4.6595	L-.26307	-.02583	.00713
SDev	.03914	.03176	.01812	.0295	.00105	.03967	.00249
%RSD	132.64	7.7806	103.08	.63289	.39935	153.59	34.919
#1	-.00443	.37548	.00455	4.6972	L-.26392	.02936	.00502
#2	-.00443	.38636	-.03221	4.6570	L-.26269	-.06521	.00493

#3	-.02234	.43538	-.01008	4.6588	L-.26392	-.03370	.00928
#4	-.08684	.43538	-.03256	4.6251	L-.26176	-.03376	.00928
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00962
SDev .00120
%RSD 12.524

#1 .00864
#2 .01111
#3 .00865
#4 .01010

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 09:46:07 AM

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page 1

Method: QUANMET Sample Name: DE1TJ

Operator: RJG

Run Time: 06/07/00 09:43:02

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00376	1.5134	.03469	-.01508	.70196	.00020	S.00131
SDev	.00173	.0082	.03780	.00000	.00245	.00007	.00000
%RSD	46.031	.54073	108.94	.02641	.34923	37.418	.00000
#1	-.00340	1.5019	.07252	-.01508	.70205	.00013	S.00131
#2	-.00343	1.5207	.06190	-.01507	.70068	.00026	S.00131
#3	-.00618	1.5139	.00220	-.01508	.70535	.00014	S.00131
#4	-.00205	1.5173	.00216	-.01508	.69976	.00026	S.00131
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00130	.00166	-.00513	.00435	-.00010	314.75	.00347
SDev	.00194	.00262	.00192	.00157	.00108	1.02	.00081
%RSD	148.91	158.03	37.404	36.094	1125.0	.32302	23.513
#1	.00160	.00324	-.00764	.00414	.00038	314.88	.00235
#2	-.00248	-.00056	-.00363	.00331	-.00026	314.52	.00417
#3	-.00218	-.00057	-.00363	.00331	-.00152	316.02	.00397
#4	-.00215	.00453	-.00563	.00663	.00101	313.56	.00337
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.31570	.06191	.02025	30.377	.00360	.00104	.03110
SDev	.01492	.00054	.00431	.172	.00430	.02657	.02600
%RSD	4.7269	.87065	21.277	.56513	119.26	2544.1	83.572
#1	.30670	.06144	.01687	30.397	.00772	.02397	.04299
#2	.31956	.06237	.02137	30.407	-.00028	.02388	.06173
#3	.30156	.06144	.01687	30.559	.00007	-.01838	.01453
#4	.33499	.06237	.02587	30.144	.00691	-.02529	.00516
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01612	.25852	.01218	4.6202	L-.25636	.03968	.00604
SDev	.03575	.00541	.01057	.0163	.00073	.07903	.00222
%RSD	221.76	2.0937	86.814	.35221	.28663	199.18	36.719
#1	-.03314	.25040	.01964	4.6172	L-.25559	.15516	.00936
#2	.02777	.26122	.01973	4.6152	L-.25713	-.02331	.00493

#3	-.00448	.26122	.01210	4.6432	L-.25590	.01871	.00484
#4	-.05464	.26122	-.00275	4.6050	L-.25682	.00815	.00501
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00674
SDev .00147
%RSD 21.841

#1 .00636
#2 .00885
#3 .00542
#4 .00633

Errors LC Pass
High 100.00
Low -.02000

Method: QUANMET Sample Name: DE1TN

Operator: RJG

Run Time: 06/07/00 09:46:09

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00071	.22666	.00414	-.00558	.00524	-.00001	38.384
SDev	.00159	.01853	.03031	.00454	.00032	.00006	.406
%RSD	223.58	8.1736	732.71	81.404	6.0832	1176.4	1.0581
#1	-.00065	.20605	-.02914	-.00999	.00489	.00002	37.902
#2	.00208	.22843	-.00114	.00067	.00535	-.00009	38.512
#3	-.00068	.22152	.00245	-.00558	.00562	.00003	38.258
#4	.00208	.25065	.04437	-.00741	.00508	.00003	38.864
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00043	.00128	.00338	.00559	.06386	26.249	.00525
SDev	.00283	.00127	.00091	.00218	.00151	.497	.00044
%RSD	650.94	99.529	27.007	38.917	2.3688	1.8919	8.3391
#1	-.00267	.00192	.00438	.00746	.06290	25.798	.00493
#2	.00033	.00191	.00388	.00663	.06291	25.939	.00485
#3	.00324	.00190	.00288	.00249	.06354	26.904	.00579
#4	-.00265	-.00063	.00238	.00580	.06608	26.355	.00542
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11638	.02237	.01688	S-.12125	.00751	.00344	.01409
SDev	.01169	.00076	.00520	.00000	.00535	.02369	.01726
%RSD	10.047	3.4000	30.774	.00000	71.280	688.95	122.48
#1	.11381	.02237	.02138	S-.12125	.00599	.03158	-.00482
#2	.12667	.02144	.01238	S-.12125	.00538	.01048	.00462
#3	.12410	.02237	.02138	S-.12125	.01535	-.00356	.02362
#4	.10095	.02330	.01238	S-.12125	.00331	-.02473	.03295
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01679	.40536	.01767	.05202	-.00224	.05721	.00203
SDev	.03005	.03454	.01289	.00090	.00039	.09330	.00200
%RSD	179.00	8.5197	72.928	1.7321	17.356	163.10	98.362
#1	.02800	.37548	.00740	.05085	-.00216	.01781	.00495
#2	-.03650	.37543	.02966	.05179	-.00185	-.00318	.00138

#3	-.02933	.43527	.00569	.05273	-.00278	.19637	.00042
#4	-.02932	.43528	.02794	.05273	-.00216	.01782	.00138
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00573
SDev .00146
%RSD 25.418

#1 .00487
#2 .00712
#3 .00681
#4 .00414

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 09:52:22 AM

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Method: QUANMET Sample Name: CCV2-1 0014-087-7 Operator: RJG
 Run Time: 06/07/00 09:49:17
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98813	50.761	5.0800	4.9784	5.0041	4.9779	49.748
SDev	.00139	.146	.0626	.0307	.0184	.0141	.210
%RSD	.14045	.28776	1.2318	.61713	.36770	.28275	.42301
#1	.98876	50.639	5.0110	4.9458	4.9943	4.9614	49.678
#2	.98884	50.880	5.1528	5.0039	5.0196	4.9931	49.608
#3	.98605	50.895	5.1071	5.0053	5.0194	4.9852	49.645
#4	.98887	50.632	5.0492	4.9586	4.9830	4.9717	50.061
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9367	4.8681	4.8461	5.0139	51.614	50.263	4.9750
SDev	.0196	.0067	.0146	.0269	.070	.594	.0545
%RSD	.39691	.13837	.30211	.53626	.13614	1.1826	1.0948
#1	4.9307	4.8592	4.8458	5.0059	51.543	50.312	4.9878
#2	4.9118	4.8745	4.8363	5.0349	51.595	49.754	5.0011
#3	4.9549	4.8667	4.8353	5.0357	51.609	51.082	5.0159
#4	4.9495	4.8719	4.8668	4.9794	51.711	49.905	4.8951
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	55.000	55.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	45.000	45.000	4.5000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.856	4.8832	4.8767	50.174	4.8827	4.8893	4.9816
SDev	.138	.0097	.0139	.415	.0161	.0308	.0121
%RSD	.27082	.19924	.28573	.82628	.32971	.62897	.24242
#1	50.709	4.8776	4.8845	50.158	4.8609	4.8628	4.9790
#2	50.907	4.8822	4.8575	50.404	4.8941	4.9123	4.9984
#3	51.023	4.8757	4.8755	50.536	4.8800	4.8628	4.9793
#4	50.786	4.8972	4.8890	49.598	4.8956	4.9194	4.9696
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	55.000	5.5000	5.5000	55.000	5.5000	5.5000	5.5000
Low	45.000	4.5000	4.5000	45.000	4.5000	4.5000	4.5000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0131	5.0328	4.8684	4.9803	4.9246	9.7976	4.9058
SDev	.0425	.0283	.0326	.0159	.0070	.1626	.0068
%RSD	.84739	.56163	.67054	.31832	.14160	1.6591	.13889
#1	4.9600	5.0082	4.8318	4.9696	4.9155	9.7958	4.8980
#2	5.0032	5.0247	4.8911	4.9946	4.9309	10.026	4.9099

#3	5.0606	5.0736	4.8503	4.9932	4.9290	9.6585	4.9024
#4	5.0287	5.0247	4.9003	4.9638	4.9229	9.7100	4.9129
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	5.5000	11.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	4.5000	9.0000	4.5000

Elem	ZN
Units	ppm
Avge	4.9238
SDev	.0055
%RSD	.11262

#1	4.9318
#2	4.9190
#3	4.9217
#4	4.9229

Errors	LC Pass
High	5.5000
Low	4.5000

Analysis Report

06/07/00 09:55:29 AM

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Method: QUANMET Sample Name: CCB1

Operator: RJG

Run Time: 06/07/00 09:52:24

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00035	.00415	.01402	.00469	.00028	.00015	.00891
SDev	.00132	.00610	.03669	.01341	.00019	.00010	.00254
%RSD	380.22	146.80	261.73	285.59	68.235	65.696	28.531
#1	-.00069	.00754	-.02380	.02243	.00030	.00003	.00702
#2	.00069	.01103	.03594	-.00569	.00049	.00015	.00857
#3	-.00068	-.00102	.05359	-.00569	.00003	.00015	.00746
#4	.00207	-.00094	-.00967	.00772	.00030	.00027	.01259
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00078	-.00223	-.00112	.00248	.00111	.20134	.00042
SDev	.00190	.00350	.00071	.00096	.00131	.28379	.00121
%RSD	242.85	157.15	63.150	38.476	117.82	140.95	289.25
#1	.00352	-.00065	-.00012	.00331	.00000	.50445	.00213
#2	-.00012	-.00446	-.00163	.00165	.00191	-.13275	.00031
#3	.00054	-.00573	-.00163	.00331	-.00000	.07965	-.00009
#4	-.00081	.00191	-.00112	.00166	.00254	.35400	-.00068
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00964	.00000	.01013	.01929	.00186	.01928	.00232
SDev	.00903	.00000	.00581	.00543	.00487	.02024	.01949
%RSD	93.650	52.151	57.376	28.125	261.14	104.98	839.13
#1	.01865	.00001	.01687	.01256	.00196	.03165	.01410
#2	.00064	.00000	.00338	.02461	.00081	-.01065	.02362
#3	.00321	.00000	.00787	.01738	.00824	.02444	-.01415
#4	.01607	.00000	.01238	.02260	-.00355	.03168	-.01428
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03493	.01089	.00001	.00033	.00015	.01838	.00048
SDev	.02140	.00445	.00615	.00008	.00040	.04538	.00055
%RSD	61.264	40.871	58606.	24.309	258.20	246.87	114.90
#1	-.01523	.01088	-.00179	.00040	.00031	.03939	.00033
#2	-.02955	.01088	-.00729	.00026	-.00000	-.04462	.00006

#3	-.06539	.01634	.00179	.00026	-.00031	.06042	.00128
#4	-.02955	.00544	.00734	.00040	.00062	.01834	.00024
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem ZN
Units ppm
Avge .00037
SDev .00137
%RSD 372.19

#1 .00189
#2 -.00079
#3 .00115
#4 -.00078

Errors LC Pass
High .02000
Low -.02000

Analysis Report

06/07/00 09:58:37 AM

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page 1

Method: QUANMET Sample Name: DE5XLB Operator: RJG
 Run Time: 06/07/00 09:55:32
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00139	.00933	.00425	.01228	.00028	-.00001	.01427
SDev	.00138	.00611	.02837	.00837	.00019	.00006	.00443
%RSD	99.105	65.492	666.83	68.162	68.235	751.68	31.021
#1	.00346	.01793	.02173	.00276	.00049	-.00010	.01804
#2	.00071	.00591	-.03439	.01931	.00030	.00002	.01335
#3	.00069	.00420	.00084	.00773	.00030	.00003	.00839
#4	.00071	.00928	.02884	.01931	.00003	.00002	.01729
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00146	.00032	.00113	.00331	.00445	.23010	.00023
SDev	.00215	.00191	.00166	.00135	.00127	.35992	.00099
%RSD	147.79	593.65	147.29	40.862	28.591	156.42	422.37
#1	-.00066	.00318	.00238	.00497	.00636	.67260	.00128
#2	-.00262	-.00063	.00238	.00331	.00382	.17700	-.00065
#3	.00116	-.00064	-.00112	.00166	.00381	-.20355	.00088
#4	-.00370	-.00063	.00088	.00331	.00381	.27435	-.00057
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00579	.00024	.00563	.04089	.00769	-.00002	-.01411
SDev	.00514	.00047	.00260	.00511	.00330	.01860	.00006
%RSD	88.889	197.39	46.181	12.496	42.888	122190.	.42929
#1	.00321	.00093	.00338	.04671	.00445	-.00346	-.01410
#2	.01350	.00000	.00338	.04149	.00574	.01051	-.01420
#3	.00321	.00000	.00788	.03426	.01185	-.02466	-.01406
#4	.00321	.00000	.00788	.04109	.00873	.01754	-.01409
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03850	.02724	-.01025	.00038	.00039	.02619	.00322
SDev	.01075	.02981	.02036	.00030	.00053	.03467	.00212
%RSD	27.923	109.41	198.69	80.539	136.63	132.42	65.851
#1	-.03312	.07079	-.02043	.00073	.00093	.04977	.00460
#2	-.05463	.00549	.02029	.00026	.00062	.00782	.00346

#3	-.03313	.02176	-.02043	.00049	-.00031	-.01316	.00015
#4	-.03313	.01094	-.02043	.00002	.00031	.06032	.00468
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem ZN
Units ppm
Avge .00196
SDev .00044
%RSD 22.336

#1 .00241
#2 .00138
#3 .00216
#4 .00189

Errors LC Pass
High .02000
Low -.02000

Analysis Report

06/07/00 10:01:45 AM

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Method: QUANMET Sample Name: DE5XLC Operator: RJG
 Run Time: 06/07/00 09:58:40
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04828	1.9360	1.9060	.93404	1.9154	.04804	49.089
SDev	.00132	.0028	.0206	.00245	.0052	.00012	.216
%RSD	2.7335	.14526	1.0816	.26237	.26980	.24905	.44033
#1	.04724	1.9394	1.9016	.93111	1.9174	.04810	48.866
#2	.05000	1.9360	1.9297	.93293	1.9088	.04786	49.098
#3	.04724	1.9325	1.9122	.93607	1.9210	.04810	49.013
#4	.04865	1.9359	1.8804	.93606	1.9143	.04809	49.379
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass
High	.06000	2.4000	2.4000		2.4000	.06000	60.000
Low	.04000	1.6000	1.6000		1.6000	.04000	40.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04501	.47251	.19013	.24247	1.0225	47.672	.94283
SDev	.00200	.00609	.00228	.00218	.0035	.379	.00547
%RSD	4.4353	1.2887	1.1979	.89845	.34609	.79405	.57970
#1	.04402	.46774	.18713	.24474	1.0213	48.099	.94616
#2	.04657	.47411	.19064	.24061	1.0207	47.737	.93884
#3	.04268	.46774	.19013	.24060	1.0201	47.179	.94874
#4	.04678	.48046	.19264	.24393	1.0277	47.675	.93756
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	.06000	.60000	.24000	.30000	1.2000	60.000	
Low	.04000	.40000	.16000	.20000	.80000	40.000	
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.202	.47925	.96202	47.596	.48508	.48722	.49108
SDev	.100	.00108	.00972	.259	.00741	.00573	.02175
%RSD	.20363	.22485	1.0105	.54439	1.5280	1.1755	4.4297
#1	49.207	.47831	.95302	47.895	.47446	.48008	.50990
#2	49.068	.47831	.96202	47.426	.48679	.48724	.47230
#3	49.310	.48017	.95752	47.723	.48740	.49410	.47219
#4	49.225	.48018	.97552	47.338	.49169	.48747	.50995
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	60.000	.60000		60.000	.60000	.60000	.60000
Low	40.000	.40000		40.000	.40000	.40000	.40000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9134	9.5765	1.9024	.96161	.95391	1.9070	.47268
SDev	.0609	.0424	.0293	.00251	.00294	.0517	.00244
%RSD	3.1828	.44269	1.5387	.26082	.30855	2.7116	.51647
#1	1.9591	9.5166	1.9224	.96170	.95136	1.9674	.47137
#2	1.8266	9.5764	1.8593	.95812	.95136	1.9149	.47155

#3	1.9520	9.6036	1.9093	.96401	.95630	1.8414	.47147
#4	1.9162	9.6091	1.9187	.96260	.95661	1.9042	.47634

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	LC Pass
High	2.4000					2.4000	.60000
Low	1.6000					1.6000	.40000

Elem	ZN
Units	ppm
Avge	.47964
SDev	.00390
%RSD	.81284

#1	.47457
#2	.48075
#3	.47928
#4	.48394

Errors	LC Pass
High	.60000
Low	.40000

Analysis Report

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Method: QUANMET Sample Name: DDNV3 Operator: RJG
 Run Time: 06/07/00 10:01:48
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00085	.01280	.00848	.03592	.12182	-.00006	51.500
SDev	.00069	.00279	.02325	.00214	.00081	.00006	.153
%RSD	81.095	21.749	274.28	5.9663	.66549	100.00	.29762
#1	-.00188	.01283	.01023	.03283	.12111	-.00009	51.689
#2	-.00050	.01284	.00321	.03780	.12184	-.00009	51.328
#3	-.00050	.01618	-.01792	.03651	.12138	.00003	51.541
#4	-.00050	.00936	.03838	.03653	.12294	-.00009	51.443
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00142	-.00101	-.00113	.01497	.82357	1.7877	.00388
SDev	.00196	.00263	.00178	.00068	.00238	.2818	.00076
%RSD	138.27	260.74	158.37	4.5315	.28863	15.764	19.689
#1	-.00186	.00186	.00038	.01580	.82357	1.8939	.00397
#2	.00030	-.00069	-.00213	.01497	.82103	1.7080	.00301
#3	-.00401	-.00068	.00038	.01497	.82294	2.1063	.00485
#4	-.00011	-.00451	-.00313	.01414	.82675	1.4425	.00369
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.600	.06426	.00237	35.144	.00318	-.02838	-.02124
SDev	.041	.00089	.00431	.316	.00296	.01226	.02488
%RSD	.35290	1.3882	181.55	.89958	93.059	43.205	117.12
#1	11.559	.06356	.00350	34.746	.00226	-.02476	-.00477
#2	11.595	.06356	-.00100	35.221	.00758	-.01779	.00484
#3	11.590	.06450	.00800	35.100	.00120	-.02489	-.04257
#4	11.657	.06543	-.00100	35.510	.00169	-.04609	-.04247
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03909	3.7378	.00285	.24597	-.00324	.02600	.00004
SDev	.04667	.0077	.01662	.00163	.00040	.03884	.00009
%RSD	119.38	.20586	584.00	.66273	12.295	149.38	197.98
#1	-.03013	3.7270	.02606	.24456	-.00309	-.02129	.00007
#2	.02002	3.7378	-.00906	.24550	-.00340	.01027	-.00002

#3	-.09104	3.7433	.00367	.24550	-.00278	.06276	.00016
#4	-.05520	3.7433	-.00928	.24832	-.00370	.05226	-.00003

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.07256
SDev	.00283
%RSD	3.8952

#1	.07044
#2	.07094
#3	.07220
#4	.07665

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

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Method: QUANMET Sample Name: DDNV3P5

Operator: RJG

Run Time: 06/07/00 10:04:56

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00065	.00639	.01906	-.00270	.02459	.00000	10.535
SDev	.00112	.01174	.01614	.00471	.00028	.00006	.025
%RSD	172.75	183.75	84.695	174.26	1.1231	152e6	.23784

#1	-.00065	.00251	.03579	-.00353	.02466	.00003	10.572
#2	-.00203	-.00772	.02181	-.00905	.02485	-.00009	10.516
#3	.00072	.01971	-.00302	.00088	.02420	.00003	10.525
#4	-.00065	.01105	.02166	.00088	.02466	.00003	10.526

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00301	-.00223	.00000	.00477	.16904	.49781	.00109
SDev	.00226	.00063	.00165	.00041	.00052	.17925	.00084
%RSD	74.932	28.425	23e6	8.6701	.30670	36.008	76.715

#1	-.00009	-.00192	-.00012	.00415	.16967	.45135	.00116
#2	-.00240	-.00191	-.00113	.00498	.16903	.26550	.00116
#3	-.00506	-.00191	.00238	.00498	.16840	.61065	.00204
#4	-.00449	-.00318	-.00113	.00498	.16904	.66375	.00000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3559	.01285	.00003	7.0203	.00273	-.03001	-.01414
SDev	.0175	.00047	.00431	.1142	.00573	.02527	.00006
%RSD	.74244	3.6174	17045.	1.6262	209.95	84.201	.44463

#1	2.3488	.01309	.00340	7.0054	.00439	-.01066	-.01415
#2	2.3797	.01309	-.00110	7.1842	-.00520	-.06692	-.01421
#3	2.3385	.01308	-.00560	6.9247	.00843	-.01770	-.01406
#4	2.3565	.01216	.00340	6.9669	.00329	-.02477	-.01417

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.02715	.78348	-.00559	.04951	-.00062	.05086	.00000
SDev	.04556	.00000	.00659	.00023	.00025	.03136	.00008
%RSD	167.79	.00000	117.97	.47522	40.825	61.663	16538.

