



# THE MEMPHIS DEPOT TENNESSEE

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## ADMINISTRATIVE RECORD COVER SHEET

AR File Number 658

**SEVERN  
TRENT  
SERVICES**

STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238

Tel 412 820 8380  
Fax 412 820 2080  
[www.stl-inc.com](http://www.stl-inc.com)

**ANALYTICAL REPORT**

PROJECT NO. UXB 7512-060

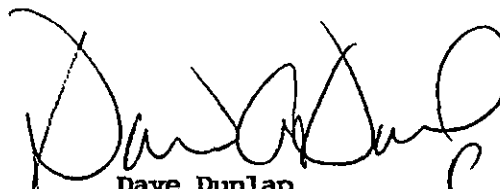
Dunn Field, Def Depot Memphis

Lot #: C08230195

Randy Reed

UXB International

SEVERN TRENT LABORATORIES, INC.



Dave Dunlap  
Project Manager

June 7, 2000

**CASE NARRATIVE**  
**UXB International Inc.**  
**Dunn Field**

**LOT # C0E230195**

**Sample Receiving:**

Samples were received on May 23, 2000. The COC did not have analysis listed. As per Randy Reed on May 24, 2000, volatiles, semivolatiles, pesticides, PCBs, herbicides, metals, cyanide, sulfide, pH, and flashpoint were to be analyzed. Notation of this was made on the COC.

Both of the volatiles sample bottles had air bubbles

**Volatiles:**

There were no problems associated with the analyses.

**Semivolatiles:**

There were no problems associated with the analyses.

**Pesticides:**

Several of the calibration verification standards had compounds outside of the  $\pm 15\%$  difference criteria. The average % difference of all compounds in the calibration verification standards were within the  $\pm 15\%$  difference criteria. Compounds exceeding these criteria were not detected in the samples. The following table lists the calibration verifications and compounds outside of the  $\pm 15\%$  difference criteria.

Column: RFX-CLP Calibration Verification Date & Time	Affected Compound	% Difference	Average % Difference of All Compounds in Standard
5/27/00 @ 00:18/00:44	heptachlor endosulfan I dieldrin 4,4-DDT methoxychlor decachlorobiphenyl	15.2 16.1 15.7 16.7 15.9 16.7	10
5/27/00 @ 06:44/07:10	heptachlor endosulfan I dieldrin 4,4-DDT methoxychlor decachlorobiphenyl	16.8 28.0 24.0 41.7 22.8 22.6	14

**PCBs:**

There were no problems associated with the analyses.

**CASE NARRATIVE**  
**UXB International Inc.**  
**Dunn Field**

**LOT # C0E230195**

**Herbicides:**

Two of the calibration verification standards had compounds outside of the  $\pm 15\%$  difference criteria. The average % difference of all compounds in the calibration verification standards were within the  $\pm 15\%$  difference criteria. Compounds exceeding these criteria that were not detected in the samples. The following table lists the calibration verifications and compounds outside of the  $\pm 15\%$  difference criteria.

Column: DB1701			
Calibration Verification Date & Times	Affected Compound	% Difference	Average % Difference of All Compounds in Standard
5/26/00 @ 11:39	2,4-DB	-19.68	7
5/26/00 @ 19:53	2,4-DB	-21.2	6

**Metals:**

The matrix spike and matrix spike duplicate were outside control limits for aluminum. All associated results were flagged with an "N" qualifier.

For the matrix spike and matrix spike duplicate, iron recoveries were not calculated due to the concentration of analyte in the sample being  $>4$  times the concentration of spike added.

**General Chemistry:**

There were no problems associated with the analyses.



**METHODS SUMMARY**

C0E230195

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
pH Aqueous	SW846 9040	SW846 9040
Chlorinated Herbicides by GC	SW846 8151A	SW846 8151A
Cyanide, Total	SW846 9012A	SW846 9012A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3010A
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 7470A
Organochlorine Pesticides	SW846 8081A	SW846 3510C
Pensky-Martens Method for Determining Ignitability	SW846 1010	SW846 1010
PCBs by SW-846 8082	SW846 8082	SW846 3510C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C
Sulfide	MCAWW 376.1	MCAWW 376.1
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3010A
Volatile Organics by GC/MS	SW846 8260B	SW846 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**

C0E230195

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
DDK90	001	DF/S1/0137/WA/001	05/22/00	13:11

**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



QUA-4124

Client: UXB Int'l., Inc. Project Manager: Frank Johnson Date: 22 May 00 Chain Of Custody Number: 671176

Address: 6141 Old Poplar Pk Telephone Number (Area Code)/Fax Number: (901) 745-4999 Lab Number: Page 1 of 1

City: Memphis, TN Zip Code: 38119 Site Contact: Jim Warren

Project Name: Dunn Field Carrier/Vehicle Number:

Contract/Purchase Order/Quote No

Sample ID No and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt	Analysis											
					Type	No														
<u>DF1510137/WR/001</u>	<u>5/22/00</u>	<u>311</u>	<u>Water</u>	<u>3.080L</u>	<u>GLASS</u>	<u>7</u>	<u>None</u>		<u>no problem, Rec'd 5/24/00</u>											
				<u>1750mL</u>	<u>Plastic</u>	<u>4</u>														
				<u>80mL</u>	<u>NOVAIR</u>	<u>2</u>			<u>anal. ref.</u>											
									<u>ITL per</u>											
									<u>ITL B&amp;H per</u>											
									<u>ITL Pest/ECB</u>											
									<u>Hbicide</u>											
									<u>ITL residues</u>											
									<u>ITL fecal</u>											
									<u>PH</u>											
									<u>fluorophenyl</u>											
									<u>oxospol</u>											

Special Instructions

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Turn Around Time Required: ☒ Normal ☐ Rush ☐ OC Level: ☐ I. ☐ II. ☐ III.

Relinquished By: James A. Hornik Date: 5/22/00 Time: 1430 1. Received By: [Signature] Date: 5/23/00 Time: 0430

Relinquished By: ... Date: ... Time: ... 2. Received By: [Signature] Date: ... Time: ...

3. Relinquished By: ... Date: ... Time: ... 3. Received By: ... Date: ... Time: ...

Comments

1. DISTRIBUTION: WHITE - Stays with Sample, CANARY - Returned to Client with Report, PINK - Field Copy

# **Cooler Receipt Form** STL Pittsburgh

Client: UKB Project: \_\_\_\_\_ Quote: \_\_\_\_\_  
Cooler Rec'd & Opened for Temp. Check on: 5/23/05  
Coolers Opened and Unpacked on: 5/23/05 By: [Signature]  
(Signature)

STL Pittsburgh Lot Number: CSC-230195

Yes No

- Were custody seals on the outside of the cooler? ✓
- If YES, how many and where? Quantity 1 Location 1st
- Were signatures and date correct? ✓
- Were custody papers included inside the cooler? ✓
- Were custody papers properly filled out (ink, signed, match labels)? ✓
- Did you sign the custody papers in the appropriate place? ✓
- Was shippers packing slip attached to this form? ✓
- Were packing materials used? ✓
- If YES, what type? Bubble Pack
- Were the samples chilled? (Record temperatures on reverse side.) ✓
- Were the samples appropriately preserved? ✓
- Were all bottles sealed in separate plastic bags? ✓
- Did all bottles arrive in good condition (unbroken)? ✓ none
- Were all bottle labels complete (sample ID, preservatives, etc.)? ✓
- Did all bottle labels and/or tags agree with custody papers? ✓
- Were correct bottles used for tests indicated? ✓
- Were all VOA vials checked for the presence of air bubbles? (Pick Bubble Jar) ✓
- Was a sufficient amount of sample sent in each bottle? ✓

16. Samples received by: FEDEX UPS CLIENT DROP-OFF OTHER AIRBORNE

Explain any discrepancies: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Level 2 Review \_\_\_\_\_  
Was contacted on \_\_\_\_\_ by \_\_\_\_\_ to resolve discrepancies.

P: Preserved

UP: Unpreserved

[illegible]

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

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

[illegible]

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

BEST AVAILABLE COPY

**FedEx** Tracking Number **821738759600**

1 From **5/22/00**

Sender's Name **Tim Morris** Phone **901745-4999**

Company **UXB Inc.**

Address **6141 Old Springdale Pike**

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

2 Your Internal Billing Reference

3 To Recipient's Name **Rusty Vickie** Phone **412-820-8380**

Company **Sevens TRAX**

Address **450 Lullwater Pkwy**

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

Is this a return? ☐ Yes ☒ No

821738759600

Form ID No. **0200**

4a Express Package Service

☒ FedEx Priority Overnight ☐ FedEx Standard Overnight

☐ FedEx 2Day<sup>®</sup> ☐ FedEx Express Saver<sup>®</sup>

4b Express Freight Service

☐ FedEx 1Day Freight<sup>®</sup> ☐ FedEx 2Day Freight

☐ FedEx 3Day Freight<sup>®</sup> ☐ FedEx 4Day Freight

5 Packaging ☐ FedEx Letter<sup>®</sup> ☐ FedEx Pak<sup>®</sup>

6 Special Handling

☐ Sunday Delivery ☐ Hold at FedEx Location

☐ Signature Required ☐ Signature Restricted

☐ Insured ☐ Registered Mail<sup>®</sup>

7 Payment Method ☐ Bill Me ☐ Collect

☐ Cash ☐ Credit Card

Total Packages **49** Total Weight **20**

Total Declared Value<sup>1</sup> **20**

Release Signature **360**

By signing this document you agree to deliver the shipment without delay and to pay for insurance and loss or damage to the contents of the shipment. Questions? Call 1-800-GO-FedEx (800-465-3339). Visit our Web site at www.fedex.com. \*For rates and restrictions, visit www.fedex.com.

**CLEARANCE REPORT**

May-15, 2000

Dunn Field, Memphis Defense Depot

Results for CWM Soil Sample Analysis

Analyst: Wyatt McNutt

Sample#		1,4-Thioxane	1,4-Dithiane	TDG	Mustard	Lewisite
DF/S1/01 37/WA/ 001		ND	ND	N/A	ND	ND
DF/S1/01 37/WA/ 001 MS		99	97	N/A	102	97
DF/S1/01 37/WA 001 MSD		97%	95	NA	99	122
DF/S1/01 37/B4B12 0020		ND	ND	N/A	ND	ND
DF/S1/01 37/B4B12 0021		ND	ND	N/A	ND	ND
DF/S1/01 37/B4B12 0022		ND	ND	NA	ND	ND
DF/S1/01 37/B4B12 0023		ND	ND	NA	ND	ND
DF/S1/01 37/B4B12 0024		ND	ND	NA	ND	ND

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

MDL= 200 ppb

BDL= Below detection limit, results &gt; 100ppb, but &lt; 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) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/23/00

Work Order: DDK90101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
67-64-1	Acetone	2.1	J
71-43-2	Benzene	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	10	U
78-93-3	2-Butanone	20	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	U
75-34-3	1,1-Dichloroethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	20	U
75-09-2	Methylene chloride	5.0	U
108-10-1	4-Methyl-2-pentanone	20	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U

FORM I

## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: COE230195 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/23/00

Work Order: DDK90101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	10	U
1330-20-7	Xylenes (total)	5.0	U

UXB INTERNATIONAL  
MATRIX SPIKE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDK90113      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
71-43-2	Benzene	51.2	
108-90-7	Chlorobenzene	49.3	
75-35-4	1,1-Dichloroethene	53.5	
108-88-3	Toluene	50.2	
79-01-6	Trichloroethene	49.9	

UXB INTERNATIONAL  
MATRIX SPIKE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDK90114      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
71-43-2	Benzene	50.1	
108-90-7	Chlorobenzene	48.9	
75-35-4	1,1-Dichloroethene	55.9	
108-88-3	Toluene	50.2	
79-01-6	Trichloroethene	49.0	

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E240000 157  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDL68102      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

QC Batch: 0145157

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
71-43-2	Benzene	49.2	
108-90-7	Chlorobenzene	49.2	
75-35-4	1,1-Dichloroethene	54.4	
108-88-3	Toluene	50.0	
79-01-6	Trichloroethene	47.7	

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0137/WA/001	98	103	99	98	00
02	METHOD BLK. DDL68101	103	103	100	100	00
03	LCS DDL68102	103	101	100	102	00
04	DF/S1/0137/WA/001 D	105	101	102	104	00
05	DF/S1/0137/WA/001 S	104	101	102	102	00

<u>SURROGATES</u>	<u>QC LIMITS</u>
SRG01 = 1,2-Dichloroethane-d4	( 77-120)
SRG02 = Toluene-d8	( 78-111)
SRG03 = 4-Bromofluorobenzene	( 80-114)
SRG04 = Dibromofluoromethane	( 78-110)

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

FORM II

## SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDL68102

BATCH: 0145157

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50.0	54.4	109	65 - 119	
Trichloroethene	50.0	47.7	95	80 - 122	
Benzene	50.0	49.2	98	79 - 116	
Toluene	50.0	50.0	100	76 - 119	
Chlorobenzene	50.0	49.2	98	81 - 115	

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/S1/0137/WA/001

Lot #: C0E230195

WO #: DDK90113

BATCH: 0145157

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	MS CONCENT. (ug/L )	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50.0	ND	53.5	107	57 - 138	
Trichloroethene	50.0	ND	49.9	100	58 - 141	
Benzene	50.0	ND	51.2	102	73 - 123	
Toluene	50.0	ND	50.2	100	67 - 129	
Chlorobenzene	50.0	ND	49.3	99	70 - 122	

## 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 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/S1/0137/WA/001

Lot #: C0E230195

WO #: DDK90114

BATCH: 0145157

COMPOUND	SPIKE ADDED (ug/L )	MSD CONCENT. (ug/L )	MSD % REC	% RPD	QC LIMITS		QUAL
					RPD	REC	
1,1-Dichloroethene	50.0	55.9	112	4.5	20	57 - 138	
Trichloroethene	50.0	49.0	98	1.8	20	58 - 141	
Benzene	50.0	50.1	100	2.0	20	73 - 123	
Toluene	50.0	50.2	100	0.17	20	67 - 129	
Chlorobenzene	50.0	48.9	98	0.81	20	70 - 122	

## 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:

FORM III

## SW846 8260B METHOD BLANK SUMMARY

DDL68101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: wb50524.d

Lot Number: C0E230195

Date Analyzed: 05/24/00

Time Analyzed: 07:25

Matrix: WATER

Date Extracted: 05/24/00

GC Column: HP624

ID: .20

Extraction Method: 5030

Instrument ID: HP5

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/S1/0137/WA/001	DDK90101	5052404.d	05/24/00	09:03
02	DF/S1/0137/WA/001	DDK90113 S	5052406.d	05/24/00	09:53
03	DF/S1/0137/WA/001	DDK90114 D	5052407.d	05/24/00	10:18
04	CHECK SAMPLE	DDL68102 C	5052402.d	05/24/00	08:14
05					
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:

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E240000 157  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDL68101      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

QC Batch: 0145157

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	20	U
71-43-2	Benzene	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	10	U
78-93-3	2-Butanone	20	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	U
75-34-3	1,1-Dichloroethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	20	U
75-09-2	Methylene chloride	5.0	U
108-10-1	4-Methyl-2-pentanone	20	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.      SDG Number:  
Matrix: (soil/water) WATER      Lab Sample ID: COE240000 157  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)  
Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDL68101      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA  
QC Batch: 0145157  
Client Sample Id: INTRA-LAB BLANK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	10	U
1330-20-7	Xylenes (total)	5.0	U

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

Lab File ID (Standard): CC50524

Date Analyzed: 05/24/00

Instrument ID: HP5

Time Analyzed: 0646

GC Column: DB 624

ID: 0.20 (mm)

Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DCB)		IS3	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	152760	9.97	233429	12.28	655063	6.87
UPPER LIMIT	305520	10.17	466858	12.48	1310126	7.07
LOWER LIMIT	76380	9.77	116714	12.08	327532	6.67
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	149766	9.97	215588	12.27	638649	6.88
02 INTRA-LAB CH	145182	9.97	214121	12.28	618603	6.89
03 DF/S1/0137/W	143289	9.97	199650	12.28	622463	6.89
04 DF/S1/0137/W	141881	9.97	219399	12.28	620339	6.88
05 DF/S1/0137/W	144401	9.97	218281	12.28	618101	6.89
06						
07						
08						
09						
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11						
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13						
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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 SEMIVOLATILE SUMMARY**

## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DF/S1/0137/WA/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
110-86-1	Pyridine	20	U
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
120-12-7	Anthracene	10	U
56-55-3	Benzo(a)anthracene	10	U
50-32-8	Benzo(a)pyrene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
86-74-8	Carbazole	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
132-64-9	Dibenzofuran	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
120-83-2	2,4-Dichlorophenol	10	U

FORM I



## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DF/S1/0137/WA/001

## CONCENTRATION UNITS:

CAS NO	COMPOUND	(ug/L or ug/kg) ug/L	Q
84-66-2	Diethyl phthalate	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
84-74-2	Di-n-butyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
51-28-5	2,4-Dinitrophenol	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
67-72-1	Hexachloroethane	10	U
193-39-5	Indeno (1,2,3-cd) pyrene	10	U
78-59-1	Isophorone	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
88-74-4	2-Nitroaniline	50	U
99-09-2	3-Nitroaniline	50	U
100-01-6	4-Nitroaniline	50	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	50	U
621-64-7	N-Nitrosodi-n-propylamine	10	U

## UXB INTERNATIONAL

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

Matrix    (soil/water) WATER      Lab Sample ID: C0E230195 001

Method:   SW846 8270C

            Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL      Date Received: 05/23/00

Work Order:   DDK90102      Date Extracted: 05/24/00

Dilution factor:   1      Date Analyzed: 05/26/00

Moisture %: NA

                                 QC Batch: 0146202

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
86-30-6	N-Nitrosodiphenylamine	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
129-00-0	Pyrene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U

FORM I

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

Lab Name Severn Trent Laboratories, Inc.      SDG Number:

Matrix: (soil/water) WATER      Lab Sample ID: COE250000 202  
Method: SW846 8270C  
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL      Date Received: 05/20/00  
Work Order: DDNQC102      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/26/00  
Moisture %: NA

QC Batch: 0146202

Client Sample Id: CHECK SAMPLE

CAS NO	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
83-32-9	Acenaphthene	40.2	Q
59-50-7	4-Chloro-3-methylphenol	59.5	
95-57-8	2-Chlorophenol	53.7	
106-46-7	1,4-Dichlorobenzene	36.0	
121-14-2	2,4-Dinitrotoluene	41.6	
100-02-7	4-Nitrophenol	56.5	
621-64-7	N-Nitrosodi-n-propylamine	44.5	
87-86-5	Pentachlorophenol	67.8	
108-95-2	Phenol	49.9	
129-00-0	Pyrene	42.7	
120-82-1	1,2,4-Trichlorobenzene	37.2	

UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL      Date Received 05/20/00

Work Order: DDNQC103      Date Extracted 05/24/00

Dilution factor: 1      Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	39.3	
59-50-7	4-Chloro-3-methylphenol	57.9	
95-57-8	2-Chlorophenol	51.8	
106-46-7	1,4-Dichlorobenzene	34.6	
121-14-2	2,4-Dinitrotoluene	40.6	
100-02-7	4-Nitrophenol	54.9	
621-64-7	N-Nitrosodi-n-propylamine	42.7	
87-86-5	Pentachlorophenol	66.0	
108-95-2	Phenol	48.4	
129-00-0	Pyrene	41.7	
120-82-1	1,2,4-Trichlorobenzene	36.4	

FORM I

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0137/WA/001	59	60	68	47	56	69	00
02	METHOD BLK. DDNQC101	71	63	69	83	66	72	00
03	LCS DDNQC102	75	71	73	82	69	80	00
04	LCSD DDNQC103	71	68	69	78	66	76	00

SURROGATES

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

QC LIMITS

( 10-113)  
 ( 30-110)  
 ( 32-112)  
 ( 10-144)  
 ( 13-110)  
 ( 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 #: C0E250000

WO #: DDNQC102

BATCH: 0146202

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
Phenol	75.0	49.9	67	10 - 131	
2-Chlorophenol	75.0	53.7	72	19 - 124	
1,4-Dichlorobenzene	50.0	36.0	72	28 - 110	
N-Nitrosodi-n-propylamine	50.0	44.5	89	30 - 115	
1,2,4-Trichlorobenzene	50.0	37.2	74	31 - 110	
4-Chloro-3-methylphenol	75.0	59.5	79	29 - 124	
Acenaphthene	50.0	40.2	80	39 - 118	
4-Nitrophenol	75.0	56.5	75	19 - 144	
2,4-Dinitrotoluene	50.0	41.6	83	47 - 131	
Pentachlorophenol	75.0	67.8	90	10 - 140	
Pyrene	50.0	42.7	85	46 - 130	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery. 0 out of 11 outside limits

COMMENTS:

FORM III

## SW846 8270C CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code QESPIT

SDG No:

Lot #: C0E250000

WO #: DDNQC103

BATCH: 0146202

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
Phenol	75.0	48.4	65	10 - 131	
2-Chlorophenol	75.0	51.8	69	19 - 124	
1,4-Dichlorobenzene	50.0	34.6	69	28 - 110	
N-Nitrosodi-n-propylamine	50.0	42.7	85	30 - 115	
1,2,4-Trichlorobenzene	50.0	36.4	73	31 - 110	
4-Chloro-3-methylphenol	75.0	57.9	77	29 - 124	
Acenaphthene	50.0	39.3	79	39 - 118	
4-Nitrophenol	75.0	54.9	73	19 - 144	
2,4-Dinitrotoluene	50.0	40.6	81	47 - 131	
Pentachlorophenol	75.0	66.0	88	10 - 140	
Pyrene	50.0	41.7	83	46 - 130	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

## SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDNQC101

Lab Name. Severn Trent Laboratories, Inc

Lab Code: QESPIT

SDG Number:

Lab File ID F0526003.

Lot Number C0E230195

Date Analyzed 05/26/00

Time Analyzed: 10:46

Matrix: WATER

Date Extracted: 05/24/00

GC Column: HP5MS ID: .25

Extraction Method. 3520C

Instrument ID. 722

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/S1/0137/WA/001	DDK90102	F0526012.	05/26/00	16:28
02	CHECK SAMPLE	DDNQC102 C	F0526004.	05/26/00	11:20
03	DUPLICATE CHECK	DDNQC103 L	F0526005.	05/26/00	11:54
04					
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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) WATER      Lab Sample ID: C0E250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol. 1000 / mL

Date Received: 05/20/00

Work Order DDNQC101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch 0146202

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
110-86-1	Pyridine	20	U
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
120-12-7	Anthracene	10	U
56-55-3	Benzo(a)anthracene	10	U
50-32-8	Benzo(a)pyrene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
86-74-8	Carbazole	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
132-64-9	Dibenzofuran	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
120-83-2	2,4-Dichlorophenol	10	U

FORM I

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol 1000 / mL

Date Received 05/20/00

Work Order: DDNQC101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id. INTRA-LAB BLANK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
84-66-2	Diethyl phthalate	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
84-74-2	Di-n-butyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
51-28-5	2,4-Dinitrophenol	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
67-72-1	Hexachloroethane	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
88-74-4	2-Nitroaniline	50	U
99-09-2	3-Nitroaniline	50	U
100-01-6	4-Nitroaniline	50	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	50	U
621-64-7	N-Nitrosodi-n-propylamine	10	U

FORM I

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E250000 202

Method SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL      Date Received: 05/20/00

Work Order: DDNQC101      Date Extracted: 05/24/00

Dilution factor: 1      Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
86-30-6	N-Nitrosodiphenylamine	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
129-00-0	Pyrene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U

FORM 8  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

658 39

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: C0E230195

Lab File ID (Standard): F05260C5

Date Analyzed: 05/26/00

Instrument ID: 722

Time Analyzed: 0904

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	35904	4.99	134042	6.51	77370	9.52
UPPER LIMIT	71808	5.49	268084	7.01	154740	10.02
LOWER LIMIT	17952	4.49	67021	6.01	38685	9.02
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	36738	4.98	148095	6.50	92291	9.50
02 INTRA-LAB CH	37216	4.98	147725	6.50	89356	9.50
03 INTRA-LAB CH	40299	4.98	158308	6.50	95449	9.51
04 DF/S1/0137/W	40683	4.99	162702	6.51	95633	9.51
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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

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: C0E230195

Lab File ID (Standard): F05260C5

Date Analyzed: 05/26/00

Instrument ID: 722

Time Analyzed: 0904

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	143810	12.81	142226	19.44	128115	22.79
UPPER LIMIT	287620	13.31	284452	19.94	256230	23.29
LOWER LIMIT	71905	12.31	71113	18.94	64058	22.29
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	170285	12.79	147827	19.40	157444	22.76
02 INTRA-LAB CH	168059	12.79	159317	19.40	158489	22.76
03 INTRA-LAB CH	179564	12.79	169325	19.40	171252	22.77
04 DF/S1/0137/W	172516	12.80	157786	19.42	186995	22.78
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
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) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
72-54-8	4,4'-DDD	0.050	U
72-55-9	4,4'-DDE	0.050	U
50-29-3	4,4'-DDT	0.050	U
60-57-1	Dieldrin	0.050	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.050	U
1031-07-8	Endosulfan sulfate	0.050	U
72-20-8	Endrin	0.050	U
7421-93-4	Endrin aldehyde	0.050	U
53494-70-5	Endrin ketone	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.10	U
8001-35-2	Toxaphene	2.0	U

FORM I

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E240000 492  
 Method: SW846 8081A  
           Pesticides (8081A)

Sample WT/Vol: 1000 / mL      Date Received: 05/23/00  
 Work Order: DDN21102      Date Extracted: 05/24/00  
 Dilution factor 1      Date Analyzed: 05/27/00  
 Moisture %: NA

Client Sample Id: CHECK SAMPLE      QC Batch: 0145492

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
309-00-2	Aldrin	0.202	
58-89-9	gamma-BHC (Lindane)	0.193	
50-29-3	4,4'-DDT	0.319	
60-57-1	Dieldrin	0.426	
72-20-8	Endrin	0.351	
76-44-8	Heptachlor	0.190	

FORM I



UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

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

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

Lab Sample ID: C0E240000 492

Sample WT/Vol: 1000 / mL  
Work Order: DDN21103  
Dilution factor: 1  
Moisture %: NA

Date Received: 05/23/00  
Date Extracted: 05/24/00  
Date Analyzed: 05/27/00

QC Batch: 0145492

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.246	
58-89-9	gamma-BHC (Lindane)	0.230	
50-29-3	4,4'-DDT	0.392	
60-57-1	Dieldrin	0.384	
72-20-8	Endrin	0.425	
76-44-8	Heptachlor	0.229	

2E  
WATER PESTICIDE SURROGATE RECOVERY

658 45

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

GC Column(1): RTX-CLP

ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX %REC #	DCB %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	DF/S1/0137/W	73	65					0
02	PBLK	82	68					0
03	LCS	85	74					0
04	LCSD	100	89					0
05	LCS	90	103					0
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
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19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY  
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150) *35-130*  
S2 (DCB) = Decachlorobiphenyl (30-150) *10-147*

# Column to be used to flag recovery values  
\* Values outside of QC limits  
D Surrogate diluted out

658 46

SW846 8081A CHECK SAMPLE RECOVERY

Lab Name Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code QESPIT

SDG No:

Lot # COE240000

WO # DDN21102

BATCH: 0145492

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT (ug/L )	% REC	QC LIMITS REC	QUAL
gamma-BHC (Lindane)	0.250	0.193	77	49 - 137	
Heptachlor	0.250	0.190	76	57 - 124	
Aldrin	0.250	0.202	81	62 - 120	
Dieldrin	0.500	0.426	85	68 - 130	
Endrin	0.500	0.351	70	46 - 137	
4,4'-DDT	0.500	0.319	64	60 - 140	

NOTES(S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

COMMENTS:

FORM III

## SW846 8081A CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No

Lot #: C0E240000

WO #: DDN21103

BATCH: 0145492

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
gamma-BHC (Lindane)	0.250	0.230	92	49 - 137	
Heptachlor	0.250	0.229	91	57 - 124	
Aldrin	0.250	0.246	98	62 - 120	
Dieldrin	0.500	0.384	77	68 - 130	
Endrin	0.500	0.425	85	46 - 137	
4,4'-DDT	0.500	0.392	78	60 - 140	

## NOTES (S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

COMMENTS.

FORM III

4C  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.:

SAS No.: 40325 SDG No.: C0E230195

Lab Sample ID: DDN21101

Lab File ID: C-A2565

Matrix (soil/water) WATER

Extraction: (SepF/Cont/Sonc) SW3510

Sulfur Cleanup (Y/N) N

Date Extracted: 05/24/00

Date Analyzed (1): 05/27/00

Date Analyzed (2):

Time Analyzed (1): 0435

Time Analyzed (2):

Instrument ID (1): GC3

Instrument ID (2):

GC Column (1): RTX-CLP ID: 0.53 (mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	=====	=====	=====	=====
01	DF/S1/0137/W	DDK90103	05/27/00	
02	LCS	DDN21102	05/27/00	
03	LCSD	DDN21103	05/27/00	
04	LCS	DDN21102	05/31/00	
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.      SDG Number

Matrix. (soil/water) WATER

Lab Sample ID: C0E240000 492

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN21101

Date Extracted: 05/24/00

Dilution factor: 1 , ,

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
72-54-8	4,4'-DDD	0.050	U
72-55-9	4,4'-DDE	0.050	U
50-29-3	4,4'-DDT	0.050	U
60-57-1	Dieldrin	0.050	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.050	U
1031-07-8	Endosulfan sulfate	0.050	U
72-20-8	Endrin	0.050	U
7421-93-4	Endrin aldehyde	0.050	U
53494-70-5	Endrin ketone	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.10	U
8001-35-2	Toxaphene	2.0	U

FORM I

## PCB SUMMARY

## UXB INTERNATIONAL

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

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90104

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

FORM I



UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 495

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN23102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	8.49	
11096-82-5	Aroclor 1260	9.09	

UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 495

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN23103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
12674-11-2	Aroclor 1016	8.74	
11096-82-5	Aroclor 1260	9.12	

FORM I

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0137/WA/001	77	84	00
02	METHOD BLK. DDN23101	86	92	00
03	LCS DDN23102	95	100	00
04	LCSD DDN23103	96	101	00

SURROGATES

SRG01 = Tetrachloro-m-xylene

SRG02 = Decachlorobiphenyl

QC LIMITS

( 45-120)

( 24-128)

# Column to be used to flag recovery values

\* Values outside of required QC Limits

D System monitoring Compound diluted out

FORM II

## SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDN23102

, BATCH: 0145495

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Aroclor 1016	10.0	8.49	85	61 - 118	
Aroclor 1260	10.0	9.09	91	61 - 124	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   2   outside limits

COMMENTS:

FORM III

## SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIIT

SDG No:

Lot #: C0E240000

WO #: DDN23103

BATCH: 0145495

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Aroclor 1016	10.0	8.74	87	61 - 118	
Aroclor 1260	10.0	9.12	91	61 - 124	

## NOTES (S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   2   outside limits

COMMENTS:

FORM III

## SW846 8082 METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDN23101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: h-a20691.

Lot Number: C0E230195

Matrix: WATER

Extraction Method:

Date Extracted: 05/24/00

Date Analyzed(1): 05/31/00

Date Analyzed(2): N/A

Time Analyzed(1): 02:57

Time Analyzed(2): N/A

Instrument ID(1): M/N

Instrument ID(2): N/A

GC Column(1): N/A

ID: N/A

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/S1/0137/WA/001	DDK90104	05/31/00	N/A
02	CHECK SAMPLE	DDN23102 C	05/31/00	N/A
03	DUPLICATE CHECK	DDN23103 L	05/31/00	N/A
04				
05				
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16				
17				
18				
19				
20				

COMMENTS:

FORM IV

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 495

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN23101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

## HERBICIDE SUMMARY



## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90112

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0145491

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
94-75-7	2,4-D	4.0	U
93-72-1	2,4,5-TP (Silvex)	1.0	U

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: COE240000 491  
Method: SW846 8151A  
Herbicides (8151A)

Sample WT/Vol: 1000 / mL      Date Received: 05/23/00  
Work Order: DDN20102      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/26/00  
Moisture %: NA

QC Batch: 0145491

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
94-75-7	2,4-D	17.6	
93-72-1	2,4,5-TP (Silvex)	4.16	
93-76-5	2,4,5-T	4.47	

UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) WATER  
Method: SW846 8151A  
Herbicides (8151A)

Lab Sample ID: C0E240000 491

Sample WT/Vol: 1000 / mL  
Work Order: DDN20103  
Dilution factor: 1  
Moisture %: NADate Received: 05/23/00  
Date Extracted: 05/24/00  
Date Analyzed: 05/26/00

QC Batch: 0145491

Client Sample Id: DUPLICATE CHECK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
94-75-7	2,4-D	17.8	
93-72-1	2,4,5-TP (Silvex)	4.33	
93-76-5	2,4,5-T	4.57	

## SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT QESSDG:

Lot #: C0E230195

	CLIENT ID	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0137/WA/001	97	00
02	METHOD BLK. DDN20101	101	00
03	LCS DDN20102	104	00
04	LCSD DDN20103	108	00

SURROGATES

SRG01 = DCAA

QC LIMITS

( 53-119)

- # 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 #: C0E240000

WO #: DDN20102

BATCH: 0145491

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	16.0	17.6	110	46 - 124	
2,4,5-TP (Silvex)	4.00	4.16	104	53 - 127	
2,4,5-T	4.00	4.47	112	40 - 126	

## NOTES(S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 3 outside limits

COMMENTS:

FORM III

## SW846 8151A CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No.

Lot #: C0E240000

WO #: DDN20103

BATCH: 0145491

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	16.0	17.8	111	46 - 124	
2,4,5-TP (Silvex)	4.00	4.33	108	53 - 127	
2,4,5-T	4.00	4.57	114	40 - 126	

## NOTES(S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   3   outside limits

COMMENTS:

FORM III

## SW846 8151A METHOD BLANK SUMMARY

DDN20101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: a-b30063.

Lot Number: C0E230195

Matrix: WATER

Extraction Method: 8151A

Date Analyzed(1): 05/26/00

Date Extracted: 05/24/00

Date Analyzed(2): N/A

Time Analyzed(1): 18:25

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/S1/0137/WA/001	DDK90112	05/26/00	N/A
02	CHECK SAMPLE	DDN20102 C	05/26/00	N/A
03	DUPLICATE CHECK	DDN20103 L	05/26/00	N/A
04				
05				
06				
07				
08				
09				
10				
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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) WATER      Lab Sample ID: COE240000 491  
Method: SW846 8151A  
Herbicides (8151A)  
Sample WT/Vol: 1000 / mL      Date Received: 05/23/00  
Work Order: DDN20101      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/26/00  
Moisture %: NA  
QC Batch: 0145491  
Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
94-75-7	2,4-D	4.0	U
93-72-1	2,4,5-TP (Silvex)	1.0	U



## METALS SUMMARY

**STL-Pittsburgh**  
Metals Data Reporting Form

**Sample Results**

Lab Sample ID: DDK90 Client ID: DF/S1/0137/WA/001  
 Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186  
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	12.7	200	7010	N	1	ICP	5/25/00	9:00
Antimony	220.35	1.5	60.0	1.5	B	1	ICPST	5/26/00	8:52
Arsenic	189.04	2.6	10.0	6.4	B	1	ICPST	5/26/00	8:52
Barium	493.41	0.41	200	208		1	ICP	5/25/00	9:00
Beryllium	313.04	0.071	5.0	0.20	B	1	ICP	5/25/00	9:00
Cadmium	226.50	0.49	5.0	0.49	U	1	ICPST	5/26/00	8:52
Calcium	317.93	37.9	5000	38100		1	ICP	5/25/00	9:00
Chromium	267.72	1.0	10.0	10.1		1	ICPST	5/26/00	8:52
Cobalt	228.62	3.2	50.0	3.2	U	1	ICP	5/25/00	9:00
Copper	324.75	2.2	25.0	16.6	B	1	ICP	5/25/00	9:00
Iron	259.94	8.8	100	6870		1	ICP	5/25/00	9:00
Lead	220.35	1.9	3.0	22.5		1	ICPST	5/26/00	8:52
Magnesium	279.08	19.9	5000	5500		1	ICP	5/25/00	9:00
Manganese	257.61	0.87	15.0	79.8		1	ICP	5/25/00	9:00
Nickel	231.60	6.1	40.0	11.7	B	1	ICP	5/25/00	9:00
Potassium	766.49	496	5000	4140	B	1	ICP	5/25/00	9:00
Selenium	220.35	2.1	5.0	2.1	U	1	ICPST	5/26/00	8:52
Silver	328.07	0.94	10.0	0.94	U	1	ICPST	5/26/00	8:52
Sodium	589	14.5	5000	1200	B	1	ICP	5/25/00	9:00
Thallium	190.86	3.9	10.0	3.9	U	1	ICPST	5/26/00	8:52
Vanadium	292.40	1.8	50.0	13.0	B	1	ICP	5/25/00	9:00
Zinc	213.86	3.1	20.0	49.1		1	ICP	5/25/00	9:00

Comments: Lot #: C0E230195 Sample #: 1

Version 3.63 4

U Result is less than the MDL

Form 1 Equivalent

B Result is between MDL and RL

**STL-Pittsburgh**  
**Metals Data Reporting Form**

Sample Results

**Lab Sample ID:** DDK90 **Client ID:** DF/S1/0137/WA/001  
**Matrix:** Water **Units:** ug/L **Prep Date:** 5/25/00 **Prep Batch:** 0145297  
**Weight:** NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.045	0.20	0.045	U	1	CVAA	5/25/00	11:46

Comments: Lot #: C0E230195 Sample # 1

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: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

			ICB1 5/25/00 9:51 AM					
Element	WL/ Mass	Report Limit	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.0	U				

## STL-Pittsburgh

## Metals Data Reporting Form

## Initial Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00525A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	ICB1 5/25/00 7:57 AM		Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
			Found	Q										
Aluminum	308.215	200	12.7	U										
Barium	493.409	200	0.4	U										
Beryllium	313.042	5	0.1	U										
Calcium	317.933	5000	37.9	U										
Cobalt	228.616	50	3.2	U										
Copper	324.754	25	2.2	U										
Iron	259.94	100	8.8	U										
Magnesium	279.079	5000	19.9	U										
Manganese	257.61	15	0.9	U										
Nickel	231.604	40	6.1	U										
Potassium	766.491	5000	496.0	U										
Sodium	588.995	5000	14.5	U										
Vanadium	292.402	50	-2.5	B										
Zinc	213.856	20	3.1	U										

## STL-Pittsburgh

## Metals Data Reporting Form

## Initial Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00526A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	ICB1 5/26/00 7:48 AM		Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
			Found	Q										
Antimony	220.353	60	1.5	U										
Arsenic	189.042	10	2.6	U										
Cadmium	226.502	5	0.5	U										
Chromium	267.716	10	1.0	U										
Lead	220.353	3	1.9	U										
Selenium	220.353	5	2.1	U										
Silver	328.068	10	0.9	U										
Thallium	190.864	10	-3.9	B										

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/25/00 9:55 AM	CCB2 5/25/00 10:20 AM	CCB3 5/25/00 10:44 AM	CCB4 5/25/00 11:09 AM	CCB5 5/25/00 11:36 AM
			Found Q	Found Q	Found Q	Found Q	Found Q
Mercury	253.7	0.2	0.0 U	0.0 U	0.0 U	0.0 U	0.0 U

## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

			CCB6 5/25/00 11:54 AM				
Element	WL/ Mass	Report Limit	Found Q	Found Q	Found Q	Found Q	Found Q
Mercury	253.7	0.2	0.1 B				



## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00525A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/25/00 8:37 AM		CCB2 5/25/00 8:51 AM		CCB3 5/25/00 9:16 AM		Found	Q
			Found	Q	Found	Q	Found	Q		
Aluminum	308.215	200	12.7	U	12.7	U	12.7	U		
Barium	493.409	200	0.4	U	0.4	U	0.4	U		
Beryllium	313.042	5	0.3	B	0.1	B	0.4	B		
Calcium	317.933	5000	37.9	U	37.9	U	37.9	U		
Cobalt	228.616	50	3.2	U	3.2	U	3.2	U		
Copper	324.754	25	2.2	U	2.2	U	2.2	U		
Iron	259.94	100	8.8	U	8.8	U	8.8	U		
Magnesium	279.079	5000	19.9	U	19.9	U	19.9	U		
Manganese	257.61	15	0.9	U	0.9	U	0.9	U		
Nickel	231.604	40	6.1	U	6.1	U	6.1	U		
Potassium	766.491	5000	496.0	U	496.0	U	496.0	U		
Sodium	588.995	5000	14.5	U	14.5	U	14.5	U		
Vanadium	292.402	50	1.8	U	-2.3	B	1.8	U		
Zinc	213.856	20	3.1	U	3.1	U	3.1	U		

## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00526A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/26/00 8:40 AM	CCB2 5/26/00 9:13 AM			
			Found Q	Found Q	Found Q	Found Q	Found Q
Antimony	220.353	60	1.5 U	1.5 U			
Arsenic	189.042	10	2.6 U	2.6 U			
Cadmium	226.502	5	0.5 U	0.5 U			
Chromium	267.716	10	1.0 U	1.0 U			
Lead	220.353	3	1.9 U	1.9 U			
Selenium	220.353	5	2.1 U	2.1 U			
Silver	328.068	10	0.9 U	0.9 U			
Thallium	190.864	10	3.9 U	3.9 U			

**STL-Pittsburgh**  
Metals Data Reporting Form

## Preparation Blank Results

Lab Sample ID: DDLA7BMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.215	12.7	200	12.7	U	1	ICP	5/25/00	8:54
Antimony	220.353	1.5	60.0	1.5	U	1	ICPST	5/26/00	8:44
Arsenic	189.042	2.6	10.0	2.6	U	1	ICPST	5/26/00	8:44
Barium	493.409	0.41	200	0.41	U	1	ICP	5/25/00	8:54
Beryllium	313.042	0.071	5.0	-0.090	B	1	ICP	5/25/00	8:54
Cadmium	226.502	0.49	5.0	0.49	U	1	ICPST	5/26/00	8:44
Calcium	317.933	37.9	5000	37.9	U	1	ICP	5/25/00	8:54
Chromium	267.716	1.0	10.0	1.0	U	1	ICPST	5/26/00	8:44
Cobalt	228.616	3.2	50.0	3.2	U	1	ICP	5/25/00	8:54
Copper	324.754	2.2	25.0	2.2	U	1	ICP	5/25/00	8:54
Iron	259.94	8.8	100	8.8	U	1	ICP	5/25/00	8:54
Lead	220.353	1.9	3.0	1.9	U	1	ICPST	5/26/00	8:44
Magnesium	279.079	19.9	5000	19.9	U	1	ICP	5/25/00	8:54
Manganese	257.61	0.87	15.0	0.87	U	1	ICP	5/25/00	8:54
Nickel	231.604	6.1	40.0	6.1	U	1	ICP	5/25/00	8:54
Potassium	766.491	496	5000	496	U	1	ICP	5/25/00	8:54
Selenium	220.353	2.1	5.0	2.1	U	1	ICPST	5/26/00	8:44
Silver	328.068	0.94	10.0	0.94	U	1	ICPST	5/26/00	8:44
Sodium	588.995	14.5	5000	14.5	U	1	ICP	5/25/00	8:54
Thallium	190.864	3.9	10.0	3.9	U	1	ICPST	5/26/00	8:44
Vanadium	292.402	1.8	50.0	-2.50	B	1	ICP	5/25/00	8:54
Zinc	213.856	3.1	20.0	3.1	U	1	ICP	5/25/00	8:54

Comments: Lot #. C0E230195

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: DDLR3BMatrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.045	0.20	0.045	U	1	CVAA	5/25/00	11:42

Comments: Lot #: C0E230195

Version 3.63 4

U Result is less than the MDL

Form 3 Equivalent

B Result is between MDL and RL

## Metals Data Reporting Form

## Matrix Spike Sample Results

Spike Sample ID: DDK90SOriginal Sample ID: DDK90 Client ID: DF/S1/0137/WA/001SMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: 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
Aluminum	308.2	7010		9940	N	2000	146.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Antimony	220.4	1.5	B	477		500	95.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Arsenic	189.0	6.4	B	1930		2000	96.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Barium	493.4	208		2070		2000	93.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Beryllium	313.0	0.20	B	47.1		50	93.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Cadmium	226.5	0.49	U	46.9		50	93.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Calcium	317.9	38100		84300		50000	92.4	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Chromium	267.7	10.1		205		200	97.5	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Cobalt	228.6	3.2	U	468		500	93.6	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Copper	324.8	16.6	B	256		250	95.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Iron	259.9	6870		7520	NC	1000		1	1	ICP	5/25/00	9:00	5/25/00	9:07
Lead	220.4	22.5		516		500	98.6	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Magnesium	279.1	5500		53200		50000	95.4	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Manganese	257.6	79.8		549		500	93.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Nickel	231.6	11.7	B	481		500	93.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Potassium	766.5	4140	B	51800		50000	95.3	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Selenium	220.4	2.1	U	1950		2000	97.5	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Silver	328.1	0.94	U	49.5		50	99.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Sodium	589	1200	B	48800		50000	95.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Thallium	190.9	3.9	U	2080		2000	104.2	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Vanadium	292.4	13.0	B	482		500	93.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Zinc	213.9	49.1		523		500	94.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07

Comments. Lot #: C0E230195 Sample #: 1

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: DDK90S  
 Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001S  
 Matrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297  
 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	0.045	U	1.2		1	120.0	1	1	CVAA	5/25/00	11:46	5/25/00	11:48

Comments. Lot #: C0E230195 Sample #: 1

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 SA Equivalent

## STL-Pittsburgh

## Metals Data Reporting Form

## Matrix Spike Duplicate Sample Results

Spike Sample ID: DDK90DOriginal Sample ID: DDK90Client ID: DF/S1/0137/WA/001DMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: 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
Aluminum	308.2	7010	N	10400	N	2000	171.2	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Antimony	220.4	1.5	B	500		500	99.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Arsenic	189.0	6.4	B	2010		2000	100.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Barium	493.4	208		2120		2000	95.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Beryllium	313.0	0.20	B	48.7		50	97.0	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Cadmium	226.5	0.49	U	48.7		50	97.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Calcium	317.9	38100		87500		50000	98.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Chromium	267.7	10.1		216		200	102.8	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Cobalt	228.6	3.2	U	484		500	96.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Copper	324.8	16.6	B	266		250	99.6	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Iron	259.9	6870		7840	NC	1000		1	1	ICP	5/25/00	9:00	5/25/00	9:10
Lead	220.4	22.5		537		500	103.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Magnesium	279.1	5500		54400		50000	97.8	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Manganese	257.6	79.8		566		500	97.3	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Nickel	231.6	11.7	B	486		500	94.8	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Potassium	766.5	4140	B	52500		50000	96.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Selenium	220.4	2.1	U	2030		2000	101.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Silver	328.1	0.94	U	51.4		50	102.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Sodium	589	1200	B	49300		50000	96.3	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Thallium	190.9	3.9	U	2160		2000	107.9	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Vanadium	292.4	13.0	B	498		500	97.0	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Zinc	213.9	49.1		529		500	96.1	1	1	ICP	5/25/00	9:00	5/25/00	9:10

Comments: Lot # C0E230195 Sample #: 1

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: DDK90D  
 Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001D  
 Matrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297  
 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	0.045	U	1.1		1	112.0	1	1	CVAA	5/25/00	11:46	5/25/00	11:50

Comments: Lot # C0E230195 Sample #: 1

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: DDK90DMatrix Spike Sample ID: DDK90S Client ID: DF/S1/0137/WA/001DMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: 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
Aluminum	308.215	9940	N	10400	N	15.8 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Antimony	220.353	477		500		4.8 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Arsenic	189.042	1930		2010		3.7 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Barium	493.409	2070		2120		2.7 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Beryllium	313.042	47.1		48.7		3.2 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Cadmium	226.502	46.9		48.7		3.8 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Calcium	317.933	84300		87500		6.6 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Chromium	267.716	205		216		5.3 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Cobalt	228.616	468		484		3.3 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Copper	324.754	256		266		3.7 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Iron	259.94	7520	NC	7840	NC		1	1	ICP	5/25/00	9:07	5/25/00	9:10
Lead	220.353	516		537		4.3 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Magnesium	279.079	53200		54400		2.5 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Manganese	257.61	549		566		3.6 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Nickel	231.604	481		486		1.0 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Potassium	766.491	51800		52500		1.5 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Selenium	220.353	1950		2030		4.0 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Silver	328.068	49.5		51.4		3.7 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Sodium	588.995	48800		49300		1.2 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Thallium	190.864	2080		2160		3.5 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Vanadium	292.402	482		498		3.4 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Zinc	213.856	523		529		1.3 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10

Comments: Lot #: C0E230195 Sample #: 1

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

## Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDK90DMatrix Spike Sample ID: DDK90S Client ID: DF/S1/0137/WA/001DMatrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297Weight: 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	1.2		1.1		6.9 %	1	1	CVAA	5/25/00	11:48	5/25/00	11:50

Comments: Lot #: C0E230195 Sample #: 1

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: DDLA7CMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Aluminum	308.215	2000	1930	96.5		80-120	1	ICP	5/25/00	8:57
Antimony	220.353	500	496	99.3		80-120	1	ICPST	5/26/00	8:48
Arsenic	189.042	2000	1990	99.6		80-120	1	ICPST	5/26/00	8:48
Barium	493.409	2000	1930	96.6		80-120	1	ICP	5/25/00	8:57
Beryllium	313.042	50.0	48.6	97.2		80-120	1	ICP	5/25/00	8:57
Cadmium	226.502	50.0	48.8	97.6		80-120	1	ICPST	5/26/00	8:48
Calcium	317.933	50000	49100	98.3		80-120	1	ICP	5/25/00	8:57
Chromium	267.716	200	204	101.8		80-120	1	ICPST	5/26/00	8:48
Cobalt	228.616	500	482	96.4		80-120	1	ICP	5/25/00	8:57
Copper	324.754	250	242	96.7		80-120	1	ICP	5/25/00	8:57
Iron	259.94	1000	1040	103.8		80-120	1	ICP	5/25/00	8:57
Lead	220.353	500	514	102.8		80-120	1	ICPST	5/26/00	8:48
Magnesium	279.079	50000	49300	98.7		80-120	1	ICP	5/25/00	8:57
Manganese	257.61	500	490	98.1		80-120	1	ICP	5/25/00	8:57
Nickel	231.604	500	483	96.5		80-120	1	ICP	5/25/00	8:57
Potassium	766.491	50000	48500	97.0		80-120	1	ICP	5/25/00	8:57
Selenium	220.353	2000	2030	101.7		80-120	1	ICPST	5/26/00	8:48
Silver	328.068	50.0	50.9	101.9		80-120	1	ICPST	5/26/00	8:48
Sodium	588.995	50000	48900	97.9		80-120	1	ICP	5/25/00	8:57
Thallium	190.864	2000	2150	107.5		80-120	1	ICPST	5/26/00	8:48
Vanadium	292.402	500	485	97.0		80-120	1	ICP	5/25/00	8:57
Zinc	213.856	500	494	98.7		80-120	1	ICP	5/25/00	8:57

Comments: Lot #: C0E230195

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: DDL3CMatrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297Weight: 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	2.5	2.6	104.0		80-120	1	CVAA	5/25/00	11:44

## GENERAL CHEMISTRY SUMMARY

Client Sample ID: DF/S1/0137/WA/001

General Chemistry

Lot-Sample #...: COE230195-001  
Date Sampled...: 05/22/00

Work Order #...: DDK90  
Date Received...: 05/23/00

Matrix.....: WATER

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.3		No Units	SW846 9040	05/23/00	0144271
	Dilution Factor: 1		MS Run #.....: 0144116			
Cyanide, Total	ND	10.0	ug/L	SW846 9012A	05/26-05/27/00	0147147
	Dilution Factor: 1		MS Run #.....: 0147046			
Flashpoint	>200		deg F	SW846 1010	05/27/00	0148128
	Dilution Factor: 1		MS Run #.....: 0148031			
Total Sulfide	183	1.0	mg/L	MCAWW 376.1	05/26/00	0147129
	Dilution Factor: 1		MS Run #.....: 0147031			

## METHOD BLANK REPORT

## General Chemistry

Client Lot #....: C0E230195

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Cyanide, Total	ND	10.0	ug/L	SW846 9012A	05/26-05/27/00	0147147
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	05/26/00	0147129
		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 #...: C0E230195

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	100	Work Order #: DDK4K101 (85 - 115)	LCS Lot-Sample#: C0E230000-271 SW846 9040	05/23/00	0144271
		Dilution Factor: 1			
Cyanide, Total	100	Work Order #: DDR65102 (85 - 145)	LCS Lot-Sample#: C0E260000-147 SW846 9012A	05/26-05/27/00	0147147
		Dilution Factor: 1			
Flashpoint	99	Work Order #: DDW45101 (85 - 115)	LCS Lot-Sample#: C0E270000-128 SW846 1010	05/27/00	0148128
		Dilution Factor: 1			
Total Sulfide	105	Work Order #: DDR42102 (75 - 125)	LCS Lot-Sample#: C0E260000-129 MCAWW 376.1	05/26/00	0147129
		Dilution Factor: 1			

**NOTE (S) :**


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



## MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #...: COE230195

Matrix.....: WATER

Date Sampled...: 05/22/00

Date Received...: 05/24/00

PARAMETER	PERCENT RECOVERY	RPD	PREPARATION-	PREP
	RECOVERY LIMITS	RPD LIMITS	ANALYSIS DATE	BATCH #
Cyanide, Total		WO#: DDM11105-MS/DDM11106-MSD	MS Lot-Sample #: COE240195-001	
102	(75 - 125)	SW846 9012A	05/26-05/27/00	0147147
101	(75 - 125) 0.95 (0-20)	SW846 9012A	05/26-05/27/00	0147147
	Dilution Factor: 1			
	MS Run #.....: 0147046			

Total Sulfide		WO#: DDNNK10G-MS/DDNNK10H-MSD	MS Lot-Sample #: COE250134-001
93	(75 - 125)	MCAWW 376.1	05/26/00 0147129
101	(75 - 125) 8.0 (0-20)	MCAWW 376.1	05/26/00 0147129
	Dilution Factor: 1		
	MS Run #.....: 0147031		

**NOTE(S):**

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

Client Lot #....: C0E230195	Work Order #....: DDK1J-SMP	Matrix.....: WATER
	DDK1J-DUP	
Date Sampled....: 05/22/00	Date Received...: 05/23/00	

93

## General Chemistry

Matrix.....: WATER

Date Received..: 05/23/00

Dilution Factor: 1

Prep Date.....: 0148031

**Analysis Date..:**

Prep Batch #...:

**GC/MS VOLATILE DATA**

**GC/MS VOLATILE  
QC SUMMARY**

## SW846 8260B SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0137/WA/001	98	103	99	98	00
02	METHOD BLK. DDL68101	103	103	100	100	00
03	LCS DDL68102	103	101	100	102	00
04	DF/S1/0137/WA/001 D	105	101	102	104	00
05	DF/S1/0137/WA/001 S	104	101	102	102	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

658 98

## SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDL68102

BATCH: 0145157

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50.0	54.4	109	65 - 119	
Trichloroethene	50.0	47.7	95	80 - 122	
Benzene	50.0	49.2	98	79 - 116	
Toluene	50.0	50.0	100	76 - 119	
Chlorobenzene	50.0	49.2	98	81 - 115	

NOTES(S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 5 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/S1/0137/WA/001

Lot #: C0E230195

WO #: DDK90113

BATCH: 0145157

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	MS CONCENT. (ug/L )	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
1,1-Dichloroethene	50.0	ND	53.5	107	57 - 138	
Trichloroethene	50.0	ND	49.9	100	58 - 141	
Benzene	50.0	ND	51.2	102	73 - 123	
Toluene	50.0	ND	50.2	100	67 - 129	
Chlorobenzene	50.0	ND	49.3	99	70 - 122	

## 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   5   outside limits

COMMENTS:

FORM III



658 100

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/S1/0137/WA/001

Lot #: C0E230195

WO #: DDK90114

BATCH: 0145157

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD %	%	QC LIMITS		QUAL
	(ug/L )	(ug/L )	REC	RPD	RPD	REC	
1,1-Dichloroethene	50.0	55.9	112	4.5	20	57- 138	
Trichloroethene	50.0	49.0	98	1.8	20	58- 141	
Benzene	50.0	50.1	100	2.0	20	73- 123	
Toluene	50.0	50.2	100	0.17	20	67- 129	
Chlorobenzene	50.0	48.9	98	0.81	20	70- 122	

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:

FORM III

## SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDL68101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: wb50524.d

Lot Number: C0E230195

Date Analyzed: 05/24/00

Time Analyzed: 07:25

Matrix: WATER

Date Extracted: 05/24/00

GC Column: HP624 ID: .20

Extraction Method: 5030

Instrument ID: HP5

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/S1/0137/WA/001	DDK90101	5052404.d	05/24/00	09:03
02	DF/S1/0137/WA/001	DDK90113 S	5052406.d	05/24/00	09:53
03	DF/S1/0137/WA/001	DDK90114 D	5052407.d	05/24/00	10:18
04	CHECK SAMPLE	DDL68102 C	5052402.d	05/24/00	08:14
05					
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

658 102

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 50515D

Lab File ID: BF50515

BFB Injection Date: 05/15/00

Instrument ID: HP5

BFB Injection Time: 0523

GC Column: DB624 20M ID: 0.20 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.5 ( 0.6)1
174	50.0 - 100.0% of mass 95	70.0
175	5.0 - 9.0% of mass 174	4.9 ( 7.0)1
176	95.0 - 101.0% of mass 174	67.0 ( 95.7)1
177	5.0 - 9.0% of mass 176	4.4 ( 6.6)2
1-Value is % mass 174		2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	VSTD50	3C50515	05/15/00	0809
02	VSTD5	VSTD5	1A50515	05/15/00	0845
03	VSTD20	VSTD20	1B50515	05/15/00	0909
04	VSTD100	VSTD100	1D50515	05/15/00	0934
05	VSTD200	VSTD200	1E50515	05/15/00	0959
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

Lab File ID: BF50524

BFB Injection Date: 05/24/00

Instrument ID: HP5

BFB Injection Time: 0625

GC Column: DB624 20M ID: 0.20 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.0
75	30.0 - 60.0% of mass 95	47.1
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	0.5 ( 0.6)1
174	50.0 - 100.0% of mass 95	80.8
175	5.0 - 9.0% of mass 174	5.8 ( 7.2)1
176	95.0 - 101.0% of mass 174	77.2 ( 95.6)1
177	5.0 - 9.0% of mass 176	5.1 ( 6.6)2

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	VSTD50	CC50524	05/24/00	0646
02	INTRA-LAB BL	DDL68101	WB50524	05/24/00	0725
03	INTRA-LAB CH	DDL68102	5052402	05/24/00	0814
04	DF/S1/0137/W	DDK90101	5052404	05/24/00	0903
05	DF/S1/0137/W	DDK90113	5052406	05/24/00	0953
06	DF/S1/0137/W	DDK90114	5052407	05/24/00	1018
07					
08					
09					
10					
11					
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.: C0E230195

Lab File ID (Standard): CC50524

Date Analyzed: 05/24/00

Instrument ID: HP5

Time Analyzed: 0646

GC Column: DB 624

ID: 0.20 (mm)

Heated Purge: (Y/N) N

	IS1 (CBZ)	RT #	IS2 (DCB)	RT #	IS3	RT #
	AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	152760	9.97	233429	12.28	655063	6.87
UPPER LIMIT	305520	10.17	466858	12.48	1310126	7.07
LOWER LIMIT	76380	9.77	116714	12.08	327532	6.67
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	149766	9.97	215588	12.27	638649	6.88
02 INTRA-LAB CH	145182	9.97	214121	12.28	618603	6.89
03 DF/S1/0137/W	143289	9.97	199650	12.28	622463	6.89
04 DF/S1/0137/W	141881	9.97	219399	12.28	620339	6.88
05 DF/S1/0137/W	144401	9.97	218281	12.28	618101	6.89
06						
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) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/23/00

Work Order: DDK90101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
67-64-1	Acetone	2.1	J
71-43-2	Benzene	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	10	U
78-93-3	2-Butanone	20	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	U
75-34-3	1,1-Dichloroethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	20	U
75-09-2	Methylene chloride	5.0	U
108-10-1	4-Methyl-2-pentanone	20	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U

## UXB INTERNATIONAL

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001

Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/23/00

Work Order: DDK90101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

QC Batch: 0145157

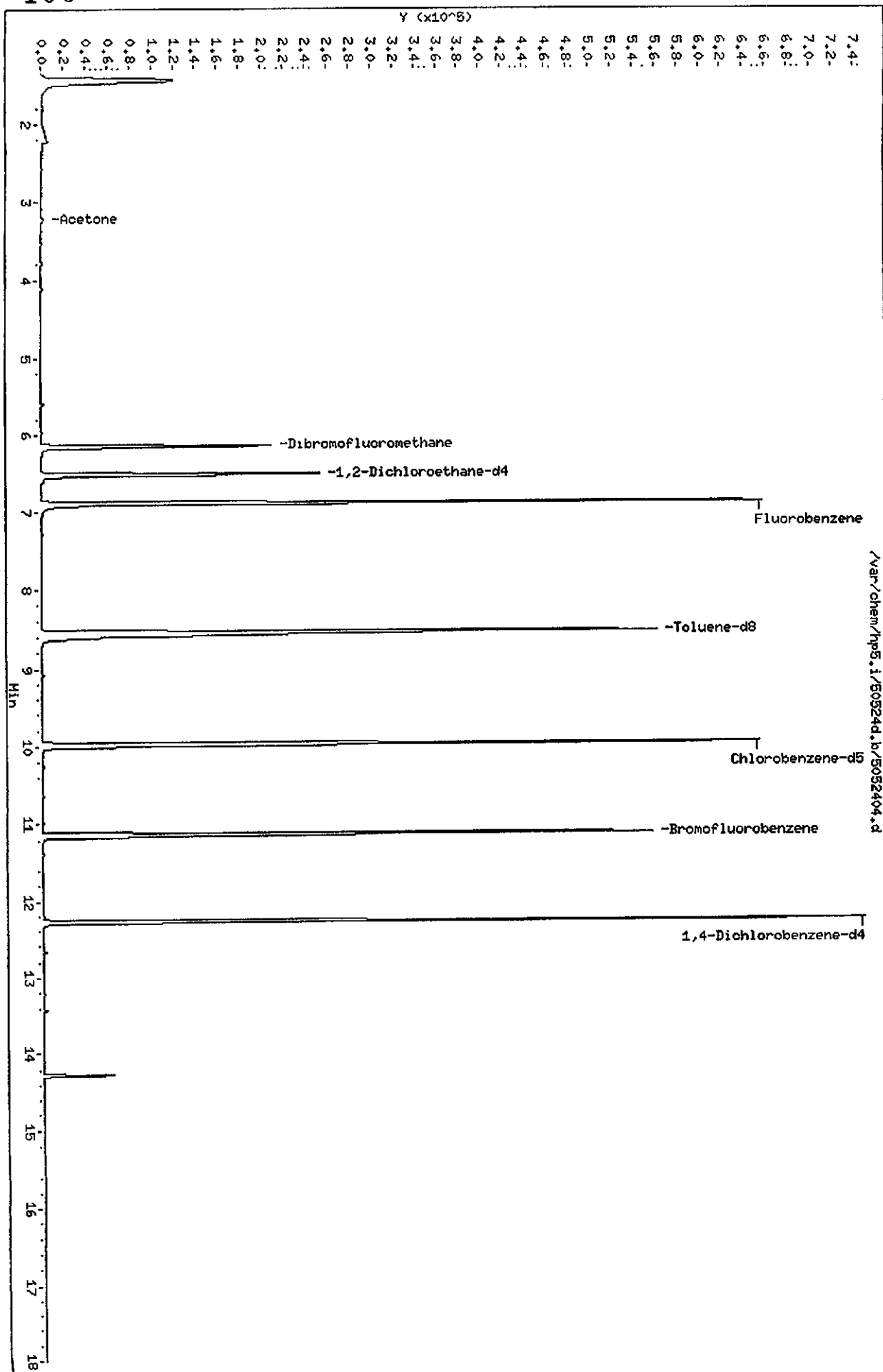
Client Sample Id: DF/S1/0137/WA/001

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	10	U
1330-20-7	Xylenes (total)	5.0	U



Data File: /var/chem/hp5.1/50524d.b/5052404.d  
Date: 24-MAY-2000 09:03  
Client ID: DF/SL/0137/HA/004  
Sample Info: COE230195-001 SWL  
Purge Volume: 5.0  
Column phase: DB 624

Instrument: hp5.1  
Operator: 007062  
Column diameter: 0.20



Data File: /var/chem/hp5.i/50524d.b/5052404.d  
Report Date: 24-May-2000 09:43

Page 1

## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052404.d  
Lab Smp Id: DDK90101 Client Smp ID: DF/S1/0137/WA/001  
Inj Date : 24-MAY-2000 09:03  
Operator : 007062 Inst ID: hp5.i  
Smp Info : C0E230195-001 5ML  
Misc Info : ddk90101,50524d.b,8260bh2o.m,tcl.sub  
Comment :  
Method : /var/chem/hp5.i/50524d.b/8260bh2o.m  
Meth Date : 24-May-2000 07:05 h Quant Type: ISTD  
Cal Date : 15-MAY-2000 08:45 Cal File: 1a50515.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.40  
Processing Host: hpuxcs21

KLG  
5/24/00

Compound Sublist: tcl.sub

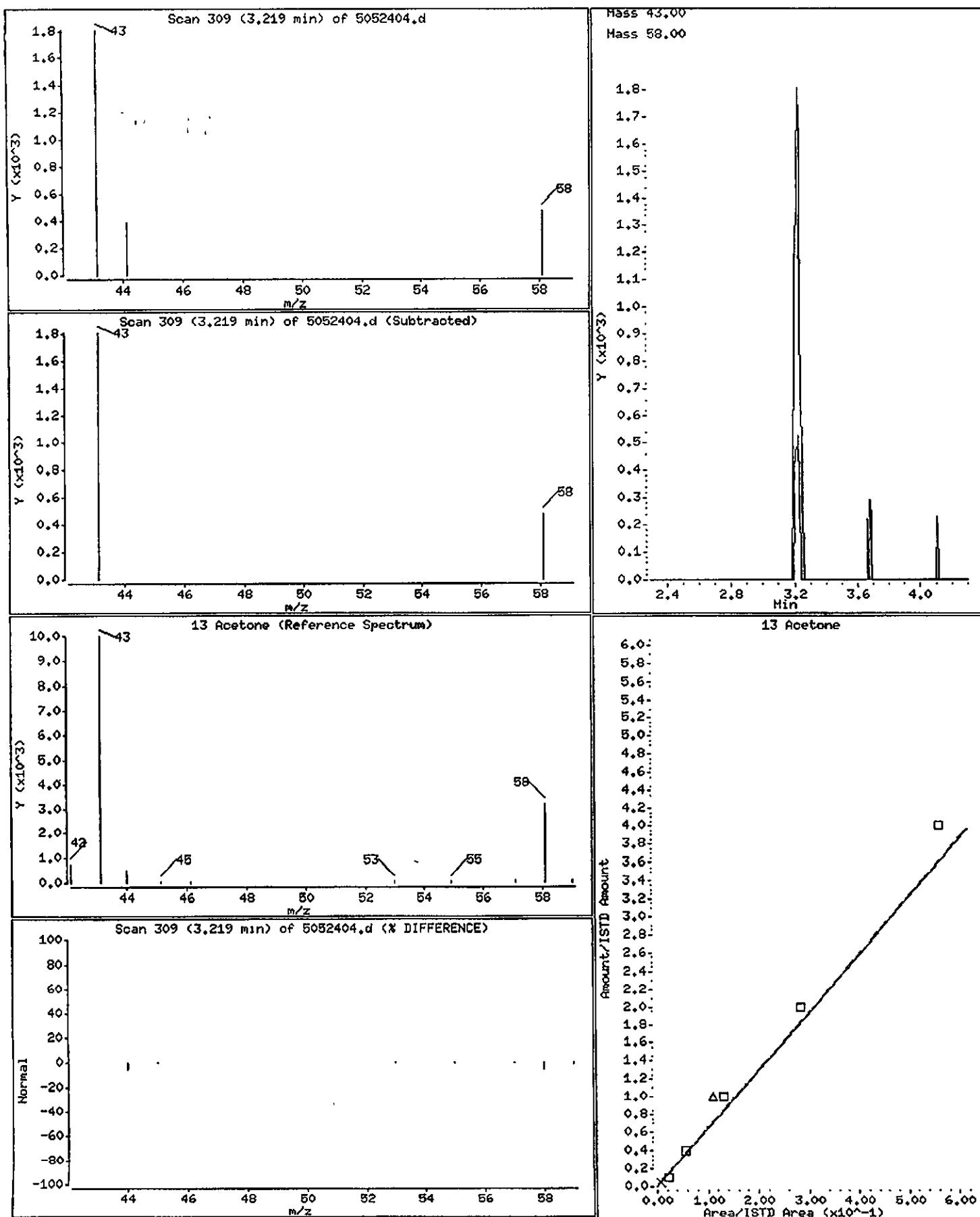
Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
* 46 Fluorobenzene	96	6.894	6.868	(1.000)	622463		
* 69 Chlorobenzene-d5	119	9.972	9.971	(1.000)	143289		
* 92 1,4-Dichlorobenzene-d4	152	12.278	12.282	(1.000)	199650		
\$ 39 Dibromofluoromethane	113	6.139	6.132	(0.891)	132563	244.428	48.88
\$ 43 1,2-Dichloroethane-d4	65	6.498	6.491	(0.943)	178113	246.239	49.25
\$ 59 Toluene-d8	98	8.542	8.529	(0.857)	596131	256.619	51.32
\$ 80 Bromofluorobenzene	95	11.134	11.145	(1.117)	217121	248.498	49.70
1 Dichlorodifluoromethane	85.00	Compound Not Detected.					
22 Acrylonitrile	53.00	Compound Not Detected.					
44 Isobutanol	41.00	Compound Not Detected.					
2 Chloromethane	50.00	Compound Not Detected.					
3 Vinyl Chloride	62.00	Compound Not Detected.					
4 Bromomethane	94.00	Compound Not Detected.					
5 Chloroethane	64.00	Compound Not Detected.					
6 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 1,1-Dichloroethene	96.00	Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76.00				Compound Not Detected		
13 Acetone	43	3 219	3.303	(0.467)	4063	10 4161	2.083
14 Iodomethane	142.00				Compound Not Detected.		
18 Methylene Chloride	84.00				Compound Not Detected		
19 trans-1,2-Dichloroethene	96.00				Compound Not Detected		
20 Methyl tert-butyl ether	73.00				Compound Not Detected.		
23 Hexane	57.00				Compound Not Detected.		
24 1,1-Dichloroethane	63.00				Compound Not Detected.		
28 cis-1,2-dichloroethene	96.00				Compound Not Detected.		
M 29 1,2-Dichloroethene (total)	96.00				Compound Not Detected.		
31 2-Butanone	43.00				Compound Not Detected.		
35 Tetrahydrofuran	42.00				Compound Not Detected.		
37 Chloroform	83.00				Compound Not Detected.		
38 1,1,1-Trichloroethane	97.00				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.		
49 1,2-Dichloropropane	63 00				Compound Not Detected.		
50 Dibromomethane	93.00				Compound Not Detected.		
53 Bromodichloromethane	83 00				Compound Not Detected		
57 cis-1,3-Dichloropropene	75.00				Compound Not Detected.		
58 4-Methyl-2-Pentanone	43.00				Compound Not Detected		
60 Toluene	91.00				Compound Not Detected.		
61 trans-1,3-Dichloropropene	75.00				Compound Not Detected		
62 Ethyl methacrylate	69.00				Compound Not Detected.		
64 1,1,2-Trichloroethane	97 00				Compound Not Detected.		
65 Tetrachloroethene	164.00				Compound Not Detected.		
66 2-Hexanone	43.00				Compound Not Detected		
67 Dibromochloromethane	129 00				Compound Not Detected.		
68 1,2-Dibromoethane	107.00				Compound Not Detected.		
70 Chlorobenzene	112.00				Compound Not Detected.		
72 Ethylbenzene	106.00				Compound Not Detected.		
73 m + p-Xylene	106.00				Compound Not Detected.		
74 Xylene-o	106 00				Compound Not Detected.		
M 75 Xylenes (total)	106.00				Compound Not Detected.		
76 Styrene	104 00				Compound Not Detected.		
77 Bromoform	173.00				Compound Not Detected.		
83 1,1,2,2-Tetrachloroethane	83.00				Compound Not Detected		
84 1,2,3-Trichloropropane	110.00				Compound Not Detected		
91 1,3-Dichlorobenzene	146 00				Compound Not Detected.		
93 1,4-Dichlorobenzene	146.00				Compound Not Detected.		
95 1,2-Dichlorobenzene	146.00				Compound Not Detected.		
78 Isopropylbenzene	105.00				Compound Not Detected.		
99 Naphthalene	128.00				Compound Not Detected.		

## 13 Acetone



**GC/MS VOLATILE  
CALIBRATION DATA**

## VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 50515D

Instrument ID: HP5

Calibration Date(s): 05/15/00 05/15/00

Heated Purge: (Y/N) N

Calibration Time(s): 0809 0959

GC Column: DB 624 ID: 0.18 (mm)

LAB FILE ID:		RRF5 =1A50515		RRF20 =1B50515			
RRF50 =3C50515		RRF100=1D50515		RRF200=1E50515			
COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Dichlorodifluoromethane	0.163	0.170	0.170	0.208	0.203	0.183	11.6
Chloromethane	* 0.210	0.208	0.215	0.255	0.253	0.228	10.3*
Vinyl Chloride	0.207	0.218	0.222	0.269	0.262	0.236	11.9
Bromomethane	0.039	0.033	0.027	0.041	0.041	0.036	16.9
Chloroethane	0.023	0.038	0.034	0.042	0.037	0.035	21.2
Trichlorofluoromethane	0.057	0.064	0.058	0.074	0.052	0.061	13.6
1,1-Dichloroethene	0.219	0.215	0.220	0.268	0.261	0.237	10.9
Methylene Chloride	0.260	0.229	0.240	0.269	0.282	0.256	8.4
trans-1,2-Dichloroethene	0.224	0.227	0.224	0.281	0.270	0.245	11.4
1,1-Dichloroethane	* 0.373	0.379	0.383	0.472	0.441	0.410	10.8*
cis-1,2-dichloroethene	0.227	0.232	0.232	0.291	0.279	0.252	12.1
Chloroform	0.353	0.370	0.366	0.453	0.446	0.398	12.0
Bromochloromethane	0.115	0.108	0.107	0.133	0.128	0.118	9.8
1,1,1-Trichloroethane	0.328	0.339	0.341	0.436	0.428	0.374	14.1
Carbon Tetrachloride	0.257	0.280	0.288	0.373	0.366	0.313	17.0
1,2-Dichloroethane	0.305	0.322	0.318	0.396	0.393	0.347	12.7
Benzene	0.893	0.911	0.908	1.106	1.044	0.972	9.9
Trichloroethene	0.226	0.229	0.233	0.286	0.272	0.249	11.1
1,2-Dichloropropane	0.210	0.213	0.215	0.262	0.260	0.232	11.3
Bromodichloromethane	0.223	0.256	0.267	0.336	0.334	0.283	17.6
cis-1,3-Dichloropropene	0.312	0.356	0.364	0.448	0.440	0.384	15.1
Toluene	4.245	4.358	4.244	5.167	5.056	4.614	9.9
trans-1,3-Dichloropropene	1.261	1.458	1.480	1.847	1.848	1.579	16.4
1,1,2-Trichloroethane	0.861	0.858	0.848	1.034	1.019	0.924	10.2
Tetrachloroethene	0.802	0.810	0.817	0.998	0.974	0.880	11.0
Dibromochloromethane	0.680	0.782	0.840	1.085	1.088	0.895	20.5
Chlorobenzene	* 2.756	2.768	2.760	3.332	3.225	2.968	9.6*
Ethylbenzene	1.675	1.600	1.584	1.902	1.862	1.725	8.6
Styrene	2.751	2.822	2.944	3.603	3.694	3.163	14.2
Bromoform	* 0.396	0.475	0.537	0.721	0.722	0.570	25.8*
1,1,2,2-Tetrachloroethane	* 0.738	0.829	0.774	0.958	0.912	0.842	10.9*
1,3-Dichlorobenzene	1.313	1.372	1.342	1.604	1.539	1.434	9.0
1,4-Dichlorobenzene	1.379	1.369	1.340	1.604	1.561	1.451	8.4
1,2-Dichlorobenzene	1.273	1.295	1.280	1.525	1.485	1.372	9.0
Dibromomethane	0.125	0.128	0.129	0.160	0.156	0.140	12.2
1,2-Dibromoethane	0.830	0.874	0.871	1.075	1.061	0.942	12.3
1,1,1,2-Tetrachloroethane	0.808	0.874	0.892	1.117	1.081	0.954	14.3

\* 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.: 50515D

Instrument ID: HP5

Calibration Date(s): 05/15/00 05/15/00

Heated Purge: (Y/N) N

Calibration Time(s): 0809 0959

GC Column: DB 624 ID: 0.18 (mm)

LAB FILE ID:		RRF5 =1A50515		RRF20 =1B50515			
RRF50 =3C50515		RRF100=1D50515		RRF200=1E50515			
COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
1,2,3-Trichloropropane	0.248	0.278	0.264	0.320	0.296	0.281	10.0
1,2-Dibromo-3-chloropropane	0.093	0.113	0.120	0.156	0.161	0.129	22.7
2,2-Dichloropropane	0.324	0.340	0.346	0.441	0.437	0.378	14.9
1,1-Dichloropropene	0.299	0.304	0.300	0.378	0.365	0.329	11.8
1,3-Dichloropropane	1.495	1.558	1.528	1.884	1.843	1.662	11.2
n-Propylbenzene	0.815	0.841	0.816	0.988	0.939	0.880	9.0
Bromobenzene	0.732	0.787	0.760	0.908	0.835	0.804	8.6
1,3,5-Trimethylbenzene	2.132	2.251	2.186	2.754	2.678	2.400	12.2
2-Chlorotoluene	0.671	0.725	0.690	0.838	0.789	0.743	9.4
4-Chlorotoluene	0.708	0.722	0.687	0.842	0.824	0.757	9.4
tert-Butylbenzene	2.106	2.112	2.067	2.451	2.357	2.219	7.8
1,2,4-Trimethylbenzene	2.129	2.176	2.092	2.626	2.578	2.320	11.2
sec-Butylbenzene	3.126	3.125	3.036	3.603	3.471	3.272	7.6
4-Isopropyltoluene	2.349	2.328	2.306	2.776	2.752	2.502	9.6
n-Butylbenzene	2.227	2.185	2.179	2.738	2.718	2.409	12.1
1,2,4-Trichlorobenzene	0.750	0.541	0.576	0.667	0.730	0.653	14.1
Hexachlorobutadiene	0.664	0.462	0.483	0.558	0.574	0.548	14.6
Naphthalene	1.490	1.136	1.178	1.304	1.458	1.313	12.1
1,2,3-Trichlorobenzene	0.816	0.414	0.449	0.474	0.542	0.539	30.0
Acetone	0.223	0.146	0.131	0.142	0.141	0.157	23.9
Carbon Disulfide	0.470	0.625	0.792	0.798	0.804	0.698	21.2
2-Butanone	0.450	0.230	0.193	0.201	0.198	0.254	43.3
4-Methyl-2-Pentanone	1.307	1.240	1.211	1.408	1.429	1.319	7.4
2-Hexanone	0.900	0.890	0.852	1.004	0.982	0.926	7.0
Methyl tert-butyl ether	0.435	0.641	0.691	0.815	0.814	0.679	23.0
Isopropylbenzene	4.579	4.517	4.547	5.493	5.369	4.901	9.9
1,2-Dichloroethene (total)	0.226	0.230	0.228	0.286	0.275	0.249	11.7
Xylenes (total)	1.774	1.716	1.765	2.126	2.199	1.916	11.9
Dibromofluoromethane	0.213	0.217	0.217	0.218	0.223	0.218	1.6
1,2-Dichloroethane-d4	0.304	0.288	0.279	0.287	0.295	0.291	3.2
Toluene-d8	4.193	4.068	3.971	3.940	4.093	4.053	2.5
Bromofluorobenzene	1.609	1.479	1.494	1.498	1.541	1.524	3.5

\* 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: hp5.i  
Lab File ID: 1e50515.d  
Analysis Type: WATER

Injection Date: 15-MAY-2000 09:59  
Lab Sample ID: vstd200  
Method File: /var/chem/hp5.i/50515d.b/8260bh2

COMPOUND	%RSD
Xylenes (total)	11.9
1,2-Dichloroethene (total)	11.7
Dichlorodifluoromethane	11.6
Chloromethane	10.3
Vinyl Chloride	11.9
Bromomethane	16.9
Chloroethane	21.2
Trichlorofluoromethane	13.6
1,1-Dichloroethene	10.9
Acetone	23.9
Carbon Disulfide	21.2
Methylene Chloride	8.4
trans-1,2-Dichloroethene	11.4
Methyl tert-butyl ether	23.0
1,1-Dichloroethane	10.8
2,2-Dichloropropane	14.9
cis-1,2-dichloroethene	12.1
2-Butanone	43.3
Bromochloromethane	9.8
Chloroform	12.0
1,1,1-Trichloroethane	14.1
Dibromofluoromethane	1.6
Carbon Tetrachloride	17.0
1,1 Dichloropropene	11.8
1,2-Dichloroethane d4	3.2
Benzene	9.9
1,2-Dichloroethane	12.7
Trichloroethene	11.1
1,2-Dichloropropane	11.3
Dibromomethane	12.2
Bromodichloromethane	17.6
cis-1,3 Dichloropropene	15.1
4-Methyl-2-Pentanone	7.4
Toluene-d8	2.5
Toluene	9.9
trans-1,3-Dichloropropene	16.4
1,1,2-Trichloroethane	10.2
Tetrachloroethene	11.0
1,3-Dichloropropane	11.2



## INITIAL CALIBRATION REPORT

Instrument ID: hp5.1  
Lab File ID: 1e50515.d  
Analysis Type: WATERInjection Date: 15-MAY-2000 09:59  
Lab Sample ID: vstd200  
Method File: /var/chem/hp5.1/50515d.b/8260bh2

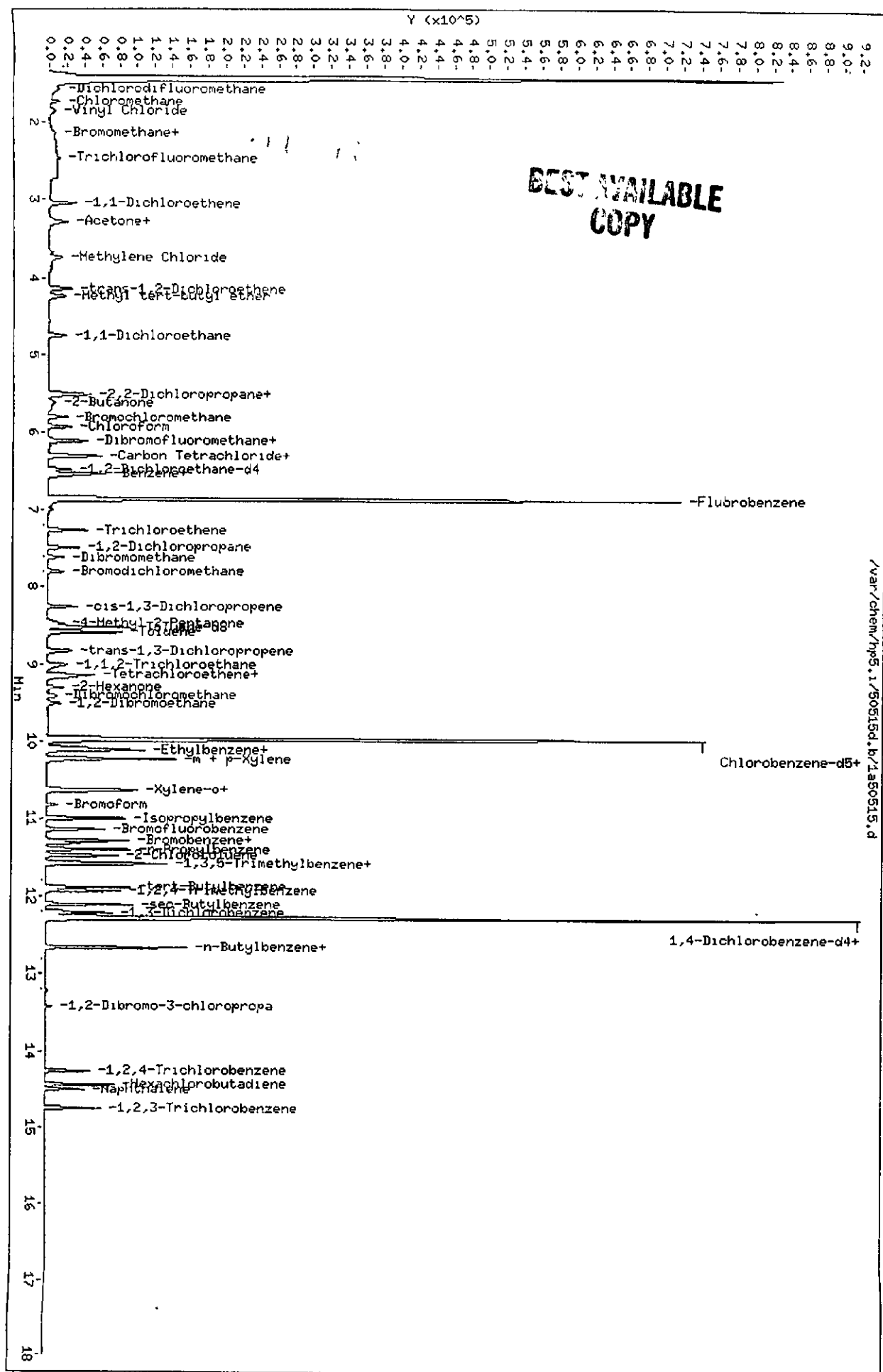
COMPOUND	%RSD
2-Hexanone	7.0
Dibromochloromethane	20.5
1,2-Dibromoethane	12.3
Chlorobenzene	9.6
Ethylbenzene	8.6
1,1,1,2-Tetrachloroethane	14.3
m + p-Xylene	10.4
Xylene-o	11.9
Styrene	14.2
Bromoform	25.8
Isopropylbenzene	9.9
Bromofluorobenzene	3.5
Bromobenzene	8.6
1,1,1,2,2-Pentachloroethane	10.9
1,2,3-Trichloropropane	10.0
n-Propylbenzene	9.0
2-Chlorotoluene	9.4
1,3,5-Trimethylbenzene	12.2
4-Chlorotoluene	9.4
tert-Butylbenzene	7.8
1,2,4-Trimethylbenzene	11.2
sec-Butylbenzene	7.6
1,3-Dichlorobenzene	9.0
4-Isopropyltoluene	9.6
1,4-Dichlorobenzene	8.4
n-Butylbenzene	12.1
1,2-Dichlorobenzene	9.0
1,2-Dibromo-3-chloropropane	22.7
1,2,4-Trichlorobenzene	14.1
Hexachlorobutadiene	14.6
Naphthalene	12.1
1,2,3-Trichlorobenzene	30.0

The average of all %RSD's in the initial calibration is 12.7

Data File: /var/chem/hp5.1/50515d.b/1a50515.d  
Date: 15-MAY-2000 08:45

Client ID: vstd5  
Sample Info: VSTD5 SHL  
Purge Volume: 5.0  
Column phase: DB 624

Instrument: hp5.1  
Operator: 10099  
Column diameter: 0.18



Data File: /var/chem/hp5.1/50515d.b/1a50515.d  
Report Date: 15-May-2000 09:52

## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.1/50515d.b/1a50515.d  
Lab Smp Id: vstd5 Client Smp ID: vstd5  
Inj Date : 15-MAY-2000 08:45  
Operator : 10099 Inst ID: hp5.1  
Smp Info : VSTD5 SML  
Misc Info : vstd5,50515d.b,8260bh2o.m,3-dwlist.sub  
Comment :  
Method : /var/chem/hp5.1/50515d.b/8260bh2o.m  
Meth Date : 15-May-2000 09:51 h Quant Type: ISTD  
Cal Date : 15-MAY-2000 08:45 Cal File: 1a50515.d  
Als bottle: 6 Calibration Sample, Level: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
Target Version: 3.40  
Processing Host: hpuxcs21

*KLG*  
*5/15/00*

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

						AMOUNTS	
QUANT SIG						CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	( ng)	( ng)
=====	=====	==	=====	=====	=====	=====	=====
* 46 Fluorobenzene	96	6.861	6.861	(1.000)	650562		
* 69 Chlorobenzene-d5	119	9.963	9.963	(1.000)	151194		
* 92 1,4-Dichlorobenzene-d4	152	12.275	12.275	(1.000)	228984		
\$ 39 Dibromofluoromethane	113	6.119	6.119	(0.892)	13879	25.0000	24.77
\$ 43 1,2-Dichloroethane-d4	65	6.478	6.478	(0.944)	19749	25.0000	26.04
\$ 59 Toluene-d8	98	8.522	8.522	(0.855)	63398	25.0000	25.68
\$ 80 Bromofluorobenzene	95	11.138	11.138	(1.118)	24332	25.0000	25.92
1 Dichlorodifluoromethane	85	1.580	1.580	(0.230)	10583	25.0000	24.48
2 Chloromethane	50	1.733	1.733	(0.253)	13690	25.0000	24.72
3 Vinyl Chloride	62	1.860	1.860	(0.271)	13481	25.0000	24.12
4 Bromomethane	94	2.140	2.140	(0.312)	2534	25.0000	29.48
5 Chloroethane	64	2.274	2.274	(0.331)	1478	25.0000	19.94
6 Trichlorofluoromethane	101	2.469	2.469	(0.360)	3693	25.0000	24.72
12 1,1-Dichloroethene	96	3.047	3.047	(0.444)	14236	25.0000	24.94
13 Acetone	43	3.266	3.266	(0.476)	14501	25.0000	31.47
15 Carbon Disulfide	76	3.284	3.284	(0.479)	30578	25.0000	18.61

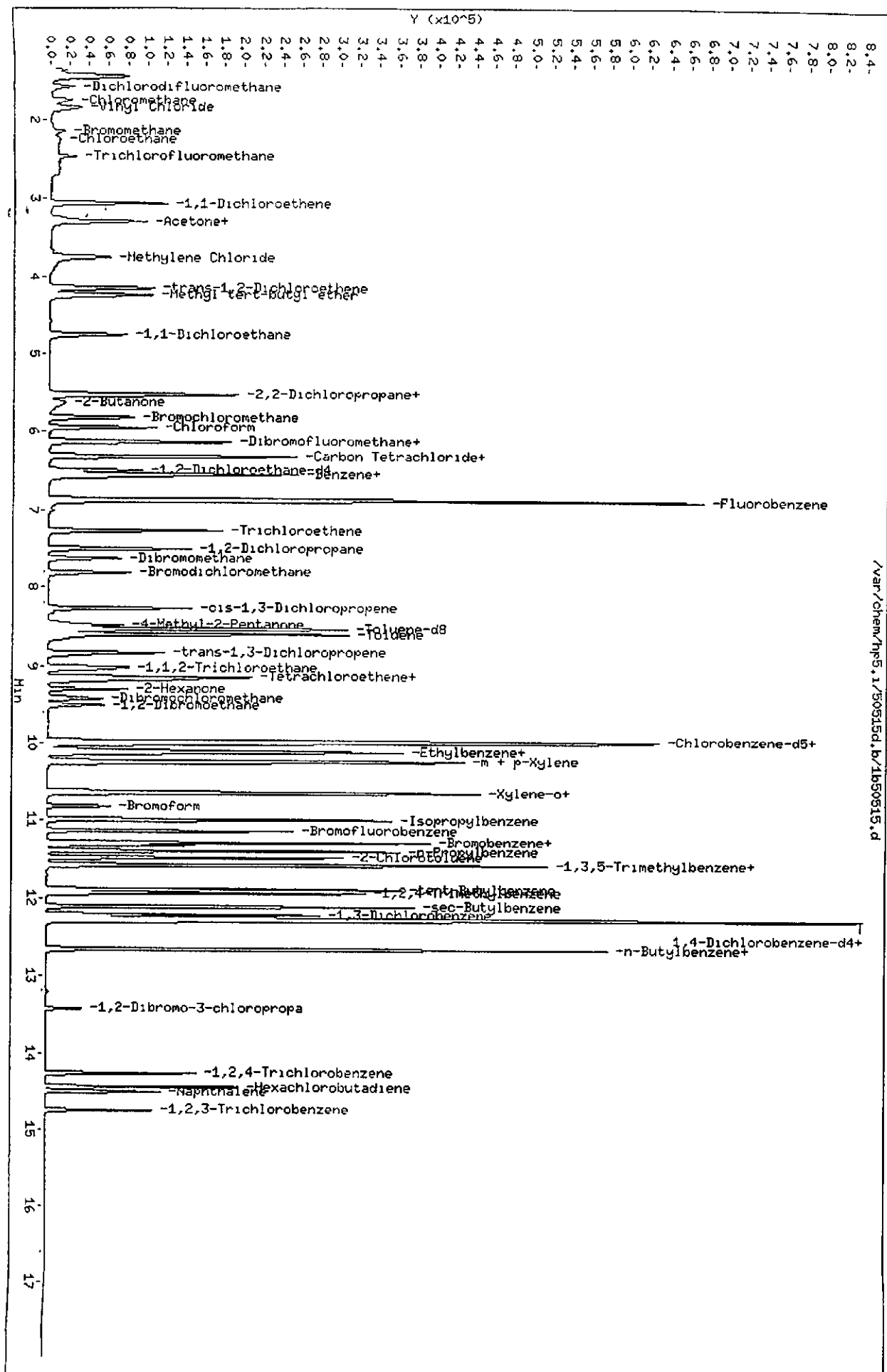
Data File: /var/chem/hp5.i/50515d.b/1a50515.d  
Report Date: 15-May-2000 09:52

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( ng)	ON COL ( ng)
18 Methylene Chloride	84	3.740	3.740	(0.545)	16946	25.0000	26.02
19 trans-1,2-Dichloroethene	96	4.142	4.142	(0.604)	14599	25.0000	25.04
20 Methyl tert-butyl ether	73	4.233	4.233	(0.617)	28297	25.0000	19.32
24 1,1-Dichloroethane	63	4.750	4.750	(0.692)	24258	25.0000	24.66
27 2,2-Dichloropropane	77	5.504	5.504	(0.802)	21114	25.0000	24.20
28 cis-1,2-dichloroethene	96	5.516	5.516	(0.804)	14754	25.0000	24.71
31 2-Butanone	43	5.626	5.626	(0.820)	29243	25.0000	34.96
30 Bromochloromethane	128	5.808	5.808	(0.847)	7479	25.0000	25.87
37 Chloroform	83	5.936	5.936	(0.865)	22993	25.0000	24.56
38 1,1,1-Trichloroethane	97	6.107	6.107	(0.890)	21371	25.0000	24.52
41 Carbon Tetrachloride	117	6.301	6.301	(0.918)	16745	25.0000	23.58
40 1,1-Dichloropropene	75	6.307	6.307	(0.919)	19482	25.0000	24.98
42 Benzene	78	6.532	6.532	(0.952)	58126	25.0000	24.80
45 1,2-Dichloroethane	62	6.569	6.569	(0.957)	19874	25.0000	24.51
47 Trichloroethene	130	7.262	7.262	(1.059)	14733	25.0000	24.65
49 1,2-Dichloropropane	63	7.494	7.494	(1.092)	13689	25.0000	24.74
50 Dibromomethane	93	7.609	7.609	(1.109)	8163	25.0000	24.69
53 Bromodichloromethane	83	7.798	7.798	(1.137)	14519	25.0000	22.76
57 cis-1,3-Dichloropropene	75	8.260	8.260	(1.204)	20305	25.0000	23.08
58 4-Methyl 2-Pentanone	43	8.479	8.479	(0.851)	19766	25.0000	25.96
60 Toluene	91	8.589	8.589	(0.862)	64189	25.0000	25.00
61 trans-1,3-Dichloropropene	75	8.826	8.826	(0.886)	19071	25.0000	23.01
64 1,1,2-Trichloroethane	97	9.014	9.014	(0.905)	13018	25.0000	25.20
65 Tetrachloroethene	164	9.136	9.136	(0.917)	12130	25.0000	24.78
67 Dibromochloromethane	129	9.404	9.404	(0.944)	10287	25.0000	22.38
63 1,3-Dichloropropane	76	9.167	9.167	(0.920)	22608	25.0000	24.73
66 2-Hexanone	43	9.294	9.294	(0.933)	13605	25.0000	25.68
68 1,2-Dibromoethane	107	9.495	9.495	(0.953)	12551	25.0000	24.40
70 Chlorobenzene	112	9.988	9.988	(1.002)	41673	25.0000	24.98
72 Ethylbenzene	106	10.103	10.103	(1.014)	25325	25.0000	25.69
71 1,1,1,2-Tetrachloroethane	131	10.085	10.085	(1.012)	12209	25.0000	23.76
73 m + p-Xylene	106	10.219	10.219	(1.026)	57697	50.0000	51.43
74 Xylene-o	106	10.614	10.614	(1.065)	26824	25.0000	25.06
76 Styrene	104	10.633	10.633	(1.067)	41599	25.0000	24.16
77 Bromoform	173	10.815	10.815	(1.085)	5982	25.0000	21.21
78 Isopropylbenzene	105	10.985	10.985	(1.103)	69238	25.0000	25.09
79 Bromobenzene	156	11.277	11.277	(0.919)	16756	25.0000	24.53
83 1,1,2,2-Tetrachloroethane	83	11.277	11.277	(0.919)	16908	25.0000	24.40
84 1,2,3-Trichloropropane	110	11.314	11.314	(0.922)	5674	25.0000	24.20
81 n-Propylbenzene	120	11.393	11.393	(0.928)	18663	25.0000	24.99
82 2-Chlorotoluene	126	11.472	11.472	(0.935)	15364	25.0000	24.65
86 1,3,5-Trimethylbenzene	105	11.569	11.569	(0.943)	48814	25.0000	24.68
85 4-Chlorotoluene	126	11.582	11.582	(0.944)	16224	25.0000	25.38
87 tert-Butylbenzene	119	11.892	11.892	(0.969)	48217	25.0000	25.23
88 1,2,4-Trimethylbenzene	105	11.934	11.934	(0.972)	48760	25.0000	25.22
89 sec-Butylbenzene	105	12.111	12.111	(0.987)	71587	25.0000	25.37
91 1,3-Dichlorobenzene	146	12.208	12.208	(0.995)	30073	25.0000	24.73

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
*****	****	==	*****	*****	*****	*****	*****
90 4-Isopropyltoluene	119	12 251	12 251	(0 998)	53790	25 0000	25 23
93 1,4-Dichlorobenzene	146	12 300	12 300	(1 002)	31579	25 0000	25 36
94 n-Butylbenzene	91	12 658	12 658	(1 031)	51000	25 0000	25 27
95 1,2-Dichlorobenzene	146	12 665	12 665	(1 032)	29151	25 0000	24 93
96 1 2-Dibromo-3-chloropropane	157	13 431	13 431	(1 094)	2122	25 0000	21 78
97 1,2,4-Trichlorobenzene	180	14 264	14 264	(1 162)	17165	25 0000	28 28
98 Hexachlorobutadiene	225	14 441	14 441	(1 176)	15197	25 0000	28 93
99 Naphthalene	128	14 502	14 502	(1 181)	34108	25 0000	27 92
100 1,2,3-Trichlorobenzene	180	14.745	14 745	(1 201)	18692	25.0000	32.24
M 29 1,2-Dichloroethene (total)	96				29353	50.0000	49 75
M 75 Xylenes (total)	106				84521	25 0000	78 97

Data File: /var/chem/hp5.1/50515d.b/1b50515.d  
 Date: 15-MAY-2000 09:09  
 Client ID: vstd20  
 Sample Info: VSTD20 SHL  
 Purge Volume: 5.0  
 Column phase: DB 624

Instrument: hp5.1  
 Operator: 10099  
 Column diameter: 0.18



## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50515d.b/1b50515.d  
 Lab Smp Id: vstd20 Client Smp ID: vstd20  
 Inj Date : 15-MAY-2000 09:09  
 Operator : 10099 Inst ID: hp5.i  
 Smp Info : VSTD20 5ML  
 Misc Info : vstd20,50515d.b,8260bh2o.m,3-dwlist.sub  
 Comment :  
 Method : /var/chem/hp5.i/50515d.b/8260bh2o.m  
 Meth Date : 15-May-2000 09:52 h Quant Type: ISTD  
 Cal Date : 15-MAY-2000 09:09 Cal File: 1b50515.d  
 Als bottle: 7 Calibration Sample, Level: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng)	ON-COL ( ng)
* 46 Fluorobenzene	96	6.870	6.870	(1.000)	634680		
* 69 Chlorobenzene-d5	119	9.973	9.973	(1.000)	149941		
* 92 1,4-Dichlorobenzene-d4	152	12.279	12.279	(1.000)	205692		
\$ 39 Dibromofluoromethane	113	6.128	6.128	(0.892)	55106	100.000	100.5
\$ 43 1,2-Dichloroethane-d4	65	6.487	6.487	(0.944)	73063	100.000	99.16
\$ 59 Toluene-d8	98	8.525	8.525	(0.855)	243981	100.000	99.77
\$ 80 Bromofluorobenzene	95	11.135	11.135	(1.117)	88711	100.000	96.82
1 Dichlorodifluoromethane	85	1.566	1.566	(0.228)	43165	100.000	101.5
2 Chloromethane	50	1.748	1.748	(0.254)	52924	100.000	98.64
3 Vinyl Chloride	62	1.845	1.845	(0.269)	55301	100.000	100.9
4 Bromomethane	94	2.138	2.138	(0.311)	8399	100.000	100.1
5 Chloroethane	64	2.241	2.241	(0.326)	9627	100.000	119.9
6 Trichlorofluoromethane	101	2.472	2.472	(0.360)	16280	100.000	107.5
12 1,1-Dichloroethene	96	3.062	3.062	(0.446)	54490	100.000	98.56
13 Acetone	43	3.257	3.257	(0.474)	37001	100.000	87.46
15 Carbon Disulfide	76	3.299	3.299	(0.480)	158762	100.000	99.37

Data File: /var/chem/hp5.i/50515d.b/lb50515.d  
Report Date: 15-May-2000 09:52

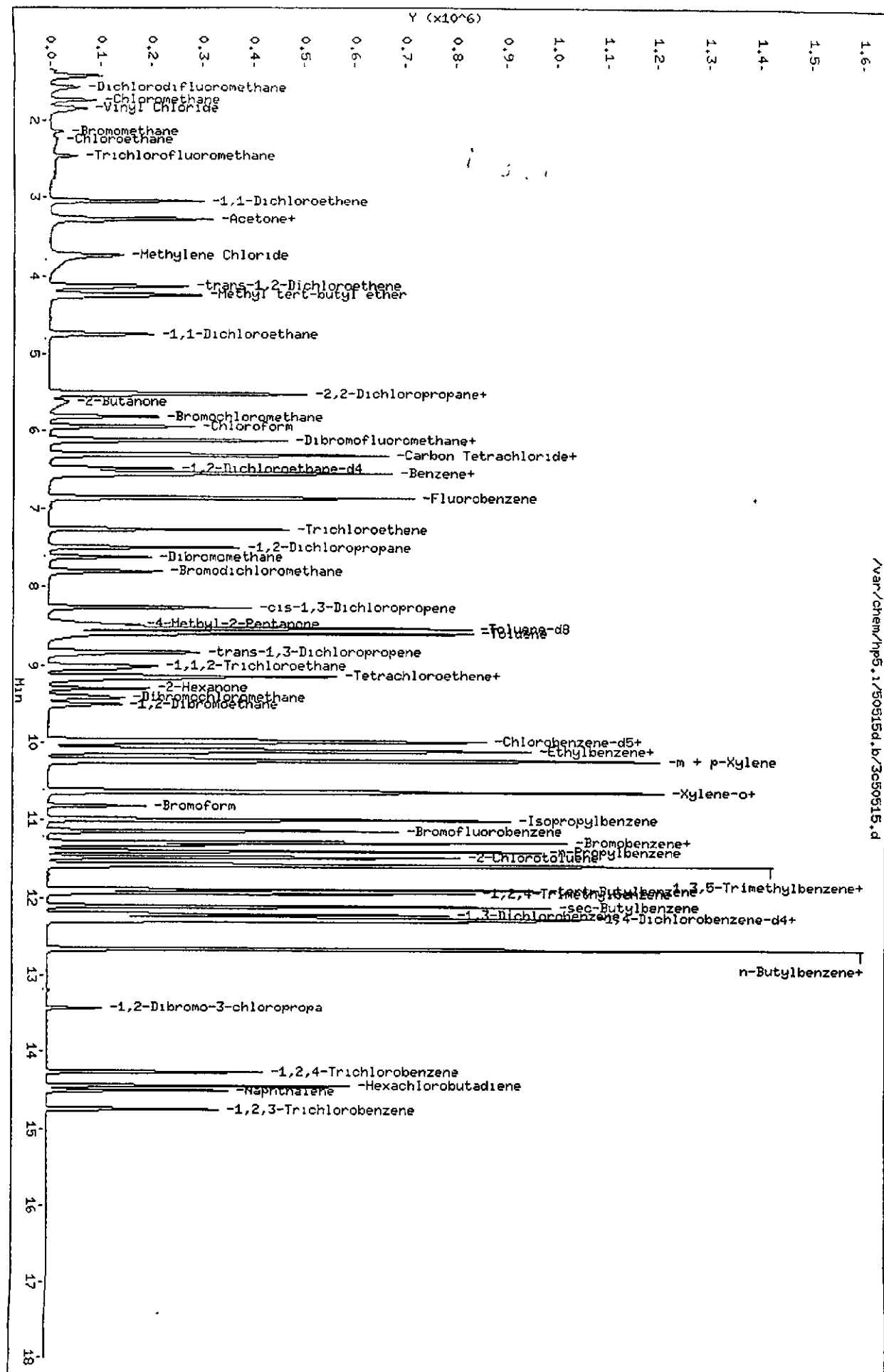
Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( ng)	ON COL ( ng)
18 Methylene Chloride	84	3.744	3.744	(0.545)	58243	100.000	94.30
19 trans-1,2-Dichloroethene	96	4.151	4.151	(0.604)	57729	100.000	101.0
20 Methyl tert-butyl ether	73	4.248	4.248	(0.618)	162656	100.000	108.8
24 1,1-Dichloroethane	63	4.753	4.753	(0.692)	96258	100.000	100.2
27 2,2-Dichloropropane	77	5.508	5.508	(0.802)	86414	100.000	101.0
28 cis-1,2-dichloroethene	96	5.526	5.526	(0.804)	58940	100.000	100.8
31 2-Butanone	43	5.617	5.617	(0.818)	58274	100.000	78.94
30 Bromochloromethane	128	5.812	5.812	(0.846)	27483	100.000	98.27
37 Chloroform	83	5.946	5.946	(0.865)	93977	100.000	101.9
38 1,1,1-Trichloroethane	97	6.116	6.116	(0.890)	86010	100.000	100.8
41 Carbon Tetrachloride	117	6.311	6.311	(0.919)	70988	100.000	101.6
40 1,1-Dichloropropene	75	6.317	6.317	(0.919)	77169	100.000	101.0
42 Benzene	78	6.542	6.542	(0.952)	231221	100.000	100.7
45 1,2-Dichloroethane	62	6.572	6.572	(0.957)	81644	100.000	102.1
47 Trichloroethene	130	7.266	7.266	(1.058)	58041	100.000	99.69
49 1,2-Dichloropropane	63	7.497	7.497	(1.091)	54176	100.000	100.2
50 Dibromomethane	93	7.619	7.619	(1.109)	32413	100.000	100.3
53 Bromodichloromethane	83	7.807	7.807	(1.136)	65108	100.000	103.0
57 cis-1,3-Dichloropropene	75	8.264	8.264	(1.203)	90526	100.000	103.6
58 4-Methyl-2-Pentanone	43	8.483	8.483	(0.851)	74361	100.000	98.97
60 Toluene	91	8.592	8.592	(0.862)	261386	100.000	101.8
61 trans 1,3-Dichloropropene	75	8.835	8.835	(0.886)	87453	100.000	104.2
64 1,1,2-Trichloroethane	97	9.012	9.012	(0.904)	51474	100.000	100.3
65 Tetrachloroethene	164	9.140	9.140	(0.916)	48600	100.000	100.1
67 Dibromochloromethane	129	9.419	9.419	(0.944)	46922	100.000	101.9
63 1,3-Dichloropropane	76	9.170	9.170	(0.919)	93438	100.000	102.0
66 2-Hexanone	43	9.298	9.298	(0.932)	53403	100.000	101.1
68 1,2-Dibromoethane	107	9.498	9.498	(0.952)	52404	100.000	101.8
70 Chlorobenzene	112	9.997	9.997	(1.002)	166005	100.000	100.2
72 Ethylbenzene	106	10.107	10.107	(1.013)	95986	100.000	98.79
71 1,1,1,2-Tetrachloroethane	131	10.089	10.089	(1.012)	52449	100.000	101.9
73 m + p-Xylene	106	10.229	10.229	(1.026)	211353	200.000	193.2
74 Xylene-o	106	10.624	10.624	(1.065)	102943	100.000	97.97
76 Styrene	104	10.642	10.642	(1.067)	169285	100.000	99.41
77 Bromoform	173	10.819	10.819	(1.085)	28475	100.000	101.2
78 Isopropylbenzene	105	10.989	10.989	(1.102)	270922	100.000	99.32
79 Bromobenzene	156	11.281	11.281	(0.919)	64721	100.000	103.6
83 1,1,2,2-Tetrachloroethane	83	11.281	11.281	(0.919)	68223	100.000	106.2
84 1,2,3-Trichloropropane	110	11.317	11.317	(0.922)	22853	100.000	105.5
81 n Propylbenzene	120	11.397	11.397	(0.928)	69215	100.000	102.1
82 2-Chlorotoluene	126	11.476	11.476	(0.935)	59648	100.000	104.2
86 1,3,5-Trimethylbenzene	105	11.573	11.573	(0.943)	185182	100.000	102.8
85 4-Chlorotoluene	126	11.585	11.585	(0.944)	59439	100.000	102.3
87 tert-Butylbenzene	119	11.889	11.889	(0.968)	173738	100.000	100.8
88 1,2,4-Trimethylbenzene	105	11.938	11.938	(0.972)	179083	100.000	102.1
89 sec Butylbenzene	105	12.108	12.108	(0.986)	257143	100.000	101.0
91 1,3-Dichlorobenzene	146	12.212	12.212	(0.995)	112931	100.000	102.2



Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL AMT ( ng)	ON-COL ( ng)
*****	****	==	=====	=====	*****	=====	=====
90 4-Isopropyltoluene	119	12 254	12.254	(0 998)	191579	100 000	100 0
93 1,4-Dichlorobenzene	146	12 303	12 303	(1 002)	112673	100 000	100 5
94 n-Butylbenzene	91	12 662	12 662	(1 031)	179780	100 000	99 45
95 1,2-Dichlorobenzene	146	12 668	12 668	(1 032)	106538	100 000	100 9
96 1,2-Dibromo 3-chloropropane	157	13 434	13 434	(1 094)	9316	100 000	104 2
97 1,2,4-Trichlorobenzene	180	14 262	14 262	(1 162)	44550	100 000	87 02
98 Hexachlorobutadiene	225	14 444	14 444	(1 176)	38019	100 000	86 14
99 Naphthalene	128	14 505	14 505	(1 181)	93485	100.000	89 62
100 1,2,3-Trichlorobenzene	180	14 749	14.749	(1 201)	34032	100.000	73 89
M 29 1,2-Dichloroethene (total)	96				116669	200 000	201 8
M 75 Xylenes (total)	106				314296	100 000	299 1

Data File: /var/chem/hp5.1/50515d.b/3c50515.d  
 Date: 15-MAY-2000 08:09  
 Client ID: vstd50  
 Sample Info: VSTD50 SHL  
 Purge Volume: 5.0  
 Column phase: DB 624

Instrument: hp5.1  
 Operator: 10099  
 Column diameter: 0.18



## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50515d.b/3c50515.d  
 Lab Smp Id: vstd50 Client Smp ID: vstd50  
 Inj Date : 15-MAY-2000 08:09  
 Operator : 10099 Inst ID: hp5.i  
 Smp Info : VSTD50 5ML  
 Misc Info : vstd50,50515d.b,8260bh2o.m,3-dwlist.sub  
 Comment :  
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 Meth Date : 15-May-2000 08:27 h Quant Type: ISTD  
 Cal Date : 24-APR-2000 15:00 Cal File: 1a50424n.d  
 Als bottle: 5 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG				AMOUNTS	
	MASS	RT	EXP RT	REL RT	CAL-AMT ( ng)	ON-COL ( ng)
*****	****	..	*****	*****	*****	*****
* 46 Fluorobenzene	96	6 862	6 862	(1 000)	656862	
* 59 Chlorobenzene-d5	119	9 971	9 971	(1.000)	155636	
* 92 1,4-Dichlorobenzene-d4	152	12 276	12 276	(1.000)	226296	
\$ 39 Dibromofluoromethane	113	6 120	6 120	(0 892)	142778	250 000 219.0
\$ 43 1,2-Dichloroethane-d4	65	6.485	6 485	(0 945)	183495	250 000 205 5
\$ 59 Toluene-d8	98	8.523	8.523	(0 855)	618043	250 000 222 2
\$ 80 Bromofluorobenzene	95	11 139	11.139	(1 117)	232609	250 000 212 5
1 Dichlorodifluoromethane	85	1 581	1 581	(0 230)	111433	250 000 335.5
2 Chloromethane	50	1 734	1 734	(0 253)	141315	250 000 258 3
3 Vinyl Chloride	62	1.855	1 855	(0 270)	146017	250 000 239 2
4 Bromomethane	94	2.135	2 135	(0 311)	17814	250 000 161.3
5 Chloroethane	64	2 257	2.257	(0 329)	22506	250 000 243 9
6 Trichlorofluoromethane	101	2 464	2 464	(0 359)	38118	250 000 54 03
12 1,1-Dichloroethene	96	3 048	3 048	(0 444)	144418	250.000 214 6
13 Acetone	43	3 260	3 260	(0 475)	86229	250.000 244 6
15 Carbon Disulfide	76	3.279	3 279	(0 478)	520567	250 000 264 4

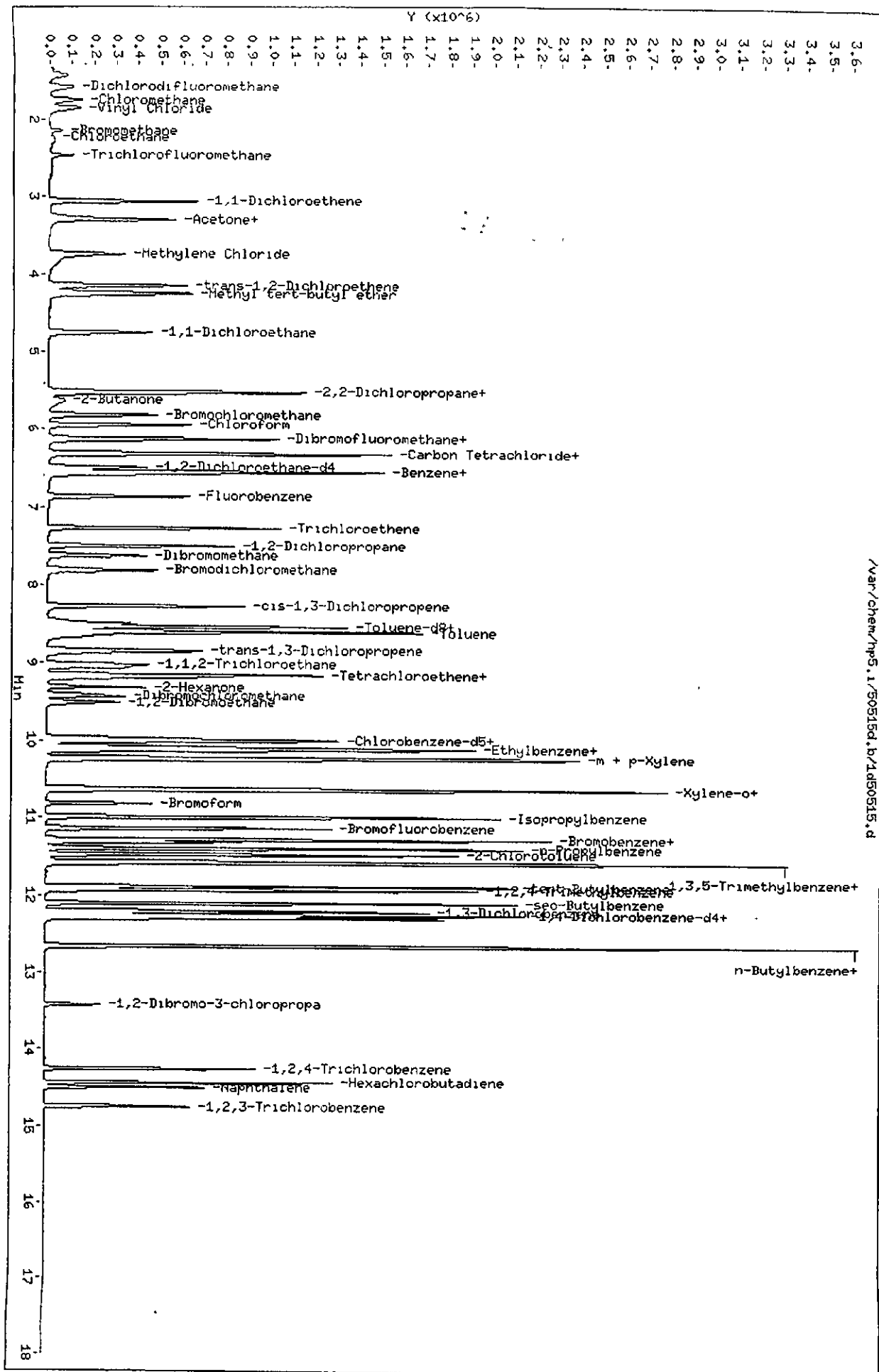
Data File: /var/chem/hp5.1/50515d.b/3c50515.d  
Report Date: 15-May-2000 08:27

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
18 Methylene Chloride	84	3.741	3.741	(0.545)	157612	250.000	208.0
19 trans-1,2-Dichloroethene	96	4.136	4.136	(0.603)	146920	250.000	201.0
20 Methyl tert-butyl ether	73	4.246	4.246	(0.619)	453706	250.000	200.5
24 1,1-Dichloroethane	63	4.745	4.745	(0.691)	251573	250.000	202.6
27 2,2-Dichloropropane	77	5.499	5.499	(0.801)	227228	250.000	209.5
28 cis-1,2-dichloroethene	96	5.524	5.524	(0.805)	152478	250.000	191.1
31 2-Butanone	43	5.621	5.621	(0.819)	126985	250.000	228.4
30 Bromochloromethane	128	5.809	5.809	(0.847)	70454	250.000	175.5
37 Chloroform	83	5.937	5.937	(0.865)	240374	250.000	192.9
38 1,1,1-Trichloroethane	97	6.108	6.108	(0.890)	224214	250.000	206.8
41 Carbon Tetrachloride	117	6.302	6.302	(0.918)	189418	250.000	211.6
40 1,1-Dichloropropene	75	6.308	6.308	(0.919)	196960	250.000	209.5
42 Benzene	78	6.539	6.539	(0.953)	596350	250.000	193.4
45 1,2-Dichloroethane	62	6.570	6.570	(0.957)	208667	250.000	189.4
47 Trichloroethene	130	7.263	7.263	(1.058)	152988	250.000	197.9
49 1,2-Dichloropropane	63	7.495	7.495	(1.092)	141176	250.000	193.2
50 Dibromomethane	93	7.616	7.616	(1.110)	84483	250.000	187.0
53 Bromodichloromethane	83	7.805	7.805	(1.137)	175399	250.000	191.1
57 cis-1,3-Dichloropropene	75	8.261	8.261	(1.204)	239133	250.000	192.4
58 4-Methyl-2-Pentanone	43	8.486	8.486	(0.851)	188490	250.000	224.7
60 Toluene	91	8.590	8.590	(0.861)	660544	250.000	196.4
61 trans-1,3-Dichloropropene	75	8.827	8.827	(0.885)	230335	250.000	200.0
64 1,1,2-Trichloroethane	97	9.015	9.015	(0.904)	131912	250.000	193.8
65 Tetrachloroethene	164	9.137	9.137	(0.916)	127115	250.000	216.1
67 Dibromochloromethane	129	9.423	9.423	(0.945)	130710	250.000	194.0
63 1,3-Dichloropropane	76	9.168	9.168	(0.919)	237743	250.000	198.4
66 2-Hexanone	43	9.295	9.295	(0.932)	132636	250.000	227.9
68 1,2-Dibromoethane	107	9.496	9.496	(0.952)	135555	250.000	198.8
70 Chlorobenzene	112	9.995	9.995	(1.002)	429532	250.000	194.0
72 Ethylbenzene	106	10.110	10.110	(1.014)	246620	250.000	210.8
71 1,1,1,2-Tetrachloroethane	131	10.092	10.092	(1.012)	138755	250.000	199.5
73 m + p-Xylene	106	10.226	10.226	(1.026)	560869	500.000	417.6
74 Xylene-o	106	10.621	10.621	(1.065)	274769	250.000	203.5
76 Styrene	104	10.640	10.640	(1.067)	458150	250.000	199.1
77 Bromoform	173	10.816	10.816	(1.085)	83591	250.000	202.7
78 Isopropylbenzene	105	10.986	10.986	(1.102)	707653	250.000	216.1
79 Bromobenzene	156	11.278	11.278	(0.919)	171878	250.000	203.2
83 1,1,2,2-Tetrachloroethane	83	11.278	11.278	(0.919)	175243	250.000	212.8
84 1,2,3-Trichloropropane	110	11.321	11.321	(0.922)	59779	250.000	210.0
81 n-Propylbenzene	120	11.394	11.394	(0.928)	184606	250.000	215.1
82 2-Chlorotoluene	126	11.473	11.473	(0.935)	156193	250.000	204.0
86 1,3,5-Trimethylbenzene	105	11.570	11.570	(0.943)	494791	250.000	213.7
85 4-Chlorotoluene	126	11.583	11.583	(0.944)	155575	250.000	201.7
87 tert-Butylbenzene	119	11.893	11.893	(0.969)	467712	250.000	223.4
88 1,2,4-Trimethylbenzene	105	11.935	11.935	(0.972)	473359	250.000	212.3
89 sec-Butylbenzene	105	12.106	12.106	(0.986)	686995	250.000	231.9
91 1,3-Dichlorobenzene	146	12.209	12.209	(0.995)	303607	250.000	208.2

						AMOUNTS	
		QUANT		SIG			
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL AMT ( ng)	ON- COL ( ng)
=====	=====	==	=====	=====	=====	=====	=====
90 4-Isopropyltoluene	119	12.252	12.252	(0.998)	521926	250.000	231.2
93 1,4-Dichlorobenzene	146	12.300	12.300	(1.002)	303193	250.000	206.7
94 n-Butylbenzene	91	12.659	12.659	(1.031)	493131	250.000	247.8
95 1,2-Dichlorobenzene	146	12.665	12.665	(1.032)	289716	250.000	207.8
96 1,2-Dibromo-3-chloropropane	157	13.432	13.432	(1.094)	27179	250.000	232.7
97 1,2,4 Trichlorobenzene	180	14.265	14.265	(1.162)	130242	250.000	242.0
98 Hexachlorobutadiene	225	14.442	14.442	(1.176)	109401	250.000	290.1
99 Naphthalene	128	14.503	14.503	(1.181)	266486	250.000	221.4
100 1,2,3-Trichlorobenzene	180	14.746	14.746	(1.201)	101711	250.000	228.5
M 29 1,2-Dichloroethene (total)	96				299398	500.000	391.7
M 75 Xylenes (total)	106				835638	250.000	619.0

Data File: /var/chem/hp5.1/50515d.b/1d50515.d  
 Date: 15-MAY-2000 09:34  
 Client ID: vstd100  
 Sample Info: VSTD100 SHL  
 Purge Volume: 5.0  
 Column phase: DB 624

Instrument: hp5.1  
 Operator: 10099  
 Column diameter: 0.18



## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.1/50515d.b/1d50515.d  
 Lab Smp Id: vstd100 Client Smp ID: vstd100  
 Inj Date : 15-MAY-2000 09:34  
 Operator : 10099 Inst ID: hp5.1  
 Smp Info : VSTD100 5ML  
 Misc Info : vstd100,50515d.b,8260bh2o.m,3-dwlist.sub  
 Comment :  
 Method : /var/chem/hp5.1/50515d.b/8260bh2o.m  
 Meth Date : 15-May-2000 09:52 h Quant Type: ISTD  
 Cal Date : 15-MAY-2000 09:34 Cal File: 1d50515.d  
 Als bottle: 8 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng)	ON-COL ( ng)
*****	****	***	***	*****	*****	*****	*****	*****
* 46 Fluorobenzene		96	6.870	6.870	(1.000)	598557		
* 69 Chlorobenzene-d5		119	9.985	9.985	(1.000)	142167		
* 92 1,4-Dichlorobenzene-d4		152	12.278	12.278	(1.000)	208871		
\$ 39 Dibromofluoromethane		113	6.128	6.128	(0.892)	261065	500.000	503.7
\$ 43 1,2-Dichloroethane-d4		65	6.487	6.487	(0.944)	343350	500.000	495.6
\$ 59 Toluene d8		98	8.531	8.531	(0.854)	1120300	500.000	487.3
\$ 80 Bromofluorobenzene		95	11.140	11.140	(2.116)	426056	500.000	492.8
1 Dichlorodifluoromethane		85	1.571	1.571	(0.229)	249210	500.000	586.0
2 Chloromethane		50	1.748	1.748	(0.254)	305254	500.000	573.6
3 Vinyl Chloride		62	1.857	1.857	(0.270)	322329	500.000	587.5
4 Bromomethane		94	2.143	2.143	(0.312)	49217	500.000	586.2
5 Chloroethane		64	2.234	2.234	(0.325)	50736	500.000	617.4
6 Trichlorofluoromethane		101	2.471	2.471	(0.360)	88576	500.000	585.1
12 1,1-Dichloroethene		96	3.062	3.062	(0.446)	321202	500.000	582.2
13 Acetone		43	3.256	3.256	(0.474)	170574	500.000	443.6
15 Carbon Disulfide		76	3.299	3.299	(0.480)	955033	500.000	594.1

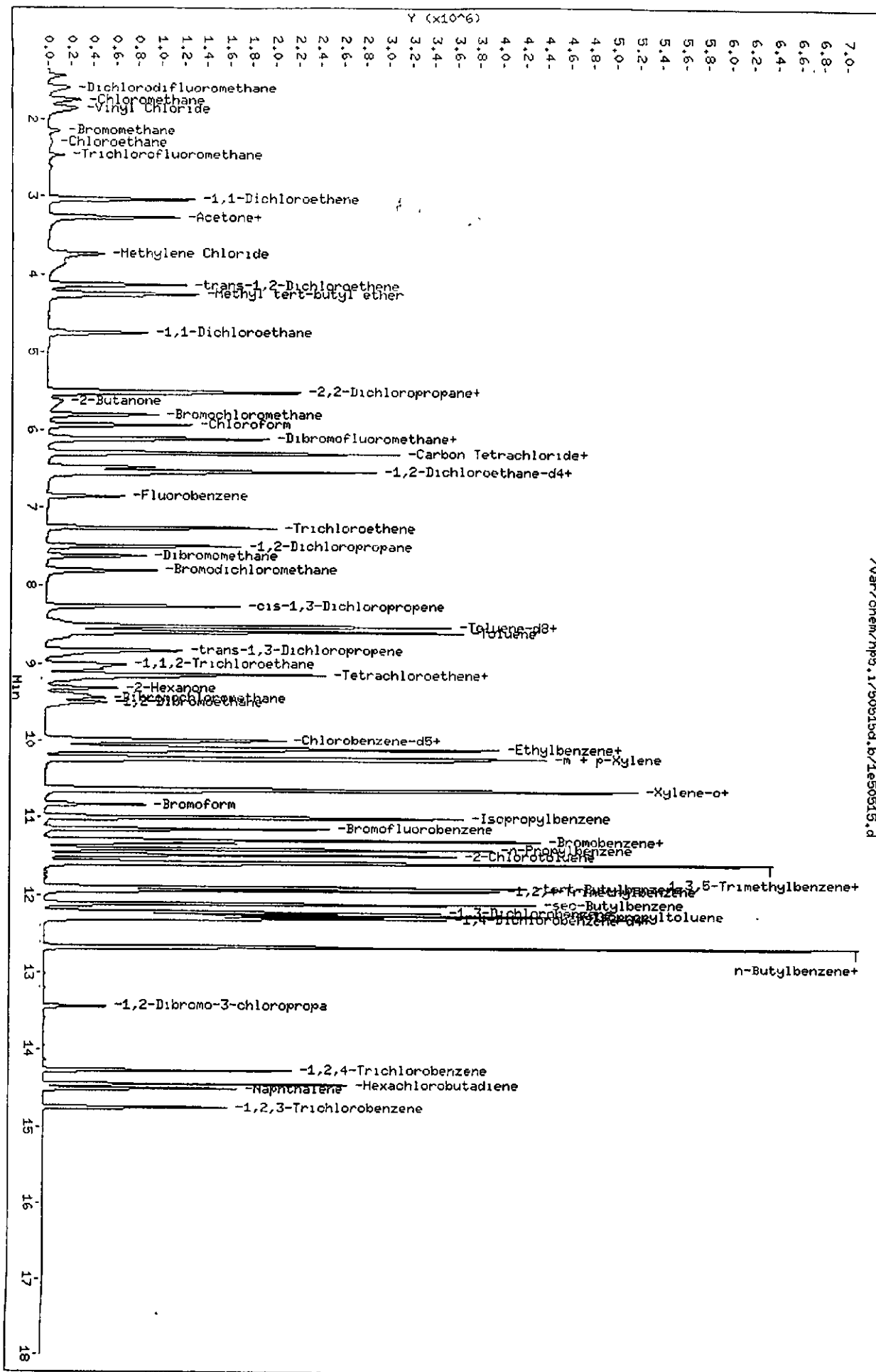
Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
18 Methylene Chloride	84	3 749	3 749	{0 546}	321896	500 000	538 5
19 trans-1,2-Dichloroethene	96	4 150	4 150	{0 604}	336689	500 000	587 9
20 Methyl tert-butyl ether	73	4 248	4 248	{0 618}	976036	500 000	631 6
24 1,1-Dichloroethane	63	4 759	4 759	{0 693}	564809	500 000	587 2
27 2,2-Dichloropropane	77	5 513	5 513	{0 803}	528131	500 000	607 6
28 cis-1,2-dichloroethene	96	5 531	5 531	{0 805}	348816	500 000	593 2
31 2-Butanone	43	5 629	5 629	{0 819}	241097	500 000	375 1
30 Bromochloromethane	128	5 811	5 811	{0 846}	158950	500 000	573 2
37 Chloroform	83	5 945	5 945	{0 865}	541844	500 000	587 0
38 1,1,1-Trichloroethane	97	6 122	6 122	{0 891}	522322	500 000	603.9
41 Carbon Tetrachloride	117	6 310	6 310	{0 919}	446757	500 000	622 7
40 1,1 Dichloropropene	75	6 316	6 316	{0.919}	451956	500 000	589 5
42 Benzene	78	6 547	6 547	{0.953}	1324240	500 000	579 4
45 1,2-Dichloroethane	62	6 578	6 578	{0 957}	474228	500 000	590 9
47 Trichloroethene	130	7 271	7 271	{1 058}	341897	500.000	586 7
49 1,2-Dichloropropane	63	7 496	7 496	{1 091}	313445	500 000	581 5
50 Dibromomethane	93	7 618	7 618	{1 109}	191358	500 000	590 3
53 Bromodichloromethane	83	7 807	7 807	{1 136}	402454	500.000	620 9
57 cis-1,3-Dichloropropene	75	8 263	8 263	{1.203}	536432	500 000	605 2
58 4-Methyl-2-Pentanone	43	8 488	8 488	{0 850}	400404	500 000	545 1
60 Toluene	91	8 598	8 598	{0.861}	1469165	500 000	573 6
61 trans-1,3-Dichloropropene	75	8 835	8 835	{0 885}	525148	500 000	610 9
64 1,1,2-Trichloroethane	97	9 017	9 017	{0 903}	293999	500 000	574 3
65 Tetrachloroethene	164	9 145	9 145	{0 916}	283638	500 000	582 2
67 Dibromochloromethane	129	9 431	9 431	{0 945}	308416	500 000	640 4
63 1,3-Dichloropropane	76	9 175	9 175	{0 919}	535848	500.000	583 0
66 2 Hexanone	43	9 303	9 303	{0 932}	285485	500 000	550 7
68 1,2-Dibromoethane	107	9 498	9 498	{0 951}	305751	500 000	589 2
70 Chlorobenzene	112	10 009	10 009	{1 002}	947324	500 000	573 7
72 Ethylbenzene	106	10 112	10 112	{1 013}	540792	500 000	562 5
71 1,1,1,2-Tetrachloroethane	131	10.094	10 094	{1.011}	317697	500 000	605 4
73 m + p-Xylene	106	10.234	10 234	{1 025}	1240401	1000.00	1140
74 Xylene-o	106	10 629	10 629	{1 065}	604625	500 000	576 1
76 Styrene	104	10 642	10 642	{1 066}	1024547	500.000	594 6
77 Bromoform	173	10 818	10 818	{1 083}	204982	500 000	677 4
78 Isopropylbenzene	105	10.994	10 994	{1 101}	1561822	500 000	574 1
79 Bromobenzene	156	11 286	11 286	{0 919}	379178	500 000	569 9
83 1,1,2,2-Tetrachloroethane	83	11 280	11 280	{0 919}	400206	500.000	580 6
84 1,2,3 Trichloropropane	110	11 323	11 323	{0 922}	133667	500 000	576 7
81 n-Propylbenzene	120	11 396	11 396	{0 928}	412539	500 000	570 9
82 2-Chlorotoluene	126	11 481	11 481	{0 935}	350254	500 000	573.4
86 1,3,5-Trimethylbenzene	105	11 572	11.572	{0 943}	1150272	500 000	590.7
85 4-Chlorotoluene	126	11 584	11.584	{0.944}	351861	500 000	569.0
87 tert Butylbenzene	119	11 895	11 895	{0 969}	1023921	500 000	561 2
88 1,2,4-Trimethylbenzene	105	11 937	11 937	{0.972}	1097232	500 000	582 1
89 sec-Butylbenzene	105	12 114	12 114	{0.987}	1505235	500 000	559.0
91 1,3-Dichlorobenzene	146	12 211	12 211	{0 995}	670258	500 000	569 8



Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( ng)	ON COL ( ng)
=====	====	==	=====	=====	=====	=====	=====
90 4-Isopropyltoluene	119	12.254	12 254	(0.998)	1159767	500.000	568.9
93 1,4-Dichlorobenzene	146	12.302	12 302	(1.002)	669870	500.000	563.4
94 n-Butylbenzene	91	12.661	12 661	(1.031)	1144016	500.000	587.0
95 1,2-Dichlorobenzene	146	12.667	12 667	(1.032)	637132	500.000	567.7
96 1,2-Dibromo-3-chloropropane	157	13.434	13 434	(1.094)	65217	500.000	647.6
97 1,2,4-Trichlorobenzene	180	14.261	14 261	(1.162)	278515	500.000	526.4
98 Hexachlorobutadiene	225	14.444	14 444	(1.176)	233212	500.000	515.1
99 Naphthalene	128	14.505	14 505	(1.181)	544974	500.000	510.8
100 1,2,3-Trichlorobenzene	180	14.748	14 748	(1.201)	198001	500.000	440.2
M 29 1,2-Dichloroethene (total)	96				685505	1000.00	1181
M 75 Xylenes (total)	106				1845026	500.000	1758

Data File: /var/chem/hp5.1/50515d.b/1e50515.d  
 Date: 15-MAY-2000 09:59  
 Client ID: vstd200  
 Sample Info: VSTD200 SHL  
 Purge Volume: 5.0  
 Column phase: DB 624

Instrument: hp5.1  
 Operator: 10099  
 Column diameter: 0.18



## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50515d.b/1e50515.d  
 Lab Smp Id: vstd200 Client Smp ID: vstd200  
 Inj Date : 15-MAY-2000 09:59  
 Operator : 10099 Inst ID: hp5.i  
 Smp Info : VSTD200 5ML  
 Misc Info : vstd200,50515d.b,8260bh2o.m,3-dwlist.sub  
 Comment :  
 Method : /var/chem/hp5.i/50515d.b/8260bh2o.m  
 Meth Date : 15-May-2000 10:17 h Quant Type: ISTD  
 Cal Date : 15-MAY-2000 09:59 Cal File: 1e50515.d  
 Als bottle: 9 Calibration Sample, Level: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

1/16  
 5/15/00

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	AMOUNTS						
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
							( ng)	( ng)
*****	***	==	=====	=====	=====	=====	=====	=====
* 46 Fluorobenzene	96	6 867	6 867	(1 000)	616507			
* 69 Chlorobenzene-d5	119	9 970	9 970	(1 000)	143792			
* 92 1,4 Dichlorobenzene-d4	152	12 282	12 282	(1 000)	219331			
\$ 39 Dibromofluoromethane	113	6.131	6 131	(0 893)	550556	1000.00		1025
\$ 43 1,2-Dichloroethane-d4	65	6.490	6 490	(0 945)	727558	1000 00		1016
\$ 59 Toluene-d8	98	8 528	8 528	(0 855)	2354095	1000.00		1010
\$ 80 Bromofluorobenzene	95	11 144	11.144	(1 118)	886152	1000 00		1011
1 Dichlorodifluoromethane	85	1 587	1 587	(0 231)	500203	1000 00		1110
2 Chloromethane	50	1.745	1 745	(0.254)	623348	1000 00		1107
3 Vinyl Chloride	62	1 861	1 861	(0.271)	645907	1000.00		1111
4 Bromomethane	94	2 140	2 140	(0 312)	102219	1000 00		1140
5 Chloroethane	64	2 299	2 299	(0 335)	92306	1000 00		1071
6 Trichlorofluoromethane	101	2 469	2 469	(0 360)	129699	1000 00		860.8
12 1,1 Dichloroethene	96	3.035	3 035	(0 442)	643699	1000.00		1104
13 Acetone	43	3 272	3 272	(0.476)	347479	1000 00		899 4
15 Carbon Disulfide	76	3 272	3.272	(0.476)	1982676	1000 00		1152

Data File: /var/chem/hp5.i/50515d.b/1e50515.d  
Report Date: 15-May-2000 10:17

Page 2

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( ng)	ON-COL ( ng)
*****	====	==	=====	=====	=====	=====	=====
18 Methylene Chloride	84	3 740	3 740	(0 545)	696870	1000 00	1103
19 trans-1,2-Dichloroethene	96	4 142	4 142	(0.603)	665252	1000 00	1100
20 Methyl tert-butyl ether	73	4 258	4 258	(0 620)	2007762	1000 00	1199
24 1,1-Dichloroethane	63	4 756	4 756	(0 693)	1087929	1000 00	1077
27 2,2-Dichloropropane	77	5 511	5 511	(0 802)	1077092	1000 00	1156
28 cis-1,2-dichloroethene	96	5 529	5 529	(0 805)	689232	1000 00	1107
31 2-Butanone	43	5 638	5 638	(0 821)	487618	1000 00	777 6
30 Bromochloromethane	128	5 815	5 815	(0 847)	315522	1000 00	1082
37 Chloroform	83	5 943	5 943	(0 865)	1100507	1000.00	1122
38 1,1,1-Trichloroethane	97	6 113	6 113	(0 890)	1056296	1000 00	1143
41 Carbon Tetrachloride	117	6 308	6 308	(0 918)	903950	1000 00	1171
40 1,1-Dichloropropene	75	6 314	6 314	(0 919)	900865	1000.00	1110
42 Benzene	78	6 545	6 545	(0 953)	2573689	1000 00	1073
45 1,2 Dichloroethane	62	6 575	6 575	(0 957)	970100	1000 00	1134
47 Trichloroethene	130	7 269	7 269	(1.058)	670348	1000 00	1091
49 1,2-Dichloropropane	63	7 500	7 500	(1 092)	640758	1000 00	1120
50 Dibromomethane	93	7 622	7 622	(1 110)	385659	1000 00	1120
53 Bromodichloromethane	83	7 810	7 810	(1 137)	823706	1000 00	1179
57 cis-1,3-Dichloropropene	75	8 260	8 260	(1 203)	1083881	1000 00	1144
58 4-Methyl-2-Pentanone	43	8 516	8 516	(0 854)	821956	1000 00	1083
60 Toluene	91	8 595	8 595	(0 862)	2908272	1000 00	1096
61 trans 1,3-Dichloropropene	75	8 832	8 832	(0 886)	1062835	1000 00	1170
64 1,1,2-Trichloroethane	97	9 015	9 015	(0 904)	586330	1000 00	1103
65 Tetrachloroethene	164	9 143	9 143	(0 917)	560323	1000 00	1107
67 Dibromochloromethane	129	9 447	9 447	(0.948)	625553	1000 00	1215
63 1,3-Dichloropropane	76	9 173	9 173	(0 920)	1059831	1000 00	1109
66 2-Hexanone	43	9 319	9 319	(0.935)	564915	1000 00	1061
68 1,2-Dibromoethane	107	9 502	9 502	(0 953)	610243	1000 00	1126
70 Chlorobenzene	112	10 000	10 000	(1 003)	1854731	1000 00	1086
72 Ethylbenzene	106	10 110	10 110	(1 014)	1070870	1000.00	1079
71 1,1,1,2-Tetrachloroethane	131	10 110	10 110	(1 014)	621534	1000 00	1132
73 m + p-Xylene	106	10 232	10 232	(1 026)	2516383	2000 00	2223
74 Xylene-o	106	10 633	10 633	(1.067)	1264733	1000 00	1147
76 Styrene	104	10 651	10 651	(1 068)	2124828	1000 00	1168
77 Bromoform	173	10 828	10 828	(1 086)	414984	1000 00	1266
78 Isopropylbenzene	105	10 998	10 998	(1 103)	3088349	1000 00	1096
79 Bromobenzene	156	11 290	11 290	(0 919)	732268	1000 00	1038
83 1,1,2,2-Tetrachloroethane	83	11 290	11 290	(0 919)	800538	1000 00	1083
84 1,2,3-Trichloropropane	110	11 327	11 327	(0 922)	259538	1000.00	1052
81 n Propylbenzene	120	11 406	11 406	(0 929)	823600	1000 00	1067
82 2-Chlorotoluene	126	11 485	11 485	(0 935)	692491	1000 00	1063
86 1,3,5-Trimethylbenzene	105	11 576	11 576	(0.943)	2349656	1000 00	1116
85 4-Chlorotoluene	126	11 588	11 588	(0 944)	722494	1000.00	1088
87 tert-Butylbenzene	119	11 898	11 898	(0 969)	2067690	1000 00	1062
88 1,2,4-Trimethylbenzene	105	11 941	11 941	(0 972)	2262072	1000 00	1111
89 sec Butylbenzene	105	12 111	12 111	(0 986)	3045485	1000 00	1061
91 1,3-Dichlorobenzene	146	12 215	12 215	(0 995)	1350625	1000 00	1073

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( ng)	ON-COL ( ng)
=====	=====	==	=====	=====	=====	=====	=====
90 4-Isopropyltoluene	119	12 257	12 257	(0 998)	2414169	1000 00	1100
93 1,4 Dichlorobenzene	146	12 306	12 306	(1 002)	1369535	1000 00	1076
94 n-Butylbenzene	91	12 665	12 665	(1 031)	2384352	1000 00	1128
95 1,2-Dichlorobenzene	146	12 671	12 671	(1 032)	1302667	1000 00	1082
96 1,2 Dibromo 3-chloropropane	157	13 438	13 438	(1 094)	141543	1000 00	1254
97 1,2,4-Trichlorobenzene	180	14 265	14 265	(1 161)	640013	1000 00	1118
98 Hexachlorocyclopentadiene	225	14 447	14 447	(1 176)	503417	1000 00	1047
99 Naphthalene	128	14 502	14 502	(1 181)	1278732	1000 00	1110
100 1,2,3 Trichlorobenzene	180	14 745	14 745	(1 201)	475528	1000.00	1005
M 29 1,2-Dichloroethene (total)	96				1354484	2000 00	2207
M 75 Xylenes (total)	106				3781116	1000 00	3430

FORM 7  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 50524D

Instrument ID: HP5

Calibration Date: 05/24/00 Time: 0646

Lab File ID: CC50524

Init. Calib. Date(s): 05/15/00 05/15/00

Heated Purge: (Y/N) N

Init. Calib. Times: 0809 0959

GC Column: DB 624 ID: 0.20 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.183	0.143	0.01	21.8	50.0
Chloromethane	0.228	0.197	0.1	13.6	50.0
Vinyl Chloride	0.236	0.210	0.01	11.0	20.0
Bromomethane	0.036	0.030	0.01	16.7	50.0
Chloroethane	0.035	0.031	0.01	11.4	50.0
Trichlorofluoromethane	0.061	0.047	0.01	23.0	50.0
1,1-Dichloroethene	0.237	0.222	0.01	6.3	20.0
Methylene Chloride	0.256	0.224	0.01	12.5	50.0
trans-1,2-Dichloroethene	0.245	0.231	0.01	5.7	50.0
1,1-Dichloroethane	0.410	0.400	0.1	2.4	50.0
cis-1,2-dichloroethene	0.252	0.240	0.01	4.8	50.0
Chloroform	0.398	0.384	0.01	3.5	20.0
Bromochloromethane	0.118	0.108	0.01	8.5	50.0
1,1,1-Trichloroethane	0.374	0.363	0.01	2.9	50.0
Carbon Tetrachloride	0.313	0.298	0.01	4.8	50.0
1,2-Dichloroethane	0.347	0.337	0.01	2.9	50.0
Benzene	0.972	0.946	0.01	2.7	50.0
Trichloroethene	0.249	0.241	0.01	3.2	50.0
1,2-Dichloropropane	0.232	0.228	0.01	1.7	20.0
Bromodichloromethane	0.283	0.278	0.01	1.8	50.0
cis-1,3-Dichloropropene	0.384	0.376	0.01	2.1	50.0
Toluene	4.614	4.568	0.01	1.0	20.0
trans-1,3-Dichloropropene	1.579	1.590	0.01	0.7	50.0
1,1,2-Trichloroethane	0.924	0.886	0.01	4.1	50.0
Tetrachloroethene	0.880	0.859	0.01	2.4	50.0
Dibromochloromethane	0.895	0.876	0.01	2.1	50.0
Chlorobenzene	2.968	2.940	0.3	0.9	50.0
Ethylbenzene	1.725	1.687	0.01	2.2	20.0
Styrene	3.163	3.398	0.01	7.4	50.0
Bromoform	0.570	0.562	0.1	1.4	50.0
1,1,2,2-Tetrachloroethane	0.842	0.771	0.3	8.4	50.0
1,3-Dichlorobenzene	1.434	1.375	0.01	4.1	50.0
1,4-Dichlorobenzene	1.451	1.372	0.01	5.4	50.0
1,2-Dichlorobenzene	1.372	1.285	0.01	6.3	50.0
Dibromomethane	0.140	0.134	0.01	4.3	50.0
1,2-Dibromoethane	0.942	0.886	0.01	5.9	50.0
1,1,1,2-Tetrachloroethane	0.954	0.951	0.01	0.3	50.0

FORM 7  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: 50524D

Instrument ID: HP5

Calibration Date: 05/24/00 Time: 0646

Lab File ID: CC50524

Init. Calib. Date(s): 05/15/00 05/15/00

Heated Purge: (Y/N) N

Init. Calib. Times: 0809 0959

GC Column: DB 624 ID: 0.20 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
1,2,3-Trichloropropane	0.281	0.256	0.01	8.9	50.0
1,2-Dibromo-3-chloropropane	0.129	0.100	0.01	22.5	50.0
2,2-Dichloropropane	0.378	0.366	0.01	3.2	50.0
1,1-Dichloropropene	0.329	0.321	0.01	2.4	50.0
1,3-Dichloropropane	1.662	1.615	0.01	2.8	50.0
n-Propylbenzene	0.880	0.876	0.01	0.4	50.0
Bromobenzene	0.804	0.781	0.01	2.9	50.0
1,3,5-Trimethylbenzene	2.400	2.250	0.01	6.2	50.0
2-Chlorotoluene	0.743	0.721	0.01	3.0	50.0
4-Chlorotoluene	0.757	0.747	0.01	1.3	50.0
tert-Butylbenzene	2.219	2.250	0.01	1.4	50.0
1,2,4-Trimethylbenzene	2.320	2.169	0.01	6.5	50.0
sec-Butylbenzene	3.272	3.348	0.01	2.3	50.0
4-Isopropyltoluene	2.502	2.468	0.01	1.4	50.0
n-Butylbenzene	2.409	2.343	0.01	2.7	50.0
1,2,4-Trichlorobenzene	0.653	0.372	0.01	43.0	50.0
Hexachlorobutadiene	0.548	0.417	0.01	23.9	50.0
Naphthalene	1.313	0.623	0.01	52.6	50.0
1,2,3-Trichlorobenzene	0.539	0.202	0.01	62.5	50.0
Acetone	0.157	0.112	0.01	28.7	50.0
Carbon Disulfide	0.698	0.760	0.01	8.9	50.0
2-Butanone	0.254	0.252	0.01	0.8	50.0
4-Methyl-2-Pentanone	1.319	1.366	0.01	3.6	50.0
2-Hexanone	0.926	0.958	0.01	3.4	50.0
Methyl tert-butyl ether	0.679	0.761	0.01	12.1	50.0
Isopropylbenzene	4.901	5.150	0.01	5.1	50.0
1,2-Dichloroethene (total)	0.249	0.236	0.01	5.2	50.0
Xylenes (total)	1.916	1.959	0.01	2.2	50.0
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	0.218	0.220	0.01	0.9	50.0
1,2-Dichloroethane-d4	0.291	0.294	0.01	1.0	50.0
Toluene-d8	4.053	4.141	0.01	2.2	50.0
Bromofluorobenzene	1.524	1.671	0.01	9.6	50.0

<-  
<-

Data File: /var/chem/hp5.i/50524d.b/cc50524.d

Report Date: 05/24/2000

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CONTINUING CALIBRATION COMPOUNDS  
PERCENT DRIFT REPORT

Instrument ID: hp5.i

Injection Date: 24-MAY-2000 06:46

Lab File ID: cc50524.d

Lab Sample ID: vstd50

Analysis Type: WATER

Method File: /var/chem/hp5.i/50524d.b/8260bh2o.m

COMPOUND	EXPECTED CONC.	MEASURED CONC	%D	MAX %D
0 Xylene-o	250.0000	255.6346	2.3	50.0
0 m + p-Xylene	500.0000	503.1564	0.6	50.0
1 Dichlorodifluoromethane	250.0000	196.0049	21.6	50.0
2 Chloromethane	250.0000	215.8191	13.7	50.0
3 Vinyl Chloride	250.0000	222.6503	10.9	20.0
4 Bromomethane	250.0000	210.3864	15.8	50.0
5 Chloroethane	250.0000	219.4416	12.2	50.0
6 Trichlorofluoromethane	250.0000	194.0261	22.4	50.0
9 1,1-Dichloroethene	250.0000	234.9498	6.0	20.0
10 Methylene Chloride	250.0000	218.8192	12.5	50.0
13 trans-1,2-Dichloroethene	250.0000	235.5973	5.8	50.0
15 1,1-Dichloroethane	250.0000	243.9312	2.4	50.0
17 cis-1,2-dichloroethene	250.0000	238.3083	4.7	50.0
18 Chloroform	250.0000	241.1020	3.6	20.0
19 Bromochloromethane	250.0000	227.4069	9.0	50.0
20 1,1,1-Trichloroethane	250.0000	242.1985	3.1	50.0
21 Carbon Tetrachloride	250.0000	238.1094	4.8	50.0
23 1,2-Dichloroethane	250.0000	242.8225	2.9	50.0
24 Benzene	250.0000	243.1196	2.8	50.0
26 Trichloroethene	250.0000	241.7246	3.3	50.0
27 1,2-Dichloropropane	250.0000	245.2159	1.9	20.0
28 Bromodichloromethane	250.0000	244.8717	2.1	50.0
31 cis-1,3-Dichloropropene	250.0000	244.5400	2.2	50.0
33 Toluene	250.0000	247.5196	1.0	20.0
34 trans-1,3-Dichloropropene	250.0000	251.7339	0.7	50.0
36 1,1,2-Trichloroethane	250.0000	239.8024	4.1	50.0
37 Tetrachloroethene	250.0000	243.8830	2.4	50.0
38 Dibromochloromethane	250.0000	244.7371	2.1	50.0
40 Chlorobenzene	250.0000	247.6105	1.0	50.0
41 Ethylbenzene	250.0000	244.5042	2.2	20.0
44 Styrene	250.0000	268.6173	7.4	50.0
45 Bromoform	250.0000	246.5626	1.4	50.0
46 1,1,2,2-Tetrachloroethane	250.0000	228.6832	8.5	50.0
48 1,3-Dichlorobenzene	250.0000	239.5978	4.2	50.0
49 1,4-Dichlorobenzene	250.0000	236.4729	5.4	50.0
50 1,2-Dichlorobenzene	250.0000	234.1958	6.3	50.0
60 Dibromomethane	250.0000	240.3730	3.9	50.0
63 1,2-Dibromoethane	250.0000	235.2155	5.9	50.0
64 1,1,1,2-Tetrachloroethane	250.0000	249.1984	0.3	50.0



Data File: /var/chem/hp5.i/50524d.b/cc50524.d

Report Date: 05/24/2000

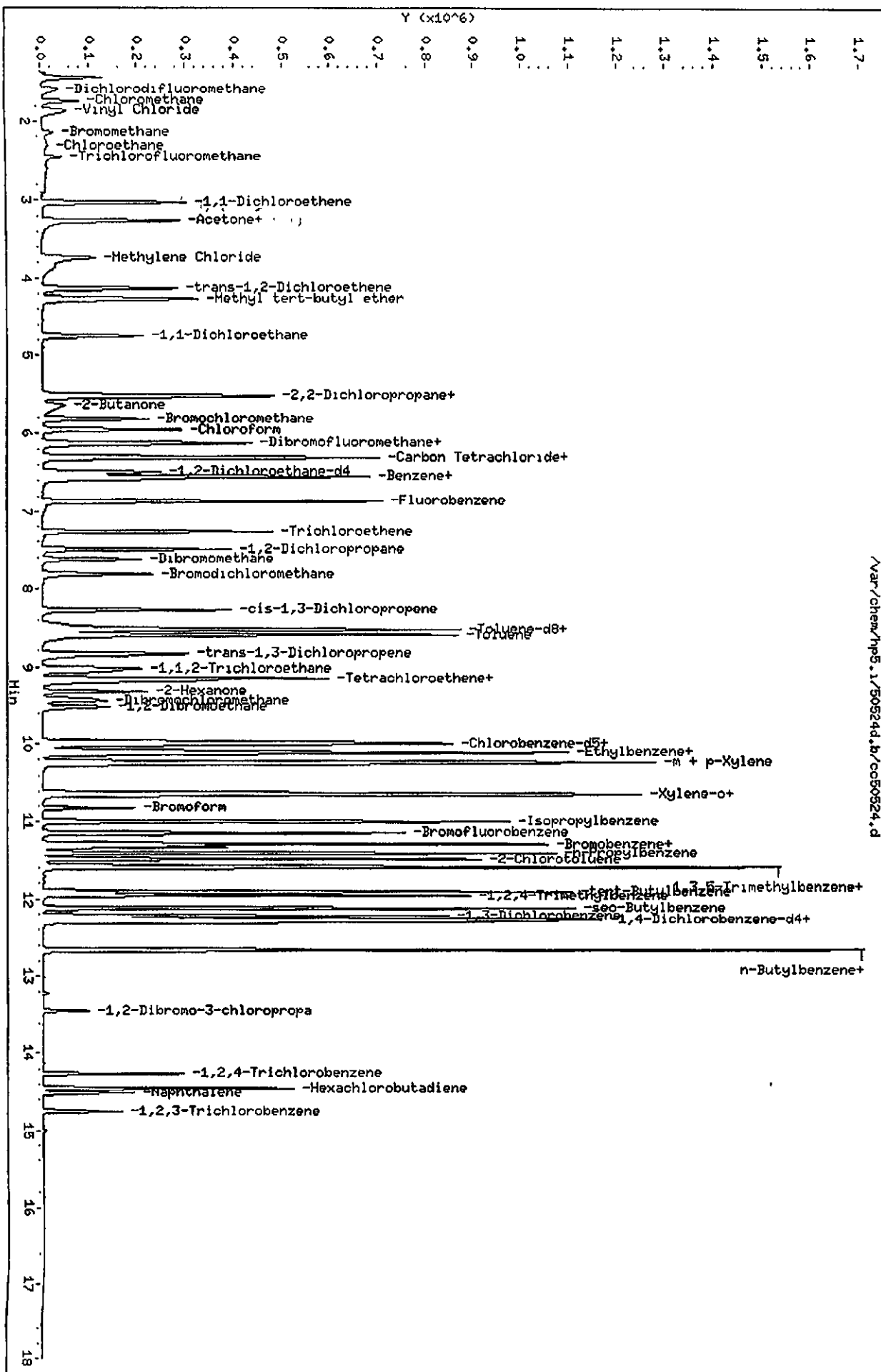
May 24 07:08 2000 hpuxcs21 /var/chem/hp5 i/50524d b/cc50524 d/custom rp Page 2

CONTINUING CALIBRATION COMPOUNDS  
PERCENT DRIFT REPORTInstrument ID: hp5.i  
Lab File ID: cc50524.d  
Analysis Type: WATERInjection Date: 24-MAY-2000 06:46  
Lab Sample ID: vstd50  
Method File: /var/chem/hp5.i/50524d.b/8260bh2

COMPOUND	EXPECTED CONC.	MEASURED CONC	%D	MAX %D
65 1,2,3-Trichloropropane	250.0000	227.8429	8.9	50.0
69 1,2-Dibromo-3-chloropropane	250.0000	194.5894	22.2	50.0
74 2,2-Dichloropropane	250.0000	242.0528	3.2	50.0
75 1,1-Dichloropropene	250.0000	243.5504	2.6	50.0
77 1,3-Dichloropropane	250.0000	243.0586	2.8	50.0
83 n-Propylbenzene	250.0000	248.9237	0.4	50.0
84 Bromobenzene	250.0000	242.8916	2.8	50.0
85 1,3,5-Trimethylbenzene	250.0000	234.4234	6.2	50.0
86 2-Chlorotoluene	250.0000	242.8339	2.9	50.0
87 4-Chlorotoluene	250.0000	246.8550	1.3	50.0
88 tert-Butylbenzene	250.0000	253.5307	1.4	50.0
89 1,2,4-Trimethylbenzene	250.0000	233.7251	6.5	50.0
90 sec-Butylbenzene	250.0000	255.7662	2.3	50.0
91 4-Isopropyltoluene	250.0000	246.6111	1.4	50.0
94 n-Butylbenzene	250.0000	243.1154	2.8	50.0
95 1,2,4-Trichlorobenzene	250.0000	142.5901	43.0	50.0
96 Hexachlorobutadiene	250.0000	190.3695	23.9	50.0
97 Naphthalene	250.0000	118.6079	52.6	50.0
98 1,2,3-Trichlorobenzene	250.0000	93.8619	62.5	50.0
101 Chlorobenzene-d5	250.0000	250.0000	0.0	50.0
102 1,4-Dichlorobenzene-d4	250.0000	250.0000	0.0	50.0
106 Acetone	250.0000	178.5229	28.6	50.0
107 Carbon Disulfide	250.0000	272.3378	8.9	50.0
108 2-Butanone	250.0000	247.4633	1.0	50.0
110 4-Methyl-2-Pentanone	250.0000	258.8171	3.5	50.0
111 2-Hexanone	250.0000	258.7908	3.5	50.0
134 Methyl tert-butyl ether	250.0000	279.9807	12.0	50.0
137 Fluorobenzene	250.0000	250.0000	0.0	50.0
144 Isopropylbenzene	250.0000	262.7080	5.1	50.0
153 1,2-Dichloroethene (total)	500.0000	473.9442	5.2	50.0
154 Xylenes (total)	750.0000	772.4071	3.0	50.0
149 Dibromofluoromethane	250.0000	252.5796	1.0	50.0
150 1,2-Dichloroethane-d4	250.0000	252.9062	1.2	50.0
151 Toluene-d8	250.0000	255.4091	2.2	50.0
152 Bromofluorobenzene	250.0000	274.0147	9.6	50.0

Data File: /var/chem/hp5.1/50524d.b/cc50524.d  
 Date : 24-MAY-2000 06:46  
 Client ID: vstd50  
 Sample Info: VSTD50 BHL  
 Purge Volume: 5.0  
 Column Phase: DB 624

Instrument: hp5.1  
 Operator: 10099  
 Column diameter: 0.20



Data File: /var/chem/hp5.i/50524d.b/cc50524.d  
Report Date: 24-May-2000 07:05

## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/cc50524.d  
Lab Smp Id: vstd50 Client Smp ID: vstd50  
Inj Date : 24-MAY-2000 06:46  
Operator : 10099 Inst ID: hp5.i  
Smp Info : VSTD50 5ML  
Misc Info : vstd50,50524d.b,8260bh2o.m,3-dwlist.sub  
Comment :  
Method : /var/chem/hp5.i/50524d.b/8260bh2o.m  
Meth Date : 24-May-2000 07:05 h Quant Type: ISTD  
Cal Date : 15-MAY-2000 08:45 Cal File: 1a50515.d  
Als bottle: 2 Continuing Calibration Sample  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: 3-dwlist.sub  
Target Version: 3.40  
Processing Host: hpuxcs21

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng)	ON-COL ( ng)
* 46 Fluorobenzene		96	6.868	6.868	(1.000)	655063		
* 69 Chlorobenzene-d5		119	9.971	9.971	(1.000)	152760		
* 92 1,4-Dichlorobenzene-d4		152	12.282	12.282	(1.000)	233429		
\$ 39 Dibromofluoromethane		113	6.132	6.132	(0.893)	144158	250.000	252.6
\$ 43 1,2-Dichloroethane-d4		65	6.491	6.491	(0.945)	192516	250.000	252.9
\$ 59 Toluene-d8		98	8.529	8.529	(0.855)	632537	250.000	255.4
\$ 80 Bromofluorobenzene		95	11.145	11.145	(1.118)	255240	250.000	274.0
1 Dichlorodifluoromethane		85	1.588	1.588	(0.231)	93817	250.000	196.0
2 Chloromethane		50	1.740	1.740	(0.253)	129138	250.000	215.8
3 Vinyl Chloride		62	1.867	1.867	(0.272)	137510	250.000	222.6
4 Bromomethane		94	2.141	2.141	(0.312)	20035	250.000	210.4
5 Chloroethane		64	2.305	2.305	(0.336)	20092	250.000	219.4
6 Trichlorofluoromethane		101	2.470	2.470	(0.360)	31064	250.000	194.0
12 1,1-Dichloroethene		96	3.029	3.029	(0.441)	145616	250.000	234.9
13 Acetone		43	3.303	3.303	(0.481)	73283	250.000	178.5
15 Carbon Disulfide		76	3.267	3.267	(0.476)	498041	250.000	272.3

Data File: /var/chem/hp5.i/50524d.b/cc50524.d  
Report Date: 24-May-2000 07:05

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Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
*****	****	==	=====	=====	=====	=====	=====
18 Methylene Chloride	84	3.741	3.741	(0.545)	146933	250.000	218.8
19 trans-1,2-Dichloroethene	96	4.136	4.136	(0.602)	151428	250.000	235.6
20 Methyl tert-butyl ether	73	4.264	4.264	(0.621)	498256	250.000	280.0
24 1,1-Dichloroethane	63	4.751	4.751	(0.692)	261801	250.000	243.9
27 2,2-Dichloropropane	77	5.505	5.505	(0.802)	239591	250.000	242.0
28 cis-1,2-dichloroethene	96	5.530	5.530	(0.805)	157600	250.000	238.3
31 2-Butanone	43	5.639	5.639	(0.821)	164892	250.000	247.5
30 Bromochloromethane	128	5.816	5.816	(0.847)	70455	250.000	227.4
37 Chloroform	83	5.949	5.949	(0.866)	251239	250.000	241.1
38 1,1,1-Trichloroethane	97	6.114	6.114	(0.890)	237766	250.000	242.2
41 Carbon Tetrachloride	117	6.302	6.302	(0.918)	195300	250.000	238.1
40 1,1-Dichloropropene	75	6.308	6.308	(0.918)	210100	250.000	243.6
42 Benzene	78	6.539	6.539	(0.952)	619450	250.000	243.1
45 1,2-Dichloroethane	62	6.576	6.576	(0.957)	220690	250.000	242.8
47 Trichloroethene	130	7.269	7.269	(1.058)	157766	250.000	241.7
49 1,2-Dichloropropane	63	7.501	7.501	(1.092)	149119	250.000	245.2
50 Dibromomethane	93	7.622	7.622	(1.110)	87926	250.000	240.4
53 Bromodichloromethane	83	7.811	7.811	(1.137)	181820	250.000	244.9
57 cis-1,3-Dichloropropene	75	8.267	8.267	(1.204)	246099	250.000	244.5
58 4-Methyl-2-Pentanone	43	8.504	8.504	(0.853)	208614	250.000	258.8
60 Toluene	91	8.596	8.596	(0.862)	697878	250.000	247.5
61 trans-1,3-Dichloropropene	75	8.833	8.833	(0.886)	242858	250.000	251.7
64 1,1,2-Trichloroethane	97	9.022	9.022	(0.905)	135399	250.000	239.8
65 Tetrachloroethene	164	9.143	9.143	(0.917)	131172	250.000	243.9
67 Dibromochloromethane	129	9.435	9.435	(0.946)	133838	250.000	244.7
63 1,3-Dichloropropane	76	9.174	9.174	(0.920)	246778	250.000	243.0
66 2-Hexanone	43	9.307	9.307	(0.933)	146388	250.000	258.8
68 1,2-Dibromoethane	107	9.502	9.502	(0.953)	135423	250.000	235.2
70 Chlorobenzene	112	10.001	10.001	(1.003)	449069	250.000	247.6
72 Ethylbenzene	106	10.110	10.110	(1.014)	257682	250.000	244.5
71 1,1,1,2-Tetrachloroethane	131	10.098	10.098	(1.013)	145311	250.000	249.2
73 m + p-Xylene	106	10.232	10.232	(1.026)	605098	500.000	503.2
74 Xylene-o	106	10.628	10.628	(1.066)	299327	250.000	255.6
76 Styrene	104	10.646	10.646	(1.068)	519169	250.000	268.6
77 Bromoform	173	10.822	10.822	(1.085)	85874	250.000	246.6
78 Isopropylbenzene	105	10.993	10.993	(1.103)	786759	250.000	262.7
79 Bromobenzene	156	11.291	11.291	(0.919)	182352	250.000	242.9
83 1,1,2,2-Tetrachloroethane	83	11.291	11.291	(0.919)	179894	250.000	228.7
84 1,2,3-Trichloropropane	110	11.327	11.327	(0.922)	59802	250.000	227.8
81 n-Propylbenzene	120	11.400	11.400	(0.928)	204457	250.000	248.9
82 2-Chlorotoluene	126	11.485	11.485	(0.935)	168417	250.000	242.8
86 1,3,5-Trimethylbenzene	105	11.577	11.577	(0.943)	525355	250.000	234.4
85 4-Chlorotoluene	126	11.589	11.589	(0.944)	174448	250.000	246.8
87 tert-Butylbenzene	119	11.899	11.899	(0.969)	525154	250.000	253.5
88 1,2,4-Trimethylbenzene	105	11.948	11.948	(0.973)	506419	250.000	233.7
89 sec-Butylbenzene	105	12.112	12.112	(0.986)	781494	250.000	255.8
91 1,3-Dichlorobenzene	146	12.215	12.215	(0.995)	320876	250.000	239.6

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Data File: /var/chem/hp5.i/50524d.b/cc50524.d  
 Report Date: 24-May-2000 07:05

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Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	====	==	=====	=====	=====	=====	=====
90 4-Isopropyltoluene	119	12 258	12 258	(0.998)	576212	250.000	246.6
93 1,4-Dichlorobenzene	146	12 307	12.307	(1.002)	320287	250 000	236 5
94 n-Butylbenzene	91	12 666	12.666	(1 031)	546970	250 000	243.1
95 1,2-Dichlorobenzene	146	12.672	12.672	(1.032)	299939	250.000	234.2
96 1,2-Dibromo-3-chloropropane	157	13.438	13.438	(1.094)	23382	250.000	194.6
97 1,2,4-Trichlorobenzene	180	14 272	14 272	(1.162)	86882	250.000	142.6
98 Hexachlorobutadiene	225	14.448	14 448	(1.176)	97453	250.000	190.4
99 Naphthalene	128	14 509	14.509	(1.181)	145420	250.000	118.6
100 1,2,3-Trichlorobenzene	180	14 752	14 752	(1 201)	47245	250.000	93.86
M 29 1,2-Dichloroethene (total)	96				309028	500.000	473.9
M 75 Xylenes (total)	106				904425	250.000	772.4

**GC/MS VOLATILE  
QC DATA**

Date : 15-MAY-2000 05:23

Client ID: 50NCBFB

Instrument: hp5.1

Sample Info: BFB 192-190-11 50NC

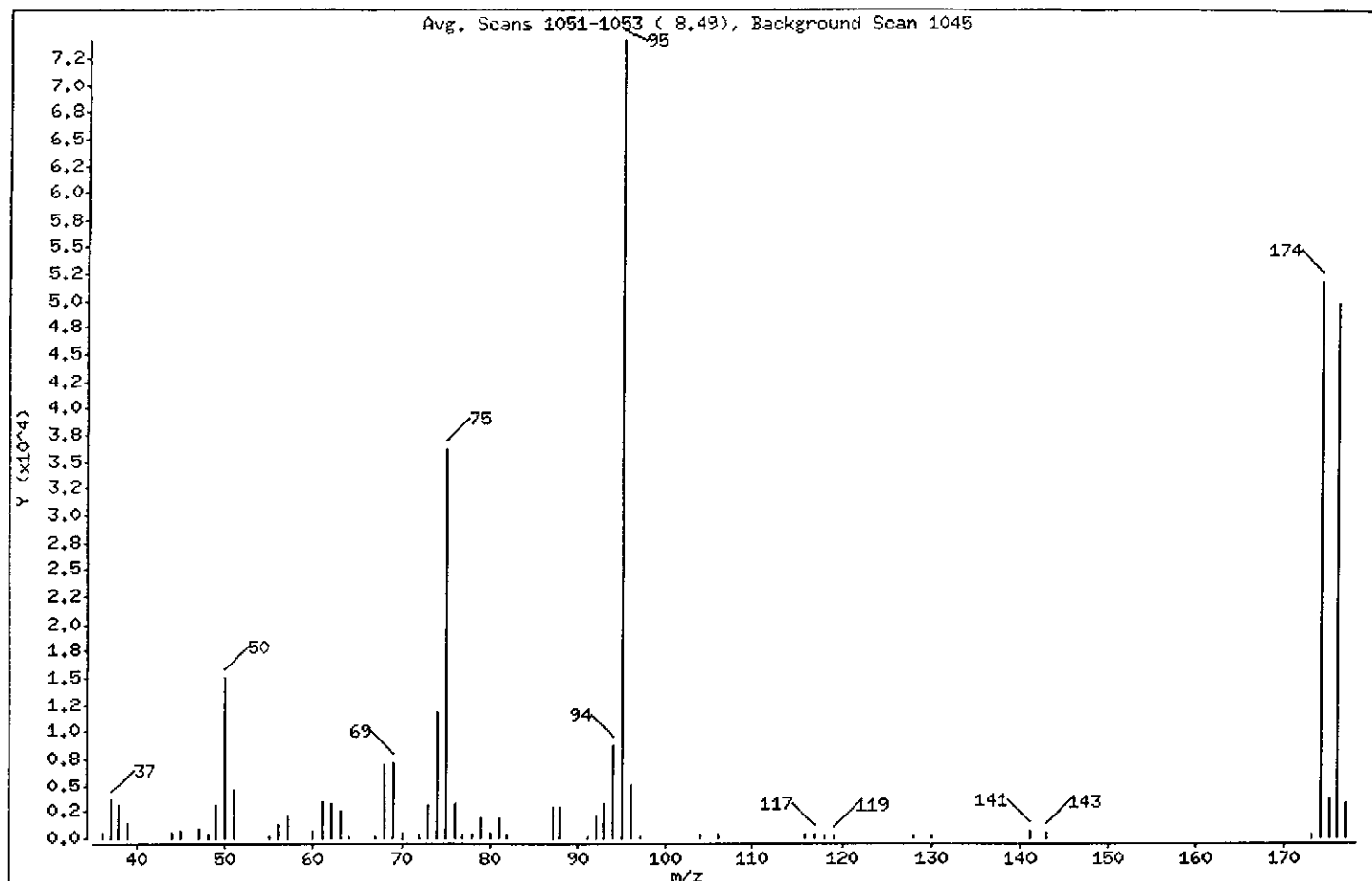
Volume Injected (uL): 1.0

Operator: 10099

Column phase: DB624 20m

Column diameter: 0.20

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	20.28
75	30.00 - 60.00% of mass 95	48.72
96	5.00 - 9.00% of mass 95	6.92
173	Less than 2.00% of mass 174	0.45 ( 0.65)
174	50.00 - 100.00% of mass 95	70.00
175	5.00 - 9.00% of mass 174	4.93 ( 7.05)
176	95.00 - 101.00% of mass 174	67.01 ( 95.73)
177	5.00 - 9.00% of mass 176	4.40 ( 6.57)

