



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 657

Part II of II

Analysis Report

05/19/00 12:45:07 PM

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#3	.01006	18.763	.06795	.11720	.08306	.02846	.00873
#4	-.00997	18.679	.09489	.11612	.08271	.09826	.00873
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	12.005
SDev	.042
%RSD	.35145

#1	11.982
#2	11.965
#3	12.061
#4	12.013

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: CCV2-8 Operator: MTW
Run Time: 05/19/00 12:45:10
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
Avg	.99225	49.099	5.1507	4.9096	4.8167	5.1060	52.693
SDev	.00088	.215	.0940	.0309	.0296	.0173	.111
%RSD	.08851	.43855	1.8241	.62949	.61460	.33819	.20982
#1	.99300	49.108	5.1864	4.8975	4.8245	5.1061	52.600
#2	.99140	48.939	5.1802	4.8989	4.7891	5.0914	52.728
#3	.99159	49.401	5.0127	4.9553	4.8549	5.1302	52.609
#4	.99301	48.949	5.2234	4.8868	4.7982	5.0961	52.834
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	5.2091	5.0746	5.0374	4.8476	51.709	48.290	4.5308
SDev	.0220	.0133	.0075	.0315	.081	.527	.0602
%RSD	.42165	.26185	.14922	.64903	.15705	1.0903	1.3290
#1	5.2269	5.0691	5.0366	4.8550	51.651	48.141	4.5384
#2	5.2267	5.0633	5.0366	4.8162	51.637	48.663	L4.4953
#3	5.2014	5.0937	5.0292	4.8882	51.812	48.745	4.6124
#4	5.1815	5.0721	5.0474	4.8310	51.736	47.610	L4.4769
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	50.082	5.0019	4.9860	48.339	5.1854	5.0436	5.0716
SDev	.175	.0090	.0321	.567	.0182	.0275	.0288
%RSD	.34895	.18090	.64321	1.1720	.35033	.54444	.56811
#1	50.068	4.9900	4.9587	48.294	5.1925	5.0435	5.0901
#2	49.932	5.0014	4.9636	48.154	5.1600	5.0203	5.0584
#3	50.330	5.0117	4.9935	49.126	5.2025	5.0285	5.0377
#4	49.996	5.0045	5.0282	47.784	5.1864	5.0822	5.1003
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	5.0194	H9.1151	5.1091	4.9495	4.8850	9.7620	5.0294
SDev	.0580	.1336	.0424	.0257	.0157	.1454	.0119
%RSD	1.1560	1.4652	.83016	.51946	.32052	1.4890	.23565
#1	5.0789	H8.9575	5.1625	4.9549	4.8873	9.8523	5.0309
#2	4.9992	H9.2816	5.0610	4.9246	4.8693	9.7832	5.0142

Analysis Report

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#3	5.0516	H9.1318	5.0960	4.9831	4.9057	9.8621	5.0431
#4	4.9479	H9.0896	5.1170	4.9352	4.8776	9.5504	5.0296

Errors	LC Pass	LC High	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	4.9521
SDev	.0058
%RSD	.11621

#1	4.9438
#2	4.9529
#3	4.9566
#4	4.9552

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB8

Operator: MTW

Run Time: 05/19/00 12:48:23

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	.00150	.02003	.02668	-.00702	.00051	.00064	.01021
SDev	.00000	.00441	.03422	.00985	.00025	.00021	.00278
%RSD	.28333	21.992	128.27	140.29	48.833	32.821	27.260
#1	.00150	.02331	.02964	-.00999	.00072	.00047	.00682
#2	.00150	.02328	.06540	-.01359	.00042	.00047	.00946
#3	.00150	.01957	.02966	-.01210	.00020	.00075	.01113
#4	.00151	.01397	-.01800	.00759	.00072	.00089	.01342
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	.00117	.00036	.00115	.00092	.00650	.52891	-.00153
SDev	.00243	.00299	.00385	.00046	.00311	.05942	.00099
%RSD	206.90	833.45	336.10	50.133	47.841	11.235	64.629
#1	-.00202	-.00144	-.00256	.00069	.00351	.53503	-.00244
#2	.00257	.00289	.00029	.00070	.00422	.46968	-.00189
#3	.00068	.00289	.00656	.00162	.00843	.60855	-.00013
#4	.00347	-.00291	.00029	.00069	.00983	.50236	-.00166
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	.00553	-.00025	.01863	.02717	-.00397	.03276	.00777
SDev	.01520	.00000	.00702	.00905	.00530	.02393	.01573
%RSD	275.00	1.2715	37.713	33.302	133.46	73.054	202.48
#1	-.00484	-.00025	.00869	.01666	-.00325	-.00006	-.00534
#2	.00898	-.00025	.01863	.03110	.00104	.05403	.01568
#3	.02556	-.00025	.02359	.03747	-.01144	.04634	.02610
#4	-.00760	-.00025	.02360	.02346	-.00225	.03073	-.00535
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	-.01888	H1.2044	-.01238	.00038	.00035	-.00585	-.00189
SDev	.06974	.1199	.02321	.00023	.00045	.02758	.00072
%RSD	369.39	9.9580	187.49	62.120	129.10	471.58	37.948
#1	-.10047	H1.3305	.00101	.00007	-.00017	-.01159	-.00242
#2	-.05272	H1.2344	.01145	.00034	.00052	.03469	-.00222

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#3	.04679	H1.2104	-.02160	.00050	.00087	-.02326	-.00211
#4	.03088	H1.0422	-.04037	.00061	.00017	-.02323	-.00083

Errors	LC Pass	LC High	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	.00030
SDev	.00054
%RSD	180.61

#1	.00071
#2	-.00041
#3	.00018
#4	.00071

Errors	LC Pass
High	.02000
Low	-.02000

Michael T. W. 5-20-00

6571002

#	Sample Name	SE
1	STD1	.00109
2	STD5A	.51284
3	STD5B	
4	ICV2-1 0014-061-7	1.0159
5	ICB1	.00489
6	ICSA 0014-088-12	.08917
7	ICSAB 0014-043-1	1.0898
8	DDC39BT	-.04875
9	DDA9GBT	-.01853
10	DDC39CT	2.1552
11	DD6A4T	-.01547
12	DD6A4TP5	-.03026
13	DD6A4ST	1.0485
14	DD6A4DT	1.0524
15	DD6A5T	-.01264
16	CCV2-1 0014-087-7	5.2498
17	CCB1	.01076
18	DD6A6T	-.07714
19	DD6A7T	-.00678
20	CCV2-2	5.2188
21	CCB2	-.01854
22	DDEK8B	-.04396
23	DDEK8C	2.0177
24	DDA67	-.05652
25	DDA67P5	.02542
26	DDA67S	2.0510
27	DDA67D	2.0343
28	DDA67F	-.02637
29	DDA67FP5	-.04495
30	DDA67SF	2.0205
31	DDA67DF	1.9999
32	CCV2-3	5.2536
33	CCB3	-.00877
34	DDA67F RERUN ZN	-.01366
35	CCV2-4	5.2225
36	CCB4	-.03516

mtw 5-20-00

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	J00519B	QUANMET	05/19/00	14:55		X	IR
2	STD5A	J00519B	QUANMET	05/19/00	14:59		X	IR
3	STD5B	J00519B	QUANMET	05/19/00	15:02		X	IR
4	ICV2-1 0014-061-7	J00519B	QUANMET	05/19/00	15:05	MTW	S	CONC
5	ICB1	J00519B	QUANMET	05/19/00	15:08	MTW	S	CONC
6	ICSA 0014-088-12	J00519B	QUANMET	05/19/00	15:11	MTW	Q	CONC
7	ICSAB 0014-043-1	J00519B	QUANMET	05/19/00	15:14	MTW	Q	CONC
8	DDC39BT	J00519B	QUANMET	05/19/00	15:20	MTW	S	CONC
9	DDA9GBT	J00519B	QUANMET	05/19/00	15:23	MTW	S	CONC
10	DDC39CT	J00519B	QUANMET	05/19/00	15:26	MTW	S	CONC
11	DD6A4T	J00519B	QUANMET	05/19/00	15:29	MTW	S	CONC
12	DD6A4TP5	J00519B	QUANMET	05/19/00	15:32	MTW	S	CONC
13	DD6A4ST	J00519B	QUANMET	05/19/00	15:36	MTW	S	CONC
14	DD6A4DT	J00519B	QUANMET	05/19/00	15:39	MTW	S	CONC
15	DD6A5T	J00519B	QUANMET	05/19/00	15:42	MTW	S	CONC
16	CCV2-1 0014-087-7	J00519B	QUANMET	05/19/00	15:45	MTW	S	CONC
17	CCB1	J00519B	QUANMET	05/19/00	15:48	MTW	S	CONC
18	DD6A6T	J00519B	QUANMET	05/19/00	15:51	MTW	S	CONC
19	DD6A7T	J00519B	QUANMET	05/19/00	15:55	MTW	S	CONC
20	CCV2-2	J00519B	QUANMET	05/19/00	15:58	MTW	S	CONC
21	CCB2	J00519B	QUANMET	05/19/00	16:01	MTW	S	CONC
22	DDEK8B	J00519B	QUANMET	05/19/00	16:06	MTW	S	CONC
23	DDEK8C	J00519B	QUANMET	05/19/00	16:09	MTW	S	CONC
24	DDA67	J00519B	QUANMET	05/19/00	16:12	MTW	S	CONC
25	DDA67P5	J00519B	QUANMET	05/19/00	16:15	MTW	S	CONC
26	DDA67S	J00519B	QUANMET	05/19/00	16:18	MTW	S	CONC
27	DDA67D	J00519B	QUANMET	05/19/00	16:22	MTW	S	CONC
28	DDA67F	J00519B	QUANMET	05/19/00	16:25	MTW	S	CONC
29	DDA67FP5	J00519B	QUANMET	05/19/00	16:28	MTW	S	CONC
30	DDA67SF	J00519B	QUANMET	05/19/00	16:31	MTW	S	CONC
31	DDA67DF	J00519B	QUANMET	05/19/00	16:34	MTW	S	CONC
32	CCV2-3	J00519B	QUANMET	05/19/00	16:37	MTW	S	CONC
33	CCB3	J00519B	QUANMET	05/19/00	16:40	MTW	S	CONC
34	DDA67F RERUN ZN	J00519B	QUANMET	05/19/00	16:44	MTW	S	CONC
35	CCV2-4	J00519B	QUANMET	05/19/00	16:47	MTW	S	CONC
36	CCB4	J00519B	QUANMET	05/19/00	16:50	MTW	S	CONC

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Standardization Rpt.

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Method: QUANMET Standard: STD1

Run Time: 05/19/00 14:55:52

Elem	AG	AL	AS	B	BA	BE	CA
Avge	-.00060	.01195	-.00005	.00051	-.00003	.00315	.00010
SDev	.00016	.00090	.00118	.00047	.00006	.00019	.00062
%RSD	27.217	7.5314	2363.6	90.882	200.00	6.0789	617.29

#1	-.00060	.01140	-.00100	.00020	-.00012	.00300	-.00028
#2	-.00060	.01120	-.00080	.00060	.00000	.00320	.00005
#3	-.00040	.01320	.00160	.00114	.00000	.00340	.00099
#4	-.00080	.01200	.00000	.00012	.00000	.00300	-.00035

Elem	CD	CO	CR	CU	FE	K	LI
Avge	.00010	.00015	.00100	.00030	.00125	-.02615	-.00010
SDev	.00015	.00050	.00028	.00012	.00044	.00484	.00020
%RSD	150.20	333.33	28.284	38.490	35.478	18.497	200.00

#1	.00000	-.00060	.00080	.00020	.00140	-.03160	.00000
#2	.00032	.00040	.00080	.00040	.00100	-.02540	.00000
#3	.00008	.00040	.00140	.00040	.00180	-.02000	.00000
#4	.00000	.00040	.00100	.00020	.00080	-.02760	-.00040

Elem	MG	MN	MO	NA	NI	PB	SB
Avge	.00005	.00010	.00030	.06320	.00071	.00100	.00015
SDev	.00034	.00012	.00012	.00085	.00043	.00085	.00019
%RSD	683.13	115.47	38.490	1.3426	60.397	84.853	127.66

#1	.00020	.00000	.00040	.06340	.00092	.00020	.00000
#2	.00000	.00020	.00020	.06340	.00007	.00140	.00040
#3	.00040	.00020	.00020	.06400	.00088	.00200	.00000
#4	-.00040	.00000	.00040	.06200	.00099	.00040	.00020

Elem	SE	SI	SN	SR	TI	TL	V
Avge	.00110	.00290	-.00030	.00000	.00215	-.00035	.00000
SDev	.00137	.00038	.00093	.00000	.00030	.00081	.00000
%RSD	124.65	13.206	310.32	.00000	13.953	230.35	.00000

#1	.00060	.00320	.00100	.00000	.00200	.00000	.00000
#2	.00240	.00280	-.00120	.00000	.00240	-.00120	.00000
#3	-.00060	.00320	-.00040	.00000	.00240	.00060	.00000
#4	.00200	.00240	-.00060	.00000	.00180	-.00080	.00000

Elem	ZN
Avge	.00029
SDev	.00012
%RSD	42.239

#1	.00032
#2	.00044
#3	.00015
#4	.00024

Standardization Rpt.

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Method: QUANMET Standard: STD5A 0014-072-2
 Run Time: 05/19/00 14:59:01

Elem	AG	AS	B	BA	BE	CD	CO
Avge	.25900	.53580	.56518	3.8324	14.672	.92107	1.4641
SDev	.00121	.00315	.00353	.0171	.064	.00234	.0065
%RSD	.46759	.58783	.62416	.44646	.43683	.25391	.44088

#1	.25720	.53420	.56179	3.8151	14.618	.91927	1.4544
#2	.25980	.53900	.56739	3.8396	14.707	.92408	1.4680
#3	.25960	.53220	.56259	3.8220	14.619	.92175	1.4670
#4	.25940	.53780	.56895	3.8529	14.745	.91916	1.4668

Elem	CR	CU	LI	MN	MO	NI	PB
Avge	3.7088	2.1342	4.0049	2.0003	.41500	1.7498	.26150
SDev	.0151	.0107	.0286	.0083	.00177	.0059	.00123
%RSD	.40753	.50297	.71496	.41318	.42744	.33764	.46940

#1	3.6868	2.1274	3.9804	1.9882	.41240	1.7428	.25980
#2	3.7210	2.1372	3.9999	2.0066	.41560	1.7470	.26240
#3	3.7122	2.1242	3.9933	2.0022	.41560	1.7547	.26140
#4	3.7152	2.1480	4.0461	2.0042	.41640	1.7546	.26240

Elem	SB	SE	SI	SN	SR	TI	TL
Avge	.19525	.51285	.33705	1.0183	7.4745	5.8313	.35845
SDev	.00132	.00297	.00538	.0099	.0329	.0218	.00280
%RSD	.67624	.57963	1.5969	.97156	.44014	.37409	.78164

#1	.19380	.50860	.32980	1.0070	7.4414	5.8048	.35440
#2	.19520	.51540	.33660	1.0264	7.4910	5.8456	.36000
#3	.19500	.51420	.33940	1.0268	7.4533	5.8226	.36060
#4	.19700	.51320	.34240	1.0130	7.5123	5.8524	.35880

Elem	V	ZN
Avge	1.5833	1.5506
SDev	.0071	.0038
%RSD	.44607	.24274

#1	1.5738	1.5462
#2	1.5896	1.5514
#3	1.5822	1.5496
#4	1.5876	1.5552

6571006

Standardization Rpt.

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Method: QUANMET Standard: STD5B
Run Time: 05/19/00 15:02:10

0014-072-3

Elem	AL	CA	FE	K ₁	MG	NA
Avge	10.667	24.665	29.004	2.2113	7.1872	45.267
SDev	.021	.115	.026	.0152	.0158	.101
%RSD	.19257	.46572	.09099	.68585	.21929	.22292
#1	10.672	24.704	29.017	2.2250	7.1940	45.380
#2	10.694	24.496	28.985	2.1898	7.2058	45.320
#3	10.649	24.712	28.980	2.2174	7.1706	45.157
#4	10.653	24.750	29.035	2.2130	7.1784	45.213

Standardization

Report

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Method: QUANMET

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD5A	STD1	7.51666	.004510	05/19/00 03:02:10
AL	308.215	STD5B	STD1	9.38518	-.112153	05/19/00 03:02:10
AS	193.696	STD5A	STD1	18.9837	.000949	05/19/00 03:02:10
B	249.600	STD5A	STD1	17.7452	-.009134	05/19/00 03:02:10
B $\bar{A}$	493.409	STD5A	STD1	2.60931	.000077	05/19/00 03:02:10
BE	313.042	STD5A	STD1	.683519	-.002153	05/19/00 03:02:10
CA	317.933	STD5B	STD1	4.05429	-.000405	05/19/00 03:02:10
CD	228.802	STD5A	STD1	11.0208	-.001102	05/19/00 03:02:10
CO	228.616	STD5A	STD1	6.86369	-.001030	05/19/00 03:02:10
CR	267.716	STD5A	STD1	2.69776	-.002698	05/19/00 03:02:10
CU	324.754	STD5A	STD1	4.68199	-.001405	05/19/00 03:02:10
FE	259.940	STD5B	STD1	3.44793	-.004310	05/19/00 03:02:10
K	766.491	STD5B	STD1	44.6937	1.16874	05/19/00 03:02:10
L $\bar{I}$	670.789	STD5A	STD1	2.49687	.000250	05/19/00 03:02:10
MG	279.079	STD5B	STD1	13.9137	-.000696	05/19/00 03:02:10
MN	257.610	STD5A	STD1	4.99785	-.000500	05/19/00 03:02:10
MO	202.030	STD5A	STD1	24.1138	-.007234	05/19/00 03:02:10
NA	588.995	STD5B	STD1	2.21219	-.139810	05/19/00 03:02:10
NI	231.604	STD5A	STD1	5.71481	-.004084	05/19/00 03:02:10
PB	220.353	STD5A	STD1	37.2584	-.037258	05/19/00 03:02:10
SB	206.838	STD5A	STD1	51.3152	-.007697	05/19/00 03:02:10
SE	196.026	STD5A	STD1	19.5408	-.021495	05/19/00 03:02:10
SI	288.158	STD5A	STD1	29.5448	-.085680	05/19/00 03:02:10
SN	189.989	STD5A	STD1	9.80715	.002942	05/19/00 03:02:10
SR	409.552	STD5A	STD1	1.33788	.000000	05/19/00 03:02:10
TI	334.941	STD5A	STD1	1.71550	-.003688	05/19/00 03:02:10
TL	190.864	STD5A	STD1	56.0027	.019601	05/19/00 03:02:10
V	292.402	STD5A	STD1	6.18142	.000000	05/19/00 03:02:10
Z $\bar{N}$	213.856	STD5A	STD1	6.47246	-.001847	05/19/00 03:02:10

Method: QUANMET Sample Name: ICV2-1 0014-061-7 Operator: MTW
Run Time: 05/19/00 15:05:18
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
Avg	.50340	25.396	.97011	.99942	.99593	.97757	25.486
SDev	.00264	.160	.03511	.02971	.00694	.00555	.132
%RSD	.52470	.63061	3.6196	2.9723	.69713	.56765	.51917
#1	.50263	25.354	.96768	.97384	.99410	.97689	25.455
#2	.50107	25.187	.92380	.97356	.98784	.97075	25.314
#3	.50719	25.510	1.0079	1.0258	.99723	.97838	25.615
#4	.50269	25.532	.98108	1.0245	1.0045	.98426	25.560
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55000	27.500	1.1000	1.1000	1.1000	1.1000	27.500
Low	.45000	22.500	.90000	.90000	.90000	.90000	22.500
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0110	.99389	1.0061	.99043	26.122	25.142	1.0005
SDev	.0059	.00626	.0078	.00702	.141	.581	.0149
%RSD	.58509	.62964	.77267	.70909	.54146	2.3094	1.4858
#1	1.0161	.99080	1.0087	.99042	26.087	24.856	.99771
#2	1.0039	.98672	.99466	.98104	25.939	24.544	.98061
#3	1.0157	1.0004	1.0119	.99231	26.205	25.884	1.0104
#4	1.0084	.99766	1.0092	.99793	26.258	25.285	1.0132
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	1.1000	1.1000	1.1000	27.500	27.500	1.1000
Low	.90000	.90000	.90000	.90000	22.500	22.500	.90000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.543	1.0014	.98052	25.505	.99211	.98245	1.0097
SDev	.166	.0053	.01044	.386	.01029	.03874	.0271
%RSD	.65023	.52588	1.0647	1.5149	1.0370	3.9432	2.6797
#1	25.512	1.0004	.98051	25.379	.98825	1.0084	.98652
#2	25.339	.99436	.96602	25.020	.97965	.92649	.99688
#3	25.581	1.0054	.98535	25.879	1.0029	.98633	1.0483
#4	25.740	1.0054	.99018	25.744	.99760	1.0085	1.0072
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	1.1000	1.1000	27.500	1.1000	1.1000	1.1000
Low	22.500	.90000	.90000	22.500	.90000	.90000	.90000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0159	.96694	.98976	.99120	.98650	4.9657	.99111
SDev	.0330	.00006	.02522	.00647	.00634	.1667	.00465
%RSD	3.2445	.00614	2.5477	.65288	.64319	3.3563	.46902
#1	1.0548	.96693	1.0093	.98899	.98444	4.7252	.99018
#2	1.0269	.96687	1.0093	.98337	.97861	5.0404	.98493