#1	-.07910	.78348	-.00558	.04963	-.00062	.05873	.00007
#2	-.03252	.78348	-.00188	.04963	-.00093	.03773	-.00002
#3	-.02894	.78348	-.01484	.04916	-.00031	.01673	-.00010
#4	.03197	.78348	-.00003	.04963	-.00062	.09024	.00006

Elem	ZN
Units	ppm
Avg	.01532
SDev	.00107
%RSD	6.9847

#1	.01674
#2	.01429
#3	.01475

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Analysis Report

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#4 .01550

Analysis Report

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Method: QUANMET Sample Name: DDNV3S

Operator: RJG

Run Time: 06/07/00 10:08:04

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04669	1.9549	1.8865	.98059	2.0275	.04782	98.725
SDev	.00137	.0141	.0672	.00822	.0079	.00021	.325
%RSD	2.9417	.72300	3.5596	.83876	.38850	.43933	.32920
#1	.04736	1.9396	1.8340	.97513	2.0277	.04777	98.356
#2	.04739	1.9549	1.8267	.98762	2.0341	.04775	98.616
#3	.04738	1.9515	1.9217	.97199	2.0164	.04763	99.130
#4	.04463	1.9737	1.9637	.98764	2.0318	.04812	98.797
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04385	.45974	.18450	.25411	1.8177	50.763	.97166
SDev	.00150	.00302	.00185	.00141	.0023	.066	.00774
%RSD	3.4272	.65595	1.0006	.55560	.12576	.13046	.79634
#1	.04562	.45751	.18212	.25390	1.8182	50.693	.97324
#2	.04437	.46005	.18463	.25473	1.8163	50.852	.98183
#3	.04210	.46389	.18663	.25225	1.8157	50.763	.96428
#4	.04331	.45751	.18463	.25556	1.8208	50.746	.96729
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	60.694	.52952	.94076	83.573	.47614	.46904	.44623
SDev	.215	.00117	.00768	.424	.01050	.04048	.01198
%RSD	.35416	.22159	.81688	.50739	2.2049	8.6298	2.6847
#1	60.649	.52789	.93064	83.497	.46282	.44436	.44387
#2	60.868	.52976	.94413	84.173	.48800	.45852	.46293
#3	60.408	.52976	.94863	83.178	.47925	.52892	.43441
#4	60.850	.53069	.93964	83.443	.47449	.44435	.44372
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9119	13.107	1.8936	1.1954	.94549	1.8100	.46265
SDev	.0910	.033	.0423	.0039	.00215	.0880	.00297
%RSD	4.7586	.24909	2.2345	.32339	.22775	4.8626	.64245
#1	1.8689	13.091	1.8649	1.1950	.94457	1.7391	.45848
#2	1.8223	13.091	1.8631	1.1985	.94796	1.7286	.46554

#3	1.9226	13.091	1.8926	1.1900	.94302	1.8861	.46337
#4	2.0337	13.156	1.9538	1.1979	.94642	1.8861	.46319
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.54065
SDev	.00242
%RSD	.44764

#1	.53838
#2	.53883
#3	.54331
#4	.54207

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

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Method: QUANMET Sample Name: DDNV3D

Operator: RJG

Run Time: 06/07/00 10:11:11

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04568	1.9796	1.9082	.98762	2.0616	.04863	98.864
SDev	.00069	.0033	.0606	.00001	.0045	.00021	.163
%RSD	1.5012	.16541	3.1748	.00058	.21971	.42692	.16526
#1	.04602	1.9822	1.9178	.98762	2.0658	.04872	98.789
#2	.04602	1.9822	1.8475	.98762	2.0651	.04884	98.940
#3	.04465	1.9753	1.8792	.98761	2.0587	.04859	98.678
#4	.04602	1.9787	1.9882	.98761	2.0568	.04835	99.048
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04247	.46100	.18450	.25805	1.8142	50.491	.98741
SDev	.00369	.00063	.00247	.00096	.0034	.200	.00565
%RSD	8.6987	.13701	1.3365	.37035	.18651	.39618	.57180
#1	.04383	.46131	.18212	.25722	1.8157	50.524	.99315
#2	.04670	.46130	.18663	.25888	1.8182	50.728	.98521
#3	.04131	.46005	.18262	.25887	1.8106	50.471	.99071
#4	.03802	.46133	.18663	.25722	1.8125	50.241	.98056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	61.002	.53441	.95201	84.442	.47028	.47085	.46741
SDev	.147	.00132	.00225	.344	.00821	.04351	.02732
%RSD	.24065	.24654	.23638	.40732	1.7457	9.2409	5.8449
#1	61.102	.53348	.95313	84.725	.47139	.44448	.47217
#2	61.112	.53628	.95314	84.394	.46130	.45151	.46265
#3	60.997	.53441	.94863	84.674	.46755	.53592	.50052
#4	60.796	.53348	.95313	83.974	.48090	.45147	.43429
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9271	13.169	1.8882	1.2136	.94673	1.8940	.46711
SDev	.0074	.009	.0377	.0022	.00182	.0682	.00052
%RSD	.38377	.07052	1.9991	.18487	.19197	3.6032	.11128
#1	1.9262	13.167	1.8799	1.2159	.94796	1.9596	.46684
#2	1.9370	13.178	1.8557	1.2149	.94858	1.8861	.46685

#3	1.9262	13.156	1.8744	1.2126	.94488	1.8021	.46789
#4	1.9190	13.173	1.9426	1.2109	.94549	1.9282	.46685
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .54545
SDev .00443
%RSD .81141

#1 .55004
#2 .53942
#3 .54655
#4 .54578

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 10:17:24 AM

page 1

Method: QUANMET Sample Name: DE7QTBT Operator: RJG
 Run Time: 06/07/00 10:14:19
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00034	.00427	.03424	.00951	.00034	.00000	.03214
SDev	.00172	.01007	.02177	.00972	.00030	.00006	.00098
%RSD	506.79	235.76	63.583	102.26	87.893	1312.8	3.0480
#1	-.00206	-.00942	.05366	.01621	.00030	.00003	.03207
#2	.00205	.00773	.00438	.00280	.00030	.00004	.03132
#3	.00068	.01452	.04649	.01935	.00003	-.00008	.03163
#4	.00070	.00426	.03243	-.00033	.00076	.00003	.03353
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00069	-.00063	-.00062	.00352	.01875	.03319	-.00037
SDev	.00168	.00294	.00173	.00104	.00168	.13253	.00031
%RSD	243.02	462.63	277.82	29.653	8.9739	399.33	83.088
#1	.00180	.00191	.00188	.00331	.01652	.21240	-.00020
#2	-.00184	-.00318	-.00112	.00248	.01970	-.05310	-.00017
#3	-.00145	-.00318	-.00112	.00331	.01843	-.07965	-.00082
#4	-.00127	.00191	-.00213	.00497	.02034	.05310	-.00028
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00900	.00024	.00225	.03908	.00236	-.00356	-.01656
SDev	.00608	.00047	.00225	.00571	.00212	.02758	.00473
%RSD	67.512	195.16	99.871	14.615	89.657	773.97	28.553
#1	.01350	.00001	.00338	.03104	.00256	.02464	-.02366
#2	.01350	.00001	-.00112	.04149	-.00068	.01043	-.01420
#3	.00064	.00001	.00338	.03948	.00354	-.03880	-.01422
#4	.00836	.00094	.00338	.04430	.00403	-.01052	-.01417
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03397	.03534	.01335	.00034	.00008	-.00805	-.00165
SDev	.04111	.03908	.00833	.00031	.00053	.05453	.00272
%RSD	121.01	110.57	62.420	91.721	683.13	677.26	164.64
#1	-.08683	.00544	.01285	.00016	-.00062	.01819	.00007
#2	-.03307	.09244	.00179	.00002	.00031	-.02378	-.00455

Analysis Report

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#3	-.02949	.02716	.01845	.00045	.00062	-.07628	-.00333
#4	.01351	.01634	.02030	.00073	-.00000	.04966	.00119

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.00338
SDev	.00030
%RSD	8.7689

#1	.00313
#2	.00363
#3	.00311
#4	.00363

Errors	NOCHECK
High	
Low	

Analysis Report

06/07/00 10:20:32 AM

page 1

Method: QUANMET Sample Name: DE63RBT Operator: RJG
 Run Time: 06/07/00 10:17:26
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00000	.01625	.12639	.00652	.00163	-.00003	.13607
SDev	.00177	.00697	.03862	.01237	.00024	.00007	.00465
%RSD	39865.	42.911	30.553	189.74	14.744	224.88	3.4147
#1	-.00206	.01455	.10268	.02247	.00168	-.00009	.13252
#2	.00206	.02650	.16587	-.00032	.00141	-.00009	.13367
#3	.00070	.01282	.15188	-.00566	.00195	.00003	.14283
#4	-.00068	.01113	.08513	.00960	.00149	.00003	.13526
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00317	-.00095	.00063	.00455	.01922	.31417	-.00021
SDev	.00304	.00263	.00119	.00107	.00095	.34081	.00044
%RSD	96.121	277.58	190.41	23.507	4.9547	108.48	212.31
#1	-.00244	-.00063	.00238	.00414	.01843	.31860	-.00057
#2	-.00157	-.00445	-.00012	.00331	.01843	-.02655	-.00017
#3	-.00764	.00193	.00038	.00497	.02034	.77880	-.00048
#4	-.00101	-.00064	-.00013	.00580	.01970	.18585	.00040
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02443	.00070	.00000	S-.12125	.00753	-.00885	-.01415
SDev	.02186	.00089	.00225	.00000	.00133	.02256	.00003
%RSD	89.474	126.60	78272.	.00000	17.697	254.99	.24672
#1	.01350	.00094	-.00112	S-.12125	.00824	.01050	-.01412
#2	.01350	.00187	-.00112	S-.12125	.00653	-.02478	-.01419
#3	.05723	.00001	.00338	S-.12125	.00904	.01057	-.01412
#4	.01350	.00001	-.00112	S-.12125	.00629	-.03170	-.01417
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02680	.06529	.01567	.00144	.00031	.06283	.00000
SDev	.03379	.02350	.01214	.00019	.00044	.05241	.00096
%RSD	126.06	35.997	77.450	13.379	141.42	83.412	74204.
#1	-.02949	.03264	.00179	.00144	-.00000	.06021	-.00002
#2	-.06532	.08704	.02585	.00144	.00093	.00774	-.00115

#3	-.02948	.06531	.00919	.00167	-.00000	.04965	.00120
#4	.01709	.07617	.02585	.00120	.00031	.13371	-.00002

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.01539
SDev	.00093
%RSD	6.0453

#1	.01404
#2	.01551
#3	.01601
#4	.01601

Errors	NOCHECK
High	
Low	

Analysis Report

06/07/00 10:23:39 AM

page 1

Method: QUANMET Sample Name: DE7QTCT Operator: RJG
 Run Time: 06/07/00 10:20:34
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04671	1.8134	2.0290	.87511	1.7478	.04382	.13763
SDev	.00206	.0231	.0393	.02168	.0173	.00036	.00451
%RSD	4.4183	1.2759	1.9370	2.4773	.99218	.81604	3.2748
#1	.04843	1.7800	2.0724	.84297	1.7225	.04334	.14429
#2	.04568	1.8262	1.9876	.88417	1.7591	.04394	.13455
#3	.04843	1.8313	2.0508	.89043	1.7591	.04419	.13641
#4	.04430	1.8159	2.0053	.88288	1.7506	.04382	.13526
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.06000		2.4000		2.4000		
Low	.04000		1.6000		1.6000		
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04143	.43502	.17548	.23084	.95624	.25222	.87129
SDev	.00074	.00181	.00111	.00207	.00365	.37047	.01471
%RSD	1.7807	.41583	.63253	.89611	.38129	146.88	1.6882
#1	.04078	.43758	.17686	.22815	.95195	.72570	.85013
#2	.04244	.43374	.17435	.23312	.95640	.00885	.88328
#3	.04100	.43502	.17486	.23146	.96085	-.08850	.87866
#4	.04151	.43375	.17586	.23063	.95576	.36285	.87308
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.06000		.24000				
Low	.04000		.16000				
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02058	.44073	-.00211	S-.12125	.44729	.43458	-.02709
SDev	.01058	.00228	.00225	.00000	.00605	.03320	.01887
%RSD	51.412	.51773	106.79	.00000	1.3523	7.6388	69.652
#1	.03408	.43793	-.00098	S-.12125	.44354	.45754	-.01763
#2	.02379	.44073	-.00098	S-.12125	.44110	L.38708	-.01773
#3	.01093	.44352	-.00098	S-.12125	.45423	.43634	-.01762
#4	.01350	.44073	-.00548	S-.12125	.45031	.45736	-.05540
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.60000	
Low						.40000	
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0117	.06948	.00838	.88325	.00023	1.7584	.43480
SDev	.0188	.02488	.01805	.00788	.00046	.0600	.00004
%RSD	.93507	35.815	215.24	.89214	200.00	3.4142	.00989
#1	2.0126	.08172	-.01656	.87166	.00062	1.7059	.43482
#2	2.0019	.07628	.01861	.88743	-.00031	1.8424	.43482

#3	1.9947	.08716	.02416	.88884	.00062	1.7268	.43482
#4	2.0377	.03275	.00733	.88507	-.00000	1.7584	.43473

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	2.4000						
Low	1.6000						

Elem	ZN
Units	ppm
Avge	.47487
SDev	.00281
%RSD	.59204

#1	.47408
#2	.47457
#3	.47877
#4	.47207

Errors	NOCHECK
High	
Low	

Analysis Report

06/07/00 10:26:46 AM

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Method: QUANMET Sample Name: DE44MT

Operator: RJG

Run Time: 06/07/00 10:23:42

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00065	.99325	.17244	.04234	1.4691	.00060	176.51
SDev	.00251	.01443	.05146	.00534	.0013	.00015	.79
%RSD	389.29	1.4533	29.844	12.614	.08750	25.178	.44962

#1	.00074	.99708	.11876	.04468	1.4696	.00063	175.83
#2	-.00341	.98855	.22788	.04155	1.4676	.00076	175.95
#3	-.00201	.97653	.14002	.03530	1.4685	.00063	176.72
#4	.00210	1.0108	.20308	.04781	1.4705	.00039	177.54

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00082	-.00105	.00200	.01637	.19348	1.4492	.00096
SDev	.00437	.00064	.00144	.00207	.00235	.2880	.00067
%RSD	530.10	61.460	71.814	12.647	1.2156	19.872	69.755

#1	-.00385	-.00136	.00388	.01740	.19189	1.8408	.00060
#2	-.00470	-.00008	.00088	.01740	.19253	1.4868	.00020
#3	.00046	-.00137	.00087	.01740	.19253	1.2655	.00156
#4	.00479	-.00138	.00238	.01326	.19698	1.2036	.00147

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.938	.07477	.00003	S-.12125	.01075	.01345	-.01410
SDev	.016	.00047	.00225	.00000	.00500	.02664	.00006
%RSD	.14933	.62301	7776.3	.00000	46.473	197.99	.40265

#1	10.947	.07454	-.00110	S-.12125	.00892	.03103	-.01412
#2	10.913	.07454	.00340	S-.12125	.01393	.01700	-.01404
#3	10.944	.07454	-.00110	S-.12125	.00458	.03104	-.01417
#4	10.947	.07547	-.00110	S-.12125	.01558	-.02525	-.01406

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.06468	4.3010	.00879	1.6036	-.00641	.05355	.00227
SDev	.02109	.0322	.01437	.0025	.00077	.07097	.00259
%RSD	32.613	.74854	163.52	.15729	12.048	132.52	114.18

#1	-.03602	4.2820	.00925	1.6034	-.00679	.09031	.00451
#2	-.07185	4.2656	-.00926	1.6003	-.00679	.01681	.00007

#3	-.08618	4.3310	.02591	1.6041	-.00679	-.02522	.00451
#4	-.06467	4.3255	.00925	1.6064	-.00525	.13231	-.00002

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.07178
SDev	.00167
%RSD	2.3281

#1	.07298
#2	.06944
#3	.07299
#4	.07171

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 10:29:54 AM

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Method: QUANMET Sample Name: CCV2-2