Data File: /var/chem/hp5.1/50515d.b/bf50515.d

Date : 15-MAY-2000 05:23

Client ID: 50NGBFB

Instrument: hp5.1

Sample Info: EFB 192-180-11 50NG

Volume Injected (uL): 1.0

Operator: 10099

Column phase: DB624 20m

Column diameter: 0.20

Data File: bf50515.d

Spectrum: Avg. Scans 1051-1053 ( 8.49), Background Scan 1045

Location of Maximum: 95.00

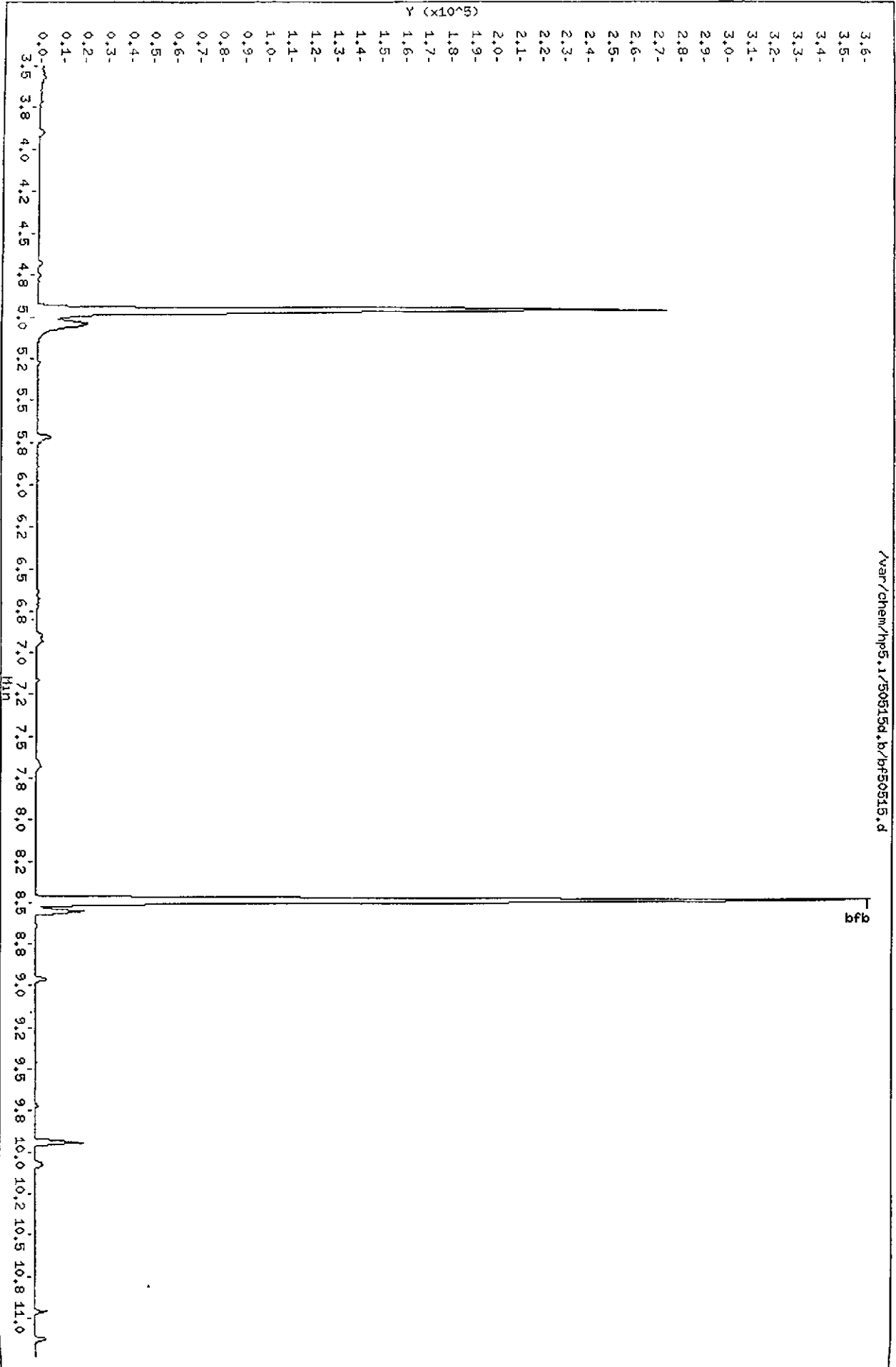
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
-----							
36.00	594	60.00	629	78.00	346	106.00	277
37.00	3589	61.00	3360	79.00	1877	116.00	301
38.00	3098	62.00	3231	80.00	479	117.00	377
39.00	1289	63.00	2624	81.00	1884	118.00	146
44.00	493	64.00	247	82.00	392	119.00	254
-----							
45.00	662	67.00	144	87.00	2916	128.00	224
47.00	894	68.00	6984	88.00	2823	130.00	233
48.00	368	69.00	7201	91.00	240	141.00	610
49.00	3685	70.00	537	92.00	1996	143.00	538
50.00	15046	72.00	390	93.00	3162	173.00	336
-----							
51.00	4568	73.00	3047	94.00	8621	174.00	51928
52.00	67	74.00	11940	95.00	74184	175.00	3659
55.00	157	75.00	36144	96.00	5135	176.00	49712
56.00	1228	76.00	3272	97.00	145	177.00	3264
57.00	2055	77.00	330	104.00	275		
-----							



Data File: /var/chem/hp5.1/50515d.b/bf50515.d  
Date : 15-MAY-2000 05:23  
Client ID: 50NGBFB  
Sample Info: BFB 192-180-11 50NC  
Volume Injected (uL): 1.0  
Column Phase: DB624 20m

Instrument: hp5.1  
Operator: 10099  
Column diameter: 0.20



Data File: /var/chem/hp5.1/50524d,b/bf50524.d

Date : 24-MAY-2000 06:25

Client ID: 50NCBFB

Instrument: hp5.1

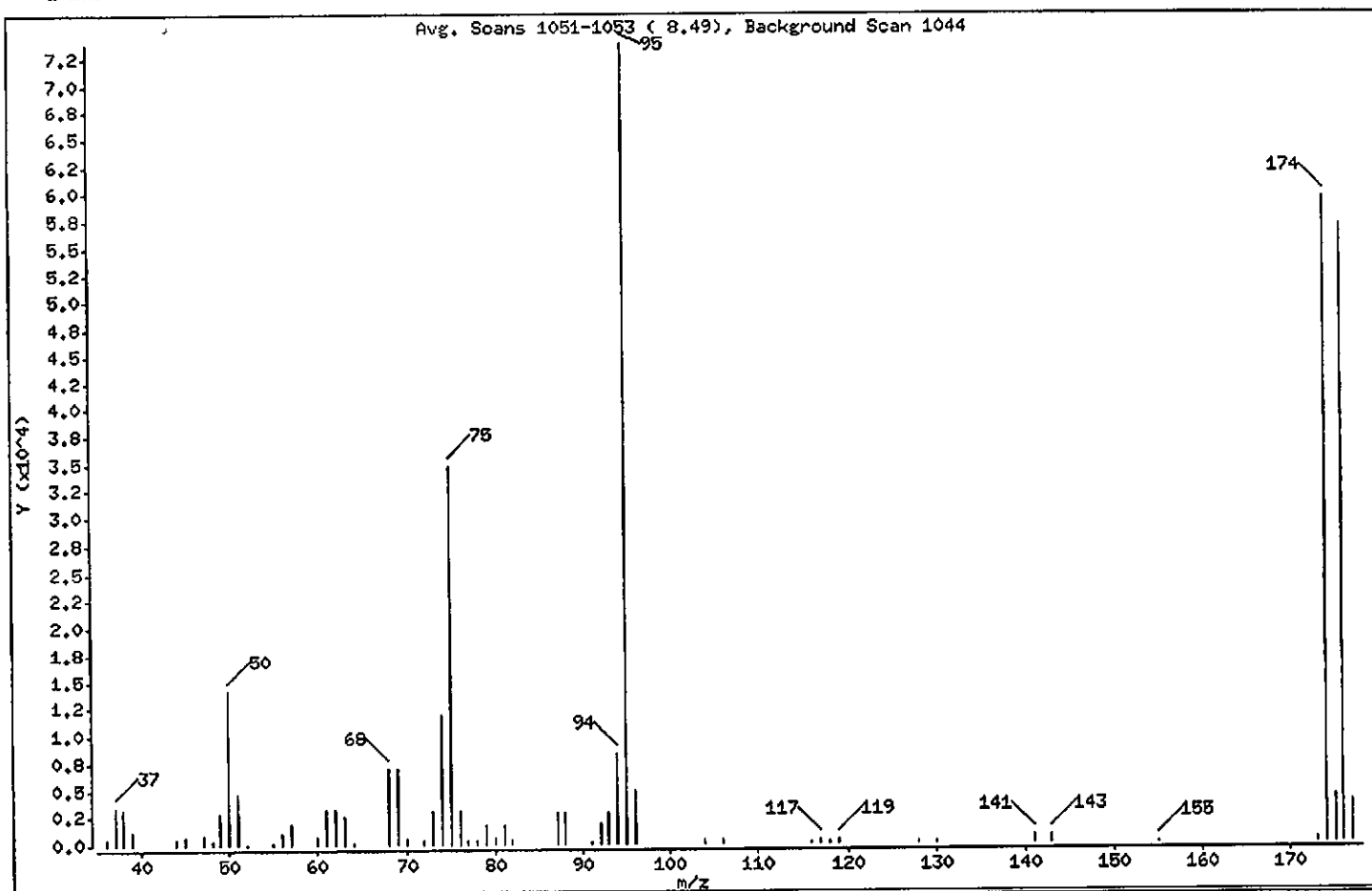
Sample Info: BFB 192-180-11 50NG

Operator: 10099

Column phase: DB624 20m

Column diameter: 0.20

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	18.00 - 40.00% of mass 95	18.97
75	30.00 - 60.00% of mass 95	47.08
96	5.00 - 9.00% of mass 95	6.58
173	Less than 2.00% of mass 174	0.81 ( 0.63)
174	50.00 - 100.00% of mass 95	80.77
175	5.00 - 9.00% of mass 174	5.78 ( 7.16)
176	95.00 - 101.00% of mass 174	77.21 ( 95.59)
177	5.00 - 9.00% of mass 176	5.06 ( 6.56)

Data File: /var/chem/hp5.1/50524d.b/bf50524.d

Page 3

Date : 24-MAY-2000 06:25

Client ID: 50NCBFB

Instrument: hp5.i

Sample Info: BFB 192-180-11 50NG

Operator: 10099

Column phase: DB624 20m

Column diameter: 0.20

Data File: bf50524.d

Spectrum: Avg. Scans 1051-1053 ( 8.49), Background Scan 1044

Location of Maximum: 95.00

Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	536	60.00	672	79.00	1622	117.00	404
37.00	3457	61.00	3207	80.00	479	118.00	155
38.00	3287	62.00	3293	81.00	1739	119.00	350
39.00	1241	63.00	2512	82.00	367	128.00	152
44.00	489	64.00	148	87.00	2937	130.00	154
45.00	647	68.00	6980	88.00	2893	141.00	692
47.00	810	69.00	6880	91.00	149	143.00	622
48.00	389	70.00	553	92.00	1943	155.00	79
49.00	2963	72.00	340	93.00	2968	173.00	375
50.00	14008	73.00	3099	94.00	8328	174.00	59632
51.00	4568	74.00	11879	95.00	73824	175.00	4270
52.00	68	75.00	34760	96.00	4856	176.00	57000
55.00	143	76.00	3105	104.00	305	177.00	3739
56.00	1089	77.00	399	106.00	295		
57.00	1930	78.00	290	116.00	96		

Data File: /var/chem/hp5.i/50524d.b/bf50524.d

Date: 24-MAY-2000 06:25

Client ID: 50NGBFB

Sample Info: BFB 192-180-11 50NG

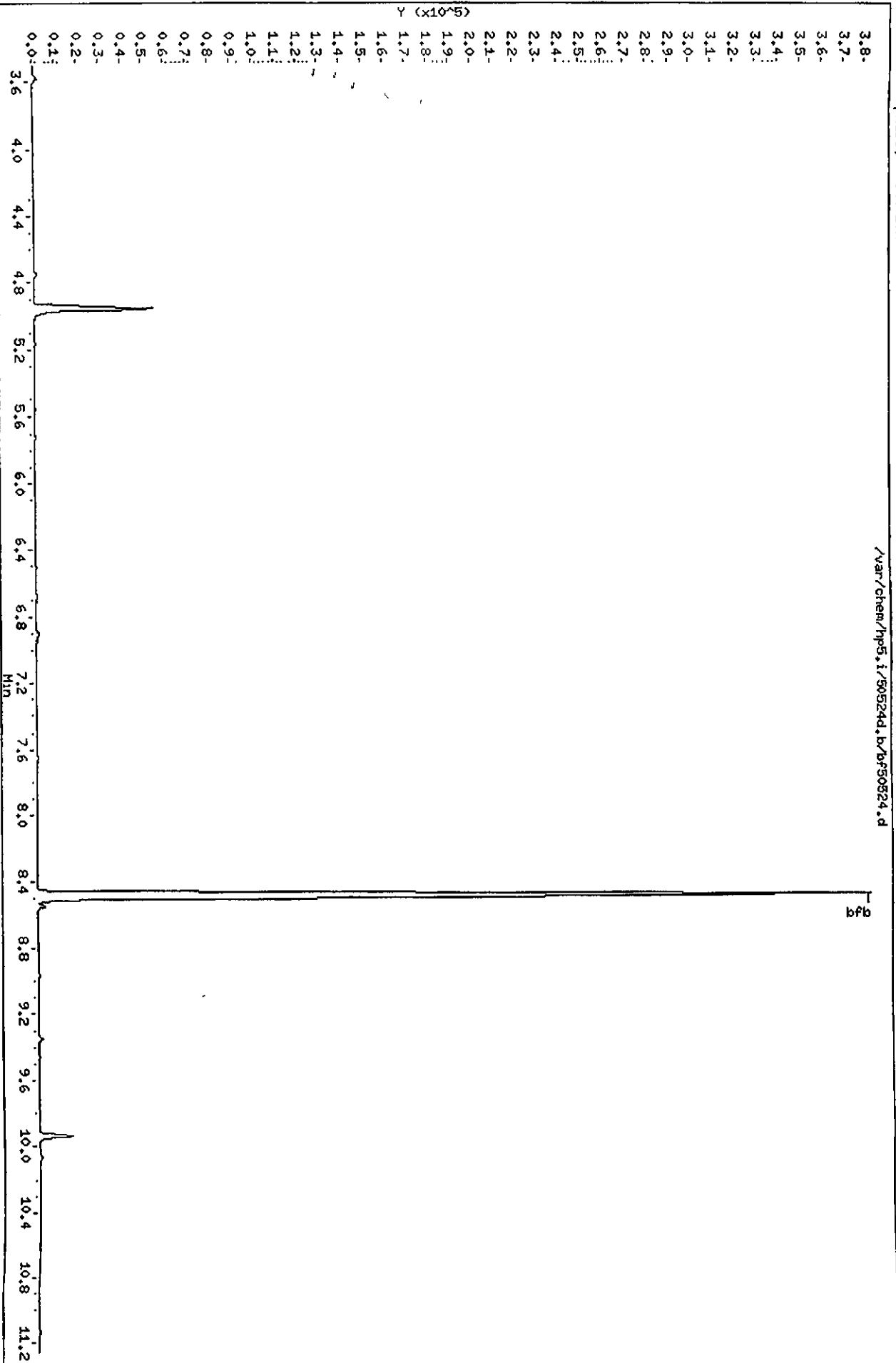
Instrument: hp5.i

Operator: 10099

Column diameter: 0.20

Column phase: DB624 20m

/var/chem/hp5.i/50524d.b/bf50524.d



UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E240000 157  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDL68101      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

QC Batch: 0145157

Client Sample Id: INTRA-LAB BLANK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	20	U
71-43-2	Benzene	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	10	U
78-93-3	2-Butanone	20	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	U
75-34-3	1,1-Dichloroethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
591-78-6	2-Hexanone	20	U
75-09-2	Methylene chloride	5.0	U
108-10-1	4-Methyl-2-pentanone	20	U
100-42-5	Styrene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E240000 157  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDL68101      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA

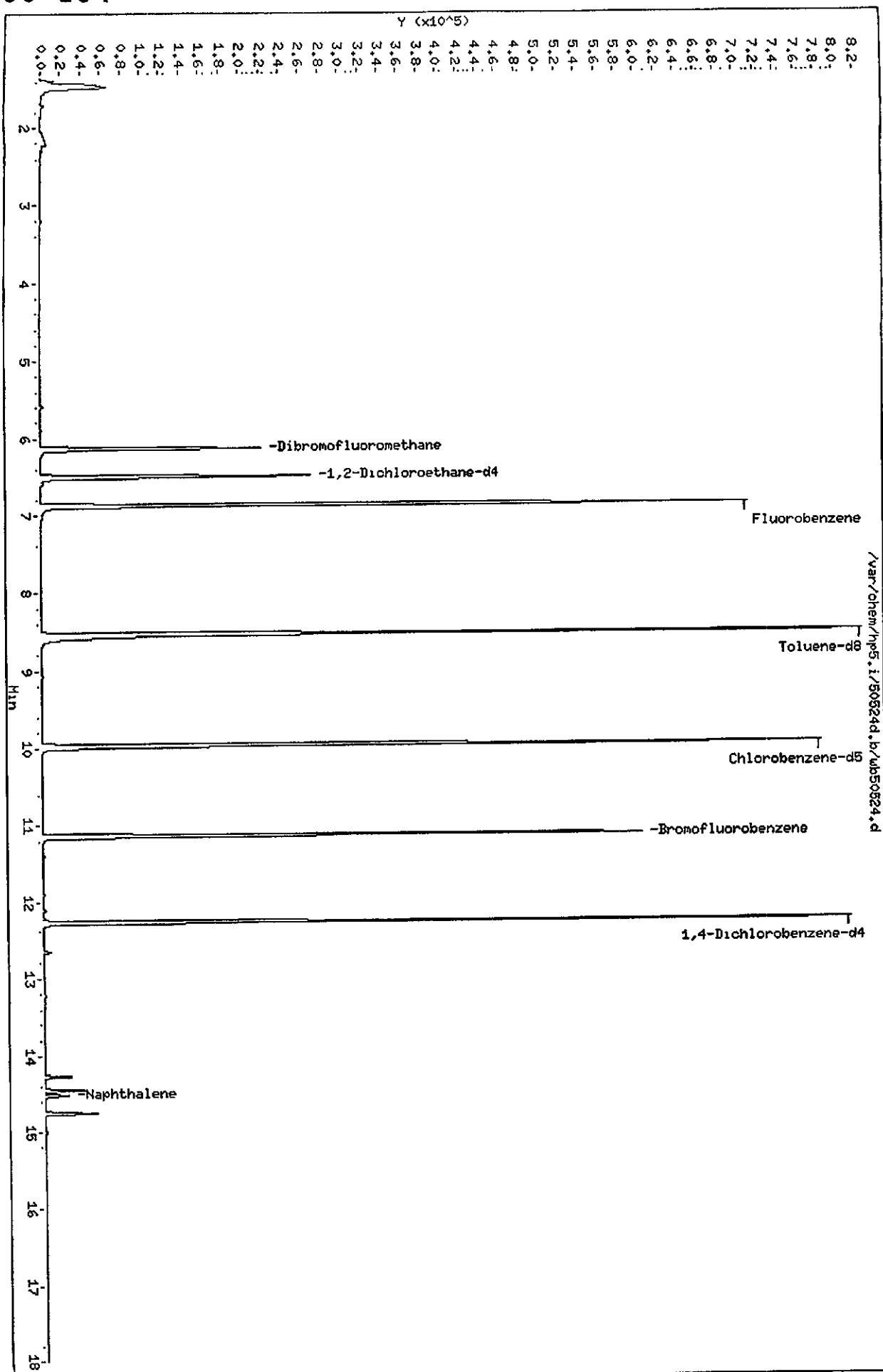
QC Batch: 0145157

Client Sample Id: INTRA-LAB BLANK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
75-01-4	Vinyl chloride	10	U
1330-20-7	Xylenes (total)	5.0	U

Data File: /var/chem/hp5.1/50524d.b/wb50524.d  
Date: 24-MAY-2000 07:25  
Client ID:  
Sample Info: WBLK EHL  
Purge Volume: 5.0  
Column phase: DB 624

Instrument: hp5.1  
Operator: 10039  
Column diameter: 0.20



Data File: /var/chem/hp5.1/50524d.b/wb50524.d  
Report Date: 24-May-2000 07:45

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## STL-PITTSBURGH

```

Data file : /var/chem/hp5.i/50524d.b/wb50524.d
Lab Smp Id: vblk
Inj Date  : 24-MAY-2000 07:25
Operator   : 10099                      Inst ID: hp5.i
Smp Info   : VBLK   5ML
Misc Info  : vblk,50524d.b,8260bh2o.m,tcl.sub

```



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76 00		Compound Not Detected				
13 Acetone	43 00		Compound Not Detected.				
14 Iodomethane	142 00		Compound Not Detected.				
18 Methylene Chloride	84 00		Compound Not Detected.				
19 trans-1,2-Dichloroethene	96.00		Compound Not Detected.				
20 Methyl tert-butyl ether	73 00		Compound Not Detected				
23 Hexane	57 00		Compound Not Detected.				
24 1,1-Dichloroethane	63 00		Compound Not Detected.				
28 cis-1,2-dichloroethene	96 00		Compound Not Detected.				
M 29 1,2-Dichloroethene (total)	96 00		Compound Not Detected.				
31 2-Butanone	43.00		Compound Not Detected				
35 Tetrahydrofuran	42 00		Compound Not Detected.				
37 Chloroform	83 00		Compound Not Detected.				
38 1,1,1-Trichloroethane	97.00		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.				
49 1,2-Dichloropropane	63.00		Compound Not Detected.				
50 Dibromomethane	93.00		Compound Not Detected.				
53 Bromodichloromethane	83.00		Compound Not Detected.				
57 cis-1,3-Dichloropropene	75 00		Compound Not Detected.				
58 4-Methyl-2-Pentanone	43 00		Compound Not Detected				
60 Toluene	91 00		Compound Not Detected.				
61 trans-1,3-Dichloropropene	75 00		Compound Not Detected.				
62 Ethyl methacrylate	69 00		Compound Not Detected.				
64 1,1,2-Trichloroethane	97.00		Compound Not Detected.				
65 Tetrachloroethene	164.00		Compound Not Detected.				
66 2-Hexanone	43.00		Compound Not Detected				
67 Dibromochloromethane	129.00		Compound Not Detected.				
68 1,2-Dibromoethane	107 00		Compound Not Detected.				
70 Chlorobenzene	112 00		Compound Not Detected.				
72 Ethylbenzene	106.00		Compound Not Detected.				
73 m + p-Xylene	106.00		Compound Not Detected.				
74 Xylene-o	106.00		Compound Not Detected				
M 75 Xylenes (total)	106 00		Compound Not Detected.				
76 Styrene	104 00		Compound Not Detected.				
77 Bromoform	173.00		Compound Not Detected.				
83 1,1,2,2-Tetrachloroethane	83 00		Compound Not Detected.				
84 1,2,3-Trichloropropane	110 00		Compound Not Detected				
91 1,3-Dichlorobenzene	146 00		Compound Not Detected.				
93 1,4-Dichlorobenzene	146 00		Compound Not Detected.				
95 1,2-Dichlorobenzene	146 00		Compound Not Detected.				
78 Isopropylbenzene	105.00		Compound Not Detected.				
99 Naphthalene	128	14 507	14.509 (1.182)		17767	15.6904	3.138

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab, Sample ID: C0E240000 157

Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/23/00

Work Order: DDL68102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

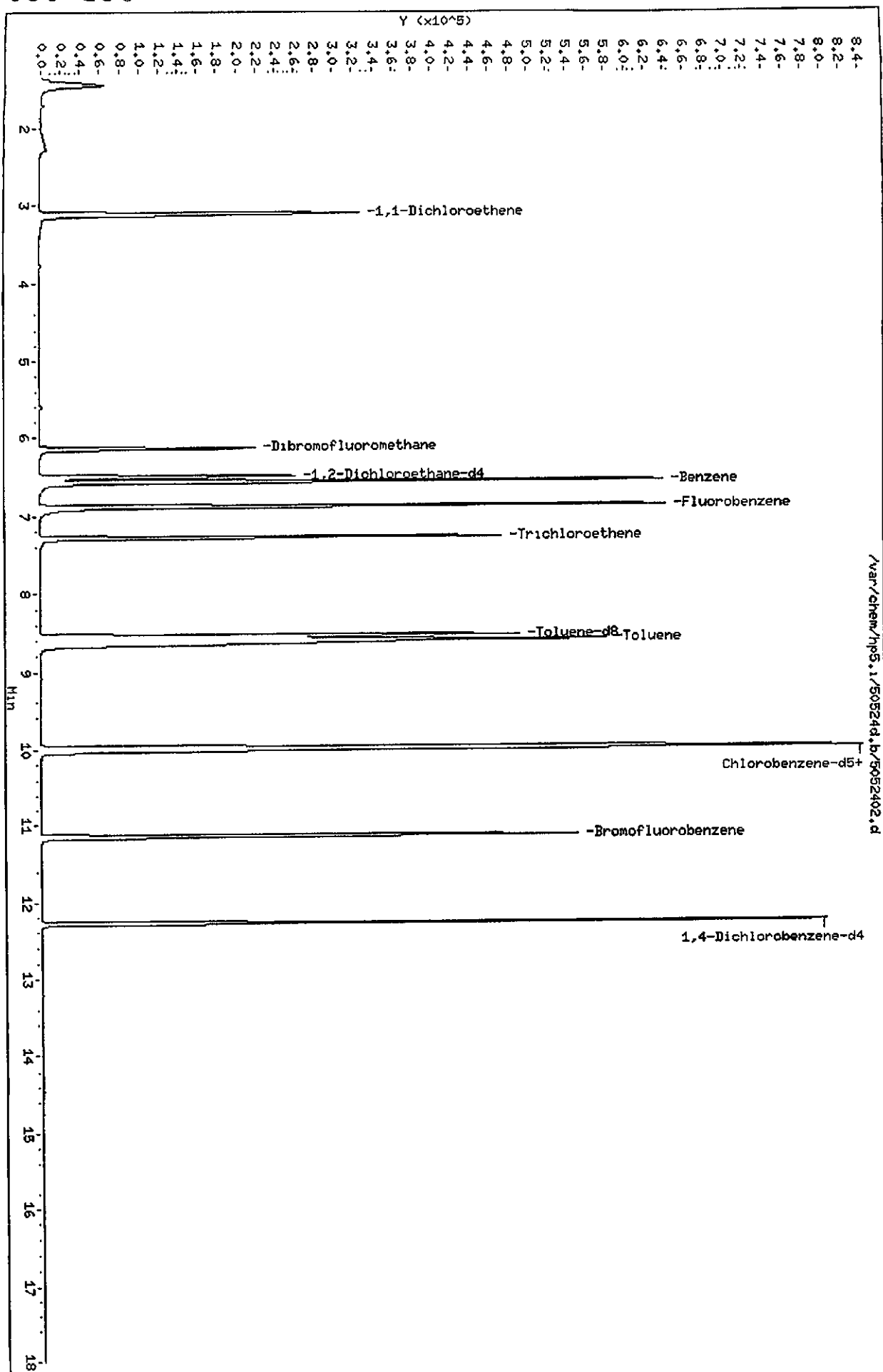
QC Batch: 0145157

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
71-43-2	Benzene	49.2	
108-90-7	Chlorobenzene	49.2	
75-35-4	1,1-Dichloroethene	54.4	
108-88-3	Toluene	50.0	
79-01-6	Trichloroethene	47.7	

Data File: /var/chem/hp5.1/50524d.b/5052402.d  
Date : 24-MAY-2000 08:14  
Client ID:  
Sample Info: BLANK HS EHL  
Purge Volume: 5.0  
Column phase: DB 624

Instrument: hp5.1  
Operator: 10099  
Column diameter: 0.20



Data File: /var/chem/hp5.i/50524d.b/5052402.d  
Report Date: 24-May-2000 08:35

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## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052402.d  
Lab Smp Id: lcs  
Inj Date : 24-MAY-2000 08:14  
Operator : 10099  
Smp Info : BLANK MS 5ML  
Misc Info : lcs,50524d.b,8260bh2o.m,tcl.sub  
Comment :  
Method : /var/chem/hp5.i/50524d.b/8260bh2o.m  
Meth Date : 24-May-2000 07:05 h  
Cal Date : 15-MAY-2000 08:45  
Als bottle: 5  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.40  
Processing Host: hpuxcs21

Inst ID: hp5.i  
Quant Type: ISTD  
Cal File: 1a50515.d  
Compound Sublist: tcl.sub

*KIG 5/24/00*

Concentration Formula:  $\text{Amt} * \text{DF} * 1/\text{Vo} * \text{Vt}$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN ( ng)	FINAL ( UG/L)
* 46 Fluorobenzene	96	6.892	6.868	(1.000)	618603			
* 69 Chlorobenzene-d5	119	9.970	9.971	(1.000)	145182			
* 92 1,4-Dichlorobenzene-d4	152	12.282	12.282	(1.000)	214121			
\$ 39 Dibromofluoromethane	113	6.138	6.132	(0.891)	137066	254.308	50.86	
\$ 43 1,2-Dichloroethane-d4	65	6.503	6.491	(0.944)	184673	256.902	51.38	
\$ 59 Toluene-d8	98	8.541	8.529	(0.857)	591610	251.352	50.27	
\$ 80 Bromofluorobenzene	95	11.132	11.145	(1.117)	222219	251.017	50.20	
1 Dichlorodifluoromethane	85.00	Compound Not Detected.						
22 Acrylonitrile	53.00	Compound Not Detected.						
44 Isobutanol	41.00	Compound Not Detected.						
2 Chloromethane	50.00	Compound Not Detected.						
3 Vinyl Chloride	62.00	Compound Not Detected.						
4 Bromomethane	94.00	Compound Not Detected.						
5 Chloroethane	64.00	Compound Not Detected.						
6 Trichlorofluoromethane	101.00	Compound Not Detected.						
12 1,1-Dichloroethene	96	3.120	3.029	(0.453)	159073	271.790	54.36	
15 Carbon Disulfide	76.00	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
=====	=====	==	=====	=====	=====	=====	=====
13 Acetone	43 00				Compound Not Detected		
14 Iodomethane	142 00				Compound Not Detected		
18 Methylene Chloride	84 00				Compound Not Detected.		
19 trans-1,2-Dichloroethene	96 00				Compound Not Detected.		
20 Methyl tert-butyl ether	73 00				Compound Not Detected.		
23 Hexane	57.00				Compound Not Detected.		
24 1,1-Dichloroethane	63 00				Compound Not Detected		
28 cis-1,2-dichloroethene	96.00				Compound Not Detected.		
M 29 1,2-Dichloroethene (total)	96.00				Compound Not Detected.		
31 2-Butanone	43.00				Compound Not Detected		
35 Tetrahydrofuran	42 00				Compound Not Detected.		
37 Chloroform	83.00				Compound Not Detected.		
38 1,1,1-Trichloroethane	97 00				Compound Not Detected		
41 Carbon Tetrachloride	117 00				Compound Not Detected.		
42 Benzene	78	6 570	6.539	(0.953)	591431	245.804	49.16
45 1,2-Dichloroethane	62 00				Compound Not Detected		
47 Trichloroethene	130	7 281	7.269	(1 056)	146962	238.442	47 69
49 1,2-Dichloropropane	63 00				Compound Not Detected.		
50 Dibromomethane	93.00				Compound Not Detected		
53 Bromodichloromethane	83.00				Compound Not Detected.		
57 cis-1,3-Dichloropropene	75 00				Compound Not Detected		
58 4-Methyl-2-Pentanone	43.00				Compound Not Detected		
60 Toluene	91	8.608	8.596	(0.863)	669900	249.998	50.00
61 trans-1,3-Dichloropropene	75.00				Compound Not Detected		
62 Ethyl methacrylate	69 00				Compound Not Detected.		
64 1,1,2-Trichloroethane	97.00				Compound Not Detected		
65 Tetrachloroethene	164.00				Compound Not Detected		
66 2-Hexanone	43 00				Compound Not Detected.		
67 Dibromochloromethane	129 00				Compound Not Detected		
68 1,2-Dibromoethane	107.00				Compound Not Detected.		
70 Chlorobenzene	112	10.001	10 001	(1.003)	424043	246.016	49.20
72 Ethylbenzene	106 00				Compound Not Detected.		
73 m + p-Xylene	106.00				Compound Not Detected		
74 Xylene-o	106 00				Compound Not Detected.		
M 75 Xylenes (total)	106.00				Compound Not Detected.		
76 Styrene	104.00				Compound Not Detected		
77 Bromoform	173.00				Compound Not Detected.		
83 1,1,2,2-Tetrachloroethane	83 00				Compound Not Detected.		
84 1,2,3-Trichloropropane	110.00				Compound Not Detected.		
91 1,3-Dichlorobenzene	146.00				Compound Not Detected.		
93 1,4-Dichlorobenzene	146.00				Compound Not Detected.		
95 1,2-Dichlorobenzene	146 00				Compound Not Detected.		
78 Isopropylbenzene	105.00				Compound Not Detected.		
99 Naphthalene	128 00				Compound Not Detected.		

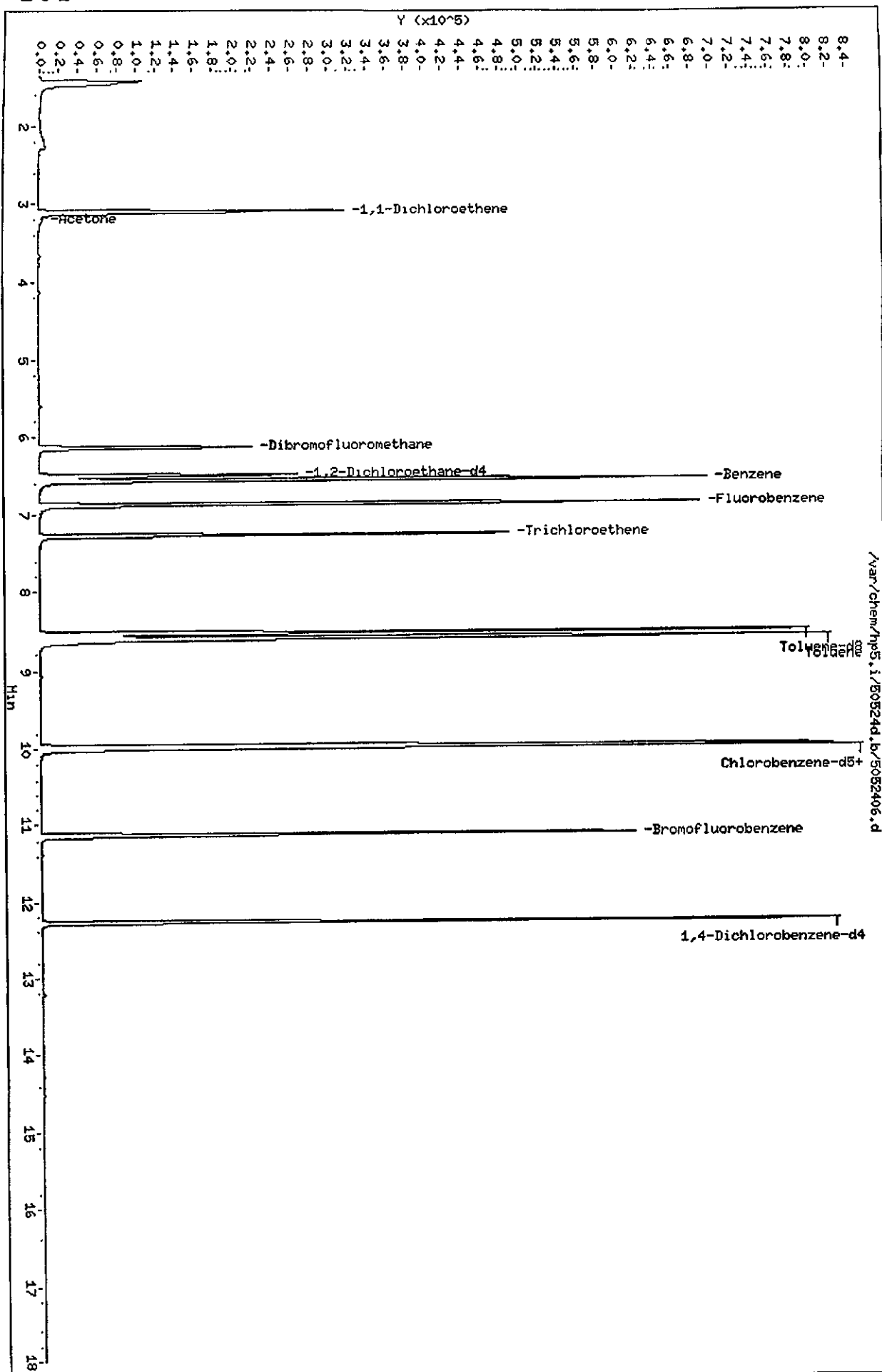
UXB INTERNATIONAL  
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.      SDG Number:  
Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001  
Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)  
Sample WT/Vol: 5 / mL      Date Received: 05/23/00  
Work Order: DDK90113      Date Extracted: 05/24/00  
Dilution factor: 1      Date Analyzed: 05/24/00  
Moisture %: NA  
QC Batch: 0145157  
Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
71-43-2	Benzene	51.2	
108-90-7	Chlorobenzene	49.3	
75-35-4	1,1-Dichloroethene	53.5	
108-88-3	Toluene	50.2	
79-01-6	Trichloroethene	49.9	

Data File: /var/chem/hp5.i/50524d.b/5052406.d  
 Date: 24-MAY-2000 09:53  
 Client ID: DF/S1/0137/MA/001  
 Sample Info: COE230195-001HS BHL  
 Purge Volume: 5.0  
 Column phase: DB 624

Instrument: hp5.i  
 Operator: 007062  
 Column diameter: 0.20



Data File: /var/chem/hp5.i/50524d.b/5052406.d  
 Report Date: 24-May-2000 10:10

Page 1

## STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052406.d  
 Lab Smp Id: DDK90113 Client Smp ID: DF/S1/0137/WA/001  
 Inj Date : 24-MAY-2000 09:53  
 Operator : 007062 Inst ID: hp5.i  
 Smp Info : C0E230195-001MS 5ML  
 Misc Info : ddk90113,50524d.b,8260bh2o.m,tcl.sub  
 Comment :  
 Method : /var/chem/hp5.i/50524d.b/8260bh2o.m  
 Meth Date : 24-May-2000 07:05 h Quant Type: ISTD  
 Cal Date : 15-MAY-2000 08:45 Cal File: 1a50515.d  
 Als bottle: 9 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: tcl.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

KLG  
 5/24/00

Concentration Formula: Amt \* DF \* 1/Vo\*Vt

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
* 46 Fluorobenzene	96	6.880	6.868	(1.000)	620339		
* 69 Chlorobenzene-d5	119	9.970	9.971	(1.000)	141881		
* 92 1,4-Dichlorobenzene-d4	152	12.276	12.282	(1.000)	219399		
\$ 39 Dibromofluoromethane	113	6.132	6.132	(0.891)	138439	256.137	51.23
\$ 43 1,2-Dichloroethane-d4	65	6.497	6.491	(0.944)	187286	259.808	51.96
\$ 59 Toluene-d8	98	8.535	8.529	(0.856)	583533	253.689	50.74
\$ 80 Bromofluorobenzene	95	11.132	11.145	(1.117)	221135	255.604	51.12
1 Dichlorodifluoromethane	85.00	Compound Not Detected					
22 Acrylonitrile	53.00	Compound Not Detected					
44 Isobutanol	41.00	Compound Not Detected.					
2 Chloromethane	50.00	Compound Not Detected.					
3 Vinyl Chloride	62.00	Compound Not Detected.					
4 Bromomethane	94.00	Compound Not Detected					
5 Chloroethane	64.00	Compound Not Detected.					
6 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 1,1-Dichloroethene	96	3.114	3.029	(0.453)	156975	267.455	53.49
15 Carbon Disulfide	76.00	Compound Not Detected.					



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
=====	=====	==	=====	=====	=====	=====	=====
13 Acetone	43	3.218	3	303 (0.468)	4163	10.7091	2.142
14 Iodomethane	142 00			Compound Not Detected.			
18 Methylene Chloride	84 00			Compound Not Detected.			
19 trans-1,2-Dichloroethene	96 00			Compound Not Detected.			
20 Methyl tert-butyl ether	73 00			Compound Not Detected.			
23 Hexane	57 00			Compound Not Detected.			
24 1,1-Dichloroethane	63 00			Compound Not Detected.			
28 cis-1,2-dichloroethene	96 00			Compound Not Detected.			
M 29 1,2-Dichloroethene (total)	96 00			Compound Not Detected.			
31 2-Butanone	43 00			Compound Not Detected.			
35 Tetrahydrofuran	42.00			Compound Not Detected.			
37 Chloroform	83 00			Compound Not Detected.			
38 1,1,1-Trichloroethane	97 00			Compound Not Detected.			
41 Carbon Tetrachloride	117 00			Compound Not Detected.			
42 Benzene	78	6.558	6.539	(0.953)	617188	255.791	51.16
45 1,2-Dichloroethane	62 00			Compound Not Detected.			
47 Trichloroethene	130	7.275	7.269	(1.057)	154286	249.625	49.92
49 1,2-Dichloropropane	63.00			Compound Not Detected.			
50 Dibromomethane	93.00			Compound Not Detected.			
53 Bromodichloromethane	83 00			Compound Not Detected.			
57 cis-1,3-Dichloropropene	75.00			Compound Not Detected.			
58 4-Methyl-2-Pentanone	43.00			Compound Not Detected.			
60 Toluene	91	8.602	8.596	(0.863)	657774	251.184	50.24
61 trans-1,3-Dichloropropene	75 00			Compound Not Detected.			
62 Ethyl methacrylate	69 00			Compound Not Detected.			
64 1,1,2-Trichloroethane	97 00			Compound Not Detected.			
65 Tetrachloroethene	164.00			Compound Not Detected.			
66 2-Hexanone	43.00			Compound Not Detected.			
67 Dibromochloromethane	129.00			Compound Not Detected.			
68 1,2-Dibromoethane	107.00			Compound Not Detected.			
70 Chlorobenzene	112	9.995	10.001	(1.002)	415071	246.413	49.28
72 Ethylbenzene	106.00			Compound Not Detected.			
73 m + p-Xylene	106 00			Compound Not Detected.			
74 Xylene-o	106.00			Compound Not Detected.			
M 75 Xylenes (total)	106.00			Compound Not Detected.			
76 Styrene	104.00			Compound Not Detected.			
77 Bromoform	173.00			Compound Not Detected.			
83 1,1,2,2-Tetrachloroethane	83.00			Compound Not Detected.			
84 1,2,3-Trichloropropane	110 00			Compound Not Detected.			
91 1,3-Dichlorobenzene	146.00			Compound Not Detected.			
93 1,4-Dichlorobenzene	146.00			Compound Not Detected.			
95 1,2-Dichlorobenzene	146.00			Compound Not Detected.			
78 Isopropylbenzene	105.00			Compound Not Detected.			
99 Naphthalene	128.00			Compound Not Detected.			

UXB INTERNATIONAL  
MATRIX SPIKE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001

Method: SW846 8260B  
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL      Date Received: 05/23/00

Work Order: DDK90114      Date Extracted: 05/24/00

Dilution factor: 1      Date Analyzed: 05/24/00

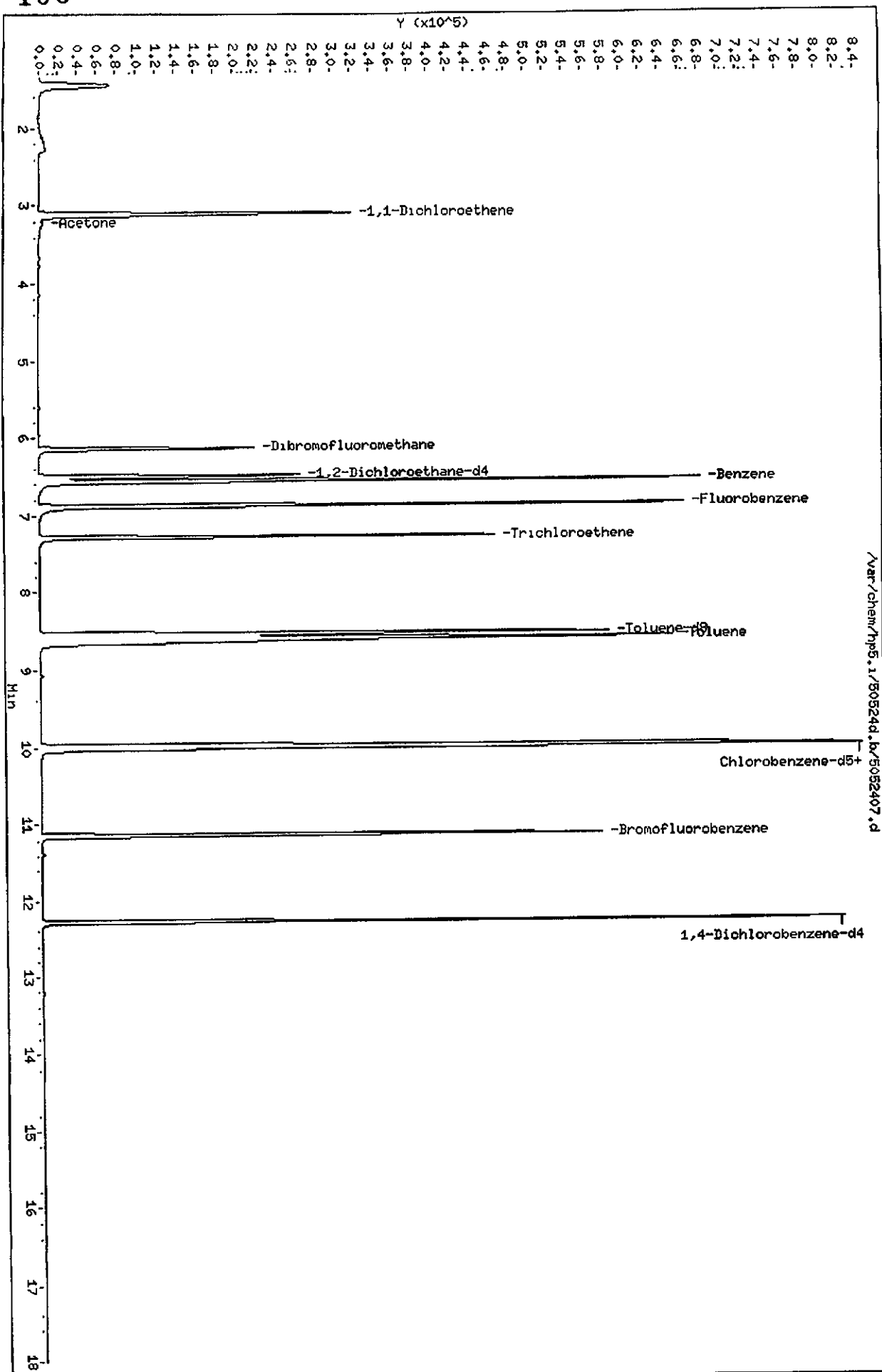
Moisture %: NA      QC Batch: 0145157

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/L	Q
71-43-2	Benzene	50.1	
108-90-7	Chlorobenzene	48.9	
75-35-4	1,1-Dichloroethene	55.9	
108-88-3	Toluene	50.2	
79-01-6	Trichloroethene	49.0	

Data File: /var/chem/hp5.i/50524d.b/5052407.d  
Date: 24-MAY-2000 10:18  
Client ID: DF/SL/0137/MA/001  
Sample Info: COE230195-001HSD SHL  
Purge Volume: 5.0  
Column phase: DB 624

Instrument: hp5.i  
Operator: 10099  
Column diameter: 0.20



Data File: /var/chem/hp5.i/50524d.b/5052407.d  
Report Date: 24-May-2000 10:35

Page 1

STL-PITTSBURGH

## VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052407.d  
Lab Smp Id: DDK90114 Client Smp ID: DF/S1/0137/WA/001  
Inj Date : 24-MAY-2000 10:18  
Operator : 10099 Inst ID: hp5.i  
Smp Info : C0E230195-001MSD 5ML  
Misc Info : ddk90114,50524d.b,8260bh2o.m,tcl.sub  
Comment :  
Method : /var/chem/hp5.i/50524d.b/8260bh2o.m  
Meth Date : 24-May-2000 07:05 h Quant Type: ISTD  
Cal Date : 15-MAY-2000 08:45 Cal File: 1a50515.d  
Als bottle: 10 QC Sample: MSD  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: tcl.sub  
Target Version: 3.40  
Processing Host: hpuxcs21

Concentration Formula:  $\text{Amt} * \text{DF} * 1/\text{Vo} * \text{Vt}$

KLG  
5/24/00

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	Sample Volume
Vt	1.000	mg/L conversion (1.0 if no conversion)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng)	FINAL ( UG/L)
* 46 Fluorobenzene	96	6.886	6.868	(1.000)	618101		
* 69 Chlorobenzene-d5	119	9.970	9.971	(1.000)	144401		
* 92 1,4-Dichlorobenzene-d4	152	12.276	12.282	(1.000)	218281		
\$ 39 Dibromofluoromethane	113	6.138	6.132	(0.891)	140189	260.314	52.06
\$ 43 1,2-Dichloroethane-d4	65	6.497	6.491	(0.943)	188009	261.755	52.35
\$ 59 Toluene-d8	98	8.541	8.529	(0.857)	593656	253.586	50.72
\$ 80 Bromofluorobenzene	95	11.132	11.145	(1.117)	223628	253.975	50.79
1 Dichlorodifluoromethane	85 00	Compound Not Detected.					
22 Acrylonitrile	53 00	Compound Not Detected.					
44 Isobutanol	41 00	Compound Not Detected.					
2 Chloromethane	50.00	Compound Not Detected.					
3 Vinyl Chloride	62.00	Compound Not Detected.					
4 Bromomethane	94 00	Compound Not Detected.					
5 Chloroethane	64 00	Compound Not Detected.					
6 Trichlorofluoromethane	101.00	Compound Not Detected.					
12 1,1-Dichloroethane	96	3.120	3.029	(0.453)	163558	279.680	55.94
15 Carbon Disulfide	76.00	Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					( ng)	( UG/L)
=====	=====	==	=====	=====	=====	=====	=====
13 Acetone	43	3.224	3 303	(0 468)	4126	10.6523	2 130
14 Iodomethane	142 00	Compound Not Detected					
18 Methylene Chloride	84.00	Compound Not Detected.					
19 trans-1,2-Dichloroethene	96 00	Compound Not Detected.					
20 Methyl tert-butyl ether	73.00	Compound Not Detected					
23 Hexane	57 00	Compound Not Detected					
24 1,1-Dichloroethane	63 00	Compound Not Detected.					
28 cis-1,2-dichloroethene	96 00	Compound Not Detected.					
M 29 1,2-Dichloroethene (total)	96 00	Compound Not Detected.					
31 2-Butanone	43 00	Compound Not Detected.					
35 Tetrahydrofuran	42.00	Compound Not Detected					
37 Chloroform	83.00	Compound Not Detected.					
38 1,1,1-Trichloroethane	97.00	Compound Not Detected					
41 Carbon Tetrachloride	117.00	Compound Not Detected.					
42 Benzene	78	6 563	6 539	(0.953)	602425	250 577	50.12
45 1,2-Dichloroethane	62.00	Compound Not Detected.					
47 Trichloroethene	130	7.281	7.269	(1.057)	150999	245 191	49.04
49 1,2-Dichloropropane	63.00	Compound Not Detected.					
50 Dibromomethane	93 00	Compound Not Detected.					
53 Bromodichloromethane	83 00	Compound Not Detected.					
57 cis-1,3-Dichloropropene	75 00	Compound Not Detected					
58 4-Methyl-2-Pentanone	43.00	Compound Not Detected					
60 Toluene	91	8.607	8.596	(0 863)	668329	250.761	50.15
61 trans-1,3-Dichloropropene	75.00	Compound Not Detected.					
62 Ethyl methacrylate	69.00	Compound Not Detected					
64 1,1,2-Trichloroethane	97.00	Compound Not Detected.					
65 Tetrachloroethene	164.00	Compound Not Detected					
66 2-Hexanone	43 00	Compound Not Detected.					
67 Dibromochloromethane	129.00	Compound Not Detected					
68 1,2-Dibromoethane	107.00	Compound Not Detected.					
70 Chlorobenzene	112	10.001	10.001	(1.003)	419011	244.411	48.88
72 Ethylbenzene	106.00	Compound Not Detected.					
73 m + p-Xylene	106.00	Compound Not Detected					
74 Xylene-o	106.00	Compound Not Detected					
M 75 Xylenes (total)	106.00	Compound Not Detected					
76 Styrene	104.00	Compound Not Detected.					
77 Bromoform	173.00	Compound Not Detected.					
83 1,1,2,2-Tetrachloroethane	83.00	Compound Not Detected.					
84 1,2,3-Trichloropropane	110.00	Compound Not Detected					
91 1,3-Dichlorobenzene	146.00	Compound Not Detected.					
93 1,4-Dichlorobenzene	146.00	Compound Not Detected.					
95 1,2-Dichlorobenzene	146.00	Compound Not Detected					
78 Isopropylbenzene	105.00	Compound Not Detected.					
99 Naphthalene	128.00	Compound Not Detected					

GC/MS

**GC/MS VOLATILE  
MISCELLANEOUS**

## GCMS Volatile

## Run Log

Method: 8260B

Inst. ID HPS

Analyst KLG

Reviewed by:

Date:

Std: 192-180-11BFB Std: 192-178-98um

Std: 192-180-7NVA Std: 192-180-8 Ketones

Std: 192-175-9MS Std: 192-179-6CS2

Std: 192-179-7MTBE

Std:

Date	File ID	Lot No./Sample No.	Vol./Wt.	pH	Port#	Comments
5/5/00	1. B50515	BFB	50ng			0523
	2. K50515	V505D Bonus	5ml			
	3. 3030515	V905D	5ml			
	4. 1A30515	V505D	5ml			
	5. 1B30515	V505D	5ml			
	6. 1D30515	V505D	5ml			
	7. 1E30515	V505D	5ml			0959
	8.					
	9.					
	10.					
	11.					
	12.					
	13.					
	14.					
	15.					
	16.					
	17.					
	18.					
	19.					
	20.					
	21.					
	22.					

**GCMS Volatile****Run Log**Analyst WLSMethod: Std: 192-180-11 BFBInst. ID HPS

  
 STL Pittsburgh  
 450 William Pitt Way  
 Pittsburgh, PA 15238  
 412-820-8380

Reviewed by: \_\_\_\_\_

Date: \_\_\_\_\_

Std: 192-180-11 BFBStd: 192-180-10 JluurStd: 192-180-8 KatoriesStd: 192-182-11 MTBE/CS2Std: 192-182-3 MS

Std: \_\_\_\_\_

Date	File ID	Lot No./Sample No.	Vol./Wt.	pH	Port#	Comments
5/24/03	1. 19250524	BFB	50mg			OKS
	2. 19250524	V6050	5ml			
	3. 19250524	VBLK	5ml			
	4. 5052401	TCU Prep Blank 5/23/03	(1ml/10ml)/5ml	5		
	5. 5052402	Blank MS	5ml			
	6. 5052403	Blank MS TCU	(1ml/10ml)/5ml	5		
	7. 5052404	19230195-001	5ml	1		
	8. 5052405	19230195-001	(1ml/10ml)/5ml	5		
	9. 5052406	19230195-001 MS	5ml	1		
	10. 5052407	19230195-001 MSB	5ml	1		
	11. 5052408	19230195-001 MS	(1ml/10ml)/5ml	5		
	12. 5052409	19230195-001 MSB	(1ml/10ml)/5ml	5		
	13. 5052410					
	14.					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22.					



658 172

PSR024 5/24/00 4:05.08 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY. GORDONK

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

<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>
4F	DDK90-1-01	___	236258	399411	I-15-QK	C0E230195	001		WATER	0	9 1

RELINQUISHED BYRECEIVED BYDATE/TIME

CPI

Kathy Gordon

5/24/00 0700

Kathy Gordon

NY01

5/24/00 1045

\*\*\*\*\* 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 #: C0E230195

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0137/WA/001	59	60	68	47	56	69	00
02	METHOD BLK. DDNQC101	71	63	69	83	66	72	00
03	LCS DDNQC102	75	71	73	82	69	80	00
04	LCSD DDNQC103	71	68	69	78	66	76	00

SURROGATESQC LIMITS

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

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

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

FORM II

658 176

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name. Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E250000

WO #: DDNQC102

BATCH: 0146202

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Phenol	75.0	49.9	67	10 - 131	
2-Chlorophenol	75.0	53.7	72	19 - 124	
1,4-Dichlorobenzene	50.0	36.0	72	28 - 110	
N-Nitrosodi-n-propylamine	50.0	44.5	89	30 - 115	
1,2,4-Trichlorobenzene	50.0	37.2	74	31 - 110	
4-Chloro-3-methylphenol	75.0	59.5	79	29 - 124	
Acenaphthene	50.0	40.2	80	39 - 118	
4-Nitrophenol	75.0	56.5	75	19 - 144	
2,4-Dinitrotoluene	50.0	41.6	83	47 - 131	
Pentachlorophenol	75.0	67.8	90	10 - 140	
Pyrene	50.0	42.7	85	46 - 130	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

## SW846 8270C CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E250000

WO #: DDNQC103

BATCH: 0146202

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
Phenol	75.0	48.4	65	10- 131	
2-Chlorophenol	75.0	51.8	69	19- 124	
1,4-Dichlorobenzene	50.0	34.6	69	28- 110	
N-Nitrosodi-n-propylamine	50.0	42.7	85	30- 115	
1,2,4-Trichlorobenzene	50.0	36.4	73	31- 110	
4-Chloro-3-methylphenol	75.0	57.9	77	29- 124	
Acenaphthene	50.0	39.3	79	39- 118	
4-Nitrophenol	75.0	54.9	73	19- 144	
2,4-Dinitrotoluene	50.0	40.6	81	47- 131	
Pentachlorophenol	75.0	66.0	88	10- 140	
Pyrene	50.0	41.7	83	46- 130	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   11   outside limits

COMMENTS:

FORM III

658 178

## SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDNQC101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: F0526003.

Lot Number: C0E230195

Date Analyzed: 05/26/00

Time Analyzed: 10:46

Matrix: WATER

Date Extracted: 05/24/00

GC Column: HP5MS ID: .25

Extraction Method: 3520C

Instrument ID: 722

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/S1/0137/WA/001	DDK90102	F0526012.	05/26/00	16:28
02	CHECK SAMPLE	DDNQC102 C	F0526004.	05/26/00	11:20
03	DUPLICATE CHECK	DDNQC103 L	F0526005.	05/26/00	11:54
04					
05					
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

FORM 5  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

658 179

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: C0E230195

Lab File ID: F0526DF1

DFTPP Injection Date: 05/26/00

Instrument ID: 722

DFTPP Injection Time: 0629

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.1
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	49.2
70	Less than 2.0% of mass 69	0.0 ( 0.0)1
127	40.0 - 60.0% of mass 198	57.4
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	6.7
275	10.0 - 30.0% of mass 198	25.8
365	Greater than 1.0% of mass 198	3.94
441	Present, but less than mass 443	10.9
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	14.1 ( 19.5)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	SSTD050	F05260C1	05/26/00	0646
02	SSTD020	SSTD020	F05260C2	05/26/00	0721
03	SSTD080	SSTD080	F05260C3	05/26/00	0755
04	SSTD120	SSTD120	F05260C4	05/26/00	0829
05	SSTD160	SSTD160	F05260C5	05/26/00	0904
06	INTRA-LAB BL	DDNQC101	F0526003	05/26/00	1046
07	INTRA-LAB CH	DDNQC102	F0526004	05/26/00	1120
08	INTRA-LAB CH	DDNQC103	F0526005	05/26/00	1154
09	DF/S1/0137/W	DDK90102	F0526012	05/26/00	1628
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					



Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: C0E230195

Lab File ID (Standard): F05260C5

Date Analyzed: 05/26/00

Instrument ID: 722

Time Analyzed: 0904

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	35904	4.99	134042	6.51	77370	9.52
UPPER LIMIT	71808	5.49	268084	7.01	154740	10.02
LOWER LIMIT	17952	4.49	67021	6.01	38685	9.02
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	36738	4.98	148095	6.50	92291	9.50
02 INTRA-LAB CH	37216	4.98	147725	6.50	89356	9.50
03 INTRA-LAB CH	40299	4.98	158308	6.50	95449	9.51
04 DF/S1/0137/W	40683	4.99	162702	6.51	95633	9.51
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
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

658 181

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: C0E230195

Lab File ID (Standard): F05260C5

Date Analyzed: 05/26/00

Instrument ID: 722

Time Analyzed: 0904

	IS4 (PHN)	RT #	IS5 (CRY)	RT #	IS6 (PRY)	RT #
	AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	143810	12.81	142226	19.44	128115	22.79
UPPER LIMIT	287620	13.31	284452	19.94	256230	23.29
LOWER LIMIT	71905	12.31	71113	18.94	64058	22.29
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	170285	12.79	147827	19.40	157444	22.76
02 INTRA-LAB CH	168059	12.79	159317	19.40	158489	22.76
03 INTRA-LAB CH	179564	12.79	169325	19.40	171252	22.77
04 DF/S1/0137/W	172516	12.80	157786	19.42	186995	22.78
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
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.

**GC/MS SEMIVOLATILE  
SAMPLE DATA**

## UXB INTERNATIONAL

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
110-86-1	Pyridine	20	U
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
120-12-7	Anthracene	10	U
56-55-3	Benzo(a)anthracene	10	U
50-32-8	Benzo(a)pyrene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
86-74-8	Carbazole	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
132-64-9	Dibenzofuran	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
120-83-2	2,4-Dichlorophenol	10	U

FORM I

## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DF/S1/0137/WA/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
84-66-2	Diethyl phthalate	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
84-74-2	Di-n-butyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
51-28-5	2,4-Dinitrophenol	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
67-72-1	Hexachloroethane	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
88-74-4	2-Nitroaniline	50	U
99-09-2	3-Nitroaniline	50	U
100-01-6	4-Nitroaniline	50	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	50	U
621-64-7	N-Nitrosodi-n-propylamine	10	U

## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method. SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

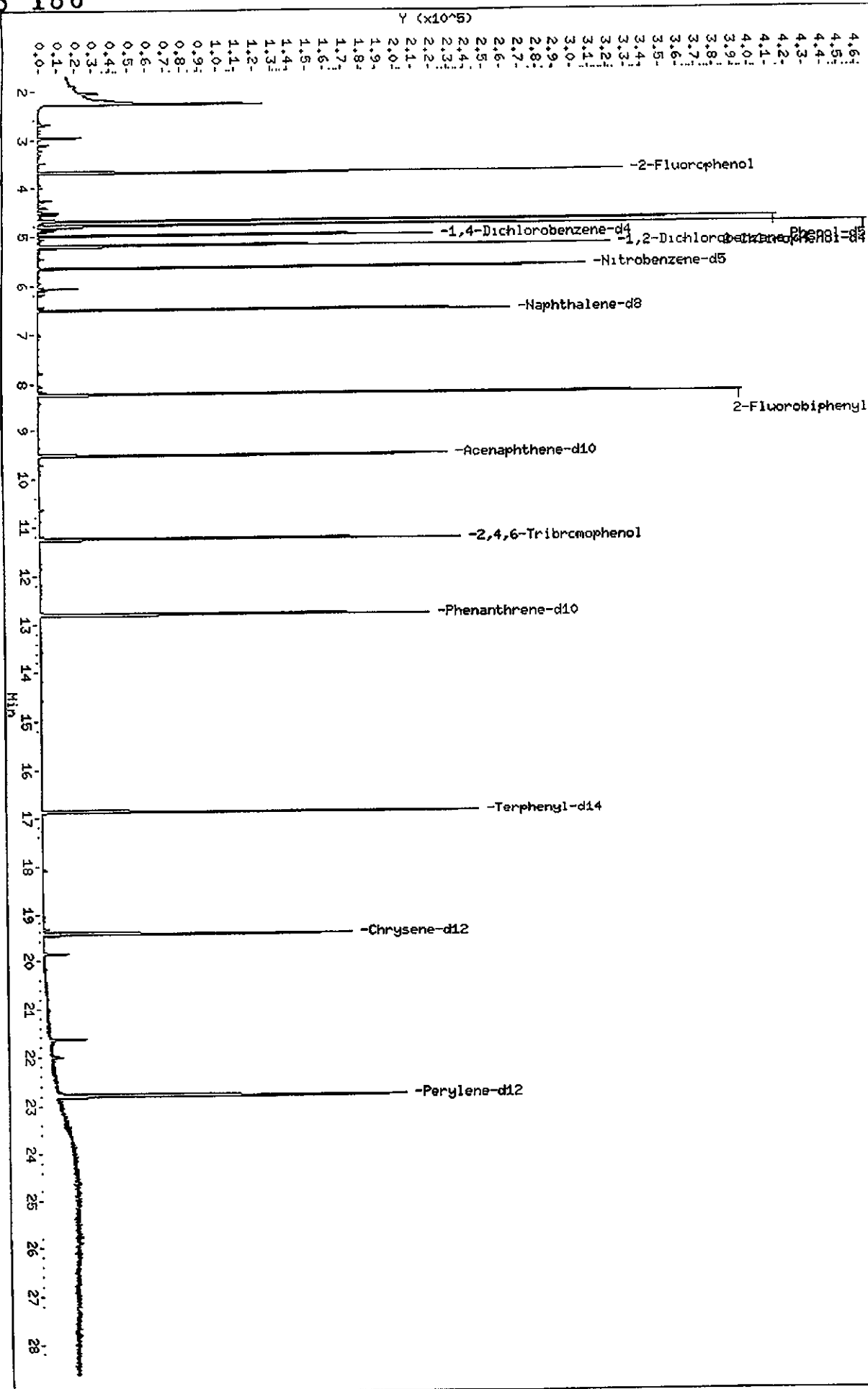
Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
86-30-6	N-Nitrosodiphenylamine	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
129-00-0	Pyrene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U

Data File: \\QPIITPA02\chem\722.1\052600.b\F0526012.D  
 Date: 26-MAY-2000 16:28  
 Client ID: DF/SL/0137/MR/001  
 Sample Info: C0E230195-001 5/24/00 H2O  
 Volume Injected (uL): 2.0  
 Column phase: HP5-HS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25

\\QPIITPA02\chem\722.1\052600.b\F0526012.D



Data File: \\Qpitpa02\D\chem\722.i\052600.b\F0526012.D  
 Report Date: 26-May-2000 17:00

Page 1

## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F0526012.D  
 Lab Smp Id: DDK90102 Client Smp ID: DF/S1/0137/WA/001  
 Inj Date : 26-MAY-2000 16:28  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : C0E230195-001 5/24/00 H2O  
 Misc Info : ddk90102,052600.b,8270b.m,2-root.sub  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 16:44 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 09:04 Cal File: F05260C5.D  
 Als bottle: 18  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.03  
 Processing Host: PITPC083

Compound Sublist: 2-root.sub

*WJL*  
*5/26/00*

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

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	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 ( ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.989	4.977	(1.000)	40683	40.0000	(Q)
* 2 Naphthalene-d8	136	6.506	6.505	(1.000)	162702	40.0000	
* 3 Acenaphthene-d10	164	9.514	9.512	(1.000)	95633	40.0000	
* 4 Phenanthrene-d10	188	12.804	12.803	(1.000)	172516	40.0000	
* 5 Chrysene-d12	240	19.423	19.427	(1.000)	157786	40.0000	
* 6 Perylene-d12	264	22.783	22.782	(1.000)	186995	40.0000	
10 N-Nitrosodimethylamine	74	Compound Not Detected.					
9 Pyridine	79	Compound Not Detected.					
21 Aniline	93	Compound Not Detected.					
22 Phenol	94	Compound Not Detected.					
23 bis(2-Chloroethyl) ether	93	Compound Not Detected.					
24 2-Chlorophenol	128	Compound Not Detected.					
26 1,3-Dichlorobenzene	146	Compound Not Detected.					
27 1,4-Dichlorobenzene	146	Compound Not Detected.					



Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( NG)	FINAL ( ug/L)
=====	=====	==	=====	=====	=====	=====	=====
28 1,2-Dichlorobenzene	146		Compound	Not	Detected		
29 Benzyl Alcohol	108		Compound	Not	Detected		
30 2-Methylphenol	108		Compound	Not	Detected		
31 2,2'-oxybis(1-Chloropropane)	45		Compound	Not	Detected		
32 N-Nitroso-di-n-propylamine	70		Compound	Not	Detected.		
192 4-Methylphenol	108		Compound	Not	Detected		
34 Hexachloroethane	117		Compound	Not	Detected		
35 Nitrobenzene	77		Compound	Not	Detected.		
41 Isophorone	82		Compound	Not	Detected.		
42 2-Nitrophenol	139		Compound	Not	Detected		
43 2,4-Dimethylphenol	107		Compound	Not	Detected		
44 bis(2-Chloroethoxy)methane	93		Compound	Not	Detected		
48 2,4-Dichlorophenol	162		Compound	Not	Detected.		
49 Benzoic Acid	122		Compound	Not	Detected.		
50 1,2,4-Trichlorobenzene	180		Compound	Not	Detected.		
51 Naphthalene	128		Compound	Not	Detected		
52 4-Chloroaniline	127		Compound	Not	Detected		
56 Hexachlorobutadiene	224		Compound	Not	Detected		
59 4-Chloro-3-Methylphenol	107		Compound	Not	Detected.		
62 2-Methylnaphthalene	142		Compound	Not	Detected.		
205 1-Methylnaphthalene	142		Compound	Not	Detected		
64 Hexachlorocyclopentadiene	236		Compound	Not	Detected.		
66 2,4,6-Trichlorophenol	196		Compound	Not	Detected.		
67 2,4,5-Trichlorophenol	196		Compound	Not	Detected		
70 2-Chloronaphthalene	162		Compound	Not	Detected		
73 2-Nitroaniline	65		Compound	Not	Detected		
76 Dimethylphthalate	163		Compound	Not	Detected.		
78 2,6-Dinitrotoluene	165		Compound	Not	Detected		
79 Acenaphthylene	152		Compound	Not	Detected		
81 3-Nitroaniline	138		Compound	Not	Detected		
82 Acenaphthene	153		Compound	Not	Detected		
83 2,4-Dinitrophenol	184		Compound	Not	Detected.		
85 4-Nitrophenol	109		Compound	Not	Detected.		
86 Dibenzofuran	168		Compound	Not	Detected.		
87 2,4-Dinitrotoluene	165		Compound	Not	Detected.		
91 2,3,5,6-Tetrachlorophenol	232		Compound	Not	Detected.		
88 2,3,4,6-Tetrachlorophenol	232		Compound	Not	Detected		
93 Diethylphthalate	149		Compound	Not	Detected		
94 Fluorene	166		Compound	Not	Detected.		
95 4-Chlorophenyl-phenylether	204		Compound	Not	Detected.		
96 4-Nitroaniline	138		Compound	Not	Detected.		
98 4,6-Dinitro-2-methylphenol	198		Compound	Not	Detected		
99 N-Nitrosodiphenylamine	169		Compound	Not	Detected.		
100 1,2-Diphenylhydrazine	77		Compound	Not	Detected		
106 4-Bromophenyl-phenylether	248		Compound	Not	Detected		
107 Hexachlorobenzene	283		Compound	Not	Detected.		
111 Pentachlorophenol	265		Compound	Not	Detected		

Data File: \\Qpitpa02\D\chem\722.i\052600.b\F0526012.D  
Report Date: 26-May-2000 17:00

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					( NG)	( ug/L)
*****	****	==	*****	*****	*****	*****	*****
115 Phenanthrene	178				Compound Not Detected		
116 Anthracene	178				Compound Not Detected.		
119 Carbazole	167				Compound Not Detected.		
120 Di-n-Butylphthalate	149				Compound Not Detected.		
123 Fluoranthene	202				Compound Not Detected		
124 Benzidine	184				Compound Not Detected		
125 Pyrene	202				Compound Not Detected.		
131 Butylbenzylphthalate	149				Compound Not Detected.		
135 3,3'-Dichlorobenzidine	252				Compound Not Detected.		
136 Benzo(a)Anthracene	228				Compound Not Detected		
137 Chrysene	228				Compound Not Detected		
139 bis(2-ethylhexyl) Phthalate	149				Compound Not Detected.		
140 Di-n-octylphthalate	149				Compound Not Detected		
141 Benzo(b)fluoranthene	252				Compound Not Detected.		
142 Benzo(k)fluoranthene	252				Compound Not Detected.		
146 Benzo(a)pyrene	252				Compound Not Detected.		
149 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
150 Dibenz(a,h)anthracene	278				Compound Not Detected		
151 Benzo(g,h,i)perylene	276				Compound Not Detected.		
\$ 154 Nitrobenzene-d5	82	5.640	5.634	(0.867)	116804	68.3265	34.2
\$ 155 2-Fluorobiphenyl	172	8.237	8.230	(0.866)	187056	59.8611	29.9
\$ 156 Terphenyl-d14	244	16.870	16.868	(0.869)	169701	46.5844	23.3
\$ 157 Phenol-d5	99	4.689	4.672	(0.940)	148795	88.4121	44.2
\$ 158 2-Fluorophenol	112	3.680	3.657	(0.738)	106091	84.1703	42.1
\$ 159 2,4,6-Tribromophenol	330	11.255	11.243	(0.879)	42985	103.340	51.7
\$ 186 2-Chlorophenol-d4	132	4.791	4.779	(0.960)	132596	104.182	52.1
\$ 187 1,2-Dichlorobenzene-d4	152	5.192	5.185	(1.041)	56464	60.5999	30.3

### QC Flag Legend

Q - Qualifier signal failed the ratio test.

658 190

**GC/MS SEMIVOLATILE  
CALIBRATION DATA**

6B  
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

658 191

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.

SAS No.:

SDG No.: \_

Instrument ID: 722

Calibration Date(s): 05/26/00

Min RRF for SPCC(#) = 0.050

Max %RSD for CCC(\*) = 30.0%

LAB FILE ID:		RRF1 =F05260C2.D	RRF2 =F05260C1.D				
RRF3 =F05260C3.D		RRF4 =F05260C4.D	RRF5 =F05260C5.D				
COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF	% RSD
Phenol	* 1.837	1.893	1.901	1.875	1.931	1.887	1.8*
bis(2-Chloroethyl)ether	1.315	1.330	1.343	1.294	1.324	1.321	1.4
2-Chlorophenol	1.432	1.461	1.460	1.399	1.441	1.439	1.8
1,3-Dichlorobenzene	1.537	1.553	1.554	1.509	1.544	1.539	1.2
1,4-Dichlorobenzene	* 1.555	1.589	1.588	1.541	1.588	1.572	1.4*
1,2-Dichlorobenzene	1.450	1.489	1.479	1.434	1.487	1.468	1.7
2-Methylphenol	1.237	1.256	1.266	1.216	1.258	1.247	1.6
2,2'-oxybis(1-Chloropropane	2.238	2.299	2.248	2.182	2.238	2.241	1.9
4-Methylphenol	1.324	1.373	1.370	1.346	1.387	1.360	1.8
Hexachloroethane	0.624	0.649	0.643	0.629	0.648	0.639	1.8
Nitrobenzene	0.415	0.438	0.442	0.439	0.446	0.436	2.8
Isophorone	0.665	0.704	0.710	0.699	0.707	0.697	2.6
2-Nitrophenol	* 0.187	0.200	0.203	0.203	0.204	0.199	3.6*
2,4-Dimethylphenol	0.347	0.381	0.388	0.386	0.398	0.380	5.1
bis(2-Chloroethoxy)methane	0.391	0.411	0.415	0.408	0.412	0.407	2.3
N-Nitroso-di-n-propylamine	# 1.054	1.075	1.057	1.024	1.050	1.052	1.8#
2,4-Dichlorophenol	* 0.275	0.290	0.294	0.292	0.294	0.289	2.8*
1,2,4-Trichlorobenzene	0.298	0.306	0.315	0.309	0.312	0.308	2.1
Naphthalene	1.087	1.129	1.132	1.124	1.143	1.123	1.9
4-Chloroaniline	0.411	0.436	0.442	0.434	0.442	0.433	2.9
Hexachlorobutadiene	* 0.177	0.184	0.187	0.187	0.192	0.185	2.9*
4-Chloro-3-Methylphenol	* 0.315	0.336	0.340	0.340	0.344	0.335	3.4*
2-Methylnaphthalene	0.711	0.742	0.752	0.745	0.753	0.741	2.3
Hexachlorocyclopentadiene	# 0.360	0.408	0.410	0.415	0.427	0.404	6.4#
2,4,6-Trichlorophenol	* 0.338	0.363	0.360	0.358	0.362	0.356	2.9*
2,4,5-Trichlorophenol	0.355	0.387	0.382	0.382	0.387	0.379	3.5
2-Chloronaphthalene	1.118	1.175	1.166	1.176	1.209	1.169	2.8
2-Nitroaniline	0.399	0.436	0.433	0.431	0.441	0.428	3.8
Dimethylphthalate	1.327	1.384	1.372	1.364	1.367	1.363	1.6
Acenaphthylene	1.807	1.910	1.894	1.881	1.886	1.876	2.1
2,6-Dinitrotoluene	0.276	0.304	0.302	0.303	0.305	0.298	4.1
3-Nitroaniline	0.332	0.356	0.354	0.355	0.360	0.351	3.2
Acenaphthene	* 1.165	1.195	1.196	1.177	1.199	1.186	1.3*
2,4-Dinitrophenol	# 0.118	0.177	0.187	0.198	0.209	0.178	20.0#
4-Nitrophenol	# 0.243	0.285	0.294	0.303	0.319	0.289	9.8#
Dibenzofuran	1.654	1.696	1.689	1.681	1.695	1.683	1.0
2,4-Dinitrotoluene	0.387	0.415	0.416	0.416	0.420	0.411	3.3

Lab Name: STL PITTSBURGH

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument ID: 722

Calibration Date(s): 05/26/00

Min RRF for SPCC(%) = 0.050

Max %RSD for CCC(\*) = 30.0%

LAB FILE ID.	RRF1 =F05260C2.D	RRF2 =F05260C1.D					
RRF3 =F05260C3.D	RRF4 =F05260C4.D	RRF5 =F05260C5.D					
COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	RRF	% RSD
Diethylphthalate	1.390	1.449	1.470	1.477	1.512	1.460	3.1
4-Chlorophenyl-phenylether	0.617	0.641	0.636	0.628	0.641	0.633	1.6
Fluorene	1.361	1.402	1.384	1.384	1.415	1.389	1.5
4-Nitroaniline	0.323	0.351	0.352	0.352	0.354	0.346	3.8
4,6-Dinitro-2-methylphenol	0.104	0.129	0.133	0.135	0.141	0.128	11.3
N-Nitrosodiphenylamine (1) *	0.537	0.534	0.533	0.535	0.546	0.537	1.0*
4-Bromophenyl-phenylether	0.190	0.201	0.201	0.197	0.203	0.198	2.6
Hexachlorobenzene	0.204	0.216	0.212	0.211	0.219	0.212	2.7
Pentachlorophenol	# 0.071	0.105	0.115	0.120	0.132	0.109	21.2#
Phenanthrene	1.025	1.048	1.053	1.036	1.069	1.046	1.6
Anthracene	1.036	1.074	1.073	1.063	1.084	1.066	1.7
Carbazole	0.956	0.982	0.990	0.977	1.008	0.983	1.9
Di-n-Butylphthalate	1.211	1.294	1.316	1.313	1.363	1.299	4.3
Fluoranthene	* 1.069	1.120	1.125	1.112	1.152	1.116	2.7*
Pyrene	1.190	1.245	1.201	1.164	1.154	1.191	3.0
Butylbenzylphthalate	0.579	0.615	0.620	0.605	0.614	0.607	2.7
3,3'-Dichlorobenzidine	0.397	0.427	0.424	0.429	0.431	0.422	3.3
Benzo (a) Anthracene	1.093	1.141	1.134	1.111	1.125	1.121	1.7
Chrysene	0.974	1.019	1.003	0.984	0.987	0.993	1.8
bis (2-ethylhexyl) Phthalate	0.741	0.831	0.824	0.822	0.843	0.812	5.0
Di-n-octylphthalate	* 1.515	1.587	1.634	1.623	1.674	1.607	3.7*
Benzo (b) fluoranthene	1.261	1.232	1.262	1.344	1.409	1.302	5.6
Benzo (k) fluoranthene	1.283	1.361	1.407	1.340	1.167	1.312	7.1
Benzo (a) pyrene	* 1.105	1.158	1.191	1.172	1.209	1.167	3.4*
Indeno (1,2,3-cd) pyrene	1.349	1.472	1.496	1.540	1.621	1.496	6.7
Dibenz (a,h) anthracene	1.173	1.279	1.305	1.347	1.438	1.308	7.4
Benzo (g,h,i) perylene	1.156	1.242	1.282	1.310	1.379	1.274	6.5
Pyridine	1.359	1.312	1.363	1.321	1.341	1.339	1.7
N-Nitrosodimethylamine	0.739	0.768	0.772	0.742	0.763	0.757	2.0
Aniline	2.242	2.149	2.212	2.192	2.244	2.208	1.8
Benzyl Alcohol	0.951	0.946	0.980	0.962	0.982	0.964	1.7
Benzoic Acid	0.103	0.188	0.194	0.210	0.208	0.181	24.7
2,3,4,6-Tetrachlorophenol	0.286	0.304	0.306	0.312	0.317	0.305	3.9
2,3,5,6-Tetrachlorophenol	0.276	0.298	0.303	0.315	0.317	0.302	5.5
1,2-Diphenylhydrazine	0.832	0.876	0.884	0.875	0.896	0.873	2.8

(1) Cannot be separated from Diphenylamine

## SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Contract:

SDG No.:

Calibration Date(s): 05/26/00

Max %RSD for CCC(\*) = 30.0%

[illegible]

653 194

Data File: \\QpITPA02\D\chem\722.i\052600.b\F05260C5.D  
Report Date: 05/26/2000

## INITIAL CALIBRATION REPORT

Instrument ID: 722.i  
Lab File ID: F05260C5.D  
Analysis Type: NONE

Injection Date: 26-MAY-2000 09:04  
Lab Sample ID: sstd160  
Method File: \\QPITPA02\D\chem\722.i\052600.b\

COMPOUND	%RSD
=====	=====
Benzo(a)pyrene	3.4
Indeno(1,2,3-cd)pyrene	6.7
Dibenz(a,h)anthracene	7.4
Benzo(g,h,i)perylene	6.5

The average of all %RSD's in the initial calibration is 3.8

# INITIAL CALIBRATION REPORT

Instrument ID: 722.i  
 Lab File ID: F05260C5.D  
 Analysis Type: NONE

Injection Date: 26-MAY-2000 09:04  
 Lab Sample ID: sstd160  
 Method File: \\QPITPA02\D\chem\722.i\052600.b\

COMPOUND	%RSD
Pyridine	1.7
N-Nitrosodimethylamine	2.0
2-Fluorophenol	0.8
Phenol-d5	1.2
Aniline	1.8
Phenol	1.8
bis(2-Chloroethyl)ether	1.4
2-Chlorophenol-d4	1.0
2-Chlorophenol	1.8
1,3-Dichlorobenzene	1.2
1,4-Dichlorobenzene	1.4
Benzyl Alcohol	1.7
1,2-Dichlorobenzene-d4	2.4
1,2-Dichlorobenzene	1.7
2-Methylphenol	1.6
2,2'-oxybis(1-Chloropropane)	1.9
4-Methylphenol	1.8
N-Nitroso-di-n-propylamine	1.8
Hexachloroethane	1.8
Nitrobenzene-d5	3.6
Nitrobenzene	2.8
Isophorone	2.6
2-Nitrophenol	3.6
2,4-Dimethylphenol	5.1
bis(2-Chloroethoxy)methane	2.3
Benzoic Acid	24.7
2,4-Dichlorophenol	2.8
1,2,4-Trichlorobenzene	2.1
Naphthalene	1.9
4-Chloroaniline	2.9
Hexachlorobutadiene	2.9
4-Chloro-3-Methylphenol	3.4
2-Methylnaphthalene	2.3
1-Methylnaphthalene	1.5
Hexachlorocyclopentadiene	6.4
2,4,6-Trichlorophenol	2.9
2,4,5-Trichlorophenol	3.5
2-Fluorobiphenyl	2.4
2-Chloronaphthalene	2.8



653 196

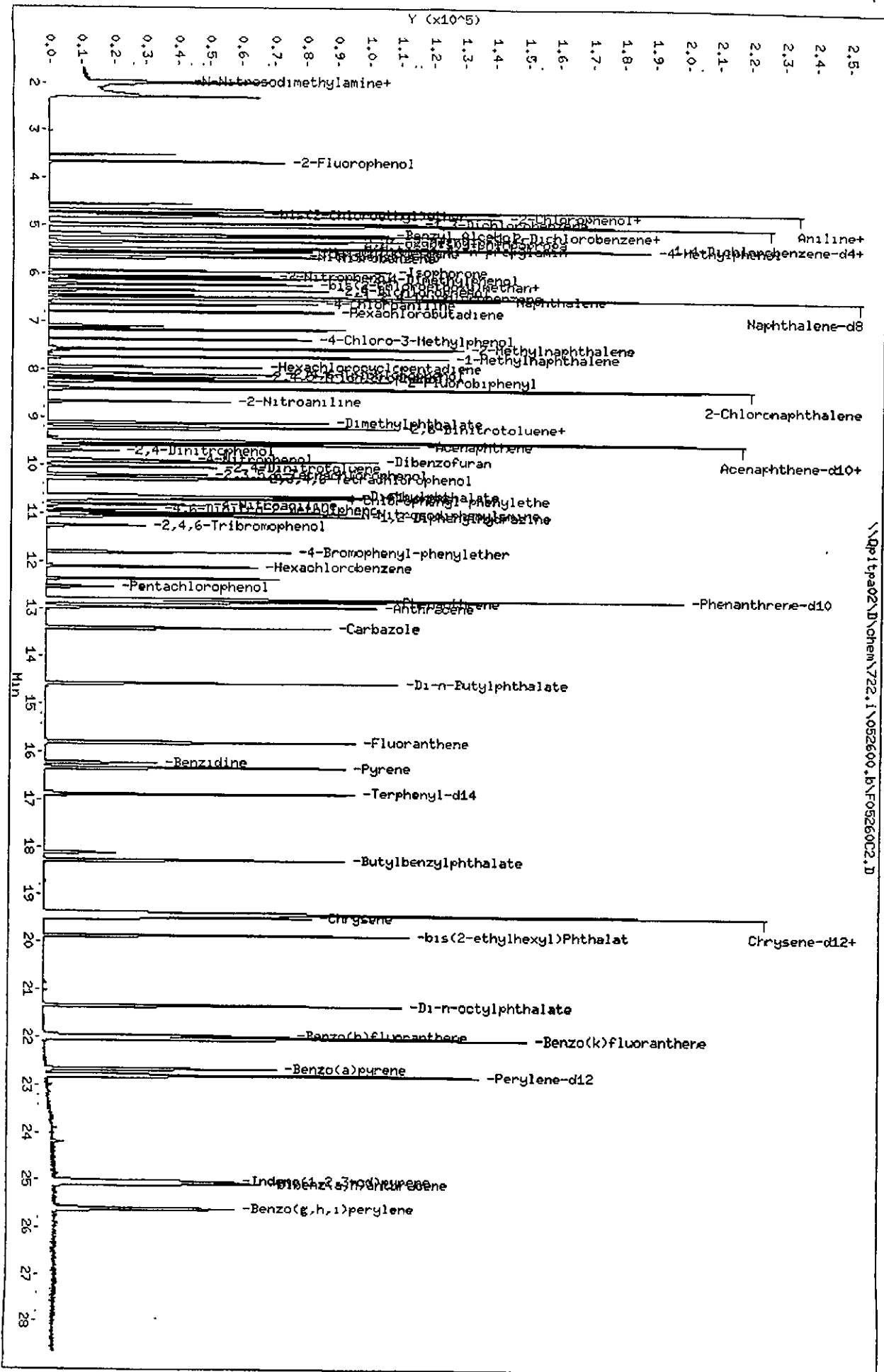
Data File: \\Qpitpa02\D\chem\722.i\052600.b\F05260C5.D  
 Report Date: 05/26/2000

## INITIAL CALIBRATION REPORT

Instrument ID: 722.i  
 Lab File ID: F05260C5.D  
 Analysis Type: NONE

Injection Date: 26-MAY-2000 09:04  
 Lab Sample ID: sstd160  
 Method File: \\QPITPA02\D\chem\722.i\052600.b\

COMPOUND	%RSD
2-Nitroaniline	3.8
Dimethylphthalate	1.6
Acenaphthylene	2.1
2,6-Dinitrotoluene	4.1
3-Nitroaniline	3.2
Acenaphthene	1.3
2,4-Dinitrophenol	20.0
4-Nitrophenol	9.8
Dibenzofuran	1.0
2,4-Dinitrotoluene	3.3
2,3,5,6-Tetrachlorophenol	5.5
2,3,4,6-Tetrachlorophenol	3.9
Diethylphthalate	3.1
Fluorene	1.5
4-Chlorophenyl-phenylether	1.6
4-Nitroaniline	3.8
4,6-Dinitro-2-methylphenol	11.3
N-Nitrosodiphenylamine	1.0
1,2-Diphenylhydrazine	2.8
2,4,6-Tribromophenol	6.9
4-Bromophenyl-phenylether	2.6
Hexachlorobenzene	2.7
Pentachlorophenol	21.2
Phenanthrene	1.6
Anthracene	1.7
Carbazole	1.9
Di-n-Butylphthalate	4.3
Fluoranthene	2.7
Benzidine	8.5
Pyrene	3.0
Terphenyl-d14	3.0
Butylbenzylphthalate	2.7
Benzo(a) Anthracene	1.7
3,3'-Dichlorobenzidine	3.3
Chrysene	1.8
bis(2-ethylhexyl) Phthalate	5.0
Di-n-octylphthalate	3.7
Benzo(b) fluoranthene	5.6
Benzo(k) fluoranthene	7.1



Column phase: Hp5-MS

Data File: \\D:\tpa02\chem\722.1\052600.b\F0526002.D  
Date : 26-May-2000 07:21  
Client ID: SST020  
Sample Info: SST020 (10ppb) 194-175-10

Instrument: 722.1  
Operator: 007062  
Column diameter: 0.25

## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F05260C2.D  
 Lab Smp Id: sstd020 Client Smp ID: SSTD020  
 Inj Date : 26-MAY-2000 07:21  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : SSTD020 (10ppb) 194-175-10  
 Misc Info : sstd020,052600.b,8270b.m,2-root.sub,1,1  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 07:58 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 07:21 Cal File: F05260C2.D  
 Als bottle: 3 Calibration Sample, Level: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

*Handwritten:*  
 198  
 5/26/00

						AMOUNTS	
QUANT SIG						CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	( NG)	( NG)
*****	=====	==	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	4.987	4.987	{1.000}	40355	40.0000	
* 2 Naphthalene-d8	136	6.515	6.515	{1.000}	158690	40.0000	
* 3 Acenaphthene-d10	164	9.522	9.522	{1.000}	90852	40.0000	
* 4 Phenanthrene-d10	188	12.813	12.813	{1.000}	172937	40.0000	
* 5 Chrysene-d12	240	19.437	19.437	{1.000}	158538	40.0000	
* 6 Perylene-d12	264	22.792	22.792	{1.000}	135587	40.0000	
10 N-Nitrosodimethylamine	74	1.979	1.979	{0.397}	14914	20.0000	19.6
9 Pyridine	79	1.995	1.995	{0.400}	27415	20.0000	20.3
21 Aniline	93	4.693	4.693	{0.941}	45230	20.0000	20.4
22 Phenol	94	4.688	4.688	{0.940}	37061	20.0000	19.7
23 bis(2-Chloroethyl)ether	93	4.757	4.757	{0.954}	26536	20.0000	19.9
24 2-Chlorophenol	128	4.805	4.805	{0.964}	28890	20.0000	19.8
26 1,3-Dichlorobenzene	146	4.949	4.949	{0.993}	31016	20.0000	19.9
27 1,4-Dichlorobenzene	146	5.008	5.008	{1.004}	31378	20.0000	19.8
28 1,2-Dichlorobenzene	146	5.211	5.211	{1.045}	29259	20.0000	19.7
29 Benzyl Alcohol	108	5.168	5.168	{1.036}	19192	20.0000	20.0
30 2-Methylphenol	108	5.318	5.318	{1.066}	24967	20.0000	19.8
31 2,2'-oxybis(1-Chloropropane)	45	5.345	5.345	{1.072}	45159	20.0000	19.7
32 N-Nitroso-di-n-propylamine	70	5.500	5.500	{1.103}	21262	20.0000	19.8
192 4-Methylphenol	108	5.478	5.478	{1.099}	26723	20.0000	19.6
34 Hexachloroethane	117	5.553	5.553	{1.114}	12598	20.0000	19.6
35 Nitrobenzene	77	5.665	5.665	{0.870}	32957	20.0000	19.5
41 Isophorone	82	5.938	5.938	{0.911}	52787	20.0000	19.4
42 2-Nitrophenol	139	6.050	6.050	{0.929}	14845	20.0000	19.3
43 2,4-Dimethylphenol	107	6.098	6.098	{0.936}	27564	20.0000	19.1
44 bis(2-Chloroethoxy)methane	93	6.221	6.221	{0.955}	31052	20.0000	19.5

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
48 2,4-Dichlorophenol	162	6.344	6.344	(0.974)	21844	20.0000	19.5
49 Benzoic Acid	122	6.210	6.210	(0.953)	8146	20.0000	14.2
50 1,2,4-Trichlorobenzene	180	6.461	6.461	(0.992)	23626	20.0000	19.7
51 Naphthalene	128	6.541	6.541	(1.004)	86273	20.0000	19.6
52 4-Chloroaniline	127	6.643	6.643	(1.020)	32644	20.0000	19.4
56 Hexachlorobutadiene	225	6.798	6.798	(1.043)	14047	20.0000	19.6
59 4-Chloro-3-Methylphenol	107	7.369	7.369	(1.131)	25015	20.0000	19.4
62 2-Methylnaphthalene	142	7.567	7.567	(1.162)	56449	20.0000	19.6
205 1-Methylnaphthalene	142	7.749	7.749	(1.189)	53532	20.0000	20.0
64 Hexachlorocyclopentadiene	237	7.957	7.957	(0.836)	16339	20.0000	18.8
66 2,4,6-Trichlorophenol	196	8.101	8.101	(0.851)	15349	20.0000	19.3
67 2,4,5-Trichlorophenol	196	8.165	8.165	(0.858)	16138	20.0000	19.2
70 2-Chloronaphthalene	162	8.406	8.406	(0.883)	50792	20.0000	19.5
73 2-Nitroaniline	65	8.668	8.668	(0.910)	18144	20.0000	19.1
76 Dimethylphthalate	163	9.105	9.105	(0.956)	60280	20.0000	19.6
78 2,6-Dinitrotoluene	165	9.228	9.228	(0.969)	12562	20.0000	19.0
79 Acenaphthylene	152	9.207	9.207	(0.967)	82070	20.0000	19.4
81 3-Nitroaniline	138	9.495	9.495	(0.997)	15071	20.0000	19.3
82 Acenaphthene	153	9.586	9.586	(1.007)	52921	20.0000	19.7
83 2,4-Dinitrophenol	184	9.709	9.709	(1.020)	5351	20.0000	16.0
85 4-Nitrophenol	109	9.880	9.880	(1.038)	11048	20.0000	18.4
86 Dibenzofuran	168	9.918	9.918	(1.042)	75114	20.0000	19.7
87 2,4-Dinitrotoluene	165	10.040	10.040	(1.054)	17568	20.0000	19.3
91 2,3,5,6-Tetrachlorophenol	232	10.201	10.201	(1.071)	12526	20.0000	19.2
88 2,3,4,6-Tetrachlorophenol	232	10.291	10.291	(1.081)	12998	20.0000	19.4
93 Diethylphthalate	149	10.633	10.633	(1.117)	63131	20.0000	19.6
94 Fluorene	166	10.665	10.665	(1.120)	61815	20.0000	19.7
95 4-Chlorophenyl-phenylether	204	10.708	10.708	(1.125)	28026	20.0000	19.6
96 4-Nitroaniline	138	10.820	10.820	(1.136)	14689	20.0000	19.2
98 4,6-Dinitro-2-methylphenol	198	10.916	10.916	(0.852)	8958	20.0000	17.8
99 N-Nitrosodiphenylamine	169	10.991	10.991	(0.858)	46461	20.0000	20.0
100 1,2-Diphenylhydrazine	77	11.055	11.055	(0.863)	71901	20.0000	19.5
106 4-Bromophenyl-phenylether	248	11.809	11.809	(0.922)	16437	20.0000	19.4
107 Hexachlorobenzene	284	12.108	12.108	(0.945)	17657	20.0000	19.4
111 Pentachlorophenol	266	12.546	12.546	(0.979)	6178	20.0000	16.2
115 Phenanthrene	178	12.866	12.866	(1.004)	88619	20.0000	19.8
116 Anthracene	178	12.968	12.968	(1.012)	89565	20.0000	19.6
119 Carbazole	167	13.417	13.417	(1.047)	82707	20.0000	19.7
120 Di-n-Butylphthalate	149	14.560	14.560	(1.136)	104726	20.0000	19.3
123 Fluoranthene	202	15.799	15.799	(1.233)	92418	20.0000	19.5
124 Benzidine	184	16.227	16.227	(0.835)	37803	20.0000	17.8
125 Pyrene	202	16.333	16.333	(0.840)	94343	20.0000	19.5
131 Butylbenzylphthalate	149	18.294	18.294	(0.941)	45871	20.0000	19.4
135 3,3'-Dichlorobenzidine	252	19.448	19.448	(1.001)	31490	20.0000	19.3
136 Benzo(a)Anthracene	228	19.394	19.394	(0.998)	86651	20.0000	19.6
137 Chrysene	228	19.496	19.496	(1.003)	77211	20.0000	19.5
139 bis(2-ethylhexyl)Phthalate	149	19.870	19.870	(1.022)	58722	20.0000	18.8

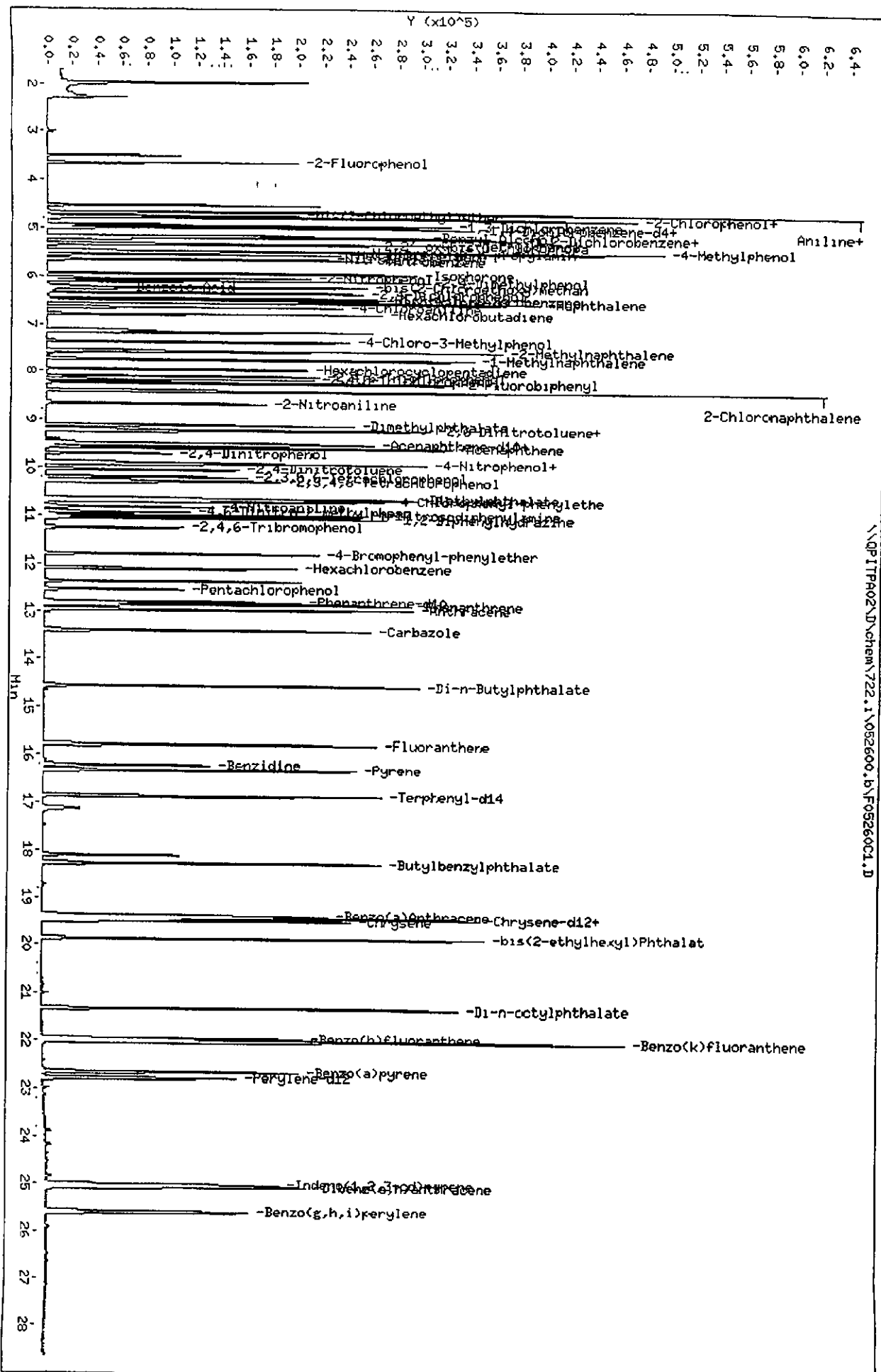
Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( NG)	ON-COL ( NG)
=====	====	==	=====	=====	=====	=====	=====
140 Di-n-octylphthalate	149	21 334	21 334	(0.936)	102736	20 0000	19 5
141 Benzo(b)fluoranthene	252	21.969	21 969	(0.964)	85518	20 0000	20 2
142 Benzo(k)fluoranthene	252	22.017	22.017	(0.966)	86971	20 0000	19 4
146 Benzo(a)pyrene	252	22 658	22.658	(0.994)	74918	20 0000	19 5
149 Indeno(1,2,3-cd)pyrene	276	25 020	25 020	(1.098)	91479	20 0000	19 1
150 Dibenz(a,h)anthracene	278	25.073	25.073	(1.100)	79495	20 0000	19 1
151 Benzo(g,h,i)perylene	276	25.591	25.591	(1.123)	78361	20 0000	19.3
\$ 154 Nitrobenzene-d5	82	5 644	5 644	(0.866)	31297	20 0000	19 3
\$ 155 2-Fluorobiphenyl	172	8 240	8 240	(0.865)	56957	20 0000	19.4
\$ 156 Terphenyl-d14	244	16 873	16.873	(0.868)	71559	20 0000	19 3
\$ 157 Phenol-d5	99	4 677	4.677	(0.938)	33319	20 0000	20 0
\$ 158 2-Fluorophenol	112	3 667	3 667	(0.735)	25186	20 0000	20.1
\$ 159 2,4,6-Tribromophenol	330	11.253	11.253	(0.878)	7401	20 0000	18 8
\$ 186 2-Chlorophenol-d4	132	4.789	4 789	(0.960)	25422	20 0000	20.0
\$ 187 1,2-Dichlorobenzene-d4	152	5 195	5 195	(1.042)	17989	20.0000	19.6

Data File: \NPITPA02\Nchem\722.1\052600.b\F0526001.D  
 Date: 26-MAY-2000 06:46  
 Client ID:

Sample Info: SST050 (25pb) 194-176-9  
 Volume Injected (uL): 2.0  
 Column phase: Hp5-MS

Instrument: 722.1

Operator: 007062  
 Column diameter: 0.25



## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F05260C1.D  
 Lab Smp Id: sstd050 Client Smp ID: SST050  
 Inj Date : 26-MAY-2000 06:46  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : SST050 (25ppb) 194-176-9  
 Misc Info : sstd050,052600.b,8270b.m,2-root.sub,1,2  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 07:24 bungardf Quant Type: ISTD  
 Cal Date : 19-MAY-2000 12:12 Cal File: F05190C5.D  
 Als bottle: 2 Calibration Sample, Level: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

*Handwritten:*  
 3/26/00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	4.977	4.977	(1.000)	43718	40.0000	
* 2 Naphthalene-d8	136	6.505	6.505	(1.000)	167887	40.0000	
* 3 Acenaphthene-d10	164	9.512	9.512	(1.000)	95217	40.0000	
* 4 Phenanthrene-d10	188	12.803	12.803	(1.000)	179488	40.0000	
* 5 Chrysene-d12	240	19.427	19.427	(1.000)	160460	40.0000	
* 6 Perylene-d12	264	22.782	22.782	(1.000)	147531	40.0000	
10 N-Nitrosodimethylamine	74	1.958	1.958	(0.394)	41947	50.0000	51.6
9 Pyridine	79	1.969	1.969	(0.396)	71697	50.0000	50.3
21 Aniline	93	4.683	4.683	(0.941)	117437	50.0000	49.5
22 Phenol	94	4.683	4.683	(0.941)	103472	50.0000	51.1
23 bis(2-Chloroethyl) ether	93	4.752	4.752	(0.955)	72689	50.0000	49.6
24 2-Chlorophenol	128	4.795	4.795	(0.964)	79842	50.0000	51.3
26 1,3-Dichlorobenzene	146	4.939	4.939	(0.992)	84877	50.0000	50.4
27 1,4-Dichlorobenzene	146	4.998	4.998	(1.004)	86862	50.0000	50.6
28 1,2-Dichlorobenzene	146	5.201	5.201	(1.045)	81349	50.0000	51.1
29 Benzyl Alcohol	108	5.164	5.164	(1.038)	51721	50.0000	49.6
30 2-Methylphenol	108	5.313	5.313	(1.068)	68621	50.0000	50.3
31 2,2'-oxybis(1-Chloropropane)	45	5.335	5.335	(1.072)	125651	50.0000	52.8
32 N-Nitroso-di-n-propylamine	70	5.495	5.495	(1.104)	58747	50.0000	52.5
192 4-Methylphenol	108	5.473	5.473	(1.100)	75055	50.0000	51.0
34 Hexachloroethane	117	5.543	5.543	(1.114)	35485	50.0000	52.4
35 Nitrobenzene	77	5.655	5.655	(0.869)	91937	50.0000	51.6
41 Isophorone	82	5.933	5.933	(0.912)	147669	50.0000	50.7
42 2-Nitrophenol	139	6.040	6.040	(0.929)	41983	50.0000	49.7
43 2,4-Dimethylphenol	107	6.093	6.093	(0.937)	79994	50.0000	50.5
44 bis(2-Chloroethoxy)methane	93	6.216	6.216	(0.956)	86193	50.0000	50.1

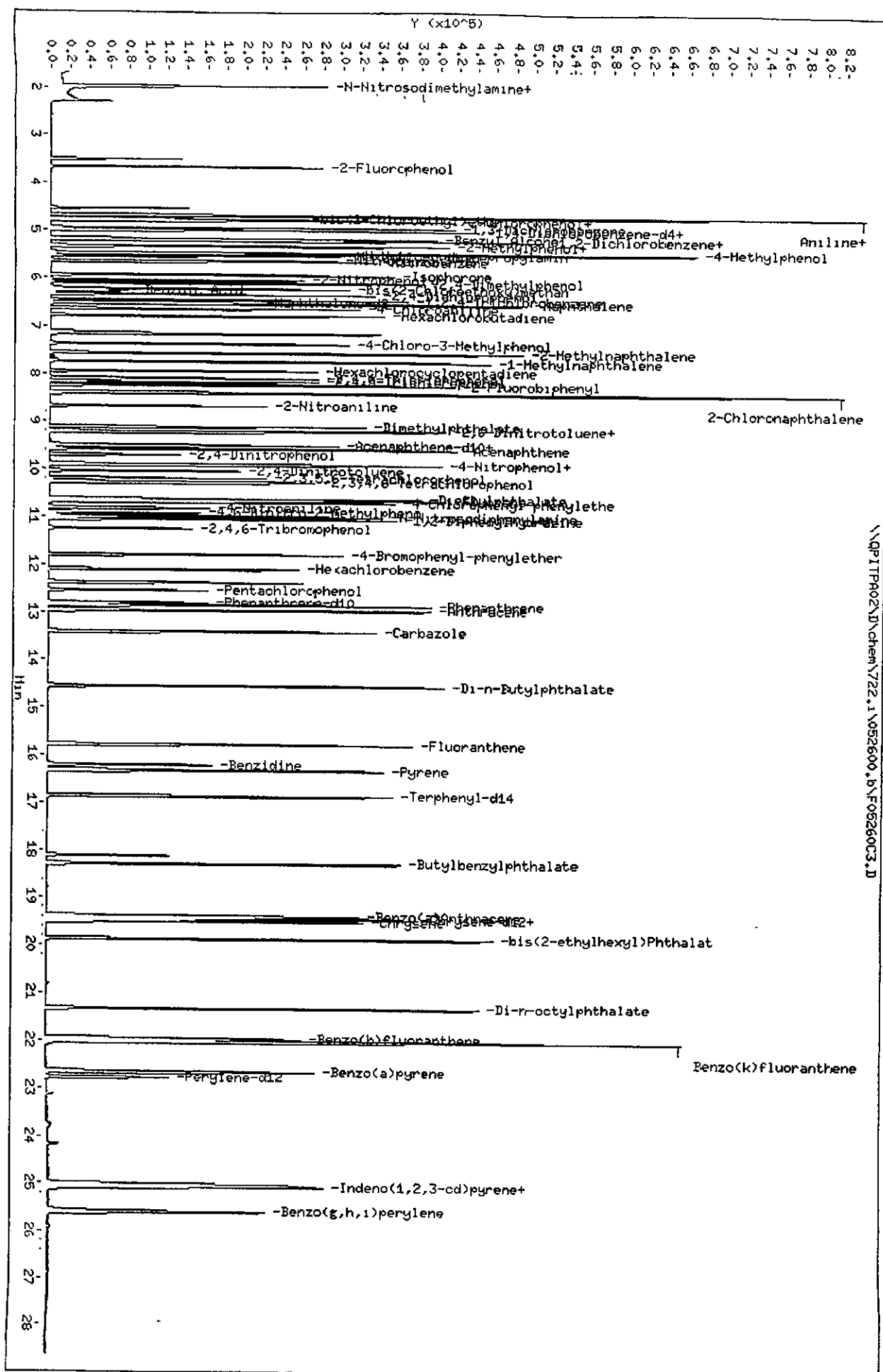
Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( NG)	ON-COL ( NG)
-----	----	==	=====	-----	=====	-----	-----
48 2,4-Dichlorophenol	162	6.339	6.339	(0.975)	60923	50.0000	50.6
49 Benzoic Acid	122	6.253	6.253	(0.961)	39349	50.0000	90.8
50 1,2,4-Trichlorobenzene	180	6.451	6.451	(0.992)	64269	50.0000	50.2
51 Naphthalene	128	6.531	6.531	(1.004)	236848	50.0000	50.5
52 4-Chloroaniline	127	6.638	6.638	(1.021)	91595	50.0000	50.2
56 Hexachlorobutadiene	225	6.788	6.788	(1.044)	38666	50.0000	51.9
59 4-Chloro-3-Methylphenol	107	7.365	7.365	(1.132)	70441	50.0000	50.8
62 2-Methylnaphthalene	142	7.562	7.562	(1.163)	155754	50.0000	50.8
205 1-Methylnaphthalene	142	7.739	7.739	(1.190)	141425	50.0000	49.8
64 Hexachlorocyclopentadiene	237	7.947	7.947	(0.835)	48504	50.0000	51.4
66 2,4,6-Trichlorophenol	196	8.091	8.091	(0.851)	43182	50.0000	51.0
67 2,4,5-Trichlorophenol	196	8.161	8.161	(0.858)	46030	50.0000	50.6
70 2-Chloronaphthalene	162	8.401	8.401	(0.883)	139832	50.0000	51.2
73 2-Nitroaniline	65	8.663	8.663	(0.911)	51883	50.0000	52.2
76 Dimethylphthalate	163	9.106	9.106	(0.957)	164728	50.0000	50.5
78 2,6-Dinitrotoluene	165	9.229	9.229	(0.970)	36211	50.0000	50.2
79 Acenaphthylene	152	9.202	9.202	(0.967)	227327	50.0000	50.4
81 3-Nitroaniline	138	9.496	9.496	(0.998)	42428	50.0000	49.1
82 Acenaphthene	153	9.576	9.576	(1.007)	142236	50.0000	50.7
83 2,4-Dinitrophenol	184	9.699	9.699	(1.020)	21073	50.0000	53.6
85 4-Nitrophenol	109	9.886	9.886	(1.039)	33925	50.0000	52.8
86 Dibenzofuran	168	9.913	9.913	(1.042)	201911	50.0000	50.7
87 2,4-Dinitrotoluene	165	10.041	10.041	(1.056)	49397	50.0000	49.2
91 2,3,5,6-Tetrachlorophenol	232	10.191	10.191	(1.071)	35418	50.0000	45.9
88 2,3,4,6-Tetrachlorophenol	232	10.287	10.287	(1.081)	36244	50.0000	48.5
93 Diethylphthalate	149	10.629	10.629	(1.117)	172495	50.0000	49.8
94 Fluorene	166	10.655	10.655	(1.120)	166813	50.0000	51.0
95 4-Chlorophenyl-phenylether	204	10.698	10.698	(1.125)	76246	50.0000	51.3
96 4-Nitroaniline	138	10.821	10.821	(1.138)	41746	50.0000	48.1
98 4,6-Dinitro-2-methylphenol	198	10.917	10.917	(0.853)	28967	50.0000	50.4
99 N-Nitrosodiphenylamine	169	10.992	10.992	(0.859)	119882	50.0000	50.3
100 1,2-Diphenylhydrazine	77	11.045	11.045	(0.863)	196609	50.0000	52.5
106 4-Bromophenyl-phenylether	248	11.799	11.799	(0.922)	45147	50.0000	52.5
107 Hexachlorobenzene	284	12.098	12.098	(0.945)	48540	50.0000	52.0
111 Pentachlorophenol	266	12.541	12.541	(0.980)	23525	50.0000	34.9
115 Phenanthrene	178	12.862	12.862	(1.005)	235181	50.0000	50.5
116 Anthracene	178	12.963	12.963	(1.013)	241061	50.0000	50.4
119 Carbazole	167	13.407	13.407	(1.047)	220244	50.0000	48.8
120 Di-n-Butylphthalate	149	14.550	14.550	(1.136)	290336	50.0000	48.8
123 Fluoranthene	202	15.789	15.789	(1.233)	251184	50.0000	49.5
124 Benzidine	184	16.217	16.217	(0.835)	119716	50.0000	53.2
125 Pyrene	202	16.329	16.329	(0.841)	249744	50.0000	53.1
131 Butylbenzylphthalate	149	18.284	18.284	(0.941)	123418	50.0000	49.6
135 3,3'-Dichlorobenzidine	252	19.443	19.443	(1.001)	85626	50.0000	51.2
136 Benzo(a)Anthracene	228	19.384	19.384	(0.998)	228806	50.0000	50.6
137 Chrysene	228	19.491	19.491	(1.003)	204466	50.0000	50.6
139 bis(2-ethylhexyl)Phthalate	149	19.860	19.860	(1.022)	166726	50.0000	49.1



Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( NG)	ON-COL ( NG)
=====	====	==	=====	=====	=====	=====	=====
140 Di-n-octylphthalate	149	21 329	21 329	(0 936)	292671	50 0000	48.3
141 Benzo(b)fluoranthene	252	21 965	21 965	(0 964)	227296	50 0000	48.8
142 Benzo(k)fluoranthene	252	22 023	22 023	(0 967)	250978	50.0000	51.4
146 Benzo(a)pyrene	252	22 659	22 659	(0 995)	213540	50 0000	50.0
149 Indeno(1,2,3-cd)pyrene	276	25 020	25 020	(1 098)	271442	50 0000	48.6
150 Dibenz(a,h)anthracene	278	25 063	25 063	(1.100)	235932	50 0000	49.2
151 Benzo(g,h,i)perylene	276	25 603	25 603	(1 124)	229113	50.0000	48.6
\$ 154 Nitrobenzene-d5	82	5 634	5 634	(0.866)	88575	50 0000	51.6
\$ 155 2-Fluorobiphenyl	172	8.230	8 230	(0 865)	158277	50 0000	51.2
\$ 156 Terphenyl-d14	244	16 868	16.968	(0 868)	194241	50.0000	53.9
\$ 157 Phenol-d5	99	4 672	4.672	(0 939)	89731	50 0000	50.3
\$ 158 2-Fluorophenol	112	3.657	3 657	(0 735)	67559	50.0000	49.3
\$ 159 2,4,6-Tribromophenol	330	11.243	11 243	(0 878)	21578	50.0000	48.7
\$ 186 2-Chlorophenol-d4	132	4.779	4.779	(0.960)	68900	50.0000	50.6
\$ 187 1,2-Dichlorobenzene-d4	152	5 185	5.185	(1 042)	50863	50 0000	51.2

Data File: \NPI\PA02\Inchem\722.1\052600.b\F05260C3.D  
 Date : 26-MAY-2000 07:55  
 Client ID:  
 Sample Info: SST080 (40ppb) 194-175-12  
 Volume Injected (uL): 2.0  
 Column phase: HP5-MS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25



## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F05260C3.D  
 Lab Smp Id: sstd080 Client Smp ID: SSTD080  
 Inj Date : 26-MAY-2000 07:55  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : SSTD080 (40ppb) 194-175-12  
 Misc Info : sstd080,052600.b,8270b.m,2-root.sub,1,3  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 08:27 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 07:55 Cal File: F05260C3.D  
 Als bottle: 4 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

103A  
3/26/50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( NG)	ON-COL ( NG)
* 1 1,4-Dichlorobenzene-d4	152	4.984	4.984	(1.000)	35803	40.0000	
* 2 Naphthalene-d8	136	6.507	6.507	(1.000)	135750	40.0000	
* 3 Acenaphthene-d10	164	9.515	9.515	(1.000)	78657	40.0000	
* 4 Phenanthrene-d10	188	12.805	12.805	(1.000)	148175	40.0000	
* 5 Chrysene-d12	240	19.424	19.424	(1.000)	138515	40.0000	
* 6 Perylene-d12	264	22.774	22.774	(1.000)	122843	40.0000	
10 N-Nitrosodimethylamine	74	1.977	1.977	(0.397)	55294	80.0000	81.3
9 Pyridine	79	1.982	1.982	(0.398)	97629	80.0000	81.1
21 Aniline	93	4.691	4.691	(0.941)	158393	80.0000	80.4
22 Phenol	94	4.691	4.691	(0.941)	136115	80.0000	81.0
23 bis(2-Chloroethyl)ether	93	4.760	4.760	(0.955)	96157	80.0000	80.8
24 2-Chlorophenol	128	4.803	4.803	(0.964)	104585	80.0000	80.5
26 1,3-Dichlorobenzene	146	4.947	4.947	(0.993)	111245	80.0000	80.3
27 1,4-Dichlorobenzene	146	5.000	5.000	(1.003)	113729	80.0000	80.5
28 1,2-Dichlorobenzene	146	5.209	5.209	(1.045)	105912	80.0000	80.4
29 Benzyl Alcohol	108	5.172	5.172	(1.038)	70210	80.0000	81.8
30 2-Methylphenol	108	5.321	5.321	(1.068)	90681	80.0000	80.8
31 2,2'-oxybis(1-Chloropropane)	45	5.342	5.342	(1.072)	160936	80.0000	79.5
32 N-Nitroso-di-n-propylamine	70	5.503	5.503	(1.104)	75663	80.0000	79.6
192 4-Methylphenol	108	5.476	5.476	(1.099)	98108	80.0000	80.8
34 Hexachloroethane	117	5.551	5.551	(1.114)	46020	80.0000	80.5
35 Nitrobenzene	77	5.663	5.663	(0.870)	119952	80.0000	81.9
41 Isophorone	82	5.941	5.941	(0.913)	192771	80.0000	82.0
42 2-Nitrophenol	139	6.042	6.042	(0.929)	55241	80.0000	82.7
43 2,4-Dimethylphenol	107	6.101	6.101	(0.938)	105323	80.0000	83.4
44 bis(2-Chloroethoxy)methane	93	6.224	6.224	(0.956)	112682	80.0000	81.8

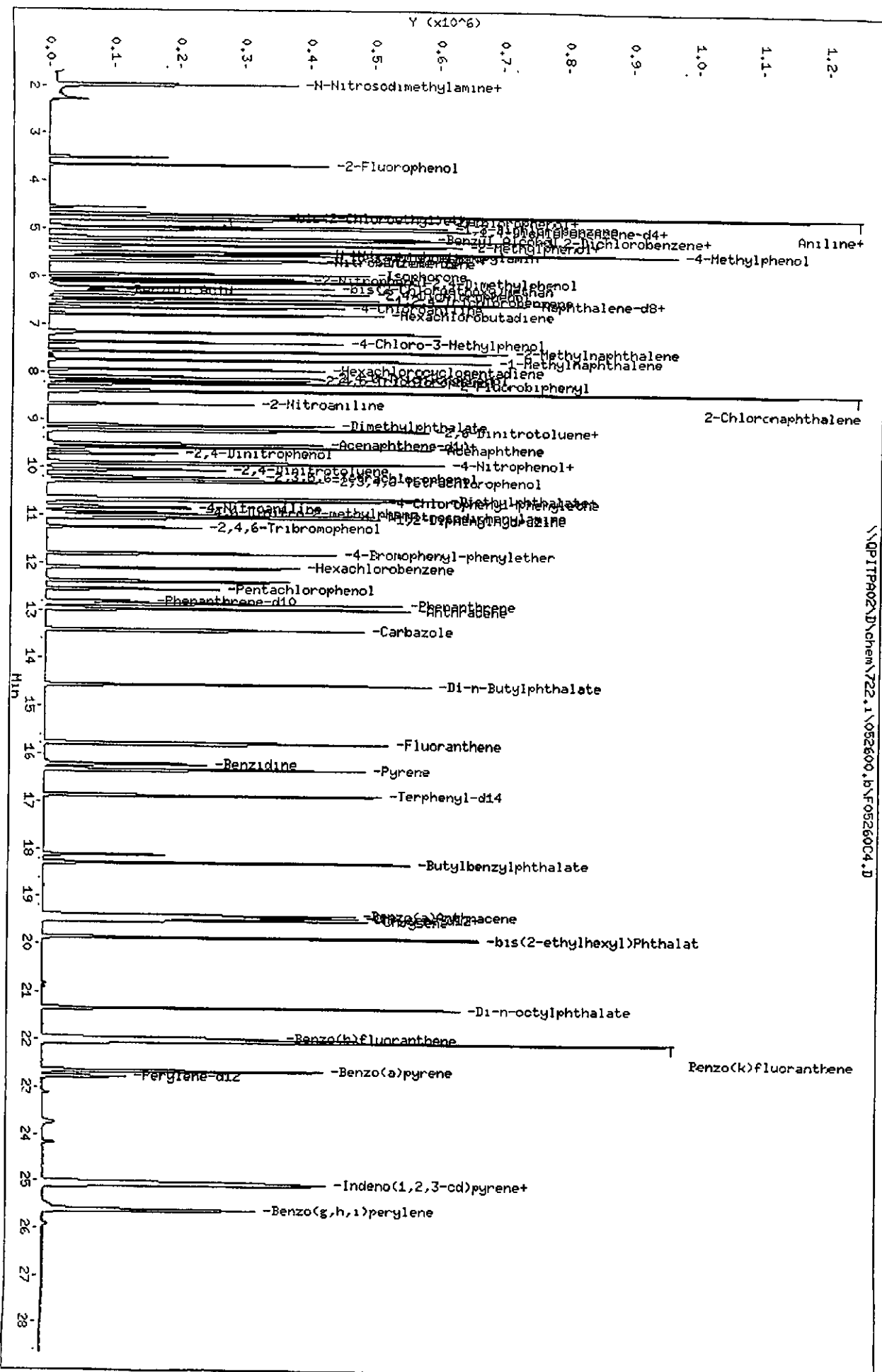
Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
48 2,4-Dichlorophenol	162	6.341	6.341	(0.975)	79961	80.0000	82.2
49 Benzoic Acid	122	6.272	6.272	(0.964)	52568	80.0000	96.0
50 1,2,4-Trichlorobenzene	180	6.454	6.454	(0.992)	85546	80.0000	82.3
51 Naphthalene	128	6.539	6.539	(1.005)	307475	80.0000	81.2
52 4-Chloroaniline	127	6.641	6.641	(1.021)	119903	80.0000	82.2
56 Hexachlorobutadiene	225	6.790	6.790	(1.044)	50677	80.0000	81.8
59 4-Chloro-3-Methylphenol	107	7.372	7.372	(1.133)	92434	80.0000	82.4
62 2-Methylnaphthalene	142	7.565	7.565	(1.163)	204150	80.0000	81.8
205 1-Methylnaphthalene	142	7.741	7.741	(1.190)	186334	80.0000	80.9
64 Hexachlorocyclopentadiene	237	7.944	7.944	(0.835)	64502	80.0000	83.6
66 2,4,6-Trichlorophenol	196	8.094	8.094	(0.851)	56656	80.0000	81.5
67 2,4,5-Trichlorophenol	196	8.168	8.168	(0.859)	60058	80.0000	81.5
70 2-Chloronaphthalene	162	8.403	8.403	(0.883)	183425	80.0000	80.9
73 2-Nitroaniline	65	8.665	8.665	(0.911)	68137	80.0000	82.0
76 Dimethylphthalate	163	9.109	9.109	(0.957)	215769	80.0000	80.6
78 2,6-Dinitrotoluene	165	9.232	9.232	(0.970)	47447	80.0000	82.0
79 Acenaphthylene	152	9.205	9.205	(0.967)	297910	80.0000	81.0
81 3-Nitroaniline	138	9.499	9.499	(0.998)	55734	80.0000	81.6
82 Acenaphthene	153	9.584	9.584	(1.007)	188214	80.0000	80.7
83 2,4-Dinitrophenol	184	9.707	9.707	(1.020)	29456	80.0000	93.2
85 4-Nitrophenol	109	9.889	9.889	(1.039)	46249	80.0000	85.8
86 Dibenzofuran	168	9.915	9.915	(1.042)	265698	80.0000	80.4
87 2,4-Dinitrotoluene	165	10.044	10.044	(1.056)	65403	80.0000	82.0
91 2,3,5,6-Tetrachlorophenol	232	10.193	10.193	(1.071)	47708	80.0000	83.0
88 2,3,4,6-Tetrachlorophenol	232	10.295	10.295	(1.082)	48119	80.0000	81.9
93 Diethylphthalate	149	10.631	10.631	(1.117)	231293	80.0000	81.9
94 Fluorene	166	10.658	10.658	(1.120)	217785	80.0000	80.1
95 4-Chlorophenyl-phenylether	204	10.701	10.701	(1.125)	100099	80.0000	80.6
96 4-Nitroaniline	138	10.834	10.834	(1.139)	55405	80.0000	82.4
98 4,6-Dinitro-2-methylphenol	198	10.925	10.925	(0.853)	39464	80.0000	87.4
99 N-Nitrosodiphenylamine	169	10.994	10.994	(0.859)	157964	80.0000	79.7
100 1,2-Diphenylhydrazine	77	11.053	11.053	(0.863)	261862	80.0000	81.8
106 4-Bromophenyl-phenylether	248	11.801	11.801	(0.922)	59490	80.0000	81.4
107 Hexachlorobenzene	284	12.100	12.100	(0.945)	62892	80.0000	80.5
111 Pentachlorophenol	266	12.544	12.544	(0.980)	34043	80.0000	94.7
115 Phenanthrene	178	12.864	12.864	(1.005)	312152	80.0000	80.8
116 Anthracene	178	12.966	12.966	(1.013)	318121	80.0000	80.9
119 Carbazole	167	13.409	13.409	(1.047)	293514	80.0000	81.2
120 Di-n-Butylphthalate	149	14.552	14.552	(1.136)	390147	80.0000	82.7
123 Fluoranthene	202	15.792	15.792	(1.233)	333295	80.0000	81.5
124 Benzidine	184	16.219	16.219	(0.835)	147666	80.0000	79.6
125 Pyrene	202	16.331	16.331	(0.841)	332742	80.0000	79.3
131 Butylbenzylphthalate	149	18.281	18.281	(0.941)	171681	80.0000	82.0
135 3,3'-Dichlorobenzidine	252	19.440	19.440	(1.001)	117464	80.0000	81.5
136 Benzo(a)Anthracene	228	19.387	19.387	(0.998)	314103	80.0000	80.8
137 Chrysene	228	19.494	19.494	(1.004)	277808	80.0000	80.3
139 bis(2-ethylhexyl)Phthalate	149	19.857	19.857	(1.022)	228249	80.0000	82.5

Report Date: 26-May-2000 08:27

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
140 Di-n-octylphthalate	149	21 326	21 326	(0 936)	401526	80 0000	82 8
141 Benzo(b)fluoranthene	252	21 967	21 967	(0 965)	309991	80 0000	80 6
142 Benzo(k)fluoranthene	252	22 026	22 026	(0 967)	345777	80 0000	83 4
146 Benzo(a)pyrene	252	22 662	22 662	(0 995)	292653	80 0000	82 8
149 Indeno(1,2,3-cd)pyrene	276	25.023	25.023	(1.099)	367598	80 0000	83 2
150 Dibenz(a,h)anthracene	278	25.071	25.071	(1.101)	320619	80 0000	83 4
151 Benzo(g,h,i)perylene	276	25.605	25.605	(1 124)	314976	80 0000	83 6
\$ 154 Nitrobenzene-d5	82	5 642	5.642	(0 867)	116054	80 0000	82 5
\$ 155 2-Fluorobiphenyl	172	8 238	8 238	(0 866)	206930	80 0000	81.0
\$ 156 Terphenyl-d14	244	16 871	16.871	(0 869)	258273	80 0000	79 8
\$ 157 Phenol-d5	99	4 680	4.680	(0.939)	118265	80 0000	80 2
\$ 158 2-Fluorophenol	112	3 665	3 665	(0 735)	88941	80 0000	80 0
\$ 159 2,4,6-Tribromophenol	330	11 251	11 251	(0.879)	28908	80 0000	83 8
\$ 186 2-Chlorophenol-d4	132	4 787	4.787	(0 960)	89020	80 0000	79 3
\$ 187 1,2-Dichlorobenzene-d4	152	5 193	5.193	(1 042)	66346	80.0000	80 9

Data File: \\QPIITPA02\chem\722.1\052600.b\F0526004.D  
 Date: 26-May-2000 08:29  
 Client ID:  
 Sample Info: SSTID20 (60ppb) 194-175-13  
 Volume Injected (uL): 2.0  
 Column phase: Hp5-MS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25



## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F05260C4.D  
 Lab Smp Id: sstd120 Client Smp ID: SSTD120  
 Inj Date : 26-MAY-2000 08:29  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : SSTD120 (60ppb) 194-175-13  
 Misc Info : sstd120,052600.b,8270b.m,2-root.sub,1,4  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 09:11 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 08:29 Cal File: F05260C4.D  
 Als bottle: 5 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

APR  
3/26/00

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( NG)	ON-COL ( NG)
*****	=====	==	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	4 984	4 984	(1.000)	35816	40.0000	
* 2 Naphthalene-d8	136	6 512	6 512	(1.000)	132779	40 0000	
* 3 Acenaphthene-d10	164	9 515	9.515	(1.000)	76694	40.0000	
* 4 Phenanthrene-d10	188	12 805	12 805	(1 000)	145144	40 0000	
* 5 Chrysene-d12	240	19 430	19 430	(1 000)	138586	40 0000	
* 6 Perylene-d12	264	22.785	22.785	(1.000)	123988	40 0000	
10 N-Nitrosodimethylamine	74	1.982	1.982	(0.398)	79692	120.000	118
9 Pyridine	79	1 977	1 977	(0.397)	141942	120.000	118
21 Aniline	93	4 691	4 691	(0 941)	235574	120.000	120
22 Phenol	94	4.696	4.696	(0.942)	201494	120.000	120
23 bis(2-Chloroethyl)ether	93	4.766	4.766	(0 956)	139033	120 000	118
24 2-Chlorophenol	128	4.803	4.803	(0.964)	150322	120.000	117
26 1,3-Dichlorobenzene	146	4 947	4.947	(0 993)	162191	120.000	118
27 1,4-Dichlorobenzene	146	5.006	5 006	(1 004)	165630	120 000	118
28 1,2-Dichlorobenzene	146	5.209	5.209	(1 045)	154089	120 000	118
29 Benzyl Alcohol	108	5.172	5.172	(1.038)	103312	120.000	120
30 2-Methylphenol	108	5.321	5 321	(1 068)	130670	120.000	117
31 2,2'-oxybis(1-Chloropropane)	45	5.342	5 342	(1.072)	234473	120 000	117
32 N-Nitroso-di-n-propylamine	70	5.508	5 508	(1.105)	109983	120.000	117
192 4-Methylphenol	108	5.481	5 481	(1.100)	144655	120 000	119
34 Hexachloroethane	117	5.551	5 551	(1.114)	67613	120 000	119
35 Nitrobenzene	77	5 663	5.663	(0.870)	174904	120 000	122
41 Isophorone	82	5 946	5 946	(0.913)	278303	120 000	121
42 2-Nitrophenol	139	6 048	6 048	(0.929)	81028	120 000	123
43 2,4-Dimethylphenol	107	6 101	6.101	(0 937)	153906	120.000	123
44 bis(2-Chloroethoxy)methane	93	6 224	6.224	(0 956)	162669	120.000	120

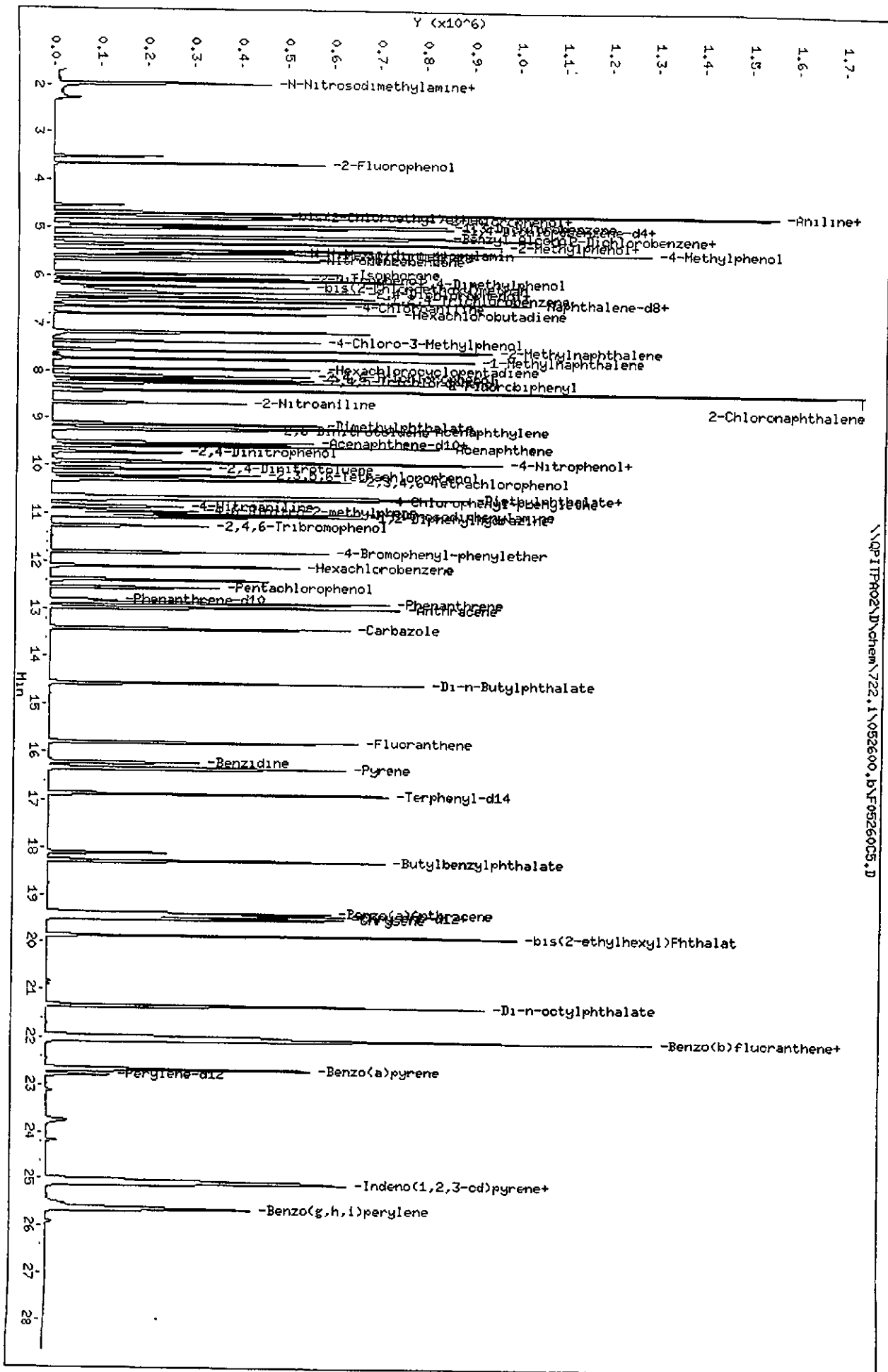
Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
48 2,4-Dichlorophenol	162	6.347	6.347	(0.975)	116202	120.000	122
49 Benzoic Acid	122	6.299	6.299	(0.967)	83846	120.000	146
50 1,2,4-Trichlorobenzene	180	6.454	6.454	(0.991)	123025	120.000	121
51 Naphthalene	128	6.539	6.539	(1.004)	447660	120.000	121
52 4-Chloroaniline	127	6.646	6.646	(1.021)	173083	120.000	121
56 Hexachlorobutadiene	225	6.790	6.790	(1.043)	74379	120.000	122
59 4-Chloro-3-Methylphenol	107	7.378	7.378	(1.133)	135468	120.000	123
62 2-Methylnaphthalene	142	7.565	7.565	(1.162)	296869	120.000	121
205 1-Methylnaphthalene	142	7.746	7.746	(1.189)	275926	120.000	122
64 Hexachlorocyclopentadiene	237	7.949	7.949	(0.835)	95494	120.000	125
66 2,4,6-Trichlorophenol	196	8.099	8.099	(0.851)	82264	120.000	121
67 2,4,5-Trichlorophenol	196	8.174	8.174	(0.859)	87998	120.000	122
70 2-Chloronaphthalene	162	8.403	8.403	(0.883)	270675	120.000	122
73 2-Nitroaniline	65	8.671	8.671	(0.911)	99241	120.000	122
76 Dimethylphthalate	163	9.114	9.114	(0.958)	313767	120.000	120
78 2,6-Dinitrotoluene	165	9.237	9.237	(0.971)	69663	120.000	123
79 Acenaphthylene	152	9.205	9.205	(0.967)	432701	120.000	120
81 3-Nitroaniline	138	9.504	9.504	(0.999)	81751	120.000	122
82 Acenaphthene	153	9.584	9.584	(1.007)	270912	120.000	119
83 2,4-Dinitrophenol	184	9.718	9.718	(1.021)	45442	120.000	139
85 4-Nitrophenol	109	9.899	9.899	(1.040)	69649	120.000	129
86 Dibenzofuran	168	9.921	9.921	(1.043)	386805	120.000	120
87 2,4-Dinitrotoluene	165	10.054	10.054	(1.057)	95649	120.000	122
91 2,3,5,6-Tetrachlorophenol	232	10.198	10.198	(1.072)	72468	120.000	127
88 2,3,4,6-Tetrachlorophenol	232	10.300	10.300	(1.083)	71874	120.000	124
93 Diethylphthalate	149	10.642	10.642	(1.118)	339850	120.000	122
94 Fluorene	166	10.669	10.669	(1.121)	318531	120.000	120
95 4-Chlorophenyl-phenylether	204	10.706	10.706	(1.125)	144524	120.000	120
96 4-Nitroaniline	138	10.845	10.845	(1.140)	81048	120.000	123
98 4,6-Dinitro-2-methylphenol	198	10.941	10.941	(0.854)	58823	120.000	129
99 N-Nitrosodiphenylamine	169	11.000	11.000	(0.859)	232899	120.000	120
100 1,2-Diphenylhydrazine	77	11.059	11.059	(0.864)	381052	120.000	121
106 4-Bromophenyl-phenylether	248	11.806	11.806	(0.922)	85806	120.000	120
107 Hexachlorobenzene	284	12.106	12.106	(0.945)	91960	120.000	120
111 Pentachlorophenol	266	12.549	12.549	(0.980)	52415	120.000	140
115 Phenanthrene	178	12.870	12.870	(1.005)	450970	120.000	119
116 Anthracene	178	12.976	12.976	(1.013)	462886	120.000	120
119 Carbazole	167	13.414	13.414	(1.048)	425491	120.000	120
120 Di-n-Butylphthalate	149	14.558	14.558	(1.137)	571658	120.000	123
123 Fluoranthene	202	15.797	15.797	(1.234)	484379	120.000	121
124 Benzidine	184	16.224	16.224	(0.835)	214738	120.000	117
125 Pyrene	202	16.337	16.337	(0.841)	483758	120.000	116
131 Butylbenzylphthalate	149	18.286	18.286	(0.941)	251622	120.000	120
135 3,3'-Dichlorobenzidine	252	19.446	19.446	(1.001)	178450	120.000	123
136 Benzo(a)Anthracene	228	19.398	19.398	(0.998)	462006	120.000	119
137 Chrysene	228	19.499	19.499	(1.004)	409089	120.000	119
139 bis(2-ethylhexyl)Phthalate	149	19.862	19.862	(1.022)	341896	120.000	123



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	-CAL-AMT	ON-COL
						( NG)	( NG)
=====	====	==	=====	=====	=====	=====	=====
140 Di-n-octylphthalate	149	21.331	21.331	(0.936)	603859	120.000	122
141 Benzo(b)fluoranthene	252	21.978	21.978	(0.965)	499967	120.000	126
142 Benzo(k)fluoranthene	252	22.042	22.042	(0.967)	498415	120.000	119
146 Benzo(a)pyrene	252	22.672	22.672	(0.995)	435880	120.000	122
149 Indeno(1,2,3-cd)pyrene	276	25.039	25.039	(1.099)	572671	120.000	126
150 Dibenz(a,h)anthracene	278	25.087	25.087	(1.101)	501088	120.000	127
151 Benzo(g,h,i)perylene	276	25.621	25.621	(1.124)	487203	120.000	126
\$ 154 Nitrobenzene-d5	82	5.642	5.642	(0.866)	169008	120.000	122
\$ 155 2-Fluorobiphenyl	172	8.238	8.238	(0.866)	300470	120.000	120
\$ 156 Terphenyl-d14	244	16.871	16.871	(0.868)	377020	120.000	117
\$ 157 Phenol-d5	99	4.680	4.680	(0.939)	176313	120.000	120
\$ 158 2-Fluorophenol	112	3.665	3.665	(0.735)	131392	120.000	118
\$ 159 2,4,6-Tribromophenol	330	11.256	11.256	(0.879)	43360	120.000	126
\$ 186 2-Chlorophenol-d4	132	4.787	4.787	(0.960)	132518	120.000	118
\$ 187 1,2-Dichlorobenzene-d4	152	5.193	5.193	(1.042)	96066	120.000	118

Data File: \NPI\PRO2\chem\722.1\052600.b\F0526005.D  
 Date : 26-MAY-2000 09:04  
 Client ID:  
 Sample Info: SST0160 (80ppb) 194-175-14  
 Volume injected (uL): 2.0  
 Column phase: Hp5-MS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25



## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F05260C5.D  
 Lab Smp Id: sstd160 Client Smp ID: SSTD160  
 Inj Date : 26-MAY-2000 09:04  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : SSTD160 (80ppb) 194-175-14  
 Misc Info : sstd160,052600.b,8270b.m,2-root.sub,1,5  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 09:36 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 09:04 Cal File: F05260C5.D  
 Als bottle: 6 Calibration Sample, Level: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

Compounds	QUANT SIG	AMOUNTS					
		RT	EXP RT	REL RT	RESPONSE	CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	4.987	4.987	(1.000)	35904	40.0000	
* 2 Naphthalene-d8	136	6.514	6.514	(1.000)	134042	40.0000	
* 3 Acenaphthene-d10	164	9.517	9.517	(1.000)	77370	40.0000	
* 4 Phenanthrene-d10	188	12.813	12.813	(1.000)	143810	40.0000	
* 5 Chrysene-d12	240	19.437	19.437	(1.000)	142226	40.0000	
* 6 Perylene-d12	264	22.787	22.787	(1.000)	128115	40.0000	
10 N-Nitrosodimethylamine	74	1.990	1.990	(0.399)	109628	160.000	161 (A)
9 Pyridine	79	1.979	1.979	(0.397)	192642	160.000	160 (A)
21 Aniline	93	4.693	4.693	(0.941)	322346	160.000	163 (A)
22 Phenol	94	4.698	4.698	(0.942)	277310	160.000	164 (A)
23 bis(2-Chloroethyl)ether	93	4.768	4.768	(0.956)	190217	160.000	160 (A)
24 2-Chlorophenol	128	4.805	4.805	(0.964)	206902	160.000	160 (A)
26 1,3-Dichlorobenzene	146	4.949	4.949	(0.993)	221784	160.000	160 (A)
27 1,4-Dichlorobenzene	146	5.008	5.008	(1.004)	228120	160.000	162 (A)
28 1,2-Dichlorobenzene	146	5.211	5.211	(1.045)	213607	160.000	162 (A)
29 Benzyl Alcohol	108	5.179	5.179	(1.039)	141033	160.000	163 (A)
30 2-Methylphenol	108	5.329	5.329	(1.069)	180733	160.000	161 (A)
31 2,2'-oxybis(1-Chloropropane)	45	5.345	5.345	(1.072)	321418	160.000	160
32 N-Nitroso-di-n-propylamine	70	5.516	5.516	(1.106)	150735	160.000	160
192 4-Methylphenol	108	5.489	5.489	(1.101)	199196	160.000	163 (A)
34 Hexachloroethane	117	5.553	5.553	(1.114)	93128	160.000	162 (A)
35 Nitrobenzene	77	5.670	5.670	(0.870)	239443	160.000	164 (A)
41 Isophorone	82	5.948	5.948	(0.913)	378947	160.000	162 (A)
42 2-Nitrophenol	139	6.050	6.050	(0.929)	109477	160.000	164 (A)
43 2,4-Dimethylphenol	107	6.108	6.108	(0.938)	213667	160.000	168 (A)
44 bis(2-Chloroethoxy)methane	93	6.231	6.231	(0.957)	221174	160.000	162 (A)

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
	( NG)	( NG)	( NG)	( NG)	( NG)	( NG)	( NG)
48 2,4-Dichlorophenol	162	6.349	6.349	(0.975)	157866	160.000	163 (A)
49 Benzoic Acid	122	6.317	6.317	(0.970)	111474	160.000	184 (A)
50 1,2,4-Trichlorobenzene	180	6.456	6.456	(0.991)	167220	160.000	162 (A)
51 Naphthalene	128	6.541	6.541	(1.004)	612921	160.000	163 (A)
52 4-Chloroaniline	127	6.648	6.648	(1.021)	236863	160.000	163 (A)
56 Hexachlorobutadiene	225	6.792	6.792	(1.043)	102936	160.000	166 (A)
59 4-Chloro-3-Methylphenol	107	7.385	7.385	(1.134)	184627	160.000	164 (A)
62 2-Methylnaphthalene	142	7.567	7.567	(1.162)	403785	160.000	163 (A)
205 1-Methylnaphthalene	142	7.748	7.748	(1.189)	373339	160.000	163 (A)
64 Hexachlorocyclopentadiene	237	7.952	7.952	(0.836)	132259	160.000	169 (A)
66 2,4,6-Trichlorophenol	196	8.106	8.106	(0.852)	112092	160.000	163 (A)
67 2,4,5-Trichlorophenol	196	8.176	8.176	(0.859)	119667	160.000	163 (A)
70 2-Chloronaphthalene	162	8.411	8.411	(0.884)	374059	160.000	165 (A)
73 2-Nitroaniline	65	8.678	8.678	(0.912)	136487	160.000	165 (A)
76 Dimethylphthalate	163	9.121	9.121	(0.958)	423108	160.000	160 (A)
78 2,6-Dinitrotoluene	165	9.244	9.244	(0.971)	94483	160.000	164 (A)
79 Acenaphthylene	152	9.212	9.212	(0.968)	583698	160.000	161 (A)
81 3-Nitroaniline	138	9.517	9.517	(1.000)	111584	160.000	164 (A)
82 Acenaphthene	153	9.591	9.591	(1.008)	371211	160.000	162 (A)
83 2,4-Dinitrophenol	184	9.725	9.725	(1.022)	64796	160.000	188 (A)
85 4-Nitrophenol	109	9.912	9.912	(1.042)	98674	160.000	177 (A)
86 Dibenzofuran	168	9.923	9.923	(1.043)	524590	160.000	161 (A)
87 2,4-Dinitrotoluene	165	10.062	10.062	(1.057)	129889	160.000	164 (A)
91 2,3,5,6-Tetrachlorophenol	232	10.206	10.206	(1.072)	98199	160.000	168 (A)
88 2,3,4,6-Tetrachlorophenol	232	10.307	10.307	(1.083)	98089	160.000	166 (A)
93 Diethylphthalate	149	10.649	10.649	(1.119)	467802	160.000	166 (A)
94 Fluorene	166	10.671	10.671	(1.121)	437846	160.000	163 (A)
95 4-Chlorophenyl-phenylether	204	10.708	10.708	(1.125)	198397	160.000	162 (A)
96 4-Nitroaniline	138	10.863	10.863	(1.141)	109636	160.000	164 (A)
98 4,6-Dinitro-2-methylphenol	198	10.954	10.954	(0.855)	81273	160.000	176 (A)
99 N-Nitrosodiphenylamine	169	11.013	11.013	(0.859)	314412	160.000	163 (A)
100 1,2-Diphenylhydrazine	77	11.066	11.066	(0.864)	515419	160.000	164 (A)
106 4-Bromophenyl-phenylether	248	11.808	11.808	(0.922)	116786	160.000	164 (A)
107 Hexachlorobenzene	284	12.113	12.113	(0.945)	126187	160.000	165 (A)
111 Pentachlorophenol	266	12.556	12.556	(0.980)	75944	160.000	194 (A)
115 Phenanthrene	178	12.872	12.872	(1.005)	614708	160.000	163 (A)
116 Anthracene	178	12.984	12.984	(1.013)	623292	160.000	163 (A)
119 Carbazole	167	13.422	13.422	(1.048)	580037	160.000	164 (A)
120 Di-n-Butylphthalate	149	14.560	14.560	(1.136)	784280	160.000	168 (A)
123 Fluoranthene	202	15.804	15.804	(1.233)	663001	160.000	165 (A)
124 Benzidine	184	16.226	16.226	(0.835)	287215	160.000	154
125 Pyrene	202	16.344	16.344	(0.841)	656705	160.000	155
131 Butylbenzylphthalate	149	18.294	18.294	(0.941)	349315	160.000	162 (A)
135 3,3'-Dichlorobenzidine	252	19.453	19.453	(1.001)	245378	160.000	164 (A)
136 Benzo(a)Anthracene	228	19.400	19.400	(0.998)	640120	160.000	161 (A)
137 Chrysene	228	19.512	19.512	(1.004)	561510	160.000	159
139 bis(2-ethylhexyl)Phthalate	149	19.864	19.864	(1.022)	479675	160.000	166 (A)

Report Date: 26-May-2000 09:36

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT ( NG)	ON-COL ( NG)
=====	=====	==	=====	=====	=====	=====	=====
140 Di-n-octylphthalate	149	21.339	21.339	(0.936)	857732	160.000	167 (A)
141 Benzo(b)fluoranthene	252	21.996	21.996	(0.965)	722067	160.000	173 (A)
142 Benzo(k)fluoranthene	252	22.060	22.060	(0.968)	597836	160.000	142
146 Benzo(a)pyrene	252	22.685	22.685	(0.996)	619374	160.000	166 (A)
149 Indeno(1,2,3-cd)pyrene	276	25.057	25.057	(1.100)	830858	160.000	173 (A)
150 Dibenz(a,h)anthracene	278	25.100	25.100	(1.102)	736975	160.000	176 (A)
151 Benzo(g,h,i)perylene	276	25.645	25.645	(1.125)	706880	160.000	173 (A)
\$ 154 Nitrobenzene-d5	82	5.649	5.649	(0.867)	232233	160.000	165 (A)
\$ 155 2-Fluorobiphenyl	172	8.245	8.245	(0.866)	411630	160.000	163 (A)
\$ 156 Terphenyl-d14	244	16.878	16.878	(0.868)	516115	160.000	157
\$ 157 Phenol-d5	99	4.687	4.687	(0.940)	242391	160.000	163 (A)
\$ 158 2-Fluorophenol	112	3.667	3.667	(0.735)	179080	160.000	161 (A)
\$ 159 2,4,6-Tribromophenol	330	11.258	11.258	(0.879)	59439	160.000	171 (A)
\$ 186 2-Chlorophenol-d4	132	4.789	4.789	(0.960)	180898	160.000	161 (A)
\$ 187 1,2-Dichlorobenzene-d4	152	5.195	5.195	(1.042)	134661	160.000	164 (A)

## QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

**GC/MS SEMIVOLATILE  
QC DATA**

Date : 26-MAY-2000 06:29

Client ID: DFTPP02

Instrument: 722.1

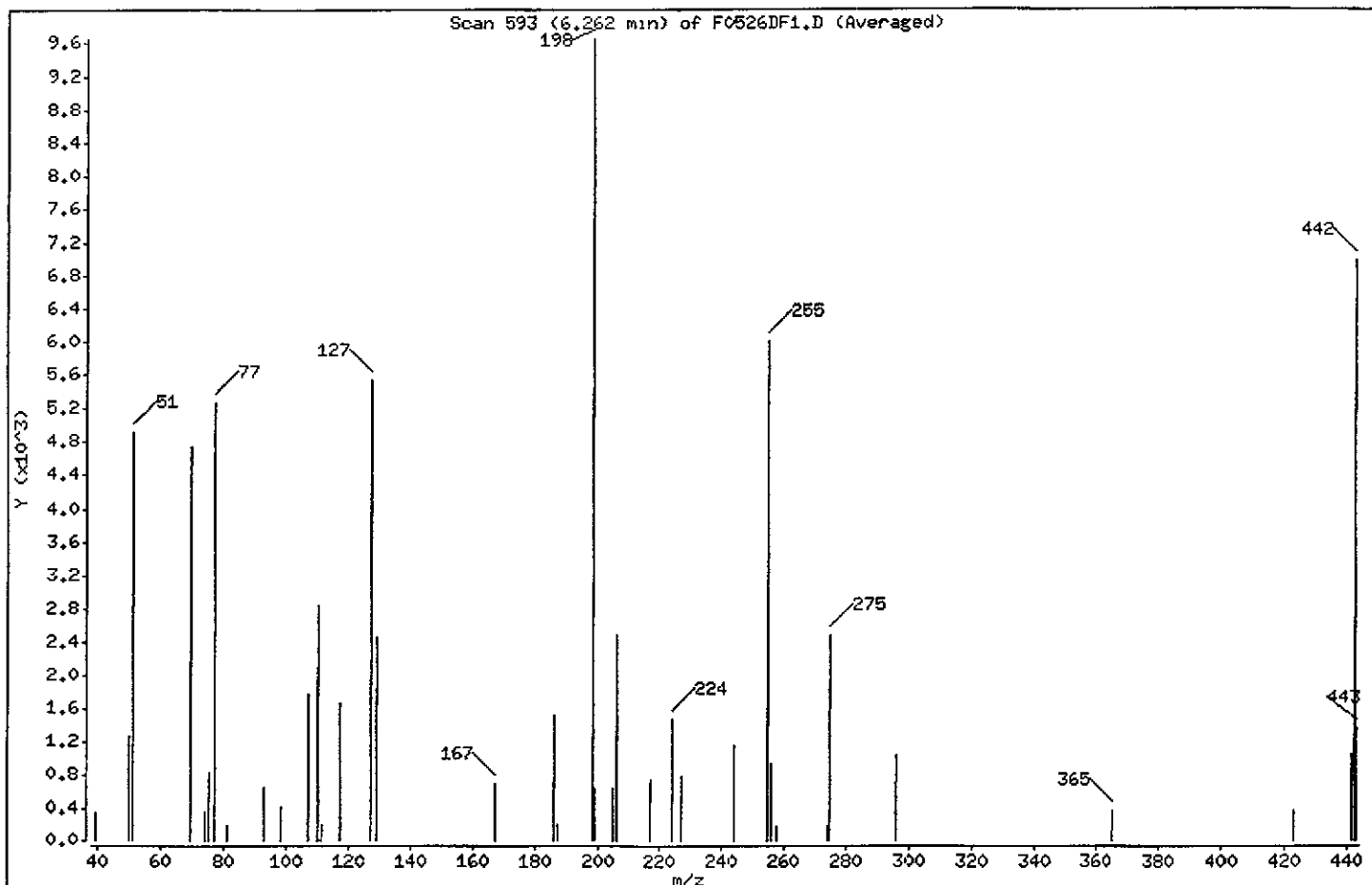
Sample Info: DFTPP050 (25ppb) 194-158-6

Operator: 007062

Column phase:

Column diameter: 2.00

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	51.10
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	49.24
70	Less than 2.00% of mass 69	0.00 ( 0.00)
127	40.00 - 60.00% of mass 198	57.38
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 30.00% of mass 198	25.80
365	Greater than 1.00% of mass 198	3.94
441	Present, but less than mass 443	10.89
442	40.00 - 100.00% of mass 198	72.49
443	17.00 - 23.00% of mass 442	14.13 ( 19.49)

Data File: \\QPI1TPA02\Nchem\722.1\052600.b\F0526DF1.D  
 Date : 26-MAY-2000 06:29  
 Client ID: DFTPP02  
 Sample Info: DFTPP030 (25ppb) 194-158-6

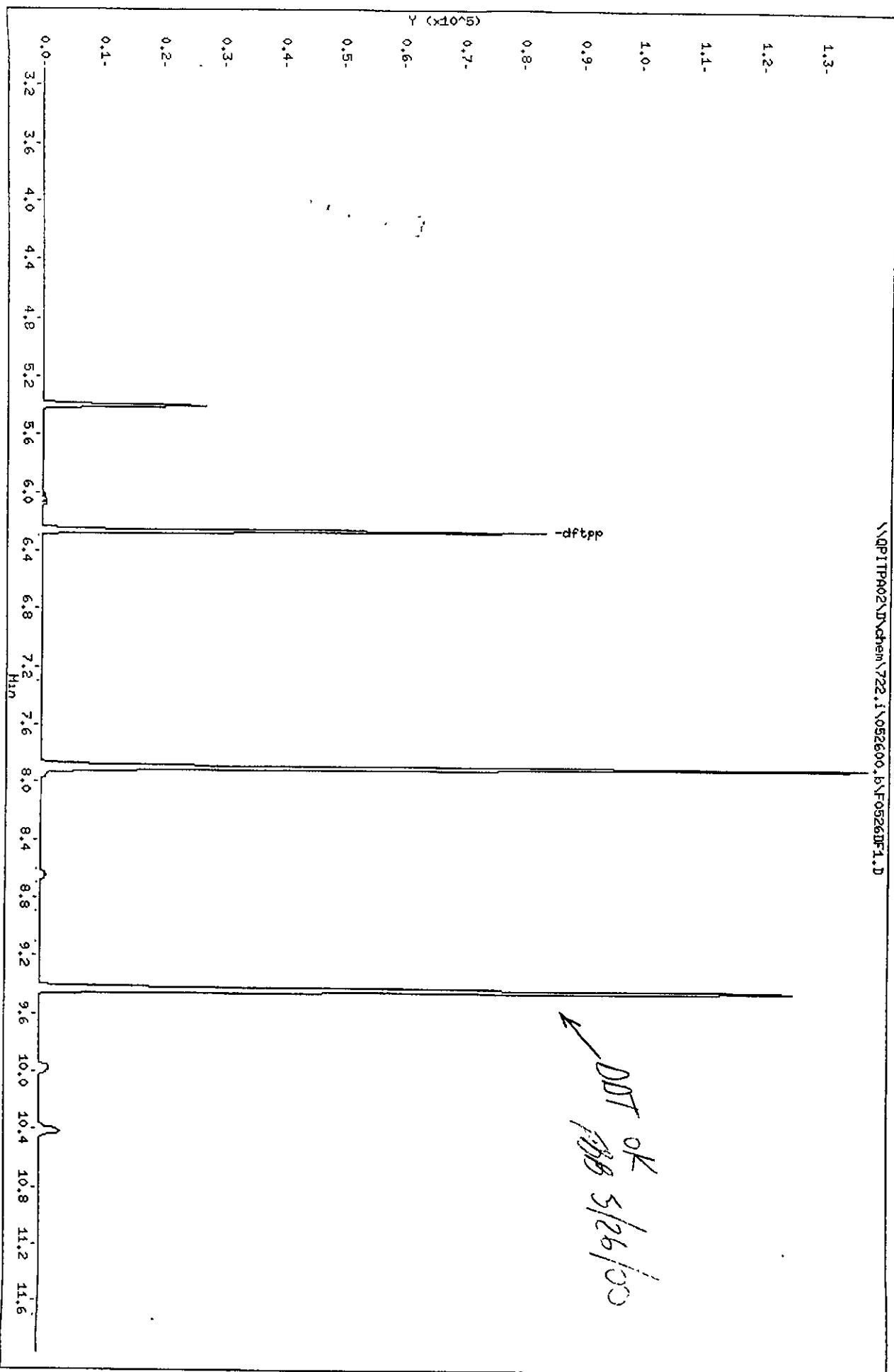
Column phases:

Instrument: 722.1

Operator: 007062

Column diameter: 2.00

\\QPI1TPA02\Nchem\722.1\052600.b\F0526DF1.D



DOT OK  
 5/26/00



Data File: \\QPITPA02\Jchem\722.1\F052600.b\F0526DF1.D

Page 4

Date : 26-MAY-2000 06:29

Client ID: DFTPP02

Instrument: 722.1

Sample Info: DFTPP050 (25ppb) 194-158-6

Operator: 007062

Column phase:

Column diameter: 2.00

Data File: F0526DF1.D

Spectrum: Scan 594 (6.262 min) of F0526DF1.D (Averaged)

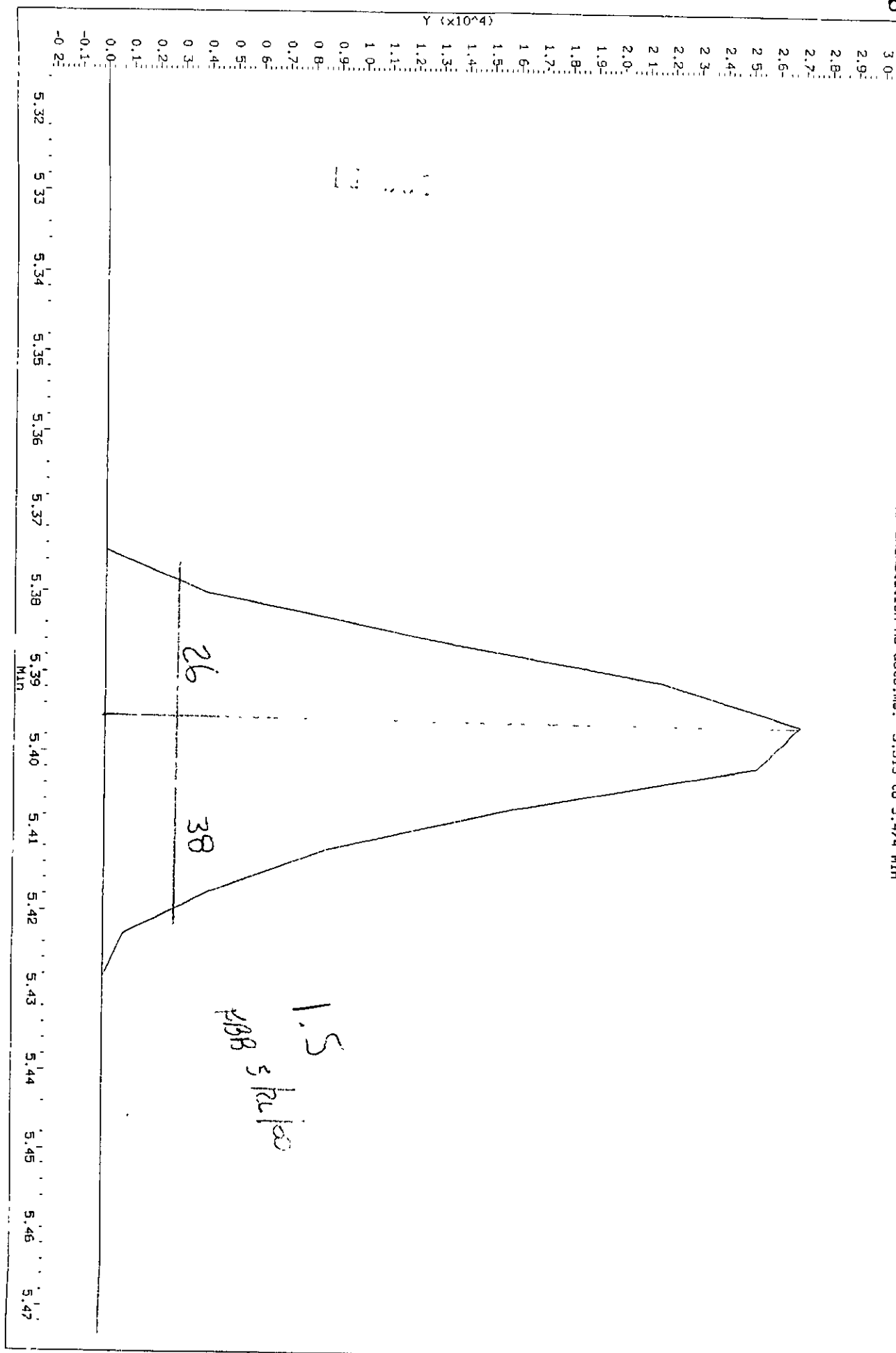
Location of Maximum: 198.00

Number of points: 38

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51.00	4926	111.00	197	206.00	2490	296.00	1034
69.00	4747	117.00	1665	217.00	741	365.00	380
74.00	344	127.00	5531	224.00	1461	423.00	369
76.00	811	129.00	2463	227.00	780	441.00	1050
77.00	5271	167.00	684	244.00	1154	442.00	6988
81.00	174	186.00	1502	255.00	6011	443.00	1362
93.00	633	187.00	190	256.00	924		
98.00	415	198.00	9640	258.00	177		

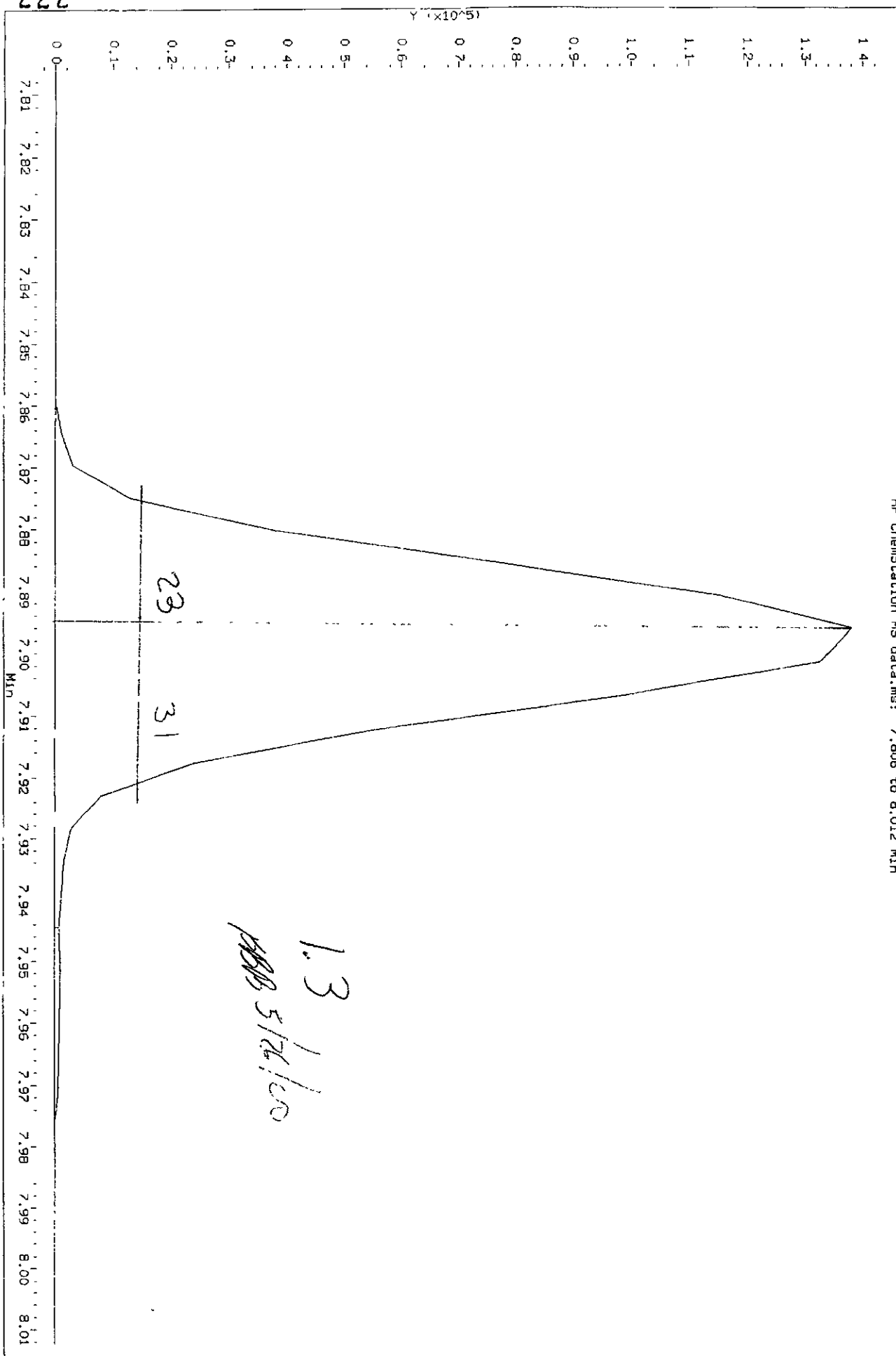
Data File: \\Dpltpa02\\D\\chem\\722.1\\052600.b\\0526DF1.D  
Injection Date: 26-MAY-2000 06:29  
Instrument: 722.1  
Client Sample ID: DFTPP02

HP ChemStation MS data.ms: 5.315 to 5.474 Min



Data File: \Np1tpa02\chem\722.1\052600.b\F0526DF1.D  
 Injection Date: 26-May-2000 06:29  
 Instrument: 722.1  
 Client Sample ID: DF1P02

HP ChemStation MS data.ms: 7.806 to 8.012 Min



UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/20/00

Work Order: DDNQC101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
110-86-1	Pyridine	20	U
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
120-12-7	Anthracene	10	U
56-55-3	Benzo(a)anthracene	10	U
50-32-8	Benzo(a)pyrene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
86-74-8	Carbazole	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
132-64-9	Dibenzofuran	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
120-83-2	2,4-Dichlorophenol	10	U

FORM I

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix (soil/water) WATER

Lab Sample ID: COE250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/20/00

Work Order: DDNQC101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: INTRA-LAB BLANK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
84-66-2	Diethyl phthalate	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
84-74-2	Di-n-butyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
51-28-5	2,4-Dinitrophenol	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
67-72-1	Hexachloroethane	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
88-74-4	2-Nitroaniline	50	U
99-09-2	3-Nitroaniline	50	U
100-01-6	4-Nitroaniline	50	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	50	U
621-64-7	N-Nitrosodi-n-propylamine	10	U

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix. (soil/water) WATER      Lab Sample ID: COE250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/20/00

Work Order: DDNQC101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch. 0146202

Client Sample Id: INTRA-LAB BLANK

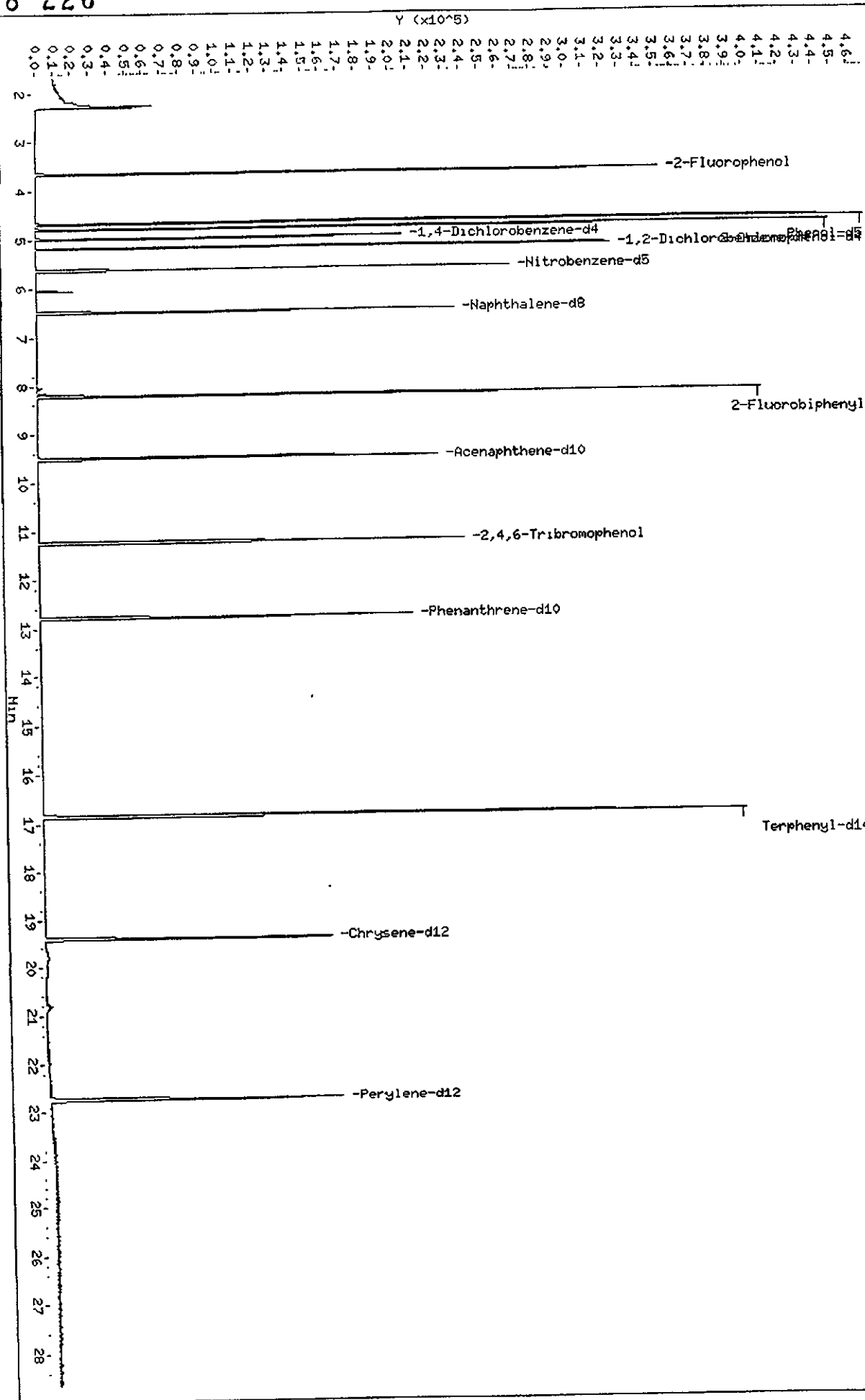
CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
86-30-6	N-Nitrosodiphenylamine	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
129-00-0	Pyrene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U

FORM I

Data File: \\QPI1P002\chem\722.1\052600.b\F0526003.D  
 Date: 26-MAY-2000 10:46  
 Client ID: INTRA-LAB BLANK  
 Sample Info: C0E240153-BLK 5/24/00 H2O  
 Volume Injected (ul): 2.0  
 Column phase: Hp5-HS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25

\\QPI1P002\chem\722.1\052600.b\F0526003.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\722.i\052600.b\F0526003.D  
Lab Smp Id: DDNQC101 Client Smp ID: INTRA-LAB BLANK  
Inj Date : 26-MAY-2000 10:46  
Operator : 007062 Inst ID: 722.i  
Smp Info : C0E240153-BLK 5/24/00 H2O  
Misc Info : ddnqc101,052600.b,8270b.m,2-root.sub  
Comment :  
Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
Meth Date : 26-May-2000 09:57 bungardf Quant Type: ISTD  
Cal Date : 26-MAY-2000 09:04 Cal File: F05260C5.D  
Als bottle: 9 QC Sample: METHOD BLANK  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: 2-root.sub  
Target Version: 4.03  
Processing Host: QPITPA02

5/26/00

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

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

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							( NG)	( ug/L)
* 1 1,4-Dichlorobenzene-d4		152	4.979	4.987	(1.000)	36738	40.0000	(Q)
* 2 Naphthalene-d8		136	6.496	6.514	(1.000)	148095	40.0000	
* 3 Acenaphthene-d10		164	9.498	9.517	(1.000)	92291	40.0000	
* 4 Phenanthrene-d10		188	12.789	12.813	(1.000)	170285	40.0000	
* 5 Chrysene-d12		240	19.397	19.437	(1.000)	147827	40.0000	
* 6 Perylene-d12		264	22.757	22.787	(1.000)	157444	40.0000	
10 N-Nitrosodimethylamine		74				Compound Not Detected.		
9 Pyridine		79				Compound Not Detected.		
21 Aniline		93				Compound Not Detected.		
22 Phenol		94				Compound Not Detected.		
23 bis(2-Chloroethyl)ether		93				Compound Not Detected.		
24 2-Chlorophenol		128				Compound Not Detected.		
26 1,3-Dichlorobenzene		146				Compound Not Detected.		
27 1,4-Dichlorobenzene		146				Compound Not Detected.		