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#3	1.0044	.96700	.98406	.99408	.98993	4.9927	.99523
#4	.97728	.96698	.95640	.99836	.99302	5.1042	.99408

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	.99608
SDev	.00504
%RSD	.50544

#1	.99187
#2	.99247
#3	.99731
#4	1.0027

Errors	LC Pass
High	1.1000
Low	.90000

Method: QUANMET Sample Name: ICB1

Operator: MTW

Run Time: 05/19/00 15:08:27

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
Avg	.00039	.00327	.01417	.00303	.00047	.00017	.00671
SDev	.00190	.00726	.02240	.01191	.00031	.00011	.00522
%RSD	490.50	222.29	158.06	393.22	67.167	65.200	77.702
#1	.00003	.00232	-.00295	.02029	.00038	.00016	.00847
#2	-.00000	.00044	.00095	-.00411	.00008	.00003	.00041
#3	-.00150	-.00328	.01237	.00151	.00060	.00017	.00522
#4	.00303	.01358	.04632	-.00558	.00081	.00030	.01276
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	-.00083	.00137	-.00000	.00094	.00224	.42236	.00025
SDev	.00293	.00553	.00132	.00121	.00392	.46713	.00000
%RSD	351.33	402.39	148340.	129.38	174.95	110.60	.00000
#1	-.00066	.00446	.00162	.00235	.00052	.82013	.00025
#2	-.00114	-.00652	-.00162	-.00047	-.00017	-.25252	.00025
#3	-.00435	.00173	.00000	.00047	.00052	.59666	.00025
#4	.00281	.00583	-.00000	.00141	.00811	.52515	.00025
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	.02226	.00025	.00121	.00619	.00089	-.00742	-.00255
SDev	.01580	.00050	.00607	.00510	.00482	.02199	.00596
%RSD	70.986	200.13	503.22	82.272	541.27	296.37	233.35
#1	.03270	.00050	.00241	.00487	.00116	-.02969	-.00766
#2	.00487	-.00050	-.00723	.00354	-.00334	-.01508	.00257
#3	.01322	.00050	.00241	.00265	-.00180	-.00741	-.00776
#4	.03826	.00050	.00724	.01372	.00755	.02251	.00264
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	.00489	.00741	.00048	.00005	.00026	.02515	.00219
SDev	.07222	.00297	.01113	.00013	.00044	.05375	.00262
%RSD	1475.9	40.103	2328.0	255.44	172.13	213.70	119.99
#1	.05276	.00893	-.00690	.00016	.00043	-.00287	.00499
#2	-.04885	.00295	-.00097	-.00011	-.00026	.09806	-.00014

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#3	.08012	.00886	.01664	.00016	.00009	-.02522	.00005
#4	-.06445	.00891	-.00685	.00000	.00077	.03065	.00385
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	.00156
SDev	.00098
%RSD	62.644

#1	.00227
#2	.00152
#3	.00227
#4	.00019

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: ICESA 0014-088-12 Operator: MTW
Run Time: 05/19/00 15:11:35
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	-0.00187	497.06	-0.22433	-0.05857	0.00193	0.00002	481.05
SDev	0.00183	2.33	0.08011	0.00887	0.00053	0.00000	1.04
%RSD	97.607	0.46832	35.710	15.146	27.355	2.6786	0.21722

#1	0.00025	494.44	-0.27950	-0.06327	0.00238	0.00002	479.90
#2	-0.00403	499.78	-0.29889	-0.06140	0.00134	0.00002	480.94
#3	-0.00253	498.01	-0.19292	-0.04538	0.00164	0.00002	482.44
#4	-0.00119	496.02	-0.12602	-0.06422	0.00238	0.00002	480.92

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
Avg	-0.00164	0.00862	-0.00108	-0.00632	184.22	0.06704	0.00201
SDev	0.00350	0.00336	0.00124	0.00074	0.49	0.34345	0.00063
%RSD	214.15	39.006	114.91	11.762	0.26696	512.29	31.333

#1	0.00096	0.00587	-0.00216	-0.00637	183.67	-0.16313	0.00275
#2	-0.00592	0.00589	-0.00216	-0.00723	184.65	-0.28827	0.00131
#3	-0.00306	0.01274	-0.00001	-0.00629	184.63	0.31956	0.00172
#4	0.00147	0.00998	-0.00001	-0.00541	183.94	0.40001	0.00228

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
Avg	492.50	0.00762	0.00102	0.00575	-0.02688	0.07687	-0.00266
SDev	1.64	0.00010	0.01113	0.00311	0.00494	0.04912	0.04920
%RSD	0.33238	1.2795	1087.7	54.029	18.373	63.906	1851.8

#1	490.66	0.00752	0.01059	0.00354	-0.02348	0.07821	-0.06935
#2	494.37	0.00769	0.01073	0.00885	-0.03419	0.01571	0.04344
#3	493.24	0.00771	-0.00856	0.00796	-0.02439	0.13600	-0.00783
#4	491.73	0.00756	-0.00866	0.00265	-0.02545	0.07755	0.02310

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
Avg	0.08917	0.07244	-0.02573	0.01356	-0.02290	0.27337	0.00496
SDev	0.09914	0.01310	0.03735	0.00024	0.00056	0.09589	0.00021
%RSD	111.18	18.083	145.15	1.7897	2.4464	35.078	4.2818

#1	0.00119	0.06801	-0.04674	0.01374	-0.02222	0.13905	0.00515
#2	0.20016	0.06210	-0.04407	0.01369	-0.02290	0.36419	0.00515

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#3	.14536	.09164	.03023	.01358	-.02359	.30837	.00478
#4	.00998	.06801	-.04234	.01321	-.02290	.28186	.00478

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	ZN
Units	ppm
Avge	.00126
SDev	.00122
%RSD	96.815

#1	.00298
#2	.00010
#3	.00106
#4	.00090

Errors	NOCHECK
Value	
Range	

Method: QUANMET Sample Name: ICSAB 0014-043-1 Operator: MTW
Run Time: 05/19/00 15:14:43
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	.95386	498.45	Q.73283	.88244	.46846	.44880	481.01
SDev	.00081	2.15	.12192	.02357	.00278	.00231	.84
%RSD	.08538	.43113	16.637	2.6710	.59346	.51403	.17420
#1	.95442	501.56	Q.76371	.90196	.47230	.45224	481.03
#2	.95417	498.13	Q.76718	.86103	.46865	.44787	480.07
#3	.95265	497.33	.84223	.86308	.46604	.44733	480.84
#4	.95419	496.77	Q.55821	.90370	.46687	.44774	482.10
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
Avg	.96930	.45254	.44257	.48078	184.25	10.190	.97806
SDev	.01081	.00138	.00231	.00237	.48	.389	.00644
%RSD	1.1155	.30583	.52097	.49318	.25900	3.8178	.65869
#1	.98095	.45181	.44406	.48387	184.95	9.6516	.98510
#2	.96381	.45461	.44296	.48099	183.97	10.572	.98061
#3	.95712	.45189	.43920	.48005	183.95	10.215	.97661
#4	.97533	.45184	.44405	.47819	184.12	10.322	.96992
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
Avg	492.34	.46195	.89927	10.110	.87596	1.0325	.93829
SDev	1.86	.00135	.01989	.061	.02562	.0364	.05410
%RSD	.37861	.29320	2.2123	.60160	2.9248	3.5237	5.7662
#1	495.11	.46385	.92228	10.122	.90671	1.0718	1.0181
#2	491.72	.46162	.87391	10.158	.88334	1.0439	.92546
#3	491.43	.46064	.89802	10.139	.86793	.98465	.90491
#4	491.09	.46170	.90286	10.022	.84588	1.0296	.90467
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
Avg	1.0898	1.0459	.84967	.93492	.88820	9.0753	.46547
SDev	.1036	.0102	.07111	.00568	.00334	.0772	.00263
%RSD	9.5068	.97856	8.3686	.60784	.37651	.85042	.56475
#1	Q1.2330	1.0548	Q.78102	.94327	.89318	9.1828	.46870
#2	1.0028	1.0312	.94911	.93375	.88700	9.0698	.46653

#3	1.0261	1.0488	.84113	.93161	.88597	9.0476	.46328
#4	1.0971	1.0488	.82743	.93107	.88666	9.0011	.46338

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	10.000	.50000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem ZN
Units ppm
Avge .93345
SDev .00486
%RSD .52107

#1 .94018
#2 .93213
#3 .93293
#4 .92858

Errors QC Pass
Value 1.0000
Range 20.000

Method: QUANMET Sample Name: DDC39BT Operator: MTW
Run Time: 05/19/00 15:20:12
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	-.00263	-.01924	-.03591	.00841	-.00013	.00004	.00810
SDev	.00190	.01190	.06727	.01580	.00041	.00001	.00288
%RSD	72.291	61.846	187.33	187.93	317.65	24.359	35.628

#1	-.00303	-.02011	-.00263	.00908	.00008	.00005	.00932
#2	-.00453	-.03520	-.08983	-.00698	-.00075	.00005	.00379
#3	-.00299	-.01458	.04278	.00156	.00008	.00003	.00994
#4	.00001	-.00709	-.09397	.02996	.00008	.00003	.00932

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00059	-.00274	-.00189	-.00000	.02655	-.34191	-.00120
SDev	.00161	.00305	.00209	.00121	.00087	.43049	.00182
%RSD	274.55	111.04	110.61	324860.	3.2727	125.91	151.90

#1	-.00199	-.00102	-.00431	-.00047	.02741	-.40448	-.00375
#2	.00169	-.00652	-.00270	-.00141	.02534	-.89611	-.00125
#3	-.00068	.00035	-.00108	.00141	.02672	.13185	.00025
#4	-.00136	-.00377	.00054	.00047	.02672	-.19889	-.00004

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00974	-.00024	-.00120	-.00044	-.00816	-.03921	-.01546
SDev	.01973	.00050	.00241	.00616	.00318	.00943	.01539
%RSD	202.53	206.14	200.66	1392.9	39.037	24.042	99.554

#1	-.03409	-.00049	-.00241	-.00487	-.00974	-.03732	-.02822
#2	-.01739	-.00049	-.00241	-.00442	-.00691	-.03742	.00253
#3	.00765	-.00049	.00242	.00841	-.01162	-.02981	-.00782
#4	.00487	.00051	-.00241	-.00088	-.00437	-.05230	-.02833

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.04875	-.01480	-.00105	-.00003	-.00043	.01376	-.00188
SDev	.02492	.00005	.02566	.00006	.00034	.06373	.00360
%RSD	51.121	.31046	2452.1	200.00	80.000	463.15	191.33

#1	-.05657	-.01484	-.02660	.00000	-.00026	-.01424	-.00500
#2	-.07221	-.01484	-.01665	-.00011	-.00094	.08663	-.00500

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#3	-.05266	-.01476	.00880	.00000	-.00026	-.05909	.00128
#4	-.01358	-.01476	.03028	.00000	-.00026	.04175	.00119

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.00262
SDev	.00038
%RSD	14.540

#1	.00281
#2	.00280
#3	.00283
#4	.00205

Errors	NOCHECK
High	
Low	

Method: QUANMET Sample Name: DDA9GBT Operator: MTW
Run Time: 05/19/00 15:23:20
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	-.00112	-.00327	.14142	.02194	.03849	.00003	.37750
SDev	.00143	.00807	.05010	.01718	.00026	.00011	.00230
%RSD	128.19	246.86	35.428	78.334	.66214	371.60	.60814

#1	-.00150	.00042	.09965	.04768	.03869	.00003	.37807
#2	-.00298	-.01450	.21360	.01426	.03869	.00016	.38041
#3	.00000	-.00320	.11867	.01217	.03817	.00003	.37645
#4	.00001	.00420	.13375	.01364	.03839	-.00011	.37507

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00214	-.00036	.00067	.00211	.00724	.33297	-.00068
SDev	.00128	.00363	.00092	.00090	.00087	.13547	.00036
%RSD	59.876	1018.2	137.05	42.642	11.987	40.684	52.714

#1	-.00225	-.00516	-.00054	.00140	.00741	.23017	-.00078
#2	-.00348	.00308	.00053	.00328	.00741	.50727	-.00098
#3	-.00243	.00170	.00162	.00141	.00603	.37319	-.00016
#4	-.00040	-.00105	.00108	.00234	.00810	.22123	-.00078

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06887	.00025	-.00482	S3514.8	-.00379	.01301	-.01797
SDev	.00601	.00050	.00278	.4	.00652	.00703	.01184
%RSD	8.7283	199.69	57.750	.01001	172.02	54.033	65.912

#1	.06609	.00050	-.00241	S3514.3	-.00961	.02217	-.02833
#2	.07722	-.00050	-.00723	S3515.1	.00458	.00750	-.02812
#3	.06887	.00050	-.00723	S3514.9	-.00826	.00749	-.00771
#4	.06331	.00050	-.00241	S3514.9	-.00187	.01486	-.00772

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01854	.00889	.00090	.00297	-.00009	.02792	.00176
SDev	.02896	.00003	.00917	.00018	.00044	.09473	.00235
%RSD	156.23	.33075	1020.2	5.9372	516.40	339.33	133.42

#1	.00589	.00886	.00674	.00279	-.00026	.00837	-.00005
#2	.00198	.00892	.00478	.00294	-.00060	.13147	.00481

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#3	-.02538	.00886	-.01278	.00294	.00009	-.09248	-.00014
#4	-.05664	.00889	.00487	.00321	.00043	.06431	.00243

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.01433
SDev	.00068
%RSD	4.7703

#1	.01523
#2	.01391
#3	.01371
#4	.01445

Errors	NOCHECK
High	
Low	

Method: QUANMET Sample Name: DDC39CT Operator: MTW
Run Time: 05/19/00 15:26:28
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	.04693	1.9752	2.2196	.99808	1.9675	.04767	L.40185
SDev	.00193	.0334	.0662	.02636	.0361	.00084	.00878
%RSD	4.1150	1.6906	2.9840	2.6415	1.8369	1.7594	2.1839

#1	.04612	1.9287	2.2003	.95866	1.9235	.04650	L.38952
#2	.04919	1.9869	2.2603	1.0134	1.9717	.04784	L.40292
#3	.04473	2.0074	2.2828	1.0119	2.0116	.04850	L.40479
#4	.04769	1.9776	2.1351	1.0084	1.9631	.04784	L.41017

Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Low
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	.04731	.47454	.19262	.24702	1.0220	L.43353	.95532
SDev	.00150	.00855	.00319	.00538	.0152	.42815	.01899
%RSD	3.1701	1.8007	1.6554	2.1780	1.4920	98.759	1.9882

#1	.04537	.46186	.18803	.24069	1.0004	L-.16313	.94057
#2	.04787	.47693	.19289	.24632	1.0246	L.53409	.95188
#3	.04893	.47966	.19504	.25382	1.0363	L.50727	.98296
#4	.04709	.47969	.19450	.24726	1.0266	L.85589	.94589

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
Avg	L.06679	.48180	-.00346	S3514.1	.48132	.47200	L-.00382
SDev	.01293	.00802	.00462	.5	.01335	.01431	.00503
%RSD	19.357	1.6640	133.34	.01451	2.7728	3.0312	131.66

#1	L.05774	.47054	-.00708	S3514.5	.46338	.45119	L-.00152
#2	L.07166	.48355	-.00226	S3513.4	.47898	.48137	L-.00126
#3	L.05496	.48955	.00257	S3514.0	.49048	.48144	L-.00114
#4	L.08279	.48355	-.00708	S3514.4	.49242	.47399	L-.01137

Errors	LC Low	LC Pass	NOCHECK	LC High	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
Avg	2.1552	.01500	.02862	.96566	-.00026	1.9507	.48061
SDev	.0802	.00010	.02107	.01732	.00028	.0601	.00819
%RSD	3.7218	.69662	73.619	1.7937	108.87	3.0832	1.7033

#1	2.0379	.01486	.06001	.94440	-.00026	1.9426	.47002
#2	2.1904	.01500	.02078	.96710	-.00026	1.8750	.48125

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#3	2.2178	.01512	.01490	.98674	-.00060	2.0205	.49000
#4	2.1747	.01500	.01878	.96438	.00009	1.9646	.48116
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	.50935						
SDev	.00866						
%RSD	1.7006						
#1	.49721						
#2	.50936						
#3	.51397						
#4	.51685						
Errors	LC Pass						
High	.60000						
Low	.40000						

Method: QUANMET Sample Name: DD6A4T

Operator: MTW

Run Time: 05/19/00 15:29:40

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
Avg	-.00412	.05159	.10858	.16272	1.3151	.00006	H737.26
SDev	.00355	.01389	.04746	.00370	.0171	.00007	2.57
%RSD	86.270	26.923	43.709	2.2749	1.3014	122.77	.34883
#1	-.00149	.04925	.03836	.16632	1.3196	.00016	H739.75
#2	-.00449	.04164	.14094	.15985	1.3290	.00002	H733.67
#3	-.00901	.04362	.12194	.16548	1.3216	.00002	H737.56
#4	-.00149	.07186	.13309	.15922	1.2901	.00002	H738.07
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	.00098	-.00128	-.00297	.00749	.04415	1.6939	.00107
SDev	.00221	.00284	.00129	.00121	.00242	.4614	.00113
%RSD	224.61	221.95	43.276	16.164	5.4889	27.238	105.85
#1	.00249	.00112	-.00162	.00796	.04656	2.1609	.00054
#2	-.00049	-.00300	-.00216	.00702	.04242	1.4995	.00075
#3	.00322	-.00438	-.00432	.00609	.04173	1.1419	.00025
#4	-.00129	.00114	-.00378	.00890	.04587	1.9732	.00275
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	9.5372	.09472	-.00602	S3514.0	-.00219	-.03916	.02577
SDev	.0986	.00096	.00723	.3	.00536	.00363	.05194
%RSD	1.0337	1.0129	120.13	.00758	244.56	9.2669	201.54
#1	9.5831	.09547	-.00240	S3513.8	.00167	-.04460	.08477
#2	9.6220	.09547	.00242	S3514.0	-.00888	-.03742	-.03848
#3	9.5469	.09347	-.01205	S3514.4	-.00413	-.03736	.04374
#4	9.3966	.09447	-.01205	S3513.8	.00258	-.03726	.01306
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01547	2.7448	.00667	2.3474	-.04623	.03365	.00482
SDev	.02056	.0118	.00856	.0279	.00040	.05200	.00014
%RSD	132.92	.43056	128.39	1.1880	.85693	154.51	2.9445
#1	-.00569	2.7507	.01724	2.3550	-.04589	.05322	.00490
#2	-.01352	2.7507	.00294	2.3691	-.04658	-.03631	.00499

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#3	-.04479	2.7507	.00921	2.3590	-.04658	.03090	.00470
#4	.00212	2.7270	-.00271	2.3066	-.04589	.08681	.00470
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	.04395
SDev	.00175
%RSD	3.9805

#1	.04366
#2	.04553
#3	.04499
#4	.04160

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD6A4TP5 Operator: MTW
Run Time: 05/19/00 15:32:53
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	-.00298	.00233	.03501	.00967	.27943	.00009	156.33
SDev	.00123	.01416	.02075	.00120	.00405	.00008	.52
%RSD	41.119	609.17	59.271	12.416	1.4484	88.031	.33539
#1	-.00298	.00796	.03117	.01071	.27648	.00002	156.16
#2	-.00298	-.00520	.05785	.01071	.27574	.00016	155.67
#3	-.00449	-.01272	.00856	.00863	.28431	.00002	156.70
#4	-.00148	.01927	.04246	.00863	.28118	.00016	156.81
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	.00016	-.00081	-.00135	.00187	.00634	.52962	.00018
SDev	.00062	.00235	.00243	.00121	.00089	.41290	.00030
%RSD	398.01	289.07	179.80	64.653	14.049	77.961	170.24
#1	.00076	.00159	.00162	.00234	.00531	1.0257	.00025
#2	.00046	.00022	-.00162	.00328	.00669	.51621	.00025
#3	.00008	-.00390	-.00432	.00047	.00600	.01564	-.00025
#4	-.00068	-.00115	-.00109	.00140	.00738	.56091	.00046
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	2.0328	.02074	-.00603	261.19	.00437	-.02611	.00008
SDev	.0123	.00050	.00462	4.40	.00683	.01775	.00985
%RSD	.60579	2.4031	76.605	1.6848	156.39	67.972	12071.
#1	2.0251	.02049	-.00241	257.09	.00358	-.03723	-.00767
#2	2.0196	.02049	-.00241	258.40	.01023	-.00000	-.00756
#3	2.0418	.02049	-.00723	266.85	.00863	-.02989	.01298
#4	2.0446	.02149	-.01206	262.41	-.00496	-.03730	.00257
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	-.03027	.56141	.01622	.50092	-.01021	.02802	.00483
SDev	.03368	.01132	.00897	.00654	.00049	.03085	.00009
%RSD	111.27	2.0154	55.288	1.3063	4.7537	110.09	1.8853
#1	-.06447	.55255	.02060	.49583	-.01021	.00841	.00490
#2	-.05274	.57619	.00687	.49557	-.01055	-.00279	.00490