Operator: RJG

Run Time: 06/07/00 10:26:49

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98579	49.824	4.9879	4.8643	4.8724	4.9036	50.650
SDev	.00301	.214	.0711	.0241	.0237	.0100	.083
%RSD	.30550	.42958	1.4260	.49511	.48688	.20452	.16387
#1	.98441	49.768	5.0367	4.8580	4.8746	4.9051	50.564
#2	.98572	49.688	4.8830	4.8496	4.8630	4.8961	50.605
#3	.98999	50.141	5.0262	4.9000	4.9041	4.9171	50.679
#4	.98303	49.701	5.0056	4.8498	4.8481	4.8959	50.752
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0256	4.8734	4.8450	4.8572	51.348	49.639	4.8192
SDev	.0188	.0118	.0048	.0206	.090	.781	.0687
%RSD	.37458	.24210	.09855	.42484	.17605	1.5730	1.4253
#1	5.0040	4.8655	4.8393	4.8593	51.315	49.064	4.8187
#2	5.0183	4.8706	4.8428	4.8477	51.262	49.533	4.7827
#3	5.0480	4.8908	4.8478	4.8850	51.474	50.772	4.9155
#4	5.0320	4.8667	4.8498	4.8370	51.341	49.188	4.7597
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	55.000	55.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	45.000	45.000	4.5000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.814	4.8745	4.8687	49.219	4.9127	4.9164	4.9628
SDev	.180	.0100	.0094	.664	.0366	.0346	.0509
%RSD	.36203	.20471	.19262	1.3489	.74483	.70357	1.0248
#1	49.786	4.8692	4.8575	49.100	4.8783	4.9197	4.9698
#2	49.680	4.8663	4.8665	48.903	4.8861	4.9199	4.9697
#3	50.076	4.8888	4.8800	50.182	4.9320	4.8708	4.8943
#4	49.714	4.8738	4.8710	48.689	4.9545	4.9550	5.0173
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	55.000	5.5000	5.5000	55.000	5.5000	5.5000	5.5000
Low	45.000	4.5000	4.5000	45.000	4.5000	4.5000	4.5000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9539	4.9629	4.9453	4.8772	4.8568	9.6798	4.8629
SDev	.0617	.0113	.0530	.0201	.0135	.0481	.0080
%RSD	1.2463	.22777	1.0713	.41157	.27869	.49670	.16484
#1	4.9198	4.9697	4.8875	4.8773	4.8568	9.6618	4.8636
#2	4.8873	4.9532	4.9134	4.8694	4.8469	9.6833	4.8536

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Analysis Report

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#3	4.9848	4.9753	4.9945	4.9047	4.8759	9.7440	4.8731
#4	5.0238	4.9533	4.9859	4.8574	4.8475	9.6300	4.8616
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	5.5000	11.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	4.5000	9.0000	4.5000

Elem	ZN
Units	ppm
Avge	4.9168
SDev	.0098
%RSD	.19893

#1	4.9177
#2	4.9032
#3	4.9201
#4	4.9263

Errors	LC Pass
High	5.5000
Low	4.5000

Analysis Report

06/07/00 10:33:02 AM

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Method: QUANMET Sample Name: CCB2

Operator: RJG

Run Time: 06/07/00 10:29:56

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00070	-.00271	.04129	.00134	.00021	.00018	.00280
SDev	.00195	.01114	.04315	.00837	.00022	.00011	.00477
%RSD	278.63	410.97	104.50	624.53	107.12	64.459	170.27
#1	.00346	.00935	.00777	-.00569	.00049	.00014	.00498
#2	-.00066	-.01140	.00089	.01086	.00030	.00026	.00471
#3	-.00069	-.01293	.07129	.00589	.00003	.00003	-.00432
#4	.00069	.00414	.08520	-.00570	.00003	.00027	.00582
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00008	-.00191	-.00175	.00145	.00207	-.30975	-.00039
SDev	.00053	.00294	.00272	.00157	.00159	.56432	.00059
%RSD	645.38	153.91	155.59	108.38	76.971	182.19	151.32
#1	-.00051	.00064	-.00013	.00248	.00445	-.10620	-.00017
#2	.00028	-.00446	-.00162	.00248	.00127	.11505	-.00105
#3	.00071	-.00446	-.00563	-.00083	.00127	-1.1416	-.00065
#4	-.00015	.00064	.00038	.00166	.00127	-.10620	.00031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00064	.00047	.01013	.01828	.00508	-.00536	-.02129
SDev	.02247	.00054	.00779	.00137	.00920	.04961	.04329
%RSD	3494.8	114.98	76.976	7.4801	181.11	926.31	203.33
#1	.01607	.00000	.00338	.02019	.00728	.06686	.02366
#2	.01350	.00094	.01687	.01698	.00186	-.02484	L-.08044
#3	-.03279	.00000	.00338	.01778	-.00532	-.04585	-.01422
#4	.00064	.00094	.01687	.01818	.01649	-.01759	-.01415
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.05374	.00139	.01286	.00005	.00023	.01836	.00217
SDev	.04712	.00270	.00928	.00005	.00068	.05749	.00236
%RSD	87.683	194.71	72.131	100.00	295.65	313.13	108.66
#1	-.01879	.00004	.00936	.00002	.00093	.10232	.00346
#2	-.02955	.00006	.02554	.00002	-.00000	-.02364	.00485

#3	-.04389	.00544	.00364	.00012	-.00062	.00790	.00005
#4	-.12271	.00000	.01289	.00002	.00062	-.01314	.00033

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem	ZN
Units	ppm
Avge	-.00051
SDev	.00132
%RSD	260.53

#1	-.00131
#2	-.00180
#3	-.00003
#4	.00112

Errors	LC Pass
High	.02000
Low	-.02000

Analysis Report

06/07/00 10:36:09 AM

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Method: QUANMET Sample Name: DE44MP5T Operator: RJG
 Run Time: 06/07/00 10:33:04
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00104	.20925	.03157	.00095	.30839	.00015	36.981
SDev	.00173	.00164	.02546	.00263	.00163	.00001	.302
%RSD	165.68	.78339	80.634	276.06	.52907	4.0148	.81700

#1	.00072	.21135	-.00454	.00376	.30681	.00014	37.249
#2	.00345	.20797	.03775	.00064	.30791	.00015	36.566
#3	.00069	.20792	.03775	.00191	.31067	.00015	36.958
#4	-.00068	.20975	.05532	-.00250	.30818	.00015	37.153

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00149	-.00110	.00100	.00352	.04098	.39161	.00069
SDev	.00113	.00241	.00125	.00207	.00184	.28671	.00054
%RSD	75.737	218.29	124.99	58.793	4.4768	73.214	78.341

#1	-.00087	-.00079	.00288	.00663	.04257	.54870	-.00009
#2	-.00050	-.00461	.00037	.00248	.04257	-.03540	.00088
#3	-.00306	.00049	.00038	.00249	.03940	.48675	.00079
#4	-.00153	.00049	.00037	.00249	.03940	.56640	.00116

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3276	.01607	-.00112	268.03	.00735	-.01247	-.00699
SDev	.0132	.00047	.00636	3.10	.00384	.02457	.04107
%RSD	.56614	2.8931	568.77	1.1555	52.277	197.12	587.34

#1	2.3334	.01584	-.00112	266.35	.01018	.02439	-.06132
#2	2.3102	.01677	-.00562	267.96	.00702	-.02488	-.01404
#3	2.3411	.01584	.00788	272.41	.00203	-.02468	.03310
#4	2.3257	.01584	-.00562	265.42	.01015	-.02470	.01429

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03120	.89639	-.01205	.33600	-.00116	-.01346	.00111
SDev	.03820	.00273	.01466	.00174	.00015	.04773	.00227
%RSD	122.43	.30457	121.66	.51775	13.333	354.58	204.05

#1	-.06882	.89779	-.00583	.33436	-.00123	.03901	.00451
#2	.02076	.89774	-.02597	.33483	-.00093	-.00293	-.00011
#3	-.04733	.89230	-.02205	.33812	-.00123	-.07647	.00015
#4	-.02942	.89774	.00563	.33671	-.00123	-.01345	-.00011

Elem	ZN
Units	ppm
Avge	.01515
SDev	.00154
%RSD	10.195

#1	.01725
#2	.01354
#3	.01480

#4 .01499

Analysis Report

06/07/00 10:39:16 AM

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Method: QUANMET Sample Name: DE44MST

Operator: RJG

Run Time: 06/07/00 10:36:11

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.88935	.93935	4.7761	.04359	44.737	.00057	163.58
SDev	.00770	.01182	.0624	.00485	.247	.00007	1.90
%RSD	.86588	1.2578	1.3070	11.133	.55104	12.330	1.1607
#1	.89623	.94913	4.7910	.04525	45.082	.00063	164.78
#2	.87835	.92350	4.7068	.04468	44.671	.00051	160.75
#3	.89210	.94756	4.8543	.03660	44.498	.00051	164.53
#4	.89073	.93723	4.7524	.04782	44.698	.00063	164.24
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92300	.00392	4.2391	.01451	.20461	1.7324	.00164
SDev	.01229	.00071	.0407	.00107	.00307	.1259	.00014
%RSD	1.3313	18.178	.96104	7.3632	1.5010	7.2651	8.5631
#1	.92754	.00342	4.2744	.01575	.20715	1.9204	.00173
#2	.90465	.00369	4.1808	.01492	.20016	1.6726	.00145
#3	.93014	.00498	4.2564	.01327	.20588	1.6815	.00176
#4	.92968	.00360	4.2449	.01409	.20524	1.6549	.00164
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.412	.06942	.00116	S797.20	.01565	4.3525	.00550
SDev	.048	.00093	.00581	1594.6	.00789	.0490	.03668
%RSD	.46577	1.3417	502.72	200.03	50.446	1.1263	667.45
#1	10.481	.06989	.00791	S-.12125	.02693	4.4157	-.04910
#2	10.389	.06802	.00340	S3189.2	.01205	4.3103	.02723
#3	10.371	.06988	-.00559	S-.12125	.00887	4.3174	.02659
#4	10.409	.06989	-.00109	S-.12125	.01474	4.3666	.01727
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96456	4.0493	.01073	1.5171	-.00509	.02973	.00388
SDev	.04403	.0309	.01307	.0075	.00064	.03965	.00014
%RSD	4.5643	.76305	121.89	.49426	12.616	133.39	3.5038
#1	.99950	4.0751	.02574	1.5277	-.00525	.06909	.00408
#2	.91349	4.0044	-.00537	1.5131	-.00586	.05865	.00381

#3	1.0031	4.0588	.01499	1.5108	-.00432	-.00442	.00379
#4	.94217	4.0588	.00754	1.5166	-.00494	-.00441	.00385
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .06713
SDev .00107
%RSD 1.5893

#1 .06869
#2 .06677
#3 .06628
#4 .06677

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 10:42:24 AM

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Method: QUANMET Sample Name: DE44MDT Operator: RJG
 Run Time: 06/07/00 10:39:19
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91273	.96334	4.8990	.04281	45.861	.00066	168.56
SDev	.00336	.00861	.0997	.00367	.326	.00006	.43
%RSD	.36872	.89359	2.0342	8.5732	.71082	9.0780	.25645
#1	.91409	.96462	4.9632	.04226	46.222	.00064	168.09
#2	.90998	.96807	4.7557	.04593	45.459	.00075	168.34
#3	.91686	.96981	4.9069	.03784	45.995	.00063	168.78
#4	.90999	.95084	4.9703	.04519	45.769	.00062	169.05
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.94229	.00457	4.3534	.01471	.17982	1.5111	.00152
SDev	.01063	.00236	.0092	.00238	.00270	.5315	.00096
%RSD	1.1285	51.565	.21217	16.154	1.4994	35.170	62.897
#1	.92855	.00284	4.3566	.01326	.17919	.92039	.00136
#2	.95003	.00316	4.3415	.01823	.17728	1.9470	.00261
#3	.95131	.00798	4.3520	.01327	.18364	1.2036	.00031
#4	.93928	.00431	4.3636	.01409	.17919	1.9735	.00182
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.623	.07174	.00115	S-.12125	.01643	4.4686	.00222
SDev	.026	.00000	.00581	.00000	.00762	.0211	.03120
%RSD	.24211	.00311	504.34	.00000	46.365	.47277	1407.7
#1	10.630	.07174	.00340	S-.12125	.01180	4.4370	.00687
#2	10.620	.07174	-.00560	S-.12125	.02139	4.4791	-.04016
#3	10.651	.07174	-.00110	S-.12125	.02426	4.4793	.00710
#4	10.589	.07174	.00790	S-.12125	.00827	4.4792	.03506
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99403	4.1662	.00423	1.5605	-.00471	.02212	.00326
SDev	.05470	.0162	.01803	.0095	.00068	.06269	.00250
%RSD	5.5029	.38974	426.52	.60792	14.540	283.44	76.807
#1	.94566	4.1730	-.00732	1.5703	-.00556	.03792	-.00037
#2	.95998	4.1459	.01652	1.5479	-.00401	-.00411	.00396

#3	1.0675	4.1839	-.01473	1.5644	-.00432	.10081	.00406
#4	1.0030	4.1622	.02243	1.5595	-.00494	-.04615	.00539
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .06836
SDev .00161
%RSD 2.3602

#1 .06874
#2 .06746
#3 .07046
#4 .06680

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 10:45:32 AM

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Method: QUANMET Sample Name: DE44QT

Operator: RJG

Run Time: 06/07/00 10:42:26

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00039	.67488	.16719	-.00427	1.3164	.00054	125.62
SDev	.00132	.00646	.04975	.00155	.0178	.00012	.58
%RSD	335.04	.95701	29.757	36.222	1.3545	21.466	.45923
#1	-.00064	.67024	.12856	-.00484	1.3302	.00063	125.33
#2	-.00064	.68044	.16716	-.00225	1.3304	.00039	125.39
#3	.00212	.66840	.13560	-.00593	1.2930	.00063	126.48
#4	.00074	.68043	.23744	-.00409	1.3121	.00050	125.27
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00164	.00094	.00237	.01367	.16871	1.2080	.00143
SDev	.00195	.00161	.00041	.00083	.00241	.5767	.00048
%RSD	118.64	171.43	17.192	6.0640	1.4273	47.743	33.312
#1	-.00443	.00253	.00237	.01409	.16521	1.4514	.00173
#2	-.00156	-.00130	.00237	.01243	.16902	.46905	.00091
#3	-.00034	.00126	.00188	.01409	.17030	1.8231	.00193
#4	-.00025	.00125	.00288	.01409	.17029	1.0885	.00116
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.040	.05731	-.00335	S796.74	.02024	.00666	-.00453
SDev	.084	.00054	.00581	1593.7	.00949	.04824	.00774
%RSD	.76213	.94030	173.44	200.03	46.870	724.25	170.62
#1	11.129	.05684	-.01010	S-.12125	.02102	.02429	-.00450
#2	11.088	.05777	-.00560	S-.12125	.02616	-.02504	.00500
#3	10.944	.05778	.00340	S3187.3	.00660	.06645	-.00468
#4	10.998	.05684	-.00110	S-.12125	.02719	-.03906	-.01395
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02446	4.0630	.00882	.93913	-.00417	-.04609	.00418
SDev	.03896	.0367	.00993	.01109	.00064	.07907	.00060
%RSD	159.27	.90398	112.57	1.1807	15.420	171.54	14.451
#1	-.02537	4.0861	.01854	.94743	-.00494	.04845	.00434
#2	-.06477	4.1024	-.00363	.94837	-.00432	-.08808	.00329

#3	.02839	4.0317	.00558	.92484	-.00340	-.13013	.00460
#4	-.03610	4.0317	.01479	.93590	-.00401	-.01461	.00451
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .05145
SDev .00142
%RSD 2.7549

#1 .05261
#2 .05187
#3 .05193
#4 .04938

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 10:48:39 AM

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Method: QUANMET Sample Name: DE3F4T

Operator: RJG

Run Time: 06/07/00 10:45:34

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG ✓	AL	AS	B_	BA ✓	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01485	4.2522	H296.35	H216.43	.02206	.00391	263.16
SDev	.00176	.0441	2.05	1.78	.00031	.00003	1.48
%RSD	11.844	1.0376	.69296	.82317	1.4044	.90580	.56313
#1	.01518	4.2200	H295.44	H215.42	.02209	.00388	261.58
#2	.01243	4.3143	H299.43	H219.01	.02236	.00388	262.22
#3	.01514	4.2528	H295.33	H216.20	.02163	.00391	264.46
#4	.01665	4.2216	H295.21	H215.09	.02217	.00396	264.39
Errors	LC Pass	LC Pass	LC High	LC High	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.78248	.14273	H788.39	.00158	-.00804	57.651	.07980
SDev	.00971	.00244	4.79	.00124	.00141	.596	.00194
%RSD	1.2404	1.7077	.60804	78.568	17.552	1.0333	2.4278
#1	.78670	.13954	H782.33	.00261	-.00948	56.994	.07856
#2	.77386	.14466	H786.84	.00013	-.00884	58.436	.08250
#3	.79419	.14461	H791.52	.00096	-.00629	57.525	.07992
#4	.77518	.14211	H792.86	.00261	-.00756	57.649	.07824
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.5422	.02461	.06412	S-.12125	.00655	L-.20664	2.2655
SDev	.0542	.00054	.00862	.00000	.01030	.03240	.1042
%RSD	.71929	2.1898	13.438	.00000	157.35	15.678	4.5974
#1	7.5055	.02508	.07537	S-.12125	.01617	L-.23550	2.2539
#2	7.6110	.02414	.05737	S-.12125	.00014	L-.19720	2.2169
#3	7.4927	.02508	.05737	S-.12125	-.00454	L-.22886	2.4145
#4	7.5596	.02415	.06637	S-.12125	.01442	L-.16501	2.1769
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE ✓	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03043	H47.955	-.04615	.15681	.20010	.93469	L-.12220
SDev	.04263	.303	.02178	.00133	.00108	.07291	.01113
%RSD	140.12	.63175	47.189	.84934	.53991	7.8009	9.1041
#1	-.01885	H47.758	-.05314	.15590	.19848	.95312	L-.12407
#2	.08506	H48.389	-.07368	.15872	.20064	.98458	L-.12456

#3	.03133	H47.937	-.03203	.15674	.20064	.82709	L-.13339
#4	.02416	H47.736	-.02574	.15590	.20064	.97396	L-.10680

Errors	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	24.756
SDev	.121
%RSD	.48963

#1	24.586
#2	24.872
#3	24.770
#4	24.795

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 10:55:30 AM

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Method: QUANMET Sample Name: DE3F6T