Compounds	QUANT SIG MASS					CONCENTRATIONS	
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( NG)	FINAL ( ug/L)
=====	=====	==	=====	=====	=====	=====	=====
28 1,2-Dichlorobenzene	146	Compound	Not	Detected.			
29 Benzyl Alcohol	108	Compound	Not	Detected.			
30 2-Methylphenol	108	Compound	Not	Detected.			
31 2,2'-oxybis(1-Chloropropane)	45	Compound	Not	Detected			
32 N-Nitroso-di-n-propylamine	70	Compound	Not	Detected			
192 4-Methylphenol	108	Compound	Not	Detected			
34 Hexachloroethane	117	Compound	Not	Detected			
35 Nitrobenzene	77	Compound	Not	Detected.			
41 Isophorone	82	Compound	Not	Detected.			
42 2-Nitrophenol	139	Compound	Not	Detected.			
43 2,4-Dimethylphenol	107	Compound	Not	Detected.			
44 bis(2-Chloroethoxy)methane	93	Compound	Not	Detected			
48 2,4-Dichlorophenol	162	Compound	Not	Detected.			
49 Benzoic Acid	122	Compound	Not	Detected.			
50 1,2,4-Trichlorobenzene	180	Compound	Not	Detected.			
51 Naphthalene	128	Compound	Not	Detected.			
52 4-Chloroaniline	127	Compound	Not	Detected.			
56 Hexachlorobutadiene	224	Compound	Not	Detected.			
59 4-Chloro-3-Methylphenol	107	Compound	Not	Detected			
62 2-Methylnaphthalene	142	Compound	Not	Detected.			
205 1-Methylnaphthalene	142	Compound	Not	Detected.			
64 Hexachlorocyclopentadiene	236	Compound	Not	Detected.			
66 2,4,6-Trichlorophenol	196	Compound	Not	Detected			
67 2,4,5-Trichlorophenol	196	Compound	Not	Detected.			
70 2-Chloronaphthalene	162	Compound	Not	Detected			
73 2-Nitroaniline	65	Compound	Not	Detected.			
76 Dimethylphthalate	163	Compound	Not	Detected.			
78 2,6-Dinitrotoluene	165	Compound	Not	Detected			
79 Acenaphthylene	152	Compound	Not	Detected.			
81 3-Nitroaniline	138	Compound	Not	Detected			
82 Acenaphthene	153	Compound	Not	Detected.			
83 2,4-Dinitrophenol	184	Compound	Not	Detected.			
85 4-Nitrophenol	109	Compound	Not	Detected.			
86 Dibenzofuran	168	Compound	Not	Detected			
87 2,4-Dinitrotoluene	165	Compound	Not	Detected			
91 2,3,5,6-Tetrachlorophenol	232	Compound	Not	Detected			
88 2,3,4,6-Tetrachlorophenol	232	Compound	Not	Detected.			
93 Diethylphthalate	149	Compound	Not	Detected			
94 Fluorene	166	Compound	Not	Detected.			
95 4-Chlorophenyl-phenylether	204	Compound	Not	Detected.			
96 4-Nitroaniline	138	Compound	Not	Detected.			
98 4,6-Dinitro-2-methylphenol	198	Compound	Not	Detected.			
99 N-Nitrosodiphenylamine	169	Compound	Not	Detected.			
100 1,2-Diphenylhydrazine	77	Compound	Not	Detected			
106 4-Bromophenyl-phenylether	248	Compound	Not	Detected			
107 Hexachlorobenzene	283	Compound	Not	Detected			
111 Pentachlorophenol	265	Compound	Not	Detected.			

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( NG)	FINAL ( ug/L)
115 Phenanthrene	178				Compound Not Detected.		
116 Anthracene	178				Compound Not Detected.		
119 Carbazole	167				Compound Not Detected.		
120 Di-n-Butylphthalate	149				Compound Not Detected.		
123 Fluoranthene	202				Compound Not Detected.		
124 Benzidine	184				Compound Not Detected.		
125 Pyrene	202				Compound Not Detected.		
131 Butylbenzylphthalate	149				Compound Not Detected.		
135 3,3'-Dichlorobenzidine	252				Compound Not Detected.		
136 Benzo(a)Anthracene	228				Compound Not Detected.		
137 Chrysene	228				Compound Not Detected.		
139 bis(2-ethylhexyl) Phthalate	149				Compound Not Detected.		
140 Di-n-octylphthalate	149				Compound Not Detected.		
141 Benzo(b)fluoranthene	252				Compound Not Detected.		
142 Benzo(k)fluoranthene	252				Compound Not Detected.		
146 Benzo(a)pyrene	252				Compound Not Detected.		
149 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
150 Dibenz(a,h)anthracene	278				Compound Not Detected.		
151 Benzo(g,h,i)perylene	276				Compound Not Detected.		
\$ 154 Nitrobenzene-d5	82	5.630	5.649	(0.967)	107096	68.8273	34.4
\$ 155 2-Fluorobiphenyl	172	8.221	8.245	(0.866)	191040	63.3499	31.7
\$ 156 Terphenyl-d14	244	16.854	16.878	(0.869)	284111	83.2453	41.6
\$ 157 Phenol-d5	99	4.669	4.687	(0.938)	163051	107.285	53.6
\$ 158 2-Fluorophenol	112	3.659	3.667	(0.735)	111920	98.3289	49.2
\$ 159 2,4,6-Tribromophenol	330	11.229	11.258	(0.978)	44111	107.438	53.7
\$ 186 2-Chlorophenol-d4	132	4.776	4.789	(0.959)	132037	114.882	57.4
\$ 187 1,2-Dichlorobenzene-d4	152	5.187	5.195	(1.042)	57252	68.0429	34.0

#### QC Flag Legend

Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/20/00

Work Order: DDNQC102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: CHECK SAMPLE

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	40.2	
59-50-7	4-Chloro-3-methylphenol	59.5	
95-57-8	2-Chlorophenol	53.7	
106-46-7	1,4-Dichlorobenzene	36.0	
121-14-2	2,4-Dinitrotoluene	41.6	
100-02-7	4-Nitrophenol	56.5	
621-64-7	N-Nitrosodi-n-propylamine	44.5	
87-86-5	Pentachlorophenol	67.8	
108-95-2	Phenol	49.9	
129-00-0	Pyrene	42.7	
120-82-1	1,2,4-Trichlorobenzene	37.2	

Data File: \\QPITPA02\1\chem\722.1\052600.b\F0526004.D

Date: 26-MAY-2000 11:20

Client ID: INTRA-LAB CHECK

Sample Info: C0E240153-LCS 5/24/00 H2O

Volume Injected (uL): 2.0

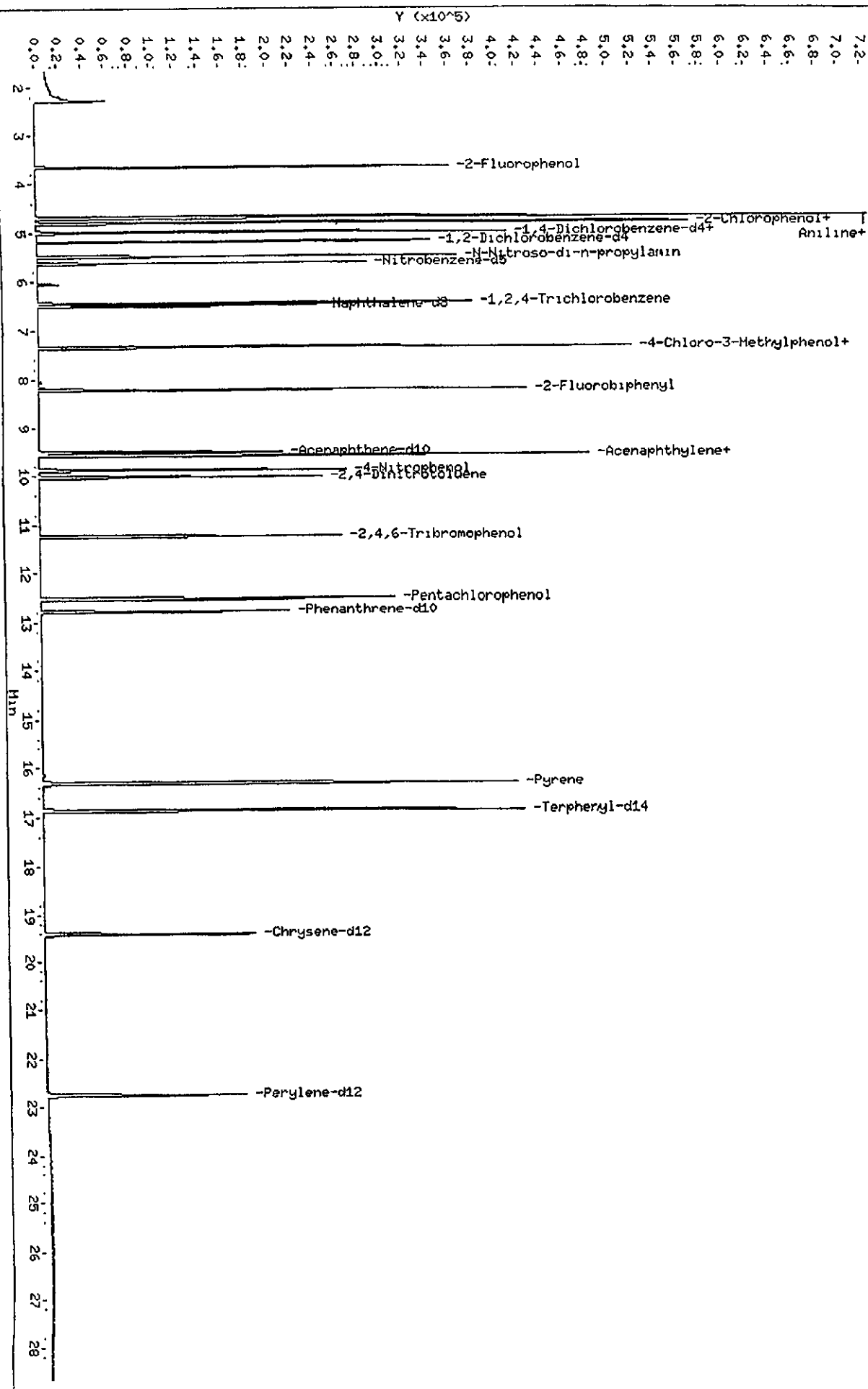
Column phase: Hp5-HS

Instrument: 722.i

Operator: 007062

Column diameter: 0.25

\\QPITPA02\1\chem\722.1\052600.b\F0526004.D



## STL Pittsburgh

## Semivolatile REPORT SW-846 Method 8270

Data file : \\Qpitpa02\D\chem\722.i\052600.b\F0526004.D  
 Lab Smp Id: DDNQC102 Client Smp ID: INTRA-LAB CHECK  
 Inj Date : 26-MAY-2000 11:20  
 Operator : 007062 Inst ID: 722.i  
 Smp Info : C0E240153-LCS 5/24/00 H2O  
 Misc Info : ddnqc102,052600.b,8270b.m,2-root.sub  
 Comment :  
 Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
 Meth Date : 26-May-2000 09:57 bungardf Quant Type: ISTD  
 Cal Date : 26-MAY-2000 09:04 Cal File: F05260C5.D  
 Als bottle: 10 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: 2-root.sub  
 Target Version: 4.03  
 Processing Host: PITPC083

AB's  
5/26/00

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

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	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 ( ug/L)
1 1,4-Dichlorobenzene-d4	152		4.979	4.987	(1.000)	37216	40 0000	(Q)
2 Naphthalene-d8	136		6.496	6.514	(1.000)	147725	40.0000	
3 Acenaphthene-d10	164		9.498	9.517	(1.000)	89356	40 0000	
4 Phenanthrene-d10	188		12.789	12.813	(1.000)	168059	40.0000	
5 Chrysene-d12	240		19.397	19.437	(1.000)	159317	40 0000	
6 Perylene-d12	264		22.757	22.787	(1.000)	158489	40.0000	
10 N-Nitrosodimethylamine	74		Compound Not Detected.					
9 Pyridine	79		Compound Not Detected.					
21 Aniline	93		Compound Not Detected.					
22 Phenol	94		4.685	4.698	(0.941)	175197	99 7656	49.9(Q)
23 bis(2-Chloroethyl) ether	93		Compound Not Detected.					
24 2-Chlorophenol	128		4.797	4.805	(0.964)	143813	107 444	53.7
26 1,3-Dichlorobenzene	146		Compound Not Detected.					
27 1,4-Dichlorobenzene	146		4.995	5.008	(1.003)	105378	72 0238	36.0
28 1,2-Dichlorobenzene	146		Compound Not Detected.					

Data File: \\Qpitpa02\D\chem\722.i\052600.b\F0526004.D  
Report Date: 26-May-2000 11:52

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( NG)	FINAL ( ug/L)
29 Benzyl Alcohol	108				Compound Not Detected.		
30 2-Methylphenol	108				Compound Not Detected.		
31 2,2'-oxybis(1-Chloropropane)	45				Compound Not Detected		
32 N-Nitroso-di-n-propylamine	70	5.486	5.516	(1.102)	87172	89.0858	44.5
192 4-Methylphenol	108				Compound Not Detected.		
34 Hexachloroethane	117				Compound Not Detected		
35 Nitrobenzene	77				Compound Not Detected		
41 Isophorone	82				Compound Not Detected.		
42 2-Nitrophenol	139				Compound Not Detected.		
43 2,4-Dimethylphenol	107				Compound Not Detected.		
44 bis(2-Chloroethoxy)methane	93				Compound Not Detected.		
48 2,4-Dichlorophenol	162				Compound Not Detected		
49 Benzoic Acid	122				Compound Not Detected		
50 1,2,4-Trichlorobenzene	180	6.442	6.456	(0.992)	84624	74.4043	37.2
51 Naphthalene	128				Compound Not Detected		
52 4-Chloroaniline	127				Compound Not Detected		
56 Hexachlorobutadiene	224				Compound Not Detected		
59 4-Chloro-3-Methylphenol	107	7.345	7.385	(1.131)	147204	118.924	59.5
62 2-Methylnaphthalene	142				Compound Not Detected.		
205 1-Methylnaphthalene	142				Compound Not Detected.		
64 Hexachlorocyclopentadiene	236				Compound Not Detected.		
66 2,4,6-Trichlorophenol	196				Compound Not Detected.		
67 2,4,5-Trichlorophenol	196				Compound Not Detected.		
70 2-Chloronaphthalene	162				Compound Not Detected.		
73 2-Nitroaniline	65				Compound Not Detected.		
76 Dimethylphthalate	163				Compound Not Detected		
78 2,6-Dinitrotoluene	165				Compound Not Detected.		
79 Acenaphthylene	152				Compound Not Detected.		
81 3-Nitroaniline	138				Compound Not Detected.		
82 Acenaphthene	153	9.568	9.591	(1.007)	213426	80.5102	40.2
83 2,4-Dinitrophenol	184				Compound Not Detected.		
85 4-Nitrophenol	109	9.877	9.912	(1.040)	72934	113.066	56.5(Q)
86 Dibenzofuran	168				Compound Not Detected.		
87 2,4-Dinitrotoluene	165	10.022	10.062	(1.055)	76254	83.1370	41.6
91 2,3,5,6-Tetrachlorophenol	232				Compound Not Detected		
88 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		
93 Diethylphthalate	149				Compound Not Detected.		
94 Fluorene	166				Compound Not Detected		
95 4-Chlorophenyl-phenylether	204				Compound Not Detected.		
96 4-Nitroaniline	138				Compound Not Detected.		
98 4,6-Dinitro-2-methylphenol	198				Compound Not Detected.		
99 N-Nitrosodiphenylamine	169				Compound Not Detected.		
100 1,2-Diphenylhydrazine	77				Compound Not Detected.		
106 4-Bromophenyl-phenylether	248				Compound Not Detected		
107 Hexachlorobenzene	283				Compound Not Detected.		
111 Pentachlorophenol	266	12.527	12.556	(0.980)	61934	135.594	67.8
115 Phenanthrene	178				Compound Not Detected.		

Report Date: 26-May-2000 11:52

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( NG)	FINAL ( ug/L)
116 Anthracene	178				Compound Not Detected		
119 Carbazole	167				Compound Not Detected		
120 Di-n-Butylphthalate	149				Compound Not Detected		
123 Fluoranthene	202				Compound Not Detected		
124 Benzidine	184				Compound Not Detected		
125 Pyrene	202	16.315	16.344	(0.841)	404758	85.3361	42.7
131 Butylbenzylphthalate	149				Compound Not Detected.		
135 3,3'-Dichlorobenzidine	252				Compound Not Detected		
136 Benzo(a)Anthracene	228				Compound Not Detected		
137 Chrysene	228				Compound Not Detected.		
139 bis(2-ethylhexyl)Phthalate	149				Compound Not Detected.		
140 Di-n-octylphthalate	149				Compound Not Detected.		
141 Benzo(b)fluoranthene	252				Compound Not Detected.		
142 Benzo(k)fluoranthene	252				Compound Not Detected.		
146 Benzo(a)pyrene	252				Compound Not Detected.		
149 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
150 Dibenzo(a,h)anthracene	278				Compound Not Detected		
151 Benzo(g,h,i)perylene	276				Compound Not Detected		
\$ 154 Nitrobenzene-d5	82	5.630	5.649	(0.867)	112689	72.6025	36.3
\$ 155 2-Fluorobiphenyl	172	8.221	8.245	(0.866)	208608	71.4477	35.7
\$ 156 Terphenyl-d14	244	16.854	16.878	(0.869)	301757	82.0389	41.0
\$ 157 Phenol-d5	99	4.674	4.687	(0.939)	172076	111.770	55.9
\$ 158 2-Fluorophenol	112	3.659	3.667	(0.735)	118976	103.187	51.6
\$ 159 2,4,6-Tribromophenol	330	11.229	11.258	(0.878)	48562	119.844	59.9
\$ 186 2-Chlorophenol-d4	132	4.776	4.789	(0.959)	138608	119.051	59.5
\$ 187 1,2-Dichlorobenzene-d4	152	5.182	5.195	(1.041)	59236	69.4975	34.7

## QC Flag Legend

Q - Qualifier signal failed the ratio test.

UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: COE250000 202

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL

Date Received: 05/20/00

Work Order: DDNQC103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146202

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
83-32-9	Acenaphthene	39.3	
59-50-7	4-Chloro-3-methylphenol	57.9	
95-57-8	2-Chlorophenol	51.8	
106-46-7	1,4-Dichlorobenzene	34.6	
121-14-2	2,4-Dinitrotoluene	40.6	
100-02-7	4-Nitrophenol	54.9	
621-64-7	N-Nitrosodi-n-propylamine	42.7	
87-86-5	Pentachlorophenol	66.0	
108-95-2	Phenol	48.4	
129-00-0	Pyrene	41.7	
120-82-1	1,2,4-Trichlorobenzene	36.4	

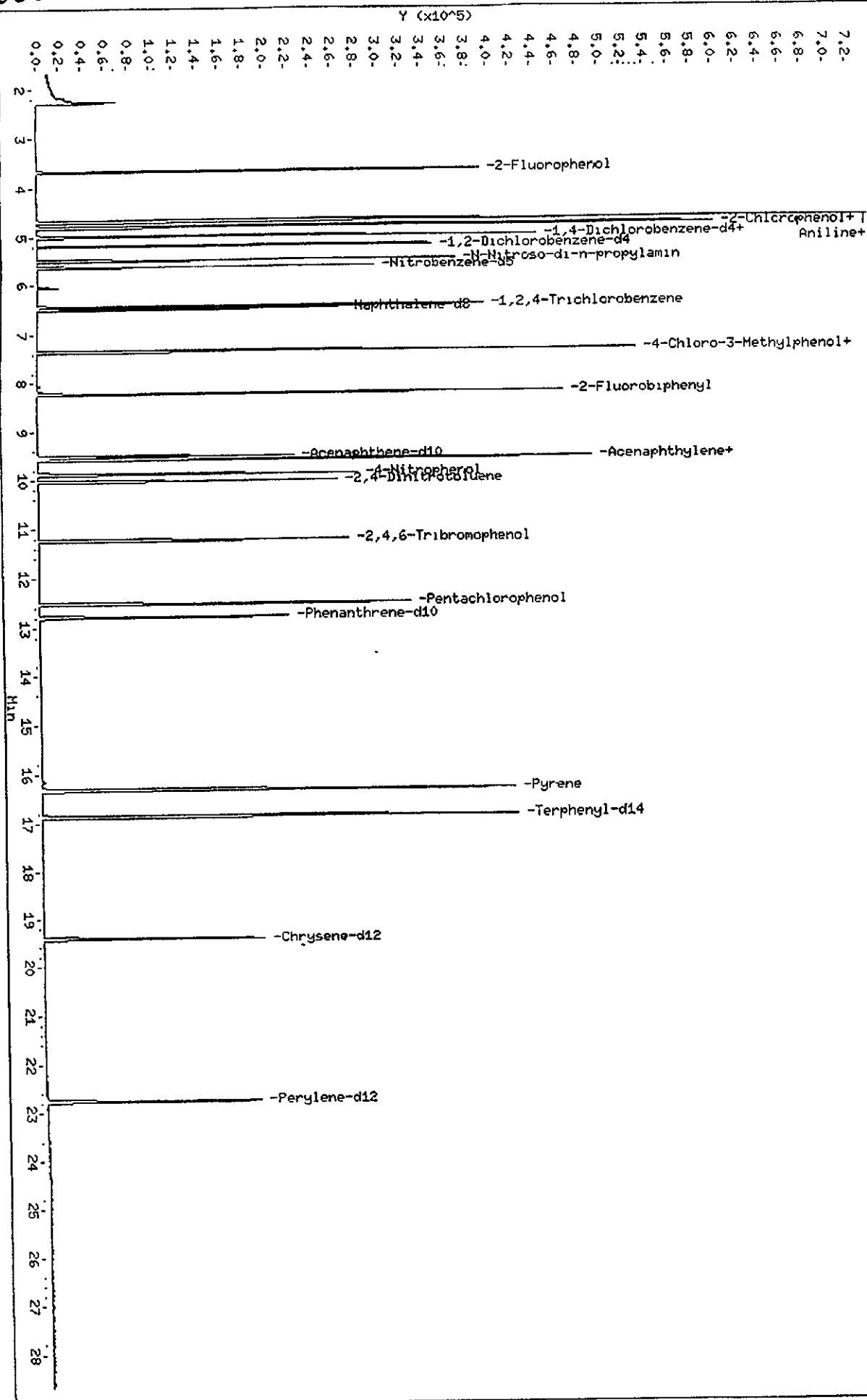
FORM I



Data File: \NPI1PA02\chem\722.1\052600.b\F0526005.D  
 Date: 26-MAY-2000 11:54  
 Client ID: INTRA-LAB CHECK  
 Sample Info: COE240153-LCSD 5/24/00 H2O  
 Volume Injected (ul): 2.0  
 Column phase: Hp5-MS

Instrument: 722.1  
 Operator: 007062  
 Column diameter: 0.25

\NPI1PA02\chem\722.1\052600.b\F0526005.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270  
Data file : \\Qpitpa02\D\chem\722.i\052600.b\F0526005.D  
Lab Smp Id: DDNQC103 Client Smp ID: INTRA-LAB CHECK  
Inj Date : 26-MAY-2000 11:54  
Operator : 007062 Inst ID: 722.i  
Smp Info : COE240153-LCSD 5/24/00 H2O  
Misc Info : ddngc103,052600.b,8270b.m,2-root.sub  
Comment :  
Method : \\QPITPA02\D\chem\722.i\052600.b\8270b.m  
Meth Date : 26-May-2000 09:57 bungardf Quant Type: ISTD  
Cal Date : 26-MAY-2000 09:04 Cal File: F05260C5.D  
Als bottle: 11 QC Sample: LCSD  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: 2-root.sub  
Target Version: 4.03  
Processing Host: PITPC083

5/26/00

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

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	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 ( ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.981	4.987 (1.000)		40299	40.0000	(Q)
* 2 Naphthalene-d8	136	6.498	6.514 (1.000)		158308	40.0000	
* 3 Acenaphthene-d10	164	9.506	9.517 (1.000)		95449	40.0000	
* 4 Phenanthrene-d10	188	12.791	12.813 (1.000)		179564	40.0000	
* 5 Chrysene-d12	240	19.405	19.437 (1.000)		169325	40.0000	
* 6 Perylene-d12	264	22.765	22.787 (1.000)		171252	40.0000	
10 N-Nitrosodimethylamine	74	Compound Not Detected.					
9 Pyridine	79	Compound Not Detected.					
21 Aniline	93	Compound Not Detected.					
22 Phenol	94	4.687	4.698 (0.941)		184244	96.8909	48.4 (Q)
23 bis(2-Chloroethyl)ether	93	Compound Not Detected.					
24 2-Chlorophenol	128	4.800	4.805 (0.964)		150095	103.559	51.8
26 1,3-Dichlorobenzene	146	Compound Not Detected.					
27 1,4-Dichlorobenzene	146	4.997	5.008 (1.003)		109476	69.1004	34.6
28 1,2-Dichlorobenzene	146	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( NG)	FINAL ( ug/L)
29 Benzyl Alcohol	108				Compound Not Detected.		
30 2-Methylphenol	108				Compound Not Detected.		
31 2,2'-oxybis(1-Chloropropane)	45				Compound Not Detected.		
32 N-Nitroso-di-n-propylamine	70	5.494	5.516	(1.103)	90565	85.4727	42.7
192 4-Methylphenol	108				Compound Not Detected.		
34 Hexachloroethane	117				Compound Not Detected.		
35 Nitrobenzene	77				Compound Not Detected.		
41 Isophorone	82				Compound Not Detected.		
42 2-Nitrophenol	139				Compound Not Detected.		
43 2,4-Dimethylphenol	107				Compound Not Detected.		
44 bis(2-Chloroethoxy)methane	93				Compound Not Detected.		
48 2,4-Dichlorophenol	162				Compound Not Detected.		
49 Benzoic Acid	122				Compound Not Detected.		
50 1,2,4-Trichlorobenzene	180	6.445	6.456	(0.992)	88797	72.8541	36.4
51 Naphthalene	128				Compound Not Detected.		
52 4-Chloroaniline	127				Compound Not Detected.		
56 Hexachlorobutadiene	224				Compound Not Detected.		
59 4-Chloro-3-Methylphenol	107	7.353	7.385	(1.132)	153555	115.762	57.9
62 2-Methylnaphthalene	142				Compound Not Detected.		
205 1-Methylnaphthalene	142				Compound Not Detected.		
64 Hexachlorocyclopentadiene	236				Compound Not Detected.		
66 2,4,6-Trichlorophenol	196				Compound Not Detected.		
67 2,4,5-Trichlorophenol	196				Compound Not Detected.		
70 2-Chloronaphthalene	162				Compound Not Detected.		
73 2-Nitroaniline	65				Compound Not Detected.		
76 Dimethylphthalate	163				Compound Not Detected.		
78 2,6-Dinitrotoluene	165				Compound Not Detected.		
79 Acenaphthylene	152				Compound Not Detected.		
81 3-Nitroaniline	138				Compound Not Detected.		
82 Acenaphthene	153	9.570	9.591	(1.007)	222457	78.5601	39.3
83 2,4-Dinitrophenol	184				Compound Not Detected.		
85 4-Nitrophenol	109	9.880	9.912	(1.039)	75669	109.818	54.9(Q)
86 Dibenzofuran	168				Compound Not Detected.		
87 2,4-Dinitrotoluene	165	10.029	10.062	(1.055)	79607	81.2523	40.6
91 2,3,5,6-Tetrachlorophenol	232				Compound Not Detected.		
88 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		
93 Diethylphthalate	149				Compound Not Detected.		
94 Fluorene	166				Compound Not Detected.		
95 4-Chlorophenyl-phenylether	204				Compound Not Detected.		
96 4-Nitroaniline	138				Compound Not Detected.		
98 4,6-Dinitro-2-methylphenol	198				Compound Not Detected.		
99 N-Nitrosodiphenylamine	169				Compound Not Detected.		
100 1,2-Diphenylhydrazine	77				Compound Not Detected.		
106 4-Bromophenyl-phenylether	248				Compound Not Detected.		
107 Hexachlorobenzene	283				Compound Not Detected.		
111 Pentachlorophenol	266	12.535	12.556	(0.980)	64431	132.023	66.0
115 Phenanthrene	178				Compound Not Detected.		

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( NG)	FINAL ( ug/L)
116 Anthracene	178				Compound Not Detected.		
119 Carbazole	167				Compound Not Detected		
120 Di-n-Butylphthalate	149				Compound Not Detected		
123 Fluoranthene	202				Compound Not Detected		
124 Benzidine	184				Compound Not Detected		
125 Pyrene	202	16 323	16.344	{0.841}	420357	83 3867	41.7
131 Butylbenzylphthalate	149				Compound Not Detected		
135 3,3'-Dichlorobenzidine	252				Compound Not Detected.		
136 Benzo(a)Anthracene	228				Compound Not Detected		
137 Chrysene	228				Compound Not Detected.		
139 bis(2-ethylhexyl) Phthalate	149				Compound Not Detected		
140 Di-n-octylphthalate	149				Compound Not Detected		
141 Benzo(b) fluoranthene	252				Compound Not Detected.		
142 Benzo(k) fluoranthene	252				Compound Not Detected		
146 Benzo(a)pyrene	252				Compound Not Detected		
149 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
150 Dibenz(a,h)anthracene	278				Compound Not Detected		
151 Benzo(g,h,i)perylene	276				Compound Not Detected		
\$ 154 Nitrobenzene-d5	82	5 633	5.649	{0.867}	115378	69 3657	34.7
\$ 155 2-Fluorobiphenyl	172	8 224	8.245	{0.865}	213249	68 3749	34.2
\$ 156 Terphenyl-d14	244	16 862	16.878	{0.869}	305174	78.0640	39.0
\$ 157 Phenol-d5	99	4 677	4.687	{0.939}	177354	106 386	53.2
\$ 158 2-Fluorophenol	112	3 662	3.667	{0.735}	122785	98 3432	49.2
\$ 159 2,4,6-Tribromophenol	330	11 237	11.258	{0.878}	49541	114.427	57.2
\$ 186 2-Chlorophenol-d4	132	4 784	4.789	{0.960}	142126	112 734	56.4
\$ 187 1,2-Dichlorobenzene-d4	152	5.189	5.195	{1.042}	60810	65.8861	32.9

# QC Flag Legend

Q - Qualifier signal failed the ratio test.

658 240

**GC/MS SEMIVOLATILE  
MISCELLANEOUS**

# Continuous L-L Extraction Worksheet

**STL**  
STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380

Submitted To Your Success

Began 5-24-00		Time 14:15		Date 5/25/2000		Prep Meth # 3520C		H2SO4 186-15-12		Solvent Mecl2		Solvent Lot		Na2SO4 Lot Number		Clean up Method	
Change over 5/25/2000		Time 13:20		Date 5/25/2000		Analysis 82270		NaOH 9299-07		Solvent Mfg. BAKER		T88284		N18593		N/A	
Completed 5-26-00		Time 0830		Date 5-26-00		Client ID		Extr Vol (mL)		Final Volume mL		pH		Surrogate Lot #		Stirr Vol (mL)	
Lot Number		Sample ID		Client ID		Extr Vol (mL)		Final Volume mL		pH		Surrogate Lot #		Stirr Vol (mL)		Matrix Spike Lot #	
1	COE200135	ALK		NA		1000	1.0	5.2	11	194-176-5	0.5	NA	194-176-13	0.5	NA	NA	
2		LES						5.2	11								
3		LES DUP						5.2	11								
4		AA1						7.2	11								
5		AA2						7.2	11								
6		AA3						7.2	11								
7		AA4						7.2	11								
8		AA5						7.2	11								
9	COE230195	AA1		NA		1.0	1.0	7.2	11	194-176-5	0.5	NA	NA	NA	NA	NA	
10																	
11																	
12	COE240134	AA1		NA		1000	1.0	7.2	11	194-176-5	0.5	NA	NA	NA	NA	NA	
13	COE240153	AA1		NA		920	1.0	7.2	11								
14	COE240144	AA1		NA		1000	20.0	6.2	11								
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
Prep Analyst SM		SM		SM		WT		KG		WT		SM		WT		SM	
Extract(s)		Extract(s) Received		Date		Time		Location		Date		Time		Location		Date	
(Ret old line number from above)		Date		Time		Location		Date		Time		Location		Date		Time	
All Above		5-26-00		0830		K. Leahy		5-26-00		0830		K. Leahy		5-26-00		0830	
51 Above		5-26-00		0900		K. Leahy		5-26-00		0930		K. Leahy		5-26-00		0930	
Batch Number: 0146202		Reviewed By: K. Leahy		Date: 5-26-00		Time: 0830		Location: K. Leahy		Date: 5-26-00		Time: 0830		Location: K. Leahy		Date: 5-26-00	

658 242

Instrument Name: GC/MS Instrument #1

Sequence File: C:\HPCHEM\1\SEQUENCE\052600.S

Comment: STL- PITT HP5973-2 LOG 2ul inj 100ul+1ul int

Operator: 007062

Data Path: C:\HPCHEM\1\DATA\052600.b\

Method Path: C:\HPCHEM\1\METHODS\

8270C

5/26/00

FBB

Line	Type	Vial	DataFile	Method	Sample Name
1)	Sample	6:29 1	F0526DF1	DFTPP	DFTPP050 (25ppb) 194-158-6
2)	Sample	AOC 2	F05260C1	72EARLY	SSTD050 (25ppb) 194-176-9
3)	Sample	↓ 3	F05260C2	72EARLY	SSTD020 (10ppb) 194-175-10
4)	Sample	↓ 4	F05260C3	72EARLY	SSTD080 (40ppb) 194-175-12
5)	Sample	↓ 5	F05260C4	72EARLY	SSTD120 (60ppb) 194-175-13
6)	Sample	AOC 6	F05260C5	72EARLY	SSTD160 (80ppb) 194-175-14
7)	Sample	AOC 7	F0526001	72EARLY	C0E240153-002 5/25/00 Soil
8)	Sample	AOC 8	F0526002	72EARLY	C0E240153-003 5/25/00 Soil
9)	Sample	AOC 9	F0526003	72EARLY	C0E240153-BLK 5/24/00 H2O
10)	Sample	AOC 10	F0526004	72EARLY	C0E240153-LCS 5/24/00 H2O
11)	Sample	AOC 11	F0526005	72EARLY	C0E240153-LCSD 5/24/00 H2O
12)	Sample	AOC 12	F0526006	72EARLY	C0E240153-001 5/24/00 H2O
13)	Sample	AOC 13	F0526007	72EARLY	C0E200135-001 5/24/00 H2O
14)	Sample	AOC 14	F0526008	72EARLY	C0E200135-002 5/24/00 H2O
15)	Sample	AOC 15	F0526009	72EARLY	C0E200135-003 5/24/00 H2O
16)	Sample	AOC 16	F0526010	72EARLY	C0E200135-004 5/24/00 H2O
17)	Sample	AOC 17	F0526011	72EARLY	C0E200135-005 5/24/00 H2O
18)	Sample	AOC 25	F0526015	72EARLY	C0E200135-004 x6 5/24/00 H2O
19)	Sample	AOC 18	F0526012	72EARLY	C0E230195-001 5/24/00 H2O
20)	Sample	19	F0526013	72EARLY	C0E240124-001 5/24/00 H2O
21)	Sample	20	F0526014	72EARLY	C0E240144-001 X20 F.V=20ml 5/24

Bytes Needed: 1059320 Space on drive C: 1023932928

Sequence Verification Done!

PSR024 5/24/00 5:59:04 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: TROUTB

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

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	QTY
										RCVD	REQD
4C CLP1	DDGQT-1-07	___	236314	120141	I-49-QL	COE200135	001		WATER	0	10 1
4C CLP1	DDGR6-1-07	___	236315	120141	I-49-QL	COE200135	002		WATER	0	10 1
4C CLP1	DDGR9-1-07	___	236316	120141	I-49-QL	COE200135	003		WATER	0	10 1
4C CLP1	DDGRA-1-07	___	236317	120141	I-49-QL	COE200135	004		WATER	0	10 1
4C CLP1	DDGRC-1-07	___	236318	120141	I-49-QL	COE200135	005		WATER	0	10 1
4F	DDK90-1-02	___	236313	399411	I-49-QL	COE230195	001		WATER	0	9 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

*Ken. Seeh*  
*B Trout*

*B Trout*  
*Ken. Seeh*

*5/24/2000 08:30*  
*5/24/2000 12:40*

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



**PESTICIDE DATA**

44 60

**PESTICIDE  
QC SUMMARY**

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPTT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

GC Column(1): RTX-CLP

ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX %REC #	DCB %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	DF/S1/0137/W	73	65					0
02	PBLK	82	68					0
03	LCS	85	74					0
04	LCSD	100	89					0
05	LCS	90	103					0
06								
07								
08								
09								
10								
11								
12								
13								
14								
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24								
25								
26								
27								
28								
29								
30								

ADVISORY  
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene

(30-150)

S2 (DCB) = Decachlorobiphenyl

(30-150)

# Column to be used to flag recovery values  
 \* Values outside of QC limits  
 D Surrogate diluted out

## SW846 8081A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDN21102

BATCH: 0145492

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
gamma-BHC (Lindane)	0.250	0.193	77	49 - 137	
Heptachlor	0.250	0.190	76	57 - 124	
Aldrin	0.250	0.202	81	62 - 120	
Dieldrin	0.500	0.426	85	68 - 130	
Endrin	0.500	0.351	70	46 - 137	
4,4'-DDT	0.500	0.319	64	60 - 140	

## NOTES(S):

\* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

COMMENTS:

FORM III

658 248

SW846 8081A CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: COE240000

WO #: DDN21103

BATCH: 0145492

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
gamma-BHC (Lindane)	0.250	0.230	92	49 - 137	
Heptachlor	0.250	0.229	91	57 - 124	
Aldrin	0.250	0.246	98	62 - 120	
Dieldrin	0.500	0.384	77	68 - 130	
Endrin	0.500	0.425	85	46 - 137	
4,4'-DDT	0.500	0.392	78	60 - 140	

NOTES(S):

\* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

COMMENTS:

FORM III

4C  
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO. 658 249

PBLK

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.:

SAS No.: 40325 SDG No.: C0E230195

Lab Sample ID: DDN21101

Lab File ID: C-A2565

Matrix (soil/water) WATER

Extraction: (SepF/Cont/Sonc) SW3510

Sulfur Cleanup (Y/N) N

Date Extracted: 05/24/00

Date Analyzed (1): 05/27/00

Date Analyzed (2):

Time Analyzed (1): 0435

Time Analyzed (2):

Instrument ID (1): GC3

Instrument ID (2):

GC Column (1): RTX-CLP ID: 0.53(mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	DF/S1/0137/W	DDK90103	05/27/00	
02	LCS	DDN21102	05/27/00	
03	LCSD	DDN21103	05/27/00	
04	LCS	DDN21102	05/31/00	
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

**PESTICIDE  
SAMPLE DATA**

## UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
72-54-8	4,4'-DDD	0.050	U
72-55-9	4,4'-DDE	0.050	U
50-29-3	4,4'-DDT	0.050	U
60-57-1	Dieldrin	0.050	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.050	U
1031-07-8	Endosulfan sulfate	0.050	U
72-20-8	Endrin	0.050	U
7421-93-4	Endrin aldehyde	0.050	U
53494-70-5	Endrin ketone	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.10	U
8001-35-2	Toxaphene	2.0	U



658 252

Data File: /var/chem/gc3.i/2260-E.b/c-a2563.d  
Report Date: 31-May-2000 10:08

STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2563.d  
Lab Smp Id: DDK90103 Client Smp ID: DF/S1/0137/WA/001  
Inj Date : 27-MAY-2000 03:44  
Operator : 1891 Inst ID: gc3.i  
Smp Info : DDK90103,2260-E.b,,PEST.sub,,  
Misc Info : 230195001  
Comment :  
Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: Falcon Compound Sublist: all.sub  
Target Version: 3.40

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

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
1 Tetrachloro-m-xylene	4.567	4.558	0.009	75205	0.01464	0.146388
2 Diallylate A				Compound Not Detected.		
3 Diallylate B				Compound Not Detected.		
4 MIREX				Compound Not Detected.		
5 alpha-BHC	5.883	5.883	0.000	1468	0.000196	0.00195605
6 gamma-BHC (Lindane)				Compound Not Detected.		
7 beta-BHC				Compound Not Detected.		
8 delta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor	7.683	7.683	0.000	5427	0.00083	0.00829650
11 Aldrin				Compound Not Detected.		
12 Heptachlor epoxide	9.658	9.658	0.000	22131	0.00422	0.0421651
13 gamma-Chlordane				Compound Not Detected.		
14 alpha-Chlordane				Compound Not Detected.		
15 Endosulfan I				Compound Not Detected.		
16 4,4'-DDE	10.592	10.550	0.042	5895	0.00140	0.0140251

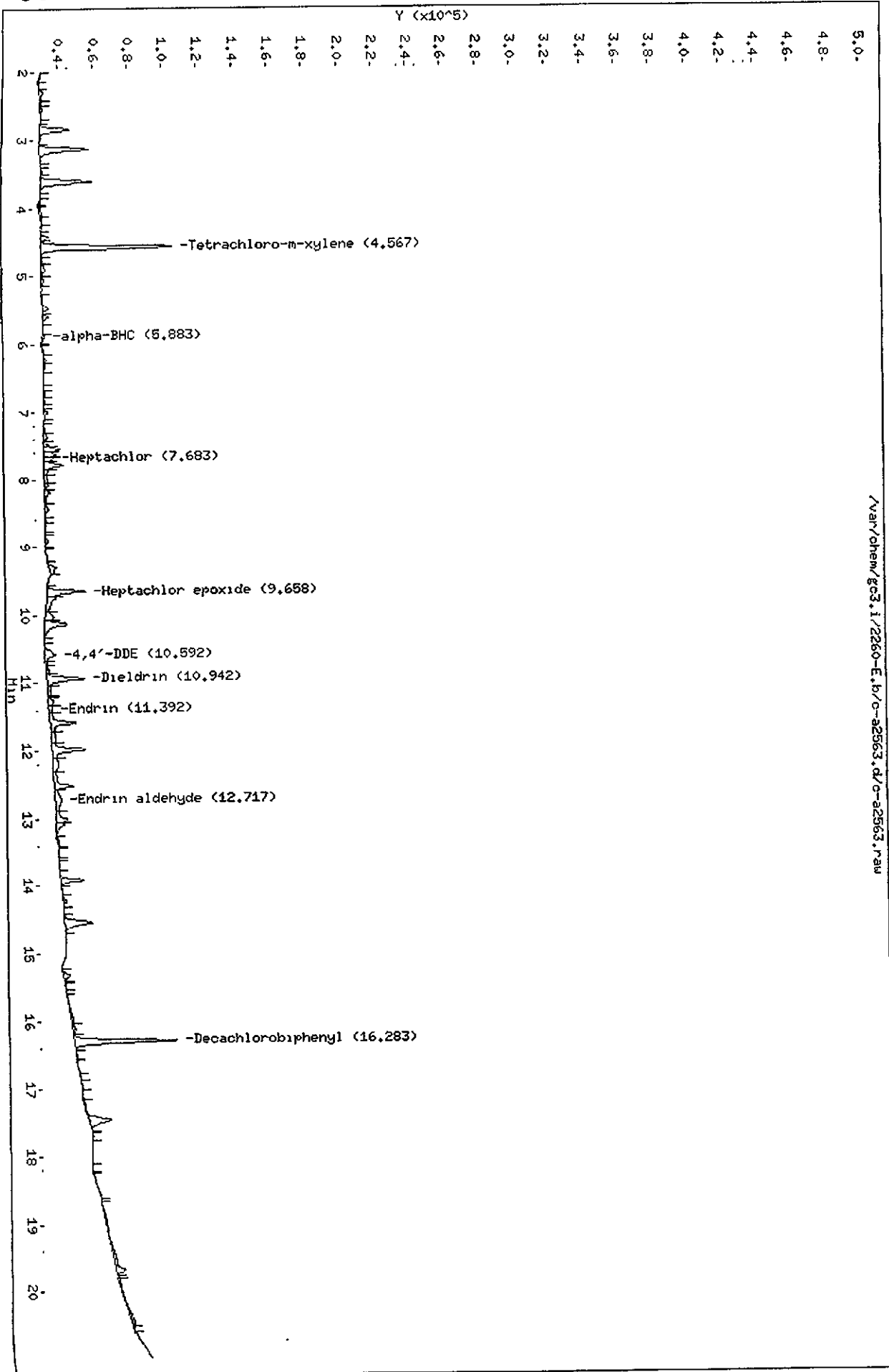
Data File: /var/chem/gc3.i/2260-E.b/c-a2563.d

Report Date: 31-May-2000 10:08

Compounds	RT	EXP RT	DLT RT	RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
						( ng)	( ug/L)
=====	==	=====	=====	=====	=====	=====	=====
17 Dieldrin	10.942	10.942	0.000		22049	0.00394	0.0393853
18 Toxaphene					Compound Not Detected		
19 Isodrin					Compound Not Detected		
20 Endrin	11.392	11.375	0.017		1828	0.000384	0.00384377
21 4,4'-DDD					Compound Not Detected		
22 Endosulfan II					Compound Not Detected		
23 4,4'-DDT					Compound Not Detected.		
24 Endrin aldehyde	12.717	12.717	0.000		3607	0.00100	0.0100066
25 Methoxychlor					Compound Not Detected.		
26 Endosulfan sulfate					Compound Not Detected		
27 Endrin ketone					Compound Not Detected		
28 Chlorobenzilate					Compound Not Detected		
29 Kepone					Compound Not Detected.		
\$ 30 Decachlorobiphenyl	16.283	16.292	-0.009		58263	0.01303	0.130252

Data File: /var/chem/gc3.1/2260-E.b/c-a2563.d  
Date: 27-MAY-2000 03:44  
Client ID: DF/SL/0137/MA/001  
Sample Info: DDK90103,2260-E.b,PEST,sub,,  
Volume Injected (ul): 1.0  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



**PESTICIDE  
CALIBRATION DATA**

658 256

Report Date : 30-May-2000 15:55

STL-PITTSBURGH

## COMPOUND LISTING

Method file : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Quant Method : ESTD Target Version : 3.40  
 Last Update : 30-May-2000 15:52 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	4.558	4.508-4.608	5.137e+06
2 Diallate A	5.733	5.683-5.783	1.904e+05
3 Diallate B	6.042	5.992-6.092	5.678e+04
4 MIREX	13.275	13.225-13.325	3.722e+06
5 alpha-BHC	5.883	5.833-5.933	7.505e+06
6 gamma-BHC (Lindane)	6.625	6.575-6.675	6.866e+06
7 beta-BHC	6.908	6.858-6.958	2.811e+06
8 delta-BHC	7.267	7.217-7.317	5.491e+06
9 Chlordane	7.500	7.450-7.550	3.237e+05
	7.683	7.633-7.733	5.911e+05
	9.933	9.883-9.983	8.386e+05
	10.208	10.158-10.258	1.169e+06
10 Heptachlor	7.683	7.633-7.733	6.541e+06
11 Aldrin	8.300	8.250-8.350	5.466e+06
12 Heptachlor epoxide	9.658	9.608-9.708	5.249e+06
13 gamma-Chlordane	9.925	9.875-9.975	5.332e+06
14 alpha-Chlordane	10.208	10.158-10.258	5.307e+06
15 Endosulfan I	10.433	10.383-10.483	5.316e+06
16 4,4'-DDE	10.550	10.500-10.600	4.203e+06
17 Dieldrin	10.942	10.892-10.992	5.598e+06
18 Toxaphene	11.467	11.417-11.517	6.061e+04
	11.842	11.792-11.892	7.141e+04
	12.583	12.533-12.633	7.604e+04
	13.342	13.292-13.392	1.209e+05

Report Date : 30-May-2000 15:55

66D  
HPC03E  
RTX-clp

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc3.i/2260-E.b/PESTA.m

Compound	RT	RT Window	RF
19 Isodrin	8.992	8.942-9.042	5.601e+06
20 Endrin	11.375	11.325-11.425	4.756e+06
21 4,4'-DDD	11.767	11.717-11.817	3.817e+06
22 Endosulfan II	11.850	11.800-11.900	4.392e+06
23 4,4'-DDT	12.317	12.267-12.367	3.650e+06
24 Endrin aldehyde	12.717	12.667-12.767	3.605e+06
25 Methoxychlor	13.442	13.392-13.492	1.739e+06
26 Endosulfan sulfate	13.583	13.533-13.633	3.808e+06
27 Endrin ketone	14.083	14.033-14.133	4.208e+06
28 Chlorobenzilate	11.442	11.392-11.492	3.315e+06
29 Kepone	11.883	11.833-11.933	5.751e+04
\$ 30 Decachlorobiphenyl	16.292	16.242-16.342	4.473e+06

658 258

66

Report Date : 30-May-2000 15:55

HP80003E  
RTX-Cep

STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2000 09:16  
 End Cal Date : 26-MAY-2000 18:18  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Cal Date : 30-May-2000 15:52 g  
 Curve Type : Average

## Calibration File Names:

Level 1: /var/chem/gc3.i/2260-E.b/c-a2537.d  
 Level 2: /var/chem/gc3.i/2260-E.b/c-a2538.d  
 Level 3: /var/chem/gc3.i/2260-E.b/c-a2539.d  
 Level 4: /var/chem/gc3.i/2260-E.b/c-a2540.d  
 Level 5: /var/chem/gc3.i/2260-E.b/c-a2541.d

Compound	0.00500	0.01000	0.02500	0.05000	0.10000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
2 Diallylate A	339940	244716	137970	116188	112950	190353	52.249<-
3 Diallylate B	100440	73964	41338	34783	33383	56782	51.881<-
4 MIREX	4691600	4477400	3695920	3049720	2697340	3722396	23.317<-
5 alpha-BHC	7170400	6955700	7645440	7048180	8704950	7504934	9.613
6 gamma-BHC (Lindane)	6644200	6366400	6940440	6357080	8023280	6866280	10.044
7 beta-BHC	3112200	3469000	2512840	2359580	2601120	2810948	16.500
8 delta-BHC	5215000	6602600	5006120	4993220	5638940	5491176	12.273
9 Chlordane(1)	+++++	+++++	323728	+++++	+++++	323728	0.000
(2)	+++++	+++++	591088	+++++	+++++	591088	0.000
(3)	+++++	+++++	838572	+++++	+++++	838572	0.000
(4)	+++++	+++++	1168520	+++++	+++++	1168520	0.000
10 Heptachlor	6871600	6295000	6579160	5926320	7034490	6541314	6.805
11 Aldrin	5728600	6820400	4947240	4716020	5117970	5466046	15.459
12 Heptachlor epoxide	5769800	6668000	4706440	4385040	4713990	5248654	18.104
13 gamma-Chlordane	5707400	6707900	4792040	4520220	4930290	5331570	16.634
14 alpha-Chlordane	5804600	6717000	4731760	4466360	4814030	5306750	17.668
15 Endosulfan I	5459200	5077300	5343120	4846120	5855170	5316182	7.223
16 4,4'-DDE	4217200	5164600	3752000	3741640	4140490	4203186	13.796
17 Dieldrin	5488400	5171000	5653000	5207280	6471740	5598284	9.424
18 Toxaphene(1)	+++++	+++++	60607	+++++	+++++	60607	0.000
(2)	+++++	+++++	71410	+++++	+++++	71410	0.000
(3)	+++++	+++++	76039	+++++	+++++	76039	0.000
(4)	+++++	+++++	120897	+++++	+++++	120897	0.000
19 Isodrin	9318400	7559120	4109460	3564600	3455820	5601480	47.759<-
20 Endrin	4733000	4413400	4789160	4352040	5491160	4755752	9.536
21 4,4'-DDD	3422000	3348800	3735360	3692320	4888860	3817468	16.287

Report Date : 30-May-2000 15:55

6E  
H8803E  
DTX-CAP

STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-2000 09:16  
 End Cal Date : 26-MAY-2000 18:18  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Cal Date : 30-May-2000 15:52 g  
 Curve Type : Average

Compound	0.00500	0.01000	0.02500	0.05000	0.10000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
22 Endosulfan II	4644400	5509300	3949640	3767220	4087520	4391616	16.064
23 4,4'-DDT	3182800	3044400	3574440	3577280	4873430	3650470	19.815
24 Endrin aldehyde	3953000	4557200	3189360	3025560	3297980	3604620	17.712
25 Methoxychlor	1718200	1590300	1675700	1621290	2090975	1739293	11.652
26 Endosulfan sulfate	4002000	4729700	3400000	3279440	3630990	3808426	15.335
27 Endrin ketone	4363600	5267900	3777600	3597620	4030880	4207520	15.661
28 Chlorobenzilate	3715200	4074040	2641680	2770827	3375670	3315483	18.405
29 Kepone	98350	78376	41844	35475	33500	57509	50.776<-
\$ 1 Tetrachloro-m-xylene	5559600	5126600	5126640	4500880	5373080	5137360	7.781
\$ 30 Decachlorobiphenyl	4757800	4308100	4290840	3903280	5105370	4473078	10.402

92.19.2



658 260

7D  
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: SDGA18632

GC Column: RTX-CLP

ID: 0.53

(mm)

Init. Calib. Date(s): 05/26/00 05/26/00

EPA Sample No. (PIBLK): \_\_\_\_\_

Date Analyzed : \_\_\_\_\_

Lab Sample ID (PIBLK): \_\_\_\_\_

Time Analyzed : \_\_\_\_\_

EPA Sample No. (PEM): \_\_\_\_\_

Date Analyzed : 05/26/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 0850

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
=====	=====	=====	=====	=====	=====	=====	
Endrin	11.38	11.32	11.43	0.036591	0.025000	46.4	<-
4,4'-DDT	12.32	12.27	12.37	0.039093	0.025000	56.4	<-

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

12.5  
~~21.12~~

Endrin % breakdown (1):

7.6  
~~14.22~~

Combined % breakdown (1):

~~35.33~~20.1DB/00

7D

## PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.: SAS No.: 40325 SDG No.: SDGA18632

GC Column: RTX-CLP ID: 0.53 (mm) Init. Calib. Date(s): 05/26/00 05/26/00

EPA Sample No. (PIBLK): \_\_\_\_\_

Date Analyzed : \_\_\_\_\_

Lab Sample ID (PIBLK): \_\_\_\_\_

Time Analyzed : \_\_\_\_\_

EPA Sample No. (PEM): \_\_\_\_\_

Date Analyzed : 05/26/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 1936

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	11.38	11.32	11.43	0.020127	0.025000	-19.5
4,4'-DDT	12.32	12.27	12.37	0.019443	0.025000	-22.2

4,4'-DDT % breakdown (1): ~~10.91~~ <sup>12.9</sup>Endrin % breakdown (1): ~~8.72~~ <sup>9.4</sup>Combined % breakdown (1): ~~19.64~~ <sup>21.3</sup>

658 262

7E

Data File: /var/chem/gc3.i/2260-E.b/c-a2555.d

Report Date: 30-May-2000 16:04

STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i

Lab File ID: c-a2555.d

Analysis Type:

Lab Sample ID: MEDA

Quant Type: ESTD

Injection Date: 27-MAY-2000 00:18

Init. Calibration Date(s): 05/26/0 05/26/0

Init. Calibration Times: 09:16 18:18

Method File: /var/chem/gc3.i/2260-E.b/PESTA.m

COMPOUND	RRP	RFO	MIN	RRP	%D	MAX
=====	=====	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5137360 000	4470240.000	0.000	13.0	15.0	
5 alpha-BHC	7504934 000	6506920 000	0.010	13.3	15 0	
6 gamma-BHC (Lindane)	6866280 000	5959600 000	0 010	13.2	15.0	
10 Heptachlor	6541314 000	5547360.000	0.010	15.2	15.0	<-
15 Endosulfan I	5316182.000	4460240.000	0.010	16.1	15 0	<-
17 Dieldrin	5598284.000	4718880 000	0.010	15 7	15.0	<-
20 Endrin	4755752.000	4197600.000	0.010	11 7	15.0	
21 4,4'-DDD	3817468 000	3354920 000	0.010	12.1	15 0	
23 4,4'-DDT	3650470.000	3040000.000	0.010	16 7	15 0	<-
25 Methoxychlor	1739293 000	1463540 000	0.010	15.9	15 0	<-
\$ 30 Decachlorobiphenyl	4473078.000	3726160 000	0.010	16.7	15.0	<-

Data File: /var/chem/gc3.1/2260-E.b/c-a2556.d

Report Date: 30-May-2000 16:04

STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i

Lab File ID: c-a2556.d

Analysis Type:

Lab Sample ID: MEDB

Quant Type: ESTD

Injection Date: 27-MAY-2000 00:44

Init. Calibration Date(s): 05/26/0 05/26/0

Init. Calibration Times: 09:16 18:18

Method File: /var/chem/gc3.1/2260-E.b/PESTA.m

COMPOUND	RRF	RPO	MIN	MAX
RRF	RPO	RRF	%D	%D
11 Aldrin	5466046.000	5222920.000	0.010	4.4 15.0
7 beta-BHC	2810948.000	2674880.000	0.010	4.8 15.0
8 delta-BHC	5491176.000	5420800.000	0.010	1.3 15.0
12 Heptachlor epoxide	5248654.000	4834560.000	0.010	7.9 15.0
13 gamma-Chlordane	5331570.000	4986600.000	0.010	6.5 15.0
14 alpha-Chlordane	5306750.000	4893600.000	0.010	7.8 15.0
16 4,4'-DDB	4203186.000	4067160.000	0.010	3.2 15.0
22 Endosulfan II	4391616.000	4039120.000	0.010	8.0 15.0
24 Endrin aldehyde	3604620.000	3379160.000	0.010	6.3 15.0
26 Endosulfan sulfate	3808426.000	3588600.000	0.010	5.8 15.0
27 Endrin ketone	4207520.000	3926600.000	0.010	6.7 15.0

AVE=10.2

10.1

658 264

7E

Data File: /var/chem/gc3.i/2260-E.b/c-a2570.d

Report Date: 30-May-2000 16:05

STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i

Injection Date: 27-MAY-2000 06:44

Lab File ID: c-a2570.d

Init. Calibration Date(s): 05/26/0 05/26/0

Analysis Type:

Init. Calibration Times: 09:16 18:18

Lab Sample ID: MEDA

Method File: /var/chem/gc3.i/2260-E.b/PESTA.m

Quant Type: ESTD

COMPOUND	RRF	RFO	MIN	MAX
1 Tetrachloro-m-xylene	5137360.000	5091680.000	0.000	0.9
5 alpha-BHC	7504934.000	6970920.000	0.010	7.1
6 gamma-BHC (Lindane)	6866280.000	6029200.000	0.010	12.2
10 Heptachlor	6541314.000	5442800.000	0.010	16.8
15 Endosulfan I	5316182.000	3827080.000	0.010	28.0
17 Dieldrin	5598284.000	4252760.000	0.010	24.0
20 Endrin	4755752.000	4067960.000	0.010	14.5
21 4,4'-DDD	3817468.000	3946760.000	0.010	-3.4
23 4,4'-DDT	3650470.000	2128280.000	0.010	41.7
25 Methoxychlor	1739293.000	1342000.000	0.010	22.8
30 Decachlorobiphenyl	4473078.000	3463200.000	0.010	22.6

Data File: /var/chem/gc3.i/2260-E.b/c-a2571.d

Report Date: 30-May-2000 16:05

STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i

Lab File ID: c-a2571.d

Analysis Type:

Lab Sample ID: MEDB

Quant Type: ESTD

Injection Date: 27-MAY-2000 07:10

Init. Calibration Date(s): 05/26/0 05/26/0

Init. Calibration Times: 09:16 18:18

Method File: /var/chem/gc3.i/2260-E.b/PESTA.m

COMPOUND	RRF	RFO	MIN RRF	%D	MAX %D
11 Aldrin	5466046.000	5249400.000	0.010	4.0	15.0
7 beta-BHC	2810948.000	2951920.000	0.010	-5.0	15.0
8 delta-BHC	5491176.000	5111640.000	0.010	6.9	15.0
12 Heptachlor epoxide	5248654.000	4789160.000	0.010	8.8	15.0
13 gamma-Chlordane	5331570.000	4842160.000	0.010	9.2	15.0
14 alpha-Chlordane	5306750.000	4702640.000	0.010	11.4	15.0
16 4,4'-DDB	4203186.000	4009680.000	0.010	4.6	15.0
22 Endosulfan II	4391616.000	3899960.000	0.010	11.2	15.0
24 Endrin aldehyde	3604620.000	3238640.000	0.010	10.2	15.0
26 Endosulfan sulfate	3808426.000	3013480.000	0.010	20.9	15.0 <-
27 Endrin ketone	4207520.000	3296360.000	0.010	21.7	15.0 <-

AVE=13.7

M.F.

058 266

8D  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

GC Column: RTX-CLP

ID: 0.53

(mm)

Init. Calib. Date(s): 05/26/00 05/26/00

Instrument ID: GC3

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 4.56			DCB: 16.29		
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	EVALB	05/26/00	0850	4.57	16.30
02	MEDTOX	05/26/00	0916	4.57	16.30
03	MEDCHLOR	05/26/00	0942	4.57	16.30
04	LOWA	05/26/00	1426	4.57	16.30
05	MLOWA	05/26/00	1452	4.57	16.30
06	MEDA	05/26/00	1518	4.57	16.30
07	MHIGHA	05/26/00	1544	4.57	16.29
08	HIGHA	05/26/00	1610	4.56	16.29
09	LOWB	05/26/00	1635		
10	MLOWB	05/26/00	1701		
11	MEDB	05/26/00	1727		
12	MHIGHB	05/26/00	1753		
13	HIGHB	05/26/00	1818		
14	2ND A	05/26/00	1844	4.56	16.29
15	2ND B	05/26/00	1910		
16	EVALB	05/26/00	1936	4.57	16.29
17	MEDA	05/27/00	0018	4.58	16.30
18	MEDB	05/27/00	0044		
19	EVALB	05/27/00	0110	4.58	16.30
20	DF/S1/0137/W DDK90103	05/27/00	0344	4.57	16.28
21	PBLK DDN21101	05/27/00	0435	4.58	16.28
22	LCS DDN21102	05/27/00	0501	4.58	16.28
23	LCSD DDN21103	05/27/00	0527	4.57	16.28
24	MEDA	05/27/00	0644	4.57	16.28
25	MEDB	05/27/00	0710		
26					
27					
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/gc3.i/2260-E.b/c-a2519.d  
Report Date: 30-May-2000 16:09

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2519.d  
Lab Smp Id: EVALB  
Inj Date : 26-MAY-2000 08:50  
Operator : 1891 Inst ID: gc3.i  
Smp Info : EVALB,2260-E.b,,EVALBR.sub,,3,1  
Misc Info : 190-88-8  
Comment :  
Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	4.567	4.558	0.009	147643	0.02874	0.0287391(R)
16 4,4'-DDE	10.558	10.550	0.008	1898	0.000452	0.000451562
20 Endrin	11.383	11.375	0.008	174016	0.03659	0.0365906
21 4,4'-DDD	11.775	11.767	0.008	18428	0.00483	0.00482728
23 4,4'-DDT	12.325	12.317	0.008	142709	0.03909	0.0390933
24 Endrin aldehyde	12.725	12.717	0.008	3986	0.00111	0.00110580
27 Endrin ketone	14.083	14.083	0.000	10304	0.00245	0.00244895
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008	135824	0.03036	0.0303648(R)

## QC Flag Legend

R - Spike/Surrogate failed recovery limits.

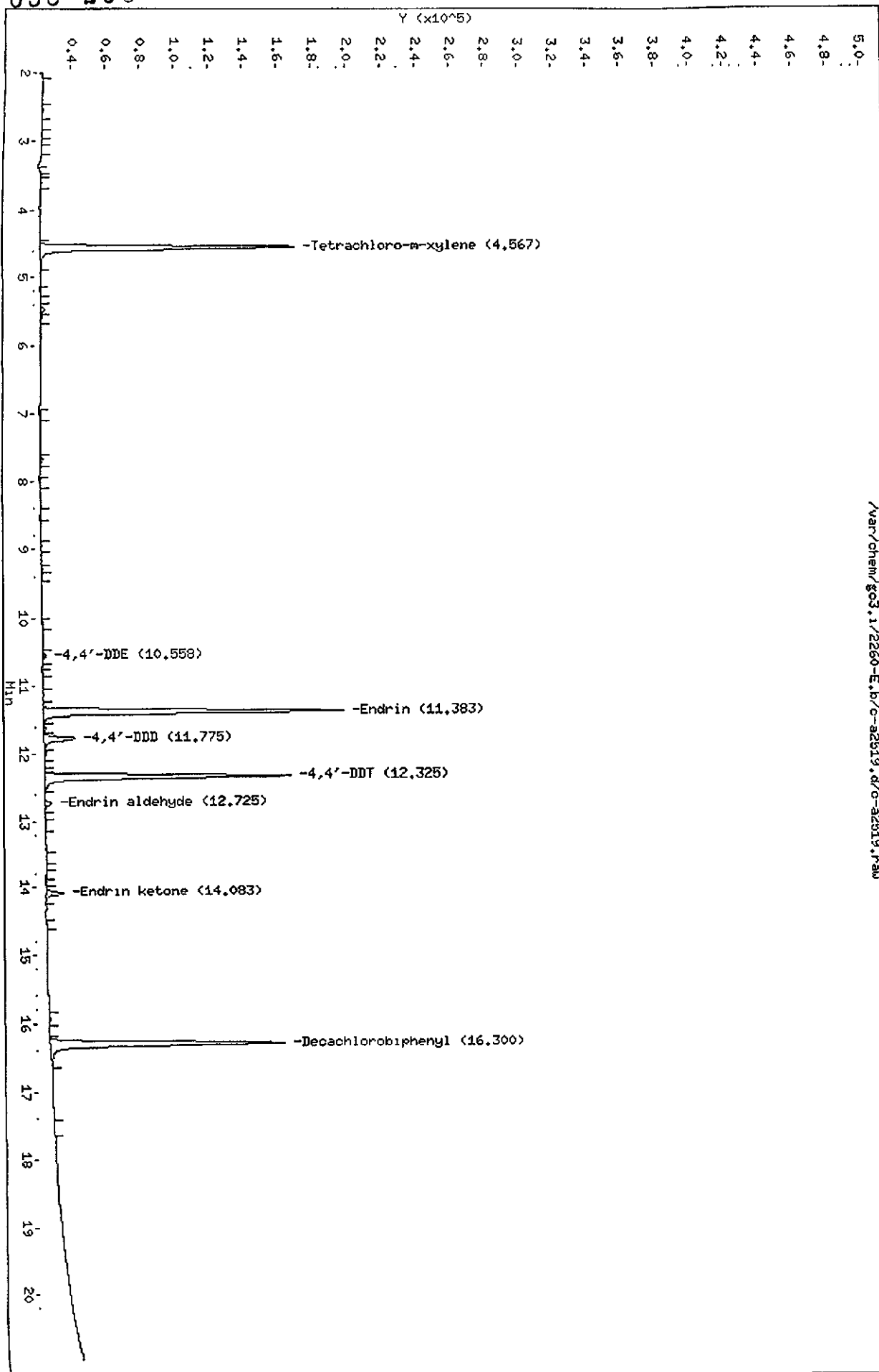
DDT = 12.5  
Endrin = 7.6

Endrin Breakdown =  $\frac{(3986 + 10304)}{(3986 + 10304 + 174016)} \times 100 = 7.6\%$

DDT Breakdown =  $\frac{(1898 + 18428)}{(1898 + 18428 + 142709)} \times 100 = 12.8\%$



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/var/chem/gc3.1/2260-E.b/c-a2519.raw

Data File: /var/chem/gc3.1/2260-E.b/c-a2519.d  
 Date: 26-May-2000 08:50  
 Client ID:  
 Sample Info: EVALB,2260-E.b,EVALBR,sub,3,1  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2520.d  
 Report Date: 30-May-2000 16:09

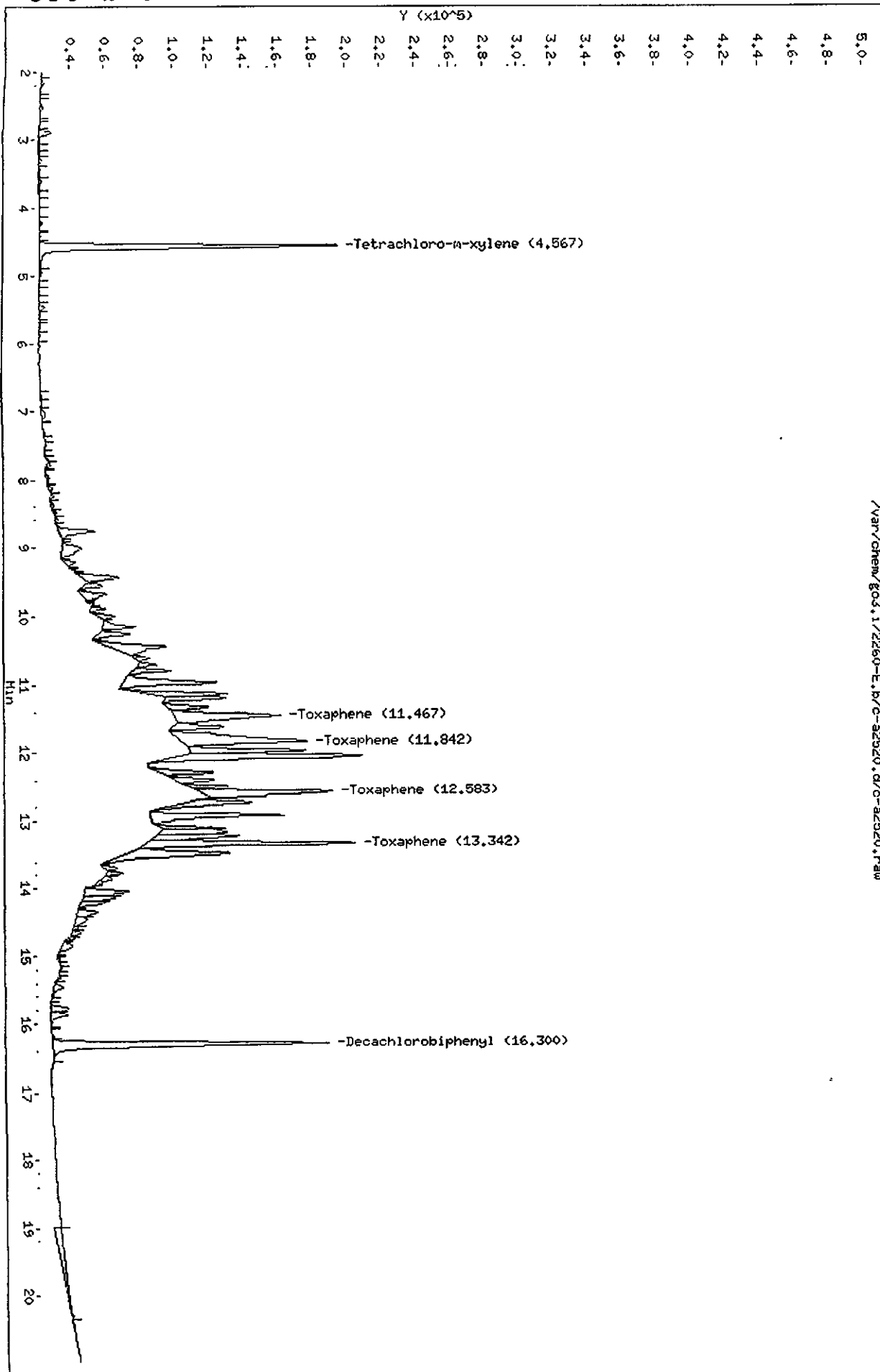
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2520.d  
 Lab Smp Id: MEDTOX  
 Inj Date : 26-MAY-2000 09:16  
 Operator : 1891  
 Smp Info : MEDTOX,2260-E.b,,1-TOX.sub,,1,3  
 Misc Info : 190-84-13  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol  
 Cal Date : 26-MAY-2000 09:16  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc3.i  
 Quant Type: ESTD  
 Cal File: c-a2520.d  
 Calibration Sample, Level: 3  
 Compound Sublist: 1-TOX.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
18 Toxaphene	11.467	11.467	0.000	60607	1.00000	1.00000
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	171749	0.02500	0.0250000
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008	159099	0.02500	0.0250000

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Data File: /var/chem/gc3.1/2260-E.b/c-a2520.d  
 Date: 26-MAY-2000 09:16  
 Client ID:  
 Sample Info: MEDTOX, 2260-E.b, 1-TOX.sub, 1,3  
 Column phase: RTX-CLP

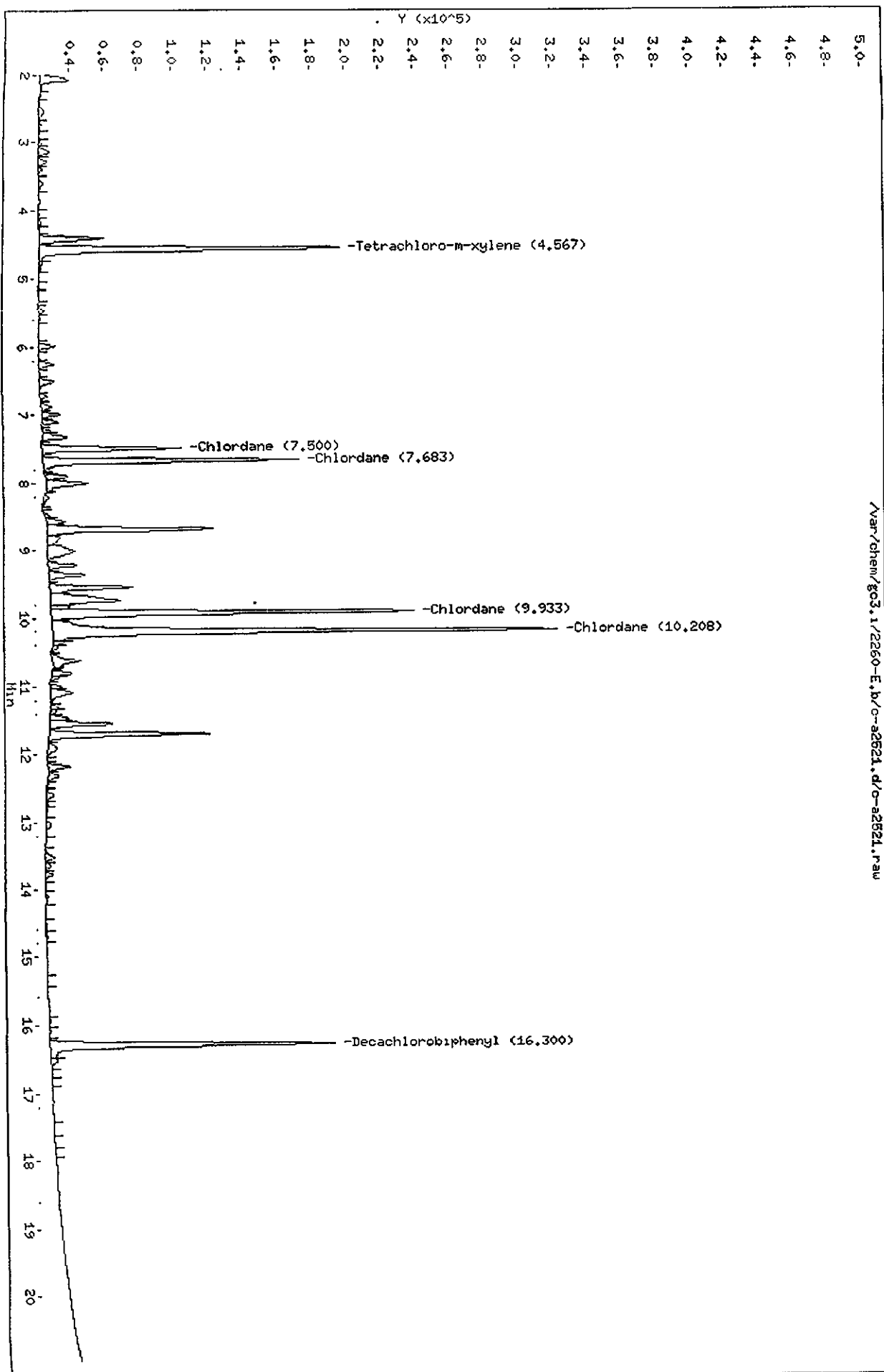
Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2521.d  
 Report Date: 30-May-2000 16:09

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2521.d  
 Lab Smp Id: MEDCHLOR  
 Inj Date : 26-MAY-2000 09:42  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDCHLOR, 2260-E.b, , 2-CHLO.sub, , 1, 3  
 Misc Info : 190-85-10  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 09:42 Cal File: c-a2521.d  
 Als bottle: 1 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 2-CHLO.sub  
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
9 Chlordane	7.500	7.500	0.000	80932	0.25000	0.250000
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	173445	0.02500	0.0250000
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008	164457	0.02500	0.0250000



Data File: /var/chem/603.1/2260-E.b/c-a2521.d  
Date: 26-MAY-2000 09:42  
Client ID:  
Sample Info: MEDCHLOR,2260-E.b/,2-CHLO.sub,1,3  
Column phase: RTX-CLP

Instrument: 603.1  
Operator: 1891  
Column diameter: 0.53

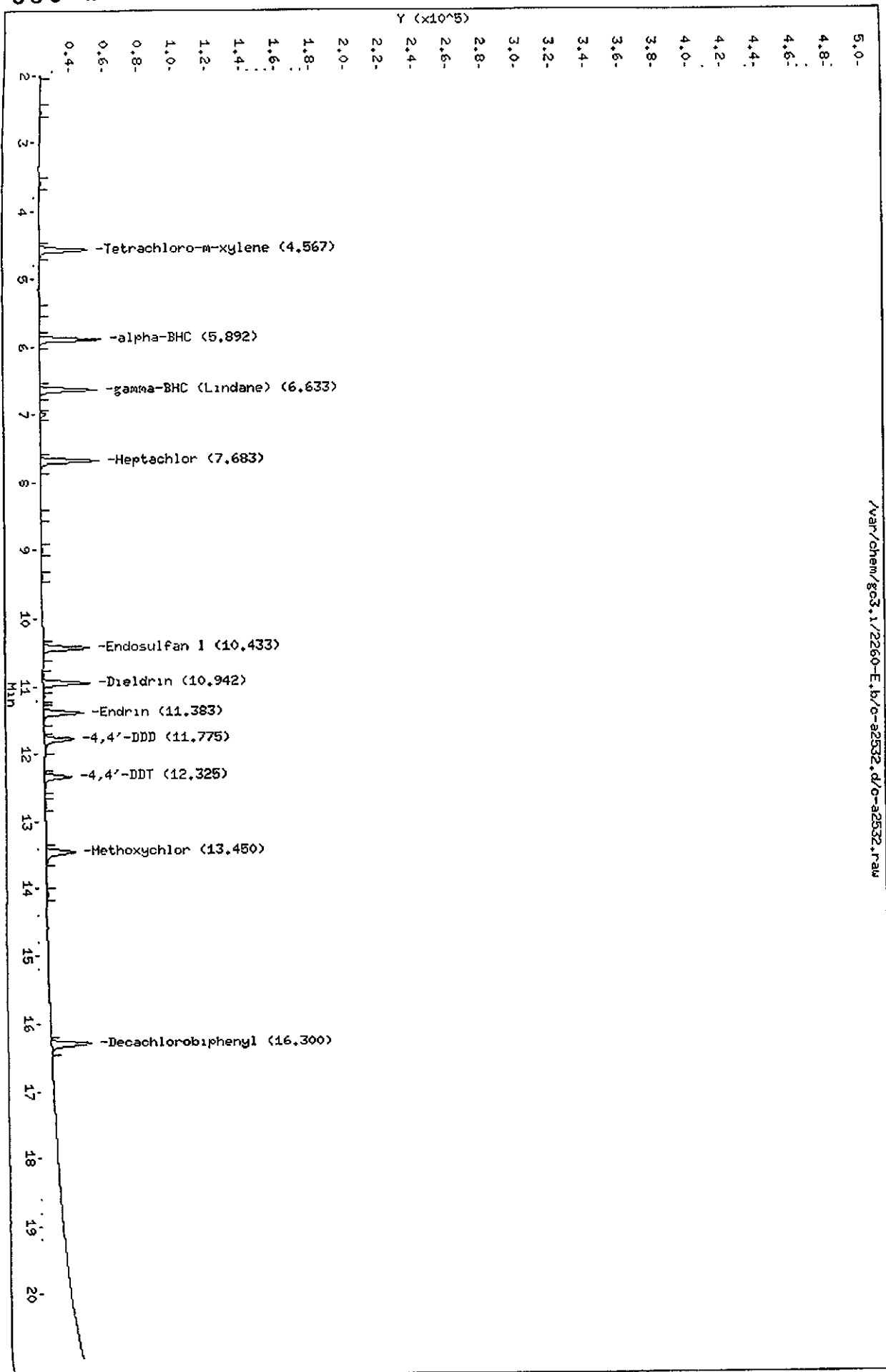
Data File: /var/chem/gc3.i/2260-E.b/c-a2532.d  
 Report Date: 30-May-2000 16:10

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2532.d  
 Lab Smp Id: LOWA  
 Inj Date : 26-MAY-2000 14:26  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : LOWA,2260-E.b,,3-INDA.sub,,1,1  
 Misc Info : 190-84-1  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.d  
 Als bottle: 1 Calibration Sample, Level: 1  
 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	4.567	4.558	0.009		27798	0.00500	0.00520258
5 alpha-BHC	5.892	5.883	0.009		35852	0.00500	0.00483968
6 gamma-BHC (Lindane)	6.633	6.625	0.008		33221	0.00500	0.00489096
10 Heptachlor	7.683	7.683	0.000		34358	0.00500	0.00510871
15 Endosulfan I	10.433	10.433	0.000		27296	0.00500	0.00505373
17 Dieldrin	10.942	10.942	0.000		27442	0.00500	0.00492613
20 Endrin	11.383	11.375	0.008		23665	0.00500	0.00497051
21 4,4'-DDD	11.775	11.767	0.008		17110	0.00500	0.00478109
23 4,4'-DDT	12.325	12.317	0.008		15914	0.00500	0.00471021
25 Methoxychlor	13.450	13.442	0.008		17182	0.01000	0.0101252
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008		23789	0.00500	0.00525803

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/var/chem/gc3.1/2260-E.b/c-a2532.raw

Data File: /var/chem/gc3.1/2260-E.b/c-a2532.d  
 Date: 26-MAY-2000 14:26  
 Client ID:  
 Sample Info: LODA,2260-E.b/,3-INDA,sub/,1,1  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2533.d  
 Report Date: 30-May-2000 16:10

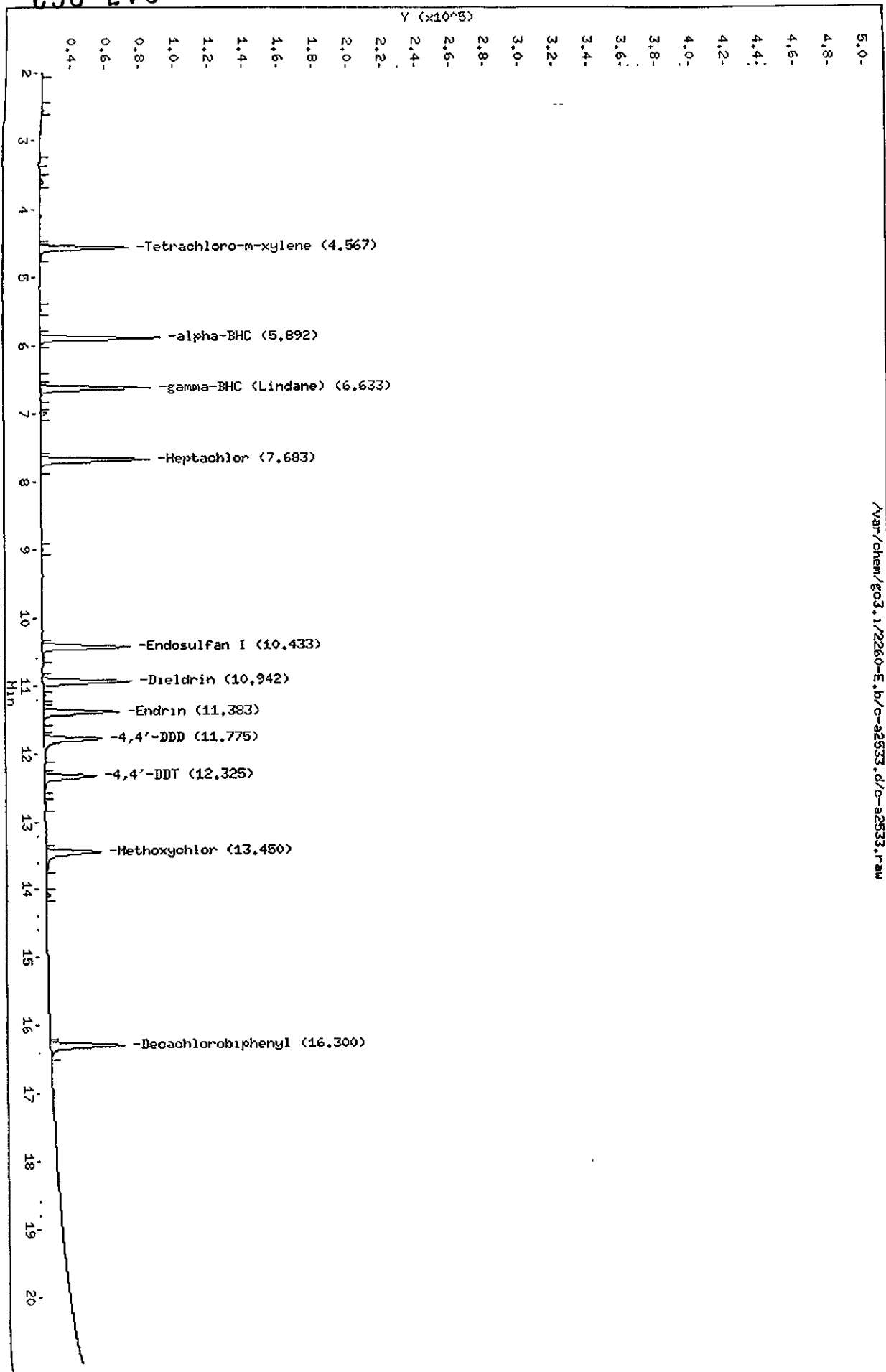
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2533.d  
 Lab Smp Id: MLOWA  
 Inj Date : 26-MAY-2000 14:52  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MLOWA,2260-E.b,,3-INDA.sub,,1,2  
 Misc Info : 190-84-2  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.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	RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====		=====	=====	=====
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009		51266	0.01000	0.00972615
5 alpha-BHC	5.892	5.883	0.009		69557	0.01000	0.00958458
6 gamma-BHC (Lindane)	6.633	6.625	0.008		63664	0.01000	0.00957303
10 Heptachlor	7.683	7.683	0.000		62950	0.01000	0.00956408
15 Endosulfan I	10.433	10.433	0.000		50773	0.01000	0.00959211
17 Dieldrin	10.942	10.942	0.000		51710	0.01000	0.00950994
20 Endrin	11.383	11.375	0.008		44134	0.01000	0.00950102
21 4,4'-DDD	11.775	11.767	0.008		33488	0.01000	0.00956239
23 4,4'-DDT	12.325	12.317	0.008		30444	0.01000	0.00931803
25 Methoxychlor	13.450	13.442	0.008		31806	0.02000	0.0191441
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008		43081	0.01000	0.00967624



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/var/chem/gc3.1/2260-E.b/c-a2533.d/o-a2533.raw

Data File: /var/chem/gc3.1/2260-E.b/c-a2533.d  
Date: 26-MAY-2000 14:52  
Client ID:  
Sample Info: HL01A,2260-E.b,3-INDA,sub,1,2  
Column phase: RTX-CLP

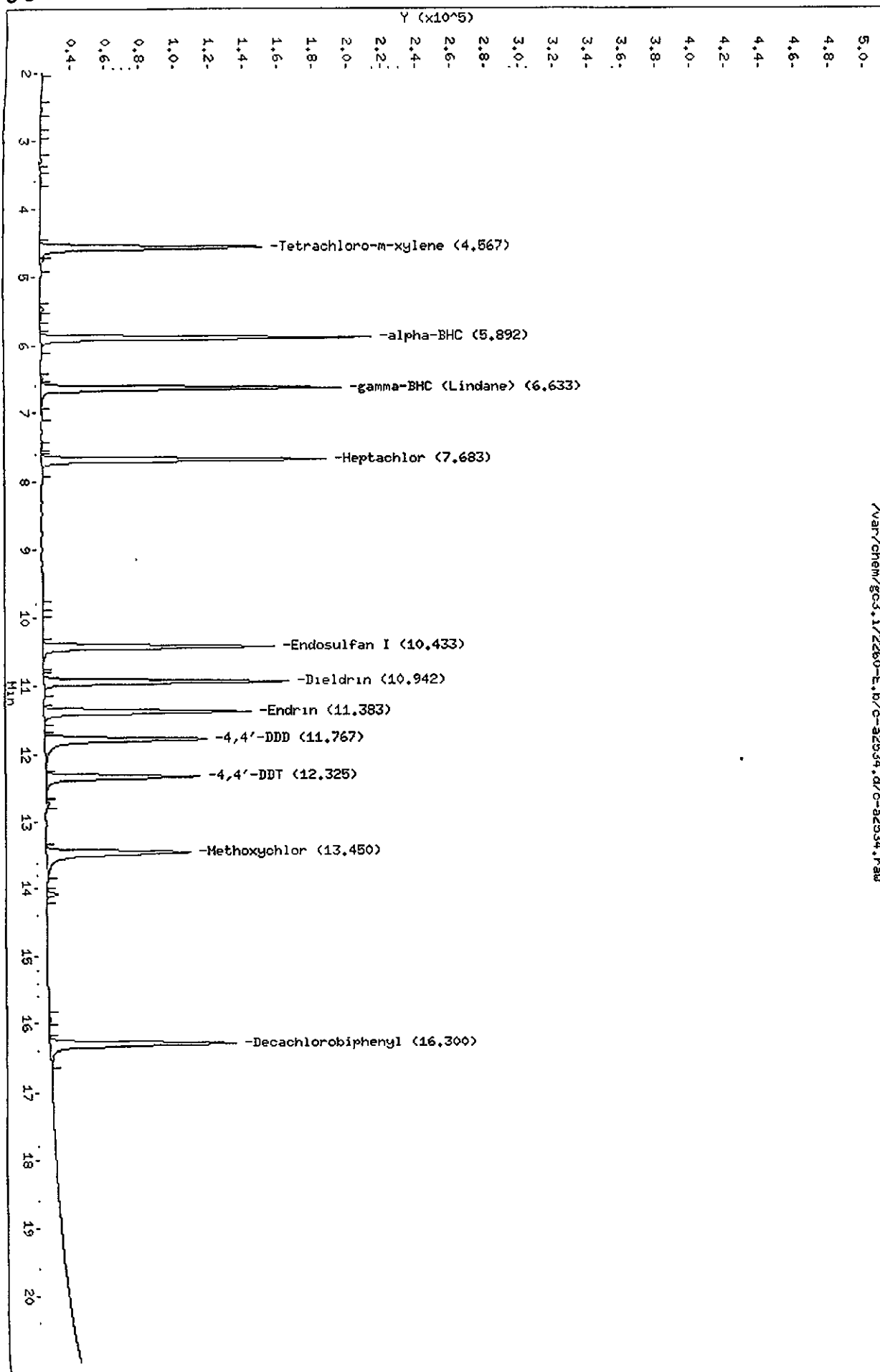
Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2534.d  
 Report Date: 30-May-2000 16:10

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2534.d  
 Lab Smp Id: MEDA  
 Inj Date : 26-MAY-2000 15:18  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDA,2260-E.b,,3-INDA.sub,,1,3  
 Misc Info : 190-84-3  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 15:18 Cal File: c-a2534.d  
 Als bottle: 1 Calibration Sample, Level: 3  
 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	4.567	4.558	0.009	128166	0.02500	0.0250000
5 alpha-BHC	5.892	5.883	0.009	191136	0.02500	0.0250000
6 gamma-BHC (Lindane)	6.633	6.625	0.008	173511	0.02500	0.0250000
10 Heptachlor	7.683	7.683	0.000	164479	0.02500	0.0250000
15 Endosulfan I	10.433	10.433	0.000	133578	0.02500	0.0250000
17 Dieldrin	10.942	10.942	0.000	141325	0.02500	0.0250000
20 Endrin	11.383	11.375	0.008	119729	0.02500	0.0250000
21 4,4'-DDD	11.767	11.767	0.000	93384	0.02500	0.0250000
23 4,4'-DDT	12.325	12.317	0.008	89361	0.02500	0.0250000
25 Methoxychlor	13.450	13.442	0.008	83785	0.05000	0.0500000
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008	107271	0.02500	0.0250000



/var/chem/gc3.1/2260-E.b/c-a2534.raw

Data File: /var/chem/gc3.1/2260-E.b/c-a2534.d  
Date: 26-MAY-2000 15:18  
Client ID:  
Sample Info: HEDA,2260-E.b,3-INDA,sub,,1,3  
Column phase: RTX-CLP

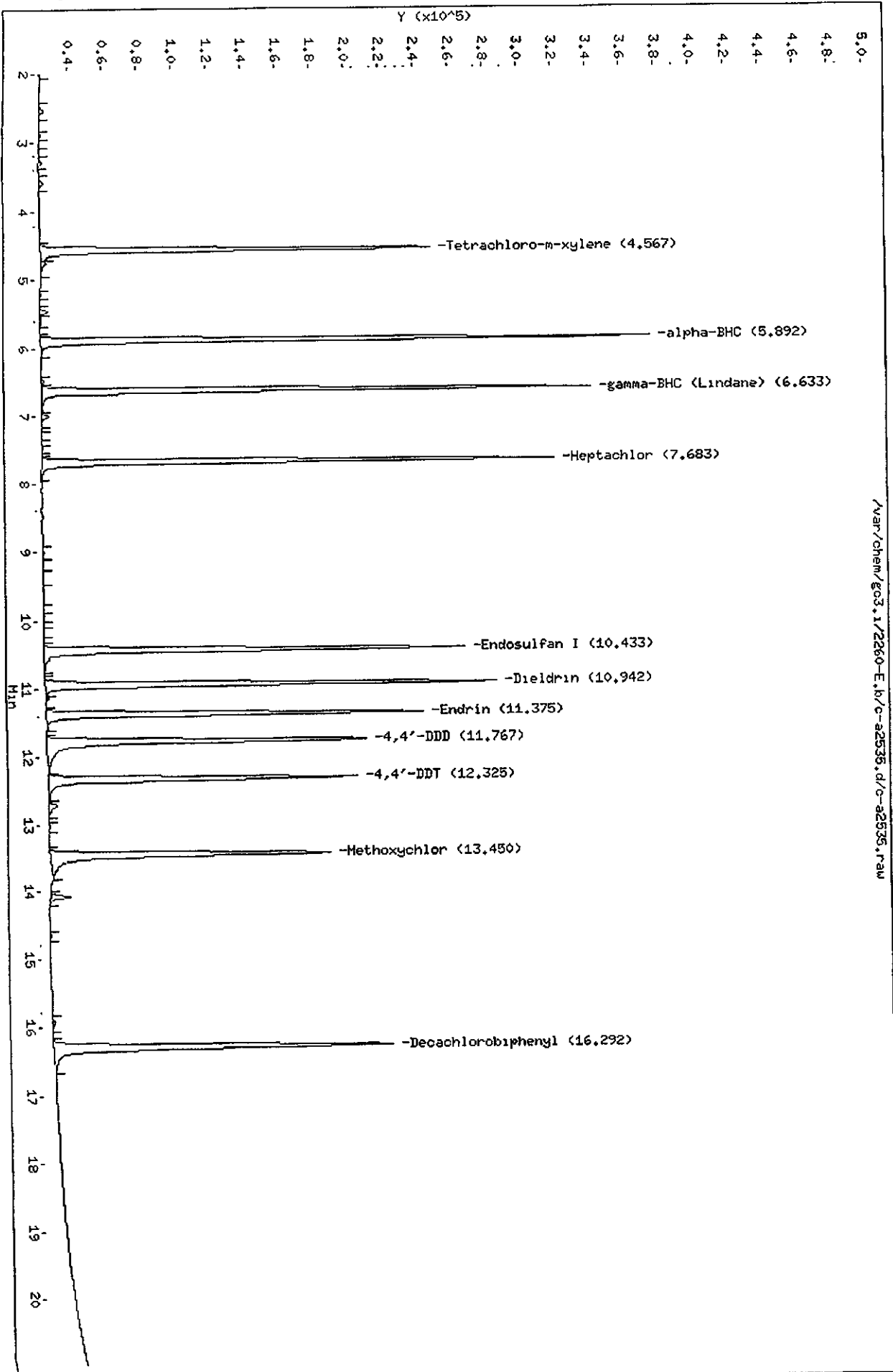
Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2535.d  
 Report Date: 30-May-2000 16:10

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2535.d  
 Lab Smp Id: MHIGHA  
 Inj Date : 26-MAY-2000 15:44  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MHIGHA,2260-E.b,,3-INDA.sub,,1,4  
 Misc Info : 190-84-4  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.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	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	225044	0.05000	0.0443137
5 alpha-BHC	5.892	5.883	0.009	352409	0.05000	0.0489122
6 gamma-BHC (Lindane)	6.633	6.625	0.008	317854	0.05000	0.0483279
10 Heptachlor	7.683	7.683	0.000	296316	0.05000	0.0461694
15 Endosulfan I	10.433	10.433	0.000	242306	0.05000	0.0467643
17 Dieldrin	10.942	10.942	0.000	260364	0.05000	0.0483955
20 Endrin	11.375	11.375	0.000	217602	0.05000	0.0475955
21 4,4'-DDD	11.767	11.767	0.000	184616	0.05000	0.0520101
23 4,4'-DDT	12.325	12.317	0.008	178864	0.05000	0.0534764
25 Methoxychlor	13.450	13.442	0.008	162129	0.10000	0.0981783
\$ 30 Decachlorobiphenyl	16.292	16.292	0.000	195164	0.05000	0.0452291



Data File: /var/chem/gc3.1/2260-E,b/c-2535.d  
Date: 26-MAY-2000 15:44  
Client ID:  
Sample Info: HHIGHA,2260-E,b,3-INDA,sub,1,4  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2536.d  
 Report Date: 30-May-2000 16:10

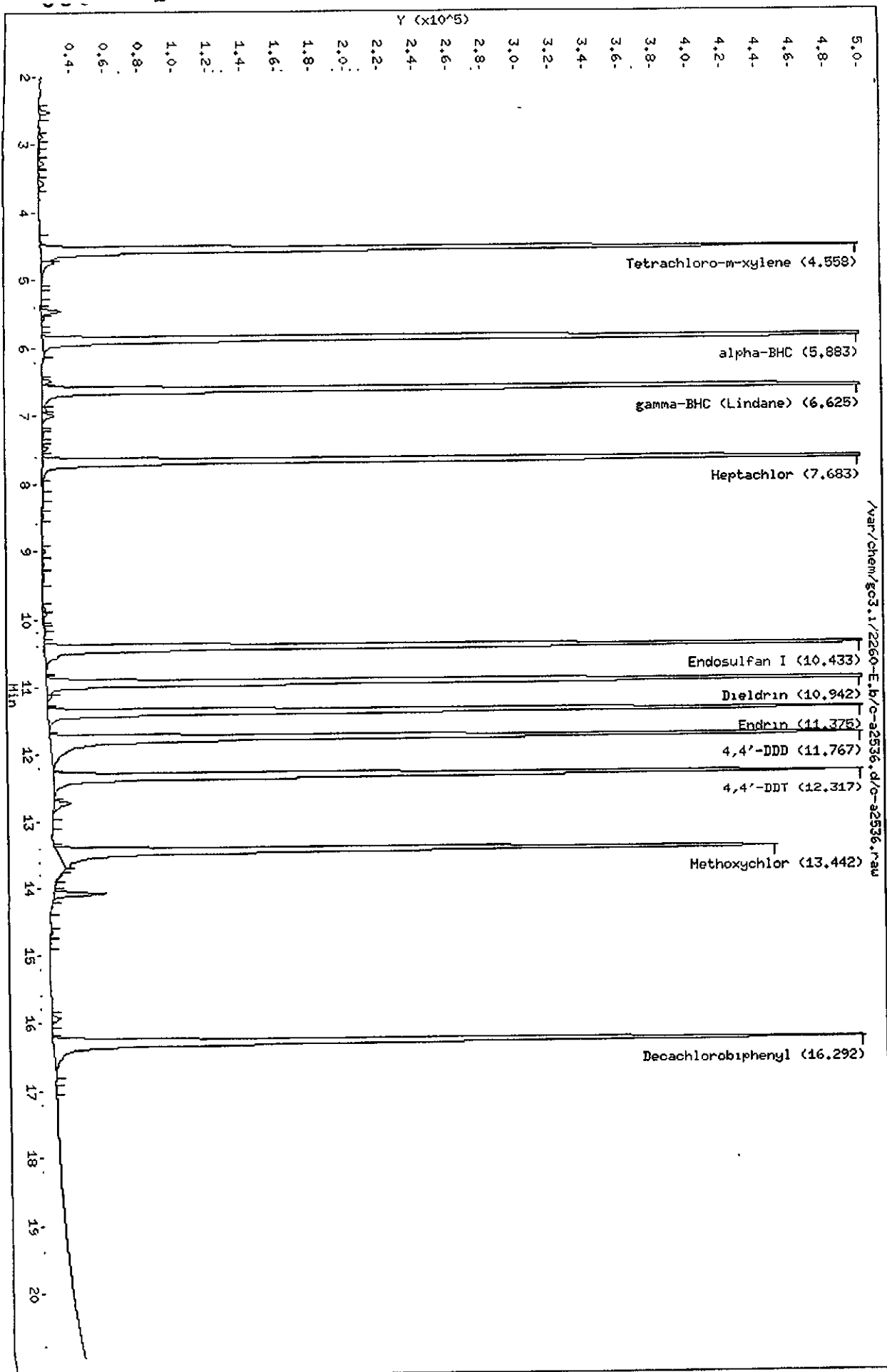
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2536.d  
 Lab Smp Id: HIGHA  
 Inj Date : 26-MAY-2000 16:10  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : HIGHA,2260-E.b,,3-INDA.sub,,1,5  
 Misc Info : 190-84-5  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.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	4.558	4.558	0.000	537308	0.10000	0.104588(A)
5 alpha-BHC	5.883	5.883	0.000	870495	0.10000	0.115990(A)
6 gamma-BHC (Lindane)	6.625	6.625	0.000	802328	0.10000	0.116850(A)
10 Heptachlor	7.683	7.683	0.000	703449	0.10000	0.107539(A)
15 Endosulfan I	10.433	10.433	0.000	585517	0.10000	0.110139(A)
17 Dieldrin	10.942	10.942	0.000	647174	0.10000	0.115602(A)
20 Endrin	11.375	11.375	0.000	549116	0.10000	0.115464(A)
21 4,4'-DDD	11.767	11.767	0.000	488886	0.10000	0.128066(A)
23 4,4'-DDT	12.317	12.317	0.000	487343	0.10000	0.133501(A)
25 Methoxychlor	13.442	13.442	0.000	418195	0.20000	0.240440(A)
\$ 30 Decachlorobiphenyl	16.292	16.292	0.000	510537	0.10000	0.114136(A)

## QC Flag Legend

A - Target compound detected but, quantitated amount  
 exceeded maximum amount.



Data File: /var/chem/gc3.1/2260-E.b/c-2536.d  
Date: 26-MAY-2000 16:10  
Client ID:  
Sample Info: HIGHR,2260-E.b/,3-INDA,sub,,1,5  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2537.d  
 Report Date: 30-May-2000 16:10

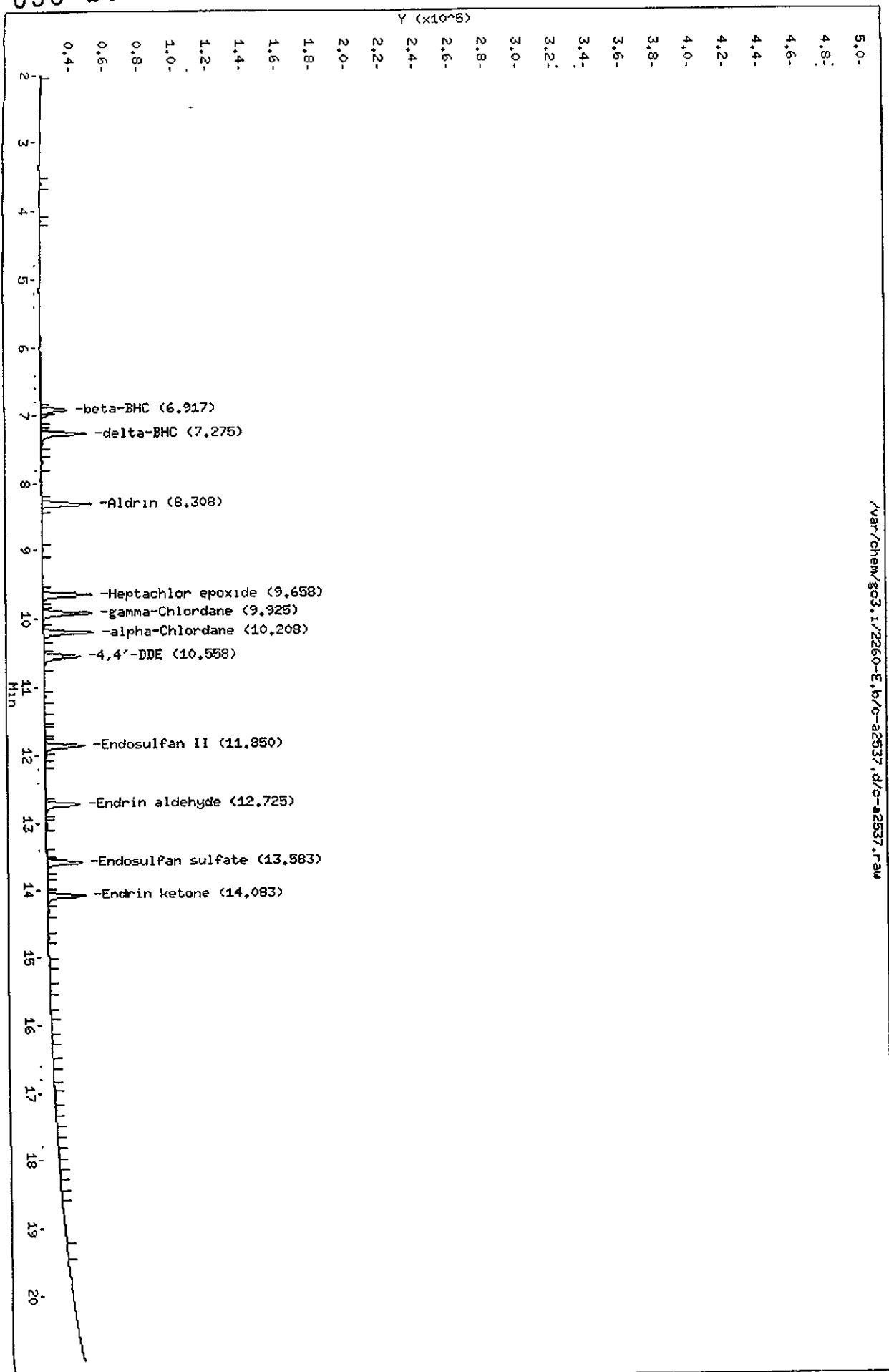
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2537.d  
 Lab Smp Id: LOWB  
 Inj Date : 26-MAY-2000 16:35  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : LOWB,2260-E.b,,4-INDB.sub,,1,1  
 Misc Info : 190-84-7  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.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	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
*****	==	=====	=====	=====	=====	=====
11 Aldrin	8.308	8.300	0.008	28643	0.00500	0.00536595
7 beta-BHC	6.917	6.908	0.009	15561	0.00500	0.00553276
8 delta-BHC	7.275	7.267	0.008	26075	0.00500	0.00510218
12 Heptachlor epoxide	9.658	9.658	0.000	28849	0.00500	0.00550751
13 gamma-Chlordane	9.925	9.925	0.000	28537	0.00500	0.00543591
14 alpha-Chlordane	10.208	10.208	0.000	29023	0.00500	0.00550911
16 4,4'-DDE	10.558	10.550	0.008	21086	0.00500	0.00529187
22 Endosulfan II	11.850	11.850	0.000	23222	0.00500	0.00540421
24 Endrin aldehyde	12.725	12.717	0.008	19765	0.00500	0.00553458
26 Endosulfan sulfate	13.583	13.583	0.000	20010	0.00500	0.00540665
27 Endrin ketone	14.083	14.083	0.000	21818	0.00500	0.00535990



658 284



Data File: /var/chem/gc3.1/2260-E,b/c-a2537.d  
Date : 26-MAY-2000 16:35  
Client ID:  
Sample Info: L00B,2260-E,b,4-INDB,sub,1,1  
Column Phase: RTX-CLP

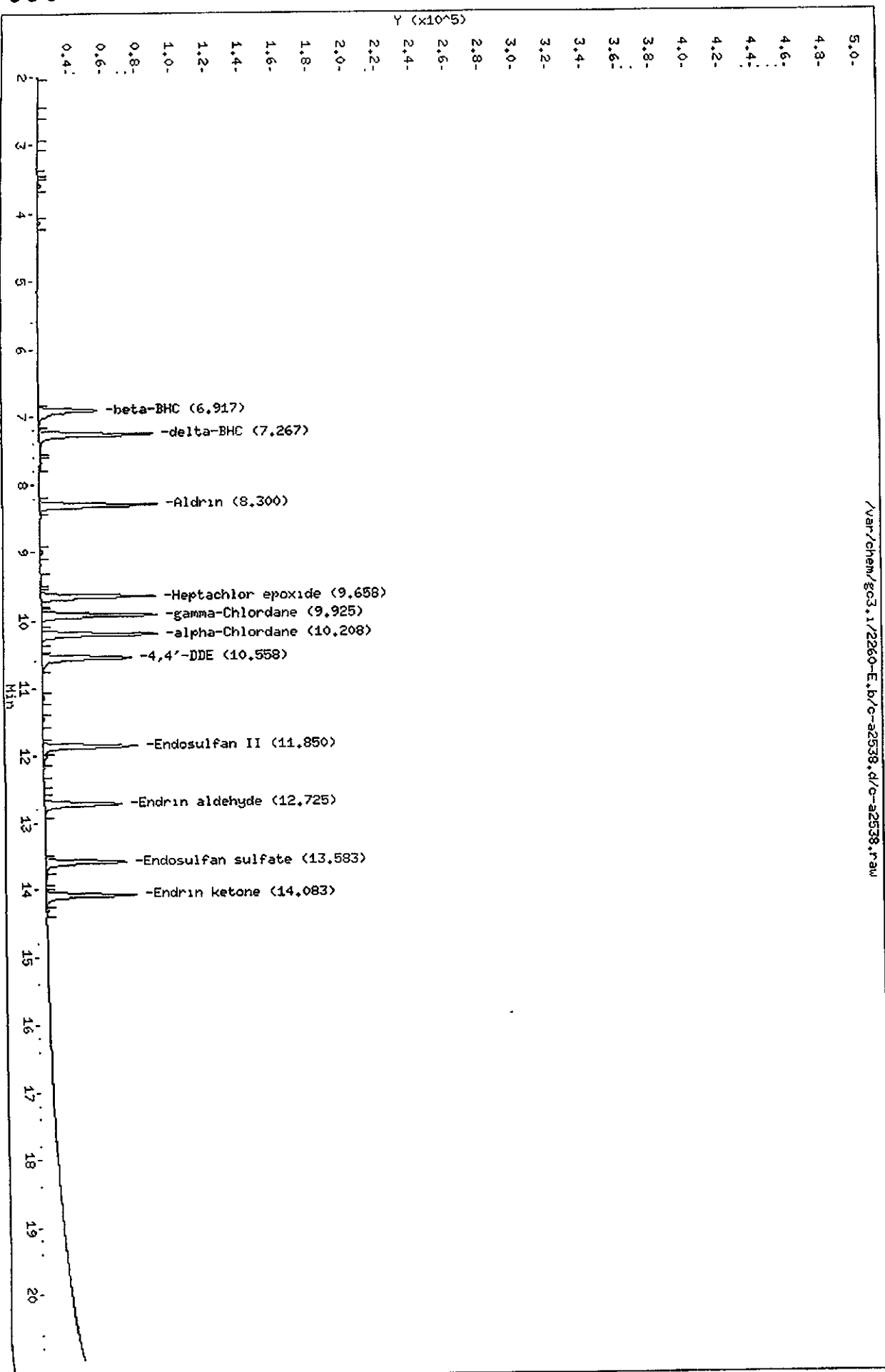
Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2538.d  
 Report Date: 30-May-2000 16:10

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2538.d  
 Lab Smp Id: MLOWB  
 Inj Date : 26-MAY-2000 17:01  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MLOWB, 2260-E.b, , 4-INDB.sub, , 1, 2  
 Misc Info : 190-84-8  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.d  
 Als bottle: 1 Calibration Sample, Level: 2  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 4-INDB.sub  
 Target Version: 3.40

Compoundo					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.300	8.300	0.000	68204	0.01000	0.0116946
7 beta-BHC	6.917	6.908	0.009	34690	0.01000	0.0114438
8 delta-BHC	7.267	7.267	0.000	66026	0.01000	0.0117737
12 Heptachlor epoxide	9.658	9.658	0.000	66680	0.01000	0.0116680
13 gamma-Chlordane	9.925	9.925	0.000	67079	0.01000	0.0116948
14 alpha-Chlordane	10.208	10.208	0.000	67170	0.01000	0.0116795
16 4,4'-DDE	10.558	10.550	0.008	51646	0.01000	0.0117969
22 Endosulfan II	11.850	11.850	0.000	55093	0.01000	0.0117191
24 Endrin aldehyde	12.725	12.717	0.008	45572	0.01000	0.0116856
26 Endosulfan sulfate	13.583	13.583	0.000	47297	0.01000	0.0116959
27 Endrin ketone	14.083	14.083	0.000	52679	0.01000	0.0117858



Data File: /var/chem/gc3.1/2260-E.b/c-a2538.d  
Date : 26-MAY-2000 17:01  
Client ID:  
Sample Info: HLOWB,2260-E.b,4-INDR.sub,1,2  
Column phase: RTX-CLP

/var/chem/gc3.1/2260-E.b/c-a2538.d/c-a2538.raw

Instrument: gc3.i  
Operator: 1691  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2539.d  
 Report Date: 30-May-2000 16:10

## STL-PITTSBURGH

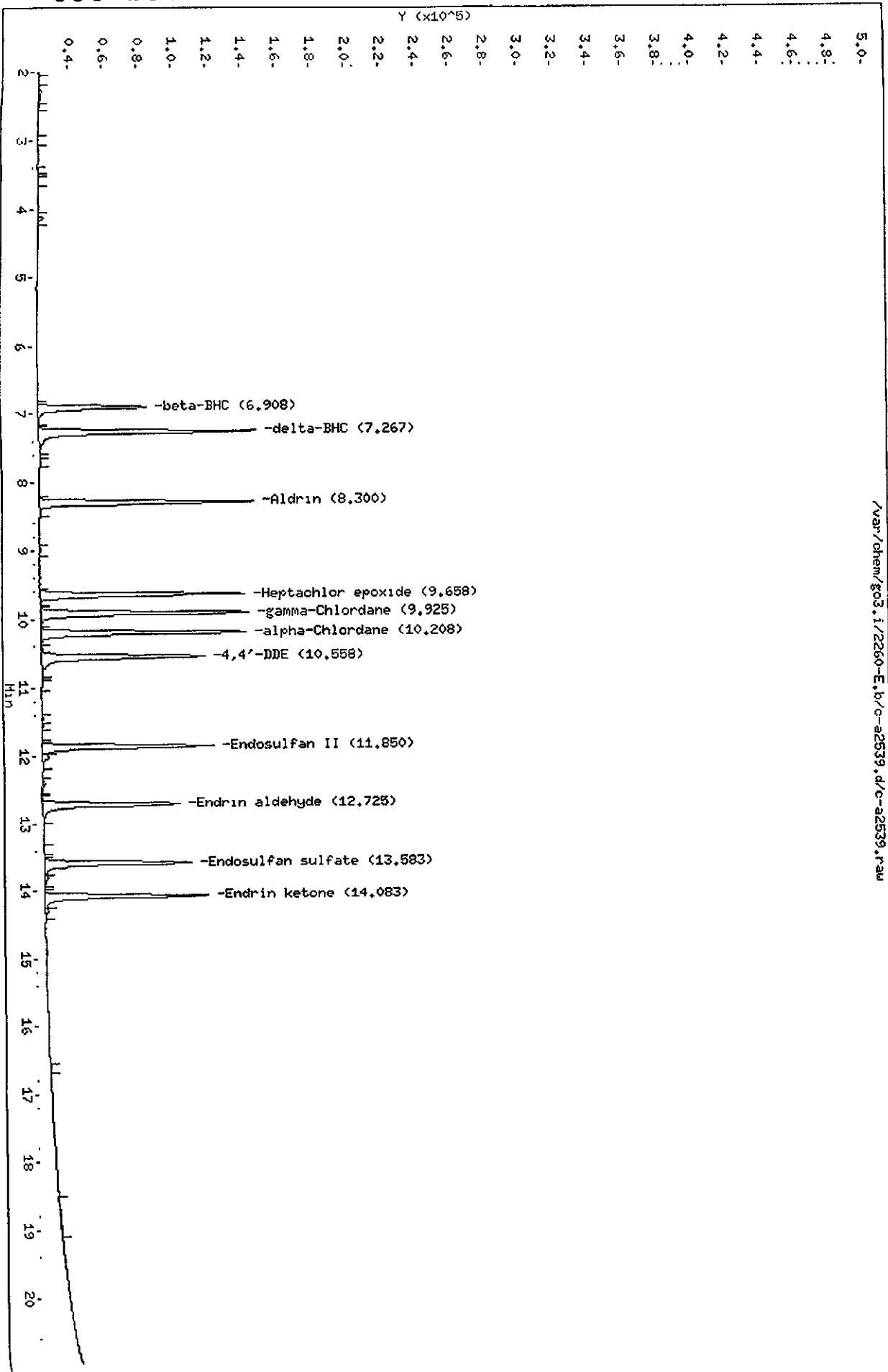
Data file : /var/chem/gc3.i/2260-E.b/c-a2539.d  
 Lab Smp Id: MEDB  
 Inj Date : 26-MAY-2000 17:27  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDB,2260-E.b,,4-INDB.sub,,1,3  
 Misc Info : 190-84-9  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:27 Cal File: c-a2539.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 ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.300	8.300	0.000	123681	0.02500	0.0250000
7 beta-BHC	6.908	6.908	0.000	62821	0.02500	0.0250000
8 delta-BHC	7.267	7.267	0.000	125153	0.02500	0.0250000
12 Heptachlor epoxide	9.658	9.658	0.000	117661	0.02500	0.0250000
13 gamma-Chlordane	9.925	9.925	0.000	119801	0.02500	0.0250000
14 alpha-Chlordane	10.208	10.208	0.000	118294	0.02500	0.0250000
16 4,4'-DDE	10.558	10.550	0.008	93800	0.02500	0.0250000
22 Endosulfan II	11.850	11.850	0.000	98741	0.02500	0.0250000
24 Endrin aldehyde	12.725	12.717	0.008	79734	0.02500	0.0250000
26 Endosulfan sulfate	13.583	13.583	0.000	85000	0.02500	0.0250000
27 Endrin ketone	14.083	14.083	0.000	94440	0.02500	0.0250000

658 288

Data File: /var/chem/gc3.1/2260-E.b/c-a2539.d  
 Date : 26-MAY-2000 17:27  
 Client ID:  
 Sample Info: HEDB,2260-E.b,,4-INDB,sub,,4,3  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2540.d  
 Report Date: 30-May-2000 16:10

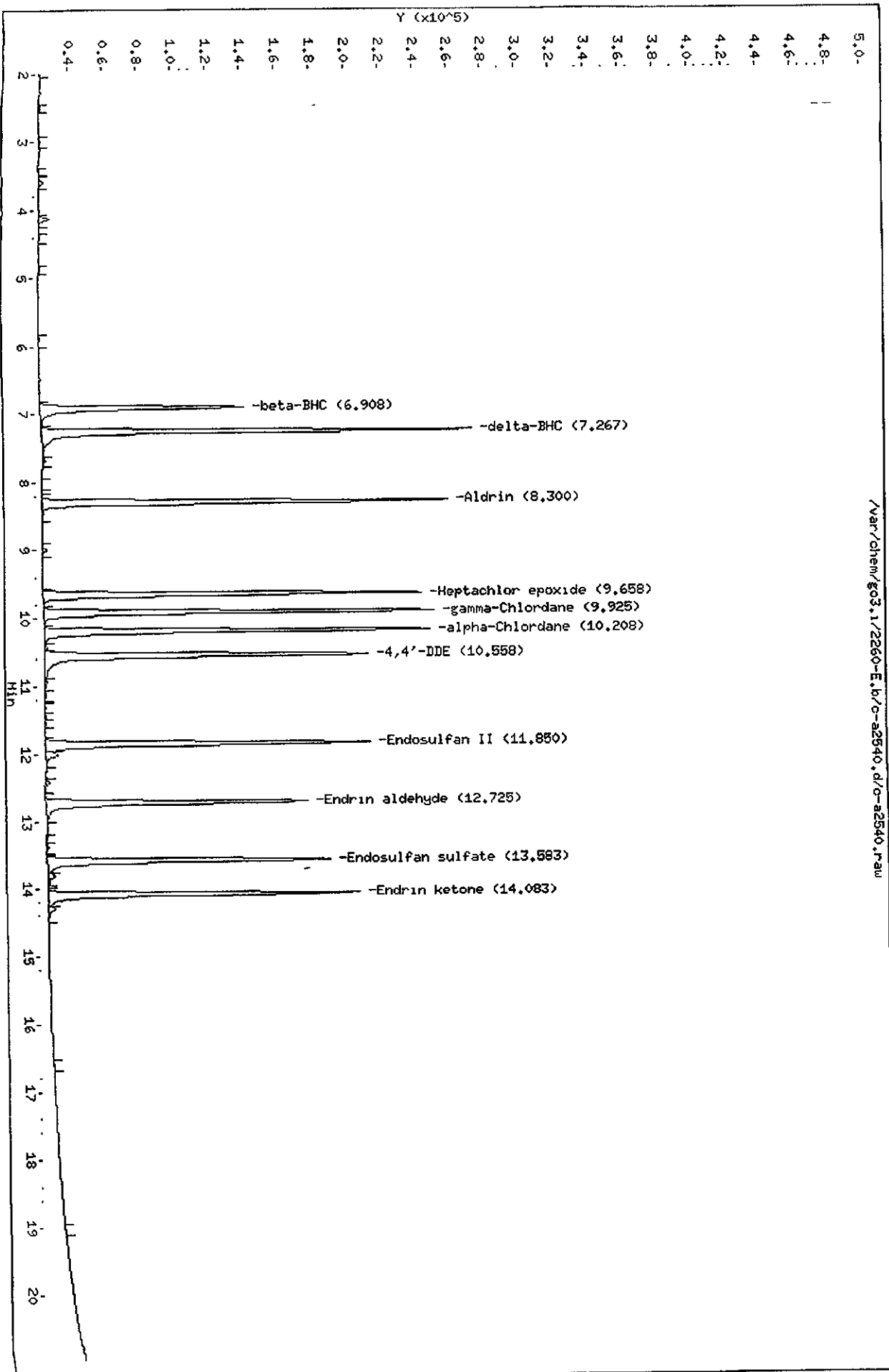
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2540.d  
 Lab Smp Id: MHIGHB  
 Inj Date : 26-MAY-2000 17:53  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MHIGHB,2260-E.b,,4-INDB.sub,,1,4  
 Misc Info : 190-84-10  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 17:53 Cal File: c-a2540.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	8.300	8.300	0.000	235801	0.05000	0.0424632
7 beta-BHC	6.908	6.908	0.000	117979	0.05000	0.0412023
8 delta-BHC	7.267	7.267	0.000	249661	0.05000	0.0457738
12 Heptachlor epoxide	9.658	9.658	0.000	219252	0.05000	0.0407356
13 gamma-Chlordane	9.925	9.925	0.000	226011	0.05000	0.0416082
14 alpha-Chlordane	10.208	10.208	0.000	223318	0.05000	0.0411272
16 4,4'-DDE	10.558	10.550	0.008	187082	0.05000	0.0443442
22 Endosulfan II	11.850	11.850	0.000	188361	0.05000	0.0421612
24 Endrin aldehyde	12.725	12.717	0.008	151278	0.05000	0.0410938
26 Endosulfan sulfate	13.583	13.583	0.000	163972	0.05000	0.0425593
27 Endrin ketone	14.083	14.083	0.000	179881	0.05000	0.0423082

Data File: /var/chem/gc3.1/2260-E.b/c-a2540.d  
Date: 26-MAY-2000 17:53  
Client ID:  
Sample Info: HHICHB,2260-E.b,,4-INDB.sub,,1,4  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2541.d  
 Report Date: 30-May-2000 16:11

## STL-PITTSBURGH

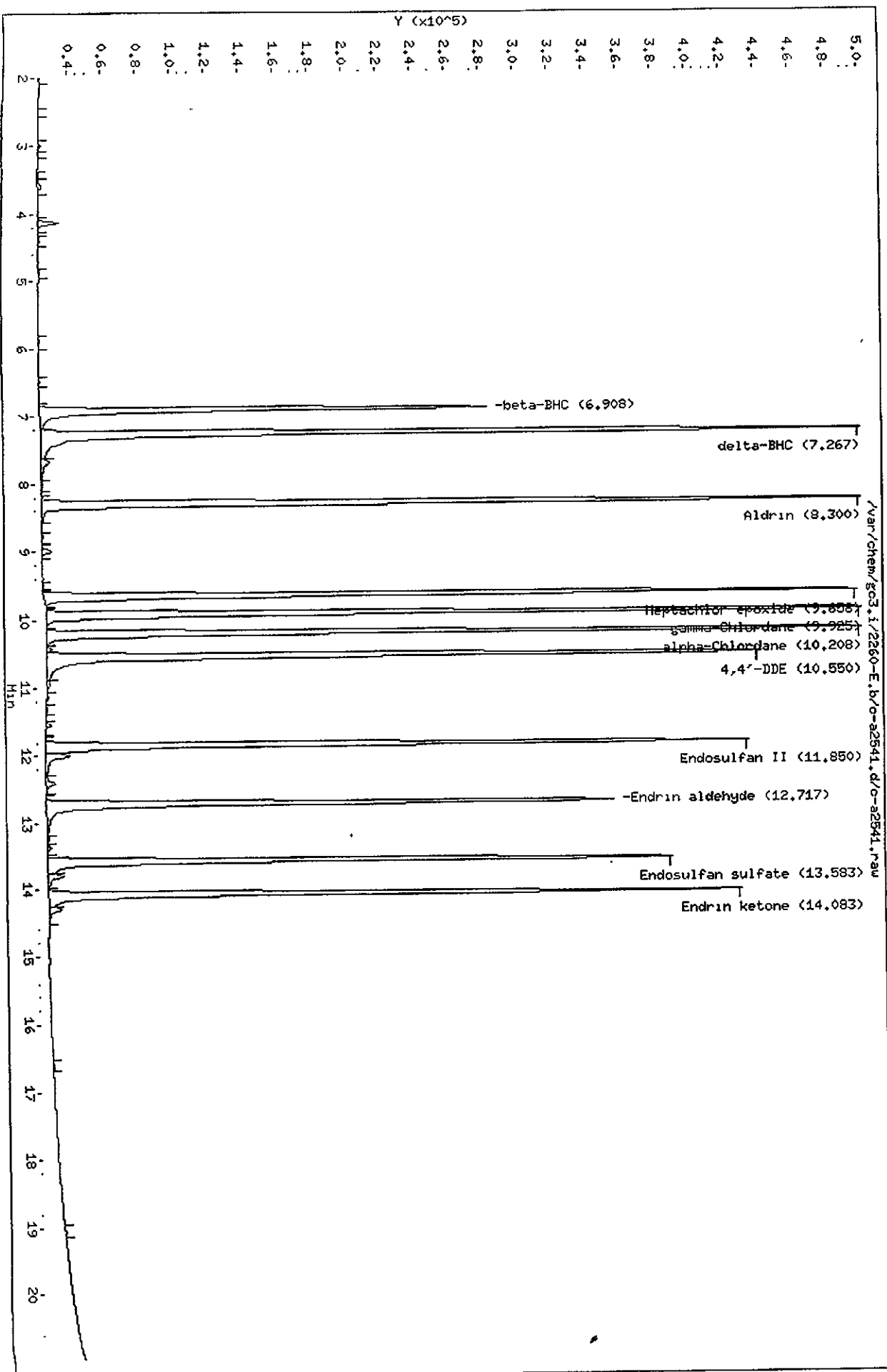
Data file : /var/chem/gc3.i/2260-E.b/c-a2541.d  
 Lab Smp Id: HIGHB  
 Inj Date : 26-MAY-2000 18:18  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : HIGHB,2260-E.b,,4-INDB.sub,,1,5  
 Misc Info : 190-84-11  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	RBSPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.300	8.300	0.000	511797	0.10000	0.0936320
7 beta-BHC	6.908	6.908	0.000	260112	0.10000	0.0925353
8 delta-BHC	7.267	7.267	0.000	563894	0.10000	0.102691 (A)
12 Heptachlor epoxide	9.658	9.658	0.000	471399	0.10000	0.0898133
13 gamma-Chlordane	9.925	9.925	0.000	493029	0.10000	0.0924735
14 alpha-Chlordane	10.208	10.208	0.000	481403	0.10000	0.0907152
16 4,4'-DDE	10.550	10.550	0.000	414049	0.10000	0.0985084
22 Endosulfan II	11.850	11.850	0.000	408752	0.10000	0.0930755
24 Endrin aldehyde	12.717	12.717	0.000	329798	0.10000	0.0914931
26 Endosulfan sulfate	13.583	13.583	0.000	363099	0.10000	0.0953410
27 Endrin ketone	14.083	14.083	0.000	403088	0.10000	0.0958018

## QC Flag Legend

A - Target compound detected but, quantitated amount  
 exceeded maximum amount.





Data File: /var/chem/gc3.1/2260-E.b/c-a2541.d  
Date: 26-MAY-2000 18:18  
Client ID:  
Sample Info: HIGHB.2260-E.b./4-INDB.sub./1.5  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2542.d  
 Report Date: 30-May-2000 16:11

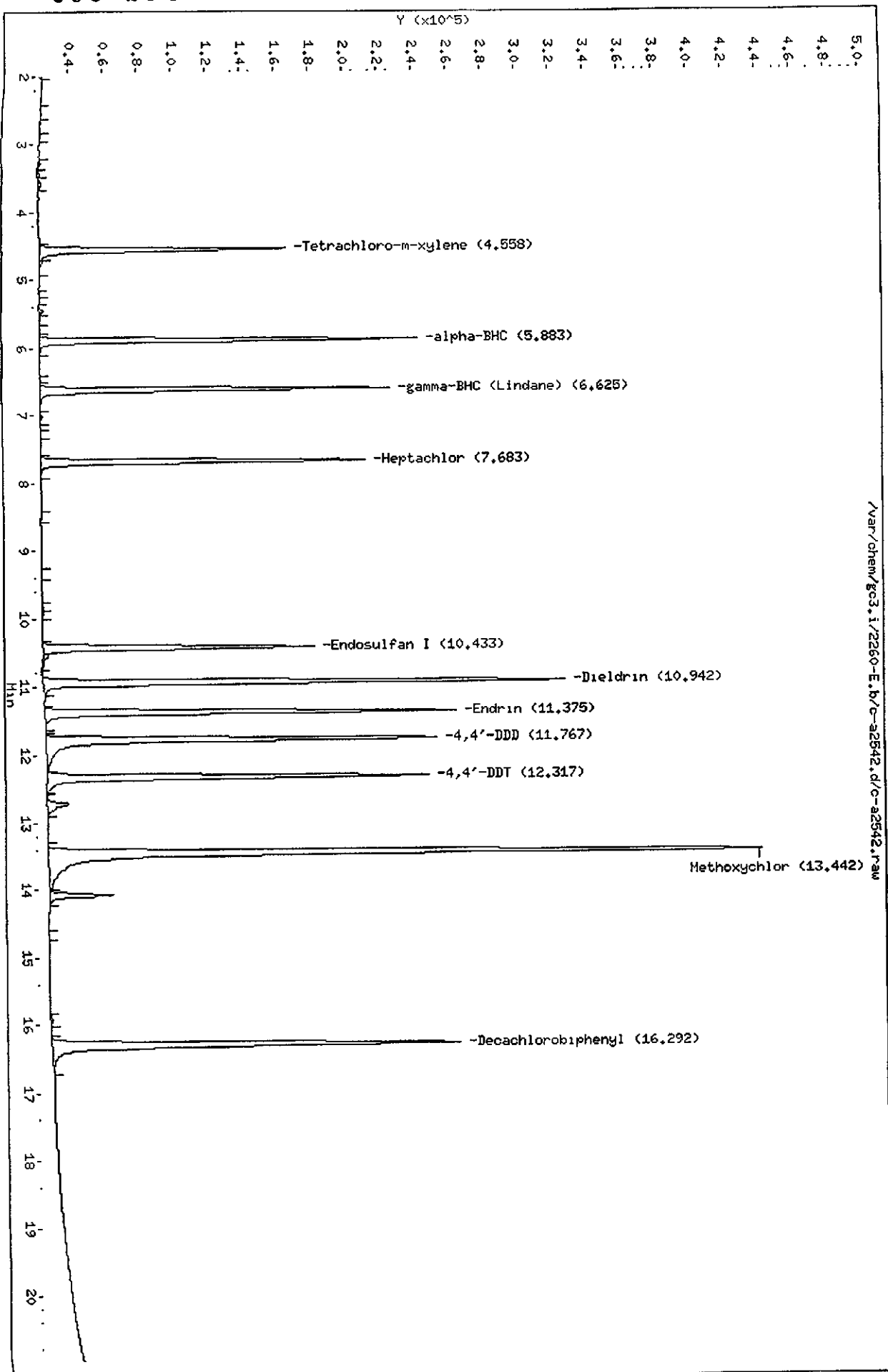
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2542.d  
 Lab Smp Id: 2ND A  
 Inj Date : 26-MAY-2000 18:44  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : 2ND A, 2260-E.b, , INDA.sub, , 2, 3  
 Misc Info : 190-82-2  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	4.558	4.558	0.000	142798	0.02500	0.0277960
5 alpha-BHC	5.883	5.883	0.000	218916	0.02500	0.0291696
6 gamma-BHC (Lindane)	6.625	6.625	0.000	203035	0.02500	0.0295699
10 Heptachlor	7.683	7.683	0.000	188207	0.02500	0.0287720
15 Endosulfan I	10.433	10.433	0.000	157413	0.02500	0.0296102
17 Dieldrin	10.942	10.942	0.000	302851	0.02500	0.0540971
20 Endrin	11.375	11.375	0.000	238074	0.02500	0.0500602
21 4,4'-DDD	11.767	11.767	0.000	226860	0.02500	0.0594268
23 4,4'-DDT	12.317	12.317	0.000	221662	0.02500	0.0607215
25 Methoxychlor	13.442	13.442	0.000	413990	0.05000	0.238022 (A)
\$ 30 Decachlorobiphenyl	16.292	16.292	0.000	236421	0.02500	0.0528542

## QC Flag Legend

A - Target compound detected but, quantitated amount  
 exceeded maximum amount.



Data File: /var/chem/gc3.1/2260-E.b/c-a2542.d  
Date: 26-May-2000 18:44  
Client ID:  
Sample Info: 2ND A, 2260-E.b, INDR, sub, 2,3  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53

/var/chem/gc3.1/2260-E.b/c-a2542.d/c-a2542.raw

Data File: /var/chem/gc3.i/2260-E.b/c-a2543.d  
Report Date: 30-May-2000 16:11

## STL-PITTSBURGH

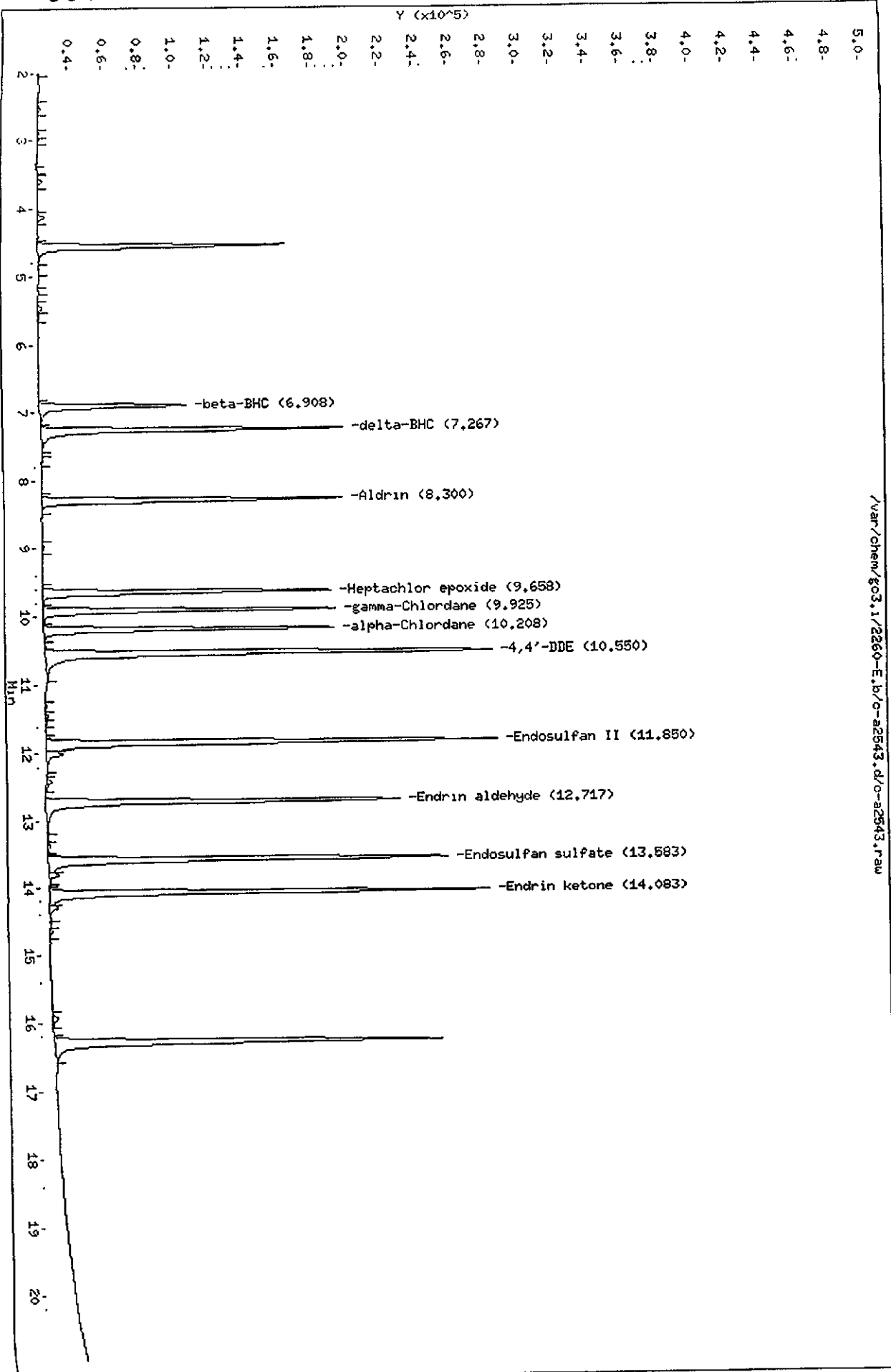
Data file : /var/chem/gc3.i/2260-E.b/c-a2543.d  
Lab Smp Id: 2ND B  
Inj Date : 26-MAY-2000 19:10  
Operator : 1891 Inst ID: gc3.i  
Smp Info : 2ND B, 2260-E.b, , INDB.sub, , 2, 3  
Misc Info : 190-82-5  
Comment :  
Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	8.300	8.300	0.000	173468	0.02500	0.0317356
7 beta-BHC	6.908	6.908	0.000	84796	0.02500	0.0301663
8 delta-BHC	7.267	7.267	0.000	174313	0.02500	0.0317442
12 Heptachlor epoxide	9.658	9.658	0.000	166423	0.02500	0.0317077
13 gamma-Chlordane	9.925	9.925	0.000	168369	0.02500	0.0315796
14 alpha-Chlordane	10.208	10.208	0.000	167460	0.02500	0.0315560
16 4,4'-DDE	10.550	10.550	0.000	257757	0.02500	0.0613242
22 Endosulfan II	11.850	11.850	0.000	260957	0.02500	0.0594216
24 Endrin aldehyde	12.717	12.717	0.000	205070	0.02500	0.0568909
26 Endosulfan sulfate	13.583	13.583	0.000	230639	0.02500	0.0605602
27 Endrin ketone	14.083	14.083	0.000	254254	0.02500	0.0604285

Data File: /var/chem/gc3.i/2260-E.b/c-a2543.d  
Date: 26-MAY-2000 19:10  
Client ID:  
Sample Info: 2ND B,2260-E.b, INDB.sub,2,3

Column phase: RTX-CLP

Instrument: gc3.i  
Operator: 1891  
Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2544.d  
Report Date: 30-May-2000 16:11

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2544.d  
Lab Smp Id: EVALB  
Inj Date : 26-MAY-2000 19:36  
Operator : 1891 Inst ID: gc3.i  
Smp Info : EVALB, 2260-E.b, , EVALBR.sub, , 3, 1  
Misc Info : 190-88-8  
Comment :  
Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	RESPONSR	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	90798	0.01767	0.0176740(R)
16 4,4'-DDE	10.558	10.550	0.008	863	0.000205	0.000205320
20 Endrin	11.375	11.375	0.000	95718	0.02013	0.0201268
21 4,4'-DDD	11.775	11.767	0.008	9633	0.00252	0.00252340
23 4,4'-DDT	12.325	12.317	0.008	70976	0.01944	0.0194430
24 Endrin aldehyde	12.725	12.717	0.008	2568	0.000712	0.000712419
27 Endrin ketone	14.083	14.083	0.000	6178	0.00147	0.00146832
\$ 30 Decachlorobiphenyl	16.292	16.292	0.000	76867	0.01718	0.0171844(R)

## QC Flag Legend

R - Spike/Surrogate failed recovery limits.

DDT = 12.9  
Endrin = 8.4

Endrin Breakdown:  $\frac{(2568 + 6178)}{(2568 + 6178 + 95718)} \times 100 = 0.4\%$

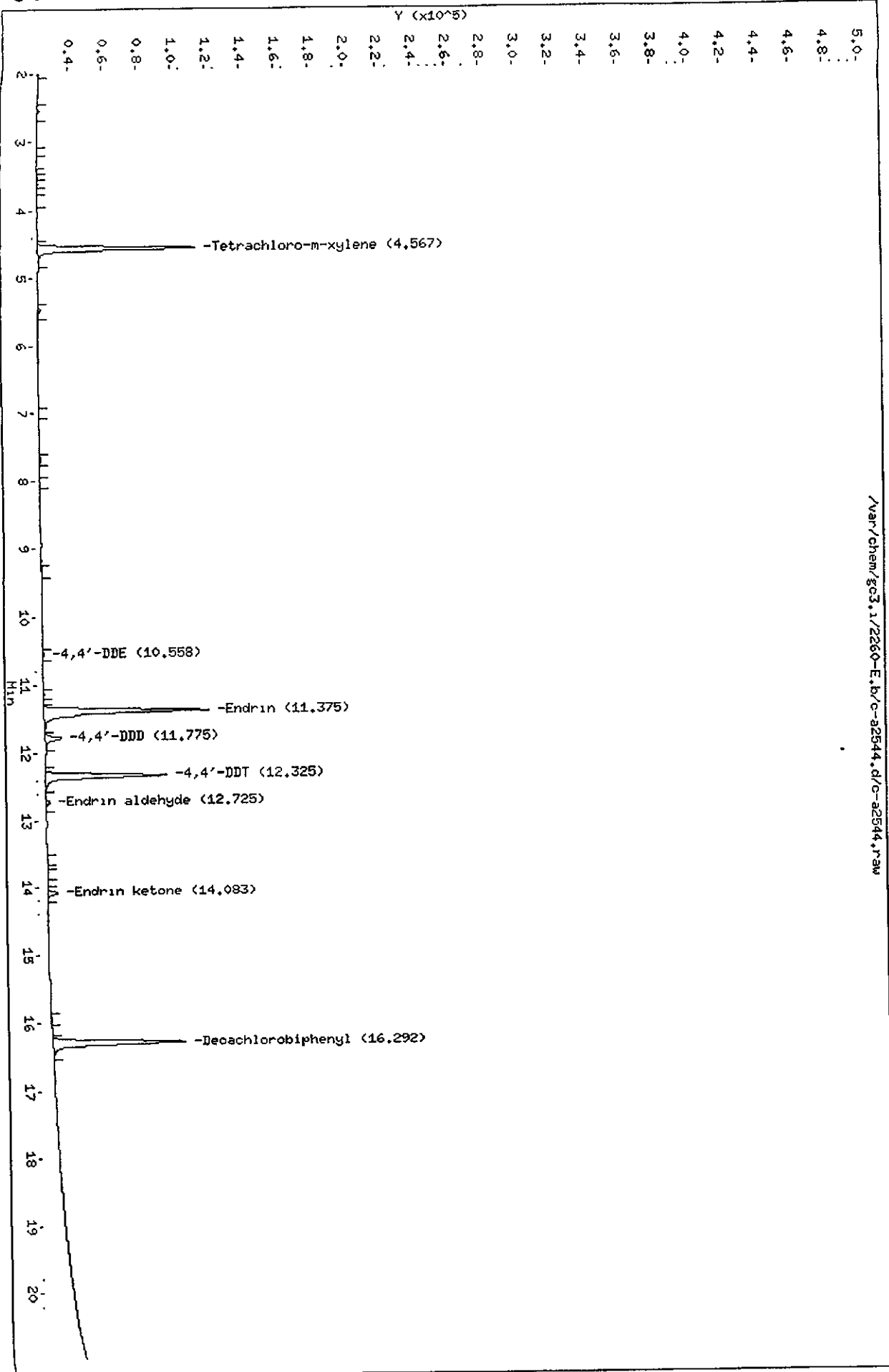
DDT Breakdown:  $\frac{(9633 + 9633)}{(9633 + 9633 + 70976)} \times 100 = 12.9\%$

STL Pittsburgh

Data File: /var/chem/gc3.1/2260-E.b/c-a2544.d  
Date: 26-MAY-2000 19:36  
Client ID:  
Sample Info: EVALB,2260-E.b, EVALBR,sub,3.1

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2555.d  
 Report Date: 30-May-2000 16:11

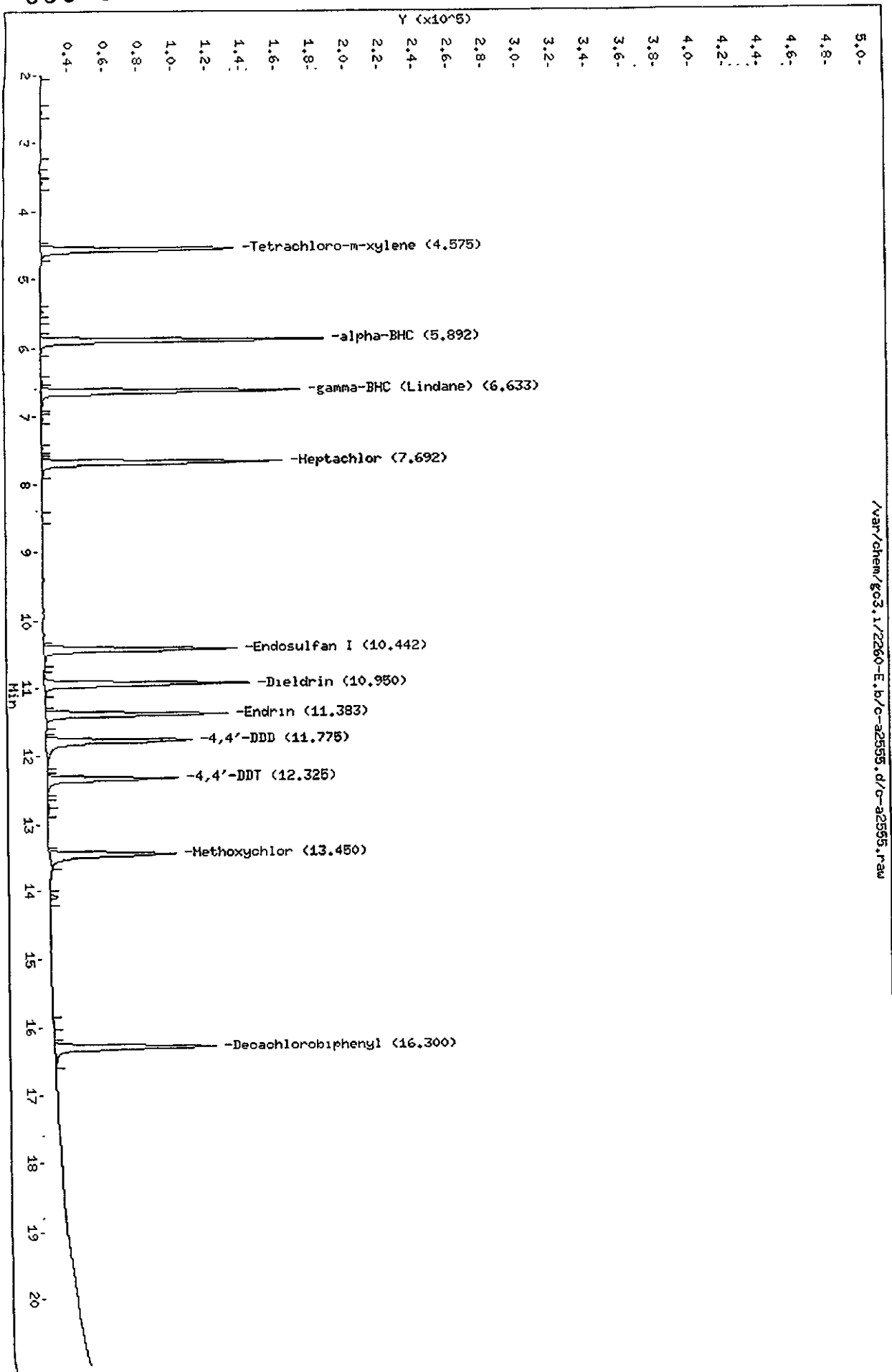
## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2555.d  
 Lab Smp Id: MEDA  
 Inj Date : 27-MAY-2000 00:18  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDA,2260-E.b,,INDA.sub,,2,3  
 Misc Info : 190-84-3  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	4.575	4.558	0.017	111756	0.02500	0.0217536
5 alpha-BHC	5.892	5.883	0.009	162673	0.02500	0.0216755
6 gamma-BHC (Lindane)	6.633	6.625	0.008	148990	0.02500	0.0216988
10 Heptachlor	7.692	7.683	0.009	138684	0.02500	0.0212012
15 Endosulfan I	10.442	10.433	0.009	111506	0.02500	0.0209748
17 Dieldrin	10.950	10.942	0.008	117972	0.02500	0.0210729
20 Endrin	11.383	11.375	0.008	104940	0.02500	0.0220659
21 4,4'-DDD	11.775	11.767	0.008	83873	0.02500	0.0219708
23 4,4'-DDT	12.325	12.317	0.008	76000	0.02500	0.0208192
25 Methoxychlor	13.450	13.442	0.008	73177	0.05000	0.0420728
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008	93154	0.02500	0.0208255



658 300



/var/chem/gc3.1/2260-E.b/c-22555.d/c-22555.raw

Data File: /var/chem/gc3.1/2260-E.b/c-22555.d  
 Date: 27-MAY-2000 00:18  
 Client ID:  
 Sample Info: MEDA, 2260-E.b, 1INDA.sub, 2,3  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2556.d  
 Report Date: 30-May-2000 16:12

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2556.d  
 Lab Smp Id: MEDB  
 Inj Date : 27-MAY-2000 00:44  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDB,2260-E.b,, INDB.sub,, 2,3  
 Misc Info : 190-84-9  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	8.308	8.300	0.008		130573	0.02500	0.0238880
7 beta-BHC	6.917	6.908	0.009		66872	0.02500	0.0237898
8 delta-BHC	7.275	7.267	0.008		135520	0.02500	0.0246796
12 Heptachlor epoxide	9.658	9.658	0.000		120864	0.02500	0.0230276
13 gamma-Chlordane	9.933	9.925	0.008		124665	0.02500	0.0233824
14 alpha-Chlordane	10.217	10.208	0.009		122340	0.02500	0.0230536
16 4,4'-DDE	10.558	10.550	0.008		101679	0.02500	0.0241909
22 Endosulfan II	11.858	11.850	0.008		100978	0.02500	0.0229934
24 Endrin aldehyde	12.725	12.717	0.008		84479	0.02500	0.0234363
26 Endosulfan sulfate	13.583	13.583	0.000		89715	0.02500	0.0235570
27 Endrin ketone	14.083	14.083	0.000		98165	0.02500	0.0233308

658 302

Data File: /var/chem/gc3.1/2260-E.b/c-a2556.d

Date: 27-MAY-2000 00:44

Client ID:

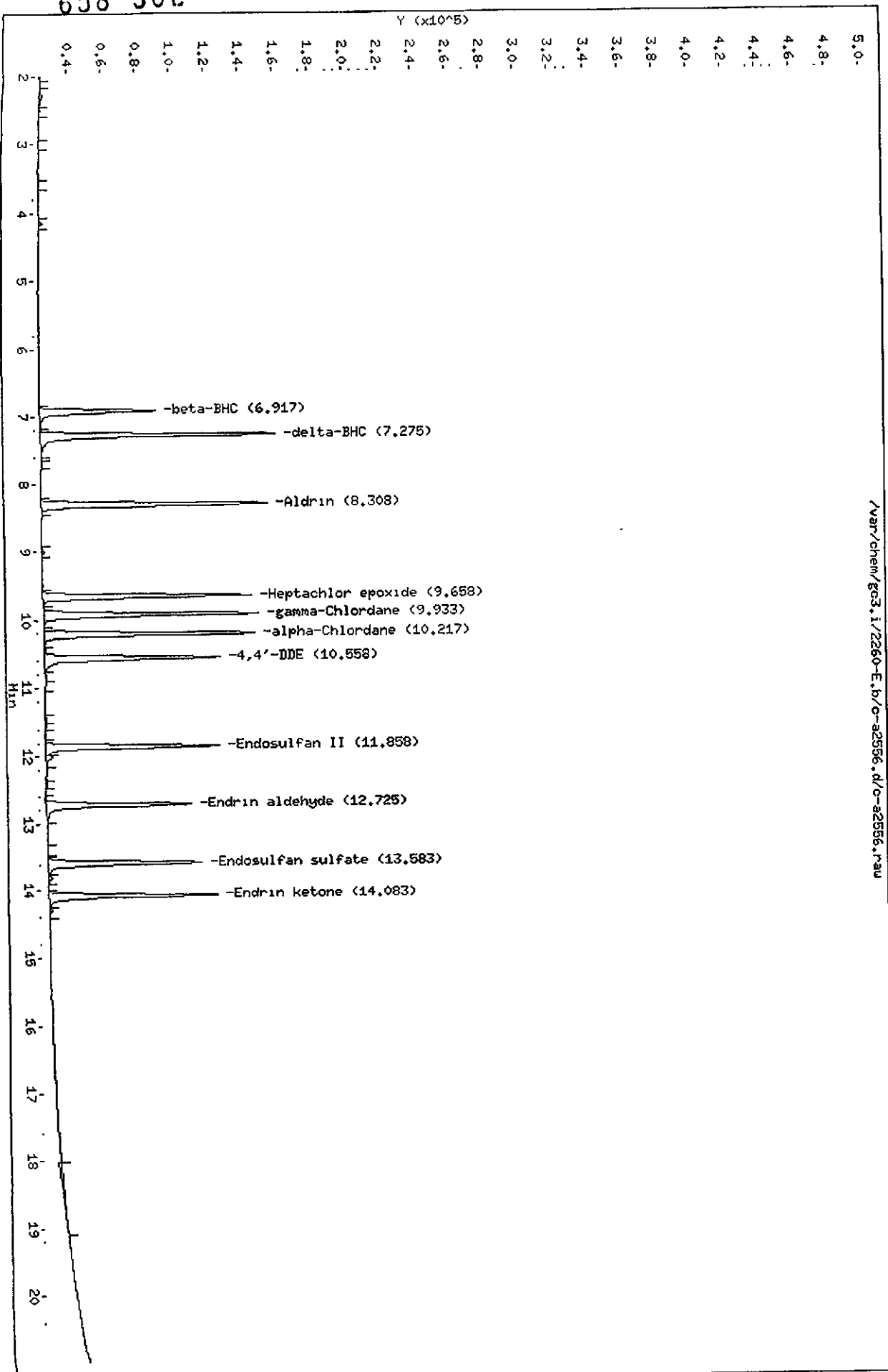
Sample Info: HEDB, 2260-E.b, INDB, sub., 2,3

Column phase: RTX-CLP

Instrument: gc3.1

Operator: 1891

Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2557.d  
Report Date: 30-May-2000 16:12

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2557.d  
Lab Smp Id: EVALB  
Inj Date : 27-MAY-2000 01:10  
Operator : 1891 Inst ID: gc3.i  
Smp Info : EVALB,2260-E.b,,EVALBR.sub,,3,1  
Misc Info : 190-88-8  
Comment :  
Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
Als bottle: 1 QC Sample: PEM  
Dil Factor: 1.00000  
Integrator: Falcon Compound Sublist: EVALBR.sub  
Target Version: 3.40

Compoundo	RT	BXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							( ng)	( ng)
=====	==	=====	=====			=====	=====	
\$ 1 Tetrachloro-m-xylene	4.575	4.558	0.017		91988	0.01791	0.0179057(R)	
16 4,4'-DDE	Compound Not Detected.							
20 Endrin	11.383	11.375	0.008		101267	0.02129	0.0212936	
21 4,4'-DDD	11.775	11.767	0.008		10672	0.00280	0.00279557	
23 4,4'-DDT	12.325	12.317	0.008		77545	0.02124	0.0212425	
24 Endrin aldehyde	12.725	12.717	0.008		2245	0.000623	0.000622812	
27 Endrin ketone	14.083	14.083	0.000		5062	0.00120	0.00120308	
\$ 30 Decachlorobiphenyl	16.300	16.292	0.008		78159	0.01747	0.0174732(R)	

## QC Flag Legend

R - Spike/Surrogate failed recovery limits.