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#3	.00588	.55255	.01089	.50926	-.01055	.04205	.00480
#4	-.00974	.56437	.02653	.50301	-.00952	.06442	.00471
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	.00927
SDev	.00063
%RSD	6.7965

#1	.00874
#2	.00871
#3	.00979
#4	.00983

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD6A4ST

Operator: MTW

Run Time: 05/19/00 15:36:00

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	.94293	.04595	5.0692	.15752	47.044	.00016	H709.29
SDev	.00335	.00414	.0511	.00803	.234	.00010	2.26
%RSD	.35571	9.0075	1.0078	5.0964	.49841	63.141	.31815
#1	.94105	.05108	5.0502	.15560	46.854	.00016	H708.91
#2	.94407	.04730	5.0920	.14703	47.039	.00029	H709.50
#3	.93952	.04372	5.1263	.16269	46.906	.00017	H706.63
#4	.94709	.04168	5.0085	.16478	47.375	.00003	H712.12
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	.96996	-.00019	4.4316	.00679	.03226	1.7475	.00066
SDev	.00501	.00183	.0218	.00090	.00228	.4078	.00104
%RSD	.51621	978.59	.49125	13.210	7.0653	23.334	157.55
#1	.96470	.00027	4.4254	.00796	.03485	2.2056	.00013
#2	.96683	.00154	4.4216	.00609	.02933	1.9196	.00222
#3	.97526	.00021	4.4157	.00703	.03278	1.2581	.00025
#4	.97307	-.00276	4.4637	.00609	.03209	1.6067	.00004
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	9.1448	.09122	-.00241	S3515.0	.00105	4.6156	.00985
SDev	.0698	.00050	.00557	.1	.00783	.0258	.02558
%RSD	.76358	.54737	231.40	.00324	747.88	.55942	259.64
#1	9.1323	.09147	.00242	S3515.1	-.00025	4.6379	-.00300
#2	9.1100	.09047	.00242	S3515.1	-.00684	4.6231	-.00295
#3	9.0905	.09147	-.00723	S3514.9	-.00059	4.5783	-.00286
#4	9.2464	.09147	-.00723	S3514.9	.01187	4.6231	.04821
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0485	2.6353	.02276	2.2520	-.04280	-.00552	.00470
SDev	.0757	.0239	.01163	.0110	.00028	.08977	.00450
%RSD	7.2245	.90512	51.100	.48996	.65451	1624.9	95.652
#1	1.1081	2.6324	.03643	2.2431	-.04246	-.05868	.00386
#2	.94393	2.6561	.00897	2.2510	-.04314	-.09241	.00756

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#3	1.0416	2.6500	.02663	2.2462	-.04280	.01979	-.00129
#4	1.1003	2.6029	.01902	2.2679	-.04280	.10920	.00869

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	.04070
SDev	.00046
%RSD	1.1334

#1	.04108
#2	.04113
#3	.04030
#4	.04031

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DD6A4DT Operator: MTW
 Run Time: 05/19/00 15:39:13
 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
Avg	.93579	.05532	5.0615	.15413	46.488	.00017	H704.57
SDev	.00554	.01384	.0635	.00402	.644	.00011	2.62
%RSD	.59212	25.017	1.2544	2.6060	1.3844	64.077	.37144
#1	.94403	.04370	5.0656	.14913	47.430	.00004	H708.42
#2	.93356	.07355	4.9929	.15288	46.071	.00017	H703.30
#3	.93203	.04548	5.1452	.15621	46.374	.00030	H702.65
#4	.93354	.05854	5.0426	.15831	46.078	.00016	H703.89
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	.96804	-.00162	4.4014	.00679	.03002	1.8324	.00040
SDev	.00888	.00203	.0229	.00140	.00225	.4953	.00156
%RSD	.91725	125.66	.52033	20.692	7.5073	27.032	394.29
#1	.96490	-.00414	4.4357	.00609	.03002	1.1687	.00025
#2	.98024	-.00212	4.3914	.00609	.03002	1.8660	-.00151
#3	.95923	-.00085	4.3909	.00890	.02726	2.3665	.00231
#4	.96777	.00065	4.3876	.00609	.03278	1.9285	.00054
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	9.0669	.08922	-.00241	S3515.5	.00553	4.5783	.00502
SDev	.0951	.00050	.00788	.3	.00513	.0272	.03066
%RSD	1.0485	.56063	327.21	.00960	92.633	.59398	610.30
#1	9.2018	.08947	-.01205	S3515.4	.01003	4.5931	-.00285
#2	9.0599	.08947	-.00241	S3515.1	.00434	4.5634	.04867
#3	8.9848	.08847	-.00241	S3515.8	.00896	4.6081	-.00253
#4	9.0210	.08947	.00724	S3515.7	-.00120	4.5485	-.02319
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0524	2.6043	.01244	2.2270	-.04323	.02538	.00403
SDev	.0284	.0419	.01867	.0285	.00071	.03825	.00414
%RSD	2.7022	1.6075	150.05	1.2796	1.6362	150.73	102.87
#1	1.0651	2.6559	-.00279	2.2687	-.04383	-.01376	-.00135
#2	1.0495	2.6206	.03863	2.2072	-.04246	.03095	.00864

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#3	1.0143	2.5733	.00113	2.2218	-.04383	.07580	.00370
#4	1.0807	2.5674	.01280	2.2103	-.04280	.00852	.00511

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	.03979
SDev	.00138
%RSD	3.4767

#1	.04080
#2	.04033
#3	.04028
#4	.03774

Errors	LC Pass
High	100.00
Low	-.02000

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Method: QUANMET Sample Name: DD6A5T

Operator: MTW

Run Time: 05/19/00 15:42:26

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	-.00451	.02065	.13835	-.00065	1.3150	.00016	H766.04
SDev	.00123	.01478	.06933	.00421	.0070	.00016	5.51
%RSD	27.231	71.587	50.117	651.80	.53034	96.037	.71982
#1	-.00452	.01932	.11847	-.00200	1.3058	.00003	H761.87
#2	-.00600	.00049	.21726	-.00493	1.3155	.00002	H760.90
#3	-.00452	.03425	.05380	-.00075	1.3162	.00031	H769.25
#4	-.00299	.02854	.16386	.00510	1.3227	.00029	H772.13
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	.00030	-.00059	-.00311	.00398	.01604	1.4838	.00010
SDev	.00162	.00131	.00178	.00140	.00266	.5045	.00195
%RSD	546.34	223.90	57.466	35.292	16.621	33.997	1898.8
#1	-.00023	-.00161	-.00432	.00234	.01483	.83801	-.00181
#2	.00217	.00113	-.00486	.00328	.01345	1.3296	.00025
#3	.00088	-.00162	-.00108	.00515	.01621	1.9196	-.00078
#4	-.00164	-.00024	-.00216	.00515	.01966	1.8481	.00275
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	9.5824	.08247	-.00482	S2634.6	.00468	-.02238	.00526
SDev	.0647	.00142	.00623	1756.5	.00531	.01363	.00983
%RSD	.67540	1.7171	129.17	66.670	113.63	60.890	186.89
#1	9.5135	.08146	-.01205	S3513.4	.00782	-.02985	.01301
#2	9.5525	.08147	-.00723	S3513.6	-.00287	-.00742	.00259
#3	9.5998	.08247	-.00241	S-.13981	.00486	-.01495	.01296
#4	9.6638	.08447	.00241	S3511.6	.00889	-.03730	-.00752
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01264	2.2661	.02570	2.5299	-.04872	.01149	.00237
SDev	.04999	.0136	.02768	.0139	.00076	.07831	.00291
%RSD	395.39	.60218	107.68	.55127	1.5615	681.70	122.62
#1	.04500	2.2543	.03260	2.5126	-.04829	-.02488	-.00024
#2	-.07616	2.2543	.06198	2.5289	-.04966	.08708	.00480

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#3	-.01753	2.2779	.00514	2.5314	-.04898	-.08089	-.00005
#4	-.00188	2.2780	.00308	2.5467	-.04795	.06464	.00499

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	.04090
SDev	.00014
%RSD	.34299

#1	.04083
#2	.04111
#3	.04083
#4	.04084

Errors	LC Pass
High	100.00
Low	-.02000

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Analysis Report

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Method: QUANMET Sample Name: CCV2-1 0014-087-7 Operator: MTW
 Run Time: 05/19/00 15:45:39
 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
Avge	.99637	51.457	5.0420	5.0095	5.0439	5.0028	50.204
SDev	.00265	.111	.0954	.0331	.0092	.0095	.130
%RSD	.26628	.21650	1.8924	.66031	.18302	.18895	.25959
#1	.99709	51.598	5.0314	5.0338	5.0557	5.0144	50.069
#2	.99254	51.358	5.1019	4.9637	5.0338	4.9955	50.180
#3	.99717	51.378	4.9115	5.0338	5.0405	5.0065	50.186
#4	.99867	51.493	5.1231	5.0066	5.0454	4.9947	50.382
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9490	4.9068	4.9025	5.0687	51.628	52.408	5.1903
SDev	.0202	.0056	.0105	.0179	.065	.718	.0560
%RSD	.40864	.11339	.21413	.35359	.12578	1.3692	1.0795
#1	4.9249	4.9117	4.8945	5.0946	51.617	53.425	5.2740
#2	4.9495	4.9103	4.8945	5.0544	51.561	52.111	5.1662
#3	4.9470	4.8993	4.9042	5.0656	51.617	51.762	5.1553
#4	4.9744	4.9061	4.9166	5.0600	51.717	52.334	5.1656
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	51.254	4.9124	4.9257	52.654	4.9262	4.9587	5.0107
SDev	.101	.0073	.0301	.472	.0377	.0372	.0200
%RSD	.19792	.14959	.61096	.89570	.76469	.74932	.39837
#1	51.344	4.9068	4.9052	53.342	4.8885	5.0090	4.9848
#2	51.113	4.9078	4.8956	52.573	4.9782	4.9197	5.0268
#3	51.308	4.9119	4.9438	52.301	4.9228	4.9492	5.0260
#4	51.252	4.9229	4.9583	52.402	4.9153	4.9567	5.0051
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	5.2498	4.9087	4.8531	5.0422	4.9676	9.8146	4.9638
SDev	.0996	.0296	.0280	.0078	.0049	.1379	.0094
%RSD	1.8963	.60281	.57642	.15523	.09887	1.4047	.18860
#1	5.3260	4.8939	4.8765	5.0526	4.9720	9.8231	4.9593
#2	5.3101	4.8938	4.8433	5.0343	4.9617	9.8349	4.9530

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#3	5.2556	4.8940	4.8178	5.0386	4.9654	9.6327	4.9737
#4	5.1075	4.9531	4.8746	5.0434	4.9713	9.9677	4.9690

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	4.9279
SDev	.0097
%RSD	.19745

#1	4.9146
#2	4.9359
#3	4.9343
#4	4.9269

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB1

Operator: MTW

Run Time: 05/19/00 15:48:46

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	-.00112	.00226	.02179	.01102	.00078	.00048	.01145
SDev	.00144	.00735	.02088	.01596	.00025	.00028	.00920
%RSD	128.75	324.91	95.815	144.76	31.536	59.639	80.387
#1	-.00150	.00419	-.00289	.03346	.00060	.00017	.00074
#2	.00002	.01163	.04255	.01113	.00060	.00030	.00708
#3	-.00301	-.00524	.03516	-.00203	.00112	.00072	.02082
#4	.00000	-.00153	.01234	.00153	.00081	.00072	.01715
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	.00139	-.00206	-.00270	.00070	.00345	.01341	-.00005
SDev	.00210	.00132	.00088	.00047	.00103	.28987	.00054
%RSD	150.85	63.763	32.670	66.783	29.996	2161.9	1055.1
#1	-.00108	-.00103	-.00270	.00047	.00258	.02458	-.00046
#2	.00061	-.00241	-.00270	.00140	.00259	.41789	.00075
#3	.00381	-.00104	-.00377	.00047	.00397	-.22570	-.00025
#4	.00224	-.00378	-.00162	.00047	.00466	-.16313	-.00025
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	.00557	.00075	.00482	.02223	-.00457	-.03732	.00251
SDev	.00766	.00050	.00279	.01658	.00377	.03385	.01452
%RSD	137.69	66.333	57.732	74.591	82.421	90.720	579.31
#1	.00209	.00050	.00241	.00664	-.00784	-.02982	.01275
#2	.01044	.00150	.00241	.01062	-.00448	-.08203	.01281
#3	.01322	.00050	.00723	.04203	-.00664	-.03728	.00248
#4	-.00348	.00050	.00723	.02964	.00068	-.00013	-.01801
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	.01076	-.04431	.00344	.00013	.00026	.00838	.00102
SDev	.03740	.02772	.00560	.00027	.00071	.07972	.00182
%RSD	347.62	62.571	162.52	200.00	277.56	951.53	179.68
#1	.00978	-.03250	.00497	.00000	-.00060	-.05882	.00004
#2	-.04103	-.03245	-.00485	.00000	.00112	.09798	.00375

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#3	.04496	-.08568	.00688	.00054	.00009	.05317	.00013
#4	.02933	-.02659	.00678	.00000	.00043	-.05882	.00014

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	.00209
SDev	.00072
%RSD	34.263

#1	.00153
#2	.00153
#3	.00229
#4	.00302

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DD6A6T

Operator: MTW

Run Time: 05/19/00 15:51:54

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	-.00489	.02999	.19046	.03134	1.3470	.00020	H827.24
SDev	.00284	.00971	.05291	.00404	.0146	.00007	2.02
%RSD	58.142	32.392	27.780	12.894	1.0823	37.887	.24432
#1	-.00303	.03423	.12973	.03557	1.3498	.00031	H825.76
#2	-.00451	.03410	.16382	.02638	1.3402	.00016	H826.40
#3	-.00903	.01548	.24374	.02993	1.3660	.00016	H830.23
#4	-.00301	.03613	.22455	.03348	1.3321	.00016	H826.58
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	-.00402	-.00093	-.00270	.00562	.01257	1.7118	.00215
SDev	.00149	.00286	.00261	.00094	.00182	.3951	.00142
%RSD	37.123	308.59	96.520	16.707	14.451	23.081	65.995
#1	L-.00567	-.00024	-.00378	.00609	.01413	1.8570	.00424
#2	-.00333	-.00161	-.00324	.00609	.01275	1.7676	.00145
#3	-.00476	-.00436	-.00486	.00421	.00998	1.1509	.00178
#4	-.00231	.00251	.00108	.00609	.01344	2.0716	.00113
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.487	.13170	-.00120	S-.13981	.00505	-.02051	.02070
SDev	.103	.00050	.00824	.00000	.00751	.02148	.02697
%RSD	.76442	.37746	684.21	.00000	148.61	104.71	130.29
#1	13.523	.13145	.00241	S-.13981	.00404	-.01496	-.01779
#2	13.437	.13145	.00724	S-.13981	.01596	-.03729	.02335
#3	13.612	.13244	-.01206	S-.13981	-.00004	-.03735	.03355
#4	13.376	.13145	-.00241	S-.13981	.00024	.00756	.04370
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	-.07714	3.0062	-.00069	2.3081	L-.05292	.06780	.00337
SDev	.02560	.0325	.01537	.0237	.00103	.04228	.00234
%RSD	33.188	1.0803	2228.1	1.0261	1.9449	62.364	69.283
#1	-.06443	3.0342	-.01264	2.3118	L-.05241	.03140	.00004
#2	-.06053	2.9752	-.01049	2.2981	L-.05241	.03139	.00508

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#3	-.06836	3.0343	-.00062	2.3391	L-.05447	.09866	.00347
#4	-.11524	2.9811	.02099	2.2835	L-.05241	.10975	.00490

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	.05099
SDev	.00149
%RSD	2.9193

#1	.05195
#2	.04934
#3	.05016
#4	.05251

Errors	LC Pass
High	100.00
Low	-.02000

6571038

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Method: QUANMET Sample Name: DD6A7T

Operator: MTW

Run Time: 05/19/00 15:55:07

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	-.00488	.03237	.18187	.05264	1.3489	.00016	H780.88
SDev	.00075	.00530	.08602	.00098	.0100	.00011	3.17
%RSD	15.408	16.372	47.298	1.8714	.74278	70.469	.40549
#1	-.00450	.03984	.06506	.05331	1.3519	.00016	H782.47
#2	-.00600	.02858	.17146	.05269	1.3605	.00029	H783.41
#3	-.00450	.02862	.23221	.05332	1.3366	.00016	H776.31
#4	-.00450	.03242	.25876	.05123	1.3465	.00002	H781.32
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	-.00016	-.00026	-.00324	.00492	.01448	1.6447	.00025
SDev	.00126	.00001	.00171	.00118	.00089	.5350	.00000
%RSD	809.10	3.1356	52.640	23.965	6.1401	32.528	.00000
#1	.00128	-.00026	-.00432	.00328	.01345	.84695	.00025
#2	.00048	-.00026	-.00270	.00515	.01482	1.9911	.00025
#3	-.00150	-.00025	-.00108	.00609	.01552	1.8570	.00025
#4	-.00088	-.00025	-.00486	.00515	.01414	1.8838	.00025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.302	.09171	-.00603	S877.92	.00589	-.02982	.01559
SDev	.065	.00126	.00462	1756.1	.00815	.01053	.02275
%RSD	.48687	1.3719	76.621	200.03	138.38	35.312	145.91
#1	13.329	.09346	-.00241	S-.13981	-.00406	-.03723	.04372
#2	13.382	.09146	-.00241	S3512.1	.01515	-.02980	.02342
#3	13.251	.09046	-.00723	S-.13981	.00358	-.03729	-.00758
#4	13.248	.09146	-.01205	S-.13981	.00889	-.01493	.00281
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	600.00	100.00	50.000	400.00	100.00	100.00	100.00
Low	-5.0000	-.01500	-.04000	-5.0000	-.04000	-.10000	-.06000
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00679	2.6561	.00810	2.0646	-.04958	.02554	.00482
SDev	.03990	.0000	.02393	.0139	.00043	.02332	.00009
%RSD	588.01	.00000	295.39	.67191	.87080	91.330	1.8664
#1	-.05271	2.6561	.00529	2.0689	-.04898	.01996	.00489
#2	.00592	2.6561	-.02422	2.0807	L-.05001	.03113	.00489

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#3	-.02144	2.6561	.03055	2.0476	-.04966	-.00248	.00480
#4	.04109	2.6561	.02079	2.0613	-.04966	.05354	.00470
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	.03131
SDev	.00171
%RSD	5.4670

#1	.03000
#2	.03381
#3	.03095
#4	.03048

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: CCV2-2

Operator: MTW

Run Time: 05/19/00 15:58:20

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
Avge	1.0054	51.720	5.1111	5.0740	5.0815	5.0459	50.996
SDev	.0040	.119	.0857	.0234	.0257	.0188	.261
%RSD	.39917	.23091	1.6772	.46086	.50484	.37233	.51218
#1	1.0020	51.632	5.0639	5.0611	5.0741	5.0418	50.729
#2	1.0097	51.858	5.1219	5.1077	5.1147	5.0721	50.895
#3	1.0020	51.780	5.0318	5.0713	5.0841	5.0426	51.014
#4	1.0080	51.609	5.2269	5.0558	5.0530	5.0273	51.347
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	5.0055	4.9691	4.9675	5.0859	52.229	51.342	5.0811
SDev	.0213	.0136	.0182	.0233	.118	.512	.0262
%RSD	.42643	.27383	.36700	.45846	.22666	.99640	.51636
#1	4.9745	4.9527	4.9474	5.0854	52.064	51.628	5.0875
#2	5.0221	4.9662	4.9662	5.1144	52.332	50.850	5.0966
#3	5.0163	4.9718	4.9646	5.0863	52.226	50.975	5.0979
#4	5.0090	4.9855	4.9916	5.0573	52.295	51.914	5.0424
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	51.549	4.9770	4.9704	52.061	4.9897	5.0012	5.0850
SDev	.158	.0136	.0251	.068	.0229	.0520	.0369
%RSD	.30732	.27373	.50450	.13027	.45905	1.0405	.72503
#1	51.475	4.9570	4.9342	51.969	4.9943	4.9878	5.0675
#2	51.781	4.9850	4.9777	52.099	4.9864	4.9732	5.1389
#3	51.513	4.9800	4.9777	52.123	4.9613	4.9659	5.0771
#4	51.427	4.9860	4.9921	52.052	5.0168	5.0781	5.0567
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	5.2188	4.9700	4.9558	5.0732	5.0148	9.8275	5.0207
SDev	.0406	.0170	.0384	.0205	.0129	.1041	.0123
%RSD	.77746	.34291	.77577	.40462	.25657	1.0589	.24403
#1	5.2377	4.9477	4.9258	5.0654	5.0052	9.7173	5.0094
#2	5.2074	4.9717	4.9457	5.0990	5.0330	9.9608	5.0375

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#3	5.1680	4.9892	4.9396	5.0778	5.0145	9.8499	5.0214
#4	5.2620	4.9714	5.0121	5.0505	5.0063	9.7820	5.0144

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	4.9749
SDev	.0167
%RSD	.33522