Operator: RJG

Run Time: 06/07/00 10:52:25

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00417	.03707	3.0085	26.590	.11527	.00017	269.71
SDev	.00138	.00821	.0910	.175	.00098	.00006	.88
%RSD	33.106	22.144	3.0246	.65938	.84989	33.925	.32669
#1	-.00485	.04393	3.0726	26.357	.11448	.00014	268.97
#2	-.00488	.02519	3.0623	26.661	.11494	.00015	268.92
#3	-.00485	.03877	2.8757	26.570	.11494	.00026	270.58
#4	-.00210	.04039	3.0234	26.771	.11670	.00014	270.35
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.7354	.05536	38.247	.51400	.19650	83.696	H164.56
SDev	.0205	.00321	.095	.00273	.00175	.548	1.34
%RSD	.54919	5.7979	.24872	.53190	.89192	.65441	.81611
#1	3.7325	.05951	38.162	.51089	.19570	83.154	H163.16
#2	3.7076	.05575	38.168	.51420	.19443	83.340	H165.22
#3	3.7523	.05182	38.329	.51337	.19825	83.951	H163.76
#4	3.7494	.05437	38.329	.51751	.19762	84.340	H166.10
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.9458	.52950	.05403	S-.12125	.16018	.16007	1.6811
SDev	.0356	.00194	.00675	.00000	.00543	.00810	.0291
%RSD	.39768	.36603	12.493	.00000	3.3931	5.0588	1.7305
#1	8.9253	.52717	.05740	S-.12125	.15566	.15303	1.6392
#2	8.9098	.52903	.04840	S-.12125	.15532	.16710	1.7053
#3	8.9587	.53183	.04840	S-.12125	.16533	.16707	1.6851
#4	8.9896	.52997	.06190	S-.12125	.16442	.15308	1.6945
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1293	8.5421	.01716	.41794	-.00633	.06614	.00317
SDev	.0462	.0624	.01239	.00231	.00102	.02500	.00245
%RSD	4.0901	.72999	72.178	.55231	16.179	37.806	77.081
#1	1.1464	8.4660	.00957	.41506	-.00710	.08185	.00420
#2	1.1858	8.5367	.00617	.41789	-.00710	.09243	-.00049

#3	1.1034	8.5476	.03384	.41812	-.00617	.03989	.00436
#4	1.0819	8.6183	.01907	.42071	-.00494	.05037	.00462
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge H188.83
SDev .50
%RSD .26546

#1 H188.23
#2 H188.71
#3 H188.97
#4 H189.43

Errors LC High
High 100.00
Low -.02000

Analysis Report

06/07/00 10:58:38 AM

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page 1

Method: QUANMET Sample Name: DE3F7T

Operator: RJG

Run Time: 06/07/00 10:55:33

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem Units	AG ppm ✓	AL ppm	AS ppm ✓	B_ ppm	BA ppm ✓	BE ppm	CA ppm
Avge	.00598	50.643	1.0411	12.869	.04429	.00228	45.687
SDev	.00079	.374	.0653	.100	.00053	.00006	.179
%RSD	13.255	.73834	6.2738	.77998	1.1974	2.5213	.39166
#1	.00669	50.958	.96369	12.992	.04461	.00223	45.580
#2	.00528	50.749	1.1027	12.845	.04461	.00225	45.491
#3	.00530	50.764	1.0111	12.889	.04442	.00236	45.815
#4	.00663	50.100	1.0871	12.750	.04350	.00226	45.860
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem Units	CD ppm ✓	CO ppm	CR ppm	CU ppm	FE ppm	K_ ppm	LI ppm
Avge	.44749	.11531	H420.30	.04728	2.3598	47.285	.03517
SDev	.00637	.00122	1.16	.00079	.0053	.606	.00412
%RSD	1.4240	1.0616	.27548	1.6772	.22269	1.2816	11.712
#1	.44780	.11371	H420.03	.04666	2.3652	47.639	.03735
#2	.45275	.11625	H418.77	.04831	2.3544	47.737	.03985
#3	.45096	.11498	H421.11	.04749	2.3633	47.356	.03241
#4	.43844	.11629	H421.28	.04666	2.3563	46.409	.03108
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem Units	MG ppm	MN ppm	MO ppm	NA ppm	NI ppm	PB ppm	SB ppm
Avge	13.595	.17429	.04310	S-.12125	.01666	.01469	1.2470
SDev	.085	.00053	.00675	.00000	.01887	.01490	.0372
%RSD	.62221	.30693	15.660	.00000	113.25	101.44	2.9816
#1	13.658	.17476	.04873	S-.12125	.03814	-.00506	1.2328
#2	13.622	.17476	.04873	S-.12125	.00496	.01537	1.2428
#3	13.629	.17383	.03973	S-.12125	.02631	.03107	1.2995
#4	13.470	.17384	.03523	S-.12125	-.00276	.01739	1.2128
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem Units	SE ppm ✓	SI ppm	SN ppm	SR ppm	TI ppm	TL ppm	V_ ppm
Avge	.38842	H100.84	.01303	.06204	.17811	.43526	-.01051
SDev	.04184	.68	.01586	.00054	.00091	.12750	.00501
%RSD	10.771	.67798	121.72	.87269	.51021	29.293	47.651
#1	.43054	H101.74	.02777	.06253	.17934	.26715	-.00528
#2	.38034	H100.73	.02041	.06233	.17811	.42483	-.01229

#3	.40903	H100.79	-.00894	.06200	.17780	.57174	-.00784
#4	.33377	H100.08	.01287	.06130	.17718	.47734	-.01665

Errors	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge 62.959
SDev .181
%RSD .28711

#1	63.073
#2	62.792
#3	63.152
#4	62.819

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:07:20 AM

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Method: QUANMET Sample Name: DE3F9T

Operator: RJG

Run Time: 06/07/00 11:04:15

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00005	.98433	.14196	.08719	.79729	.00088	210.52
SDev	.00275	.01427	.05433	.00206	.00417	.00001	.94
%RSD	5506.5	1.4496	38.271	2.3675	.52270	.69811	.44750
#1	-.00143	.97152	.08057	.08502	.79288	.00088	209.38
#2	-.00141	.98516	.18935	.08686	.79793	.00087	210.60
#3	-.00143	.97662	.18599	.08686	.80272	.00088	210.40
#4	.00407	1.0040	.11193	.09000	.79563	.00088	211.68
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00178	.00502	.01640	.00725	.05127	2.5178	.00849
SDev	.00055	.00191	.00394	.00042	.00167	.3324	.00075
%RSD	30.864	38.043	24.042	5.7173	3.2620	13.203	8.8807
#1	.00115	.00662	.01089	.00746	.05143	2.1240	.00754
#2	.00239	.00661	.01639	.00746	.05270	2.8231	.00919
#3	.00205	.00407	.01840	.00663	.04889	2.3629	.00822
#4	.00152	.00279	.01990	.00746	.05207	2.7612	.00899
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.759	3.7570	.00338	S-.12125	.01212	.01897	.00471
SDev	.073	.0140	.00000	.00000	.00320	.01050	.03190
%RSD	.53188	.37229	.00739	.00000	26.409	55.378	677.80
#1	13.688	3.7372	.00338	S-.12125	.01591	.01028	.05210
#2	13.755	3.7586	.00338	S-.12125	.01179	.02426	-.01418
#3	13.861	3.7623	.00338	S-.12125	.01264	.01013	-.01423
#4	13.732	3.7698	.00338	S-.12125	.00813	.03119	-.00487
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01773	18.092	.00841	.54969	-.01204	.06522	.00123
SDev	.01069	.046	.02084	.00268	.00067	.01828	.00226
%RSD	60.329	.25315	247.97	.48739	5.5391	28.031	184.09
#1	-.02937	18.058	-.02007	.54702	-.01204	.04935	.00009
#2	-.02220	18.047	.00924	.54980	-.01235	.04943	.00462

#3	-.00430	18.134	.01480	.55333	-.01266	.08105	.00010
#4	-.01504	18.129	.02965	.54862	-.01111	.08107	.00010
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.19765
SDev	.00182
%RSD	.91911

#1	.19645
#2	.20020
#3	.19770
#4	.19625

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:10:28 AM

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Method: QUANMET Sample Name: DE3FCT

Operator: RJG

Run Time: 06/07/00 11:07:23

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00206	.01847	1.0017	H148.26	71.011	.00003	74.080
SDev	.00112	.00692	.0360	1.08	.683	.00001	.238
%RSD	54.452	37.476	3.5953	.72967	.96198	30.151	.32152
#1	-.00069	.02658	1.0201	H148.17	71.143	.00003	73.982
#2	-.00207	.02151	1.0060	H149.40	71.663	.00003	74.396
#3	-.00345	.01469	1.0307	H148.64	71.190	.00003	74.107
#4	-.00204	.01109	.94981	H146.82	70.049	.00001	73.835
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48910	.01183	.58464	.01326	.00316	707.30	.02779
SDev	.00610	.00194	.00292	.00135	.00137	7.03	.00054
%RSD	1.2473	16.430	.49920	10.208	43.447	.99429	1.9486
#1	.48335	.00923	.58163	.01160	.00252	708.58	.02703
#2	.49065	.01150	.58714	.01326	.00507	713.96	.02819
#3	.49700	.01299	.58714	.01491	.00189	709.27	.02779
#4	.48538	.01360	.58264	.01326	.00316	697.38	.02816
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.0548	.06356	.00788	S-.12125	.02570	-.00432	2.8042
SDev	.0383	.00047	.00636	.00000	.00751	.02323	.0440
%RSD	.54268	.73221	80.807	.00000	29.213	537.02	1.5681
#1	7.0400	.06426	.00788	S-.12125	.02640	-.02017	2.8444
#2	7.1018	.06333	.00338	S-.12125	.03574	-.02012	2.8351
#3	7.0657	.06333	.00338	S-.12125	.01806	-.00607	2.7876
#4	7.0117	.06333	.01688	S-.12125	.02262	.02906	2.7499
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.12631	2.1029	.01218	2.7532	-.00509	.07111	.00244
SDev	.05237	.0272	.01471	.0246	.00031	.00859	.00238
%RSD	41.461	1.2932	120.78	.89237	6.0606	12.078	97.382
#1	.11735	2.0893	.00774	2.7562	-.00525	.07115	.00130
#2	.05645	2.1437	-.00526	2.7773	-.00525	.08160	.00123

#3	.15676	2.0893	.02969	2.7603	-.00525	.07112	.00123
#4	.17468	2.0893	.01655	2.7190	-.00463	.06056	.00600
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge 16.856
SDev .088
%RSD .52352

#1 16.830
#2 16.966
#3 16.872
#4 16.755

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 11:13:35 AM

page 1

Method: QUANMET Sample Name: DE3FDT Operator: RJG
 Run Time: 06/07/00 11:10:30
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00252	.71995	1.5678	4.2161	9.8144	.00033	165.53
SDev	.00207	.01151	.0209	.0297	.1052	.00007	.38
%RSD	82.139	1.5983	1.3342	.70452	1.0719	20.842	.22678
#1	-.00081	.72339	1.5449	4.1880	9.6823	.00039	164.99
#2	-.00078	.72844	1.5940	4.2429	9.8547	.00027	165.64
#3	-.00356	.72498	1.5730	4.2406	9.9307	.00027	165.62
#4	-.00493	.70298	1.5592	4.1929	9.7898	.00039	165.87
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.3787	.01862	3.3700	.23867	.07988	31.530	.67745
SDev	.0062	.00280	.0117	.00273	.00141	.285	.01067
%RSD	.18429	15.051	.34574	1.1452	1.7648	.90354	1.5754
#1	3.3707	.01998	3.3527	.23598	.07940	31.152	.66645
#2	3.3835	.01859	3.3743	.24012	.08068	31.621	.67918
#3	3.3837	.01473	3.3783	.24177	.07813	31.833	.69143
#4	3.3768	.02118	3.3748	.23681	.08131	31.515	.67274
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.232	.74526	.01014	S-.12125	.03379	2.4308	1.4586
SDev	.108	.00335	.00779	.00000	.00780	.0311	.0235
%RSD	.62454	.44911	76.888	.00000	23.077	1.2807	1.6115
#1	17.083	.74037	.01239	S-.12125	.03714	2.4063	1.4705
#2	17.317	.74689	.01239	S-.12125	.02462	2.4203	1.4702
#3	17.305	.74782	.01689	S-.12125	.03079	2.4765	1.4702
#4	17.222	.74595	-.00111	S-.12125	.04262	2.4203	1.4233
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16690	17.563	.00130	.60056	-.00903	.05046	.00347
SDev	.03739	.109	.02033	.00603	.00046	.07347	.00230
%RSD	22.404	.61855	1560.5	1.0036	5.1282	145.59	66.358
#1	.14271	17.449	.00506	.59262	-.00864	-.02045	.00235
#2	.21796	17.558	.01431	.60321	-.00864	.13709	.00692

#3	.17137	17.710	.01432	.60674	-.00957	.08467	.00248
#4	.13555	17.536	-.02848	.59968	-.00926	.00056	.00213
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge 32.650
SDev .179
%RSD .54691

#1 32.394
#2 32.727
#3 32.804
#4 32.674

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

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Method: QUANMET Sample Name: CCV2-3

Operator: RJG

Run Time: 06/07/00 11:13:38

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96599	48.410	4.8796	4.8919	4.7082	4.7637	49.742
SDev	.00367	.131	.0307	.0190	.0194	.0168	.191
%RSD	.37946	.26995	.62957	.38764	.41185	.35173	.38445
#1	.96283	48.285	4.8528	4.8878	4.6835	4.7432	49.844
#2	.96836	48.310	4.9017	4.8707	4.7023	4.7619	49.676
#3	.96988	48.528	4.8535	4.9166	4.7211	4.7841	49.941
#4	.96289	48.519	4.9103	4.8924	4.7260	4.7655	49.506
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9410	4.7476	4.8250	4.6979	49.979	47.130	4.5836
SDev	.0132	.0105	.0121	.0212	.113	.194	.0326
%RSD	.26739	.22160	.25077	.45180	.22604	.41268	.71213
#1	4.9355	4.7515	4.8253	4.6711	49.888	47.144	4.5725
#2	4.9434	4.7361	4.8148	4.6918	49.930	46.976	4.5539
#3	4.9581	4.7602	4.8419	4.7084	50.143	47.002	4.5779
#4	4.9271	4.7425	4.8178	4.7200	49.954	47.400	4.6301
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	55.000	55.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	45.000	45.000	4.5000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	48.440	4.7486	4.7482	47.051	4.8106	4.7783	4.7687
SDev	.162	.0079	.0228	.251	.0625	.0305	.0603
%RSD	.33472	.16537	.47962	.53345	1.3001	.63832	1.2655
#1	48.268	4.7495	4.7223	46.957	4.8588	4.7487	4.8188
#2	48.345	4.7458	4.7358	46.804	4.7486	4.8044	4.7424
#3	48.623	4.7589	4.7673	47.046	4.8699	4.8048	4.6958
#4	48.523	4.7402	4.7673	47.396	4.7653	4.7553	4.8178
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	55.000	5.5000	5.5000	55.000	5.5000	5.5000	5.5000
Low	45.000	4.5000	4.5000	45.000	4.5000	4.5000	4.5000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8495	4.9029	4.7785	4.7335	4.7275	9.3800	4.7477
SDev	.0769	.0365	.0435	.0173	.0128	.2292	.0095
%RSD	1.5856	.74399	.91105	.36453	.27076	2.4437	.19994
#1	4.9145	4.8865	4.8222	4.7120	4.7123	9.5726	4.7398
#2	4.9111	4.8811	4.7182	4.7271	4.7228	9.0576	4.7424

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#3	4.8152	4.9575	4.7864	4.7466	4.7420	9.3807	4.7611
#4	4.7571	4.8866	4.7870	4.7482	4.7330	9.5089	4.7475
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.5000	5.5000	5.5000	5.5000	5.5000	11.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	4.5000	9.0000	4.5000

Elem	ZN
Units	ppm
Avge	4.7889
SDev	.0079
%RSD	.16551

#1	4.7899
#2	4.7810
#3	4.7994
#4	4.7851

Errors	LC Pass
High	5.5000
Low	4.5000

Analysis Report

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Method: QUANMET Sample Name: CCB3

Operator: RJG

Run Time: 06/07/00 11:16:45

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00034	-.00265	.02287	.09431	.00007	.00003	.00178
SDev	.00132	.00497	.02904	.00479	.00026	.00010	.00212
%RSD	382.67	187.51	126.95	5.0789	392.60	319.26	119.02
#1	-.00206	-.00773	.01852	.09743	-.00016	-.00009	.00206
#2	.00069	.00243	.05710	.09120	.00030	.00015	.00374
#3	.00069	.00070	-.01319	.09929	.00030	.00003	.00255
#4	-.00069	-.00600	.02907	.08935	-.00016	.00003	-.00122
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.30000	.20000	.20000	.00500	5.0000
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00113	-.00032	.00438	.00062	-.00016	-.18142	.00028
SDev	.00220	.00282	.00123	.00041	.00131	.45383	.00049
%RSD	195.92	879.07	27.989	66.616	825.06	250.15	176.93
#1	.00184	.00318	.00288	.00083	-.00127	.18585	-.00028
#2	.00383	-.00192	.00589	.00083	.00127	.01770	.00040
#3	.00008	-.00318	.00438	.00083	.00064	-.08850	.00088
#4	-.00125	.00064	.00438	.00000	-.00127	-.84075	.00011
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.00500	.05000	.01000	.02500	.10000	5.0000	.05000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00064	.00000	.00900	.02923	.00313	-.03343	-.01426
SDev	.01121	.00000	.00431	.00433	.00913	.01752	.00009
%RSD	1743.6	56.387	47.873	14.826	292.18	52.400	.64125
#1	.00579	.00000	.00787	.02421	.01057	-.05971	-.01414
#2	.00579	.00000	.01238	.03305	.00115	-.02469	-.01432
#3	.00321	.00000	.01237	.03265	.00977	-.02472	-.01423
#4	-.01736	.00000	.00337	.02702	-.00899	-.02461	-.01434
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	5.0000	.01500	.04000	5.0000	.04000	.10000	.06000
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03493	.03944	.00965	.00002	-.00000	.05514	-.00010
SDev	.01258	.02680	.00463	.00000	.00025	.06671	.00064
%RSD	36.015	67.946	47.942	.00000	739e6	120.97	637.47
#1	-.04390	.05985	.00364	.00002	-.00000	-.01314	.00016
#2	-.04747	.04897	.01474	.00002	.00031	.06039	.00025

#3	-.02597	.04897	.00919	.00002	-.00000	.14443	.00025
#4	-.02240	-.00001	.01104	.00002	-.00031	.02890	-.00106

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem ZN
Units ppm
Avge .00081
SDev .00072
%RSD 89.728