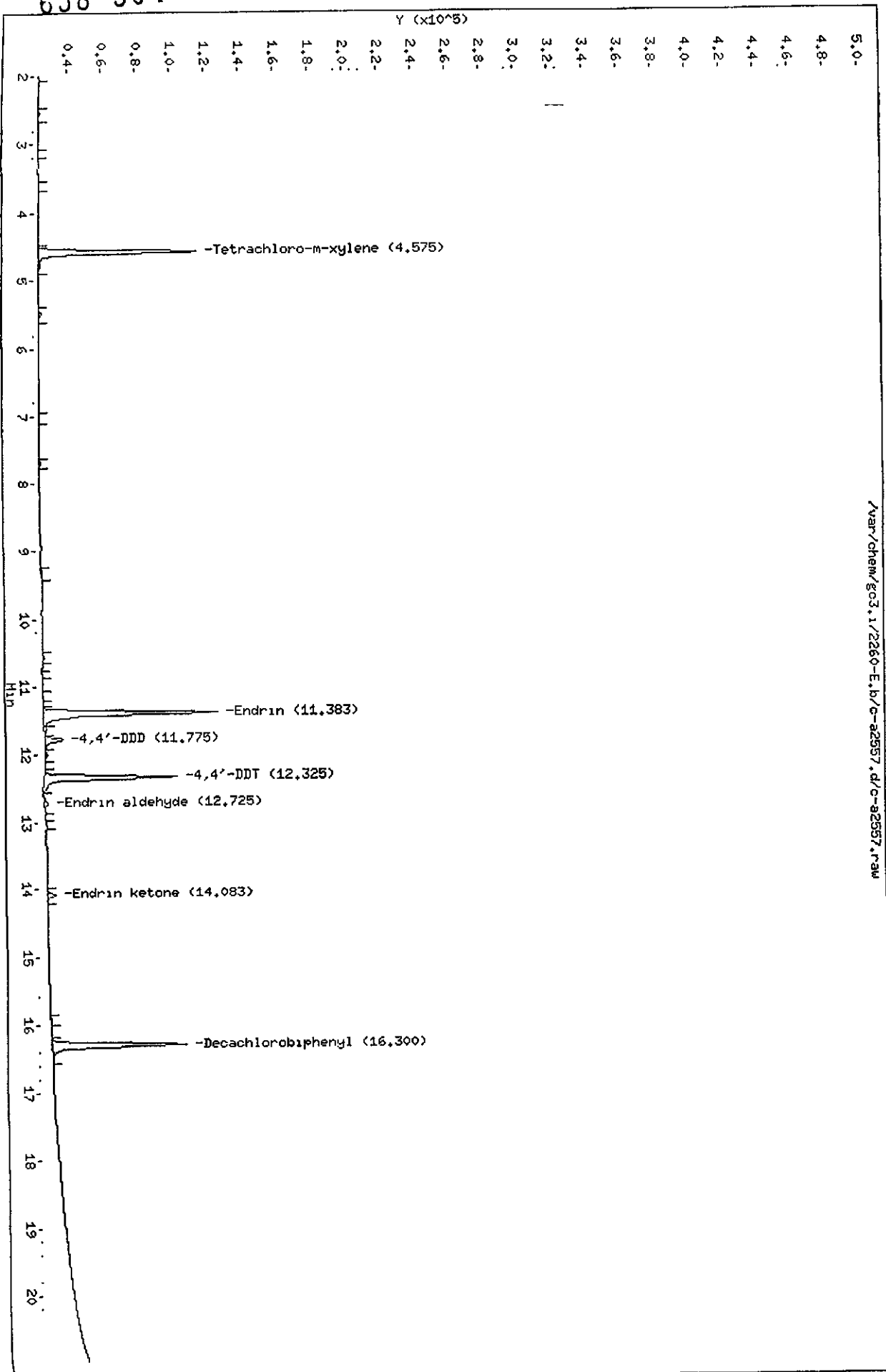
DDT = 1d.1  
endrin = 6.7  
Endrin Breakdown  $\left( \frac{2245 + 5062}{(2245 + 5062 + 101267)} \right) \times 100 = 6.7\%$

STL Breakdown  $\left( \frac{10672}{(10672 + 77545)} \right) \times 100 = 12.10\%$   
STL Pittsburgh

658 304

Data File: /var/chem/gc3.1/2260-E.b/c-a2557.d  
 Date : 27-MAY-2000 01:10  
 Client ID:  
 Sample Info: EVALB.2260-E.b., EVAL BR. sub., 3.1  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53



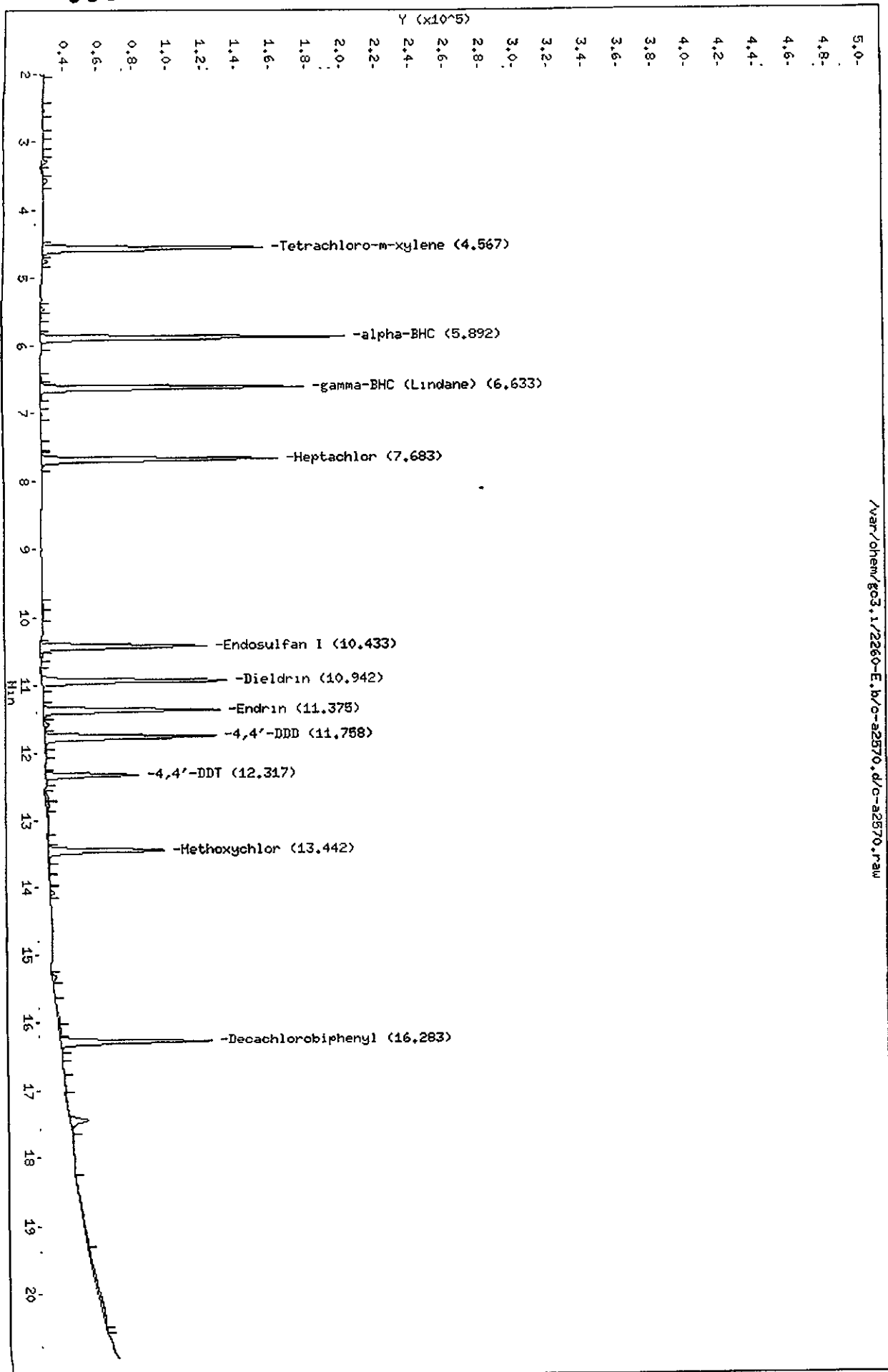
Data File: /var/chem/gc3.i/2260-E.b/c-a2570.d  
 Report Date: 30-May-2000 16:13

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2570.d  
 Lab Smp Id: MEDA  
 Inj Date : 27-MAY-2000 06:44  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDA,2260-E.b,,INDA.sub,,2,3  
 Misc Info : 190-84-3  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
 Als bottle: 1 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: INDA.sub  
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	127292	0.02500	0.0247777
5 alpha-BHC	5.892	5.883	0.009	174273	0.02500	0.0232211
6 gamma-BHC (Lindane)	6.633	6.625	0.008	150730	0.02500	0.0219522
10 Heptachlor	7.683	7.683	0.000	136070	0.02500	0.0208016
15 Endosulfan I	10.433	10.433	0.000	95677	0.02500	0.0179973
17 Dieldrin	10.942	10.942	0.000	106319	0.02500	0.0189914
20 Endrin	11.375	11.375	0.000	101699	0.02500	0.0213844
21 4,4'-DDD	11.758	11.767	-0.009	98669	0.02500	0.0258467
23 4,4'-DDT	12.317	12.317	0.000	53207	0.02500	0.0145754
25 Methoxychlor	13.442	13.442	0.000	67100	0.05000	0.0385789
\$ 30 Decachlorobiphenyl	16.283	16.292	-0.009	86580	0.02500	0.0193558

658 306



/var/chem/gc3.i/2260-E.b/c-a2570.raw

Data File: /var/chem/gc3.i/2260-E.b/c-a2570.d  
Date: 27-MAY-2000 06:44  
Client ID:  
Sample Info: HEDA, 2260-E.b, INDA, sub, 2,3  
Column phase: RTX-CLP

Instrument: gc3.i  
Operator: 1891  
Column diameter: 0.53

Data File: /var/chem/gc3.i/2260-E.b/c-a2571.d  
 Report Date: 30-May-2000 16:13

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2571.d  
 Lab Smp Id: MEDB  
 Inj Date : 27-MAY-2000 07:10  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDB,2260-E.b,,INDB.sub,,2,3  
 Misc Info : 190-84-9  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.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	8.300	8.300	0.000	131235	0.02500	0.0240091
7 beta-BHC	6.908	6.908	0.000	73798	0.02500	0.0262538
8 delta-BHC	7.267	7.267	0.000	127791	0.02500	0.0232721
12 Heptachlor epoxide	9.658	9.658	0.000	119729	0.02500	0.0228114
13 gamma-Chlordane	9.925	9.925	0.000	121054	0.02500	0.0227051
14 alpha-Chlordane	10.208	10.208	0.000	117566	0.02500	0.0221540
16 4,4'-DDB	10.550	10.550	0.000	100242	0.02500	0.0238490
22 Endosulfan II	11.842	11.850	-0.008	97499	0.02500	0.0222012
24 Endrin aldehyde	12.717	12.717	0.000	80966	0.02500	0.0224617
26 Endosulfan sulfate	13.575	13.583	-0.008	75337	0.02500	0.0197817
27 Endrin Ketone	14.075	14.083	-0.008	82409	0.02500	0.0195861



Data File: /var/chem/gc3.1/2260-E.b/c-a2571.d

Date : 27-MAY-2000 07:10

Client ID:

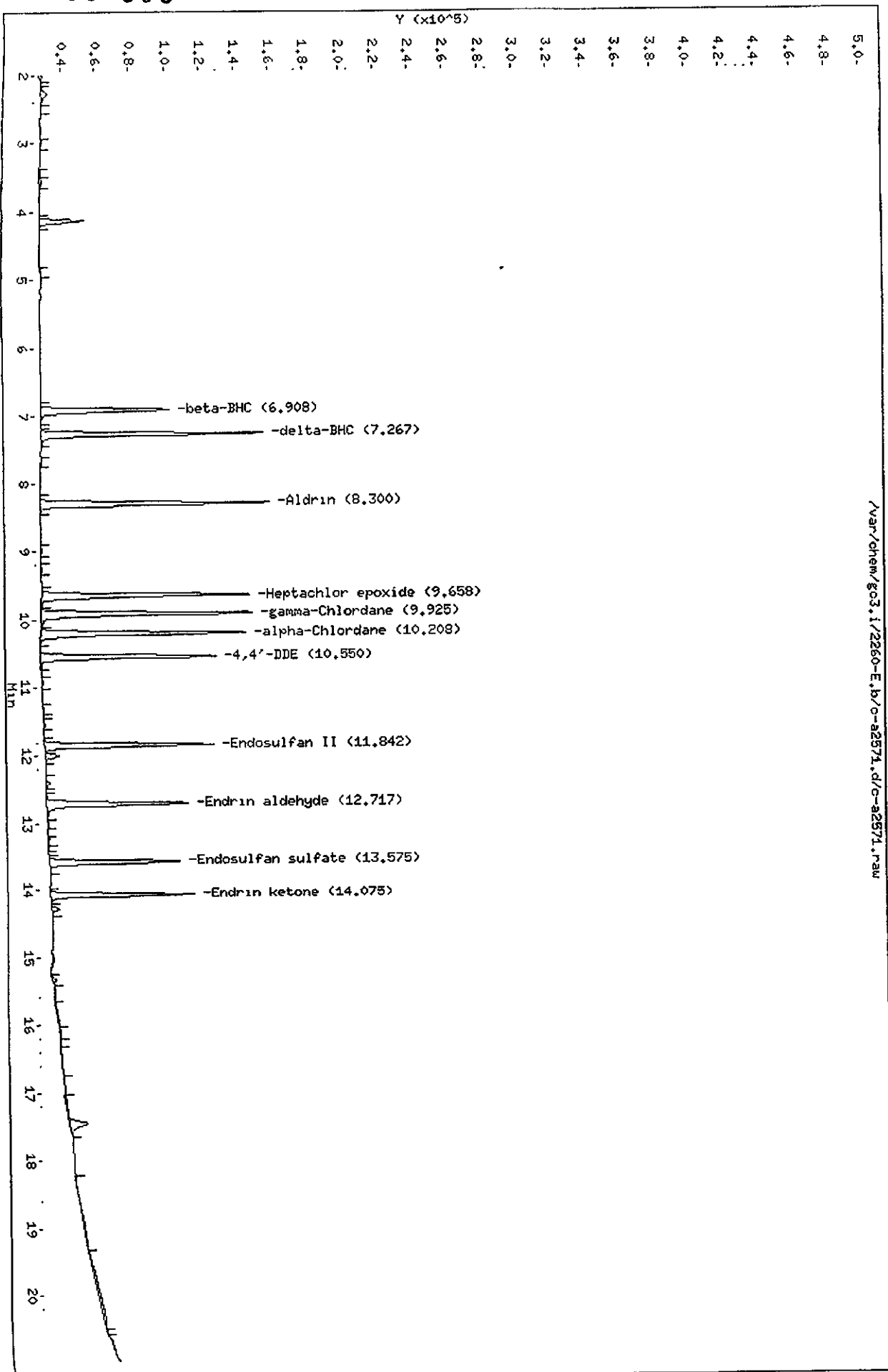
Sample Info: MEDB-2260-E.b, INDB.sub, 2.3

Column phase: RTX-CLP

Instrument: gc3.1

Operator: 1891

Column diameter: 0.53



Report Date : 01-Jun-2000 12:07

HP00903E

RTX-Cop

STL-PITTSBURGH

# COMPOUND LISTING

Method file : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Quant Method : ESTD Target Version : 3.40  
 Last Update : 01-Jun-2000 12:06 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	4.575	4.525-4.625	4.562e+06
2 Diallate A	5.733	5.683-5.783	
3 Diallate B	6.042	5.992-6.092	
4 MIREX	13.275	13.225-13.325	
5 alpha-BHC	5.892	5.842-5.942	5.955e+06
6 gamma-BHC (Lindane)	6.633	6.583-6.683	5.424e+06
7 beta-BHC	6.917	6.867-6.967	2.861e+06
8 delta-BHC	7.275	7.225-7.325	4.379e+06
9 Chlordane	7.508	7.458-7.558	1.609e+05
	7.692	7.642-7.742	2.810e+05
	9.933	9.883-9.983	4.235e+05
	10.217	10.167-10.267	5.870e+05
10 Heptachlor	7.683	7.633-7.733	5.162e+06
11 Aldrin	8.308	8.258-8.358	5.281e+06
12 Heptachlor epoxide	9.658	9.608-9.708	4.859e+06
13 gamma-Chlordane	9.933	9.883-9.983	5.035e+06
14 alpha-Chlordane	10.217	10.167-10.267	4.959e+06
15 Endosulfan I	10.442	10.392-10.492	4.272e+06
16 4,4'-DDE	10.558	10.508-10.608	4.494e+06
17 Dieldrin	10.950	10.900-11.000	4.491e+06
18 Toxaphene	11.475	11.425-11.525	5.654e+04
	11.842	11.792-11.892	6.358e+04
	12.583	12.533-12.633	6.724e+04
	13.350	13.300-13.400	4.834e+04

658 310

Report Date : 01-Jun-2000 12:07

6D  
HPSROZE

RTX-CQD

STL-PITTSBURGH

## COMPOUND LISTING

Method file : /var/chem/gc3.i/2310-E.b/PESTA.m

Compound	RT	RT Window	RF
19 Isodrin	8.992	8.942-9.042	
20 Endrin	11.383	11.333-11.433	4.049e+06
21 4,4'-DDD	11.775	11.725-11.825	3.692e+06
22 Endosulfan II	11.858	11.808-11.908	4.076e+06
23 4,4'-DDT	12.325	12.275-12.375	2.429e+06
24 Endrin aldehyde	12.725	12.675-12.775	3.387e+06
25 Methoxychlor	13.450	13.400-13.500	1.404e+06
26 Endosulfan sulfate	13.592	13.542-13.642	2.726e+06
27 Endrin ketone	14.092	14.042-14.142	3.274e+06
28 Chlorobenzilate	11.442	11.392-11.492	
29 Kepone	11.883	11.833-11.933	
\$ 30 Decachlorobiphenyl	16.300	16.250-16.350	3.429e+06

Report Date : 01-Jun-2000 12:07 *HSC ROSE*

*RTX-CLP*

STL-PITTSBURGH

# INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-2000 14:45  
 End Cal Date : 31-MAY-2000 19:30  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Cal Date : 01-Jun-2000 12:06 g  
 Curve Type : Average

## Calibration File Names:

Level 1: /var/chem/gc3.i/2310-E.b/c-a2580.d  
 Level 2: /var/chem/gc3.i/2310-E.b/c-a2581.d  
 Level 3: /var/chem/gc3.i/2310-E.b/c-a2582.d  
 Level 4: /var/chem/gc3.i/2310-E.b/c-a2583.d  
 Level 5: /var/chem/gc3.i/2310-E.b/c-a2584.d

Compound	0.00500	0.01000	0.02500	0.05000	0.10000	RRF	% RSD
-----	-----	-----	-----	-----	-----	-----	-----
2 Diallylate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Diallylate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 MIREX	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 alpha-BHC	6239600	6321300	6079960	5790300	5344990	5955230	6.664
6 gamma-BHC (Lindane)	5771200	5777900	5493120	5252620	4822790	5423526	7.383
7 beta-BHC	3298600	3245500	2778600	2627860	2352910	2860694	14.185
8 delta-BHC	4294000	4552700	4360040	4466340	4219520	4378520	3.039
9 Chlordane(1)	+++++	+++++	160932	+++++	+++++	160932	0.000
(2)	+++++	+++++	280992	+++++	+++++	280992	0.000
(3)	+++++	+++++	423456	+++++	+++++	423456	0.000
(4)	+++++	+++++	587044	+++++	+++++	587044	0.000
10 Heptachlor	5879200	5665000	5125920	4805420	4336020	5162312	12.167
11 Aldrin	5818000	5833900	5241640	5024740	4489070	5281470	10.746
12 Heptachlor epoxide	5588400	5475600	4773080	4482060	3975160	4858860	13.970
13 gamma-Chlordane	5660000	5621000	4928320	4738400	4225900	5034724	12.114
14 alpha-Chlordane	5693400	5591500	4840440	4615920	4056170	4959486	13.846
15 Endosulfan I	4824400	4733300	4253800	3985220	3564930	4272330	12.277
16 4,4'-DDE	4845800	4925300	4455720	4338060	3907100	4494396	9.174
17 Dieldrin	4861000	4832400	4564120	4299400	3898080	4491000	8.956
18 Toxaphene(1)	+++++	+++++	56539	+++++	+++++	56539	0.000
(2)	+++++	+++++	63580	+++++	+++++	63580	0.000
(3)	+++++	+++++	67235	+++++	+++++	67235	0.000
(4)	+++++	+++++	48336	+++++	+++++	48336	0.000
19 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Endrin	4383200	4343300	4121240	3887740	3510970	4049290	8.896
21 4,4'-DDD	3975800	3935700	3730160	3579760	3238030	3691890	8.127

658 312

606

Report Date : 01-Jun-2000 12:07

H. P. S. R. O. B. E.  
Rtr-cep

STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-2000 14:45  
 End Cal Date : 31-MAY-2000 19:30  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Cal Date : 01-Jun-2000 12:06 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	4565600	4552400	4010200	3822360	3431120	4076336	11.963
23 4,4'-DDT	2238600	2427000	2408600	2551140	2517510	2428570	5.019
24 Endrin aldehyde	3900400	3783000	3313840	3139420	2795900	3386512	13.503
25 Methoxychlor	1514900	1551200	1376240	1333080	1243200	1403724	9.125
26 Endosulfan sulfate	2859600	2809000	2725960	2637240	2598740	2726108	4.052
27 Endrin ketone	3474000	3371800	3345720	3092720	3087220	3274292	5.344
28 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 1 Tetrachloro-m-xylene	5460200	5159800	4508200	4062360	3617190	4561550	16.657
\$ 30 Decachlorobiphenyl	4130400	3868400	3345680	3045080	2754050	3428722	16.594

7D  
PESTICIDE CALIBRATION VERIFICATION SUMMARY

658 313

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: G

GC Column: RTX-CLP

ID: 0.53

(mm)

Init. Calib. Date(s): 05/31/00 05/31/00

EPA Sample No. (PIBLK): \_\_\_\_\_

Date Analyzed : \_\_\_\_\_

Lab Sample ID (PIBLK): \_\_\_\_\_

Time Analyzed : \_\_\_\_\_

EPA Sample No. (PEM): EVALB

Date Analyzed : 05/31/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 1419

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	11.40	11.33	11.43	0.018339	0.025000	-26.6
4,4'-DDT	12.34	12.28	12.38	0.019183	0.025000	-23.3

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

*na*  
~~14.25~~

Endrin % breakdown (1):

*4.2*  
~~2.94~~

Combined % breakdown (1):

~~18.19~~ *4.2*

*John*

656 314

7D  
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: G

GC Column: RTX-CLP

ID: 0.53

(mm)

Init. Calib. Date(s): 05/31/00 05/31/00

EPA Sample No. (PIBLK): \_\_\_\_\_

Date Analyzed : \_\_\_\_\_

Lab Sample ID (PIBLK): \_\_\_\_\_

Time Analyzed : \_\_\_\_\_

EPA Sample No. (PEM): EVALB

Date Analyzed : 05/31/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 2048

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	11.38	11.33	11.43	0.025662	0.025000	2.6
4,4'-DDT	12.32	12.28	12.38	0.027007	0.025000	8.0

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

~~20.90~~

Endrin % breakdown (1):

~~2.90~~

Combined % breakdown (1):

~~28.80~~

3.9

4.25

8.0

G/1/a

Data File: /var/chem/gc3.i/2310-E.b/c-a2595.d  
 Report Date: 01-Jun-2000 12:09

HP5890E  
 RTX-CQ

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i  
 Lab File ID: c-a2595.d  
 Analysis Type:  
 Lab Sample ID: MEDA  
 Quant Type: ESTD

Injection Date: 01-JUN-2000 00:15  
 Init. Calibration Date(s): 05/31/0 05/31/0  
 Init. Calibration Times: 14:45 19:30  
 Method File: /var/chem/gc3.i/2310-E.b/PESTA.m

COMPOUND		RRF	RFO	MIN	RRF	%D	MAX
-----		-----	-----	-----	-----	-----	-----
\$	1 Tetrachloro-m-xylene	4561550.000	4648600.000	0.000	-1.9	15.0	
	5 alpha-BHC	5955230.000	6531320.000	0.010	-9.7	15.0	
	6 gamma-BHC (Lindane)	5423526.000	5908840.000	0.010	-8.9	15.0	
	10 Heptachlor	5162312.000	5423920.000	0.010	-5.1	15.0	
	15 Endosulfan I	4272330.000	4411640.000	0.010	-3.3	15.0	
	17 Dieldrin	4491000.000	4701600.000	0.010	-4.7	15.0	
	20 Endrin	4049290.000	4234120.000	0.010	-4.6	15.0	
	21 4,4'-DDD	3691890.000	3676360.000	0.010	0.4	15.0	
	23 4,4'-DDT	2428570.000	2651960.000	0.010	-9.2	15.0	
	25 Methoxychlor	1403724.000	1452920.000	0.010	-3.5	15.0	
\$	30 Decachlorobiphenyl	3428722.000	3562920.000	0.010	-3.9	15.0	



658 316

7E  
Data File: /var/chem/gc3.i/2310-E.b/c-a2596.d  
Report Date: 01-Jun-2000 12:09

HPSCQBE  
RTX-CQ

STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc3.i  
Lab File ID: c-a2596.d  
Analysis Type:  
Lab Sample ID: MEDB  
Quant Type: ESTD

Injection Date: 01-JUN-2000 00:41  
Init. Calibration Date(s): 05/31/0 05/31/0  
Init. Calibration Times: 14:45 19:30  
Method File: /var/chem/gc3.i/2310-E.b/PESTA.m

COMPOUND	RRF	RPO	MIN RRF	%D	MAX %D
11 Aldrin	5281470.000	5233960.000	0.010	0.9	15.0
7 beta-BHC	2860694.000	2741040.000	0.010	4.2	15.0
8 delta-BHC	4378520.000	4660240.000	0.010	-6.4	15.0
12 Heptachlor epoxide	4858860.000	4796360.000	0.010	1.3	15.0
13 gamma-Chlordane	5034724.000	4936080.000	0.010	2.0	15.0
14 alpha-Chlordane	4959486.000	4859240.000	0.010	2.0	15.0
16 4,4'-DDE	4494396.000	4308560.000	0.010	4.1	15.0
22 Endosulfan II	4076336.000	3991680.000	0.010	2.1	15.0
24 Endrin aldehyde	3386512.000	3309080.000	0.010	2.3	15.0
26 Endosulfan sulfate	2726108.000	2994560.000	0.010	-9.8	15.0
27 Endrin ketone	3274292.000	3585600.000	0.010	-9.5	15.0

8D  
PESTICIDE ANALYTICAL SEQUENCE

658 317

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

GC Column: RTX-CLP

ID: 0.53

(mm)

Init. Calib. Date(s): 05/31/00 05/31/00

Instrument ID: GC3

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
TCX: 4.58		DCB: 16.30			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
=====	=====	=====	=====	=====	=====
01 EVALB	EVALB	05/31/00	1419	4.60	16.31
02 MEDTOX	MEDTOX	05/31/00	1445	4.58	16.30
03 MEDCHLOR	MEDCHLOR	05/31/00	1511	4.58	16.30
04 LOWA	LOWA	05/31/00	1537	4.58	16.30
05 MLOWA	MLOWA	05/31/00	1603	4.58	16.30
06 MEDA	MEDA	05/31/00	1629	4.58	16.30
07 MHIGHA	MHIGHA	05/31/00	1655	4.58	16.30
08 HIGHA	HIGHA	05/31/00	1721	4.58	16.30
09 LOWB	LOWB	05/31/00	1747		
10 MLOWB	MLOWB	05/31/00	1813		
11 MEDB	MEDB	05/31/00	1839		
12 MHIGHB	MHIGHB	05/31/00	1905		
13 HIGHB	HIGHB	05/31/00	1930		
14 2ND A	2ND A	05/31/00	1956	4.58	16.30
15 2ND B	2ND B	05/31/00	2022		
16 LCS	DDN21102	05/31/00	2349	4.58	16.29
17 MEDA	MEDA	06/01/00	0015	4.58	16.30
18 MEDB	MEDB	06/01/00	0041		
19					
20					
21					
22					
23					
24					
25					
26					
27					
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.

658 318

Data File: /var/chem/gc3.i/2310-E.b/c-a2572.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2572.d  
 Lab Smp Id: EVALB Client Smp ID: EVALB  
 Inj Date : 31-MAY-2000 14:19  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : EVALB, 2310-E.b, , EVALBR.sub, , 3, 1  
 Misc Info : 190-88-8  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	4.600	4.575	0.025	83271	0.01825	0.0182550 (R)
16 4,4'-DDE	10.575	10.558	0.017	2630	0.000585	0.000585173
20 Endrin	11.400	11.383	0.017	74260	0.01834	0.0183390
21 4,4'-DDD	11.783	11.775	0.008	10989	0.00298	0.00297652
23 4,4'-DDT	12.342	12.325	0.017	46586	0.01918	0.0191825
24 Endrin aldehyde	12.742	12.725	0.017	826	0.000244	0.000243909 (M)
27 Endrin ketone	14.100	14.092	0.008	2429	0.000742	0.000741840
\$ 30 Decachlorobiphenyl	16.308	16.300	0.008	53050	0.01547	0.0154722 (R)

## QC Flag Legend

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

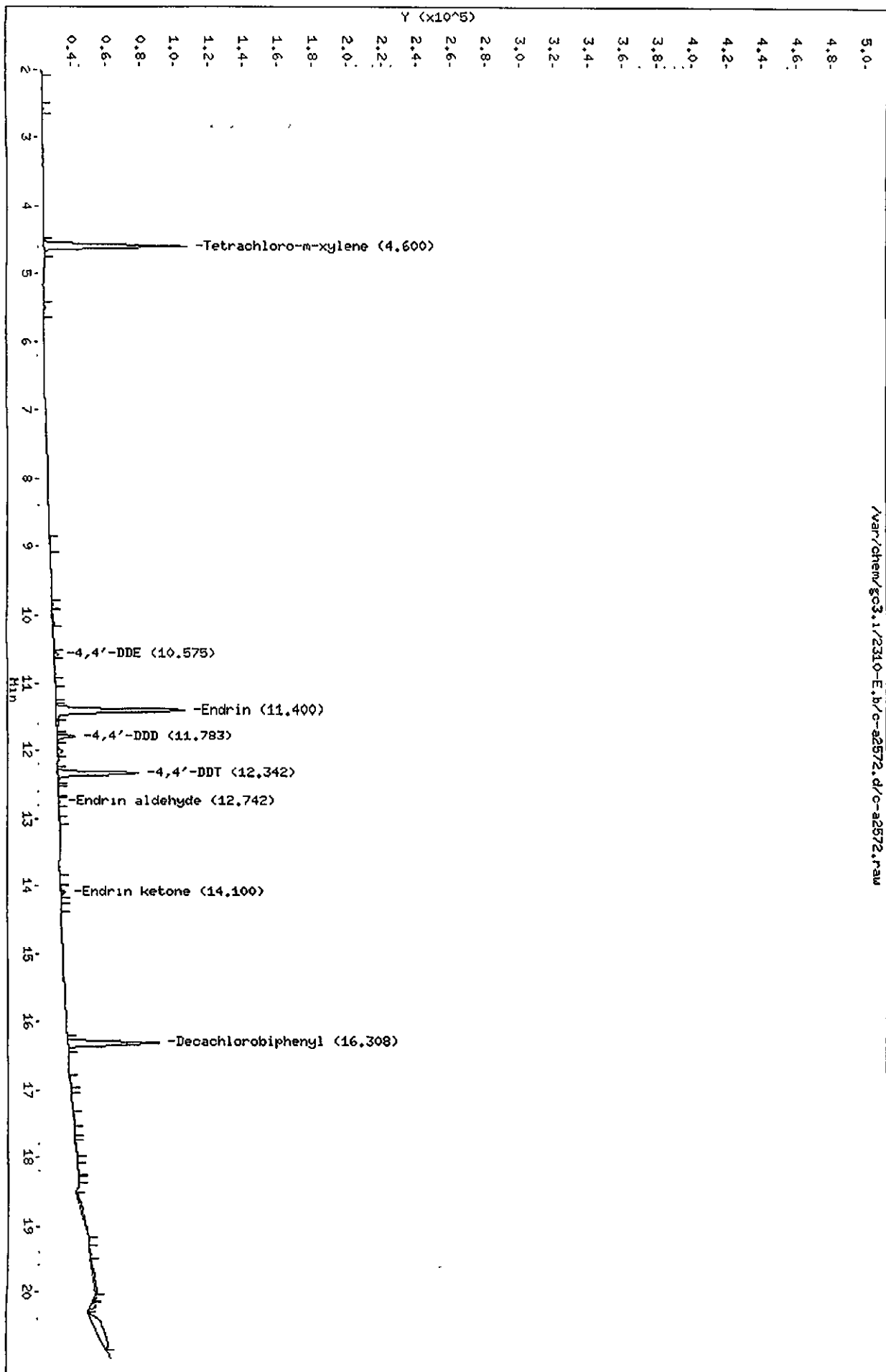
$$\text{Endrin Breakdown} = \frac{(926 + 2429)}{(926 + 2429 + 74260)} \times 100 = 4.2\%$$

$$\text{DDT Breakdown} = \frac{(2630 + 10989)}{(2630 + 10989 + 46586)} \times 100 = 22.6\%$$

Data File: /var/chem/gc3.1/2310-E.b/c-a2572.d  
Date: 31-MAY-2000 14:19  
Client ID: EVALB  
Sample Info: EVALB,2310-E.b,EVALBR,sub,3,1

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 320

Data File: /var/chem/gc3.i/2310-E.b/c-a2573.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

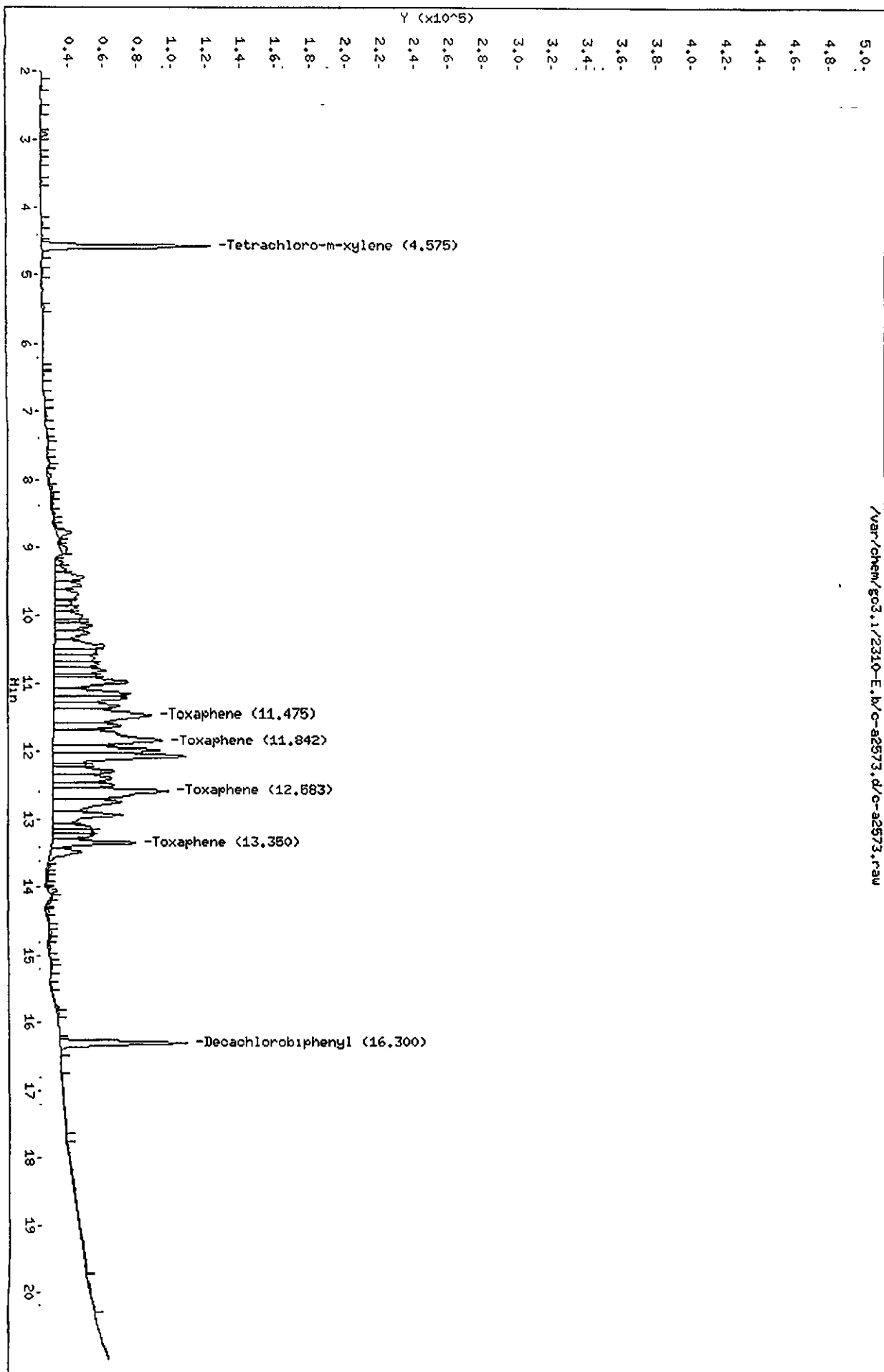
Data file : /var/chem/gc3.i/2310-E.b/c-a2573.d  
Lab Smp Id: MEDTOX Client Smp ID: MEDTOX  
Inj Date : 31-MAY-2000 14:45  
Operator : 1891 Inst ID: gc3.i  
Smp Info : MEDTOX,2310-E.b,,1-TOX.sub,,1,3  
Misc Info : 190-84-13  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 14:45 Cal File: c-a2573.d  
Als bottle: 1 Calibration Sample, Level: 3  
Dil Factor: 1.00000  
Integrator: Falcon Compound Sublist: 1-TOX.sub  
Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
18 Toxaphene	11.475	11.475	0.000	56539	1.00000	1.00000
\$ 1 Tetrachloro-m-xylene	4.575	4.575	0.000	97879	0.02500	0.0250000
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	74101	0.02500	0.0250000

Data File: /var/chem/gc3.1/2310-E.b/c-a2573.d  
Date: 31-MAY-2000 14:45  
Client ID: MEDTOX  
Sample Info: MEDTOX,2310-E.b,1-TOX,sub,1,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 322

Data File: /var/chem/gc3.i/2310-E.b/c-a2574.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

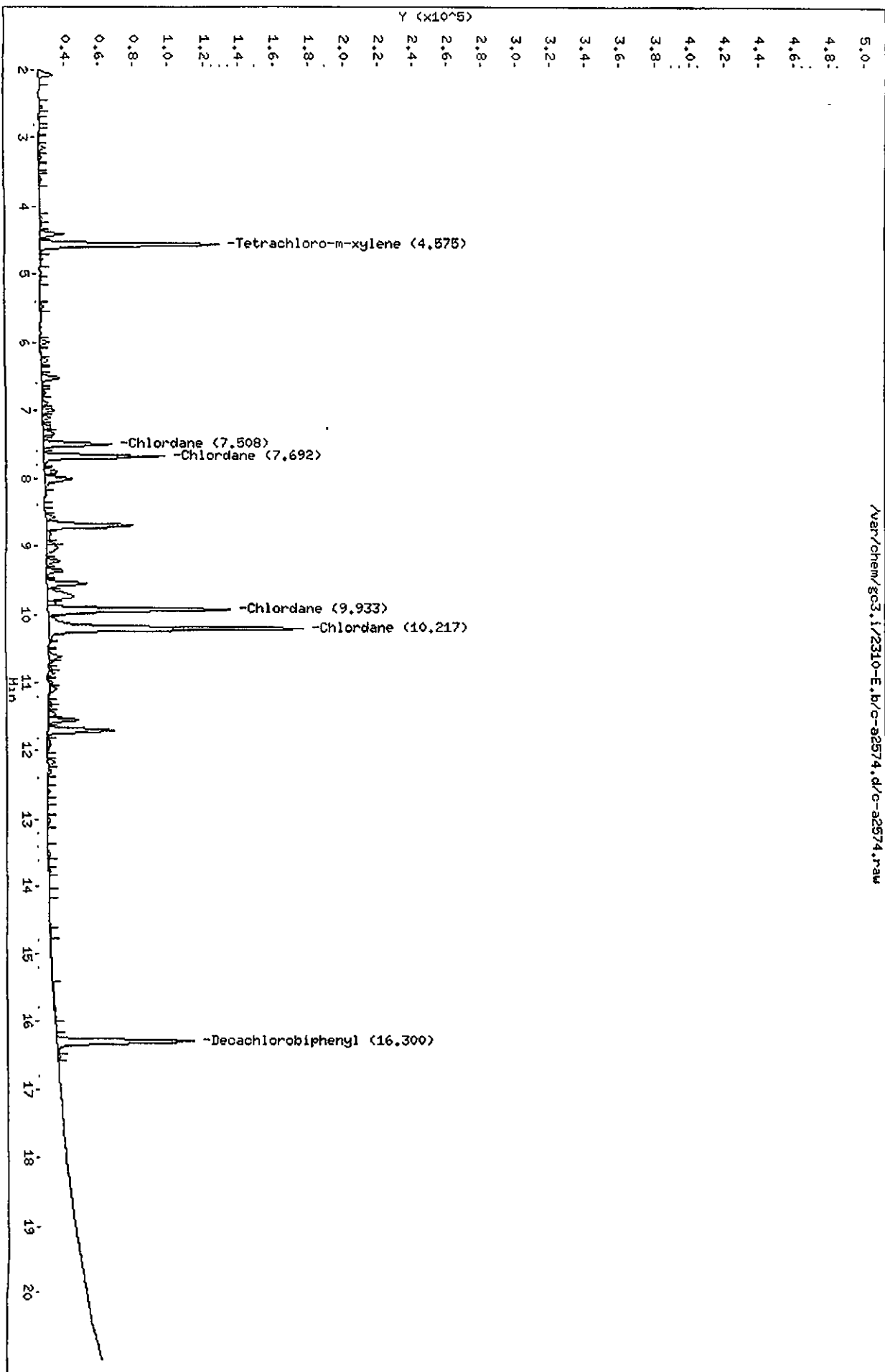
Data file : /var/chem/gc3.i/2310-E.b/c-a2574.d  
Lab Smp Id: MEDCHLOR Client Smp ID: MEDCHLOR  
Inj Date : 31-MAY-2000 15:11  
Operator : 1891 Inst ID: gc3.i  
Smp Info : MEDCHLOR,2310-E.b,,2-CHLO.sub,,1,3  
Misc Info : 190-85-10  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 15:11 Cal File: c-a2574.d  
Als bottle: 1 Calibration Sample, Level: 3  
Dil Factor: 1.00000  
Integrator: Falcon Compound Sublist: 2-CHLO.sub  
Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT	ON-COL
					( ng)	( ng)
9 Chlordane	7.508	7.508	0.000	40233	0.25000	0.250000
\$ 1 Tetrachloro-m-xylene	4.575	4.575	0.000	103452	0.02500	0.0250000
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	79805	0.02500	0.0250000

Data File: /var/chem/gc3.1/2310-E.b/c-a2574.d  
Date: 31-MAY-2000 15:11  
Client ID: MEDCHLOR  
Sample Info: MEDCHLOR,2310-E,b,2-CHLO,sub,1,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53





658 324

Data File: /var/chem/gc3.i/2310-E.b/c-a2575.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

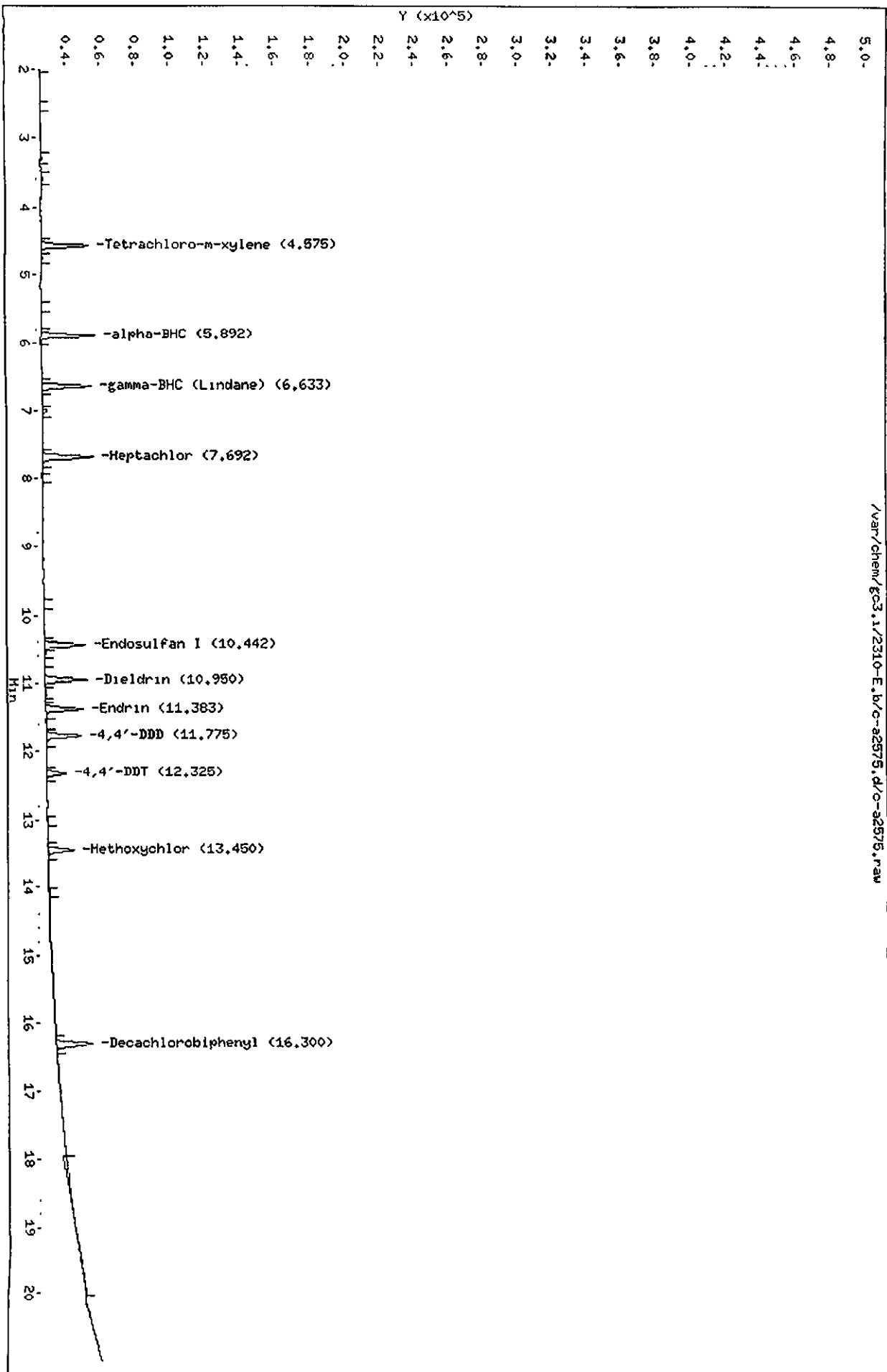
Data file : /var/chem/gc3.i/2310-E.b/c-a2575.d  
Lab Smp Id: LOWA Client Smp ID: LOWA  
Inj Date : 31-MAY-2000 15:37  
Operator : 1891 Inst ID: gc3.i  
Smp Info : LOWA,2310-E.b,,3-INDA.sub,,1,1  
Misc Info : 190-84-1  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 15:37 Cal File: c-a2575.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	4.575	4.575	0.000	27301	0.00500	0.00568873
5 alpha-BHC	5.892	5.892	0.000	31198	0.00500	0.00500000
6 gamma-BHC (Lindane)	6.633	6.633	0.000	28856	0.00500	0.00500000
10 Heptachlor	7.692	7.683	0.009	29396	0.00500	0.00500000
15 Endosulfan I	10.442	10.442	0.000	24122	0.00500	0.00500000
17 Dieldrin	10.950	10.950	0.000	24305	0.00500	0.00500000
20 Endrin	11.383	11.383	0.000	21916	0.00500	0.00500000
21 4,4'-DDD	11.775	11.775	0.000	19879	0.00500	0.00500000
23 4,4'-DDT	12.325	12.325	0.000	11193	0.00500	0.00500000
25 Methoxychlor	13.450	13.450	0.000	15149	0.01000	0.01000000
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	20652	0.00500	0.00564062

Data File: /var/chem/gc3.1/2310-E.b/c-a2575.d  
Date: 31-MAY-2000 15:37  
Client ID: LOMA  
Sample Info: LOMA, 2310-E.b, 3-INDR, sub, 1.1

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 326

Data File: /var/chem/gc3.i/2310-E.b/c-a2576.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

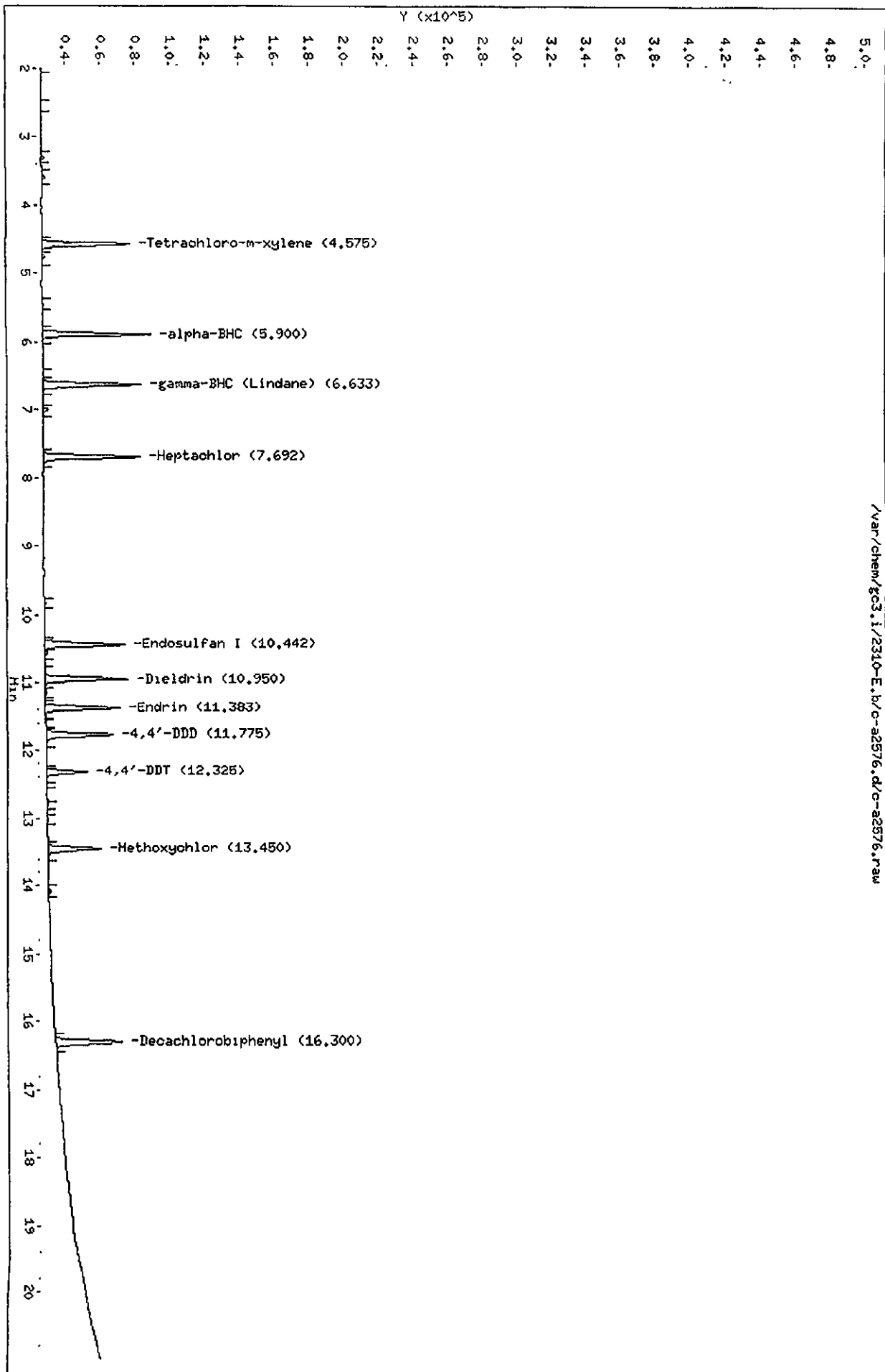
Data file : /var/chem/gc3.i/2310-E.b/c-a2576.d  
 Lab Smp Id: MLOWA Client Smp ID: MLOWA  
 Inj Date : 31-MAY-2000 16:03  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MLOWA, 2310-E.b, , 3-INDA.sub, , 1, 2  
 Misc Info : 190-84-2  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 16:03 Cal File: c-a2576.d  
 Als bottle: 1 Calibration Sample, Level: 2  
 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	4.575	4.575	0.000	51598	0.01000	0.0104888
5 alpha-BHC	5.900	5.892	0.008	63213	0.01000	0.0100650
6 gamma-BHC (Lindane)	6.633	6.633	0.000	57779	0.01000	0.0100058
10 Heptachlor	7.692	7.683	0.009	56650	0.01000	0.00981445
15 Endosulfan I	10.442	10.442	0.000	47333	0.01000	0.00990468
17 Dieldrin	10.950	10.950	0.000	48324	0.01000	0.00997050
20 Endrin	11.383	11.383	0.000	43433	0.01000	0.00995428
21 4,4'-DDD	11.775	11.775	0.000	39357	0.01000	0.00994931
23 4,4'-DDT	12.325	12.325	0.000	24270	0.01000	0.0104038
25 Methoxychlor	13.450	13.450	0.000	31024	0.02000	0.0202368
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	38684	0.01000	0.0103701

Data File: /var/chem/gc3.1/2310-E.b/c-a2576.d  
Date: 31-MAY-2000 16:03  
Client ID: MLCMA  
Sample Info: MLCMA,2310-E.b,3-INDA,sub,1,2

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 328

Data File: /var/chem/gc3.i/2310-E.b/c-a2577.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

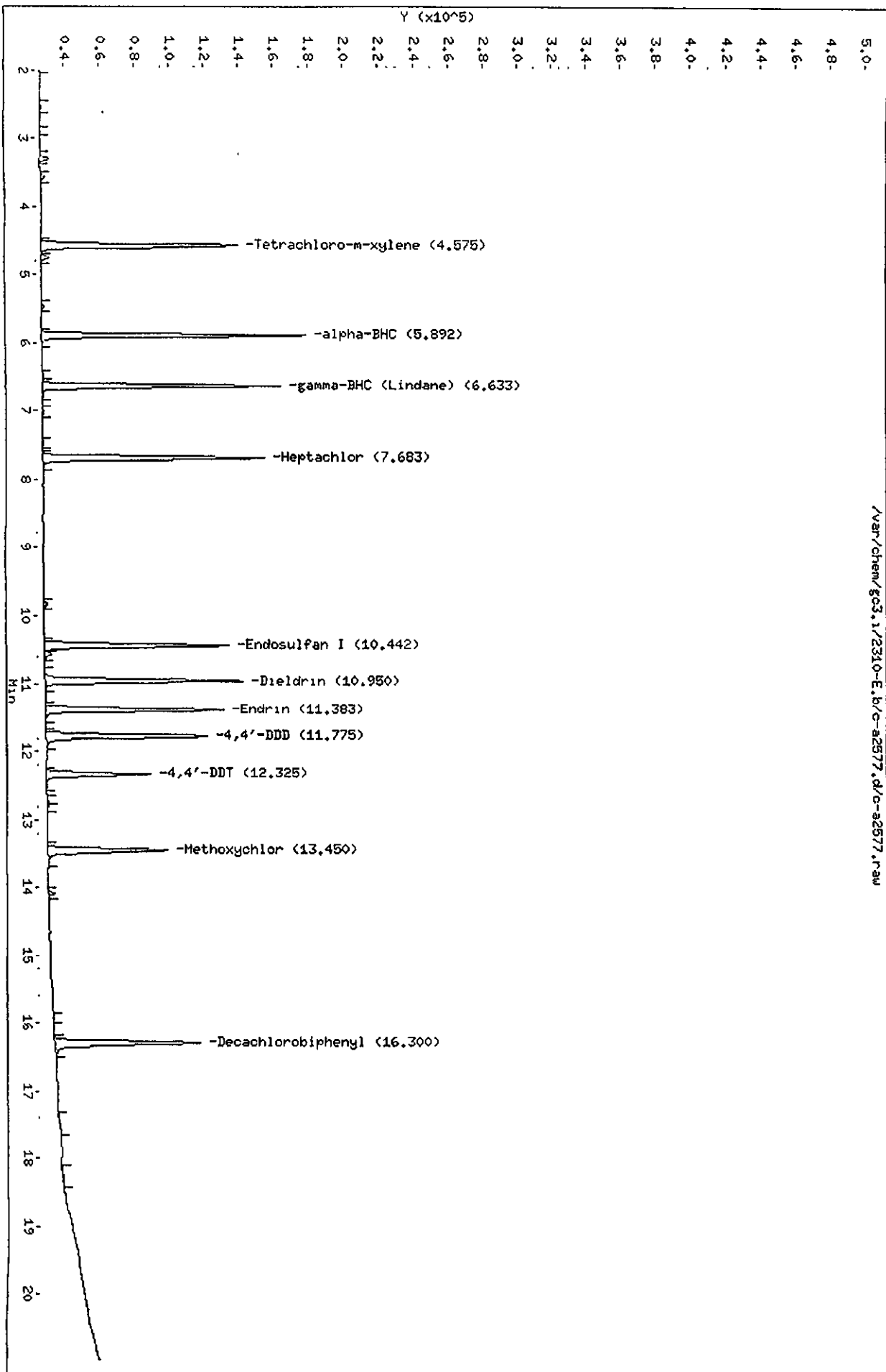
Data file : /var/chem/gc3.i/2310-E.b/c-a2577.d  
 Lab Smp Id: MEDA Client Smp ID: MEDA  
 Inj Date : 31-MAY-2000 16:29  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDA, 2310-E.b, , 3-INDA.sub, , 1, 3  
 Misc Info : 190-84-3  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 16:29 Cal File: c-a2577.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	4.575	4.575	0.000	112705	0.02500	0.0223500
5 alpha-BHC	5.892	5.892	0.000	151999	0.02500	0.0244622
6 gamma-BHC (Lindane)	6.633	6.633	0.000	137328	0.02500	0.0241743
10 Heptachlor	7.683	7.683	0.000	128148	0.02500	0.0230619
15 Endosulfan I	10.442	10.442	0.000	106345	0.02500	0.0230992
17 Dieldrin	10.950	10.950	0.000	114103	0.02500	0.0240090
20 Endrin	11.383	11.383	0.000	103031	0.02500	0.0240582
21 4,4'-DDD	11.775	11.775	0.000	93254	0.02500	0.0240311
23 4,4'-DDT	12.325	12.325	0.000	60215	0.02500	0.0255357
25 Methoxychlor	13.450	13.450	0.000	68812	0.05000	0.0464701
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	83642	0.02500	0.0221188

Data File: /var/chem/gc3.1/2310-E.b/c-a2577.d  
Date : 31-MAY-2000 16:29  
Client ID: HEDA  
Sample Info: HEDA,2310-E.b,3-INDA.sub,1,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



Data File: /var/chem/gc3.i/2310-E.b/c-a2578.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2578.d  
 Lab Smp Id: MHIGHA Client Smp ID: MHIGHA  
 Inj Date : 31-MAY-2000 16:55  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MHIGHA,2310-E.b,,3-INDA.sub,,1,4  
 Misc Info : 190-84-4  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 16:55 Cal File: c-a2578.d  
 Als bottle: 1 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 3-INDA.sub  
 Target Version: 3.40

Compoundo						AMOUNTS	
	RT	EXP RT	DLT RT	RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	4.575	4.575	0.000		203118	0.05000	0.0423371
5 alpha-BHC	5.892	5.892	0.000		289515	0.05000	0.0474009
6 gamma-BHC (Lindane)	6.633	6.633	0.000		262631	0.05000	0.0471196
10 Heptachlor	7.692	7.683	0.009		240271	0.05000	0.0447525
15 Endosulfan I	10.433	10.442	-0.009		199261	0.05000	0.0447860
17 Dieldrin	10.950	10.950	0.000		214970	0.05000	0.0463374
20 Endrin	11.383	11.383	0.000		194387	0.05000	0.0464610
21 4,4'-DDD	11.767	11.775	-0.008		178988	0.05000	0.0470358
23 4,4'-DDT	12.325	12.325	0.000		127557	0.05000	0.0530088
25 Methoxychlor	13.450	13.450	0.000		133308	0.10000	0.0923278
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000		152254	0.05000	0.0423235

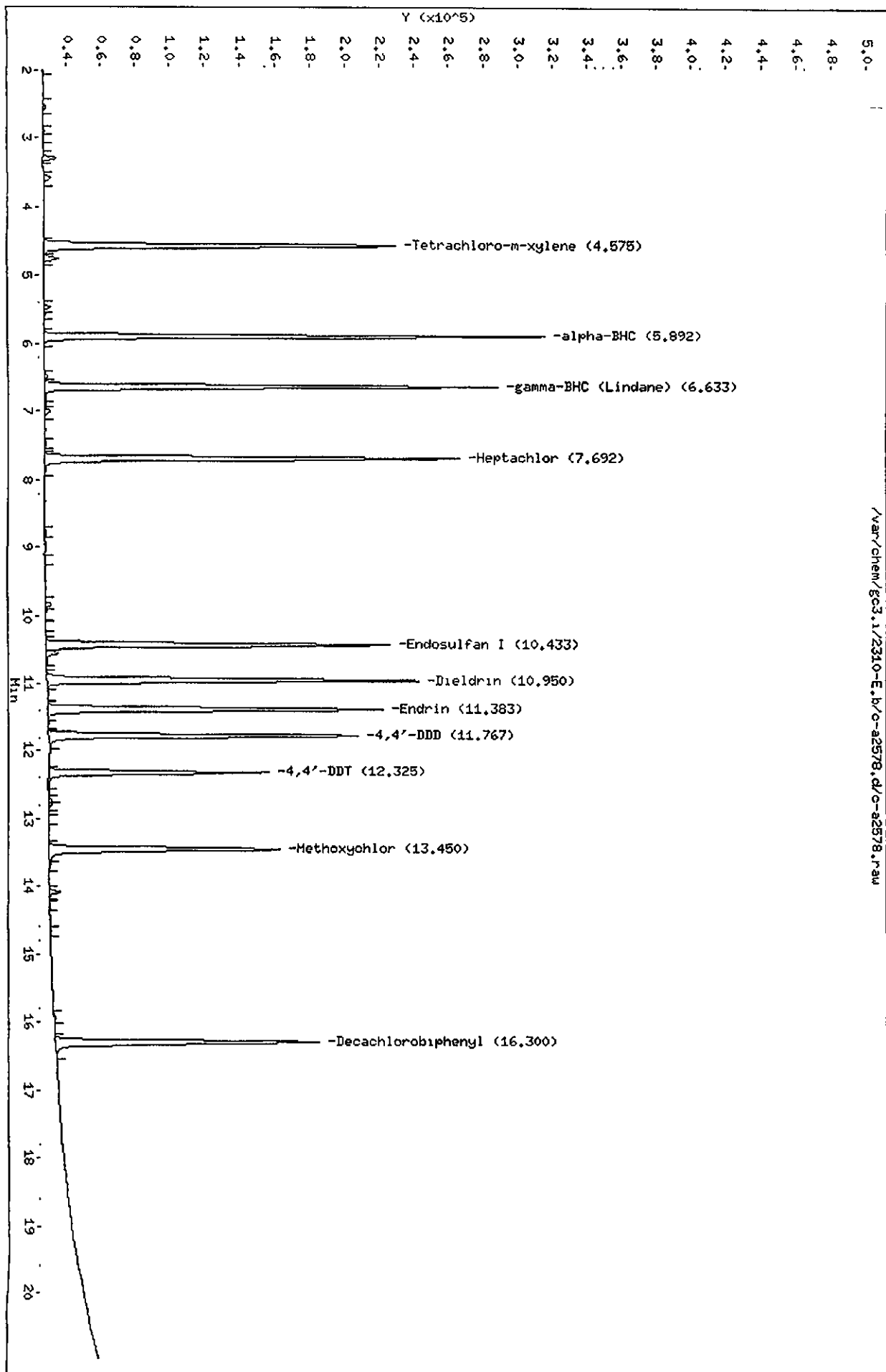
Data File: /var/chem/gc3.1/2310-E.b/c-a2578.d  
Date: 31-MAY-2000 16:55  
Client ID: HHIGHA  
Sample Info: HHIGHA,2310-E.b,3-INDA.sub,1,4

Column phase: RTX-CLP

Instrument: gc3.1

Operator: 1891

Column diameter: 0.53





Data File: /var/chem/gc3.i/2310-E.b/c-a2579.d  
Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2579.d  
Lab Smp Id: HIGHA Client Smp ID: HIGHA  
Inj Date : 31-MAY-2000 17:21  
Operator : 1891 Inst ID: gc3.i  
Smp Info : HIGHA,2310-E.b,,3-INDA.sub,,1,5  
Misc Info : 190-84-5  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 17:21 Cal File: c-a2579.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	4.575	4.575	0.000	361719	0.10000	0.0792974
5 alpha-BHC	5.900	5.892	0.008	534499	0.10000	0.0897529
6 gamma-BHC (Lindane)	6.633	6.633	0.000	482279	0.10000	0.0889235
10 Heptachlor	7.692	7.683	0.009	433602	0.10000	0.0839938
15 Endosulfan I	10.433	10.442	-0.009	356493	0.10000	0.0834423
17 Dieldrin	10.950	10.950	0.000	389808	0.10000	0.0867976
20 Endrin	11.383	11.383	0.000	351097	0.10000	0.0867058
21 4,4'-DDD	11.767	11.775	-0.008	323803	0.10000	0.0877066
23 4,4'-DDT	12.325	12.325	0.000	251751	0.10000	0.103662 (A)
25 Methoxychlor	13.450	13.450	0.000	248640	0.20000	0.177129
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	275405	0.10000	0.0803229

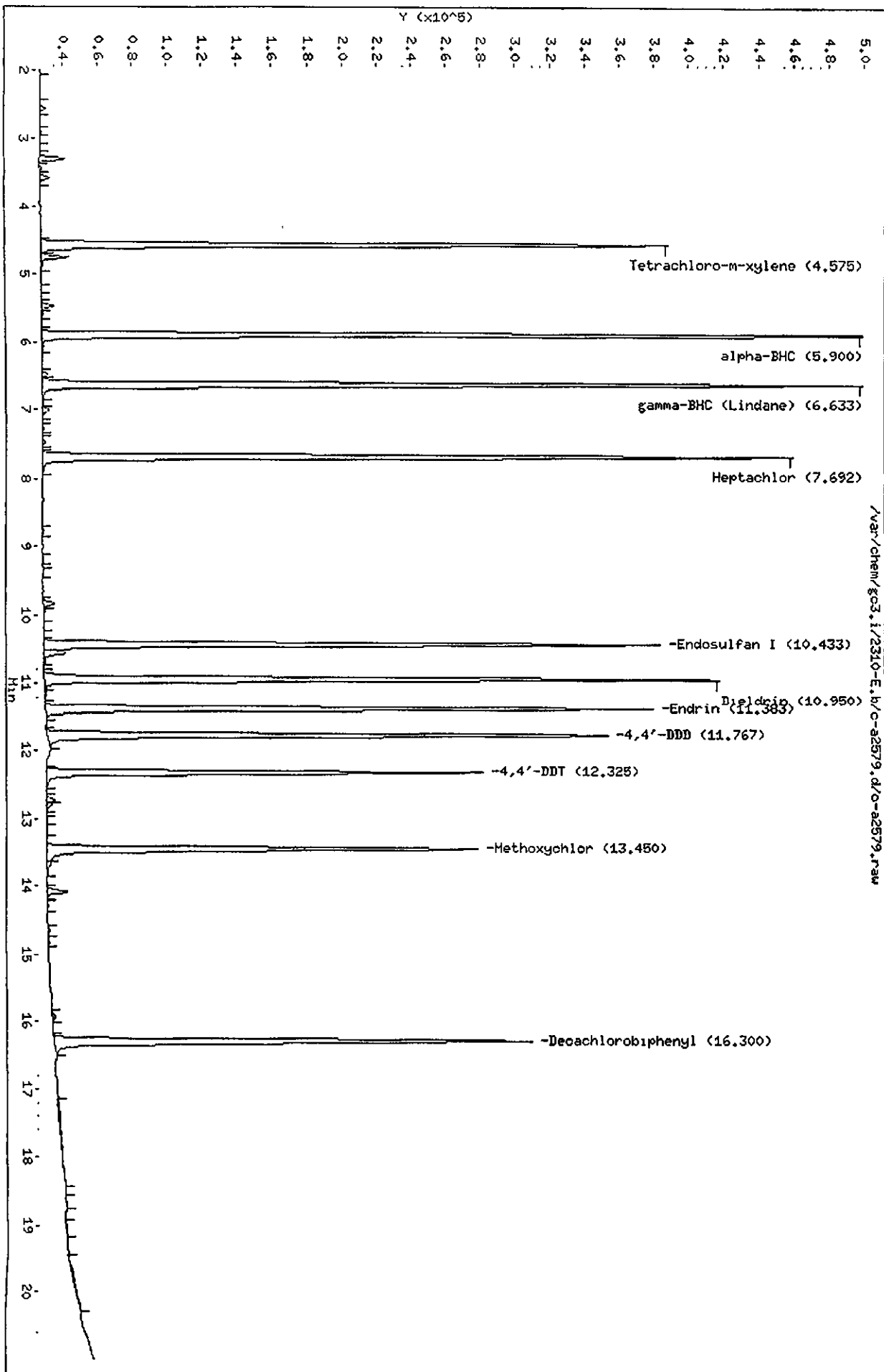
## QC Flag Legend

A - Target compound detected but, quantitated amount  
exceeded maximum amount.

Data File: /var/chem/gc3.1/2310-E.b/c-a2579.d  
Date: 31-MAY-2000 17:24  
Client ID: HIGHA  
Sample Info: HIGHA,2310-E.b,3-INDA.sub,1,5

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1894  
Column diameter: 0.53



658 334

Data File: /var/chem/gc3.i/2310-E.b/c-a2580.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

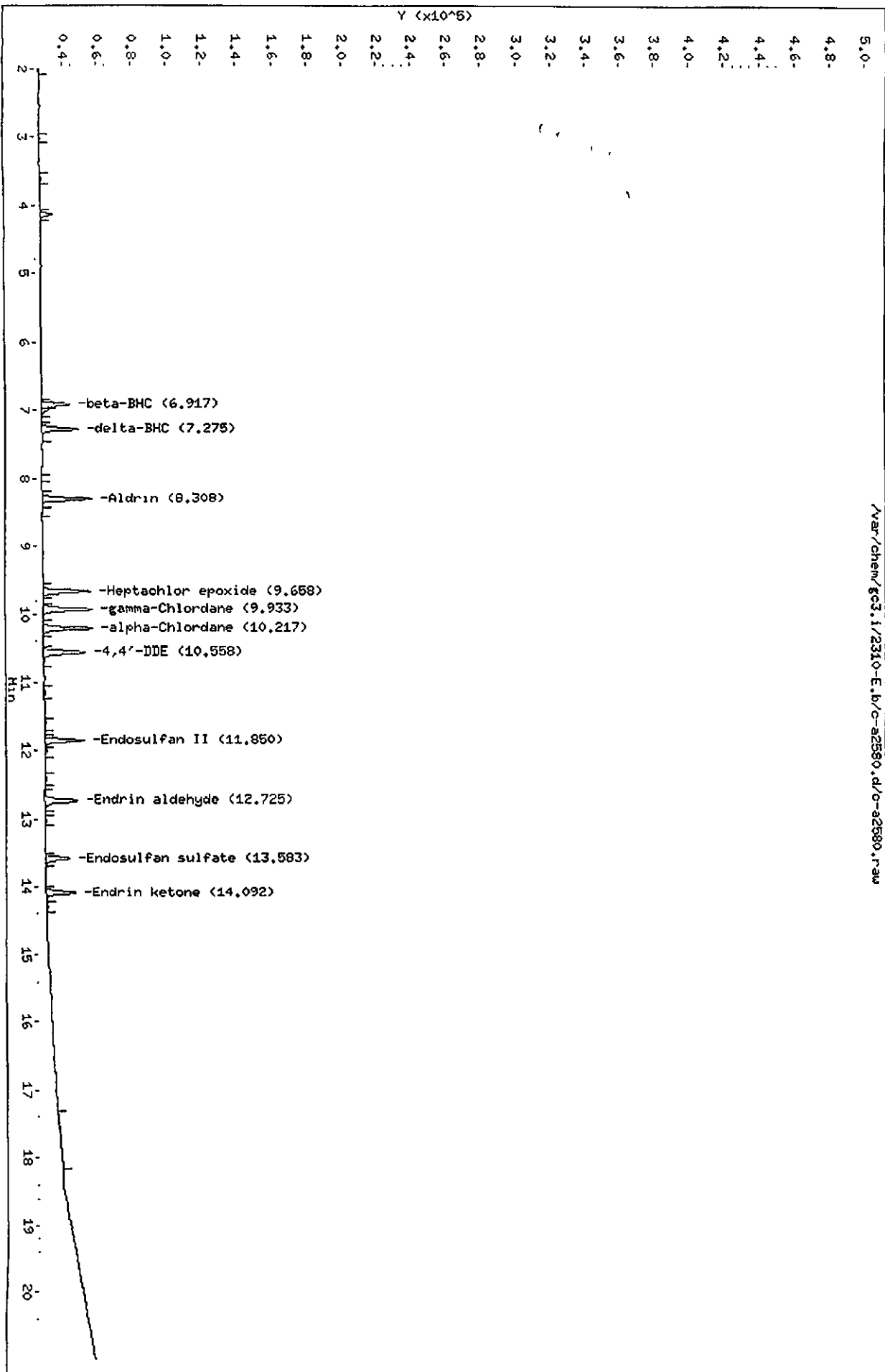
Data file : /var/chem/gc3.i/2310-E.b/c-a2580.d  
Lab Smp Id: LOWB Client Smp ID: LOWB  
Inj Date : 31-MAY-2000 17:47  
Operator : 1891 Inst ID: gc3.i  
Smp Info : LOWB,2310-E.b,,4-INDB.sub,,1,1  
Misc Info : 190-84-7  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 17:47 Cal File: c-a2580.d  
Als bottle: 1 Calibration Sample, Level: 1  
Dil Factor: 1.00000  
Integrator: Falcon Compound Sublist: 4-INDB.sub  
Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.308	8.308	0.000	29090	0.00500	0.00500000
7 beta-BHC	6.917	6.917	0.000	16493	0.00500	0.00500000
8 delta-BHC	7.275	7.275	0.000	21470	0.00500	0.00500000
12 Heptachlor epoxide	9.658	9.658	0.000	27942	0.00500	0.00500000
13 gamma-Chlordane	9.933	9.933	0.000	28300	0.00500	0.00500000
14 alpha-Chlordane	10.217	10.217	0.000	28467	0.00500	0.00500000
16 4,4'-DDE	10.558	10.558	0.000	24229	0.00500	0.00500000
22 Endosulfan II	11.850	11.858	-0.008	22828	0.00500	0.00500000
24 Endrin aldehyde	12.725	12.725	0.000	19502	0.00500	0.00500000
26 Endosulfan sulfate	13.583	13.592	-0.009	14298	0.00500	0.00500000
27 Endrin ketone	14.092	14.092	0.000	17370	0.00500	0.00500000

Data File: /var/chem/gc3.1/2310-E.b/c-a2580.d  
Date: 31-MAY-2000 17:47  
Client ID: LOMB  
Sample Info: LOMB,2310-E.b,4-INDS.sub,1,1

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 336

Data File: /var/chem/gc3.i/2310-E.b/c-a2581.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

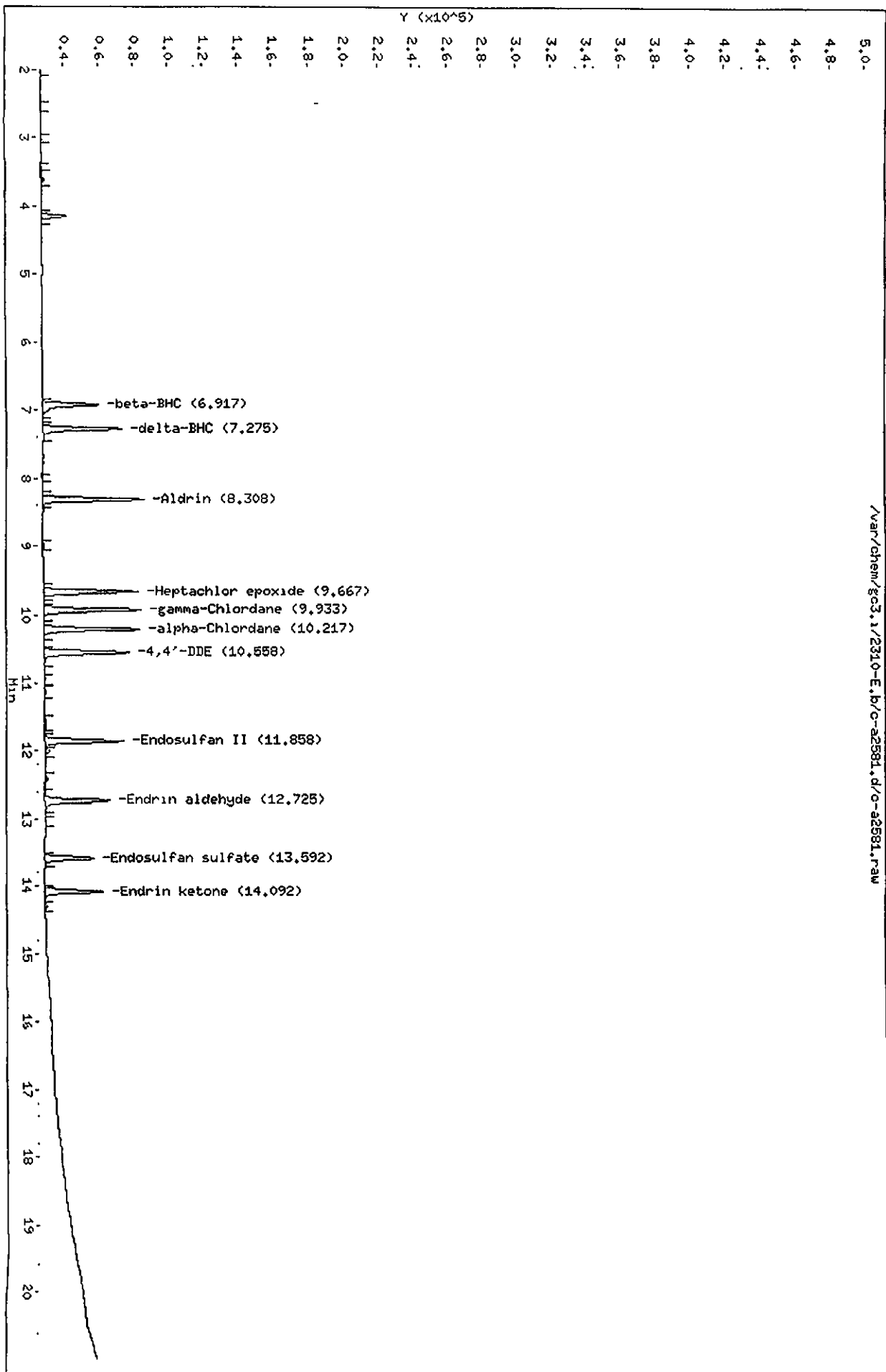
Data file : /var/chem/gc3.i/2310-E.b/c-a2581.d  
Lab Smp Id: MLOWB Client Smp ID: MLOWB  
Inj Date : 31-MAY-2000 18:13  
Operator : 1891 Inst ID: gc3.i  
Smp Info : MLOWB,2310-E.b,,4-INDB.sub,,1,2  
Misc Info : 190-84-8  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 18:13 Cal File: c-a2581.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	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.308	8.308	0.000	58339	0 01000	0.0100136
7 beta-BHC	6.917	6.917	0 000	32455	0 01000	0.00991886
8 delta-BHC	7.275	7 275	0.000	45527	0.01000	0.0102924
12 Heptachlor epoxide	9.667	9.658	0.009	54756	0.01000	0 00989805
13 gamma-Chlordane	9.933	9.933	0.000	56210	0.01000	0 00996543
14 alpha-Chlordane	10.217	10.217	0.000	55915	0.01000	0.00990970
16 4,4'-DDE	10.558	10.558	0.000	49253	0.01000	0 0100814
22 Endosulfan II	11 858	11.858	0 000	45524	0.01000	0 00998552
24 Endrin aldehyde	12.725	12.725	0 000	37830	0.01000	0 00984720
26 Endosulfan sulfate	13.592	13 592	0.000	28090	0.01000	0.00991074
27 Endrin ketone	14.092	14 092	0 000	33718	0 01000	0.00985071

Data File: /var/chem/gc3.1/2310-E.b/c-a2581.d  
Date: 31-MAY-2000 18:13  
Client ID: HLOMB  
Sample Info: HLOMB,2310-E.b,4-INDB.sub,1,2

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



Data File: /var/chem/gc3.i/2310-E.b/c-a2582.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

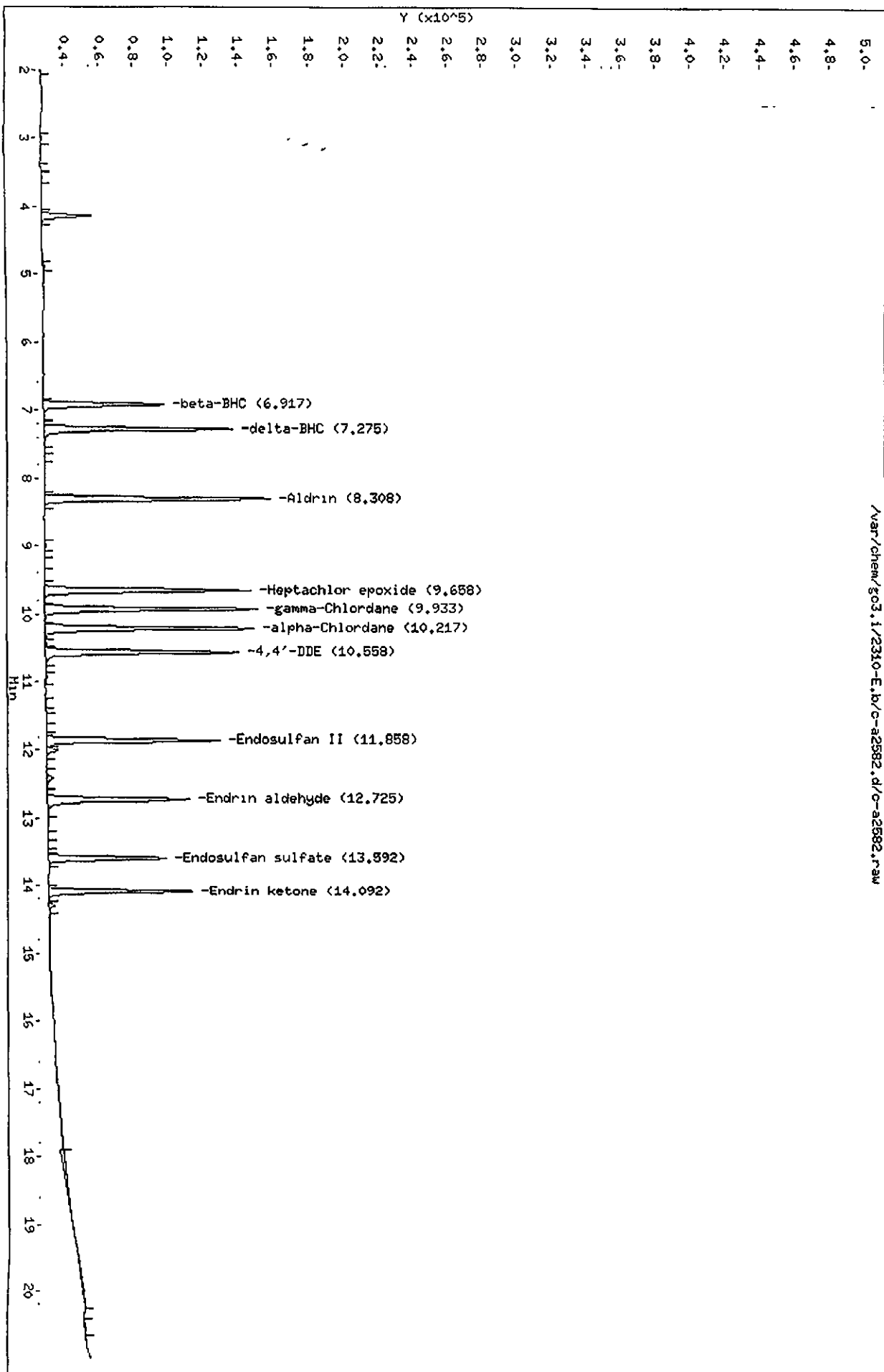
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 Inj Date : 31-MAY-2000 18:39  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDB,2310-E.b,,4-INDB.sub,,1,3  
 Misc Info : 190-84-9  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 18:39 Cal File: c-a2582.d  
 Als bottle: 1 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 4-INDB.sub  
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT ( ng)	ON-COL ( ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	8.308	8 308	0 000	131041	0 02500	0.0232706
7 beta-BHC	6.917	6.917	0.000	69465	0.02500	0 0223535
8 delta-BHC	7.275	7.275	0.000	109001	0 02500	0.0247603
12 Heptachlor epoxide	9.658	9 658	0 000	119327	0.02500	0 0226040
13 gamma-Chlordane	9.933	9.933	0 000	123208	0 02500	0 0228032
14 alpha-Chlordane	10.217	10 217	0 000	121011	0.02500	0.0225132
16 4,4'-DDE	10.558	10.558	0 000	111393	0.02500	0.0234894
22 Endosulfan II	11.858	11.858	0 000	100255	0 02500	0.0229098
24 Endrin aldehyde	12.725	12.725	0 000	82846	0 02500	0.0226000
26 Endosulfan sulfate	13.592	13 592	0.000	68149	0 02500	0.0243547
27 Endrin ketone	14 092	14.092	0.000	83643	0.02500	0.0246214

Data File: /var/chem/gc3.1/2310-E.b/c-a2582.d  
Date : 31-MAY-2000 18:39  
Client ID: HEDB  
Sample Info: HEDB,2310-E.b,4-INDB,sub,1,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53





658 340

Data File: /var/chem/gc3.i/2310-E.b/c-a2583.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

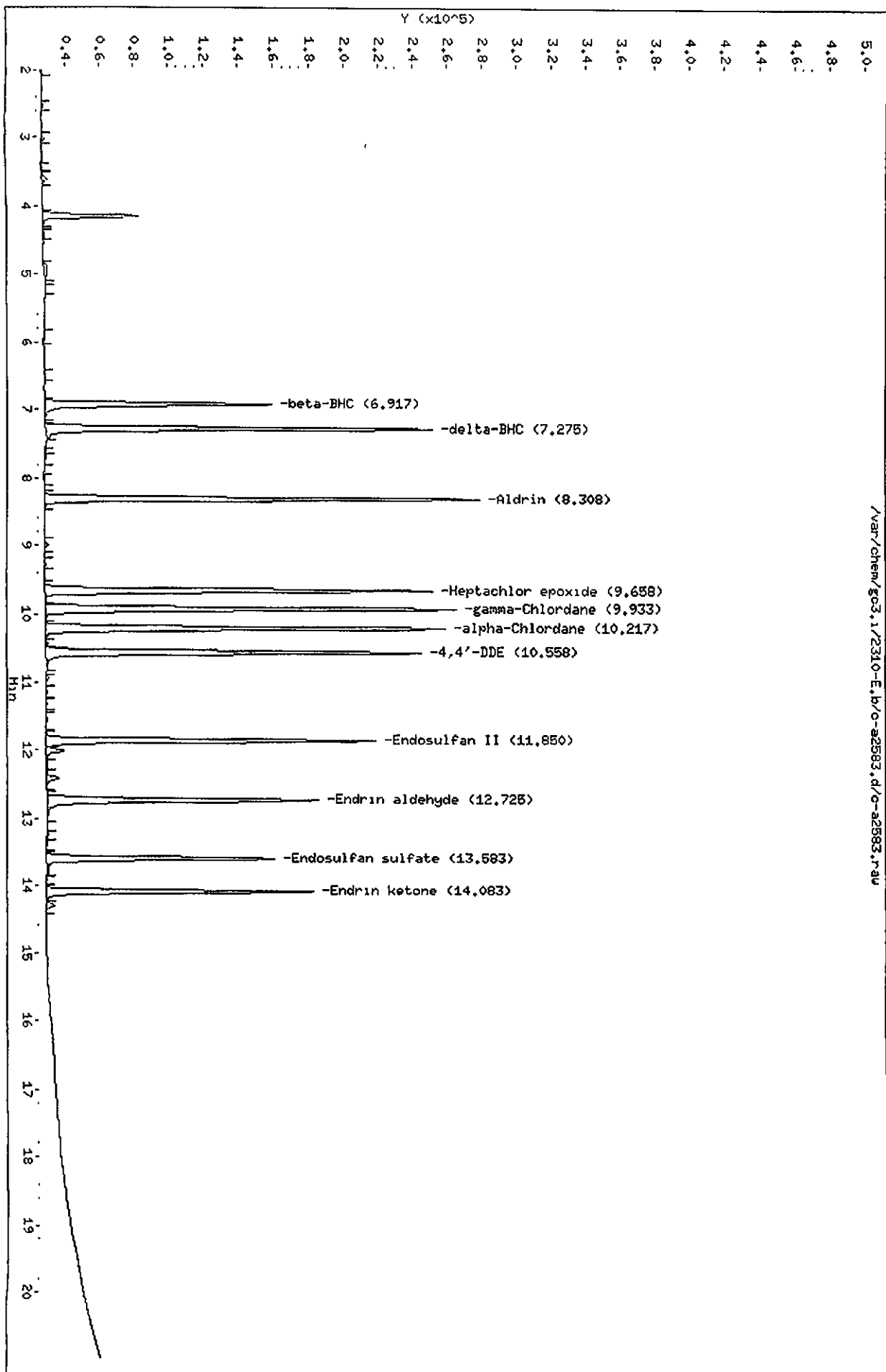
Data file : /var/chem/gc3.i/2310-E.b/c-a2583.d  
 Lab Smp Id: MHIGHB Client Smp ID: MHIGHB  
 Inj Date : 31-MAY-2000 19:05  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MHIGHB, 2310-E.b, , 4-INDB.sub, , 1, 4  
 Misc Info : 190-84-10  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 19:05 Cal File: c-a2583.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	8.308	8.308	0.000	251237	0.05000	0.0458498
7 beta-BHC	6.917	6.917	0.000	131393	0.05000	0.0439788
8 delta-BHC	7.275	7.275	0.000	223317	0.05000	0.0505440
12 Heptachlor epoxide	9.658	9.658	0.000	224103	0.05000	0.0441166
13 gamma-Chlordane	9.933	9.933	0.000	236920	0.05000	0.0452402
14 alpha-Chlordane	10.217	10.217	0.000	230796	0.05000	0.0445095
16 4,4'-DDE	10.558	10.558	0.000	216903	0.05000	0.0467340
22 Endosulfan II	11.850	11.858	-0.008	191118	0.05000	0.0451001
24 Endrin aldehyde	12.725	12.725	0.000	156971	0.05000	0.0444153
26 Endosulfan sulfate	13.583	13.592	-0.009	131862	0.05000	0.0478116
27 Endrin ketone	14.083	14.092	-0.009	154636	0.05000	0.0465622

Data File: /var/chem/gc3.1/2310-E.b/c-a2583.d  
Date: 31-MAY-2000 19:05  
Client ID: HHICHB  
Sample Info: HHICHB, 2310-E.b, 4-INDB, sub, 1,4

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 342

Data File: /var/chem/gc3.i/2310-E.b/c-a2584.d  
Report Date: 01-Jun-2000 12:14

STL-PITTSBURGH

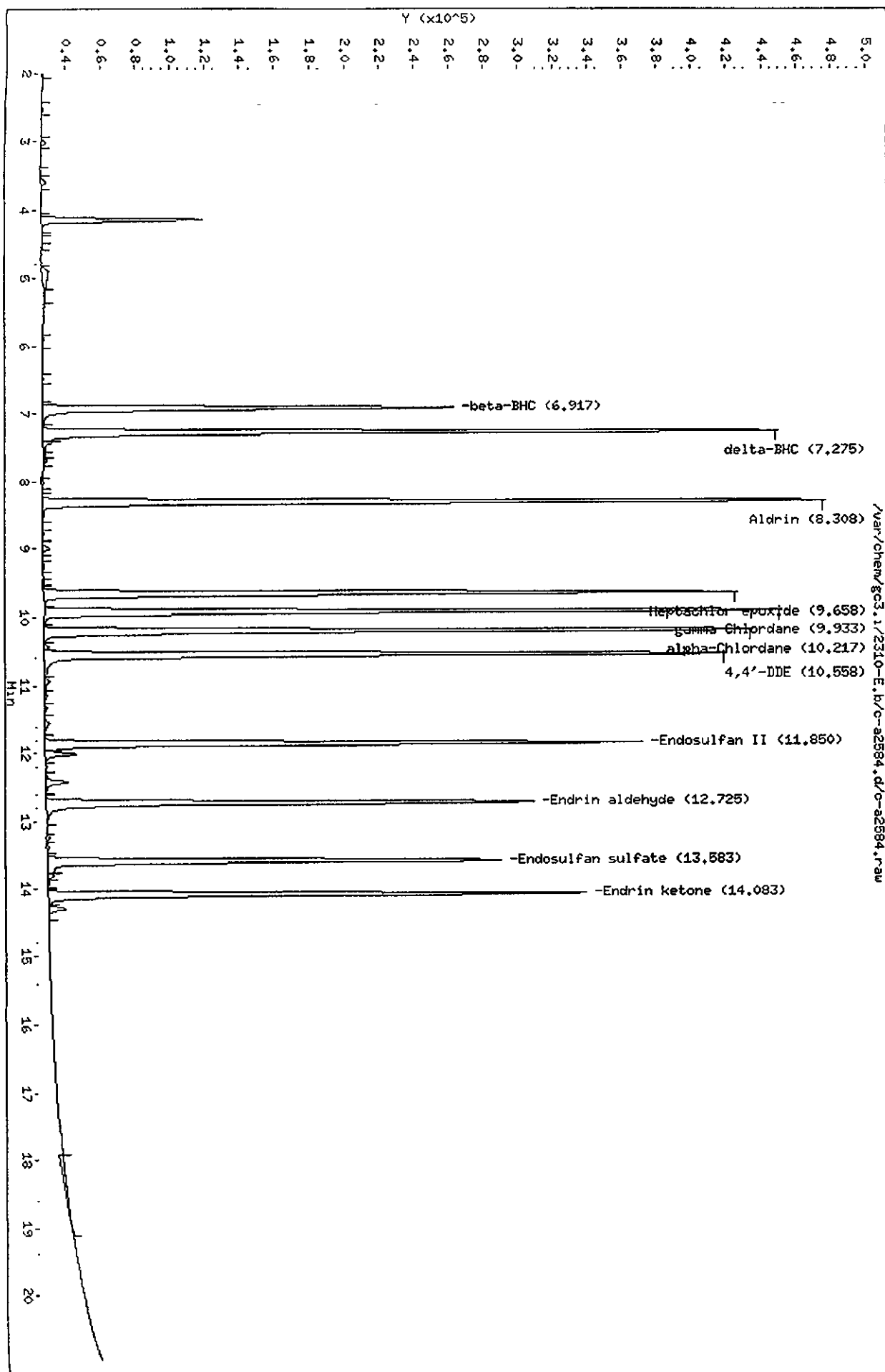
Data file : /var/chem/gc3.i/2310-E.b/c-a2584.d  
Lab Smp Id: HIGHB Client Smp ID: HIGHB  
Inj Date : 31-MAY-2000 19:30  
Operator : 1891 Inst ID: gc3.i  
Smp Info : HIGHB,2310-E.b,,4-INDB.sub,,1,5  
Misc Info : 190-84-11  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	8.308	8.308	0.000	448907	0.10000	0.0849966
7 beta-BHC	6.917	6.917	0.000	235291	0.10000	0.0822496
8 delta-BHC	7.275	7.275	0.000	421952	0.10000	0.0963686
12 Heptachlor epoxide	9.658	9.658	0.000	397516	0.10000	0.0818126
13 gamma-Chlordane	9.933	9.933	0.000	422590	0.10000	0.0839351
14 alpha-Chlordane	10.217	10.217	0.000	405617	0.10000	0.0817861
16 4,4'-DDE	10.558	10.558	0.000	390710	0.10000	0.0869327
22 Endosulfan II	11.850	11.858	-0.008	343112	0.10000	0.0841717
24 Endrin aldehyde	12.725	12.725	0.000	279590	0.10000	0.0825599
26 Endosulfan sulfate	13.583	13.592	-0.009	259874	0.10000	0.0953278
27 Endrin ketone	14.083	14.092	-0.009	308722	0.10000	0.0942866

Data File: /var/chem/gc3.1/2310-E.b/c-a2584.d  
Date: 31-MAY-2000 19:30  
Client ID: HICHB  
Sample Info: HICHB,2310-E.b,4-INDB,sub,1,5

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 344

Data File: /var/chem/gc3.i/2310-E.b/c-a2585.d  
Report Date: 01-Jun-2000 12:14

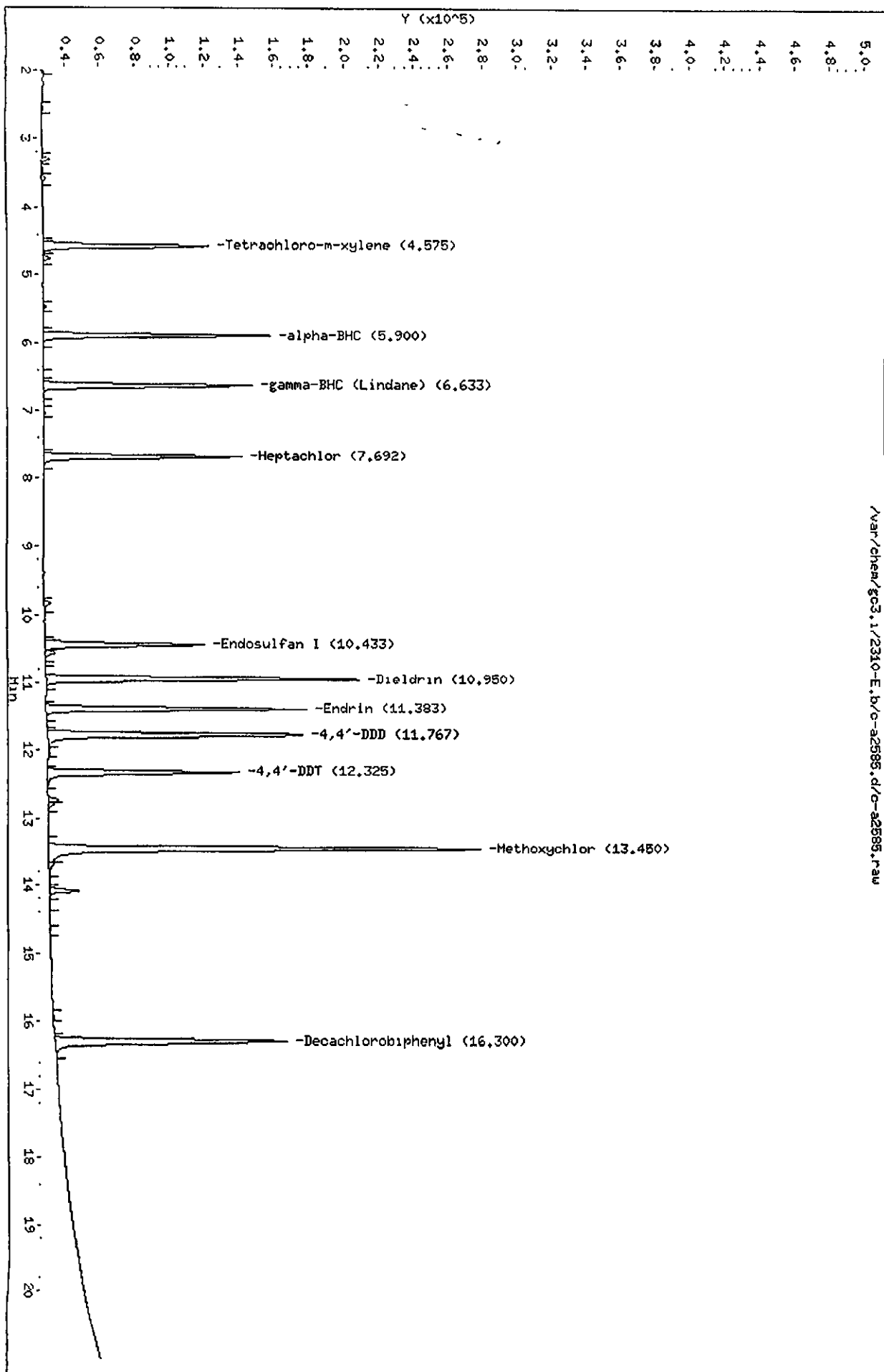
STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2585.d  
Lab Smp Id: 2ND A Client Smp ID: 2ND A  
Inj Date : 31-MAY-2000 19:56  
Operator : 1891 Inst ID: gc3.i  
Smp Info : 2ND A,2310-E.b,,INDA.sub,,2,3  
Misc Info : 190-82-2  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	4.575	4.575	0.000	95501	0.02500	0.0209361
5 alpha-BHC	5.900	5.892	0.008	131616	0.02500	0.0221009
6 gamma-BHC (Lindane)	6.633	6.633	0.000	121166	0.02500	0.0223408
10 Heptachlor	7.692	7.683	0.009	114349	0.02500	0.0221507
15 Endosulfan I	10.433	10.442	-0.009	92472	0.02500	0.0216444
17 Dieldrin	10.950	10.950	0.000	181033	0.02500	0.0403102
20 Endrin	11.383	11.383	0.000	150387	0.02500	0.0371391
21 4,4'-DDD	11.767	11.775	-0.008	148121	0.02500	0.0401206
23 4,4'-DDT	12.325	12.325	0.000	111428	0.02500	0.0458821
25 Methoxychlor	13.450	13.450	0.000	249284	0.05000	0.177588
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	134130	0.02500	0.0391195

Data File: /var/chem/gc3.1/2310-E.b/c-a2585.d  
Date : 31-MAY-2000 19:56  
Client ID: 2ND A  
Sample Info: 2ND A, 2310-E.b, IND0.sub, 2,3  
Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 346

Data File: /var/chem/gc3.i/2310-E.b/c-a2586.d  
 Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

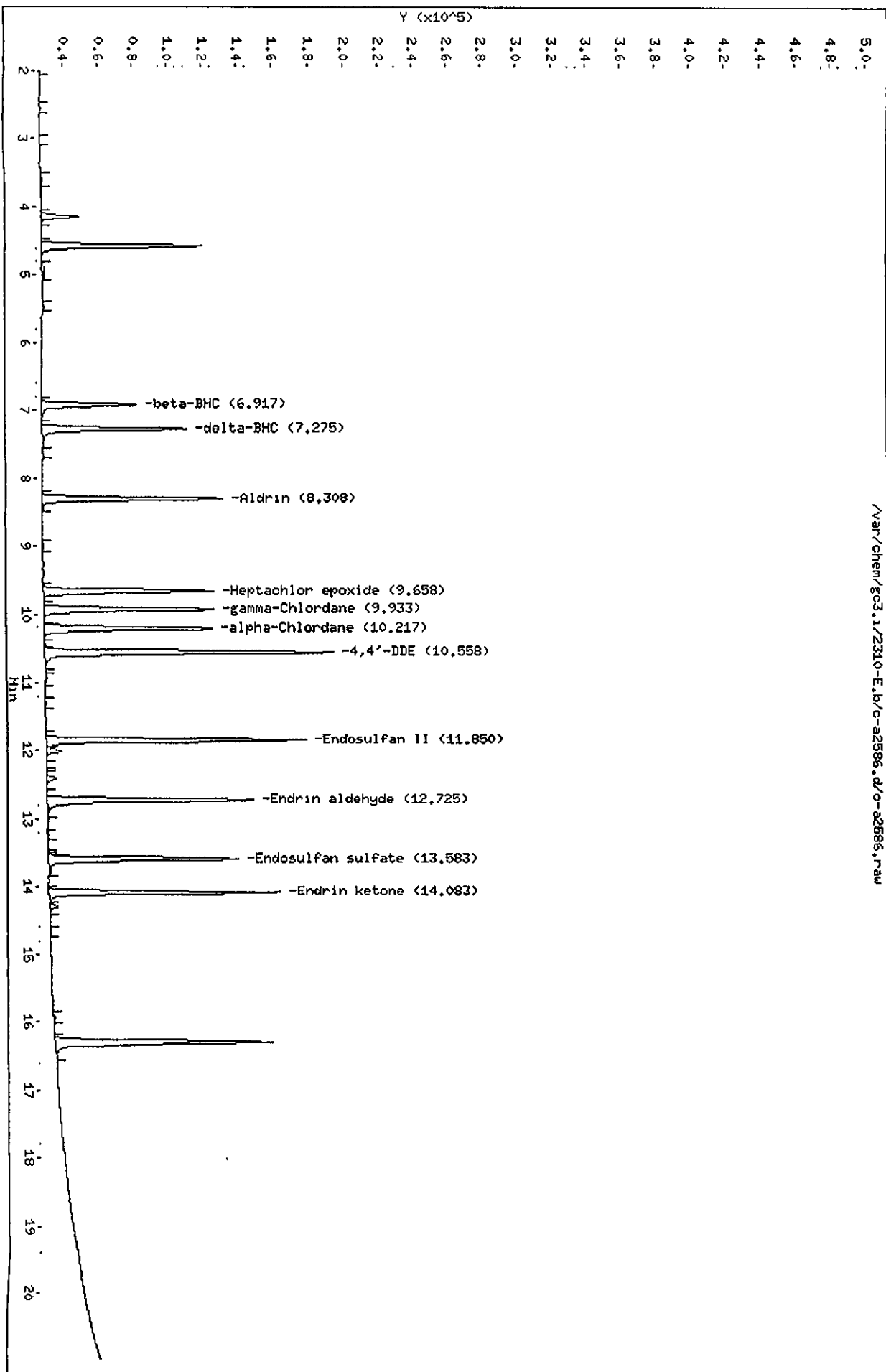
Data file : /var/chem/gc3.i/2310-E.b/c-a2586.d  
 Lab Smp Id: 2ND B Client Smp ID: 2ND B  
 Inj Date : 31-MAY-2000 20:22  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : 2ND B, 2310-E.b, , INDB.sub, , 2, 3  
 Misc Info : 190-82-5  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	8.308	8.308	0.000	104013	0.02500	0.0196939
7 beta-BHC	6.917	6.917	0.000	54771	0.02500	0.0191460
8 delta-BHC	7.275	7.275	0.000	83171	0.02500	0.0189952
12 Heptachlor epoxide	9.658	9.658	0.000	98469	0.02500	0.0202659
13 gamma-Chlordane	9.933	9.933	0.000	97854	0.02500	0.0194358
14 alpha-Chlordane	10.217	10.217	0.000	97483	0.02500	0.0196559
16 4,4'-DDE	10.558	10.558	0.000	165695	0.02500	0.0368670
22 Endosulfan II	11.850	11.858	-0.008	149660	0.02500	0.0367143
24 Endrin aldehyde	12.725	12.725	0.000	119386	0.02500	0.0352534
26 Endosulfan sulfate	13.583	13.592	-0.009	109417	0.02500	0.0401367
27 Endrin ketone	14.083	14.092	-0.009	133041	0.02500	0.0406320

Data File: /var/chem/gc3.1/2310-E.b/c-a2586.d  
Date: 31-MAY-2000 20:22  
Client ID: 2ND B  
Sample Info: 2ND B, 2310-E.b, INDB.sub, 2,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53





Data File: /var/chem/gc3.i/2310-E.b/c-a2587.d  
Report Date: 01-Jun-2000 12:14

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2587.d  
Lab Smp Id: EVALB Client Smp ID: EVALB  
Inj Date : 31-MAY-2000 20:48  
Operator : 1891 Inst ID: gc3.i  
Smp Info : EVALB, 2310-E.b, , EVALBR.sub, , 3, 1  
Misc Info : 190-88-8  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	4.575	4.575	0.000	95693	0.02098	0.0209782 (R)
16 4,4'-DDE	10.558	10.558	0.000	3752	0.000835	0.000834817
20 Endrin	11.383	11.383	0.000	103914	0.02566	0.0256623
21 4,4'-DDD	11.775	11.775	0.000	16206	0.00439	0.00438962
23 4,4'-DDT	12.325	12.325	0.000	65588	0.02701	0.0270068
24 Endrin aldehyde	12.725	12.725	0.000	2097	0.000619	0.000619221
27 Endrin ketone	14.083	14.092	-0.009	4441	0.00136	0.00135632
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	74928	0.02185	0.0218530 (R)

## QC Flag Legend

R - Spike/Surrogate failed recovery limits.

$$\text{Endrin Breakdown} = \frac{(2097 + 4441) \times 100}{(2097 + 4441 + 103914)} = 5.9\%$$

$$\text{DDT Breakdown} = \frac{(3752 + \overset{16206}{655}) \times 100}{(3752 + 16206 + 65500)} = 23\%$$

Data File: /var/chem/gc3.1/2310-E,b/c-a2587.d  
Date: 31-MAY-2000 20:48  
Client ID: EVALB  
Sample Info: EVALB,2310-E,b,,EVALBR,sub,3,1

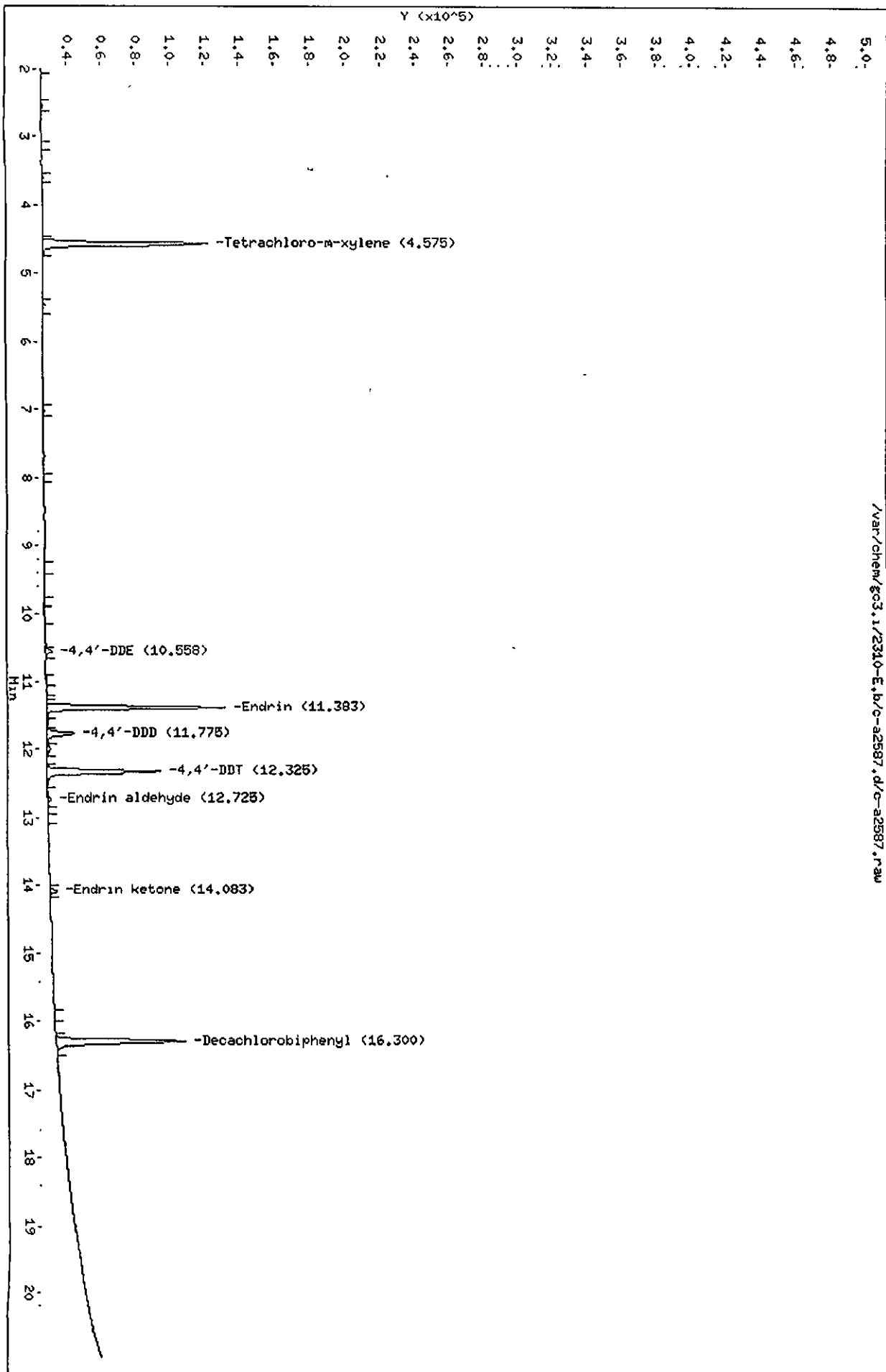
Instrument: gc3.1

Operator: 1891

Column diameter: 0.53

Column phase: RTX-CLP

/var/chem/gc3.1/2310-E,b/c-a2587.d/c-a2587.raw



Data File: /var/chem/gc3.i/2310-E.b/c-a2595.d  
 Report Date: 01-Jun-2000 12:15

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2595.d  
 Lab Smp Id: MEDA Client Smp ID: MEDA  
 Inj Date : 01-JUN-2000 00:15  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : MEDA,2310-E.b,,INDA.sub,,2,3  
 Misc Info : 190-84-3  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	4.575	4.575	0.000	116215	0.02500	0.0254771
5 alpha-BHC	5.892	5.892	0.000	163283	0.02500	0.0274184
6 gamma-BHC (Lindane)	6.633	6.633	0.000	147721	0.02500	0.0272371
10 Heptachlor	7.683	7.683	0.000	135598	0.02500	0.0262669
15 Endosulfan I	10.433	10.442	-0.009	110291	0.02500	0.0258152
17 Dieldrin	10.950	10.950	0.000	117540	0.02500	0.0261723
20 Endrin	11.383	11.383	0.000	105853	0.02500	0.0261411
21 4,4'-DDD	11.775	11.775	0.000	91909	0.02500	0.0248948
23 4,4'-DDT	12.325	12.325	0.000	66299	0.02500	0.0272996
25 Methoxychlor	13.450	13.450	0.000	72646	0.05000	0.0517523
\$ 30 Decachlorobiphenyl	16.300	16.300	0.000	89073	0.02500	0.0259785

Data File: /var/chem/gc3.i/2310-E.b/c-a2595.d

Date : 01-JUN-2000 00:15

Client ID: MEDA

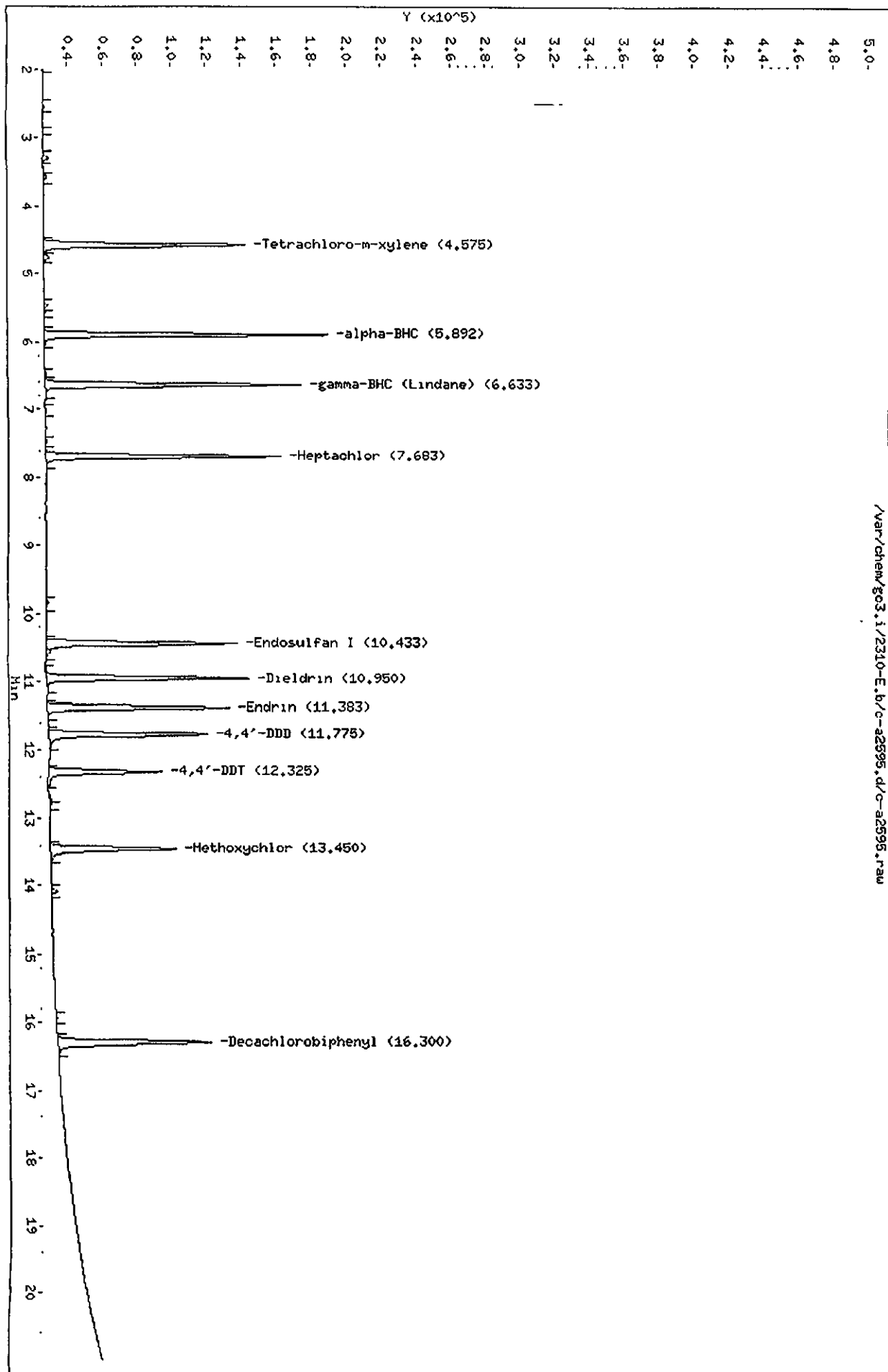
Sample Info: MEDA, 2310-E.b., INDA, sub, 2,3

Column phase: RTX-CLP

Instrument: gc3.i

Operator: 1891

Column diameter: 0.53



658 352

Data File: /var/chem/gc3.i/2310-E.b/c-a2596.d  
Report Date: 01-Jun-2000 12:15

STL-PITTSBURGH

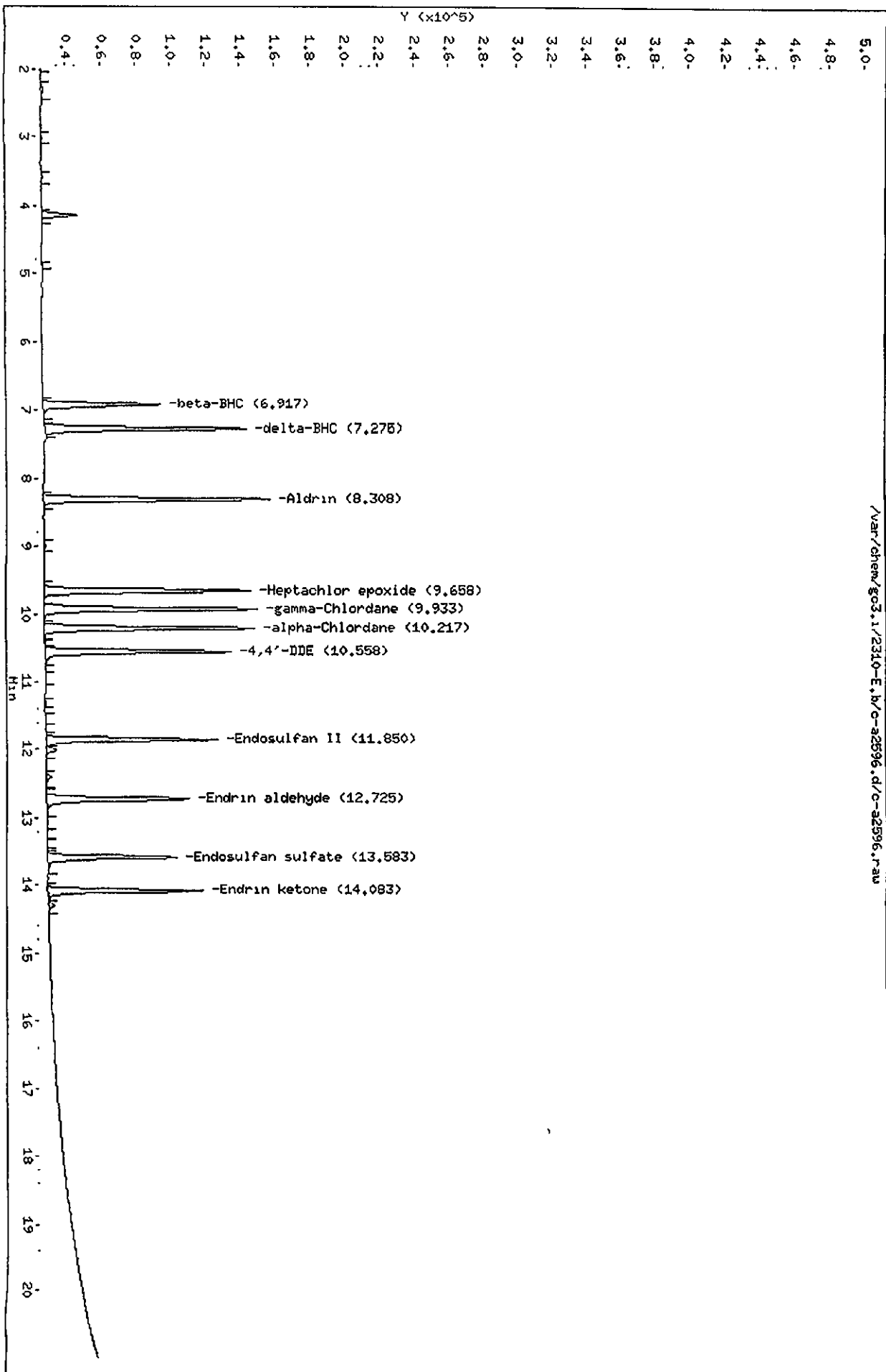
Data file : /var/chem/gc3.i/2310-E.b/c-a2596.d  
Lab Smp Id: MEDB Client Smp ID: MEDB  
Inj Date : 01-JUN-2000 00:41  
Operator : 1891 Inst ID: gc3.i  
Smp Info : MEDB,2310-E.b,,INDB.sub,,2,3  
Misc Info : 190-84-9  
Comment :  
Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.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	8.308	8.308	0.000	130849	0.02500	0.0247751
7 beta-BHC	6.917	6.917	0.000	68526	0.02500	0.0239543
8 delta-BHC	7.275	7.275	0.000	116506	0.02500	0.0266085
12 Heptachlor epoxide	9.658	9.658	0.000	119909	0.02500	0.0246784
13 gamma-Chlordane	9.933	9.933	0.000	123402	0.02500	0.0245102
14 alpha-Chlordane	10.217	10.217	0.000	121481	0.02500	0.0244947
16 4,4'-DDE	10.558	10.558	0.000	107714	0.02500	0.0239663
22 Endosulfan II	11.850	11.858	-0.008	99792	0.02500	0.0244808
24 Endrin aldehyde	12.725	12.725	0.000	82727	0.02500	0.0244284
26 Endosulfan sulfate	13.583	13.592	-0.009	74864	0.02500	0.0274619
27 Endrin ketone	14.083	14.092	-0.009	89640	0.02500	0.0273769

353  
Data File: /var/chem/gc3.1/2310-E.b/c-a2596.d  
Date: 01-JUN-2000 00:41  
Client ID: HEDB  
Sample Info: HEDB,2310-E.b., INDB.sub.,2,3

Column phase: RTX-CLP

Instrument: gc3.1  
Operator: 1891  
Column diameter: 0.53



658 354

**PESTICIDE  
QC DATA**

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 492

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN21101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS.	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.050	U
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
72-54-8	4,4'-DDD	0.050	U
72-55-9	4,4'-DDE	0.050	U
50-29-3	4,4'-DDT	0.050	U
60-57-1	Dieldrin	0.050	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.050	U
1031-07-8	Endosulfan sulfate	0.050	U
72-20-8	Endrin	0.050	U
7421-93-4	Endrin aldehyde	0.050	U
53494-70-5	Endrin ketone	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-43-5	Methoxychlor	0.10	U
8001-35-2	Toxaphene	2.0	U



658 356

Data File: /var/chem/gc3.i/2260-E.b/c-a2565.d  
 Report Date: 31-May-2000 10:08

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2565.d  
 Lab Smp Id: DDN21101 Client Smp ID: INTRA-LAB BLANK  
 Inj Date : 27-MAY-2000 04:35  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : DDN21101,2260-E.b,,PEST.sub,,3,  
 Misc Info : 230195BLK  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
 Als bottle: 1 QC Sample: METHOD BLANK  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: all.sub  
 Target Version: 3.40

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

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
§ 1 Tetrachloro-m-xylene	4.575	4.558	0.017	84011	0.01635	0.163530
2 Diallate A				Compound Not Detected.		
3 Diallate B				Compound Not Detected.		
4 MIREX	13.283	13.275	0.008	420	0.000113	0.00112830(a)
5 alpha-BHC				Compound Not Detected.		
6 gamma-BHC (Lindane)				Compound Not Detected		
7 beta-BHC				Compound Not Detected		
8 delta-BHC				Compound Not Detected		
9 Chlordane				Compound Not Detected		
10 Heptachlor				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		

Data File: /var/chem/gc3.i/2260-E.b/c-a2565.d  
 Report Date: 31-May-2000 10:08

Compounds	RT	EXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							( ng)	( ug/L)
*****	**	*****	*****	*****	*****	*****	*****	*****
17 Dieldrin						Compound Not Detected		
18 Toxaphene						Compound Not Detected		
19 Isodrin						Compound Not Detected.		
20 Endrin						Compound Not Detected.		
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.		
25 Methoxychlor						Compound Not Detected.		
26 Endosulfan sulfate						Compound Not Detected		
27 Endrin ketone						Compound Not Detected		
28 Chlorobenzilate						Compound Not Detected		
29 Kepone						Compound Not Detected.		
\$ 30 Decachlorobiphenyl	16.283	16	292	-0.009		60483	0.01352	0.135216

#### QC Flag Legend

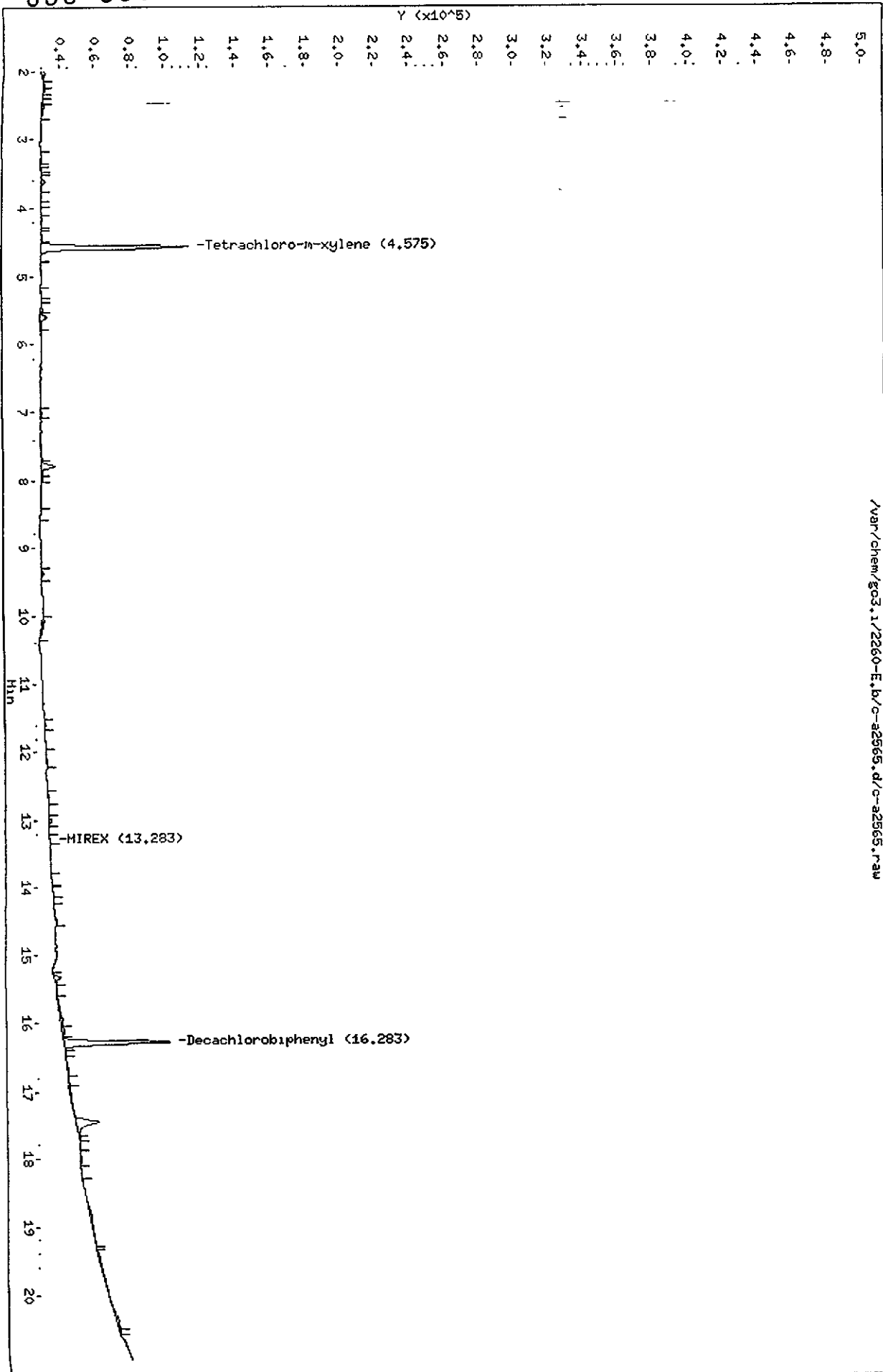
a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

658 358

Data File: /var/chem/gc3.1/2260-E.b/c-22565.d  
 Date: 27-MAY-2000 04:35  
 Client ID: INTRA-LAB BLANK  
 Sample Info: DDN2101.2260-E.b, PEST+sub,,3,  
 Volume Injected (uL): 1.0  
 Column Phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

/var/chem/gc3.1/2260-E.b/c-22565.raw



UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

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

Lab Sample ID: C0E240000 492

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN21102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.202	
58-89-9	gamma-BHC (Lindane)	0.193	
50-29-3	4,4'-DDT	0.319	
60-57-1	Dieldrin	0.426	
72-20-8	Endrin	0.351	
76-44-8	Heptachlor	0.190	

658 360

Data File: /var/chem/gc3.i/2310-E.b/c-a2594.d  
 Report Date: 01-Jun-2000 13:59

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2310-E.b/c-a2594.d  
 Lab Smp Id: DDN21102 Client Smp ID: LCS  
 Inj Date : 31-MAY-2000 23:49  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : DDN21102,2310-E.b,,PEST.sub,,3,  
 Misc Info : E230195LCS  
 Comment :  
 Method : /var/chem/gc3.i/2310-E.b/PESTA.m  
 Meth Date : 01-Jun-2000 12:09 g Quant Type: ESTD  
 Cal Date : 31-MAY-2000 19:30 Cal File: c-a2584.d  
 Als bottle: 1 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: PEST.sub  
 Target Version: 3.40  
 Processing Host: hpuxcs21

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

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
5 alpha-BHC				Compound Not Detected.		
6 gamma-BHC (Lindane)	6.633	6.633	0.000	127763	0.02356	0.235572
7 beta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor	7.692	7.683	0.009	121261	0.02349	0.234897
8 delta-BHC				Compound Not Detected.		
11 Aldrin	8.308	8.308	0.000	114150	0.02161	0.216133
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	10.558	10.558	0.000	4393	0.000977	0.00977439(a)
17 Dieldrin	10.950	10.950	0.000	191539	0.04265	0.426495
20 Endrin	11.383	11.383	0.000	171512	0.04236	0.423561
18 Toxaphene				Compound Not Detected.		

Data File: /var/chem/gc3.i/2310-E.b/c-a2594.d  
 Report Date: 01-Jun-2000 13:59

Compounds						CONCENTRATIONS	
	RT	EXP RT	DLT RT	RT	RESPONSE	ON-COLUMN ( ng)	FINAL ( ug/L)
21 4,4'-DDD	11.767	11.775	-0.008		19095	0.00517	0.0517215
22 Endosulfan II	Compound Not Detected						
23 4,4'-DDT	12.325	12.325	0.000		132812	0.05469	0.546873
24 Endrin aldehyde	12.725	12.725	0.000		3515	0.00104	0.0103794(a)
26 Endosulfan sulfate	Compound Not Detected.						
25 Methoxychlor	Compound Not Detected.						
27 Endrin ketone	14.083	14.092	-0.009		7151	0.00218	0.0218398(a)
\$ 1 Tetrachloro-m-xylene	4.575	4.575	0.000		82522	0.01809	0.180908
\$ 30 Decachlorobiphenyl	16.292	16.300	-0.008		70561	0.02058	0.205794

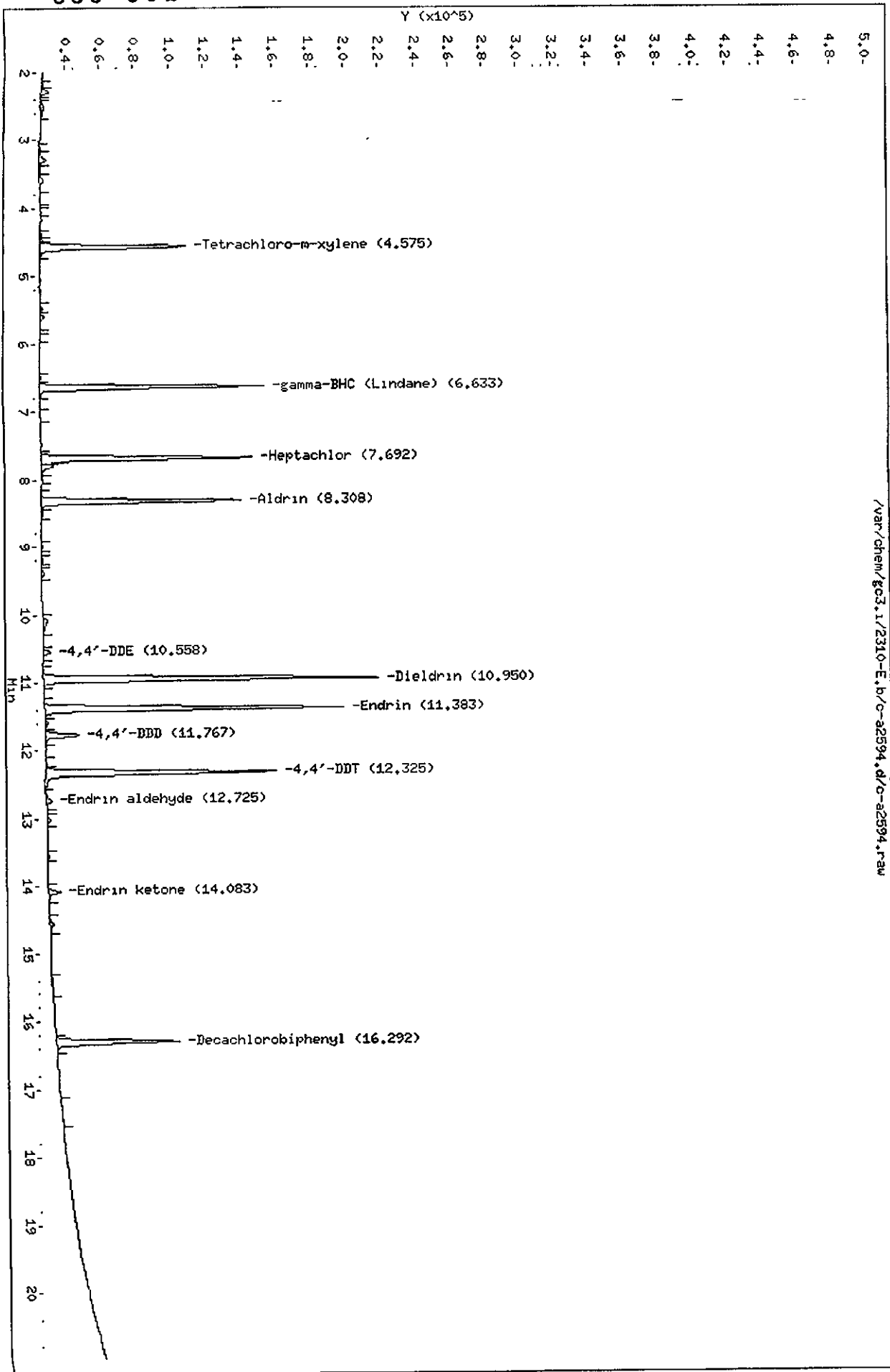
### QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

058 362

Data File: /var/chem/gc3.1/2310-E.b/c-a2594.d  
 Date: 31-MAY-2000 23:49  
 Client ID: LCS  
 Sample Info: DDN21102,2310-E.b,,PEST,sub,,5,  
 Volume Injected (uL): 1.0  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53



Data File: /var/chem/gc3.i/2260-E.b/c-a2566.d  
 Report Date: 30-May-2000 16:12

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2566.d  
 Lab Smp Id: DDN21102 Client Smp ID: INTRA-LAB CHECK  
 Inj Date : 27-MAY-2000 05:01  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : DDN21102,2260-E.b,,PEST.sub,,3,  
 Misc Info : 230195LCS  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
 Als bottle: 1 QC Sample: LCS  
 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	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
5 alpha-BHC				Compound Not Detected.		
6 gamma-BHC (Lindane)	6.633	6.625	0.008	132328	0.01927	0.192722
7 beta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor	7.683	7.683	0.000	124262	0.01900	0.189965
8 delta-BHC				Compound Not Detected.		
11 Aldrin	8.300	8.300	0.000	110518	0.02022	0.202190
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'-DDB	10.550	10.550	0.000	2364	0.000562	0.00562430 (a)
17 Dieldrin	10.942	10.942	0.000	178584	0.03190	0.318998 (R)
20 Endrin	11.375	11.375	0.000	166891	0.03509	0.350924
18 Toxaphene				Compound Not Detected.		
21 4,4'-DDD	11.767	11.767	0.000	23222	0.00608	0.0608309
22 Endosulfan II				Compound Not Detected.		



658 364

Data File: /var/chem/gc3.i/2260-E.b/c-a2566.d

Report Date: 30-May-2000 16:12

Compounds	RT	EXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN ( ng)	FINAL ( ug/L)
=====	==	=====	=====	=====	=====	=====	=====	
23 4,4'-DDT	12 317	12 317	0 000		116439	0 03190	0.318970	
24 Endrin aldehyde	12 717	12 717	0.000		2518	0.000699	0 00698548(a)	
26 Endosulfan sulfate					Compound Not Detected			
25 Methoxychlor					Compound Not Detected			
27 Endrin ketone	14 075	14 083	-0.008		5486	0 00130	0 0130386(a)	
\$ 1 Tetrachloro-m-xylene	4 575	4 558	0.017		87723	0 01708	0.170755	
\$ 30 Decachlorobiphenyl	16 283	16 292	-0.009		66567	0.01488	0.148817	

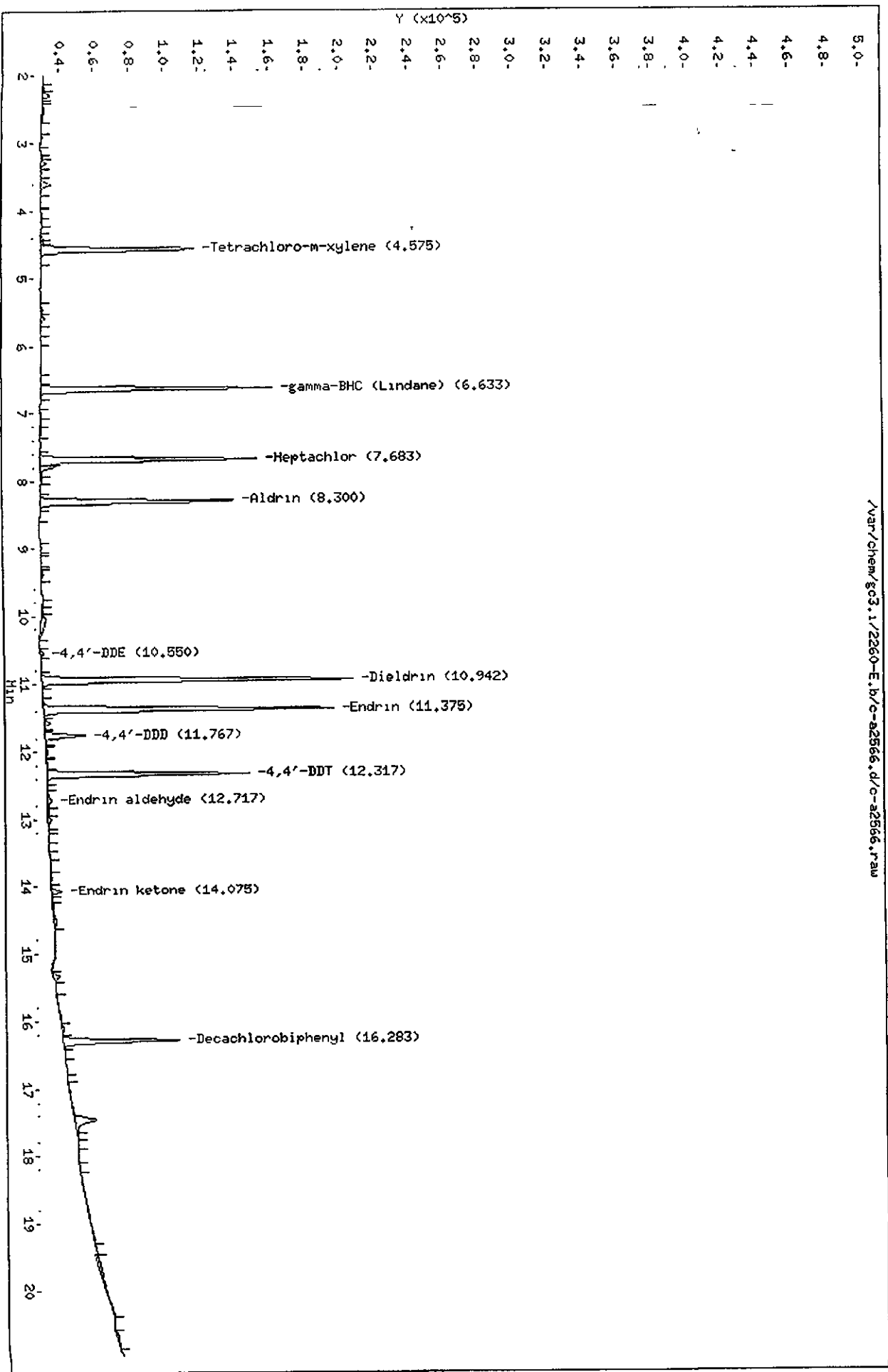
## QC Flag Legend

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

Data File: /var/chem/gc3.1/2260-E.b/c-a2566.d  
 Date: 27-MAY-2000 05:01  
 Client ID: INTRA-LAB CHECK  
 Sample Info: DDN21102, 2260-E.b, PEST, sub, 3,  
 Volume Injected (uL): 1.0  
 Column phase: RTX-CLP

Instrument: gc3.1  
 Operator: 1891  
 Column diameter: 0.53

/var/chem/gc3.1/2260-E.b/c-a2566.d/c-a2566.raw



UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 492

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN21103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/27/00

Moisture %: NA

QC Batch: 0145492

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
309-00-2	Aldrin	0.246	
58-89-9	gamma-BHC (Lindane)	0.230	
50-29-3	4,4'-DDT	0.392	
60-57-1	Dieldrin	0.384	
72-20-8	Endrin	0.425	
76-44-8	Heptachlor	0.229	

Data File: /var/chem/gc3.i/2260-E.b/c-a2567.d

Report Date: 30-May-2000 16:12

## STL-PITTSBURGH

Data file : /var/chem/gc3.i/2260-E.b/c-a2567.d  
 Lab Smp Id: DDN21103 Client Smp ID: INTRA-LAB CHECK  
 Inj Date : 27-MAY-2000 05:27  
 Operator : 1891 Inst ID: gc3.i  
 Smp Info : DDN21103,2260-E.b,,PEST.sub,,3,  
 Misc Info : 230195LCD  
 Comment :  
 Method : /var/chem/gc3.i/2260-E.b/PESTA.m  
 Meth Date : 30-May-2000 16:08 matkol Quant Type: ESTD  
 Cal Date : 26-MAY-2000 18:18 Cal File: c-a2541.d  
 Als bottle: 1 QC Sample: LCSD  
 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	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
5 alpha-BHC						
6 gamma-BHC (Lindane)	6.633	6.625	0.008	158057	0.02302	0.230193
7 beta-BHC						
9 Chlordane						
10 Heptachlor	7.683	7.683	0.000	149622	0.02287	0.228734
8 delta-BHC						
11 Aldrin	8.300	8.300	0.000	134392	0.02459	0.245867
12 Heptachlor epoxide						
13 gamma-Chlordane						
14 alpha-Chlordane						
15 Endosulfan I						
16 4,4'-DDB	10.550	10.550	0.000	2925	0.000696	0.00695901(a)
17 Dieldrin	10.942	10.942	0.000	215081	0.03842	0.384191
20 Endrin	11.375	11.375	0.000	202351	0.04255	0.425487
18 Toxaphene						
21 4,4'-DDD	11.758	11.767	-0.009	27432	0.00719	0.0718591
22 Endosulfan II						

058 368

Data File: /var/chem/gc3.i/2260-E.b/c-a2567.d  
Report Date: 30-May-2000 16:12

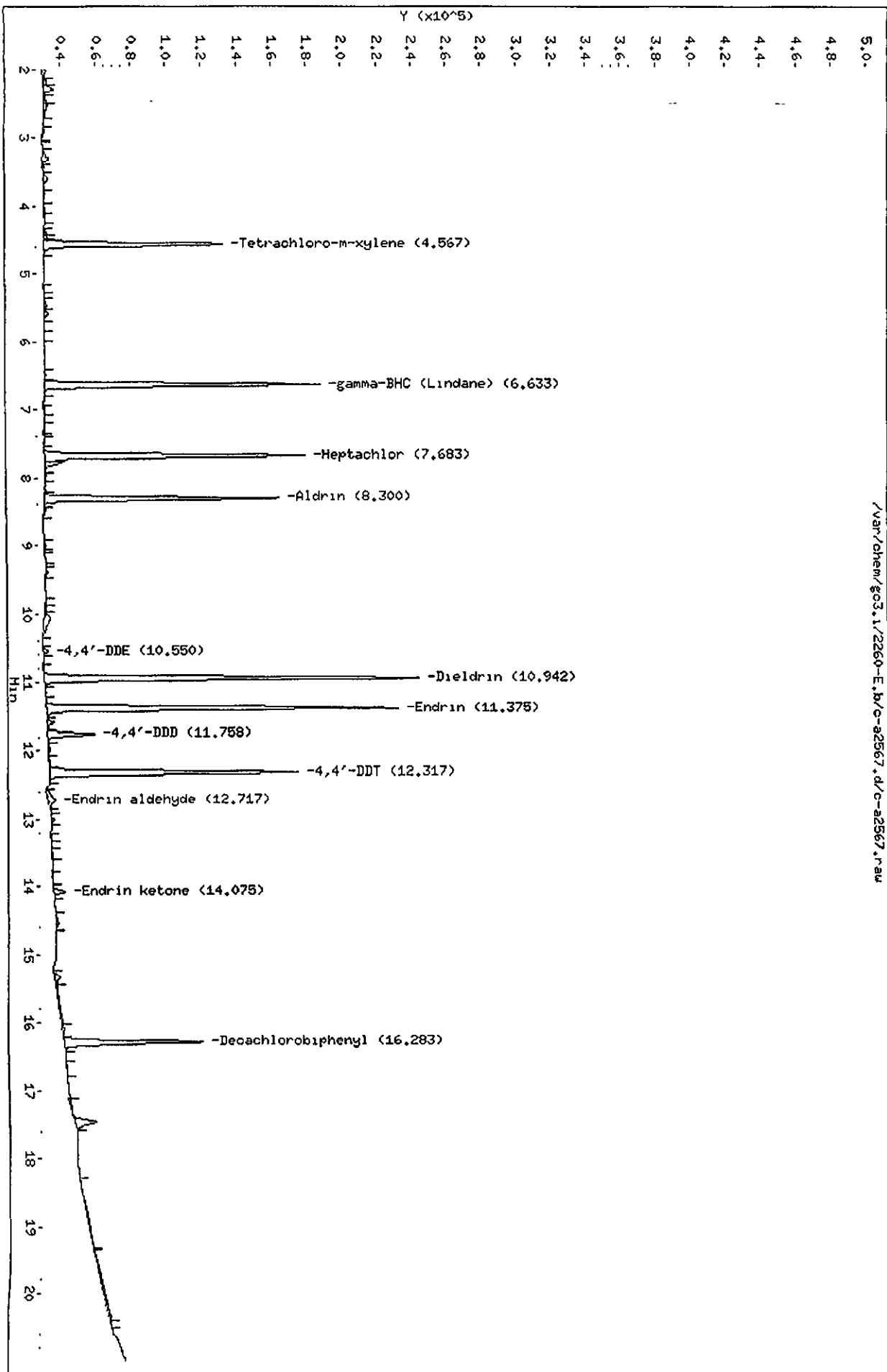
Compounds					CONCENTRATIONS		
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN ( ng)	FINAL ( ug/L)	
=====	==	=====	=====	=====	=====	=====	
23 4,4'-DDT	12.317	12.317	0.000	143124	0.03921	0.392070	
24 Endrin aldehyde	12.717	12.717	0.000	3843	0.00107	0.0106613 (a)	
26 Endosulfan sulfate	Compound Not Detected						
25 Methoxychlor	Compound Not Detected.						
27 Endrin ketone	14.075	14.083	-0.008	6818	0.00162	0.0162043 (a)	
\$ 1 Tetrachloro-m-xylene	4.567	4.558	0.009	102305	0.01991	0.199139	
\$ 30 Decachlorobiphenyl	16.283	16.292	-0.009	79473	0.01777	0.177670	

### QC Flag Legend

a - Target compound detected but, quantitated amount  
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gc3.1/2260-E.b/c-a2567.d  
Date : 27-MAY-2000 05:27  
Client ID: INTRA-LAB CHECK  
Sample Info: DDM2103, 2260-E.b, PEST, sub, 3,  
Volume Injected (uL): 1.0  
Column phase: RTX-CLP

Instrument: gc3.i  
Operator: 1891  
Column diameter: 0.53



658 370

**PESTICIDE  
MISCELLANEOUS**

## Separatory Funnel Extraction Worksheet

THX 5200

Post B# 0175492  
PCB B# 0175495

**STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380**

[illegible]



Turbochrom Sequence File : H:\ACQUIRE\MET\_SEQ\2260-E.SEQ  
Created by : DE11/02/98 on : 5/26/00 13:36  
Edited by : DE05/26/00 on : 5/26/00 16:32  
Description : QUANTERRA PGH 8081 RUN ON GC#3 CLP1/CLP2 COLUMNS  
REVIEWED BY:

Sequence File Header Information:

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Number of Rows      : 53
Instrument Type     : 760 / 900 Series Intelligent Interface
Injection Type      : SINGLE
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Sequence Sample Descriptions - Channel A												
Row	Type	Sample Name	Sample Number	Study Name	Sample Amount	ISTD Amount	Sample Volume	Dil. Factor	Mult	Divisor	Addend	Norm. factor
1	Std Check	EVALB, 2260-E.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
2	Cal:Replace	MEDTOX, 2260-E.b	190-84-13		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
3	Cal:Replace	MEDCHLOR, 2260-E	190-85-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
4	Cal:Replace	LAPPX9, 2260-E.b	190-80-6		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
5	Cal:Replace	MLAPPX9, 2260-E.	190-80-7		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
6	Cal:Replace	MAPPX9, 2260-E.b	190-80-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
7	Cal:Replace	MHAPPX9, 2260-E.	190-80-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
8	Cal:Replace	HAPPX9, 2260-E.b	190-80-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
9	Cal:Replace	L8081F, 2260-E.b	190-74-1		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
10	Cal:Replace	ML8081F, 2260-E.	190-74-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
11	Cal:Replace	M8081F, 2260-E.b	190-74-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
12	Cal:Replace	MH8081F, 2260-E.	190-74-4		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
13	Cal:Replace	H8081F, 2260-E.b	190-74-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
14	Cal:Replace	LOWA, 2260-E.b,,	190-84-1		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
15	Cal:Replace	MLOWA, 2260-E.b,	190-84-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
16	Cal:Replace	MEDA, 2260-E.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
17	Cal:Replace	MHIGHA, 2260-E.b	190-84-4		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
18	Cal:Replace	HIGHA, 2260-E.b,	190-84-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
19	Cal:Replace	LOWB, 2260-E.b,,	190-84-7		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
20	Cal:Replace	MLOWB, 2260-E.b,	190-84-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
21	Cal:Replace	MEDB, 2260-E.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
22	Cal:Replace	MHIGHB, 2260-E.b	190-84-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
23	Cal:Replace	HIGHB, 2260-E.b,	190-84-11		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
24	Std Check	2ND A, 2260-E.b,	190-82-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
25	Std Check	2ND B, 2260-E.b,	190-82-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
26	Std Check	EVALB, 2260-E.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
27	Sample	DD8G610A, 2260-E	160189008	} Regular 8081 only!!	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
28	Sample	DD8G710A, 2260-E	160189009		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
29	Sample	DD8GP10A, 2260-E	160189019		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
30	Sample	DD8GQ10A, 2260-E	160189020		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
31	Sample	DD8GV10A, 2260-E	160189023		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
32	Sample	DD9NN10R, 2260-E	170151001		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
33	Sample	DD9PJ10R, 2260-E	170159001		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
34	Sample	DDG3A101, 2260-E	160189BLK2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
35	Std Check	MAPPX9, 2260-E.b	190-80-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
36	Std Check	M8081F, 2260-E.b	190-74-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
37	Std Check	MEDA, 2260-E.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
38	Std Check	MEDB, 2260-E.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
39	Std Check	EVALB, 2260-E.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
40	Sample	<del>DD5VE113, 2260-E</del>	<del>130142001</del>		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
41	Sample	<del>DD9NW113, 2260-E</del>	<del>170158001</del>		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
42	Sample	<del>DDKNW101, 2260-E</del>	<del>130142BLK</del>		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
43	Sample	<del>DDKNW102, 2260-E</del>	<del>130142LCS</del>		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
44	Sample	<del>DDKNW103, 2260-E</del>	<del>130142LCS</del>		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
45	Sample	DDK90103, 2260-E	230195001		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
46	Sample	<del>DDLEF10R, 2260-E</del>	<del>240144001</del>	Meth.	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
47	Sample	DDN21101, 2260-E	230195BLK		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
48	Sample	DDN21102, 2260-E	230195LCS	Lucifer	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
49	Sample	DDN21103, 2260-E	230195LCS		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
50	Std Check	MAPPX9, 2260-E.b	190-80-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
51	Std Check	M8081F, 2260-E.b	190-74-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
52	Std Check	MEDA, 2260-E.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
53	Std Check	MEDB, 2260-E.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000

[illegible]

-	1	1	GEN3C	GEN3A	122190A	EVAL	C-A2519	C-A2519	C-A2519	-	-	-	LPT1:	
-	1	2	GEN3C	GEN3A	122190A	TOX	C-A2520	C-A2520	C-A2520	N	MED	N	LPT1, LP	
-	1	2	GEN3C	GEN3A	122190A	TOX	C-A2521	C-A2521	C-A2521	N	MED	N	LPT1, LP	
4	-	1	4	GEN3C	GEN3A	122190A	INDA	C-A2522	C-A2522	C-A2522	N	LOW	N	LPT1
5	-	1	5	GEN3C	GEN3A	122190A	INDA	C-A2523	C-A2523	C-A2523	N	MLOW	N	LPT1
6	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2524	C-A2524	C-A2524	N	MLOW	N	LPT1
7	-	1	7	GEN3C	GEN3A	122190A	INDA	C-A2525	C-A2525	C-A2525	N	MLOW	N	LPT1
8	-	1	8	GEN3C	GEN3A	122190A	INDA	C-A2526	C-A2526	C-A2526	N	MLOW	N	LPT1
9	-	1	9	GEN3C	GEN3A	122190A	INDA	C-A2527	C-A2527	C-A2527	N	LOW	N	LPT1
10	-	1	10	GEN3C	GEN3A	122190A	INDA	C-A2528	C-A2528	C-A2528	N	MLOW	N	LPT1
11	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2529	C-A2529	C-A2529	N	MLOW	N	LPT1
12	-	1	12	GEN3C	GEN3A	122190A	INDA	C-A2530	C-A2530	C-A2530	N	MLOW	N	LPT1
13	-	1	13	GEN3C	GEN3A	122190A	INDA	C-A2531	C-A2531	C-A2531	N	MLOW	N	LPT1
14	-	1	4	GEN3C	GEN3A	122190A	INDA	C-A2532	C-A2532	C-A2532	N	LOW	N	LPT1
15	-	1	5	GEN3C	GEN3A	122190A	INDA	C-A2533	C-A2533	C-A2533	N	MLOW	N	LPT1
16	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2534	C-A2534	C-A2534	N	MLOW	N	LPT1
17	-	1	7	GEN3C	GEN3A	122190A	INDA	C-A2535	C-A2535	C-A2535	N	MLOW	N	LPT1
18	-	1	8	GEN3C	GEN3A	122190A	INDA	C-A2536	C-A2536	C-A2536	N	MLOW	N	LPT1
19	-	1	9	GEN3C	GEN3A	122190A	INDA	C-A2537	C-A2537	C-A2537	N	LOW	N	LPT1
20	-	1	10	GEN3C	GEN3A	122190A	INDA	C-A2538	C-A2538	C-A2538	N	MLOW	N	LPT1
21	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2539	C-A2539	C-A2539	N	MLOW	N	LPT1
22	-	1	12	GEN3C	GEN3A	122190A	INDA	C-A2540	C-A2540	C-A2540	N	MLOW	N	LPT1
23	-	1	13	GEN3C	GEN3A	122190A	INDA	C-A2541	C-A2541	C-A2541	N	MLOW	N	LPT1
24	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2542	C-A2542	C-A2542	-	-	-	LPT1
25	-	1	24	GEN3C	GEN3A	122190A	INDA	C-A2543	C-A2543	C-A2543	-	-	-	LPT1
26	-	1	1	GEN3C	GEN3A	122190A	EVAL	C-A2544	C-A2544	C-A2544	-	-	-	LPT1
27	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2545	C-A2545	C-A2545	-	-	-	LPT1
28	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2546	C-A2546	C-A2546	-	-	-	LPT1
29	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2547	C-A2547	C-A2547	-	-	-	LPT1
30	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2548	C-A2548	C-A2548	-	-	-	LPT1
31	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2549	C-A2549	C-A2549	-	-	-	LPT1
32	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2550	C-A2550	C-A2550	-	-	-	LPT1
33	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2551	C-A2551	C-A2551	-	-	-	LPT1
34	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2552	C-A2552	C-A2552	-	-	-	LPT1
35	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2553	C-A2553	C-A2553	-	-	-	LPT1
36	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2554	C-A2554	C-A2554	-	-	-	LPT1
37	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2555	C-A2555	C-A2555	-	-	-	LPT1
38	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2556	C-A2556	C-A2556	-	-	-	LPT1
39	-	1	1	GEN3C	GEN3A	122190A	EVAL	C-A2557	C-A2557	C-A2557	-	-	-	LPT1
40	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2558	C-A2558	C-A2558	-	-	-	LPT1
41	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2559	C-A2559	C-A2559	-	-	-	LPT1
42	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2560	C-A2560	C-A2560	-	-	-	LPT1
43	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2561	C-A2561	C-A2561	-	-	-	LPT1
44	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2562	C-A2562	C-A2562	-	-	-	LPT1
45	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2563	C-A2563	C-A2563	-	-	-	LPT1
46	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2564	C-A2564	C-A2564	-	-	-	LPT1
47	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2565	C-A2565	C-A2565	-	-	-	LPT1
48	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2566	C-A2566	C-A2566	-	-	-	LPT1
49	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2567	C-A2567	C-A2567	-	-	-	LPT1
50	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2568	C-A2568	C-A2568	-	-	-	LPT1
51	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2569	C-A2569	C-A2569	-	-	-	LPT1
52	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2570	C-A2570	C-A2570	-	-	-	LPT1
53	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2571	C-A2571	C-A2571	-	-	-	LPT1

Turbochrom Sequence File : H:\ACQUIRE\MET\_SEQ\2310-E.SEQ

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Description : QUANTERRA PGH 8081 RUN ON GC#3 CLP1/CLP2 COLUMNS

REVIEWED BY: - - -

Number of Times Edited : 2

## Sequence File Header Information:

Number of Rows : 25

Instrument Type : 760 / 900 Series Intelligent Interface

Injection Type : SINGLE

Sequence Sample Descriptions - Channel A												
Row	Type	Sample Name	Sample Number	Study Name	Sample Amount	ISTD Amount	Sample Volume	Dil. Factor	Mult	Divisor	Addend	Norm. factor
1	Std Check	EVALB, 2310-E.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
2	Cal Replace	MEDTOX, 2310-E.b	190-84-13		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
3	Cal Replace	MEDCHLOR, 2310-E	190-85-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
4	Cal Replace	LOWA, 2310-E.b,,	190-84-1		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
5	Cal Replace	MLOWA, 2310-E.b,	190-84-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
6	Cal Replace	MEDA, 2310-E.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
7	Cal Replace	MHIGHA, 2310-E.b	190-84-4		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
8	Cal Replace	HIGHA, 2310-E.b,	190-84-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
9	Cal Replace	LOWB, 2310-E.b,,	190-84-7		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
10	Cal Replace	MLOWB, 2310-E.b,	190-84-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
11	Cal Replace	MEDB, 2310-E.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
12	Cal Replace	MHIGHB, 2310-E.b	190-84-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
13	Cal Replace	HIGHB, 2310-E.b,	190-84-11		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
14	Std Check	2ND A, 2310-E.b,	190-82-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
15	Std Check	2ND B, 2310-E.b,	190-82-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
16	Std Check	EVALB, 2310-E.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
17	Sample	DDLX3104, 2310-E	E240180001		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
18	Sample	DDLX310M, 2310-E	240180001S		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
19	Sample	DDLX310N, 2310-E	240180001D		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
20	Sample	DDLX6104, 2310-E	E240180002		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
21	Sample	DDTM6101, 2310-E	E240180BLK		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
22	Sample	DDTM6102, 2310-E	E240180LCS		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
23	Sample	DDN21102, 2310-E	E230195LCS		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
24	Std Check	MEDA, 2310-E.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
25	Std Check	MEDB, 2310-E.b,,	190-84-9		1.000	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	Update RT	Out Dev
1	-	1	1	GEN3C	GEN3A	122190A	EVAL	C-A2572	C-A2572		C-A2572	-	-	-	LPT1:
2	-	1	2	GEN3C	GEN3A	122190A	TOX	C-A2573	C-A2573		C-A2573	N	MED	N	LPT1:, LPT1
3	-	1	2	GEN3C	GEN3A	122190A	TOX	C-A2574	C-A2574		C-A2574	N	MED	N	LPT1:, LPT1
4	-	1	4	GEN3C	GEN3A	122190A	INDA	C-A2575	C-A2575		C-A2575	N	LOW	N	LPT1:
5	-	1	5	GEN3C	GEN3A	122190A	INDA	C-A2576	C-A2576		C-A2576	N	MLOW	N	LPT1:
6	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2577	C-A2577		C-A2577	N	MLOW	N	LPT1:
7	-	1	7	GEN3C	GEN3A	122190A	INDA	C-A2578	C-A2578		C-A2578	N	MLOW	N	LPT1:
8	-	1	8	GEN3C	GEN3A	122190A	INDA	C-A2579	C-A2579		C-A2579	N	MLOW	N	LPT1:
9	-	1	9	GEN3C	GEN3A	122190A	INDA	C-A2580	C-A2580		C-A2580	N	LOW	N	LPT1:
10	-	1	10	GEN3C	GEN3A	122190A	INDA	C-A2581	C-A2581		C-A2581	N	MLOW	N	LPT1:
11	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2582	C-A2582		C-A2582	N	MLOW	N	LPT1:
12	-	1	12	GEN3C	GEN3A	122190A	INDA	C-A2583	C-A2583		C-A2583	N	MLOW	N	LPT1:
13	-	1	13	GEN3C	GEN3A	122190A	INDA	C-A2584	C-A2584		C-A2584	N	MLOW	N	LPT1:
14	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2585	C-A2585		C-A2585	-	-	-	LPT1:
15	-	1	24	GEN3C	GEN3A	122190A	INDA	C-A2586	C-A2586		C-A2586	-	-	-	LPT1:
16	-	1	1	GEN3C	GEN3A	122190A	EVAL	C-A2587	C-A2587		C-A2587	-	-	-	LPT1:
17	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2588	C-A2588		C-A2588	-	-	-	LPT1:
18	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2589	C-A2589		C-A2589	-	-	-	LPT1:
19	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2590	C-A2590		C-A2590	-	-	-	LPT1:
20	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2591	C-A2591		C-A2591	-	-	-	LPT1:
21	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2592	C-A2592		C-A2592	-	-	-	LPT1:
22	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2593	C-A2593		C-A2593	-	-	-	LPT1:
23	-	1	23	GEN3C	GEN3A	122190A	INDA	C-A2594	C-A2594		C-A2594	-	-	-	LPT1:
24	-	1	6	GEN3C	GEN3A	122190A	INDA	C-A2595	C-A2595		C-A2595	-	-	-	LPT1:
25	-	1	11	GEN3C	GEN3A	122190A	INDA	C-A2596	C-A2596		C-A2596	-	-	-	LPT1:

PSR024 5/24/00 13:45:09 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: YUSHINSC

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>
4F	DDK90-1-03	___	236505	399411	1-09-QJ	COE230195	001		WATER	0	9 1
6B CLP1	DDLFR-1-0R	___	236506	416241	1-09-QJ	COE240144	001		WATER	0	20 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

*P. Yushinski*  
*P. Yushinski*

*P. Yushinski*  
*P. Yushinski*

*5-24-00 154*  
*5-24-00 223*

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

658 376

**PCB DATA**

**PCB  
QC SUMMARY**

658 378

## SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0137/WA/001	77	84	00
02	METHOD BLK. DDN23101	86	92	00
03	LCS DDN23102	95	100	00
04	LCSD DDN23103	96	101	00

SURROGATES

SRG01 = Tetrachloro-m-xylene

SRG02 = Decachlorobiphenyl

QC LIMITS

( 45-120)

( 24-128)

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

FORM II

## SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDN23102

BATCH: 0145495

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Aroclor 1016	10.0	8.49	85	61 - 118	
Aroclor 1260	10.0	9.09	91	61 - 124	

NOTES (S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   2   outside limits

COMMENTS:



658 380

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No: \_\_\_\_\_

Lot #: C0E240000

WO #: DDN23103

BATCH: 0145495

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Aroclor 1016	10.0	8.74	87	61 - 118	
Aroclor 1260	10.0	9.12	91	61 - 124	

NOTES (S) :  
\_\_\_\_\_

\* Values outside of QC limits

Spike Recovery:   0   out of   2   outside limitsCOMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_

FORM III

BLANK WORKORDER NO.

## SW846 8082 METHOD BLANK SUMMARY

DDN23101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: h-a20691.

Lot Number: C0E230195

Matrix: WATER

Extraction Method:

Date Extracted: 05/24/00

Date Analyzed(1): 05/31/00

Date Analyzed(2): N/A

Time Analyzed(1): 02:57

Time Analyzed(2): N/A

Instrument ID(1): M/N

Instrument ID(2): N/A

GC Column(1): N/A

ID: N/A

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/S1/0137/WA/001	DDK90104	05/31/00	N/A
02	CHECK SAMPLE	DDN23102 C	05/31/00	N/A
03	DUPLICATE CHECK	DDN23103 L	05/31/00	N/A
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

658 382

**PCB  
SAMPLE DATA**

## UXB INTERNATIONAL

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

Matrix: (soil/water) WATER      Lab Sample ID: C0E230195 001  
 Method: SW846 8082  
         PCBs (8082)

Sample WT/Vol: 1000 / mL      Date Received: 05/23/00  
 Work Order: DDK90104      Date Extracted: 05/24/00  
 Dilution factor: 1      Date Analyzed: 05/31/00  
 Moisture %: NA

QC Batch: 0145495

Client Sample Id: DF/S1/0137/WA/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

FORM I

Data File: /var/chem/gc8.i/2250.b/h-a20689.d  
 Report Date: 31-May-2000 08:39

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STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20689.d  
 Lab Smp Id: DDK90104 Client Smp ID: DF/S1/0137/WA/001  
 Inj Date : 31-MAY-2000 02:18  
 Operator : 010139 Inst ID: gc8.i  
 Smp Info : DDK90104,2250.b  
 Misc Info : 230195-1  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 08:13 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 19:01 Cal File: h-a20549.d  
 Als bottle: 56  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: all.sub  
 Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt \* DF \* Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

CONCENTRATIONS							
		ON-COL	FINAL				
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ug/L)	TARGET RANGE	RATIO	
\$ 1	Tetrachloro-m-xylene		CAS #: 877-09-8				
1.746	1.747	-0.001	9480636 0 01546	0.15463	0.00- 0.00	0.00	

51 Chlordane CAS #: 57-74-9

Peaks not detected for Quant. or Qual signal(s).

8 Aroclor-1221 CAS # 11104-28-2

Peaks not detected for Quant. or Qual. signal(s).

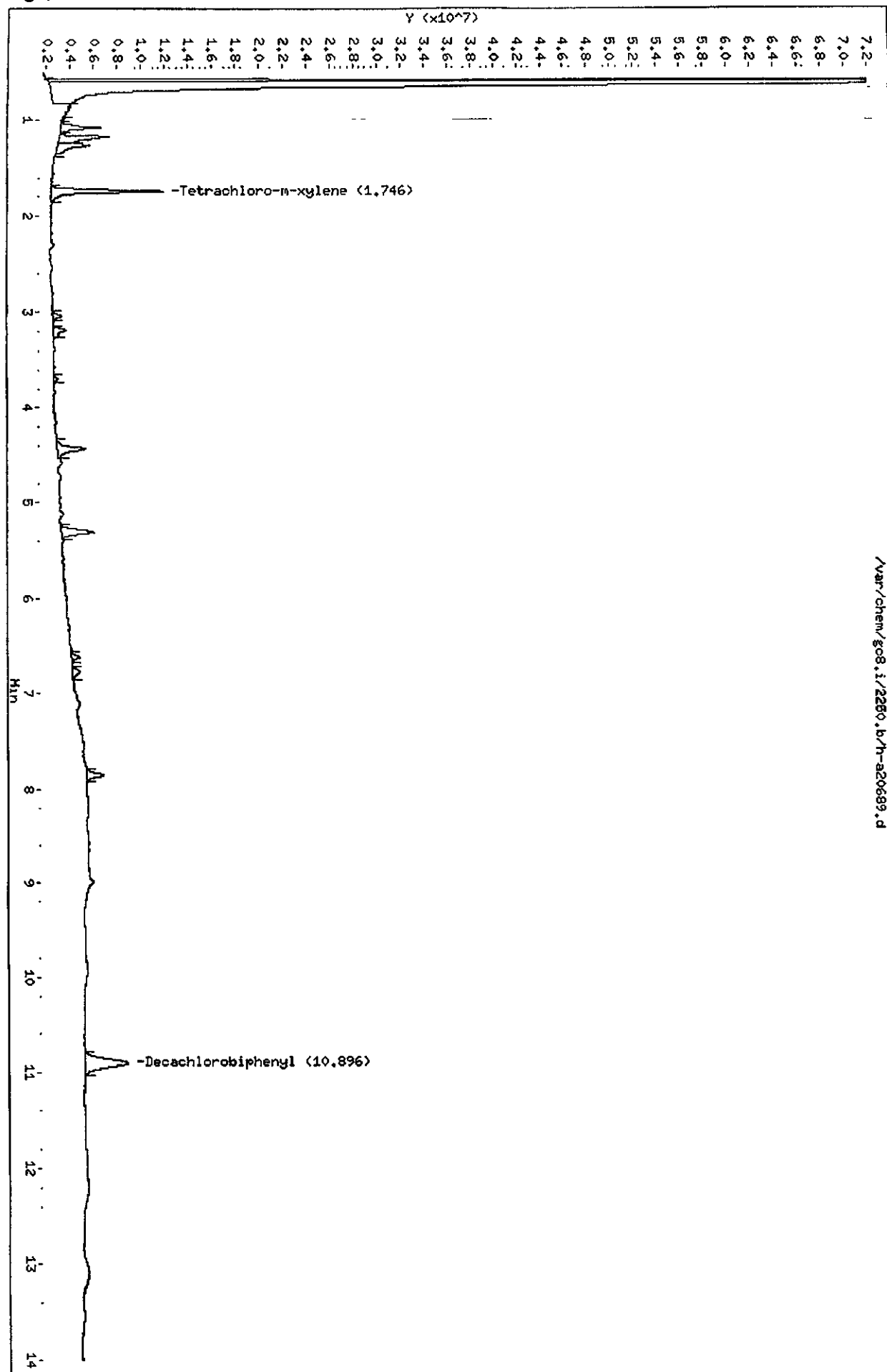
Data File: /var/chem/gc8.i/2250.b/h-a20689.d  
 Report Date: 31-May-2000 08:39

Page 2

		CONCENTRATIONS					
RT	EXP RT	DLT RT	ON-COL	FINAL	TARGET RANGE	RATIO	
			RESPONSE ( ng)	( ug/L)			
14							
Aroclor-1232			CAS #. 11141-16-5				
Peaks not detected for Quant or Qual. signal(s).							
-----							
15							
Aroclor-1242			CAS # 53469-21-9				
Peaks not detected for Quant or Qual. signal(s)							
-----							
20							
Aroclor-1016			CAS #: 12674-11-2				
Peaks not detected for Quant. or Qual. signal(s).							
-----							
21							
Aroclor-1248			CAS # 12672-29-6				
Peaks not detected for Quant. or Qual. signal(s)							
-----							
33							
Aroclor-1254			CAS #: 11097-69-1				
Peaks not detected for Quant or Qual. signal(s)							
-----							
\$ 34							
Decachlorobiphenyl			CAS #. 2051-24-3				
10.896	10.921	-0.025	3621301	0.01688	0.16879	0.00-	0.00 0.00
-----							
36							
Aroclor-1260			CAS #. 11096-82-5				
Peaks not detected for Quant. or Qual. signal(s).							
-----							

Data File: /var/chem/gc8.i/2250.b/h-a20689.d  
 Date: 31-MAY-2000 02:18  
 Client ID: DF/S1/0137/MA/001  
 Sample Info: DDK90104,2250.b  
 Volume Injected (uL): 1.0  
 Column phase: DB608

Instrument: gc8.i  
 Operator: 010139  
 Column diameter: 0.53



**PCB  
CALIBRATION DATA**



658 388

Report Date : 26-May-2000 10:12

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STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 25-MAY-2000 16:23  
 End Cal Date : 25-MAY-2000 19:01  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc8.i/2250.b/PCBA.m  
 Cal Date : 26-May-2000 10:11 eppinged  
 Curve Type : Average

## Calibration File Names:

Level 1: /var/chem/gc8.i/2250.b/h-a20545.d  
 Level 2: /var/chem/gc8.i/2250.b/h-a20546.d  
 Level 3: /var/chem/gc8.i/2250.b/h-a20547.d  
 Level 4: /var/chem/gc8.i/2250.b/h-a20548.d  
 Level 5: /var/chem/gc8.i/2250.b/h-a20549.d

Compound	0.00500	0.01000	0.02500	0.05000	0.10000	RRF	RSD
	Level 1	Level 2	Level 3	Level 4	Level 5		
51 Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 Aroclor-1221(1)	+++++	+++++	6072946	+++++	+++++	6072946	0.000
(2)	+++++	+++++	3840346	+++++	+++++	3840346	0.000
(3)	+++++	+++++	11680556	+++++	+++++	11680556	0.000
14 Aroclor-1232(1)	+++++	+++++	7723038	+++++	+++++	7723038	0.000
(2)	+++++	+++++	11790882	+++++	+++++	11790882	0.000
(3)	+++++	+++++	7802416	+++++	+++++	7802416	0.000
(4)	+++++	+++++	5515122	+++++	+++++	5515122	0.000
15 Aroclor-1242(1)	+++++	+++++	13492972	+++++	+++++	13492972	0.000
(2)	+++++	+++++	22150990	+++++	+++++	22150990	0.000
(3)	+++++	+++++	10243034	+++++	+++++	10243034	0.000
(4)	+++++	+++++	13717370	+++++	+++++	13717370	0.000
(5)	+++++	+++++	9726812	+++++	+++++	9726812	0.000
20 Aroclor-1016(1)	12257300	11377050	9681638	9104277	8284674	10140988	16.157
(2)	21615410	20343750	17603966	16840526	15613319	18403394	13.570
(3)	34189340	32896200	29255534	28438345	27121802	30380244	9.942
(4)	16163970	15282345	13130344	12503259	11776206	13771225	13.589
(5)	22133860	20831930	18097064	17339425	16413213	18963098	12.764
21 Aroclor-1248(1)	+++++	+++++	14741246	+++++	+++++	14741246	0.000
(2)	+++++	+++++	13556302	+++++	+++++	13556302	0.000
(3)	+++++	+++++	16939688	+++++	+++++	16939688	0.000
(4)	+++++	+++++	17633992	+++++	+++++	17633992	0.000
(5)	+++++	+++++	16892052	+++++	+++++	16892052	0.000

## STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 25-MAY-2000 16:23  
 End Cal Date : 25-MAY-2000 19:01  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gc8.i/2250.b/PCBA.m  
 Cal Date : 26-May-2000 10:11 eppinged  
 Curve Type : Average

Compound	0.00500	0.01000	0.02500	0.05000	0.10000	RRF	% RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
33 Aroclor-1254(1)	+++++	+++++	13523388	+++++	+++++	13523388	0.000
(2)	+++++	+++++	16607860	+++++	+++++	16607860	0.000
(3)	+++++	+++++	12654104	+++++	+++++	12654104	0.000
(4)	+++++	+++++	25147350	+++++	+++++	25147350	0.000
(5)	+++++	+++++	17846900	+++++	+++++	17846900	0.000
36 Aroclor-1260(1)	27376050	23616880	21624986	20720283	19737648	22615169	13.361
(2)	28959500	24641280	23206332	22201560	21064586	24014652	12.748
(3)	28310540	24683575	23427998	22869001	22147536	24287730	10.016
(4)	41568330	37024930	35944990	36682058	35144374	37272936	6.728
(5)	21235160	18815690	17951180	17841844	17232584	18615292	8.432
\$ 1 Tetrachloro-m-xylene	665111800	621804400	605712920	593601040	579339840	613114000	5.382
\$ 34 Decachlorobiphenyl	238823600	220856400	214042760	203237760	195738950	214539894	7.768

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Data File: /var/chem/gc8.i/2250.b/h-a20642.d  
 Report Date: 31-May-2000 10:13

FL  
 68908A  
 DB608

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## STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc8.i  
 Lab File ID: h-a20642.d  
 Analysis Type:  
 Lab Sample ID: M1660  
 Quant Type: ESTD

Injection Date: 30-MAY-2000 10:48  
 Init. Calibration Date(s): 05/25/00 05/25/00  
 Init. Calibration Times: 16:23 19:01  
 Method File: /var/chem/gc8.i/2250.b/PCBA.m

COMPOUND	RRF	RFO	MIN	MAX
=====	=====	=====	=====	=====
20 Aroclor-1016(1)	10140987.800	10484566.000	0.010	-3.4 15.0
(2)	18403394.200	19139298.000	0.010	-4.0 15.0
(3)	30380244.300	31101872.000	0.010	-2.4 15.0
(4)	13771224.800	13952984.000	0.010	-1.3 15.0
(5)	18963098.400	19316698.000	0.010	-1.9 15.0
\$ 1 Tetrachloro-m-xylene	613114000.000	663039600.000	0.000	-8.1 15.0
\$ 34 Decachlorobiphenyl	214539894.000	234296520.000	0.010	-9.2 15.0
36 Aroclor-1260(1)	22615169.300	23344484.000	0.010	-3.2 15.0
(2)	24014651.700	24530186.000	0.010	-2.1 15.0
(3)	24287729.900	24632868.000	0.010	-1.4 15.0
(4)	37272936.500	35732572.000	0.010	4.1 15.0
(5)	18615291.600	19354114.000	0.010	-4.0 15.0

ata File: /var/chem/gc8.i/2250.b/h-a20682.d  
 Report Date: 31-May-2000 08:39

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STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc8.i      Injection Date: 30-MAY-2000 23:59  
 Lab File ID: h-a20682.d      Init. Calibration Date(s): 05/25/00 05/25/00  
 Analysis Type:      Init. Calibration Times: 16:23 19:01  
 Lab Sample ID: M1660      Method File: /var/chem/gc8.i/2250.b/PCBA.m  
 Instrument Type: ESTD

COMPOUND	RRF	RPO	MIN	MAX
20 Aroclor-1016(1)	10140987.800	9896550.000	0.010	2.4
(2)	18403394.200	17955188.000	0.010	2.4
(3)	30380244.300	29713456.000	0.010	2.2
(4)	13771224.800	12944850.000	0.010	6.0
(5)	18963098.400	17843966.000	0.010	5.9
\$ 1 Tetrachloro-m-xylene	613114000.000	629849120.000	0.000	-2.7
\$ 34 Decachlorobiphenyl	214539894.000	207482880.000	0.010	3.3
36 Aroclor-1260(1)	22615169.300	21781008.000	0.010	3.7
(2)	24014651.700	22861774.000	0.010	4.8
(3)	24287729.900	23133706.000	0.010	4.8
(4)	37272936.500	33926624.000	0.010	9.0
(5)	18615291.600	16681252.000	0.010	10.4

658 392

Data File: /var/chem/gc8.i/2250.b/h-a20703.d  
 Report Date: 31-May-2000 10:23

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STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc8.i  
 Lab File ID: h-a20703.d  
 Analysis Type:  
 Lab Sample ID: M1660  
 Quant Type: ESTD

Injection Date: 31-MAY-2000 08:08  
 Init. Calibration Date(s): 05/25/0 05/25/0  
 Init. Calibration Times: 16:23 19:01  
 Method File: /var/chem/gc8.i/2250.b/PCBA.m

COMPOUND	RRF	RFD	MIN	MAX
20 Aroclor-1016(1)	10140987.800	9608270.000	0.010	5.3
(2)	18403394.200	17078538.000	0.010	7.2
(3)	30380244.300	28666016.000	0.010	5.6
(4)	13771224.800	12195546.000	0.010	11.4
(5)	18963098.400	16917288.000	0.010	10.8
\$ 1 Tetrachloro-m-xylene	613114000.000	600237760.000	0.000	2.1
\$ 34 Decachlorobiphenyl	214539894.000	213220680.000	0.010	0.6
36 Aroclor-1260(1)	22615169.300	21361852.000	0.010	5.5
(2)	24014651.700	22325546.000	0.010	7.0
(3)	24287729.900	22605384.000	0.010	6.9
(4)	37272936.500	33875756.000	0.010	9.1
(5)	18615291.600	18218858.000	0.010	2.1

8D  
PESTICIDE ANALYTICAL SEQUENCE

658 393

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: COE230195

GC Column: DB608

ID: 0.53 (mm) Init. Calib. Date(s): 05/25/00 05/25/00

Instrument ID: GC8

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION							
TCX: 1.75				DCB: 10.92			
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT	#	DCB RT	#
=====	=====	=====	=====	=====		=====	
01	M2154	05/25/00	1623	1.74		10.91	
02	M1232	05/25/00	1643				
03	M1242	05/25/00	1702				
04	M1248	05/25/00	1722				
05	L1660	05/25/00	1742	1.75		10.92	
06	ML1660	05/25/00	1802	1.75		10.92	
07	M1660	05/25/00	1822	1.75		10.92	
08	MH1660	05/25/00	1841	1.75		10.92	
09	H1660	05/25/00	1901	1.75		10.92	
10	2M2154	05/25/00	1921	1.74			
11	2M1232	05/25/00	1941				
12	2M1242	05/25/00	2000				
13	2M1248	05/25/00	2020				
14	2M1660	05/25/00	2040				
15	M2154	05/30/00	0929	1.74		10.90	
16	M1232	05/30/00	0948				
17	M1242	05/30/00	1008				
18	M1248	05/30/00	1028				
19	M1660	05/30/00	1048	1.75		10.90	
20	M1660	05/30/00	2359	1.74		10.90	
21	DF/S1/0137/W	DDK90104	05/31/00	0218		10.90	
22	PBLK	DDN23101	05/31/00	0257		10.90	
23	LCS	DDN23102	05/31/00	0317		10.90	
24	LCSD	DDN23103	05/31/00	0337		10.90	
25		M1660	05/31/00	0808		10.90	
26							
27							
28							
29							
30							
31							
32							

QC LIMITS

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

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)

# Column used to flag retention time values with an asterisk.

\* Values outside of QC limits.