#1	4.9528
#2	4.9856
#3	4.9897
#4	4.9717

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB2

Operator: MTW

Run Time: 05/19/00 16:01:28

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
Avge	-.00150	.00180	.00188	.00304	.00071	.00055	.01995
SDev	.00123	.00541	.04457	.00803	.00035	.00042	.02174
%RSD	81.749	300.34	2375.8	264.40	49.509	77.392	108.97
#1	-.00301	-.00526	.04655	.00152	.00029	.00017	-.00021
#2	.00000	.00227	.03130	-.00057	.00060	.00031	.00613
#3	-.00150	.00227	-.04844	.01468	.00081	.00058	.02592
#4	-.00150	.00794	-.02191	-.00348	.00112	.00113	.04796
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	-.00165	-.00068	-.00108	.00023	.00379	-.31733	-.00045
SDev	.00189	.00173	.00088	.00090	.00495	.21044	.00170
%RSD	114.15	252.70	81.804	384.23	130.58	66.317	378.98
#1	-.00203	-.00240	-.00216	-.00047	-.00155	-.54750	-.00295
#2	.00036	-.00103	-.00108	.00047	.00190	-.32403	-.00004
#3	-.00407	-.00102	.00000	-.00047	.00466	-.35978	.00054
#4	-.00086	.00172	-.00108	.00141	.01017	-.03799	.00066
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	-.00278	.00100	.00723	.03617	-.00489	-.01678	.00248
SDev	.01075	.00058	.00000	.02516	.00441	.02466	.02219
%RSD	386.22	57.649	.01024	69.566	90.239	146.95	895.66
#1	-.01461	.00050	.00723	.01106	-.00927	-.05225	-.01806
#2	-.00904	.00050	.00723	.01902	.00077	-.01489	.03330
#3	.00765	.00150	.00723	.05088	-.00732	-.00004	-.00782
#4	.00487	.00150	.00724	.06371	-.00375	.00004	.00249
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	-.01855	-.07238	.00344	.00056	.00026	.02797	.00014
SDev	.04629	.02659	.00906	.00043	.00034	.06225	.00000
%RSD	249.56	36.735	263.10	76.549	133.33	222.53	1.2720
#1	-.03323	-.03250	-.00891	.00027	-.00026	-.04757	.00014
#2	-.07620	-.08568	.01290	.00027	.00043	.09800	.00014

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#3	.02933	-.08568	.00487	.00054	.00043	.00837	.00014
#4	.00590	-.08568	.00492	.00118	.00043	.05309	.00014

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	.00203
SDev	.00070
%RSD	34.600

#1	.00100
#2	.00226
#3	.00260
#4	.00227

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDEK8B Operator: MTW
Run Time: 05/19/00 16:06:19
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	-.00075	-.00515	.00859	.02129	.00024	-.00000	.01025
SDev	.00087	.00732	.03547	.00565	.00011	.00007	.00133
%RSD	115.47	142.34	413.06	26.521	45.161	289e6	12.982
#1	-.00000	-.00887	-.01037	.01320	.00029	.00003	.01085
#2	-.00150	.00421	-.00668	.02280	.00008	-.00010	.00971
#3	.00000	-.00328	.06172	.02635	.00029	.00003	.01176
#4	-.00150	-.01264	-.01033	.02281	.00029	.00003	.00870
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	.00034	-.00108	.00047	-.00017	-.01341	-.00085
SDev	.00171	.00194	.00182	.00133	.00098	.33273	.00073
%RSD	528.76	563.26	168.28	282.85	562.93	2481.6	86.207
#1	.00213	.00171	-.00054	-.00047	.00052	-.10950	-.00122
#2	-.00064	.00035	-.00324	.00047	-.00155	-.06481	.00025
#3	-.00179	.00172	.00108	.00234	.00052	.45364	-.00122
#4	-.00100	-.00240	-.00162	-.00047	-.00017	-.33297	-.00122
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	-.00209	-.00000	-.00121	.00542	-.00318	-.02420	.00256
SDev	.01213	.00100	.00462	.00230	.00511	.01763	.01459
%RSD	581.19	289840.	382.96	42.352	161.01	72.838	570.49
#1	-.00904	.00150	-.00241	.00442	.00043	.00007	.01285
#2	-.00904	-.00050	.00241	.00442	-.00402	-.03725	.00252
#3	.01600	-.00050	.00241	.00885	-.01008	-.03723	-.01807
#4	-.00626	-.00050	-.00723	.00398	.00096	-.02240	.01293
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	-.04397	-.06500	-.00146	-.00011	-.00026	.03920	-.00003
SDev	.06643	.00591	.01243	.00018	.00028	.03699	.00009
%RSD	151.08	9.0909	852.08	172.50	108.87	94.365	352.55
#1	-.01758	-.07386	.00300	-.00016	.00009	.04199	-.00005
#2	.00195	-.06204	.01080	-.00016	-.00026	-.00279	.00004

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#3	-.14265	-.06204	-.00106	.00016	-.00026	.08678	.00005
#4	-.01759	-.06204	-.01857	-.00027	-.00060	.03082	-.00014

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	.00222
SDev	.00063
%RSD	28.334

#1	.00204
#2	.00152
#3	.00229
#4	.00303

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDEK8C Operator: MTW
 Run Time: 05/19/00 16:09:27
 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	.04812	2.0278	1.9769	.98842	2.0817	.05037	L.01734
SDev	.00257	.0028	.0229	.01996	.0112	.00020	.00173
%RSD	5.3321	.13903	1.1591	2.0198	.54035	.40006	9.9824
#1	.04474	2.0246	2.0016	1.0020	2.0962	.05055	L.01548
#2	.04925	2.0302	1.9902	.99781	2.0717	.05014	L.01796
#3	.04777	2.0264	1.9635	.95878	2.0848	.05053	L.01648
#4	.05075	2.0302	1.9522	.99510	2.0740	.05027	L.01944
Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Low
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	.04582	.49267	.19827	.25898	1.0916	L.10056	1.0582
SDev	.00177	.00237	.00159	.00162	.0031	.20957	.0131
%RSD	3.8565	.48210	.80094	.62555	.28419	208.40	1.2420
#1	.04420	.49061	.19612	.26132	1.0901	L-.10950	1.0651
#2	.04745	.49198	.19882	.25851	1.0901	L.31062	1.0625
#3	.04725	.49610	.19989	.25758	1.0963	L-.04693	1.0664
#4	.04438	.49199	.19827	.25851	1.0901	L.24805	1.0386
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	L-.01113	.50206	-.00466	L.01294	.50068	.46499	L-.01123
SDev	.01389	.00208	.00278	.00524	.01173	.04813	.02220
%RSD	124.79	.41474	59.763	40.488	2.3432	10.350	197.75
#1	L-.02017	.49956	-.00707	L.00664	.50035	.40717	L-.02147
#2	L-.00070	.50256	-.00225	L.01283	.48616	.44445	L-.03190
#3	L-.02574	.50456	-.00225	L.01947	.50131	.51170	L.01954
#4	L.00209	.50156	-.00707	L.01283	.51488	.49664	L-.01108
Errors	LC Low	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	2.0177	-.07941	.00849	1.0389	-.00026	1.9723	.49111
SDev	.0485	.00003	.00892	.0053	.00084	.0392	.00251
%RSD	2.4061	.04027	105.05	.50798	326.60	1.9886	.51031
#1	2.0460	-.07943	.00894	1.0458	-.00129	2.0311	.48982
#2	1.9913	-.07943	.00104	1.0343	.00043	1.9527	.48992

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#3	2.0695	-.07936	.02090	1.0404	-.00060	1.9526	.49487
#4	1.9639	-.07943	.00310	1.0353	.00043	1.9527	.48982
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	.49239						
SDev	.00379						
%RSD	.77013						
#1	.48702						
#2	.49249						
#3	.49452						
#4	.49551						
Errors	LC Pass						
High	.60000						
Low	.40000						

Method: QUANMET Sample Name: DDA67
Run Time: 05/19/00 16:12:40
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	-.00149	.05166	.00139	.05039	.06351	.00003	60.041
SDev	.00123	.00675	.02390	.00106	.00045	.00001	.169
%RSD	82.529	13.062	1722.0	2.1008	.71308	20.239	.28074
#1	-.00147	.05499	-.02243	.04918	.06374	.00002	59.885
#2	-.00300	.05679	.03459	.05128	.06396	.00003	59.945
#3	-.00149	.04180	-.00327	.05128	.06344	.00003	60.068
#4	.00001	.05308	-.00334	.04982	.06291	.00003	60.267
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	-.00300	.00067	.03062	.00305	.03999	1.5486	.00590
SDev	.00123	.00343	.00120	.00118	.00142	.4464	.00059
%RSD	40.905	514.00	3.9059	38.739	3.5579	28.823	10.015
#1	-.00173	.00581	.03021	.00422	.04119	2.0447	.00677
#2	-.00241	-.00105	.02914	.00141	.03912	.97209	.00574
#3	-.00457	-.00104	.03183	.00328	.03843	1.4995	.00554
#4	-.00327	-.00105	.03129	.00328	.04119	1.6782	.00554
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	22.536	.00576	-.00602	15.720	-.00713	-.00373	-.00538
SDev	.124	.00050	.00241	.125	.00336	.02322	.03788
%RSD	.55152	8.6753	40.038	.79271	47.066	622.41	704.01
#1	22.437	.00551	-.00723	15.549	-.00449	.00758	-.00793
#2	22.709	.00551	-.00241	15.776	-.01182	-.03732	-.00798
#3	22.542	.00651	-.00723	15.839	-.00727	-.00010	-.04905
#4	22.456	.00551	-.00723	15.719	-.00494	.01492	.04344
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	-.05652	11.697	-.00834	.10188	-.00309	-.03120	.00149
SDev	.01150	.035	.02530	.00071	.00033	.07346	.00232
%RSD	20.349	.29720	303.28	.69491	10.638	235.48	155.74
#1	-.05652	11.650	.01469	.10121	-.00300	-.05928	.00487
#2	-.04480	11.732	-.02061	.10281	-.00335	-.09277	.00001

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#3	-.05262	11.697	.01058	.10201	-.00335	.07524	.00116
#4	-.07215	11.709	-.03803	.10147	-.00266	-.04799	-.00008

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	.00961
SDev	.00163
%RSD	16.968

#1	.01187
#2	.00930
#3	.00799
#4	.00927

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67P5 Operator: MTW
Run Time: 05/19/00 16:15:47
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	-.00111	.00376	-.01624	.00810	.01286	.00009	12.271
SDev	.00285	.01613	.04392	.00213	.00030	.00007	.027
%RSD	256.92	429.23	270.53	26.328	2.3425	81.096	.22093
#1	-.00150	-.00140	-.01043	.00863	.01260	.00003	12.274
#2	-.00298	-.01085	.03132	.00507	.01312	.00016	12.308
#3	-.00298	.00049	-.07508	.00861	.01312	.00002	12.251
#4	.00303	.02679	-.01076	.01008	.01260	.00016	12.252
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	.00068	.00485	.00094	.00465	.52292	.00025
SDev	.00225	.00409	.00182	.00121	.00246	.38353	.00000
%RSD	379.25	599.22	37.433	129.37	52.833	73.343	.00000
#1	-.00139	-.00378	.00593	-.00047	.00465	.14079	.00025
#2	-.00328	-.00102	.00215	.00047	.00258	.34638	.00025
#3	.00195	.00171	.00593	.00141	.00327	.56985	.00025
#4	.00034	.00583	.00539	.00235	.00810	1.0347	.00025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.5999	.00150	-.00482	3.1714	.00249	.00002	-.00000
SDev	.0291	.00082	.00278	.0284	.00640	.02009	.01535
%RSD	.63329	54.500	57.746	.89424	257.20	105540.	1798400.
#1	4.6159	.00050	-.00723	3.1825	.01057	.00734	-.00761
#2	4.6214	.00150	-.00241	3.2059	-.00502	.01490	.01275
#3	4.6047	.00150	-.00723	3.1431	.00290	.00748	-.01795
#4	4.5574	.00250	-.00241	3.1541	.00150	-.02964	.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
Avge	.02542	2.3695	.01324	.02088	-.00112	-.00287	.00363
SDev	.01150	.0059	.01117	.00018	.00086	.04382	.00250
%RSD	45.230	.24893	84.340	.85357	77.434	1526.1	69.030
#1	.02151	2.3724	-.00297	.02114	-.00129	-.01402	-.00013
#2	.04105	2.3725	.02262	.02076	-.00197	-.05885	.00490

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#3	.02541	2.3725	.01659	.02076	-.00129	.01953	.00482
#4	.01371	2.3607	.01673	.02087	.00009	.04185	.00491
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	.00242
SDev	.00078
%RSD	32.309

#1	.00330
#2	.00154
#3	.00280
#4	.00204

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67S

Operator: MTW

Run Time: 05/19/00 16:18:55

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	.04815	2.1038	1.9922	1.0710	2.1295	.05084	60.227
SDev	.00075	.0125	.0183	.0000	.0159	.00020	.286
%RSD	1.5561	.59334	.91879	.00066	.74473	.38964	.47451
#1	.04776	2.0883	1.9820	1.0709	2.1137	.05068	60.074
#2	.04928	2.1109	1.9856	1.0709	2.1181	.05067	60.247
#3	.04778	2.0995	1.9819	1.0710	2.1429	.05094	59.969
#4	.04780	2.1164	2.0196	1.0710	2.1434	.05107	60.620
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	.04505	.49025	.22673	.26015	1.1244	1.5151	1.0555
SDev	.00133	.00378	.00194	.00141	.0044	.3009	.0148
%RSD	2.9529	.77119	.85478	.54109	.39230	19.858	1.4028
#1	.04531	.48785	.22525	.25945	1.1218	1.7229	1.0389
#2	.04608	.49197	.22633	.25945	1.1211	1.7855	1.0475
#3	.04570	.48647	.22579	.25945	1.1238	1.1330	1.0703
#4	.04311	.49471	.22956	.26226	1.1307	1.4190	1.0654
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	22.631	.50206	-.00586	15.723	.50099	.47048	-.01911
SDev	.141	.00265	.00241	.193	.00942	.00429	.00975
%RSD	.62383	.52710	41.158	1.2288	1.8802	.91211	51.029
#1	22.467	.49956	-.00707	15.481	.48698	.47415	-.01156
#2	22.565	.50056	-.00707	15.663	.50734	.47423	-.03182
#3	22.776	.50256	-.00707	15.827	.50506	.46664	-.02169
#4	22.718	.50557	-.00224	15.920	.50459	.46688	-.01137
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	2.0510	11.749	-.00428	1.1332	-.00274	1.9719	.49547
SDev	.0377	.059	.01912	.0077	.00043	.0636	.00316
%RSD	1.8367	.49880	446.96	.67581	15.729	3.2239	.63743
#1	2.0891	11.721	.00311	1.1256	-.00266	2.0196	.49235
#2	2.0539	11.756	-.02444	1.1275	-.00232	1.9635	.49482

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#3	1.9992	11.691	.01876	1.1394	-.00335	1.8852	.49482
#4	2.0618	11.827	-.01454	1.1401	-.00266	2.0194	.49987

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	.49609
SDev	.00318
%RSD	.64162

#1	.49302
#2	.49814
#3	.49944
#4	.49374

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67D Operator: MTW
Run Time: 05/19/00 16:22:02
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	.04889	2.0977	1.9886	1.0662	2.1257	.05078	60.922
SDev	.00075	.0202	.0198	.0094	.0138	.00017	.273
%RSD	1.5309	.96512	.99389	.88054	.64971	.32703	.44866
#1	.04777	2.0770	1.9973	1.0709	2.1325	.05081	60.660
#2	.04925	2.0846	1.9973	1.0709	2.1050	.05055	60.758
#3	.04927	2.1201	2.0007	1.0521	2.1325	.05081	60.997
#4	.04927	2.1090	1.9590	1.0709	2.1330	.05094	61.273
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	.04499	.48991	.22700	.25898	1.1004	1.3810	1.0498
SDev	.00122	.00363	.00258	.00162	.0065	.4304	.0113
%RSD	2.7200	.74181	1.1382	.62597	.59453	31.168	1.0733
#1	.04422	.48510	.22417	.25944	1.0983	.97209	1.0554
#2	.04425	.49198	.22579	.25664	1.0921	1.9732	1.0344
#3	.04679	.48921	.23011	.26038	1.1045	1.3922	1.0603
#4	.04469	.49334	.22795	.25945	1.1066	1.1866	1.0488
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	22.856	.50231	-.00466	15.798	.48753	.47981	-.00646
SDev	.139	.00206	.00623	.145	.00785	.02231	.01028
%RSD	.60838	.41042	133.66	.91507	1.6095	4.6496	159.09
#1	22.876	.50255	-.01189	15.899	.47757	.47410	-.00134
#2	22.654	.49956	-.00225	15.601	.48576	.47426	-.02188
#3	22.949	.50256	.00258	15.913	.49081	.45929	-.00137
#4	22.946	.50456	-.00707	15.777	.49599	.51157	-.00126
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	2.0343	11.880	.01441	1.1317	-.00317	2.0086	.49364
SDev	.0557	.040	.01055	.0075	.00044	.0749	.00245
%RSD	2.7383	.33260	73.225	.65874	13.957	3.7278	.49553
#1	2.0773	11.869	.00120	1.1350	-.00369	2.0982	.49473
#2	2.0851	11.839	.01287	1.1205	-.00300	1.9527	.48997

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#3	2.0031	11.934	.01689	1.1355	-.00266	2.0421	.49502
#4	1.9718	11.880	.02670	1.1358	-.00335	1.9413	.49483

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	.49762
SDev	.00283
%RSD	.56873

#1	.49641
#2	.49432
#3	.49896
#4	.50077

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67F Operator: MTW
Run Time: 05/19/00 16:25:10
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	-.00149	-.00137	-.00003	.04943	.06297	.00003	60.070
SDev	.00172	.00886	.01974	.00036	.00064	.00001	.458
%RSD	115.39	644.18	60349.	.72663	1.0128	26.841	.76183
#1	-.00298	-.00699	-.01426	.04974	.06291	.00002	59.473
#2	-.00298	-.00520	.00850	.04974	.06344	.00002	60.566
#3	-.00000	.01185	-.01813	.04912	.06209	.00003	60.020
#4	-.00000	-.00516	.02377	.04912	.06344	.00003	60.222
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	-.00071	.02967	.00351	.00257	1.4168	.00540
SDev	.00192	.00131	.00139	.00141	.00000	.1442	.00038
%RSD	173.49	184.92	4.7029	40.035	.05831	10.178	7.0030
#1	.00126	.00032	.02805	.00515	.00257	1.4637	.00554
#2	-.00210	.00032	.03021	.00421	.00257	1.5263	.00574
#3	-.00312	-.00242	.02913	.00234	.00257	1.2045	.00486
#4	-.00047	-.00105	.03129	.00234	.00257	1.4727	.00545
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	22.563	.00475	-.00844	15.739	-.00134	-.00556	.01780
SDev	.120	.00050	.00723	.063	.00655	.02305	.02959
%RSD	.53042	10.560	85.718	.39951	489.88	414.29	166.16
#1	22.501	.00449	-.01206	15.699	-.00610	-.00743	-.00788
#2	22.665	.00450	-.00241	15.821	.00761	.01492	-.00776
#3	22.425	.00449	-.01688	15.681	-.00635	.00746	.04345
#4	22.662	.00550	-.00241	15.755	-.00050	-.03721	.04340
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	-.02637	11.455	-.01707	.10174	-.00377	.01959	.00237
SDev	.04628	.074	.01237	.00072	.00043	.04288	.00288
%RSD	175.51	.64431	72.506	.71197	11.439	218.91	121.78
#1	-.02149	11.366	-.00492	.10136	-.00437	.07557	.00477
#2	-.05666	11.543	-.03435	.10254	-.00369	-.01404	.00496

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#3	-.06448	11.437	-.01449	.10094	-.00369	-.01398	-.00027
#4	.03714	11.472	-.01450	.10212	-.00335	.03081	.00002

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	100.00	50.000	50.000	100.00	100.00
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-2.0000	-.05000

Elem	ZN
Units	ppm
Avge	.01930
SDev	.00090
%RSD	4.6637

#1	.01888
#2	.01831
#3	.01964
#4	.02038

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67FP5 Operator: MTW
Run Time: 05/19/00 16:28:18
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	.00002	-.00053	-.00482	.00897	.01279	.00006	12.257
SDev	.00123	.00950	.02295	.00221	.00025	.00013	.048
%RSD	5416.5	1799.3	476.33	24.615	1.9307	234.91	.39375
#1	.00002	-.00710	.01611	.00860	.01282	.00002	12.309
#2	.00153	.00227	-.00295	.01217	.01260	.00016	12.209
#3	-.00148	-.00895	.00474	.00798	.01260	-.00012	12.223
#4	.00002	.01167	-.03718	.00715	.01312	.00016	12.287
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	-.00069	.00620	.00117	-.00242	.47152	.00087
SDev	.00218	.00206	.00143	.00118	.00172	.22696	.00125
%RSD	1496.7	297.97	23.010	100.66	71.392	48.133	142.86
#1	-.00037	.00171	.00539	.00141	-.00431	.50727	.00025
#2	.00333	-.00242	.00647	.00140	-.00017	.60560	.00275
#3	-.00077	.00034	.00809	-.00047	-.00293	.14079	.00025
#4	-.00161	-.00240	.00485	.00234	-.00224	.63242	.00025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.5769	.00100	-.00121	3.1638	-.00269	-.02610	-.00519
SDev	.0082	.00058	.00241	.0290	.00828	.02470	.01758
%RSD	.17899	57.808	199.92	.91606	307.78	94.629	338.38
#1	4.5741	.00150	.00241	3.1860	-.00227	-.02976	-.00774
#2	4.5769	.00050	-.00241	3.1847	.00829	-.05221	.01283
#3	4.5686	.00050	-.00241	3.1603	-.01156	-.02982	-.02836
#4	4.5880	.00150	-.00241	3.1241	-.00523	.00739	.00249
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	-.04495	2.2913	.00488	.02064	-.00077	.05601	.00463
SDev	.00902	.0266	.00981	.00027	.00044	.02483	.00064
%RSD	20.070	1.1602	200.87	1.3140	57.378	44.332	13.770
#1	-.03714	2.2780	-.00297	.02087	-.00129	.06441	.00500
#2	-.05276	2.2780	.01870	.02087	-.00060	.08679	.00491