#1	-.00009
#2	.00096
#3	.00166
#4	.00070

Errors	LC Pass
High	.02000
Low	-.02000

Analysis Report

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Method: QUANMET Sample Name: DE3F4T/5 As Operator: RJG
 Run Time: 06/07/00 11:19:53
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem Units	AG ppm	AL ppm	AS ✓ ppm	B_ ppm	BA ppm	BE ppm	CA ppm
Avge	.00300	.83762	58.724	44.165	.00455	.00084	56.702
SDev	.00132	.00930	.480	.166	.00023	.00011	.421
%RSD	43.956	1.1105	.81780	.37582	5.0520	13.363	.74221
#1	.00196	.82485	58.653	44.183	.00443	.00081	56.875
#2	.00473	.84019	59.413	44.275	.00489	.00093	57.216
#3	.00333	.84706	58.516	44.278	.00443	.00069	56.390
#4	.00197	.83837	58.312	43.925	.00443	.00093	56.328
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem Units	CD ✓ ppm	CO ppm	CR ppm	CU ppm	FE ppm	K_ ppm	LI ppm
Avge	.12384	.03111	H181.99	.00086	-.00049	10.954	.01595
SDev	.00394	.00218	1.08	.00117	.00137	.481	.00094
%RSD	3.1839	6.9941	.59121	136.78	281.77	4.3893	5.8864
#1	.12445	.03334	H182.38	.00086	-.00239	10.965	.01478
#2	.12847	.03078	H183.27	.00251	-.00049	10.930	.01707
#3	.11886	.03208	H181.51	.00003	.00078	10.372	.01594
#4	.12358	.02825	H180.79	.00003	.00015	11.549	.01602
Errors	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem Units	MG ppm	MN ppm	MO ppm	NA ppm	NI ppm	PB ppm	SB ppm
Avge	1.6666	.00581	.01575	S1290.8	.01022	-.06576	.41185
SDev	.0108	.00047	.00431	1273.4	.00989	.04336	.03304
%RSD	.64710	8.0001	27.356	98.654	96.786	65.936	8.0213
#1	1.6673	.00651	.01237	H653.06	.01307	L-.11644	.39684
#2	1.6698	.00557	.01237	H650.66	.01808	-.01043	.38012
#3	1.6518	.00558	.01687	H658.52	.01400	-.06783	.41345
#4	1.6775	.00558	.02137	S3200.9	-.00426	-.06836	.45701
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem Units	SE ppm	SI ppm	SN ppm	SR ppm	TI ppm	TL ppm	V_ ppm
Avge	-.01165	9.4246	-.02091	.03306	.04268	.13908	-.01866
SDev	.02822	.0357	.01349	.00008	.00015	.10054	.00158
%RSD	242.26	.37832	64.504	.23927	.36166	72.291	8.4716
#1	-.04390	9.4124	-.01126	.03296	.04260	-.00269	-.01908
#2	-.00806	9.4777	-.01319	.03306	.04291	.22835	-.01731

#3	-.01881	9.4015	-.01859	.03316	.04260	.18634	-.02072
#4	.02418	9.4070	-.04060	.03306	.04260	.14434	-.01753

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	5.0530
SDev	.0349
%RSD	.69156

#1	5.0683
#2	5.0929
#3	5.0378
#4	5.0129

Errors	LC Pass
High	100.00
Low	-.02000

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Method: QUANMET Sample Name: DE3F4T/10 Cr Operator: RJG
 Run Time: 06/07/00 11:25:16
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00142	.38757	28.419	21.632	.00232	.00036	27.945
SDev	.00079	.00674	.184	.081	.00022	.00007	.230
%RSD	55.422	1.7393	.64849	.37645	9.6812	18.556	.82392
#1	-.00208	.37944	28.204	21.591	.00241	.00041	27.606
#2	-.00074	.39308	28.362	21.650	.00260	.00030	28.078
#3	-.00074	.39316	28.464	21.550	.00214	.00042	28.099
#4	-.00211	.38462	28.644	21.738	.00214	.00030	27.997
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05833	.01700	90.837	.00209	-.00279	5.0511	.00731
SDev	.00239	.00180	.501	.00159	.00082	.2529	.00097
%RSD	4.1023	10.614	.55124	76.090	29.443	5.0078	13.242
#1	.05991	.01827	90.087	.00416	-.00374	5.2746	.00848
#2	.06021	.01445	91.120	.00084	-.00311	4.7082	.00666
#3	.05822	.01700	91.085	.00084	-.00183	5.2038	.00771
#4	.05499	.01828	91.057	.00250	-.00247	5.0179	.00638
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.81980	.00232	.00787	311.39	-.00007	-.04259	.21540
SDev	.01477	.00054	.00367	2.88	.00441	.01857	.00887
%RSD	1.8022	23.162	46.660	.92328	6182.3	43.610	4.1182
#1	.83909	.00185	.00337	313.12	-.00057	-.03953	.22870
#2	.80823	.00186	.01237	309.95	-.00015	-.05303	.21067
#3	.82366	.00279	.00787	308.11	-.00516	-.01781	.21092
#4	.80823	.00279	.00787	314.39	.00560	-.05999	.21132
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02867	4.5375	.00695	.01602	.02053	.15225	-.00822
SDev	.03762	.0045	.01239	.00000	.00040	.08677	.00291
%RSD	131.21	.09858	178.43	.00000	1.9413	56.990	35.434
#1	-.04749	4.5430	.00284	.01602	.02037	.09183	-.00386
#2	-.02957	4.5375	.00831	.01602	.02068	.11290	-.00956

#3	.02418	4.5375	.02312	.01602	.02099	.28091	-.00971
#4	-.06181	4.5321	-.00649	.01602	.02006	.12337	-.00977
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	2.4800
SDev	.0082
%RSD	.32873

#1	2.4681
#2	2.4817
#3	2.4838
#4	2.4864

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DE3F7T/10 Cr Operator: RJG
 Run Time: 06/07/00 11:29:32
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00109	5.0970	.14420	1.3855	.00483	.00018	4.8862
SDev	.00204	.0548	.01357	.0286	.00014	.00007	.0126
%RSD	186.99	1.0751	9.4097	2.0661	2.8011	37.839	.25784
#1	.00348	5.0543	.16221	1.3556	.00462	.00028	4.8717
#2	-.00060	5.0919	.14064	1.3984	.00489	.00013	4.8830
#3	-.00062	5.0662	.14445	1.3690	.00489	.00015	4.8883
#4	.00211	5.1758	.12952	1.4191	.00489	.00016	4.9020
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04263	.01099	46.721	.00624	.25585	4.6130	.00380
SDev	.00326	.00122	.212	.00048	.00448	.0960	.00015
%RSD	7.6545	11.088	.45381	7.6587	1.7509	2.0803	4.0874
#1	.03994	.01196	46.508	.00583	.25362	4.6639	.00397
#2	.04681	.01194	46.713	.00665	.25426	4.6639	.00386
#3	.04013	.01068	46.651	.00583	.25299	4.4692	.00377
#4	.04361	.00940	47.012	.00665	.26252	4.6551	.00360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5078	.01860	.00341	272.79	.00892	-.01239	.13134
SDev	.0109	.00076	.00367	5.86	.00218	.02664	.00887
%RSD	.72369	4.0861	107.64	2.1480	24.456	214.94	6.7570
#1	1.5001	.01953	.00341	267.30	.00813	.00510	.13310
#2	1.5232	.01860	-.00109	270.82	.01143	.00523	.14094
#3	1.5001	.01767	.00791	271.98	.00978	-.05111	.13186
#4	1.5078	.01860	.00341	281.06	.00635	-.00878	.11948
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02960	10.215	.00985	.00661	.01898	.04201	.00086
SDev	.04536	.117	.01394	.00000	.00040	.09014	.00426
%RSD	153.24	1.1476	141.52	.00000	2.0992	214.60	496.06
#1	.02869	10.120	-.00125	.00661	.01914	.00530	-.00296
#2	.08602	10.213	.00619	.00661	.01852	-.06830	.00641

#3	-.02505	10.147	.03021	.00661	.01883	.12079	.00194
#4	.02873	10.381	.00424	.00661	.01945	.11024	-.00196

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	6.4794
SDev	.0276
%RSD	.42612

#1	6.4550
#2	6.4853
#3	6.4613
#4	6.5159

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:36:52 AM

page 1

Method: QUANMET Sample Name: DE1TE/10 Ca Operator: RJG
 Run Time: 06/07/00 11:33:47
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00171	.31361	.04215	.04900	.07403	-.00004	396.66
SDev	.00132	.00889	.02532	.00257	.00113	.00012	1.33
%RSD	77.046	2.8360	60.056	5.2421	1.5209	315.62	.33489
#1	-.00206	.32602	.00868	.04927	.07265	-.00009	395.34
#2	-.00068	.31409	.03690	.04560	.07357	-.00009	395.78
#3	-.00067	.30713	.06502	.05184	.07495	.00014	398.17
#4	-.00342	.30721	.05801	.04927	.07495	-.00010	397.37
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00262	-.00031	.00113	.00124	-.00024	28.935	.00030
SDev	.00294	.00121	.00166	.00143	.00167	.383	.00088
%RSD	112.04	391.62	147.50	115.51	692.78	1.3239	287.46
#1	.00022	.00064	.00238	.00248	-.00199	28.515	.00040
#2	-.00380	-.00190	-.00113	-.00000	.00119	28.709	.00003
#3	L-.00619	-.00062	.00238	.00248	-.00135	29.214	.00145
#4	-.00071	.00064	.00088	.00000	.00119	29.302	-.00065
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03279	.01210	.00450	2.6216	.00446	-.00368	.00479
SDev	.01081	.00000	.00431	.0399	.00364	.02566	.03185
%RSD	32.966	.00843	95.738	1.5201	81.555	696.78	665.10
#1	.03665	.01210	.00787	2.5673	.00690	-.01774	-.00467
#2	.01865	.01210	-.00112	2.6196	.00485	-.03180	.05210
#3	.04437	.01210	.00787	2.6389	.00690	.02442	-.01413
#4	.03151	.01210	.00338	2.6605	-.00080	.01039	-.01413
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03225	.08573	-.00452	.49439	-.02369	.01056	.00263
SDev	.04151	.00271	.00767	.00601	.00053	.01792	.00173
%RSD	128.73	3.1652	169.77	1.2161	2.2252	169.72	65.816
#1	.02418	.08707	-.00364	.48716	-.02346	-.01305	.00129
#2	-.02955	.08707	-.01263	.49210	-.02315	.00794	.00111

#3	-.05106	.08711	.00557	.49751	-.02377	.01843	.00468
#4	-.07255	.08166	-.00738	.50080	-.02439	.02891	.00346
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00247
SDev .00113
%RSD 45.920

#1 .00116
#2 .00314
#3 .00365
#4 .00193

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 11:39:59 AM

660.675
page 1

Method: QUANMET Sample Name: DE1TEP50 Ca

Operator: RJG

Run Time: 06/07/00 11:36:54

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00102	.05815	.04868	.04118	.01551	-.00004	79.183
SDev	.00132	.00530	.01326	.00276	.00010	.00007	.078
%RSD	130.09	9.1052	27.233	6.6917	.61002	194.64	.09856
#1	-.00205	.06069	.03898	.03989	.01547	-.00010	79.090
#2	-.00206	.05218	.03911	.04247	.01566	.00003	79.151
#3	.00071	.06412	.04948	.03806	.01547	-.00010	79.264
#4	-.00067	.05563	.06715	.04430	.01547	.00002	79.228
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00248	-.00095	.00263	.00041	-.00065	5.8764	-.00060
SDev	.00177	.00217	.00087	.00048	.00180	.2439	.00032
%RSD	71.243	229.15	33.035	115.34	275.52	4.1500	54.294
#1	-.00049	-.00064	.00388	-.00000	-.00192	6.0711	-.00028
#2	-.00469	-.00317	.00238	.00082	-.00193	5.5489	-.00096
#3	-.00186	-.00190	.00187	.00083	.00189	5.8321	-.00037
#4	-.00289	.00192	.00238	.00000	-.00065	6.0534	-.00077
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01415	.00279	-.00000	.54527	.00125	-.01414	-.01416
SDev	.00530	.00000	.00225	.00349	.01408	.01671	.00014
%RSD	37.483	.02098	2334100.	.64067	1129.8	118.20	.99948
#1	.00836	.00279	.00337	.54577	.01283	-.02468	-.01407
#2	.01865	.00279	-.00113	.54899	-.00679	.01042	-.01418
#3	.01093	.00279	-.00112	.54055	-.01449	-.02472	-.01436
#4	.01865	.00279	-.00113	.54577	.01344	-.01758	-.01405
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02777	.01908	-.00283	.10315	-.00494	-.00787	.00283
SDev	.04393	.00942	.02439	.00057	.00044	.04066	.00197
%RSD	158.20	49.376	863.48	.55521	8.8388	516.82	69.468
#1	-.02957	.00549	-.01116	.10261	-.00463	.03940	.00347
#2	-.07973	.02176	-.03152	.10365	-.00556	-.05508	-.00002
#3	-.02955	.02182	.02587	.10271	-.00463	-.02365	.00451
#4	.02777	.02725	.00551	.10365	-.00494	.00786	.00338
Elem	ZN						
Units	ppm						
Avge	.00039						
SDev	.00032						
%RSD	83.110						
#1	.00065						
#2	.00047						
#3	.00052						

660 676

Analysis Report

06/07/00 11:39:59 AM

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#4 -.00008

Analysis Report

06/07/00 11:43:07 AM

page 1

Method: QUANMET Sample Name: DE1TES/10 Ca Operator: RJG
 Run Time: 06/07/00 11:40:02
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00205	.31318	.02721	.03415	.07415	-.00007	403.23
SDev	.00195	.00408	.01752	.00156	.00044	.00006	1.41
%RSD	95.214	1.3026	64.402	4.5645	.59353	84.896	.34844
#1	-.00344	.30889	.01585	.03494	.07449	-.00009	401.31
#2	-.00204	.31743	.02978	.03182	.07357	.00002	403.49
#3	-.00344	.31579	.01228	.03493	.07449	-.00009	403.42
#4	.00071	.31060	.05093	.03494	.07403	-.00010	404.70
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00080	-.00254	-.00100	.00207	-.00040	33.568	-.00014
SDev	.00219	.00220	.00189	.00048	.00064	.198	.00076
%RSD	272.43	86.740	188.57	23.154	157.96	.58874	533.93
#1	-.00111	-.00318	-.00113	.00165	-.00072	33.285	-.00108
#2	.00168	-.00446	-.00363	.00248	.00055	33.727	.00020
#3	-.00019	.00064	.00038	.00248	-.00072	33.586	-.00037
#4	-.00359	-.00317	.00037	.00165	-.00072	33.674	.00068
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8069	.01233	.00112	7.1877	.00719	-.01432	-.01408
SDev	.0196	.00047	.00260	.0387	.00571	.02842	.00005
%RSD	.40836	3.7787	230.94	.53812	79.476	198.42	.33348
#1	4.8307	.01210	.00337	7.2373	.00433	.02435	-.01404
#2	4.7922	.01210	-.00112	7.1871	.01576	-.03899	-.01405
#3	4.7896	.01303	.00337	7.1429	.00433	-.03182	-.01411
#4	4.8153	.01210	-.00113	7.1834	.00433	-.01082	-.01414
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02777	.05989	.00882	.49611	-.02431	-.01568	.00285
SDev	.00902	.03173	.03013	.00144	.00039	.06026	.00191
%RSD	32.469	52.980	341.79	.28953	1.5978	384.31	66.990
#1	-.02956	.02722	-.02959	.49798	-.02469	.01847	.00119
#2	-.02956	.08711	.04075	.49516	-.02439	-.09708	.00450

#3	-.03673	.08707	.00187	.49483	-.02377	.03945	.00120
#4	-.01523	.03814	.02224	.49647	-.02439	-.02356	.00450
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00085
SDev .00074
%RSD 86.287

#1 .00168
#2 .00114
#3 .00065
#4 -.00006

Errors LC Pass
High 100.00
Low -.02000

Analysis Report

06/07/00 11:46:15 AM

page 1

Method: QUANMET Sample Name: DELETED/10 Ca Operator: RJG
 Run Time: 06/07/00 11:43:10
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00447	.30422	.02028	.02726	.07306	-.00000	402.53
SDev	.00173	.00553	.02725	.00383	.00030	.00006	1.10
%RSD	38.655	1.8173	134.40	14.050	.41471	1580.7	.27221
#1	-.00617	.30202	.01937	.02556	.07338	.00002	401.67
#2	-.00482	.31243	.05451	.02298	.07265	.00003	401.49
#3	-.00206	.30033	-.01220	.03182	.07311	-.00009	403.43
#4	-.00482	.30212	.01944	.02868	.07311	.00003	403.51
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00020	-.00095	-.00088	.00207	.00071	33.391	-.00003
SDev	.00231	.00191	.00166	.00048	.00175	.189	.00096
%RSD	1161.3	200.90	189.45	23.119	246.71	.56721	3389.2
#1	.00094	-.00191	.00037	.00248	-.00136	33.462	-.00145
#2	.00179	.00064	-.00113	.00166	-.00009	33.435	.00057
#3	.00129	-.00318	-.00313	.00165	.00182	33.117	.00020
#4	-.00322	.00065	.00038	.00248	.00246	33.550	.00057
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8455	.01187	.00225	7.1950	.00057	-.02658	-.01651
SDev	.0191	.00089	.00225	.0524	.00315	.00669	.00473
%RSD	.39335	7.5197	99.998	.72856	550.16	25.168	28.644
#1	4.8359	.01117	.00337	7.2023	.00329	-.01783	-.02360
#2	4.8513	.01117	-.00112	7.2465	-.00251	-.03182	-.01413
#3	4.8693	.01303	.00338	7.2092	-.00178	-.02488	-.01417
#4	4.8256	.01210	.00338	7.1220	.00329	-.03181	-.01413
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04837	.02722	.00557	.49088	-.02446	-.00519	.00146
SDev	.03774	.00443	.00812	.00237	.00030	.02165	.00216
%RSD	78.028	16.254	145.94	.48310	1.2081	416.68	148.50
#1	-.08331	.02182	.01479	.49294	-.02439	-.00257	.00459
#2	-.07614	.02720	-.00368	.48988	-.02469	.01844	-.00002

#3	-.00447	.03266	.00928	.49271	-.02408	-.03406	.00119
#4	-.02955	.02720	.00188	.48800	-.02469	-.00259	.00007
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.00012
SDev	.00065
%RSD	531.19

#1	.00067
#2	-.00027
#3	.00068
#4	-.00059

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:49:23 AM

page 1

Method: QUANMET Sample Name: DE1TJ/10 Ca Operator: RJG
 Run Time: 06/07/00 11:46:17
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00308	.14200	.05588	.00758	.07359	-.00007	394.66
SDev	.00068	.00797	.02884	.01407	.00042	.00006	.72
%RSD	21.963	5.6127	51.613	185.58	.57107	84.442	.18150
#1	-.00342	.13943	.01721	.00055	.07338	.00002	394.28
#2	-.00342	.13430	.06998	.00055	.07403	-.00010	393.99
#3	-.00207	.15313	.08397	.02868	.07311	-.00009	395.63
#4	-.00342	.14115	.05235	.00055	.07384	-.00010	394.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00185	-.00031	-.00200	.00145	-.00199	28.539	.00048
SDev	.00308	.00191	.00111	.00079	.00090	.213	.00019
%RSD	166.21	613.51	55.421	54.793	45.202	.74484	40.307
#1	.00134	.00063	-.00113	.00166	-.00262	28.824	.00068
#2	-.00170	.00064	-.00163	.00248	-.00072	28.568	.00031
#3	-.00102	-.00318	-.00163	.00082	-.00199	28.338	.00060
#4	L-.00604	.00066	-.00363	.00083	-.00263	28.426	.00031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04308	.00791	.00337	2.8479	.00104	-.01235	.02840
SDev	.00743	.00093	.00000	.0261	.00607	.02458	.03322
%RSD	17.234	11.767	.00416	.91724	586.15	198.97	116.97
#1	.04437	.00745	.00337	2.8486	-.00275	-.02467	.00477
#2	.03408	.00745	.00337	2.8329	-.00147	-.02468	-.00471
#3	.05208	.00745	.00337	2.8257	-.00175	.02452	.05192
#4	.04179	.00931	.00337	2.8844	.01011	-.02459	.06163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02957	.07894	.00114	.48898	-.02385	-.01309	.00346
SDev	.01055	.00312	.02074	.00285	.00039	.03930	.00226
%RSD	35.676	3.9582	1812.9	.58324	1.6289	300.33	65.471
#1	-.01882	.07623	-.01100	.48810	-.02377	.03942	.00459
#2	-.02956	.07623	.00932	.48904	-.02377	-.05513	.00459