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Data File: /var/chem/gc8.i/2250.b/h-a20541.d  
 Report Date: 01-Jun-2000 11:22

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20541.d  
 Lab Smp Id: M2154  
 Inj Date : 25-MAY-2000 16:23  
 Operator : 010139  
 Smp Info : M2154,2250.b  
 Misc Info : 190-83-1  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g  
 Cal Date : 25-MAY-2000 16:23  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20541.d  
 Calibration Sample, Level: 3  
 Compound Sublist: 2-2154.sub  
 Sample Matrix: None

AMOUNTS								
RT	EXP RT	DLT RT	CAL-AMT		ON-COL	TARGET RANGE		RATIO
==	=====	=====	RESPONSE (	ng)	( ng)	=====		=====
8 Aroclor-1221					CAS # 11104-28-2			
2 068	2.068	0.000	3036473	0.50000	0.50000	0.00-	0.00	0.00
2.208	2 208	0.000	1920173	0.50000	0.50000	116.57-	156.57	0 00
2 274	2.274	0.000	5840278	0.50000	0.50000	66.04-	106.04	0.00
Average of Peak Amounts =					0.5			
-----								
\$ 1 Tetrachloro-m-xylene					CAS # 877-09-8			
1.743	1.747	-0.004	14430961	0.02500	0.025000	0 00-	0.00	0.00
-----								
\$ 34 Decachlorobiphenyl					CAS # 2051-24-3			
10 909	10.921	-0 012	4887513	0.02500	0.025000	0.00-	0 00	0.00
-----								
33 Aroclor-1254					CAS #: 11097-69-1			
4.515	4.515	0 000	6761694	0.50000	0.50000	0.00-	0.00	0.00(M)
4.588	4.588	0.000	8303930	0.50000	0.50000	92.23-	132.23	0.00
5.231	5.231	0.000	6327052	0.50000	0.50000	77.40-	117.40	0.00
5.401	5.401	0.000	12573675	0.50000	0.50000	51.09-	91.09	0 00
5.573	5.573	0.000	8923450	0.50000	0.50000	65.01-	105.01	0.00
Average of Peak Amounts =					0.5			

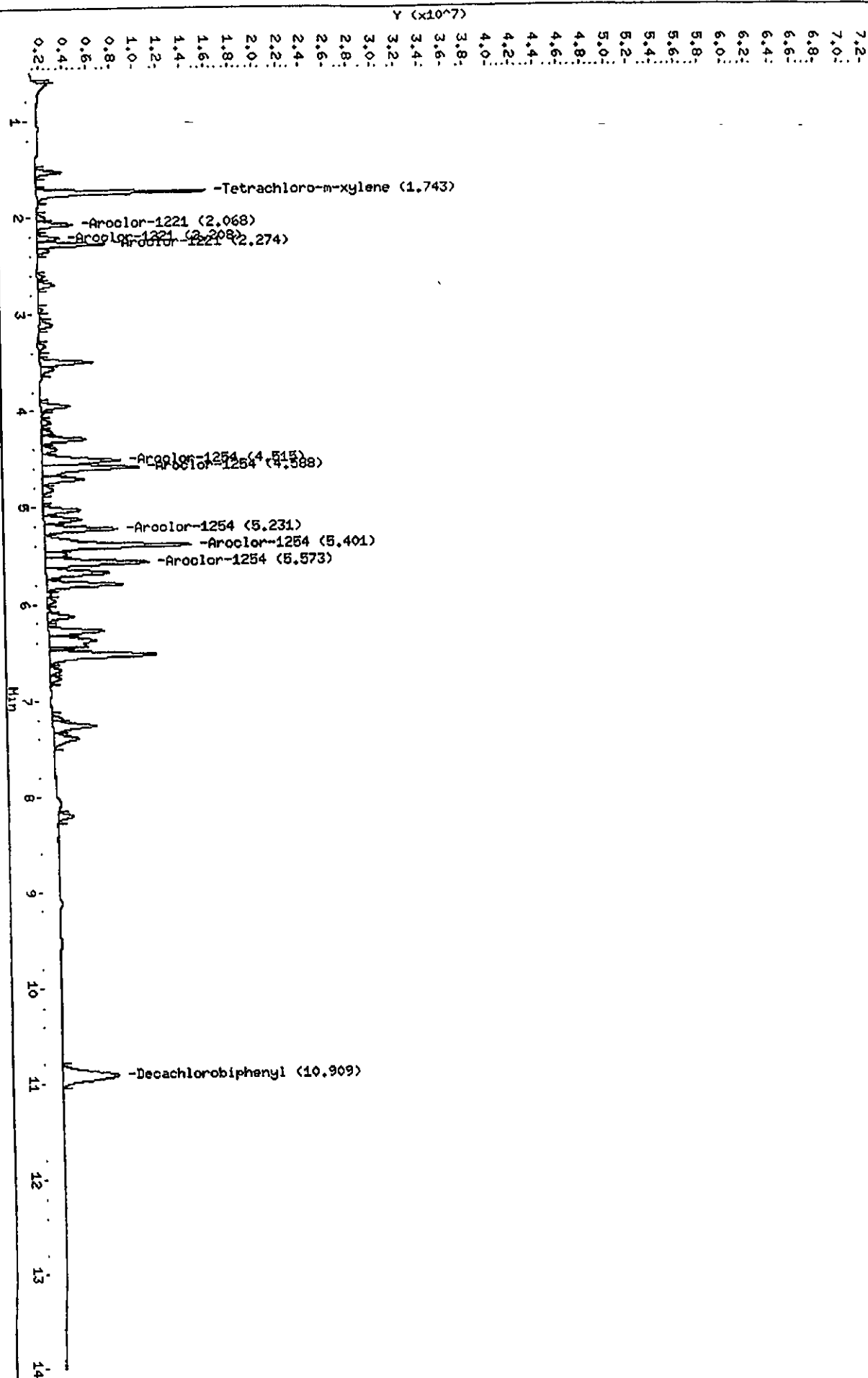
## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.1/2250.b/h-a20541.d  
Date : 25-May-2000 16:23  
Client ID:  
Sample Info: H2154,2250.b  
Column phase: DB608

Instrument: gc8.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20541.d





Data File: /var/chem/gc8.i/2250.b/h-a20542.d  
 Report Date: 01-Jun-2000 11:22

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20542.d  
 Lab Smp Id: M1232  
 Inj Date : 25-MAY-2000 16:43  
 Operator : 010139  
 Smp Info : M1232,2250.b  
 Misc Info : 190-83-2  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g  
 Cal Date : 25-MAY-2000 16:43  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20542.d  
 Calibration Sample, Level: 3  
 Compound Sublist: 3-1232.sub  
 Sample Matrix: None

AMOUNTS							
RT	EXP RT	DLT RT	CAL-AMT		ON-COL	TARGET RANGE	RATIO
			RESPONSE (	ng)	( ng)		
==	=====	=====	=====	=====	=====	=====	=====
14 Aroclor-1232					CAS #. 11141-16-5		
2.702	2.702	0.000	3861519	0.50000	0.50000	0 00- 0.00	0.00 (M)
3.115	3.115	0.000	5895441	0.50000	0.50000	146.26- 186.26	0.00
3.499	3.499	0.000	3901208	0.50000	0.50000	65 99- 105 99	0.00
3.947	3.947	0.000	2757561	0.50000	0.50000	74.18- 114.18	0.00
Average of Peak Amounts =					0 5		

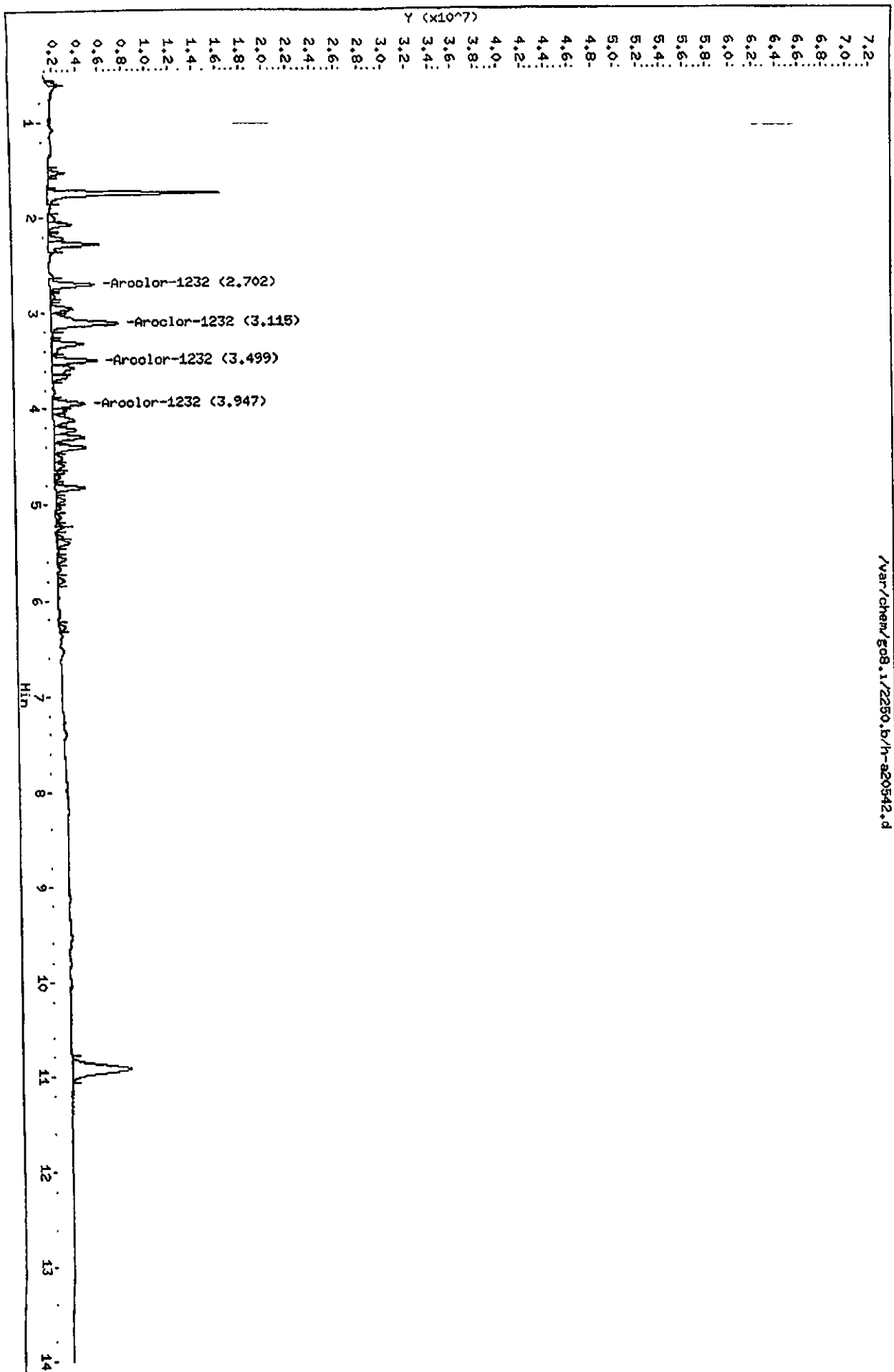
## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.1/2250.b/h-a20542.d  
 Date: 25-MAY-2000 16:43  
 Client ID:  
 Sample Info: M1232,2250.b  
 Column phase: DB608

Instrument: gc8.1  
 Operator: 010139  
 Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20542.d



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20543.d  
Lab Smp Id: M1242  
Inj Date : 25-MAY-2000 17:02  
Operator : 010139  
Smp Info : M1242,2250.b  
Misc Info : 190-83-3  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 17:02  
Als bottle: 4  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20543.d  
Calibration Sample, Level: 3  
Compound Sublist: 4-1242.sub  
Sample Matrix: None

AMOUNTS								
			CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	ng)	TARGET RANGE	RATIO
--	-----	-----	-----	-----	-----	-----	-----	-----
15 Aroclor-1242					CAS #: 53469-21-9			
2 703	2 703	0.000	6746486 0	50000	0 50000	0.00-	0.00	0.00 (M)
3 118	3 118	0.000	11075495 0	50000	0.50000	310.13-	350.13	0.00
3 326	3 326	0.000	5121517 0	50000	0 50000	749.70-	789.70	0.00
3 499	3 499	0.000	6858685 0.50000		0.50000	512.48-	552.48	0.00
4.824	4.824	0.000	4863406 0.50000		0.50000	314 30-	354 30	0.00
Average of Peak Amounts =					0 5			

## QC Flag Legend

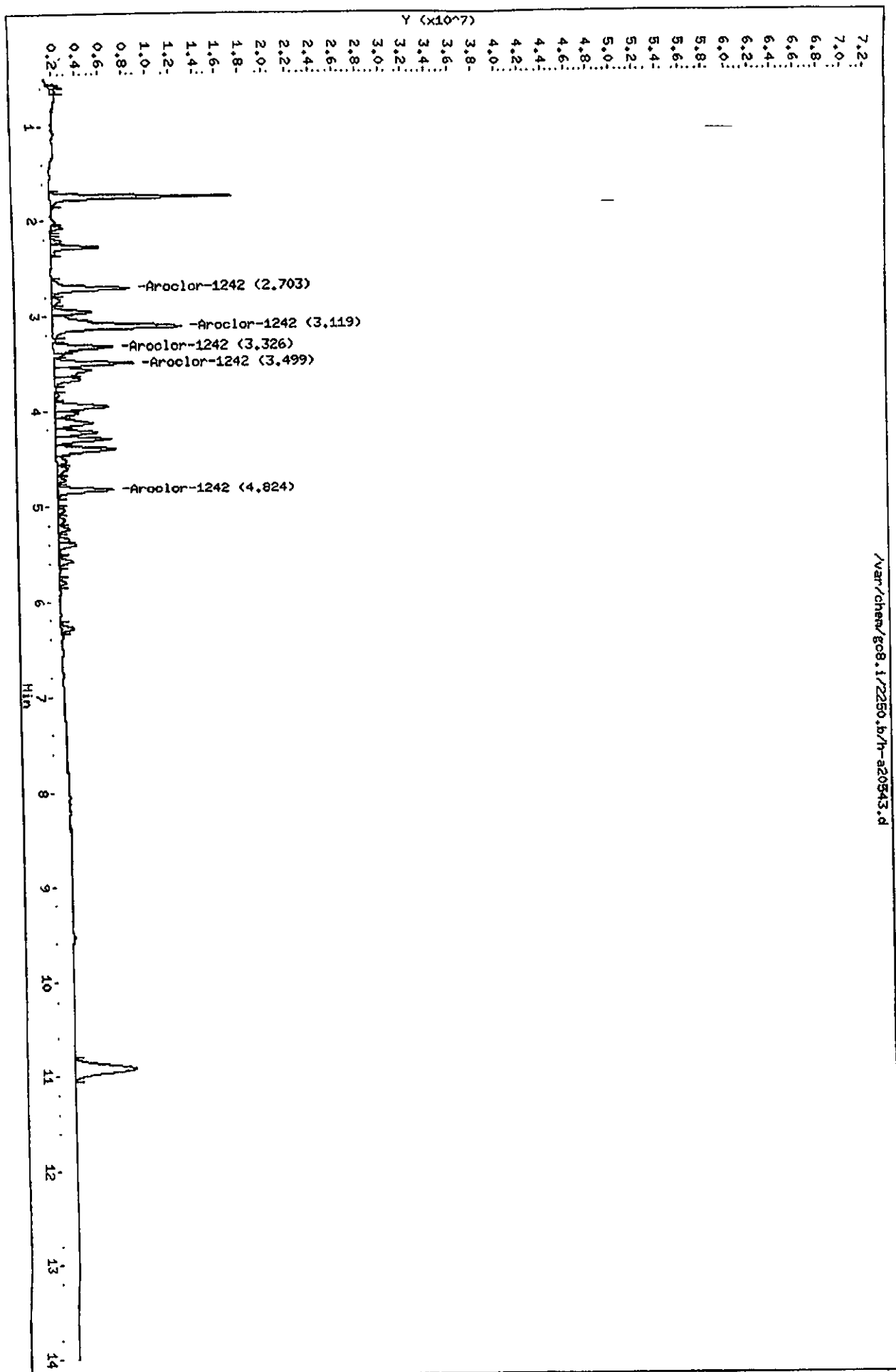
M - Compound response manually integrated.

Data File: /var/chem/g08.i/2250.b/h-a20543.d  
Date : 25-MAY-2000 17:02  
Client ID:  
Sample Info: H1242,2250.b

Column phase: DB608

Instrument: g08.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/g08.i/2250.b/h-a20543.d



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20544.d

Lab Smp Id: M1248

Inj Date : 25-MAY-2000 17:22

Operator : 010139

Inst ID: gc8.i

Smp Info : M1248,2250.b

Misc Info : 190-83-4

Comment :

Method : /var/chem/gc8.i/2250.b/PCBA.m

Meth Date : 01-Jun-2000 10:53 g

Quant Type: ESTD

Cal Date : 25-MAY-2000 17:22

Cal File: h-a20544.d

Als bottle: 5

Calibration Sample, Level: 3

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: 5-1248.sub

Target Version: 3.40

Sample Matrix: None

AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE ( ng)		( ng)		TARGET RANGE		RATIO
--	-----	-----	-----	-----	-----	-----	-----	-----	-----
21 Aroclor-1248					CAS #: 12672-29-6				
3.498	3.498	0.000	7370623	0.50000	0.50000	0.00-	0.00		0.00 (M)
3.951	3.951	0.000	6778151	0.50000	0.50000	114.57-	154.57		0.00
4.300	4.300	0.000	8469844	0.50000	0.50000	63.67-	103.67		0.00
4.402	4.402	0.000	8816996	0.50000	0.50000	43.86-	83.86		0.00
4.824	4.824	0.000	8446026	0.50000	0.50000	128.08-	168.08		0.00
Average of Peak Amounts =					0.5				

## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.i/2250.b/h-a20544.d

Date: 25-MAY-2000 17:22

Client ID:

Sample Info: H1248,2250.b

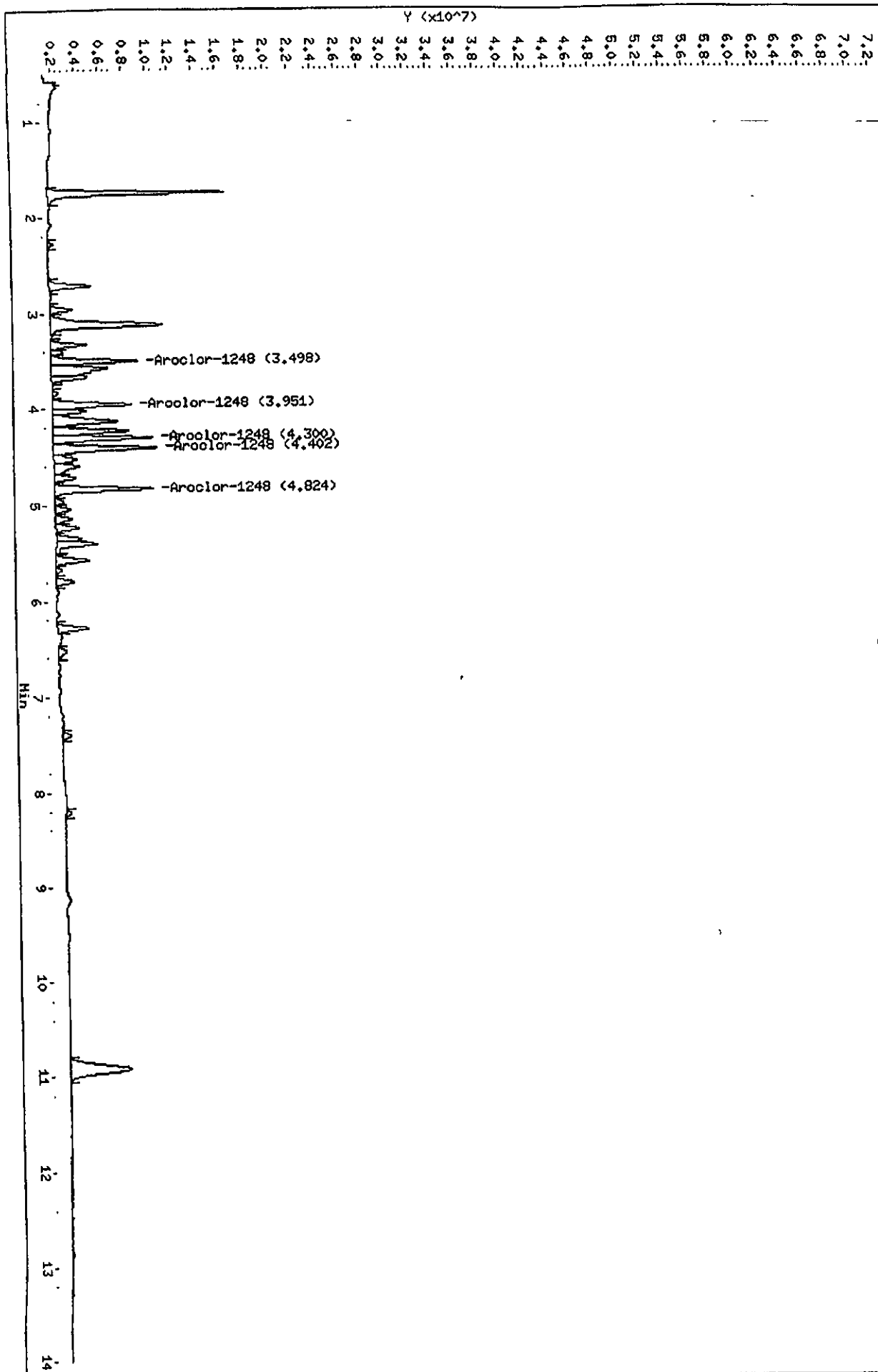
Column phase: DB608

Instrument: gc8.i

Operator: 010139

Column diameter: 0.53

/var/chem/gc8.i/2250.b/h-a20544.d



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Data File: /var/chem/gc8.i/2250.b/h-a20545.d  
Report Date: 01-Jun-2000 11:23

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20545.d  
Lab Smp Id: L1660  
Inj Date : 25-MAY-2000 17:42  
Operator : 010139  
Smp Info : L1660,2250.b  
Misc Info : 190-83-5  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 17:42  
Als bottle: 6  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20545.d  
Calibration Sample, Level: 1  
Compound Sublist: 1-1660.sub  
Sample Matrix: None

AMOUNTS								
			CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	ng)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====
20 Aroclor-1016					CAS # 12674-11-2			
2 277	2 277	0 000	1225730	0.10000	0 10000	0.00-	0.00	0.00 (M)
2.703	2.704	-0.001	2161541	0 10000	0 10000	80.00-	120.00	0.00
3.118	3.119	-0.001	3418934	0.10000	0.10000	416 04-	456.04	0.00
3 326	3 327	-0 001	1616397	0 10000	0.10000	203.51-	243.51	0.00
3 498	3 499	-0.001	2213386	0.10000	0.10000	297.56-	337.56	0 00
Average of Peak Amounts =					0.1			
-----								
\$ 1 Tetrachloro-m-xylene					CAS # 877-09-8			
1 746	1.747	-0.001	3325559	0 00500	0 0053536	0.00-	0.00	0.00
-----								
\$ 34 Decachlorobiphenyl					CAS # 2051-24-3			
10.917	10 921	-0.004	1194118	0.00500	0.0054987	0.00-	0.00	0.00 (M)
-----								
36 Aroclor-1260					CAS #: 11096-82-5			
5.677	5.681	-0.004	2737605	0 10000	0.10000	0 00-	0 00	0 00 (M)
5.799	5 798	0.001	2895950	0.10000	0 10000	95.86-	135.86	0.00
6.528	6.526	0.002	2831054	0.10000	0.10000	116.91-	156.91	0.00
7.401	7.401	0.000	4156833	0.10000	0 10000	120.00-	160.00	0.00
8 209	8.210	-0.001	2123516	0.10000	0.10000	108 33-	148.33	0.00
Average of Peak Amounts =					0.1			

Data File: /var/chem/gc8.i/2250.b/h-a20545.d  
Report Date: 01-Jun-2000 11:23

#### QC Flag Legend

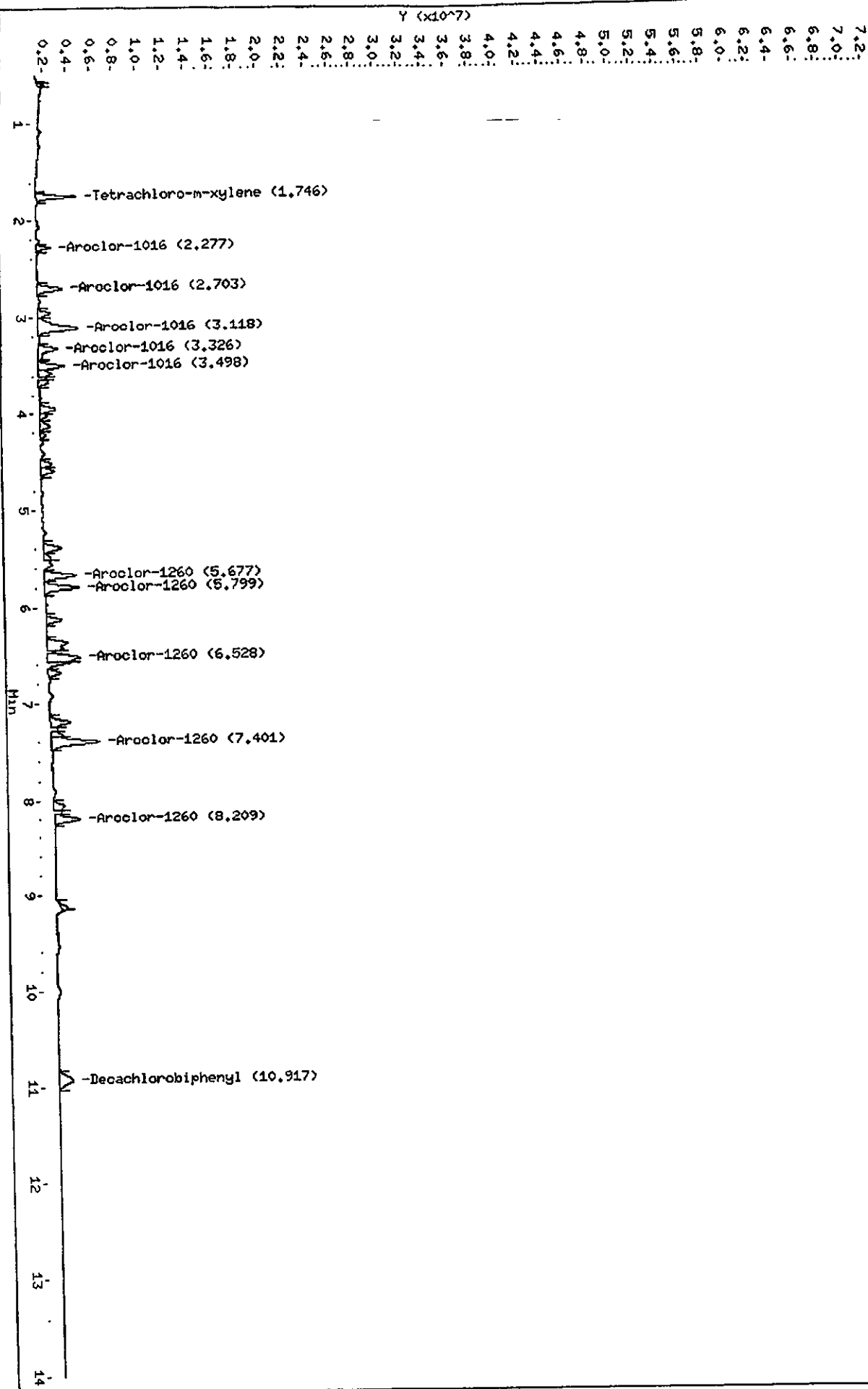
M - Compound response manually integrated.



Data File: /var/chem/ec8.1/2250.b/h-a20545.d  
Date: 25-MAY-2000 17:42  
Client ID:  
Sample Info: L1660,2250.b  
Column phase: DB608

Instrument: ec8.1  
Operator: 010139  
Column diameter: 0.53

/var/chem/ec8.1/2250.b/h-a20545.d



Data File: /var/chem/gc8.i/2250.b/h-a20546.d  
Report Date: 01-Jun-2000 11:23

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20546.d  
Lab Smp Id: ML1660  
Inj Date : 25-MAY-2000 18:02  
Operator : 010139  
Smp Info : ML1660,2250.b  
Misc Info : 190-83-6  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 18:02  
Als bottle: 7  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20546.d  
Calibration Sample, Level: 2  
Compound Sublist: 1-1660.sub  
Sample Matrix: None

AMOUNTS							
			CAL-AMT		ON-COL		
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
20 Aroclor-1016					CAS #: 12674-11-2		
2.278	2.277	0.001	2275410	0.20000	0.19255	0.00- 0.00	0.00(M)
2.703	2.704	-0.001	4068750	0.20000	0.19394	80.00- 120.00	0.00
3.119	3.119	0.000	6579240	0.20000	0.19614	416.04- 456.04	0.00
3.327	3.327	0.000	3056469	0.20000	0.19439	203.51- 243.51	0.00
3.499	3.499	0.000	4166386	0.20000	0.19394	297.56- 337.56	0.00
Average of Peak Amounts =					0.19419		
-----							
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8		
1.746	1.747	-0.001	6218044	0.01000	0.010007	0.00- 0.00	0.00
-----							
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3		
10.919	10.921	-0.002	2208564	0.01000	0.010113	0.00- 0.00	0.00
-----							
36 Aroclor-1260					CAS #: 11096-82-5		
5.677	5.681	-0.004	4723376	0.20000	0.18526	0.00- 0.00	0.00(M)
5.799	5.798	0.001	4928256	0.20000	0.18389	95.86- 135.86	0.00
6.528	6.526	0.002	4936715	0.20000	0.18631	116.91- 156.91	0.00
7.403	7.401	0.002	7404986	0.20000	0.18844	120.00- 160.00	0.00
8.207	8.210	-0.003	3763138	0.20000	0.18792	108.33- 148.33	0.00
Average of Peak Amounts =					0.18636		

658 406

Data File: /var/chem/gc8.i/2250.b/h-a20546.d  
Report Date: 01-Jun-2000 11:23

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QC-Flag Legend

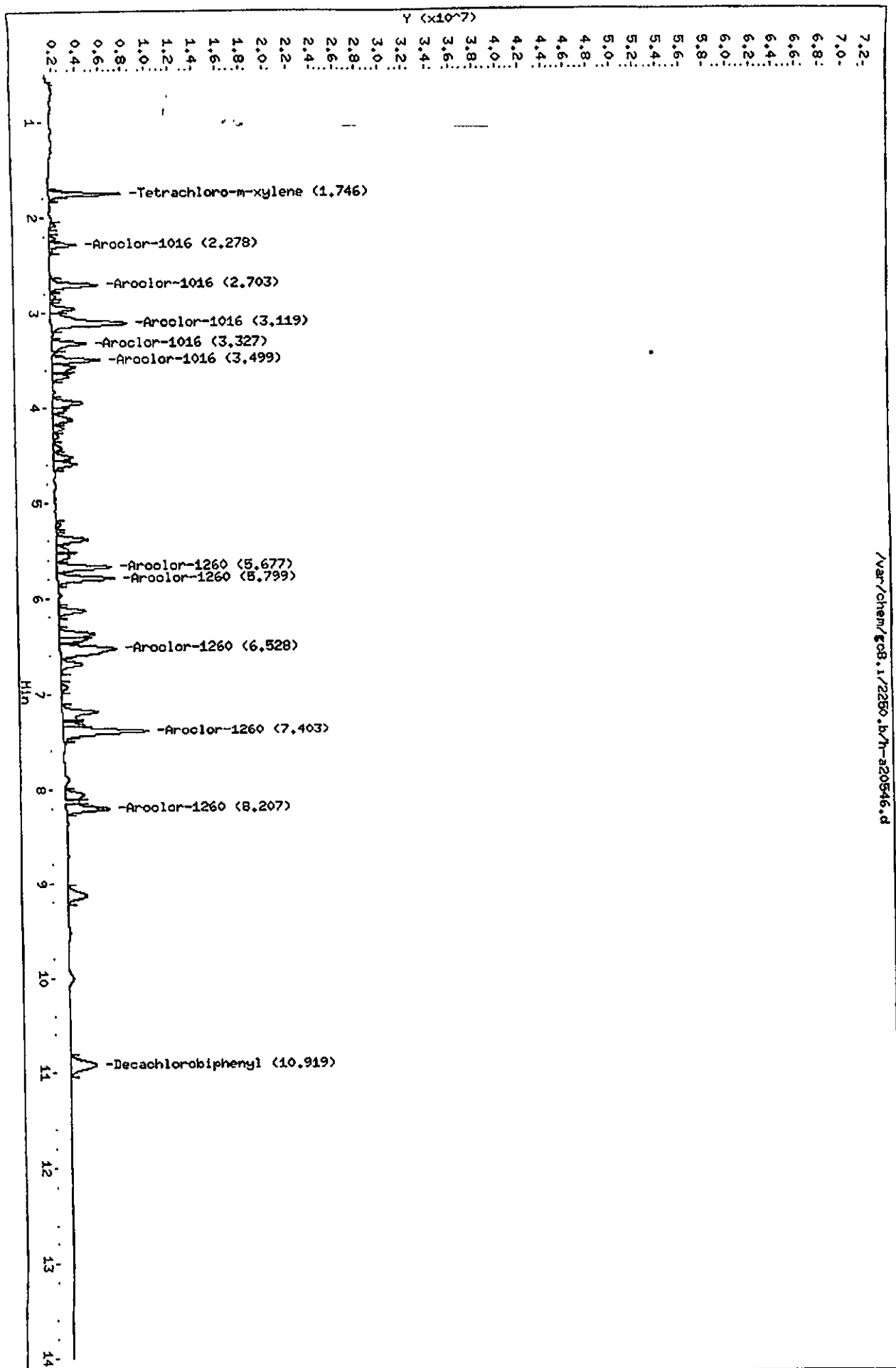
M - Compound response manually integrated.

Data File: /var/chem/gc8.1/2250.b/h-a20546.d  
Date : 25-MAY-2000 18:02  
Client ID:  
Sample Info: HL1660,2250.b

Column phase: DB608

Instrument: gc8.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20546.d



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20547.d  
 Lab Smp Id: M1660  
 Inj Date : 25-MAY-2000 18:22  
 Operator : 010139  
 Smp Info : M1660,2250.b  
 Misc Info : 190-83-7  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g  
 Cal Date : 25-MAY-2000 18:22  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

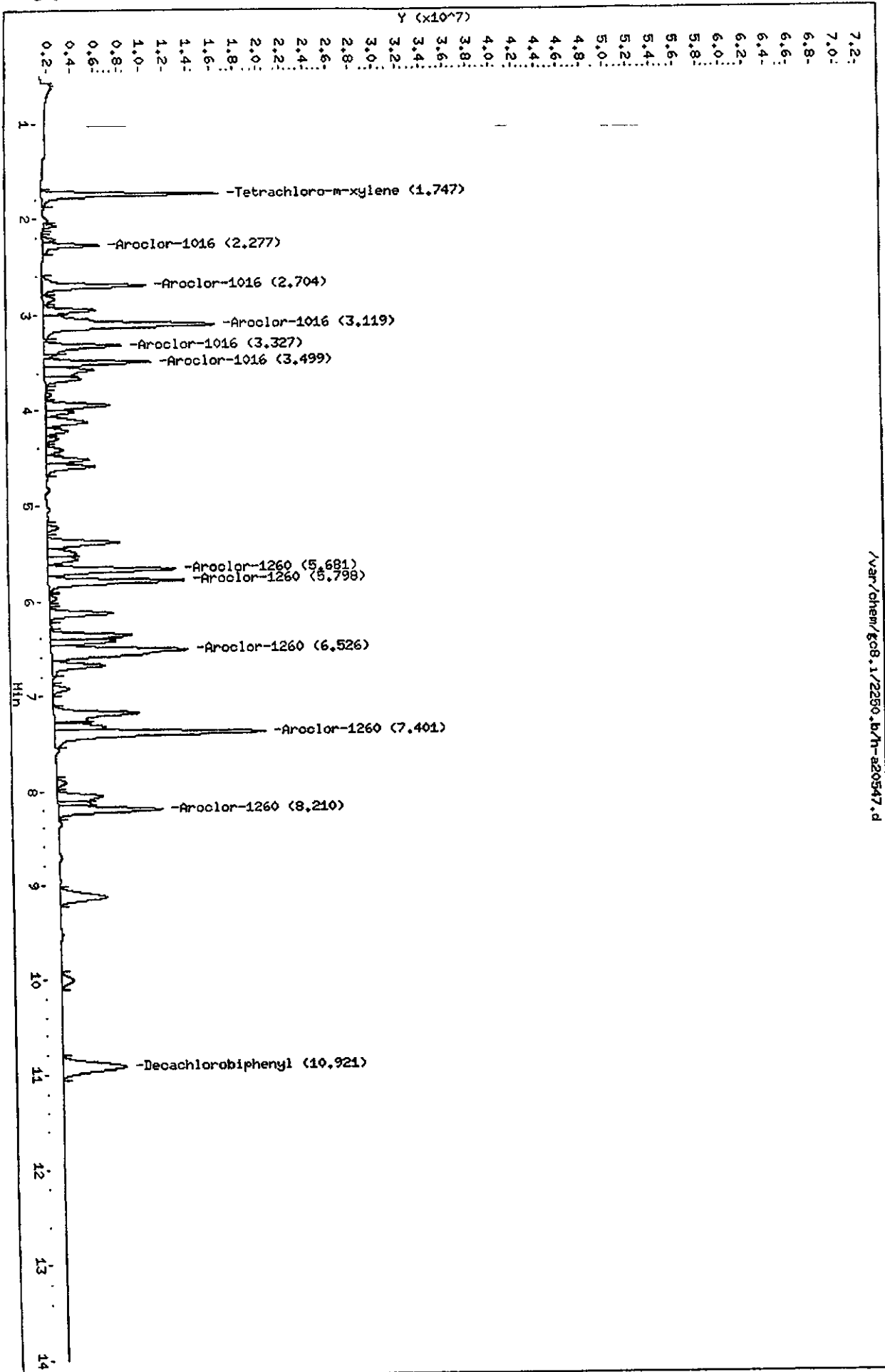
Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20547.d  
 Calibration Sample, Level: 3  
 Compound Sublist: 1-1660.sub  
 Sample Matrix: None

AMOUNTS									
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)	TARGET RANGE	RATIO		
==	=====	=====	=====	=====	=====	=====	=====		
20 Aroclor-1016					CAS #: 12674-11-2				
2 277	2 277	0.000	4840819	0.50000	0.43590	0.00- 0.00	0.00(M)		
2 704	2.704	0.000	8801983	0.50000	0.44333	80.00- 120.00	0.00		
3 119	3 119	0.000	14627767	0.50000	0.45550	416.04- 456.04	0.00		
3.327	3 327	0.000	6565172	0.50000	0.44183	203 51- 243 51	0.00		
3 499	3.499	0.000	9048532	0.50000	0.44455	297.56- 337.56	0.00		
Average of Peak Amounts =					0.44422				
-----									
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8				
1.747	1.747	0.000	15142823	0.02500	0.024003	0.00- 0.00	0.00		
-----									
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3				
10 921	10.921	0.000	5351069	0.02500	0.023828	0.00- 0.00	0.00		
-----									
36 Aroclor-1260					CAS #: 11096-82-5				
5.681	5.681	0.000	10812493	0.50000	0.44669	0.00- 0.00	0.00(M)		
5.798	5.798	0.000	11603166	0.50000	0.45321	95.86- 135.86	0.00		
6.526	6 526	0.000	11713999	0.50000	0.45984	116.91- 156.91	0.00		
7.401	7.401	0.000	17972495	0.50000	0.47074	120.00- 160.00	0.00		
8 210	8.210	0.000	8975590	0.50000	0.46424	108.33- 148.33	0.00		
Average of Peak Amounts =					0.45894				

Data File: /var/chem/gc8.i/2250.b/h-a20547.d  
Report Date: 01-Jun-2000 11:23

## QC Flag Legend

M - Compound response manually integrated.



Data File: /var/chem/gob.1/2250.b/h-a20547.d  
Date : 25-MAY-2000 18:22  
Client ID:  
Sample Info: H1660,2250.b  
Column Phase: DB608

/var/chem/gob.1/2250.b/h-a20547.d

Instrument: gob.1  
Operator: 010139  
Column diameter: 0.53

Data File: /var/chem/gc8.i/2250.b/h-a20548.d  
Report Date: 01-Jun-2000 11:23

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20548.d  
Lab Smp Id: MH1660  
Inj Date : 25-MAY-2000 18:41  
Operator : 010139  
Smp Info : MH1660,2250.b  
Misc Info : 190-83-8  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 18:41  
Als bottle: 9  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20548.d  
Calibration Sample, Level: 4  
Compound Sublist: 1-1660.sub  
Sample Matrix: None

AMOUNTS								
			CAL-AMT		ON-COL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	ng)	TARGET RANGE	RATIO
--	-----	-----	-----	-----	-----	-----	-----	-----
20 Aroclor-1016					CAS #: 12674-11-2			
2.277	2.277	0.000	9104277	1.00000	0.85848	0.00-	0.00	0.00
2.704	2.704	0.000	16840526	1.00000	0.88166	80.00-	120.00	0.00
3.120	3.119	0.001	28438345	1.00000	0.91164	416.04-	456.04	0.00
3.327	3.327	0.000	12503259	1.00000	0.87619	203.51-	243.51	0.00
3.499	3.499	0.000	17339425	1.00000	0.88464	297.56-	337.56	0.00
Average of Peak Amounts =					0.88252			
-----								
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8			
1.747	1.747	0.000	29680052	0.05000	0.047751	0.00-	0.00	0.00
-----								
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
10.917	10.921	-0.004	10161888	0.05000	0.046350	0.00-	0.00	0.00
-----								
36 Aroclor-1260					CAS #: 11096-82-5			
5.678	5.681	-0.003	20720283	1.00000	0.88796	0.00-	0.00	0.00 (M)
5.798	5.798	0.000	22201560	1.00000	0.89695	95.86-	135.86	0.00
6.526	6.526	0.000	22869001	1.00000	0.92129	116.91-	156.91	0.00
7.402	7.401	0.001	36682058	1.00000	0.97029	120.00-	160.00	0.00
8.207	8.210	-0.003	17841844	1.00000	0.94098	108.33-	148.33	0.00
Average of Peak Amounts =					0.9235			



658 412

Data File: /var/chem/gc8.i/2250.b/h-a20548.d  
Report Date: 01-Jun-2000 11:23

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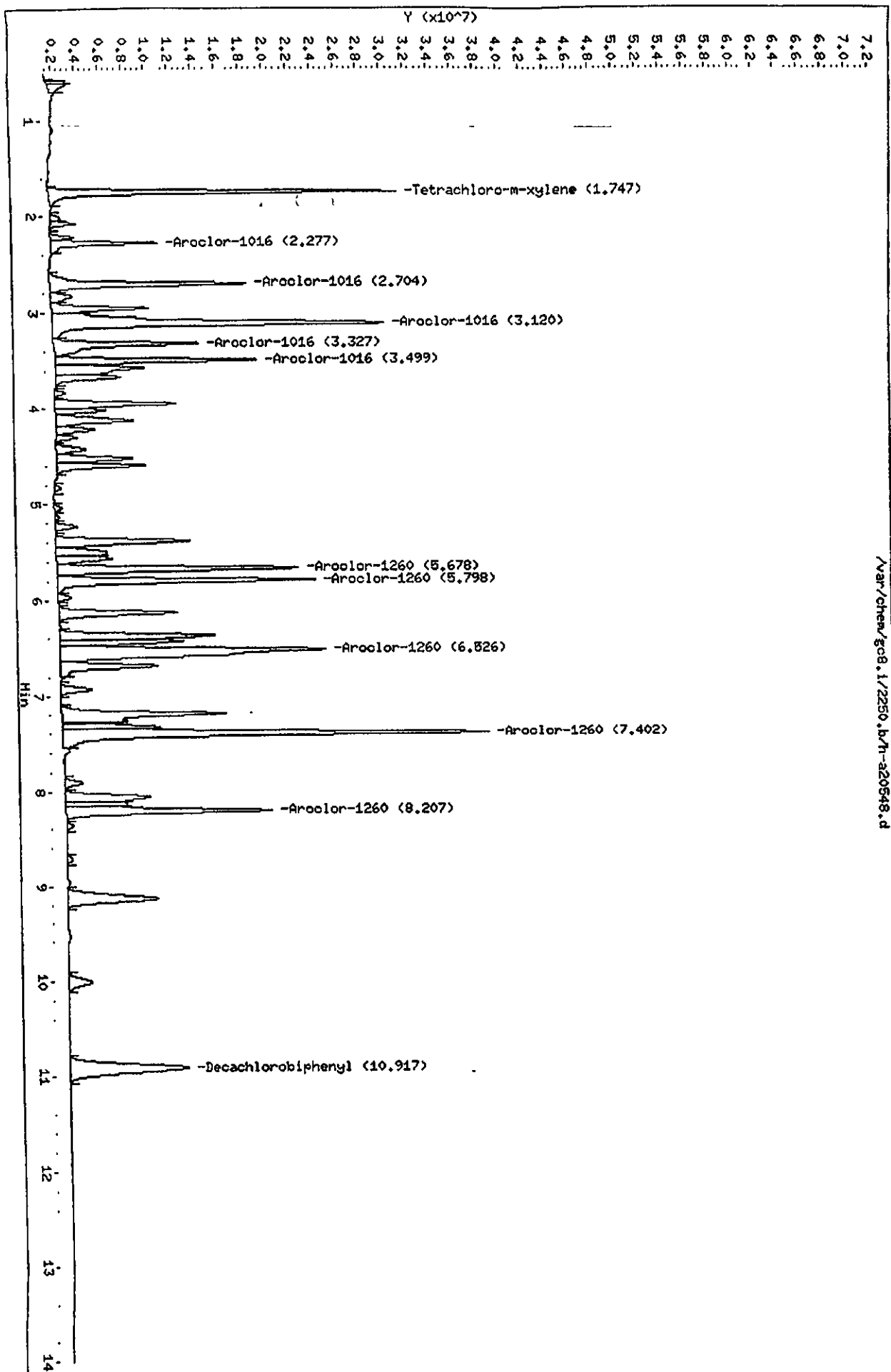
QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chew/gc8.1/2250.b/h-a20548.d  
Date: 25-MAY-2000 18:44  
Client ID:  
Sample Info: MHD660,2250.b  
Column phase: JIB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53

/var/chew/gc8.1/2250.b/h-a20548.d



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20549.d

Lab Smp Id: H1660

Inj Date : 25-MAY-2000 19:01

Operator : 010139

Inst ID: gc8.i

Smp Info : H1660,2250.b

Misc Info : 190-83-9

Comment :

Method : /var/chem/gc8.i/2250.b/PCBA.m

Meth Date : 01-Jun-2000 10:53 g

Quant Type: ESTD

Cal Date : 25-MAY-2000 19:01

Cal File: h-a20549.d

Als bottle: 10

Calibration Sample, Level: 5

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: 1-1660.sub

Target Version: 3.40

Sample Matrix: None

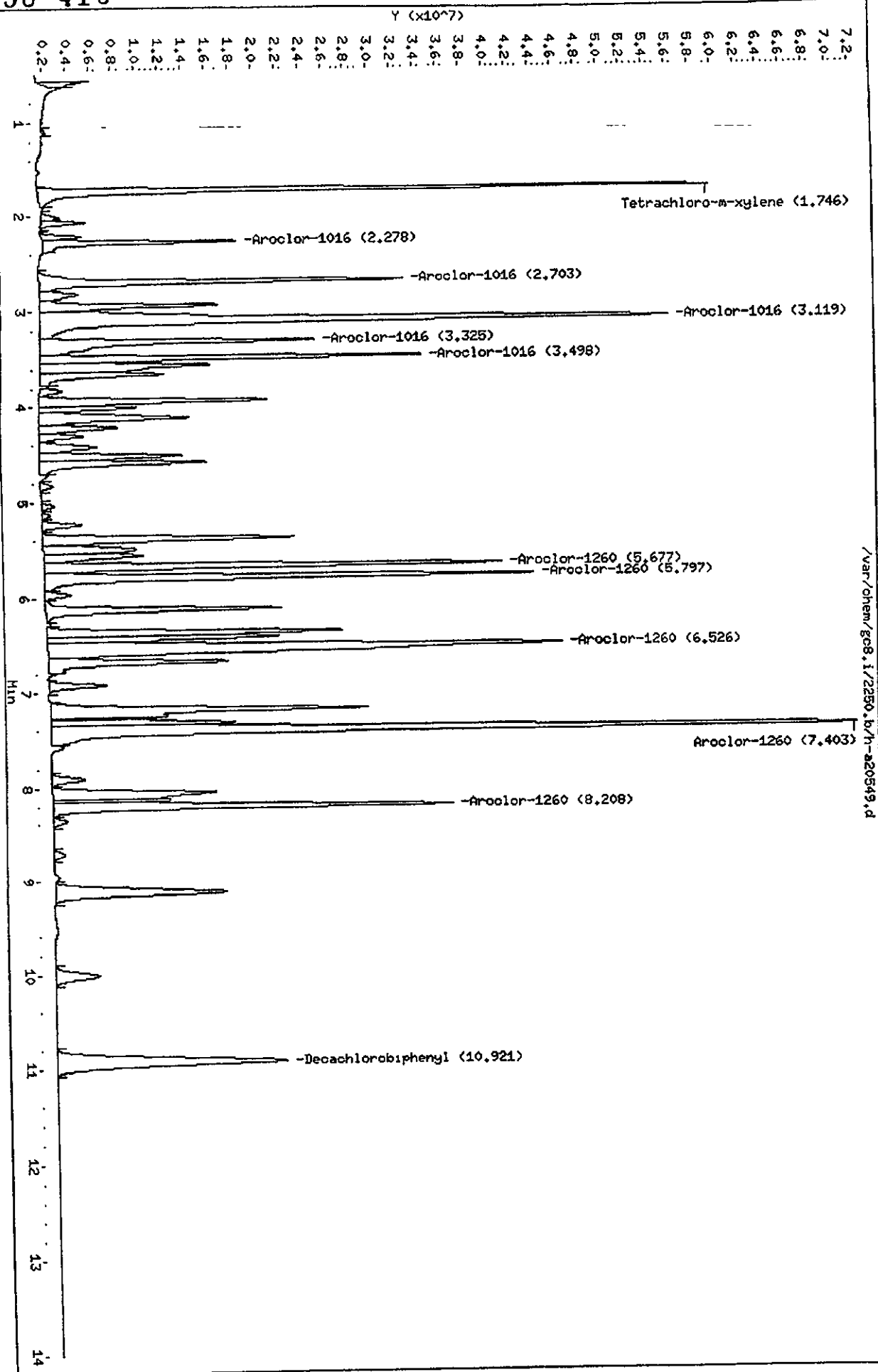
AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE ( ng)		( ng)		TARGET RANGE		RATIO
==	=====	=====	=====	=====	=====	=====	=====	=====	=====
20 Aroclor-1016					CAS #: 12674-11-2				
2.278	2.277	0.001	16569348	2.00000	1.6339	0.00-	0.00	0.00(M)	
2.703	2.704	-0.001	31226638	2.00000	1.6968	80.00-	120.00	0.00	
3.119	3.119	0.000	54243605	2.00000	1.7855	416.04-	456.04	0.00	
3.325	3.327	-0.002	23552412	2.00000	1.7103	203.51-	243.51	0.00	
3.498	3.499	-0.001	32826426	2.00000	1.7311	297.56-	337.56	0.00	
Average of Peak Amounts =					1.7115				
-----									
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8				
1.746	1.747	-0.001	57933984	0.10000	0.094491	0.00-	0.00	0.00	
-----									
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3				
10.921	10.921	0.000	19573895	0.10000	0.091237	0.00-	0.00	0.00	
-----									
36 Aroclor-1260					CAS #: 11096-82-5				
5.677	5.681	-0.004	39475295	2.00000	1.7455	0.00-	0.00	0.00(M)	
5.797	5.798	-0.001	42129173	2.00000	1.7543	95.86-	135.86	0.00	
6.526	6.526	0.000	44295071	2.00000	1.8238	116.91-	156.91	0.00	
7.403	7.401	0.002	70288749	2.00000	1.8858	120.00-	160.00	0.00	
8.208	8.210	-0.002	34465168	2.00000	1.8514	108.33-	148.33	0.00	
Average of Peak Amounts =					1.8122				

Data File: /var/chem/gc8.i/2250.b/h-a20549.d  
Report Date: 01-Jun-2000 11:23

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#### QC Flag Legend

M - Compound response manually integrated.



Column phase: DB608

Date File: /var/chem/gc08.i/2250.b/h-a20549.d  
Date: 25-MAY-2000 19:01  
Client ID:  
Sample Info: H1660,2250.b

Instrument: gc08.i  
Operator: 010139  
Column diameter: 0.53

Data File: /var/chem/gc8.i/2250.b/h-a20550.d  
Report Date: 01-Jun-2000 11:23

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20550.d  
Lab Smp Id: 2M2154  
Inj Date : 25-MAY-2000 19:21  
Operator : 010139  
Smp Info : 2M2154,2250.b  
Misc Info : 190-66-13  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 19:01  
Als bottle: 11  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20549.d  
Continuing Calibration Sample  
Compound Sublist: 2154.sub  
Sample Matrix: None

AMOUNTS								
RT	EXP RT	DLT RT	RESPONSE (	CAL-AMT	ON-COL	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	=====	
8 Aroclor-1221					CAS #: 11104-28-2			
2 071	2.068	0.003	3343838	0.50000	0.55061	0.00- 0.00	0.00	
2 211	2.208	0.003	2193730	0.50000	0.57123	116.57- 156.57	0.00	
2.277	2.274	0.003	6659964	0.50000	0.57018	66.04- 106.04	0.00	
Average of Peak Amounts =					0.56401			
-----								
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8			
1.744	1.747	-0.003	878975	0.02500	0.0014336	0.00- 0.00	0.00	
-----								
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
Compound Not Detected								
-----								
33 Aroclor-1254					CAS #: 11097-69-1			
4 520	4.515	0.005	7636747	0.50000	0.56471	0.00- 0.00	0.00(M)	
4 593	4.588	0.005	9471249	0.50000	0.57029	92.23- 132.23	0.00	
5.234	5.231	0.003	7166386	0.50000	0.56633	77.40- 117.40	0.00	
5 404	5.401	0.003	14218841	0.50000	0.56542	51.09- 91.09	0.00	
5 578	5.573	0.005	10553659	0.50000	0.59134	65.01- 105.01	0.00	
Average of Peak Amounts =					0.57162			

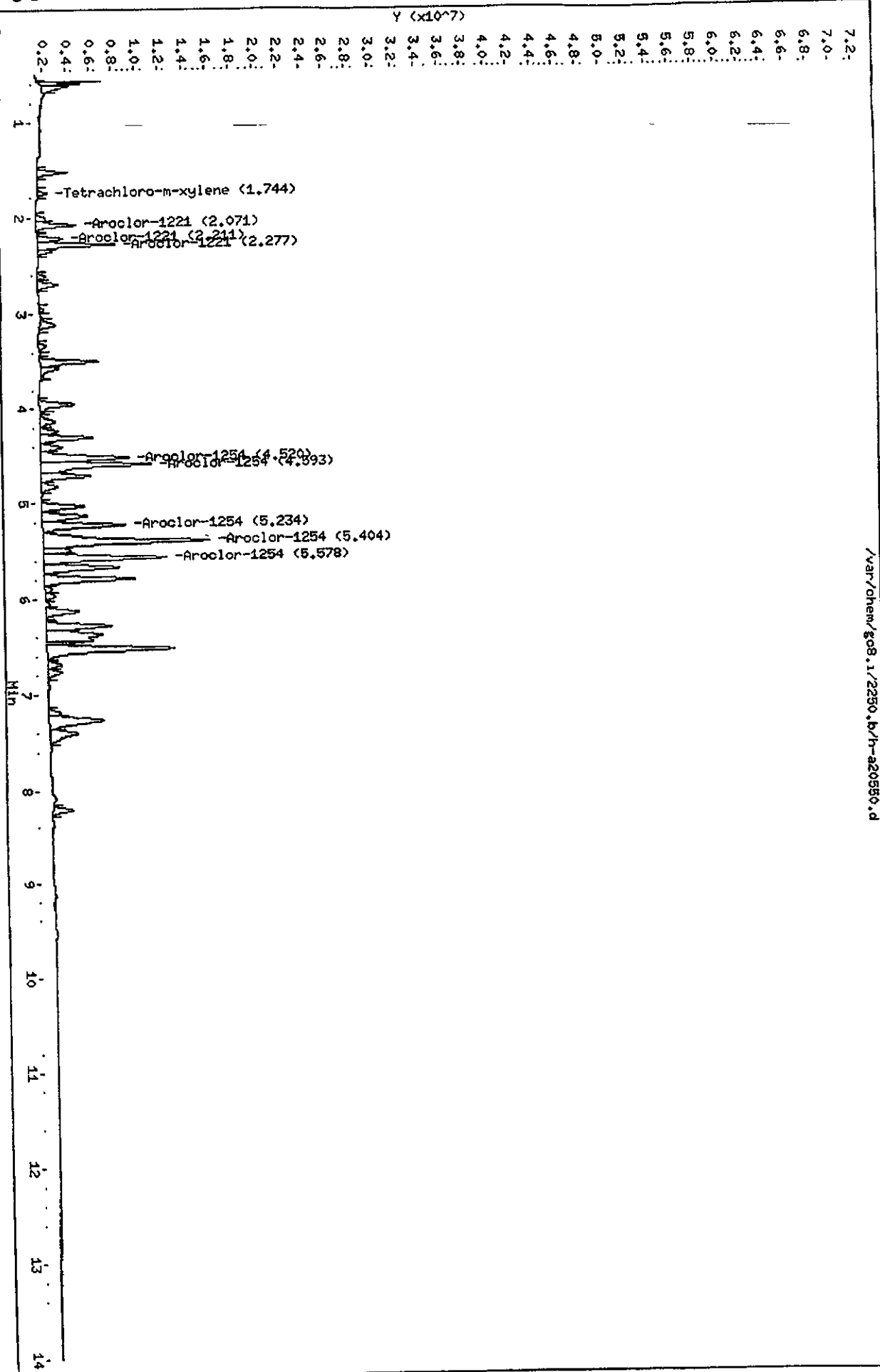
## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/g08.i/2250.b/h-a20550.d  
Date : 25-MAY-2000 19:21  
Client ID:  
Sample Info: 2H2154,2250.b  
Column phase: DB608

Instrument: g08.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/g08.i/2250.b/h-a20550.d



Data File: /var/chem/gc8.i/2250.b/h-a20551.d  
 Report Date: 01-Jun-2000 11:23

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STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20551.d  
 Lab Smp Id: 2M1232  
 Inj Date : 25-MAY-2000 19:41  
 Operator : 010139  
 Smp Info : 2M1232,2250.b  
 Misc Info : 190-66-14  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g  
 Cal Date : 25-MAY-2000 19:01  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20549.d  
 Continuing Calibration Sample  
 Compound Sublist: 1232.sub  
 Sample Matrix: None

AMOUNTS								
			CAL-AMT		ON-COL			
RT	EXP RT	DLT RT	RESPONSE ( ng)		( ng)		TARGET RANGE	RATIO
..	*****	*****	*****	*****	*****	*****	*****	*****
14 Aroclor-1232			CAS #: 11141-16-5					
2.702	2.702	0.000	4113275	0.50000	0.53260	0.00-	0.00	0.00(M)
3.120	3.115	0.005	6049055	0.50000	0.51303	146.26-	186.26	0.00
3.500	3.499	0.001	3862488	0.50000	0.49504	65.99-	105.99	0.00
3.950	3.947	0.003	2592477	0.50000	0.47007	74.18-	114.18	0.00
Average of Peak Amounts =					0.50268			

QC Flag Legend

M - Compound response manually integrated.



Data File: /var/chem/ec8.1/2250.b/h-820551.d

Date : 25-MAY-2000 19:41

Client ID:

Sample Info: 2M1232,2250.b

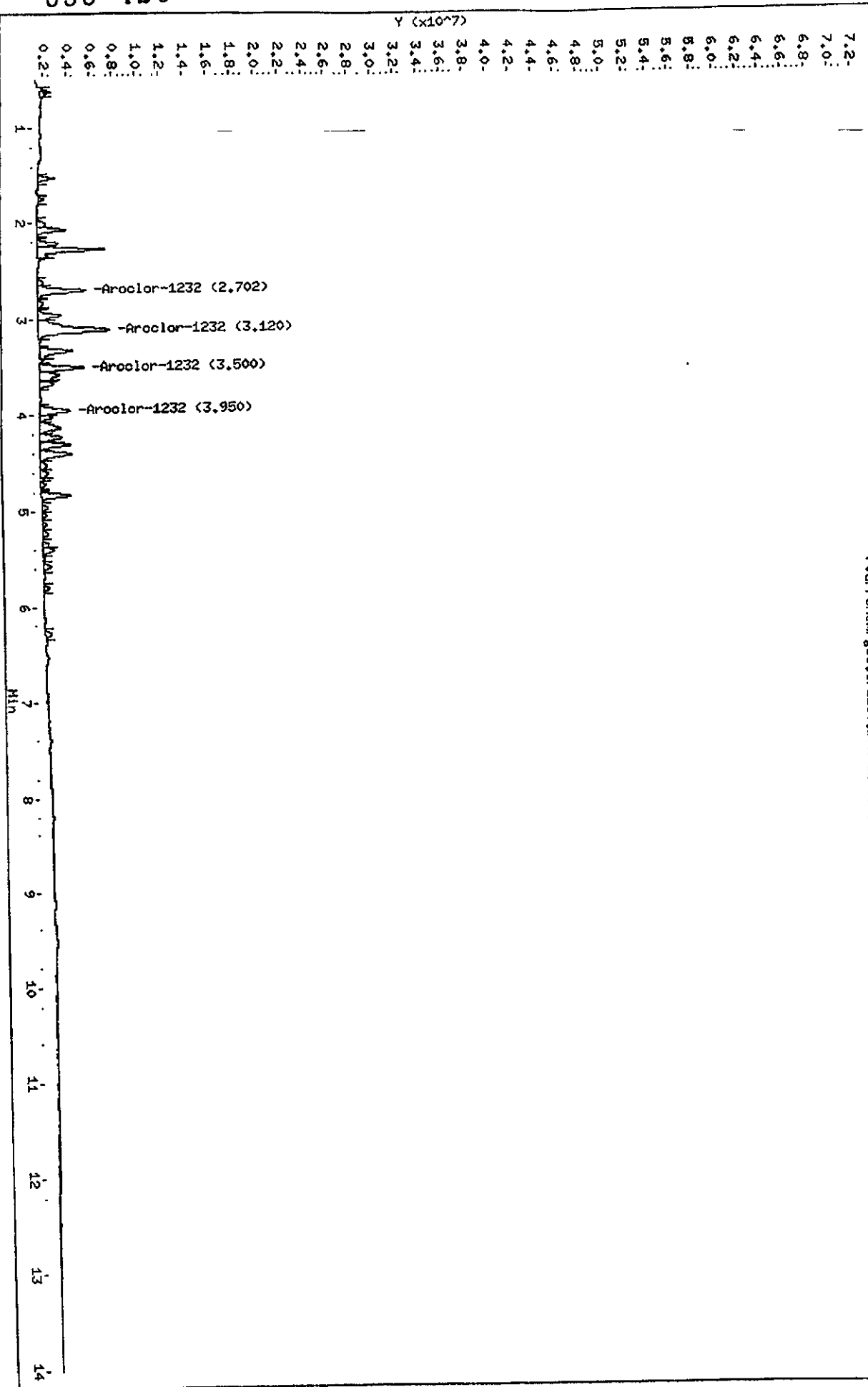
Column phase: DB608

Instrument: ec8.1

Operator: 010139

Column diameter: 0.53

/var/chem/ec8.1/2250.b/h-820551.d



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Data File: /var/chem/gc8.i/2250.b/h-a20552.d  
 Report Date: 01-Jun-2000 11:23

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# STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20552.d /-  
 Lab Smp Id: 2M1242  
 Inj Date : 25-MAY-2000 20:00  
 Operator : 010139 Inst ID: gc8.i  
 Smp Info : 2M1242,2250.b  
 Misc Info : 190-67-1  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 19:01 Cal File: h-a20549.d  
 Als bottle: 13 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 1242.sub  
 Target Version: 3.40 Sample Matrix: None

AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	ng)	TARGET RANGE	RATIO	
..	.....	.....	.....	.....	.....	.....	.....	.....	
1S Aroclor-1242					CAS #: 53469-21-9				
2 703	2 703	0.000	6933444	0.50000	0.51386	0 00-	0.00	0 00(M)	
3.118	3 118	0.000	11297487	0.50000	0.51002	310.13-	350.13	0.00	
3.327	3 326	0.001	5262139	0.50000	0.51373	749.70-	789.70	0.00	
3 499	3.499	0.000	7186072	0.50000	0.52387	512.48-	552.48	0.00	
4.828	4.824	0.004	4631196	0.50000	0 47613	314 30-	354.30	0.00	
Average of Peak Amounts =					0.50752				

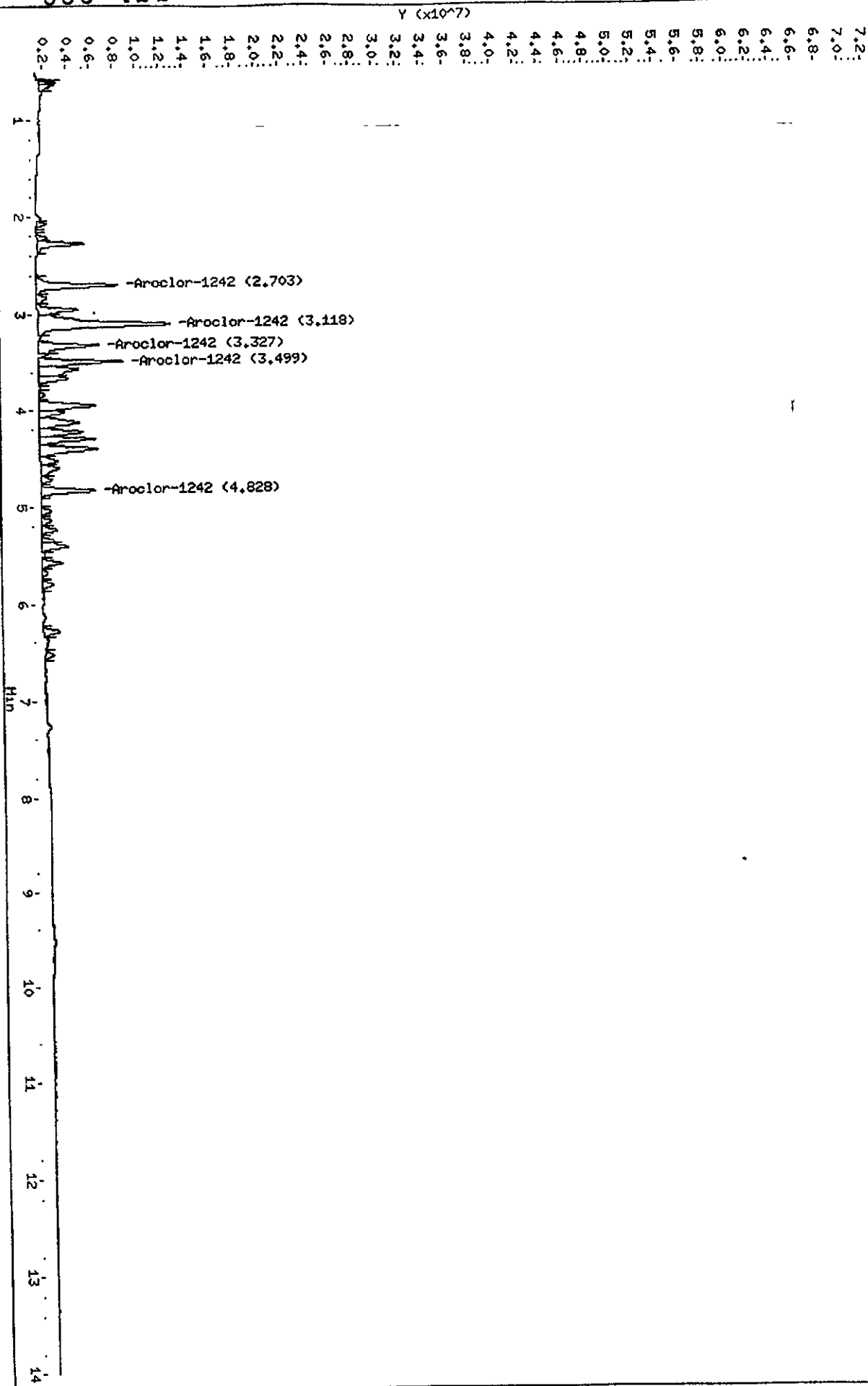
## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.1/2250.b/h-a20552.d  
Date: 25-MAY-2000 20:00  
Client ID:  
Sample Info: 2M1242,2250.b  
Column phase: DB608

Instrument: gc8.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20552.d



Data File: /var/chem/gc8.i/2250.b/h-a20553.d  
Report Date: 01-Jun-2000 11:23

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20553.d  
Lab Smp Id: 2M1248  
Inj Date : 25-MAY-2000 20:20  
Operator : 010139  
Smp Info : 2M1248,2250.b  
Misc Info : 190-67-2  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 01-Jun-2000 10:53 g  
Cal Date : 25-MAY-2000 19:01  
Als bottle: 14  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20549.d  
Continuing Calibration Sample  
Compound Sublist: 1248.sub  
Sample Matrix: None

AMOUNTS						
			CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ng)	TARGET RANGE	RATIO
--	-----	-----	-----	-----	-----	-----
21 Aroclor-1248			CAS #: 12672-29-6			
3.500	3.498	0.002	7563992 0.50000	0.51312	0.00- 0.00	0.00 (M)
3.952	3.951	0.001	7009133 0.50000	0.51704	114.57- 154.57	0.00
4.300	4.300	0.000	8123951 0.50000	0.47958	63.67- 103.67	0.00
4.400	4.402	-0.002	7755518 0.50000	0.43980	43.86- 83.86	0.00
4.825	4.824	0.001	7016013 0.50000	0.41534	128.08- 168.08	0.00
Average of Peak Amounts =			0.47298			

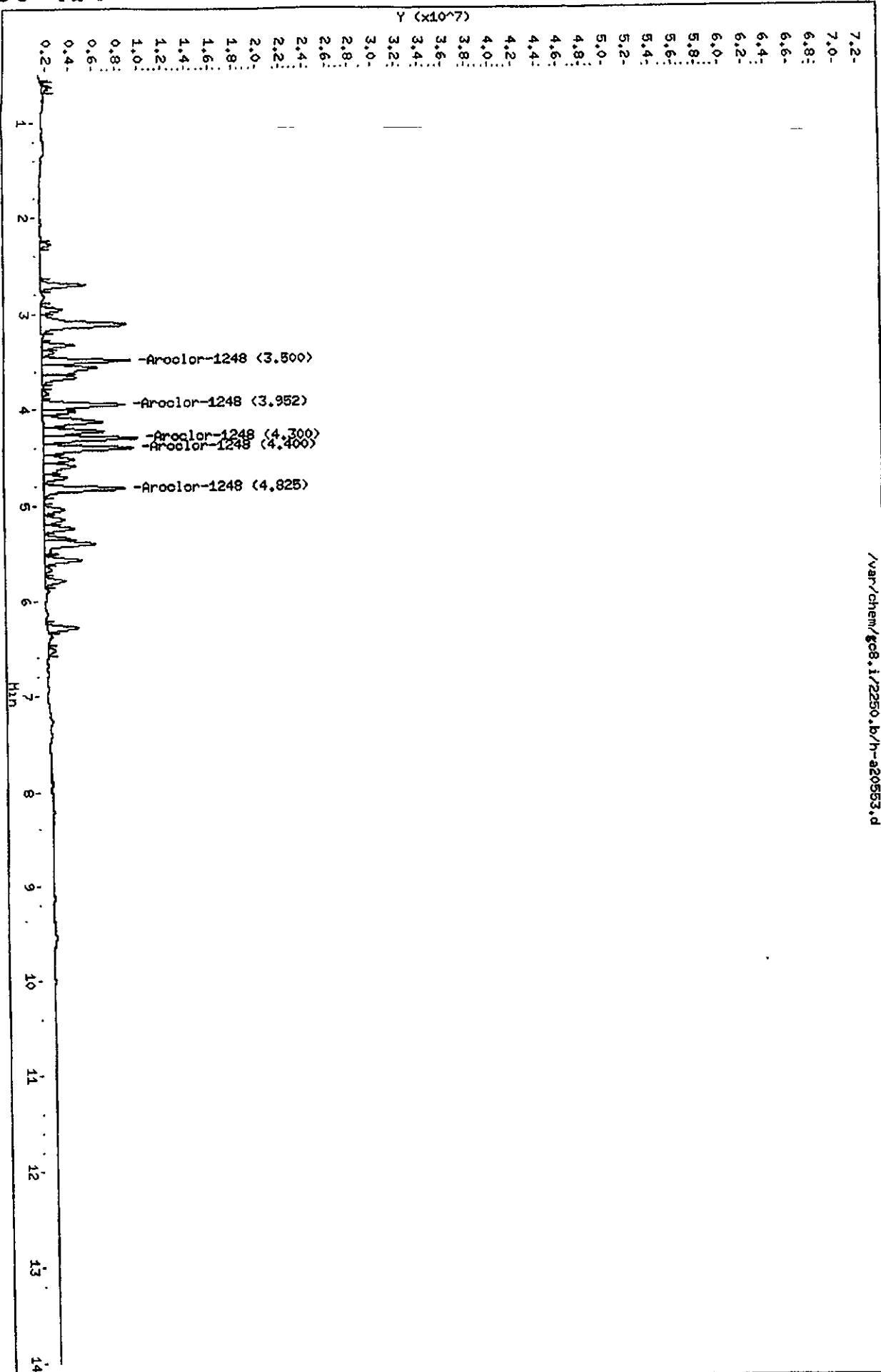
## QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.i/2250.b/h-a20553.d  
Date: 25-MAY-2000 20:20  
Client ID:  
Sample Info: 2M1248,2250.b  
Column phase: DB608

Instrument: gc8.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.i/2250.b/h-a20553.d



Data File: /var/chem/gc8.i/2250.b/h-a20554.d  
 Report Date: 01-Jun-2000 11:23

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STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20554.d  
 Lab Smp Id: 2M1660  
 Inj Date : 25-MAY-2000 20:40  
 Operator : 010139  
 Smp Info : 2M1660,2250.b  
 Misc Info : 190-67-4  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 01-Jun-2000 10:53 g  
 Cal Date : 25-MAY-2000 19:01  
 Als bottle: 15  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20549.d  
 Continuing Calibration Sample  
 Compound Sublist: 1660.sub  
 Sample Matrix: None

AMOUNTS							
		CAL-AMT		ON-COL			
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	TARGET RANGE	RATIO
ng)					ng)		
---	-----	-----	-----	-----	-----	-----	-----
20 Aroclor-1016				CAS # 12674-11-2			
2.277	2.277	0.000	5250672	0.50000	0.51777	0.00- 0.00	0.00 (M)
2.703	2.704	-0.001	8882861	0.50000	0.48268	80.00- 120.00	0.00
3.117	3.119	-0.002	14506996	0.50000	0.47751	416.04- 456.04	0.00
3.327	3.327	0.000	6612821	0.50000	0.48019	203.51- 243.51	0.00
3.498	3.499	-0.001	8900403	0.50000	0.46935	297.56- 337.56	0.00
Average of Peak Amounts =				0.4855			

-----  
 \$ 1 Tetrachloro-m-xylene CAS #. 877-09-8

Compound Not Detected

-----  
 \$ 34 Decachlorobiphenyl CAS #. 2051-24-3

Compound Not Detected

36 Aroclor-1260				CAS #: 11096-82-5			
5.676	5.681	-0.005	10828036	0.50000	0.47880	0.00- 0.00	0.00 (M)
5.796	5.798	-0.002	11609599	0.50000	0.48344	95.86- 135.86	0.00
6.528	6.526	0.002	10661586	0.50000	0.43897	116.91- 156.91	0.00
7.402	7.401	0.001	21145709	0.50000	0.56732	120.00- 160.00	0.00
8.210	8.210	0.000	10039898	0.50000	0.53934	108.33- 148.33	0.00
Average of Peak Amounts =				0.50157			

C58 426

Data File: /var/chem/gc8.i/2250.b/h-a20554.d  
Report Date: 01-Jun-2000 11:23

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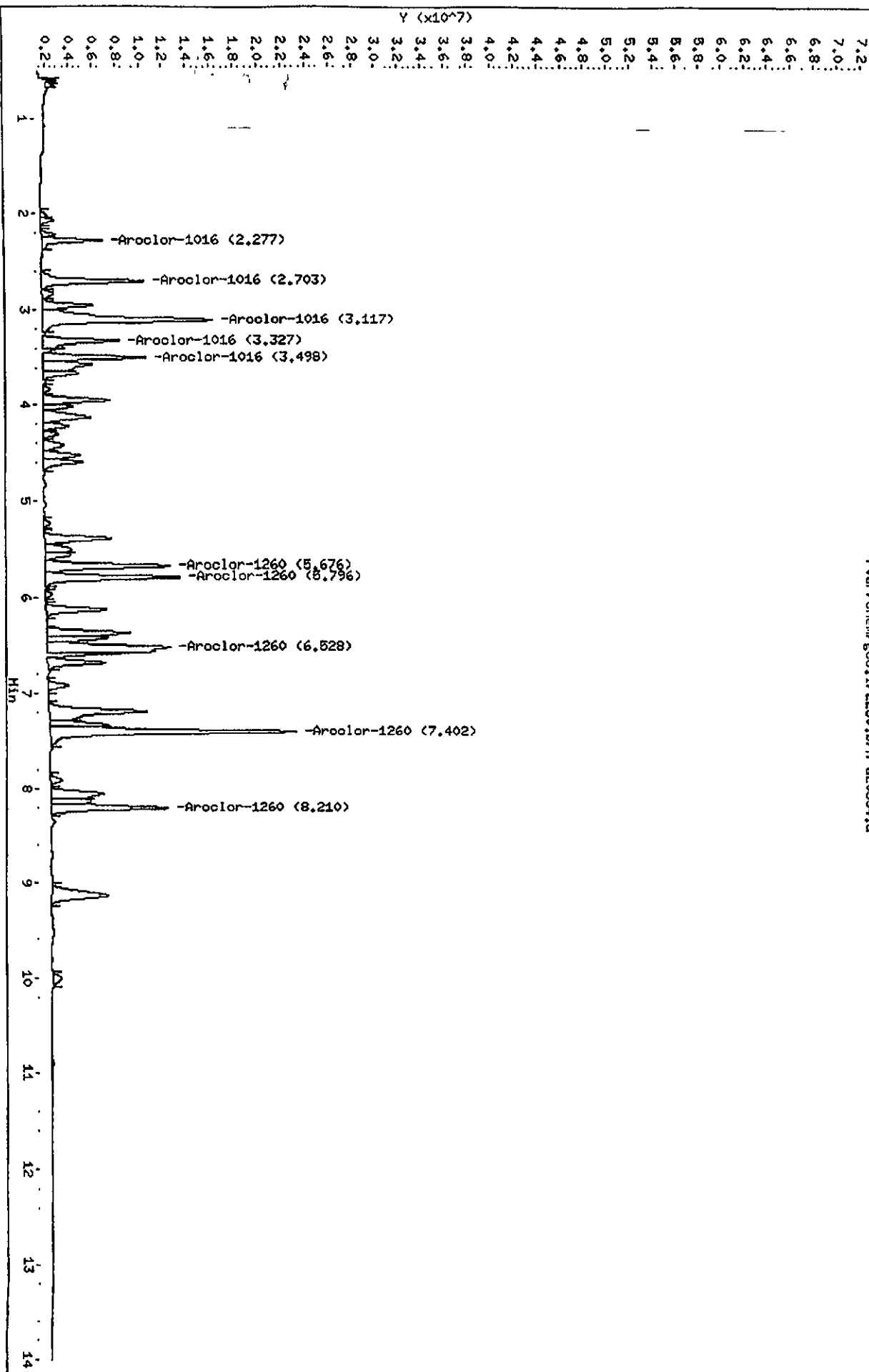
QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc8.i/2280.b/h-a20554.d  
Date: 25-MAY-2000 20:40  
Client ID:  
Sample Info: 2M460,2280.b  
Column phase: DB608

Instrument: gc8.i  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.i/2280.b/h-a20554.d





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Data File: /var/chem/gc8.i/2250.b/h-a20638.d  
Report Date: 31-May-2000 10:13

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## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20638.d  
Lab Smp Id: M2154  
Inj Date : 30-MAY-2000 09:29  
Operator : 010139  
Smp Info : M2154,2250.b  
Misc Info : 190-83-1  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 31-May-2000 10:06 g  
Cal Date : 25-MAY-2000 19:01  
Als bottle: 3  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20549.d  
Continuing Calibration Sample  
Compound Sublist: 2-2154.sub  
Sample Matrix: None

AMOUNTS							
RT	EXP RT	DLT RT	RESPONSE ( ng)	CAL-AMT ( ng)	ON-COL ( ng)	TARGET RANGE	RATIO
..	.....	.....	.....	.....	.....	.....	.....
8 Aroclor-1221			CAS #: 11104-28-2				
2.065	2.068	-0.003	3334355	0.50000	0.54905	0.00- 0.00	0.00
2.206	2.208	-0.002	2129640	0.50000	0.55454	116.57- 156.57	0.00
2.271	2.274	-0.003	6426300	0.50000	0.55017	66.04- 106.04	0.00
Average of Peak Amounts =			0.55126 10.2				
\$ 1 Tetrachloro-m-xylene			CAS #: 877-09-8				
1.741	1.747	-0.006	15837790	0.02500	0.025832	0.00- 0.00	0.00
\$ 34 Decachlorobiphenyl			CAS #: 2051-24-3				
10.897	10.921	-0.024	5293885	0.02500	0.024676	0.00- 0.00	0.00
33 Aroclor-1254			CAS #: 11097-69-1				
4.511	4.515	-0.004	7490840	0.50000	0.55392	0.00- 0.00	0.00
4.582	4.588	-0.006	9073447	0.50000	0.54633	92.23- 132.23	0.00
5.224	5.231	-0.007	6861701	0.50000	0.54225	77.40- 117.40	0.00
5.396	5.401	-0.005	13406694	0.50000	0.53312	51.09- 91.09	0.00
5.567	5.573	-0.006	9394054	0.50000	0.52637	65.01- 105.01	0.00
Average of Peak Amounts =			0.5404				

8.1

CCAL

Data File: /var/chem/gc8.1/2250.b/h-a20638.d

Date: 30-MAY-2000 09:29

Client ID:

Sample Info: H2154,2250.b

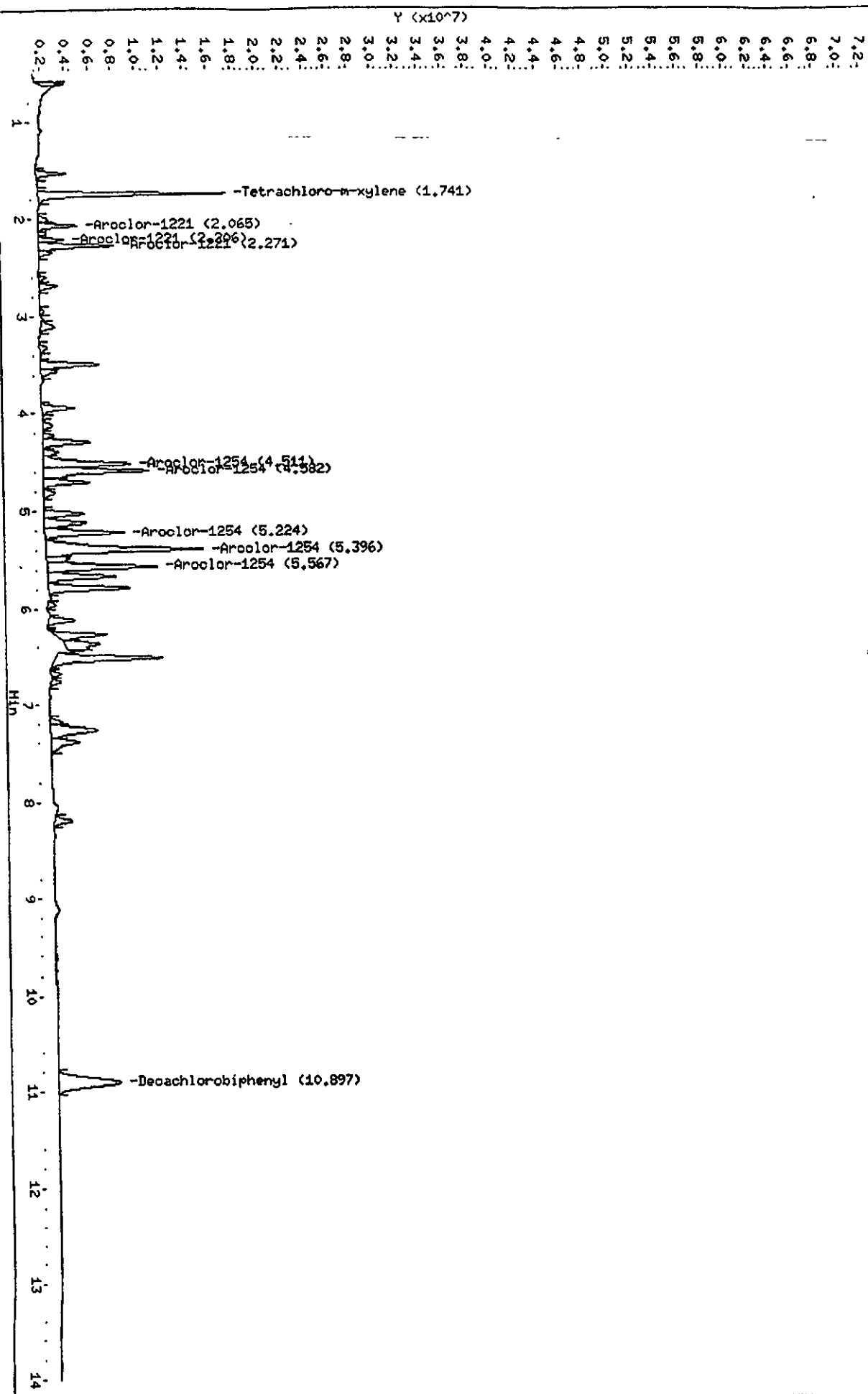
Column Phase: DB608

Instrument: gc8.1

Operator: 010139

Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20638.d



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Data File: /var/chem/gc8.i/2250.b/h-a20639.d  
Report Date: 31-May-2000 10:13

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20639.d  
Lab Smp Id: M1232  
Inj Date : 30-MAY-2000 09:48  
Operator : 010139  
Smp Info : M1232,2250.b  
Misc Info : 190-83-2  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 31-May-2000 10:06 g  
Cal Date : 25-MAY-2000 19:01  
Als bottle: 4  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20549.d  
Continuing Calibration Sample  
Compound Sublist: 3-1232.sub  
Sample Matrix: None

		AMOUNTS							
RT	EXP RT	DLT RT	RESPONSE (	CAL-AMT ( ng)	ON-COL ( ng)	TARGET RANGE		RATIO	
			*****	*****	*****	*****		*****	
14 Aroclor-1232			CAS #- 11141-16-5						
2.698	2.702	-0.004	4122560	0.50000	0.53380	0.00- 0.00		0.00	
3.114	3.115	-0.001	6178693	0.50000	0.52402	146.26- 186.26		0.00	
3.493	3.499	-0.006	4138805	0.50000	0.53045	65.99- 105.99		0.00	
3.942	3.947	-0.005	3044179	0.50000	0.55197	74.18- 114.18		0.00	
Average of Peak Amounts =					0.53506				

7.0

C.CAL

Data File: /var/chem/gc8.1/2250.b/h-a20639.d  
Date: 30-MAY-2000 09:48

Client ID:

Sample Info: H4232.2250.b

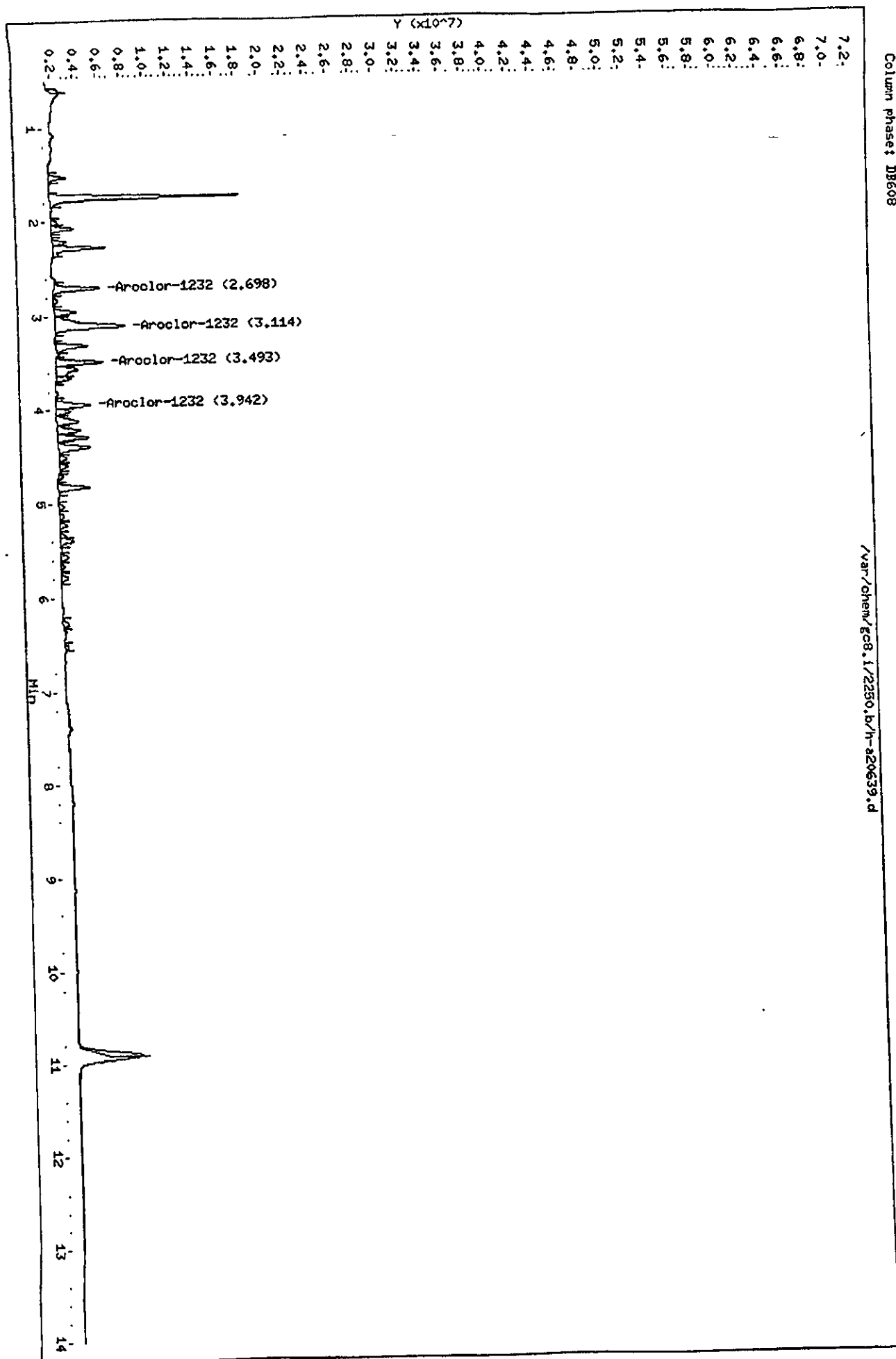
Column phase: DB608

Instrument: gc8.1

Operator: 010139

Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20639.d



Data File: /var/chem/gc8.i/2250.b/h-a20640.d  
 Report Date: 31-May-2000 10:13

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20640.d  
 Lab Smp Id: M1242  
 Inj Date : 30-MAY-2000 10:08  
 Operator : 010139  
 Smp Info : M1242,2250.b  
 Misc Info : 190-83-3  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 10:06 g  
 Cal Date : 25-MAY-2000 19:01  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20549.d  
 Continuing Calibration Sample  
 Compound Sublist: 4-1242.sub  
 Sample Matrix: None

AMOUNTS						
			CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ng)	TARGET RANGE	RATIO
--	-----	-----	-----	-----	-----	-----
15 Aroclor-1242			CAS #: 53469-21-9			
2.700	2.703	-0.003	7310446 0.50000	0.54180	0.00- 0.00	0.00
3.114	3.118	-0.004	11828656 0.50000	0.53400	310.13- 350.13	0.00
3.323	3.326	-0.003	5216573 0.50000	0.50928	749.70- 789.70	0.00
3.494	3.499	-0.005	7143376 0.50000	0.52075	512.48- 552.48	0.00
4.819	4.824	-0.005	5178728 0.50000	0.53242	314.30- 354.30	0.00
Average of Peak Amounts =			0.52765			

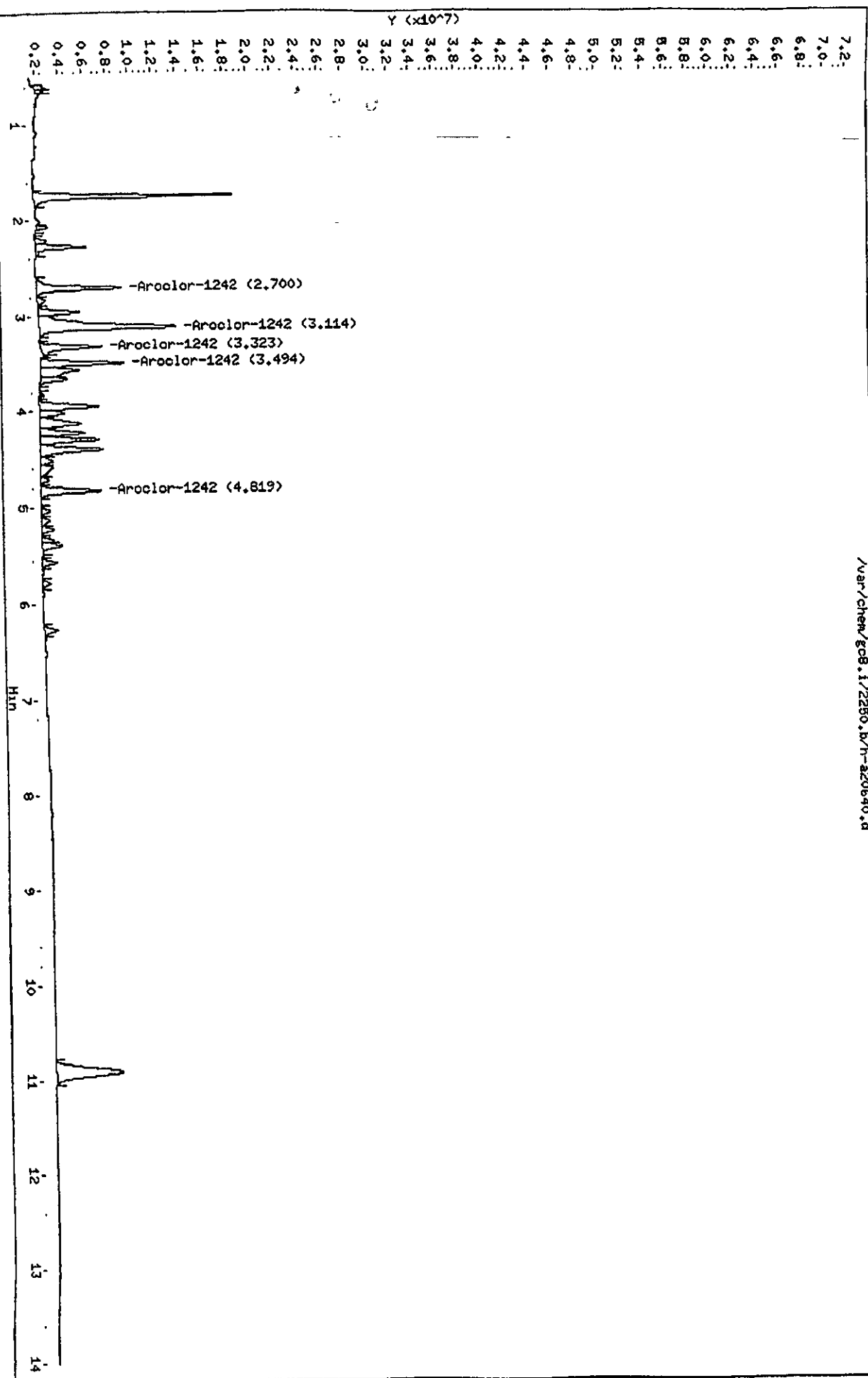
5.5

GCAL

Data File: /var/chem/gc8.1/2250.b/h-a20640.d  
 Date: 30-MAY-2000 10:08  
 Client ID:  
 Sample Info: H1242,2250.b  
 Column phase: DB608

Instrument: gc8.1  
 Operator: 010139  
 Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20640.d



658 434

Data File: /var/chem/gc8.i/2250.b/h-a20641.d  
Report Date: 31-May-2000 10:13

Page 1

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20641.d  
Lab Smp Id: M1248  
Inj Date : 30-MAY-2000 10:28  
Operator : 010139  
Smp Info : M1248,2250.b  
Misc Info : 190-83-4  
Comment :  
Method : /var/chem/gc8.i/2250.b/PCBA.m  
Meth Date : 31-May-2000 10:06 g  
Cal Date : 25-MAY-2000 19:01  
Als bottle: 6  
Dil Factor: 1.00000  
Integrator: Falcon  
Target Version: 3.40

Inst ID: gc8.i  
Quant Type: ESTD  
Cal File: h-a20549.d  
Continuing Calibration Sample  
Compound Sublist: 5-1248.sub  
Sample Matrix: None

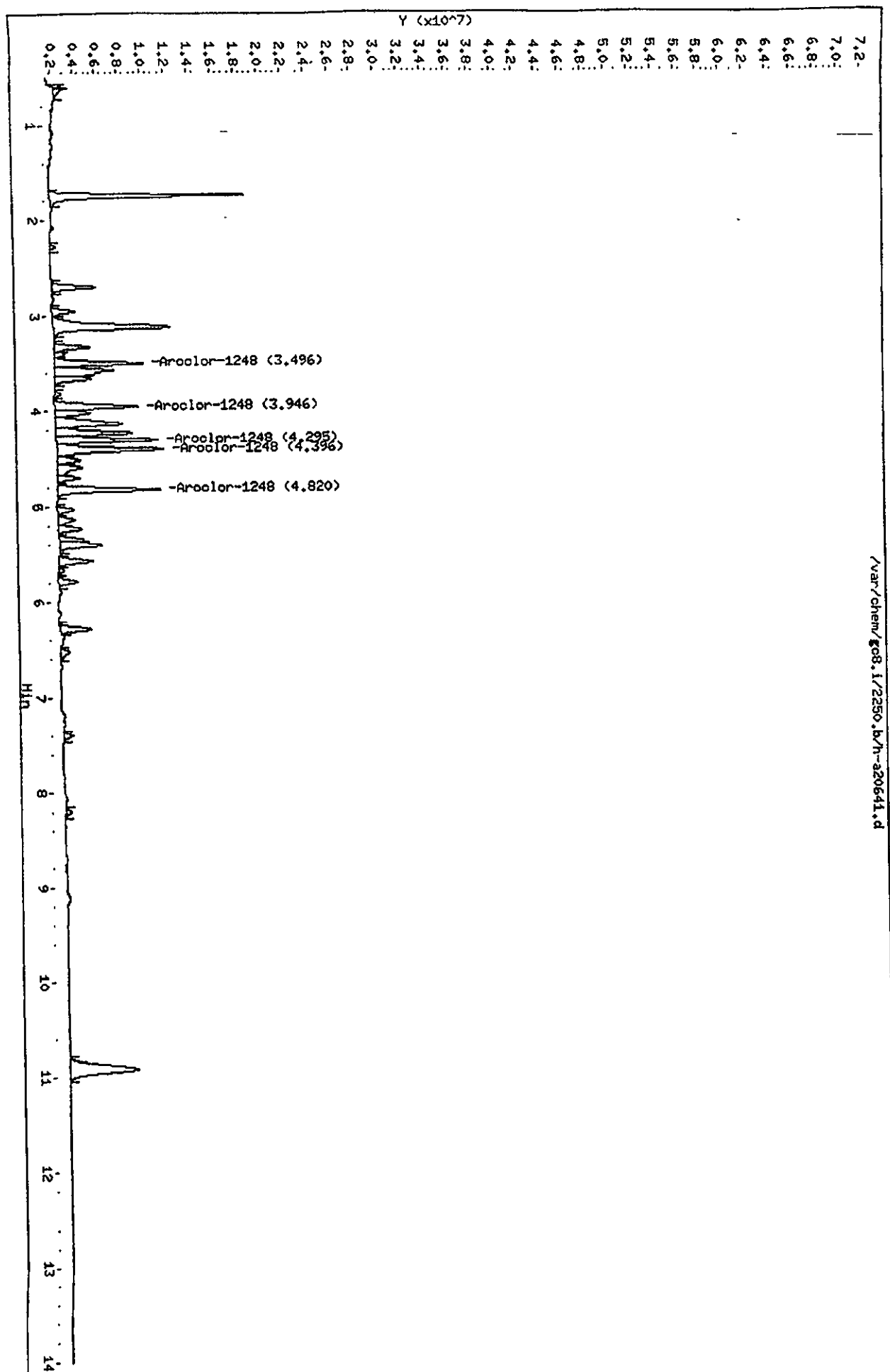
AMOUNTS						
			CAL-AMT	ON-COL		
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ng)	TARGET RANGE	RATIO
*****						
21 Aroclor-1248			CAS #: 12672-29-6			
3.496	3.498	-0.002	7933529 0.50000	0.53818	0.00- 0.00	0.00
3.946	3.951	-0.005	7458096 0.50000	0.55016	114.57- 154.57	0.00
4.295	4.300	-0.005	9083169 0.50000	0.53621	63.67- 103.67	0.00
4.396	4.402	-0.006	9471640 0.50000	0.53712	43.86- 83.86	0.00
4.820	4.824	-0.004	9050335 0.50000	0.53577	128.08- 168.08	0.00
Average of Peak Amounts =			0.53949			

7.9  
GCAL

Data File: /var/chem/gc8.1/2250.b/h-a20641.d  
Date: 30-MAY-2000 10:28  
Client ID:  
Sample Info: M1248.2250.b  
Column phase: DB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20641.d





658 436

Data File: /var/chem/gc8.i/2250.b/h-a20642.d  
Report Date: 31-May-2000 10:13

Page 1

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20642.d

Lab Smp Id: M1660

Inj Date : 30-MAY-2000 10:48

Operator : 010139

Inst ID: gc8.i

Smp Info : M1660,2250.b

Misc Info : 190-83-7

Comment :

Method : /var/chem/gc8.i/2250.b/PCBA.m

Meth Date : 31-May-2000 10:06 g

Quant Type: ESTD

Cal Date : 25-MAY-2000 19:01

Cal File: h-a20549.d

Als bottle: 7

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: 1-1660.sub

Target Version: 3.40

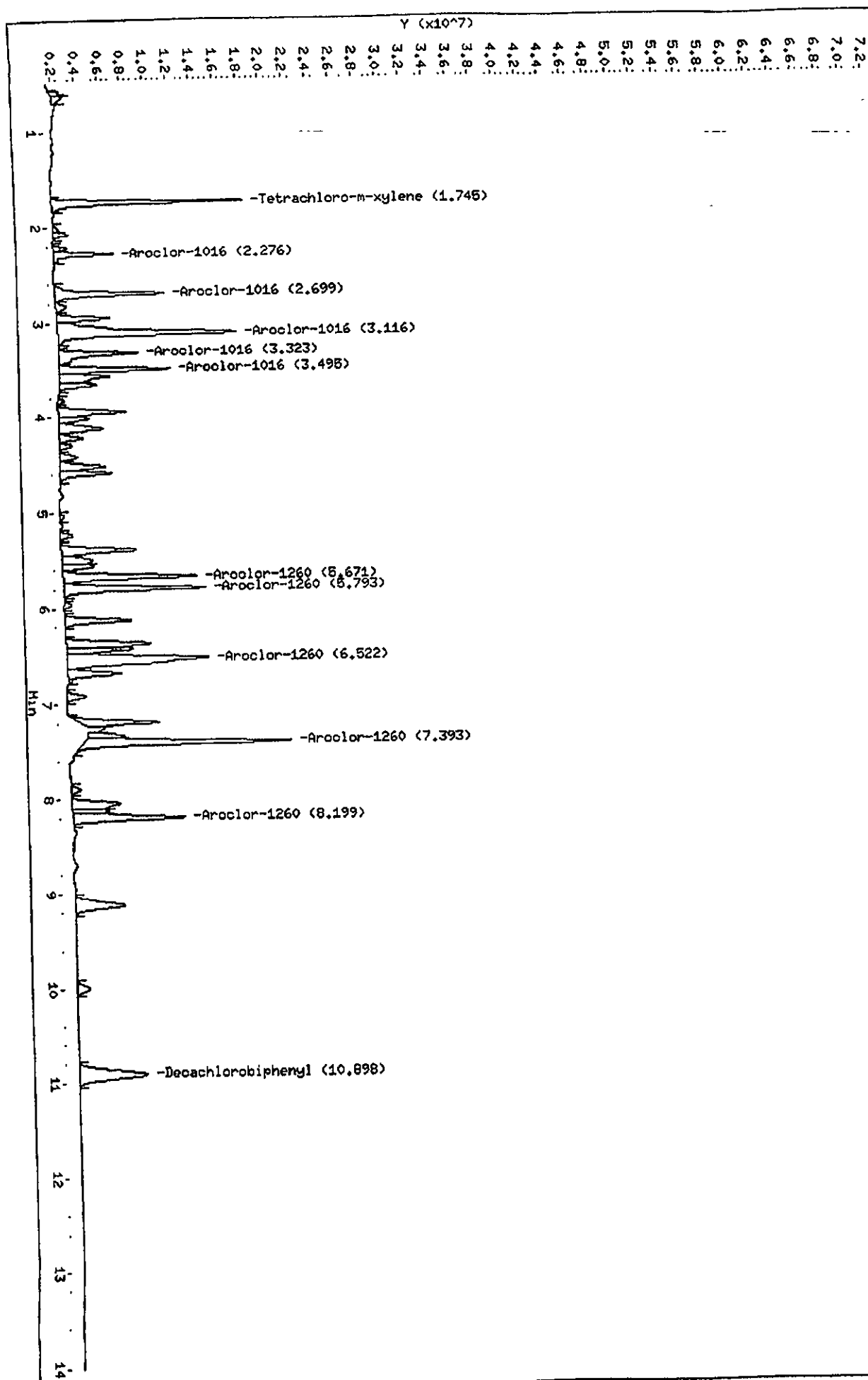
Sample Matrix: None

AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE ( ng)		( ng)		TARGET RANGE		RATIO
=	=====	=====	=====	=====	=====	=====	=====	=====	=====
20 Aroclor-1016					CAS #: 12674-11-2				
2.276	2.277	-0.001	5242283	0.50000	0.51694	0.00-	0.00	0.00	
2.699	2.704	-0.005	9569649	0.50000	0.51999	80.00-	120.00	0.00	
3.116	3.119	-0.003	15550936	0.50000	0.51188	416.04-	456.04	0.00	
3.323	3.327	-0.004	6976492	0.50000	0.50660	203.51-	243.51	0.00	
3.495	3.499	-0.004	9658349	0.50000	0.50932	297.56-	337.56	0.00	
Average of Peak Amounts =					0.51295				
-----									
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8				
1.745	1.747	-0.002	16575990	0.02500	0.027036	0.00-	0.00	0.00	
-----									
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3				
10.898	10.921	-0.023	5857413	0.02500	0.027302	0.00-	0.00	0.00	
-----									
36 Aroclor-1260					CAS #: 11096-82-5				
5.671	5.681	-0.010	11672242	0.50000	0.51612	0.00-	0.00	0.00	
5.793	5.798	-0.005	12265093	0.50000	0.51073	95.86-	135.86	0.00	
6.522	6.526	-0.004	12316434	0.50000	0.50710	116.91-	156.91	0.00	
7.393	7.401	-0.008	17866286	0.50000	0.47934	120.00-	160.00	0.00	
8.199	8.210	-0.011	9677057	0.50000	0.51984	108.33-	148.33	0.00	
Average of Peak Amounts =					0.50663				

Data File: /var/chew/gc8.1/2250.b/h-a20642.d  
Date: 30-MAY-2000 10:48  
Client ID:  
Sample Info: H160,2250.b  
Column phase: DB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53

/var/chew/gc8.1/2250.b/h-a20642.d



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20682.d  
 Lab Smp Id: M1660  
 Inj Date : 30-MAY-2000 23:59  
 Operator : 010139  
 Smp Info : M1660,2250.b  
 Misc Info : 190-83-7  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 08:13 g  
 Cal Date : 25-MAY-2000 19:01  
 Als bottle: 49  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc8.i  
 Quant Type: ESTD  
 Cal File: h-a20549.d  
 Continuing Calibration Sample  
 Compound Sublist: 1-1660.sub  
 Sample Matrix: None

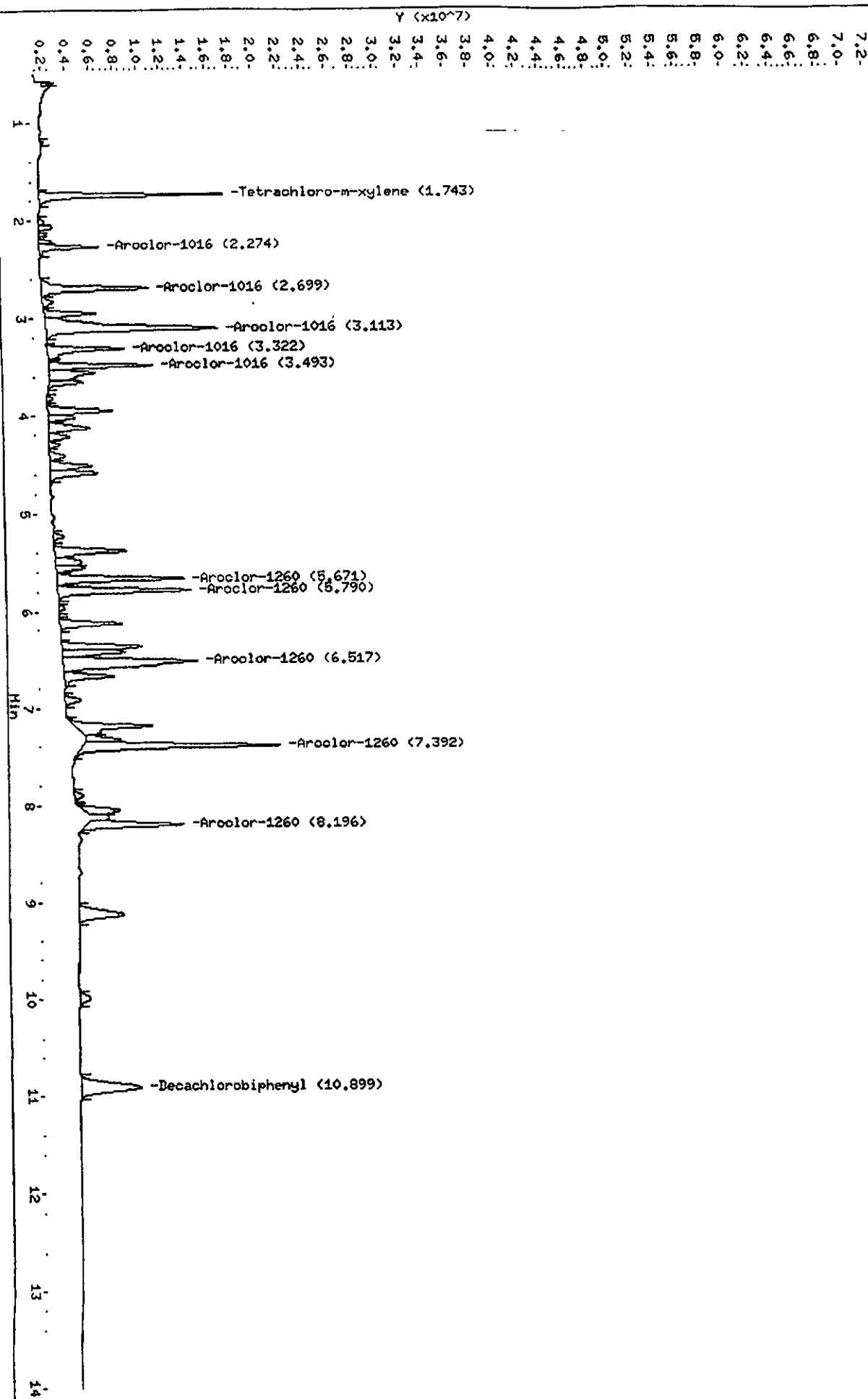
AMOUNTS									
			CAL-AMT		ON-COL				
RT	EXP RT	DLT RT	RESPONSE (	ng)	(	ng)	TARGET RANGE	RATIO	
--	-----	-----	-----	-----	-----	-----	-----	-----	
20 Aroclor-1016					CAS #: 12674-11-2				
2.274	2.277	-0.003	4948275	0.50000	0.48795	0.00-	0.00	0.00	
2.699	2.704	-0.005	8977594	0.50000	0.48782	80.00-	120.00	0.00	
3.113	3.119	-0.006	14856728	0.50000	0.48902	416.04-	456.04	0.00	
3.322	3.327	-0.005	6472425	0.50000	0.47000	203.51-	243.51	0.00	
3.493	3.499	-0.006	8921983	0.50000	0.47049	297.56-	337.56	0.00	
Average of Peak Amounts =					0.48106				
-----									
\$ 1 Tetrachloro-m-xylene					CAS #: 877-09-8				
1.743	1.747	-0.004	15746228	0.02500	0.025682	0.00-	0.00	0.00	
-----									
\$ 34 Decachlorobiphenyl					CAS #: 2051-24-3				
10.899	10.921	-0.022	5187072	0.02500	0.024178	0.00-	0.00	0.00	
-----									
36 Aroclor-1260					CAS #: 11096-82-5				
5.671	5.681	-0.010	10890504	0.50000	0.48156	0.00-	0.00	0.00	
5.790	5.798	-0.008	11430887	0.50000	0.47600	95.86-	135.86	0.00	
6.517	6.526	-0.009	11566853	0.50000	0.47624	116.91-	156.91	0.00	
7.392	7.401	-0.009	16963312	0.50000	0.45511	120.00-	160.00	0.00	
8.196	8.210	-0.014	8340626	0.50000	0.44805	108.33-	148.33	0.00	
Average of Peak Amounts =					0.46739				
-----									

658 439

Data File: /var/chem/ec8.i/2250.b/h-a20682.d  
 Date: 30-MAY-2000 23:59  
 Client ID:  
 Sample Info: H1660,2250.b  
 Column phase: DB608

Instrument: ec8.i  
 Operator: 010139  
 Column diameter: 0.53

/var/chem/ec8.i/2250.b/h-a20682.d



Data File: /var/chem/gc8.i/2250.b/h-a20703.d  
Report Date: 31-May-2000 10:40

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20703.d

Lab Smp Id: M1660

Inj Date : 31-MAY-2000 08:08

Operator : 010139

Inst ID: gc8.i

Smp Info : M1660,2250.b

Misc Info : 190-83-7

Comment :

Method : /var/chem/gc8.i/2250.b/PCBA.m

Meth Date : 31-May-2000 10:23 g

Quant Type: ESTD

Cal Date : 25-MAY-2000 19:01

Cal File: h-a20549.d

Als bottle: 66

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: Falcon

Compound Sublist: 1-1660.sub

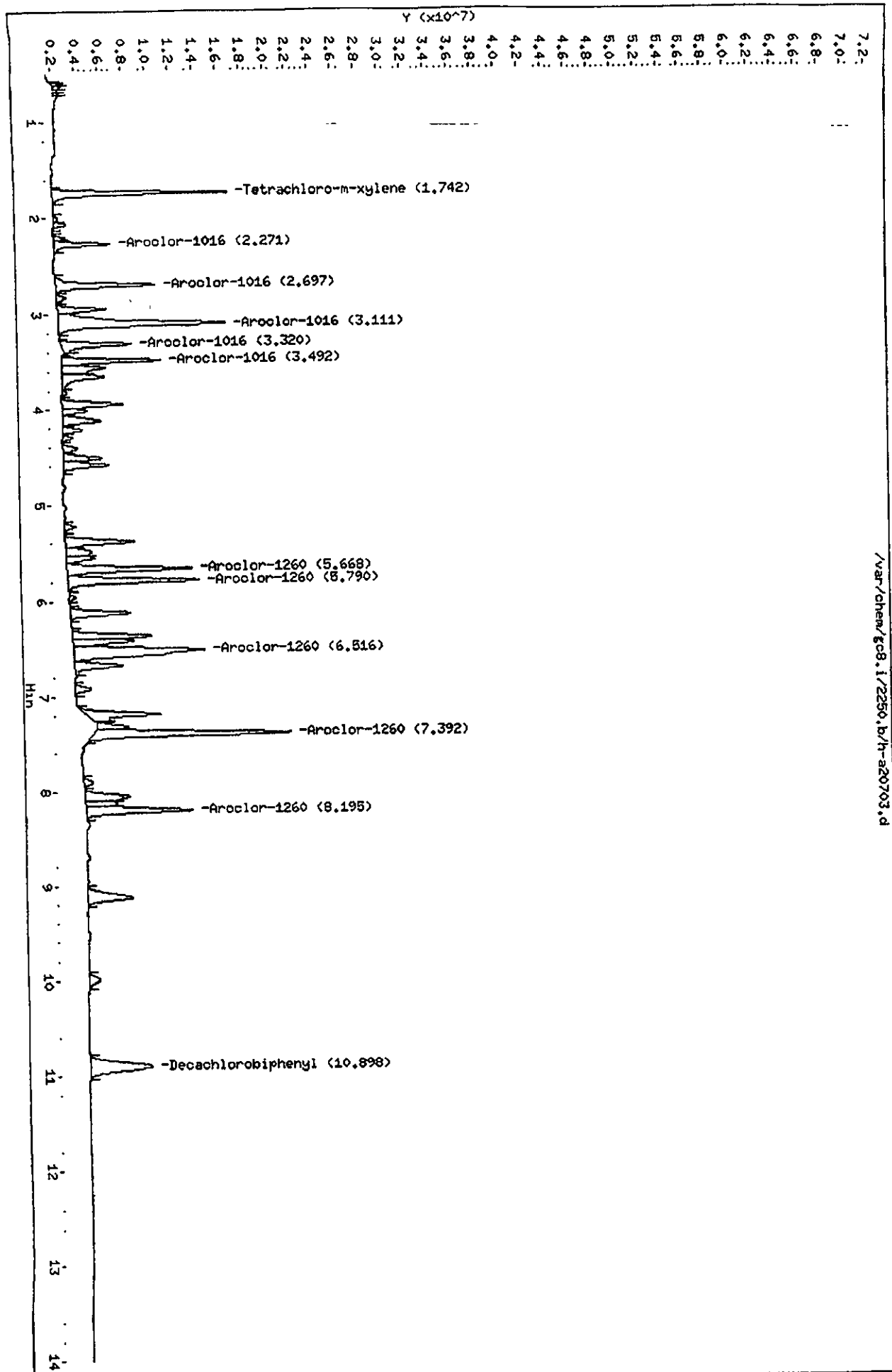
Target Version: 3.40

Sample Matrix: None

AMOUNTS							
			CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ng)	TARGET RANGE	RATIO	
==	=====	=====	=====	=====	=====	=====	
20 Aroclor-1016				CAS #: 12674-11-2			
2.271	2.277	-0.006	4804135 0.50000	0.47373	0.00- 0.00	0.00	
2.697	2.704	-0.007	8539269 0.50000	0.46400	80.00- 120.00	0.00	
3.111	3.119	-0.008	14333008 0.50000	0.47179	416.04- 456.04	0.00	
3.320	3.327	-0.007	6097773 0.50000	0.44279	203.51- 243.51	0.00	
3.492	3.499	-0.007	8458644 0.50000	0.44606	297.56- 337.56	0.00	
Average of Peak Amounts =				0.45968			
-----							
\$ 1 Tetrachloro-m-xylene				CAS #: 877-09-8			
1.742	1.747	-0.005	15005944 0.02500	0.024475	0.00- 0.00	0.00	
-----							
\$ 34 Decachlorobiphenyl				CAS #: 2051-24-3			
10.898	10.921	-0.023	5330517 0.02500	0.024846	0.00- 0.00	0.00	
-----							
36 Aroclor-1260				CAS #: 11096-82-5			
5.668	5.681	-0.013	10680926 0.50000	0.47229	0.00- 0.00	0.00	
5.790	5.798	-0.008	11162773 0.50000	0.46483	95.86- 135.86	0.00	
6.516	6.526	-0.010	11302692 0.50000	0.46537	116.91- 156.91	0.00	
7.392	7.401	-0.009	16937878 0.50000	0.45443	120.00- 160.00	0.00	
8.195	8.210	-0.015	9109429 0.50000	0.48935	108.33- 148.33	0.00	
Average of Peak Amounts =				0.46925			

Data File: /var/chem/gc8.1/2250.b/h-a20703.d  
Date: 31-May-2000 08:08  
Client ID:  
Sample Info: H1660,2250.b  
Column phase: DB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53



658 442

**PCB  
QC DATA**

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER  
Method: SW846 8082  
PCBs (8082)

Lab Sample ID: C0E240000 495

Sample WT/Vol: 1000 / mL  
Work Order: DDN23101  
Dilution factor: 1  
Moisture %: NADate Received: 05/23/00  
Date Extracted: 05/24/00  
Date Analyzed: 05/31/00

QC Batch: 0145495

Client Sample Id: INTRA-LAB BLANK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U



Data File: /var/chem/gc8.i/2250.b/h-a20691.d  
 Report Date: 31-May-2000 08:39

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20691.d  
 Lab Smp Id: DDN23101 Client Smp ID: INTRA-LAB BLANK  
 Inj Date : 31-MAY-2000 02:57  
 Operator : 010139 Inst ID: gc8.i  
 Smp Info : DDN23101,2250.b  
 Misc Info : 230195BLK  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 08:13 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 19:01 Cal File: h-a20549.d  
 Als bottle: 58 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: all.sub  
 Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt \* DF \* Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

CONCENTRATIONS							
			ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE ( ng)	( ug/L)	TARGET RANGE	RATIO	
-----							
\$ 1					CAS # 877-09-8		
1 745	1 747	-0.002	10556573 0 01722	0.17218	0.00- 0.00	0.00	
-----							
51					CAS #: 57-74-9		

Peaks not detected for Quant. or Qual signal(s)

8 Aroclor-1221	CAS #. 11104-28-2
----------------	-------------------

Peaks not detected for Quant. or Qual. signal(s).

Data File: /var/chem/gc8.i/2250.b/h-a20691.d  
 Report Date: 31-May-2000 08:39

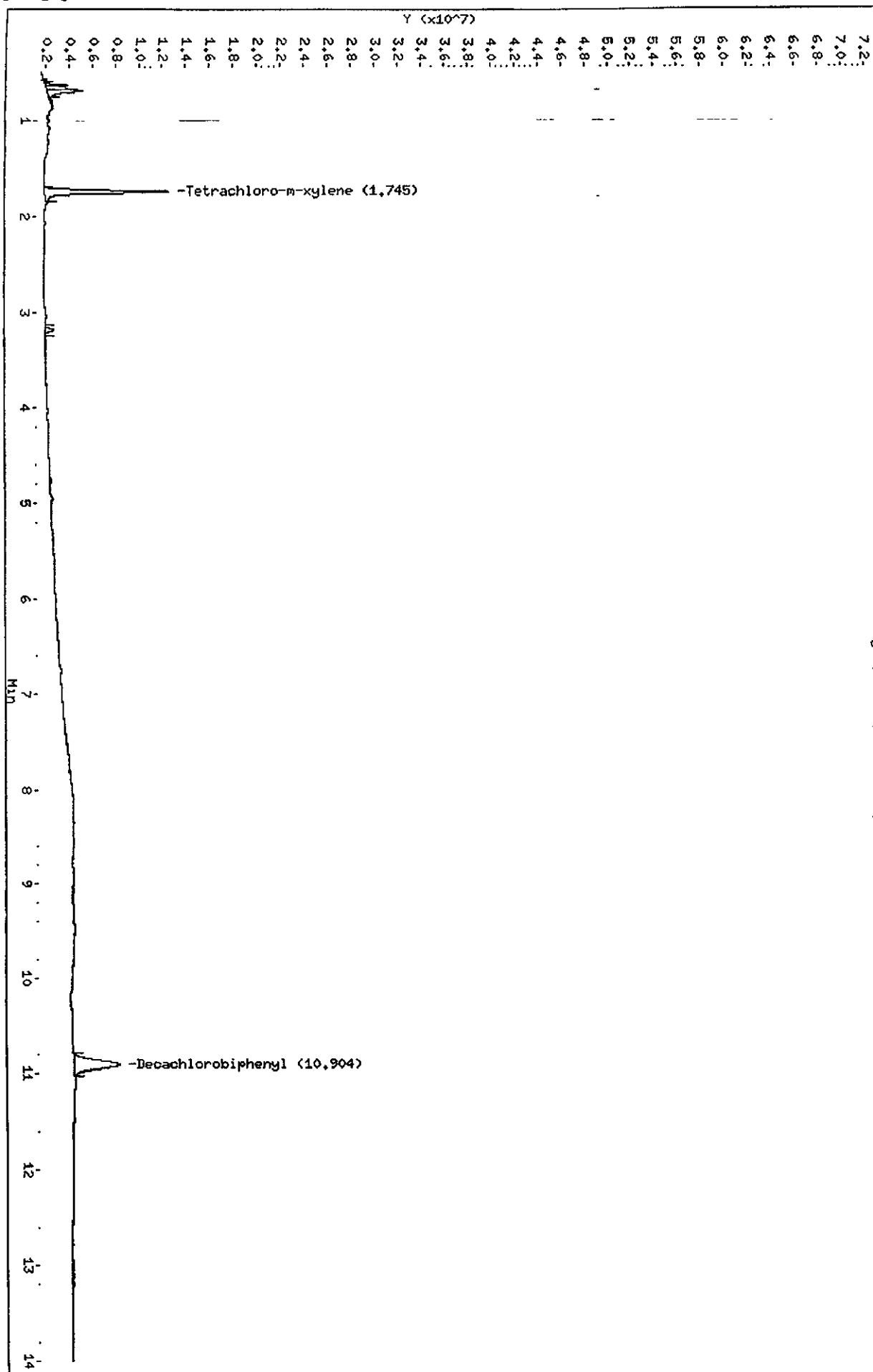
Page 2

		CONCENTRATIONS							
RT	EXP RT	DLT RT	RESPONSE ( ng)	ON-COL	FINAL	TARGET RANGE	RATIO		
..	.....	.....	.....	.....	.....	.....	.....		
14									
Aroclor-1232			CAS #: 11141-16-5						
Peaks not detected for Quant. or Qual. signal(s).									
-----									
15									
Aroclor-1242			CAS #: 53469-21-9						
Peaks not detected for Quant. or Qual. signal(s).									
-----									
20									
Aroclor-1016			CAS #: 12674-11-2						
Peaks not detected for Quant. or Qual. signal(s).									
-----									
21									
Aroclor-1248			CAS #: 12672-29-6						
Peaks not detected for Quant. or Qual. signal(s).									
-----									
33									
Aroclor-1254			CAS #: 11097-69-1						
Peaks not detected for Quant. or Qual. signal(s).									
-----									
\$ 34	Decachlorobiphenyl								
10 904	10.921	-0.017	3960868	0.01846	0 18462	0.00-	0.00	0 00	
-----									
36									
Aroclor-1260			CAS #: 11096-82-5						
Peaks not detected for Quant. or Qual. signal(s).									
-----									

Data File: /var/chem/gc8.1/2250.b/h-a20691.d  
Date: 31-MAY-2000 02:57  
Client ID: INTRA-LAB BLANK  
Sample Info: DDM23101,2250.b  
Volume Injected (uL): 1.0  
Column phase: DB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20691.d



UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 495

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN23102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	8.49	
11096-82-5	Aroclor 1260	9.09	

## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20692.d  
 Lab Smp Id: DDN23102 Client Smp ID: INTRA-LAB CHECK  
 Inj Date : 31-MAY-2000 03:17  
 Operator : 010139 Inst ID: gc8.i  
 Smp Info : DDN23102,2250.b  
 Misc Info : 230195LCS  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 08:13 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 19:01 Cal File: h-a20549.d  
 Als bottle: 59 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 1-1660.sub  
 Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt \* DF \* Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

CONCENTRATIONS							
RT	EXP RT	DLT RT	RESPONSE ( ng)	ON-COL	FINAL ( ug/L)	TARGET RANGE	RATIO
==	=====	=====	=====	=====	=====	=====	=====
20 Aroclor-1016				CAS #: 12674-11-2			
2 274	2.277	-0.003	8475664 0.83578	8.3578	0.00-	0.00	0.00
2 700	2 704	-0.004	15789622 0.85797	8 5797	80.00-	120.00	0.00
3.116	3.119	-0.003	26841004 0.88350	8.8350	416.04-	456.04	0.00
3 323	3 327	-0.004	11364045 0.82520	8.2520	203 51-	243 51	0.00
3 495	3.499	-0.004	15998858 0.84368	8.4368	297 56-	337.56	0.00
Average of Peak Concentrations =				8.4923			
-----							
\$ 1 Tetrachloro-m-xylene				CAS #: 877-09-8			
1.745	1 747	-0.002	11628547 0.01897	0.18966	0.00-	0.00	0.00
-----							
\$ 34 Decachlorobiphenyl				CAS #: 2051-24-3			
10.897	10.921	-0.024	4281992 0.01996	0.19959	0.00-	0.00	0.00
-----							
36 Aroclor-1260				CAS #: 11096-82-5			
5 670	5.681	-0.011	20041231 0.88619	8.8618	0.00-	0.00	0.00

Data File: /var/chem/gc8.i/2250.b/h-a20692.d  
 Report Date: 31-May-2000 08:39

		CONCENTRATIONS							
		ON-COL		FINAL					
RT	EXP RT	DLT RT	RESPONSE (	ng)	( ug/L)	TARGET RANGE	RATIO		
..	.....	.....	.....	.....	.....	.....	.....		

36 Aroclor-1260 (continued)

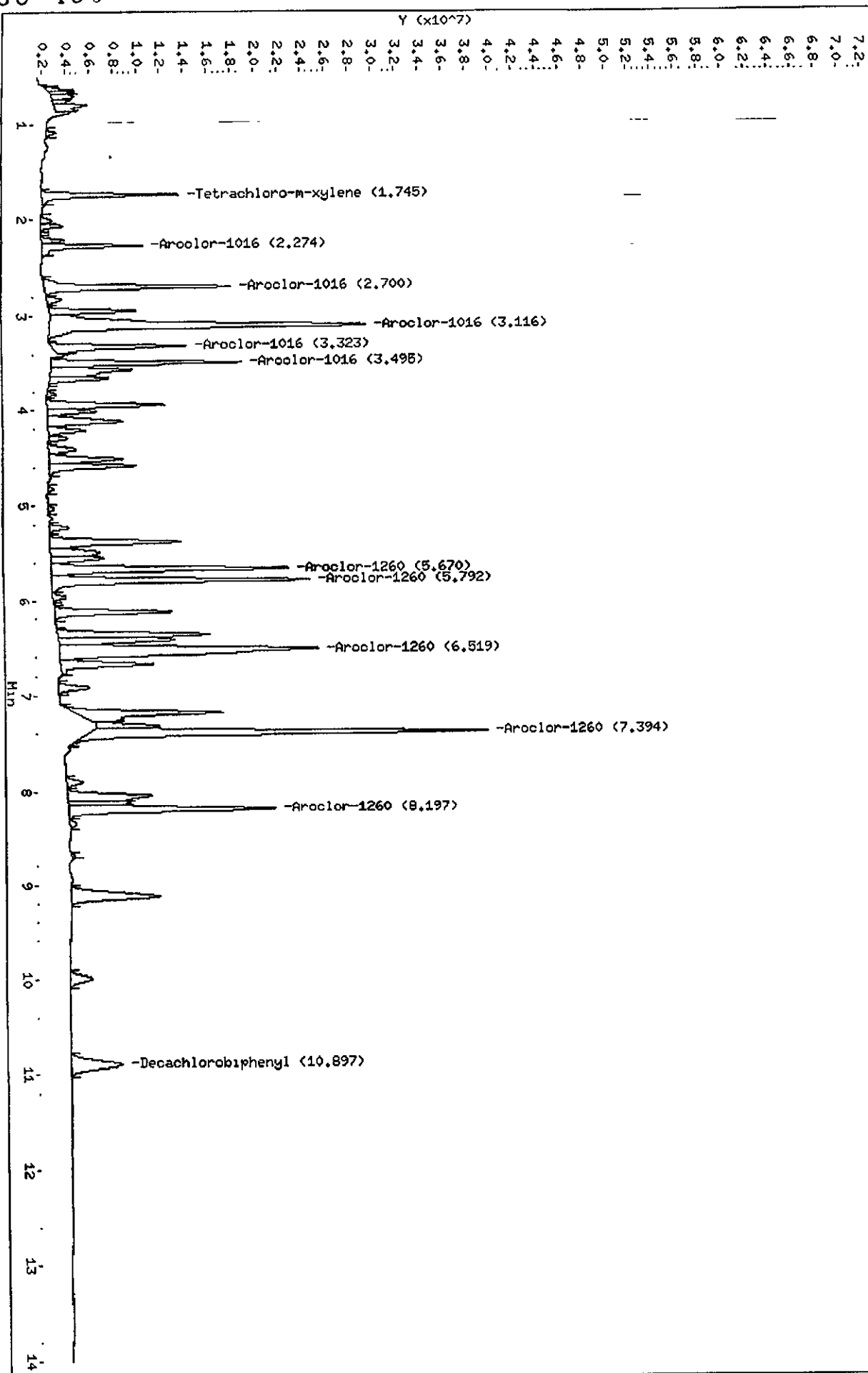
5.792	5.798	-0.006	21785716	0.90718	9.0718	95.86-135.86	0.00		
6.519	6.526	-0.007	21999515	0.90579	9.0579	116.91-156.91	0.00		
7.394	7.401	-0.007	33972089	0.91144	9.1144	120.00-160.00	0.00		
8.197	8.210	-0.013	17435227	0.93661	9.3661	108.33-148.33	0.00		

Average of Peak Concentrations = 9.0944

Data File: /var/chem/gc08.1/2250.b/h-a20692.d  
Date : 31-MAY-2000 03:17  
Client ID: INTRA-LAB CHECK  
Sample Info: DUN23102,2250.b  
Volume Injected (uL): 1.0  
Column phase: DB608

Instrument: gc08.1  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc08.1/2250.b/h-a20692.d



UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 495

Method: SW846 8082

PCBs (8082)

Sample WT/Vol: 1000 / mL ;

Date Received: 05/23/00

Work Order: DDN231031 ;

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/31/00

Moisture %: NA

QC Batch: 0145495

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
12674-11-2	Aroclor 1016	8.74	
11096-82-5	Aroclor 1260	9.12	

FORM I



## STL-PITTSBURGH

Data file : /var/chem/gc8.i/2250.b/h-a20693.d  
 Lab Smp Id: DDN23103 Client Smp ID: INTRA-LAB CHECK  
 Inj Date : 31-MAY-2000 03:37  
 Operator : 010139 Inst ID: gc8.i  
 Smp Info : DDN23103,2250.b  
 Misc Info : 230195LCD  
 Comment :  
 Method : /var/chem/gc8.i/2250.b/PCBA.m  
 Meth Date : 31-May-2000 08:13 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 19:01 Cal File: h-a20549.d  
 Als bottle: 60 QC Sample: LCSD  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: 1-1660.sub  
 Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt \* DF \* Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

## CONCENTRATIONS

RT	EXP RT	DLT RT	ON-COL	FINAL	TARGET RANGE	RATIO
---	-----	-----	---	---	-----	-----
			CAS #: 12674-11-2			
20 Aroclor-1016						
2 275	2.277	-0.002	8667237 0 85467	8.5467	0 00- 0.00	0 00
2 700	2 704	-0.004	16110632 0 87542	8.7542	80.00- 120.00	0 00
3 113	3 119	-0 006	27394045 0.90171	9.0170	416.04- 456.04	0.00
3 323	3.327	-0.004	11993808 0.87093	8 7093	203.51- 243 51	0.00
3 495	3.499	-0 004	16464103 0.86822	8.6822	297.56- 337 56	0.00
Average of Peak Concentrations =			8.7419			
-----						
			CAS #: 877-09-8			
\$ 1 Tetrachloro-m-xylene						
1.745	1 747	-0 002	11823570 0.01928	0 19284	0.00- 0.00	0.00
-----						
			CAS #: 2051-24-3			
\$ 34 Decachlorobiphenyl						
10 902	10.921	-0 019	4312981 0.02010	0.20103	0.00- 0.00	0 00
-----						
			CAS #: 11096-82-5			
36 Aroclor-1260						
5 672	5.681	-0.009	20342934 0.89953	8 9953	0.00- 0 00	0.00

Data File: /var/chem/gc8.i/2250.b/h-a20693.d  
 Report Date: 31-May-2000 08:39

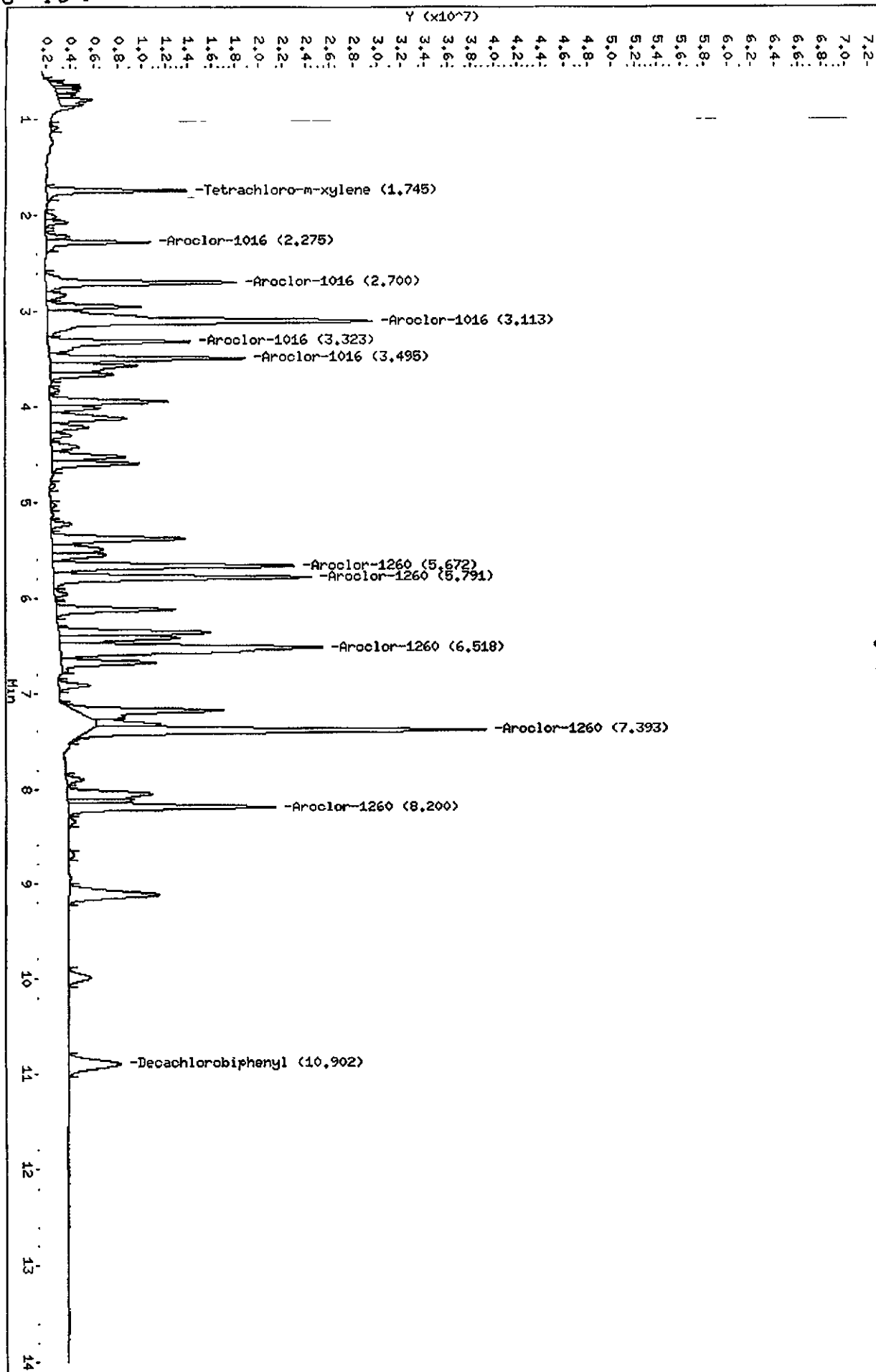
Page 2

				CONCENTRATIONS					
				ON-COL	FINAL				
RT	EXP RT	DLT RT	RT	RESPONSE (	ng)	( ug/L)	TARGET RANGE	RATIO	
==	=====	=====		=====	=====	=====	=====	=====	
36 Aroclor-1260 (continued)									
5 791	5.798	-0 007		21779210 0 90691	9 0691	95 86-	135 86	0.00	
6 518	6 526	-0.008		22170621 0 91283	9 1283	116.91-	156.91	0 00	
7 393	7.401	-0 008		33591128 0.90122	9 0122	120 00-	160.00	0 00	
8 200	8 210	-0.010		17515051 0 94090	9 4090	108 33-	148.33	0 00	
Average of Peak Concentrations =				9.1228					

Data File: /var/chem/gc8.1/2250.b/h-a20693.d  
Date : 31-MAY-2000 03:37  
Client ID: INTRA-LAB CHECK  
Sample Info: DUN23103.2250.b  
Volume Injected (ul): 1.0  
Column phase: DB608

Instrument: gc8.1  
Operator: 010139  
Column diameter: 0.53

/var/chem/gc8.1/2250.b/h-a20693.d



**PCB  
MISCELLANEOUS**

# Separatory Funnel Extraction Worksheet

RF  
5.26.00

Prod B# 0145492  
PGB B# 0145495



STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380

Hexane  
N44279

Date Extraction Began	Date Completed	Parameter	Method	Solvent	Solvent Lot	Solvent Mfg.	Clean up Method			
5-24-00	5-26-00	Prod/PGB	35101	HEXANE	TD8286	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)	Cleanup Date
1. POE 230195	ABP		5	1000	10.0	190-90-8	1.0	NA	NA	NA
2. POE 230195	CP5	2nd	5					190-73-1	0.5	
3. POE 230195	CP5	2nd	5					190-81-14	1.0	
4. POE 230195	CP5	2nd	5					NA	NA	
5. POE 230195	CP5	2nd	5					NA	NA	
6. POE 230195	CP5	2nd	5					NA	NA	
7. POE 230195	CP5	2nd	5					NA	NA	
8. POE 230195	CP5	2nd	5					NA	NA	
9. POE 230195	CP5	2nd	5					NA	NA	
10. POE 230195	CP5	2nd	5					NA	NA	
11. POE 230195	CP5	2nd	5					NA	NA	
12. POE 230195	CP5	2nd	5					NA	NA	
13. POE 230195	CP5	2nd	5					NA	NA	
14. POE 230195	CP5	2nd	5					NA	NA	
15. POE 230195	CP5	2nd	5					NA	NA	
16. POE 230195	CP5	2nd	5					NA	NA	
17. POE 230195	CP5	2nd	5					NA	NA	
18. POE 230195	CP5	2nd	5					NA	NA	
19. POE 230195	CP5	2nd	5					NA	NA	
20. POE 230195	CP5	2nd	5					NA	NA	
21. POE 230195	CP5	2nd	5					NA	NA	
22. POE 230195	CP5	2nd	5					NA	NA	
23. POE 230195	CP5	2nd	5					NA	NA	
24. POE 230195	CP5	2nd	5					NA	NA	
Analyst	NY	NY	NY	NY	KG/SW	NY	NY	NY	NY	NY
Extract(s)	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY
Extract(s) Received	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY
Extract(s) Relinquished	NY	NY	NY	NY	NY	NY	NY	NY	NY	NY
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst	Location	Date	Time
111 Above	5-24-00	2130	NY	Org. Prep.	5-24-00	2140	NY	Org. Prep.	5-24-00	2140
111 Above	5-26-00	1500	NY	Org. Prep.	5-26-00	1210	NY	Org. Prep.	5-26-00	1210
111 Above	5-26-00	1500	NY	Org. Prep.	5-26-00	1210	NY	Org. Prep.	5-26-00	1210
Sodium Sulfate Mfg	Baker									
Lot Number	T13684									
Reviewed By	James M. Allen									
Date	5-24-00									

P. Guadagnoli  
5-24-00

*Control: DE 5-25-00*

Sequence Table (Front Injector):

Vial Information Part:

Line	Vial	Vial Information
=====	=====	=====
1	1	RINSE
2	2	190-83-1 <i>541</i>
3	3	190-83-2
4	4	190-83-3
5	5	190-83-4
6	6	190-83-5 <i>545</i>
7	7	190-83-6
8	8	190-83-7
9	9	190-83-8
10	10	190-83-9
11	11	190-66-13 <i>550</i>
12	12	190-66-14
13	13	190-67-1
14	14	190-67-2
15	15	190-67-4
16	16	✓ 130195001 <i>555</i>
17	17	✓ 130195002
18	18	✓ 130195003
19	19	✓ 130195004
20	20	✓ 130195005
21	21	✓ 130195005S <i>560</i>
22	22	✓ 130195005D
23	23	✓ 130195006
24	24	✓ 130195007
25	25	✓ 130195009

*1 conf. req'd*

658 458

Line	Vial	Vial Information
26	26	✓ 130195010 <i>565</i>
27	27	✓ 130195011
28	28	✓ 130195012
29	29	✓ 130195013
30	30	✓ 130195014
31	31	<del>130195015</del> <i>570</i> (10X)
32	32	✓ 130195016
33	33	✓ 130195017
34	34	✓ 130195BLK1
35	35	130195LCS1
36	36	✓ 190-83-7 <i>575</i>
37	37	✓ 130195018
38	38	✓ 130195019
39	39	<del>130195020</del> (10X)
40	40	✓ 130195021
41	41	✓ 130195022 <i>580</i>
42	42	✓ 130195022S
43	43	✓ 130195022D
44	44	✓ 130195023
45	45	✓ 130195024
46	46	<del>130195025</del> <i>585</i> (2X)
47	47	✓ 130195026
48	48	✓ 130195027
49	49	✓ 130195028
50	50	✓ 130195029
51	51	✓ 130195030 <i>590</i>
52	52	✓ 130195031
53	53	✓ 130195032

Line Vial Vial Information

Line	Vial	Vial Information
54	54	<del>130195033</del> 50X
55	55	130195BLK2
56	56	130195LCS2 555
57	57	190-83-7
58	58	130195034
59	59	130195035
60	60	130195036
61	61	130195037 600
62	62	130195038
63	63	130195040
64	64	130195041
65	65	<del>130195042</del> 10X
66	66	190-83-7 605

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEXANE	PCB	1	Sample		
2	2	M2154,2250.b	PCB	1	Sample		
3	3	M1232,2250.b	PCB	1	Sample		
4	4	M1242,2250.b	PCB	1	Sample		
5	5	M1248,2250.b	PCB	1	Sample		
6	6	L1660,2250.b	PCB	1	Sample		
7	7	ML1660,2250.b	PCB	1	Sample		
8	8	M1660,2250.b	PCB	1	Sample		
9	9	MH1660,2250.b	PCB	1	Sample		
10	10	H1660,2250.b	PCB	1	Sample		
11	11	2M2154,2250.b	PCB	1	Sample		
12	12	2M1232,2250.b	PCB	1	Sample		
13	13	2M1242,2250.b	PCB	1	Sample		
14	14	2M1248,2250.b	PCB	1	Sample		
15	15	2M1660,2250.b	PCB	1	Sample		
16	16	DD6AC102,2250.b	PCB	1	Sample		
17	17	DD6AD102,2250.b	PCB	1	Sample		
18	18	DD6AE102,2250.b	PCB	1	Sample		
19	19	DD6AF102,2250.b	PCB	1	Sample		
20	20	DD6AG102,2250.b	PCB	1	Sample		
21	21	DD6AG103,2250.b	PCB	1	Sample		
22	22	DD6AG104,2250.b	PCB	1	Sample		
23	23	DD6AH102,2250.b	PCB	1	Sample		
24	24	DD6AJ102,2250.b	PCB	1	Sample		
25	25	DD6AL102,2250.b	PCB	1	Sample		



Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
=====	=====	=====	=====	=====	=====	=====	=====
26	26	DD6AM102,2250.b	PCB	1	Sample		
27	27	DD6AN102,2250.b	PCB	1	Sample		
28	28	DD6AP102,2250.b	PCB	1	Sample		
29	29	DD6AQ102,2250.b	PCB	1	Sample		
30	30	DD6AR102,2250.b	PCB	1	Sample		
31	31	DD6AT102,2250.b	PCB	1	Sample		
32	32	DD6AV102,2250.b	PCB	1	Sample		
33	33	DD6AW102,2250.b	PCB	1	Sample		
34	34	DDJ8X101,2250.b	PCB	1	Sample		
35	35	DDJ8X102,2250.b	PCB	1	Sample		
36	36	M1660,2250.b	PCB	1	Sample		
37	37	DD6AX102,2250.b	PCB	1	Sample		
38	38	DD6C0102,2250.b	PCB	1	Sample		
39	39	DD6C1102,2250.b	PCB	1	Sample		
40	40	DD6C2102,2250.b	PCB	1	Sample		
41	41	DD6C3102,2250.b	PCB	1	Sample		
42	42	DD6C3104,2250.b	PCB	1	Sample		
43	43	DD6C3105,2250.b	PCB	1	Sample		
44	44	DD6C4102,2250.b	PCB	1	Sample		
45	45	DD6C5102,2250.b	PCB	1	Sample		
46	46	DD6C6102,2250.b	PCB	1	Sample		
47	47	DD6C7102,2250.b	PCB	1	Sample		
48	48	DD6C8102,2250.b	PCB	1	Sample		
49	49	DD6C9102,2250.b	PCB	1	Sample		
50	50	DD6CA102,2250.b	PCB	1	Sample		
51	51	DD6CC102,2250.b	PCB	1	Sample		
52	52	DD6CD102,2250.b	PCB	1	Sample		
53	53	DD6CE102,2250.b	PCB	1	Sample		
54	54	DD6CF102,2250.b	PCB	1	Sample		
55	55	DDKP0101,2250.b	PCB	1	Sample		
56	56	DDKP0102,2250.b	PCB	1	Sample		
57	57	M1660,2250.b	PCB	1	Sample		
58	58	DD6CG102,2250.b	PCB	1	Sample		
59	59	DD6CH102,2250.b	PCB	1	Sample		
60	60	DD6CJ102,2250.b	PCB	1	Sample		
61	61	DD6CK102,2250.b	PCB	1	Sample		
62	62	DD6CL102,2250.b	PCB	1	Sample		
63	63	DD6CN102,2250.b	PCB	1	Sample		
64	64	DD6CP102,2250.b	PCB	1	Sample		
65	65	DD6CQ102,2250.b	PCB	1	Sample		
66	66	M1660,2250.b	PCB	1	Sample		

Sequence Table (Back Injector):

Vial Information Part:

Line	Vial	Vial Information
=====	=====	=====
1	100	RINSE
2	1	RINSE
3	2	190-83-1

Sequence Table (Front Injector):

Vial Information Part:

M

Line	Vial	Vial Information	
=====	=====	=====	=====
1	2	RINSE	
2	3	190-83-1	638
3	4	190-83-2	639
4	5	190-83-3	640
5	6	190-83-4	641
6	7	190-83-7	642
7	8	<del>180288001</del>	643 5X
8	11	<del>180288002</del>	644 5X
9	12	<del>180288003</del>	645 TBA
10	13	<del>180288004</del>	646 3X
11	14	<del>180288005</del>	647 3X
12	15	<del>180288006</del>	648 3X
13	16	180288007	649
14	17	180288008	650
15	18	180288009	651
16	19	180288010	652
17	20	180288011	653
18	21	<del>180288012</del>	654 3X
19	22	180288013	655
20	23	180288014	656
21	24	180288015	657
22	25	<del>180288016</del>	658 TBA
23	26	180288BLK	659
24	27	180288LCS	660
25	28	190-83-7	661

658 462

Line	Vial	Vial Information
=====	=====	=====
26	29	180288018 662
27	30	180288019 663
28	31	<del>180288020</del> 664 TBA
29	32	180288021 665
30	33	<del>180288022</del> 666 TBA
31	34	<del>180288022S</del> 667
32	35	<del>180288022D</del> 668
33	36	<del>180288023</del> 669 5X
34	37	180288024 670
35	38	<del>180288025</del> 671 3X
36	39	180288026 672
37	40	180288027 673
38	41	180288028 674
39	42	180288029 675
40	43	180288030 676
41	44	180288031 677
42	45	180288032 678
43	46	180288033 679
44	47	180288BLK2 680
45	48	180288LCS2 681
46	49	190-83-7 682
47	50	180288034 683
48	51	180288035 684
49	52	180288036 685
50	53	180288037 686
51	54	180288038 687
52	55	180288041 688
53	56	230195001 689

Line	Vial	Vial Information	
====	====	=====	=====
54	57	240144001	690
55	58	230195BLK	691
56	59	230195LCS	692
57	60	230195LCD	693
58	61	130142001 *10	694
59	62	170155001 *10	695
60	63	130142BLK	696
61	64	130142LCS	697
62	65	130142LCD	698
63	8	180288001 *5	699
64	9	180288001S *5	700
65	10	180288001D *5	701
66	11	180288002 *5	702
67	66	190-83-7	703
68	12	180288003	704
69	13	180288004 *3	705
70	14	180288005*3	706
71	15	180288006*3	707
72	95	1301950059 *4	708
73	66	190-83-7	709
74	81	130195051 *1000	710
75	66	190-83-7	711

## Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	===	=====	=====	=====
1	2	HEXANE	PCB	1	Sample		
2	3	M2154,2250.b	PCB	1	Sample		
3	4	M1232,2250.b	PCB	1	Sample		
4	5	M1242,2250.b	PCB	1	Sample		
5	6	M1248,2250.b	PCB	1	Sample		
6	7	M1660,2250.b	PCB	1	Sample		
7	8	DDDNM102,2250.b	PCB	1	Sample		

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
=====	=====	=====	=====	=====	=====	=====	=====
8	11	DDDNW102,2250.b	PCB	1	Sample		
9	12	DDDP1102,2250.b	PCB	1	Sample		
10	13	DDDP4102,2250.b	PCB	1	Sample		
11	14	DDDP7102,2250.b	PCB	1	Sample		
12	15	DDDP102,2250.b	PCB	1	Sample		
13	16	DDDP102,2250.b	PCB	1	Sample		
14	17	DDDP102,2250.b	PCB	1	Sample		
15	18	DDDP102,2250.b	PCB	1	Sample		
16	19	DDDP102,2250.b	PCB	1	Sample		
17	20	DDDP102,2250.b	PCB	1	Sample		
18	21	DDDP102,2250.b	PCB	1	Sample		
19	22	DDDP102,2250.b	PCB	1	Sample		
20	23	DDDP102,2250.b	PCB	1	Sample		
21	24	DDDP102,2250.b	PCB	1	Sample		
22	25	DDDP102,2250.b	PCB	1	Sample		
23	26	DDN3X101,2250.b	PCB	1	Sample		
24	27	DDN3X102,2250.b	PCB	1	Sample		
25	28	M1660,2250.b	PCB	1	Sample		
26	29	DDQ1102,2250.b	PCB	1	Sample		
27	30	DDQ2102,2250.b	PCB	1	Sample		
28	31	DDQ9102,2250.b	PCB	1	Sample		
29	32	DDQD102,2250.b	PCB	1	Sample		
30	33	DDQF102,2250.b	PCB	1	Sample		
31	34	DDQF103,2250.b	PCB	1	Sample		
32	35	DDQF104,2250.b	PCB	1	Sample		
33	36	DDQH102,2250.b	PCB	1	Sample		
34	37	DDQJ102,2250.b	PCB	1	Sample		
35	38	DDQL102,2250.b	PCB	1	Sample		
36	39	DDQW102,2250.b	PCB	1	Sample		
37	40	DDQX102,2250.b	PCB	1	Sample		
38	41	DDDR0102,2250.b	PCB	1	Sample		
39	42	DDDR1102,2250.b	PCB	1	Sample		
40	43	DDDR2102,2250.b	PCB	1	Sample		
41	44	DDDR3102,2250.b	PCB	1	Sample		
42	45	DDDR4102,2250.b	PCB	1	Sample		
43	46	DDDR6102,2250.b	PCB	1	Sample		
44	47	DDQEJ101,2250.b	PCB	1	Sample		
45	48	DDQEJ102,2250.b	PCB	1	Sample		
46	49	M1660,2250.b	PCB	1	Sample		
47	50	DDDR7102,2250.b	PCB	1	Sample		
48	51	DDDR9102,2250.b	PCB	1	Sample		
49	52	DDDR102,2250.b	PCB	1	Sample		
50	53	DDDRD102,2250.b	PCB	1	Sample		
51	54	DDDRF102,2250.b	PCB	1	Sample		
52	55	DDDRQ102,2250.b	PCB	1	Sample		
53	56	DDK90104,2250.b	PCB	1	Sample		
54	57	DDLFR10Q,2250.b	PCB	1	Sample		
55	58	DDN23101,2250.b	PCB	1	Sample		
56	59	DDN23102,2250.b	PCB	1	Sample		
57	60	DDN23103,2250.b	PCB	1	Sample		
58	61	DD5VE114,2250.b	PCB	1	Sample		
59	62	DD9NW114,2250.b	PCB	1	Sample		
60	63	DDKW4101,2250.b	PCB	1	Sample		
61	64	DDKW4102,2250.b	PCB	1	Sample		
62	65	DDKW4103,2250.b	PCB	1	Sample		
63	8	DDDNM102,2250.b	PCB	1	Sample		

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	===	=====	=====	=====
64	9	DDDNM103,2250.b	PCB	1	Sample		
65	10	DDDNM104,2250.b	PCB	1	Sample		
66	11	DDDNW102,2250.b	PCB	1	Sample		
67	66	M1660,2250.b	PCB	1	Sample		
68	12	DDDP1102,2250.b	PCB	1	Sample		
69	13	DDDP4102,2250.b	PCB	1	Sample		
70	14	DDDP7102,2250.b	PCB	1	Sample		
71	15	DDDP102,2250.b	PCB	1	Sample		
72	95	DD6DC102,2250.b	PCB	1	Sample		
73	66	M1660,2250.b	PCB	1	Sample		
74	81	DD6D3102,2250.b	PCB	1	Sample		
75	66	M1660,2250.b	PCB	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

658 466

PSR024 5/24/00 13:46:50 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: YUSHINSC

METHOD: QH PCBs (8082)

<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>
4F	DDK90-1-04	___	236508	399411	I-09-QH	COE230195	001		WATER	0	9
6B CLP1	DDLFR-1-0Q	___	236507	416241	I-09-QH	COE240144	001		WATER	0	20

RELINQUISHED BY

*P. Yushinski*  
*P. Yushinski*

RECEIVED BY

*P. Yushinski*  
*P. Yushinski*

DATE/TIME

*5-24-00 1540*  
*5-24-00 2230*

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

**HERBICIDE DATA**



**HERBICIDE  
QC SUMMARY**

## SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E230195

	CLIENT ID.	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0137/WA/001	97	00
02	METHOD BLK. DDN20101	101	00
03	LCS DDN20102	104	00
04	LCSD DDN20103	108	00

SURROGATES

SRG01 = DCAA

QC LIMITS

( 53-119)

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

FORM II

658 470

## SW846 8151A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No: \_\_\_\_\_

Lot #: C0E240000

WO #: DDN20102

BATCH: 0145491

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	16.0	17.6	110	46 - 124	
2,4,5-TP (Silvex)	4.00	4.16	104	53 - 127	
2,4,5-T	4.00	4.47	112	40 - 126	

NOTES (S) :  
\_\_\_\_\_

\* Values outside of QC limits

Spike Recovery:   0   out of   3   outside limitsCOMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_

FORM III

## SW846 8151A CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT\_\_\_\_\_

SDG No: \_\_\_\_\_

Lot #: C0E240000

WO #: DDN20103

BATCH: 0145491

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENT. (ug/L )	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	16.0	17.8	111	46 - 124	
2,4,5-TP (Silvex)	4.00	4.33	108	53 - 127	
2,4,5-T	4.00	4.57	114	40 - 126	

## NOTES (S) :

\* Values outside of QC limits

Spike Recovery:   0   out of   3   outside limits

COMMENTS:

FORM III

658 472

## SW846 8151A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDN20101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number: ---

Lab File ID: a-b30063.

Lot Number: C0E230195

Matrix: WATER

Extraction Method: 8151A

Date Extracted: 05/24/00

Date Analyzed(1): 05/26/00

Date Analyzed(2): N/A

Time Analyzed(1): 18:25

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/S1/0137/WA/001	DDK90112	05/26/00	N/A
02	CHECK SAMPLE	DDN20102 C	05/26/00	N/A
03	DUPLICATE CHECK	DDN20103 L	05/26/00	N/A
04				
05				
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) WATER

Lab Sample ID: C0E230195 001

Method: SW846 8151A

Herbicides (8151A)

c

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDK90112

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0145491

Client Sample Id: DF/S1/0137/WA/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
94-75-7	2,4-D	4.0		U
93-72-1	2,4,5-TP (Silvex)	1.0		U

Data File: /var/chem/gc1.i/2250.b/a-b30057.d  
 Report Date: 27-May-2000 08:45

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30057.d  
 Lab Smp Id: DDK90112 Client Smp ID: DF/S1/0137/WA/001  
 Inj Date : 26-MAY-2000 15:31  
 Operator : 01797 Inst ID: gc1.i  
 Smp Info : DDK90112,2250.b  
 Misc Info : 230195001  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 27-May-2000 08:40 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 15:20 Cal File: a-b30007.d  
 Als bottle: 57  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: all.sub  
 Target Version: 3.40

Concentration Formula: Amt \* DF \* 20\*Vt/Vo/Vi

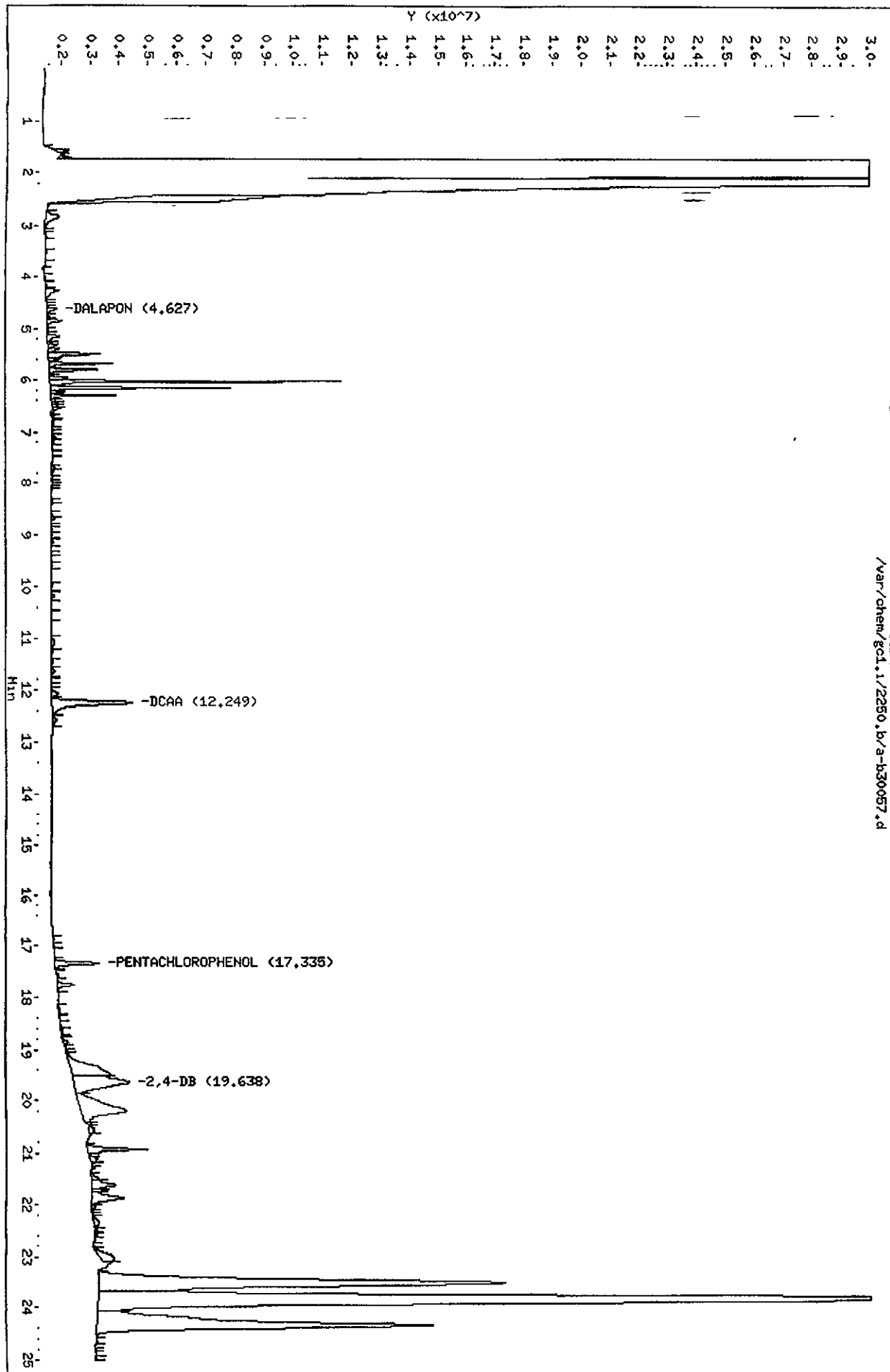
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
1 DALAPON	4.627	4.649	-0.022	353851	0.00281	0.5621
\$ 2 DCAA	12.249	12.244	0.005	16348954	0.04849	9.698
3 DICAMBA				Compound Not Detected		
4 MCPP				Compound Not Detected		
5 MCPA				Compound Not Detected		
6 DICHLOROPROP				Compound Not Detected		
7 2,4-D				Compound Not Detected		
8 PENTACHLOROPHENOL	17.335	17.334	0.001	1523165	0.00126	0.2518
9 2,4,5-TP(SILVEX)				Compound Not Detected		
10 2,4,5-T				Compound Not Detected.		
11 2,4-DB	19.638	19.678	-0.040	1891841	0.02808	5.615
12 DINOSEB				Compound Not Detected.		