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#3	-.05277	2.2780	-.00111	.02034	-.00094	.03080	.00491
#4	-.03714	2.3311	.00492	.02049	-.00026	.04203	.00367
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	.00560
SDev	.00086
%RSD	15.410

#1	.00671
#2	.00461
#3	.00568
#4	.00541

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67SF Operator: MTW
Run Time: 05/19/00 16:31:25
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	.04888	2.0390	1.9872	1.0621	2.1224	.05051	60.062
SDev	.00142	.0183	.0353	.0175	.0243	.00053	.387
%RSD	2.8970	.89745	1.7787	1.6521	1.1430	1.0430	.64460
#1	.05071	2.0133	1.9829	1.0357	2.0886	.04974	59.500
#2	.04776	2.0451	2.0242	1.0708	2.1351	.05067	60.291
#3	.04776	2.0564	2.0013	1.0708	2.1439	.05094	60.114
#4	.04926	2.0414	1.9407	1.0708	2.1220	.05067	60.343
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	.04455	.48991	.22593	.25851	1.0559	1.5174	1.0498
SDev	.00223	.00285	.00068	.00171	.0084	.3481	.0121
%RSD	5.0119	.58155	.30020	.66238	.79169	22.942	1.1502
#1	.04698	.48649	.22526	.25663	1.0445	1.9822	1.0326
#2	.04394	.48922	.22579	.25944	1.0611	1.3296	1.0560
#3	.04551	.49333	.22687	.26038	1.0632	1.1866	1.0598
#4	.04177	.49061	.22579	.25757	1.0549	1.5710	1.0508
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	22.573	.49805	-.00346	15.743	.48789	.48358	-.00130
SDev	.212	.00300	.00462	.158	.00805	.03245	.02219
%RSD	.94010	.60262	133.50	1.0035	1.6511	6.7098	1701.7
#1	22.258	.49355	-.00708	15.508	.47737	.45185	.00887
#2	22.679	.49955	-.00708	15.830	.49674	.45937	.01934
#3	22.718	.49955	.00257	15.840	.48725	.51161	-.00135
#4	22.637	.49955	-.00225	15.795	.49020	.51150	-.03208
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	2.0205	11.493	.00364	1.1293	-.00360	1.9782	.49242
SDev	.0550	.086	.00947	.0121	.00059	.0655	.00499
%RSD	2.7210	.74735	260.20	1.0736	16.265	3.3125	1.0140
#1	1.9520	11.366	-.00858	1.1123	-.00300	1.9980	.48493
#2	2.0498	11.555	.00129	1.1355	-.00437	1.9642	.49482

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#3	2.0772	11.526	.01296	1.1399	-.00335	2.0537	.49501
#4	2.0029	11.526	.00889	1.1294	-.00369	1.8970	.49492
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	.49328
SDev	.00474
%RSD	.96043

#1	.48992
#2	.49095
#3	.49197
#4	.50027

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDA67DF Operator: MTW
 Run Time: 05/19/00 16:34:33
 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	.04661	2.0376	1.9721	1.0661	2.1351	.05054	59.741
SDev	.00189	.0129	.0733	.0094	.0081	.00015	.502
%RSD	4.0560	.63203	3.7193	.88141	.37736	.30639	.84074
#1	.04623	2.0188	1.9523	1.0708	2.1437	.05041	59.243
#2	.04473	2.0450	1.9635	1.0520	2.1372	.05068	59.415
#3	.04924	2.0395	2.0737	1.0708	2.1243	.05041	59.976
#4	.04625	2.0469	1.8989	1.0708	2.1351	.05067	60.330
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	.04525	.48441	.22121	.25967	1.0540	1.0592	1.0699
SDev	.00297	.00177	.00243	.00089	.0050	.3895	.0099
%RSD	6.5517	.36534	1.0996	.34457	.47313	36.767	.92389
#1	.04822	.48372	.22094	.26037	1.0500	.54303	1.0811
#2	.04148	.48237	.21932	.26037	1.0500	1.0525	1.0750
#3	.04688	.48647	.22471	.25850	1.0556	1.4816	1.0643
#4	.04442	.48510	.21986	.25944	1.0604	1.1598	1.0594
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	22.652	.49605	-.00346	16.018	.49519	.45364	.01421
SDev	.061	.00173	.00462	.082	.00711	.01869	.05592
%RSD	.26753	.34933	133.47	.51016	1.4354	4.1210	393.54
#1	22.676	.49455	-.00708	16.102	.48870	.42931	L-.06282
#2	22.604	.49555	.00257	16.073	.50501	.45916	.00914
#3	22.601	.49555	-.00708	15.950	.49158	.45188	.05009
#4	22.726	.49855	-.00225	15.945	.49548	.47421	.06043
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	1.9999	11.505	-.01443	1.1341	-.00437	2.0091	.49087
SDev	.0544	.043	.00558	.0031	.00084	.0484	.00187
%RSD	2.7197	.37171	38.647	.26980	19.212	2.4074	.38098
#1	1.9364	11.467	-.00890	1.1372	-.00506	2.0539	.48987
#2	1.9950	11.526	-.01445	1.1349	-.00506	1.9419	.49005

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#3	1.9990	11.473	-.01230	1.1299	-.00335	2.0091	.48988
#4	2.0693	11.555	-.02206	1.1345	-.00403	2.0314	.49367

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	.49149
SDev	.00672
%RSD	1.3679

#1	.48341
#2	.48854
#3	.49765
#4	.49636

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: CCV2-3 Operator: MTW
Run Time: 05/19/00 16:37:41
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	1.0182	52.519	5.0574	5.1187	5.1705	5.0948	51.216
SDev	.0049	.191	.0903	.0266	.0272	.0275	.328
%RSD	.47728	.36349	1.7857	.51909	.52658	.53984	.64034
#1	1.0252	52.746	5.1427	5.1352	5.1977	5.1266	51.707
#2	1.0159	52.560	5.1074	5.0791	5.1813	5.1007	51.024
#3	1.0174	52.485	4.9372	5.1280	5.1696	5.0921	51.086
#4	1.0142	52.285	5.0422	5.1326	5.1335	5.0599	51.048
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	5.0609	5.0021	4.9994	5.1648	52.667	52.560	5.1677
SDev	.0171	.0283	.0289	.0200	.260	.533	.0193
%RSD	.33705	.56626	.57770	.38722	.49378	1.0144	.37347
#1	5.0830	5.0441	5.0412	5.1763	53.030	52.531	5.1777
#2	5.0455	4.9908	4.9894	5.1800	52.604	52.575	5.1875
#3	5.0497	4.9908	4.9921	5.1669	52.622	51.914	5.1626
#4	5.0654	4.9825	4.9749	5.1360	52.412	53.219	5.1432
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	52.348	5.0106	5.0139	53.074	5.0016	5.0258	5.0848
SDev	.181	.0252	.0251	.147	.0545	.0381	.0626
%RSD	.34502	.50267	.50043	.27703	1.0898	.75796	1.2315
#1	52.590	5.0472	5.0453	53.144	5.0680	5.0269	5.1389
#2	52.376	5.0001	4.9874	53.237	5.0110	5.0628	5.0979
#3	52.245	5.0051	5.0211	53.014	4.9913	5.0405	5.1078
#4	52.181	4.9901	5.0018	52.901	4.9360	4.9732	4.9946
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	5.2536	5.0031	4.9694	5.1531	5.0714	10.016	5.0732
SDev	.0435	.0269	.0325	.0274	.0249	.177	.0277
%RSD	.82724	.53723	.65411	.53261	.49136	1.7684	.54526
#1	5.2608	5.0435	5.0123	5.1820	5.1030	10.222	5.1070
#2	5.2358	4.9898	4.9651	5.1617	5.0739	9.8456	5.0724

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#3	5.3101	4.9899	4.9671	5.1524	5.0660	10.103	5.0743
#4	5.2077	4.9894	4.9333	5.1163	5.0426	9.8926	5.0392

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	5.0230
SDev	.0225
%RSD	.44825

#1	5.0565
#2	5.0097
#3	5.0101
#4	5.0157

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB3 Operator: MTW
Run Time: 05/19/00 16:40:49
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
Avge	-.00188	.00367	-.03042	.02042	.00058	.00044	.00440
SDev	.00189	.00710	.02745	.00767	.00048	.00039	.00378
%RSD	100.75	193.55	90.235	37.550	82.896	87.029	85.860
#1	-.00150	-.00145	-.00664	.02030	.00008	.00017	.00088
#2	.00000	.00973	-.05609	.02992	.00029	.00017	.00160
#3	-.00150	.00981	-.00674	.02031	.00081	.00044	.00642
#4	-.00451	-.00343	-.05219	.01114	.00112	.00099	.00870
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	.00021	.00069	-.00108	.00024	.00552	.02682	-.00050
SDev	.00167	.00304	.00182	.00140	.00344	.30899	.00089
%RSD	801.50	443.72	168.81	597.54	62.409	1152.3	178.52
#1	.00028	.00446	-.00215	-.00046	.00189	.03352	-.00098
#2	-.00048	-.00103	-.00215	-.00047	.00466	.16760	-.00151
#3	.00248	.00171	-.00162	.00234	.00534	.31062	.00025
#4	-.00145	-.00240	.00162	-.00047	.01017	-.40448	.00025
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	-.00209	.00075	.01085	.00232	-.00496	-.02980	-.00527
SDev	.01125	.00050	.00241	.00189	.00128	.01052	.01286
%RSD	538.86	66.383	22.221	81.371	25.831	35.314	243.99
#1	-.00070	.00050	.01206	.00310	-.00631	-.02970	-.00785
#2	-.01183	.00050	.01206	.00442	-.00463	-.03730	-.00784
#3	.01322	.00050	.00723	.00177	-.00557	-.03724	-.01803
#4	-.00904	.00151	.01206	-.00000	-.00334	-.01495	.01263
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	-.00877	-.07682	.01959	.00028	-.00000	.03914	.00021
SDev	.02197	.00763	.01611	.00042	.00043	.04606	.00005
%RSD	250.39	9.9307	82.217	149.28	339e6	117.66	22.856
#1	-.03712	-.07977	.02645	.00000	-.00060	-.00285	.00023
#2	.00197	-.06795	.02056	.00011	.00043	.00836	.00023

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#3	.01370	-.07386	-.00303	.00011	.00009	.09794	.00014
#4	-.01364	-.08568	.03439	.00091	.00009	.05312	.00024

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem	ZN
Units	ppm
Avge	.00093
SDev	.00092
%RSD	99.199

#1	-.00030
#2	.00152
#3	.00174
#4	.00076

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDA67F RERUN ZN Operator: MTW
 Run Time: 05/19/00 16:44:39
 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
Avge	-.00073	-.00287	.03507	.05100	.06362	.00002	59.557
SDev	.00195	.00772	.04942	.00149	.00037	.00001	.244
%RSD	266.39	269.33	140.90	2.9142	.57901	21.138	.40967
#1	-.00148	-.00149	.04264	.05183	.06344	.00002	59.565
#2	.00003	-.00332	.06543	.05267	.06344	.00002	59.301
#3	.00153	.00606	.06915	.04974	.06417	.00002	59.884
#4	-.00300	-.01272	-.03694	.04975	.06344	.00003	59.477
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	-.00283	-.00071	.02724	.00281	.00326	1.3051	.00655
SDev	.00108	.00206	.00128	.00054	.00245	.1647	.00126
%RSD	38.121	291.70	4.7159	19.290	75.225	12.622	19.244
#1	-.00158	.00032	.02805	.00234	.00119	1.4548	.00824
#2	-.00274	.00032	.02805	.00328	.00671	1.4369	.00677
#3	-.00278	.00032	.02536	.00328	.00188	1.1956	.00545
#4	-.00421	-.00379	.02752	.00234	.00326	1.1330	.00574
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	22.635	.00450	-.00121	15.846	-.00414	-.02050	-.00792
SDev	.042	.00000	.00241	.164	.00718	.01956	.00011
%RSD	.18682	.01659	200.06	1.0366	173.47	95.411	1.3547
#1	22.651	.00450	.00241	16.014	.00465	-.03724	-.00785
#2	22.679	.00450	-.00241	15.887	-.00691	-.00743	-.00793
#3	22.631	.00450	-.00241	15.861	-.00207	-.03725	-.00782
#4	22.578	.00450	-.00241	15.621	-.01222	-.00009	-.00806
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	-.01367	11.421	-.00787	.10212	-.00369	.06717	.00405
SDev	.01833	.042	.01843	.00000	.00028	.04958	.00187
%RSD	134.14	.36668	234.28	.00000	7.5953	73.819	46.193
#1	-.03321	11.425	-.00885	.10212	-.00403	.01958	.00505
#2	-.00975	11.360	-.00689	.10212	-.00369	.03072	.00495

Analysis Report

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#3	.00978	11.449	-.03043	.10212	-.00335	.12037	.00495
#4	-.02148	11.449	.01469	.10212	-.00369	.09802	.00124

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	.02043
SDev	.00173
%RSD	8.4774

#1	.01810
#2	.02042
#3	.02093
#4	.02225

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: CCV2-4

Operator: MTW

Run Time: 05/19/00 16:47:47

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	1.0132	52.503	5.0269	5.1108	5.1745	5.0814	50.796
SDev	.0024	.199	.0472	.0309	.0235	.0213	.287
%RSD	.23257	.37899	.93908	.60534	.45447	.41865	.56404
#1	1.0111	52.298	5.0200	5.0740	5.1543	5.0623	50.417
#2	1.0142	52.376	4.9732	5.1046	5.1543	5.0640	50.828
#3	1.0114	52.617	5.0881	5.1489	5.1916	5.0963	50.823
#4	1.0160	52.722	5.0261	5.1155	5.1979	5.1030	51.114
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	5.0505	4.9705	4.9649	5.1790	52.445	52.363	5.2238
SDev	.0439	.0308	.0227	.0220	.249	.326	.0334
%RSD	.86854	.61985	.45744	.42424	.47513	.62293	.63870
#1	5.0034	4.9388	4.9393	5.1678	52.148	51.923	5.1904
#2	5.0396	4.9524	4.9582	5.1537	52.362	52.710	5.2059
#3	5.0497	4.9839	4.9684	5.1997	52.536	52.388	5.2666
#4	5.1091	5.0070	4.9938	5.1950	52.733	52.432	5.2322
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	52.414	4.9848	4.9825	53.501	4.9760	5.0139	5.1029
SDev	.260	.0251	.0376	.360	.0188	.0779	.0246
%RSD	.49541	.50421	.75464	.67366	.37798	1.5538	.48184
#1	52.153	4.9550	4.9343	53.051	4.9605	4.9796	5.1082
#2	52.245	4.9780	4.9825	53.381	4.9618	4.9650	5.0667
#3	52.543	4.9911	4.9874	53.855	5.0003	4.9806	5.1185
#4	52.713	5.0151	5.0260	53.719	4.9814	5.1302	5.1181
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	5.2225	5.0044	4.9450	5.1518	5.0557	9.9399	5.0518
SDev	.0844	.0381	.0348	.0235	.0229	.2432	.0264
%RSD	1.6159	.76108	.70475	.45570	.45234	2.4464	.52206
#1	5.1208	4.9774	4.9260	5.1325	5.0317	9.7052	5.0206
#2	5.2466	4.9894	4.9866	5.1306	5.0426	9.7813	5.0401

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#3	5.2004	4.9898	4.9593	5.1690	5.0660	10.037	5.0686
#4	5.3222	5.0608	4.9083	5.1749	5.0824	10.236	5.0781

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	4.9997
SDev	.0207
%RSD	.41391

#1	4.9722
#2	4.9957
#3	5.0125
#4	5.0183

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB4

Operator: MTW

Run Time: 05/19/00 16:50:55

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	.00083	-.01710	.02318	.00084	.00051	.02695
SDev	.00310	.01166	.03421	.01196	.00058	.00024	.00431
%RSD	828.24	1412.0	200.04	51.578	69.135	46.188	15.990
#1	.00000	.00229	.00472	.03345	.00029	.00031	.02201
#2	-.00451	-.00151	-.02182	.01467	.00060	.00031	.02573
#3	.00000	-.01288	-.06350	.01113	.00081	.00072	.02769
#4	.00301	.01540	.01220	.03346	.00164	.00072	.03236
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	.00220	-.00035	-.00108	.00117	.00293	-.03352	-.00096
SDev	.00222	.00177	.00245	.00208	.00255	.27517	.00116
%RSD	101.01	506.47	227.96	177.53	87.002	820.91	120.46
#1	H.00546	.00033	-.00054	.00047	-.00017	-.14525	-.00254
#2	.00134	-.00241	-.00270	-.00047	.00190	-.12738	.00025
#3	.00050	-.00103	-.00323	.00047	.00534	-.23464	-.00078
#4	.00149	.00171	.00216	.00422	.00466	.37319	-.00078
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	-.00626	.00075	.01206	.00254	.00199	-.02422	.00505
SDev	.00454	.00050	.00682	.00693	.00773	.01764	.01548
%RSD	72.577	66.021	56.569	272.54	389.21	72.816	306.49
#1	-.01183	.00150	.00723	.00177	.00695	-.03723	.01281
#2	-.00626	.00050	.00723	.00531	.00560	-.03731	.01284
#3	-.00626	.00051	.02170	-.00664	-.00954	-.02240	-.01817
#4	-.00070	.00050	.01206	.00973	.00493	.00006	.01273
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	-.03516	-.07977	.01571	.00016	.00026	.05598	.00023
SDev	.04093	.00482	.00872	.00026	.00059	.03812	.00013
%RSD	116.41	6.0481	55.517	157.79	230.94	68.093	56.474
#1	-.05276	-.07386	.01869	.00000	-.00026	.05321	.00014
#2	-.06448	-.08568	.00692	.00011	.00009	.04200	.00013

Analysis Report

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#3	-.04883	-.07977	.01070	.00000	.00009	.10916	.00041
#4	.02542	-.07977	.02654	.00054	.00112	.01954	.00024

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.25000	.50000	.10000	.05000	.05000	.30000	.05000
Low	-.25000	-.50000	-.10000	-.05000	-.05000	-.30000	-.05000

Elem	ZN
Units	ppm
Avge	.00246
SDev	.00080
%RSD	32.291

#1	.00224
#2	.00332
#3	.00283
#4	.00147

Errors	LC Pass
High	.02000
Low	-.02000

Metals Preparation Log



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

Method: 3010A		Matrix: Water		Start Time: 8/45		SDG:		Balance#		Reference:	
Analyst: Michael Trench		Date: 5-18-00		Lot Number: C0E130R4		Lab Lot No. (book, page, line): 99101-177-15		9950-114-13		3m Conc. HNO3 Salt HCl	
Revised By:		Date: 5-18-00				MS		MS 614 EV		TCLP SRIVE	
Sample ID	Init Wt/Vol g/mL	Final Vol mL	Comments	Color		Clarity		Texture		Artifacts	Artifact Codes
				Pre	Post	Pre	Post	Pre	Post		
1. DDC44	50mL	50mL	5-18-00								S=Stones
2. DDC44S			5-18-00								O=Organic (plant mat)
3. DDC44D			5-18-00								W=free H2O
4. DDC45			5-18-00								G=Glass
5. DDC46			5-18-00								M=Metal Fragments
6. DDC47			5-18-00								R=Rubber/Plastic
7. DDC48			5-18-00								C=Cloth
8. DDC39B			5-18-00								P=Paper
9. DDC39C			5-18-00								I=Insects
10.											
11.											
12.											
13.											
14.											
15.											
16.											
17.											
18.											
19.											
20.											
21.											
22.											
23.											