#3	-.02598	.08161	.02624	.48598	-.02346	-.02354	.00006
#4	-.04390	.08167	-.01999	.49280	-.02439	-.01309	.00458

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.00083
SDev	.00083
%RSD	100.64

#1	.00070
#2	-.00026
#3	.00170
#4	.00117

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:52:30 AM

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page 1

Method: QUANMET Sample Name: DE1TN/10 Na Operator: RJG
 Run Time: 06/07/00 11:49:25
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00035	.02180	.01210	.00447	.00064	-.00009	3.8650
SDev	.00174	.00258	.01448	.00176	.00023	.00000	.0104
%RSD	497.19	11.821	119.71	39.442	35.789	5.0406	.26900
#1	.00069	.02311	.02528	.00553	.00030	-.00009	3.8618
#2	.00069	.02478	.00769	.00498	.00076	-.00009	3.8783
#3	-.00206	.01973	.02180	.00553	.00076	-.00009	3.8534
#4	.00208	.01956	-.00639	.00186	.00076	-.00010	3.8667
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00115	-.00063	.00313	.00186	.00683	2.6262	.00076
SDev	.00285	.00001	.00119	.00079	.00109	.1875	.00054
%RSD	248.46	1.1714	38.114	42.550	15.908	7.1399	71.085
#1	-.00206	-.00063	.00188	.00248	.00635	2.6992	.00088
#2	-.00346	-.00063	.00388	.00248	.00572	2.8143	.00000
#3	.00301	-.00064	.00238	.00083	.00699	2.3718	.00088
#4	-.00208	-.00063	.00438	.00166	.00826	2.6196	.00128
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02250	.00280	.00113	H407.00	.00877	.01046	-.04248
SDev	.01121	.00000	.00581	1.75	.00223	.02365	.03358
%RSD	49.816	.07371	515.93	.42998	25.412	225.98	79.055
#1	.01865	.00279	-.00112	H409.57	.00580	-.02466	-.01420
#2	.01607	.00280	.00338	H406.46	.01048	.02451	L-.06140
#3	.01607	.00279	-.00562	H405.67	.01048	.02448	L-.08019
#4	.03922	.00280	.00788	H406.30	.00830	.01754	-.01413
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04028	.08706	.00212	.00567	-.00015	.06296	.00088
SDev	.06942	.00002	.02096	.00000	.00064	.02328	.00179
%RSD	172.32	.02606	989.81	.00000	416.33	36.979	203.90
#1	-.08686	.08705	.02956	.00567	-.00093	.09185	-.00002
#2	.00987	.08705	.00712	.00567	-.00000	.03935	.00007

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Analysis Report

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page 2

#3	-.11194	.08705	-.01148	.00567	-.00031	.04984	-.00010
#4	.02780	.08710	-.01673	.00567	.00062	.07080	.00356

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.00128
SDev	.00065
%RSD	50.906

#1	.00042
#2	.00114
#3	.00166
#4	.00189

Errors	LC Pass
High	100.00
Low	-.02000

Analysis Report

06/07/00 11:55:38 AM

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page 1

Method: QUANMET Sample Name: DE1TN/25 Na Operator: RJG
 Run Time: 06/07/00 11:52:33
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00103	.00681	.00873	.00322	.00016	-.00015	1.5164
SDev	.00133	.00325	.01583	.00140	.00016	.00015	.0349
%RSD	129.14	47.661	181.39	43.416	96.225	97.212	2.2996
#1	.00206	.00426	-.01322	.00184	.00003	-.00021	1.4981
#2	-.00071	.00765	.02198	.00498	.00003	-.00032	1.4764
#3	.00209	.01105	.00774	.00240	.00030	.00002	1.5434
#4	.00069	.00428	.01842	.00368	.00030	-.00009	1.5477
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.0000	600.00	100.00	100.00	100.00	15.000	600.00
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500	-5.0000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00002	-.00191	.00113	.00165	.00159	.88942	-.00009
SDev	.00169	.00312	.00296	.00179	.00110	.77471	.00038
%RSD	8712.1	163.44	262.70	108.18	69.282	87.103	452.16
#1	.00045	-.00191	-.00113	.00083	-.00000	.36285	-.00037
#2	.00213	-.00573	-.00162	-.00001	.00191	.23895	-.00026
#3	-.00187	-.00190	.00438	.00414	.00191	1.9293	.00048
#4	-.00062	.00191	.00288	.00166	.00254	1.0266	-.00020
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00514	.00116	.00113	167.55	.00405	-.02646	-.02594
SDev	.02416	.00047	.00260	3.37	.00451	.03519	.02361
%RSD	469.71	39.934	230.90	2.0100	111.20	132.96	91.035
#1	-.00964	.00093	-.00112	165.72	.00867	-.02469	-.01411
#2	-.01736	.00093	.00338	172.50	-.00202	-.07403	-.01417
#3	.03665	.00186	-.00112	165.20	.00388	-.01772	L-.06135
#4	.01093	.00093	.00338	166.75	.00568	.01058	-.01412
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04836	.04897	-.01632	.00191	-.00000	.01838	.00002
SDev	.04739	.02917	.01781	.00000	.00000	.07431	.00366
%RSD	97.984	59.570	109.16	.00000	.00000	404.19	15292.
#1	-.08689	.06529	.00919	.00191	-.00000	.01840	-.00002
#2	-.09046	.00538	-.03153	.00191	-.00000	.12347	-.00446

#3	.00269	.06535	-.02435	.00191	-.00000	-.03416	.00451
#4	-.01880	.05985	-.01858	.00191	-.00000	-.03417	.00007
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN
Units ppm
Avge .00062
SDev .00219
%RSD 354.54

#1 -.00206
#2 -.00029
#3 .00241
#4 .00240

Errors LC Pass
High 100.00
Low -.02000

06/07/00 11:58:46 AM

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Analysis Report

Method: QUANMET Sample Name: CCV2-4

Operator: RJG

Run Time: 06/07/00 11:55:41

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.95808	48.273	4.8154	4.7412	4.6693	4.7018	49.171
SDev	.00165	.230	.1254	.0372	.0338	.0211	.141
%RSD	.17263	.47650	2.6044	.78379	.72382	.44957	.28657
#1	.95977	48.159	4.9114	4.7016	4.6534	4.6912	49.337
#2	.95580	48.598	4.8157	4.7731	4.7194	4.7334	49.029
#3	.95834	48.073	4.6382	4.7727	4.6460	4.6889	49.083
#4	.95842	48.262	4.8964	4.7173	4.6584	4.6938	49.237
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8859	4.6941	4.7810	4.6802	49.404	46.723	4.5981
SDev	.0099	.0095	.0036	.0344	.100	.169	.0578
%RSD	.20239	.20330	.07521	.73587	.20233	.36121	1.2566
#1	4.8837	4.7071	4.7828	4.6537	49.380	46.666	4.5376
#2	4.8939	4.6917	4.7838	4.7307	49.534	46.577	4.6768
#3	4.8729	4.6843	4.7758	4.6652	49.293	46.683	4.5898
#4	4.8933	4.6931	4.7818	4.6711	49.408	46.967	4.5884
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	48.461	4.6944	4.7031	47.233	4.7513	4.7331	4.7779
SDev	.248	.0072	.0196	.378	.0206	.0300	.0363
%RSD	.51227	.15424	.41638	.79961	.43258	.63474	.75999
#1	48.258	4.6954	4.6862	46.915	4.7405	4.7546	4.7993
#2	48.816	4.7010	4.7177	47.778	4.7783	4.6906	4.7522
#3	48.330	4.6842	4.6862	47.157	4.7551	4.7540	4.7425
#4	48.440	4.6972	4.7222	47.080	4.7312	4.7331	4.8177
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.7578	4.8493	4.7897	4.6924	4.6770	9.1684	4.7054
SDev	.1198	.0474	.0417	.0305	.0164	.1488	.0139
%RSD	2.5181	.97653	.87145	.65047	.35166	1.6228	.29573
#1	4.6440	4.8370	4.7537	4.6774	4.6704	9.3891	4.6995
#2	4.9133	4.7993	4.7534	4.7375	4.7009	9.1039	4.7250
#3	4.6866	4.9131	4.8275	4.6710	4.6636	9.0646	4.6927
#4	4.7874	4.8480	4.8241	4.6837	4.6731	9.1159	4.7047
Elem	ZN						
Units	ppm						
Avge	4.7479						
SDev	.0079						
%RSD	.16718						
#1	4.7536						
#2	4.7440						
#3	4.7386						

#4 4.7553

06/07/00 12:01:54 PM

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Analysis Report

Method: QUANMET Sample Name: CCB4

Operator: RJG

Run Time: 06/07/00 11:58:48

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00002	.00372	.02889	.01017	.00030	.00020	.00723
SDev	.00178	.01067	.01729	.00798	.00000	.00007	.00181
%RSD	8253.2	286.81	59.845	78.502	.00000	34.787	25.030
#1	.00071	-.00267	.02191	.00497	.00030	.00014	.00702
#2	-.00204	-.00615	.04305	.00682	.00030	.00026	.00644
#3	.00209	.01782	.00767	.00682	.00030	.00026	.00981
#4	-.00067	.00589	.04295	.02206	.00030	.00014	.00564
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00085	-.00064	.00188	.00207	.00350	.28984	.00035
SDev	.00049	.00232	.00108	.00048	.00132	.21330	.00127
%RSD	57.233	365.69	57.593	23.133	37.865	73.595	366.37
#1	-.00029	.00191	.00238	.00249	.00318	.54870	.00060
#2	-.00142	-.00318	.00038	.00165	.00382	.07080	-.00048
#3	-.00065	-.00191	.00288	.00248	.00509	.37170	.00204
#4	-.00103	.00064	.00188	.00166	.00191	.16815	-.00077
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01672	.00070	.00788	.01939	.00698	-.00881	-.00236
SDev	.00823	.00047	.00000	.00270	.00409	.02328	.02366
%RSD	49.255	66.328	.00251	13.954	58.557	264.17	1001.8
#1	.02379	.00000	.00788	.02019	.01160	.02465	-.01414
#2	.01093	.00094	.00788	.01617	.00170	-.02472	-.01422
#3	.02379	.00093	.00788	.02260	.00790	-.02463	.03312
#4	.00836	.00093	.00788	.01858	.00672	-.01055	-.01421
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03223	.00005	.00600	.00002	.00062	-.00268	.00412
SDev	.04273	.00001	.01761	.00000	.00044	.04774	.00065
%RSD	132.57	15.913	293.40	.00000	70.711	1780.0	15.913
#1	-.07971	.00006	.01474	.00002	.00031	-.01321	.00468
#2	-.03671	.00005	.00549	.00002	.00062	.02885	.00355
#3	-.03671	.00006	-.01836	.00002	.00123	.03932	.00468
#4	.02419	.00005	.02215	.00002	.00031	-.06568	.00355
Elem	ZN						
Units	ppm						
Avge	.00011						
SDev	.00056						
%RSD	496.06						
#1	-.00059						
#2	.00046						
#3	.00066						

#4 -.00007

Metals Preparation Log

STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238
412-820-8380

N:\QA\FORMS\METALS_PREP

LOGBOOK # IP-00-0040

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PSR024 6/04/00 8:02:16 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: FAUSTG

METHOD: QO Inductively Coupled Plasma (60108)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8B	DE3F0	— — —	237985	367970	A-34-QO	C0F020113	019		SOLID	0	2 1
8B	DE3F2	— — —	237986	367970	A-34-QO	C0F020113	020		SOLID	0	2 1
8B	DE3F4	— — —	237987	367970	A-34-QO	C0F020113	021		SOLID	0	2 1
8B	DE3F6	— — —	237988	367970	A-34-QO	C0F020113	022		SOLID	0	2 1
8B	DE3F7	— — —	237989	367970	A-34-QO	C0F020113	023		SOLID	0	2 1
8B	DE3F9	— — —	237990	367970	A-34-QO	C0F020113	024		SOLID	0	2 1
8B	DE3FC	— — —	237991	367970	A-34-QO	C0F020113	025		SOLID	0	2 1
8B	DE3FD	— — —	237992	367970	A-34-QO	C0F020113	026		SOLID	0	2 1
8C,D CLP	DE44M	— — —	237983	399411	A-34-QO	C0F020191	001		SOLID	0	3 1
8C,D CLP	DE44Q	— — —	237984	399411	A-34-QO	C0F020191	002		SOLID	0	3 1

RELINQUISHED BY

Jeffrey O. Faust
Jeffrey O. Faust

RECEIVED BY

Jeffrey O. Faust
Jeffrey O. Faust

DATE/TIME

6-4-00 1055
6-4-00 1120

***** END OF REPORT *****

STL-Pittsburgh Atomic Absorption Data for Mercury

Instrument: PS200HG

Analyst Name: William A. Hoyle

Date of Analysis: 6-6-00

File ID: 0606HGA

Matrix: WATER

Lot Number/SDG

Method

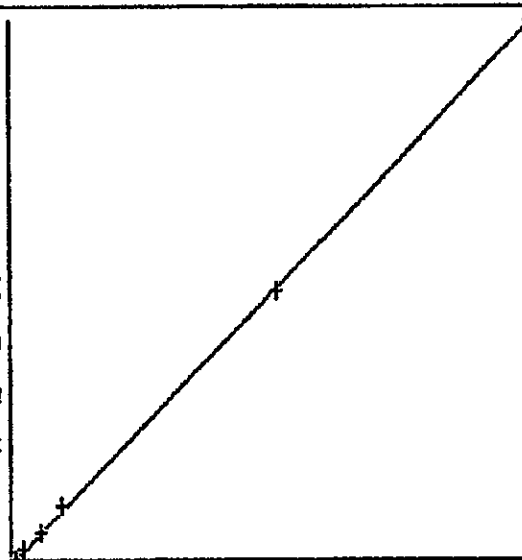
[illegible]

09:00:32 06 Jun 2000 Folder: 0606HGA Page 95B
Protocol: HGMET

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		09:00:32 06 Jun 2000 HG		
Hg	.000	ppb	23929					
*** Standard: 2 Rep: 1				Seq: 1		09:02:36 06 Jun 2000 HG		
Hg	.200	ppb	56629		0014-125-9			
*** Standard: 3 Rep: 1				Seq: 2		09:04:29 06 Jun 2000 HG		
Hg	.500	ppb	125261		0014-125-10			
*** Standard: 4 Rep: 1				Seq: 3		09:06:58 06 Jun 2000 HG		
Hg	1.00	ppb	209098		0014-125-11			
*** Standard: 5 Rep: 1				Seq: 4		09:09:22 06 Jun 2000 HG		
Hg	5.00	ppb	1086590		0014-125-12			
*** Standard: 6 Rep: 1				Seq: 5		09:11:20 06 Jun 2000 HG		
Hg	10.0	ppb	2122728		0014-125-13			

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS
 RunFold: 0606HGA Seq: 6 Batch:
 Prnt: R/T On Pump: On
 Rev: 4.2 09:17:02 06 Jun 2000 Xmit: Off Gas: 0.30 LPM
 State: Idle User: WNH A/S: On

CALIBRATION: Line proto: HGMET
 Hg Accepted
 Conc. Calc. Dev. ->linear
 S1 .000 .037 .037 Quadratic
 S2 .200 .192 -.000 Wtdlinear
 S3 .500 .517 .017
 S4 1.00 .914 -.006 Accept
 S5 5.00 5.07 .068
 S6 10.0 9.97 -.027
 A .0000000 r .999909
 B 4.73390e-6 C -7.61202e-2



Mean
 S1 23929 0 SD 23929
 S2 56629 0 %RSD 56629
 S3 125261 0 %RSD 125261
 S4 209090 0 %RSD 209090
 S5 1006590 0 %RSD 1006590
 S6 2122720 0 %RSD 2122720

New cal coefficients stored

09:19:31 06 Jun 2000 Folder: 0606HGA Page 959
Protocol: HGMET

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV5-1				Seq: 6	09:19:31 06 Jun 2000 HG			
Hg	2.59	ppb	562476		0014-125-14			
*** Sample ID: ICB1				Seq: 7	09:21:23 06 Jun 2000 HG			
Hg	.064	ppb	29574					
*** Sample ID: CCV5-1				Seq: 8	09:23:33 06 Jun 2000 HG			
Hg	5.06	ppb	1084227		0014-125-15			
*** Sample ID: CCB1				Seq: 9	09:25:23 06 Jun 2000 HG			
Hg	.024	ppb	21182					
*** Sample ID: DE7HKBT				Seq: 10	09:27:24 06 Jun 2000 HG			
Hg	.058	ppb	28243					
*** Sample ID: DE7HKCT				Seq: 11	09:30:05 06 Jun 2000 HG			
Hg	2.61	ppb	566687		0014-125-16			
*** Sample ID: DE63RBT				Seq: 12	09:32:06 06 Jun 2000 HG			
Hg	.067	ppb	30135					
*** Sample ID: DE44MT				Seq: 13	09:33:55 06 Jun 2000 HG			
Hg	.077	ppb	32346					
*** Sample ID: DE44MST				Seq: 14	09:35:59 06 Jun 2000 HG			
Hg	5.12	ppb	1097582					SP.REC. 101%
*** Sample ID: DE44MDT				Seq: 15	09:38:34 06 Jun 2000 HG			
Hg	5.05	ppb	1083844					SP.REC. 99%
*** Sample ID: DE44QT				Seq: 16	09:40:25 06 Jun 2000 HG			
Hg	.053	ppb	27351					
*** Sample ID: DE7HMB				Seq: 17	09:42:25 06 Jun 2000 HG			
Hg	-.023	ppb	11307					