Data File: /var/chem/gc1.1/2250.b/a-b30057.d  
Date: 26-MAY-2000 15:31  
Client ID: DF/S1/0137/NA/001  
Sample Info: DDK90112, 2250.b  
Volume Injected (uL): 1.0  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53



1000 1000 1000

1000 1000 1000

1

1

**HERBICIDE  
CALIBRATION DATA**

658 478

Report Date : 25-May-2000 18:28

6D  
HP68901B  
DB1721

STL-PITTSBURGH

## COMPOUND LISTING

Method file : /var/chem/gcl.i/2250.b/LONGHB.m  
Quant Method : ESTD Target Version : 3.40  
Last Update : 25-May-2000 18:28 Number of Cpnds : 12  
Data Type : GC MULTI COMP

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	4.649	4.579-4.719	1.259e+08
\$ 2 DCAA	12.244	12.174-12.314	3.372e+08
3 DICAMBA	12.934	12.864-13.004	2.541e+08
4 MCPP	13.430	13.360-13.500	2.516e+05
5 MCPA	14.436	14.366-14.506	3.374e+05
6 DICHLOROPROP	15.738	15.668-15.808	6.133e+07
7 2,4-D	17.062	16.992-17.132	7.316e+07
8 PENTACHLOROPHENOL	17.334	17.264-17.404	1.210e+09
9 2,4,5-TP (SILVEX)	18.507	18.437-18.577	6.470e+08
10 2,4,5-T	19.160	19.090-19.230	5.614e+08
11 2,4-DB	19.678	19.608-19.748	6.738e+07
12 DINOSEB	20.345	20.275-20.415	6.475e+08

Report Date : 25-May-2000 18:29

65  
HP685013  
DB1721

STL-PITTSBURGH

## INITIAL CALIBRATION DATA

Start Cal Date : 25-MAY-2000 13:24  
 End Cal Date : 25-MAY-2000 15:20  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.40  
 Integrator : Falcon  
 Method file : /var/chem/gcl.i/2250.b/LONGHB.m  
 Cal Date : 25-May-2000 18:28 g  
 Curve Type : Average

## Calibration File Names:

Level 1: /var/chem/gcl.i/2250.b/a-b30003.d  
 Level 2: /var/chem/gcl.i/2250.b/a-b30004.d  
 Level 3: /var/chem/gcl.i/2250.b/a-b30005.d  
 Level 4: /var/chem/gcl.i/2250.b/a-b30006.d  
 Level 5: /var/chem/gcl.i/2250.b/a-b30007.d

Compound	0 00500	0 01000	0.02500	0.05000	0 10000	RRF	RSD
Level 1	Level 2	Level 3	Level 4	Level 5			
1 DALAPON	138676818	131206318	127444374	119289624	112868653	125897157	8.015
3 DICAMBA	255804057	263313052	266825388	252786439	231889641	254123715	5.369
4 MCPP	346285	287367	246719	204806	172580	251552	27.183
5 MCPA	444528	383882	332278	280717	245547	337391	23.578
6 DICHLOROPROP	64841557	65255212	64639788	58854400	53075493	61333290	8.664
7 2,4-D	66878009	73142753	77500118	76159641	72130303	73162165	5.650
8 PENTACHLOROPHENOL	1.135e+09	1.222e+09	1.276e+09	1.251e+09	1.164e+09	1.210e+09	4.870
9 2,4,5-TP(SILVEX)	599292381	648499905	683223886	668215107	635935643	647033384	4.986
10 2,4,5-T	474722391	537462952	591594218	604311564	599154656	561449156	9.862
11 2,4-DB	54434360	62768981	70269219	72962414	76485592	67384113	13.091
12 DINOSEB	664148580	662837165	668905827	638183386	603364941	647487980	4.233
\$ 2 DCAA	377328826	369167247	350318801	313280835	275776112	337174364	12.539

Avg 10.77%  
RSD

658 480

72  
689016Data File: /var/chem/gc1.i/2250.b/a-b30049.d D61701  
Report Date: 26-May-2000 12:21

## STL-PITTSBURGH

## CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc1.i Injection Date: 26-MAY-2000 11:39  
 Lab File ID: a-b30049.d Init. Calibration Date(s): 05/25/0 05/25/0  
 Analysis Type: Init. Calibration Times: 13:24 15:20  
 Lab Sample ID: Mherb Method File: /var/chem/gc1.i/2250.b/LONGHB.m  
 Quant Type: ESTD

COMPOUND	RRF	RFO	MIN	MAX
1 DALAPON	125897157.499	123676514.806	0.010	1.8   15.0
2 DCAA	337174364.364	332475452.409	0.010	1.4   15.0
3 DICAMBA	254123715.428	250358729.412	0.010	1.5   15.0
4 MCPP	251551.505	237005.986	0.010	5.8   15.0
5 MCPA	337390.579	317543.107	0.010	5.9   15.0
6 DICHLOROPROP	61333289.846	62798903.302	0.010	-2.4   15.0
7 2,4-D	73162164.809	82506169.213	0.010	-12.8   15.0
8 PENTACHLOROPHENOL	1209688964.100	1124969078.947	0.010	7.0   15.0
9 2,4,5-TP(SILVEX)	647033384.343	641167962.085	0.010	0.9   15.0
10 2,4,5-T	561449156.332	630502606.635	0.010	-12.3   15.0
11 2,4-DB	67384113.217	80609656.805	0.010	-19.6   15.0
12 DINOSEB	647487979.868	587855511.811	0.010	9.2   15.0

AVE=6.72

FE  
689016

658 481

Data File: /var/chem/gc1.1/2250.b/a-b30066.d  
Report Date: 27-May-2000 08:46

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc1.1      Injection Date: 26-MAY-2000 19:53  
Lab File ID: a-b30066.d      Init. Calibration Date(s): 05/25/00 05/25/00  
Analysis Type:      Init. Calibration Times: 13:24 15:20  
Lab Sample ID: Mherb      Method File: /var/chem/gc1.1/2250.b/LONGHB.m  
Quant Type: ESTD

COMPOUND	RRF	RFO	MIN	MAX
1 DALAPON	125897157 499	125032665 148	0.010	0.7 15.0
2 DCAA	337174364.364	342405017 626	0.010	-1.6 15.0
3 DICAMBA	254123715.428	259269764.706	0.010	-2.0 15.0
4 MCPP	251551 505	244505.751	0.010	2.8 15.0
5 MCPA	337390.579	326821 612	0.010	3.1 15.0
6 DICHLOROPROP	61333289 846	64184634.434	0.010	-4.6 15.0
7 2,4-D	73162164 809	82219882.491	0.010	-12.4 15.0
8 PENTACHLOROPHENOL	1209688964.100	1203246052.632	0.010	0.5 15.0
9 2,4,5-TP (SILVEX)	647033384.343	684805165.877	0.010	-5.8 15.0
10 2,4,5-T	561449156.332	641842464.455	0.010	-14.3 15.0
11 2,4-DB	67384113 217	81643065 089	0.010	-21.2 15.0
12 DINOSBB	647487979.868	625055039.370	0.010	3.5 15.0

AVE=6.0

8D  
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STL PIT

Case No.:

SAS No.: 40325

SDG No.: C0E230195

GC Column: DB1701

ID: 0.53

(mm)

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

Instrument ID: GC1

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION S1 : 12.24					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	LHERB	05/25/00	1324	12.25	
02	MLHERB	05/25/00	1354	12.25	
03	MHERB	05/25/00	1422	12.24	
04	MHHERB	05/25/00	1451	12.24	
05	HHERB	05/25/00	1520	12.24	
06	MHERB	05/26/00	1139	12.24	
07	DF/S1/0137/W	DDK90112	05/26/00	1531	12.25
08	PBLK1	DDN20101	05/26/00	1825	12.25
09	LCS1	DDN20102	05/26/00	1854	12.24
10	LCD1	DDN20103	05/26/00	1923	12.23
11	MHERB	05/26/00	1953	12.24	
12					
13					
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/2250.b/a-b30003.d  
 Report Date: 25-May-2000 18:29

## STL-PITTSBURGH

S

Data file : /var/chem/gc1.i/2250.b/a-b30003.d  
 Lab Smp Id: Lherb  
 Inj Date : 25-MAY-2000 13:24  
 Operator : 01797  
 Smp Info : Lherb,2250.b  
 Misc Info : 190-80-1  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 25-May-2000 18:29 eppinged  
 Cal Date : 25-MAY-2000 13:24  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30003.d  
 Calibration Sample, Level: 1  
 Compound Sublist: 1-all.sub

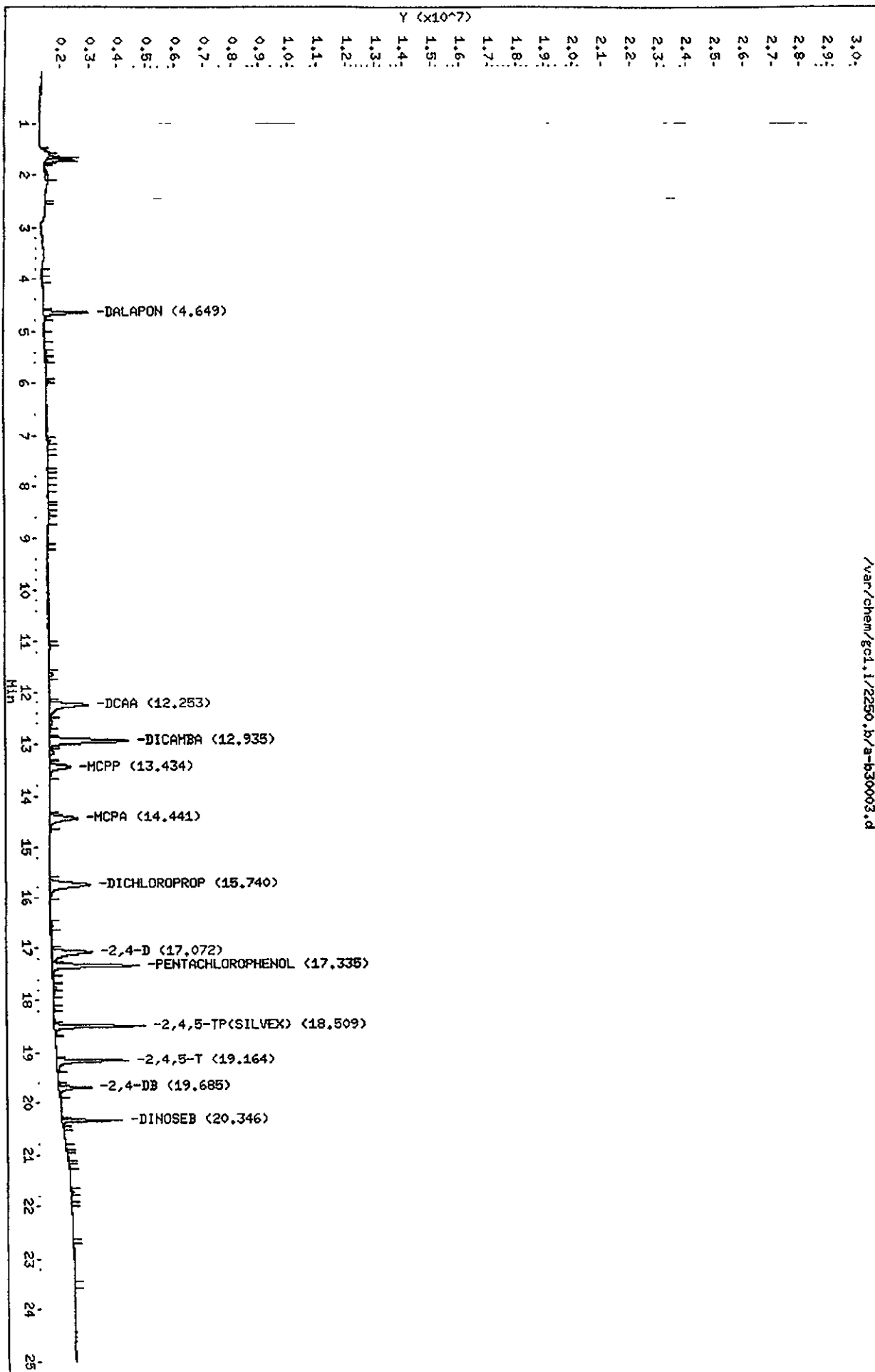
Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
*****	**	*****	*****	*****	*****	*****
8 PENTACHLOROPHENOL	17.335	17.334	0.001	3018785	0.00266	0.002660
1 DALAPON	4.649	4.649	0.000	1525445	0.01100	0.01100
\$ 2 DCAA	12.253	12.244	0.009	8037104	0.02130	0.02130
3 DICAMBA	12.935	12.934	0.001	2711523	0.01060	0.01060
4 MCPP	13.434	13.430	0.004	734125	2.12000	2.120
5 MCPA	14.441	14.436	0.005	951290	2.14000	2.140
6 DICHLOROPROP	15.740	15.738	0.002	1374641	0.02120	0.02120
7 2,4-D	17.072	17.062	0.010	1411126	0.02110	0.02110
9 2,4,5-TP (SILVEX)	18.509	18.507	0.002	3146285	0.00525	0.005250
10 2,4,5-T	19.164	19.160	0.004	2501787	0.00527	0.005270
11 2,4-DB	19.685	19.678	0.007	1148565	0.02110	0.02110
12 DINOSEB	20.346	20.345	0.001	2105351	0.00317	0.003170



Data File: /var/chem/gc1.1/2250.b/a-b30003.d  
Date: 25-MAY-2000 13:24  
Client ID:  
Sample info: Herb,2250.b  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.1/2250.b/a-b30003.d



Data File: /var/chem/gc1.i/2250.b/a-b30004.d  
 Report Date: 25-May-2000 18:29

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30004.d  
 Lab Smp Id: MLherb  
 Inj Date : 25-MAY-2000 13:54  
 Operator : 01797  
 Smp Info : MLherb,2250.b  
 Misc Info : 190-80-2  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 25-May-2000 18:29 eppinged  
 Cal Date : 25-MAY-2000 13:54  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

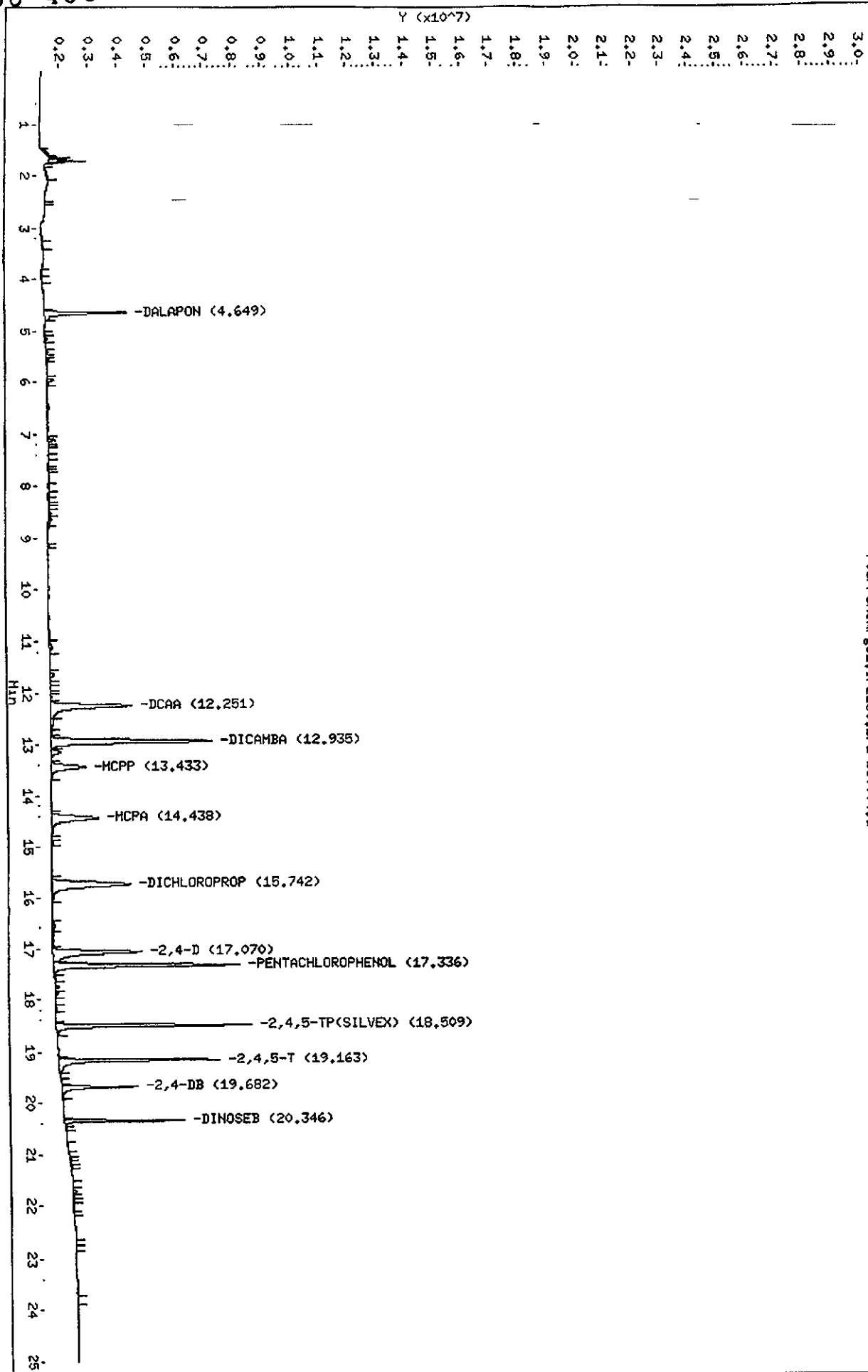
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30004.d  
 Calibration Sample, Level: 2  
 Compound Sublist: 1-all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
8 PENTACHLOROPHENOL	17.336	17.334	0.002	6503398	0.00532	0.005518
1 DALAPON	4.649	4.649	0.000	2886539	0.02200	0.02139
\$ 2 DCAA	12.251	12.244	0.007	15689608	0.04250	0.04204
3 DICAMBA	12.935	12.934	0.001	5608568	0.02130	0.02161
4 MCPP	13.433	13.430	0.003	1224182	4.26000	3.864
5 MCPA	14.438	14.436	0.002	1643015	4.28000	3.967
6 DICHLOROPROP	15.742	15.738	0.004	2766821	0.04240	0.04253
7 2,4-D	17.070	17.062	0.008	3108567	0.04250	0.04440
9 2,4,5-TP(SILVEX)	18.509	18.507	0.002	6809249	0.01050	0.01091
10 2,4,5-T	19.163	19.160	0.003	5643361	0.01050	0.01115
11 2,4-DB	19.682	19.678	0.004	2648851	0.04220	0.04520
12 DINOSEB	20.346	20.345	0.001	4209016	0.00635	0.006344

Data File: /var/chem/gc1.1/2250.b/a-b30004.d  
Date: 25-MAY-2000 13:54  
Client ID:  
Sample Info: HLherb/2250.b  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.1/2250.b/a-b30004.d



Data File: /var/chem/gc1.i/2250.b/a-b30005.d  
 Report Date: 25-May-2000 18:29

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30005.d  
 Lab Smp Id: Mherb  
 Inj Date : 25-MAY-2000 14:22  
 Operator : 01797  
 Smp Info : Mherb,2250.b  
 Misc Info : 190-80-3  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 25-May-2000 18:29 eppinged  
 Cal Date : 25-MAY-2000 14:22  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

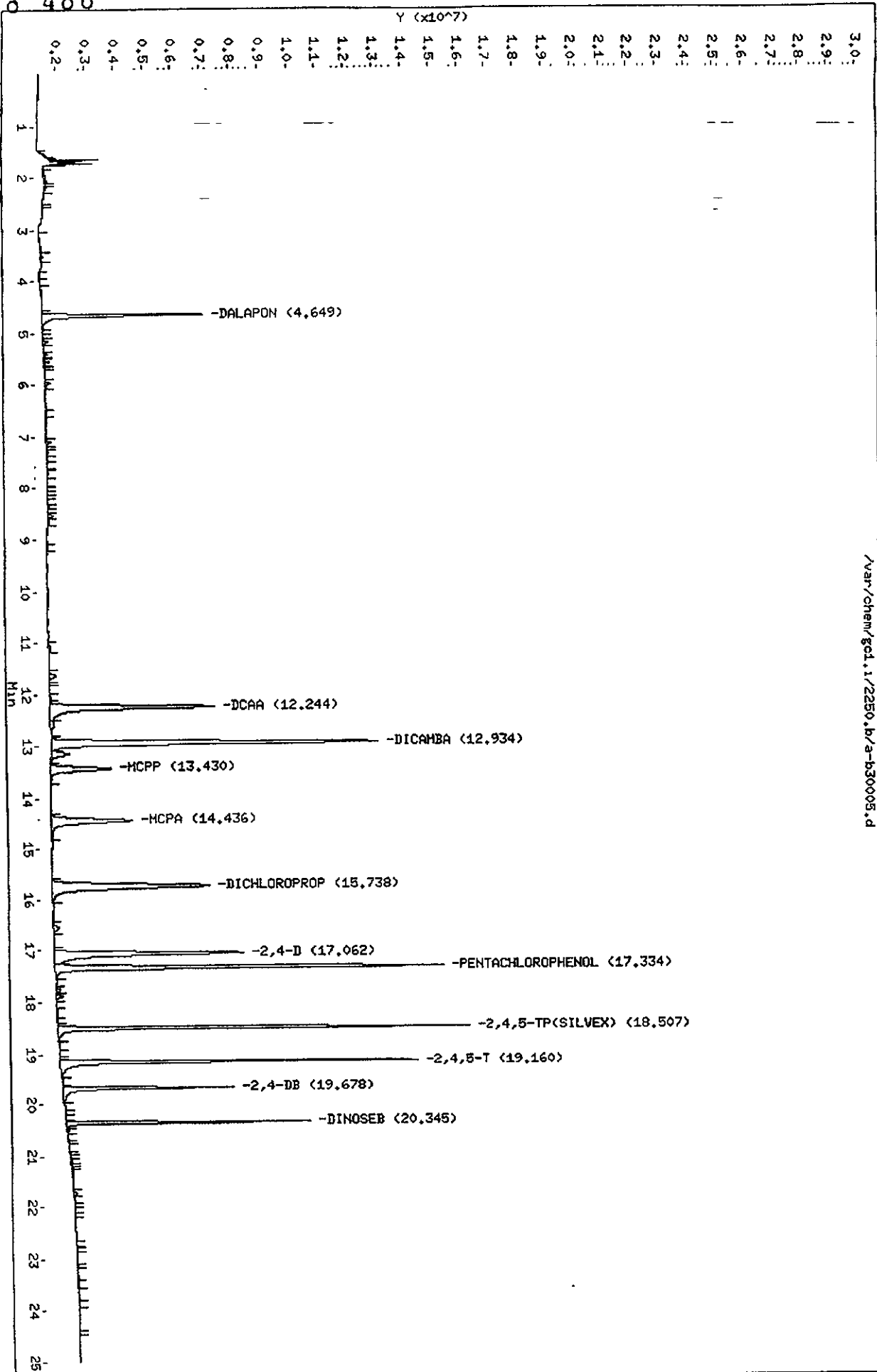
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30005.d  
 Calibration Sample, Level: 3  
 Compound Sublist: 1-all.sub

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT ( ng)	ON-COL ( ng)
8 PENTACHLOROPHENOL	17.334	17.334	0.000	13573473	0.01064	0.01121
1 DALAPON	4.649	4.649	0.000	5594808	0.04390	0.04224
\$ 2 DCAA	12.244	12.244	0.000	29812130	0.08510	0.08154
3 DICAMBA	12.934	12.934	0.000	11340079	0.04250	0.04328
4 MCPP	13.430	13.430	0.000	2102050	8.52000	7.163
5 MCPA	14.436	14.436	0.000	2844301	8.56000	7.352
6 DICHLOROPROP	15.738	15.738	0.000	5481454	0.08480	0.08444
7 2,4-D	17.062	17.062	0.000	6595260	0.08510	0.09096
9 2,4,5-TP(SILVEX)	18.507	18.507	0.000	14416024	0.02110	0.02240
10 2,4,5-T	19.160	19.160	0.000	12482638	0.02110	0.02335
11 2,4-DB	19.678	19.678	0.000	5937749	0.08450	0.09502
12 DINOSEB	20.345	20.345	0.000	8495104	0.01270	0.01277

Data File: /var/chem/gcl.1/2250.b/a-b30005.d  
Date: 25-MAY-2000 14:22  
Client ID:  
Sample Info: Mherb,2250.b  
Column phase: DB1701

Instrument: gcl.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gcl.1/2250.b/a-b30005.d



Data File: /var/chem/gc1.i/2250.b/a-b30006.d  
 Report Date: 25-May-2000 18:29

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30006.d  
 Lab Smp Id: MHherb  
 Inj Date : 25-MAY-2000 14:51  
 Operator : 01797  
 Smp Info : MHherb,2250.b  
 Misc Info : 190-80-4  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 25-May-2000 18:29 eppinged  
 Cal Date : 25-MAY-2000 14:51  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

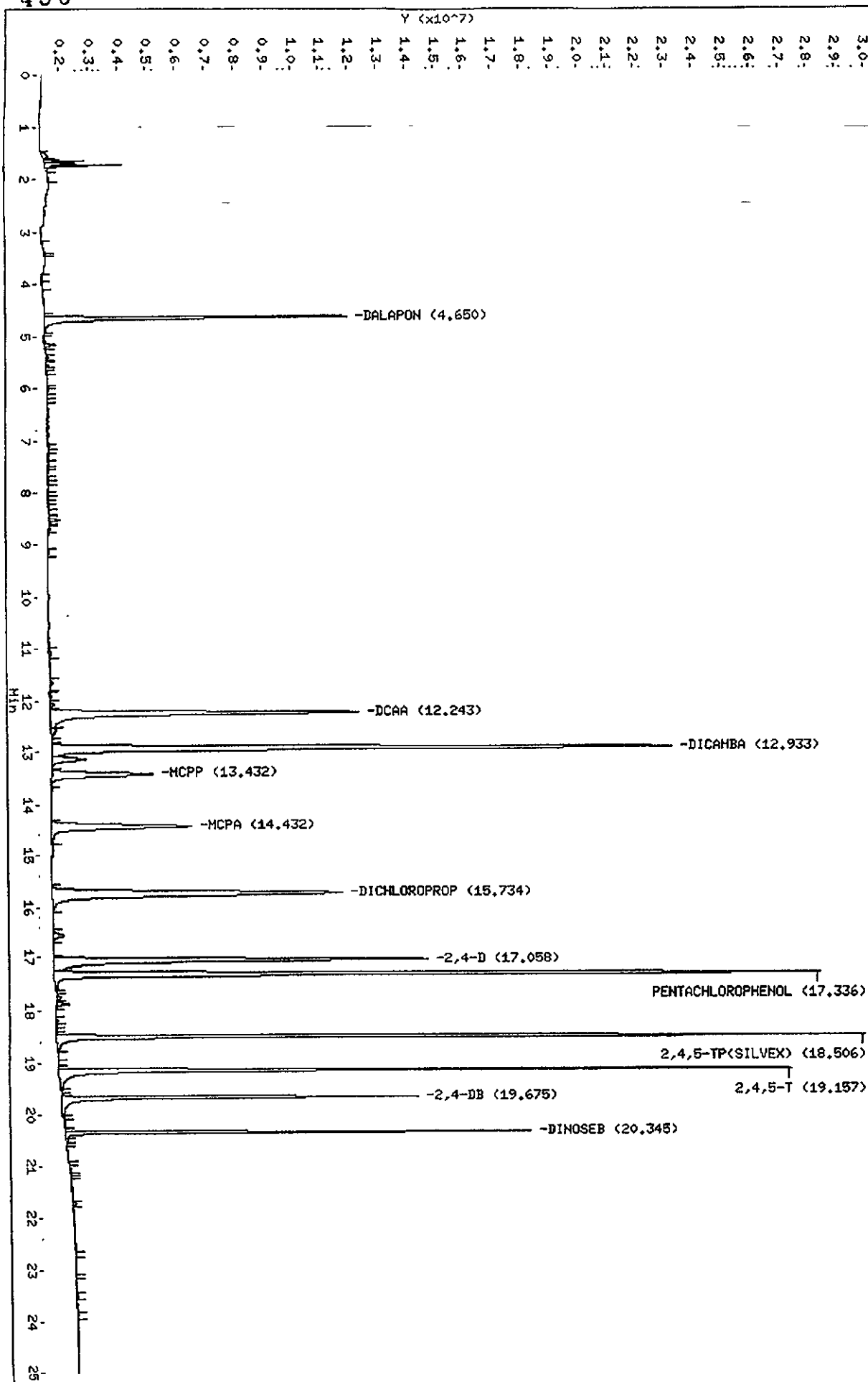
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30006.d  
 Calibration Sample, Level: 4  
 Compound Sublist: 1-all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
*****	==	=====	=====	=====	=====	=====
8 PENTACHLOROPHENOL	17.336	17.334	0.002	26622591	0.02128	0.02180
1 DALAPON	4.650	4.649	0.001	10473629	0.08780	0.08109
\$ 2 DCAA	12.243	12.244	-0.001	53257742	0.17000	0.1511
3 DICAMBA	12.933	12.934	-0.001	21512126	0.08510	0.08284
4 MCPP	13.432	13.430	0.002	3481697	17.0000	12.83
5 MCPA	14.432	14.436	-0.004	4800267	17.1000	13.32
6 DICHLOROPROP	15.734	15.738	-0.004	10005248	0.17000	0.1578
7 2,4-D	17.058	17.062	-0.004	12947139	0.17000	0.1763
9 2,4,5-TP(SILVEX)	18.506	18.507	-0.001	28131856	0.04210	0.04329
10 2,4,5-T	19.157	19.160	-0.003	25501948	0.04220	0.04620
11 2,4-DB	19.675	19.678	-0.003	12330648	0.16900	0.1894
12 DINOSEB	20.345	20.345	0.000	16209858	0.02540	0.02462

Data File: /var/chem/gcl.i/2250.b/a-b30006.d  
Date: 25-MAY-2000 14:51  
Client ID:  
Sample Info: MHerb, 2250.b  
Column phase: DB1701

Instrument: gcl.i  
Operator: 01797  
Column diameter: 0.53

/var/chem/gcl.i/2250.b/a-b30006.d



Data File: /var/chem/gc1.i/2250.b/a-b30007.d  
 Report Date: 25-May-2000 18:29

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30007.d  
 Lab Smp Id: Hherb  
 Inj Date : 25-MAY-2000 15:20  
 Operator : 01797  
 Smp Info : Hherb,2250.b  
 Misc Info : 190-80-5  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 25-May-2000 18:29 eppinged  
 Cal Date : 25-MAY-2000 15:20  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

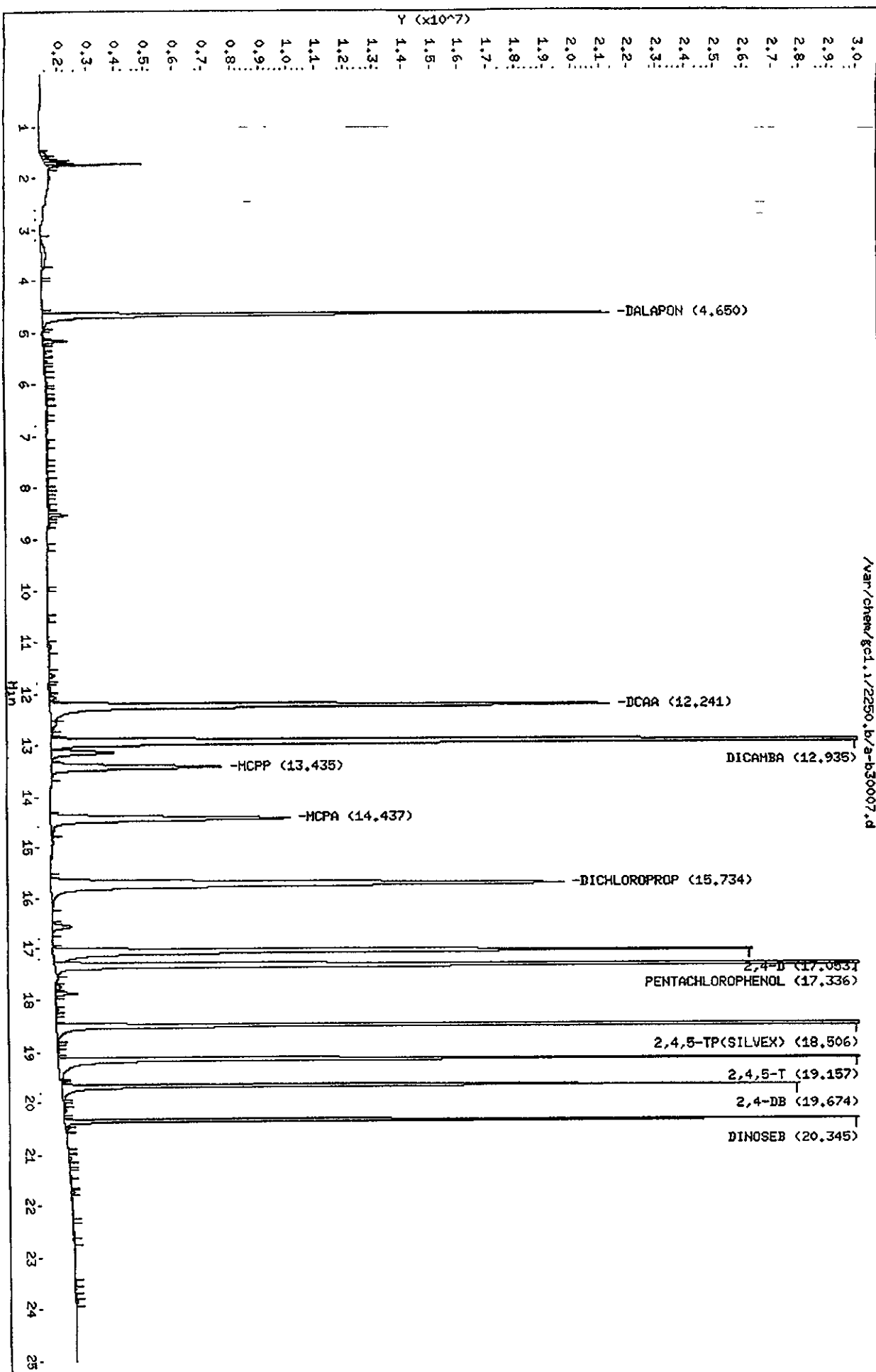
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30007.d  
 Calibration Sample, Level: 5  
 Compound Sublist: 1-all.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
8 PENTACHLOROPHENOL	17.336	17.334	0.002	49543350	0.04255	0.04096
1 DALAPON	4.650	4.649	0.001	19864883	0.17600	0.1578
2 DCAA	12.241	12.244	-0.003	93763878	0.34000	0.2781
3 DICAMBA	12.935	12.934	0.001	39421239	0.17000	0.1551
4 MCPP	13.435	13.430	0.005	5884988	34.1000	23.39
5 MCPA	14.437	14.436	0.001	8348609	34.0000	24.74
6 DICHLOROPROP	15.734	15.738	-0.004	17992592	0.33900	0.2934
7 2,4-D	17.053	17.062	-0.009	24524303	0.34000	0.3352
9 2,4,5-TP(SILVEX)	18.506	18.507	-0.001	53418594	0.08400	0.08256
10 2,4,5-T	19.157	19.160	-0.003	50568653	0.08440	0.09007
11 2,4-DB	19.674	19.678	-0.004	25852130	0.33800	0.3836
12 DINOSEB	20.345	20.345	0.000	30650939	0.05080	0.04734



Data File: /var/chem/gc1.1/2250.b/a-b30007.d  
Date: 25-MAY-2000 15:20  
Client ID:  
Sample Info: Herb, 2250.b  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53



Data File: /var/chem/gc1.i/2250.b/a-b30049.d  
 Report Date: 26-May-2000 12:21

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30049.d  
 Lab Smp Id: Mherb  
 Inj Date : 26-MAY-2000 11:39  
 Operator : 01797  
 Smp Info : Mherb,2250.b  
 Misc Info : 190-80-3  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 26-May-2000 12:21 g  
 Cal Date : 25-MAY-2000 15:20  
 Als bottle: 49  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

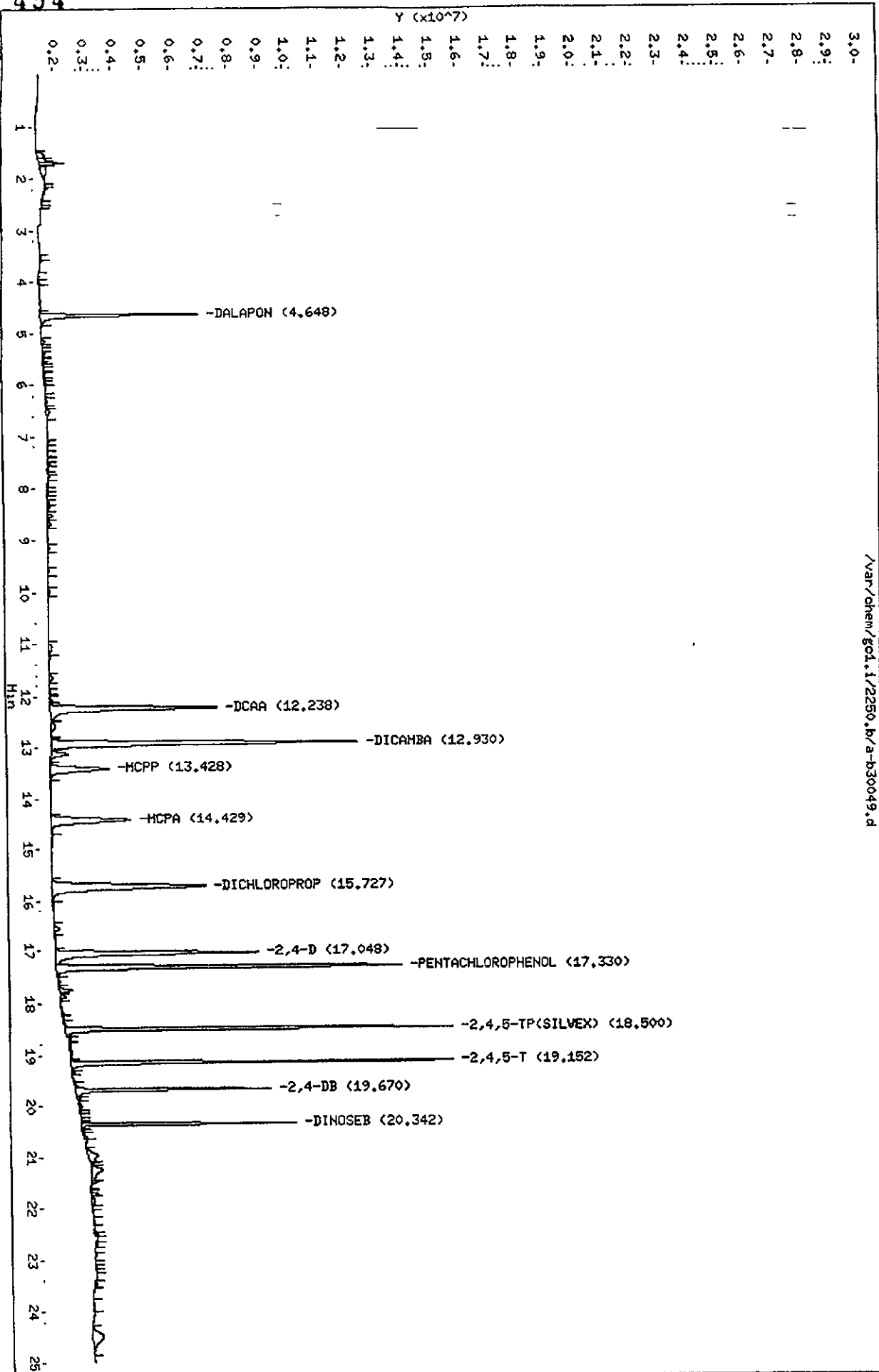
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30007.d  
 Continuing Calibration Sample  
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
1 DALAPON	4.648	4.649	-0.001	5429399	0.04390	0.04312
\$ 2 DCAA	12.238	12.244	-0.006	28293661	0.08510	0.08391
3 DICAMBA	12.930	12.934	-0.004	10640246	0.04250	0.04187
4 MCPP	13.428	13.430	-0.002	2019291	8.52000	8.027
5 MCPA	14.429	14.436	-0.007	2718169	8.56000	8.056
6 DICHLOROPROP	15.727	15.738	-0.011	5325347	0.08480	0.08683
7 2,4-D	17.048	17.062	-0.014	7021275	0.08510	0.09597
8 PENTACHLOROPHENOL	17.330	17.334	-0.004	11969671	0.01064	0.009895
9 2,4,5-TP(SILVEX)	18.500	18.507	-0.007	13528644	0.02110	0.02091
10 2,4,5-T	19.152	19.160	-0.008	13303605	0.02110	0.02370
11 2,4-DB	19.670	19.678	-0.008	6811516	0.08450	0.1011
12 DINOSB	20.342	20.345	-0.003	7465765	0.01270	0.01153

Data File: /var/chem/gc1.1/2250.b/a-b30049.d  
Date: 26-MAY-2000 11:39  
Client ID:  
Sample Info: Mherb,2250.b  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.1/2250.b/a-b30049.d



Data File: /var/chem/gc1.i/2250.b/a-b30066.d  
 Report Date: 27-May-2000 08:46

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30066.d  
 Lab Smp Id: Mherb  
 Inj Date : 26-MAY-2000 19:53  
 Operator : 01797  
 Smp Info : Mherb,2250.b  
 Misc Info : 190-80-3  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 27-May-2000 08:40 g  
 Cal Date : 25-MAY-2000 15:20  
 Als bottle: 65  
 Dil Factor: 1.00000  
 Integrator: Falcon  
 Target Version: 3.40

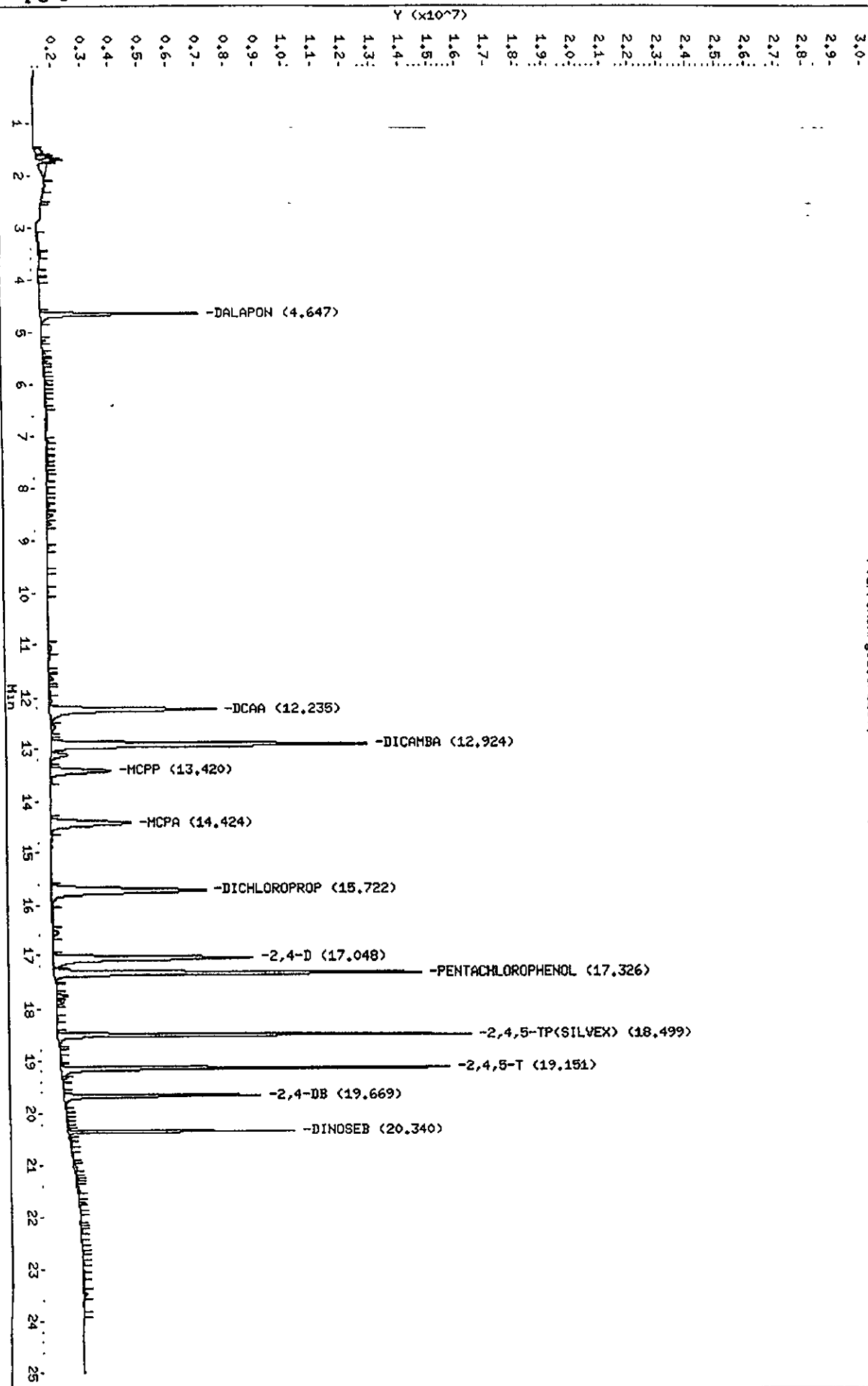
Inst ID: gc1.i  
 Quant Type: ESTD  
 Cal File: a-b30007.d  
 Continuing Calibration Sample  
 Compound Sublist: all.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT ( ng)	ON-COL ( ng)
1 DALAPON	4.647	4.649	-0.002	5488934	0.04390	0.04360
2 DCAA	12.235	12.244	-0.009	29138667	0.08510	0.08642
3 DICAMBA	12.924	12.934	-0.010	11018965	0.04250	0.04336
4 MCPP	13.420	13.430	-0.010	2083189	8.52000	8.281
5 MCPA	14.424	14.436	-0.012	2797593	8.56000	8.292
6 DICHLOROPROP	15.722	15.738	-0.016	5442857	0.08480	0.08874
7 2,4-D	17.048	17.062	-0.014	6996912	0.08510	0.09564
8 PENTACHLOROPHENOL	17.326	17.334	-0.008	12802538	0.01064	0.01058
9 2,4,5-TP(SILVEX)	18.499	18.507	-0.008	14449389	0.02110	0.02233
10 2,4,5-T	19.151	19.160	-0.009	13542876	0.02110	0.02412
11 2,4-DB	19.669	19.678	-0.009	6898839	0.08450	0.1024
12 DINOSEB	20.340	20.345	-0.005	7938199	0.01270	0.01226

Data file: /var/chem/gc1.1/2250.b/a-b30066.d  
Date : 26-MAY-2000 19:53  
Client ID:  
Sample info: Nherb,2250.b  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.1/2250.b/a-b30066.d



**HERBICIDE  
QC DATA**

658 498

UXB INTERNATIONAL  
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) WATER  
Method: SW846 8151A  
Herbicides (8151A)

Lab Sample ID: COE240000 491

Sample WT/Vol: 1000 / mL  
Work Order: DDN20101  
Dilution factor: 1  
Moisture %: NADate Received: 05/23/00  
Date Extracted: 05/24/00  
Date Analyzed: 05/26/00

QC Batch: 0145491

Client Sample Id: INTRA-LAB BLANK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
94-75-7	2,4-D	4.0	U
93-72-1	2,4,5-TP (Silvex)	1.0	U

Data File: /var/chem/gc1.i/2250.b/a-b30063.d

Report Date: 27-May-2000 08:46

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30063.d  
 Lab Smp Id: DDN20101 Client Smp ID: PBLK1  
 Inj Date : 26-MAY-2000 18:25  
 Operator : 01797 Inst ID: gc1.i  
 Smp Info : DDN20101,2250.b  
 Misc Info : 230195BLK  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 27-May-2000 08:40 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 15:20 Cal File: a-b30007.d  
 Als bottle: 62 QC Sample: BLANK  
 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	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

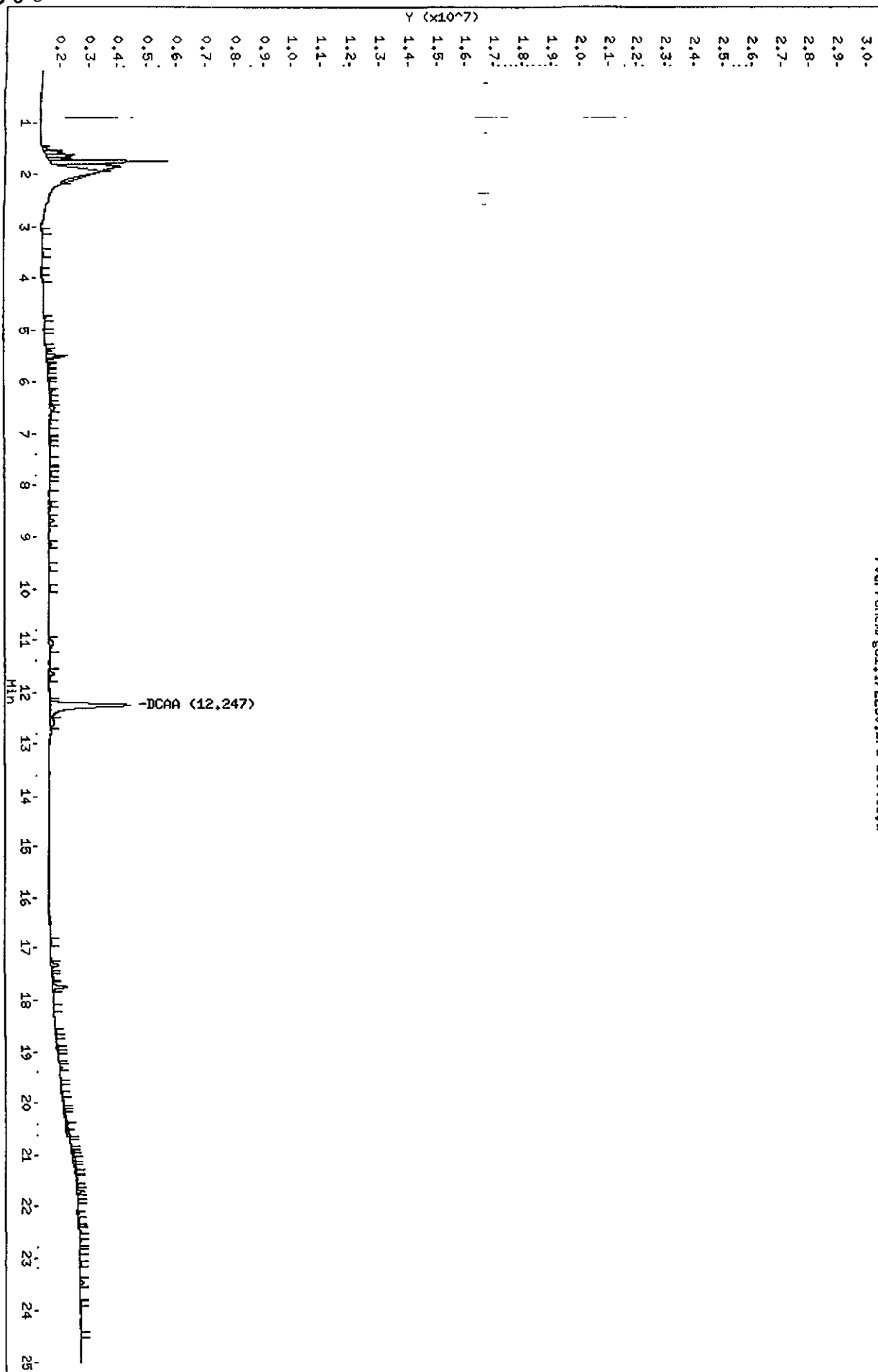
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
1 DALAPON						
\$ 2 DCAA	12.247	12.244	0 003	16989146	0.05039	10.08
3 DICAMBA						
4 MCPPE						
5 MCPA						
6 DICHLOROPROP						
7 2,4-D						
8 PENTACHLOROPHENOL						
9 2,4,5-TP(SILVEX)						
10 2,4,5-T						
11 2,4-DB						
12 DINOSEB						



Data File: /var/chem/ec1.i/2250.b/a-b30063.d  
Date: 26-MAY-2000 18:25  
Client ID: PBLK1  
Sample Info: DDM20101,2250.b  
Volume Injected (uL): 1.0  
Column phase: DB1701

Instrument: ec1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/ec1.i/2250.b/a-b30063.d



UXB INTERNATIONAL  
CHECK SAMPLE COMPOUNDSLab Name: Severn Trent Laboratories, Inc.      SDG Number:Matrix: (soil/water) WATER  
Method: SW846 8151A  
Herbicides (8151A)

Lab Sample ID: C0E240000 491

Sample WT/Vol: 1000 / mL  
Work Order: DDN20102  
Dilution factor: 1  
Moisture %: NADate Received: 05/23/00  
Date Extracted: 05/24/00  
Date Analyzed: 05/26/00

QC Batch: 0145491

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
94-75-7	2,4-D	17.6	
93-72-1	2,4,5-TP (Silvex)	4.16	
93-76-5	2,4,5-T	4.47	

Data File: /var/chem/gcl.i/2250.b/a-b30064.d  
 Report Date: 27-May-2000 08:46

## STL-PITTSBURGH

Data file : /var/chem/gcl.i/2250.b/a-b30064.d  
 Lab Smp Id: DDN20102 Client Smp ID: LCS1  
 Inj Date : 26-MAY-2000 18:54  
 Operator : 01797 Inst ID: gcl.i  
 Smp Info : DDN20102,2250.b  
 Misc Info : 230195LCS  
 Comment :  
 Method : /var/chem/gcl.i/2250.b/LONGHB.m  
 Meth Date : 27-May-2000 08:40 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 15:20 Cal File: a-b30007.d  
 Als bottle: 63 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	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
1 DALAPON	4.647	4.649	-0.002	3586529	0.02849	5.698
2 DCAA	12.238	12.244	-0.006	17583865	0.05215	10.43
3 DICAMBA	12.927	12.934	-0.007	10711710	0.04215	8.430
4 MCPP	13.425	13.430	-0.005	1944728	7.73093	1546
5 MCPA	14.427	14.436	-0.009	2571072	7.62046	1524
6 DICHLOROPROP	15.725	15.738	-0.013	5051821	0.08237	16.47
7 2,4-D	17.049	17.062	-0.013	6433332	0.08793	17.59
8 PENTACHLOROPHENOL	17.329	17.334	-0.005	12650072	0.01046	2.091(R)
9 2,4,5-TP(SILVEX)	18.500	18.507	-0.007	13441240	0.02077	4.155
10 2,4,5-T	19.153	19.160	-0.007	12560828	0.02237	4.474
11 2,4-DB	19.671	19.678	-0.007	6430945	0.09544	19.09
12 DINOSEB	20.341	20.345	-0.004	6316738	0.00976	1.951

Data File: /var/chem/gc1.i/2250.b/a-b30064.d  
Report Date: 27-May-2000 08:46

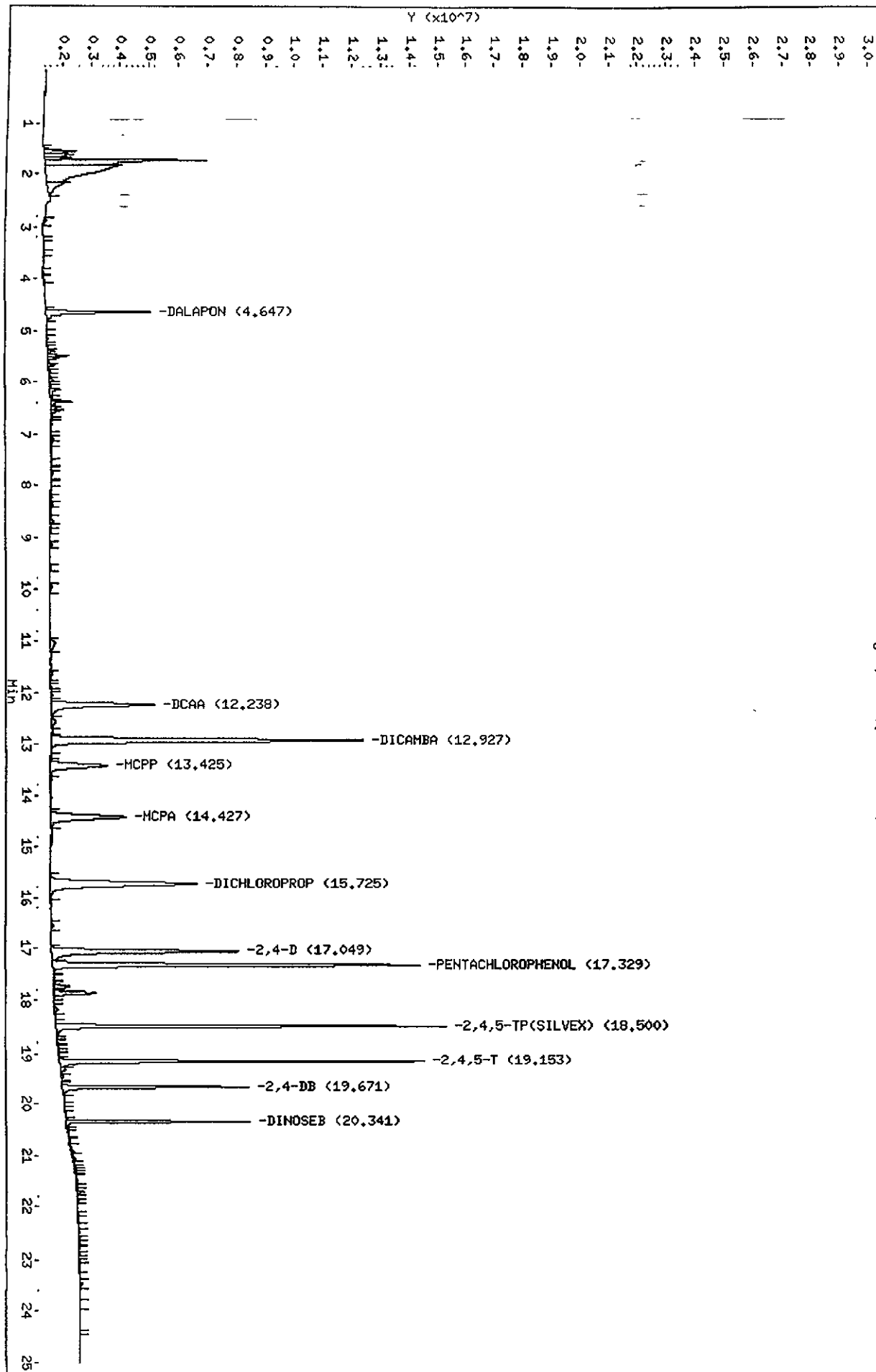
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc1.1/2250.b/a-b30064.d  
Date: 26-MAY-2000 18:54  
Client ID: LCS1  
Sample Info: DMN20102,2250.b  
Volume Injected (uL): 1.0  
Column phase: DB1701

Instrument: gc1.1  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.1/2250.b/a-b30064.d



UXB INTERNATIONAL  
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: \_\_\_\_\_

Matrix: (soil/water) WATER

Lab Sample ID: C0E240000 491

Method: SW846 8151A  
Herbicides (8151A)

Sample WT/Vol: 1000 / mL

Date Received: 05/23/00

Work Order: DDN20103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0145491

Client Sample Id: DUPLICATE CHECK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) ug/L	Q
94-75-7	2,4-D	17.8	
93-72-1	2,4,5-TP (Silvex)	4.33	
93-76-5	2,4,5-T	4.57	

Data File: /var/chem/gc1.i/2250.b/a-b30065.d  
 Report Date: 27-May-2000 08:46

## STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-b30065.d  
 Lab Smp Id: DDN20103 Client Smp ID: LCD1  
 Inj Date : 26-MAY-2000 19:23  
 Operator : 01797 Inst ID: gc1.i  
 Smp Info : DDN20103,2250.b  
 Misc Info : 230195LCD  
 Comment :  
 Method : /var/chem/gc1.i/2250.b/LONGHB.m  
 Meth Date : 27-May-2000 08:40 g Quant Type: ESTD  
 Cal Date : 25-MAY-2000 15:20 Cal File: a-b30007.d  
 Als bottle: 64 QC Sample: LCSD  
 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	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN ( ng)	FINAL ( ug/L)
1 DALAPON	4.648	4.649	-0.001	4127716	0.03279	6.557
2 DCAA	12.233	12.244	-0.011	18246844	0.05412	10.82
3 DICAMBA	12.924	12.934	-0.010	11104456	0.04370	8.739
4 MCPP	13.421	13.430	-0.009	2002092	7.95897	1592
5 MCPA	14.422	14.436	-0.014	2629631	7.79403	1559
6 DICHLOROPROP	15.721	15.738	-0.017	5198876	0.08476	16.95
7 2,4-D	17.047	17.062	-0.015	6496343	0.08879	17.76
8 PENTACHLOROPHENOL	17.325	17.334	-0.009	13393287	0.01107	2.214 (R)
9 2,4,5-TP(SILVEX)	18.498	18.507	-0.009	13999048	0.02164	4.327
10 2,4,5-T	19.151	19.160	-0.009	12832566	0.02286	4.571
11 2,4-DB	19.670	19.678	-0.008	6701120	0.09945	19.89
12 DINOSEB	20.340	20.345	-0.005	6761042	0.01044	2.088

Data File: /var/chem/gc1.i/2250.b/a-b30065.d  
Report Date: 27-May-2000 08:46

## QC Flag Legend

R - Spike/Surrogate failed recovery limits.

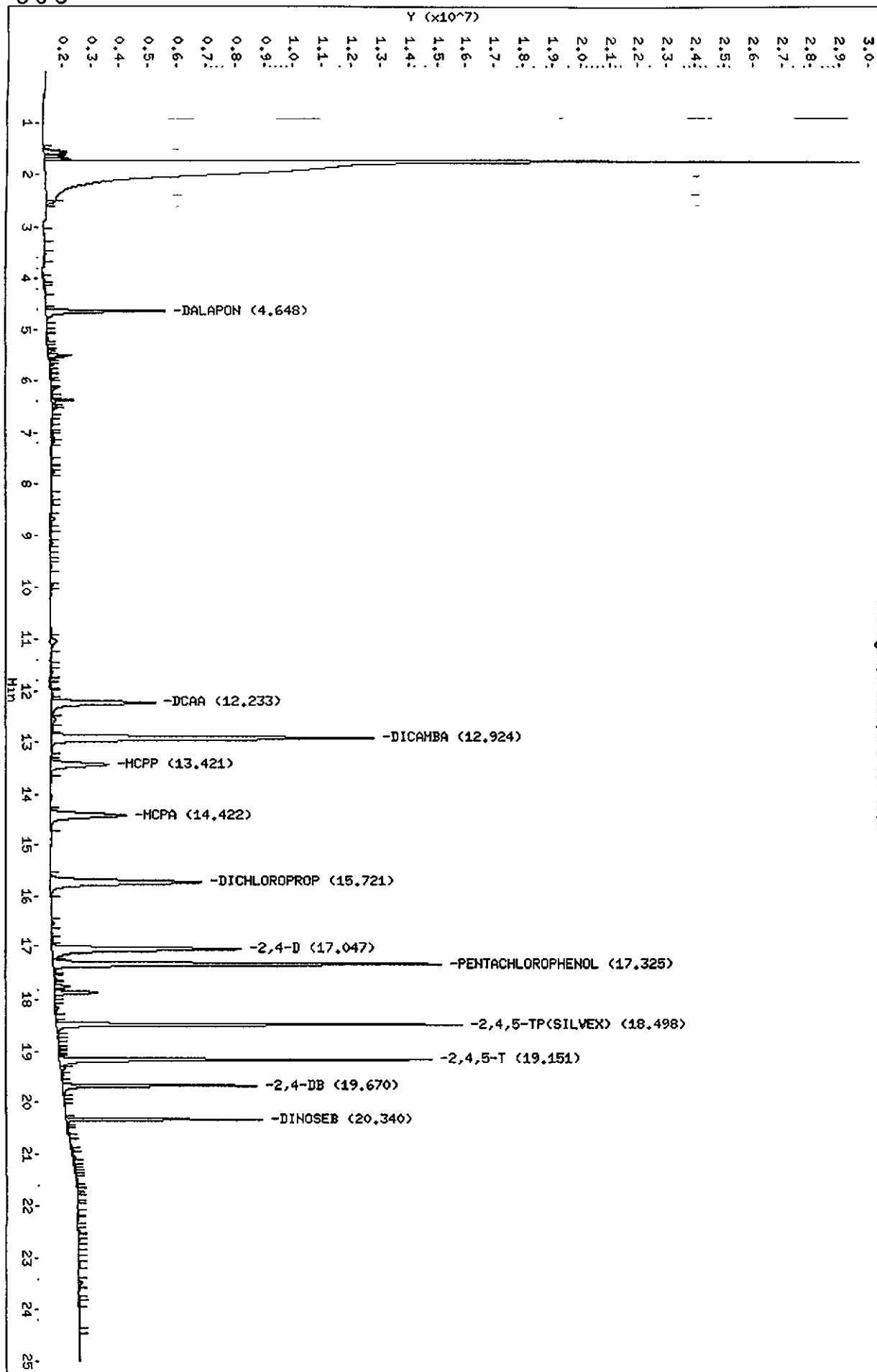
QC 100



Data File: /var/chem/gc1.i/2250.b/a-b30065.d  
Date: 26-MAY-2000 19:23  
Client ID: LCD1  
Sample Info: DDH20103,2250.b  
Volume Injected (uL): 1.0  
Column phase: DB1701

Instrument: gc1.i  
Operator: 01797  
Column diameter: 0.53

/var/chem/gc1.i/2250.b/a-b30065.d



HERBICIDE  
MISCELLANEOUS

# Separatory Funnel Extraction Worksheet

20X Dilution 1m of 20/00

B#0145491



STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380

5044

Date Extraction Began	Date Completed	Parameter	Method	pH	Sample Volume (mL)	Solvent Volume (mL)	Final Volume (mL)	Surrogate Number	Solvent Lot	Surrogate Volume (mL)	Solvent Mfg.	Matrix Spike No.	Matrix Spike Volume (mL)	Clean up Method
5-24-00	5-25-00	NEW 18151A	35106		1000	10.0	190-89-3	1.0	150-91-3	1.0	NA	NA	NA	NA
Lot Number	Sample ID	Client ID												
1. POE 230195	APP	NA												
2. POE 240144	APP													
3. POE 240144	APP													
4. POE 240144	APP													
5. POE 240144	APP													
6. POE 190188	APP													
7. POE 190188	APP													
8. POE 190188	APP													
9. POE 190188	APP													
10. POE 190188	APP													
11. POE 190188	APP													
12. POE 190188	APP													
13. POE 190188	APP													
14. POE 190188	APP													
15. POE 190188	APP													
16. POE 190188	APP													
17. POE 190188	APP													
18. POE 190188	APP													
19. POE 190188	APP													
20. POE 190188	APP													
21. POE 190188	APP													
22. POE 190188	APP													
23. POE 190188	APP													
24. POE 190188	APP													
Analyst														
Extract(s)														
Extract(s) Received														
Extract(s) Relinquished														
Record line number from above	Date	Time	Location	Date	Time	Location	Date	Time	Location	Date	Time	Location	Date	Time
ALL ABOVE	5-24-00	2130	By A.C.P.	5-24-00	2140	By A.C.P.	5-25-00	1345	By A.C.P.	5-25-00	0830	By A.C.P.	5-25-00	0830
ALL ABOVE	5-25-00	0500	By A.C.P.	5-25-00	0500	By A.C.P.	5-25-00	0500	By A.C.P.	5-25-00	0500	By A.C.P.	5-25-00	0500
ALL ABOVE	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800
ALL ABOVE	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800	By A.C.P.	5-25-00	0800
Sodium Sulfate Mfg.	Lot Number	Reviewed By	Date	Time	Location	Date	Time	Location	Date	Time	Location	Date	Time	Location
BAKER	N18583	By A.C.P.	5-24-00	2140	By A.C.P.	5-25-00	1345	By A.C.P.	5-25-00	0830	By A.C.P.	5-25-00	0830	By A.C.P.

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
58	2	HEXANE	HERB	1	Sample		
59	59	DDF8L102,2250.b	HERB	1	Sample		
60	60	DDF8W102,2250.b	HERB	1	Sample		
61	61	DDF94102,2250.b	HERB	1	Sample		
62	62	DDN20101,2250.b	HERB	1	Sample		
63	63	DDN20102,2250.b	HERB	1	Sample		
64	64	DDN20103,2250.b	HERB	1	Sample		
65	65	Mherb,2250.b	HERB	1	Sample		
66	66	DDQLF101,2250.b	HERB	1	Sample		
67	67	DDQLF102,2250.b	HERB	1	Sample		
68	68	DDQLF103,2250.b	HERB	1	Sample		
69	69	DDLXR101,2250.b	HERB	1	Sample		
70	70	DDLXV101,2250.b	HERB	1	Sample		
71	71	DDR3J101,2250.b	HERB	1	Sample		
72	72	DDR3J102,2250.b	HERB	1	Sample		
73	73	DDNP2106,2250.b	HERB	1	Sample		
74	74	DDNP2107,2250.b	HERB	1	Sample		
75	75	DDNP2102,2250.b	HERB	1	Sample		
76	55	DDLCE101,2250.b	HERB	1	Sample		
77	56	DDLCC101,2250.b	HERB	1	Sample		
78	76	Mherb,2250.b	HERB	1	Sample		

WM 5/30/00

## Sequence Table (Back Injector):

## Vial Information Part:

Line	Vial	Vial Information
1	1	RINSE
2	2	RINSE
3	3	190-80-1
4	4	190-80-2
5	5	190-80-3
6	6	190-80-4
7	7	190-80-5
8	8	170150BLK
9	9	170150LCS
10	10	170150003S
11	11	170150003D
12	12	170150002
13	13	170150003

Line	Vial	Vial Information
------	------	------------------

====	====	=====
------	------	-------

14	14	180158001
15	15	190181001
16	16	190181002
17	17	190181003
18	18	180303BLK
19	19	180303LCS
20	20	180303001S
21	21	180303001D
22	22	180303001
23	23	170151001
24	24	170159001
25	25	170151BLK
26	26	170151LCS
27	27	170151LCD
28	28	190-80-3
29	29	230156001
30	30	230156002
31	31	230156003
32	32	230156003S
33	33	230156003D
34	34	230156004
35	35	130142001
36	36	230156BLK
37	37	230156LCS
38	38	190257001
39	39	190257001S
40	40	190257001D
41	41	190257BLK

Line	Vial	Vial Information	
====	====	=====	=====
42	42	190257LCS	02-
43	43	130141001	01
44	44	170152-2	-
45	45	170158-2	+
46	46	170160-2	
47	47	240137-2	
48	48	130141BLK	
49	49	190-80-3	
50	50	130141LCS	
51	51	130141LCD	
52	52	240124BLK	
53	53	240124LCS	
54	54	240124LCD	
55	55	240124003	
56	56	240124004	
57	57	230195-1	
58	58	240144-1	
59	2	RINSE	
60	59	190188-2	
61	60	190188-4	
62	61	190188-5	
63	62	230195BLK	
64	63	230195LCS	
65	64	230195LCD	
66	65	190-80-3	
67	66	240186BLK	
68	67	240186LCS	
69	68	240186LCD	

Line	Vial	Vial Information
====	====	=====
70	69	240186001
71	70	240186002
72	71	250138BLK
73	72	250138LCS
74	73	250138001S
75	74	250138001D
76	75	250138001
77	55	240124003 *50
78	56	240124004 *10
79	76	190-80-3

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	===	=====	=====	=====
1	1	HEXANE	HERB	1	Sample		
2	2	HEXANE	HERB	1	Sample		
3	3	Lherb,2250.b	HERB	1	Sample		
4	4	MLherb,2250.b	HERB	1	Sample		
5	5	Mherb,2250.b	HERB	1	Sample		
6	6	MHherb,2250.b	HERB	1	Sample		
7	7	Hherb,2250.b	HERB	1	Sample		
8	8	DDH3H101,2250.b	HERB	1	Sample		
9	9	DDH3H102,2250.b	HERB	1	Sample		
10	10	DD9N6105,2250.b	HERB	1	Sample		
11	11	DD9N6106,2250.b	HERBA	1	Sample		
12	12	DD9MW102,2250.b	HERBA	1	Sample		
13	13	DD9N6104,2250.b	HERBA	1	Sample		
14	14	DDCJ8101,2250.b	HERBA	1	Sample		
15	15	DDF6M101,2250.b	HERBA	1	Sample		
16	16	DDF6P101,2250.b	HERBA	1	Sample		
17	17	DDF6Q101,2250.b	HERBA	1	Sample		
18	18	DDH3F101,2250.b	HERBA	1	Sample		
19	19	DDH3F102,2250.b	HERBA	1	Sample		
20	20	DDDV1110,2250.b	HERBA	1	Sample		
21	21	DDDV1111,2250.b	HERBA	1	Sample		
22	22	DDDV1105,2250.b	HERBA	1	Sample		
23	23	DD9NN11D,2250.b	HERBA	1	Sample		
24	24	DD9PJ12G,2250.b	HERBA	1	Sample		
25	25	DDJCV101,2250.b	HERBA	1	Sample		
26	26	DDJCV102,2250.b	HERBA	1	Sample		
27	27	DDJCV103,2250.b	HERBA	1	Sample		
28	28	Mherb,2250.b	HERBA	1	Sample		
29	29	DDJX1102,2250.b	HERBA	1	Sample		
30	30	DDJX5102,2250.b	HERBA	1	Sample		
31	31	DDJX7102,2250.b	HERBA	1	Sample		

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	==	=====	=====	=====
32	32	DDJX7103,2250.b	HERBA	1	Sample		
33	33	DDJX7104,2250.b	HERBA	1	Sample		
34	34	DDJX9102,2250.b	HERBA	1	Sample		
35	35	DD5VE11D,2250.b	HERBA	1	Sample		
36	36	DDN48101,2250.b	HERBA	1	Sample		
37	37	DDN48102,2250.b	HERBA	1	Sample		
38	38	DDFV6105,2250.b	HERBA	1	Sample		
39	39	DDFV610R,2250.b	HERBA	1	Sample		
40	40	DDFV610T,2250.b	HERBA	1	Sample		
41	41	DDKWG101,2250.b	HERBA	1	Sample		
42	42	DDKWG102,2250.b	HERBA	1	Sample		
43	43	DD5VC117,2250.b	HERBA	1	Sample		
44	44	DD9NT12A,2250.b	HERBA	1	Sample		
45	45	DD9PE115,2250.b	HERBA	1	Sample		
46	46	DD9PX115,2250.b	HERBA	1	Sample		
47	47	DDLFF10V,2250.b	HERBA	1	Sample		
48	48	DDM76101,2250.b	HERBA	1	Sample		
49	49	Mherb,2250.b	HERBA	1	Sample		
50	50	DDM76102,2250.b	HERBA	1	Sample		
51	51	DDM76103,2250.b	HERBA	1	Sample		
52	52	DDN1X101,2250.b	HERBA	1	Sample		
53	53	DDN1X102,2250.b	HERBA	1	Sample		
54	54	DDN1X103,2250.b	HERBA	1	Sample		
55	55	DDLCE101,2250.b	HERBA	1	Sample		
56	56	DDLCG101,2250.b	HERBA	1	Sample		
57	57	DDK90112,2250.b	HERBA	1	Sample		
58	58	DDLFR11E,2250.b	HERBA	1	Sample		
59	2	HEXANE	HERBA	1	Sample		
60	59	DDF8L102,2250.b	HERBA	1	Sample		
61	60	DDF8W102,2250.b	HERBA	1	Sample		
62	61	DDF94102,2250.b	HERBA	1	Sample		
63	62	DDN20101,2250.b	HERBA	1	Sample		
64	63	DDN20102,2250.b	HERBA	1	Sample		
65	64	DDN20103,2250.b	HERBA	1	Sample		
66	65	Mherb,2250.b	HERBA	1	Sample		
67	66	DDQLF101,2250.b	HERBA	1	Sample		
68	67	DDQLF102,2250.b	HERBA	1	Sample		
69	68	DDQLF103,2250.b	HERBA	1	Sample		
70	69	DDLXR101,2250.b	HERBA	1	Sample		
71	70	DDLXV101,2250.b	HERBA	1	Sample		
72	71	DDR3J101,2250.b	HERBA	1	Sample		
73	72	DDR3J102,2250.b	HERBA	1	Sample		
74	73	DDNP2106,2250.b	HERBA	1	Sample		
75	74	DDNP2107,2250.b	HERBA	1	Sample		
76	75	DDNP2102,2250.b	HERBA	1	Sample		
77	55	DDLCE101,2250.b	HERBA	1	Sample		
78	56	DDLCE101,2250.b	HERBA	1	Sample		
79	76	Mherb,2250.b	HERB	1	Sample		



656 516

PSR024 5/24/00 13:51:14 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: YUSHINSC

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>	
4F	DDK90-1-12	---	236511	399411	I-0A-QS	COE230195	001		WATER	0	9	1
6B CLP1	DDLFR-1-1E	---	236510	416241	I-0A-QS	COE240144	001		WATER	0	20	1
5R3,4L2,CS5B,SU	DDF8L-1-02	---	236512	394097	I-0A-QS	HOE190188	002		WATER	0	10	1
5R3,4L2,CS5B,SU	DDF8W-1-02	---	236513	394097	I-0A-QS	HOE190188	004		WATER	0	9	1
5R3,4L2,CS5B,SU	DDF94-1-02	---	236514	394097	I-0A-QS	HOE190188	005		WATER	0	9	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

J. Yushinski  
J. Yushinski

J. Yushinski  
J. Yushinski

5-24-00 1540  
5-24-00 2230



## METALS DATA

**STL-Pittsburgh****Cover Page - Inorganic Analysis Data Package**

<u>Client ID</u>	<u>Lab Sample ID:</u>
<u>DF/S1/0137/WA/001</u>	<u>DDK90</u>
<u>DF/S1/0137/WA/001D</u>	<u>DDK90D</u>
<u>DF/S1/0137/WA/001S</u>	<u>DDK90S</u>

**Comments:** UXB/DUNN FIELD  
C0E230195  
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: <u>QUF</u>
DATE: <u>5-27-00</u>

**METALS  
RESULTS**

## STL-Pittsburgh

## Metals Data Reporting Form

## Sample Results

Lab Sample ID: DDK90 Client ID: DF/S1/0137/WA/001  
 Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186  
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	12.7	200	7010	N	1	ICP	5/25/00	9:00
Antimony	220.35	1.5	60.0	1.5	B	1	ICPST	5/26/00	8:52
Arsenic	189.04	2.6	10.0	6.4	B	1	ICPST	5/26/00	8:52
Barium	493.41	0.41	200	208		1	ICP	5/25/00	9:00
Beryllium	313.04	0.071	5.0	0.20	B	1	ICP	5/25/00	9:00
Cadmium	226.50	0.49	5.0	0.49	U	1	ICPST	5/26/00	8:52
Calcium	317.93	37.9	5000	38100		1	ICP	5/25/00	9:00
Chromium	267.72	1.0	10.0	10.1		1	ICPST	5/26/00	8:52
Cobalt	228.62	3.2	50.0	3.2	U	1	ICP	5/25/00	9:00
Copper	324.75	2.2	25.0	16.6	B	1	ICP	5/25/00	9:00
Iron	259.94	8.8	100	6870		1	ICP	5/25/00	9:00
Lead	220.35	1.9	3.0	22.5		1	ICPST	5/26/00	8:52
Magnesium	279.08	19.9	5000	5500		1	ICP	5/25/00	9:00
Manganese	257.61	0.87	15.0	79.8		1	ICP	5/25/00	9:00
Nickel	231.60	6.1	40.0	11.7	B	1	ICP	5/25/00	9:00
Potassium	766.49	496	5000	4140	B	1	ICP	5/25/00	9:00
Selenium	220.35	2.1	5.0	2.1	U	1	ICPST	5/26/00	8:52
Silver	328.07	0.94	10.0	0.94	U	1	ICPST	5/26/00	8:52
Sodium	589	14.5	5000	1200	B	1	ICP	5/25/00	9:00
Thallium	190.86	3.9	10.0	3.9	U	1	ICPST	5/26/00	8:52
Vanadium	292.40	1.8	50.0	13.0	B	1	ICP	5/25/00	9:00
Zinc	213.86	3.1	20.0	49.1		1	ICP	5/25/00	9:00

Comments: Lot #: C0E230195 Sample #: 1

Version 3 63.4

U Result is less than the MDL

Form 1 Equivalent

B Result is between MDL and RL

## STL-Pittsburgh

## Metals Data Reporting Form

Sample Results

Lab Sample ID: DDK90 Client ID: DF/S1/0137/WA/001  
Matrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297  
Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.045	0.20	0.045	U	1	CVAA	5/25/00	11:46

Comments: Lot #. C0E230195 Sample #: 1

Version 3.63 4

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

Form 1 Equivalent

658 522

## STL-Pittsburgh

## Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRNAcceptable Range: 80% - 120%Standard Source: UltraStandard ID: 0014-109-12

			ICV5-1 5/25/00 9:49 AM									
	WL/ Mass	True Conc	% Found Rec		% Found Rec		% Found Rec		% Found Rec		% Found Rec	
Element			Found	Rec	Found	Rec	Found	Rec	Found	Rec	Found	Rec
Mercury	253.7	2.5	2.56	102.4								

## Metals Data Reporting Form

## Initial Calibration Verification Standard

Instrument: ICPUnits: ug/LChart Number: J00525A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-061-7

Element	WL/ Mass	True Conc	ICV2-1 5/25/00 7:54 AM		Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
			Found	% Rec								
Aluminum	308.215	25000.0	25134.36	100.5								
Barium	493.409	1000.0	995.52	99.6								
Beryllium	313.042	1000.0	982.99	98.3								
Calcium	317.933	25000.0	25393.58	101.6								
Cobalt	228.616	1000.0	1004.78	100.5								
Copper	324.754	1000.0	989.67	99.0								
Iron	259.94	25000.0	26197.54	104.8								
Magnesium	279.079	25000.0	25537.82	102.2								
Manganese	257.61	1000.0	1010.27	101.0								
Nickel	231.604	1000.0	1012.93	101.3								
Potassium	766.491	25000.0	25055.00	100.2								
Sodium	588.995	25000.0	25213.46	100.9								
Vanadium	292.402	1000.0	993.94	99.4								
Zinc	213.856	1000.0	1003.38	100.3								



## Metals Data Reporting Form

Initial Calibration Verification Standard

Date

Page

Instrument: ICPST

Time

Units: µg/L

Page

Chart Number: T00526A.ARC

C

Acceptable Range: 90% - 110%

r

Standard Source: Inorganic Ventures

L

Standard ID: 0014-079-6

Element	WL/ Mass	True Conc	ICV3-1 5/26/00 7:43 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	220.353	250.0	248.08	99.2								
Arsenic	189.042	250.0	250.39	100.2								
Cadmium	226.502	250.0	245.23	98.1								
Chromium	267.716	1000.0	1007.94	100.8								
Lead	220.353	250.0	250.42	100.2								
Selenium	220.353	250.0	251.01	100.4								
Silver	328.068	500.0	499.56	99.9								
Thallium	190.864	500.0	507.74	101.5								

## Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRNAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-109-13

Element	WL/ Mass	True Conc	CCV5-1 5/25/00 9:53 AM		CCV5-2 5/25/00 10:17 AM		CCV5-3 5/25/00 10:42 AM		CCV5-4 5/25/00 11:07 AM		CCV5-5 5/25/00 11:33 AM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	5.13	102.6	5.09	101.8	5.02	100.4	5.12	102.4	5.18	103.6

## STL-Pittsburgh

658 526

## Metals Data Reporting Form

## Continuing Calibration Verification

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Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRNAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-109-13

			CCV5-6 5/25/00 11:52 AM							
	WL/ Mass	True Conc	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	5.14	102.8						

## Metals Data Reporting Form

## Continuing Calibration Verification

Instrument: ICP

Units: ug/L

Chart Number: J00525A.ARC

Acceptable Range: 90% - 110%

Standard Source: Inorganic Ventures

Standard ID: 0014-087-7

Element	WL/ Mass	True Conc	CCV2-1 5/25/00 8:34 AM		CCV2-2 5/25/00 8:48 AM		CCV2-3 5/25/00 9:13 AM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	50000.0	49678.20	99.4	49485.40	99.0	49693.21	99.4		
Barium	493.409	5000.0	4875.68	97.5	4866.47	97.3	4874.04	97.5		
Beryllium	313.042	5000.0	4934.68	98.7	4927.91	98.6	4977.85	99.6		
Calcium	317.933	50000.0	50561.52	101.1	50218.47	100.4	51097.76	102.2		
Cobalt	228.616	5000.0	4963.63	99.3	4952.87	99.1	5010.47	100.2		
Copper	324.754	5000.0	4913.89	98.3	4905.63	98.1	4910.59	98.2		
Iron	259.94	50000.0	51502.96	103.0	51367.95	102.7	51956.38	103.9		
Magnesium	279.079	50000.0	50020.92	100.0	49880.34	99.8	50126.85	100.3		
Manganese	257.61	5000.0	4956.77	99.1	4938.95	98.8	5003.07	100.1		
Nickel	231.604	5000.0	4971.74	99.4	4939.57	98.8	5019.78	100.4		
Potassium	766.491	50000.0	50041.59	100.1	49398.16	98.8	49085.69	98.2		
Sodium	588.995	50000.0	49811.38	99.6	49502.41	99.0	49029.39	98.1		
Vanadium	292.402	5000.0	4943.13	98.9	4927.43	98.5	4979.18	99.6		
Zinc	213.856	5000.0	4990.41	99.8	4961.14	99.2	5015.39	100.3		

## Metals Data Reporting Form

## Continuing Calibration Verification

101:

Instrument: ICPSTUnits: ug/LChart Number: T00526A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-110-3

Element	WL/ Mass	True Conc	CCV3-1 5/26/00 8:36 AM		CCV3-2 5/26/00 9:09 AM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	220.353	500.0	513.47	102.7	518.99	103.8						
Arsenic	189.042	500.0	516.96	103.4	516.62	103.3						
Cadmium	226.502	500.0	503.91	100.8	504.64	100.9						
Chromium	267.716	2000.0	2071.77	103.6	2069.35	103.5						
Lead	220.353	500.0	518.83	103.8	522.26	104.5						
Selenium	220.353	500.0	518.95	103.8	524.43	104.9						
Silver	328.068	1000.0	1037.03	103.7	1033.19	103.3						
Thallium	190.864	1000.0	1071.36	107.1	1075.60	107.6						

## STL-Pittsburgh

## Metals Data Reporting Form

## Initial Calibration-Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

			ICB1 5/25/00 9.51 AM					
Element	WL/ Mass	Report Limit	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.0	U				

658 530

## STL-Pittsburgh

## Metals Data Reporting Form

## Initial Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00525A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	ICBI 5/25/00 7:57 AM		Found	Q	Found	Q	Found	Q	Found	Q
			Found	Q								
Aluminum	308.215	200	12.7	U								
Barium	493.409	200	0.4	U								
Beryllium	313.042	5	0.1	U								
Calcium	317.933	5000	37.9	U								
Cobalt	228.616	50	3.2	U								
Copper	324.754	25	2.2	U								
Iron	259.94	100	8.8	U								
Magnesium	279.079	5000	19.9	U								
Manganese	257.61	15	0.9	U								
Nickel	231.604	40	6.1	U								
Potassium	766.491	5000	496.0	U								
Sodium	588.995	5000	14.5	U								
Vanadium	292.402	50	-2.5	B								
Zinc	213.856	20	3.1	U								

## STL-Pittsburgh

## Metals Data Reporting Form

## Initial Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00526A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	ICB1 5/26/00 7.48 AM							
			Found	Q	Found	Q	Found	Q	Found	Q
Antimony	220.353	60	1.5	U						
Arsenic	189.042	10	2.6	U						
Cadmium	226.502	5	0.5	U						
Chromium	267.716	10	1.0	U						
Lead	220.353	3	1.9	U						
Selenium	220.353	5	2.1	U						
Silver	328.068	10	0.9	U						
Thallium	190.864	10	-3.9	B						



658 532

## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/25/00 9:55 AM	CCB2 5/25/00 10:20 AM	CCB3 5/25/00 10:44 AM	CCB4 5/25/00 11:09 AM	CCB5 5/25/00 11:36 AM
			Found    Q	Found    Q	Found    Q	Found    Q	Found    Q
Mercury	253.7	0.2	0.0    U	0.0    U	0.0    U	0.0    U	0.0    U

## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0525HGA.PRN

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

			CCB6 5/25/00 11:54 AM				
Element	WL/ Mass	Report Limit	Found    Q	Found    Q	Found    Q	Found    Q	Found    Q
Mercury	253.7	0.2	0.1    B				

658 534

## STL-Pittsburgh

## Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPUnits: µg/LChart Number: J00525A.ARC50

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/25/00 8:37 AM		CCB2 5/25/00 8:51 AM		CCB3 5/25/00 9:16 AM		Found	Q
			Found	Q	Found	Q	Found	Q		
Aluminum	308.215	200	12.7	U	12.7	U	12.7	U		
Barium	493.409	200	0.4	U	0.4	U	0.4	U		
Beryllium	313.042	5	0.3	B	0.1	B	0.4	B		
Calcium	317.933	5000	37.9	U	37.9	U	37.9	U		
Cobalt	228.616	50	3.2	U	3.2	U	3.2	U		
Copper	324.754	25	2.2	U	2.2	U	2.2	U		
Iron	259.94	100	8.8	U	8.8	U	8.8	U		
Magnesium	279.079	5000	19.9	U	19.9	U	19.9	U		
Manganese	257.61	15	0.9	U	0.9	U	0.9	U		
Nickel	231.604	40	6.1	U	6.1	U	6.1	U		
Potassium	766.491	5000	496.0	U	496.0	U	496.0	U		
Sodium	588.995	5000	14.5	U	14.5	U	14.5	U		
Vanadium	292.402	50	1.8	U	-2.3	B	1.8	U		
Zinc	213.856	20	3.1	U	3.1	U	3.1	U		

## STL-Pittsburgh

## Metals Data Reporting Form

## Continuing-Calibration-Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00526A.ARC

Standard Source: \_\_\_\_\_

Standard ID: \_\_\_\_\_

Element	WL/ Mass	Report Limit	CCB1 5/26/00 8:40 AM		CCB2 5/26/00 9:13 AM					
			Found	Q	Found	Q	Found	Q	Found	Q
Antimony	220.353	60	1.5	U	1.5	U				
Arsenic	189.042	10	2.6	U	2.6	U				
Cadmium	226.502	5	0.5	U	0.5	U				
Chromium	267.716	10	1.0	U	1.0	U				
Lead	220.353	3	1.9	U	1.9	U				
Selenium	220.353	5	2.1	U	2.1	U				
Silver	328.068	10	0.9	U	0.9	U				
Thallium	190.864	10	3.9	U	3.9	U				

**STL-Pittsburgh**  
Metals Data Reporting Form

## Preparation Blank Results

Lab Sample ID: DDLA7B v13

Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186

Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.215	12.7	200	12.7	U	1	ICP	5/25/00	8:54
Antimony	220.353	1.5	60.0	1.5	U	1	ICPST	5/26/00	8:44
Arsenic	189.042	2.6	10.0	2.6	U	1	ICPST	5/26/00	8:44
Barium	493.409	0.41	200	0.41	U	1	ICP	5/25/00	8:54
Beryllium	313.042	0.071	5.0	-0.090	B	1	ICP	5/25/00	8:54
Cadmium	226.502	0.49	5.0	0.49	U	1	ICPST	5/26/00	8:44
Calcium	317.933	37.9	5000	37.9	U	1	ICP	5/25/00	8:54
Chromium	267.716	1.0	10.0	1.0	U	1	ICPST	5/26/00	8:44
Cobalt	228.616	3.2	50.0	3.2	U	1	ICP	5/25/00	8:54
Copper	324.754	2.2	25.0	2.2	U	1	ICP	5/25/00	8:54
Iron	259.94	8.8	100	8.8	U	1	ICP	5/25/00	8:54
Lead	220.353	1.9	3.0	1.9	U	1	ICPST	5/26/00	8:44
Magnesium	279.079	19.9	5000	19.9	U	1	ICP	5/25/00	8:54
Manganese	257.61	0.87	15.0	0.87	U	1	ICP	5/25/00	8:54
Nickel	231.604	6.1	40.0	6.1	U	1	ICP	5/25/00	8:54
Potassium	766.491	496	5000	496	U	1	ICP	5/25/00	8:54
Selenium	220.353	2.1	5.0	2.1	U	1	ICPST	5/26/00	8:44
Silver	328.068	0.94	10.0	0.94	U	1	ICPST	5/26/00	8:44
Sodium	588.995	14.5	5000	14.5	U	1	ICP	5/25/00	8:54
Thallium	190.864	3.9	10.0	3.9	U	1	ICPST	5/26/00	8:44
Vanadium	292.402	1.8	50.0	-2.50	B	1	ICP	5/25/00	8:54
Zinc	213.856	3.1	20.0	3.1	U	1	ICP	5/25/00	8:54

Comments: Lot #: C0E230195

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:** DDL3B**Matrix:** Water      **Units:** ug/L      **Prep Date:** 5/25/00      **Prep Batch:** 0145297**Weight:** NA      **Volume:** 100      **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.045	0.20	0.045	U	1	CVAA	5/25/00	11.42

Comments: Lot #: C0E230195

Version 3.63.4

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

Form 3 Equivalent

658 538

## STL-Pittsburgh

## Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPUnits: ug/LChart Number: J00525A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-088-12

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 5/25/00 8:00 AM	Found	Found	Found	Found
				Found				
Aluminum	308.215		500000	497000				
Barium	493.409	200		2				
Beryllium	313.042	5		0				
Calcium	317.933		500000	484000				
Cobalt	228.616	50		12				
Copper	324.754	25		-5				
Iron	259.94		200000	184000				
Magnesium	279.079		500000	481000				
Manganese	257.61	15		-1				
Nickel	231.604	40		-8				
Potassium	766.491	5000		-160				
Sodium	588.995	5000		5				
Vanadium	292.402	50		2				
Zinc	213.856	20		3				

## Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST

Units: ug/L

Chart Number: T00526A.ARC

Acceptable Range: 0% - 0%

Standard Source: Inorganic Ventures

Standard ID: 0014-088-12

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 5/26/00 7:52 AM				
				Found	Found	Found	Found	Found
Antimony	220.353	60		0				
Arsenic	189.042	10		0				
Cadmium	226.502	5		2				
Chromium	267.716	10		2				
Lead	220.353	3		0				
Selenium	220.353	5		-9				
Silver	328.068	10		0				
Thallium	190.864	10		-1				



658 540

## STL-Pittsburgh

## Metals Data Reporting Form

Interference Check Standard AB

Re:

Instrument: ICPUnits: ug/LChart Number: J00525A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-043-1

Element	WL/ Mass	True Conc	ICSAB 5/25/00 8:03 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	498784.8	99.8								
Barium	493.409	500	464.9	93.0								
Beryllium	313.042	500	442.6	88.5								
Calcium	317.933	500000	482906.8	96.6								
Cobalt	228.616	500	460.3	92.1								
Copper	324.754	500	501.4	100.3								
Iron	259.94	200000	183638.8	91.8								
Magnesium	279.079	500000	480122.3	96.0								
Manganese	257.61	500	457.6	91.5								
Nickel	231.604	1000	882.0	88.2								
Potassium	766.491	10000	9941.8	99.4								
Sodium	588.995	10000	10074.0	100.7								
Vanadium	292.402	500	462.3	92.5								
Zinc	213.856	1000	958.9	95.9								

## Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPSTUnits: µg/LChart Number: T00526A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-075-12

Element	WL/ Mass	True Conc	ICSAB 5/26/00 7:56 AM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	220.353	1000	1051.1	105.1								
Arsenic	189.042	1000	1017.9	101.8								
Cadmium	226.502	1000	933.6	93.4								
Chromium	267.716	500	509.8	102.0								
Lead	220.353	1000	1028.4	102.8								
Selenium	220.353	1000	1032.0	103.2								
Silver	328.068	1000	1114.4	111.4								
Thallium	190.864	1000	1097.3	109.7								

## STL-Pittsburgh

## Metals Data Reporting Form

## Matrix Spike-Sample Results

Spike Sample ID: DDK90S

Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001S

Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186

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
Aluminum	308.2	7010		9940	N	2000	146.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Antimony	220.4	1.5	B	477		500	95.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Arsenic	189.0	6.4	B	1930		2000	96.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Barium	493.4	208		2070		2000	93.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Beryllium	313.0	0.20	B	47.1		50	93.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Cadmium	226.5	0.49	U	46.9		50	93.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Calcium	317.9	38100		84300		50000	92.4	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Chromium	267.7	10.1		205		200	97.5	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Cobalt	228.6	3.2	U	468		500	93.6	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Copper	324.8	16.6	B	256		250	95.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Iron	259.9	6870		7520	NC	1000		1	1	ICP	5/25/00	9:00	5/25/00	9:07
Lead	220.4	22.5		516		500	98.6	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Magnesium	279.1	5500		53200		50000	95.4	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Manganese	257.6	79.8		549		500	93.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Nickel	231.6	11.7	B	481		500	93.9	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Potassium	766.5	4140	B	51800		50000	95.3	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Selenium	220.4	2.1	U	1950		2000	97.5	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Silver	328.1	0.94	U	49.5		50	99.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Sodium	589	1200	B	48800		50000	95.1	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Thallium	190.9	3.9	U	2080		2000	104.2	1	1	ICPST	5/26/00	8:52	5/26/00	9:00
Vanadium	292.4	13.0	B	482		500	93.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07
Zinc	213.9	49.1		523		500	94.8	1	1	ICP	5/25/00	9:00	5/25/00	9:07

Comments: Lot #: C0E230195 Sample #: 1

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

## Metals Data Reporting Form

## Matrix Spike Sample Results --

Spike Sample ID: DDK90S  
 Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001S  
 Matrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297  
 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	0.045	U	1.2		1	120.0	1	1	CVAA	5/25/00	11:46	5/25/00	11:48

Comments: Lot #: C0E230195 Sample #: 1

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

## Metals Data Reporting Form

## Matrix Spike Duplicate Sample Results

Spike Sample ID: DDK90D

Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001D

Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186

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
Aluminum	308.2	7010	N	10400	N	2000	171.2	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Antimony	220.4	1.5	B	500		500	99.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Arsenic	189.0	6.4	B	2010		2000	100.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Barium	493.4	208		2120		2000	95.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Beryllium	313.0	0.20	B	48.7		50	97.0	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Cadmium	226.5	0.49	U	48.7		50	97.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Calcium	317.9	38100		87500		50000	98.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Chromium	267.7	10.1		216		200	102.8	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Cobalt	228.6	3.2	U	484		500	96.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Copper	324.8	16.6	B	266		250	99.6	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Iron	259.9	6870		7840	NC	1000		1	1	ICP	5/25/00	9:00	5/25/00	9:10
Lead	220.4	22.5		537		500	103.0	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Magnesium	279.1	5500		54400		50000	97.8	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Manganese	257.6	79.8		566		500	97.3	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Nickel	231.6	11.7	B	486		500	94.8	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Potassium	766.5	4140	B	52500		50000	96.7	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Selenium	220.4	2.1	U	2030		2000	101.4	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Silver	328.1	0.94	U	51.4		50	102.7	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Sodium	589	1200	B	49300		50000	96.3	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Thallium	190.9	3.9	U	2160		2000	107.9	1	1	ICPST	5/26/00	8:52	5/26/00	9:05
Vanadium	292.4	13.0	B	498		500	97.0	1	1	ICP	5/25/00	9:00	5/25/00	9:10
Zinc	213.9	49.1		529		500	96.1	1	1	ICP	5/25/00	9:00	5/25/00	9:10

Comments: Lot #: C0E230195 Sample #: 1

Version 3.63.4

U Result is less than the MDL

Form 5A 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

## Matrix Spike Duplicate Sample Results

Spike Sample ID: DDK90D  
 Original Sample ID: DDK90 Client ID: DF/S1/0137/WA/001D  
 Matrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297  
 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	0.045	U	1.1		1	112.0	1	1	CVAA	5/25/00	11:46	5/25/00	11:50

Comments: Lot #: C0E230195 Sample #: 1

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: DDK90DMatrix Spike Sample ID: DDK90S Client ID: DF/S1/0137/WA/001DMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: 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
Aluminum	308.215	9940	N	10400	N	15.8 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Antimony	220.353	477		500		4.8 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Arsenic	189.042	1930		2010		3.7 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Barium	493.409	2070		2120		2.7 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Beryllium	313.042	47.1		48.7		3.2 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Cadmium	226.502	46.9		48.7		3.8 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Calcium	317.933	84300		87500		6.6 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Chromium	267.716	205		216		5.3 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Cobalt	228.616	468		484		3.3 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Copper	324.754	256		266		3.7 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Iron	259.94	7520	NC	7840	NC		1	1	ICP	5/25/00	9:07	5/25/00	9:10
Lead	220.353	516		537		4.3 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Magnesium	279.079	53200		54400		2.5 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Manganese	257.61	549		566		3.6 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Nickel	231.604	481		486		1.0 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Potassium	766.491	51800		52500		1.5 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Selenium	220.353	1950		2030		4.0 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Silver	328.068	49.5		51.4		3.7 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Sodium	588.995	48800		49300		1.2 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Thallium	190.864	2080		2160		3.5 %	1	1	ICPST	5/26/00	9:00	5/26/00	9:05
Vanadium	292.402	482		498		3.4 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10
Zinc	213.856	523		529		1.3 %	1	1	ICP	5/25/00	9:07	5/25/00	9:10

Comments: Lot #: C0E230195 Sample #: 1

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

## Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDK90DMatrix Spike Sample ID: DDK90S Client ID: DF/S1/0137/WA/001DMatrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297Weight: 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	1.2		1.1		6.9 %	1	1	CVAA	5/25/00	11:48	5/25/00	11:50

Comments: Lot #. C0E230195 Sample #: 1

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: DDLA7CMatrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Aluminum	308.215	2000	1930	96.5		80-120	1	ICP	5/25/00	8:57
Antimony	220.353	500	496	99.3		80-120	1	ICPST	5/26/00	8:48
Arsenic	189.042	2000	1990	99.6		80-120	1	ICPST	5/26/00	8:48
Barium	493.409	2000	1930	96.6		80-120	1	ICP	5/25/00	8:57
Beryllium	313.042	50.0	48.6	97.2		80-120	1	ICP	5/25/00	8:57
Cadmium	226.502	50.0	48.8	97.6		80-120	1	ICPST	5/26/00	8:48
Calcium	317.933	50000	49100	98.3		80-120	1	ICP	5/25/00	8:57
Chromium	267.716	200	204	101.8		80-120	1	ICPST	5/26/00	8:48
Cobalt	228.616	500	482	96.4		80-120	1	ICP	5/25/00	8:57
Copper	324.754	250	242	96.7		80-120	1	ICP	5/25/00	8:57
Iron	259.94	1000	1040	103.8		80-120	1	ICP	5/25/00	8:57
Lead	220.353	500	514	102.8		80-120	1	ICPST	5/26/00	8:48
Magnesium	279.079	50000	49300	98.7		80-120	1	ICP	5/25/00	8:57
Manganese	257.61	500	490	98.1		80-120	1	ICP	5/25/00	8:57
Nickel	231.604	500	483	96.5		80-120	1	ICP	5/25/00	8:57
Potassium	766.491	50000	48500	97.0		80-120	1	ICP	5/25/00	8:57
Selenium	220.353	2000	2030	101.7		80-120	1	ICPST	5/26/00	8:48
Silver	328.068	50.0	50.9	101.9		80-120	1	ICPST	5/26/00	8:48
Sodium	588.995	50000	48900	97.9		80-120	1	ICP	5/25/00	8:57
Thallium	190.864	2000	2150	107.5		80-120	1	ICPST	5/26/00	8:48
Vanadium	292.402	500	485	97.0		80-120	1	ICP	5/25/00	8:57
Zinc	213.856	500	494	98.7		80-120	1	ICP	5/25/00	8:57

Comments: Lot #: C0E230195

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: DDL3CMatrix: Water Units: ug/L Prep Date: 5/25/00 Prep Batch: 0145297Weight: 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	2.5	2.6	104.0		80-120	1	CVAA	5/25/00	11:44

Comments: Lot #: C0E230195

Version 3.63.4

U Result is less than the MDL

Form 7 Equivalent

B Result is between MDL and RL

## Metals Data Reporting Form

## Serial Dilution RPD Report

Serial Dilution Sample ID: DDK90POriginal Sample ID: DDK90 Client ID: DF/S1/0137/WA/001Matrix: Water Units: ug/L Prep Date: 5/24/00 Prep Batch: 0145186Weight: 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
Aluminum	308.215	7010	N	7020		0.1 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Antimony	220.353	1.5	B	7.3	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Arsenic	189.042	6.4	B	12.8	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Barium	493.409	208		207	B	0.5 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Beryllium	313.042	0.20	B	0.36	U		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Cadmium	226.502	0.49	U	2.5	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Calcium	317.933	38100		38600		1.4 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Chromium	267.716	10.1		9.2	B		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Cobalt	228.616	3.2	U	16.1	U		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Copper	324.754	16.6	B	18.5	B		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Iron	259.94	6870		6980		1.7 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Lead	220.353	22.5		25.4			1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Magnesium	279.079	5500		5490	B	0.1 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Manganese	257.61	79.8		80.1		0.3 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Nickel	231.604	11.7	B	30.7	U		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Potassium	766.491	4140	B	4180	B		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Selenium	220.353	2.1	U	10.5	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Silver	328.068	0.94	U	4.7	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Sodium	588.995	1200	B	1170	B	2.2 %	1	5	ICP	5/25/00	9:00	5/25/00	9:03
Thallium	190.864	3.9	U	19.4	U		1	5	ICPST	5/26/00	8:52	5/26/00	8:56
Vanadium	292.402	13.0	B	13.5	B		1	5	ICP	5/25/00	9:00	5/25/00	9:03
Zinc	213.856	49.1		51.3	B		1	5	ICP	5/25/00	9:00	5/25/00	9:03

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: CVAAUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Mercury	253.70	0.2	0.045	3/20/00

## Metals Data Reporting Form

## Instrument Detection Limits

Instrument: ICPUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Aluminum	308.21	200	12.7	4/1/00
Barium	493.41	200	0.41	4/1/00
Beryllium	313.04	5	0.071	4/1/00
Calcium	317.93	5000	37.9	4/1/00
Cobalt	228.62	50	3.2	4/1/00
Copper	324.75	25	2.2	4/1/00
Iron	259.94	100	8.8	4/1/00
Magnesium	279.08	5000	19.9	4/1/00
Manganese	257.61	15	0.87	4/1/00
Nickel	231.60	40	6.1	4/1/00
Potassium	766.49	5000	496	4/1/00
Sodium	589.00	5000	14.5	4/1/00
Vanadium	292.40	50	1.8	4/1/00
Zinc	213.86	20	3.1	4/1/00

## Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPSTUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Antimony	220 35	60	1.5	4/1/00
Arsenic	189 04	10	2.6	4/1/00
Cadmium	226 50	5	0.49	4/1/00
Chromium	267 72	10	1 0	4/1/00
Lead	220 35	3	1.9	4/1/00
Selenium	220.35	5	2.1	4/1/00
Silver	328.07	10	0.94	4/1/00
Thallium	190.86	10	3.9	4/1/00

## Metals Data Reporting Form

## Inter-Element Correction Factors

Instrument: 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), Tl(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), Tl(0.010326), Zn(0.000098)
Manganese	257.61	Ag(0.000201), Tl(-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), Tl(0.007148), Zn(-0.004494)

## Metals Data Reporting Form

Inter-Element Correction FactorsInstrument: ICPSTDate of IEC's: 5/25/00

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(0.000101), Pb(0.000107), Sb(0.000019), Se(-0.000024), Tl(-0.000052), V(-0.000349), Zn(0.000127)
Iron	271.441	Pb(0.000054), Sb(0.000021), Se(-0.000286)
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)



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**STL-Pittsburgh**

**Metals Data Reporting Form**

Linear-Dynamic Ranges

**Instrument:** CVAA

**Units:** 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: ICPUnits: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Aluminum	308.21	600000	4/5/00
Barium	493.41	100000	4/5/00
Beryllium	313.04	15000	4/5/00
Calcium	317.93	600000	4/5/00
Cobalt	228.62	100000	4/5/00
Copper	324.75	100000	4/5/00
Iron	259.94	400000	4/5/00
Magnesium	279.08	600000	4/5/00
Manganese	257.61	100000	4/5/00
Nickel	231.60	100000	4/5/00
Potassium	766.49	1000000	4/5/00
Sodium	589.00	400000	4/5/00
Vanadium	292.40	100000	4/5/00
Zinc	213.86	100000	4/5/00

## Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPSTUnits: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Antimony	220.35	10000	3/15/00
Arsenic	189.04	10000	3/15/00
Cadmium	226.50	5000	3/15/00
Chromium	267.72	20000	3/15/00
Lead	220.35	5000	3/15/00
Selenium	220.35	10000	3/15/00
Silver	328.07	2000	3/16/00
Thallium	190.86	10000	3/15/00

## Metals Data Reporting Form

## Preparation Log

Preparation Batch: 0145186 Instrument: ICP Matrix: Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DDLA7B	5/24/00	NA	50	NA
DDLA7C	5/24/00	NA	50	NA
DDK90	5/24/00	NA	50	NA
DDK90D	5/24/00	NA	50	NA
DDK90S	5/24/00	NA	50	NA

## STL-Pittsburgh

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## Metals Data Reporting Form

Preparation Log

Preparation Batch: 0145297

Instrument: CVAA

Matrix: Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DDL3B	5/25/00	NA	100	NA
DDL3C	5/25/00	NA	100	NA
DDK90	5/25/00	NA	100	NA
DDK90D	5/25/00	NA	100	NA
DDK90S	5/25/00	NA	100	NA

## Metals Data Reporting Form

Instrument Runlog

Instrument: CVAAChart Number: 0525HGA.PRN

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	5/25/00	9:37 AM
Std2Rep1	5/25/00	9:39 AM
Std3Rep1	5/25/00	9:41 AM
Std4Rep1	5/25/00	9:43 AM
Std5Rep1	5/25/00	9:45 AM
Std6Rep1	5/25/00	9:47 AM
ICV5-1	5/25/00	9:49 AM
ICB1	5/25/00	9:51 AM
CCV5-1	5/25/00	9:53 AM
CCB1	5/25/00	9:55 AM
ZZZZZZ	5/25/00	9:57 AM
ZZZZZZ	5/25/00	9:59 AM
ZZZZZZ	5/25/00	10:01 AM
ZZZZZZ	5/25/00	10:02 AM
ZZZZZZ	5/25/00	10:04 AM
ZZZZZZ	5/25/00	10:06 AM
ZZZZZZ	5/25/00	10:08 AM
ZZZZZZ	5/25/00	10:10 AM
ZZZZZZ	5/25/00	10:13 AM
ZZZZZZ	5/25/00	10:15 AM
CCV5-2	5/25/00	10:17 AM
CCB2	5/25/00	10:20 AM
ZZZZZZ	5/25/00	10:22 AM
ZZZZZZ	5/25/00	10:24 AM
ZZZZZZ	5/25/00	10:26 AM
ZZZZZZ	5/25/00	10:28 AM
ZZZZZZ	5/25/00	10:29 AM
ZZZZZZ	5/25/00	10:31 AM
ZZZZZZ	5/25/00	10:33 AM
ZZZZZZ	5/25/00	10:36 AM
ZZZZZZ	5/25/00	10:38 AM
ZZZZZZ	5/25/00	10:40 AM
CCV5-3	5/25/00	10:42 AM
CCB3	5/25/00	10:44 AM
ZZZZZZ	5/25/00	10:46 AM
ZZZZZZ	5/25/00	10:48 AM
ZZZZZZ	5/25/00	10:51 AM
ZZZZZZ	5/25/00	10:53 AM
ZZZZZZ	5/25/00	10:55 AM
ZZZZZZ	5/25/00	10:57 AM
ZZZZZZ	5/25/00	10:59 AM

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**STL-Pittsburgh**  
Metals Data Reporting Form

Instrument Runlog

(It :

Instrument: CVAAChart Number: 0525HGA:PRN

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/25/00	11:01 AM
ZZZZZZ	5/25/00	11:03 AM
ZZZZZZ	5/25/00	11:05 AM
CCV5-4	5/25/00	11:07 AM
CCB4	5/25/00	11:09 AM
ZZZZZZ	5/25/00	11:11 AM
ZZZZZZ	5/25/00	11:13 AM
ZZZZZZ	5/25/00	11:15 AM
ZZZZZZ	5/25/00	11:17 AM
ZZZZZZ	5/25/00	11:19 AM
ZZZZZZ	5/25/00	11:21 AM
ZZZZZZ	5/25/00	11:23 AM
ZZZZZZ	5/25/00	11:25 AM
ZZZZZZ	5/25/00	11:28 AM
ZZZZZZ	5/25/00	11:30 AM
CCV5-5	5/25/00	11:33 AM
CCB5	5/25/00	11:36 AM
ZZZZZZ	5/25/00	11 38 AM
ZZZZZZ	5/25/00	11:40 AM
DDL3B	5/25/00	11:42 AM
DDL3C	5/25/00	11:44 AM
DDK90	5/25/00	11:46 AM
DDK90S	5/25/00	11:48 AM
DDK90D	5/25/00	11:50 AM
CCV5-6	5/25/00	11:52 AM
CCB6	5/25/00	11:54 AM

## Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: J00525A-ARC

Sample Name	Date of Analysis	Time of Analysis
STD1	5/25/00	7:44 AM
STD5A	5/25/00	7:48 AM
STD5B	5/25/00	7:51 AM
ICV2-1	5/25/00	7:54 AM
ICB1	5/25/00	7:57 AM
ICSA	5/25/00	8:00 AM
ICSAB	5/25/00	8:03 AM
ZZZZZZ	5/25/00	8:09 AM
ZZZZZZ	5/25/00	8:12 AM
ZZZZZZ	5/25/00	8:15 AM
ZZZZZZ	5/25/00	8:18 AM
ZZZZZZ	5/25/00	8:21 AM
ZZZZZZ	5/25/00	8:24 AM
ZZZZZZ	5/25/00	8:28 AM
ZZZZZZ	5/25/00	8:31 AM
CCV2-1	5/25/00	8:34 AM
CCB1	5/25/00	8:37 AM
ZZZZZZ	5/25/00	8:41 AM
ZZZZZZ	5/25/00	8:45 AM
CCV2-2	5/25/00	8:48 AM
CCB2	5/25/00	8:51 AM
DDLA7B	5/25/00	8:54 AM
DDLA7C	5/25/00	8:57 AM
DDK90	5/25/00	9:00 AM
DDK90P	5/25/00	9:03 AM
DDK90S	5/25/00	9:07 AM
DDK90D	5/25/00	9:10 AM
CCV2-3	5/25/00	9:13 AM
CCB3	5/25/00	9:16 AM
ZZZZZZ	5/25/00	9:38 AM
ZZZZZZ	5/25/00	9:41 AM
ZZZZZZ	5/25/00	9:45 AM
ZZZZZZ	5/25/00	9:48 AM
ZZZZZZ	5/25/00	9:51 AM
ZZZZZZ	5/25/00	9:54 AM
ZZZZZZ	5/25/00	9:57 AM
ZZZZZZ	5/25/00	10:01 AM
ZZZZZZ	5/25/00	10:04 AM
ZZZZZZ	5/25/00	10:07 AM
ZZZZZZ	5/25/00	10:10 AM
ZZZZZZ	5/25/00	10:13 AM



658 564

STL-Pittsburgh  
Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: J00525A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/25/00	10:16 AM
ZZZZZZ	5/25/00	10:19 AM
ZZZZZZ	5/25/00	10:23 AM
ZZZZZZ	5/25/00	10:26 AM
ZZZZZZ	5/25/00	10:29 AM
ZZZZZZ	5/25/00	10:32 AM
ZZZZZZ	5/25/00	10:35 AM
ZZZZZZ	5/25/00	10:39 AM
ZZZZZZ	5/25/00	10:42 AM
ZZZZZZ	5/25/00	10:45 AM
ZZZZZZ	5/25/00	10:48 AM
ZZZZZZ	5/25/00	10:51 AM
ZZZZZZ	5/25/00	10:54 AM
ZZZZZZ	5/25/00	10:57 AM
ZZZZZZ	5/25/00	11:01 AM
ZZZZZZ	5/25/00	11:04 AM
ZZZZZZ	5/25/00	11:07 AM
ZZZZZZ	5/25/00	11:10 AM
ZZZZZZ	5/25/00	11:13 AM
ZZZZZZ	5/25/00	11:16 AM
ZZZZZZ	5/25/00	11:19 AM
ZZZZZZ	5/25/00	11:23 AM
ZZZZZZ	5/25/00	11:26 AM
ZZZZZZ	5/25/00	11:29 AM
ZZZZZZ	5/25/00	11:32 AM
ZZZZZZ	5/25/00	11:35 AM
ZZZZZZ	5/25/00	11:38 AM
ZZZZZZ	5/25/00	11:41 AM
ZZZZZZ	5/25/00	11:46 AM
ZZZZZZ	5/25/00	11:50 AM
ZZZZZZ	5/25/00	11:53 AM
ZZZZZZ	5/25/00	11:56 AM
ZZZZZZ	5/25/00	11:59 AM
ZZZZZZ	5/25/00	12:02 PM
ZZZZZZ	5/25/00	12:05 PM
ZZZZZZ	5/25/00	12:08 PM
ZZZZZZ	5/25/00	12:11 PM
ZZZZZZ	5/25/00	12:15 PM
ZZZZZZ	5/25/00	12:18 PM
ZZZZZZ	5/25/00	12:21 PM
ZZZZZZ	5/25/00	12:24 PM

## Metals Data Reporting Form

Instrument Runlog

Instrument: ICPChart Number: J00525A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/25/00	12:27 PM
ZZZZZZ	5/25/00	12:30 PM
ZZZZZZ	5/25/00	12:34 PM
ZZZZZZ	5/25/00	12:37 PM

## STL-Pittsburgh

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## Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: T00526A:ARC

Sample Name	Date of Analysis	Time of Analysis
STD1	5/26/00	7:31 AM
STD6	5/26/00	7:36 AM
STD7	5/26/00	7:40 AM
ICV3-1	5/26/00	7:43 AM
ICB1	5/26/00	7:48 AM
ICSA	5/26/00	7:52 AM
ICSAB	5/26/00	7:56 AM
ZZZZZZ	5/26/00	8:02 AM
ZZZZZZ	5/26/00	8:06 AM
ZZZZZZ	5/26/00	8:11 AM
ZZZZZZ	5/26/00	8:15 AM
ZZZZZZ	5/26/00	8:19 AM
ZZZZZZ	5/26/00	8:23 AM
ZZZZZZ	5/26/00	8:27 AM
ZZZZZZ	5/26/00	8:31 AM
CCV3-1	5/26/00	8:36 AM
CCB1	5/26/00	8:40 AM
DDLA7B	5/26/00	8:44 AM
DDLA7C	5/26/00	8:48 AM
DDK90	5/26/00	8:52 AM
DDK90P	5/26/00	8:56 AM
DDK90S	5/26/00	9:00 AM
DDK90D	5/26/00	9:05 AM
CCV3-2	5/26/00	9:09 AM
CCB2	5/26/00	9:13 AM
ZZZZZZ	5/26/00	9:18 AM
ZZZZZZ	5/26/00	9:22 AM
ZZZZZZ	5/26/00	9:26 AM
ZZZZZZ	5/26/00	9:30 AM
ZZZZZZ	5/26/00	9:34 AM
ZZZZZZ	5/26/00	9:39 AM
ZZZZZZ	5/26/00	9:43 AM
ZZZZZZ	5/26/00	9:47 AM
ZZZZZZ	5/26/00	9:51 AM
ZZZZZZ	5/26/00	9:55 AM
ZZZZZZ	5/26/00	9:59 AM
ZZZZZZ	5/26/00	10:03 AM
ZZZZZZ	5/26/00	10:08 AM
ZZZZZZ	5/26/00	10:12 AM
ZZZZZZ	5/26/00	10:16 AM
ZZZZZZ	5/26/00	10:20 AM

## Metals Data Reporting Form

Instrument Runlog

Date

Instrument: ICPSTChart Number: T00526A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/26/00	10:24 AM
ZZZZZZ	5/26/00	10:28 AM
ZZZZZZ	5/26/00	10:33 AM

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**METALS  
RAW DATA**

*Michael A. Vento 5-25-00*

#	Sample Name	AL	BA	BE	CA	CO	CU
1	STD1	.01109	.00014	.00295	.00005	.00014	.00054
2	STD5A		4.20211	14.7971		1.33774	2.36544
3	STD5B	11.544			21.662		
4	ICV2-1 0014-061-7	25.134	.99552	.98299	25.394	1.0048	.98967
5	ICB1	.00087	-.00016	.00004	-.00526	.00038	-.00084
6	ICSA 0014-088-12	496.75	.00154	-.00003	483.52	.01167	-.00515
7	ICSAB 0014-043-1	498.78	.46489	.44255	482.91	.46027	.50136
8	DDLFBV	.02608	-.00011	-.00005	.08818	.00037	-.00189
9	DDLFCV	1.9855	1.9324	.04991	42.536	.49580	.24324
10	DDK1J (QC)	-.00169	.29195	.00000	134.06	.00137	.00332
11	DDK1JP5 (QC)	-.00652	.05923	-.00010	26.372	-.00040	.00049
12	DDK1JS (QC)	2.0280	2.2096	.04968	180.50	.49304	.24993
13	DDK1JD (QC)	2.3507	2.5043	.05764	182.12	.57175	.28803
14	DDKA2F	.01604	.06518	-.00006	39.811	.00072	.00329
15	DDKA7F	.06843	.04476	-.00004	30.532	.00035	.00105
16	CCV2-1 0014-087-7	49.678	4.8757	4.9347	50.562	4.9636	4.9139
17	CCB1	-.00661	.00002	.00027	-.00099	.00037	-.00084
18	DDK9T	.00634	.27884	.00002	54114.5	.00083	.01563
19	DDLFCV RERUN CA, K	1.9783	1.9141	.05024	42.989	.50444	.23458
20	CCV2-2	49.485	4.8665	4.9279	50.218	4.9529	4.9056
21	CCB2	-.00358	-.00033	.00014	-.00424	-.00075	-.00105
22	DDLA7B	-.00955	-.00028	-.00009	.02583	-.00112	-.00063
23	DDLA7C	1.9300	1.9317	.04859	49.132	.48221	.24175
24	DDK90	7.0141	.20787	.00020	38.091	-.00076	.01660
25	DDK90P5	1.4046	.04138	-.00004	7.7222	-.00007	.00370
26	DDK90S	9.9358	2.0707	.04714	84.288	.46810	.25640
27	DDK90D	10.439	2.1210	.04869	87.465	.48369	.26553
28	CCV2-3	49.693	4.8740	4.9779	51.098	5.0105	4.9106
29	CCB3	-.00184	.00002	.00037	-.00372	-.00150	-.00084
30	DDL6CB	-.00038	-.00006	.00000	.02651	.00112	-.00084
31	DDL6CC	1.9415	1.9379	.04899	50.082	.48745	.24260
32	DD3QM	.01985	.04193	-.00003	38.829	-.00076	.00233
33	DD3QN	71.913	.96663	.00345	93.533	.04893	.06819
34	DD3QQ	25.207	.29395	.00126	37.232	.02165	.03060
35	DD3QR	-.00306	-.00002	-.00006	.02710	-.00337	-.00105
36	DD3QT	43.897	.37894	.00289	60.254	.02771	.04580
37	DD3QV	.03513	.30026	.00000	46.913	-.00014	-.00069
38	DD3QX	58.747	.53491	.00293	100.18	.03265	.05852
39	DD3QXP5	11.826	.10898	.00062	20.576	.00698	.01127
40	CCV2-4	50.062	4.9291	5.0601	51.646	5.0632	4.9698
41	CCB4	.00158	.00011	.00041	.00039	-.00225	-.00063
42	DD3QXS	95.909	2.4647	.05084	151.91	.51368	.30879
43	DD3QXD	92.859	2.4539	.05082	151.31	.50956	.30620
44	DD3R0	27.671	.33584	.00168	111.27	.01776	.05269
45	DD4WA	14.118	.17945	.00065	46.262	.00754	.01402
46	DD4WG	.13045	.27346	.00000	55.400	-.00013	.00067
47	DD4WH	4.3956	.18385	.00008	73.090	.00316	.00858
48	DD4WJ	95.354	.79529	.00524	753.05	.08471	.16641
49	DD4WK	.27480	.05269	.00006	42.063	-.00003	.00154
50	DD4WL	29.101	.27436	.00138	52.867	.01562	.03078
51	DD4WM	-.00304	-.00002	.00000	.20650	-.00112	-.00063
52	CCV2-5	49.604	4.8661	5.0477	52.267	5.0883	4.8938
53	CCB5	.00072	.00037	.00051	-.00282	-.00075	-.00084

#	Sample Name	AL	BA	BE	CA	CO	CU
54	DD50E	.02114	.42092	.00000	46.652	.00054	.00050
55	DD50N	9.5555	1.2267	.00104	63.439	.01145	.03033
56	CCV2-6	49.579	4.8573	5.0332	52.379	5.0955	4.8797
57	CCB6	-.00102	.00013	.00037	-.00213	-.00075	-.00084
58	DDL76BF	-.00481	-.00028	-.00006	.02241	-.00224	-.00169
59	DDL76CF	1.9157	1.9070	.04953	50.742	.49349	.23795
60	DD3QMF	.00383	.03907	.00000	37.376	-.00189	-.00126
61	DD3QNF	.00083	.18678	.00003	80.597	-.00195	-.00146
62	DD3QQF	.00004	.09865	.00000	35.932	.00333	-.00143
63	DD3QRF	.00301	-.00033	-.00006	.01945	-.00037	.00126
64	DD3QTF	.00744	.09717	.00003	48.738	.00371	-.00102
65	DD3QVF	.00171	.26932	-.00003	46.376	-.00087	-.00125
66	DD3QXF	.00170	.19604	.00004	81.259	.00103	-.00095
67	DD3QXFP5	-.00477	.03984	.00003	16.826	.00110	-.00106
68	CCV2-7	48.891	4.8077	5.0930	52.693	5.1131	4.8282
69	CCB7	-.00227	.00011	.00068	-.00063	-.00112	.00021
70	DD3QXSF	1.9455	2.1062	.05011	134.28	.49152	.24060
71	DD3QXDF	1.9710	2.1184	.05103	136.86	.50764	.24379
72	DD3R0F	.00000	.15405	.00004	86.420	.00143	-.00110
73	DD4WAF	.00690	.07439	.00007	40.213	-.00040	-.00097
74	DD4WGF	.00428	.24725	.00003	54.308	-.00312	-.00034
75	DD4WHF	.00777	.14451	-.00003	71.289	.00068	-.00019
76	DD4WJF	.00168	.26960	-.00003	75.032	-.00125	-.00076
77	DD4WKF	.01044	.04572	.00007	37.561	.00036	-.00021
78	DD4WLF	.00480	.07772	.00013	41.737	.00147	.00029
79	DD4WMF	.00346	-.00016	-.00002	.05006	-.00075	-.00042
80	CCV2-8	49.161	4.8282	5.1527	53.456	5.1789	4.8502
81	CCB8	-.00267	-.00011	.00034	-.00255	-.00075	-.00105
82	DD50EF	-.00009	.42608	.00006	48.942	.00130	-.00063
83	DD50NF	-.00009	1.0810	.00003	37.964	-.00279	-.00062
84	DD3QXFP5 RERUN ZN	.00174	.04060	.00010	16.769	-.00038	-.00085
85	CCV2-9	49.161	4.8441	5.1836	53.137	5.1644	4.8808
86	CCB9	.00856	.00002	.00037	-.00172	-.00074	-.00021

#	Sample Name	FE	K	MG	MN	NA	NI
1	STD1	.00245	-.03179	.00015	.00014	.05155	-.00015
2	STD5A				1.88405		1.60741
3	STD5B	28.2359	2.67245	7.64664		52.5656	
4	ICV2-1 0014-061-7	26.198	25.055	25.538	1.0103	25.213	1.0129
5	ICB1	-.00159	-.08690	.00130	-.00026	.00114	-.00233
6	ICSA 0014-088-12	183.65	-.15716	481.03	-.00109	.00514	-.00798
7	ICSAB 0014-043-1	183.64	9.9418	480.12	.45763	10.074	.88197
8	DDLFVB	.01257	-.22741	.03269	-.00026	.00952	.00006
9	DDLFVC	1.0583	40.771	42.456	.50384	40.750	.50999
10	DDK1J (QC)	4.5998	5.1179	26.310	.94480	105.99	-.00758
11	DDK1JP5 (QC)	.92673	1.0410	5.1605	.19129	20.809	.00581
12	DDK1JS (QC)	5.4749	51.617	73.215	1.4287	150.72	.49347
13	DDK1JD (QC)	5.5823	54.492	76.149	1.4916	150.19	.57730
14	DDKA2F	1.6349	2.4295	7.7120	2.3891	14.769	.00547
15	DDKA7F	.02195	1.4976	7.0784	.00133	10.055	.00788
16	CCV2-1 0014-087-7	51.503	50.042	50.021	4.9568	49.811	4.9717
17	CCB1	-.00247	.03512	.00653	.00000	.00380	.00182

## Analysis Report

## Averages

05/25/00 01:15:14 PM

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#	Sample Name	FE	K	MG	MN	NA	NI
18	DDK9T	.00696	221.35	49.1647	5.4544	53.130	.00708
19	DDLFCV RERUN CA,K	1.0541	L39.497	42.167	.50702	L39.272	.50049
20	CCV2-2	51.368	49.398	49.880	4.9390	49.502	4.9396
21	CCB2	.00442	-.12387	52.00130	.00000	.00580	-.00272
22	DDLA7B	.00017	-.01848	-.00392	-.00052	-.00076	-.00104
23	DDLA7C	1.0376	48.524	49.328	.49036	48.927	.48248
24	DDK90	6.8685	4.1361	5.4960	.07984	1.1973	.01166
25	DDK90P5	1.3965	.83572	1.0979	.01602	.23422	-.00416
26	DDK90S	7.5233	51.767	53.217	.54884	48.769	.48104
27	DDK90D	7.8399	52.477	54.418	.56617	49.326	.48585
28	CCV2-3	51.956	49.086	50.127	5.0031	49.029	5.0198
29	CCB3	-.00247	-.20708	.00326	-.00026	.00038	.00573
30	DDL6CB	.00531	-.07950	-.00130	-.00052	.00914	-.00058
31	DDL6CC	1.0543	48.501	49.926	.49594	48.846	.49665
32	DD3QM	.17124	.97439	14.800	.00721	5.0266	.00629
33	DD3QN	109.92	13.586	48.928	1.0546	31.526	.07992
34	DD3QQ	44.395	5.7336	23.937	1.4784	46.801	.02992
35	DD3QR	.03860	-.08320	.00653	.00001	.01551	.00171
36	DD3QT	67.883	9.4259	33.656	2.1545	30.021	.03926
37	DD3QV	7.2001	1.6178	21.726	.36078	67.680	.00117
38	DD3QX	92.202	6.9631	51.800	2.1776	102.28	.05165
39	DD3QXP5	19.403	1.4829	10.612	.45214	20.526	.01404
40	CCV2-4	52.526	49.204	50.598	5.0584	49.789	5.0590
41	CCB4	.00053	-.01294	-.00130	.00000	.00238	.00169
42	DD3QXS	94.144	59.257	102.31	2.6750	150.61	.54676
43	DD3QXD	90.868	59.100	101.67	2.6614	150.66	.54252
44	DD3R0	64.366	6.7172	59.566	1.7932	99.236	.03445
45	DD4WA	16.749	9.1892	18.603	1.2935	16.518	.01427
46	DD4WG	3.1698	1.7824	22.895	.50289	59.805	.00415
47	DD4WH	6.8786	2.1170	35.285	2.0661	42.916	.01167
48	DD4WJ	212.50	30.106	431.87	10.607	15.345	.13961
49	DD4WK	.88194	20.004	26.045	.08992	16.906	.00431
50	DD4WL	33.472	12.628	24.835	1.4787	15.792	.03247
51	DD4WM	.01788	.01848	.01503	.00027	.04265	.00328
52	CCV2-5	52.561	48.873	50.142	5.0739	48.982	5.0743
53	CCB5	-.00053	-.15161	-.00392	.00027	.00837	.00117
54	DD50E	.97100	1.7121	28.558	.39295	44.633	-.00310
55	DD50N	33.209	4.7370	38.586	.37339	55.248	.02812
56	CCV2-6	52.575	49.274	50.093	5.0792	49.125	5.0913
57	CCB6	.00106	.00554	-.00653	.00000	.00590	.00254
58	DDL76BF	-.00566	-.14791	-.00719	-.00053	.00133	-.00486
59	DDL76CF	1.0424	47.205	49.188	.49806	47.807	.49612
60	DD3QMF	.00583	1.1574	14.446	.00531	4.8169	-.00472
61	DD3QNF	2.8532	4.8516	36.313	.67871	28.071	-.00175
62	DD3QQF	3.1277	1.1574	18.695	1.1970	44.984	.00238
63	DD3QRF	-.00246	.06656	.00457	-.00026	.00761	-.00053
64	DD3QTF	5.6702	4.6371	22.850	1.3473	27.758	.00519
65	DD3QVF	2.7584	1.3091	21.048	.35526	63.304	.00093
66	DD3QXF	11.830	1.1038	36.156	1.2934	93.618	.00092
67	DD3QXFP5	2.4575	.33465	7.4426	.26921	18.938	.00196
68	CCV2-7	52.799	46.135	49.730	5.1055	46.789	5.0829
69	CCB7	-.00017	-.02403	.00392	.00000	.00780	.00162
70	DD3QXSF	13.045	47.693	87.207	1.8167	146.33	.49092
71	DD3QXDF	13.085	47.928	87.815	1.8345	144.18	.50629



#	Sample Name	FE	K	MG	MN	NA	NI
72	DD3R0F	4.6701	.99473	38.605	1.6867	95.961	.00307
73	DD4WAF	1.0794	5.1382	12.128	1.1319	15.706	.00160
74	DD4WGF	1.0192	1.6844	22.201	.47680	56.285	-.00561
75	DD4WHF	.18079	1.2998	32.757	1.8618	39.856	.00287
76	DD4WJF	3.7161	1.0613	30.280	1.5946	15.141	-.00398
77	DD4WKF	-.00638	18.756	23.997	.04802	16.199	.00216
78	DD4WLF	1.0608	5.3545	12.157	1.1666	15.660	.00376
79	DD4WMF	-.00602	.03143	.00196	-.00026	.06150	.00069
80	CCV2-8	53.306	46.852	50.071	5.1595	47.233	5.1757
81	CCB8	-.00194	-.03512	-.00261	-.00026	.00637	-.00197
82	DD50EF	.02425	1.8989	29.500	.41045	44.793	-.00468
83	DD50NF	.13688	1.5069	21.621	.13933	54.094	-.00422
84	DD3QXFP5 RERUN ZN	2.4712	.26439	7.4446	.27080	18.909	.00083
85	CCV2-9	53.222	46.395	50.213	5.1463	47.514	5.1871
86	CCB9	-.00212	.02588	-.00457	.00053	.00790	.00106

#	Sample Name	V	ZN
1	STD1	.00039	.00033
2	STD5A	1.5176	1.47723
3	STD5B		
4	ICV2-1 0014-061-7	.99394	1.0034
5	ICB1	-.00250	-.00013
6	ICSA 0014-088-12	.00149	.00308
7	ICSAB 0014-043-1	.46233	.95888
8	DDLFBV	-.00516	.00398
9	DDLFCV	.48429	.51527
10	DDK1J (QC)	-.00254	.41555
11	DDK1JP5 (QC)	.00067	.08433
12	DDK1JS (QC)	.48289	.92177
13	DDK1JD (QC)	.56033	.99117
14	DDKA2F	-.00217	.01636
15	DDKA7F	.00265	.01003
16	CCV2-1 0014-087-7	4.9431	4.9904
17	CCB1	-.00099	.00039
18	DDK9T	.00253	.00602
19	DDLFCV RERUN CA,K	.48797	.51556
20	CCV2-2	4.9274	4.9611
21	CCB2	-.00228	-.00067
22	DDLA7B	-.00250	.00175
23	DDLA7C	.48489	.49357
24	DDK90	.01298	.04907
25	DDK90P5	.00269	.01026
26	DDK90S	.48173	.52313
27	DDK90D	.49803	.52937
28	CCV2-3	4.9792	5.0154
29	CCB3	-.00136	.00043
30	DDL6CB	-.00258	.01024
31	DDL6CC	.48924	.50243
32	DD3QM	.00018	.07468
33	DD3QN	.11653	.28638
34	DD3QQ	.04680	.10040
35	DD3QR	-.00255	.01417

#	Sample Name	V	ZN
36	DD3QT	.05836	.27255
37	DD3QV	-.00255	.04684
38	DD3QX	.10603	.16091
39	DD3QXP5	.01939	.03342
40	CCV2-4	5.0274	5.0462
41	CCB4	-.00131	.00093
42	DD3QXS	.60985	.66571
43	DD3QXD	.60224	.67925
44	DD3R0	.05375	.13833
45	DD4WA	.02072	.06329
46	DD4WG	.00010	.06413
47	DD4WH	.00779	.05961
48	DD4WJ	.18251	.43630
49	DD4WK	.00108	.06668
50	DD4WL	.04014	.11154
51	DD4WM	-.00158	.01850
52	CCV2-5	5.0343	5.0483
53	CCB5	-.00222	.00120
54	DD50E	.00149	.01900
55	DD50N	.02865	.13423
56	CCV2-6	5.0272	5.0348
57	CCB6	-.00093	.00356
58	DDL76BF	-.00248	.00253
59	DDL76CF	.48778	.49381
60	DD3QMF	-.00243	.00890
61	DD3QNF	.00126	.01188
62	DD3QQF	-.00125	.01211
63	DD3QRF	-.00026	.00405
64	DD3QTF	-.00129	.00954
65	DD3QVF	.00000	.00910
66	DD3QXF	-.00242	.00942
67	DD3QXFP5	.00005	.02943
68	CCV2-7	5.0461	5.0327
69	CCB7	-.00230	.00188
70	DD3QXSF	.48664	.49876
71	DD3QXDF	.49868	.50965
72	DD3R0F	-.00246	.01255
73	DD4WAF	-.00245	.00999
74	DD4WGF	-.00124	.00588
75	DD4WHF	.00101	.01124
76	DD4WJF	.00037	.00467
77	DD4WKF	-.00257	.02498
78	DD4WLF	-.00128	.00613
79	DD4WMF	-.00219	.00486
80	CCV2-8	5.0961	5.0412
81	CCB8	-.00238	-.00013
82	DD50EF	.00118	.01516
83	DD50NF	-.00176	.00339
84	DD3QXFP5 RERUN ZN	-.00004	.00363
85	CCV2-9	5.0900	5.0308
86	CCB9	-.00230	-.00055

MTW 5-25-00

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	J00525A	QUANMET	05/25/00	07:44		X	IR
2	STD5A	J00525A	QUANMET	05/25/00	07:48		X	IR
3	STD5B	J00525A	QUANMET	05/25/00	07:51		X	IR
4	ICV2-1 0014-061-7	J00525A	QUANMET	05/25/00	07:54	MTW	S	CONC
5	ICB1	J00525A	QUANMET	05/25/00	07:57	MTW	S	CONC
6	ICSA 0014-088-12	J00525A	QUANMET	05/25/00	08:00	MTW	Q	CONC
7	ICSAB 0014-043-1	J00525A	QUANMET	05/25/00	08:03	MTW	Q	CONC
8	DDLFBV	J00525A	QUANMET	05/25/00	08:09	MTW	S	CONC
9	DDLFCV	J00525A	QUANMET	05/25/00	08:12	MTW	S	CONC
10	DDK1J (QC)	J00525A	QUANMET	05/25/00	08:15	MTW	S	CONC
11	DDK1JP5 (QC)	J00525A	QUANMET	05/25/00	08:18	MTW	S	CONC
12	DDK1JS (QC)	J00525A	QUANMET	05/25/00	08:21	MTW	S	CONC
13	DDK1JD (QC)	J00525A	QUANMET	05/25/00	08:24	MTW	S	CONC
14	DDKA2F	J00525A	QUANMET	05/25/00	08:28	MTW	S	CONC
15	DDKA7F	J00525A	QUANMET	05/25/00	08:31	MTW	S	CONC
16	CCV2-1 0014-087-7	J00525A	QUANMET	05/25/00	08:34	MTW	S	CONC
17	CCB1	J00525A	QUANMET	05/25/00	08:37	MTW	S	CONC
18	DDK9T	J00525A	QUANMET	05/25/00	08:41	MTW	S	CONC
19	DDLFCV RERUN CA,K	J00525A	QUANMET	05/25/00	08:45	MTW	S	CONC
20	CCV2-2	J00525A	QUANMET	05/25/00	08:48	MTW	S	CONC
21	CCB2	J00525A	QUANMET	05/25/00	08:51	MTW	S	CONC
22	DDLA7B	J00525A	QUANMET	05/25/00	08:54	MTW	S	CONC
23	DDLA7C	J00525A	QUANMET	05/25/00	08:57	MTW	S	CONC
24	DDK90	J00525A	QUANMET	05/25/00	09:00	MTW	S	CONC
25	DDK90P5	J00525A	QUANMET	05/25/00	09:03	MTW	S	CONC
26	DDK90S	J00525A	QUANMET	05/25/00	09:07	MTW	S	CONC
27	DDK90D	J00525A	QUANMET	05/25/00	09:10	MTW	S	CONC
28	CCV2-3	J00525A	QUANMET	05/25/00	09:13	MTW	S	CONC
29	CCB3	J00525A	QUANMET	05/25/00	09:16	MTW	S	CONC
30	DDL6CB	J00525A	QUANMET	05/25/00	09:38	MTW	S	CONC
31	DDL6CC	J00525A	QUANMET	05/25/00	09:41	MTW	S	CONC
32	DD3QM	J00525A	QUANMET	05/25/00	09:45	MTW	S	CONC
33	DD3QN	J00525A	QUANMET	05/25/00	09:48	MTW	S	CONC
34	DD3QQ	J00525A	QUANMET	05/25/00	09:51	MTW	S	CONC
35	DD3QR	J00525A	QUANMET	05/25/00	09:54	MTW	S	CONC
36	DD3QT	J00525A	QUANMET	05/25/00	09:57	MTW	S	CONC
37	DD3QV	J00525A	QUANMET	05/25/00	10:01	MTW	S	CONC
38	DD3QX	J00525A	QUANMET	05/25/00	10:04	MTW	S	CONC
39	DD3QXP5	J00525A	QUANMET	05/25/00	10:07	MTW	S	CONC
40	CCV2-4	J00525A	QUANMET	05/25/00	10:10	MTW	S	CONC
41	CCB4	J00525A	QUANMET	05/25/00	10:13	MTW	S	CONC
42	DD3QXS	J00525A	QUANMET	05/25/00	10:16	MTW	S	CONC
43	DD3QXD	J00525A	QUANMET	05/25/00	10:19	MTW	S	CONC
44	DD3R0	J00525A	QUANMET	05/25/00	10:23	MTW	S	CONC
45	DD4WA	J00525A	QUANMET	05/25/00	10:26	MTW	S	CONC
46	DD4WG	J00525A	QUANMET	05/25/00	10:29	MTW	S	CONC
47	DD4WH	J00525A	QUANMET	05/25/00	10:32	MTW	S	CONC
48	DD4WJ	J00525A	QUANMET	05/25/00	10:35	MTW	S	CONC
49	DD4WK	J00525A	QUANMET	05/25/00	10:39	MTW	S	CONC
50	DD4WL	J00525A	QUANMET	05/25/00	10:42	MTW	S	CONC
51	DD4WM	J00525A	QUANMET	05/25/00	10:45	MTW	S	CONC
52	CCV2-5	J00525A	QUANMET	05/25/00	10:48	MTW	S	CONC
53	CCB5	J00525A	QUANMET	05/25/00	10:51	MTW	S	CONC

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
54	DD50E	J00525A	QUANMET	05/25/00	10:54	MTW	S	CONC
55	DD50N	J00525A	QUANMET	05/25/00	10:57	MTW	S	CONC
56	CCV2-6	J00525A	QUANMET	05/25/00	11:01	MTW	S	CONC
57	CCB6	J00525A	QUANMET	05/25/00	11:04	MTW	S	CONC
58	DDL76BF	J00525A	QUANMET	05/25/00	11:07	MTW	S	CONC
59	DDL76CF	J00525A	QUANMET	05/25/00	11:10	MTW	S	CONC
60	DD3QMF	J00525A	QUANMET	05/25/00	11:13	MTW	S	CONC
61	DD3QNF	J00525A	QUANMET	05/25/00	11:16	MTW	S	CONC
62	DD3QQF	J00525A	QUANMET	05/25/00	11:19	MTW	S	CONC
63	DD3QRF	J00525A	QUANMET	05/25/00	11:23	MTW	S	CONC
64	DD3QTF	J00525A	QUANMET	05/25/00	11:26	MTW	S	CONC
65	DD3QVF	J00525A	QUANMET	05/25/00	11:29	MTW	S	CONC
66	DD3QXF	J00525A	QUANMET	05/25/00	11:32	MTW	S	CONC
67	DD3QXFP5	J00525A	QUANMET	05/25/00	11:35	MTW	S	CONC
68	CCV2-7	J00525A	QUANMET	05/25/00	11:38	MTW	S	CONC
69	CCB7	J00525A	QUANMET	05/25/00	11:41	MTW	S	CONC
70	DD3QXSF	J00525A	QUANMET	05/25/00	11:46	MTW	S	CONC
71	DD3QXDF	J00525A	QUANMET	05/25/00	11:50	MTW	S	CONC
72	DD3R0F	J00525A	QUANMET	05/25/00	11:53	MTW	S	CONC
73	DD4WAF	J00525A	QUANMET	05/25/00	11:56	MTW	S	CONC
74	DD4WGF	J00525A	QUANMET	05/25/00	11:59	MTW	S	CONC
75	DD4WHF	J00525A	QUANMET	05/25/00	12:02	MTW	S	CONC
76	DD4WJF	J00525A	QUANMET	05/25/00	12:05	MTW	S	CONC
77	DD4WKF	J00525A	QUANMET	05/25/00	12:08	MTW	S	CONC
78	DD4WLF	J00525A	QUANMET	05/25/00	12:11	MTW	S	CONC
79	DD4WMF	J00525A	QUANMET	05/25/00	12:15	MTW	S	CONC
80	CCV2-8	J00525A	QUANMET	05/25/00	12:18	MTW	S	CONC
81	CCB8	J00525A	QUANMET	05/25/00	12:21	MTW	S	CONC
82	DD50EF	J00525A	QUANMET	05/25/00	12:24	MTW	S	CONC
83	DD50NF	J00525A	QUANMET	05/25/00	12:27	MTW	S	CONC
84	DD3QXFP5 RERUN ZN	J00525A	QUANMET	05/25/00	12:30	MTW	S	CONC
85	CCV2-9	J00525A	QUANMET	05/25/00	12:34	MTW	S	CONC
86	CCB9	J00525A	QUANMET	05/25/00	12:37	MTW	S	CONC

Method: QUANMET Standard: STD1

Run Time: 05/25/00 07:44:53

Elem	AG	AL	AS	B	BA	BE	CA
Avge	-.00075	.01110	.00020	.00000	.00014	.00295	.00006
SDev	.00010	.00048	.00114	.00000	.00018	.00010	.00140
%RSD	13.333	4.2891	571.55	.00000	125.28	3.3898	2380.5
#1	-.00080	.01080	-.00140	.00000	.00000	.00280	-.00147
#2	-.00060	.01180	.00080	.00000	.00008	.00300	.00002
#3	-.00080	.01100	.00120	.00000	.00008	.00300	-.00024
#4	-.00080	.01080	.00020	.00000	.00040	.00300	.00192

Elem	CD	CO	CR	CU	FE	K	LI
Avge	.00013	.00015	.00065	.00055	.00245	-.03180	.00035
SDev	.00010	.00025	.00074	.00055	.00148	.00817	.00032
%RSD	73.105	167.77	113.40	100.14	60.495	25.681	92.478
#1	.00020	-.00020	-.00020	.00000	.00120	-.04160	-.00004
#2	.00000	.00020	.00060	.00020	.00140	-.03380	.00048
#3	.00020	.00020	.00060	.00080	.00280	-.02980	.00024
#4	.00012	.00040	.00160	.00120	.00440	-.02200	.00072

Elem	MG	MN	MO	NA	NI	PB	SB
Avge	.00015	.00015	.00005	.05155	-.00015	.00015	.00005
SDev	.00060	.00010	.00010	.00108	.00014	.00030	.00041
%RSD	398.14	66.667	200.00	2.0863	91.665	200.00	824.62
#1	.00000	.00000	.00000	.05140	-.00008	.00040	.00000
#2	-.00040	.00020	.00020	.05040	-.00032	.00000	.00000
#3	.00000	.00020	.00000	.05140	-.00021	-.00020	.00060
#4	.00100	.00020	.00000	.05300	.00000	.00040	-.00040

Elem	SE	SI	SN	SR	TI	TL	V
Avge	.00020	.00085	-.00025	.00000	.00215	-.00035	.00040
SDev	.00184	.00010	.00268	.00000	.00025	.00041	.00046
%RSD	920.15	11.765	1070.1	.00000	11.705	117.80	115.47
#1	.00200	.00080	.00140	.00000	.00220	-.00040	.00000
#2	.00140	.00100	-.00420	.00000	.00240	-.00040	.00080
#3	-.00200	.00080	.00040	.00000	.00180	-.00080	.00000
#4	-.00060	.00080	.00140	.00000	.00220	.00020	.00080

Elem	ZN
Avge	.00034
SDev	.00008
%RSD	23.311
#1	.00032
#2	.00040
#3	.00040
#4	.00024

Method: QUANMET Standard: STD5A 0014-072-2

Run Time: 05/25/00 07:48:04

Elem	AG	AS	B	BA	BE	CD	CO
Avge	.25325	.52800	.58022	4.2021	14.797	.84765	1.3377
SDev	.00169	.00453	.00287	.0362	.107	.00518	.0098
%RSD	.66817	.85766	.49505	.86095	72625	.61126	.73469
#1	.25260	.52740	.58152	4.2484	14.860	.84367	1.3394
#2	.25140	.52240	.57756	4.1657	14.643	.84287	1.3246
#3	.25540	.53340	.58365	4.2114	14.881	.85335	1.3484
#4	.25360	.52880	.57815	4.1829	14.805	.85071	1.3386

Elem	CR	CU	LI	MN	MO	NI	PB
Avge	3.3833	2.3654	5.4344	1.8841	.39060	1.6074	.24400
SDev	.0241	.0180	.0972	.0143	.00340	.0110	.00298
%RSD	.71128	.75902	1.7881	.76039	.86995	.68662	1.2213
#1	3.3790	2.3896	5.5366	1.8842	.39000	1.6076	.24500
#2	3.3524	2.3510	5.4856	1.8648	.38620	1.5929	.23960
#3	3.4094	2.3686	5.3995	1.8992	.39420	1.6197	.24620
#4	3.3924	2.3526	5.3159	1.8880	.39200	1.6094	.24520

Elem	SB	SE	SI	SN	SR	TI	TL
Avge	.19140	.51515	.33275	.91505	7.8896	5.9276	.34620
SDev	.00186	.00528	.00320	.00585	.0630	.0399	.00318
%RSD	.96903	1.0259	.96090	.63932	.79822	.67326	.91828
#1	.19300	.52060	.33060	.91440	7.9633	5.9528	.34580
#2	.18880	.50860	.33000	.90720	7.8208	5.8730	.34440
#3	.19240	.51800	.33700	.91780	7.9163	5.9614	.35080
#4	.19140	.51340	.33340	.92080	7.8579	5.9232	.34380

Elem	V	ZN
Avge	1.5176	1.4772
SDev	.0100	.0067
%RSD	.66043	.45377
#1	1.5202	1.4763
#2	1.5036	1.4687
#3	1.5274	1.4848
#4	1.5192	1.4792

658 578

Standardization Rpt.