REQUESTED BY: FAUSTG

METHOD: QO Inductively Coupled Plasma (60108)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
2F CLP1	DD6A4	___	233926	399411	A-34-QO	C0E130194	001		SOLID	0	3 1
2F CLP1	DD6A5	___	233927	399411	A-34-QO	C0E130194	002		SOLID	0	3 1
2F CLP1	DD6A6	___	233928	399411	A-34-QO	C0E130194	003		SOLID	0	3 1
2F CLP1	DD6A7	___	233929	399411	A-34-QO	C0E130194	004		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

*Geoffrey O. Bausch**Geoffrey O. Bausch*

5-16-00 1410

*Geoffrey O. Bausch**Geoffrey O. Bausch*

5-16-00 1450

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

6571076

STL-Pittsburgh Atomic Absorption Data for Mercury

Instrument: PS200HG

Analyst Name: William A. Hayle

Date of Analysis: 5-18-00

File ID: 0518HGA

Matrix: WATER

Lot Number/SDG

Method

<u>COE130194 (YCLP)</u>	<u>7470A</u>
<u>COE130176</u>	
<u>COE170151</u>	
<u>COE170159</u>	
<u>COE170156</u>	
<u>COE130132</u>	
<u>COE170206 WM003</u>	<u>7470A</u>

10:34:49 18 May 2000

Folder: 0518HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		10:34:49 18 May 2000 HG		
Hg	.000	ppb	23860					
*** Standard: 2 Rep: 1				Seq: 1		10:37:13 18 May 2000 HG		
Hg	.200	ppb	55979		0014-093-3			
*** Standard: 3 Rep: 1				Seq: 2		10:39:22 18 May 2000 HG		
Hg	.500	ppb	147811		0014-094-1			
*** Standard: 4 Rep: 1				Seq: 3		10:41:27 18 May 2000 HG		
Hg	1.00	ppb	257237		0014-094-2			
*** Standard: 5 Rep: 1				Seq: 4		10:43:45 18 May 2000 HG		
Hg	5.00	ppb	1298373		0014-094-3			
*** Standard: 6 Rep: 1				Seq: 5		10:46:10 18 May 2000 HG		
Hg	10.0	ppb	2463532		0014-094-4			

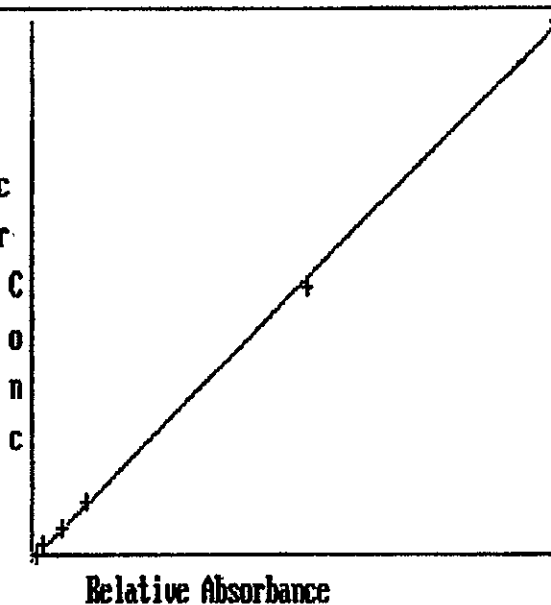
6571078

William A Doyle 5.18.00

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS
 RunFold: 0518HGA Seq: 6 Batch:
 Prnt: R/T On Pump: On
 Rev: 4.2 10:46:28 18 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	.007 Quadratic
S2	.200	.137 -.063 Wtdlinear
S3	.500	.510 .010
S4	1.00	.954 -.046 Accept
S5	5.00	5.10 .181
S6	10.0	9.91 -.090
A	.0000000	r .999787
B	4.05926e-6	C -0.90830e-2



	Mean	SD
S1	23060	23060
S2	55979	55979
S3	147811	147811
S4	257237	257237
S5	1298373	1298373
S6	2463532	2463532

New cal coefficients stored.

10:49:12 18 May 2000

Folder: 0518HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV5-1				Seq: 6	10:49:12 18 May 2000 HG			
Hg	2.54	ppb	647356		0014-094-5			
*** Sample ID: ICB1				Seq: 7	10:51:12 18 May 2000 HG			
Hg	-.049	ppb	9944					
*** Sample ID: CCV5-1				Seq: 8	10:53:24 18 May 2000 HG			
Hg	5.21	ppb	1306747		0014-094-6			
*** Sample ID: CCB1				Seq: 9	10:55:17 18 May 2000 HG			
Hg	-.028	ppb	15310					
*** Sample ID: DDC2GBT				Seq: 10	10:57:06 18 May 2000 HG			
Hg	-.090	ppb	53					
*** Sample ID: DDC2GCT				Seq: 11	10:58:59 18 May 2000 HG			
Hg	2.75	ppb	699719		0014-094-7			
*** Sample ID: DDA9GBT				Seq: 12	11:01:10 18 May 2000 HG			
Hg	.063	ppb	37543					
*** Sample ID: DD6A4T				Seq: 13	11:03:00 18 May 2000 HG			
Hg	.030	ppb	29624					
*** Sample ID: DD6A4ST				Seq: 14	11:04:51 18 May 2000 HG			
Hg	5.33	ppb	1335370					SP.REC. 106%
*** Sample ID: DD6A4DT				Seq: 15	11:07:16 18 May 2000 HG			
Hg	5.24	ppb	1313161					SP.REC. 104%
*** Sample ID: DD6A5T				Seq: 16	11:09:06 18 May 2000 HG			
Hg	.025	ppb	28334					
*** Sample ID: DD6A6T				Seq: 17	11:10:55 18 May 2000 HG			
Hg	-.014	ppb	18721					

6571080

11:13:27 18 May 2000

Folder: 0518HGA-
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DD6A7T				Seq: 18		11:13:27 18 May 2000	HG	
Hg	-.001	ppb	21799					
*** Sample ID: DDC2NB				Seq: 19		11:15:17 18 May 2000	HG	
Hg	.004	ppb	23142					
*** Sample ID: CCV5-2				Seq: 20		11:17:05 18 May 2000	HG	
Hg	5.19	ppb	1301315					
*** Sample ID: CCB2				Seq: 21		11:18:57 18 May 2000	HG	
Hg	-.088	ppb	529					
*** Sample ID: DDC2NC				Seq: 22		11:21:20 18 May 2000	HG	
Hg	2.47	ppb	630756		0014-094-8			
*** Sample ID: DD652				Seq: 23		11:23:18 18 May 2000	HG	
Hg	.323	ppb	101632					
*** Sample ID: DD652S				Seq: 24		11:25:08 18 May 2000	HG	
Hg	1.44	ppb	378004					SP. REC. 112%
*** Sample ID: DD652D				Seq: 25		11:27:02 18 May 2000	HG	
Hg	1.32	ppb	348452					SP. REC. 100%
*** Sample ID: DD653				Seq: 26		11:28:51 18 May 2000	HG	
Hg	.148	ppb	58612					
*** Sample ID: DD654				Seq: 27		11:30:51 18 May 2000	HG	
Hg	-.012	ppb	19194					
*** Sample ID: DD655				Seq: 28		11:32:39 18 May 2000	HG	
Hg	-.074	ppb	3974					
*** Sample ID: DD657				Seq: 29		11:34:44 18 May 2000	HG	
Hg	.009	ppb	24316					

11:36:34 18 May 2000

Folder: 0518HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DD659				Seq: 30	11:36:34 18 May 2000 HG			
Hg	.021	ppb	27370					
*** Sample ID: DD65C				Seq: 31	11:38:23 18 May 2000 HG			
Hg	-.056	ppb	8345					
*** Sample ID: CCV5-3				Seq: 32	11:40:25 18 May 2000 HG			
Hg	5.20	ppb	1302259					
*** Sample ID: CCB3				Seq: 33	11:42:27 18 May 2000 HG			
Hg	-.038	ppb	12881					
*** Sample ID: DD65E				Seq: 34	11:44:26 18 May 2000 HG			
Hg	.047	ppb	33591					
*** Sample ID: DD65F				Seq: 35	11:46:16 18 May 2000 HG			
Hg	-.027	ppb	15403					
*** Sample ID: DD65K				Seq: 36	11:48:17 18 May 2000 HG			
Hg	-.008	ppb	20154					
*** Sample ID: DD65P				Seq: 37	11:50:11 18 May 2000 HG			
Hg	-.002	ppb	21533					
*** Sample ID: DD9NN				Seq: 38	11:52:02 18 May 2000 HG			
Hg	2.78	ppb	705989					
*** Sample ID: DD9PJ				Seq: 39	11:54:12 18 May 2000 HG			
Hg	.227	ppb	78047					
*** Sample ID: DD9P2				Seq: 40	11:56:33 18 May 2000 HG			
Hg	.353	ppb	109200					
*** Sample ID: DDC2RB				Seq: 41	11:58:34 18 May 2000 HG			
Hg	-.088	ppb	525					

6571082

12:00:38 18 May 2000

Folder: 0518HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDC2RC				Seq: 42	12:00:38 18 May 2000 HG			
Hg	2.31	ppb	592186	0014.094.9				
*** Sample ID: DD5Q3				Seq: 43	12:02:30 18 May 2000 HG			
Hg	-.035	ppb	13532					
*** Sample ID: CCV5-4				Seq: 44	12:04:34 18 May 2000 HG			
Hg	4.91	ppb	1231995					
*** Sample ID: CCB4				Seq: 45	12:06:45 18 May 2000 HG			
Hg	-.057	ppb	8015					
*** Sample ID: DD5Q3S				Seq: 46	12:10:20 18 May 2000 HG			
Hg	.888	ppb	240981					
*** Sample ID: DD5Q3D				Seq: 47	12:12:21 18 May 2000 HG			
Hg	.914	ppb	247326					
*** Sample ID: DD5Q4				Seq: 48	12:14:22 18 May 2000 HG			
Hg	-.013	ppb	18820					
*** Sample ID: DD5Q5				Seq: 49	12:16:54 18 May 2000 HG			
Hg	.145	ppb	57759					
*** Sample ID: DD5Q7				Seq: 50	12:19:00 18 May 2000 HG			
Hg	.017	ppb	26230					
*** Sample ID: DD5Q8				Seq: 51	12:21:26 18 May 2000 HG			
Hg	-.053	ppb	9049					
*** Sample ID: DD5QA				Seq: 52	12:23:22 18 May 2000 HG			
Hg	-.007	ppb	20314					
*** Sample ID: DD5QC				Seq: 53	12:25:14 18 May 2000 HG			
Hg	-.028	ppb	15213					

SP REC
89%SP REC
91%

12:28:09 18 May 2000

Folder: 0518HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DD5QE				Seq: 54	12:28:09 18 May 2000	HG		
Hg	.018	ppb	26515					
*** Sample ID: DD5QF				Seq: 55	12:30:42 18 May 2000	HG		
Hg	-.055	ppb	8562					
*** Sample ID: CCV5-5				Seq: 56	12:32:37 18 May 2000	HG		
Hg	5.09	ppb	1275967					
*** Sample ID: CCB5				Seq: 57	12:34:53 18 May 2000	HG		
Hg	-.048	ppb	10398					
*** Sample ID: DD5QH				Seq: 58	12:36:46 18 May 2000	HG		
Hg	-.008	ppb	20053					
*** Sample ID: DD5QK				Seq: 59	12:38:49 18 May 2000	HG		
Hg	-.024	ppb	16157					
*** Sample ID: DD5QM				Seq: 60	12:40:43 18 May 2000	HG		
Hg	-.034	ppb	13820					
*** Sample ID: CCV5-6				Seq: 61	12:43:07 18 May 2000	HG		
Hg	4.88	ppb	1225119					
*** Sample ID: CCB5				Seq: 62	12:45:14 18 May 2000	HG		
Hg	-.065	ppb	6182					
*** Sample ID: DDCJHB				Seq: 63	14:07:53 18 May 2000	HG		
Hg	-.056	ppb	8353					
*** Sample ID: DDCJHC				Seq: 64	14:09:48 18 May 2000	HG		
Hg	2.40	ppb	614255					
*** Sample ID: DDA67				Seq: 65	14:11:55 18 May 2000	HG		
Hg	-.075	ppb	3636					

0014-096-4

6571084

Folder: 0518HGA
Protocol: HGMET

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14:13:59 18 May 2000

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDA67S				Seq: 66	14:13:59 18 May 2000	HG		
Hg	1.00	ppb	269217					SP. REC. 100%
*** Sample ID: DDA67D				Seq: 67	14:16:06 18 May 2000	HG		
Hg	1.00	ppb	269351					SP. REC. 100%
*** Sample ID: DDA67F				Seq: 68	14:18:12 18 May 2000	HG		
Hg	-.095	ppb	-1251					
*** Sample ID: DDA67SF				Seq: 69	14:20:09 18 May 2000	HG		
Hg	.926	ppb	250145					SP. REC. 93%
*** Sample ID: DDA67DF				Seq: 70	14:22:07 18 May 2000	HG		
Hg	.923	ppb	249430					SP. REC. 92%
*** Sample ID: CCV5-7				Seq: 71	14:24:01 18 May 2000	HG		
Hg	4.76	ppb	1195080					
*** Sample ID: CCB7				Seq: 72	14:26:02 18 May 2000	HG		
Hg	-.131	ppb	-10190					

END OF ANALYSIS
WAH
5-18-00

6571085

William a Noyle 5-18-00

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 0518HGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
	Rev: 4.2	09:48:09 18 May 2000	Xmit: Off Gas: LPM
State: Idle		User: WAH	A/S: On

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	DDC2GBT	1.0000	1.0000		
6	DDC2GCT	1.0000	1.0000		
7	DDA9GBT	1.0000	1.0000		
8	DD6A4T	1.0000	1.0000		
9	DD6A4ST	1.0000	1.0000		
10	DD6A4DT	1.0000	1.0000		
11	DD6A5T	1.0000	1.0000		
12	DD6A6T	1.0000	1.0000		
13	DD6A7T	1.0000	1.0000		
14	DDC2NB	1.0000	1.0000		
15	CCV5-2	1.0000	1.0000		

PgDn

Cup 1 ID: ICV5-1	Cell down mode Ins to switch

6571086

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 051BHGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
	Revs: 4.2	09:48:11 18 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
16 CCB2		1.0000	1.0000	
17 DDC2NC		1.0000	1.0000	
18 DD652		1.0000	1.0000	
19 DD652S		1.0000	1.0000	
20 DD652D		1.0000	1.0000	
21 DD653		1.0000	1.0000	
22 DD654		1.0000	1.0000	
23 DD655		1.0000	1.0000	
24 DD657		1.0000	1.0000	
25 DD659		1.0000	1.0000	
26 DD65C		1.0000	1.0000	
27 CCV5-3		1.0000	1.0000	
28 CCB3		1.0000	1.0000	
29 DD65E		1.0000	1.0000	
30 DD65F		1.0000	1.0000	

PgDn

Cup 16 ID: CCB2	Cell down mode Ins to switch

RunProt: HOMET STL-PITTSBURGH METALS ANALYSIS
RunFold: 0518HGA Seq: 0 Batch:
Prnt: R/T On Pump: Off
Rev: 4.2 09:48:13 18 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 DD65K 1.0000 1.0000
32 DD65P 1.0000 1.0000
33 DD9NN 1.0000 1.0000
34 DD9PJ 1.0000 1.0000
35 DD9P2 1.0000 1.0000
36 DDC2RB 1.0000 1.0000
37 DDC2RC 1.0000 1.0000
38 DD5Q3 1.0000 1.0000
39 CCV5-4 1.0000 1.0000
40 CCB4 1.0000 1.0000
41 DD5Q3S 1.0000 1.0000
42 DD5Q3D 1.0000 1.0000
43 DD5Q4 1.0000 1.0000
44 DD5Q5 1.0000 1.0000

PgDn

Cup 31 ID: DD65K

Cell down mode Ins to switch

6571088

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS
RunFold: 0518HGA Seq: 73 Batch:
Prnt: R/T On Pump: On
Rev: 4.2 14:26:59 18 May 2000 Xmit: Off Gas: 0.30 LPM
State: Idle User: WAH A/S: On

AUTOSAMPLER: Rack Edit		rack: RACK2	Range 1-44	Clear seq	Undo exit	PgUp
cup ID	Extended id	Weight	Volume	Macro	check macros	
16 DDA67		1.0000	1.0000			
17 DDA67S		1.0000	1.0000			
18 DDA67D		1.0000	1.0000			
19 DDA67F		1.0000	1.0000			
20 DDA67SF		1.0000	1.0000			
21 DDA67DF		1.0000	1.0000			
22 CCV5-7		1.0000	1.0000			
23 CCB7		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

Full column mode Ins to switch

Hg Digestion Log

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



6571089

QUA-4189

Serial Number 059 Log Book Number 96-MT-576 Start Time 09:10-30-25

Sample ID	Date Rec'd	Prep Date	Prepared By	Wt/Vol	Sample Type	Run Date	Comments
1. DD654	5-13-00	5-18-00	WAH	100ml	WATER	5-18-00	N/A
2. DD655							
3. DD657							
4. DD659							
5. DD65C							
6. DD65E							
7. DD65F							
8. DD65K							
9. DD65P							
10. DD9M	5-17-00						
11. DD9PT							
12. DD9P2							
13. DDc2RA	N/A						
14. DDc2RC							
15. DD5Q3	5-13-00						
16. DD5Q3S							
17. DD5Q3D							
18. DD5Q4							
19. DD5Q5							
20. DD5Q7							
21. DD5Q8							
22. DD5Q9A							
23. DD5Q5C							
24. DD5Q5E							
25. DD5Q5F							
Reagents	Vol (mL)	Ref. Number	Method				
HNO3	2.5ml	MAIL/UCKRODT	6623 U35058	7470R	AUTOCCLAVE	15PSI	120°C
H2SO4	5.0ml	MBIL/UCKRODT	5557 A21A13	5556A	0014-083-6		
KMNO4	15.0ml	0014-050-10		0014-078-14			
K2S2O4	8.0ml	0014-083-3		WAH	5-18-00		
Extract(s)	Date	Time	Analyst	Location	Date	Time	Analyst
(Record line number from above)							
			WAH	5-18-00			

Hg Digestion Log

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



CUA-4169

Serial Number 060 Log Book Number 96-MT-576 Start Time 08:10 ~ 08:25

Sample ID	Date Rec'd	Prep Date	Prepared By	WVVol	Sample Type	Run Date	Comments
1. D5Q4	5-13-00	5-18-00	WAH	100ml	WATER	5-18-00	N/A
2. D5QK							
3. D5Qm							
4.							
5.							
6.							
7.							
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				MATHUCKROBT 6623 N35058		7470A AUTOCLAVE 15PSI 180°C
H2SO4	5.0 mL				MATHUCKROBT 5557 N21A13		SAC42: 0014-083-6
KMNO4	15.0 mL				0014-090-10		NAC-NASOH: 0014-078-14
K2S2O4	8.0 mL				0014-083-3		WAH 5-18-00
Extract(s)			Extract(s) Received				Extract(s) Relinquished
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst
			WAH	5-18-00			

6571090

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

QUA-4169

PIPE# H31609

Serial Number	Lot Book Number	Start Time

Log Book Number
061 96-MT-576

Start June
13:45-13:00

Quanterra

Environmental
Canadian[illegible]

TCLP (Method 1311)

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



QUA-4171
By: *[Signature]* Date: 5-16-00 Checked by: *[Signature]* Client Codes: 389411
Project Number: 202130194 Log Number: 202130194 Solution Number 1 - Log Book Number: 9954104-12 Solution Number 2 - Log Book Number:
Filter lot # 8320701w Serial Number: 038 Log Book Number: 96-MT-526

Fluid Determination						TCLP Extraction			
Sample ID	Wgt/Vol	Init pH	Final pH	Extract Fluid #1, or #2	Conc: HNO3 to Acidity (for Metals)	Sample ID	Wgt (g) Wet/Dry	Fluid Vol.	Final pH After Tumbling
DD6A4	500g/16.5ml	9.61	1.83	301#1	5.5	1 DB-TCLP 5-16-00	100.00g	2000ml Glass	4.93
DD6A5	↓	9.44	1.73	↓	7.2	2 DD6A4	↓	↓	6.26
DD6A6	↓	9.39	1.79	↓	4.4	3 DD6A5	↓	↓	6.31
DD6A7	↓	9.36	1.78	↓	4.4	4 DD6A6	↓	↓	6.32
					4.4	5 DD6A7	↓	↓	6.31
						6 DD6A4	↓	↓	6.30
						7.			
						8.			
						9.			
						10.			
						11.			
						12.			
						13.			
						14.			
						15.			
						16.			
						17.			
						18.			
						19.			
						20.			