09:44:32 06 Jun 2000

Folder: 0606HGA
Protocol: HGMET

Page 960

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DE7HMC				Seq: 18	09:44:32 06 Jun 2000 HG			
Hg	2.46	ppb	536305	0014-126-1				
*** Sample ID: DE68H				Seq: 19	09:46:34 06 Jun 2000 HG			
Hg	-.003	ppb	15351					
*** Sample ID: CCV5-2				Seq: 20	09:48:32 06 Jun 2000 HG			
Hg	4.94	ppb	1059347					
*** Sample ID: CCB2				Seq: 21	09:50:36 06 Jun 2000 HG			
Hg	-.013	ppb	13378					
*** Sample ID: DE68P				Seq: 22	09:52:24 06 Jun 2000 HG			
Hg	.011	ppb	18421					
*** Sample ID: DE68Q				Seq: 23	09:54:15 06 Jun 2000 HG			
Hg	-.011	ppb	13832					
*** Sample ID: DE68R				Seq: 24	09:56:06 06 Jun 2000 HG			
Hg	.036	ppb	23664					
*** Sample ID: DE68T				Seq: 25	09:58:06 06 Jun 2000 HG			
Hg	.096	ppb	36271					
*** Sample ID: DE68TS				Seq: 26	10:00:19 06 Jun 2000 HG			
Hg	1.01	ppb	230230	SP. REC. 910/0				
*** Sample ID: DE68TD				Seq: 27	10:02:38 06 Jun 2000 HG			
Hg	1.01	ppb	229613	SP. REC. 910/0				
*** Sample ID: DE68V				Seq: 28	10:04:37 06 Jun 2000 HG			
Hg	.081	ppb	33124					
*** Sample ID: DE68X				Seq: 29	10:06:39 06 Jun 2000 HG			
Hg	.040	ppb	24568					

TCLP (Method 1311)

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238
412/826-5477 FAX 412/826-5571



QIUA-181

By

Jeffrey O. Savant

Date

6-4-00

Checked by

W. T. Miller

Date

6-4-00

pH Instrument

Accumet 4625

Probe

5N902030

Balance

944817

Solution Number 1 - Log Book Number

064497-12

Solution Number 2 - Log Book Number

95-08-220-35-14

Project Number

Log # 820191

Client Codes

367970, 399411

Fluid Determination

TCLP Extraction

Sample ID	Wgt/Vol	Init. pH	Final pH	Extract Fluid #1, or #2	Conc. HNO ₃ to Acidity (for Metals)	Sample ID	Wgt (g), Wet/Dry	Fluid Vol.	Final pH After Tumbling
DE44M	5.00g / 15.1	8.24	1.65	501#1	5 ml	18-TCLP 6-4-00	100.00g	2000ml Glass	4.93
DE44Q	5.00g / 15.1	8.73	1.62	501#2	5 ml	2 DE44M	100.00g	2000ml Glass	5.11
DE3FO	5.00g / 15.1	9.86	6.93	501#2	5 ml	3 DE44M	100.00g	2000ml Glass	5.06
DE3F2	5.00g / 15.1	11.22	6.77	501#1	5 ml	4 DE44Q	100.00g	2000ml Glass	4.98
DE3F4	5.00g / 15.1	6.96	2.43	501#1	5 ml	5 DE3FO	100.00g	2000ml Glass	5.55
DE3F6	5.00g / 15.1	10.30	2.52	501#1	5 ml	6 DE3F2	100.00g	2000ml Glass	6.00
DE3F7	5.00g / 15.1	7.25	3.47	501#1	5 ml	7 DE3F4	100.00g	2000ml Glass	5.89
DE3F9	5.00g / 15.1	7.44	1.59	501#1	5 ml	8 DE3F6	100.00g	2000ml Glass	6.44
DE3FC	5.00g / 15.1	9.66	2.21	501#1	5 ml	9 DE3F7	100.00g	2000ml Glass	5.59
DE3FD	5.00g / 15.1	11.19	1.76	501#1	5 ml	10 DE3F9	100.00g	2000ml Glass	5.15
						11 DE3FC	100.00g	2000ml Glass	6.28
						12 DE3FD	100.00g	2000ml Glass	5.40
						13 18-TCLP 6-4-00	100.00g	2000ml Glass	2.82

Extract(s)

Extract(s) Received

Extract(s) Relinquished

(Record line number from above)

Analyst

Location

Date

Time

Analyst

Agitation Apparatus RPMs

All Above

Jeffrey O. Savant

Metals/19

6-5-00

1035

Jeffrey O. Savant

304

* = Sample determined to have free-liquid, % solid determination was performed.

<5 = Extraction Fluid No. 1 5.7 mL Glacial Acetic Acid dil 500 mL + 64.3 mL of 1N Na OH dil to 1L (pH 4.93 ± 0.05)

>5 = Extraction Fluid No. 2 5.7 mL Glacial Acetic Acid dil to 1L (pH 2.88 ± 0.05)

Room Temp 23°

Date/Time On	Date/Time Off	Agitation Apparatus RPMs
6-4-00 1330	6-5-00 0600	30 ± 2
Date	pH Calibration	
6-4-00	4.00	7.01
6-5-00	4.06	7.01
		10.04

Comments

869 099

PSR024 6/06/00 3:43:05 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: HOYLEW

METHOD: 08 Mercury (7470A, Cold Vapor) - Liquid

STORAGE LOCATION	WORK ORDER #	PICKED	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	QTY
		CNTR#								RCVD	REQD
8C,D CLP	DE44M	— — —	238335	399411	A-OM-08	COF020191	001		SOLID	0	3 1
8C,D CLP	DE44Q DE63RB	— — —	238336	399411	A-OM-08	COF020191	002		SOLID	0	3 1

RELINQUISHED BYRECEIVED BYDATE/TIME

<u>William a Hoyle</u>	<u>William a Hoyle</u>	<u>6-6-00</u>	<u>06:05</u>
<u>William a Hoyle</u>	<u>William a Hoyle</u>	<u>6-6-00</u>	<u>06:45</u>

***** END OF REPORT *****

660 700

PSR024 6/06/00 8:31:54 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: KRANCES

METHOD: Q0 Inductively Coupled Plasma (6010B)

STORAGE LOCATION	WORK ORDER #	PICKED	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	QTY
		CNTR#								RCVD	REQD
8B	DE3F4	___	238434	367970	A-34-Q0	C0F020113	021		SOLID	0	2 1
8B	DE3F6	___	238435	367970	A-34-Q0	C0F020113	022		SOLID	0	2 1
8B	DE3F7	___	238436	367970	A-34-Q0	C0F020113	023		SOLID	0	2 1
8B	DE3F9	___	238437	367970	A-34-Q0	C0F020113	024		SOLID	0	2 1
8B	DE3FC	___	238438	367970	A-34-Q0	C0F020113	025		SOLID	0	2 1
8B	DE3FD	___	238439	367970	A-34-Q0	C0F020113	026		SOLID	0	2 1
8C,D CLP	DE44M	___	238432	399411	A-34-Q0	C0F020191	001		SOLID	0	3 1
8C,D CLP	DE44Q	___	238433	399411	A-34-Q0	C0F020191	002		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

<i>AC</i>	<i>Suzanne Krance</i>	6/6/00 0800
<i>Suzanne Krance</i>	<i>AC</i>	6/6/00 1045

***** END OF REPORT *****

GENERAL CHEMISTRY DATA

Client Sample ID: DF/S1/0153/SDC/006

General Chemistry

Lot-Sample #....: C0F020191-001 Work Order #....: DE44M Matrix.....: SOLID
 Date Sampled....: 06/01/00 Date Received...: 06/02/00
 % Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.9		No Units	SW846 9045C	06/04/00	0156095
	Dilution Factor: 1		MS Run #.....: 0156004			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	06/05/00	0157277
	Dilution Factor: 1		MS Run #.....: 0157122			
Percent Solids	86.5		%	MCAWW 160.3 MOD	06/05-06/06/00	0157280
	Dilution Factor: 1		MS Run #.....: 0157125			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	06/07/00	0159471
	Dilution Factor: 1		MS Run #.....: 0159188			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	06/07/00	0159470
	Dilution Factor: 1		MS Run #.....: 0159187			

Client Sample ID: DF/S1/0153/SDC/007

General Chemistry

Lot-Sample #...: C0F020191-002 Work Order #...: DE44Q Matrix.....: SOLID
 Date Sampled...: 06/01/00 Date Received...: 06/02/00
 % Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.1		No Units	SW846 9045C	06/04/00	0156095
	Dilution Factor: 1		MS Run #:.....: 0156004			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	06/05/00	0157277
	Dilution Factor: 1		MS Run #:.....: 0157122			
Percent Solids	84.0		%	MCAWW 160.3 MOD	06/05-06/06/00	0157280
	Dilution Factor: 1		MS Run #:.....: 0157125			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	06/07/00	0159471
	Dilution Factor: 1		MS Run #:.....: 0159188			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	06/07/00	0159470
	Dilution Factor: 1		MS Run #:.....: 0159187			

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C0F020191

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Reactive Cyanide	ND	Work Order #: DEC9A101 200	mg/kg	MB Lot-Sample #: A0F070000-471 SW846 7.3.3	06/07/00	0159471
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: DEC99101 200	mg/kg	MB Lot-Sample #: A0F070000-470 SW846 7.3.4	06/07/00	0159470
		Dilution Factor: 1				

NOTE (S) :

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: C0F020191

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH	101	Work Order #: DE5VX101 (85 - 115)	LCS Lot-Sample#: C0F040000-095 SW846 9045C	06/04/00	0156095

Dilution Factor: 1

NOTE (S) :

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191 Work Order #....: DE3F4-SMP Matrix.....: SOLID
Date Sampled....: 05/25/00 DE3F4-DUP
% Moisture.....: 0.95 Date Received...: 06/01/00

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.0	6.8	No Units	2.7	(0-20)	SW846 9045C	06/04/00	0156095
SD Lot-Sample #: C0F020113-021								
Dilution Factor: 1								
Prep Date.....: 0156004			Analysis Date..:			Prep Batch #....:		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191 Work Order #....: DE3X1-SMP Matrix.....: SOLID

DE3X1-DUP

Date Sampled....: 06/01/00

Date Received...: 06/02/00

% Moisture.....: 13

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide	ND	ND	mg/kg	0	(0-20)	SD Lot-Sample #: A0F020155-001 SW846 7.3.3	06/07/00	0159471

Dilution Factor: 1

Prep Date.....: 0159188

Analysis Date...:

Prep Batch #....:

Reactive Sulfide

ND

ND

mg/kg

0

(0-20)

SD Lot-Sample #: A0F020155-001

SW846 7.3.4

06/07/00

0159470

Dilution Factor: 1

Prep Date.....: 0159187

Analysis Date...:

Prep Batch #....:

660 708

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0F020191

Work Order #....: DE5KP-SMP
DE5KP-DUP

Matrix.....: SOLID

Date Sampled....: 05/31/00

Date Received...: 06/03/00

% Moisture.....: 1.4

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Solids	98.6	98.3	%	0.37	(0-20)	SD Lot-Sample #: C0F030143-004 MCAWW 160.3 MOD	06/05-06/06/00	0157280
Dilution Factor: 1								
Prep Date.....: 0157125			Analysis Date...:			Prep Batch #....:		

Method: IGNITABILITY



ANALYST: C L LOHMEYER

DATE: 6-5-00

BATCH: 0157277

TIME: 0800

SAMPLE ID

RESULT

COF020191-001

A203

- COVID

NO

-002

12

Reviewed by

Date _____

6-5-00

Quanterra Environmental Services pH LOG SHEET

H₂O { COF020163 > 0156096
 Lot No. Batch No. SDG No. Includes attachment(s) _____ Page ____ of ____
 SOILS { COF020113 (001-020) 0156094
 COF020113 (021-026) 0156095
 COF020191

Analyst: ERIC L. WESOLOSKI
 Date: 6-4-00
 Start Time: 11:35

pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
<u>7.00</u>	7.0	<u>LAB CHEM 9291-13</u>	<u>2-29-00</u>	<u>11-12-01</u>
<u>4.00</u>	4.0	<u>9167-08</u>	<u>5-9-00</u>	<u>6-25-01</u>
<u>10.00</u>	10.0	<u>0010-07</u>	<u>2-29-00</u>	<u>1-11-01</u>

LCS ID No.: 342-155-10

Relative Percent Difference =

Range = ± .05 pH units

$$\frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} \times 100$$

X₁ = Original Result

X₂ = Duplicate

Sample ID	pH Reading
LCS	7.04
COF020113 - 001	6.94 RTD 2.2%
- 001 Dup	6.99
- 002	9.53
- 003	10.60
- 004	8.95
- 005	11.02
- 006	9.94
- 007	9.85
- 008	9.92
- 009	10.34
LCS	6.98
- 010	9.68
- 011	10.15
- 012	10.00
- 013	10.23
- 014	9.58
- 015	9.38
- 016	8.66
- 017	9.46
- 018	7.55
- 019	8.98
LCS	7.04
- 020	10.48
- 021	7.02 RTD 2.7%
- 021 Dup	6.83
- 022	8.96
- 023	7.79

Eric L. Wesoloski 6-4-00

Quanterra Environmental Services
pH LOG SHEET

Page ____ of ____

Lot No.

Batch No.

SDG No.

- Includes attachment(s)

Analyst:

Date:

Start Time:

pH Meter Calibration

Reading

Buffer

Manuf.

~~Lot No~~

Rec'd

Expire

7.0

4.0

~~10.0~~

LCS ID No.:

Relative Percent Difference =

Range = $\pm .05$ pH units

$$\frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} \times 100$$

~~X_g~~ = Original Result

X₂ = Duplicate

Sample ID	pH Reading
LCS	6.99
COF020113 - 024	7.15
↓ - 025	8.94
↓ - 026	10.52
COF020191 - 001	7.93
↓ - 002	8.12
LCS	7.01
COF020163 - 001	~~7.50~~ 7.60 RPD
↓ 001 Dup	7.61
LCS	6.99
(6.99) 6-4-00	

COF020191
COF010144
COF010150
COF010152
COF010153
COF010155
COF010143

TS
0157280

QUANTERA ENVIRONMENTAL SERVICES
TOTAL Solids / PERCENT MOISTURE LOG SHEET

660 712

20 MOISTURE

Page ____ of ____

Oven Temperature: 103°C COF020118 0157273

Includes attachment(s) _____

Calculations:

COF020174
COF020179
COF020135
0157275

Analyst: C. LOHEIDE

Date 6-5-00 Time in 1100

Date 6-6-00 Time out 0515

BALANCE # Batch No(s): C94817

1. A - C = D
2. B - C = E
3. $\frac{D}{E} \times 100 = F$
4. 100 - F = G

SAMPLE ID	TARE NO.	(A) DRIED SAMPLE + TARE	(B) SAMPLE + TARE	(C) TARE	(D) WEIGHT OF DRY SAMPLE IN GRAMS	(E) WEIGHT OF SAMPLE IN GRAMS	(F) PERCENT SOLIDS	(G) PERCENT MOISTURE
COF030139-001	C	5.65	6.15	1.12				
-001	42	5.88	6.40	1.12				
-002	113	5.66	6.17	1.14				
-003	118	6.00	6.55	1.11				
-004	47	5.25	6.36	1.11				
-005	141	6.13	6.92	1.15				
-006	149	5.87	6.51	1.14				
-007	108	5.14	5.72	1.13				
-008	51	6.01	6.77	1.12				
-009	V	6.02	6.84	1.11				
-010	1551	5.37	6.07	1.11				
-011	152	5.85	6.54	1.13				
-012	82	6.20	6.97	1.11				
-013	104	6.88	7.70	1.11				
-014	115	5.64	6.28	1.12				
-015	33	5.99	6.94	1.12	015D 231	6.91	8.00	1.11
-016	94	5.54	6.15	1.11				
-017	1581	6.72	7.70	1.13				
-019	38	5.69	6.65	1.15				
-020	129	5.40	6.37	1.13				
-021	40	5.25	6.59	1.12				
COF020191-001	48	6.06	6.83	1.13				
-002	46	5.58	6.43	1.13				
COF010144-001	119	8.43	8.70	1.08				
-002	235	7.96	8.06	1.05				
-003	75	7.27	7.53	1.01				
-004	P14	9.22	10.00	1.06				
-005	194	6.40	6.56	1.08				
-006	Y	6.05	6.38	1.06				
COF010150-001	158	4.15	6.13	1.14				
COF010152-001	166	5.01	7.00	1.11				
COF010153-001	80	5.22	6.41	1.13				
COF010155-001	1108	6.45	6.64	1.13				

CU
6500

[Signature]

QUANTERRA ENVIRONMENTAL SERVICES
~~TOTAL Solids~~ PERCENT MOISTURE LOG SHEET

Page ____ of ____

Oven Temperature: 103°C

Includes attachment(s) _____

Calculations:

Analyst: CLLOHEYDE

1. $A - C = D$ 2. $B - C = E$
 3. $\frac{D}{E} \times 100 = F$ 4. $100 - F = G$

Date 6-5-00 Time in _____Date 6-6-00 Time out _____

Batch No(s): _____

SAMPLE ID	TARE NO.	(A) DRIED SAMPLE + TARE	(B) SAMPLE + TARE	(C) TARE	(D) WEIGHT OF DRY SAMPLE IN GRAMS	(E) WEIGHT OF SAMPLE IN GRAMS	(F) PERCENT SOLIDS	(G) PERCENT MOISTURE
COF030143-001	PL	5.95	6.06	1.13				
-002	96	2.01	7.13	1.11				
-003	105	11.12	11.41	1.13				
-004	123	7.64	7.78	1.13				
-004D	181	7.39	7.50	1.11				
COF020113-001	2	6.67	6.73	1.00				
-001D	P26	6.71	6.78	1.05				
-002	TG	5.96	6.28	1.01				
-003	J19	6.08	6.22	1.06				
-004	461	4.78	6.10	1.07				
-005	TL	4.29	6.62	1.02				
-006	X6	7.20	7.43	1.06				
-007	J4	6.25	7.26	1.09				
-008	J8	6.28	6.34	1.06				
-009	J12	6.19	6.26	1.06				
-010	P28	5.81	6.29	1.05				
-011	Y16	6.17	6.28	1.07				
-012	B6	5.84	6.78	1.02				
-013	T12	5.95	6.37	1.00				
-014	15	5.92	6.73	1.60				
-015	P12	7.12	7.35	1.06				
-016	Y17	7.18	7.86	1.05				
-017	222	5.94	6.35	1.05				
-018	95	5.98	6.08	1.05				
-019	124	5.80	6.26	1.11				
-020	P7	5.59	5.96	1.06				
-021	300	6.24	6.29	1.02				
-021D	208	6.32	6.37	1.01				
-022	16	6.74	6.88	1.62				
-023	A67	6.63	6.77	1.01				
-024	R15	6.89	7.67	1.06				
-025	P19	6.14	6.20	1.05				
-026	B3	6.20	6.38	1.03				

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM: 0006003
 LISTED: CIL 6/5/00
 CHECKED: *PMG 6-6-00*

CREATED: 6/6/00 9:21 53 AM
 REVISED: 6/6/00 9:23:27 AM

COMMENTS:

C0F030139 C0F020191 C0F010144 C0F010150 C0F010152 C0F010153 C0F010155 C0F030143 C0F020113 C0F020118 C0F020174 C0D020179 C0F0