05/25/00 07:54:18 AM

page 1

Method: QUANMET Standard: STD5B 0014-072-3

Run Time: 05/25/00 07:51:13

Elem	AL	CA	FE	KIC	MG	NA
Avge	11.544	21.662	28.236	2.6725	7.6466	52.566
SDev	.033	.159	.091	.0455	.0085	.795
%RSD	.28198	.73627	.32276	1.7037	.11167	1.5121
#1	11.554	21.551	28.146	2.7134	7.6498	53.233
#2	11.515	21.834	28.361	2.6088	7.6466	51.432
#3	11.521	21.759	28.235	2.6946	7.6350	52.632
#4	11.585	21.504	28.201	2.6730	7.6552	52.965

Method: QUANMET

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD5A	STD1	7.68238	.005762	05/25/00 07:51:13
AL	308.215	STD5B	STD1	8.67088	-.096247	05/25/00 07:51:13
AS	193.696	STD5A	STD1	19.2733	-.003855	05/25/00 07:51:13
B	249.600	STD5A	STD1	17.2695	.000000	05/25/00 07:51:13
BA	493.409	STD5A	STD1	2.37984	-.000336	05/25/00 07:51:13
BE	313.042	STD5A	STD1	.677736	-.001999	05/25/00 07:51:13
CA	317.933	STD5B	STD1	4.61640	-.000272	05/25/00 07:51:13
CD	228.802	STD5A	STD1	11.9759	-.001550	05/25/00 07:51:13
CO	228.616	STD5A	STD1	7.51178	-.001127	05/25/00 07:51:13
CR	267.716	STD5A	STD1	2.95708	-.001922	05/25/00 07:51:13
CU	324.754	STD5A	STD1	4.22466	-.002324	05/25/00 07:51:13
FE	259.940	STD5B	STD1	3.54190	-.008678	05/25/00 07:51:13
K	766.491	STD5B	STD1	36.9788	1.17593	05/25/00 07:51:13
LI	670.789	STD5A	STD1	1.84025	-.000644	05/25/00 07:51:13
MG	279.079	STD5B	STD1	13.0779	-.001962	05/25/00 07:51:13
MN	257.610	STD5A	STD1	5.30639	-.000796	05/25/00 07:51:13
MO	202.030	STD5A	STD1	25.6049	-.001280	05/25/00 07:51:13
NA	588.995	STD5B	STD1	1.90425	-.098164	05/25/00 07:51:13
NI	231.604	STD5A	STD1	6.21779	.000951	05/25/00 07:51:13
PB	220.353	STD5A	STD1	39.8024	-.005970	05/25/00 07:51:13
SB	206.838	STD5A	STD1	52.3208	-.002616	05/25/00 07:51:13
SE	196.026	STD5A	STD1	19.4194	-.003884	05/25/00 07:51:13
SI	288.158	STD5A	STD1	29.7451	-.025283	05/25/00 07:51:13
SN	189.989	STD5A	STD1	10.9140	.002728	05/25/00 07:51:13
SR	409.552	STD5A	STD1	1.26749	.000000	05/25/00 07:51:13
TI	334.941	STD5A	STD1	1.68764	-.003628	05/25/00 07:51:13
TL	190.864	STD5A	STD1	57.9823	.020294	05/25/00 07:51:13
V	292.402	STD5A	STD1	6.45072	-.002580	05/25/00 07:51:13
ZN	213.856	STD5A	STD1	6.79418	-.002298	05/25/00 07:51:13



658 580

Michael Wentz 5-25-00

## Analysis Report

05/25/00 07:57:28 AM

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Method: QUANMET Sample Name: ICV2-1 0014-061-7 Operator: MTW  
 Run Time: 05/25/00 07:54:22  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem Units	AG ppm /	AL ppm /	AS ppm /	B ppm	BA ppm /	BE ppm /	CA ppm /
Avg	.50621	25.134	1.0054	1.0060	.99553	.98300	25.394
SDev	.00411	.110	.0054	.0105	.00745	.00495	.238
%RSD	.81127	.43906	.53783	1.0392	.74843	.50323	.93684
#1	.50852	25.184	.99824	1.0059	.99880	.98432	25.377
#2	.50545	25.235	1.0055	1.0053	1.0021	.98839	25.321
#3	.51011	24.980	1.0113	.99361	.98492	.98281	25.721
#4	.50078	25.139	1.0066	1.0192	.99634	.97647	25.155
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 Units	CD ppm /	CO ppm /	CR ppm /	CU ppm /	FE ppm /	K ppm /	LI ppm
Avg	1.0172	1.0048	1.0142	.98968	26.198	25.055	.98720
SDev	.0058	.0077	.0088	.00900	.103	.630	.03005
%RSD	.57314	.76658	.86422	.90947	.39388	2.5139	3.0439
#1	1.0136	1.0022	1.0144	.99348	26.216	25.109	.99123
#2	1.0121	1.0037	1.0156	.99855	26.227	25.338	1.0008
#3	1.0179	1.0157	1.0239	.97745	26.295	24.162	.94410
#4	1.0251	.99764	1.0026	.98924	26.052	25.612	1.0127
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 Units	MG ppm /	MN ppm /	MO ppm	NA ppm /	NI ppm /	PB ppm /	SB ppm
Avg	25.538	1.0103	.99227	25.213	1.0129	1.0533	1.0165
SDev	.150	.0066	.01692	.650	.0190	.0303	.0061
%RSD	.58594	.65278	1.7054	2.5795	1.8771	2.8731	.60119
#1	25.576	1.0116	.97051	25.324	1.0083	1.0631	1.0218
#2	25.733	1.0095	.99099	25.487	1.0128	1.0472	1.0114
#3	25.403	1.0180	1.0115	24.277	1.0382	1.0875	1.0217
#4	25.440	1.0020	.99609	25.766	.99238	1.0153	1.0110
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 Units	SE ppm /	SI ppm	SN ppm /	SR ppm	TI ppm	TL ppm	V ppm /
Avg	1.0502	1.0166	1.0233	.99253	.99039	4.9125	.99394
SDev	.0477	.0084	.0469	.00584	.00371	.0906	.00436
%RSD	4.5450	.82949	4.5809	.58798	.37437	1.8448	.43893
#1	1.0474	1.0047	.99987	.99585	.99241	4.9007	.99352
#2	1.0940	1.0225	.96926	.99798	.99376	5.0281	.99392

## Analysis Report

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#3	1.0749	1.0226	1.0697	.98475	.99005	4.8070	.99950
#4	.98464	1.0165	1.0544	.99154	.98533	4.9140	.98883
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	1.0034						
SDev	.0038						
%RSD	.38196						
#1	1.0052						
#2	1.0025						
#3	1.0074						
#4	.99849						
Errors	LC Pass						
High	1.1000						
Low	.90000						

Method: QUANMET Sample Name: ICB1

Operator: MTW

Run Time: 05/25/00 07:57:30

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00155	.00087	-.01827	-.00000	-.00017	.00004	-.00527
SDev	.00077	.00468	.00368	.00000	.00012	.00011	.00277
%RSD	49.563	537.17	20.134	32.673	70.711	273.39	52.520

#1	-.00040	.00779	-.01544	-.00000	-.00014	-.00010	-.00858
#2	-.00193	-.00257	-.01535	-.00000	-.00034	.00018	-.00310
#3	-.00193	-.00082	-.01923	-.00000	-.00006	.00004	-.00288
#4	-.00193	-.00091	-.02308	-.00000	-.00014	.00004	-.00652

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	-.00191	.00038	.00089	-.00084	-.00159	-.08690	-.00044
SDev	.00058	.00213	.00177	.00081	.00271	.21190	.00023
%RSD	30.281	558.49	198.45	95.953	170.20	243.84	52.444

#1	-.00180	-.00112	.00281	-.00148	-.00372	-.10354	-.00028
#2	-.00139	-.00112	.00044	-.00064	-.00372	-.09615	-.00064
#3	-.00273	.00339	.00163	.00021	.00195	.18489	-.00021
#4	-.00171	.00038	-.00133	-.00148	-.00088	-.33281	-.00064

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	.00131	-.00026	.00384	.00114	-.00234	.01395	.00254
SDev	.00987	.00061	.00418	.00466	.00532	.02945	.02007
%RSD	754.98	231.57	108.88	407.68	227.56	211.17	790.60

#1	-.00981	-.00080	.00384	-.00524	.00241	.02582	-.01319
#2	.00327	.00026	-.00128	.00124	-.00248	-.01395	.00786
#3	.01373	-.00079	.00384	.00581	-.00973	.04983	-.01322
#4	-.00196	.00027	.00896	.00276	.00045	-.00592	.02870

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	.00388	-.02383	.00820	.00006	.00000	.06381	-.00250
SDev	.02710	.00297	.02255	.00013	.00032	.02574	.00008
%RSD	698.82	12.483	275.12	200.00	378e6	40.340	3.1709

#1	-.01555	-.01937	.03323	.00000	.00008	.07834	-.00250
#2	.01164	-.02532	-.02125	.00000	-.00025	.08994	-.00260

#3	.03885	-.02532	.00703	.00025	-.00025	.05505	-.00250
#4	-.01942	-.02531	.01377	.00000	.00042	.03192	-.00241
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 -.00014  
SDev .00177  
%RSD 1271.2

#1 -.00015  
#2 -.00014  
#3 .00204  
#4 -.00230

Errors LC Pass  
High .02000  
Low -.02000

Method: QUANMET Sample Name: ICSA 0014-088-12 Operator: MTW  
 Run Time: 05/25/00 08:00:38  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00189	496.75	-.29602	-.03714	.00155	-.00004	483.52
SDev	.00207	1.66	.04890	.00569	.00020	.00007	2.41
%RSD	109.63	.33487	16.519	15.334	12.659	196.07	.49742

#1	.00052	496.37	-.28857	-.03031	.00176	.00003	485.92
#2	-.00265	495.01	-.23425	-.04146	.00157	-.00011	484.65
#3	-.00112	496.62	-.30932	-.03459	.00157	.00003	483.19
#4	-.00430	499.01	-.35193	-.04219	.00129	-.00010	480.32

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	.00164	.01168	-.00133	-.00515	183.65	-.15716	.00167
SDev	.00268	.00194	.00153	.00042	.32	.28074	.00054
%RSD	163.54	16.611	114.81	8.2411	.17648	178.63	32.457

#1	.00143	.01243	-.00192	-.00533	184.06	.23666	.00193
#2	.00039	.01393	.00044	-.00452	183.65	-.14792	.00230
#3	.00545	.01091	-.00074	-.00537	183.63	-.35500	.00135
#4	-.00071	.00943	-.00310	-.00540	183.27	-.36239	.00111

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	481.03	-.00109	.01082	.00514	-.00798	.07337	.02102
SDev	.63	.00062	.01028	.00263	.00997	.01779	.01794
%RSD	.13095	56.926	95.039	51.097	124.86	24.249	85.358

#1	480.77	-.00017	.02624	.00581	-.00958	.08143	-.00270
#2	480.29	-.00133	.00570	.00847	-.01542	.07436	.02889
#3	481.37	-.00137	.00569	.00238	-.01344	.08937	.03931
#4	481.71	-.00152	.00564	.00390	.00652	.04832	.01855

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	.34511	.06991	-.05387	.01332	-.02261	.55327	.00150
SDev	.07634	.00003	.02688	.00031	.00058	.03679	.00266
%RSD	22.121	.04846	49.889	2.2950	2.5490	6.6502	177.46

#1	.28446	.06993	-.01899	.01317	-.02185	.53164	.00308
#2	.35676	.06993	-.08440	.01317	-.02287	.51266	.00269

#3	.29064	.06993	-.05816	.01317	-.02253	.58252	.00269
#4	.44857	.06986	-.05396	.01378	-.02320	.58627	-.00248

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem    ZN ✓  
Units   ppm  
Avge    .00308  
SDev    .00245  
%RSD    79.580

#1	.00403
#2	.00385
#3	.00497
#4	-.00052

Errors	NOCHECK
Value	
Range	

Method: QUANMET Sample Name: ICSAB 0014-043-1 Operator: MTW  
 Run Time: 05/25/00 08:03:47  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61EP  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98792	498.78	Q.64369	.91298	.46489	.44256	482.91
SDev	.00239	1.48	.01969	.01120	.00104	.00179	1.69
%RSD	.24185	.29714	3.0582	1.2264	.22321	.40529	.34959
#1	.98895	498.46	Q.63167	.92016	.46530	.44138	481.37
#2	.99082	500.24	Q.62268	.92077	.46578	.44502	485.15
#3	.98597	499.58	Q.66415	.91420	.46510	.44273	481.88
#4	.98595	496.86	Q.65627	.89678	.46340	.44109	483.23
Errors	QC Pass	QC Pass	QC Fail	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	1.0031	.46028	.44416	.50137	183.64	9.9418	.97341
SDev	.0072	.00247	.00359	.00190	.56	.1173	.00724
%RSD	.71497	.53573	.80873	.37819	.30521	1.1799	.74410
#1	1.0119	.45725	.44106	.50196	183.17	9.8881	.97322
#2	1.0049	.46026	.44756	.50291	184.44	9.9621	.97846
#3	1.0006	.46329	.44697	.50200	183.56	9.8216	.97874
#4	.99493	.46030	.44105	.49860	183.38	10.095	.96324
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	480.12	.45763	.91339	10.074	.88197	1.0493	.93046
SDev	1.29	.00148	.00967	.081	.01302	.0593	.04453
%RSD	.26828	.32242	1.0583	.80749	1.4759	5.6468	4.7853
#1	479.33	.45618	.92740	10.080	.88400	.99379	.91722
#2	481.98	.45969	.91223	10.145	.87759	1.1042	.97997
#3	479.98	.45733	.90698	10.112	.86763	1.0968	.94882
#4	479.19	.45733	.90695	9.9586	.89868	1.0026	.87584
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	Q1.2257	1.0693	.87312	.92737	.88668	9.3712	.46233
SDev	.0612	.0379	.06318	.00288	.00253	.2755	.00290
%RSD	4.9901	3.5455	7.2365	.31012	.28550	2.9400	.62717
#1	Q1.2871	1.1228	.91827	.92708	.88643	9.4427	.46002
#2	Q1.2685	1.0574	.93407	.93012	.89014	9.7310	.46490

#3	1.1837	1.0633	.80280	.92880	.88609	9.1603	.45963
#4	1.1636	1.0336	.83736	.92348	.88407	9.1506	.46478
Errors	QC Fail	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 .95889  
SDev .00811  
%RSD .84544

#1 .95463  
#2 .97085  
#3 .95329  
#4 .95676

Errors QC Pass  
Value 1.0000  
Range 20.000



Method: QUANMET Sample Name: DDLFVB Operator: MTW  
 Run Time: 05/25/00 08:09:15  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	ARBA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00233	.02608	-.03098	.00002	-.00012	-.00005	.08819
SDev	.00076	.01797	.04311	.00001	.00036	.00007	.01912
%RSD	32.677	68.908	139.15	48.725	299.71	134.02	21.681

#1	-.00193	.05128	.02272	.00003	.00014	-.00009	.11422
#2	-.00196	.02520	-.02323	.00003	-.00062	.00005	.09075
#3	-.00196	.01833	-.04244	.00002	-.00014	-.00008	.07527
#4	-.00347	.00954	-.08099	.00001	.00014	-.00010	.07250

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
Avg	.00024	.00038	-.00074	-.00190	.01257	-.22742	-.00103
SDev	.00382	.00122	.00174	.00085	.00598	.13933	.00060
%RSD	1563.3	324.78	236.16	44.540	47.590	61.266	58.289

#1	.00201	.00187	.00103	-.00063	.01824	-.04437	-.00175
#2	-.00369	-.00112	-.00192	-.00232	.01611	-.36239	-.00101
#3	.00470	.00036	-.00251	-.00232	.01116	-.30323	-.00028
#4	-.00205	.00038	.00045	-.00232	.00478	-.19969	-.00110

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
Avg	.03269	-.00026	.00000	.00952	.00006	.01588	-.02878
SDev	.01996	.00061	.00490	.00379	.00529	.02865	.03020
%RSD	61.057	234.04	260770.	39.783	8787.7	180.44	104.94

#1	.06081	-.00079	-.00640	.01381	.00253	.00192	L-.06537
#2	.02943	.00027	.00384	.00809	-.00674	.00987	-.02364
#3	.01373	-.00079	-.00128	.01114	-.00111	-.00602	-.03400
#4	.02681	.00027	.00384	.00505	.00556	.05773	.00788

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
Avg	-.00384	.02224	-.00231	.00009	-.00042	-.01749	-.00516
SDev	.04349	.03187	.00813	.00024	.00019	.03941	.00296
%RSD	1133.2	143.29	351.31	283.07	46.188	225.30	57.258

#1	.05832	.03417	.00898	.00040	-.00025	.02011	-.00270
#2	-.04266	.04006	-.00174	.00015	-.00059	-.00300	-.00767

#3	-.01161	-.02538	-.00834	-.00010	-.00025	-.01456	-.00777
#4	-.01940	.04012	-.00815	-.00010	-.00059	-.07251	-.00251
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 .00398  
SDev .00098  
%RSD 24.538

#1 .00416  
#2 .00473  
#3 .00447  
#4 .00256

Errors LC Pass  
High .02000  
Low -.02000

Method: QUANMET Sample Name: DDLFVC

Operator: MTW

Run Time: 05/25/00 08:12:23

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B1	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04870	1.9855	1.9646	.98088	1.9324	.04992	42.536
SDev	.00194	.0129	.0315	.02033	.0120	.00017	.287
%RSD	3.9942	.65128	1.6032	2.0731	.61878	.34706	.67451
#1	.04678	2.0028	1.9510	1.0100	1.9420	.05013	42.545
#2	.04831	1.9715	1.9358	.96262	1.9293	.04985	42.255
#3	.04831	1.9838	1.9627	.97544	1.9415	.04972	42.416
#4	.05141	1.9837	2.0089	.97544	1.9167	.04998	42.928
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	.04761	.49581	.19829	.24324	1.0583	40.771	.95544
SDev	.00591	.00313	.00317	.00069	.0094	.406	.01442
%RSD	12.410	.63147	1.5965	.28447	.89024	.99470	1.5090
#1	.04526	.49506	.19652	.24324	1.0688	40.876	.96086
#2	.05260	.49204	.19652	.24239	1.0461	40.551	.95256
#3	.04034	.49657	.19711	.24409	1.0574	41.291	.97125
#4	.05224	.49956	.20302	.24325	1.0610	40.366	.93711
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	42.456	.50384	.00528	40.750	.51000	.54378	L-.01153
SDev	.140	.00265	.00490	.524	.01205	.02481	.01356
%RSD	.32956	.52697	92.864	1.2856	2.3629	4.5625	117.58
#1	42.629	.50464	.00400	41.018	.52105	.53979	L.00433
#2	42.287	.50039	.00912	40.614	.51058	.53172	L-.02723
#3	42.457	.50358	-.00112	41.285	.49310	.52391	L-.00644
#4	42.451	.50676	.00912	40.082	.51526	.57970	L-.01678
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	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	2.0157	.01213	-.00530	.97341	-.00228	2.0864	.48430
SDev	.0494	.00296	.01664	.00485	.00055	.0557	.00264
%RSD	2.4521	24.432	313.81	.49799	24.192	2.6704	.54454
#1	2.0429	.01657	-.02541	.97810	-.00295	2.0341	.48298
#2	2.0623	.01063	-.01247	.97075	-.00228	2.1503	.48308

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#3	1.9497	.01062	.00727	.97684	-.00228	2.1154	.48288
#4	2.0080	.01069	.00941	.96796	-.00160	2.0458	.48825
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 .51527  
SDev .00586  
%RSD 1.1375

#1 .50874  
#2 .51365  
#3 .51586  
#4 .52285

Errors LC Pass  
High .60000  
Low .40000

Method: QUANMET Sample Name: DDK1J (QC) Operator: MTW  
 Run Time: 05/25/00 08:15:36  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00448	-.00170	-.00598	.28514	.29196	.00001	134.06
SDev	.00147	.00413	.03134	.00002	.00159	.00007	.42
%RSD	32.756	242.98	523.66	.00830	.54341	1002.5	.31630
#1	-.00410	-.00427	-.01752	.28514	.29079	.00004	134.16
#2	-.00563	-.00432	.01329	.28518	.29384	.00004	134.57
#3	-.00564	.00437	-.04458	.28513	.29269	.00004	133.54
#4	-.00257	-.00258	.02488	.28512	.29051	-.00009	133.97
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	-.00111	.00137	-.00266	.00333	4.5998	5.1179	.02193
SDev	.00258	.00190	.00122	.00081	.0132	.1896	.00087
%RSD	232.80	138.24	45.869	24.318	.28737	3.7050	3.9580
#1	-.00020	.00175	-.00251	.00396	4.5986	4.9330	.02079
#2	-.00350	.00175	-.00251	.00227	4.6177	5.3028	.02285
#3	-.00286	.00325	-.00133	.00396	4.5972	5.2584	.02226
#4	.00212	-.00127	-.00429	.00311	4.5858	4.9774	.02183
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	26.310	.94480	.00197	105.99	-.00759	.01493	.00781
SDev	.130	.00219	.00296	1.47	.01054	.02546	.02569
%RSD	.49384	.23193	150.29	1.3848	138.92	170.47	328.97
#1	26.251	.94613	-.00059	104.44	.00095	.04082	.00787
#2	26.436	.94719	.00453	107.36	.00104	-.00691	.03927
#3	26.397	.94294	.00453	107.13	-.01179	-.00695	-.02366
#4	26.156	.94294	-.00059	105.04	-.02055	.03277	.00776
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	-.00843	7.4987	-.00452	.41486	-.00861	.03611	-.00255
SDev	.02164	.0156	.01662	.00192	.00042	.04116	.00006
%RSD	256.74	.20864	368.16	.46205	4.9345	113.99	2.3103
#1	-.01038	7.5061	.01022	.41413	-.00869	.01293	-.00260
#2	.01300	7.5002	-.00709	.41666	-.00869	.07072	-.00250

#3	-.03757	7.4764	.00571	.41616	-.00903	.07090	-.00250
#4	.00123	7.5121	-.02689	.41250	-.00802	-.01012	-.00260
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 .41555  
SDev .00280  
%RSD .67384

#1 .41790  
#2 .41519  
#3 .41738  
#4 .41174

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DDK1JP5 (QC) Operator: MTW  
Run Time: 05/25/00 08:18:44  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00097	-.00653	-.01467	.06344	.05924	-.00010	26.372
SDev	.00199	.00819	.02974	.02083	.00024	.00011	.071
%RSD	206.13	125.41	202.78	32.831	.40175	104.57	.27077
#1	-.00175	-.00433	.01429	.03874	.05936	-.00023	26.329
#2	.00135	.00087	.00644	.08813	.05936	-.00011	26.435
#3	-.00019	-.00442	-.03207	.06986	.05888	-.00011	26.430
#4	-.00327	-.01824	-.04733	.05705	.05936	.00003	26.294
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	-.00015	-.00040	-.00044	.00050	.92673	1.0410	.00449
SDev	.00151	.00260	.00102	.00042	.00547	.4421	.00040
%RSD	978.26	646.25	230.67	85.429	.59043	42.472	8.9492
#1	.00171	.00034	-.00074	.00029	.91859	.70999	.00414
#2	-.00158	.00185	.00103	.00113	.92850	1.6493	.00488
#3	-.00118	-.00416	-.00074	.00028	.92992	.71739	.00414
#4	.00043	.00035	-.00133	.00029	.92992	1.0872	.00479
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	5.1605	.19130	.00142	20.809	.00582	.00974	.00790
SDev	.0237	.00053	.00296	.418	.00190	.01454	.00857
%RSD	.45966	.27670	208.35	2.0082	32.662	149.22	108.39
#1	5.1429	.19156	.00398	21.038	.00592	.02567	-.00266
#2	5.1560	.19156	-.00114	20.338	.00520	-.00612	.00795
#3	5.1481	.19156	-.00114	20.598	.00381	.00168	.00799
#4	5.1952	.19050	.00398	21.262	.00835	.01774	.01833
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	.03349	1.4412	-.00196	.08364	-.00160	.02630	.00067
SDev	.01661	.0260	.03552	.00022	.00028	.05305	.00242
%RSD	49.598	1.8006	1808.7	.26802	17.189	201.76	360.32
#1	.01113	1.4262	.03127	.08397	-.00160	.03510	-.00250
#2	.04612	1.4323	-.01670	.08357	-.00127	.01175	.00256

#3	.03059	1.4798	-.04507	.08346	-.00160	.09296	.00256
#4	.04612	1.4263	.02264	.08357	-.00194	-.03462	.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 .08434  
SDev .00218  
%RSD 2.5892

#1 .08750  
#2 .08401  
#3 .08322  
#4 .08263

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: DDK1JS.(QC) Operator: MTW  
Run Time: 05/25/00 08:21:52  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04687	2.0280	2.0095	1.2650	2.2096	.04969	180.50
SDev	.00154	.0071	.0373	.0083	.0044	.00017	.76
%RSD	3.2781	.35213	1.8549	.65701	.20104	.33709	.42155
#1	.04610	2.0219	2.0491	1.2623	2.2128	.04972	180.45
#2	.04613	2.0358	1.9602	1.2582	2.2138	.04984	181.36
#3	.04607	2.0220	2.0222	1.2623	2.2074	.04973	179.52
#4	.04918	2.0322	2.0066	1.2771	2.2045	.04945	180.69
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
Avg	.04795	.49305	.19474	.24993	5.4749	51.617	1.0030
SDev	.00414	.00413	.00174	.00049	.0142	.744	.0044
%RSD	8.6307	.83665	.89368	.19598	.25922	1.4407	.43744
#1	.05149	.49492	.19475	.24951	5.4699	52.044	1.0002
#2	.05151	.49792	.19533	.25036	5.4954	52.111	1.0065
#3	.04501	.48893	.19238	.24950	5.4628	50.520	.99827
#4	.04377	.49043	.19652	.25035	5.4713	51.793	1.0069
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	73.215	1.4287	-.00046	150.72	.49348	.54670	.01456
SDev	.172	.0033	.00591	.57	.01519	.01838	.01199
%RSD	.23470	.23119	1281.0	.38095	3.0771	3.3616	82.358
#1	73.195	1.4271	.00466	150.91	.50306	.53085	.02505
#2	73.446	1.4335	-.00558	151.16	.48682	.56273	.00408
#3	73.190	1.4260	-.00558	149.87	.50861	.56250	.00427
#4	73.030	1.4282	.00466	150.92	.47541	.53072	.02484
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	1.9493	7.5331	-.01468	1.3753	-.01063	2.0576	.48289
SDev	.0408	.0381	.01443	.0033	.00051	.0361	.00422
%RSD	2.0923	.50621	98.314	.23802	4.7619	1.7531	.87341
#1	1.9347	7.5004	.00174	1.3755	-.01105	2.0519	.48299
#2	1.9698	7.5719	-.00708	1.3799	-.01038	2.0400	.48795

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#3	1.9930	7.5004	-.02455	1.3734	-.01105	2.0288	.47763
#4	1.8998	7.5599	-.02882	1.3725	-.01004	2.1099	.48299
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 .92177  
SDev .00479  
%RSD .51912

#1 .91950  
#2 .92853  
#3 .91754  
#4 .92151

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DDK1JD (QC) Operator: MTW  
Run Time: 05/25/00 08:24:59  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05726	2.3507	2.3253	1.4130	2.5043	.05765	182.12
SDev	.00126	.0122	.0361	.0123	.0041	.00019	1.25
%RSD	2.1953	.52059	1.5504	.87363	.16350	.33272	.68663
#1	.05573	2.3376	2.3726	1.4240	2.5067	.05765	181.37
#2	.05726	2.3429	2.3302	1.4081	2.5086	.05751	180.78
#3	.05727	2.3601	2.3107	1.3979	2.5024	.05751	182.91
#4	.05881	2.3620	2.2876	1.4221	2.4996	.05792	183.43
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
Avg	.05515	.57175	.22767	.28803	5.5823	54.492	1.1398
SDev	.00554	.00256	.00436	.00049	.0262	.582	.0195
%RSD	10.038	.44838	1.9134	.17001	.46940	1.0682	1.7088
#1	.05153	.56838	.22309	.28761	5.5761	54.633	1.1489
#2	.05007	.57289	.22486	.28845	5.5499	54.810	1.1583
#3	.06225	.57136	.23078	.28761	5.5910	54.891	1.1387
#4	.05676	.57438	.23196	.28846	5.6123	53.634	1.1132
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	76.149	1.4916	-.00173	150.19	.57730	.62628	.00253
SDev	.048	.0069	.00490	1.90	.02183	.03075	.01019
%RSD	.06317	.45933	284.14	1.2636	3.7806	4.9091	402.00
#1	76.177	1.4887	-.00045	151.10	.55206	.64410	-.00551
#2	76.130	1.4834	-.00557	151.98	.57884	.60445	.01574
#3	76.090	1.4961	.00468	150.08	.57320	.59640	-.00547
#4	76.198	1.4982	-.00556	147.59	.60510	.66018	.00539
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	2.2896	7.4003	.00657	1.5168	-.01029	2.4036	.56034
SDev	.0165	.0119	.02182	.0011	.00032	.0633	.00010
%RSD	.72237	.16076	332.32	.07326	3.1391	2.6328	.01718
#1	2.3119	7.4062	.00162	1.5174	-.01072	2.3399	.56036
#2	2.2924	7.4062	-.02012	1.5180	-.01038	2.4909	.56026

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#3	2.2770	7.3824	.03218	1.5156	-.01004	2.3862	.56047
#4	2.2770	7.4062	.01259	1.5162	-.01004	2.3975	.56027
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						
Avg	.99118						
SDev	.00095						
%RSD	.09592						
#1	.99016						
#2	.99063						
#3	.99225						
#4	.99166						
Errors	LC Pass						
High	100.00						
Low	-.02000						

Method: QUANMET Sample Name: DDKA2F Operator: MTW  
Run Time: 05/25/00 08:28:07  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00125	.01604	-.00803	.05708	.06519	-.00006	39.811
SDev	.00320	.01563	.01731	.00461	.00069	.00007	.118
%RSD	254.78	97.441	215.69	8.0838	1.0552	110.53	.29600
#1	.00258	.03213	-.00624	.06328	.06574	-.00010	39.982
#2	-.00509	-.00266	-.00982	.05436	.06582	-.00010	39.712
#3	-.00049	.02514	.01310	.05778	.06459	-.00010	39.786
#4	-.00203	.00956	-.02915	.05290	.06459	.00004	39.765
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	-.00200	.00073	.00015	.00330	1.6349	2.4295	.00025
SDev	.00233	.00309	.00267	.00109	.0084	.2693	.00017
%RSD	116.65	425.02	1774.5	33.061	.51311	11.084	66.832
#1	-.00098	.00335	.00163	.00457	1.6404	2.5515	.00040
#2	L- .00520	-.00264	-.00369	.00287	1.6418	2.5515	.00037
#3	-.00204	.00336	.00045	.00203	1.6340	2.0264	.00003
#4	.00024	-.00116	.00222	.00372	1.6234	2.5885	.00022
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	7.7120	2.3891	.00409	14.769	.00548	.00956	-.02354
SDev	.0581	.0080	.00418	.317	.00590	.03182	.01909
%RSD	.75400	.33348	102.37	2.1477	107.83	332.77	81.114
#1	7.7454	2.3992	.00409	14.644	.00995	-.00627	-.00255
#2	7.7768	2.3918	.00409	15.237	.00086	-.00646	-.03399
#3	7.6591	2.3833	.00921	14.530	.01117	-.00632	-.04443
#4	7.6669	2.3822	-.00104	14.667	-.00008	.05730	-.01318
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	-.02024	.86109	.00730	.03858	-.00270	.03138	-.00218
SDev	.04362	.02790	.01829	.00033	.00058	.06513	.00064
%RSD	215.51	3.2398	250.34	.86620	21.348	207.55	29.603
#1	-.00954	.84324	-.00133	.03853	-.00262	.08644	-.00250
#2	-.05226	.83136	-.00802	.03904	-.00329	-.00635	-.00122

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#3	-.05617	.88488	.00502	.03823	-.00194	.08642	-.00240
#4	.03701	.88488	.03355	.03853	-.00295	-.04100	-.00260

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	.01636
SDev	.00161
%RSD	9.8152

#1	.01730
#2	.01487
#3	.01515
#4	.01814

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDKA7F

Operator: MTW

Run Time: 05/25/00 08:31:14

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00075	.06844	-.00932	.05210	.04477	-.00004	30.532
SDev	.00147	.01056	.06064	.00640	.00037	.00008	.217
%RSD	196.16	15.426	650.62	12.284	.83437	191.22	.71193
#1	-.00190	.05623	-.02753	.05531	.04432	-.00011	30.285
#2	-.00037	.07540	.07639	.04250	.04460	.00003	30.608
#3	.00117	.07891	-.06626	.05530	.04508	-.00011	30.791
#4	-.00190	.06321	-.01988	.05531	.04508	.00003	30.443
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	-.00147	.00036	.00103	.00106	.02195	1.4976	.00108
SDev	.00210	.00174	.00251	.00069	.00089	.2998	.00057
%RSD	142.10	483.30	242.47	65.297	4.0621	20.021	53.168
#1	-.00082	-.00114	-.00015	.00021	.02178	1.2573	.00040
#2	-.00437	.00187	.00340	.00106	.02320	1.6862	.00083
#3	.00061	.00186	.00281	.00190	.02178	1.8194	.00143
#4	-.00133	-.00114	-.00192	.00106	.02107	1.2277	.00165
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	7.0784	.00133	.00384	10.055	.00789	.02784	.00792
SDev	.0582	.00000	.00418	.254	.00296	.01770	.01707
%RSD	.82240	.11801	108.77	2.5267	37.533	63.582	215.56
#1	7.0496	.00133	.00896	10.170	.00951	.03378	.00789
#2	7.0104	.00133	.00384	9.7053	.00418	.04184	.02883
#3	7.1229	.00133	-.00128	10.048	.00695	.03385	.00794
#4	7.1307	.00133	.00384	10.296	.01089	.00190	-.01299
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	-.00283	2.4034	-.00705	.12839	-.00143	.04614	.00266
SDev	.05338	.0341	.01040	.00117	.00019	.05787	.00008
%RSD	1884.6	1.4201	147.57	.91196	13.585	125.40	2.9552
#1	.06222	2.3544	.00059	.12738	-.00127	-.01472	.00275
#2	.01950	2.4079	-.01896	.12738	-.00127	.08961	.00266

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#3	-.04653	2.4198	-.01250	.12940	-.00160	.10122	.00256
#4	-.04653	2.4317	.00268	.12940	-.00160	.00848	.00265
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 .01003  
SDev .00167  
%RSD 16.662

#1 .00879  
#2 .01208  
#3 .00855  
#4 .01070

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: CCV2-1 0014-087-7 Operator: MTW  
 Run Time: 05/25/00 08:34:22  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0036	49.678	5.0112	4.9598	4.8757	4.9347	50.562
SDev	.0026	.218	.1157	.0104	.0313	.0115	.112
%RSD	.26059	.43816	2.3082	.20997	.64131	.23323	.22175

#1	1.0024	49.877	5.1425	4.9650	4.9097	4.9360	50.444
#2	1.0009	49.813	5.0736	4.9650	4.8888	4.9371	50.523
#3	1.0070	49.392	4.9038	4.9442	4.8364	4.9190	50.711
#4	1.0039	49.631	4.9248	4.9651	4.8678	4.9466	50.567

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	5.0618	4.9636	4.9540	4.9139	51.503	50.042	4.8260
SDev	.0060	.0050	.0103	.0271	.039	.846	.0857
%RSD	.11824	.09994	.20842	.55127	.07492	1.6908	1.7764

#1	5.0643	4.9628	4.9421	4.9331	51.499	50.483	4.8774
#2	5.0536	4.9629	4.9486	4.9331	51.505	51.016	4.9168
#3	5.0614	4.9584	4.9611	4.8756	51.457	49.337	4.7320
#4	5.0677	4.9704	4.9640	4.9137	51.551	49.330	4.7778

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	50.021	4.9568	4.9328	49.811	4.9717	5.0419	5.0356
SDev	.145	.0028	.0254	.770	.0277	.0582	.0657
%RSD	.28934	.05631	.51566	1.5464	.55614	1.1533	1.3053

#1	50.152	4.9528	4.9482	50.317	4.9841	5.0855	5.0254
#2	50.050	4.9591	4.9021	50.585	4.9626	5.0458	5.1089
#3	49.814	4.9570	4.9226	48.939	4.9381	5.0776	4.9516
#4	50.068	4.9581	4.9584	49.405	5.0022	4.9585	5.0566

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	5.1140	4.9933	5.0010	4.8729	4.9058	9.7687	4.9431
SDev	.0573	.0069	.0539	.0259	.0112	.1653	.0017
%RSD	1.1206	.13756	1.0785	.53189	.22794	1.6919	.03361

#1	5.0431	4.9874	4.9382	4.9004	4.9148	9.9717	4.9434
#2	5.1480	4.9993	5.0696	4.8841	4.9104	9.8325	4.9451

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#3	5.1711	4.9874	4.9925	4.8396	4.8895	9.6590	4.9430
#4	5.0938	4.9992	5.0038	4.8677	4.9084	9.6116	4.9411
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 4.9904  
SDev .0109  
%RSD .21751

#1 4.9762  
#2 4.9890  
#3 5.0018  
#4 4.9946

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB1

Operator: MTW

Run Time: 05/25/00 08:37:30

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00116	-.00662	.01068	-.00001	.00002	.00027	-.00099
SDev	.00199	.00589	.01924	.00000	.00024	.00013	.00218
%RSD	172.17	89.035	180.24	23.558	1133.3	48.723	220.38

#1	.00117	-.00449	-.00001	-.00001	.00014	.00016	.00119
#2	-.00193	-.00620	.03864	-.00000	.00014	.00045	-.00049
#3	-.00347	-.01483	-.00369	-.00001	-.00034	.00031	-.00402
#4	-.00040	-.00095	.00776	-.00001	.00014	.00018	-.00065

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
Avg	-.00107	.00038	-.00029	-.00084	-.00248	.03513	.00031
SDev	.00129	.00000	.00177	.00081	.00068	.15518	.00017
%RSD	120.83	.90654	607.46	95.763	27.395	441.73	56.722

#1	.00085	.00037	-.00074	-.00063	-.00301	.18489	.00046
#2	-.00198	.00038	-.00251	.00021	-.00159	.14052	.00016
#3	-.00151	.00038	.00045	-.00148	-.00301	-.14792	.00016
#4	-.00164	.00038	.00163	-.00148	-.00230	-.03698	.00046

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
Avg	.00654	.00000	.01536	.00381	.00183	.02191	.00250
SDev	.00392	.00053	.00256	.00190	.00333	.02942	.00605
%RSD	60.000	11831.	16.668	49.917	181.93	134.29	241.85

#1	.00327	-.00079	.01408	.00657	.00169	.00201	.00774
#2	.00850	.00027	.01920	.00238	-.00036	-.00595	.00773
#3	.01112	.00027	.01408	.00352	.00658	.03385	-.00268
#4	.00327	.00027	.01408	.00276	-.00059	.05772	-.00279

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
Avg	-.03205	-.02530	.01911	.00026	.00051	.01453	-.00099
SDev	.02183	.00003	.00917	.00023	.00042	.04686	.00256
%RSD	68.105	.12933	47.966	87.566	83.887	322.61	257.92

#1	-.01943	-.02525	.02459	.00015	.00042	.02030	.00285
#2	-.00777	-.02531	.00931	.00040	.00042	.07831	-.00221

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#3	-.05050	-.02531	.01363	.00000	.00008	-.01445	-.00231
#4	-.05050	-.02531	.02890	.00051	.00110	-.02605	-.00231

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	.00039
SDev	.00128
%RSD	326.31

#1	-.00149
#2	.00121
#3	.00063
#4	.00122

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDK9T

Operator: MTW

Run Time: 05/25/00 08:41:52

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

QNT

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00723	.00635	-.02131	.01139	.27885	.00003	S4114.5
SDev	.00148	.01071	.04650	.00172	.00511	.00000	2162.5
%RSD	20.455	168.72	218.22	15.115	1.8328	7.1176	52.558
#1	-.00917	-.00616	.03857	.01098	.28650	.00003	S7358.2
#2	-.00607	.00414	-.06177	.00977	.27623	.00003	S3033.2
#3	-.00607	.00761	-.00783	.01382	.27662	.00003	S3033.3
#4	-.00760	.01981	-.05419	.01099	.27603	.00003	S3033.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
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	.00144	.00083	-.00857	.01563	.00696	221.35	.00655
SDev	.00285	.00075	.00089	.00081	.00274	5.70	.00348
%RSD	197.84	90.443	10.344	5.1745	39.304	2.5732	53.160
#1	-.00198	.00046	-.00902	.01458	.00430	229.64	.00966
#2	.00056	.00046	-.00902	.01627	.00856	216.65	.00156
#3	.00475	.00044	-.00902	.01627	.00502	219.28	.00728
#4	.00245	.00196	-.00724	.01542	.00997	219.85	.00771
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	4.1647	5.4544	.01536	53.130	.00708	-.01191	.01599
SDev	.0489	.0396	.00490	1.482	.00852	.03920	.02325
%RSD	1.1750	.72667	31.913	2.7893	120.33	329.22	145.36
#1	4.2379	5.5062	.00896	55.288	-.00307	-.06167	.00811
#2	4.1359	5.4499	.01921	51.912	.00777	-.00593	.02908
#3	4.1411	5.4521	.01920	52.614	.01772	-.01388	.03960
#4	4.1437	5.4096	.01408	52.705	.00592	.03385	-.01282
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	-.00968	1.7223	-.00270	4.4547	L-.13661	.05093	.00254
SDev	.02116	.0396	.01248	.0713	.00158	.04931	.00073
%RSD	218.54	2.2974	461.60	1.5997	1.1588	96.820	28.747
#1	-.03494	1.7594	-.01201	4.5612	L-.13864	.08605	.00145
#2	-.00385	1.7535	-.01410	4.4186	L-.13594	.09727	.00293

#3	-.01552	1.6881	.00340	4.4266	L-.13493	-.00705	.00293
#4	.01557	1.6881	.01190	4.4124	L-.13695	.02744	.00284
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 .00603  
SDev .00093  
%RSD 15.388

#1 .00524  
#2 .00577  
#3 .00573  
#4 .00737

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DDLFVC RERUN CA,K Operator: MTW  
 Run Time: 05/25/00 08:45:05  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05064	1.9783	2.0108	.97455	1.9141	.05025	42.989
SDev	.00199	.0075	.0377	.02121	.0127	.00018	.196
%RSD	3.9317	.38083	1.8763	2.1763	.66321	.36242	.45526
#1	.05138	1.9683	1.9667	.97339	1.8981	.04999	42.965
#2	.05297	1.9770	2.0551	.96465	1.9127	.05037	43.270
#3	.04987	1.9822	1.9973	1.0045	1.9169	.05025	42.893
#4	.04833	1.9856	2.0243	.95570	1.9288	.05038	42.827
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	.05033	.50445	.20036	.23459	1.0541	L39.497	.91662
SDev	.00289	.00413	.00202	.00857	.0043	.421	.01418
%RSD	5.7472	.81833	1.0082	3.6541	.40462	1.0648	1.5474
#1	.04791	.49958	.20007	.22635	1.0511	L39.316	.90669
#2	.05415	.50857	.20124	.22805	1.0596	L39.013	.90288
#3	.05098	.50707	.20243	.24156	1.0553	L39.686	.92422
#4	.04827	.50257	.19770	.24240	1.0503	L39.974	.93269
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	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	42.167	.50702	-.00496	L39.272	.50050	.53012	L.00680
SDev	.274	.00219	.00256	.485	.01080	.01210	.03952
%RSD	.65018	.43170	51.590	1.2359	2.1571	2.2822	581.21
#1	41.782	.50463	-.00624	L38.872	.49506	.51600	L-.03778
#2	42.255	.50994	-.00624	L38.919	.50688	.54025	L.05653
#3	42.203	.50676	-.00112	L39.388	.48821	.54015	L.01448
#4	42.428	.50676	-.00624	L39.911	.51183	.52407	L-.00604
Errors	LC Pass	LC Pass	NOCHECK	LC Low	LC Pass	LC Pass	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	2.0507	.01515	-.01177	.96431	-.00169	2.0052	.48798
SDev	.0542	.00298	.03479	.00578	.00032	.0949	.00421
%RSD	2.6425	19.637	295.64	.59914	19.149	4.7344	.86375
#1	2.1206	.01657	-.00161	.95630	-.00160	1.9183	.48279
#2	2.0662	.01670	.01630	.96477	-.00194	1.9645	.49311

#3	2.0118	.01664	.00082	.96619	-.00127	1.9994	.48805	ob
#4	2.0040	.01069	-.06258	.96999	-.00194	2.1386	.48795	3
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	LC Pass	14.
High	2.4000					2.4000	.60000	
Low	1.6000					1.6000	.40000	#
Elem	ZN							
Units	ppm							
Avge	.51556							
SDev	.00432							
%RSD	.83704							
#1	.51050							
#2	.52081							
#3	.51431							
#4	.51663							
Errors	LC Pass							
High	.60000							
Low	.40000							



Method: QUANMET Sample Name: CCV2-2

Operator: MTW

Run Time: 05/25/00 08:48:19

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99961	49.485	4.9496	4.9648	4.8665	4.9279	50.218
SDev	.00678	.150	.0771	.0003	.0172	.0136	.263
%RSD	.67822	.30318	1.5577	.00565	.35263	.27548	.52438

#1	.98987	49.468	4.8540	4.9645	4.8716	4.9150	49.835
#2	1.0055	49.577	5.0217	4.9651	4.8762	4.9443	50.429
#3	1.0023	49.281	5.0016	4.9647	4.8410	4.9187	50.278
#4	1.0008	49.615	4.9213	4.9649	4.8771	4.9336	50.332

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	5.0250	4.9529	4.9316	4.9056	51.368	49.398	4.7983
SDev	.0314	.0150	.0192	.0154	.160	.353	.0422
%RSD	.62560	.30377	.38978	.31411	.31076	.71399	.87950

#1	4.9837	4.9376	4.9037	4.9162	51.182	49.389	4.8444
#2	5.0292	4.9600	4.9457	4.9078	51.539	49.078	4.7617
#3	5.0267	4.9435	4.9344	4.8832	51.296	49.234	4.7633
#4	5.0602	4.9704	4.9427	4.9154	51.455	49.892	4.8237

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	49.880	4.9390	4.9238	49.502	4.9396	4.9779	4.9963
SDev	.098	.0173	.0174	.414	.0432	.0321	.0262
%RSD	.19584	.35053	.35429	.83626	.87552	.64499	.52387

#1	49.843	4.9155	4.9072	49.900	4.8918	4.9576	4.9622
#2	49.953	4.9549	4.9226	49.183	4.9465	4.9820	4.9937
#3	49.759	4.9368	4.9174	49.109	4.9250	5.0216	5.0250
#4	49.966	4.9485	4.9482	49.818	4.9950	4.9505	5.0044

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	5.1417	4.9649	4.9785	4.8537	4.8878	9.7992	4.9274
SDev	.0202	.0458	.0555	.0151	.0132	.0950	.0144
%RSD	.39205	.92325	1.1152	.31158	.27058	.96946	.29306

#1	5.1585	4.8977	4.9096	4.8554	4.8774	9.8012	4.9077
#2	5.1598	4.9873	4.9992	4.8653	4.9027	9.9017	4.9403

#3	5.1239	4.9753	4.9645	4.8319	4.8760	9.6724	4.9260
#4	5.1245	4.9992	5.0407	4.8622	4.8952	9.8213	4.9357
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 4.9611  
SDev .0178  
%RSD .35915

#1 4.9356  
#2 4.9750  
#3 4.9624  
#4 4.9715

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB2 Operator: MTW  
Run Time: 05/25/00 08:51:27  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00040	-.00358	-.00378	-.00001	-.00034	.00014	-.00425
SDev	.00177	.00696	.01753	.00001	.00000	.00017	.00220
%RSD	447.29	194.17	463.72	95.859	.00000	120.49	51.789

#1	.00114	.00245	.00773	-.00001	-.00034	-.00010	-.00212
#2	-.00193	-.00451	.01165	.00000	-.00034	.00018	-.00733
#3	.00114	.00075	-.02695	-.00001	-.00034	.00031	-.00391
#4	-.00193	-.01303	-.00755	-.00001	-.00034	.00018	-.00364

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	-.00032	-.00075	-.00044	-.00106	-.00443	-.12388	.00002
SDev	.00106	.00355	.00123	.00084	.00116	.14648	.00072
%RSD	334.34	472.81	281.14	79.894	26.135	118.24	4420.2

#1	-.00164	-.00112	-.00014	.00021	-.00584	.05177	.00061
#2	-.00030	-.00563	.00104	-.00148	-.00442	-.22927	.00037
#3	-.00026	.00188	-.00192	-.00148	-.00301	-.25885	.00009
#4	.00094	.00188	-.00074	-.00148	-.00443	-.05917	-.00101

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	-.00131	.00000	.01536	.00581	-.00273	.01191	-.01062
SDev	.00447	.00102	.00490	.00218	.00726	.03065	.00995
%RSD	341.56	26250.	31.916	37.479	265.91	257.39	93.761

#1	.00327	.00027	.01920	.00847	-.00446	.00196	-.00282
#2	-.00196	-.00079	.01408	.00657	-.01098	.05755	-.01332
#3	-.00719	-.00079	.01920	.00467	-.00205	-.00592	-.00277
#4	.00065	.00133	.00896	.00352	.00657	-.00594	-.02356

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	-.05051	-.02531	.01305	.00016	.00034	.02616	-.00228
SDev	.04628	.00000	.00331	.00012	.00042	.05562	.00009
%RSD	91.636	.00474	25.371	73.105	125.83	212.61	4.1208

#1	-.01944	-.02531	.01581	.00025	.00042	-.03760	-.00221
#2	-.10100	-.02531	.00921	.00025	.00076	.06678	-.00231

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#3	-.00389	-.02531	.01581	.00000	.00042	-.00287	-.00221
#4	-.07769	-.02531	.01135	.00015	-.00025	.007833	-.00241

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	-.00068
SDev	.00136
%RSD	201.89

#1	.00122
#2	-.00203
#3	-.00094
#4	-.00096

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDLA7B

Operator: MTW

Run Time: 05/25/00 08:54:35

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BI	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00078	-.00955	-.02300	.00000	-.00029	-.00010	.02584
SDev	.00147	.00512	.03097	.00000	.00035	.00000	.00374
%RSD	188.41	53.606	134.64	60.084	122.73	.00885	14.467

#1	.00114	-.01478	-.01525	.00000	-.00014	-.00010	.02449
#2	-.00040	-.00260	.01548	.00000	.00014	-.00010	.03112
#3	-.00193	-.01129	-.03455	.00000	-.00062	-.00010	.02536
#4	-.00193	-.00955	-.05770	.00000	-.00053	-.00010	.02238

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	-.00105	-.00112	-.00133	-.00063	.00018	-.01849	-.00041
SDev	.00183	.00123	.00160	.00000	.00071	.15891	.00046
%RSD	173.78	109.06	120.59	.18309	402.44	859.45	112.97

#1	-.00280	-.00262	-.00192	-.00064	-.00018	-.11833	-.00043
#2	-.00172	.00038	.00104	-.00063	.00124	.17010	.00024
#3	-.00117	-.00112	-.00192	-.00063	-.00018	-.17750	-.00064
#4	.00149	-.00113	-.00251	-.00063	-.00018	.05177	-.00080

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	-.00392	-.00053	.00384	-.00076	-.00104	.01390	-.00529
SDev	.01357	.00053	.00000	.00240	.00750	.01897	.01780
%RSD	345.88	100.27	.00276	314.58	717.53	136.52	336.41

#1	.00589	-.00079	.00384	.00200	-.00731	.00195	.01818
#2	.00589	-.00079	.00384	-.00295	-.00622	.03384	-.00272
#3	-.02289	-.00079	.00384	-.00257	.00036	.02583	-.01311
#4	-.00458	.00027	.00384	.00048	.00899	-.00603	-.02352

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	-.01553	-.02383	.01144	.00000	-.00025	.01452	-.00251
SDev	.03416	.00297	.00892	.00000	.00028	.03606	.00000
%RSD	219.87	12.483	77.968	.00000	108.87	248.40	.12639

#1	-.00000	-.02532	.01809	.00000	-.00025	.05512	-.00251
#2	.02331	-.01937	.00272	.00000	.00008	-.00290	-.00250

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#3	-.03107	-.02532	.00485	.00000	.00025	.03191	-.00251
#4	-.05437	-.02532	.02008	.00000	.00059	-.02606	-.00251
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	.00175
SDev	.00040
%RSD	22.589

#1	.00179
#2	.00203
#3	.00201
#4	.00118

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDLA7C

Operator: MTW

Run Time: 05/25/00 08:57:43

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04563	1.9300	1.9998	.95333	1.9317	.04860	49.132
SDev	.00147	.0079	.0323	.00281	.0088	.00006	.242
%RSD	3.2291	.41124	1.6176	.29503	.45441	.12431	.49346
#1	.04522	1.9406	1.9901	.95024	1.9407	.04851	48.821
#2	.04679	1.9232	1.9979	.95571	1.9201	.04863	49.158
#3	.04371	1.9317	1.9669	.95572	1.9306	.04863	49.137
#4	.04679	1.9247	2.0441	.95166	1.9353	.04863	49.413
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
Avg	.04775	.48221	.19281	.24175	1.0376	48.524	.96706
SDev	.00439	.00398	.00353	.00106	.0025	1.356	.01941
%RSD	9.2010	.82629	1.8288	.43920	.23921	2.7952	2.0070
#1	.05335	.47844	.19090	.24322	1.0345	50.003	.98987
#2	.04568	.48748	.19208	.24154	1.0402	47.607	.94888
#3	.04883	.48296	.19799	.24154	1.0367	47.163	.95315
#4	.04315	.47997	.19030	.24069	1.0388	49.322	.97634
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
Avg	49.328	.49036	.97186	48.927	.48248	.52619	.48664
SDev	.093	.00219	.01254	.941	.01636	.01505	.01307
%RSD	.18757	.44697	1.2907	1.9230	3.3900	2.8609	2.6848
#1	49.411	.48797	.95650	50.068	.50254	.52409	.48424
#2	49.294	.49009	.96674	48.044	.47065	.51639	.48399
#3	49.213	.49010	.98210	48.278	.48900	.54809	.47356
#4	49.393	.49328	.98210	49.318	.46773	.51621	.50476
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
Avg	1.9554	9.6555	1.9662	.96912	.95849	1.9620	.48490
SDev	.0409	.0435	.0159	.00309	.00178	.0594	.00278
%RSD	2.0923	.45086	.80707	.31911	.18523	3.0295	.57421
#1	2.0117	9.6837	1.9859	.97162	.95697	1.9998	.48073
#2	1.9535	9.6183	1.9597	.96477	.95765	1.9300	.48609

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#3	1.9418	9.6183	1.9487	.96908	.95832	2.0229	.48640
#4	1.9147	9.7016	1.9707	.97100	.96102	1.8953	.48638
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	.49357						
SDev	.00398						
%RSD	.80738						
#1	.48785						
#2	.49534						
#3	.49416						
#4	.49695						
Errors	LC Pass						
High	.60000						
Low	.40000						



Method: QUANMET Sample Name: DDK90

Operator: MTW

Run Time: 05/25/00 09:00:51

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00138	7.0141	-.02262	.03153	.20787	.00020	38.091
SDev	.00077	.0121	.04665	.00686	.00064	.00008	.137
%RSD	55.540	.17236	206.20	21.748	.30566	38.628	.36001
#1	-.00177	7.0119	.02463	.03654	.20777	.00027	38.015
#2	-.00023	7.0257	-.01405	.03799	.20845	.00013	37.938
#3	-.00177	6.9981	-.08704	.02373	.20702	.00014	38.229
#4	-.00176	7.0207	-.01403	.02786	.20825	.00027	38.181
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	-.00177	-.00077	.00635	.01660	6.8685	4.1361	.00524
SDev	.00204	.00151	.00236	.00042	.0160	.1636	.00000
%RSD	115.37	196.25	37.227	2.5461	.23261	3.9565	.00000
#1	-.00300	-.00001	.00753	.01681	6.8575	4.0159	.00524
#2	.00024	-.00303	.00280	.01681	6.8710	3.9789	.00524
#3	-.00033	-.00002	.00753	.01597	6.8554	4.3117	.00524
#4	-.00397	-.00001	.00753	.01682	6.8901	4.2378	.00524
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	5.4960	.07984	.00359	1.1973	.01167	.02659	.00500
SDev	.0056	.00053	.00490	.0112	.00475	.02095	.01786
%RSD	.10281	.66679	136.66	.93445	40.723	78.792	357.54
#1	5.5012	.07957	.00487	1.1983	.01230	.03660	.02848
#2	5.4960	.08064	.00999	1.2085	.00841	.02848	-.01337
#3	5.4986	.07957	-.00026	1.2005	.01814	.04454	.00771
#4	5.4881	.07958	-.00025	1.1819	.00783	-.00326	-.00282
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	-.03995	14.923	.00559	.44206	.17838	.02511	.01298
SDev	.01463	.036	.02053	.00160	.00175	.04285	.00009
%RSD	36.634	.24221	367.07	.36082	.98167	170.66	.69833
#1	-.02931	14.931	.03190	.44034	.17627	.04261	.01301
#2	-.06033	14.954	.00987	.44334	.17965	-.03868	.01310

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#3	-.02931	14.937	-.00313	.44106	.17762	.04263	.01291
#4	-.04084	14.871	-.01627	.44349	.17999	.05387	.01291

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	-.25000	-.05000

Elem	ZN
Units	ppm
Avge	.04907
SDev	.00177
%RSD	3.5979

#1	.04885
#2	.04670
#3	.04995
#4	.05078

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDK90P5 Operator: MTW  
Run Time: 05/25/00 09:03:59  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT\_JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00004	1.4046	.00950	.00268	.04139	-.00004	7.7222
SDev	.00217	.0030	.03376	.00001	.00024	.00008	.0339
%RSD	5364.0	.21486	355.46	.20378	.57500	191.00	.43889
#1	-.00158	1.4002	.03267	.00268	.04175	-.00011	7.6977
#2	-.00004	1.4071	.02104	.00269	.04127	.00003	7.7566
#3	.00303	1.4055	-.04062	.00268	.04127	-.00011	7.7457
#4	-.00158	1.4055	.02491	.00268	.04127	.00003	7.6890
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	-.00126	-.00008	.00370	.00370	1.3965	.83572	-.00015
SDev	.00300	.00256	.00267	.00000	.0032	.21341	.00017
%RSD	238.68	3364.5	72.175	.06706	.22870	25.536	109.03
#1	-.00047	-.00121	.00399	.00370	1.3919	.56208	-.00021
#2	-.00034	-.00271	.00518	.00370	1.3969	1.0798	-.00028
#3	.00136	.00330	.00577	.00371	1.3990	.88010	.00009
#4	L-.00558	.00031	-.00015	.00370	1.3983	.82093	-.00021
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	1.0979	.01603	.00533	.23422	-.00417	.00492	-.00018
SDev	.0034	.00061	.00490	.00601	.00419	.01525	.01012
%RSD	.30756	3.8282	91.985	2.5654	100.47	310.13	5703.7
#1	1.0992	.01550	.00917	.24079	-.00952	.00089	-.01341
#2	1.0940	.01656	.00917	.23584	-.00109	.01679	.00764
#3	1.0966	.01656	.00405	.22632	-.00549	.01695	-.00278
#4	1.1018	.01550	-.00107	.23394	-.00058	-.01497	.00784
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	-.02305	3.0206	.01214	.08841	.03578	.02334	.00269
SDev	.02296	.0000	.02794	.00043	.00064	.08118	.00010
%RSD	99.576	.00000	230.15	.48208	1.7858	347.81	3.6664
#1	-.02987	3.0206	.04646	.08889	.03620	-.00560	.00277
#2	-.04538	3.0206	.02037	.08798	.03485	.11033	.00277

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#3	.00900	3.0206	.00067	.08813	.03620	.06388	.00267
#4	-.02596	3.0206	-.01893	.08864	.03586	-.07525	.00256

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	.01026
SDev	.00170
%RSD	16.539

#1	.01142
#2	.00844
#3	.01197
#4	.00923

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDK90S

Operator: MTW

Run Time: 05/25/00 09:07:07

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04561	9.9358	1.9474	.95688	2.0708	.04715	84.288
SDev	.00194	.0317	.0689	.00216	.0085	.00011	.491
%RSD	4.2509	.31953	3.5375	.22578	.41276	.23139	.58243
#1	.04367	9.9144	1.9111	.95432	2.0726	.04702	83.670
#2	.04525	9.9783	2.0029	.95869	2.0794	.04714	84.414
#3	.04522	9.9417	1.8684	.95865	2.0720	.04715	84.216
#4	.04830	9.9089	2.0074	.95586	2.0590	.04729	84.854
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	.04287	.46811	.19977	.25641	7.5233	51.767	.94083
SDev	.00259	.00605	.00324	.00155	.0253	.964	.01675
%RSD	6.0291	1.2936	1.6223	.60317	.33615	1.8616	1.7805
#1	.04050	.47525	.19503	.25810	7.4932	52.222	.94921
#2	.04579	.47072	.20213	.25726	7.5435	52.784	.95551
#3	.04091	.46173	.20036	.25556	7.5116	51.512	.94137
#4	.04430	.46473	.20154	.25472	7.5449	50.550	.91725
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	53.217	.54884	.95747	48.769	.48105	.51414	.46822
SDev	.180	.00202	.01107	.766	.00476	.00808	.02631
%RSD	.33898	.36775	1.1556	1.5714	.98999	1.5720	5.6182
#1	53.225	.54591	.94210	49.151	.48365	.51829	.44216
#2	53.468	.55017	.95747	49.503	.48600	.51816	.46295
#3	53.110	.54911	.96771	48.688	.47525	.50202	.46294
#4	53.065	.55018	.96259	47.734	.47929	.51809	.50484
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	1.8976	H24.466	1.9179	1.3574	1.0522	1.9274	.48173
SDev	.0372	.056	.0417	.0043	.0027	.1098	.00292
%RSD	1.9595	.22857	2.1719	.31430	.25797	5.6992	.60561
#1	1.9111	H24.396	1.9538	1.3571	1.0491	1.8638	.47917
#2	1.8569	H24.532	1.9539	1.3625	1.0555	1.8054	.48593

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#3	1.8801	H24.467	1.8775	1.3581	0.0511	2.0145	
#4	1.9423	H24.467	1.8865	1.3521	0.0528	2.0258	.48096
							.48087
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 .52314  
SDev .00202  
%RSD .38701

#1 .52413  
#2 .52415  
#3 .52010  
#4 .52416

Errors LC Pass  
High 100.00  
Low -.02000

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## Analysis Report

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Method: QUANMET Sample Name: DDK90D  
Run Time: 05/25/00 09:10:20  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Operator: MTW

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04807	10.439	1.9753	.97676	2.1210	.04870	87.465
SDev	.00318	.071	.0367	.02196	.0196	.00035	.450
%RSD	6.6089	.68238	1.8556	2.2486	.92182	.72345	.51434
#1	.04997	10.339	1.9300	.95630	2.0949	.04819	87.472
#2	.05156	10.436	2.0138	.99648	2.1172	.04899	88.089
#3	.04538	10.493	1.9941	.99300	2.1360	.04874	87.056
#4	.04538	10.486	1.9634	.95924	2.1360	.04887	87.241
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
Avg	.04333	.48369	.20435	.26553	7.8399	52.477	.95122
SDev	.00447	.00430	.00346	.00223	.0387	.963	.02591
%RSD	10.326	.88814	1.6947	.83898	.49388	1.8355	2.7241
#1	.04424	.47809	.20627	.26235	7.7868	52.000	.93180
#2	.04419	.48707	.20627	.26575	7.8796	51.541	.92760
#3	.04779	.48705	.19917	.26744	7.8484	53.767	.98149
#4	.03712	.48257	.20568	.26655	7.8449	52.599	.96399

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	54.418	.56618	.98312	49.326	.48586	.55807	.50983
SDev	.415	.00230	.01724	1.075	.00786	.01456	.02501
%RSD	.76261	.40663	1.7537	2.1793	1.6184	2.6084	4.9057

#1	53.866	.56404	.97799	48.420	.48837	.56596	.52559
#2	54.355	.56937	.98825	48.476	.49042	.57410	.52548
#3	54.823	.56617	.96264	50.641	.49049	.54221	.51522
#4	54.627	.56512	1.0036	49.767	.47415	.55001	.47303

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	1.9725	H26.532	1.9462	1.3968	1.1503	2.0341	.49804
SDev	.0850	.153	.0288	.0113	.0060	.0646	.00267
%RSD	4.3087	.57810	1.4816	.80959	.52401	3.1748	.53599

#1	1.8617	H26.305	1.9300	1.3810	1.1413	1.9419	.49665
#2	1.9902	H26.567	1.9757	1.3964	1.1538	2.0453	.50201

#3	2.0677	H26.633	1.9648	1.4044	1.1531	2.0572	.49634
#4	1.9706	H26.621	1.9144	1.4056	1.1531	2.0921	.49715
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 .52938  
SDev .00209  
%RSD .39411

#1 .52630  
#2 .53013  
#3 .53010  
#4 .53096

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: CCV2-3

Operator: MTW

Run Time: 05/25/00 09:13:32

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_m	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0104	49.693	5.0628	5.0124	4.8740	4.9779	51.098
SDev	.0022	.224	.0798	.0065	.0228	.0154	.214
%RSD	.22149	.45177	1.5761	.12918	.46721	.30924	.41901
#1	1.0104	49.960	5.1713	5.0072	4.9013	4.9859	50.977
#2	1.0072	49.784	4.9999	5.0208	4.8807	4.9548	50.859
#3	1.0120	49.577	5.0742	5.0074	4.8671	4.9865	51.251
#4	1.0119	49.452	5.0059	5.0143	4.8472	4.9842	51.304
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	5.0938	5.0105	5.0050	4.9106	51.956	49.086	4.7226
SDev	.0154	.0124	.0144	.0273	.118	1.234	.1203
%RSD	.30243	.24667	.28747	.55495	.22788	2.5145	2.5476
#1	5.0774	5.0214	4.9959	4.9366	51.961	50.247	4.8013
#2	5.1048	4.9928	4.9900	4.9281	51.788	50.025	4.8417
#3	5.0842	5.0124	5.0131	4.9011	52.025	48.294	4.6652
#4	5.1089	5.0153	5.0208	4.8766	52.051	47.777	4.5821
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	50.127	5.0031	4.9738	49.029	5.0198	5.0968	5.0461
SDev	.112	.0113	.0293	1.020	.0218	.0189	.0306
%RSD	.22425	.22625	.58871	2.0810	.43489	.37050	.60611
#1	50.267	5.0039	4.9841	49.866	5.0470	5.0710	5.0046
#2	50.133	4.9868	4.9431	49.913	5.0273	5.0943	5.0568
#3	50.115	5.0113	4.9585	48.452	4.9987	5.1109	5.0773
#4	49.992	5.0103	5.0097	47.886	5.0061	5.1110	5.0456
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	5.1885	5.0414	5.0366	4.8732	4.9249	9.8332	4.9792
SDev	.0633	.0357	.0354	.0181	.0091	.1016	.0088
%RSD	1.2195	.70718	.70264	.37094	.18551	1.0331	.17737
#1	5.1497	4.9879	4.9839	4.8964	4.9357	9.7113	4.9842
#2	5.1723	5.0591	5.0519	4.8753	4.9138	9.7945	4.9666

#3	5.1499	5.0593	5.0498	4.8684	4.9273	9.9427	4.9863
#4	5.2820	5.0592	5.0606	4.8528	4.9229	9.8844	4.9796
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 5.0154  
SDev .0153  
%RSD .30586

#1 5.0138  
#2 4.9951  
#3 5.0316  
#4 5.0211

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB3

Operator: MTW

Run Time: 05/25/00 09:16:40

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00231	-.00185	-.01249	-.00000	.00002	.00038	-.00372
SDev	.00194	.01012	.02146	.00000	.00033	.00023	.00511
%RSD	83.688	547.46	171.88	280.78	1571.5	62.151	137.40

#1	-.00501	-.00449	-.02690	-.00000	-.00034	.00004	-.01097
#2	-.00191	-.01319	.01936	-.00001	.00042	.00044	-.00223
#3	-.00040	.01123	-.02318	.00000	.00014	.00058	.00103
#4	-.00193	-.00095	-.01922	.00000	-.00014	.00045	-.00272

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	.00073	-.00150	.00119	-.00085	-.00248	-.20708	-.00013
SDev	.00225	.00225	.00257	.00106	.00286	.43141	.00048
%RSD	307.29	149.72	216.63	125.81	115.26	208.33	369.53

#1	.00170	-.00413	-.00133	-.00233	-.00585	-.73958	-.00064
#2	.00345	.00037	.00459	.00021	-.00372	.23666	-.00036
#3	-.00129	.00038	.00163	-.00063	.00053	.02958	.00003
#4	-.00093	-.00263	-.00014	-.00064	-.00089	-.35500	.00046

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	.00327	-.00026	.01280	.00038	.00573	.01387	-.01838
SDev	.01227	.00106	.00490	.00225	.00435	.02481	.01343
%RSD	375.23	405.25	38.296	590.90	75.796	178.90	73.080

#1	-.01504	-.00079	.01408	-.00295	.01015	-.00613	-.03399
#2	.00850	-.00079	.01920	.00124	.00410	.04977	-.00277
#3	.01112	.00133	.00896	.00200	.00826	.00196	-.02355
#4	.00850	-.00079	.00896	.00124	.00043	.00986	-.01319

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	-.00389	-.02530	.00864	.00044	.00008	.00294	-.00136
SDev	.04563	.00003	.01501	.00013	.00055	.02223	.00202
%RSD	1172.2	.10202	173.65	28.571	653.20	754.72	148.39

#1	-.05051	-.02531	-.00834	.00025	-.00059	.02040	-.00231
#2	.00775	-.02526	.02236	.00051	.00008	-.02607	.00167

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#3	.05438	-.02531	.00043	.00051	.00076	.02031	-.00240
#4	-.02719	-.02531	.02013	.00051	.00008	-.00286	-.00241
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 .00044  
 SDev .00168  
 %RSD 382.81

#1 -.00153  
 #2 .00009  
 #3 .00254  
 #4 .00065

Errors LC Pass  
 High .02000  
 Low -.02000

Method: QUANMET Sample Name: DDL6CB

Operator: MTW

Run Time: 05/25/00 09:38:49

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00116	-.00038	.00100	.00001	-.00007	.00001	.02652
SDev	.00266	.00986	.03359	.00001	.00021	.00007	.00279
%RSD	228.64	2564.8	3343.8	68.698	303.75	991.91	10.520
#1	.00114	.00785	.04623	.00001	.00006	.00004	.02840
#2	-.00040	.00265	.00002	.00000	.00014	-.00010	.02906
#3	-.00501	-.01471	-.03453	.00001	-.00034	.00004	.02297
#4	-.00040	.00267	-.00769	.00001	-.00014	.00004	.02563
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
Avg	.00013	.00113	-.00148	-.00084	.00531	-.07950	-.00029
SDev	.00136	.00194	.00057	.00042	.00168	.20040	.00028
%RSD	1010.5	172.41	38.344	50.126	31.549	252.07	95.701
#1	.00132	.00037	-.00074	-.00148	.00762	-.05177	.00003
#2	-.00055	.00338	-.00133	-.00063	.00407	.07396	-.00034
#3	.00122	-.00113	-.00192	-.00063	.00407	.02958	-.00021
#4	-.00145	.00188	-.00192	-.00063	.00549	-.36979	-.00064
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
Avg	-.00131	-.00053	.00000	.00914	-.00058	.01396	.00263
SDev	.01054	.00053	.00256	.00514	.00508	.01889	.02769
%RSD	806.23	100.40	322280.	56.250	869.90	135.26	1054.7
#1	.01373	-.00079	-.00128	.01342	.00097	.00205	.03928
#2	-.00719	.00027	.00384	.01228	-.00424	.00209	.00778
#3	-.00196	-.00079	-.00128	.00200	-.00498	.04174	-.02356
#4	-.00981	-.00079	-.00128	.00885	.00592	.00998	-.01300
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
Avg	-.02134	-.02383	-.00326	.00000	-.00008	.04634	-.00258
SDev	.04804	.00297	.00932	.00000	.00065	.07712	.00005
%RSD	225.08	12.482	285.86	.00000	765.94	166.43	1.9228
#1	-.08542	-.01937	-.01019	.00000	.00076	.11300	-.00261
#2	.01555	-.02532	.00932	.00000	-.00059	.08982	-.00251

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#3	-.03106	-.02532	-.01048	.00000	-.00059	-.06090	-.00261
#4	.01556	-.02532	-.00170	.00000	.00008	.04343	-.00261
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	.01024
SDev	.00225
%RSD	21.913

#1	.00800
#2	.00882
#3	.01290
#4	.01126

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDL6CC

Operator: MTW

Run Time: 05/25/00 09:41:57

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04796	1.9415	1.9899	.96488	1.9379	.04899	50.082
SDev	.00148	.0115	.0570	.01923	.0052	.00019	.265
%RSD	3.0773	.59061	2.8667	1.9935	.26707	.39905	.52997
#1	.04833	1.9386	2.0170	.95431	1.9363	.04876	49.746
#2	.04989	1.9436	2.0554	.95577	1.9380	.04915	50.336
#3	.04682	1.9558	1.9589	.95574	1.9448	.04915	50.247
#4	.04679	1.9282	1.9284	.99372	1.9325	.04890	49.999
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	.04204	.48745	.19843	.24260	1.0543	48.501	.95249
SDev	.00275	.00535	.00387	.00081	.0055	.725	.01613
%RSD	6.5376	1.0973	1.9523	.33498	.52567	1.4939	1.6934
#1	L.03829	.48747	.19267	.24323	1.0495	49.396	.97192
#2	.04402	.47993	.20094	.24154	1.0587	47.644	.93356
#3	.04417	.49195	.19976	.24324	1.0594	48.346	.94754
#4	.04168	.49047	.20036	.24239	1.0495	48.620	.95696
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	49.926	.49594	.99619	48.846	.49666	.52435	.49697
SDev	.126	.00221	.00490	.708	.00925	.00933	.01784
%RSD	.25206	.44589	.49225	1.4502	1.8626	1.7797	3.5891
#1	49.780	.49329	.99235	49.629	.49815	.51636	.47353
#2	50.010	.49860	.99747	47.918	.49406	.51618	.49421
#3	50.050	.49648	1.0026	48.815	.50833	.53244	.50488
#4	49.864	.49541	.99235	49.022	.48610	.53243	.51527
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	2.0244	9.8429	2.0006	.97512	.97630	1.9531	.48925
SDev	.0448	.0676	.0279	.00233	.00401	.0613	.00307
%RSD	2.2122	.68642	1.3940	.23862	.41040	3.1389	.62745
#1	2.0468	9.7492	1.9901	.97354	.97149	1.8720	.48658
#2	2.0041	9.8980	2.0339	.97582	.97925	1.9879	.49186

#3	2.0740	9.8385	2.0099	.97810	.97993	2.0110	.49196
#4	1.9730	9.8860	1.9685	.97303	.97453	1.9415	.48660
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 .50243  
SDev .00284  
%RSD .56472

#1 .49820  
#2 .50368  
#3 .50362  
#4 .50424

Errors LC Pass  
High .60000  
Low .40000



Method: QUANMET Sample Name: DD3QM

Operator: MTW

Run Time: 05/25/00 09:45:05

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00265	.01985	-.02641	.01090	.04193	-.00003	38.829
SDev	.00090	.01012	.02807	.00476	.00028	.00007	.112
%RSD	34.045	50.964	106.28	43.711	.67293	205.17	.28771
#1	-.00187	.02851	-.06218	.01070	.04194	.00003	38.801
#2	-.00187	.02855	-.00051	.01759	.04155	.00003	38.917
#3	-.00343	.00945	-.00797	.00663	.04203	-.00010	38.916
#4	-.00343	.01290	-.03498	.00867	.04222	-.00010	38.683
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
Avg	-.00280	-.00076	.00429	.00234	.17124	.97439	.00982
SDev	.00133	.00334	.00515	.00085	.00058	.38327	.00092
%RSD	47.476	437.70	119.93	36.248	.33804	39.334	9.3612
#1	-.00227	-.00264	-.00074	.00276	.17125	1.0946	.01113
#2	-.00392	.00337	.00872	.00276	.17054	1.3534	.00919
#3	-.00384	.00037	.00873	.00276	.17124	1.0058	.00977
#4	-.00117	-.00415	.00045	.00107	.17195	.44375	.00919
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	14.800	.00722	.00899	5.0266	.00630	.02782	.01566
SDev	.052	.00061	.00418	.0814	.00526	.01646	.02622
%RSD	.34932	8.4739	46.524	1.6201	83.470	59.162	167.47
#1	14.776	.00774	.00387	5.0349	.00968	.04173	.04976
#2	14.739	.00775	.00899	4.9115	-.00154	.04182	-.01319
#3	14.828	.00669	.01411	5.1012	.00871	.01791	.01823
#4	14.855	.00669	.00899	5.0586	.00834	.00980	.00783
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	.00548	4.3071	.00393	1.2530	-.00186	.03597	.00018
SDev	.03494	.0331	.00428	.0077	.00058	.04489	.00292
%RSD	637.41	.76859	108.76	.61781	31.051	124.82	1604.8
#1	-.01491	4.3294	.00955	1.2515	-.00127	.08815	.00265
#2	.05500	4.3235	.00052	1.2434	-.00194	.05332	.00277

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#3	-.02268	4.3175	.00067	1.2551	-.00262	.01858	-.00229
#4	.00451	4.2580	.00499	1.2620	-.00160	-.01618	-.00241
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 .07469  
 SDev .00137  
 %RSD 1.8298

#1 .07511  
 #2 .07267  
 #3 .07565  
 #4 .07534

Errors LC Pass  
 High 100.00  
 Low -.02000

Method: QUANMET Sample Name: DD3QN

Operator: MTW

Run Time: 05/25/00 09:48:13

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00202	71.913	-.01073	.31870	.96663	.00345	93.533
SDev	.00194	.145	.01662	.02494	.00261	.00008	.161
%RSD	95.905	.20120	154.86	7.8267	.26970	2.2572	.17239
#1	.00165	71.847	-.02663	.30660	.96711	.00352	93.746
#2	.00007	71.845	.00832	.30625	.96568	.00339	93.447
#3	.00166	72.130	-.00210	.35611	.96997	.00352	93.377
#4	.00470	71.830	-.02252	.30583	.96378	.00339	93.564
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	-.00068	.04893	.10477	.06819	109.92	13.586	.12650
SDev	.00268	.00123	.00184	.00001	.11	.162	.00210
%RSD	392.84	2.5229	1.7545	.01187	.09874	1.1935	1.6602
#1	-.00149	.04894	.10624	.06820	109.97	13.675	.12545
#2	-.00090	.04894	.10506	.06818	109.79	13.741	.12545
#3	.00301	.04742	.10211	.06820	110.04	13.556	.12965
#4	-.00335	.05044	.10565	.06819	109.89	13.372	.12545
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	48.928	1.0546	.01132	31.526	.07993	.12588	.01818
SDev	.182	.0009	.00257	.173	.01537	.01008	.03735
%RSD	.37120	.08483	22.732	.54941	19.231	8.0070	205.48
#1	48.815	1.0546	.01004	31.425	.08676	.12389	-.00271
#2	48.849	1.0535	.01002	31.520	.07834	.13983	-.01330
#3	49.200	1.0557	.01517	31.772	.05933	.11574	.01804
#4	48.849	1.0546	.01003	31.387	.09527	.12405	.07068
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	.18821	H74.496	.00943	.25055	.32462	.05832	.11654
SDev	.06537	.142	.02729	.00067	.00089	.09479	.00005
%RSD	34.730	.19082	289.58	.26609	.27509	162.52	.03964
#1	.26606	H74.499	.01807	.25049	.32445	.10712	.11652
#2	.18384	H74.380	.04418	.25023	.32344	.13218	.11651

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#3	.19642	H74.696	-.01456	.25150	.32512	-.07915	.11661
#4	.10653	H74.410	-.00998	.24998	.32546	.07314	.11652
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 .28639  
SDev .00254  
%RSD .88596

#1 .28968  
#2 .28349  
#3 .28624  
#4 .28614

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QQ

Operator: MTW

Run Time: 05/25/00 09:51:26

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00093	25.207	.04032	.04037	.29396	.00127	37.232
SDev	.00333	.107	.03204	.01000	.00184	.00011	.321
%RSD	358.97	.42321	79.452	24.776	.62535	8.6701	.86249
#1	.00085	25.115	.07814	.04077	.29289	.00141	36.884
#2	.00251	25.216	.04583	.04361	.29336	.00126	37.443
#3	.00403	25.144	.00021	.05044	.29289	.00126	37.560
#4	-.00368	25.354	.03711	.02666	.29670	.00114	37.041
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	.00131	.02165	.03014	.03061	44.395	5.7336	.08158
SDev	.00316	.00151	.00228	.00081	.199	.2441	.00257
%RSD	241.25	6.9598	7.5748	2.6367	.44882	4.2578	3.1510
#1	.00214	.02090	.03117	.03080	44.097	5.8205	.08368
#2	.00534	.02089	.03235	.02998	44.522	5.6652	.07935
#3	-.00190	.02391	.02999	.03167	44.485	6.0128	.07935
#4	-.00034	.02091	.02703	.02998	44.475	5.4359	.08392
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	23.937	1.4784	-.00104	46.801	.02993	.03508	.02085
SDev	.097	.0078	.00647	.553	.00787	.03256	.01979
%RSD	.40400	.52924	620.52	1.1806	26.311	92.810	94.914
#1	23.876	1.4675	-.01005	47.318	.03380	.03516	.00783
#2	23.996	1.4835	.00026	46.482	.03636	.03501	.00782
#3	23.836	1.4846	.00537	46.188	.01859	.07496	.01812
#4	24.040	1.4782	.00025	47.215	.03096	-.00480	.04962
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	.06131	H38.886	.00393	.07870	.21686	.02776	.04681
SDev	.03265	.120	.00697	.00047	.00175	.05374	.00273
%RSD	53.248	.30833	177.49	.60328	.80749	193.57	5.8384
#1	.08352	H38.739	.00600	.07850	.21475	-.04459	.04502
#2	.06177	H38.906	-.00266	.07839	.21846	.07865	.04909

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#3	.08494	H38.870	-.00044	.07850	.21813	.02103	.04919
#4	.01499	H39.031	.01281	.07940	.21610	.05595	.04392
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 .10041  
SDev .00173  
%RSD 1.7270

#1 .09798  
#2 .10091  
#3 .10208  
#4 .10067

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QR

Operator: MTW

Run Time: 05/25/00 09:54:39

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00116	-.00306	-.01636	.00008	-.00003	-.00006	.02710
SDev	.00198	.00460	.03012	.00001	.00034	.00007	.00270
%RSD	171.58	150.45	184.08	6.0093	1200.0	110.98	9.9490
#1	-.00346	-.00962	.02706	.00009	-.00053	.00004	.02645
#2	-.00192	-.00083	-.02698	.00008	.00014	-.00009	.02357
#3	.00115	-.00266	-.02311	.00008	.00014	-.00010	.02889
#4	-.00039	.00087	-.04241	.00008	.00014	-.00009	.02949
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
Avg	-.00296	-.00337	-.00192	-.00106	.03860	-.08320	.00028
SDev	.00291	.00194	.00097	.00049	.00068	.23677	.00036
%RSD	98.296	57.399	50.385	46.188	1.7521	284.57	129.75
#1	L-.00625	-.00562	-.00192	-.00064	.03878	-.01479	.00031
#2	.00014	-.00413	-.00311	-.00148	.03949	-.25146	-.00006
#3	-.00129	-.00112	-.00074	-.00063	.03807	.22187	.00076
#4	-.00446	-.00262	-.00192	-.00148	.03807	-.28843	.00009
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	.00654	.00001	.00129	.01552	.00172	.02776	-.00263
SDev	.00250	.00053	.00661	.00627	.00816	.01770	.02706
%RSD	38.297	4568.1	514.07	40.398	475.07	63.774	1027.9
#1	.00327	-.00078	.00385	.00885	-.00242	.03366	-.01314
#2	.00589	.00027	-.00640	.01152	-.00748	.00182	-.03407
#3	.00850	.00028	.00897	.02142	.01054	.04176	.00791
#4	.00850	.00028	-.00127	.02028	.00623	.03379	.02878
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	.01665	.05202	.00818	.00000	-.00076	-.00615	-.00256
SDev	.02525	.00841	.01582	.00000	.00058	.03590	.00013
%RSD	151.65	16.175	193.30	.00000	76.980	583.61	5.0613
#1	.05063	.04607	.00268	.00000	-.00127	.04314	-.00251
#2	.01956	.04607	.01350	.00000	-.00127	-.03804	-.00271

#3	.00402	.06392	-.01032	.00000	-.00025	-.00326	-.00241
#4	-.00763	.05202	.02688	.00000	-.00025	-.02644	-.00261
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	.01417						
SDev	.00153						
%RSD	10.812						
#1	.01560						
#2	.01210						
#3	.01500						
#4	.01398						
Errors	LC Pass						
High	100.00						
Low	-.02000						



Method: QUANMET Sample Name: DD3QT

Operator: MTW

Run Time: 05/25/00 09:57:47

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00084	43.897	.01580	.08806	.37895	.00290	60.254
SDev	.00080	.169	.06686	.00031	.00184	.00007	.189
%RSD	94.838	.38541	423.28	.35050	.48555	2.2644	.31405
#1	-.00121	43.835	.10583	.08817	.37828	.00286	60.376
#2	-.00125	44.016	-.00341	.08802	.38019	.00287	60.085
#3	.00036	44.050	.01523	.08839	.38066	.00286	60.454
#4	-.00127	43.686	-.05447	.08766	.37666	.00299	60.099
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	-.00055	.02771	.04566	.04580	67.883	9.4259	.05667
SDev	.00328	.00193	.00149	.00049	.160	.2255	.00177
%RSD	593.99	6.9795	3.2607	1.0634	.23513	2.3923	3.1249
#1	-.00170	.02847	.04536	.04538	67.943	9.1264	.05586
#2	-.00429	.02547	.04536	.04537	67.859	9.4962	.05933
#3	.00030	.02696	.04418	.04624	68.054	9.6663	.05565
#4	.00348	.02996	.04773	.04621	67.675	9.4148	.05586
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	33.656	2.1545	.01143	30.021	.03927	.09573	.00777
SDev	.096	.0035	.00294	.383	.00455	.03933	.10285
%RSD	.28606	.16464	25.754	1.2751	11.584	41.085	1323.7
#1	33.598	2.1564	.01400	29.686	.03814	.04387	L-.10730
#2	33.689	2.1521	.00887	30.520	.04029	.09954	-.03413
#3	33.776	2.1585	.00890	30.118	.03386	.13954	.13326
#4	33.561	2.1510	.01396	29.759	.04479	.09997	.03924
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	.07726	H58.466	.03090	.22618	.16269	.11650	.05837
SDev	.02948	.197	.02274	.00076	.00127	.03777	.00261
%RSD	38.149	.33754	73.602	.33828	.78318	32.418	4.4788
#1	.09690	H58.371	-.00292	.22605	.16379	.06079	.05971
#2	.06941	H58.645	.04106	.22655	.16379	.13128	.05445

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#3	.03905	H58.615	.04625	.22696	.16176	.12925	.05961
#4	.10369	H58.234	.03920	.22518	.16142	.14469	.05971
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 .27256  
SDev .00299  
%RSD 1.0969

#1 .27148  
#2 .27170  
#3 .27692  
#4 .27013

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QV

Operator: MTW

Run Time: 05/25/00 10:01:00

Comment: STL-PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00029	.03514	.01149	.01774	.30027	.00001	46.913
SDev	.00218	.00654	.01731	.00218	.00126	.00007	.182
%RSD	755.76	18.598	150.63	12.284	.41939	1000.5	.38892
#1	-.00337	.02692	-.01344	.01517	.29908	-.00009	46.678
#2	.00125	.03735	.02109	.01955	.30193	.00004	46.926
#3	-.00029	.04248	.01334	.01669	.30050	.00004	46.926
#4	.00125	.03381	.02497	.01955	.29955	.00004	47.124
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	-.00059	-.00015	.00237	-.00069	7.2001	1.6178	.00200
SDev	.00265	.00075	.00155	.00081	.0279	.1217	.00088
%RSD	451.70	510.33	65.690	117.28	.38731	7.5244	43.801
#1	.00124	.00023	.00458	-.00175	7.1587	1.4865	.00156
#2	-.00394	-.00127	.00163	-.00090	7.2132	1.6567	.00172
#3	-.00145	.00023	.00104	-.00006	7.2097	1.5605	.00141
#4	.00180	.00022	.00222	-.00006	7.2189	1.7676	.00330
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	21.726	.36078	.00108	67.680	.00118	.01628	.01044
SDev	.055	.00160	.00490	1.130	.00870	.01720	.01572
%RSD	.25183	.44302	455.45	1.6702	740.72	105.65	150.61
#1	21.652	.35892	-.00021	68.965	-.01112	-.00759	-.00278
#2	21.762	.36211	-.00532	67.762	.00870	.01623	-.00257
#3	21.773	.35999	.00492	67.785	.00155	.03223	.02874
#4	21.718	.36212	.00492	66.209	.00557	.02426	.01837
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	.03118	6.0442	.00143	.07498	-.00245	.06976	-.00255
SDev	.01742	.0132	.01790	.00040	.00044	.06968	.00009
%RSD	55.865	.21825	1255.8	.53225	17.807	99.886	3.6899
#1	.04559	6.0308	.00845	.07444	-.00295	-.00520	-.00258
#2	.04579	6.0605	.01719	.07535	-.00194	.11023	-.00268

#3	.02247	6.0367	.00424	.07520	-.00262	.02907	-.00248
#4	.01085	6.0486	-.02418	.07495	-.00228	.14495	-.00248
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 .04684  
SDev .00159  
%RSD 3.3938

#1 .04811  
#2 .04476  
#3 .04806  
#4 .04645

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QX Operator: MTW  
 Run Time: 05/25/00 10:04:08  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00095	58.747	.02264	.04287	.53491	.00294	100.18
SDev	.00239	.074	.04023	.00504	.00171	.00007	.60
%RSD	251.21	.12615	177.71	11.752	.31979	2.4007	.59608
#1	-.00296	58.773	.02959	.03835	.53574	.00289	99.682
#2	-.00292	58.787	.00619	.04537	.53527	.00287	99.659
#3	.00025	58.636	-.02000	.03902	.53241	.00299	100.57
#4	.00183	58.790	.07476	.04875	.53622	.00301	100.81
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	-.00259	.03266	.06544	.05852	92.202	6.9631	.09813
SDev	.00198	.00275	.00410	.00081	.301	.3683	.00247
%RSD	76.324	8.4054	6.2593	1.3883	.32608	5.2897	2.5124
#1	-.00379	.03567	.06426	.05914	91.938	7.0556	.10012
#2	-.00059	.02965	.06189	.05745	91.993	6.5822	.10042
#3	-.00126	.03416	.07135	.05917	92.286	7.4327	.09600
#4	-.00471	.03116	.06426	.05834	92.590	6.7819	.09600
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	51.800	2.1776	.00611	102.28	.05165	.09851	.01300
SDev	.071	.0087	.00495	1.16	.00451	.03279	.02493
%RSD	.13775	.39868	81.030	1.1385	8.7413	33.286	191.81
#1	51.718	2.1693	.00223	102.91	.04696	.11850	-.01317
#2	51.868	2.1715	.00223	103.60	.04952	.07057	-.00271
#3	51.763	2.1822	.00740	101.35	.05268	.07076	.02864
#4	51.852	2.1876	.01257	101.25	.05744	.13422	.03924
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	.09237	H67.359	.00664	.22097	.30850	.08837	.10604
SDev	.03871	.072	.01088	.00063	.00194	.15372	.00426
%RSD	41.913	.10757	163.85	.28474	.62771	173.96	4.0183
#1	.07587	H67.265	-.00936	.22159	.30757	-.11768	.10080
#2	.10326	H67.384	.01035	.22078	.30690	.22967	.10596

#3	.04995	H67.349	.01055	.22017	.30825	.06429	.11124
#4	.14040	H67.438	.01501	.22133	.31128	.17719	.10616

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 .16091  
SDev .00226  
%RSD 1.4036

#1	.16109
#2	.15943
#3	.16404
#4	.15910

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD3QXP5 Operator: MTW  
 Run Time: 05/25/00 10:07:21  
 Comment: STL PITTSBURGH ICP-METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00080	11.826	-.00525	.00921	.10898	.00063	20.576
SDev	.00150	.016	.01365	.00536	.00014	.00007	.176
%RSD	188.42	.13929	260.08	58.123	.12845	10.506	.85473
#1	.00119	11.850	.00221	.00485	.10905	.00066	20.639
#2	-.00039	11.821	.00651	.00455	.10877	.00053	20.334
#3	-.00037	11.814	-.02437	.01221	.10905	.00066	20.583
#4	.00275	11.819	-.00535	.01524	.10905	.00065	20.749
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	-.00150	.00698	.01581	.01128	19.403	1.4829	.02096
SDev	.00119	.00150	.00282	.00081	.079	.2393	.00129
%RSD	79.322	21.499	17.811	7.2052	.40890	16.138	6.1651
#1	-.00328	.00623	.01758	.01191	19.459	1.7602	.02254
#2	-.00093	.00623	.01640	.01021	19.302	1.1759	.01964
#3	-.00101	.00623	.01758	.01191	19.378	1.4865	.02023
#4	-.00078	.00923	.01167	.01107	19.473	1.5087	.02144
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	10.612	.45215	.00034	20.526	.01404	.03138	-.01051
SDev	.039	.00281	.00490	.365	.00473	.02156	.00999
%RSD	.37053	.62217	1438.6	1.7760	33.705	68.702	95.081
#1	10.664	.45349	-.00349	20.495	.00936	.03931	-.00273
#2	10.620	.44814	.00161	20.972	.01528	.03933	-.02359
#3	10.578	.45241	-.00350	20.557	.01141	-.00046	-.00268
#4	10.586	.45456	.00675	20.081	.02011	.04735	-.01303
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	.02335	13.591	.01323	.04559	.06388	.06582	.01939
SDev	.05224	.052	.00806	.00015	.00091	.02125	.00266
%RSD	223.69	.38403	60.966	.33408	1.4309	32.285	13.707
#1	.04783	13.610	.02364	.04573	.06455	.04208	.01803
#2	-.04207	13.515	.01261	.04563	.06253	.07845	.01813

#3	.00870	13.604	.01271	.04538	.06421	.05450	.01803
#4	.07895	13.634	.00395	<u>.04563</u>	.06421	.08825	.02338
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 .03343  
SDev .00172  
%RSD 5.1473

#1 .03520  
#2 .03329  
#3 .03113  
#4 .03408

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: CCV2-4

Operator: MTW

Run Time: 05/25/00 10:10:29

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JJA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0119	50.062	5.0784	5.0730	4.9291	5.0601	51.646
SDev	.0046	.104	.0928	.0089	.0145	.0127	.362
%RSD	.45192	.20796	1.8272	.17457	.29487	.25042	.70064
#1	1.0090	50.003	5.0044	5.0597	4.9357	5.0482	51.249
#2	1.0107	50.071	5.2037	5.0773	4.9252	5.0580	51.633
#3	1.0187	50.204	5.0936	5.0779	4.9445	5.0781	52.126
#4	1.0092	49.969	5.0119	5.0771	4.9107	5.0563	51.575
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	5.1361	5.0632	5.0437	4.9698	52.526	49.204	4.7839
SDev	.0158	.0302	.0263	.0078	.230	.501	.0512
%RSD	.30845	.59615	.52235	.15784	.43881	1.0181	1.0701
#1	5.1304	5.0332	5.0160	4.9814	52.327	49.921	4.8423
#2	5.1211	5.0572	5.0427	4.9654	52.494	49.167	4.7931
#3	5.1583	5.1052	5.0793	4.9646	52.856	48.916	4.7179
#4	5.1347	5.0572	5.0367	4.9679	52.427	48.812	4.7822
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	50.598	5.0584	5.0443	49.789	5.0590	5.1219	5.1007
SDev	.099	.0268	.0207	.421	.0490	.0102	.0247
%RSD	.19527	.53004	.40984	.84525	.96893	.19867	.48335
#1	50.547	5.0337	5.0200	50.299	4.9904	5.1112	5.0978
#2	50.536	5.0539	5.0559	49.881	5.0740	5.1357	5.1190
#3	50.745	5.0965	5.0662	49.285	5.1062	5.1210	5.1192
#4	50.565	5.0497	5.0354	49.692	5.0654	5.1198	5.0669
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	5.2556	5.0732	5.1257	4.9426	4.9822	10.027	5.0274
SDev	.0788	.0126	.0655	.0148	.0163	.094	.0231
%RSD	1.4989	.24754	1.2770	.30035	.32652	.93749	.46004
#1	5.3452	5.0595	5.0498	4.9457	4.9749	9.8930	5.0043
#2	5.2254	5.0717	5.1896	4.9386	4.9735	10.030	5.0231

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#3	5.2889	5.0900	5.1699	4.9609	5.0066	10.096	5.0595
#4	5.1630	5.0717	5.0933	4.9253	4.9739	10.089	5.0227
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 5.0462  
SDev .0221  
%RSD .43761

#1 5.0190  
#2 5.0382  
#3 5.0684  
#4 5.0591

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB4

Operator: MTW

Run Time: 05/25/00 10:13:37

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B <sub>1</sub>	BA	BE	CA	B
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00038	.00159	-.01541	.00001	.00012	.00041	.00039	
SDev	.00089	.01064	.03276	.00000	.00032	.00013	.00645	
%RSD	236.63	670.95	212.60	56.914	266.46	30.620	1637.2	
#1	-.00040	-.00282	.00778	.00001	-.00034	.00031	-.00619	
#2	.00114	.01107	.00765	.00000	.00034	.00031	.00320	
#3	.00116	.00947	-.06178	.00000	.00034	.00057	.00804	
#4	-.00040	-.01138	-.01528	.00000	.00014	.00045	-.00348	
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 <sub>2</sub>	LI	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00030	-.00225	.00030	-.00064	.00053	-.01294	.00029	
SDev	.00109	.00448	.00122	.00069	.00322	.27918	.00053	
%RSD	365.55	199.04	404.44	109.18	605.61	2157.0	182.99	
#1	-.00027	-.00864	-.00073	-.00149	-.00372	-.34021	.00009	
#2	.00075	-.00113	-.00073	-.00063	.00124	.33281	.00061	
#3	.00013	.00188	.00163	.00021	.00408	.03698	.00083	
#4	-.00181	-.00112	.00104	-.00063	.00053	-.08135	-.00036	
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	-.00131	.00001	.01536	.00238	.00169	.02180	-.01846	
SDev	.00781	.00053	.00644	.00508	.00520	.01899	.00603	
%RSD	597.22	10242.	41.943	213.47	307.05	87.087	32.680	
#1	-.00458	-.00079	.01408	-.00409	.00138	.00968	-.02374	
#2	.00065	.00027	.02432	.00809	-.00549	.04970	-.01332	
#3	.00850	.00027	.00896	.00390	.00621	.01794	-.01315	
#4	-.00981	.00027	.01408	.00162	.00467	.00989	-.02363	
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 <sub>2</sub>	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.02719	-.02530	.02556	.00048	.00025	.03481	-.00132	
SDev	.02595	.00002	.01409	.00042	.00080	.01985	.00186	
%RSD	95.468	.09366	55.123	86.762	317.40	57.011	141.17	
#1	-.02332	-.02531	.04191	.00000	-.00059	.05520	-.00231	
#2	-.05049	-.02531	.02013	.00051	.00076	.00871	-.00211	

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#3	---	-.04271	-.02526	.03104	.00101	.00110	.03182	.00147	---
#4	---	.00777	-.02531	.00917	.00040	-.00025	.04351	-.00231	---
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	---
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000	.05000	---
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000	-.05000	---

Elem ZN  
Units ppm  
Avge .00093  
SDev .00090  
%RSD 97.118

#1 -.00015  
#2 .00067  
#3 .00200  
#4 .00120

Errors LC Pass  
High .02000  
Low -.02000

Method: QUANMET Sample Name: DD3QXS

Operator: MTW

Run Time: 05/25/00 10:16:45

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04883	95.909	1.9941	.99932	2.4647	.05084	151.91
SDev	.00147	.308	.0582	.01112	.0089	.00013	.47
%RSD	3.0170	.32148	2.9196	1.1131	.36212	.25747	.30955
#1	.04767	95.710	2.0103	.98768	2.4608	.05087	151.82
#2	.04917	95.734	2.0565	1.0102	2.4602	.05074	151.54
#3	.05078	95.826	1.9166	.99204	2.4597	.05074	152.59
#4	.04771	96.365	1.9930	1.0074	2.4781	.05101	151.69
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	.04640	.51369	.27628	.30879	94.144	59.257	1.0515
SDev	.00448	.00626	.00363	.00081	.160	.359	.0093
%RSD	9.6592	1.2185	1.3139	.26284	.16992	.60584	.88239
#1	.04266	.51521	.27302	.30900	94.091	58.841	1.0404
#2	.04255	.51220	.28071	.30814	93.943	59.100	1.0531
#3	.05135	.52119	.27361	.30818	94.249	59.432	1.0496
#4	.04903	.50616	.27776	.30986	94.295	59.654	1.0628
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	102.31	2.6750	.97042	150.61	.54677	.62570	.41080
SDev	.31	.0047	.00726	.99	.01196	.03105	.02253
%RSD	.30049	.17404	.74773	.65442	2.1881	4.9631	5.4856
#1	102.25	2.6758	.97041	149.79	.53515	.61395	.44209
#2	102.07	2.6683	.96527	150.10	.54559	.66159	.38989
#3	102.17	2.6790	.96532	150.53	.54289	.63786	.41081
#4	102.76	2.6769	.98069	152.02	.56344	.58938	.40043
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	2.1511	H93.920	1.9201	1.1809	1.2997	1.9047	.60986
SDev	.0466	.601	.0229	.0037	.0025	.0911	.00051
%RSD	2.1668	.63951	1.1951	.31421	.19259	4.7822	.08408
#1	2.2121	H94.548	1.9388	1.1802	1.2975	1.9429	.61017
#2	2.1378	H93.292	1.9036	1.1779	1.2996	2.0140	.61009

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#3	2.1000	H93.536	1.9409	1.1792	1.2986	1.8137	.61008
#4	2.1546	H94.304	1.8972	1.1863	1.3033	1.8481	.60909
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 .66571  
SDev .00463  
%RSD .69555

#1 .66406  
#2 .67004  
#3 .65994  
#4 .66881

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QXD Operator: MTW  
Run Time: 05/25/00 10:19:58  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT-JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04993	92.859	2.0423	1.0027	2.4539	.05083	151.31
SDev	.00125	.517	.0720	.0060	.0143	.00023	.36
%RSD	2.5056	.55675	3.5275	.59591	.58214	.44651	.23549
#1	.04986	92.107	2.0490	1.0035	2.4335	.05063	151.17
#2	.05153	92.935	2.0761	.99895	2.4583	.05102	151.71
#3	.04988	93.177	1.9397	.99761	2.4571	.05063	150.90
#4	.04847	93.218	2.1045	1.0108	2.4668	.05102	151.47
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	.04097	.50956	.27199	.30621	90.868	59.100	1.0523
SDev	.00576	.00257	.00369	.00218	.265	1.117	.0190
%RSD	14.052	.50480	1.3562	.71339	.29162	1.8905	1.8077
#1	.03914	.51221	.26711	.30365	90.599	57.938	1.0306
#2	.03699	.50618	.27539	.30537	91.061	58.848	1.0461
#3	.04950	.50916	.27421	.30873	90.683	60.623	1.0759
#4	.03825	.51068	.27125	.30707	91.127	58.989	1.0567
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	101.67	2.6614	.96097	150.66	.54252	.59609	.41333
SDev	.46	.0078	.00489	2.22	.00965	.03207	.02618
%RSD	.45519	.29451	.50841	1.4731	1.7785	5.3803	6.3351
#1	101.03	2.6547	.96477	147.86	.54214	.57667	.37928
#2	101.71	2.6665	.96484	150.18	.54634	.63973	.44219
#3	101.79	2.6547	.95966	153.13	.52943	.59994	.42097
#4	102.14	2.6697	.95461	151.45	.55218	.56800	.41087
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	2.0770	H97.003	1.9550	1.1778	1.3104	1.9965	.60225
SDev	.0252	.260	.0381	.0067	.0046	.1246	.00296
%RSD	1.2127	.26753	1.9479	.56711	.34940	6.2406	.49084
#1	2.0479	H97.242	1.9837	1.1686	1.3050	2.0833	.59973
#2	2.1039	H96.874	1.9055	1.1803	1.3131	1.8119	.60491

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#3	2.0909	H96.701	1.9861	1.1782	1.3083	2.0361	.59965
#4	2.0653	H97.195	1.9446	1.1843	1.3151	2.10547	.60470
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	-.25000	-.05000

Elem	ZN
Units	ppm
Avge	.67925
SDev	.00271
%RSD	.39952

#1	.67714
#2	.67734
#3	.67955
#4	.68298

Errors	LC Pass
High	100.00
Low	-.02000



Method: QUANMET Sample Name: DD3R0

Operator: MTW

Run Time: 05/25/00 10:23:11

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B <sub>1</sub>	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00163	27.671	.00685	.03622	.33584	.00169	111.27
SDev	.00149	.086	.03135	.02295	.00117	.00007	.46
%RSD	91.377	.31028	457.97	63.361	.34970	3.9346	.41018
#1	-.00204	27.557	-.02677	.06042	.33430	.00165	111.37
#2	-.00048	27.681	-.00864	.04374	.33600	.00166	110.95
#3	-.00357	27.765	.01774	.00561	.33715	.00166	110.88
#4	-.00044	27.683	.04505	.03513	.33592	.00179	111.87
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	-.00174	.01777	.02821	.05269	64.366	6.7172	.11036
SDev	.00133	.00123	.00551	.00069	.123	.2366	.00303
%RSD	76.358	6.9110	19.513	1.3138	.19088	3.5225	2.7502
#1	-.00136	.01626	.02644	.05268	64.267	6.7819	.10778
#2	-.00298	.01777	.03590	.05354	64.365	6.4417	.11220
#3	-.00003	.01777	.02289	.05184	64.293	6.6414	.11367
#4	-.00257	.01927	.02762	.05271	64.540	7.0038	.10778
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	59.566	1.7932	.00834	99.236	.03445	.09681	-.00277
SDev	.206	.0054	.00592	1.355	.01519	.03283	.00017
%RSD	.34528	.30179	70.964	1.3653	44.098	33.912	6.1610
#1	59.264	1.7906	.00321	97.807	.05113	.09288	-.00255
#2	59.665	1.7916	.00322	99.443	.02209	.09283	-.00296
#3	59.719	1.7895	.01345	101.00	.02107	.06096	-.00282
#4	59.617	1.8012	.01349	98.690	.04352	.14059	-.00275
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	.04596	H44.760	-.01010	.20561	.28622	.11610	.05376
SDev	.01916	.107	.02332	.00078	.00194	.08778	.00075
%RSD	41.691	.23874	230.83	.38095	.67657	75.608	1.3953
#1	.02132	H44.605	-.02322	.20454	.28800	.03884	.05430
#2	.06440	H44.771	.00954	.20581	.28597	.22338	.05303

#3	.04084	H44.831	-.03630	.20642	.28361	.05016	.05320
#4	.05727	H44.831	.00957	.20566	.28732	.15202	.05450
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 .13834  
SDev .00109  
%RSD .78767

#1 .13778  
#2 .13753  
#3 .13811  
#4 .13994

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WA

Operator: MTW

Run Time: 05/25/00 10:26:24

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00038	14.118	-.00650	.04531	.17945	.00066	46.262
SDev	.00090	.064	.04366	.00289	.00091	.00001	.312
%RSD	233.26	.45544	671.66	6.3814	.50788	1.2335	.67532
#1	-.00116	14.054	-.06661	.04154	.17874	.00065	45.927
#2	.00037	14.100	-.00916	.04857	.17874	.00066	46.185
#3	-.00116	14.207	.01687	.04580	.18064	.00066	46.255
#4	.00042	14.110	.03291	.04533	.17969	.00065	46.680
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	.00079	.00755	.01581	.01402	16.749	9.1892	.07819
SDev	.00484	.00300	.00097	.00145	.076	.1881	.00156
%RSD	615.58	39.777	6.1162	10.328	.45109	2.0472	1.9930
#1	.00740	.00603	.01581	.01422	16.662	9.2891	.07693
#2	-.00423	.00606	.01581	.01338	16.725	9.2077	.07935
#3	-.00015	.00604	.01462	.01254	16.768	8.9193	.07972
#4	.00012	.01205	.01699	.01593	16.842	9.3409	.07678
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	18.603	1.2935	.00250	16.518	.01427	.03679	.01286
SDev	.068	.0066	.00875	.255	.00661	.01365	.01817
%RSD	.36430	.50917	349.33	1.5417	46.340	37.102	141.29
#1	18.511	1.2857	.00121	16.489	.01982	.02285	-.00274
#2	18.592	1.2921	.00634	16.614	.01858	.03875	.00759
#3	18.660	1.2943	-.00901	16.786	.01340	.03076	.03913
#4	18.647	1.3017	.01148	16.183	.00527	.05480	.00747
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	.03987	H25.281	.02561	.10310	.15096	.01387	.02072
SDev	.03766	.122	.02390	.00037	.00282	.04925	.00307
%RSD	94.468	.48433	93.305	.36251	1.8707	354.98	14.815
#1	.07645	H25.145	.01189	.10283	.15028	.08720	.02328
#2	.03007	H25.228	.04688	.10274	.14725	-.00615	.01822

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#3	-.00861	H25.318	-.00101	.10350	.15298	-.00657	.01792
#4	.06157	H25.431	.04470	.10334	.15332	-.01898	.02348
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	.06329						
SDev	.00116						
%RSD	1.8308						
#1	.06343						
#2	.06285						
#3	.06207						
#4	.06481						
Errors	LC Pass						
High	100.00						
Low	-.02000						

Method: QUANMET Sample Name: DD4WG

Operator: MTW

Run Time: 05/25/00 10:29:37

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00050	.13046	.00052	.01157	.27346	-.00000	55.400
SDev	.00089	.00537	.05126	.00202	.00168	.00006	.306
%RSD	178.81	4.1175	9770.1	17.443	.61471	23973.	.55280
#1	-.00125	.13089	-.00145	.01178	.27318	.00003	55.280
#2	-.00128	.12753	.01409	.00892	.27556	.00004	55.295
#3	.00026	.12560	.05649	.01384	.27365	-.00010	55.172
#4	.00028	.13782	-.06703	.01176	.27147	.00003	55.852
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	-.00025	-.00014	.00858	.00068	3.1698	1.7824	.00615
SDev	.00347	.00449	.00140	.00042	.0058	.2782	.00048
%RSD	1396.7	3305.0	16.308	62.913	.18160	15.610	7.7804
#1	.00096	-.00127	.00872	.00046	3.1684	1.5975	.00555
#2	L-.00539	.00176	.00754	.00047	3.1663	1.6788	.00613
#3	.00128	-.00577	.01050	.00046	3.1783	1.6567	.00672
#4	.00215	.00474	.00754	.00131	3.1663	2.1965	.00620
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	22.895	.50290	.00431	59.805	.00415	.02310	-.00008
SDev	.160	.00134	.00591	1.309	.00228	.02473	.01320
%RSD	.70065	.26580	137.06	2.1880	55.005	107.05	16841.
#1	22.819	.50104	-.00081	59.132	.00096	.02509	.01827
#2	23.096	.50316	-.00081	61.493	.00607	.00922	-.00259
#3	22.939	.50317	.00944	60.108	.00410	.00105	-.00277
#4	22.725	.50422	.00944	58.485	.00548	.05705	-.01323
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	-.01851	5.1295	.00988	.19793	-.00110	.01069	.00010
SDev	.01323	.0324	.02763	.00128	.00044	.08544	.00298
%RSD	71.479	.63114	279.57	.64781	39.723	799.23	2971.1
#1	-.00784	5.0968	-.00313	.19761	-.00093	.07157	.00258
#2	-.02338	5.1741	-.01414	.19938	-.00160	.09481	-.00258

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#3	-.00780	5.1265	.00769	.19837	-.00059	-.07921	-.00238
#4	-.03503	5.1206	.04911	.19634	-.00127	-.04441	.00278
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	100.000	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem ZN  
 Units ppm  
 Avge .06414  
 SDev .00122  
 %RSD 1.9064

#1 .06534  
 #2 .06282  
 #3 .06339  
 #4 .06500

Errors LC Pass  
 High 100.00  
 Low -.02000

Method: QUANMET Sample Name: DD4WH Operator: MTW  
Run Time: 05/25/00 10:32:45  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00027	4.3956	-.03245	.01320	.18386	.00008	73.090
SDev	.00230	.0292	.02658	.00005	.00060	.00008	.444
%RSD	846.99	.66425	81.923	.37161	.32575	96.437	.60716
#1	.00241	4.4230	.00013	.01316	.18398	.00001	72.799
#2	-.00219	4.4126	-.03071	.01327	.18398	.00015	73.697
#3	-.00219	4.3899	-.03432	.01319	.18445	.00015	72.723
#4	.00088	4.3571	-.06489	.01320	.18302	.00001	73.142
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
Avg	.00100	.00316	.00621	.00858	6.8786	2.1170	.01196
SDev	.00273	.00174	.00405	.00042	.0269	.0393	.00166
%RSD	272.04	54.941	65.262	4.9578	.39048	1.8568	13.846
#1	-.00271	.00167	.00458	.00837	6.8522	2.1004	.01445
#2	.00145	.00467	.01108	.00922	6.9160	2.1744	.01113
#3	.00387	.00164	.00162	.00837	6.8707	2.0856	.01113
#4	.00141	.00467	.00754	.00837	6.8756	2.1078	.01113
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	35.285	2.0661	.00231	42.916	.01168	.01013	-.02373
SDev	.146	.0074	.00661	.930	.00584	.02640	.01487
%RSD	.41499	.35963	286.35	2.1659	50.019	260.76	62.665
#1	35.272	2.0589	-.00538	43.938	.00900	.01408	-.00276
#2	35.389	2.0759	-.00025	42.788	.00686	.04596	-.03430
#3	35.397	2.0621	.00999	43.223	.01074	-.00983	-.03429
#4	35.083	2.0674	.00487	41.717	.02011	-.00971	-.02354
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	-.02632	11.904	.06150	.30214	.07400	.04490	.00780
SDev	.03741	.035	.03871	.00121	.00391	.07759	.00013
%RSD	142.16	.29247	62.942	.40111	5.2797	172.82	1.6001
#1	.00951	11.891	.05832	.30181	.07265	.06544	.00765
#2	-.03298	11.956	.08657	.30333	.07097	.12283	.00776

#3	-.07586	11.885	.09308	.30283	.07974	-.06230	.00794
#4	-.00594	11.885	.00803	.30059	.07265	.05362	.00785
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 .05961  
SDev .00174  
%RSD 2.9175

#1 .05759  
#2 .05894  
#3 .06030  
#4 .06163

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: DD4WJ

Operator: MTW

Run Time: 05/25/00 10:35:52

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00237	95.354	.00518	.03007	.79529	.00524	H753.05
SDev	.00085	.509	.05319	.01642	.00466	.00001	1.34
%RSD	36.041	.53376	1027.6	54.617	.58606	.12803	.17781
#1	-.00316	95.069	.03659	.05436	.79251	.00525	H752.96
#2	-.00162	95.409	-.05104	.02578	.79641	.00524	H753.18
#3	-.00304	96.045	.06248	.02063	.80136	.00524	H751.40
#4	-.00164	94.891	-.02732	.01950	.79089	.00524	H754.67
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
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	-.00143	.08472	.09379	.16642	212.50	30.106	1.0127
SDev	.00158	.00075	.00305	.00050	.26	.468	.0159
%RSD	110.40	.88279	3.2562	.30078	.12276	1.5557	1.5737
#1	.00050	.08434	.09261	.16599	212.46	29.701	1.0008
#2	-.00092	.08434	.09734	.16683	212.39	30.478	1.0186
#3	-.00216	.08584	.09024	.16687	212.88	30.545	1.0325
#4	-.00316	.08435	.09497	.16598	212.29	29.701	.99876
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	431.87	10.607	.02154	15.345	.13961	.32425	.00939
SDev	1.46	.009	.00491	.231	.00064	.01036	.04042
%RSD	.33861	.08952	22.779	1.5083	.45910	3.1955	430.56
#1	431.09	10.610	.02537	15.151	.14045	.31245	.00681
#2	431.72	10.599	.02536	15.448	.13915	.32827	.04862
#3	433.98	10.619	.02031	15.624	.13907	.31987	.02769
#4	430.71	10.600	.01510	15.159	.13977	.33640	-.04557
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	.23309	H87.204	.51291	.40622	.77640	.51038	.18251
SDev	.06017	.336	.02528	.00219	.00193	.11297	.00253
%RSD	25.815	.38497	4.9294	.54044	.24847	22.134	1.3883
#1	.20961	H87.118	.48779	.40558	.77707	.41234	.17871
#2	.31810	H87.172	.49452	.40558	.77538	.66809	.18388

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#3	.22670	H87.665	.53380	.40939	.77876	.51232	.18377	
#4	.17793	H86.862	.53554	.40432	.77437	.44875	.18368	
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 .43630  
 SDev .00653  
 %RSD 1.4975

#1 .44430  
 #2 .43834  
 #3 .42910  
 #4 .43347

Errors LC Pass  
 High 100.00  
 Low -.02000

Method: QUANMET Sample Name: DD4WK  
Run Time: 05/25/00 10:39:05  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Operator: MTW

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00058	.27481	-.00540	.01272	.05269	.000006	42.063
SDev	.00089	.00755	.04786	.00341	.00000	.00013	.184
%RSD	153.50	2.7480	885.72	26.800	.00000	199.52	.43827
#1	-.00021	.26624	.04292	.00860	.05269	.00004	41.814
#2	-.00018	.27133	.01580	.01551	.05269	-.00011	42.144
#3	.00135	.28340	-.01127	.01552	.05269	.00017	42.048
#4	.00136	.27825	-.06906	.01124	.05269	.00016	42.246
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
Avg	-.00040	-.00003	.00813	.00155	.88195	20.004	.04059
SDev	.00246	.00189	.00108	.00109	.00248	.353	.00087
%RSD	613.91	5920.0	13.281	70.420	.28065	1.7663	2.1402
#1	.00082	.00034	.00695	.00113	.87894	20.013	.04118
#2	-.00409	.00035	.00754	.00028	.88460	19.569	.04066
#3	.00099	-.00266	.00873	.00197	.88318	20.434	.04118
#4	.00067	.00184	.00932	.00282	.88106	19.998	.03934
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	26.045	.08993	.00525	16.906	.00432	.01957	.00776
SDev	.076	.00053	.00490	.190	.00831	.01990	.00847
%RSD	.29169	.59115	93.342	1.1246	192.49	101.67	109.14
#1	25.950	.08966	-.00115	17.002	.00959	-.00628	.00779
#2	26.033	.08966	.00397	16.890	-.00789	.01761	.01813
#3	26.133	.09073	.00909	17.085	.00600	.02547	.00775
#4	26.065	.08966	.00909	16.647	.00958	.04150	-.00262
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	-.00260	6.0308	.01110	.17347	.00388	.01748	.00109
SDev	.01967	.0404	.01805	.00036	.00184	.05802	.00252
%RSD	756.05	.66953	162.54	.20667	47.296	331.83	232.07
#1	.00321	5.9713	.03347	.17321	.00650	.08132	-.00259
#2	-.01619	6.0606	.01388	.17347	.00380	-.05794	.00267

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#3	-.02007	6.0487	.00729	.17397	.00245	.01170	.00148
#4	.02264	6.0427	-.01022	.17321	.00278	.03486	.00277
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 .06668  
SDev .00171  
%RSD 2.5613

#1 .06687  
#2 .06855  
#3 .06689  
#4 .06441

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WL

Operator: MTW

Run Time: 05/25/00 10:42:14

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00021	29.101	-.02597	.05450	.27437	.00138	52.867
SDev	.00147	.150	.01433	.00019	.00163	.00012	225
%RSD	702.09	.51539	55.177	.34525	.59254	8.9280	.42477
#1	.00140	29.044	-.03721	.05462	.27365	.00154	53.162
#2	.00132	28.918	-.00495	.05424	.27270	.00142	52.802
#3	-.00172	29.251	-.03106	.05451	.27651	.00129	52.622
#4	-.00016	29.192	-.03065	.05465	.27461	.00129	52.880
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	-.00180	.01563	.02837	.03079	33.472	12.628	.16220
SDev	.00123	.00397	.00233	.00137	.100	.207	.00269
%RSD	68.082	25.422	8.2282	4.4573	.29731	1.6388	1.6615
#1	-.00272	.01638	.03117	.03079	33.536	12.721	.16063
#2	-.00214	.01188	.02940	.03246	33.329	12.772	.16022
#3	-.00235	.02088	.02644	.03079	33.479	12.699	.16610
#4	.00000	.01337	.02644	.02910	33.544	12.321	.16184
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	24.835	1.4787	.00501	15.792	.03248	.06913	.00247
SDev	.106	.0040	.00257	.233	.01188	.03465	.02764
%RSD	.42507	.26711	51.283	1.4755	36.569	50.121	1119.6
#1	24.791	1.4824	.00886	15.589	.04675	.09903	.00783
#2	24.707	1.4738	.00370	15.641	.01996	.09899	-.01332
#3	24.938	1.4771	.00373	16.104	.03715	.03532	-.02362
#4	24.904	1.4813	.00374	15.835	.02606	.04318	.03898
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	.07187	H46.247	-.00322	.10971	.23686	.01598	.04015
SDev	.03040	.179	.02144	.00051	.00167	.04047	.00263
%RSD	42.305	.38662	666.35	.46201	.70294	253.26	6.5598
#1	.04880	H46.223	-.01574	.10963	.23770	.02980	.04410
#2	.04416	H46.003	-.02242	.10902	.23602	-.00282	.03883

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#3	.10685	H46.377	-.00062	.11003	.23872	.06515	.03883
#4	.08767	H46.383	.02589	.11014	.23500	-.02820	.03883
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	.11155
SDev	.00213
%RSD	1.9075

#1	.11199
#2	.11151
#3	.11392
#4	.10877

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD4WM

Operator: MTW

Run Time: 05/25/00 10:45:27

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00231	-.00304	.01930	.00781	-.00003	.00000	.20650
SDev	.00317	.00755	.03631	.01554	.00037	.00007	.00736
%RSD	137.41	248.28	188.12	199.08	1334.1	1575.7	3.5646

#1	-.00500	-.00433	.07330	.00004	-.00034	-.00009	.20100
#2	-.00037	.00438	-.00008	.00003	.00042	.00003	.21480
#3	.00114	.00080	.00772	.03112	.00014	.00004	.21056
#4	-.00500	-.01302	-.00372	.00004	-.00034	.00004	.19965

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	-.00177	-.00112	.00192	-.00063	.01788	.01849	.00019
SDev	.00228	.00324	.00258	.00120	.00092	.38950	.00055
%RSD	128.68	289.35	134.05	189.15	5.1211	2106.6	279.97

#1	-.00477	-.00262	.00340	-.00148	.01753	-.24406	.00024
#2	-.00153	.00339	.00281	.00106	.01824	.38458	.00044
#3	.00076	-.00113	.00340	-.00063	.01895	.31802	.00068
#4	-.00153	-.00413	-.00192	-.00148	.01682	-.38458	-.00058

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	.01504	.00027	.00128	.04266	.00329	.00593	-.00785
SDev	.01767	.00000	.00512	.00370	.00776	.01903	.01815
%RSD	117.53	.68022	399.17	8.6681	235.94	320.96	231.15

#1	.00850	.00027	-.00128	.03932	.00307	.00986	-.01308
#2	.03727	.00027	-.00128	.04732	-.00204	.01802	.01833
#3	.01896	.00027	.00896	.04389	.01433	.01786	-.01304
#4	-.00458	.00027	-.00128	.04008	-.00221	-.02203	-.02363

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	-.01159	.06988	.00106	.00035	-.00068	.00564	-.00158
SDev	.02517	.00002	.01788	.00031	.00042	.03051	.00191
%RSD	217.24	.03480	1685.8	86.316	62.915	541.49	120.31

#1	.01172	.06987	-.00606	.00051	-.00059	.02015	-.00260
#2	-.04654	.06992	-.01464	.00051	-.00059	.00847	.00127

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#3	.00007	.06987	-.00169	.00051	-.00025	-.03786	-.00240	
#4	-.01159	.06987	.02664	-.00010	-.00127	.03177	-.00261	
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 .01851  
 SDev .00153  
 %RSD 8.2562

#1 .01695  
 #2 .02049  
 #3 .01883  
 #4 .01777

Errors LC Pass  
 High 100.00  
 Low -.02000



Method: QUANMET Sample Name: CCV2-5

Operator: MTW

Run Time: 05/25/00 10:48:35

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0131	49.604	5.0561	5.0437	4.8661	5.0477	52.267
SDev	.0037	.124	.0464	.0298	.0197	.0184	.305
%RSD	.36578	.24945	.91727	.59031	.40440	.36525	.58294
#1	1.0107	49.632	5.0031	5.0184	4.8694	5.0302	52.055
#2	1.0185	49.426	5.0736	5.0188	4.8377	5.0339	52.719
#3	1.0123	49.649	5.1106	5.0773	4.8828	5.0671	52.127
#4	1.0108	49.711	5.0369	5.0601	4.8744	5.0597	52.167
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
Avg	5.1682	5.0883	5.0713	4.8938	52.561	48.873	4.6764
SDev	.0290	.0121	.0213	.0273	.091	.750	.0823
%RSD	.56058	.23798	.42027	.55701	.17368	1.5354	1.7609
#1	5.1466	5.0708	5.0427	4.9054	52.440	49.988	4.7777
#2	5.2110	5.0976	5.0923	4.8531	52.662	48.368	4.5760
#3	5.1577	5.0947	5.0811	4.9105	52.570	48.620	4.6749
#4	5.1576	5.0902	5.0693	4.9063	52.572	48.516	4.6770
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
Avg	50.142	5.0739	5.0507	48.982	5.0743	5.1467	5.0458
SDev	.132	.0166	.0209	.669	.0321	.0210	.1270
%RSD	.26408	.32780	.41392	1.3660	.63227	.40865	2.5169
#1	50.123	5.0603	5.0507	49.861	5.0720	5.1363	5.1193
#2	49.963	5.0975	5.0508	48.235	5.0328	5.1448	4.8672
#3	50.262	5.0646	5.0764	48.871	5.0819	5.1767	5.0456
#4	50.220	5.0731	5.0251	48.962	5.1104	5.1289	5.1510
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
Avg	5.2111	5.1685	5.1413	4.8984	4.9581	10.012	5.0343
SDev	.0482	.0209	.0803	.0170	.0073	.198	.0071
%RSD	.92556	.40409	1.5618	.34646	.14815	1.9792	.14160
#1	5.2368	5.1372	5.0718	4.8997	4.9479	9.8219	5.0269
#2	5.2454	5.1790	5.2518	4.8741	4.9580	10.051	5.0437

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#3	5.1402	5.1789	5.1478	4.9123	4.9648	10.273	5.0352
#4	5.2218	5.1789	5.0938	4.9073	4.9617	9.9016	5.0316

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	5.0483
SDev	.0129
%RSD	.25636

#1	5.0371
#2	5.0629
#3	5.0376
#4	5.0555

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB5 Operator: MTW  
 Run Time: 05/25/00 10:51:43  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00040	.00073	-.02309	.00000	.00038	.00051	-.00282
SDev	.00126	.00617	.03373	.00001	.00028	.00032	.00240
%RSD	317.74	846.48	146.05	1642.2	72.703	63.143	84.892
#1	.00114	.00416	.02699	-.00000	.00014	.00031	-.00429
#2	-.00039	-.00446	-.04620	-.00001	.00014	.00017	-.00081
#3	-.00194	-.00447	-.03845	.00000	.00062	.00072	-.00543
#4	-.00039	.00769	-.03472	.00001	.00062	.00085	-.00076
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	-.00010	-.00075	.00282	-.00085	-.00053	-.15161	.00012
SDev	.00176	.00189	.00281	.00081	.00335	.17138	.00034
%RSD	1743.1	251.80	99.978	95.504	631.74	113.04	274.06
#1	.00151	-.00263	.00459	.00021	-.00301	.08875	.00024
#2	-.00102	.00188	.00459	-.00148	-.00301	-.22187	-.00028
#3	-.00211	-.00112	-.00132	-.00148	-.00018	-.31062	.00001
#4	.00122	-.00113	.00341	-.00063	.00408	-.16271	.00053
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	-.00392	.00027	.01792	.00838	.00117	.00795	.00773
SDev	.00751	.00000	.00256	.00684	.00357	.01008	.01912
%RSD	191.49	.16021	14.283	81.597	304.36	126.75	247.42
#1	.00589	.00027	.01920	.00200	-.00373	-.00604	-.00282
#2	-.00981	.00027	.01920	.00581	.00155	.01801	.02867
#3	-.00196	.00027	.01920	.00771	.00482	.00990	-.01316
#4	-.00981	.00027	.01408	.01800	.00206	.00994	.01821
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	-.00874	.04459	-.00269	.00064	.00034	.04062	-.00223
SDev	.02137	.00298	.00671	.00030	.00058	.05386	.00106
%RSD	244.49	6.6952	249.06	46.257	170.78	132.60	47.534
#1	-.00389	.04608	.00053	.00040	.00008	.04356	-.00220
#2	-.02331	.04609	-.01242	.00040	.00042	-.01447	-.00091

#3	-.02719	.04011	.00267	.00076	-.00025	.02033	-.00350
#4	.01943	.04608	-.00156	.00101	.00110	.11305	-.00230

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	.00121
SDev	.00104
%RSD	85.970

#1	.00146
#2	.00258
#3	.00040
#4	.00041

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DD50E

Operator: MTW

Run Time: 05/25/00 10:54:51

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: -CONC Corr: Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00138	.02114	.00430	.00379	.42093	-.00000	46.652
SDev	.00147	.00475	.04287	.00067	.00253	.00006	.447
%RSD	107.05	22.442	996.20	17.692	.60046	1534.3	.95892
#1	-.00329	.01808	-.04388	.00330	.41846	.00003	46.790
#2	-.00178	.01645	.01791	.00388	.42445	-.00010	45.993
#3	-.00022	.02327	.05630	.00328	.42064	.00003	46.836
#4	-.00022	.02676	-.01312	.00471	.42017	.00003	46.988
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
Avg	-.00266	.00055	.00119	.00050	.97100	1.7121	.00076
SDev	.00120	.00225	.00074	.00042	.00626	.2851	.00025
%RSD	45.198	409.89	62.742	84.741	.64446	16.650	33.269
#1	-.00441	-.00132	.00222	.00029	.97667	1.4348	.00098
#2	-.00172	-.00133	.00045	.00029	.96250	1.6936	.00083
#3	-.00214	.00167	.00104	.00029	.97030	1.6123	.00040
#4	-.00234	.00318	.00104	.00114	.97455	2.1078	.00083
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	28.558	.39296	.01039	44.633	-.00311	.02168	.00518
SDev	.165	.00201	.00490	1.182	.00448	.01899	.01316
%RSD	.57801	.51199	47.208	2.6472	144.10	87.557	254.16
#1	28.364	.39322	.00911	43.242	-.00189	.03359	.01835
#2	28.767	.39003	.00398	46.122	-.00074	.00171	-.01308
#3	28.537	.39428	.01423	44.459	-.00973	.00978	.00774
#4	28.565	.39428	.01423	44.710	-.00007	.04166	.00771
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	-.00810	4.7339	-.01452	.68243	-.00245	.04146	.00149
SDev	.01954	.0000	.03357	.00291	.00065	.03955	.00266
%RSD	241.13	.00070	231.23	.42660	26.412	95.407	178.42
#1	-.03527	4.7340	-.04938	.67963	-.00262	.05880	.00276
#2	-.00425	4.7339	-.01897	.68652	-.00329	-.01061	-.00250

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#3	.01131	4.7340	-.02105	.68166	-.00194	.08204	.00286
#4	-.00421	4.7340	.03133	.68191	-.00194	.03560	.00286
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 .01900  
 SDev .00059  
 %RSD 3.1254

#1 .01825  
 #2 .01958  
 #3 .01883  
 #4 .01936

Errors LC Pass  
 High 100.00  
 Low -.02000

Method: QUANMET Sample Name: DD50N Operator: MTW  
Run Time: 05/25/00 10:57:59  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E ICP  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00046	9.5555	-.01323	.03648	1.2267	.00104	63.439
SDev	.00231	.0555	.04110	.00235	.0099	.00000	.451
%RSD	506.24	.58127	310.75	6.4442	.80379	.01265	.71109
#1	.00148	9.6027	-.03587	.03990	1.2304	.00104	63.447
#2	.00146	9.4762	.03852	.03489	1.2128	.00104	63.943
#3	-.00317	9.5819	-.00081	.03617	1.2359	.00104	62.847
#4	-.00160	9.5612	-.05475	.03497	1.2278	.00104	63.520
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	.00067	.01146	.01241	.03034	33.209	4.7370	.04954
SDev	.00162	.00124	.00201	.00110	.064	.2765	.00025
%RSD	241.74	10.809	16.224	3.6077	.19135	5.8369	.50462
#1	.00202	.01144	.01049	.02992	33.269	4.7037	.04976
#2	-.00120	.01298	.01522	.03076	33.203	5.1253	.04976
#3	.00204	.00995	.01167	.02906	33.123	4.4744	.04932
#4	-.00017	.01147	.01226	.03161	33.242	4.6445	.04932
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	38.586	.37339	.01265	55.248	.02813	.05947	.00510
SDev	.229	.00202	.00256	1.071	.00282	.01192	.01786
%RSD	.59242	.54195	20.219	1.9387	10.039	20.041	350.03
#1	38.703	.37368	.01394	55.304	.02890	.05346	.00778
#2	38.280	.37472	.01393	53.994	.03175	.05357	-.00277
#3	38.805	.37045	.01391	56.605	.02649	.05349	.02861
#4	38.554	.37473	.00881	55.089	.02538	.07734	-.01321
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	.04566	19.620	.01491	.38081	.19391	.00969	.02865
SDev	.03247	.110	.02024	.00235	.00701	.03901	.00005
%RSD	71.104	.56311	135.79	.61663	3.6133	402.74	.17365
#1	.02064	19.732	-.01348	.38187	.20328	.00327	.02867
#2	.08254	19.506	.03454	.37742	.18775	.00395	.02868

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#3	.01622	19.696	.01936	.38274	.19518	.06276	.02868
#4	.06326	19.547	.01921	.38122	.18944	-.03123	.02858
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 .13424  
 SDev .00093  
 %RSD .68901

#1 .13295  
 #2 .13430  
 #3 .13514  
 #4 .13456

Errors LC Pass  
 High 100.00  
 Low -.02000



Method: QUANMET Sample Name: CCV2-6

Operator: MTW

Run Time: 05/25/00 11:01:07

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B__	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0134	49.579	5.0641	5.0141	4.8573	5.0332	52.379
SDev	.0041	.095	.0826	.0096	.0185	.0076	.224
%RSD	.40115	.19226	1.6307	.19052	.38055	.15116	.42739
#1	1.0138	49.594	4.9916	5.0222	4.8537	5.0358	52.474
#2	1.0153	49.523	5.1659	5.0082	4.8501	5.0227	52.423
#3	1.0169	49.492	5.0964	5.0222	4.8415	5.0407	52.564
#4	1.0076	49.707	5.0025	5.0037	4.8840	5.0337	52.055
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	5.1711	5.0955	5.0736	4.8797	52.575	49.274	4.6632
SDev	.0331	.0128	.0170	.0237	.071	.658	.0732
%RSD	.64086	.25159	.33434	.48636	.13427	1.3353	1.5706
#1	5.1857	5.1022	5.0823	4.8733	52.623	49.234	4.6578
#2	5.1703	5.0887	5.0710	4.8632	52.521	49.500	4.6390
#3	5.2027	5.1097	5.0900	4.8674	52.648	48.398	4.5912
#4	5.1255	5.0813	5.0509	4.9147	52.509	49.966	4.7647
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	50.094	5.0792	5.0636	49.125	5.0913	5.1489	5.0877
SDev	.105	.0128	.0122	.629	.0180	.0240	.0572
%RSD	.20905	.25194	.24076	1.2802	.35390	.46663	1.1252
#1	49.984	5.0879	5.0508	49.129	5.0957	5.1849	5.1191
#2	50.029	5.0741	5.0559	48.937	5.0837	5.1369	5.1504
#3	50.152	5.0911	5.0764	48.463	5.1141	5.1374	5.0564
#4	50.209	5.0635	5.0712	49.970	5.0719	5.1364	5.0249
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	5.1082	5.1401	5.1617	4.8885	4.9517	10.061	5.0272
SDev	.0413	.0402	.0436	.0153	.0039	.132	.0051
%RSD	.80890	.78239	.84549	.31360	.07799	1.3138	.10066
#1	5.0977	5.0836	5.1919	4.8859	4.9536	10.168	5.0282
#2	5.0973	5.1490	5.1964	4.8810	4.9462	10.181	5.0232

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#3	5.0706	5.1789	5.1567	4.8763	4.9519	- 9.9240	5.0339
#4	5.1672	5.1490	5.1019	4.9107	4.9550	5. 9.9719	5.0234
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	5 11.000	5.5000
Low	4.5000	4.5000	4.5000	4.5000	4.5000	9.0000	4.5000

Elem ZN  
Units ppm  
Avge 5.0348  
SDev .0110  
%RSD .21775

#1 5.0459  
#2 5.0266  
#3 5.0425  
#4 5.0243

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB6

Operator: MTW

Run Time: 05/25/00 11:04:15

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC-- Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00154	-.00102	-.00287	-.00777	.00014	.00038	-.00213
SDev	.00146	.00492	.04893	.01555	.00049	.00018	.00151
%RSD	94.715	481.82	1706.3	199.95	349.10	48.050	70.740
#1	-.00344	-.00454	-.02314	-.00001	-.00053	.00016	-.00326
#2	-.00040	.00592	-.03856	.00000	.00014	.00031	-.00299
#3	-.00193	-.00451	.06945	.03109	.00062	.00058	.00005
#4	-.00040	-.00095	-.01923	.00001	.00034	.00045	-.00234
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	.00027	-.00075	.00237	-.00085	.00106	.00555	-.00029
SDev	.00045	.00144	.00257	.00127	.00291	.06868	.00026
%RSD	165.76	191.13	108.44	149.88	274.19	1238.3	90.191
#1	.00068	.00038	.00281	-.00148	-.00230	.07396	-.00006
#2	.00028	-.00113	-.00132	-.00232	.00054	.04437	-.00034
#3	.00049	.00037	.00341	.00021	.00478	-.08135	-.00012
#4	-.00036	-.00263	.00459	.00021	.00124	-.01479	-.00064
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	-.00654	.00001	.01792	.00590	.00254	.02387	.00509
SDev	.00781	.00053	.00644	.00310	.00949	.01004	.01313
%RSD	119.44	8507.4	35.952	52.512	372.83	42.076	257.94
#1	-.00981	-.00079	.01920	.00238	-.00233	.02591	.01814
#2	-.00458	.00027	.01920	.00467	-.00834	.02585	.00759
#3	-.01504	.00027	.02433	.00695	.01177	.03383	-.01317
#4	.00327	.00027	.00896	.00962	.00907	.00989	.00781
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	.01068	.02825	.01476	.00061	.00008	.03769	-.00094
SDev	.02227	.03566	.01107	.00012	.00073	.04074	.00260
%RSD	208.48	126.25	74.993	20.372	864.10	108.08	276.85
#1	.02329	-.02525	.01155	.00051	-.00059	.06668	.00296
#2	.00777	.04608	.03114	.00051	.00110	-.00288	-.00221

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#3	-.01940	.04608	.00922	.00066	-.00008	.00866	-.00210
#4	.03108	.04607	.00713	.00076	-.00025	.07830	-.00240
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 .00357  
SDev .00142  
%RSD 39.879

#1 .00205  
#2 .00341  
#3 .00549  
#4 .00334

Errors LC Pass  
High .02000  
Low -.02000

Method: QUANMET Sample Name: DDL76BF Operator: MTW

Run Time: 05/25/00 11:07:23

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00117	-.00481	-.00955	-.00001	-.00029	-.00006	.02242
SDev	.00321	.01133	.01842	.00001	.00010	.00007	.00407
%RSD	275.58	235.42	193.01	79.059	34.146	112.09	18.175
#1	-.00038	-.00625	.00004	-.00000	-.00034	-.00011	.02504
#2	-.00503	-.01816	-.01127	-.00000	-.00034	-.00008	.01705
#3	.00268	.00950	.00765	-.00001	-.00014	-.00010	.02607
#4	-.00193	-.00435	-.03460	-.00001	-.00034	.00004	.02151
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	-.00191	-.00225	-.00103	-.00169	-.00567	-.14792	-.00021
SDev	.00136	.00333	.00177	.00107	.00187	.36746	.00069
%RSD	70.889	148.06	171.94	62.938	32.908	248.43	336.66
#1	-.00158	-.00563	-.00251	-.00148	-.00656	.05177	.00037
#2	-.00383	-.00412	-.00014	-.00317	-.00585	-.68041	-.00095
#3	-.00064	.00188	-.00251	-.00063	-.00301	.13312	.00040
#4	-.00159	-.00112	.00104	-.00148	-.00726	-.09615	-.00064
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	-.00719	-.00053	.00512	.00133	-.00486	-.00404	-.00009
SDev	.01089	.00053	.00490	.00195	.00746	.00392	.00520
%RSD	151.39	100.25	95.761	146.39	153.35	96.974	6089.2
#1	.00589	-.00079	.00896	.00314	-.00900	.00184	-.00277
#2	-.02027	-.00080	-.00128	-.00143	.00519	-.00608	-.00256
#3	-.00458	.00027	.00896	.00200	-.01177	-.00591	.00771
#4	-.00981	-.00080	.00384	.00162	-.00388	-.00600	-.00272
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	-.04566	.04756	.00109	-.00001	-.00051	.02618	-.00248
SDev	.02716	.00751	.01441	.00012	.00089	.03606	.00389
%RSD	59.483	15.796	1319.7	804.14	175.33	137.74	156.46
#1	-.01944	.04612	.01145	.00015	-.00093	-.02599	.00146
#2	-.05051	.04006	-.01911	-.00010	-.00127	.05523	-.00777

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#3	-.08157	.05799	.00058	.00000	.00076	.03192	-.00112
#4	-.03110	.04607	.01145	-.00010	-.00059	.04358	.00250
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 .00253  
SDev .00100  
%RSD 39.619

#1 .00182  
#2 .00254  
#3 .00182  
#4 .00395

Errors LC Pass  
High .02000  
Low -.02000

Method: QUANMET Sample Name: DDL76CF Operator: MTW  
 Run Time: 05/25/00 11:10:31  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT: JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04718	1.9157	1.9487	.95413	1.9070	.04954	50.742
SDev	.00148	.0136	.0726	.00273	.0137	.00023	.379
%RSD	3.1377	.70894	3.7235	.28613	.71687	.47049	.74641
#1	.04525	1.8972	2.0174	.95569	1.9087	.04930	50.355
#2	.04679	1.9230	1.8861	.95630	1.9054	.04957	50.567
#3	.04833	1.9282	1.8860	.95430	1.9235	.04985	50.806
#4	.04835	1.9144	2.0055	.95023	1.8902	.04943	51.238
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
Avg	.04334	.49349	.19637	.23796	1.0424	47.205	.92033
SDev	.00207	.00123	.00131	.00243	.0098	1.303	.02812
%RSD	4.7711	.24954	.66702	1.0200	.94406	2.7609	3.0559
#1	.04070	.49351	.19445	.23648	1.0346	47.259	.93003
#2	.04498	.49199	.19740	.23732	1.0332	47.340	.92254
#3	.04499	.49348	.19681	.24155	1.0509	48.701	.94756
#4	.04268	.49501	.19681	.23648	1.0509	45.521	.88118
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
Avg	49.188	.49806	.98723	47.807	.49612	.51258	.48392
SDev	.244	.00281	.01106	1.223	.01206	.03282	.02254
%RSD	.49582	.56484	1.1206	2.5588	2.4304	6.4038	4.6577
#1	49.124	.49434	.97186	48.227	.48244	.51660	.50491
#2	49.155	.49753	.99234	47.978	.49464	.51652	.48390
#3	49.527	.50072	.99747	48.946	.49560	.54840	.49423
#4	48.946	.49966	.98723	46.079	.51182	.46879	.45266
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
Avg	1.9671	9.8191	2.0317	.96520	.96541	1.9938	.48778
SDev	.0543	.0899	.0307	.00556	.00284	.0488	.00259
%RSD	2.7587	.91536	1.5094	.57596	.29390	2.4476	.53096
#1	1.9069	9.7076	1.9991	.96501	.96237	2.0576	.48619
#2	1.9418	9.8206	2.0142	.96400	.96440	1.9765	.48659

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#3	1.9885	9.9277	2.0666	.97262	.96912	1.9995	.48669
#4	2.0312	9.8207	2.0468	.95918	.96575	1.9415	.49165
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 .49382  
SDev .00299  
%RSD .60638

#1 .49285  
#2 .49009  
#3 .49686  
#4 .49549

Errors LC Pass  
High .60000  
Low .40000



Method: QUANMET Sample Name: DD3QMF Operator: MTW  
 Run Time: 05/25/00 11:13:40  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC—Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00155	.00384	-.00385	.01038	.03908	.00001
SDev	.00077	.00170	.04699	.00488	.00023	.00007
%RSD	49.577	44.239	1220.0	47.057	.59477	1051.7

#1	-.00193	.00429	-.04626	.01383	.03937	.00004
#2	-.00193	.00252	-.00384	.01038	.03889	-.00010
#3	-.00193	.00250	-.02697	.00347	.03917	.00004
#4	-.00040	.00605	.06166	.01383	.03889	.00004

Errors	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
Low	-.01000	-.20000	-.30000	-.20000	-.20000	-.00500

Elem	CD	CO	CR	CU	FE	K	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00032	-.00189	-.00044	-.00127	.00584	1.1574	.00569
SDev	.00195	.00194	.00262	.00106	.00212	.1497	.00032
%RSD	612.05	102.46	596.03	83.911	36.398	12.933	5.5632

#1	-.00004	.00036	.00045	.00021	.00831	1.1907	.00607
#2	.00228	-.00265	-.00310	-.00233	.00690	.96145	.00583
#3	-.00127	-.00414	-.00192	-.00148	.00406	1.1537	.00546
#4	-.00225	-.00114	.00281	-.00148	.00407	1.3238	.00540

Errors	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
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.446	.00531	.00768	4.8169	-.00472	.00192	-.01058
SDev	.048	.00053	.00256	.0673	.00847	.02763	.02325
%RSD	.33561	9.9781	33.332	1.3981	179.24	1438.6	219.77

#1	14.504	.00452	.00896	4.8491	.00549	.04182	.01826
#2	14.454	.00558	.00896	4.8110	-.01523	-.00609	-.03417
#3	14.439	.00558	.00896	4.8818	-.00484	-.00612	-.02369
#4	14.386	.00557	.00384	4.7257	-.00432	-.02193	-.00272

Errors	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
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000

Elem	SE	SI	SN	SR	TI	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00775	4.2297	.00869	1.2043	-.00236	.02320	-.00243
SDev	.03805	.0327	.01167	.0036	.00051	.06720	.00005
%RSD	491.25	.77356	134.21	.29866	21.429	289.70	1.8609

#1	-.03881	4.2580	.01810	1.2054	-.00262	.02025	-.00241
#2	.03886	4.1985	-.00615	1.2067	-.00262	.00870	-.00241

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#3	-.03882	4.2044	.01791	1.2062	-.00262	-.04925	-.00241
#4	.00778	4.2580	.00491	1.1990	-.00160	.11308	-.00250
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 .00890  
SDev .00066  
%RSD 7.3635

#1 .00878  
#2 .00942  
#3 .00938  
#4 .00802

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QNF

Operator: MTW

Run Time: 05/25/00 11:16:48

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

MET

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00252	.00083	-.00570	.30166	.18678	.00003	80.597
SDev	.00077	.00816	.02909	.02299	.00050	.00001	.185
%RSD	30.577	981.78	510.01	7.6217	.26741	22.428	.22956
#1	-.00290	.00260	-.04621	.28179	.18711	.00003	80.578
#2	-.00137	.01127	.01540	.28177	.18636	.00003	80.715
#3	-.00290	-.00275	.01551	.32325	.18731	.00003	80.343
#4	-.00292	-.00780	-.00751	.31981	.18636	.00004	80.752
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	-.00224	-.00196	-.00281	-.00146	2.8532	4.8516	.00350
SDev	.00231	.00313	.00171	.00144	.0086	.3250	.00035
%RSD	102.90	159.83	60.693	98.712	.30274	6.6992	10.078
#1	-.00193	-.00121	-.00133	-.00294	2.8517	4.7259	.00304
#2	-.00303	.00180	-.00133	.00044	2.8447	5.3323	.00377
#3	.00074	-.00572	-.00429	-.00210	2.8510	4.6150	.00340
#4	-.00476	-.00270	-.00429	-.00125	2.8652	4.7333	.00377
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	36.313	.67871	-.00085	28.071	-.00176	.01522	-.00262
SDev	.034	.00137	.00418	.245	.00298	.02869	.01477
%RSD	.09343	.20156	489.84	.87209	169.64	188.51	564.19
#1	36.315	.68030	-.00597	28.365	-.00146	.00928	.00786
#2	36.297	.67924	-.00085	27.918	-.00505	.05711	-.00267
#3	36.360	.67712	.00427	28.174	.00211	-.00680	-.02348
#4	36.281	.67819	-.00085	27.828	-.00263	.00128	.00782
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	-.02161	6.2480	.00819	.18512	-.00481	-.00534	.00127
SDev	.01962	.0114	.01709	.00036	.00058	.06491	.00258
%RSD	90.802	.18205	208.76	.19214	12.155	1216.1	203.72
#1	.00266	6.2569	.01424	.18508	-.00532	-.09810	.00246
#2	-.01679	6.2450	.02292	.18473	-.00430	.00631	.00256

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#3	-.02842	6.2331	-.01647	.18559	-.00532	.05268	.00265
#4	-.04390	6.2568	.01206	.18508	-.00430	.01776	-.00261
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	.01189
SDev	.00130
%RSD	10.927

#1	.01024
#2	.01184
#3	.01207
#4	.01341

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD3QQF

Operator: MTW

Run Time: 05/25/00 11:19:56

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00065	.00005	-.02529	.01423	.09865	.00000	35.932
SDev	.00090	.00570	.01203	.00194	.00029	.00007	.099
%RSD	137.00	11887.	47.580	13.663	.28989	1973.7	.27641
#1	.00011	-.00425	-.01173	.01168	.09906	.00004	35.926
#2	-.00143	.00095	-.03875	.01574	.09839	-.00009	35.807
#3	-.00143	-.00427	-.01945	.01575	.09858	.00004	35.945
#4	.00014	.00776	-.03122	.01374	.09858	.00003	36.049
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	-.00128	.00334	-.00015	-.00144	3.1277	1.1574	.00091
SDev	.00139	.00123	.00153	.00042	.0086	.1251	.00118
%RSD	108.13	36.718	1040.9	29.334	.27460	10.812	129.19
#1	-.00270	.00334	-.00192	-.00123	3.1224	1.2277	.00009
#2	.00042	.00333	.00044	-.00123	3.1195	1.2869	.00211
#3	-.00078	.00484	-.00074	-.00207	3.1301	1.0058	-.00028
#4	-.00207	.00184	.00163	-.00123	3.1386	1.1094	.00174
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	18.695	1.1970	.00175	44.984	.00238	.02328	.01044
SDev	.018	.0028	.00296	.124	.00235	.01992	.02157
%RSD	.09523	.23342	169.21	.27598	98.591	85.559	206.67
#1	18.702	1.1972	-.00081	44.884	.00190	-.00660	-.01311
#2	18.681	1.1930	-.00081	45.148	.00022	.03323	.00784
#3	18.718	1.1983	.00431	44.892	.00572	.03331	.03922
#4	18.681	1.1994	.00431	45.011	.00169	.03318	.00781
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	-.00896	6.1721	.02248	.06558	-.00236	.07010	-.00126
SDev	.02963	.0029	.01106	.00019	.00032	.10989	.00262
%RSD	330.81	.04766	49.182	.28965	13.678	156.75	208.17
#1	-.01966	6.1736	.03165	.06531	-.00262	.08756	-.00260
#2	-.00025	6.1736	.00991	.06557	-.00194	.21513	-.00260

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#3	.02698	6.1736	.03189	.06572	-.00262	.01790	-.00250
#4	-.04290	6.1677	.01647	.06572	-.00228	-.04018	.00267
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	-.20000	-.05000

Elem ZN  
Units ppm  
Avge .01212  
SDev .00145  
%RSD 11.965

#1 .01233  
#2 .01394  
#3 .01176  
#4 .01044

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QRF Operator: MTW  
Run Time: 05/25/00 11:23:04  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_m	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00192	.00301	.03082	-.00000	-.00034	-.00007	.01946
SDev	.00127	.00786	.03132	.00001	.00000	.00006	.00376
%RSD	65.823	260.96	101.61	125.56	.00000	93.992	19.325
#1	-.00037	.01292	.01912	-.00000	-.00034	.00003	.02439
#2	-.00347	.00087	-.00767	-.00001	-.00034	-.00010	.01689
#3	-.00194	-.00598	.05023	-.00001	-.00034	-.00009	.01618
#4	-.00191	.00423	.06160	.00000	-.00034	-.00011	.02037
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
Avg	-.00190	-.00038	.00385	.00127	-.00247	.06656	-.00040
SDev	.00175	.00194	.00122	.00160	.00089	.50979	.00059
%RSD	92.169	513.92	31.708	126.19	36.202	765.89	150.29
#1	-.00078	-.00113	.00517	.00359	-.00229	.82833	.00031
#2	-.00006	.00037	.00459	.00021	-.00371	-.22927	-.00110
#3	-.00309	.00188	.00281	.00021	-.00229	-.12573	-.00058
#4	-.00366	-.00263	.00281	.00105	-.00158	-.20708	-.00021
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	.00458	-.00027	.00256	.00762	-.00053	.00397	-.00012
SDev	.01376	.00061	.00256	.00100	.00743	.01005	.01794
%RSD	300.57	231.09	100.01	13.150	1399.9	253.12	15160.
#1	.02419	.00027	.00384	.00847	.00834	.00197	.00782
#2	-.00719	.00027	.00384	.00771	-.00974	-.00599	-.02378
#3	.00327	-.00080	-.00128	.00619	.00058	.01796	-.00272
#4	-.00196	-.00080	.00384	.00809	-.00131	.00194	.01821
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	-.02817	.06692	.02563	-.00005	.00388	-.01447	-.00027
SDev	.02381	.00597	.00894	.00006	.00058	.04338	.00343
%RSD	84.534	8.9179	34.875	115.47	14.851	299.86	1291.4
#1	-.01166	.06993	.01803	.00000	.00447	-.01448	.00266
#2	-.04662	.05797	.03098	-.00010	.00312	-.02604	-.00250

#3	-.00389	.06985	.03544	.00000	.00413	-.06085	-.00389
#4	-.05050	.06993	.01808	-.00010	.00380	.04350	.00266
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 .00405  
SDev .00056  
%RSD 13.787

#1 .00470  
#2 .00396  
#3 .00336  
#4 .00419

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: DD3QTF

Operator: MTW

Run Time: 05/25/00 11:26:12

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

ALC

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00085	.00744	-.00942	.05116	.09717	.00004	48.738
SDev	.00126	.00534	.03362	.00280	.00070	.00001	.274
%RSD	149.40	71.710	357.07	5.4812	.72141	18.332	.56241
#1	-.00086	.00440	.01958	.04882	.09648	.00004	48.493
#2	.00071	.01478	-.03461	.05032	.09668	.00003	48.867
#3	-.00085	.00273	.01957	.05027	.09763	.00004	48.529
#4	-.00238	.00786	-.04221	.05524	.09791	.00004	49.062
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	-.00253	.00372	.00118	-.00102	5.6702	4.6371	.00077
SDev	.00336	.00144	.00366	.00069	.0283	.2488	.00019
%RSD	132.68	38.601	309.17	67.730	.49879	5.3661	24.705
#1	-.00199	.00184	-.00074	-.00103	5.6385	4.5558	.00053
#2	.00047	.00484	.00103	-.00102	5.6810	4.7481	.00098
#3	L-.00733	.00336	-.00192	-.00187	5.6576	4.3339	.00083
#4	-.00128	.00484	.00636	-.00017	5.7037	4.9108	.00074
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	22.850	1.3473	-.00043	27.758	.00519	.00678	-.00258
SDev	.139	.0056	.00418	.369	.00097	.02783	.01479
%RSD	.60965	.41933	967.78	1.3279	18.600	410.55	572.30
#1	22.659	1.3412	-.00044	27.210	.00490	.04057	-.00258
#2	22.892	1.3497	-.00043	27.921	.00585	.01674	-.01297
#3	22.858	1.3444	-.00556	27.894	.00396	-.02305	.01833
#4	22.992	1.3540	.00469	28.007	.00607	-.00714	-.01312
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	.00422	5.1741	.01035	.16552	-.00321	-.01329	-.00130
SDev	.01666	.0412	.01883	.00103	.00058	.07390	.00258
%RSD	394.65	.79670	181.89	.62282	17.977	556.04	199.17
#1	.00119	5.1146	.01035	.16398	-.00262	.05081	-.00259
#2	.01688	5.1861	-.01370	.16612	-.00295	-.07721	.00257

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#3	-.01816	5.1860	.03228	.16586	-.00329	.05062	-.00269
#4	.01697	5.2098	.01250	.16612	-.00397	-.07738	-.00248
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 .00954  
SDev .00216  
%RSD 22.637

#1 .00744  
#2 .00937  
#3 .00880  
#4 .01254

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QVF Operator: MTW  
Run Time: 05/25/00 11:29:20  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr: Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00172	.00172	-.00653	.01231	.26932	-.00003	46.376
SDev	.00148	.00672	.05400	.00142	.00202	.00007	.116
%RSD	86.370	391.11	827.11	11.499	.74986	207.65	.25078
#1	.00021	.00952	.01553	.01301	.26699	.00003	46.487
#2	-.00288	.00434	-.08457	.01019	.27155	-.00009	46.331
#3	-.00288	-.00609	.03887	.01302	.27032	-.00010	46.233
#4	-.00132	-.00089	.00405	.01302	.26842	.00003	46.452
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
Avg	-.00139	-.00088	.00030	-.00126	2.7584	1.3091	.00078
SDev	.00380	.00144	.00498	.00154	.0040	.3974	.00021
%RSD	274.05	164.35	1682.8	122.62	.14582	30.358	27.062
#1	-.00163	.00025	.00517	-.00041	2.7526	1.6567	.00083
#2	-.00052	-.00276	-.00370	-.00211	2.7618	.94666	.00098
#3	.00290	-.00127	-.00429	-.00295	2.7597	.98364	.00048
#4	L-.00629	.00026	.00399	.00043	2.7597	1.6493	.00083
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	21.048	.35526	.00041	63.304	.00094	.01529	.00784
SDev	.078	.00102	.00256	.753	.00597	.01992	.01703
%RSD	.37203	.28611	620.77	1.1890	637.42	130.33	217.05
#1	20.944	.35446	-.00087	62.681	.00543	.00938	.02869
#2	21.119	.35659	-.00087	64.335	.00022	.01722	.00791
#3	21.095	.35447	.00425	63.386	.00533	-.00664	-.01302
#4	21.032	.35553	-.00087	62.812	-.00724	.04119	.00780
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	.01105	5.7200	.00385	.07277	-.00278	.04890	.00001
SDev	.02401	.0374	.03206	.00029	.00019	.06656	.00296
%RSD	217.18	.65370	833.71	.39679	6.9982	136.10	34616.
#1	.04502	5.6917	.05142	.07241	-.00262	.14460	.00257
#2	.01010	5.7631	-.01634	.07307	-.00295	.04021	-.00260

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#3	-.00156	5.7393	-.00553	.07292	-.00262	.01702	-.00251
#4	-.00933	5.6858	-.01416	.07266	-.00295	-.00622	.00257
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	-.20000	-.05000

Elem ZN  
Units ppm  
Avge .00911  
SDev .00097  
%RSD 10.649

#1 .00910  
#2 .00774  
#3 .00989  
#4 .00970

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QXF

Operator: MTW

Run Time: 05/25/00 11:32:29

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00052	.00171	.01629	-.00166	.19604	.00004	81.259
SDev	.00076	.00416	.02960	.00006	.00096	.00000	.088
%RSD	145.95	243.51	181.75	3.3148	.48961	.66368	.10848
#1	-.00091	.00432	-.02709	-.00168	.19683	.00004	81.182
#2	-.00091	.00261	.02301	-.00164	.19635	.00004	81.375
#3	.00062	.00432	.03847	-.00173	.19464	.00004	81.279
#4	-.00090	-.00442	.03075	-.00160	.19635	.00004	81.200
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	-.00051	.00104	-.00103	-.00095	11.830	1.1038	.00322
SDev	.00190	.00261	.00244	.00049	.026	.1406	.00037
%RSD	372.47	251.06	236.52	51.044	.22195	12.741	11.429
#1	-.00181	.00329	.00104	-.00137	11.823	1.2499	.00304
#2	-.00141	-.00121	-.00251	-.00053	11.841	1.1907	.00377
#3	-.00113	.00329	.00104	-.00053	11.798	1.0280	.00304
#4	.00231	-.00122	-.00369	-.00138	11.859	.94666	.00304
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	36.156	1.2934	.00817	93.618	.00092	.03122	.01566
SDev	.157	.0010	.00512	1.207	.01236	.03841	.01801
%RSD	.43394	.07886	62.665	1.2891	1341.0	123.05	115.01
#1	36.174	1.2921	.01073	94.262	-.00673	-.00059	-.00280
#2	36.211	1.2942	.00049	93.880	-.00804	.01522	.00778
#3	35.936	1.2931	.01073	91.846	.01874	.02336	.03939
#4	36.305	1.2942	.01074	94.483	-.00028	.08688	.01825
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	.00052	7.2920	.00616	.18239	-.00515	.00400	-.00242
SDev	.03544	.0137	.01788	.00090	.00019	.07247	.00010
%RSD	6752.3	.18840	290.27	.49346	3.7859	1812.2	4.1639
#1	.03934	7.2801	.02681	.18270	-.00498	.02144	-.00237
#2	.01998	7.3039	.00503	.18270	-.00532	.09089	-.00258

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#3	-.01901	7.2801	-.01666	.18107	.00498	-.01308	-.00237
#4	-.03821	7.3039	.00945	.18310	.00532	-.08325	-.00238
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 .00943  
SDev .00133  
%RSD 14.081

#1 .00959  
#2 .00959  
#3 .01087  
#4 .00765

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QXFP5

Operator: MTW

Run Time: 05/25/00 11:35:37

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00100	-.00478	-.00223	.01015	.03984	.00003	16.826
SDev	.00194	.01106	.00472	.00786	.00000	.00011	.070
%RSD	193.65	231.44	212.13	77.390	.00000	311.28	.41770
#1	.00170	.00948	.00435	.01896	.03984	.00003	16.925
#2	-.00294	-.01650	-.00690	.00066	.03984	.00004	16.760
#3	-.00138	-.00263	-.00325	.01343	.03984	.00016	16.813
#4	-.00140	-.00947	-.00310	.00755	.03984	-.00009	16.806
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	.00111	.00030	-.00107	2.4575	.33466	-.00064
SDev	.00096	.00398	.00257	.00043	.0063	.16782	.00000
%RSD	117.05	359.02	867.05	39.759	.25839	50.148	.00000
#1	.00185	-.00265	.00222	-.00128	2.4657	.49552	-.00064
#2	.00001	-.00114	-.00192	-.00128	2.4593	.22927	-.00064
#3	.00142	.00636	.00281	-.00043	2.4515	.45854	-.00064
#4	-.00001	.00186	-.00192	-.00128	2.4536	.15531	-.00064
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	7.4426	.26921	.00293	18.938	.00197	.02334	-.01312
SDev	.0207	.00102	.00490	.260	.00624	.04653	.01903
%RSD	.27876	.37734	167.43	1.3727	317.08	199.32	145.01
#1	7.4367	.27054	-.00091	18.643	-.00190	.07300	-.00277
#2	7.4707	.26842	.00421	18.986	-.00219	.04919	.00779
#3	7.4420	.26842	.00933	19.265	.00087	.00158	-.02359
#4	7.4210	.26947	-.00091	18.858	.01110	-.03039	-.03392
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	-.01335	1.4962	.02169	.03766	-.00160	.03991	.00006
SDev	.03299	.0157	.02302	.00015	.00062	.05221	.00301
%RSD	247.16	1.0482	106.13	.40445	38.437	130.80	5274.7
#1	-.03759	1.5096	.05557	.03788	-.00093	.04275	.00257
#2	-.04538	1.4798	.00979	.03752	-.00194	-.00356	-.00250

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#3	.02061	1.5096	.00527	.03762	-.00127	.00802	.00277
#4	.00897	1.4857	.01614	.03762	-.00228	.11244	-.00260
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 .02943  
SDev .00093  
%RSD 3.1674

#1 .02898  
#2 .02896  
#3 .02897  
#4 .03083

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: CCV2-7

Operator: MTW

Run Time: 05/25/00 11:38:45

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0113	48.891	4.9834	5.0225	4.8077	5.0930	52.693
SDev	.0039	.100	.1302	.0002	.0084	.0084	.247
%RSD	.38728	.20361	2.6136	.00433	.17533	.16511	.46883
#1	1.0062	48.930	4.9045	5.0222	4.8125	5.0867	52.389
#2	1.0125	48.918	5.1737	5.0227	4.8128	5.1019	52.861
#3	1.0156	48.971	4.9613	5.0226	4.8104	5.0850	52.925
#4	1.0109	48.746	4.8942	5.0223	4.7951	5.0983	52.598
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	5.1976	5.1131	5.0929	4.8282	52.799	46.135	L4.3875
SDev	.0251	.0165	.0135	.0108	.128	.567	.0578
%RSD	.48266	.32245	.26597	.22315	.24215	1.2293	1.3181
#1	5.1951	5.0902	5.0740	4.8421	52.652	46.327	L4.4495
#2	5.2187	5.1187	5.1018	4.8286	52.919	46.312	L4.3579
#3	5.2135	5.1292	5.1036	4.8261	52.893	46.593	L4.4204
#4	5.1632	5.1143	5.0923	4.8159	52.732	45.306	L4.3225
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
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	49.730	5.1055	5.0879	46.789	5.0829	5.1338	5.0927
SDev	.113	.0143	.0179	.497	.0369	.0326	.0767
%RSD	.22665	.28097	.35256	1.0632	.72587	.63461	1.5069
#1	49.775	5.0880	5.0610	47.307	5.0361	5.1371	5.0558
#2	49.812	5.1167	5.0969	46.642	5.1188	5.1379	5.1085
#3	49.770	5.1178	5.0969	47.042	5.1048	5.0905	5.1922
#4	49.563	5.0997	5.0969	46.166	5.0719	5.1696	5.0142
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	5.1760	5.0541	5.1591	4.8651	4.9476	9.8122	5.0461
SDev	.0992	.0452	.0407	.0085	.0117	.0928	.0106
%RSD	1.9162	.89336	.78871	.17433	.23718	.94537	.20927
#1	5.3037	4.9885	5.1524	4.8665	4.9378	9.7037	5.0323
#2	5.0677	5.0602	5.1919	4.8719	4.9604	9.7704	5.0537

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#3	5.1919	5.0840	5.1879	4.8693	4.9546	9.9097	5.0550
#4	5.1408	5.0838	5.1042	4.8528	4.9374	9.8651	5.0433
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 5.0327  
SDev .0157  
%RSD .31202

#1 5.0117  
#2 5.0450  
#3 5.0445  
#4 5.0297

Errors LC Pass  
High 5.5000  
Low 4.5000

Method: QUANMET Sample Name: CCB7

Operator: MTW

Run Time: 05/25/00 11:41:59

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00155	-.00228	-.01921	.00777	.00012	.00068	-.00064
SDev	.00077	.00886	.02116	.01556	.00058	.00056	.00644
%RSD	49.591	389.13	110.10	200.13	489.57	81.507	1009.0
#1	-.00193	-.00093	-.03078	-.00001	-.00053	.00018	-.00695
#2	-.00040	-.00622	.01166	-.00001	-.00014	.00031	-.00489
#3	-.00193	.00938	-.03475	.03111	.00081	.00140	.00695
#4	-.00193	-.01133	-.02299	.00000	.00034	.00085	.00234
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	-.00004	-.00113	.00089	.00021	-.00018	-.02404	-.00063
SDev	.00233	.00001	.00248	.00069	.00752	.13152	.00015
%RSD	5608.6	.55720	277.97	328.30	4268.5	547.18	24.117
#1	.00259	-.00113	-.00014	.00021	-.00514	-.07396	-.00064
#2	-.00169	-.00112	-.00014	-.00064	-.00584	.14052	-.00043
#3	.00122	-.00113	.00459	.00021	.01045	.00740	-.00064
#4	-.00229	-.00112	-.00074	.00106	-.00018	-.17010	-.00080
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	.00392	.00000	.01408	.00781	.00162	.02384	-.01055
SDev	.00720	.00102	.00591	.00955	.00564	.01990	.00520
%RSD	183.59	21933.	41.992	122.27	347.60	83.486	49.287
#1	-.00458	.00027	.00896	-.00181	-.00074	.03379	-.01311
#2	.00850	-.00079	.01920	.00847	.00387	-.00601	-.01312
#3	.01112	.00134	.01921	.02066	.00819	.03379	-.00275
#4	.00065	-.00079	.00896	.00390	-.00483	.03379	-.01323
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	.00097	.04013	.00050	.00071	.00025	.00583	-.00231
SDev	.01860	.00486	.02270	.00066	.00085	.06655	.00012
%RSD	1916.9	12.108	4580.8	92.799	335.55	1142.4	5.0877
#1	.01552	.03418	-.01916	.00000	-.00059	-.02601	-.00241
#2	-.00391	.04608	-.01916	.00040	.00008	-.00282	-.00221

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#3	.01557	.04013	.02017	.00152	.00143	-.04936	-.00220
#4	-.02330	.04013	.02013	.00091	.00008	.10149	-.00241

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	.00188
SDev	.00147
%RSD	77.925

#1	.00177
#2	.00040
#3	.00390
#4	.00146

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DD3QXSF Operator: MTW  
Run Time: 05/25/00 11:46:53  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04785	1.9455	2.0127	.98531	2.1062	.05012	134.28
SDev	.00125	.0052	.0673	.01624	.0034	.00011	.63
%RSD	2.6102	.26876	3.3457	1.6480	.16347	.22061	.46960
#1	.04786	1.9403	2.0474	.97353	2.1019	.05012	134.78
#2	.04784	1.9455	2.0899	1.0079	2.1086	.04998	133.38
#3	.04938	1.9527	1.9664	.97345	2.1050	.05012	134.32
#4	.04632	1.9437	1.9472	.98637	2.1093	.05025	134.63
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	.04478	.49153	.19370	.24061	13.045	47.693	.90926
SDev	.00543	.00466	.00196	.00126	.047	.821	.01529
%RSD	12.116	.94859	1.0096	.52485	.35999	1.7218	1.6816
#1	.04021	.49192	.19622	.23998	13.071	47.074	.89415
#2	.05070	.48889	.19148	.24166	12.982	48.782	.92912
#3	.04014	.49792	.19326	.23913	13.037	47.873	.91271
#4	.04807	.48738	.19385	.24166	13.089	47.044	.90108
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	87.207	1.8167	.99542	146.33	.49092	.52178	.51005
SDev	.050	.0055	.00875	1.84	.01620	.01459	.02007
%RSD	.05735	.30378	.87892	1.2596	3.3005	2.7967	3.9346
#1	87.196	1.8191	1.0044	144.45	.50687	.50588	.51541
#2	87.261	1.8085	.99413	148.72	.48821	.51374	.49424
#3	87.227	1.8191	.98390	146.71	.46950	.53791	.53619
#4	87.144	1.8202	.99927	145.44	.49911	.52960	.49435
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	2.0285	17.153	2.0183	1.1545	.95512	1.9411	.48664
SDev	.0780	.026	.0374	.0012	.00178	.0804	.00017
%RSD	3.8457	.15380	1.8552	.10419	.18588	4.1447	.03522
#1	2.0596	17.144	1.9949	1.1532	.95529	1.9756	.48682
#2	2.0787	17.132	2.0646	1.1539	.95259	1.8257	.48662

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#3	2.0634	17.144	1.9819	1.1550	.95596	1.9527	.48642
#4	1.9121	17.191	2.0319	1.1560	.95664	2.0102	.48672
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 .49876  
SDev .00367  
%RSD .73582

#1 .49781  
#2 .49436  
#3 .50314  
#4 .49975

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD3QXDF

Operator: MTW

Run Time: 05/25/00 11:50:01

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05022	1.9710	2.0286	1.0132	2.1184	.05103	136.86
SDev	.00152	.0128	.0388	.0071	.0107	.00019	.50
%RSD	3.0332	.65018	1.9138	.70546	.50593	.37613	.36200
#1	.04794	1.9643	2.0624	1.0150	2.1328	.05102	136.13
#2	.05096	1.9578	2.0549	1.0066	2.1119	.05092	137.23
#3	.05101	1.9749	1.9775	1.0225	2.1088	.05089	137.10
#4	.05099	1.9870	2.0198	1.0087	2.1200	.05131	136.97
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	.04157	.50765	.19918	.24379	13.085	47.928	.89810
SDev	.00692	.00513	.00251	.00161	.006	.174	.01106
%RSD	16.638	1.0095	1.2596	.66237	.04687	.36309	1.2312
#1	.04008	.50238	.19681	.24590	13.081	48.146	.91379
#2	.04599	.51440	.20036	.24253	13.079	47.828	.88885
#3	.03244	.50543	.19740	.24252	13.086	47.984	.89757
#4	.04777	.50838	.20213	.24422	13.093	47.754	.89220
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	87.815	1.8345	1.0172	144.18	.50630	.56005	.53617
SDev	.264	.0028	.0066	1.44	.01262	.01767	.02267
%RSD	.30119	.15312	.64993	.99918	2.4918	3.1558	4.2272
#1	88.172	1.8318	1.0249	146.24	.50886	.56986	.53625
#2	87.643	1.8350	1.0146	142.91	.49788	.57814	.52551
#3	87.588	1.8329	1.0095	143.98	.49539	.55399	.51527
#4	87.858	1.8382	1.0198	143.60	.52306	.53821	.56765
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	2.0840	17.383	2.0527	1.1624	.97689	1.9347	.49869
SDev	.0288	.041	.0424	.0047	.00226	.0935	.00496
%RSD	1.3810	.23419	2.0670	.40065	.23092	4.8325	.99382
#1	2.0480	17.322	2.0145	1.1682	.97858	1.9754	.50270
#2	2.1140	17.406	2.1083	1.1585	.97588	1.8826	.49219

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#3	2.0985	17.400	2.0254	1.1588	.97419	2.0449	.50241
#4	2.0752	17.406	2.0627	1.1641	.97891	1.8361	.49745
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 .50966  
SDev .00263  
%RSD .51679

#1 .51360  
#2 .50816  
#3 .50822  
#4 .50866

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: DD3R0F Operator: MTW  
Run Time: 05/25/00 11:53:10  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00077	.00000	-.01669	.00897	.15406	.00004	86.420
SDev	.00077	.00097	.02364	.00004	.00054	.00000	.360
%RSD	99.667	67875.	141.60	.47106	.35255	.62436	.41660
#1	-.00116	.00082	-.02919	.00892	.15332	.00004	86.061
#2	-.00116	-.00080	.01320	.00894	.15399	.00004	86.185
#3	-.00116	-.00087	-.04080	.00900	.15447	.00004	86.600
#4	.00038	.00086	-.00999	.00901	.15447	.00004	86.835
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	-.00229	.00144	-.00088	-.00110	4.6702	.99473	.00221
SDev	.00335	.00144	.00101	.00069	.0227	.22018	.00193
%RSD	146.41	99.663	114.29	62.752	.48681	22.135	87.533
#1	-.00106	.00031	-.00133	-.00195	4.6439	.73218	-.00064
#2	L-.00632	.00183	-.00074	-.00110	4.6588	.90968	.00267
#3	-.00332	.00032	-.00192	-.00110	4.6850	1.1020	.00340
#4	.00156	.00331	.00045	-.00026	4.6928	1.2351	.00340
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	38.605	1.6867	.00582	95.961	.00308	.02686	.00788
SDev	.093	.0053	.00490	.323	.00274	.02627	.01481
%RSD	.24180	.31446	84.260	.33640	89.213	97.795	188.09
#1	38.478	1.6827	.00966	95.965	.00309	.02487	.02882
#2	38.599	1.6816	-.00058	95.954	-.00081	.00895	-.00260
#3	38.648	1.6922	.00454	96.359	.00490	.06462	-.00261
#4	38.695	1.6901	.00966	95.568	.00512	.00900	.00789
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	-.00041	6.7699	-.00888	.19944	-.00548	.05406	-.00247
SDev	.05841	.0462	.01698	.00027	.00019	.05296	.00010
%RSD	14414.	.68208	191.27	.13394	3.5529	97.980	3.8570
#1	-.05293	6.7328	-.02461	.19943	-.00565	.03982	-.00240
#2	-.03346	6.7328	-.00293	.19907	-.00532	.06284	-.00259

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#3	.07927	6.7863	.01236	.19968	-.00565	-.00694	-.00250
#4	.00550	6.8279	-.02033	.19958	-.00532	.12051	-.00239
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 .01256  
SDev .00223  
%RSD 17.757

#1 .00971  
#2 .01299  
#3 .01241  
#4 .01512

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WAF

Operator: MTW

Run Time: 05/25/00 11:56:18

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00037	.00691	.01013	.01955	.07440	.00007	40.213
SDev	.00125	.00645	.02062	.00086	.00034	.00007	.092
%RSD	341.98	93.476	203.51	4.4023	.45821	91.115	.22811
#1	-.00190	.01474	.03320	.01873	.07411	.00004	40.269
#2	-.00037	.00252	.02173	.01935	.07411	.00018	40.080
#3	.00117	.00956	-.00916	.02076	.07478	.00004	40.226
#4	-.00037	.00080	-.00524	.01935	.07459	.00004	40.278
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	-.00113	-.00041	-.00177	-.00097	1.0794	5.1382	.00045
SDev	.00466	.00195	.00030	.00049	.0020	.2547	.00123
%RSD	410.92	479.62	16.725	50.288	.18560	4.9561	273.88
#1	-.00188	.00035	-.00192	-.00055	1.0780	5.4063	.00226
#2	-.00078	-.00266	-.00133	-.00139	1.0780	4.7925	-.00049
#3	L-.00661	.00186	-.00192	-.00139	1.0794	5.1844	-.00006
#4	.00474	-.00117	-.00192	-.00055	1.0822	5.1696	.00009
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	12.128	1.1319	.00656	15.706	.00161	.01765	-.00524
SDev	.034	.0023	.00296	.156	.00225	.03621	.01004
%RSD	.28084	.20262	45.054	.99270	139.72	205.23	191.71
#1	12.082	1.1308	.00400	15.667	-.00037	.06543	-.00260
#2	12.124	1.1298	.00912	15.636	.00424	.00962	-.01309
#3	12.155	1.1319	.00400	15.587	.00271	.01772	.00786
#4	12.153	1.1351	.00912	15.935	-.00015	-.02219	-.01311
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	.00200	3.8118	-.00527	.09442	-.00253	.04164	-.00246
SDev	.03495	.0347	.00723	.00039	.00017	.01110	.00006
%RSD	1744.1	.91003	137.24	.40885	6.6667	26.665	2.3386
#1	.05055	3.7821	-.01453	.09396	-.00228	.02715	-.00251
#2	.00394	3.7821	-.00367	.09426	-.00262	.05036	-.00241

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#3	-.01936	3.8475	.00298	.09472	-.00262	.05032	-.00251
#4	-.02711	3.8356	-.00585	.09476	-.00262	.03873	-.00241
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 .00999  
SDev .00129  
%RSD 12.944

#1 .01142  
#2 .01061  
#3 .00845  
#4 .00950

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WGF Operator: MTW  
Run Time: 05/25/00 11:59:26  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00024	.00428	.00828	.01065	.24726	.00004	54.308
SDev	.00127	.00677	.01019	.00112	.00129	.00001	.109
%RSD	520.11	158.07	123.06	10.514	.52312	35.304	.19982
#1	.00131	.01119	-.00147	.00967	.24538	.00003	54.469
#2	-.00028	-.00433	.00269	.01151	.24823	.00005	54.277
#3	-.00022	.00247	.01015	.01172	.24747	.00003	54.234
#4	-.00179	.00781	.02176	.00969	.24795	.00004	54.253
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
Avg	-.00103	-.00312	-.00162	-.00034	1.0192	1.6844	.00441
SDev	.00298	.00144	.00141	.00106	.0041	.1716	.00019
%RSD	291.09	46.138	86.497	309.55	.40530	10.187	4.3283
#1	-.00150	-.00124	-.00015	.00114	1.0156	1.9377	.00444
#2	-.00396	-.00424	-.00310	-.00056	1.0156	1.6345	.00460
#3	.00314	-.00426	-.00074	-.00140	1.0220	1.5605	.00414
#4	-.00178	-.00274	-.00251	-.00055	1.0234	1.6049	.00444
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	22.201	.47681	.00271	56.285	-.00561	.01760	.00259
SDev	.102	.00053	.00256	.712	.00861	.02342	.01346
%RSD	.45996	.11140	94.367	1.2647	153.35	133.09	520.06
#1	22.068	.47601	.00399	55.234	.00497	-.00626	-.01297
#2	22.217	.47707	.00399	56.461	-.00219	.00167	.01830
#3	22.202	.47707	.00399	56.723	-.01309	.04145	.00773
#4	22.317	.47707	-.00113	56.724	-.01214	.03352	-.00271
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	-.01666	4.6536	-.01615	.18913	-.00338	.06177	-.00124
SDev	.03564	.0259	.01399	.00137	.00051	.06094	.00495
%RSD	213.87	.55707	86.579	.72608	15.000	98.648	399.08
#1	.03478	4.6447	-.03424	.18720	-.00295	.11685	.00266
#2	-.03124	4.6386	-.01881	.18944	-.00397	.09376	-.00767

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#3	-.04675	4.6388	-.01013	.18944	-.00295	-.02235	.00266
#4	-.02345	4.6922	-.00144	.19045	-.00363	.05884	-.00261

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	.00589
SDev	.00139
%RSD	23.601

#1	.00519
#2	.00517
#3	.00797
#4	.00523

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD4WHF Operator: MTW  
Run Time: 05/25/00 12:02:34  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00071	.00778	.01413	.00121	.14451	-.00004	71.289
SDev	.00001	.00243	.02585	.00103	.00028	.00008	.488
%RSD	1.5708	31.205	182.86	84.917	.19016	222.83	.68410
#1	-.00073	.00616	.03830	.00034	.14475	.00004	70.664
#2	-.00070	.00601	-.01190	.00177	.14427	.00003	71.440
#3	-.00071	.00771	-.00418	.00035	.14427	-.00011	71.219
#4	-.00070	.01123	.03431	.00238	.14475	-.00011	71.832
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	-.00064	.00069	.00000	-.00020	.18080	1.2998	.00300
SDev	.00424	.00256	.00322	.00049	.00091	.3626	.00031
%RSD	661.58	372.98	1726500.	248.91	.50549	27.899	10.336
#1	-.00337	.00332	-.00251	-.00062	.18115	.97624	.00340
#2	.00141	.00031	-.00192	.00023	.17974	1.1833	.00304
#3	-.00489	-.00268	-.00015	-.00062	.18044	1.2203	.00267
#4	.00428	.00180	.00458	.00023	.18186	1.8194	.00288
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	32.757	1.8618	.00259	39.856	.00288	.01989	.01309
SDev	.092	.0089	.00256	.279	.00042	.02634	.01808
%RSD	.28059	.47922	98.954	.69906	14.408	132.42	138.17
#1	32.763	1.8522	-.00125	40.060	.00315	.00205	.00797
#2	32.756	1.8629	.00387	39.507	.00241	.01787	-.00259
#3	32.643	1.8586	.00387	40.100	.00330	.00188	.00779
#4	32.868	1.8735	.00387	39.756	.00265	.05777	.03917
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	.00357	5.1444	.00884	.29235	-.00430	-.00878	.00102
SDev	.03523	.0049	.02390	.00064	.00028	.07111	.00249
%RSD	985.66	.09455	270.34	.21746	6.4039	809.50	245.06
#1	-.02264	5.1444	-.02338	.29324	-.00464	-.06392	-.00261
#2	-.01488	5.1504	.00495	.29197	-.00397	.06370	.00265

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#3	-.00322	5.1385	.02901	.29182	5.00430	-.07545	.00136
#4	.05504	5.1444	.02479	.29237	5.00430	.04053	.00266
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 .01125  
SDev .00098  
%RSD 8.6801

#1 .01069  
#2 .01208  
#3 .01207  
#4 .01016

Errors LC Pass  
High 100.00  
Low -.02000



Method: QUANMET Sample Name: DD4WJF

Operator: MTW

Run Time: 05/25/00 12:05:42

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00135	.00168	-.02225	.00714	.26961	-.00003	75.032
SDev	.00127	.00218	.03833	.00001	.00040	.00008	.090
%RSD	93.499	129.57	172.30	.16797	.14989	222.39	.11974
#1	-.00135	.00424	.02590	.00713	.26917	.00003	74.969
#2	.00019	-.00083	-.05118	.00713	.26937	-.00011	75.118
#3	-.00290	.00251	-.05497	.00715	.27004	-.00010	75.100
#4	-.00135	.00081	-.00875	.00715	.26985	.00003	74.941
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	-.00107	-.00125	-.00503	-.00076	3.7161	1.0613	.00221
SDev	.00057	.00442	.00243	.00085	.0052	.1705	.00196
%RSD	53.360	353.14	48.409	111.54	.14040	16.068	88.585
#1	-.00172	-.00275	-.00192	-.00034	3.7096	1.0946	.00377
#2	-.00083	.00476	-.00725	-.00033	3.7167	.96145	.00304
#3	-.00041	-.00576	-.00429	-.00203	3.7160	.90228	.00267
#4	-.00133	-.00125	-.00665	-.00034	3.7223	1.2869	-.00064
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	30.280	1.5946	.00312	15.141	-.00399	.01505	.00261
SDev	.076	.0016	.00256	.202	.00923	.03589	.01353
%RSD	.25060	.09989	82.166	1.3323	231.61	238.50	517.60
#1	30.260	1.5922	.00440	15.308	.00117	.01701	.00783
#2	30.195	1.5954	-.00072	15.023	-.01712	.01720	-.00268
#3	30.378	1.5954	.00440	15.314	-.00352	-.03087	-.01306
#4	30.286	1.5954	.00440	14.917	.00352	.05686	.01836
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	.00970	5.6545	-.00254	.17734	-.00481	.03730	.00037
SDev	.01584	.0331	.01808	.00030	.00034	.06060	.00217
%RSD	163.32	.58537	712.31	.17177	7.0175	162.49	581.78
#1	.02133	5.6798	.01004	.17706	-.00464	.08374	.00137
#2	.02524	5.6858	.00344	.17727	-.00464	.02564	.00255

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#3	-.00195	5.6322	-.02935	.17778	-.00532	-.04381	-.00250
#4	-.00581	5.6203	.00572	.17727	-.00464	.08363	.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 .00467  
SDev .00166  
%RSD 35.548

#1 .00438  
#2 .00364  
#3 .00710  
#4 .00356

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WKF

Operator: MTW

Run Time: 05/25/00 12:08:50

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00041	.01044	-.01449	.01202	.04572	.00007	37.561
SDev	.00177	.00329	.02837	.00213	.00022	.00013	.087
%RSD	434.65	31.537	195.77	17.712	.49244	173.89	.23070
#1	.00113	.01296	-.01163	.01096	.04575	.00004	37.523
#2	-.00195	.00610	-.05011	.01380	.04555	.00018	37.570
#3	.00113	.01303	.01922	.00954	.04555	.00018	37.676
#4	-.00195	.00968	-.01544	.01379	.04603	-.00009	37.473
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	-.00213	.00036	.00429	-.00021	-.00639	18.756	.03513
SDev	.00233	.00213	.00156	.00049	.00134	.324	.00020
%RSD	109.77	587.37	36.479	231.10	21.019	1.7296	.55669
#1	-.00240	.00036	.00340	-.00063	-.00444	18.452	.03499
#2	.00041	-.00115	.00458	-.00064	-.00727	18.541	.03493
#3	-.00135	-.00114	.00636	.00021	-.00656	19.162	.03529
#4	L-.00516	.00337	.00281	.00021	-.00727	18.867	.03529
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	23.997	.04802	-.00000	16.199	.00216	.03186	.00782
SDev	.107	.00000	.00644	.179	.00712	.01356	.02260
%RSD	.44626	.00512	675100.	1.1079	329.49	42.566	288.87
#1	23.842	.04802	.00896	15.968	.00687	.04974	-.01312
#2	24.067	.04802	-.00128	16.145	-.00781	.03385	.03917
#3	24.069	.04802	-.00128	16.345	.00190	.02584	-.00268
#4	24.012	.04802	-.00640	16.336	.00768	.01801	.00792
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	-.00779	5.4136	.00277	.14161	-.00278	.06993	-.00257
SDev	.02127	.0268	.01470	.00067	.00044	.04272	.00012
%RSD	273.01	.49450	530.13	.47340	15.648	61.096	4.8359
#1	-.01944	5.4002	.00922	.14060	-.00228	.12499	-.00240
#2	-.02333	5.4537	-.01891	.14197	-.00329	.06705	-.00260

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#3	-.01168	5.4002	-.01364	.14187	-.00295	.02066	-.00259
#4	.02328	5.4002	-.00714	.14197	-.00262	.06702	-.00270
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	.02498						
SDev	.00188						
%RSD	7.5166						
#1	.02269						
#2	.02434						
#3	.02590						
#4	.02700						
Errors	LC Pass						
High	100.00						
Low	-.02000						

Method: QUANMET Sample Name: DD4WLF Operator: MTW  
 Run Time: 05/25/00 12:11:58  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00001	.00480	-.00430	.01930	.07773	.00014	41.737
SDev	.00318	.00713	.03287	.00203	.00044	.00007	.368
%RSD	27074.	148.48	763.98	10.517	.56829	47.464	.88162
#1	-.00345	.00440	.02175	.02072	.07792	.00018	41.296
#2	-.00038	-.00433	-.05142	.01787	.07716	.00004	41.578
#3	.00426	.01301	-.00155	.01727	.07764	.00016	42.085
#4	-.00038	.00614	.01401	.02135	.07820	.00018	41.992
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	-.00170	.00147	-.00118	.00030	1.0608	5.3545	.00094
SDev	.00178	.00257	.00112	.00154	.0056	.2128	.00198
%RSD	104.43	174.23	94.650	519.02	.52977	3.9744	209.67
#1	-.00316	.00185	-.00133	-.00139	1.0567	5.2732	-.00021
#2	-.00333	.00035	-.00192	-.00055	1.0553	5.1401	.00031
#3	-.00007	.00485	.00044	.00199	1.0645	5.6430	.00388
#4	-.00027	-.00116	-.00192	.00114	1.0666	5.3619	-.00021
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	12.157	1.1666	.00016	15.660	.00376	.01969	-.00784
SDev	.026	.0056	.00490	.132	.00083	.03751	.02765
%RSD	.21551	.48360	3090.6	.84350	22.133	190.52	352.42
#1	12.166	1.1595	-.00112	15.854	.00366	-.00616	-.00268
#2	12.163	1.1648	.00400	15.634	.00496	-.00624	-.03396
#3	12.119	1.1712	.00400	15.571	.00338	.01784	.02875
#4	12.179	1.1712	-.00624	15.582	.00306	.07333	-.02350
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	-.02622	3.7955	.01982	.09298	-.00270	.04780	-.00129
SDev	.01630	.0268	.02525	.00046	.00042	.08056	.00263
%RSD	62.150	.70504	127.38	.49870	15.729	168.52	204.21
#1	-.02721	3.7821	.05095	.09350	-.00329	-.06526	-.00260
#2	-.04275	3.7821	-.00813	.09259	-.00262	.12034	-.00251

#3	-.00388	3.7821	.02708	.09259	-.00228	.08542	.00266
#4	-.03106	3.8356	.00938	.09324	-.00262	.05070	-.00270
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 .00613  
SDev .00192  
%RSD 31.308

#1 .00573  
#2 .00381  
#3 .00654  
#4 .00844

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: DD4WMF

Operator: MTW

Run Time: 05/25/00 12:15:07

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	.00346	-.00384	.03885	-.00017	-.00003	.05006
SDev	.00193	.00771	.03019	.00173	.00023	.00008	.00132
%RSD	15448.	222.73	786.82	4.4424	134.03	282.66	2.6298
#1	-.00194	-.00435	.00395	.03798	-.00034	.00004	.04883
#2	-.00039	-.00090	-.03465	.03798	-.00034	-.00010	.05013
#3	.00267	.00607	.03469	.04143	.00014	-.00010	.04942
#4	-.00040	.01303	-.01933	.03799	-.00014	.00004	.05187
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
Avg	.00064	-.00075	.00636	-.00042	-.00602	.03143	-.00058
SDev	.00251	.00075	.00084	.00042	.00274	.10741	.00037
%RSD	393.14	99.040	13.143	99.638	45.445	341.72	62.808
#1	-.00019	-.00112	.00518	.00021	-.00868	-.08135	-.00108
#2	-.00215	-.00112	.00695	-.00064	-.00726	.17750	-.00051
#3	.00384	.00037	.00636	-.00063	-.00584	.01479	-.00019
#4	.00106	-.00113	.00695	-.00063	-.00230	.01479	-.00056
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	.00196	-.00027	.00256	.06151	.00069	.01192	-.00268
SDev	.00623	.00061	.00256	.00265	.00397	.02285	.01479
%RSD	317.40	230.12	100.02	4.3011	571.65	191.70	552.75
#1	-.00458	-.00080	.00384	.05760	-.00367	.01786	-.02360
#2	.00850	-.00080	.00384	.06294	-.00161	-.00598	.00774
#3	.00589	.00026	.00384	.06332	.00461	-.00596	-.00268
#4	-.00196	.00026	-.00128	.06217	.00344	.04177	.00783
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	.00775	.06095	-.00492	.00010	-.00034	.01748	-.00220
SDev	.04337	.00595	.01604	.00018	.00064	.03464	.00066
%RSD	559.91	9.7551	325.67	180.38	189.30	198.22	30.236
#1	.02716	.05797	-.02576	.00025	-.00127	.06679	-.00250
#2	-.01556	.05799	.00276	-.00010	.00008	-.01441	-.00120

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#3	-.03886	.05797	.01145	.00000	.00008	.00877	-.00249
#4	.05825	.06987	-.00815	.00025	-.00025	.00875	-.00259
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	-.505000	-.05000	-2.0000	-.05000

Elem ZN  
 Units ppm  
 Avge .00487  
 SDev .00187  
 %RSD 38.515

#1 .00633  
 #2 .00338  
 #3 .00663  
 #4 .00312

Errors LC Pass  
 High 100.00  
 Low -.02000



Method: QUANMET Sample Name: CCV2-8

Operator: MTW

Run Time: 05/25/00 12:18:15

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B_	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0170	49.161	5.1435	5.0492	4.8282	5.1527	53.456
SDev	.0018	.213	.0812	.0341	.0340	.0221	.153
%RSD	.18169	.43311	1.5790	.67630	.70424	.42950	.28661
#1	1.0174	49.209	5.2162	5.0165	4.8239	5.1494	53.615
#2	1.0144	49.431	5.2102	5.0788	4.8750	5.1765	53.283
#3	1.0174	49.075	5.0863	5.0786	4.8203	5.1609	53.552
#4	1.0188	48.930	5.0612	5.0230	4.7936	5.1240	53.376
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	5.2842	5.1789	5.1506	4.8502	53.306	46.852	L4.3835
SDev	.0126	.0121	.0108	.0367	.129	.405	.0541
%RSD	.23760	.23305	.20899	.75764	.24128	.86489	1.2337
#1	5.2799	5.1831	5.1621	4.8329	53.347	46.978	L4.3765
#2	5.2720	5.1905	5.1414	4.8997	53.421	47.355	L4.4619
#3	5.3016	5.1800	5.1574	4.8540	53.335	46.652	L4.3526
#4	5.2831	5.1621	5.1414	4.8143	53.122	46.423	L4.3432
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
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	50.071	5.1595	5.1494	47.233	5.1757	5.1195	5.1191
SDev	.270	.0116	.0206	.465	.0202	.0442	.0668
%RSD	.53915	.22497	.40093	.98462	.38943	.86381	1.3042
#1	50.047	5.1635	5.1738	47.268	5.1568	5.0997	5.1397
#2	50.379	5.1657	5.1277	47.873	5.2038	5.0759	5.1299
#3	50.131	5.1667	5.1584	46.969	5.1750	5.1792	5.0248
#4	49.725	5.1422	5.1379	46.822	5.1673	5.1233	5.1818
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	5.2623	5.0964	5.2459	4.9110	4.9818	10.093	5.0961
SDev	.0969	.0323	.0534	.0299	.0178	.146	.0134
%RSD	1.8418	.63424	1.0181	.60842	.35819	1.4431	.26224
#1	5.2984	5.0727	5.1898	4.9123	4.9833	10.148	5.0991
#2	5.3803	5.1442	5.3185	4.9505	5.0022	10.240	5.1098

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#3	5.2090	5.0845	5.2395	4.9024	4.9830	10.090	5.0976
#4	5.1617	5.0843	5.2359	4.8787	4.9587	9.8955	5.0778
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 5.0412  
 SDev .0153  
 %RSD .30332

#1 5.0338  
 #2 5.0462  
 #3 5.0600  
 #4 5.0248

Errors LC Pass  
 High 5.5000  
 Low 4.5000

Method: QUANMET Sample Name: CCB8

Operator: MTW

Run Time: 05/25/00 12:21:28

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00193	-.00267	-.02403	.00777	-.00012	.00035	-.00255
SDev	.00125	.00739	.04628	.01554	.00004	.00020	.00280
%RSD	64.905	276.60	192.64	199.99	35.294	58.972	109.64

#1	-.00347	-.00782	-.05771	.03108	-.00014	.00018	-.00391
#2	-.00193	-.00794	.02324	-.00001	-.00014	.00018	-.00559
#3	-.00040	.00779	.00769	.00000	-.00006	.00058	.00081
#4	-.00193	-.00271	-.06932	.00001	-.00014	.00045	-.00152

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
Avg	.00157	-.00075	-.00162	-.00106	-.00195	-.03513	-.00081
SDev	.00091	.00257	.00059	.00109	.00359	.19195	.00034
%RSD	58.126	340.17	36.387	103.32	184.21	546.39	41.448

#1	.00051	.00188	-.00192	-.00063	-.00301	-.08135	-.00101
#2	.00199	.00037	-.00192	-.00148	-.00655	-.19229	-.00116
#3	.00117	-.00113	-.00074	.00021	.00053	.24406	-.00043
#4	.00258	-.00414	-.00192	-.00233	.00124	-.11094	-.00064

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
Avg	-.00262	-.00026	.01024	.00638	-.00198	.02585	-.00013
SDev	.01740	.00061	.00644	.00577	.00527	.02339	.01577
%RSD	665.21	233.96	62.913	90.476	266.95	90.466	12473.