Extract(s)			Extract(s) Rejected			Extract(s) Relinquished		
Record line number from above	Date	Time	Analyst	Location	Date	Time	Analyst	Location
111 ASD16	5-16-00	12:25		Meticon	5-16-00	12:20		SD

Extract(s) (Record line number from above)
5-16-00 12:45 Analyst: *[Signature]* Location: *[Signature]* Date: 5-16-00 Time: 12:20 Analyst: *[Signature]* Location: 5D

Extract(s) Requisitioned
Date/Time On: 5-16-00 15:45 Date/Time Off: 5-17-00 9:30 Agitation Apparatus RPMs: 30 ± 2
pH Calibration: (4.0) (7.0) (10.0)
Date: 5-16-00 4:00 7:01 10:03
Date: 5-17-00 4:00 7:01 10:03
Comments:
Room Temp - 23°C

6571092

PSR024 5/18/00 3:55:13 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: HOYLEW

METHOD: 08 Mercury (7470A, Cold Vapor) - Liquid

STORAGE LOCATION	WORK ORDER #	PICKED CNTR#	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY RCVD	QTY REQD
2F CLP1	DD6A4	___	234434	399411	A-OM-08	COE130194	001		SOLID	0	3 1
2F CLP1	DD6A5	___	234435	399411	A-OM-08	COE130194	002		SOLID	0	3 1
2F CLP1	DD6A6	___	234436	399411	A-OM-08	COE130194	003		SOLID	0	3 1
2F CLP1	DD6A7	___	234437	399411	A-OM-08	COE130194	004		SOLID	0	3 1

TCLP
LEACHATE

DDA968

RELINQUISHED BY

RECEIVED BY

DATE/TIME

*William A. Hoyle**William A. Hoyle / Geoffrey O. Brant*

5-18-00

07:10

*William A. Hoyle / Geoffrey O. Brant**William A. Hoyle*

5-18-00

08:05

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

STL Pittsburgh

6299

6571094

GENERAL CHEMISTRY DATA

Client Sample ID: DF/S1/0133/SDC/001 A

General Chemistry

Lot-Sample #....: COE130194-001 Work Order #....: DD6A4 Matrix.....: SOLID
 Date Sampled....: 05/12/00 Date Received...: 05/13/00
 % Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.8		No Units	SW846 9045C	05/15/00	0136242
	Dilution Factor: 1		MS Run #.....: 0136107			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/15/00	0136237
	Dilution Factor: 1		MS Run #.....: 0136105			
Percent Solids	89.6	1.0	%	MCAWW 160.3 MOD	05/19-05/20/00	0140168
	Dilution Factor: 1		MS Run #.....: 0140053			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/17/00	0138394
	Dilution Factor: 1		MS Run #.....: 0138162			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/17/00	0138393
	Dilution Factor: 1		MS Run #.....: 0138161			

6571096

UXB INTERNATIONAL

Client Sample ID: DF/S1/0133/SDC/001 B

General Chemistry

Lot-Sample #....: C0E130194-002 Work Order #....: DD6A5 Matrix.....: SOLID
 Date Sampled...: 05/12/00 Date Received...: 05/13/00
 % Moisture.....: 8.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.1		No Units	SW846 9045C	05/15/00	0136242
	Dilution Factor: 1		MS Run #.....: 0136107			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/15/00	0136237
	Dilution Factor: 1		MS Run #.....: 0136105			
Percent Solids	91.4	1.0	%	MCAWW 160.3 MOD	05/19-05/20/00	0140168
	Dilution Factor: 1		MS Run #.....: 0140053			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/17/00	0138394
	Dilution Factor: 1		MS Run #.....: 0138162			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/17/00	0138393
	Dilution Factor: 1		MS Run #.....: 0138161			

Client Sample ID: DF/S1/0133/SDC/001 C

General Chemistry

Lot-Sample #....: C0E130194-003 Work Order #....: DD6A6 Matrix.....: SOLID
 Date Sampled....: 05/12/00 Date Received...: 05/13/00
 % Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.1		No Units	SW846 9045C	05/15/00	0136242
	Dilution Factor: 1		MS Run #.....: 0136107			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/15/00	0136237
	Dilution Factor: 1		MS Run #.....: 0136105			
Percent Solids	89.7	1.0	%	MCAWW 160.3 MOD	05/19-05/20/00	0140168
	Dilution Factor: 1		MS Run #.....: 0140053			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/17/00	0138394
	Dilution Factor: 1		MS Run #.....: 0138162			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/17/00	0138393
	Dilution Factor: 1		MS Run #.....: 0138161			

UXB INTERNATIONAL

6571098

Client Sample ID: DF/S1/0133/SDC/001 D

General Chemistry

Lot-Sample #....: C0E130194-004 Work Order #....: DD6A7 Matrix.....: SOLID
 Date Sampled....: 05/12/00 Date Received...: 05/13/00
 % Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.9		No Units	SW846 9045C	05/15/00	0136242
	Dilution Factor: 1		MS Run #.....: 0136107			
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/15/00	0136237
	Dilution Factor: 1		MS Run #.....: 0136105			
Percent Solids	89.2	1.0	%	MCAWW 160.3 MOD	05/19-05/20/00	0140168
	Dilution Factor: 1		MS Run #.....: 0140053			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/17/00	0138394
	Dilution Factor: 1		MS Run #.....: 0138162			
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/17/00	0138393
	Dilution Factor: 1		MS Run #.....: 0138161			

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C0E130194

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Reactive Cyanide	ND	Work Order #: DDARD101 200	mg/kg	MB Lot-Sample #: A0E170000-394 SW846 7.3.3	05/17/00	0138394
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: DDARC101 200	mg/kg	MB Lot-Sample #: A0E170000-393 SW846 7.3.4	05/17/00	0138393
		Dilution Factor: 1				

NOTE(S) :

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

6571100

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: C0E130194

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH	100	Work Order #: DD70J101 (85 - 115)	LCS Lot-Sample#: C0E150000-242 SW846 9045C	05/15/00	0136242
		Dilution Factor: 1			

NOTE(S) :

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0E130194

Work Order #....: DDAJ6-SMP

Matrix.....: SOLID

DDAJ6-DUP

Date Sampled....: 04/12/00

Date Received...: 05/17/00

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Solids	79.9	81.7	%	2.2	(0-20)	SD Lot-Sample #: C0E170244-030 MCAWW 160.3 MOD	05/19-05/20/00	0140168

Dilution Factor: 1

Prep Date.....: 0140053

Analysis Date...:

Prep Batch #....:

6571102

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0E130194

Work Order #....: DD6DM-SMP
DD6DM-DUP

Matrix.....: SOLID

Date Sampled....: 05/11/00

Date Received...: 05/13/00

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide	ND	ND	mg/kg	0	(0-20)	SD Lot-Sample #: G0E130196-003 SW846 7.3.3	05/17/00	0138394
Dilution Factor: 1								
			Prep Date.....: 0138162	Analysis Date...:		Prep Batch #....:		
Reactive Sulfide	ND	ND	mg/kg	200	(0-20)	SD Lot-Sample #: G0E130196-003 SW846 7.3.4	05/17/00	0138393
Dilution Factor: 1								
			Prep Date.....: 0138161	Analysis Date...:		Prep Batch #....:		

Method: Ignitability

ANALYST: C. LOTTEY DE
BATCH: 0136237DATE: 5-15-00
TIME: 10:00

SAMPLE ID	RESULT
COE130194-001	NO
-001Dyp	NO
-002	NO
-003	NO
-004	NO

Reviewed by J. J. Johnson Date 5-15-00

Quanterra Environmental Services
pH LOG SHEET

Page ____ of ____

Lot No.	Batch No.	SDG No.
<u>COE130141</u>	<u>0136242</u>	
<u>COE130194</u>	<u>0136242</u>	
<u>COE130140</u>	<u>0136248</u>	

Includes attachment(s) _____

Analyst: CHOTTE-YD-

Date: 5-15-00

Start Time: 1230

pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
7.01	7.0	LAB Chem 9291-13	2-29-00	11-12-01
4.00	4.0	9245-18	✓	9-8-01
10.00	10.0	0010-07	✓	1-11-01

LCS ID No.: 342-155-10

Relative Percent Difference =

Range = $\pm .05$ pH units

$$\frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} \times 100$$

X₁ =Original Result

X₇ = Duplicate

Sample ID	pH Reading
LCS	7.03
CGE130141-001	7.34
CGE130194-001	7.75
-001D _{up}	7.82
-002	8.08
-003	8.06
-004	7.90
LCS	7.04
CGE130140-001	6.09
-001D _{up}	6.16
LCS	7.04

COE170161
COE180321
COE180240
COE170244
(001-008)

COE170244
(009-028) > 0140166

0005012

6571105

COE170244
(029-030) > 0140168 < COE130194
COE130192

QUANTERRA ENVIRONMENTAL SERVICES
TOTAL SOLIDS/PERCENT MOISTURE LOG SHEET

Oven Temperature: 103°C

Calculations:

1. $A - C = D$
2. $B - C = E$
3. $\frac{D}{E} \times 100 = F$
4. $100 - F = G$

Page of
Includes attachment(s) BALANCE # 94817
5-19-00
Analyst: ERIC L. WESOLOSKI
Date 5-19-00 Time in 10:40
Date 5-20-00 Time out 05:15
Batch No(s):

SAMPLE ID	TARE NO.	(A) DRIED SAMPLE + TARE	(B) SAMPLE + TARE	(C) TARE	(D) WEIGHT OF DRY SAMPLE IN GRAMS	(E) WEIGHT OF SAMPLE IN GRAMS	(F) PERCENT SOLIDS	(G) PERCENT MOISTURE
COE170161-001	C	4.98	6.95	1.13				
COE180321-001	110	7.77	9.28	1.15				
-002	105	5.26	6.15	1.12				
-003	48	6.15	7.36	1.12				
-004	149	4.95	6.57	1.12				
-005	111	6.11	7.29	1.14				
-006	80	6.68	8.00	1.13				
-007	38	7.61	9.17	1.11				
-008	104	5.74	6.46	1.10				
-009	25	6.57	7.64	1.11				
COE180240-001	166	7.33	7.59	1.10				
-002	46	7.29	7.54	1.12				
COE170244-001	28	5.52	6.33	1.09				
-002	182	5.43	6.37	1.09				
-003	118	5.73	6.60	1.14				
-004	153	5.37	6.57	1.10				
-005	115	5.10	6.30	1.12				
-005 DU	158	5.12	6.38	1.12				
-006	150	5.38	6.54	1.17				
-007	12	5.34	6.46	1.10				
-008	96	5.50	6.36	1.09				
COE170244-009	152	5.75	6.80	1.13				
-010	165	5.26	6.43	1.11				
-011	188	4.99	6.57	1.13				
-012	129	5.76	6.83	1.12				
-013	177	5.03	6.39	1.12				
-014	33	5.35	6.41	1.14				
-015	1108	5.75	6.65	1.17				
-016	FU	5.54	6.68	1.13				
-017	123	5.24	6.24	1.13				
-018	1051	5.77	6.92	1.14				
-019	173	5.51	6.55	1.15				
-020	157	5.70	6.82	1.14				

**QUANTERRA ENVIRONMENTAL SERVICES
TOTAL SOLIDS/PERCENT MOISTURE LOG SHEET**

Oven Temperature: 103°C

Calculations:

1. $A - C = D$ 2. $B - C = E$
 3. $\frac{D}{E} \times 100 = F$ 4. $100 - F = G$

 Includes attachment(s) BALANCE #94817
 Date 5-19-00
Analyst: Eric L. WesolowskiDate 5-19-00 Time in 10:40 / 12:45Date 5-20-00 Time out 05:15

Batch No(s): _____

SAMPLE ID	TARE NO.	(A) DRIED SAMPLE + TARE	(B) SAMPLE + TARE	(C) TARE	(D) WEIGHT OF DRY SAMPLE IN GRAMS	(E) WEIGHT OF SAMPLE IN GRAMS	(F) PERCENT SOLIDS	(G) PERCENT MOISTURE
COE170244-0202	154	5.85	6.95	1.12				
-021	V	6.10	7.23	1.09				
-022	42	5.42	6.29	1.13				
-023	51	5.47	6.41	1.12				
-024	A	5.34	6.35	1.15				
-025	Y2	5.73	6.68	1.06				
-026	Y15	5.68	6.95	1.05				
-027	31	5.95	6.99	1.64				
-028	T0	4.64	6.20	1.03				
-029	Y10	5.25	6.64	1.05				
-030	Y14	5.09	6.08	1.06				
-030	J13	5.22	6.15	1.07				
COE130194-001	Y9	5.98	6.55	1.06				
-002	P30	6.02	6.49	1.05				
-003	181	7.43	8.09	1.66				
-004	314	6.82	7.52	1.04				
COE130192-006	Y8	7.06	8.37	1.05				
-007	P29	7.25	8.72	1.07				
-008	C2	7.17	8.75	1.02				
-009	C9	5.38	7.62	1.03				

STL - Pittsburgh WATER CONTENT SHEET

TET NUM 0005012
 TESTED: ELW 5/19/00
 CHECKED: *AS* 5-20-00

CREATED: 5/19/00 11:17:26 AM

REVISED: 5/20/00 7:28:52 AM

COMMENTS:

C0E170161/C0E180321/C0E180240/C0E170244/C0E130192/C0E130194

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.	TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC.
C0E170161	001	SMP C	1.13	6.95	4.98	10:40	5:15	1.97	33.849	66.151 ✓
C0E180321	001	SMP 110	1.15	9.28	7.77	10:40	5:15	1.51	18.573	81.427 ✓
C0E180321	002	SMP 105	1.12	6.15	5.26	10:40	5:15	0.89	17.694	82.306 ✓
C0E180321	003	SMP 48	1.12	7.36	6.15	10:40	5:15	1.21	19.391	80.609 ✓
C0E180321	004	SMP 149	1.12	6.51	4.95	10:40	5:15	1.56	28.942	71.058 ✓
C0E180321	005	SMP 111	1.14	7.29	6.11	10:40	5:15	1.18	19.187	80.813 ✓
180321	006	SMP 80	1.13	8	6.68	10:40	5:15	1.32	19.214	80.786 ✓
C0E180321	007	SMP 38	1.11	9.17	7.61	10:40	5:15	1.56	19.355	80.645 ✓
C0E180321	008	SMP 104	1.1	6.46	5.74	10:40	5:15	0.72	13.433	86.567 ✓
C0E180321	009	SMP 25	1.11	7.64	6.57	10:40	5:15	1.07	16.386	83.614 ✓
C0E180240	001	SMP 166	1.1	7.59	7.33	10:40	5:15	0.26	4.006	95.994 ✓
C0E180240	002	SMP 46	1.12	7.54	7.29	10:40	5:15	0.25	3.894	96.106 ✓
C0E170244	001	SMP 28	1.09	6.33	5.52	10:40	5:15	0.81	15.458	84.542 ✓
C0E170244	002	SMP 182	1.09	6.37	5.43	10:40	5:15	0.94	17.803	82.197 ✓
C0E170244	003	SMP 118	1.14	6.6	5.73	10:40	5:15	0.87	15.934	84.066 ✓
C0E170244	004	SMP 1551	1.1	6.87	5.37	10:40	5:15	1.5	25.997	74.003 ✓
C0E170244	005	SMP 115	1.12	6.3	5.1	10:40	5:15	1.2	23.166	76.834 ✓
C0E170244	005 DUP	SMP 158	1.12	6.38	5.12	10:40	5:15	1.26	23.954	76.046 ✓

6571108

STL - Pittsburgh WATER CONTENT SHEET

TEST NUM: 0005012
 TESTED: ELW 5/19/00
 CHECKED: *188* 52000

CREATED: 5/19/00 11:17:26 AM

REVISED: 5/20/00 7:28:52 AM

COMMENTS:

C0E170161/C0E180321/C0E180240/C0E170244/C0E130192/C0E130194

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.		TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC	SOLIDS CONTENT CALC.
C0E170244	006	SMP	150	1.17	6.54	5.38	10:40	5:15	1.16	21.601	78.399 ✓
C0E170244	007	SMP	12	1.1	6.46	5.34	10:40	5:15	1.12	20.896	79.104 ✓
C0E170244	008	SMP	96	1.09	6.36	5.5	10:40	5:15	0.86	16.319	83.681 ✓
C0E170244	009	SMP	152	1.13	6.8	5.75	10:40	5:15	1.05	18.519	81.481 ✓
C0E170244	010	SMP	165	1.11	6.43	5.26	10:40	5:15	1.17	21.992	78.008 ✓
C0E170244	011	SMP	188	1.13	6.57	4.99	10:40	5:15	1.58	29.044	70.956 ✓
170244	012	SMP	129	1.12	6.83	5.76	10:40	5:15	1.07	18.739	81.261 ✓
C0E170244	013	SMP	177	1.12	6.39	5.03	10:40	5:15	1.36	25.806	74.194 ✓
C0E170244	014	SMP	33	1.14	6.41	5.35	10:40	5:15	1.06	20.114	79.886 ✓
C0E170244	015	SMP	1108	1.17	6.65	5.75	10:40	5:15	0.9	16.423	83.577 ✓
C0E170244	016	SMP	PU	1.13	6.68	5.54	10:40	5:15	1.14	20.541	79.459 ✓
C0E170244	017	SMP	123	1.13	6.24	5.24	10:40	5:15	1	19.569	80.431 ✓
C0E170244	018	SMP	1051	1.14	6.92	5.77	10:40	5:15	1.15	19.896	80.104 ✓
C0E170244	019	SMP	173	1.15	6.55	5.51	10:40	5:15	1.04	19.259	80.741 ✓
C0E170244	020	SMP	157	1.14	6.82	5.7	10:40	5:15	1.12	19.718	80.282 ✓
C0E170244	020 DUP	SMP	154	1.12	6.95	5.85	10:40	5:15	1.1	18.868	81.132 ✓
C0E170244	021	SMP	V	1.09	7.23	6.1	10:40	5:15	1.13	18.404	81.596 ✓
C0E170244	022	SMP	42	1.13	6.29	5.42	10:40	5:15	0.87	16.86	83.14 ✓

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 0005012
 STED ELW 5/19/00
 CHECKED *19* 52000

CREATED 5/19/00 11:17:26 AM
 REVISED 5/20/00 11:50:54 AM

COMMENTS:

C0E170161/C0E160321/C0E180240/C0E170244/C0E130192/C0E130194

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.	TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC.	
C0E170244	023	SMP	51	1 12	6.61	5.47	10:40	5:15	1.14	20.765	79 235
C0E170244	024	SMP	4	1.15	6.35	5.34	10:40	5:15	1.01	19.423	80.577
C0E170244	025	SMP	Y2	1.06	6.68	5 73	10:40	5:15	0.95	16.904	83.096
C0E170244	026	SMP	Y15	1.05	6 95	5.68	10:40	5:15	1 27	21.525	78.475
C0E170244	027	SMP	31	1.64	6.99	5.95	10:40	5:15	1 04	19 439	80.561
C0E170244	028	SMP	TO	1.03	6.2	4 64	10:40	5:15	1 56	30 174	69.826
C0E170244	029	SMP	Y10	1.05	6.64	5.25	10:40	5:15	1.39	24.866	75 134
C0E170244	030	SMP	Y14	1 06	6.08	5 07	10:40	5:15	1.01	20 12	79 88
C0E170244	030 DUP	SMP	J13	1 07	6 15	5.22	10:40	5:15	0 93	18.307	81.693
C0E130194	001	SMP	y9	1 06	6 55	5.98	12:45	5:15	0 57	10.383	89.617
C0E130194	002	SMP	P30	1.05	6.49	6.02	12:45	5:15	0.47	8.64	91 36
C0E130194	003	SMP	181	1.66	8.09	7.43	12:45	5:15	0.66	10 264	89.736
C0E130194	004	SMP	314	1 04	7 52	6 82	12:45	5:15	0.7	10.802	89 198
C0E130192	006	SMP	Y8	1.05	8.37	7.06	12:45	5:15	1.31	17 896	82.104
C0E130192	007	SMP	P29	1 07	8 72	7 25	12:45	5:15	1.47	19.216	80 784
C0E130192	008	SMP	C2	1.02	8.75	7.17	12:45	5:15	1 58	20 44	79 56
C0E130192	009	SMP	C9	1 03	7 62	5 38	12:45	5:15	2 24	33 991	66 009

6571110

PSR024 5/15/00 6:15:47 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: LOHEYDEC

METHOD: IQ Ignitability (SW7.1.2)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
2F CLP1	DD6A4-1-OF	___	233460	399411	A-88-IQ	COE130194	001		SOLID	3	1
2F CLP1	DD6A5-1-OF	___	233461	399411	A-88-IQ	COE130194	002		SOLID	3	1
2F CLP1	DD6A6-1-OF	___	233462	399411	A-88-IQ	COE130194	003		SOLID	3	1
2F CLP1	DD6A7-1-OF	___	233463	399411	A-88-IQ	COE130194	004		SOLID	3	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

[Signature]
[Signature]

[Signature]
[Signature]

5-15-00 0830
5-15-00 1045

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

STL Pittsburgh

7017

PSR024 5/15/00 6:03:59 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: LOHEYDEC

METHOD: OZ pH (9045C) - Non-Aqueous

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
2B,C	DD5VC-1-02	___	233454	416241	N-88-OZ	COE130141	001		WASTE	9	1
2F CLP1	DD6A4-1-0E	___	233455	399411	A-88-OZ	COE130194	001		SOLID	3	1
2F CLP1	DD6A5-1-0E	___	233456	399411	A-88-OZ	COE130194	002		SOLID	3	1
2F CLP1	DD6A6-1-0E	___	233457	399411	A-88-OZ	COE130194	003		SOLID	3	1
2F CLP1	DD6A7-1-0E	___	233458	399411	A-88-OZ	COE130194	004		SOLID	3	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

[Signature]
[Signature]

[Signature]
[Signature]

5-15-00 0830
5-15-00 1045

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

6571112

PSR024 5/19/00 10:35:59 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: MESOLOSE

METHOD: SM Solids, Percent (as TS - 160.3 MOD) - Solids

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
2F CLP1	DD6A4-1-1F	___	235076	399411	A-88-SM	C0E130194	001		SOLID	0	3
2F CLP1	DD6A5-1-0K	___	235077	399411	A-88-SM	C0E130194	002		SOLID	0	3
2F CLP1	DD6A6-1-0K	___	235078	399411	A-88-SM	C0E130194	003		SOLID	0	3
2F CLP1	DD6A7-1-0K	___	235079	399411	A-88-SM	C0E130194	004		SOLID	0	3

RELINQUISHED BY

RECEIVED BY

DATE/TIME

E. L. Whelan
E. L. Whelan

E. L. Whelan
E. L. Whelan

5/19/00 (12:35)
5/19/00 (14:00)

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

Batch Number 0138393
LCS Number —
LCS Prep Date —
RL 200mclks

Titrant Name NaOH solution
 Titrant Normality 0.025N - 0.02483
 Titrant Standardization Date/ Initials 5-8-00, Jav

~~200mg/Kg~~
Iodine
MFG 0.02747
4-27-00

Sample Number	Sample Volume	Dil.	Titrant Vol (mL)	Final Conc.	Units	QC Calculations and Comments
BLU	~~Blank~~		22.3	ND		
DC+FC			22.1	.112		
DD6DM			22.1	.112		
DD6DM (Dup)			22.6	ND		
DD6DN			22.0	.42		
DD6DP			22.0	.42		
DD6A4			22.4	ND		
DD6A5			22.7	ND		
DD6A6			21.7	1.69		
DD6A7			22.7	ND		
JAH 5-18-00						

Rev. 10/30/98
N:\Metals\Wet Log

QUANTERRA- NORTH CANTON
TITRIMETRIC LOGSHEET

Analysis W-React
Prep/ Anal. Date 5/7/80
Analyst JPK

Batch Number 0138394
LCS Number —
LCS Prep Date —
RL 200 mg/kg

Titrant Name Silver Nitrate
 Titrant Normality 0.0192N
 Titrant Standardization Date/Initials _____

[illegible]

**SEVERN
TRENT
SERVICES**

STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238

Tel 412 820 8380
Fax 412 820 2080
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. UXB 7512-060

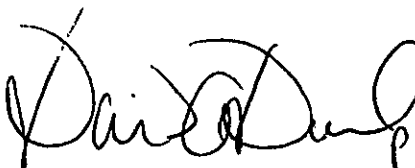
Dunn Field, Def Depot Memphis

Lot #: C0E190257

Randy Reed

UXB International

SEVERN TRENT LABORATORIES, INC.