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.	TARE NO	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC
C0F030139	001	SMP C	1 12	6.15	5.65	11:00	5:15	0.5	9.94	90.06 <i>PPD, 10%</i>
C0F030139	001D	SMP 42	1.12	6.4	5.88	11:00	5:15	0.52	9.848	90.152
C0F030139	002	SMP 11B	1.14	6.17	5.66	11:00	5:15	0.51	10.139	89.861
C0F030139	003	SMP 118	1.11	6.55	6	11:00	5:15	0.55	10.11	89.89
C0F030139	004	SMP 47	1.11	6.36	5.75	11:00	5:15	0.61	11.619	88.381
C0F030139	005	SMP 141	1.15	6.92	6.13	11:00	5:15	0.79	13.692	86.308
C0F030139	006	SMP 149	1.14	6.51	5.87	11:00	5:15	0.64	11.918	88.082
C0F030139	007	SMP 108	1.13	5.72	5.14	11:00	5:15	0.58	12.636	87.364
C0F030139	008	SMP 51	1.12	6.77	6.01	11:00	5:15	0.76	13.451	86.549
C0F030139	009	SMP V	1.11	6.84	6.02	11:00	5:15	0.82	14.311	85.689
C0F030139	010	SMP 1551	1.11	6.07	5.37	11:00	5:15	0.7	14.113	85.887
C0F030139	011	SMP 152	1.13	6.54	5.85	11:00	5:15	0.69	12.754	87.246
C0F030139	012	SMP 82	1.11	6.97	6.2	11:00	5:15	0.77	13.14	86.86
C0F030139	013	SMP 104	1.11	7.7	6.88	11:00	5:15	0.82	12.443	87.557
C0F030139	014	SMP 115	1.12	6.28	5.64	11:00	5:15	0.64	12.403	87.597
C0F030139	015	SMP 33	1.12	6.94	5.99	11:00	5:15	0.95	16.323	83.677 <i>PPD, 60%</i>
C0F030139	015D	SMP 231	1.11	8	6.91	11:00	5:15	1.09	15.82	84.18
C0F030139	016	SMP 94	1.11	6.15	5.54	11:00	5:15	0.61	12.103	87.897

660 716

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 0006003

TESTED: CLL 6/5/00

CHECKED: *PLK* 6-6-00

CREATED: 6/6/00 9:21:53 AM

REVISED: 6/6/00 9:23:27 AM

COMMENTS

C0F030139 C0F020191 C0F010144 C0F010150 C0F010152 C0F010153 C0F010155 C0F030143 C0F020113 C0F020118 C0F020174 C0D020179 C0F0

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.		TARE NO	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC
C0F030139	017	SMP	1581	1.13	7.7	6.72	11:00	5:15	0.98	14.916	85.084
C0F030139	019	SMP	38	1.15	6.65	5.69	11:00	5:15	0.96	17.455	82.545
C0F030139	020	SMP	129	1.13	6.37	5.4	11:00	5:15	0.97	18.511	81.489
C0F030139	021	SMP	40	1.12	6.59	5.75	11:00	5:15	0.84	15.356	84.644
C0F020191	001	SMP	48	1.13	6.83	6.06	11:00	5:15	0.77	13.509	86.491
C0F020191	002	SMP	46	1.13	6.43	5.58	11:00	5:15	0.85	16.038	83.962
C0F010144	001	SMP	119	1.08	8.7	8.43	11:00	5:15	0.27	3.543	96.457
C0F010144	002	SMP	235	1.05	8.06	7.96	11:00	5:15	0.1	1.427	98.573
C0F010144	003	SMP	75	1.01	7.53	7.27	11:00	5:15	0.26	3.988	96.012
C0F010144	004	SMP	P14	1.06	10	9.72	11:00	5:15	0.28	3.132	96.868
C0F010144	005	SMP	194	1.08	6.56	6.4	11:00	5:15	0.16	2.92	97.08
C0F010144	006	SMP	Y	1.06	6.38	6.05	11:00	5:15	0.33	6.203	93.797
C0F010150	001	SMP	158	1.14	6.13	4.15	11:00	5:00	1.98	39.679	60.321
C0F010152	001	SMP	166	1.11	7	5.01	11:00	5:00	1.99	33.786	66.214
C0F010153	001	SMP	80	1.13	6.41	5.22	11:00	5:15	1.19	22.538	77.462
C0F010155	001	SMP	1108	1.13	6.64	6.45	11:00	5:15	0.19	3.448	96.552
C0F030143	001	SMP	PU	1.13	6.06	5.95	11:00	5:15	0.11	2.231	97.769
C0F030143	002	SMP	96	1.11	7.13	7.01	11:00	5:15	0.12	1.993	98.007

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 0006003
 TESTED. ICLL 6/5/00
 CHECKED. *PMG* 6-6-00

CREATED: 6/6/00 9:21:53 AM

REVISED: 6/6/00 9:23:27 AM

COMMENTS:

C0F030139 C0F020191 C0F010144 C0F010150 C0F010152 C0F010153 C0F010155 C0F030143 C0F020113 C0F020118 C0F020174 C0D020179 C0F0

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT		TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC	SOLIDS CONTENT CALC.
C0F030143	003	SMP	105	1.13	11.41	11.12	11:00	5:15	0.29	2.821	97.179
C0F030143	004	SMP	123	1.13	7.78	7.69	11:00	5:15	0.09	1.353	98.647
C0F030143	004D	SMP	181	1.11	7.5	7.39	11:00	5:15	0.11	1.721	98.279
C0F020113	001	SMP	Z	1	6.73	6.67	11:00	5:15	0.06	1.047	98.953
C0F020113	001D	SMP	P26	1.05	6.78	6.71	11:00	5:15	0.07	1.222	98.778
C0F020113	002	SMP	TG	1.01	6.28	5.96	11:00	5:15	0.32	6.072	93.928
C0F020113	003	SMP	J19	1.06	6.22	6.08	11:00	5:15	0.14	2.713	97.287
C0F020113	004	SMP	461	1.07	6.1	4.78	11:00	5:15	1.32	26.243	73.757
C0F020113	005	SMP	TL	1.02	6.62	4.29	11:00	5:15	2.33	41.607	58.393
C0F020113	006	SMP	X6	1.06	7.43	7.2	11:00	5:15	0.23	3.611	96.389
C0F020113	007	SMP	J4	1.09	7.26	6.25	11:00	5:15	1.01	16.37	83.63
C0F020113	008	SMP	J8	1.06	6.34	6.28	11:00	5:15	0.06	1.136	98.864
C0F020113	009	SMP	J12	1.06	6.26	6.19	11:00	5:15	0.07	1.346	98.654
C0F020113	010	SMP	P28	1.05	6.29	5.81	11:00	5:15	0.48	9.16	90.84
C0F020113	011	SMP	Y16	1.07	6.28	6.17	11:00	5:15	0.11	2.111	97.889
C0F020113	012	SMP	B6	1.02	6.78	5.84	11:00	5:15	0.94	16.319	83.681
C0F020113	013	SMP	T12	1	6.37	5.95	11:00	5:15	0.42	7.821	92.179
C0F020113	014	SMP	15	1.6	6.73	5.92	11:00	5:15	0.81	15.789	84.211

660 718

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 0006003
 TESTED JCLL 6/5/00
 CHECKED. *PMG* 6-6-00

CREATED 6/6/00 9:21.53 AM

REVISED: 6/6/00 9:23.27 AM

COMMENTS:

C0F030139 C0F020191 C0F010144 C0F010150 C0F010152 C0F010153 C0F010155 C0F030143 C0F020113 C0F020118 C0F020174 C0D020179 C0F0

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT		TARE NO	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC
C0F020113	015	SMP	P12	1.06	7.35	7.12	11:00	5:15	0.23	3.657	96.343
C0F020113	016	SMP	Y17	1.05	7.86	7.18	11:00	5:15	0.68	9.985	90.015
C0F020113	017	SMP	222	1.05	6.35	5.94	11:00	5:15	0.41	7.736	92.264
C0F020113	018	SMP	95	1.05	6.08	5.98	11:00	5:15	0.1	1.988	98.012
C0F020113	019	SMP	124	1.11	6.26	5.8	11:00	5:15	0.46	8.932	91.068
C0F020113	020	SMP	P7	1.06	5.96	5.59	11:00	5:15	0.37	7.551	92.449
C0F020113	021	SMP	300	1.02	6.29	6.24	11:00	5:15	0.05	0.949	99.051
C0F020113	021D	SMP	208	1.01	6.37	6.32	11:00	5:15	0.05	0.933	99.067
C0F020113	022	SMP	16	1.62	6.88	6.74	11:00	5:15	0.14	2.662	97.338
C0F020113	023	SMP	A67	1.01	6.77	6.65	11:00	5:15	0.12	2.083	97.917
C0F020113	024	SMP	P15	1.06	7.67	6.89	11:00	5:15	0.78	11.8	88.2
C0F020113	025	SMP	P19	1.05	6.2	6.14	11:00	5:15	0.06	1.165	98.835
C0F020113	026	SMP	B3	1.03	6.38	6.2	11:00	5:15	0.18	3.364	96.636
C0F020118	001	SMP	12	1.12	6.75	6.09	11:00	5:15	0.66	11.723	88.277
C0F020118	001D	SMP	111	1.14	6.74	6.09	11:00	5:15	0.65	11.607	88.393
C0F020118	002	SMP	157	1.13	6.22	5.74	11:00	5:15	0.48	9.43	90.57
C0F020118	003	SMP	177	1.13	7.02	6.49	11:00	5:15	0.53	8.998	91.002
C0F020118	004	SMP	66	1.13	7.16	6.49	11:00	5:15	0.67	11.111	88.889

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 0006003
 TESTED: CLL 6/5/00
 CHECKED: *PMG* 6-6-00

CREATED: 6/6/00 9:21:53 AM

REVISED: 6/6/00 9:23:27 AM

COMMENTS:

C0F030139 C0F020191 C0F010144 C0F010150 C0F010152 C0F010153 C0F010155 C0F030143 C0F020113 C0F020118 C0F020174 C0D020179 C0F0

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT	TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC.	
C0F020174	001	SMP	1151	1.1	6.34	4.83	11:00	5:15	1.51	28.817	71.183
C0F020174	001D	SMP	B	1.14	6.31	4.77	11:00	5:15	1.54	29.787	70.213
C0F020179	001	SMP	AB	1.11	7.32	6.82	11:00	5:15	0.5	8.052	91.948
C0F020179	002	SMP	36	1.11	7.08	6.49	11:00	5:15	0.59	9.883	90.117
C0F030135	001	SMP	150	1.14	6.91	6.24	11:00	5:15	0.67	11.612	88.388
C0F030135	002	SMP	A	1.11	6.34	5.75	11:00	5:15	0.59	11.281	88.719

660 720

PSR024 6/05/00 3:17:36 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: LOHEYDEC

METHOD: IQ Ignitability (SW7.1.2)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8C,D CLP	DE44M-1-0G	— — —	238108	399411	A-88-IQ	C0F020191	001		SOLID	3	1
8C,D CLP	DE44Q-1-0G	— — —	238109	399411	A-88-IQ	C0F020191	002		SOLID	3	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

[Signature]
[Signature]

[Signature]
[Signature]

6-5-00 0530
6-5-00 1130

REQUESTED BY: WESOLOSE

METHOD: OZ pH (9045C) - Non-Aqueous

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
8B	DE3DT-1-0F	___	237954	367970	A-88-OZ	C0F020113	001		SOLID	2	1
8B	DE3DW-1-0F	___	237955	367970	A-88-OZ	C0F020113	002		SOLID	2	1
8B	DE3DX-1-0F	___	237956	367970	A-88-OZ	C0F020113	003		SOLID	2	1
8B	DE3EC-1-0F	___	237957	367970	A-88-OZ	C0F020113	010		SOLID	2	1
8B	DE3EE-1-0F	___	237958	367970	A-88-OZ	C0F020113	011		SOLID	2	1
8B	DE3EG-1-0F	___	237959	367970	A-88-OZ	C0F020113	012		SOLID	2	1
8B	DE3EH-1-0F	___	237960	367970	A-88-OZ	C0F020113	013		SOLID	2	1
8B	DE3EJ-1-0F	___	237961	367970	A-88-OZ	C0F020113	014		SOLID	2	1
8B	DE3EL-1-0F	___	237962	367970	A-88-OZ	C0F020113	015		SOLID	2	1
8B	DE3EM-1-0F	___	237963	367970	A-88-OZ	C0F020113	016		SOLID	2	1
8B	DE3EP-1-0F	___	237964	367970	A-88-OZ	C0F020113	017		SOLID	2	1
8B	DE3EQ-1-0F	___	237965	367970	A-88-OZ	C0F020113	018		SOLID	2	1
8B	DE3EO-1-0F	___	237966	367970	A-88-OZ	C0F020113	004		SOLID	2	1
8B	DE3E1-1-0F	___	237967	367970	A-88-OZ	C0F020113	005		SOLID	2	1
8B	DE3E2-1-0F	___	237968	367970	A-88-OZ	C0F020113	006		SOLID	2	1
8B	DE3E5-1-0F	___	237969	367970	A-88-OZ	C0F020113	007		SOLID	2	1
8B	DE3E6-1-0F	___	237970	367970	A-88-OZ	C0F020113	008		SOLID	2	1
8B	DE3E9-1-0F	___	237971	367970	A-88-OZ	C0F020113	009		SOLID	2	1
8B	DE3FC-1-0F	___	237972	367970	A-88-OZ	C0F020113	025		SOLID	2	1
8B	DE3FD-1-0F	___	237973	367970	A-88-OZ	C0F020113	026		SOLID	2	1
8B	DE3FO-1-0F	___	237974	367970	A-88-OZ	C0F020113	019		SOLID	2	1
8B	DE3F2-1-0F	___	237975	367970	A-88-OZ	C0F020113	020		SOLID	2	1
8B	DE3F4-1-0F	___	237976	367970	A-88-OZ	C0F020113	021		SOLID	2	1
8B	DE3F6-1-0F	___	237977	367970	A-88-OZ	C0F020113	022		SOLID	2	1
8B	DE3F7-1-0F	___	237978	367970	A-88-OZ	C0F020113	023		SOLID	2	1
8B	DE3F9-1-0F	___	237979	367970	A-88-OZ	C0F020113	024		SOLID	2	1

660 722

PSR024 6/04/00 6:59:11 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 002

REQUESTED BY: MESOLOSE

METHOD: OZ pH (9045C) - Non-Aqueous

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8C,D CLP	DE44M-1-0F	— — —	237980	399411	A-88-OZ	C0F020191	001		SOLID	3	1
8C,D CLP	DE44Q-1-0F	— — —	237981	399411	A-88-OZ	C0F020191	002		SOLID	3	1

ALSO i → (C0F020113 025 Solid)
 ↓ ↓
 026 ↓

RELINQUISHED BY

E. L. Walsh
E. L. Walsh

RECEIVED BY

E. L. Walsh
E. L. Walsh

DATE/TIME

6/4/00 (09:00)
6/4/00 (10:30)

***** END OF REPORT *****

PSR024 6/05/00 3:16:36 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: LOHEYDEC

METHOD: SM Solids, Percent (as TS - 160.3 MOD) - Solids

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
8C,D CLP	DE44M-1-01	— — —	238086	399411	A-88-SM	COF020191	001		SOLID	0	3 1
8C,D CLP	DE44Q-1-01	— — —	238087	399411	A-88-SM	COF020191	002		SOLID	0	3 1

POF030143-001 CL
-002.
-003 6-5-00
-004

RELINQUISHED BY

RECEIVED BY

DATE/TIME

[Signature]
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6-5-00 0530
6-5-00 1130

***** END OF REPORT *****

Analysis

Sulfide React

Prep/ Anal. Date

6/7/00

Analyst

JAK

Batch Number

0159470

LCS Number

LCS Prep Date

RL

200mg/Ly

Titrant Name

NH₄thosulfate

Titrant Normality

0.02483

Titrant Standardization Date/ Initials

JAK1-5-8-006/6/00 DEIndicator 0.0283

Sample Number	Sample Volume	Dil.	Titrant Vol (mL)	Final Conc.	Units	QC Calculations and Comments
<u>Bel</u>	<u>100</u>		<u>20.8</u>	<u>ND</u>		
<u>DE3X1</u>	<u>10</u>		<u>22.6</u>	<u>ND</u>		
<u>DE3X1 (dup)</u>			<u>21.8</u>	<u>ND</u>		
<u>DE3XT</u>			<u>21.3</u>	<u>ND</u>		
<u>DE404</u>			<u>21.3</u>	<u>ND</u>		
<u>DE40m</u>			<u>22.3</u>	<u>ND</u>		
<u>DE440</u>			<u>22.0</u>	<u>ND</u>		
<u>DE50J</u> ^{DE7J7}			<u>20.7</u>	<u>ND</u>		
<u>DE50J</u> ^{6/7/00}			<u>21.8</u>	<u>ND</u>		
<u>DE50K</u>			<u>21.6</u>	<u>ND</u>		
<u>DE50H</u>			<u>24.0</u>	<u>ND</u>		
<u>DE7J8</u>			<u>22.9</u>	<u>ND</u>		
<u>DE7J9</u>			<u>20.9</u>	<u>ND</u>		
<u>DE7JA</u>			<u>20.3</u>	<u>ND</u>		
<u>DE7HW</u>			<u>21.2</u>	<u>ND</u>		
<u>DE7J3</u>			<u>21.7</u>	<u>ND</u>		
<u>DE7JE</u>			<u>22.3</u>	<u>ND</u>		
<u>DE50K (dup)</u>			<u>23.2</u>	<u>ND</u>		
<u>JAK 6/7/00</u>						

QUANTERRA- NORTH CANTON
TITRIMETRIC LOGSHEET

660 725

Analysis Cal Peest
Prep/ Anal. Date 6/7/00
Analyst MFG-JAK

Batch Number 0159471
LCS Number —
LCS Prep Date —
RL 200 mg/Kg

Titrant Name Silver Nitrate
Titrant Normality 0.192
Titrant Standardization Date/ Initials —

Sample Number	Sample Volume	Dil.	Titrant Vol (mL)	Final Conc.	Units	QC Calculations and Comments
<u>Ble</u>	<u>10g</u>		<u>0.005</u>	<u>ND</u>		
<u>DE44m</u>	<u>1</u>		<u>0.005</u>	<u>ND</u>		
<u>DE44Q</u>			<u>0.005</u>	<u>ND</u>		
<u>DE3X1</u>			<u>0.005</u>	<u>ND</u>		
<u>DE3XT</u>			<u>0.005</u>	<u>ND</u>		
<u>DE404</u>			<u>0.005</u>	<u>ND</u>		
<u>DE50H</u>			<u>0.005</u>	<u>ND</u>		
<u>DE50J</u>			<u>0.005</u>	<u>ND</u>		
<u>DE50K</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7J7</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7J8</u>			<u>0.005</u>	<u>ND</u>		
<u>DE3X1 (dup)</u>			<u>0.005</u>	<u>ND</u>		
<u>DE50K (dup)</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7J9</u>			<u>0.030</u>	<u>ND</u>		
<u>DE7JA</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7HW</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7J3</u>			<u>0.005</u>	<u>ND</u>		
<u>DE7JE</u>			<u>0.015</u>	<u>ND</u>		
<u>JAK 6-7-00</u>						

Rev. 10/30/98
N:Metals/Wet Log

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PART I

ADMINISTRATIVE RECORD

PART I

FINAL PAGE