#1	.00065	-.00079	.00896	.00314	-.00358	-.00591	.00774
#2	-.00719	.00027	.01920	.00276	-.00498	.02587	-.01333
#3	.01896	-.00079	.00384	.01495	.00586	.04974	.01828
#4	-.02289	.00027	.00896	.00467	-.00520	.03370	-.01320

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
Avg	-.02137	.03715	.02237	.00028	-.00017	-.00866	-.00239
SDev	.01436	.00343	.01754	.00033	.00032	.04288	.00012
%RSD	67.191	9.2422	78.399	118.63	191.49	495.42	5.1853

#1	-.01943	.03418	.01586	-.00010	-.00059	-.07245	-.00241
#2	-.02333	.03418	.04632	.00015	-.00025	.02038	-.00221

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#3	-.00388	.04012	.02246	.00066	.00008	.00871	-.00251
#4	-.03883	.04013	.00485	.00040	.00008	.00874	-.00241

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 -.00014  
 SDev .00099  
 %RSD 710.32

#1 -.00014  
 #2 .00067  
 #3 -.00153  
 #4 .00044

Errors LC Pass  
 High .02000  
 Low -.02000

Method: QUANMET Sample Name: DD50EF

Operator: MTW

-Run Time: 05/25/00 12:24:36

-Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00161	-.00010	.00766	.00091	.42609	.00006	48.942
SDev	.00076	.00728	.02906	.00103	.00339	.00006	.136
%RSD	47.040	7484.0	379.53	113.22	.79581	101.02	.27781
#1	-.00198	.00767	-.01556	.00146	.42140	.00003	48.904
#2	-.00198	.00425	-.00012	.00005	.42588	.00016	48.901
#3	-.00199	-.00794	.05012	.00208	.42901	.00003	48.826
#4	-.00047	-.00436	-.00381	.00004	.42806	.00004	49.139
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	-.00406	.00130	-.00103	-.00063	.02425	1.8989	.00064
SDev	.00115	.00075	.00123	.00000	.00092	.1017	.00031
%RSD	28.413	57.662	119.22	.11203	3.7734	5.3533	48.918
#1	-.00235	.00168	.00045	-.00063	.02319	1.9969	.00098
#2	-.00450	.00168	-.00133	-.00063	.02532	1.9451	.00083
#3	-.00450	.00018	-.00074	-.00063	.02390	1.8933	.00037
#4	-.00489	.00168	-.00251	-.00063	.02461	1.7602	.00037
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	29.500	.41046	.01153	44.793	-.00469	.03982	-.00792
SDev	.202	.00137	.00296	.548	.01147	.00399	.01816
%RSD	.68562	.33384	25.651	1.2225	244.81	10.018	229.24
#1	29.217	.40887	.01409	44.065	.00454	.04185	.01828
#2	29.528	.40993	.00897	44.959	-.01062	.03384	-.02366
#3	29.695	.41205	.01409	45.377	.00526	.04178	-.01304
#4	29.559	.41099	.00897	44.770	-.01793	.04182	-.01327
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	.00397	4.8038	-.00602	.70999	-.00295	.03103	.00119
SDev	.03058	.0467	.01324	.00499	.00028	.06380	.00247
%RSD	769.88	.97152	219.83	.70276	9.3314	205.59	207.94
#1	-.01157	4.7340	.00283	.70350	-.00295	-.01247	.00285
#2	.04670	4.8232	-.00173	.70872	-.00262	-.02408	.00275

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#3	.00397	4.8291	-.02569	.71455	-.00329	.04555	.00156	
#4	-.02321	4.8291	.00050	.71318	-.00295	.11513	-.00241	
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	.01517							
SDev	.00154							
%RSD	10.136							
#1	.01537							
#2	.01294							
#3	.01616							
#4	.01621							
Errors	LC Pass							
High	100.00							
Low	-.02000							

Method: QUANMET Sample Name: DD50NF

Operator: MTW

Run Time: 05/25/00 12:27:45

Comment: STL PITTSBURGH-ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00192	-.00009	-.03677	.01408	1.0810	.00004	37.964
SDev	.00251	.01063	.03751	.00000	.0074	.00000	.130
%RSD	130.36	11230.	102.03	.01054	.68766	8.1718	.34208
#1	-.00192	.00946	-.07350	.01408	1.0745	.00003	38.149
#2	-.00500	-.01310	.01153	.01409	1.0902	.00004	37.845
#3	-.00193	.00767	-.02719	.01408	1.0838	.00004	37.922
#4	.00115	-.00441	-.05792	.01409	1.0754	.00004	37.942
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	-.00154	-.00279	-.00133	-.00063	.13688	1.5069	.00147
SDev	.00227	.00075	.00324	.00069	.00136	.1824	.00079
%RSD	148.07	26.853	243.98	110.33	.99012	12.104	53.984
#1	-.00173	-.00316	.00340	.00022	.13582	1.7306	.00265
#2	-.00465	-.00316	-.00310	-.00063	.13724	1.2869	.00098
#3	-.00027	-.00317	-.00192	-.00147	.13582	1.5309	.00120
#4	.00051	-.00167	-.00369	-.00062	.13866	1.4792	.00104
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	21.621	.13934	.00898	54.094	-.00423	.00785	-.00534
SDev	.123	.00086	.00418	.796	.00501	.01880	.00518
%RSD	.57025	.62109	46.551	1.4706	118.49	239.63	97.032
#1	21.527	.14039	.00386	53.215	-.00710	.03371	-.00280
#2	21.775	.13934	.00898	55.124	-.00820	.00982	-.01310
#3	21.665	.13934	.01410	54.185	-.00454	-.00610	-.00278
#4	21.516	.13827	.00898	53.854	.00292	-.00605	-.00267
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	.00924	4.6417	.00547	.37205	-.00287	.03420	-.00176
SDev	.02754	.0142	.03127	.00239	.00058	.05389	.00123
%RSD	298.02	.30524	571.79	.64166	20.092	157.59	69.792
#1	-.01504	4.6506	.02676	.37036	-.00228	.05450	.00008
#2	-.01115	4.6447	-.04095	.37497	-.00363	-.01509	-.00241

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#3	.01992	4.6506	.01585	.37300	-.00262	.10089	-.00231
#4	.04323	4.6209	.02022	.36985	-.00295	-.00352	-.00241
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 .00339  
 SDev .00097  
 %RSD 28.523

#1 .00259  
 #2 .00450  
 #3 .00258  
 #4 .00391

Errors LC Pass  
 High 100.00  
 Low -.02000



Method: QUANMET Sample Name: DD3QXFP5 RERUN ZN<sub>4</sub> Operator: MTW  
 Run Time: 05/25/00 12:30:53  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC - Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00015	.00175	.00638	.00343	.04060	.00010	16.769
SDev	.00218	.00574	.03283	.00315	.00023	.00007	.083
%RSD	1446.5	328.31	514.84	92.031	.57242	71.024	.49481
#1	.00014	.00265	-.00709	.00415	.04079	.00004	16.818
#2	-.00138	-.00607	.00835	.00758	.04032	.00017	16.697
#3	-.00139	.00266	.05073	.00128	.04079	.00004	16.700
#4	.00324	.00776	-.02649	.00070	.04051	.00016	16.860
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	CD	CO	CR	CU	FE	K	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00200	-.00039	-.00000	-.00086	2.4712	.26440	-.00064
SDev	.00056	.00087	.00233	.00049	.0081	.23210	.00000
%RSD	28.120	223.08	381530.	56.700	.32637	87.786	.00000
#1	-.00237	.00036	-.00192	-.00128	2.4784	-.00000	-.00064
#2	-.00156	.00036	.00281	-.00128	2.4657	.14052	-.00064
#3	-.00147	-.00114	.00103	-.00044	2.4629	.43635	-.00064
#4	-.00258	-.00114	-.00192	-.00044	2.4777	.48072	-.00064
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	7.4446	.27081	-.00219	18.909	.00084	.01733	-.01043
SDev	.0541	.00160	.00256	.256	.00673	.02156	.01576
%RSD	.72629	.58882	116.90	1.3545	804.67	124.43	151.08
#1	7.4734	.27267	-.00091	19.193	.00445	.00937	-.02356
#2	7.3635	.26948	-.00091	18.624	-.00886	.04918	-.02360
#3	7.4707	.26948	-.00603	19.043	.00615	.00141	.00790
#4	7.4707	.27160	-.00091	18.778	.00161	.00935	-.00247
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	-.02689	1.4917	-.00558	.03772	-.00127	.01950	-.00004
SDev	.01463	.0129	.03221	.00034	.00039	.07026	.00237
%RSD	54.411	.86254	577.56	.91197	30.792	360.33	5610.3
#1	-.03755	1.4857	.02929	.03823	-.00093	-.07333	-.00260
#2	-.01429	1.4798	-.01655	.03752	-.00160	.00794	.00128

#3	-.01430	1.4917	.00979	.03752	-.00160	.08917	-.00140
#4	-.04143	1.5096	-.04483	.03762	-.00093	.05421	.00256
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 .00364  
SDev .00175  
%RSD 48.199

#1 .00232  
#2 .00621  
#3 .00287  
#4 .00314

Errors LC Pass  
High 100.00  
Low -.02000

Method: QUANMET Sample Name: CCV2-9<sup>M</sup> Operator: MTW  
 Run Time: 05/25/00 12:34:02  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0104	49.161	5.1398	5.0698	4.8441	5.1836	53.137
SDev	.0033	.209	.0450	.0081	.0233	.0021	.322
%RSD	.32373	.42437	.87558	.16066	.48009	.04042	.60659
#1	1.0065	49.082	5.1254	5.0644	4.8405	5.1814	52.889
#2	1.0096	48.987	5.1915	5.0750	4.8294	5.1824	53.250
#3	1.0112	49.463	5.1567	5.0784	4.8780	5.1844	52.868
#4	1.0144	49.110	5.0858	5.0615	4.8285	5.1861	53.543
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
Avg	5.2455	5.1644	5.1263	4.8808	53.222	46.395	L4.4051
SDev	.0285	.0182	.0189	.0332	.133	.723	.1046
%RSD	.54291	.35189	.36904	.68121	.25003	1.5593	2.3737
#1	5.2415	5.1486	5.1148	4.8819	53.086	46.224	L4.3857
#2	5.2228	5.1727	5.1450	4.8574	53.239	46.031	L4.3337
#3	5.2312	5.1501	5.1059	4.9275	53.165	47.459	4.5582
#4	5.2867	5.1860	5.1396	4.8566	53.399	45.869	L4.3428
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
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
Avg	50.213	5.1463	5.1366	47.514	5.1871	5.0993	5.1612
SDev	.211	.0154	.0282	.843	.0317	.0232	.0353
%RSD	.41952	.29993	.54867	1.7746	.61077	.45531	.68299
#1	50.110	5.1305	5.0969	47.326	5.1417	5.0830	5.1715
#2	50.073	5.1529	5.1430	46.917	5.1975	5.1155	5.1193
#3	50.526	5.1369	5.1430	48.753	5.1940	5.1227	5.2032
#4	50.141	5.1646	5.1635	47.061	5.2152	5.0760	5.1509
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
Avg	5.2261	5.0815	5.2407	4.9301	4.9800	9.9552	5.0900
SDev	.0688	.0060	.0192	.0204	.0073	.0818	.0099
%RSD	1.3161	.11841	.36695	.41410	.14705	.82189	.19415
#1	5.2664	5.0724	5.2467	4.9247	4.9715	9.9654	5.0821
#2	5.2048	5.0844	5.2378	4.9167	4.9762	9.8826	5.0843

## Analysis Report

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#3	5.2939	5.0844	5.2621	4.9603	4.9870	9.9066	5.0894
#4	5.1394	5.0846	5.2161	4.9187	4.9850	10.066	5.1041

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 5.0308  
 SDev .0152  
 %RSD .30310

#1 5.0211  
 #2 5.0379  
 #3 5.0156  
 #4 5.0487

Errors LC Pass  
 High 5.5000  
 Low 4.5000

Method: QUANMET Sample Name: CCB9

Operator: MTW

Run Time: 05/25/00 12:37:15

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT JA61E

Mode: CONC Corr. Factor:-1

Elem	AG	AL	AS	B	BA	BE	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00037	.00857	-.00485	-.00000	.00002	.00038	-.00172
SDev	.00089	.00301	.01704	.00000	.00024	.00026	.00351
%RSD	238.78	35.188	351.48	143.42	1133.3	68.458	203.64

#1	-.00040	.01121	.00766	-.00000	-.00034	.00018	-.00489
#2	-.00040	.00423	-.02312	-.00001	.00014	.00018	-.00375
#3	.00114	.00938	.01152	.00000	.00014	.00072	.00304
#4	.00114	.00945	-.01546	-.00000	.00014	.00045	-.00130

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
Avg	-.00185	-.00075	.00267	-.00021	-.00212	.02589	-.00104
SDev	.00132	.00075	.00283	.00049	.00227	.23763	.00069
%RSD	71.116	100.80	106.18	230.29	106.80	918.00	66.152

#1	-.00122	-.00112	.00281	-.00064	-.00372	-.13312	-.00181
#2	-.00031	-.00113	-.00133	-.00064	-.00443	-.03698	-.00129
#3	-.00310	-.00112	.00518	.00021	-.00018	.37718	-.00019
#4	-.00279	.00038	.00400	.00021	-.00018	-.10354	-.00086

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
Avg	-.00458	.00053	.01408	.00790	.00106	.00197	-.00011
SDev	.00979	.00053	.00418	.00486	.00554	.01454	.00531
%RSD	213.81	99.345	29.693	61.528	522.82	739.25	4635.2

#1	-.01504	.00027	.00896	.00086	-.00359	.00991	-.00278
#2	-.00719	.00027	.01408	.00885	.00907	-.01395	.00785
#3	.00850	.00027	.01920	.01000	-.00000	-.00601	-.00283
#4	-.00458	.00133	.01408	.01190	-.00124	.01792	-.00269

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
Avg	-.00486	.03566	.00382	.00048	.00008	.08122	-.00230
SDev	.03178	.00297	.02327	.00017	.00039	.07716	.00008
%RSD	653.47	8.3400	609.37	34.748	461.88	95.002	3.5979

#1	-.05050	.03418	.02018	.00051	-.00025	.10153	-.00240
#2	.00387	.04013	.00058	.00025	-.00025	.17112	-.00231

## Analysis Report

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#3	.02330	.03418	.02236	.00066	.00042	.06671	-.00220
#4	.00388	.03418	-.02784	.00051	.00042	-.01447	-.00230

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	-.00055
SDev	.00111
%RSD	201.36

#1	-.00149
#2	-.00154
#3	.00041
#4	.00041

Errors	LC Pass
High	.02000
Low	-.02000

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*Revised 52600*

#	Sample Name	AG	AS	CD	CR	PB	SB
1	STD1	.00151	-.01357	.00132	.0009		
2	STD6	10.6819	5.37795	12.2999			
3	STD7				11.2538		
4	ICV3-1 0014-079-6	.49956	.25039	.24523	1.0079	.25042	.24808
5	ICB1	-.00023	.00000	.00016	.00021	-.00126	-.00059
6	ICSA 0014-088-12	-.00003	-.00040	.00244	.00163	-.00035	-.00023
7	ICSAB 0014-075-12	1.1144	1.0179	.93364	.50976	1.0284	1.0511
8	DDP6PB	.00007	-.00024	.00014	.00058	.00066	.00040
9	DDP6PC	.04544	1.8135	.04559	.18797	.45645	.44808
10	DDNMX	.00008	.00312	.00105	.02276	.09107	.00279
11	DDNMXP5	-.00012	.00039	.00022	.00485	.01867	.00014
12	DDNMXS	.05253	2.0454	.05177	.24461	.63759	.45645
13	DDNMXD	.04855	1.9003	.04821	.23030	.60026	.47524
14	DDNN3	.00015	.00426	.00090	.01735	.12028	.00397
15	DDNN5	-.00033	.00259	.00060	.01845	.07628	.00203
16	CCV3-1 0014-110-3	1.0370	.51696	.50391	2.0718	.51883	.51347
17	CCB1	-.00024	-.00054	.00009	.00008	.00000	.00032
18	DDLA7B	-.00040	-.00022	.00000	-.00022	-.00026	-.00019
19	DDLA7C	.05093	1.9916	.04880	.20364	.51377	.49634
20	DDK90	-.00003	.00637	-.00005	.01006	.02245	.00149
21	DDK90P5	-.00004	.00113	-.00003	.00183	.00507	-.00193
22	DDK90S	.04951	1.9337	.04686	.20502	.51554	.47651
23	DDK90D	.05136	2.0070	.04868	.21556	.53738	.50006
24	CCV3-2	1.0332	.51662	.50464	2.0694	.52226	.51899
25	CCB2	-.00060	.00014	-.00002	.00009	-.00088	.00035
26	DDLFBV	-.00013	-.00031	-.00014	.00008	-.00148	-.00046
27	DDLFCV	.05100	2.0154	.04993	.20378	.51917	L-.00090
28	DDK1J	-.00012	.00900	.00009	.00031	.00027	.00043
29	DDK1JP5	-.00012	.00184	.00013	.00009	-.00069	.00132
30	DDK1JS	.05138	2.0810	.04937	.20478	.53002	-.00134
31	DDK1JD	.05931	2.4121	.05679	.23678	.61215	-.00088
32	DDCJW	.00004	.00382	.00181	.03729	.08296	.00364
33	DDCV1	-.00056	.00221	.00072	.01532	.03903	-.00038
34	DDCVF	-.00021	.00102	.00040	.00185	.01305	.00000
35	DDCVJ	-.00054	.02407	.00767	.11868	.10384	.00629
36	CCV3-3	1.0422	.52518	.51412	2.1035	.53162	.52608
37	CCB3	.00004	.00017	-.00004	.00038	.00064	.00053
38	DDCVK	-.00045	.00568	.00362	.04317	.07652	.00202
39	DDCVM	-.00018	.00231	.00044	.00782	.00713	-.00003
40	DDCVW	-.00009	.00026	.00000	.00147	.00221	-.00024
41	DDK9N	-.00032	.00428	.00122	.01655	.00952	.00002
42	DDK9T	.00006	.00030	.00035	.00210	-.00269	-.00116
43	CCV3-4	1.0495	.51991	.50647	2.0847	.52580	.52502
44	CCB4	-.00032	-.00031	.00002	.00032	-.00034	.00208

#	Sample Name	SE	TL
1	STD1		-.04246
2	STD6		3.99103
3	STD7		
4	ICV3-1 0014-079-6	.25101	.50774
5	ICB1	-.00079	-.00391

#	Sample Name	SE	TL
6	ICSA 0014-088-12	-.00850	-.00123
7	ICSAB 0014-075-12	1.0320	1.0973
8	DDP6PB	-.00089	-.00496
9	DDP6PC	1.8097	1.8335
10	DDNMX	-.00023	-.00150
11	DDNMXP5	-.00234	-.00431
12	DDNMXS	2.0274	2.1624
13	DDNMXD	1.8889	1.9920
14	DDNN3	-.00180	-.00285
15	DDNN5	.00045	-.00228
16	CCV3-1 0014-110-3	.51895	1.0714
17	CCB1	.00070	-.00013
18	DDLA7B	.00024	-.00288
19	DDLA7C	2.0342	2.1498
20	DDK90	.00016	-.00017
21	DDK90P5	-.00006	-.00055
22	DDK90S	1.9496	2.0835
23	DDK90D	2.0285	2.1584
24	CCV3-2	.52443	1.0756
25	CCB2	-.00085	.00000
26	DDLFBV	-.00079	.00525
27	DDLFBVC	2.1878	2.0052
28	DDK1J	.00118	.00244
29	DDK1JP5	-.00107	.00128
30	DDK1JS	2.1498	2.2195
31	DDK1JD	2.5190	2.5891
32	DDCJW	.00265	.00777
33	DDCV1	.00081	.00331
34	DDCVF	-.00108	.00052
35	DDCVJ	.00131	.00810
36	CCV3-3	.53558	1.0855
37	CCB3	-.00008	-.00125
38	DDCVK	-.00041	.00545
39	DDCVM	-.00175	.00244
40	DDCVW	.00035	.00700
41	DDK9N	.00447	.00333
42	DDK9T	.00486	.01633
43	CCV3-4	.53157	1.0378
44	CCB4	-.00229	.00878



R652600

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	T00526A	METTRA	05/26/00	07:31		X	IR +
2	STD6	T00526A	METTRA	05/26/00	07:36		X	IR
3	STD7	T00526A	METTRA	05/26/00	07:40		X	IR
4	ICV3-1 0014-079-6	T00526A	METTRA	05/26/00	07:43	RJG	S	CONC
5	ICB1	T00526A	METTRA	05/26/00	07:48	RJG	S	CONC
6	ICSA 0014-088-12	T00526A	METTRA	05/26/00	07:52	RJG	Q	CONC
7	ICSAB 0014-075-12	T00526A	METTRA	05/26/00	07:56	RJG	Q	CONC
8	DDP6PB	T00526A	METTRA	05/26/00	08:02	RJG	S	CONC
9	DDP6PC	T00526A	METTRA	05/26/00	08:06	RJG	S	CONC
10	DDNMX	T00526A	METTRA	05/26/00	08:11	RJG	S	CONC
11	DDNMXP5	T00526A	METTRA	05/26/00	08:15	RJG	S	CONC
12	DDNMXS	T00526A	METTRA	05/26/00	08:19	RJG	S	CONC
13	DDNMXD	T00526A	METTRA	05/26/00	08:23	RJG	S	CONC
14	DDNN3	T00526A	METTRA	05/26/00	08:27	RJG	S	CONC
15	DDNN5	T00526A	METTRA	05/26/00	08:31	RJG	S	CONC
16	CCV3-1 0014-110-3	T00526A	METTRA	05/26/00	08:36	RJG	S	CONC
17	CCB1	T00526A	METTRA	05/26/00	08:40	RJG	S	CONC
18	DDLA7B	T00526A	METTRA	05/26/00	08:44	RJG	S	CONC
19	DDLA7C	T00526A	METTRA	05/26/00	08:48	RJG	S	CONC
20	DDK90	T00526A	METTRA	05/26/00	08:52	RJG	S	CONC
21	DDK90P5	T00526A	METTRA	05/26/00	08:56	RJG	S	CONC
22	DDK90S	T00526A	METTRA	05/26/00	09:00	RJG	S	CONC
23	DDK90D	T00526A	METTRA	05/26/00	09:05	RJG	S	CONC
24	CCV3-2	T00526A	METTRA	05/26/00	09:09	RJG	S	CONC
25	CCB2	T00526A	METTRA	05/26/00	09:13	RJG	S	CONC
26	DDLFBV	T00526A	METTRA	05/26/00	09:18	RJG	S	CONC
27	DDLFBVC	T00526A	METTRA	05/26/00	09:22	RJG	S	CONC
28	DDK1J	T00526A	METTRA	05/26/00	09:26	RJG	S	CONC
29	DDK1JP5	T00526A	METTRA	05/26/00	09:30	RJG	S	CONC
30	DDK1JS	T00526A	METTRA	05/26/00	09:34	RJG	S	CONC
31	DDK1JD	T00526A	METTRA	05/26/00	09:39	RJG	S	CONC
32	DDCJW	T00526A	METTRA	05/26/00	09:43	RJG	S	CONC
33	DDCV1	T00526A	METTRA	05/26/00	09:47	RJG	S	CONC
34	DDCVF	T00526A	METTRA	05/26/00	09:51	RJG	S	CONC
35	DDCVJ	T00526A	METTRA	05/26/00	09:55	RJG	S	CONC
36	CCV3-3	T00526A	METTRA	05/26/00	09:59	RJG	S	CONC
37	CCB3	T00526A	METTRA	05/26/00	10:03	RJG	S	CONC
38	DDCVK	T00526A	METTRA	05/26/00	10:08	RJG	S	CONC
39	DDCVM	T00526A	METTRA	05/26/00	10:12	RJG	S	CONC
40	DDCVW	T00526A	METTRA	05/26/00	10:16	RJG	S	CONC
41	DDK9N	T00526A	METTRA	05/26/00	10:20	RJG	S	CONC
42	DDK9T	T00526A	METTRA	05/26/00	10:24	RJG	S	CONC
43	CCV3-4	T00526A	METTRA	05/26/00	10:28	RJG	S	CONC
44	CCB4	T00526A	METTRA	05/26/00	10:33	RJG	S	CONC

Standardization Rpt.

05/26/00 07:35:59 AM

Method: METTRA Standard: STD1

Run Time: 05/26/00 07:31:50

Elem	AG	AL	AS	BA	BE	CA	CD
Avge	.00152	.13588	-.01357	.00111	-.07280	.00316	.00133
SDev	.00041	.00040	.01088	.00011	.00006	.00001	.00192
%RSD	27.284	.29315	80.141	10.038	.08523	.21060	144.86
#1	.00122	.13616	-.02127	.00119	-.07275	.00316	-.00003
#2	.00181	.13560	-.00588	.00103	-.07284	.00317	.00268
Elem	CO	CR	CU	FE	MG	MN	MO
Avge	-.00195	.00090	.01205	-.00216	-.00107	.00200	.00123
SDev	.00084	.00064	.00000	.00031	.00023	.00000	.00037
%RSD	43.054	70.553	.02129	14.567	21.633	.21061	29.974
#1	-.00255	.00135	.01205	-.00238	-.00090	.00200	.00097
#2	-.00136	.00045	.01205	-.00194	-.00123	.00200	.00149
Elem	NI	PB/1	PB/2	SB/1	SB/2	SE/1	SE/2
Avge	-.00010	.05586	-.01136	-.03676	.01854	-.11933	.09230
SDev	.00014	.00409	.00007	.02292	.01817	.00367	.01215
%RSD	141.42	7.3179	.59293	62.354	98.025	3.0784	13.164
#1	.00000	.05297	-.01141	-.05297	.03138	-.12192	.08371
#2	-.00019	.05875	-.01131	-.02055	.00569	-.11673	.10089
Elem	TL	V	ZN				
Avge	-.04246	.00016	-.00056				
SDev	.00356	.00005	.00002				
%RSD	8.3872	28.082	4.2510				
#1	-.04498	.00019	-.00055				
#2	-.03994	.00013	-.00058				

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Standardization Rpt.

05/26/00 07:35:59 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	15495	--	--	--	--	--	--	
SDev	32.63325	--	--	--	--	--	--	
%RSD	.2106068	--	--	--	--	--	--	
#1	15518	--	--	--	--	--	--	
#2	15472	--	--	--	--	--	--	

Method: METTRA Standard: STD6  
Run Time: 05/26/00 07:36:03

00140878

Elem	AG	AS	CD	PB/1	PB/2	SB/1	SB/2
Avge	10.682	5.3780	12.300	5.1422	6.6489	10.018	6.4939
SDev	.010	.0023	.002	.0014	.0035	.021	.0047
%RSD	.08906	.04330	.01669	.02781	.05274	.20999	.07302

#1	10.689	5.3796	12.298	5.1433	6.6514	10.003	6.4972
#2	10.675	5.3763	12.301	5.1412	6.6465	10.033	6.4905

Elem	SE/1	SE/2	TL
Avge	5.1284	5.2752	3.9910
SDev	.0000	.0230	.0137
%RSD	.00024	.43662	.34432

#1	5.1284	5.2915	3.9813
#2	5.1284	5.2589	4.0007

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15455	--	--	--	--	--	--
SDev	27.40039	--	--	--	--	--	--
%RSD	.1772946	--	--	--	--	--	--

#1	15435	--	--	--	--	--	--
#2	15474	--	--	--	--	--	--

658 752

Standardization Rpt.

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Method: METTRA Standard: STD7  
 Run Time: 05/26/00 07:40:14

004087.9

Elem	AL	BA	BE	CA	CO	CR	CU
Avge	6.8554	13.389	11.095	4.3248	2.8597	11.254	3.5323
SDev	.0157	.044	.020	.0027	.0029	.015	.0099
%RSD	.22831	.32743	.18119	.06306	.09979	.13005	.28078
#1	6.8665	13.420	11.109	4.3267	2.8618	11.264	3.5393
#2	6.8443	13.358	11.081	4.3229	2.8577	11.243	3.5253
Elem	FE	MG	MN	MO	NI	V	ZN
Avge	3.8213	13.583	9.7426	2.1442	2.3260	.80843	2.9159
SDev	.0029	.031	.0192	.0014	.0017	.00162	.0056
%RSD	.07610	.22795	.19742	.06694	.07499	.20030	.19069
#1	3.8234	13.605	9.7562	2.1432	2.3273	.80957	2.9198
#2	3.8192	13.562	9.7290	2.1452	2.3248	.80728	2.9119
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15334	--	--	--	--	--	--
SDev	46.45705	--	--	--	--	--	--
%RSD	.3029765	--	--	--	--	--	--
#1	15301	--	--	--	--	--	--
#2	15366	--	--	--	--	--	--

Standardization

Report

05/26/00 07:43:51 AM

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Method: METTRA

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD6	STD1	.187259	-.000284	05/26/00 07:40:14
AL	308.215	STD7	STD1	7.46063	-1.01377	05/26/00 07:40:14
AS	189.042	STD6	STD1	.185476	.002518	05/26/00 07:40:14
BA	493.409	STD7	STD1	.298784	-.000333	05/26/00 07:40:14
BE	313.042	STD7	STD1	.355197	.025858	05/26/00 07:40:14
CA	317.933	STD7	STD1	23.1394	-.073175	05/26/00 07:40:14
CD	226.502	STD6	STD1	.081310	-.000108	05/26/00 07:40:14
CO	228.616	STD7	STD1	1.39777	.002728	05/26/00 07:40:14
CR	267.716	STD7	STD1	.355289	-.000321	05/26/00 07:40:14
CU	324.753	STD7	STD1	1.13629	-.013695	05/26/00 07:40:14
FE	271.441	STD7	STD1	13.1701	.028469	05/26/00 07:40:14
MG	279.078	STD7	STD1	7.36133	.007841	05/26/00 07:40:14
MN	257.610	STD7	STD1	.410652	-.000822	05/26/00 07:40:14
MO	202.030	STD7	STD1	1.86658	-.002290	05/26/00 07:40:14
NI	231.604	STD7	STD1	1.71845	.000167	05/26/00 07:40:14
PB/1	220.351	STD6	STD1	.196603	-.010983	05/26/00 07:40:14
PB/2	220.352	STD6	STD1	.150143	.001705	05/26/00 07:40:14
PB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SB/1	206.831	STD6	STD1	.099453	.003656	05/26/00 07:40:14
SB/2	206.832	STD6	STD1	.154432	-.002862	05/26/00 07:40:14
SB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SE/1	196.021	STD6	STD1	.190558	.022738	05/26/00 07:40:14
SE/2	196.022	STD6	STD1	.192942	-.017809	05/26/00 07:40:14
SE	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
TL	190.864	STD6	STD1	.495848	.021055	05/26/00 07:40:14
V	292.402	STD7	STD1	4.92728	-.000795	05/26/00 07:40:14
ZN	213.856	STD7	STD1	1.37997	.000779	05/26/00 07:40:14

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## Analysis Report

05/26/00 07:48:01 AM

page 1

Method: METTRA Sample Name: ICV3-1 0014-079-6 Operator: RJG  
 Run Time: 05/26/00 07:43:55  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACE ICP  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49956	11.798	.25039	.98557	.98880	24.853	.24524
SDev	.00087	.005	.00032	.00066	.00176	.070	.00011
%RSD	.17483	.04528	.12810	.06724	.17785	.28298	.04467
#1	.50018	11.802	.25062	.98604	.99004	24.903	.24516
#2	.49894	11.794	.25016	.98510	.98756	24.803	.24531
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	1.0006	1.0079	.95452	12.286	23.720	.98457	1.0085
SDev	.0007	.0016	.00241	.018	.036	.00079	.0010
%RSD	.06839	.15848	.25275	.14792	.15314	.08062	.09864
#1	1.0011	1.0091	.95622	12.299	23.746	.98513	1.0078
#2	1.0001	1.0068	.95281	12.273	23.694	.98401	1.0092
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	.99773	.25085	.25021	.25042	.24902	.24762	.24808
SDev	.00825	.00284	.00115	.00171	.00273	.00081	.00037
%RSD	.82707	1.1338	.45996	.68472	1.0951	.32631	.14880
#1	1.0036	.25286	.25102	.25164	.25095	.24704	.24834
#2	.99190	.24884	.24940	.24921	.24709	.24819	.24782
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	.24700	.25301	.25101	.50775	.98974	1.0314	
SDev	.00241	.00162	.00188	.00519	.00128	.0041	
%RSD	.97620	.63934	.74972	1.0221	.12937	.39563	
#1	.24871	.25416	.25234	.51142	.99065	1.0343	
#2	.24530	.25187	.24968	.50408	.98884	1.0286	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.27500	.55000	1.1000	1.1000	
Low			.22500	.45000	.90000	.90000	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15690	--	--	--	--	--	--
SDev	111.52570	--	--	--	--	--	--
%RSD	.0734596	--	--	--	--	--	--
#1	15698	--	--	--	--	--	--
#2	15682	--	--	--	--	--	--



Method: METTRA Sample Name: ICB1 Operator: RJG  
 Run Time: 05/26/00 07:48:05  
 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	-.00023	.00998	.00001	.00048	.00117	.01220	.00017
SDev	.00040	.00507	.00202	.00030	.00027	.00824	.00012
%RSD	171.62	50.764	34315.	62.066	23.042	67.530	69.511
#1	-.00051	.01357	.00143	.00027	.00098	.00638	.00025
#2	.00005	.00640	-.00142	.00068	.00136	.01803	.00009
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	.00150	.00021	-.00018	.00069	.01299	.00047	.00365
SDev	.00085	.00046	.00029	.00350	.00529	.00031	.00068
%RSD	56.508	218.99	165.70	510.82	40.750	66.333	18.577
#1	.00090	-.00012	-.00038	-.00179	.00925	.00025	.00413
#2	.00211	.00054	.00003	.00316	.01673	.00069	.00317
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	.00115	-.00081	-.00149	-.00127	-.00145	-.00016	-.00059
SDev	.00046	.00118	.00131	.00049	.00285	.00057	.00133
%RSD	40.250	146.04	87.984	38.363	196.66	353.89	225.52
#1	.00082	-.00164	-.00056	-.00092	.00057	.00024	.00035
#2	.00148	.00003	-.00242	-.00161	-.00346	-.00057	-.00153
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	-.00053	-.00093	-.00080	-.00391	.00030	.00251	
SDev	.00020	.00128	.00092	.00321	.00067	.00046	
%RSD	37.926	138.01	115.95	82.039	220.01	18.395	
#1	-.00039	-.00002	-.00014	-.00164	-.00017	.00218	
#2	-.00067	-.00184	-.00145	-.00618	.00077	.00283	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

	IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--	--
Avge	15718	--	--	--	--	--	--	--
SDev	15.87468	--	--	--	--	--	--	--
%RSD	.1009941	--	--	--	--	--	--	--
#1	15707	--	--	--	--	--	--	--
#2	15730	--	--	--	--	--	--	--

Method: METTRA Sample Name: ICSA 0014-088-12 Operator: RJG  
 Run Time: 05/26/00 07:52:14  
 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	-.00004	520.52	-.00040	.00180	-.00121	488.61	.00245
SDev	.00007	1.51	.00085	.00004	.00008	1.79	.00014
%RSD	193.40	.29050	212.20	2.0687	6.8866	.36579	5.6328
#1	-.00009	519.45	.00020	.00183	-.00115	487.35	.00235
#2	.00001	521.59	-.00100	.00178	-.00127	489.87	.00255
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	.00116	.00163	-.00116	206.56	534.49	.00767	-.00126
SDev	.00010	.00005	.00018	.81	1.54	.00005	.00127
%RSD	8.4267	2.8551	15.283	.39269	.28751	.59687	101.05
#1	.00109	.00166	-.00128	205.99	533.41	.00764	-.00036
#2	.00123	.00160	-.00103	207.14	535.58	.00771	-.00216
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	.00284	-.00780	.00337	-.00035	.00071	-.00071	-.00024
SDev	.00009	.00314	.00243	.00057	.00144	.00330	.00172
%RSD	3.2447	40.251	71.993	163.45	204.09	462.98	716.58
#1	.00277	-.00558	.00165	-.00075	-.00031	.00162	.00098
#2	.00290	-.01002	.00508	.00005	.00172	-.00304	-.00146
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	-.00384	-.01084	-.00851	-.00123	.00785	.00172	
SDev	.00001	.00147	.00098	.00035	.00015	.00002	
%RSD	.26628	13.566	11.567	28.313	1.9073	1.2264	
#1	-.00383	-.00980	-.00781	-.00099	.00796	.00174	
#2	-.00385	-.01188	-.00921	-.00148	.00775	.00171	
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	
Value							
Range							

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14478	--	--	--	--	--	--
SDev	43.87584	--	--	--	--	--	--
%RSD	.3030617	--	--	--	--	--	--
#1	14509	--	--	--	--	--	--
#2	14446	--	--	--	--	--	--

Method: METTRA Sample Name: ICSAB 0014-075-12 Operator: RJG  
 Run Time: 05/26/00 07:56:24  
 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	1.1144	524.46	1.0179	.53323	.49756	488.99	.93364
SDev	.0008	.29	.0045	.00057	.00167	1.11	.00325
%RSD	.07209	.05606	.44426	.10698	.33606	.22716	.34762
#1	1.1150	524.25	1.0211	.53364	.49874	489.78	.93594
#2	1.1139	524.67	1.0147	.53283	.49638	488.21	.93135
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	.50046	.50977	.55670	207.73	535.44	.51771	.99752
SDev	.00078	.00063	.00026	.18	.40	.00042	.00305
%RSD	.15497	.12310	.04677	.08491	.07472	.08138	.30560
#1	.50101	.51021	.55688	207.85	535.72	.51801	.99968
#2	.49991	.50932	.55652	207.60	535.15	.51742	.99536
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	1.0153	1.0418	1.0217	1.0284	1.0488	1.0523	1.0511
SDev	.0029	.0074	.0081	.0079	.0093	.0011	.0039
%RSD	.28907	.70781	.79545	.76589	.88959	.10786	.36761
#1	1.0173	1.0471	1.0274	1.0340	1.0554	1.0531	1.0538
#2	1.0132	1.0366	1.0159	1.0228	1.0422	1.0515	1.0484
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	1.0257	1.0351	1.0320	1.0973	.52256	1.0668	
SDev	.0002	.0027	.0019	.0034	.00365	.0026	
%RSD	.01928	.26355	.18270	.31031	.69850	.24673	
#1	1.0258	1.0371	1.0333	1.0997	.52514	1.0687	
#2	1.0255	1.0332	1.0307	1.0949	.51998	1.0650	
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	

Analysis Report

QC Standard

05/26/00 08:00:30 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	14432	--	--	--	--	--	--
SDev	45.32527	--	--	--	--	--	--
%RSD	.3140522	--	--	--	--	--	--
#1	14400	--	--	--	--	--	--
#2	14464	--	--	--	--	--	--

Method: METTRA Sample Name: DDP6PB

Operator: RJG

Run Time: 05/26/00 08:02:50

2:5

Comment: STL PITTSBURGH-ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

OF

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00007	.05881	-.00025	.00106	.00050	.37114	.00015
SDev	.00015	.00326	.00162	.00005	.00003	.00754	.00008
%RSD	222.07	5.5466	658.76	4.5908	6.0766	2.0328	55.681
#1	-.00004	.06112	.00090	.00102	.00048	.36581	.00009
#2	.00018	.05651	-.00139	.00109	.00052	.37648	.00020
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	.00022	.00058	.00023	.05767	.07600	.00103	.00179
SDev	.00110	.00020	.00006	.01205	.00612	.00004	.00026
%RSD	494.61	33.749	23.466	20.898	8.0540	3.7221	14.482
#1	-.00055	.00044	.00019	.04915	.07167	.00100	.00160
#2	.00100	.00072	.00027	.06619	.08032	.00105	.00197
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	.00073	.00308	-.00054	.00067	-.00060	.00090	.00040
SDev	.00190	.00037	.00134	.00102	.00195	.00054	.00101
%RSD	261.61	11.997	249.39	153.17	326.23	59.967	250.68
#1	-.00062	.00334	.00041	.00139	-.00198	.00052	-.00031
#2	.00207	.00282	-.00149	-.00006	.00078	.00129	.00112
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	-.00707	.00219	-.00089	-.00496	.00003	.01541	
SDev	.00042	.00134	.00075	.00115	.00023	.00009	
%RSD	5.8925	60.988	84.312	23.168	810.34	.56944	
#1	-.00736	.00314	-.00036	-.00415	-.00014	.01535	
#2	-.00677	.00125	-.00142	-.00577	.00019	.01547	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

## Analysis Report

05/26/00 08:06:56 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	15337	--	--	--	--	--	--
SDev	2.651650	--	--	--	--	--	--
%RSD	.0172891	--	--	--	--	--	--
#1	15339	--	--	--	--	--	--
#2	15335	--	--	--	--	--	--



Method: METTRA Sample Name: DDP6PC Operator: RJG  
 Run Time: 05/26/00 08:06:59 S/C.  
 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	.04545	1.7525	1.8135	1.7795	.04749	L.32674	.04560
SDev	.00022	.0062	.0055	.0018	.00004	.00950	.00029
%RSD	.47886	.35393	.30518	.10040	.07969	2.9090	.63238
#1	.04530	1.7481	1.8096	1.7807	.04746	L.32002	.04539
#2	.04560	1.7569	1.8174	1.7782	.04751	L.33346	.04580
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	.47072	.18797	.21891	.95013	L.06644	.46136	.94469
SDev	.00050	.00068	.00023	.01689	.01131	.00152	.00520
%RSD	.10547	.36394	.10382	1.7777	17.017	.32829	.55032
#1	.47037	.18749	.21907	.93818	L.05845	.46028	.94101
#2	.47107	.18845	.21875	.96207	L.07444	.46243	.94836
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
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	.46796	.45984	.45476	.45645	.44206	.45109	.44808
SDev	.00120	.00225	.00279	.00261	.00434	.00649	.00577
%RSD	.25616	.48968	.61363	.57204	.98157	1.4384	1.2883
#1	.46880	.45824	.45279	.45460	.43899	.44650	.44400
#2	.46711	.46143	.45673	.45830	.44513	.45568	.45217
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
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	1.8059	1.8116	1.8097	1.8335	.45509	.49082	
SDev	.0069	.0068	.0068	.0041	.00114	.00203	
%RSD	.37986	.37369	.37574	.22267	.25170	.41304	
#1	1.8011	1.8068	1.8049	1.8307	.45428	.48939	
#2	1.8108	1.8164	1.8145	1.8364	.45590	.49226	
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

05/26/00 08:11:05 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	15391	--	--	--	--	--	--
SDev	38.50210	--	--	--	--	--	--
%RSD	.2501538	--	--	--	--	--	--
#1	15419	--	--	--	--	--	--
#2	15364	--	--	--	--	--	--

Method: METTRA Sample Name: DDNMX

Operator: RJG

Run Time: 05/26/00 08:11:08

Time

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	.00008	17.688	.00312	.06784	.00075	318.04	.00105
SDev	.00020	.008	.00088	.00016	.00004	.42	.00006
%RSD	248.51	.04653	28.038	.23843	5.7430	.13303	5.9013
#1	-.00006	17.682	.00374	.06795	.00078	318.34	.00110
#2	.00022	17.694	.00250	.06772	.00072	317.74	.00101
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	.00250	.02276	.01343	9.5573	4.4155	.04714	.01023
SDev	.00006	.00028	.00005	.0256	.0010	.00003	.00010
%RSD	2.6071	1.2172	.40336	.26760	.02308	.05485	.96751
#1	.00254	.02257	.01339	9.5754	4.4148	.04716	.01030
#2	.00245	.02296	.01347	9.5392	4.4162	.04712	.01016
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	.00908	.09440	.08941	.09107	.00249	.00296	.00280
SDev	.00023	.00063	.00017	.00032	.00205	.00125	.00152
%RSD	2.5596	.66972	.18888	.35485	82.432	42.265	54.152
#1	.00892	.09485	.08953	.09130	.00394	.00384	.00387
#2	.00925	.09396	.08929	.09084	.00104	.00207	.00173
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	-.00882	.00405	-.00024	-.00150	.02566	.13694	
SDev	.00154	.00291	.00143	.00257	.00003	.00007	
%RSD	17.446	72.017	602.82	171.39	.11940	.04861	
#1	-.00773	.00199	-.00125	.00032	.02568	.13689	
#2	-.00990	.00611	.00077	-.00332	.02564	.13698	
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

05/26/00 08:15:14 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	15134	--	--	--	--	--	--
SDev	14.21326	--	--	--	--	--	--
%RSD	.0939170	--	--	--	--	--	--
#1	15124	--	--	--	--	--	--
#2	15144	--	--	--	--	--	--

Method: METTRA Sample Name: DDNMXP5 Operator: RJG  
 Run Time: 05/26/00 08:15:17  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS - INSTRUMENT TRACE ICP  
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00013	3.3519	.00039	.01327	.00087	64.623	.00022
SDev	.00002	.0066	.00297	.00002	.00001	.054	.00002
%RSD	13.819	.19758	757.96	.16247	1.4895	.08325	7.0871

#1	-.00011	3.3566	-.00171	.01326	.00088	64.661	.00023
#2	-.00014	3.3472	.00250	.01329	.00086	64.585	.00021

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00153	.00486	.00132	1.9030	.86367	.00952	.00256
SDev	.00016	.00002	.00024	.0003	.00688	.00006	.00018
%RSD	10.401	.49021	18.186	.01795	.79636	.63556	6.9735

#1	.00164	.00487	.00115	1.9028	.85881	.00948	.00268
#2	.00141	.00484	.00148	1.9032	.86853	.00956	.00243

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00257	.01951	.01825	.01867	-.00146	.00094	.00014
SDev	.00103	.00039	.00211	.00128	.00090	.00115	.00106
%RSD	40.090	1.9792	11.534	6.8322	61.518	121.53	738.21
#1	.00329	.01978	.01676	.01777	-.00082	.00176	.00090
#2	.00184	.01924	.01974	.01957	-.00209	.00013	-.00061

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00413	-.00146	-.00235	-.00432	.00211	.03179
SDev	.00084	.00105	.00042	.00145	.00000	.00180
%RSD	20.425	72.115	17.877	33.551	.14714	5.6519
#1	-.00473	-.00071	-.00205	-.00534	.00211	.03052
#2	-.00353	-.00220	-.00264	-.00329	.00211	.03306

## Analysis Report

05/26/00 08:19:23 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	15405	--	--	--	--	--	--
SDev	22.16752	---	--	--	--	---	--
%RSD	.1438980	--	--	--	--	--	--
#1	15389	--	--	--	--	--	--
#2	15421	--	--	--	--	--	--

Method: METTRA Sample Name: DDNMXS

Operator: RJG

Run Time: 05/26/00 08:19:26

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	.05253	28.047	2.0454	2.1191	.05494	130.93	.05178
SDev	.00031	.016	.0030	.0043	.00019	.40	.00011
%RSD	.59560	.05602	.14866	.20298	.34532	.30766	.21918
#1	.05231	28.058	2.0475	2.1222	.05508	131.22	.05170
#2	.05275	28.036	2.0432	2.1161	.05481	130.65	.05186
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	.53247	.24462	.27441	10.359	2.6247	.56512	1.0271
SDev	.00057	.00023	.00007	.005	.0076	.00080	.0010
%RSD	.10800	.09403	.02696	.04609	.28835	.14195	.09662
#1	.53288	.24478	.27436	10.356	2.6301	.56569	1.0264
#2	.53206	.24446	.27446	10.362	2.6194	.56455	1.0278
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	.53987	.64750	.63265	.63759	.44741	.46097	.45645
SDev	.00591	.00228	.00253	.00093	.00360	.00059	.00159
%RSD	1.0948	.35148	.40027	.14605	.80345	.12796	.34844
#1	.54405	.64911	.63086	.63693	.44487	.46055	.45533
#2	.53569	.64589	.63444	.63825	.44995	.46138	.45758
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	2.0216	2.0302	2.0274	2.1624	.55266	.69958	
SDev	.0046	.0179	.0135	.0147	.00046	.00240	
%RSD	.22839	.88289	.66556	.67781	.08390	.34368	
#1	2.0184	2.0175	2.0178	2.1727	.55233	.70128	
#2	2.0249	2.0429	2.0369	2.1520	.55299	.69788	
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

05/26/00 08:23:31 AM

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IntStd	1.1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y <sup>2</sup>	--	--	--	--	--	--
Wavlen	371.030	--	--	--	7.2	--	--
Avge	15180	--	--	--	5.2	--	--
SDev	37.93586	--	--	--	9.2	--	--
%RSD	.2498991	--	--	--	1.2	--	--
#1	15154	--	--	--	--	--	--
#2	15207	--	--	--	--	--	--



Method: METTRA Sample Name: DDNMXD Operator: RJG  
 Run Time: 05/26/00 08:23:35  
 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	.04855	29.707	1.9003	1.9464	.05104	82.677	.04822
SDev	.00029	.011	.0021	.0032	.00001	.218	.00045
%RSD	.59008	.03717	.10861	.16469	.02175	.26394	.93242
#1	.04835	29.715	1.8988	1.9487	.05104	82.523	.04790
#2	.04876	29.700	1.9017	1.9442	.05105	82.831	.04854
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	.49607	.23031	.25328	11.348	1.9173	.53028	1.0835
SDev	.00146	.00125	.00023	.050	.0007	.00083	.0051
%RSD	.29374	.54271	.09003	.43683	.03521	.15666	.47325
#1	.49504	.22942	.25344	11.313	1.9169	.52970	1.0799
#2	.49710	.23119	.25312	11.383	1.9178	.53087	1.0871
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	.50469	.60654	.59714	.60027	.46949	.47812	.47525
SDev	.00073	.00012	.00622	.00419	.00379	.00109	.00199
%RSD	.14457	.02019	1.0425	.69850	.80681	.22771	.41821
#1	.50520	.60645	.59274	.59730	.46681	.47735	.47384
#2	.50417	.60663	.60154	.60323	.47217	.47889	.47665
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	1.8714	1.8976	1.8889	1.9920	.51628	.66698	
SDev	.0043	.0135	.0104	.0019	.00098	.00097	
%RSD	.23051	.71008	.55186	.09471	.19042	.14479	
#1	1.8684	1.8881	1.8815	1.9907	.51698	.66630	
#2	1.8745	1.9072	1.8963	1.9933	.51559	.66766	
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

05/26/00 08:27:40 AM

658 773  
page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15278	--	--	--	--	--	--
SDev	38.11333	--	--	--	--	--	--
%RSD	.2494695	--	--	--	--	--	--
#1	15305	--	--	--	--	--	--
#2	15251	--	--	--	--	--	--

Method: METTRA Sample Name: DDNN3  
 Run Time: 05/26/00 08:27:43  
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP  
 Mode: CONC Corr. Factor: 1

Operator: RJG

08.

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00015	12.725	.00427	.03851	.00138	22.694	.00091
SDev	.00029	.079	.00122	.00029	.00004	.135	.00000
%RSD	190.71	.62144	28.702	.75497	2.9614	.59410	.44419
#1	-.00005	12.669	.00340	.03831	.00141	22.598	.00090
#2	.00036	12.781	.00513	.03872	.00136	22.789	.00091
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	.00218	.01736	.01165	6.1248	.52065	.02232	.00516
SDev	.00026	.00012	.00008	.0321	.00551	.00011	.00110
%RSD	11.806	.69033	.70037	.52440	1.0592	.48041	21.268
#1	.00237	.01727	.01159	6.1021	.51675	.02225	.00593
#2	.00200	.01744	.01171	6.1475	.52455	.02240	.00438
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	.00641	.12230	.11927	.12028	.00236	.00478	.00398
SDev	.00014	.00129	.00077	.00008	.00118	.00147	.00138
%RSD	2.2486	1.0587	.64539	.06840	50.213	30.846	34.670
#1	.00651	.12139	.11982	.12034	.00319	.00583	.00495
#2	.00631	.12322	.11873	.12022	.00152	.00374	.00300
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	-.00728	.00092	-.00181	-.00286	.02149	.10280	
SDev	.00354	.00103	.00049	.00255	.00040	.00089	
%RSD	48.602	110.95	27.330	89.366	1.8469	.86262	
#1	-.00978	.00165	-.00216	-.00105	.02177	.10217	
#2	-.00478	.00020	-.00146	-.00466	.02121	.10342	
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	15410	--	--	--	--	--	--
SDev	33.76435	--	--	--	--	--	--
%RSD	.2191028	--	--	--	--	--	--
#1	15434	--	--	--	--	--	--
#2	15386	--	--	--	--	--	--

Method: METTRA Sample Name: DDNN5

Operator: RJG

Run Time: 05/26/00 08:31:52

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	-.00033	15.806	.00259	.04130	.00169	18.801	.00061
SDev	.00041	.042	.00026	.00007	.00012	.062	.00014
%RSD	123.74	.26851	9.9296	.16551	7.2767	.33205	22.998
#1	-.00004	15.836	.00241	.04135	.00161	18.845	.00051
#2	-.00062	15.776	.00278	.04126	.00178	18.757	.00070
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	.00214	.01845	.01047	8.2957	.50085	.02330	.00518
SDev	.00000	.00028	.00008	.0125	.00218	.00001	.00003
%RSD	.12135	1.5054	.77414	.15122	.43580	.05591	.63825
#1	.00214	.01865	.01052	8.3046	.50239	.02331	.00521
#2	.00214	.01826	.01041	8.2869	.49931	.02329	.00516
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	.00799	.07929	.07478	.07628	.00188	.00211	.00204
SDev	.00052	.00217	.00023	.00056	.00164	.00099	.00011
%RSD	6.4409	2.7314	.31391	.74012	87.254	46.701	5.5194
#1	.00763	.08082	.07462	.07668	.00072	.00281	.00212
#2	.00836	.07776	.07495	.07589	.00304	.00142	.00196
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	-.00516	.00325	.00045	-.00228	.02247	.07577	
SDev	.00014	.00145	.00092	.00096	.00010	.00012	
%RSD	2.6604	44.456	203.16	42.029	.42081	.15447	
#1	-.00506	.00223	-.00020	-.00160	.02253	.07586	
#2	-.00526	.00428	.00110	-.00296	.02240	.07569	
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	NOTUSED
Elem	Y	--	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--	--
Avge	15484	--	--	--	--	--	--	--
SDev	68.55345	--	--	--	--	--	--	--
%RSD	.4427352	--	--	--	--	--	--	--
#1	15436	--	--	--	--	--	--	--
#2	15533	--	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-1 0014-110-3 Operator: RJG  
Run Time: 05/26/00 08:36:01  
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
Avg	1.0370	24.068	.51697	1.9853	2.0753	51.747	.50392
SDev	.0060	.200	.00343	.0161	.0058	.118	.00103
%RSD	.57431	.83061	.66268	.81343	.28052	.22839	.20376
#1	1.0328	23.927	.51455	1.9739	2.0712	51.664	.50319
#2	1.0412	24.209	.51939	1.9967	2.0794	51.831	.50464
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	2.0670	2.0718	1.9574	25.392	49.738	2.0442	2.0754
SDev	.0106	.0097	.0145	.162	.259	.0095	.0145
%RSD	.51520	.46868	.74311	.63795	.51989	.46251	.70075
#1	2.0594	2.0649	1.9471	25.277	49.555	2.0375	2.0651
#2	2.0745	2.0786	1.9677	25.506	49.921	2.0509	2.0857
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	2.0623	.51937	.51857	.51884	.51522	.51260	.51347
SDev	.0054	.00052	.00422	.00264	.00514	.00112	.00097
%RSD	.26385	.10065	.81321	.50858	.99811	.21745	.18871
#1	2.0585	.51974	.51559	.51697	.51158	.51339	.51279
#2	2.0662	.51900	.52155	.52070	.51885	.51182	.51416
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	.51891	.51897	.51895	1.0714	2.0408	2.1002	
SDev	.00067	.00020	.00009	.0075	.0073	.0057	
%RSD	.12998	.03922	.01712	.69800	.35690	.27085	
#1	.51939	.51883	.51902	1.0661	2.0356	2.0962	
#2	.51844	.51912	.51889	1.0766	2.0459	2.1043	
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	15499	--	--	--	--	--	--
SDev	20.82443	--	--	--	--	--	--
%RSD	.1343588	--	--	--	--	--	--
#1	15514	--	--	--	--	--	--
#2	15484	--	--	--	--	--	--



Method: METTRA Sample Name: CCB1

Operator: RJG

Run Time: 05/26/00 08:40:10

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
Avg	-.00024	.06365	-.00055	.00030	.00179	.01059	.00010
SDev	.00018	.01169	.00022	.00007	.00002	.00195	.00008
%RSD	74.460	18.371	39.437	22.716	.87687	18.386	85.430
#1	-.00011	.07192	-.00039	.00025	.00178	.00922	.00004
#2	-.00037	.05538	-.00070	.00034	.00181	.01197	.00016
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	.00124	.00008	-.00220	.00751	.00927	.00032	.00483
SDev	.00025	.00018	.00050	.00415	.00000	.00003	.00138
%RSD	20.422	217.02	22.569	55.289	.03087	11.020	28.553
#1	.00142	.00021	-.00255	.01044	.00927	.00029	.00581
#2	.00106	-.00004	-.00185	.00457	.00927	.00034	.00386
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	.00045	-.00158	.00078	-.00001	-.00050	.00074	.00033
SDev	.00008	.00098	.00165	.00078	.00077	.00168	.00086
%RSD	17.487	62.313	211.99	13573.	152.94	226.01	263.45
#1	.00039	-.00088	-.00039	-.00055	-.00105	.00193	.00094
#2	.00050	-.00228	.00195	.00054	.00004	-.00044	-.00028
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	.00139	.00036	.00070	-.00013	.00016	.00316	
SDev	.00014	.00071	.00052	.00213	.00000	.00028	
%RSD	9.9441	198.17	74.013	1629.9	2.0582	8.8305	
#1	.00130	-.00014	.00034	.00138	.00017	.00296	
#2	.00149	.00086	.00107	-.00164	.00016	.00336	
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	15469	--	--	--	--	--	--
SDev	31.00705	--	--	--	--	--	--
%RSD	.2004506	--	--	--	--	--	--
#1	15447	--	--	--	--	--	--
#2	15491	--	--	--	--	--	--

Method: METTRA Sample Name: DDLA7B Operator: RJG  
 Run Time: 05/26/00 08:44:19  
 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	-.00040	.06453	-.00023	.00004	.00182	.03301	.00001
SDev	.00015	.01312	.00133	.00005	.00006	.00069	.00011
%RSD	37.914	20.330	584.69	132.99	3.5787	2.0953	1354.1
#1	-.00051	.07381	-.00117	.00007	.00177	.03252	-.00007
#2	-.00030	.05525	.00071	.00000	.00186	.03350	.00009
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	.00075	-.00023	-.00296	.01191	.00430	-.00002	.00178
SDev	.00012	.00016	.00040	.00784	.00101	.00002	.00018
%RSD	15.938	70.641	13.596	65.800	23.610	89.621	10.268
#1	.00084	-.00011	-.00324	.00637	.00358	-.00003	.00191
#2	.00067	-.00034	-.00267	.01745	.00501	-.00001	.00165
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	.00028	-.00006	-.00037	-.00027	-.00051	-.00003	-.00019
SDev	.00062	.00243	.00006	.00077	.00152	.00077	.00001
%RSD	225.61	3761.9	17.462	289.16	300.51	2308.8	5.5991
#1	-.00016	-.00178	-.00032	-.00081	-.00158	.00051	-.00018
#2	.00072	.00165	-.00041	.00028	.00057	-.00058	-.00020
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	-.00249	.00160	.00024	-.00289	-.00016	.00509	
SDev	.00013	.00337	.00221	.00152	.00000	.00008	
%RSD	5.1789	210.31	912.79	52.480	.37993	1.4827	
#1	-.00258	.00399	.00180	-.00182	-.00016	.00504	
#2	-.00240	-.00078	-.00132	-.00396	-.00016	.00515	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

# Analysis Report

05/26/00 08:48:25 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	15581	--	--	--	--	--	--
SDev	52.60833	--	--	--	--	--	--
%RSD	.3376365	--	--	--	--	--	--
#1	15544	--	--	--	--	--	--
#2	15619	--	--	--	--	--	--

Method: METTRA Sample Name: DDLA7C

Operator: RJG

Run Time: 05/26/00 08:48:29

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	.05093	2.0607	1.9916	1.9517	.05250	50.378	.04881
SDev	.00094	.0682	.0424	.0367	.00061	.997	.00095
%RSD	1.8524	3.3078	2.1277	1.8822	1.1621	1.9790	1.9442
#1	.05160	2.1089	2.0216	1.9777	.05294	51.083	.04948
#2	.05026	2.0125	1.9616	1.9257	.05207	49.673	.04814
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	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	.50646	.20364	.24334	.90219	48.714	.50231	1.0171
SDev	.01054	.00399	.00498	.02800	.961	.00970	.0179
%RSD	2.0802	1.9612	2.0456	3.1031	1.9728	1.9311	1.7628
#1	.51391	.20647	.24686	.92199	49.393	.50916	1.0298
#2	.49901	.20082	.23982	.88240	48.034	.49545	1.0045
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
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	.50709	.51905	.51114	.51377	.48992	.49956	.49635
SDev	.01049	.01130	.01196	.01174	.00922	.01080	.01027
%RSD	2.0684	2.1775	2.3391	2.2847	1.8815	2.1623	2.0700
#1	.51450	.52704	.51959	.52207	.49643	.50720	.50361
#2	.49967	.51105	.50268	.50547	.48340	.49192	.48908
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
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	2.0251	2.0387	2.0342	2.1498	.49443	.52890	
SDev	.0312	.0483	.0426	.0409	.00970	.01141	
%RSD	1.5425	2.3688	2.0949	1.9021	1.9608	2.1576	
#1	2.0472	2.0728	2.0643	2.1787	.50129	.53697	
#2	2.0030	2.0045	2.0040	2.1209	.48758	.52083	
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	15524	--	--	--	--	--	--
SDev	275.6301	--	--	--	--	--	--
%RSD	1.775521	--	--	--	--	--	--
#1	15329	--	--	--	--	--	--
#2	15719	--	--	--	--	--	--

Method: METTRA Sample Name: DDK90

Operator: RJG

Run Time: 05/26/00 08:52:39

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	-.00004	6.3031	.00638	.20369	.00212	38.692	-.00005
SDev	.00014	.0154	.00044	.00016	.00009	.022	.00009
%RSD	386.91	.24461	6.9845	.07696	4.0844	.05703	176.07
#1	.00006	6.3140	.00669	.20358	.00218	38.676	.00001
#2	-.00014	6.2922	.00606	.20381	.00206	38.708	-.00012
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	.00223	.01007	.01999	6.5145	5.1910	.08145	.00533
SDev	.00026	.00023	.00047	.0016	.0123	.00006	.00109
%RSD	11.422	2.2478	2.3373	.02413	.23722	.06997	20.465
#1	.00241	.00991	.01966	6.5156	5.1823	.08141	.00610
#2	.00205	.01023	.02032	6.5133	5.1997	.08149	.00456
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	.00824	.02475	.02131	.02246	.00184	.00132	.00149
SDev	.00046	.00105	.00063	.00007	.00015	.00191	.00132
%RSD	5.5387	4.2337	2.9475	.31231	8.2987	144.64	88.611
#1	.00856	.02549	.02087	.02241	.00195	.00267	.00243
#2	.00791	.02401	.02176	.02251	.00174	-.00003	.00056
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	-.00213	.00131	.00017	-.00018	.01447	.05687	
SDev	.00145	.00224	.00101	.00319	.00002	.00025	
%RSD	68.222	170.74	609.55	1800.3	.13992	.44021	
#1	-.00110	-.00027	-.00055	.00208	.01446	.05669	
#2	-.00316	.00289	.00088	-.00243	.01449	.05704	
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	15549	--	--	--	--	--	--
SDev	24.88961	--	--	--	--	--	--
%RSD	.1600726	--	--	--	--	--	--
#1	15567	--	--	--	--	--	--
#2	15531	--	--	--	--	--	--



Method: METTRA Sample Name: DDK90P5 Operator: RJG  
Run Time: 05/26/00 08:56:48  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACE ICP  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00004	1.2853	.00113	.04046	.00182	7.7714	-.00003
SDev	.00007	.0051	.00213	.00003	.00015	.0116	.00003
%RSD	165.76	.39536	188.12	.06620	8.0397	.14946	98.861

#1	-.00009	1.2889	-.00037	.04048	.00192	7.7797	-.00005
#2	.00001	1.2817	.00264	.04044	.00172	7.7632	-.00001

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00171	.00183	.00140	1.3166	1.0272	.01633	.00158
SDev	.00010	.00002	.00010	.0048	.0020	.00002	.00001
%RSD	5.6955	1.0479	7.0137	.36214	.19359	.14232	.33217

#1	.00178	.00182	.00133	1.3132	1.0287	.01631	.00157
#2	.00164	.00184	.00147	1.3199	1.0258	.01634	.00158

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00178	.00487	.00518	.00508	-.00034	-.00273	-.00193
SDev	.00023	.00012	.00014	.00014	.00022	.00156	.00097
%RSD	13.134	2.5333	2.7215	2.6614	63.820	57.206	50.178

#1	.00195	.00478	.00508	.00498	-.00019	-.00384	-.00262
#2	.00162	.00496	.00528	.00517	-.00049	-.00163	-.00125

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00180	.00081	-.00006	-.00055	.00062	.01512
SDev	.00357	.00222	.00029	.00442	.00000	.00021
%RSD	199.06	275.08	475.83	802.43	.47618	1.3864

#1	.00073	-.00076	-.00026	-.00368	.00062	.01497
#2	-.00432	.00237	.00014	.00257	.00062	.01527

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15446	--	--	--	--	--	--
SDev	20.93008	--	--	--	--	--	--
%RSD	.1355036	--	--	--	--	--	--
#1	15461	--	--	--	--	--	--
#2	15431	--	--	--	--	--	--

Method: METTRA Sample Name: DDK90S Operator: RJG  
Run Time: 05/26/00 09:00:58  
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	.04951	10.093	1.9337	2.0657	.05131	85.604	.04686
SDev	.00008	.009	.0053	.0007	.00008	.178	.00057
%RSD	.16535	.09352	.27470	.03603	.15991	.20749	1.2141
#1	.04957	10.100	1.9374	2.0662	.05137	85.729	.04727
#2	.04946	10.086	1.9299	2.0652	.05125	85.478	.04646
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	.48809	.20502	.25587	7.2666	52.364	.56073	.98132
SDev	.00044	.00027	.00003	.0250	.054	.00065	.00236
%RSD	.09061	.13164	.01113	.34394	.10289	.11688	.24090
#1	.48778	.20521	.25585	7.2843	52.402	.56119	.97965
#2	.48840	.20483	.25589	7.2489	52.325	.56026	.98299
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	.49080	.52196	.51233	.51554	.47366	.47794	.47651
SDev	.00141	.00044	.00443	.00281	.00539	.00268	.00001
%RSD	.28762	.08354	.86362	.54429	1.1370	.56095	.00107
#1	.49180	.52165	.51546	.51752	.47747	.47604	.47652
#2	.48980	.52227	.50920	.51356	.46985	.47983	.47651
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	1.9385	1.9552	1.9496	2.0835	.49607	.56033	
SDev	.0015	.0095	.0069	.0197	.00085	.00262	
%RSD	.07940	.48648	.35169	.94554	.17232	.46794	
#1	1.9395	1.9619	1.9544	2.0974	.49668	.56219	
#2	1.9374	1.9484	1.9447	2.0696	.49547	.55848	
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	15649	--	--	--	--	--	--
SDev	54.97755	--	--	--	--	--	--
%RSD	.3513139	--	--	--	--	--	--
#1	15610	--	--	--	--	--	--
#2	15688	--	--	--	--	--	--

Method: METTRA Sample Name: DDK90D

Operator: RJG

Run Time: 05/26/00 09:05:07

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACE ICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05137	10.683	2.0070	2.1429	.05340	89.962	.04869
SDev	.00007	.060	.0054	.0128	.00028	.382	.00022
%RSD	.12860	.55790	.27082	.59902	.52205	.42432	.46006
#1	.05142	10.640	2.0031	2.1339	.05320	89.692	.04853
#2	.05132	10.725	2.0108	2.1520	.05359	90.232	.04885
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	.50988	.21557	.26882	7.6705	54.495	.58596	1.0287
SDev	.00323	.00075	.00130	.0282	.279	.00316	.0044
%RSD	.63247	.34669	.48320	.36811	.51286	.53934	.42685
#1	.50760	.21504	.26790	7.6505	54.298	.58372	1.0256
#2	.51216	.21610	.26974	7.6904	54.693	.58819	1.0318
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	.51788	.54147	.53534	.53738	.49787	.50117	.50007
SDev	.00305	.00046	.00149	.00084	.00258	.00133	.00175
%RSD	.58991	.08536	.27772	.15589	.51869	.26522	.34925
#1	.51572	.54180	.53429	.53679	.49604	.50023	.49883
#2	.52004	.54114	.53639	.53798	.49969	.50211	.50130
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	2.0126	2.0364	2.0285	2.1584	.51190	.57584	
SDev	.0067	.0126	.0106	.0026	.00287	.00257	
%RSD	.33051	.61961	.52410	.11944	.56094	.44579	
#1	2.0079	2.0275	2.0210	2.1566	.50987	.57402	
#2	2.0173	2.0453	2.0360	2.1602	.51393	.57765	
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	15496	--	--	--	--	--	--
SDev	18.63268	--	--	--	--	--	--
%RSD	.1202401	--	--	--	--	--	--
#1	15509	--	--	--	--	--	--
#2	15483	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-2

Operator: RJG

Run Time: 05/26/00 09:09:16

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	1.0332	23.762	.51663	1.9571	2.0779	51.760	.50464
SDev	.0005	.004	.00190	.0023	.0034	.123	.00084
%RSD	.04440	.01748	.36839	.11622	.16335	.23849	.16649
#1	1.0329	23.759	.51528	1.9555	2.0803	51.847	.50524
#2	1.0335	23.765	.51797	1.9587	2.0755	51.673	.50405
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	2.0624	2.0694	1.9396	25.211	49.679	2.0406	2.0829
SDev	.0049	.0027	.0005	.016	.036	.0024	.0040
%RSD	.23719	.12967	.02587	.06453	.07262	.11988	.19371
#1	2.0659	2.0713	1.9392	25.200	49.705	2.0424	2.0800
#2	2.0590	2.0675	1.9399	25.223	49.654	2.0389	2.0857
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	2.0591	.51986	.52346	.52226	.52192	.51754	.51900
SDev	.0069	.00169	.00064	.00013	.00093	.00203	.00166
%RSD	.33594	.32536	.12289	.02569	.17726	.39263	.32051
#1	2.0640	.52106	.52300	.52235	.52257	.51897	.52017
#2	2.0542	.51866	.52391	.52217	.52126	.51610	.51782
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	.52174	.52578	.52444	1.0756	2.0346	2.0955	
SDev	.00049	.00074	.00033	.0021	.0015	.0052	
%RSD	.09448	.14097	.06297	.19606	.07487	.25005	
#1	.52209	.52526	.52420	1.0741	2.0356	2.0992	
#2	.52139	.52631	.52467	1.0771	2.0335	2.0918	
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	15395	--	--	--	--	--	--
SDev	32.24448	--	--	--	--	--	--
%RSD	.2094437	--	--	--	--	--	--
#1	15372	--	--	--	--	--	--
#2	15418	--	--	--	--	--	--



Method: METTRA Sample Name: CCB2

Operator: RJG

Run Time: 05/26/00 09:13:25

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACE ICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00061	.09821	.00015	.00039	.00249	.01161	-.00003
SDev	.00003	.00193	.00012	.00009	.00011	.00353	.00004
%RSD	4.4689	1.9652	78.301	23.633	4.4959	30.398	140.66
#1	-.00059	.09957	.00023	.00032	.00257	.00912	-.00006
#2	-.00063	.09684	.00007	.00045	.00241	.01411	-.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
Avg	.00128	.00010	-.00347	.00488	.01119	.00040	.00515
SDev	.00001	.00003	.00012	.00655	.00406	.00008	.00125
%RSD	.46523	35.431	3.4590	134.06	36.320	19.907	24.327
#1	.00128	.00007	-.00356	.00025	.00832	.00035	.00604
#2	.00127	.00012	-.00339	.00952	.01406	.00046	.00427
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	.00050	-.00082	-.00092	-.00088	.00002	.00051	.00035
SDev	.00016	.00192	.00078	.00012	.00207	.00021	.00083
%RSD	31.157	235.16	84.920	13.643	8502.8	40.227	235.42
#1	.00061	.00054	-.00147	-.00080	-.00144	.00037	-.00023
#2	.00039	-.00218	-.00037	-.00097	.00149	.00066	.00094
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	-.00258	.00001	-.00085	.00001	.00017	.00330	
SDev	.00041	.00322	.00228	.00524	.00001	.00017	
%RSD	15.992	33950.	267.97	98639.	3.7535	5.0966	
#1	-.00287	-.00226	-.00247	-.00370	.00016	.00319	
#2	-.00229	.00228	.00076	.00371	.00017	.00342	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
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	15420	--	--	--	--	--	--
SDev	63.18041	--	--	--	--	--	--
%RSD	.4097190	--	--	--	--	--	--
#1	15465	--	--	--	--	--	--
#2	15376	--	--	--	--	--	--

Method: METTRA Sample Name: DDLFVB Operator: RJG  
Run Time: 05/26/00 09:18:15  
Comment: STL PITTSBURGH ICP METALS ANALYSIS INSTRUMENT TRACE ICP  
Mode: -CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	.14788	-.00031	.00007	.00354	.04825	-.00014
SDev	.00053	.07215	.00085	.00004	.00180	.00661	.00004
%RSD	399.92	48.785	268.79	60.376	50.777	13.698	25.897
#1	-.00051	.19890	-.00091	.00004	.00481	.04358	-.00012
#2	.00024	.09687	.00028	.00010	.00227	.05292	-.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
Avg	.00181	.00009	-.00557	.00471	.00831	-.00003	.00022
SDev	.00009	.00048	.00298	.00126	.00266	.00008	.00001
%RSD	5.1024	541.32	53.513	26.823	32.058	230.67	3.0894
#1	.00175	-.00025	-.00767	.00560	.01019	-.00009	.00021
#2	.00188	.00043	-.00346	.00381	.00642	.00002	.00022
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	-.00011	-.00448	.00001	-.00149	.00056	-.00097	-.00046
SDev	.00054	.00169	.00032	.00078	.00115	.00357	.00199
%RSD	511.03	37.658	3428.6	52.345	207.20	368.04	432.72
#1	-.00049	-.00567	-.00022	-.00204	.00137	-.00349	-.00187
#2	.00028	-.00329	.00024	-.00094	-.00026	.00155	.00095
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	.00376	-.00307	-.00079	.00526	.00063	.00572	
SDev	.00109	.00001	.00036	.00774	.00022	.00024	
%RSD	28.850	.17127	45.116	147.21	35.106	4.1712	
#1	.00453	-.00307	-.00054	H.01073	.00078	.00589	
#2	.00299	-.00306	-.00105	-.00022	.00047	.00556	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

## Analysis Report

05/26/00 09:22:21 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	15627	--	--	--	--	--	--
SDev	42.10807	--	--	--	--	--	--
%RSD	.2694507	--	--	--	--	--	--
#1	15657	--	--	--	--	--	--
#2	15598	--	--	--	--	--	--

Method: METTRA Sample Name: DDLFVC

Operator: RJG

Run Time: 05/26/00 09:22:25

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	.05100	2.0928	2.0154	1.9125	.05409	42.433	.04993
SDev	.00014	.0066	.0065	.0028	.00005	.007	.00002
%RSD	.26508	.31423	.32379	.14656	.09269	.01641	.04625
#1	.05110	2.0882	2.0108	1.9105	.05413	42.438	.04992
#2	.05091	2.0975	2.0200	1.9145	.05406	42.428	.04995
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	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
Avg	.51179	.20379	.23431	.92325	40.517	.50336	L.00041
SDev	.00176	.00045	.00054	.00111	.023	.00003	.00059
%RSD	.34470	.22191	.23047	.11970	.05686	.00497	144.46
#1	.51054	.20411	.23392	.92247	40.501	.50335	L.00083
#2	.51304	.20347	.23469	.92403	40.534	.50338	L-.00001
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	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
Avg	.51330	.51839	.51956	.51917	-.00117	-.00077	L-.00091
SDev	.00171	.00167	.00093	.00007	.00078	.00046	.00057
%RSD	.33230	.32141	.17992	.01323	66.919	59.606	62.755
#1	.51209	.51957	.51890	.51912	-.00062	-.00045	L-.00050
#2	.51451	.51721	.52023	.51922	-.00173	-.00110	L-.00131
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	
Avg	2.1990	2.1822	2.1878	2.0052	.49433	.53852	
SDev	.0130	.0013	.0034	.0014	.00023	.00076	
%RSD	.59171	.06164	.15704	.06765	.04645	.14016	
#1	2.1898	2.1831	2.1854	2.0043	.49449	.53905	
#2	2.2082	2.1812	2.1902	2.0062	.49417	.53798	
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	15564	--	--	--	--	--	--
SDev	20.93008	--	--	--	--	--	--
%RSD	.1344741	--	--	--	--	--	--
#1	15579	--	--	--	--	--	--
#2	15550	--	--	--	--	--	--

Method: METTRA Sample Name: DDK1J

Operator: RJG

Run Time: 05/26/00 09:26:34

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	-.00013	.10509	.00900	.29279	.00252	131.28	.00009
SDev	.00029	.00626	.00079	.00116	.00005	.47	.00004
%RSD	223.27	5.9549	8.7256	.39555	1.8994	.35716	46.301
#1	.00007	.10951	.00845	.29361	.00256	131.61	.00006
#2	-.00033	.10066	.00956	.29197	.00249	130.95	.00012
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	.00139	.00031	.00067	4.4146	25.114	.94809	-.00027
SDev	.00006	.00016	.00042	.0108	.091	.00314	.00067
%RSD	4.3991	51.275	62.179	.24473	.36237	.33120	251.40
#1	.00143	.00043	.00037	4.4222	25.178	.95031	-.00074
#2	.00135	.00020	.00096	4.4069	25.050	.94587	.00021
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	.00104	-.00523	.00302	.00027	.00077	.00027	.00044
SDev	.00108	.00085	.00147	.00070	.00056	.00062	.00023
%RSD	103.84	16.200	48.610	255.95	73.135	229.20	51.990
#1	.00028	-.00463	.00198	-.00022	.00037	.00071	.00060
#2	.00181	-.00583	.00405	.00076	.00117	-.00017	.00028
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	.00924	-.00283	.00119	.00245	.00075	.43938	
SDev	.00226	.00313	.00133	.00023	.00000	.00160	
%RSD	24.469	110.43	112.21	9.4538	.50523	.36505	
#1	.00764	-.00062	.00213	.00261	.00075	.44051	
#2	.01084	-.00504	.00025	.00229	.00074	.43824	
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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	1	2	3	4	5	6	7
IntStd	1						
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15683	--	--	--	--	--	--
SDev	21.60197	--	--	--	--	--	--
%RSD	.1377402	--	--	--	--	--	--
#1	15668	--	--	--	--	--	--
#2	15698	--	--	--	--	--	--



Method: METTRA Sample Name: DDK1JP5

Operator: RJG

Run Time: 05/26/00 09:30:43

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	-.00013	.10314	.00185	.05831	.00261	26.381	.00013
SDev	.00010	.01132	.00057	.00170	.00006	.562	.00003
%RSD	80.419	10.977	31.067	2.9137	2.4732	2.1285	24.187

#1	-.00006	.11115	.00144	.05711	.00265	25.984	.00016
#2	-.00020	.09513	.00226	.05951	.00256	26.778	.00011

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00147	.00009	-.00316	.88068	4.8570	.19145	.00041
SDev	.00006	.00007	.00000	.02095	.1132	.00479	.00009
%RSD	4.0752	72.316	.13552	2.3785	2.3315	2.5002	22.610

#1	.00151	.00014	-.00316	.86587	4.7769	.18807	.00047
#2	.00143	.00004	-.00317	.89549	4.9370	.19484	.00034

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00066	-.00231	.00011	-.00070	.00084	.00156	.00132
SDev	.00039	.00055	.00137	.00073	.00104	.00018	.00023
%RSD	58.583	23.770	1296.9	104.78	124.25	11.256	17.369

#1	.00039	-.00192	-.00086	-.00122	.00157	.00144	.00148
#2	.00094	-.00270	.00108	-.00018	.00010	.00169	.00116

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00094	-.00208	-.00108	.00128	.00347	.09104
SDev	.00198	.00411	.00340	.00257	.00023	.00171
%RSD	209.98	197.05	315.49	200.53	6.5657	1.8809

#1	-.00046	-.00499	-.00348	-.00054	.00363	.08983
#2	.00234	.00082	.00133	.00310	.00331	.09225

## 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	15563	--	--	--	--	--	--	
SDev	44.47729	--	--	--	--	--	--	
%RSD	.2857933	--	--	--	--	--	--	
#1	15531	--	--	--	--	--	--	
#2	15594	--	--	--	--	--	--	

Method: METTRA Sample Name: DDK1JS Operator: RJG  
Run Time: 05/26/00 09:34:52  
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
Avg	.05139	2.2406	2.0810	2.2431	.05409	178.06	.04937
SDev	.00016	.0152	.0051	.0087	.00030	.61	.00011
%RSD	.30366	.67621	.24678	.38886	.55602	.34509	.22521
#1	.05128	2.2513	2.0846	2.2492	.05430	178.50	.04945
#2	.05150	2.2299	2.0774	2.2369	.05387	177.63	.04929
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	.51136	.20478	.25133	5.3177	72.278	1.4632	-.00011
SDev	.00088	.00031	.00034	.0263	.227	.0041	.00034
%RSD	.17176	.15282	.13344	.49454	.31430	.28250	310.12
#1	.51199	.20500	.25157	5.3363	72.439	1.4662	-.00035
#2	.51074	.20456	.25109	5.2991	72.117	1.4603	.00013
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	.51534	.53132	.52937	.53002	-.00016	-.00193	-.00134
SDev	.00074	.00019	.00309	.00199	.00075	.00108	.00097
%RSD	.14293	.03664	.58346	.37646	458.83	56.060	72.471
#1	.51586	.53119	.53156	.53143	.00037	-.00116	-.00065
#2	.51482	.53146	.52719	.52861	-.00070	-.00269	-.00203
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	2.1438	2.1528	2.1498	2.2195	.49818	.96568	
SDev	.0034	.0024	.0004	.0079	.00004	.00270	
%RSD	.16049	.11087	.02076	.35725	.00792	.28014	
#1	2.1414	2.1544	2.1501	2.2251	.49821	.96759	
#2	2.1463	2.1511	2.1495	2.2139	.49815	.96376	
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	15413	--	--	--	--	--	--
SDev	14.95558	--	--	--	--	--	--
%RSD	.0970349	--	--	--	--	--	--
#1	15402	--	--	--	--	--	--
#2	15423	--	--	--	--	--	--

Method: METTRA Sample Name: DDK1JD

Operator: RJG

Run Time: 05/26/00 09:39:01

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	.05931	2.5839	2.4121	2.5503	.06240	178.68	.05679
SDev	.00028	.0128	.0022	.0000	.00001	.20	.00061
%RSD	.47371	.49526	.09288	.00122	.02117	.10939	1.0776
#1	.05911	2.5930	2.4105	2.5503	.06241	178.54	.05636
#2	.05951	2.5749	2.4137	2.5503	.06239	178.82	.05722
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	.59176	.23678	.29261	5.4098	75.411	1.5247	-.00017
SDev	.00056	.00092	.00020	.0058	.033	.0019	.00009
%RSD	.09508	.38757	.06868	.10692	.04392	.12184	53.775
#1	.59216	.23614	.29276	5.4058	75.387	1.5234	-.00023
#2	.59136	.23743	.29247	5.4139	75.434	1.5260	-.00010
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	.59489	.61293	.61176	.61215	.00128	-.00197	-.00088
SDev	.00004	.00352	.00156	.00221	.00003	.00107	.00070
%RSD	.00609	.57397	.25456	.36106	2.2563	54.437	79.651
#1	.59486	.61542	.61286	.61372	.00130	-.00272	-.00138
#2	.59492	.61045	.61066	.61059	.00126	-.00121	-.00039
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	2.5180	2.5195	2.5190	2.5891	.58013	1.0421	
SDev	.0093	.0030	.0051	.0032	.00101	.0003	
%RSD	.37106	.12035	.20381	.12433	.17327	.02975	
#1	2.5114	2.5173	2.5153	2.5914	.58085	1.0418	
#2	2.5246	2.5216	2.5226	2.5869	.57942	1.0423	
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

05/26/00 09:43:06 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	15376	--	--	--	--	--	--
SDev	21.38998	--	--	--	--	--	--
%RSD	.1391089	--	--	--	--	--	--
#1	15392	--	--	--	--	--	--
#2	15361	--	--	--	--	--	--

Method: METTRA Sample Name: DDCJW Operator: RJG  
Run Time: 05/26/00 09:43:10  
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
Avg	.00004	5.9414	.00383	.07354	.00249	76.085	.00181
SDev	.00002	.0115	.00023	.00007	.00010	.169	.00005
%RSD	42.044	.19274	5.9752	.09766	4.0910	.22160	2.6215
#1	.00003	5.9333	.00399	.07360	.00256	75.966	.00178
#2	.00006	5.9495	.00367	.07349	.00242	76.205	.00185
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	.00685	.03729	.04757	12.686	11.644	.22198	.00152
SDev	.00046	.00030	.00025	.034	.007	.00059	.00007
%RSD	6.7665	.80596	.52640	.26508	.05592	.26583	4.7054
#1	.00652	.03708	.04739	12.662	11.639	.22156	.00157
#2	.00718	.03751	.04775	12.710	11.648	.22240	.00147
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	.04105	.07872	.08509	.08296	.00547	.00274	.00365
SDev	.00111	.00002	.00075	.00050	.00029	.00005	.00006
%RSD	2.7046	.02473	.87557	.60674	5.2627	1.7271	1.7637
#1	.04183	.07870	.08456	.08261	.00567	.00270	.00369
#2	.04026	.07873	.08561	.08332	.00527	.00277	.00360
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	.00718	.00039	.00265	.00777	.03494	.56630	
SDev	.00262	.00072	.00039	.00479	.00013	.00135	
%RSD	36.401	183.75	14.856	61.597	.36173	.23858	
#1	.00534	.00089	.00237	.00439	.03485	.56534	
#2	.00903	-.00012	.00293	.01116	.03502	.56726	
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	15427	--	--	--	--	--	--
SDev	56.49742	--	--	--	--	--	--
%RSD	.3662219	--	--	--	--	--	--
#1	15467	--	--	--	--	--	--
#2	15387	--	--	--	--	--	--



Method: METTRA Sample Name: DDCV1

Operator: RJG

Run Time: 05/26/00 09:47:19

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	-.00056	2.5802	.00221	.02912	.00256	29.102	.00072
SDev	.00017	.0098	.00011	.00026	.00016	.078	.00019
%RSD	30.288	.37817	4.9805	.89777	6.2070	.26649	26.505
#1	-.00044	2.5871	.00229	.02894	.00267	29.157	.00086
#2	-.00068	2.5733	.00213	.02931	.00245	29.048	.00059
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	.00336	.01533	.01488	5.1392	4.3395	.09866	.00044
SDev	.00006	.00055	.00003	.0188	.0042	.00006	.00024
%RSD	1.8205	3.5571	.18705	.36565	.09564	.06507	56.096
#1	.00332	.01571	.01490	5.1525	4.3425	.09870	.00026
#2	.00341	.01494	.01486	5.1260	4.3366	.09861	.00061
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	.01339	.03774	.03968	.03903	.00094	-.00104	-.00038
SDev	.00093	.00040	.00224	.00163	.00033	.00119	.00069
%RSD	6.9363	1.0734	5.6356	4.1667	35.277	114.90	179.96
#1	.01404	.03745	.03810	.03788	.00117	-.00188	-.00087
#2	.01273	.03803	.04126	.04018	.00070	-.00020	.00010
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	.00711	-.00233	.00081	.00332	.01459	.20559	
SDev	.00516	.00079	.00224	.00396	.00075	.00066	
%RSD	72.494	33.751	275.80	119.47	5.1245	.32038	
#1	.01076	-.00178	.00240	.00612	.01512	.20606	
#2	.00347	-.00289	-.00077	.00052	.01406	.20512	
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	15408	--	--	--	--	--	--
SDev	71.24101	--	--	--	--	--	--
%RSD	.4623705	--	--	--	--	--	--
#1	15357	--	--	--	--	--	--
#2	15458	--	--	--	--	--	--

Method: METTRA Sample Name: DDCVF Operator: RJG  
Run Time: 05/26/00 09:51:29  
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	-.00021	.49548	.00103	.01420	.00263	15.943	.00040
SDev	.00017	.00127	.00118	.00001	.00002	.010	.00013
%RSD	80.633	.25571	115.10	.06774	.58597	.06425	33.254
#1	-.00009	.49458	.00019	.01420	.00262	15.936	.00031
#2	-.00033	.49637	.00187	.01421	.00264	15.950	.00050
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	.00167	.00185	.00673	.68381	1.7982	.03300	.00048
SDev	.00010	.00006	.00014	.00672	.0017	.00011	.00034
%RSD	5.6733	3.3955	2.0827	.98324	.09391	.32069	71.849
#1	.00174	.00181	.00663	.67905	1.7971	.03293	.00072
#2	.00160	.00190	.00683	.68856	1.7994	.03307	.00023
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	.00410	.01000	.01458	.01305	.00158	-.00080	-.00001
SDev	.00148	.00370	.00039	.00149	.00108	.00034	.00013
%RSD	36.228	36.974	2.6504	11.408	68.221	41.976	1738.6
#1	.00305	.01262	.01485	.01411	.00082	-.00056	-.00010
#2	.00515	.00739	.01431	.01200	.00234	-.00104	.00009
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	.00317	-.00321	-.00108	.00053	.00500	.14660	
SDev	.00001	.00121	.00081	.00069	.00023	.00026	
%RSD	.19170	37.829	74.631	132.06	4.5255	.17816	
#1	.00317	-.00235	-.00051	.00003	.00516	.14641	
#2	.00318	-.00406	-.00165	.00102	.00484	.14678	
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	15523	--	--	--	--	--	--
SDev	11.52570	--	--	--	--	--	--
%RSD	.0742485	--	--	--	--	--	--
#1	15515	--	--	--	--	--	--
#2	15531	--	--	--	--	--	--

Method: METTRA Sample Name: DDCVJ Operator: RJG  
Run Time: 05/26/00 09:55:38  
Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACE ICP  
Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00054	10.511	.02407	.15743	.00451	45.998	.00768
SDev	.00026	.086	.00145	.00114	.00022	.317	.00007
%RSD	48.545	.82213	6.0088	.72708	4.9628	.68968	.90800
#1	-.00073	10.450	.02510	.15662	.00467	45.774	.00763
#2	-.00036	10.572	.02305	.15824	.00435	46.222	.00772
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	.01746	.11869	.05993	99.672	13.612	.88697	.00409
SDev	.00050	.00175	.00112	.761	.088	.00648	.00032
%RSD	2.8533	1.4740	1.8612	.76316	.64749	.73030	7.7745
#1	.01711	.11745	.05914	99.134	13.549	.88239	.00431
#2	.01781	.11992	.06072	100.21	13.674	.89155	.00386
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	.06481	.10022	.10565	.10385	.00629	.00630	.00630
SDev	.00048	.00034	.00014	.00003	.00118	.00108	.00033
%RSD	.73378	.34308	.12744	.02378	18.698	17.166	5.2363
#1	.06515	.10046	.10556	.10386	.00713	.00554	.00607
#2	.06447	.09998	.10575	.10383	.00546	.00707	.00653
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	.00996	-.00300	.00131	.00810	.08863	.82534	
SDev	.00125	.00015	.00052	.00224	.00001	.00533	
%RSD	12.548	5.0378	39.337	27.659	.01131	.64534	
#1	.00907	-.00311	.00095	.00969	.08863	.82157	
#2	.01084	-.00289	.00168	.00652	.08864	.82910	
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	15514	--	--	--	--	--	--
SDev	54.97755	--	--	--	--	--	--
%RSD	.3543664	--	--	--	--	--	--
#1	15553	--	--	--	--	--	--
#2	15475	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-3

Operator: RJG

Run Time: 05/26/00 09:59:48

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	1.0422	23.549	.52519	1.9518	2.1193	52.730	.51413
SDev	.0002	.034	.00039	.0024	.0014	.075	.00002
%RSD	.01515	.14376	.07478	.12073	.06725	.14255	.00464
#1	1.0421	23.573	.52491	1.9534	2.1203	52.784	.51415
#2	1.0423	23.525	.52547	1.9501	2.1183	52.677	.51411
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	2.0905	2.1035	1.9415	25.410	50.450	2.0678	2.1220
SDev	.0017	.0007	.0006	.052	.021	.0018	.0059
%RSD	.08078	.03402	.03302	.20577	.04120	.08638	.27886
#1	2.0916	2.1040	1.9420	25.447	50.465	2.0691	2.1178
#2	2.0893	2.1030	1.9411	25.373	50.436	2.0665	2.1262
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	2.1064	.52778	.53354	.53162	.53136	.52345	.52608
SDev	.0007	.00401	.00179	.00253	.00195	.00083	.00010
%RSD	.03337	.75956	.33627	.47620	.36655	.15788	.01851
#1	2.1059	.52495	.53227	.52983	.52999	.52403	.52602
#2	2.1069	.53062	.53481	.53341	.53274	.52286	.52615
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	.53140	.53767	.53558	1.0855	2.0600	2.1255	
SDev	.00097	.00204	.00169	.0056	.0017	.0019	
%RSD	.18255	.37996	.31474	.51811	.08194	.08885	
#1	.53209	.53911	.53677	1.0815	2.0612	2.1268	
#2	.53072	.53622	.53439	1.0894	2.0588	2.1242	
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	15203	--	--	--	--	--	--
SDev	19.16301	--	--	--	--	--	--
%RSD	.1260509	--	--	--	--	--	--
#1	15189	--	--	--	--	--	--
#2	15216	--	--	--	--	--	--



Method: METTRA Sample Name: CCB3

Operator: RJG

Run Time: 05/26/00 10:03:58

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	.14803	.00017	.00018	.00370	.00615	-.00004
SDev	.00026	.00328	.00095	.00012	.00015	.00082	.00012
%RSD	565.88	2.2136	540.93	66.526	4.0729	13.381	278.70
#1	.00023	.15035	.00084	.00027	.00380	.00673	-.00012
#2	-.00014	.14571	-.00049	.00010	.00359	.00557	.00004
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	.00140	.00039	-.00527	.00428	.00928	.00064	.00502
SDev	.00026	.00015	.00060	.00968	.00407	.00002	.00118
%RSD	18.682	38.458	11.440	225.97	43.920	3.6710	23.577
#1	.00159	.00028	-.00570	-.00256	.01216	.00062	.00586
#2	.00122	.00049	-.00485	.01112	.00640	.00066	.00418
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	.00090	-.00034	.00114	.00065	-.00048	.00104	.00053
SDev	.00119	.00349	.00160	.00009	.00137	.00269	.00134
%RSD	132.66	1040.6	141.22	14.187	288.32	259.37	250.77
#1	.00006	.00213	.00000	.00071	-.00145	.00295	.00148
#2	.00174	-.00280	.00227	.00058	.00050	-.00087	-.00041
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	.00179	-.00102	-.00009	-.00126	.00017	.00350	
SDev	.00221	.00095	.00137	.00350	.00001	.00003	
%RSD	123.41	93.079	1604.4	279.05	3.7038	.85903	
#1	.00336	-.00035	.00088	.00122	.00017	.00352	
#2	.00023	-.00170	-.00106	-.00373	.00018	.00348	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

## Analysis Report

05/26/00 10:08:03 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	15315	--	--	--	--	--	--
SDev	47.44659	--	--	--	--	--	--
%RSD	.3098118	--	--	--	--	--	--
#1	15348	--	--	--	--	--	--
#2	15281	--	--	--	--	--	--

Method: METTRA Sample Name: DDCVK

Operator: RJG

Run Time: 05/26/00 10:08:07

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	.00046	4.4580	.00568	.07423	.00459	48.417	.00362
SDev	.00006	.0033	.00131	.00019	.00020	.042	.00006
%RSD	13.104	.07501	23.125	.25162	4.2934	.08723	1.7426
#1	-.00042	4.4556	.00476	.07410	.00473	48.447	.00358
#2	-.00050	4.4603	.00661	.07437	.00445	48.387	.00367
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	.00883	.04317	.02689	23.619	13.902	.29506	.00258
SDev	.00005	.00035	.00030	.035	.008	.00036	.00010
%RSD	.52753	.80595	1.1349	.14954	.05537	.12150	3.7481
#1	.00880	.04292	.02667	23.594	13.896	.29480	.00252
#2	.00887	.04342	.02710	23.644	13.907	.29531	.00265
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	.03274	.07327	.07815	.07653	.00307	.00150	.00202
SDev	.00008	.00134	.00046	.00014	.00048	.00116	.00061
%RSD	.24019	1.8308	.58650	.18417	15.741	77.194	30.189
#1	.03269	.07422	.07783	.07663	.00342	.00068	.00159
#2	.03280	.07232	.07848	.07643	.00273	.00232	.00246
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	.00736	-.00430	-.00042	.00546	.03795	.44009	
SDev	.00188	.00062	.00104	.00177	.00009	.00048	
%RSD	25.531	14.322	249.17	32.390	.22647	.10861	
#1	.00869	-.00386	.00032	.00421	.03788	.44043	
#2	.00603	-.00473	-.00115	.00671	.03801	.43976	
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	OTHER
Elem	Y	--	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--	--
Avge	15512	--	--	--	--	--	--	--
SDev	37.44144	--	--	--	--	--	--	--
%RSD	.2413712	--	--	--	--	--	--	--
#1	15538	--	--	--	--	--	--	--
#2	15486	--	--	--	--	--	--	--

Method: METTRA Sample Name: DDCVM

Operator: RJG

Run Time: 05/26/00 10:12:16

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	.00019	.77954	.00232	.02188	.00350	18.425	.00044
SDev	.00077	.00719	.00002	.00009	.00028	.018	.00021
%RSD	413.10	.92210	.75673	.39027	8.1043	.09520	48.272
#1	-.00073	.78462	.00233	.02182	.00370	18.412	.00029
#2	.00036	.77445	.00230	.02194	.00330	18.437	.00060
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	.00295	.00783	.00274	4.7916	3.2850	.07941	.00139
SDev	.00006	.00013	.00037	.0123	.0143	.00019	.00059
%RSD	2.1767	1.6263	13.317	.25611	.43516	.24185	42.498
#1	.00291	.00774	.00249	4.7829	3.2749	.07927	.00181
#2	.00300	.00792	.00300	4.8002	3.2951	.07954	.00097
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	.00989	.00329	.00906	.00713	.00152	-.00080	-.00003
SDev	.00025	.00032	.00205	.00126	.00051	.00112	.00092
%RSD	2.5497	9.5778	22.629	17.686	33.762	138.97	2950.5
#1	.00971	.00307	.01050	.00803	.00188	-.00001	.00062
#2	.01007	.00351	.00761	.00624	.00116	-.00160	-.00068
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	.00793	-.00659	-.00176	.00245	.01060	.08150	
SDev	.00262	.00418	.00366	.00044	.00020	.00026	
%RSD	33.041	63.380	208.44	17.948	1.9307	.32042	
#1	.00979	-.00364	.00083	.00276	.01074	.08132	
#2	.00608	-.00955	-.00434	.00214	.01045	.08168	
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	15466	--	--	--	--	--	--
SDev	26.16295	--	--	--	--	--	--
%RSD	.1691681	--	--	--	--	--	--
#1	15484	--	--	--	--	--	--
#2	15447	--	--	--	--	--	--

658 825

Method: METTRA Sample Name: DDCVW  
Run Time: 05/26/00 10:16:26  
Comment: STL-PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP  
Mode: CONC Corr. Factor: 1

Operator: RJG

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.27927	.00027	.05695	.00289	74.736	-.00001
SDev	.00007	.00333	.00109	.00034	.00023	.180	.00007
%RSD	71.134	1.1936	407.23	.59729	8.0146	.24095	836.52
#1	-.00015	.28163	-.00050	.05671	.00305	74.609	-.00006
#2	-.00005	.27691	.00104	.05719	.00272	74.864	.00004
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	.00169	.00147	.03807	1.3416	41.994	.00875	.12938
SDev	.00022	.00002	.00048	.0044	.162	.00011	.00103
%RSD	13.103	1.5963	1.2635	.32453	.38573	1.2246	.79858
#1	.00154	.00149	.03773	1.3385	41.879	.00867	.12865
#2	.00185	.00146	.03841	1.3446	42.108	.00882	.13011
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	.00491	-.00035	.00349	.00221	.00152	-.00113	-.00025
SDev	.00018	.00003	.00073	.00047	.00217	.00064	.00029
%RSD	3.7582	9.6761	20.866	21.448	142.35	56.545	118.25
#1	.00478	-.00032	.00297	.00188	-.00001	-.00068	-.00046
#2	.00504	-.00037	.00400	.00255	.00305	-.00159	-.00004
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	.00694	-.00293	.00036	.00701	.00227	.08883	
SDev	.00158	.00304	.00256	.00167	.00047	.00049	
%RSD	22.775	104.07	713.28	23.748	20.877	.55219	
#1	.00805	-.00077	.00217	.00819	.00193	.08849	
#2	.00582	-.00508	-.00145	.00583	.00260	.08918	
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	15212	--	--	--	--	--	--
SDev	79.26708	--	--	--	--	--	--
%RSD	.5210894	--	--	--	--	--	--
#1	15268	--	--	--	--	--	--
#2	15156	--	--	--	--	--	--



Method: METTRA Sample Name: DDK9N  
Run Time: 05/26/00 10:20:35  
Comment: STL PITTSBURGH ICP METALS ANALYSIS  
Mode: CONC Corr. Factor: 1

Operator: RJG

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.00032	1.8752	.00429	.08450	.00341	29.206	.00122
SDev	.00002	.0069	.00181	.00023	.00034	.052	.00003
%RSD	5.3625	.36755	42.152	.26949	10.092	.17645	2.3841
#1	-0.00033	1.8703	.00301	.08434	.00365	29.242	.00124
#2	-0.00031	1.8801	.00557	.08466	.00317	29.169	.00120
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	.00307	.01656	.08859	6.5140	10.148	.13700	.03074
SDev	.00016	.00031	.00066	.0018	.015	.00040	.00028
%RSD	5.2282	1.8715	.74226	.02826	.14773	.29113	.92668
#1	.00319	.01678	.08813	6.5153	10.138	.13671	.03094
#2	.00296	.01634	.08906	6.5127	10.159	.13728	.03054
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	.01220	.00271	.01293	.00953	.00524	-.00258	.00002
SDev	.00009	.00019	.00137	.00097	.00014	.00167	.00116
%RSD	.70984	6.8928	10.590	10.239	2.5968	64.817	4982.6
#1	.01214	.00284	.01390	.01022	.00515	-.00377	-.00080
#2	.01226	.00258	.01196	.00884	.00534	-.00140	.00084
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	.01393	-.00024	.00448	.00334	.00148	3.3533	
SDev	.00130	.00126	.00127	.00196	.00000	.0020	
%RSD	9.3097	516.22	28.375	58.836	.04343	.05941	
#1	.01301	-.00113	.00358	.00472	.00148	3.3548	
#2	.01485	.00065	.00537	.00195	.00148	3.3519	
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	15144	--	--	--	--	--	--
SDev	109.1416	--	--	--	--	--	--
%RSD	.7206793	--	--	--	--	--	--
#1	15221	--	--	--	--	--	--
#2	15067	--	--	--	--	--	--

Method: METTRA Sample Name: DDK9T

Operator: RJG

Run Time: 05/26/00 10:24:44

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
Avg	.00006	.13065	.00030	.31101	.00399	H1668.3	.00036
SDev	.00005	.02390	.00111	.00436	.00020	11.9	.00012
%RSD	78.582	18.296	367.08	1.4031	5.1030	.71035	34.683
#1	.00003	.14756	.00109	.31409	.00385	H1676.7	.00027
#2	.00010	.11375	-.00048	.30792	.00414	H1659.9	.00044
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	.00354	.00210	-.00101	.00937	4.4303	5.9244	.01129
SDev	.00010	.00027	.00020	.00756	.0630	.0634	.00071
%RSD	2.9449	12.737	19.415	80.664	1.4209	1.0699	6.2925
#1	.00361	.00229	-.00088	.00403	4.4749	5.9692	.01179
#2	.00347	.00191	-.00115	.01471	4.3858	5.8795	.01079
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	.00422	-.00785	-.00012	-.00270	.00148	-.00249	-.00117
SDev	.00005	.00041	.00059	.00025	.00148	.00111	.00025
%RSD	1.2271	5.2242	470.09	9.4519	99.714	44.528	21.244
#1	.00418	-.00756	-.00054	-.00288	.00044	-.00171	-.00099
#2	.00426	-.00814	.00029	-.00252	.00252	-.00328	-.00134
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	.01385	.00037	.00486	.01633	-.00063	.01075	
SDev	.00082	.00005	.00024	.00559	.00023	.00001	
%RSD	5.9511	12.207	5.0233	34.213	36.674	.06997	
#1	.01327	.00040	.00469	.01238	-.00046	.01076	
#2	.01444	.00034	.00503	.02029	-.00079	.01074	
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

05/26/00 10:28:50 AM

658 831  
page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15056	--	--	--	--	--	--
SDev	107.1971	--	--	--	--	--	--
%RSD	.7120129	--	--	--	--	--	--
#1	14980	--	--	--	--	--	--
#2	15131	--	--	--	--	--	--

Method: METTRA Sample Name: CCV3-4

Operator: RJG

Run Time: 05/26/00 10:28:53

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	23.619	.51992	1.9509	2.0912	52.179	.50648
SDev	.0018	.007	.00021	.0016	.0017	.106	.00138
%RSD	.17102	.03026	.04044	.08163	.08001	.20368	.27354
#1	1.0508	23.624	.51977	1.9498	2.0924	52.254	.50746
#2	1.0483	23.614	.52006	1.9520	2.0901	52.104	.50550
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	2.0748	2.0847	1.9487	25.111	50.451	2.0477	2.1132
SDev	.0048	.0047	.0017	.052	.043	.0030	.0098
%RSD	.23201	.22326	.08580	.20685	.08562	.14677	.46182
#1	2.0782	2.0880	1.9475	25.148	50.482	2.0498	2.1063
#2	2.0714	2.0814	1.9498	25.075	50.421	2.0455	2.1201
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	2.0569	.52312	.52714	.52580	.52987	.52261	.52502
SDev	.0013	.00277	.00151	.00193	.00139	.00360	.00287
%RSD	.06463	.52934	.28616	.36673	.26337	.68957	.54633
#1	2.0578	.52508	.52821	.52717	.53085	.52515	.52705
#2	2.0559	.52116	.52608	.52444	.52888	.52006	.52300
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	.53029	.53221	.53157	1.0378	2.0321	2.1178	
SDev	.00376	.00458	.00431	.0188	.0017	.0015	
%RSD	.70988	.86069	.81059	1.8071	.08481	.06875	
#1	.53295	.53545	.53462	1.0245	2.0333	2.1189	
#2	.52763	.52897	.52852	1.0511	2.0309	2.1168	
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	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14981	--	--	--	--	--	--
SDev	12.62227	--	--	--	--	--	--
%RSD	.0842567	--	--	--	--	--	--
#1	14972	--	--	--	--	--	--
#2	14990	--	--	--	--	--	--

Method: METTRA Sample Name: CCB4

Operator: RJG

Run Time: 05/26/00 10:33:03

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	.16538	-.00032	.00036	.00362	.11835	.00003
SDev	.00055	.01110	.00041	.00015	.00021	.03581	.00007
%RSD	171.31	6.7093	128.31	41.286	5.7572	30.261	268.99
#1	-.00071	.17322	-.00003	.00026	.00377	.14367	.00008
#2	.00007	.15753	-.00061	.00047	.00348	.09302	-.00002
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	.00144	.00032	-.00465	.02438	.01500	.00124	.00497
SDev	.00004	.00071	.00075	.01185	.00036	.00000	.00069
%RSD	2.4796	218.25	16.025	48.612	2.4216	.33027	13.960
#1	.00146	-.00018	-.00518	.01600	.01474	.00124	.00546
#2	.00141	.00083	-.00412	.03276	.01525	.00125	.00448
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	.00005	-.00059	-.00022	-.00034	.00149	.00238	.00208
SDev	.00081	.00153	.00115	.00127	.00137	.00097	.00110
%RSD	1580.4	259.46	520.46	371.02	91.931	40.702	52.906
#1	.00063	.00049	.00059	.00056	.00246	.00306	.00286
#2	-.00052	-.00167	-.00103	-.00124	.00052	.00169	.00130
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	-.00308	-.00190	-.00229	.00878	.00054	.00401	
SDev	.00160	.00057	.00091	.00094	.00047	.00020	
%RSD	52.100	29.984	39.888	10.719	88.512	5.1041	
#1	-.00195	-.00149	-.00164	.00945	.00020	.00387	
#2	-.00421	-.00230	-.00294	.00812	.00087	.00416	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
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	14918	--	--	--	--	--	--
SDev	29.66327	--	--	--	--	--	--
%RSD	.1988371	--	--	--	--	--	--
#1	14939	--	--	--	--	--	--
#2	14897	--	--	--	--	--	--



# Metals Preparation Log



STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380

Method: 3010A		Matrix: Water		Start Time: 0900		SDG:		Balance#		Reagents: 3010A, HNO <sub>3</sub> , SALICID, 6014-010-1																																																																																																																																																																																																																																																																																																							
Analyst: O. Gandy		Date: 5-24-00		Lot Number: 6014-010-1		Lab Lot No. (book, page, line): 6014-010-1		MS-1A		MS-1A																																																																																																																																																																																																																																																																																																							
Revised By:		Date:		MS-1A		MS-1A		MS-1A		MS-1A																																																																																																																																																																																																																																																																																																							
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REQUESTED BY: FAUSTG

METHOD: QM Inductively Coupled Plasma (6010B Trace)

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
4A	DDGT8		236290	054156	A-46-QM	COE200139	001		SOLID	0	1
4A	DDGTN		236291	054156	A-46-QM	COE200139	002		SOLID	0	1
4A	DDGTQ		236292	054156	A-46-QM	COE200139	003		SOLID	0	1
4A	DDGTW		236293	054156	A-46-QM	COE200139	004		SOLID	0	1
4F	DDK90		236294	399411	I-05-QM	COE230195	001		WATER	0	9

RELINQUISHED BY

RECEIVED BY

DATE/TIME

Geoffrey O. Braust  
Geoffrey O. Braust

Geoffrey O. Braust  
Geoffrey O. Braust

5-24-00 0715  
5-24-00 0910

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

## STL-Pittsburgh Atomic Absorption Data for Mercury

Instrument: PS200HG

Analyst Name: William a HoyleDate of Analysis: 5.25-00File ID: 0525HGAMatrix: WATER

Lot Number/SDG

Method

COE1102617470ACOE120206COE230195

09:37:08 25 May 2000

Folder: 0525HGA  
Protocol: HGMET

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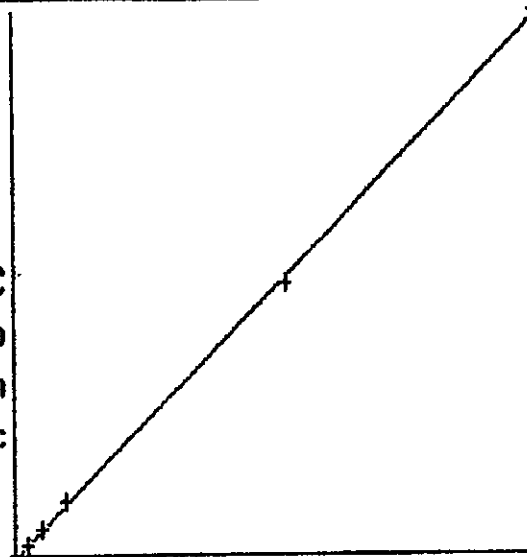
Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0	09:37:08 25 May 2000	HG		
Hg	.000	ppb	4153					
*** Standard: 2 Rep: 1				Seq: 1	09:39:12 25 May 2000	HG		
Hg	.200	ppb	58640		0014-109-7			
*** Standard: 3 Rep: 1				Seq: 2	09:41:06 25 May 2000	HG		
Hg	.500	ppb	121351		0014-109-8			
*** Standard: 4 Rep: 1				Seq: 3	09:43:05 25 May 2000	HG		
Hg	1.00	ppb	231797		0014-109-9			
*** Standard: 5 Rep: 1				Seq: 4	09:45:00 25 May 2000	HG		
Hg	5.00	ppb	1204779		0014-109-10			
*** Standard: 6 Rep: 1				Seq: 5	09:47:04 25 May 2000	HG		
Hg	10.0	ppb	2309635		0014-109-11			

658 8.10

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS  
 RunFold: 8525HGA Seq: 6 Batch: ---  
 Prot: R/T On Pump: On  
 Rev: 4.2 09:47:24 25 May 2000 Xmit: Off Gas: 0.30 LPM  
 State: Idle User: WAH A/S: On

CALIBRATION: Line proto: HGMET

	Hg	Accepted
	Conc.	Calc. Dev. ->linear
S1	.000	-.026
S2	.200	.209
S3	.500	.400
S4	1.00	.957
S5	5.00	5.16
S6	10.0	9.92
A	.0000000	r .999793
B	4.31569e-6	C -4.36961e-2



	Mean	SD
S1	4153	4153
S2	50640	50640
S3	121351	121351
S4	231797	231797
S5	1204779	1204779
S6	2309635	2309635

New cal coefficients stored

09:49:45 25 May 2000

Folder: 0525HGA

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Protocol: HGMET

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV5-1								
Hg	2.56	ppb	603299					
					0014-109-12			
*** Sample ID: ICB1								
Hg	.024	ppb	15603					
*** Sample ID: CCV5-1								
Hg	5.13	ppb	1198304					
					0014-109-13			
*** Sample ID: CCB1								
Hg	-.033	ppb	2553					
*** Sample ID: DDLPFB								
Hg	-.019	ppb	5735					
*** Sample ID: DDLPFC								
Hg	2.59	ppb	610562					
					0014-109-14			
*** Sample ID: DD3QM								
Hg	.025	ppb	15950					
*** Sample ID: DD3QN								
Hg	.239	ppb	65423					
*** Sample ID: DD3QQ								
Hg	-.001	ppb	9942					
*** Sample ID: DD3QR								
Hg	.075	ppb	27438					
*** Sample ID: DD3QT								
Hg	.136	ppb	41641					
*** Sample ID: DD3QV								
Hg	-.012	ppb	7271					

10:13:21 25 May 2000

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DD3QX				Seq: 18	10:13:21 25 May 2000 HG			
Hg	.185	ppb	53038					
*** Sample ID: DD3QXS				Seq: 19	10:15:29 25 May 2000 HG			
Hg	1.16	ppb	278007					
*** Sample ID: CCV5-2				Seq: 20	10:17:17 25 May 2000 HG			
Hg	5.09	ppb	1189941					
*** Sample ID: CCB2				Seq: 21	10:20:26 25 May 2000 HG			
Hg	.006	ppb	11506					
*** Sample ID: DD3QXD				Seq: 22	10:22:14 25 May 2000 HG			
Hg	1.08	ppb	261451					
*** Sample ID: DD3R0				Seq: 23	10:24:14 25 May 2000 HG			
Hg	.223	ppb	61881					
*** Sample ID: DD4WA				Seq: 24	10:26:06 25 May 2000 HG			
Hg	-.014	ppb	6956					
*** Sample ID: DD4WG				Seq: 25	10:28:00 25 May 2000 HG			
Hg	-.066	ppb	-5260					
*** Sample ID: DD4WH				Seq: 26	10:29:49 25 May 2000 HG			
Hg	.102	ppb	33680					
*** Sample ID: DD4WJ				Seq: 27	10:31:39 25 May 2000 HG			
Hg	.190	ppb	54248					
*** Sample ID: DD4WK				Seq: 28	10:33:43 25 May 2000 HG			
Hg	.020	ppb	14685					
*** Sample ID: DD4WL				Seq: 29	10:36:22 25 May 2000 HG			
Hg	.044	ppb	20285					

SP-REC.  
98%SP-REC.  
98%

Folder: 0525HGA

Protocol: HGMET

10:38:54 25 May 2000

Line	Conc.	Units	SD/RSD	1	2	3	4	5	7R
*** Sample ID: DD4WM				Seq: 30	10:38:54 25 May 2000	HG			
Hg	.035	ppb	18275						
*** Sample ID: DD50E				Seq: 31	10:40:46 25 May 2000	HG			
Hg	-.042	ppb	300						
*** Sample ID: CCV5-3				Seq: 32	10:42:39 25 May 2000	HG			
Hg	5.02	ppb	1173677						
*** Sample ID: CCB3				Seq: 33	10:44:39 25 May 2000	HG			
Hg	-.007	ppb	8552						
*** Sample ID: DD50N				Seq: 34	10:46:54 25 May 2000	HG			
Hg	.007	ppb	11741						
*** Sample ID: DDLQ8B				Seq: 35	10:48:43 25 May 2000	HG			
Hg	-.008	ppb	8221						
*** Sample ID: DDLQ8C				Seq: 36	10:51:04 25 May 2000	HG			
Hg	2.44	ppb	576450		0014-109-15				
*** Sample ID: DD3QMF				Seq: 37	10:53:07 25 May 2000	HG			
Hg	.082	ppb	29011						
*** Sample ID: DD3QNF				Seq: 38	10:55:01 25 May 2000	HG			
Hg	.084	ppb	29672						
*** Sample ID: DD3QQF				Seq: 39	10:57:16 25 May 2000	HG			
Hg	.009	ppb	12186						
*** Sample ID: DD3QRF				Seq: 40	10:59:37 25 May 2000	HG			
Hg	.014	ppb	13470						
*** Sample ID: DD3QTF				Seq: 41	11:01:30 25 May 2000	HG			
Hg	.025	ppb	15994						



11:03:30 25 May 2000

Line	Conc.	Units	SD/RSD	1	2	3	4	5	6
*** Sample ID: DD3QVF				Seq: 42	11:03:30 25 May 2000	HG			
Hg	.015	ppb	13594						
*** Sample ID: DD3QXF				Seq: 43	11:05:21 25 May 2000	HG			
Hg	-.028	ppb	3679						
*** Sample ID: CCV5-4				Seq: 44	11:07:47 25 May 2000	HG			
Hg	5.12	ppb	1197108						
*** Sample ID: CCB4				Seq: 45	11:09:39 25 May 2000	HG			
Hg	.018	ppb	14256						
*** Sample ID: DD3QXSF				Seq: 46	11:11:33 25 May 2000	HG			
Hg	.878	ppb	213633						SP. REC. 88%
*** Sample ID: DD3QXDF				Seq: 47	11:13:27 25 May 2000	HG			
Hg	.869	ppb	211374						SP. REC. 87%
*** Sample ID: DD3ROF				Seq: 48	11:15:31 25 May 2000	HG			
Hg	.032	ppb	17483						
*** Sample ID: DD4WAF				Seq: 49	11:17:26 25 May 2000	HG			
Hg	.035	ppb	18310						
*** Sample ID: DD4WGF				Seq: 50	11:19:28 25 May 2000	HG			
Hg	-.004	ppb	9266						
*** Sample ID: DD4WHF				Seq: 51	11:21:34 25 May 2000	HG			
Hg	.025	ppb	15836						
*** Sample ID: DD4WJF				Seq: 52	11:23:28 25 May 2000	HG			
Hg	.021	ppb	14983						
*** Sample ID: DD4WKF				Seq: 53	11:25:40 25 May 2000	HG			
Hg	.019	ppb	14494						

11:28:23 25 May 2000

Folder: 0525HGA  
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	Seq
*** Sample ID: DD4WLF								Seq: 54
Hg	.100	ppb	33254					11:28:23 25 May 2000 HG
*** Sample ID: DD4WMF								Seq: 55
Hg	-.034	ppb	2246					11:30:45 25 May 2000 HG
*** Sample ID: CCV5-5								Seq: 56
Hg	5.18	ppb	1210016					11:33:28 25 May 2000 HG
*** Sample ID: CCB5								Seq: 57
Hg	-.029	ppb	3457					11:36:04 25 May 2000 HG
*** Sample ID: DD50EF								Seq: 58
Hg	.103	ppb	34035					11:38:11 25 May 2000 HG
*** Sample ID: DD50NF								Seq: 59
Hg	-.025	ppb	4403					11:40:25 25 May 2000 HG
*** Sample ID: DDLR3B								Seq: 60
Hg	.028	ppb	16598					11:42:20 25 May 2000 HG
*** Sample ID: DDLR3C								Seq: 61
Hg	2.60	ppb	612220					11:44:37 25 May 2000 HG
*** Sample ID: DDK90								Seq: 62
Hg	.020	ppb	14772					11:46:35 25 May 2000 HG
*** Sample ID: DDK90S								Seq: 63
Hg	1.20	ppb	288740					11:48:29 25 May 2000 HG
*** Sample ID: DDK90D								Seq: 64
Hg	1.12	ppb	270658					11:50:23 25 May 2000 HG
*** Sample ID: CCV5-6								Seq: 65
Hg	5.14	ppb	1200142					11:52:20 25 May 2000 HG

SP. REC.  
120%SP. REC.  
112%

658 846

11:54:14 25 May 2000

Folder: 0525HGA  
Protocol: HGMET ..

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
------	-------	-------	--------	---	---	---	---	---

\*\*\* Sample ID: CCB6

Seq: 66 ... 11:54:14 25 May 2000 HG

Hg .065 ppb 25201

END OF ANALYSIS

WAH

5-25-00

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS  
 RunFold: 0525HGA Seq: 0 Batch:  
 Prnt: R/T On Pump: Off  
 Rev: 4.2 08:39:48 25 May 2000 Xmit: Off Gas:  
 User: WAH A/S: On  
 State: Idle LPM

AUTOSAMPLER: Rack Edit rack: RACK1  
 cup ID Extended id Weight Volume Macro check macros  
 1 ICV5-1 1.0000 1.0000  
 2 ICB1 1.0000 1.0000  
 3 CCV5-1 1.0000 1.0000  
 4 CCB1 1.0000 1.0000  
 5 DDL PFB 1.0000 1.0000  
 6 DDL PFC 1.0000 1.0000  
 7 DD3QM 1.0000 1.0000  
 8 DD3QN 1.0000 1.0000  
 9 DD3QQ 1.0000 1.0000  
 10 DD3QR 1.0000 1.0000  
 11 DD3QT 1.0000 1.0000  
 12 DD3QV 1.0000 1.0000  
 13 DD3QX 1.0000 1.0000  
 14 DD3QXS 1.0000 1.0000  
 15 CCV5-2 1.0000 1.0000

PgDn

Cup 1 ID: ICV5-1

Cell down mode Ins to switch

RunProt: HGMET      STL-PITTSBURGH-METALS ANALYSIS  
RunFold: 0525HGA    Seq: 0    Batch:  
                      Prnt: R/T On            Pump: Off  
                      Rev: 4.2    08:41:13 25 May 2000    Xmit: Off Gas: LPM  
                                                          User: WAH            A/S: On  
State: Idle

AUTOSAMPLER: Rack Edit    rack: RACK1    PgUp  
cup ID            Extended id            Weight Volume Macro            checkK macros  
16 CCB2                            1.0000 1.0000  
17 DD3QXD                          1.0000 1.0000  
18 DD3R0                          1.0000 1.0000  
19 DD4WA                          1.0000 1.0000  
20 DD4WG                          1.0000 1.0000  
21 DD4WH                          1.0000 1.0000  
22 DD4WJ                          1.0000 1.0000  
23 DD4WK                          1.0000 1.0000  
24 DD4WL                          1.0000 1.0000  
25 DD4WM                          1.0000 1.0000  
26 DD50E                          1.0000 1.0000  
27 CCV5-3                        1.0000 1.0000  
28 CCB3                            1.0000 1.0000  
29 DD50N                          1.0000 1.0000  
30 DDLQ8B                        1.0000 1.0000

PgDn

Cup 16 ID: CCB2

Cell down mode Ins to switch

RunProt: HGMET		STL-PITTSBURGH METALS ANALYSIS	
RunFold: 0525HGA	Seq: 0	Batch:	
	Prnt: R/T On		Pump: Off
	Rev: 4.2	08:41:16 25 May 2000	Xmit: Off Gas: LPM
State: Idle		User: WAH	A/S: On

AUTOSAMPLER: Rack Edit rack: RACK1				PgUp
cup ID	Extended id	Weight	Volume	Macro check macros
31	DDLQBC	1.0000	1.0000	
32	DD3QMF	1.0000	1.0000	
33	DD3QNF	1.0000	1.0000	
34	DD3QQF	1.0000	1.0000	
35	DD3QRF	1.0000	1.0000	
36	DD3QTF	1.0000	1.0000	
37	DD3QVF	1.0000	1.0000	
38	DD3QXF	1.0000	1.0000	
39	CCV5-4	1.0000	1.0000	
40	CCB4	1.0000	1.0000	
41	DD3QXSF	1.0000	1.0000	
42	DD3QXDF	1.0000	1.0000	
43	DD3ROF	1.0000	1.0000	
44	DD4WAF	1.0000	1.0000	

PgDn

Cup 31 ID: DDLQBC	Cell down mode Ins to switch
-------------------	------------------------------

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 0525HGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
	Rev: 4.2	08:45:55 25 May 2000	Xmit: Off Gas: LPM
State: Idle		User: WAH	A/S: On

AUTOSAMPLER: Rack Edit rack: RACK2		Weight	Volume	Macro	check macros
cup ID	Extended id				
1	DD4WGF	1.0000	1.0000		
2	DD4WHF	1.0000	1.0000		
3	DD4WJF	1.0000	1.0000		
4	DD4WKF	1.0000	1.0000		
5	DD4WLF	1.0000	1.0000		
6	DD4WMF	1.0000	1.0000		
7	CCV5-5	1.0000	1.0000		
8	CCB5	1.0000	1.0000		
9	DD50EF	1.0000	1.0000		
10	DD50NF	1.0000	1.0000		
11	DDL3B	1.0000	1.0000		
12	DDL3C	1.0000	1.0000		
13	DDK90	1.0000	1.0000		
14	DDK90S	1.0000	1.0000		
15	DDK90D	1.0000	1.0000		

PgDn

Cup 1 ID: DD4WGF

Cell down mode Ins to switch

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS.

RunFold: 0525HGA Seq: 0 Batch:

Prnt: R/T On

Pump: Off

Rev: 4.2 08:45:57 25 May 2000 Xmit: Off Gas:

LPM

State: Idle

User: WAH

A/S: On

AUTOSAMPLER: Rack Edit rack: RACK2

PgUp

cup ID	Extended id	Weight	Volume	Macro	check macros
16	CCV5-6	1.0000	1.0000		
17	CCB6	1.0000	1.0000		
18		1.0000	1.0000		
19		1.0000	1.0000		
20		1.0000	1.0000		
21		1.0000	1.0000		
22		1.0000	1.0000		
23		1.0000	1.0000		
24		1.0000	1.0000		
25		1.0000	1.0000		
26		1.0000	1.0000		
27		1.0000	1.0000		
28		1.0000	1.0000		
29		1.0000	1.0000		
30		1.0000	1.0000		

PgDn

Cup 16 ID: CCV5-6

Cell down mode Ins to switch



# Hg Digestion Log

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



6336

QUA-4169

Serial Number 072 Log Book Number 96-MI-576 Start Time 08:05:30

Sample ID	Date Rec'd	Prep Date	Prepared By	Wt/Vol	Sample Type	Run Date	Comments
1. STD0	N/A	6-25-00	WAH	100ml	WATER	6-25-00	N/A
2. STD1							0014-108-7
3. STD2							0014-108-8
4. STD3							0014-108-9
5. STD4							0014-108-10
6. STD5							0014-108-11
7. STD6							0014-108-12
8. ICB							N/A
9. CCV							0014-108-13
10. CCB							N/A
11. DDLPF8							0014-108-14
12. DDLPC							N/A
13. DD3QM	5-11-00						N/A
14. DD3QM							N/A
15. DD3QR							N/A
16. DD3QR							N/A
17. DD3QT							N/A
18. DD3QV							N/A
19. DD3QX							N/A
20. DD3QYS							N/A
21. DD3QXD							N/A
22. DD3RO							N/A
23. DD4WA	5-12-00						N/A
24. DD4WS							N/A
25. DD4WH							N/A
Reagents							
HNO3	2.5ml						
H2SO4	5.0ml						
KMNO4	15.0ml						
K2S2O4	8.0ml						
Extract(s)							
(Record line number from above)							
Date	Time	Analyst	Location	Date	Time	Analyst	Location
		WAH	5-25-00				

658 852

STL Pittsburgh

658 853

## Hg Digestion Log

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



6337

04/21/89

Sample ID	Date Rec'd	Prep Date	Prepared By	Wt/Vol	Sample Type	Run Date	Comments
1 DDYWC	5-12-00	5-25-00	WAH	100ml	WATER	5-25-00	N/A
2 DDYWK							
3 DDYWL							
4 DDYWM							
5 DDYOE							
6 DDYOD							
7 DDYQSB	N/A						
8 DDYQSC							
9 DDYQMF	5-11-00						0014-108-15 N/A
10 DDYQMF							
11 DDYQMF							
12 DDYQMF							
13 DDYQMF							
14 DDYQMF							
15 DDYQMF							
16 DDYQMF							
17 DDYQMF							
18 DDYQMF							
19 DDYQMF	5-12-00						
20 DDYQMF							
21 DDYQMF							
22 DDYQMF							
23 DDYQMF							
24 DDYQMF							
25 DDYQMF							
Reagents		Vol (mL)			Ref. Number		Method
HNO <sub>3</sub>	3.5ml				MAILBACKROBT 6623 N35058		7470A AUTOCLAVE 15PSI 120°C
H <sub>2</sub> SO <sub>4</sub>	5.0ml				MAILBACKROBT 5557 N37802		SOLIA = 0014-094-10
KMNO <sub>4</sub>	15.0ml				0014-098-8		MACT-AUSON = 0014-097-7
K <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	8.0ml				0014-090-11		WAH 5-25-00
Extract(s)			Extract(s) Received				Extract(s) Relinquished
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst
			WAH 5-25-00				

STL Pittsburgh

# Hg Digestion Log

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



QUA-4169

Serial Number 074 Log Book Number 96-MT-576 Start Time 08:05-08:30

Sample ID	Date Rec'd	Prep Date	Prepared By	Wt/Vol	Sample Type	Run Date	Comments
1. DD506F	5-12-00	5-25-00	WJAH	100ml	WATER	5-25-00	N/A
2. DD504F							
3. DDLR3B	N/A						
4. DDLR3C							0014-109-16
5. DDK96	5-23-00						N/A
6. DDK905							+ 1ml 0014-108-3
7. DDK90B							+ 1ml 0014-108-3
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
Reagents		Vol (ml)			Ref. Number		Method
HNO3	2.5 ml				MAILINCKRODT 6623 N35058	7470A	AUTOClave 15Psi 120°C
H2SO4	5.0 ml				MAILINCKRODT 5537 N37A02	SACLS = 0014-094-10	
KMNO4	15.0 ml				0014-095-8	Heck-NASCH = 0014-097-7	
K2S2O4	8.0 ml				0014-090-11		WJAH 5-25-00
Extract(s)			Extract(s) Received				Extract(s) Relinquished
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst
				WJAH 5-05-00			

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
4F	DDK90		236409	399411	I-19-08	COE230195	001		WATER	0	9 1

RELINQUISHED BY	RECEIVED BY	DATE/TIME
<i>William A. Hoyle</i>	<i>William A. Hoyle</i>	5-25-00 06:00
<i>William A. Hoyle</i>	<i>William A. Hoyle</i>	5-25-00 07:16

**GENERAL CHEMISTRY DATA**

Client Sample ID: DF/S1/0137/WA/001

## General Chemistry

Lot-Sample #....: C0E230195-001

Work Order #....: DDK90

Matrix: 001.....: WATER

Date Sampled....: 05/22/00

Date Received...: 05/23/00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.3		No Units	SW846 9040	05/23/00	0144271
		Dilution Factor: 1		MS Run #.....: 0144116	..	
Cyanide, Total	ND	10.0	ug/L	SW846 9012A	05/26-05/27/00	0147147
		Dilution Factor: 1		MS Run #.....: 0147046		
Flashpoint	>200		deg F	SW846 1010	05/27/00	0148128
		Dilution Factor: 1		MS Run #.....: 0148031		
Total Sulfide	183	1.0	mg/L	MCAWW 376.1	05/26/00	0147129
		Dilution Factor: 1		MS Run #.....: 0147031		

658 858

## METHOD BLANK REPORT

## General Chemistry

Client Lot #...: COE230195

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Cyanide, Total	ND	Work Order #: DDR65101	MB Lot-Sample #:	COE260000-147		
		10.0	-ug/L	SW846 9012A	05/26-05/27/00	0147147
		Dilution Factor: 1				
Total Sulfide	ND	Work Order #: DDR42101	MB Lot-Sample #:	COE260000-129		
		1.0	mg/L	MCAWW 376.1	05/26/00	0147129
		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 #....: C0E230195

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	100	Work Order #: DDK4K101 (85 - 115)	LCS Lot-Sample#: C0E230000-271 SW846 9040	05/23/00	0144271
Dilution Factor: 1					
Cyanide, Total	100	Work Order #: DDR65102 (85 - 145)	LCS Lot-Sample#: C0E260000-147 SW846 9012A	05/26-05/27/00	0147147
Dilution Factor: 1					
Flashpoint	99	Work Order #: DDW45101 (85 - 115)	LCS Lot-Sample#: C0E270000-128 SW846 1010	05/27/00	0148128
Dilution Factor: 1					
Total Sulfide	105	Work Order #: DDR42102 (75 - 125)	LCS Lot-Sample#: C0E260000-129 MCAWW 376.1	05/26/00	0147129
Dilution Factor: 1					

**NOTE (S) :**

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



658 860

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #....: COE230195

Matrix.....: WATER

Date Sampled....: 05/22/00

Date Received...: 05/24/00

PARAMETER	PERCENT RECOVERY	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#: DDM11105-MS/DDM11106-MSD	MS Lot-Sample #: COE240195-001		
102	(75 - 125)	SW846 9012A	05/26-05/27/00	0147147	
101	(75 - 125) 0.95 (0-20)	SW846 9012A	05/26-05/27/00	0147147	
	Dilution Factor: 1				
	MS Run #.....: 0147046				

Total Sulfide		WO#: DDNNK10G-MS/DDNNK10H-MSD	MS Lot-Sample #: COE250134-001
93	(75 - 125)	MCAWW 376.1	05/26/00 0147129
101	(75 - 125) 8.0 (0-20)	MCAWW 376.1	05/26/00 0147129
	Dilution Factor: 1		
	MS Run #.....: 0147031		

**NOTE(S) :**

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

Client Lot #.... COE230195      Work Order #...DDK1J-SMP..      Matrix..... WATER  
                                              DDK1J-DUP

Date Sampled.... 05/22/00      Date Received... 05/23/00

<u>PARAM-RESULT</u>	<u>DUPLICATE RESULT</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD LIMIT</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH					SD Lot-Sample #:	C0E230164-001	
7.2	7.2	No Units	0.28	(0-20)	SW846 9040	05/23/00	0144271
Dilution Factor: 1							
Prep Date.....: 0144116      Analysis Date...      Prep Batch #...							

658 862

## SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #...: C0E230195 Work Order #...: DDK90-SMP Matrix...: WATER

DDK90-DUP

Date Sampled...: 05/22/00

Date Received...: 05/23/00

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Flashpoint	>200	>200	deg F	0.0	(0-20)	SW846 1010	05/27/00	0148128

SD Lot-Sample #: C0E230195-001

Dilution Factor: 1

Prep Date.....: 0148031

Analysis Date...:

Prep Batch #...:

Lysanide

658 863

COE240157 } Total Solid 0146146

COE230215 } Total Solid 0147144

COE240157 } Total Water 0147145

COE250133 } Total Solid 0147146

COE230195 } Total  
COE240195 } Water 0147147

COE240195 } Free Water 0147148

COE240195 } Amenable Water 0147149

658 864

Total CN - NonAmenable CN = Amenable CN

Sample J

mg  
LCS

mg

mg

mg

Range 31.95  
47.97 76.15

72.095.01  
COE 24019.5.001

582.4  
34.2

1102.9

33ml 001

0342  
34.2

0202

0140

33ml 3p

0342

0120

0222 453  
APJ

Note: The Range between The Sample & Jp  
Is less Than The Reporting limit of 0.01 ppm

Ag 0.000  
5.2700

## Run Results Report

Results: C:\FLOW\_4\052700A.RST

658 865

Results completed: 08:57 May 27, 2000.

Operator: P.JOHNSON

*P. Johnson 5.27.00*

Time	Cup	Name	Height	Calc.	Flags
CYANIDE					
User request: Start Data Collect					
06:00	0	CARRYOVER	710	0.001550	VER
06:01	0	CARRYOVER	77	0.000192	VER
		Mean & RSD:	394	0.000871	NoRSD SD
06:03	0	READ BASELIN	0	0.000026	BL
06:04	301	0.500 PPM ST	234566	0.503230	HI
06:05	301	0.500 PPM ST	234145	0.502327	HI
06:06	301	0.500 PPM ST	235174	0.504535	HI
		Mean & RSD:	234628	0.503364	.221%
06:07	302	0.400 PPM ST	187214	0.401648	
06:08	302	0.400 PPM ST	187327	0.401890	
06:10	302	0.400 PPM ST	186450	0.400008	
		Mean & RSD:	186997	0.401182	.255%
06:11	303	0.300 ppm ST	139426	0.299130	
06:12	303	0.300 ppm ST	141340	0.303236	
06:13	303	0.300 ppm ST	139936	0.300225	
		Mean & RSD:	140234	0.300864	.707%
06:14	304	0.200 PPM ST	93333	0.200249	
06:15	304	0.200 PPM ST	93437	0.200472	
06:17	304	0.200 PPM ST	91986	0.197360	
		Mean & RSD:	92919	0.199360	.871%
06:18	305	0.100 PPM ST	45928	0.098553	
06:19	305	0.100 PPM ST	46499	0.099779	
06:20	305	0.100 PPM ST	46053	0.098821	
		Mean & RSD:	46160	0.099051	.651%
06:21	306	0.050 PPM ST	23023	0.049416	
06:22	306	0.050 PPM ST	22892	0.049134	
06:24	306	0.050 PPM ST	22912	0.049177	
		Mean & RSD:	22942	0.049243	.308%
06:25	307	0.010 PPM ST	4934	0.010611	
06:26	307	0.010 PPM ST	4939	0.010622	
06:27	307	0.010 PPM ST	4689	0.010085	OL
		Mean & RSD:	4937	0.010617	2.9%
06:28	0	0.000 PPM ST	9	0.000044	
06:29	0	0.000 PPM ST	-1	0.000023	
06:31	0	0.000 PPM ST	-16	-0.000009	LO OL
		Mean & RSD:	4	0.000034	343%
06:32	101	ICV	77070	0.165362	103.47.
06:33	0	ICB	20	0.000070	
06:34	0	BLANK	30	0.000090	
06:35	2	CCV 7209510	48237	0.103507	103.57.
06:36	0	CCB	21	0.000070	
06:38	0	BASELINE	0	0.000026	BL
06:39	102	DDNHE101B	850	0.092445	mg/kg

Page #1

Run Results Report

## Run Results Report

Results: C:\FLOW\_4\052700A.RST

Results completed: 08:57 May 27, 2000.

Operator: P. JOHNSON

P. Johnson 5-2700

CYANIDE

Time	Cup	Name	Height	Calc.	Flags	
06:40	103	DDNHE102C	117984	126.565834	mg/kg Range 51.6-148	153.49
06:41	104	DDLJF10W	2174	0.234441		
06:42	105	DDLJL10W	1528	0.165161		
06:43	106	DDLJM10W	1643	0.177574		
06:45	107	DDLJN10W	1800	0.194421		
06:46	108	DDLJQ12M	1661	0.179448		
06:47	109	DDLJQ12PX	1768	0.190949	mg/kg 0.67. RDJ	
06:48	0	BLANK	-32	-0.000042	LO	
06:49	2	CCV 7209510	48376	0.103804	103.89	
06:50	0	CCB	-10	0.000005		
06:52	0	BASELINE	0	0.000026	BL	
06:53	110	DDLJQ12NS	44812	4.808002	mg/kg 94.27	
06:54	111	DDLJV10W	2386	0.257274		
06:55	112	DDLJW10W	2141	0.230932		
06:56	113	DDLK010W	2390	0.257636		
06:57	114	DDLK110W	2561	0.275974		
06:59	115	DDLKJ10W	2334	0.251694	mg/kg	
07:00	0	BLANK	-24	-0.000027	LO	
07:01	2	CCV 7209510	48766	0.104642	104.67	
07:02	0	CCB	-8	0.000009		
07:03	0	BASELINE	0	0.000026	BL	
07:04	116	ICV	75251	0.161458	100.97	
07:06	0	ICB	10	0.000047		
07:07	0	BLANK	1	0.000028		
07:08	2	CCV 7209510	48485	0.104039	104.07	
07:09	0	CCB	12	0.000051		
07:10	0	BASELINE	0	0.000026	BL	
07:11	117	DDR5X101B	920	0.100014	mg/kg Range 51.6-148	142.51
07:13	118	DDR5X102C	109557	117.526466		
07:14	119	DDKF1101	4460	0.479735		
07:15	120	DDKF2101	3531	0.380023		
07:16	121	DDKF4101	2841	0.306061		
07:17	122	DDKF5101	4874	0.524097		
07:18	123	DDKF6101	1607	0.173678		
07:20	124	DDKF8101	5793	0.622723	mg/kg	
07:21	0	BLANK	-11	0.000003		
07:22	2	CCV 7209510	48673	0.104442	104.47	
07:23	0	CCB	10	0.000048		
07:24	0	BASELINE	0	0.000026	BL	
07:25	125	DDKFC101	12179	1.307687	mg/kg	
07:27	126	DDKFC12HX	12159	1.305518		
07:28	127	DDKFC102S	38423	4.122693		
07:29	128	DDKFD101	6200	0.666370	mg/kg	
07:30	0	BLANK	-3	0.000020		

0.27. RDJ  
56.37. Saw Analytical  
Spikes.

Page #2

Run Results Report

Run Results Report  
 Results: C:\FLOW\_4\052700A.RST  
 Results completed: 08:57 May 27, 2000.  
 Operator: P.JOHNSON

658 867

*P. Johnson 5.27.00*

CYANIDE					
Time	Cup	Name	Height	Calc.	Flags
07:31	2	CCV 7209510	48214	0.103458	103.59.
07:32	0	CCB	5	0.000036	
07:34	0	BASELINE	0	0.000026	BL
07:35	129	DDR61102C	74066	0.158917	99.39.
07:36	0	ICB	2	0.000030	
07:37	0	BLANK	1	0.000027	
07:38	2	CCV 7209510	49022	0.105191	105.29.
07:39	0	CCB	28	0.000087	
07:41	0	BASELINE	0	0.000026	BL
<del>07:42</del>	<del>130</del>	<del>DDR61101B</del>	<del>11256</del>	<del>0.024172</del>	<del></del>
07:43	131	DDR61103L	74503	0.159853	99.99. 0.67.RP
07:44	132	DDLKT10V	440	0.000970	
07:45	0	BLANK	20	0.000069	
07:46	2	CCV 7209510	48643	0.104379	104.49.
07:48	0	CCB	11	0.000051	
07:49	0	BASELINE	0	0.000026	BL
07:50	133	.05 7209503	21894	0.046994	94.09.
07:51	134	.40 7209504	192644	0.413297	103.39.
07:52	0	BLANK	33	0.000098	
07:53	2	CCV 7209510	48377	0.103807	103.89.
07:55	0	CCB	19	0.000068	
07:56	0	BASELINE	0	0.000026	BL
07:57	135	DDR63101B	1000	0.108522	mg/kg Range 51.6-148 142.69
07:58	136	DDR63102C	109679	117.657753	
07:59	137	DDNNA10W	16718	1.794489	69.79.
08:00	138	DDNNA112S	49217	5.280433	mg/kg 72.99. 3.07.RP
08:02	139	DDNNA113D	50693	5.438787	
08:03	0	BLANK	7	0.000041	
08:04	2	CCV 7209510	48254	0.103544	103.59.
08:05	0	CCB	-17	-0.000010	LO
08:06	0	BASELINE	0	0.000026	BL
08:07	140	DDR65101B	1250	0.002708	
08:09	141	DDR65102C	74934	0.160779	100.59.
08:10	142	DDK9010W	1487	0.003216	
08:11	143	DDM11103	15948	0.034239	
08:12	144	DDM11105S	63576	0.136413	102.29.
08:13	145	DDM11106D	62977	0.135128	100.99. 1.07.RP
08:14	0	BLANK	37	0.000106	
08:16	2	CCV 7209510	49029	0.105206	105.29.
08:17	0	CCB	0	0.000026	
08:18	0	BASELINE	0	0.000026	BL
08:19	146	DDR68101B	1055	0.002290	
08:20	147	DDR68102C	78248	0.167889	104.99.
08:21	148	DDM11102	4178	0.008988	

Page #3  
 Run Results Report



## Run Results Report

Results: C:\FLOW\_4\052700A.RST

Results completed: 08:57 May 27, 2000.

Operator: P. JOHNSON

P. Johnson 5.27.00

CYANIDE					
Time	Cup	Name	Height	Calc.	Flags
08:23	149	DDM11107S	49520	0.106258	104.3%
08:24	150	DDM11108D	50152	0.107614	107.2% 1.2% RPS
08:25	0	BLANK	2	0.000030	
08:26	2	CCV 7209510	48317	0.103678	103.7%
08:27	0	CCB	-5	0.000015	
08:28	0	BASELINE	0	0.000026	BL
08:30	151	DDR69101B	1123	0.002435	} See Attached Sheet For Amenable CH Calculations.
08:31	152	DDR69102C	135780	0.582617	
08:32	153	DDR69102C	47961	0.102915	
08:33	154	DDM11101	9412	0.020218	
08:34	155	DDM11109X	5564	0.011962	
08:35	0	BLANK	-11	0.000002	
08:37	2	CCV 7209510	48623	0.104334	104.3%
08:38	0	CCB	-4	0.000018	
08:39	0	BASELINE	0	0.000026	BL
08:45*	156	DDKFC102A	32824	3.522042	mg/kg 88.6%
08:46	130	DDR61101B	2096	0.004523	
08:48	0	BLANK	4	0.000034	
08:49	2	CCV 7209510	48397	0.103850	103.8%
08:50	0	CCB	8	0.000044	
08:51	0	BASELINE	0	0.000026	BL

\* Analytical Spike For Sample C0E230215.007

0.125me of 10ppm CH Std To 2.5me of Sample  
C0E230215.007. TV: 2.5 mg/kg

File name: C:\FLOW\_4\052700A.RST

Date: May 27, 2000

Operator: P.JOHNSON

Name	Conc	Height
* 0.500 PPM STD	0.500000	234565.859375
* 0.500 PPM STD	0.500000	234144.750000
* 0.500 PPM STD	0.500000	235174.312500
* 0.400 PPM STD	0.400000	187213.859375
* 0.400 PPM STD	0.400000	187326.687500
* 0.400 PPM STD	0.400000	186449.703125
* 0.300 ppm STD	0.300000	139425.593750
* 0.300 ppm STD	0.300000	141339.812500
* 0.300 ppm STD	0.300000	139936.140625
* 0.200 PPM STD	0.200000	93333.109375
* 0.200 PPM STD	0.200000	93436.734375
* 0.200 PPM STD	0.200000	91986.281250
* 0.100 PPM STD	0.100000	45927.753906
* 0.100 PPM STD	0.100000	46499.164062
* 0.100 PPM STD	0.100000	46052.796875
* 0.050 PPM STD	0.050000	23022.816406
* 0.050 PPM STD	0.050000	22891.642578
* 0.050 PPM STD	0.050000	22911.708984
* 0.010 PPM STD	0.010000	4934.362793
* 0.010 PPM STD	0.010000	4939.477539
* 0.010 PPM STD	0.010000	4689.104492
* 0.000 PPM STD	0.000000	8.610161
* 0.000 PPM STD	0.000000	-1.279019
* 0.000 PPM STD	0.000000	-16.380140

Calib Coef:

 $y = bx + a$ 

a: (intercept) -1.2106e+01

b: 4.6614e+05

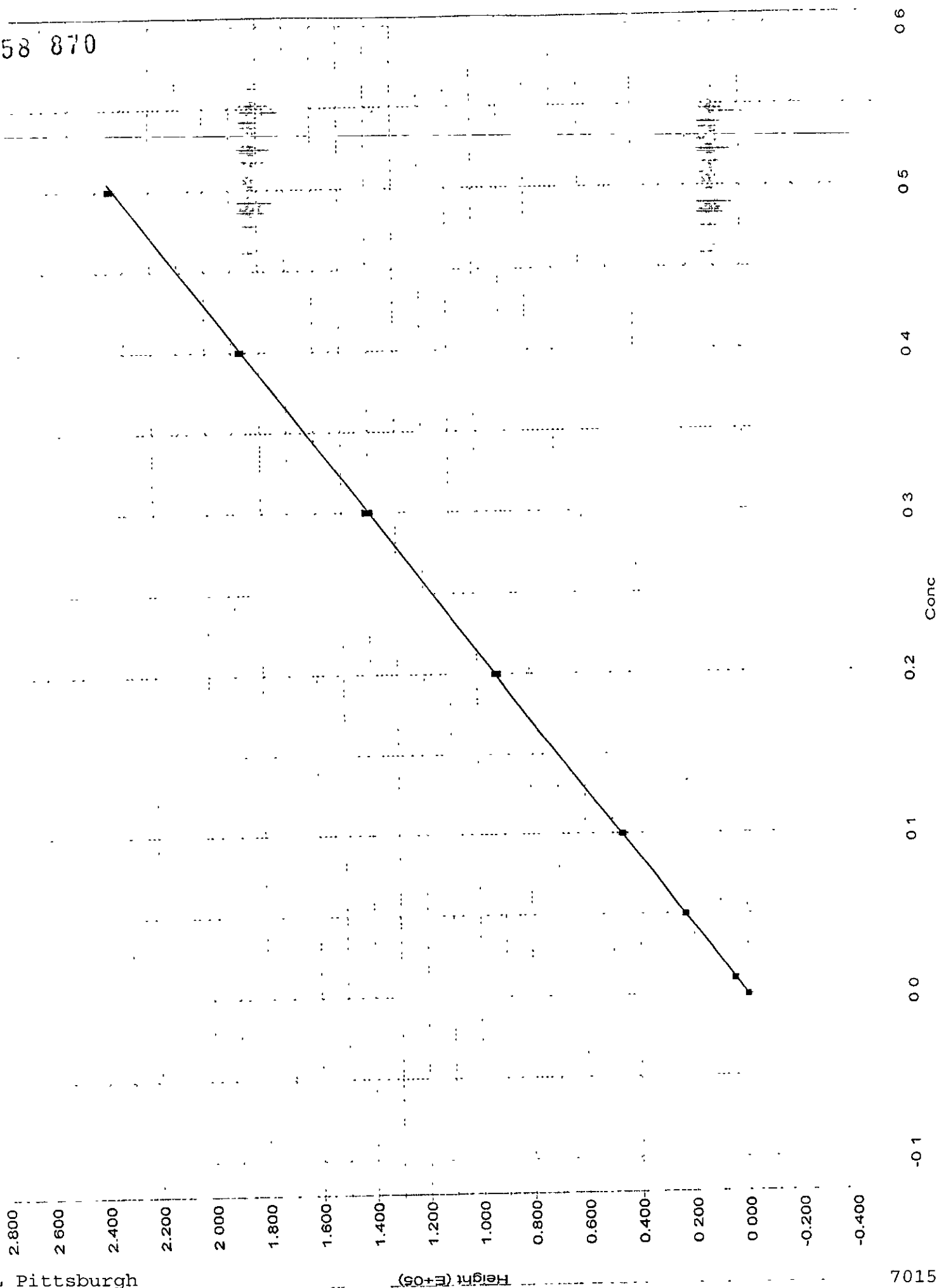
Corr Coef: 0.999976

Carryover: 0.154%

No Drift Peaks

658 870

CYANIDE: Calibration, Peak 5-144



# Cyanide Distillation Worksheet

60E240157 Total 0146146



STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380

Reagent/Std Book ID: 32-1592/34138/142152

Date: 3-25-00

Sample Description (CLP Samples Only)

Sample ID	Distillation		Before Distillation	After Distillation	Expiration Date
	Initial	Final			
1. T-1	5.00g		NA	NA	NA
2. 30NHE1011	5.00g		NA	NA	NA
3. 30NHE1012	5.00g		NA	NA	NA
4. 30NHE1013	5.00g		NA	NA	NA
5. 30NHE1014	5.00g		NA	NA	NA
6. 30NHE1015	5.00g		NA	NA	NA
7. 30NHE1016	5.00g		NA	NA	NA
8. 30NHE1017	5.00g		NA	NA	NA
9. 30NHE1018	5.00g		NA	NA	NA
10. 30NHE1019	5.00g		NA	NA	NA
11. 30NHE1020	5.00g		NA	NA	NA
12. 30NHE1021	5.00g		NA	NA	NA
13. 30NHE1022	5.00g		NA	NA	NA
14. 30NHE1023	5.00g		NA	NA	NA
15. 30NHE1024	5.00g		NA	NA	NA
16. 30NHE1025	5.00g		NA	NA	NA
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					

Comments: 30NHE1011-30NHE1025

Revised by: 30NHE1011-30NHE1025

Date: 3-25-00

CEE230215 Total 0142144



**STL Pittsburgh**  
**450 William Pitt Way**  
**Pittsburgh, PA 15238**  
**412-820-8380**

7017

Distilled by:		Date:	Reagent / Std Book ID:	Sample Description (CLP Samples Only)			
Sample ID		Distillation		Before Distillation	After Distillation	Expiration Date	
	Initial	Final					
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3	1.000	1.000	1.000	1.000	1.000	1.000	1.000
4	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6	1.000	1.000	1.000	1.000	1.000	1.000	1.000
7	1.000	1.000	1.000	1.000	1.000	1.000	1.000
8	1.000	1.000	1.000	1.000	1.000	1.000	1.000
9	1.000	1.000	1.000	1.000	1.000	1.000	1.000
10	1.000	1.000	1.000	1.000	1.000	1.000	1.000
11	1.000	1.000	1.000	1.000	1.000	1.000	1.000
12	1.000	1.000	1.000	1.000	1.000	1.000	1.000
13	1.000	1.000	1.000	1.000	1.000	1.000	1.000
14	1.000	1.000	1.000	1.000	1.000	1.000	1.000
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

Cyanide Distillation  
Worksheet

STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380



60E240157 Total 014714

Distilled by: <u>P. Johnson</u>		Date: <u>3-26-00</u>		Reagent / Std Book ID: <u>3-21532 / 3-21532</u>		Sample Description (CLP Samples Only)			
Sample ID	Initial	Distillation		Before Distillation	After Distillation	Expiration Date	Location	Analyst	Location
		Date	Final						
1. 11026	Good			NA	NA	NA	NA		
2. 11026	Good			NA	NA	NA	NA		
3. 11026	Good			NA	NA	NA	NA		
4. 11026	Good			NA	NA	NA	NA		
5. 11026	Good			NA	NA	NA	NA		
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
21.									
22.									
23.									
24.									
25.									
26.									
Distillate(s)		Distillate(s) Received		Distillate(s) Relinquished					
(Record line number from	Date	Time	Analyst	Location	Date	Time	Analyst	Location	
1. ft	3-26-00	1030	P. Johnson	Lab	3-26-00	1100	P. Johnson	Lab	
1. ft	3-27-00	0940	P. Johnson	Lab	3-27-00	0810	P. Johnson	Lab	
Comments: <u>1. 11026: 11026 72.09416 72.09416 72.09416</u>									
Reviewed by: <u>P. Johnson</u>		Date: <u>3-26-00</u>							

**STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380**

[illegible]

Expiration Date	
-----------------	--

[illegible]





# Cyanide Distillation Worksheet

26E240193 Free 6147148



STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8360

7021

Distilled by: <u>P. Johnson</u>		Date: <u>5.7.00</u>		Reagent / Std Book ID: <u>321529 93209 935408</u>		Sample Description (CLP Samples Only)			
Sample ID	Initial	Distillation		Before Distillation	After Distillation	Expiration Date			
		Final							
1	321529	321529				4.5.00			
2	321529	321529				4.5.00			
3	321529	321529				4.5.00			
4	321529	321529				4.5.00			
5	321529	321529				4.5.00			
6	321529	321529				4.5.00			
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									

Distillate(s) (Record line number from)	Date	Time	Distillate(s) Received		Location	Date	Time	Distillate(s) Relinquished		Location
			Analyst					Analyst		
1-3	5.7.00	04:40	P. Johnson		Prof	5.7.00	08:00	P. Johnson		Prof

Comments: 1-3: 110 ppm 32.00 3.03  
2-3: 110 ppm 32.00 3.03  
3-3: 110 ppm 32.00 3.03  
4-3: 110 ppm 32.00 3.03  
5-3: 110 ppm 32.00 3.03  
6-3: 110 ppm 32.00 3.03  
7-3: 110 ppm 32.00 3.03  
8-3: 110 ppm 32.00 3.03  
9-3: 110 ppm 32.00 3.03  
10-3: 110 ppm 32.00 3.03  
11-3: 110 ppm 32.00 3.03  
12-3: 110 ppm 32.00 3.03  
13-3: 110 ppm 32.00 3.03  
14-3: 110 ppm 32.00 3.03  
15-3: 110 ppm 32.00 3.03  
16-3: 110 ppm 32.00 3.03  
17-3: 110 ppm 32.00 3.03  
18-3: 110 ppm 32.00 3.03  
19-3: 110 ppm 32.00 3.03  
20-3: 110 ppm 32.00 3.03  
21-3: 110 ppm 32.00 3.03  
22-3: 110 ppm 32.00 3.03  
23-3: 110 ppm 32.00 3.03  
24-3: 110 ppm 32.00 3.03  
25-3: 110 ppm 32.00 3.03  
26-3: 110 ppm 32.00 3.03

Reviewed by: P. Johnson

Cyanide Distillation Worksheet

665240195 Amenable 6/4/79

STL Pittsburgh  
450 William Pitt Way  
Pittsburgh, PA 15238  
412-820-8380



Distilled by: P. Johnson		Date: 5-26-00		Reagent / Std Book ID: 342-150-2		Sample Description (CLP Samples Only)	
Sample ID	Distillation		Before Distillation	After Distillation	Expiration Date		
	Initial	Final					
1	342-150-2	342-150-2			NA		
2	342-150-2	342-150-2			NA		
3	342-150-2	342-150-2			6:30:00		
4	342-150-2	342-150-2			6:30:00		
5	342-150-2	342-150-2					
6	342-150-2	342-150-2					
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

Distillate(s) (Record line number from)	Distillate(s) Received		Distillate(s) Relinquished	
	Date	Time	Date	Time
1-3	5/26/00	13:30	5/26/00	14:00
1-3	5/27/00	04:40	5/27/00	08:50

Comments: W.S. 639 pm 73.095.00	Analyst	Location	Date	Time	Analyst	Location
	P. Johnson	Ref 3	5/26/00	14:00	P. Johnson	Ref 3
	P. Johnson	Ref 3	5/27/00	08:50	P. Johnson	Ref 3

Reviewed by:	Date:
P. Johnson	5-26-00

Method:

Flashpoint (COP)

Quanterra  
IncorporatedANALYST: R. H.DATE: 5-22-00BATCH: COE230 195-0148128TIME: 18:00

COC 170152, COC 170158, COC 170160 - 0148127

SAMPLE ID

RESULT

P-XYLENE

80°F

COE230195-001

NO &gt; 200°F

COE170152-002

YES 170°F

COE170158-002

NO &gt; 200°F

COE170160-002

&gt; 200°F

COE230195-001 DUP

NO &gt; 200°F

COE170152-002 DUP

172°F

Reviewed by ESM Faust Date 5-28-00

0073

# Quanterra Environmental Services pH LOG SHEET

Lot No. COE220108  
1-20  
21-40  
41-60  
61-65

Batch No. 0144211  
0144213  
0144215  
0144221

SDG No. 0144211

BALANCE ID C94817 Page 1 of 1  
 Includes attachment(s) Eric L. Wesolowski  
 Analyst: Eric L. Wesolowski  
 Date: 5-23-00  
 Start Time: 09:15

## pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
<u>7.00</u>	7.0	<u>LABCHEM 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

$$\frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} \times 100$$

$X_1$  = Original Result  
 $X_2$  = Duplicate

Sample ID	pH Reading
LCS	7.01
COE220108-001	6.93 RPD
-001 Dup	6.82 / 1.6%
-002	7.43
-003	7.99
-004	7.38
-005	7.20
-006	8.05
-007	7.45
-008	7.59
-009	7.48
LCS	6.99
-010	6.37
-011	7.60
-012	8.42
-013	8.42 RPD
-014	8.47
-015	7.61
-016	7.64
-017	7.48
-018	7.18
LCS	6.99
-019	7.65
-020	5.46
-021	7.30 RPD
-021 Dup	7.42 / 1.83%
-022	7.28
-023	7.56

658 880

# Quanterra Environmental Services pH LOG SHEET

Lot No.

COE220108

Batch No.

5-23-00

SDG No.

BALANCE ID Page of  
Includes attachment(s) C94817

Analyst:

Eric L. Wesolowski

Date:

5-23-00

Start Time:

09:15

## pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
	7.0			
	4.0			
	10.0			

LCS ID No.:

Relative Percent Difference =

Range = ± .05 pH units

$$\frac{|X_1 - X_2|}{\frac{X_1 + X_2}{2}} \times 100$$

X<sub>1</sub> = Original ResultX<sub>2</sub> = Duplicate

Sample ID	pH Reading
ECS from COE220108-024	7.49
-025	7.54
-026	7.40
-027	7.63
LCS	7.00
-028	7.38
-029	7.53
-030	9.33
-031	9.27
-032	7.43
-033	7.52
-034	3.98
-035	4.91
-036	3.72
LCS	6.99
-037	5.30
-038	10.26
-039	4.08
-040	6.19
-041	6.24
-041 Dup	6.25
-042	6.50
-043	4.59
-044	4.16
LCS	6.99
-045	2.80
-046	5.85
-047	6.65

# Quanterra Environmental Services pH LOG SHEET

Lot No.

Batch No.

SDG No.

BALANCE ID Page of  
Includes attachment(s) C94817

Analyst: EREL L WESOLOSKI

Date: 5-23-00

Start Time: 09:15 / 11:50

## pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
	7.0			
	4.0			
	10.0			

LCS ID No.:

Relative Percent Difference =

Range = ± .05 pH units

$$\frac{|X_1 - X_2|}{\frac{X_1 + X_2}{2}} \times 100$$

X<sub>1</sub> = Original ResultX<sub>2</sub> = Duplicate

Sample ID	pH Reading
LCS	6.88
COE220108-048	7.27
-049	7.98
-050	5.94
-051	7.28
-052	7.38
-053	6.99
LCS	6.30
-054	6.31
-055	6.94
-056	4.74
-057	7.12
-058	7.18
-059	7.46
-060	6.99
LCS	6.90 RPD
-061	7.04
-061 Dup	7.18
-062	7.49
-063	7.35
-064	7.31
-065	7.00
LCS	7.21
INFLUENT COE230164 -002	7.16 RPD
EFFLUENT -001	7.18
EFFLUENT Dup -001 Dup	7.26
LCS	7.00
COE230195-601	8.26
LCS	7.00

# Quanterra Environmental Services SULFIDE LOG SHEET

Lot No. COE230195 Batch No. 0147129 SDG No. 2/20  
 Includes attachment(s) \_\_\_\_\_  
 Analyst: ERIC L. WESOLOSKI  
 Date: 5-26-00  
 Start Time: 07:00

Stock Std. ID No.: 0071-004-13 True Value 200 ppm  
 Prep 5-26-00 Exp 6-2-00

LCS 5 mL of 200 ppm (ID No.: 0071-004-13) = 200 ppm  
 Range ± 25%

## Calculations:

Sulfide mg/L =  $\frac{[(20 \text{ mL of Iodine} \times N \text{ Iodine}) - (\text{mL Na}_2\text{S}_2\text{O}_3 \times N \text{ Na}_2\text{S}_2\text{O}_3)]}{\text{mL Sample}} \times 16,000$

Iodine Standardization ID No.: 0071-003-02  
 $\frac{0.0246}{0.0221} \times N \text{ Iodine} = \frac{(\text{mL Na}_2\text{S}_2\text{O}_3)(\text{N of Na}_2\text{S}_2\text{O}_3)}{20.0 \text{ mL of Iodine Solution}}$

## Sodium Thiosulfate Standardization

ID No. 0071-003-04

Titration mLs Normality  
 1 10.2 0.025N  
 2 \_\_\_\_\_ 5-26-00 Avg. = \_\_\_\_\_ N

$\frac{(10 \text{ mL of KH(IO}_3)_2)(0.025N \text{ KH(IO}_3)_2)}{\text{mL of Na}_2\text{S}_2\text{O}_3}$

## Concentration of Sample in Spike:

Orig. Smp. Conc. ND  
 $\frac{\text{Vol. of Smp. in Spike}}{\text{Orig. Smp. Vol.}} = \frac{200}{200} = \text{ND}$

Sample ID: COE250134-001 (TOTAL)

CONCENTRATION OF Sample in Spike:  
 $\frac{\text{Orig. Smp. Conc.}}{\text{Vol. of Spike Smp.}} = \frac{\text{Orig. Smp. Vol.}}{200} = \text{ND}$

SAMPLE ID: COE250134-001 (DISSOLVED)

Relative Percent Difference =  $\frac{X_1 - X_2}{\frac{X_1 + X_2}{2}} \times 100$   
 TOTAL = 8.06%  
 DISSOLVED = 0%

$\frac{|X_1 - X_2|}{\frac{X_1 + X_2}{2}} \times 100$   
 $X_1$  = Original Result  
 $X_2$  = Duplicate

## MS Percent Recovery

$100 \times \frac{\text{Obs. Conc. of MS} - \text{Conc. of Smp. in Spike}}{\text{True Spike Conc.}} = 105\%$

## MS Percent Recovery:

Sample ID: COE250134-001 (DISSOLVED)

$100 \times \frac{\text{Observed Conc. of MS} - \text{Conc. of Smp. in Spike}}{\text{True Spike Conc.}} = 93\%$

Sample ID: COE250134-001 (TOTAL)

E. L. Wesołowski  
 5-26-00

MSD Percent Recovery:

$$100 \times \frac{\text{Observed Conc. of MSD} - \text{Conc. of Spk. in spike}}{\text{True Spike Conc.}} = \frac{5.256 - \text{ND}}{5.0} = 105\%$$

SAMPLE ID: COE250134-001 (DISSOLVED)

STL Pittsburgh 4/PT/Apr-97/97-001/SLFDLGRR DOC



REQUESTED BY: JOHNSON

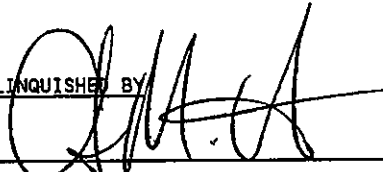
METHOD: QP Cyanide Total

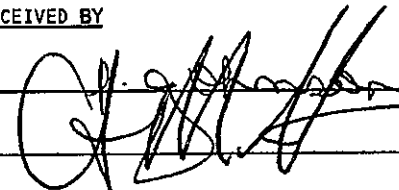
STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
4F	DDK90-1-DW		236909	399411	I-06-QP COE230195	001		WATER	9	1
6A CLP1	DDM11-1-03		236910	097631	I-06-QP COE240195	001		WATER	4	1
6C	DDNNA-1-DW		236911	054156	A-06-QP COE250133	001		SOLID	3	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

  
 P. Johnson



5-26-00/0730  
 5-26-00/1030

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

PSR024 5/27/00 11:50:18 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: GROVEP

METHOD: AE Flash Point (1010, Closed Cup)

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	DESCRIPTION	RCVD	REQD
5A-CLP1	DD9NN-1-01		237000	416241	I-88-AE COE170151	001			WATER	0	18
5A CLP1	DD9NT-1-01		237003	416241	N-88-AE COE170152	002			WASTE	0	9
5A CLP1	DD9PE-1-01		237004	416241	N-88-AE COE170158	002			WASTE	0	9
5A-CLP1	DD9PJ-1-01		237001	416241	I-88-AE COE170159	001			WATER	0	18
5A CLP1	DD9PX-1-01		237005	416241	N-88-AE COE170160	002			WASTE	0	9
4F	DDK90-1-0X		237002	399411	I-88-AE COE230195	001			WATER	0	9

Handwritten notes: *NO SAMPLES AVAILABLE*, *RMG*, *5-27-00*

RELINQUISHED BY

RECEIVED BY

DATE/TIME

5-27-00 14:00

5-27-00 20:30

658 886

PSR024

5/26/00

4:00:13 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 002

REQUESTED BY: MESOLOSE

METHOD: CT Sulfide (376.1)

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
4F	DDK90-1-10		236878	399411	I-88-CT	COE230195	001		WATER	9	1
6C	DDNNK-1-0C		236879	059184	I-88-CT	COE250134	001		WATER	11	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

*C. L. Mable*  
*C. L. Mable*

*C. L. Mable*  
*C. L. Mable*

*5/26/00 (06:00)*  
*5/26/00 (08:25)*

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

COC/Sample  
Request

Quanterra Incorporated  
450 William Pitt Way  
Building 6, Third Floor  
Pittsburgh, Pennsylvania 15238  
412/826-5477 FAX: 412/826-5571



COE230195

QUA-4188

Project Name

UXB

DU  
Proj

Site

Dunfield

Lot Number/Sample Number

Analysis

Matrix

1. COE230195-001

pH

H<sub>2</sub>O

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

23.

24.

25.

26.

27.

28.

29.

30.

CHZ  
B-2  
00

Raw Sample

(Record line number from above)

Raw Relinquished by

Raw Received by

Date

Time

Analyst

Location

Date

Time

Analyst

Location

1

5-23-00

15:05

E. Z. N. M. H.

SR

5-23-00

15:05

E. Z. N. M. H.

SR

1

5-23-00

15:10

E. Z. N. M. H.

WC

5-23-00

15:30

E. Z. N. M. H.

SR

**FINAL PAGE**

**PART I**

**ADMINISTRATIVE RECORD**

**PART I**

**FINAL PAGE**