Dave Dunlap
Project Manager

May 31, 2000

CASE NARRATIVE
UXB International Inc.
Dunn Field

LOT # C0E190257

Sample Receiving:

One sample was received on May 19, 2000

Volatiles:

The recovery of vinyl chloride was outside control limits in the matrix spike duplicate. The RPD between the matrix spikes and the recovery of vinyl chloride in the laboratory control sample were within the control limits.

Semivolatiles:

There were no problems associated with the analyses.

Pesticides:

Due to a technical problem at the instrument, all calibration raw data and sample raw data have the same injection time and date. Therefore a Form 8 could not be provided.

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: DB608			
Calibration Verification Date & Times	Affected Compound	% Difference	Average % Difference of All Compounds in Standard
5/26/00 @ 01:00	DCAA Dicamba Dichloroprop 2,4-D Silvex 2,4,5-T	-17.0 -16.5 -19.2 -20.0 -17.1 -18.5	14
5/26/00 @ 11:10	Dichloroprop 2,4-D 2,4,5-T	-17.5 -16.9 -18.7	10

Metals:

There were no problems associated with the analyses.

CASE NARRATIVE
UXB International Inc.
Dunn Field

LOT # C0E190257

TCLP Metals:

There were no problems associated with the analyses.

General Chemistry:

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

METHODS SUMMARY

COR190257

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

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C0E190257

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
DDFV6	001	DF/S1/0138/GRAB/001	05/18/00	11:45

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

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

Contract/Purchase Order/Quote No.[illegible]

Possible Hazard Identification				Sample Disposal	
☒ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison	☐ Unknown	☐ Return To Client
Turn Around Time Required				Project Specific (Specify)	
☒ Normal	☐ Rush	QC Level		☐ Disposal By Lab	
1 Relinquished By <i>Don Horn</i>		☐ I. ☐ II. ☐ III.		☐ Archive For _____ Months	
Date <i>5/18/00</i>		Time <i>1300</i>		1 Received By <i>[Signature]</i>	
Date		Time		2 Received By <i>[Signature]</i>	
Date		Time		Date <i>5/19/00</i>	
Date		Time		Time <i>6:30</i>	
3 Relinquished By		3. Received By		Date	
Date		Time		Time	

Cooler Rec ipt Form

STL Pittsburgh

Client: UBX Project: 5/19/00 Quote: 34878

Cooler Rec'd & Opened for Temp. Check on: 5/19/00

Coolers Opened and Unpacked on: 5/19/00 By: [Signature]

(Signature)

STL Pittsburgh Lot Number: 006-190257

Yes No

1. Were custody seals on the outside of the cooler? ✓
If YES, how many and where? Quantity 1 Location Left Side
Were signatures and date correct? ✓
2. Were custody papers included inside the cooler? ✓
3. Were custody papers properly filled out (ink, signed, match labels)? ✓
4. Did you sign the custody papers in the appropriate place? ✓
5. Was shippers packing slip attached to this form? ✓
6. Were packing materials used? ✓
If YES, what type? Bubble
7. Were the samples chilled? (Record temperatures on reverse side.) ✓
8. Were the samples appropriately preserved? ✓
9. Were all bottles sealed in separate plastic bags? ✓
10. Did all bottles arrive in good condition (unbroken)? ✓
11. Were all bottle labels complete (sample ID, preservatives, etc.)? ✓
12. Did all bottle labels and/or tags agree with custody papers? ✓
13. Were correct bottles used for tests indicated? ✓
14. Were all VOA vials checked for the presence of air bubbles? ✓
15. 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.

Cooler Receipt Form

STL Pittsburgh

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.

FedEx

 FedEx Tracking Number
821264589185

 1 From **5/18/00** Date

 Sender's Name **Jim Thoren** Phone **901 685-9595**

 Company **WXB Inst.**

 Address **6141 Old Poplar Pike**

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

2 Your Internal Billing Reference

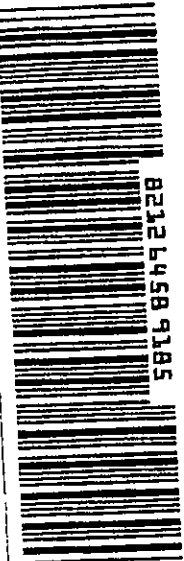
 3 To **Rusty Vincuit** Phone **412 820-2080**

 Name **Sever Trent**

 Company **450 William Pitt Way**

 Address **450 William Pitt Way**

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

 To Mail or print location
 print FedEx address label


821264589185

0200

4a Express Package Service

☒ FedEx Priority Overnight

☐ FedEx Standard Overnight

☐ FedEx First Overnight

☐ FedEx 2Day[®]
☐ FedEx Express Saver[®]

4b Express Freight Service

☐ FedEx 1Day Freight[®]
☐ FedEx 2Day Freight

☐ FedEx 3Day Freight

☐ FedEx 1Day Freight[®]
☐ FedEx 2Day Freight

☐ FedEx 3Day Freight

5 Packaging

☐ FedEx letter[®]
☐ FedEx Pak[®]
☒ Other Pkg

6 Special Handling

☐ Saturday Delivery[™]
☐ Sunday Delivery

☐ HOLD Wednesday

☐ HOLD Saturday

☐ Fragile

☐ Dry Ice

☐ Fragile

☐ Signature Required

☐ Signature Required

☐ Signature Required

☐ Payment Bill to:

☐ Recipient

☐ Recipient

☐ Total Packages

☐ Total Weight

☐ Total Packages

☐ Total Packages

☐ Total Weight

☐ Total Packages

☐ Release Signature

☐ Release Signature

☐ Release Signature

360

SBCCOM
Monitoring Branch Laboratory

CLEARANCE REPORT

May-17, 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/S1/10 38/GRAB /001		ND	ND	N/A	ND	ND

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

MDL= 200 ppb

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

MS= matrix spike

MSD= matrix spike duplicate

DUP= duplicate

DATA SUMMARY PACKAGE

GC/MS VOLATILE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/19/00

Work Order: DDFV6102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: 16

QC Batch: 0145166

Client Sample Id: DF/S1/0138/GRAB/001

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

6571128

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E190257 001

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

Sample WT/Vol: 5 / mL Date Received: 05/19/00
Work Order: DDFV610W Date Extracted: 05/24/00
Dilution factor: 1 Date Analyzed: 05/24/00
Moisture %: 16

QC Batch: 0145166

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.529	
78-93-3	2-Butanone	0.264	
56-23-5	Carbon tetrachloride	0.534	
108-90-7	Chlorobenzene	0.519	
67-66-3	Chloroform	0.544	
107-06-2	1,2-Dichloroethane	0.544	
75-35-4	1,1-Dichloroethene	0.541	
127-18-4	Tetrachloroethene	0.516	
79-01-6	Trichloroethene	0.519	
75-01-4	Vinyl chloride	0.640	

FORM I

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E190257 001
 Method: SW846 8260B
 Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 05/19/00
 Work Order: DDFV610X Date Extracted: 05/24/00
 Dilution factor: 1 Date Analyzed: 05/24/00
 Moisture %: 16

QC Batch: 0145166

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.598	
78-93-3	2-Butanone	0.319	
56-23-5	Carbon tetrachloride	0.613	
108-90-7	Chlorobenzene	0.576	
67-66-3	Chloroform	0.610	
107-06-2	1,2-Dichloroethane	0.622	
75-35-4	1,1-Dichloroethene	0.614	
127-18-4	Tetrachloroethene	0.574	
79-01-6	Trichloroethene	0.586	
75-01-4	Vinyl chloride	0.728	a

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E240000 166

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

Sample WT/Vol: 5 / mL Date Received: 05/19/00

Work Order: DDL7A101 Date Extracted: 05/24/00

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

Moisture %: NA

QC Batch: 0145166

Client Sample Id: CHECK SAMPLE

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.543	
78-93-3	2-Butanone	0.303	
56-23-5	Carbon tetrachloride	0.523	
108-90-7	Chlorobenzene	0.525	
67-66-3	Chloroform	0.534	
107-06-2	1,2-Dichloroethane	0.549	
75-35-4	1,1-Dichloroethene	0.532	
127-18-4	Tetrachloroethene	0.520	
79-01-6	Trichloroethene	0.527	
75-01-4	Vinyl chloride	0.625	

SW846 8260B SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E190257

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	91	97	94	90	00
02	METHOD BLK. DDL31101	96	102	101	94	00
03	LCS DDL7A101	102	101	104	104	00
04	DF/S1/0138/GRAB/001 D	106	102	104	108	00
05	DF/S1/0138/GRAB/001 S	102	100	103	105	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

6571132

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E240000

WO #: DDL7A101

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Benzene	0.500	0.543	109	79 - 116	
2-Butanone	0.500	0.303	61	35 - 156	
Carbon tetrachloride	0.500	0.523	105	72 - 133	
Chlorobenzene	0.500	0.525	105	81 - 115	
Chloroform	0.500	0.534	107	81 - 122	
1,2-Dichloroethane	0.500	0.549	110	73 - 127	
1,1-Dichloroethene	0.500	0.532	106	65 - 119	
Tetrachloroethene	0.500	0.520	104	78 - 131	
Trichloroethene	0.500	0.527	105	80 - 122	
Vinyl chloride	0.500	0.625	125	53 - 134	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610W

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
Benzene	0.500	ND	0.529	106	73 - 123	
2-Butanone	0.500	ND	0.264	53	10 - 151	
Carbon tetrachloride	0.500	ND	0.534	107	61 - 143	
Chlorobenzene	0.500	ND	0.519	104	70 - 122	
Chloroform	0.500	ND	0.544	109	65 - 131	
1,2-Dichloroethane	0.500	ND	0.544	109	67 - 132	
1,1-Dichloroethene	0.500	ND	0.541	108	57 - 138	
Tetrachloroethene	0.500	ND	0.516	103	70 - 130	
Trichloroethene	0.500	ND	0.519	104	58 - 141	
Vinyl chloride	0.500	ND	0.640	128	51 - 133	

NOTES (S) :

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

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

COMMENTS:

FORM III

6571134

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/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610X

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	REC	QUAL
=====	=====	=====	=====	=====	=====	=====	=====
Benzene	0.500	0.598	120	12	20	73 - 123	
2-Butanone	0.500	0.319	64	19	34	10 - 151	
Carbon tetrachloride	0.500	0.613	123	14	20	61 - 143	
Chlorobenzene	0.500	0.576	115	11	20	70 - 122	
Chloroform	0.500	0.610	122	12	20	65 - 131	
1,2-Dichloroethane	0.500	0.622	124	13	20	67 - 132	
1,1-Dichloroethene	0.500	0.614	123	13	20	57 - 138	
Tetrachloroethene	0.500	0.574	115	11	20	70 - 130	
Trichloroethene	0.500	0.586	117	12	20	58 - 141	
Vinyl chloride	0.500	0.728	146*	13	20	51 - 133	a

NOTES (S) :

a Spiked analyte recovery is outside stated control limits.

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

* Values outside of QC limits

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

COMMENTS:

FORM III

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDL31101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: 5052401.d

Lot Number: C0E190257

Date Analyzed: 05/24/00

Time Analyzed: 07:50

Matrix: SOLID

Date Extracted: 05/24/00

GC Column: HP624 ID: .20

Extraction Method: 1311/5030B

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/S1/0138/GRAB/001	DDFV610W S	5052408.d	05/24/00	10:42
02	DF/S1/0138/GRAB/001	DDFV610X D	5052409.d	05/24/00	11:07
03	DF/S1/0138/GRAB/001	DDFV6102	5052405.d	05/24/00	09:28
04	CHECK SAMPLE	DDL7A101 C	5052403.d	05/24/00	08:39
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

6571136

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E240000 135

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/17/00

Work Order: DDL31101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: NA

QC Batch: 0145166

Client Sample Id: INTRA-LAB BLANK

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

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT Case No.:

SAS No.: 40325

SDG No.: C0E190257

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	145785	9.97	214438	12.28	644708	6.89
02 INTRA-LAB CH	149772	9.97	230313	12.28	669876	6.89
03 DF/S1/0138/G	145813	9.97	215701	12.28	636737	6.89
04 DF/S1/0138/G	144050	9.97	219642	12.28	616326	6.89
05 DF/S1/0138/G	146832	9.97	212905	12.28	621894	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.

6571138

GC/MS SEMIVOLATILE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDFV6103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: 16

QC Batch: 0146281

Client Sample Id: DF/S1/0138/GRAB/001

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

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: COE250000 281

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDP6L102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146281

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.192	
121-14-2	2,4-Dinitrotoluene	0.170	
118-74-1	Hexachlorobenzene	0.214	
87-68-3	Hexachlorobutadiene	0.195	
67-72-1	Hexachloroethane	0.195	
98-95-3	Nitrobenzene	0.192	
87-86-5	Pentachlorophenol	0.202	
110-86-1	Pyridine	0.340	
95-95-4	2,4,5-Trichlorophenol	0.201	
88-06-2	2,4,6-Trichlorophenol	0.200	
1319-77-3	Cresols (total)	0.577	

UXB INTERNATIONAL
CHECK SAMPLE DUPLICATE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E250000 281
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL Date Received: 05/19/00
Work Order: DDP6L103 Date Extracted: 05/24/00
Dilution factor: 1 Date Analyzed: 05/26/00
Moisture %: NA

QC Batch: 0146281

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.185	
121-14-2	2,4-Dinitrotoluene	0.166	
118-74-1	Hexachlorobenzene	0.213	
87-68-3	Hexachlorobutadiene	0.190	
67-72-1	Hexachloroethane	0.190	
98-95-3	Nitrobenzene	0.189	
87-86-5	Pentachlorophenol	0.199	
110-86-1	Pyridine	0.329	
95-95-4	2,4,5-Trichlorophenol	0.194	
88-06-2	2,4,6-Trichlorophenol	0.198	
1319-77-3	Cresols (total)	0.575	

SW846 8270C SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E190257

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	96	97	106	85	89	110	00
02	METHOD BLK. DDP6L101	70	72	84	64	69	80	00
03	LCS DDP6L102	76	80	78	75	77	83	00
04	LCSD DDP6L103	75	78	80	73	76	82	00

SURROGATES

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

QC LIMITS

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

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

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E250000

WO #: DDP6L102

BATCH: 0146281

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
1,4-Dichlorobenzene	0.250	0.192	77	28- 110	
2,4-Dinitrotoluene	0.250	0.170	68	47- 131	
Hexachlorobenzene	0.250	0.214	85	57- 128	
Hexachlorobutadiene	0.250	0.195	78	36- 116	
Hexachloroethane	0.250	0.195	78	30- 110	
Nitrobenzene	0.250	0.192	77	45- 130	
Pentachlorophenol	0.250	0.202	81	10- 140	
Pyridine	0.250	0.340	136	10- 148	
2,4,5-Trichlorophenol	0.250	0.201	80	41- 125	
2,4,6-Trichlorophenol	0.250	0.200	80	46- 135	
Cresols (total)	0.750	0.577	77	29- 144	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

6571144

SW846 8270C CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: COE250000

WO #: DDP6L103

BATCH: 0146281

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
1,4-Dichlorobenzene	0.250	0.185	74	28- 110	
2,4-Dinitrotoluene	0.250	0.166	66	47- 131	
Hexachlorobenzene	0.250	0.213	85	57- 128	
Hexachlorobutadiene	0.250	0.190	76	36- 116	
Hexachloroethane	0.250	0.190	76	30- 110	
Nitrobenzene	0.250	0.189	76	45- 130	
Pentachlorophenol	0.250	0.199	79	10- 140	
Pyridine	0.250	0.329	132	10- 148	
2,4,5-Trichlorophenol	0.250	0.194	77	41- 125	
2,4,6-Trichlorophenol	0.250	0.198	79	46- 135	
Cresols (total)	0.750	0.575	77	29- 144	

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.

DDP6L101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: S0526001.

Lot Number: C0E190257

Date Analyzed: 05/26/00

Time Analyzed: 10:18

Matrix: SOLID

Date Extracted: 05/24/00

GC Column: DB5MS ID: .25

Extraction Method: 1311/3520C

Instrument ID: 71

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/S1/0138/GRAB/001	DDFV6103	S0526004.	05/26/00	11:57
02	CHECK SAMPLE	DDP6L102 C	S0526002.	05/26/00	10:51
03	DUPLICATE CHECK	DDP6L103 L	S0526003.	05/26/00	11:24
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

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E250000 281
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL Date Received: 05/19/00
Work Order: DDP6L101 Date Extracted: 05/24/00
Dilution factor: 1 Date Analyzed: 05/26/00
Moisture %: NA

QC Batch: 0146281

Client Sample Id: INTRA-LAB BLANK

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

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): S0526CC3 Date Analyzed: 05/26/00
 Instrument ID: 71 Time Analyzed: 0944

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	157584	4.98	612623	6.50	312444	9.51
UPPER LIMIT	315168	5.48	1225246	7.00	624888	10.01
LOWER LIMIT	78792	4.48	306312	6.00	156222	9.01
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	160321	4.98	652950	6.50	351968	9.51
02 INTRA-LAB CH	123769	4.98	494686	6.49	261001	9.51
03 INTRA-LAB CH	141326	4.98	571425	6.50	301387	9.51
04 DF/S1/0138/G	111471	4.97	421249	6.49	215257	9.49
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

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: _

Lab File ID (Standard): S0526CC3

Date Analyzed: 05/26/00

Instrument ID: 71

Time Analyzed: 0944

	IS4 (PHN)	RT #	IS5 (CRY)	RT #	IS6 (PRY)	RT #
	AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	499444	12.80	382446	19.43	492173	22.79
UPPER LIMIT	998888	13.30	764892	19.93	984346	23.29
LOWER LIMIT	249722	12.30	191223	18.93	246087	22.29
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	544595	12.80	411047	19.42	476187	22.79
02 INTRA-LAB CH	431139	12.80	407107	19.42	535892	22.78
03 INTRA-LAB CH	484922	12.80	429789	19.42	527120	22.78
04 DF/S1/0138/G	349052	12.78	373228	19.40	511027	22.76
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) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV6104

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

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

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

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

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV610P

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00208	
76-44-8	Heptachlor	0.00188	
1024-57-3	Heptachlor epoxide	0.00200	
58-89-9	Lindane	0.00162	
72-43-5	Methoxychlor	0.00226	

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number.

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV610Q

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00210	
76-44-8	Heptachlor	0.00190	
1024-57-3	Heptachlor epoxide	0.00200	
58-89-9	Lindane	0.00164	
72-43-5	Methoxychlor	0.00226	

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E230000 491
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDKW7102 Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/23/00
Moisture %: NA

QC Batch: 0144491

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00205	
76-44-8	Heptachlor	0.00192	
1024-57-3	Heptachlor epoxide	0.00201	
58-89-9	Lindane	0.00165	
72-43-5	Methoxychlor	0.00222	

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: COE190257

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	96	88	00
02	METHOD BLK. DDKW7101	98	65	00
03	LCS DDKW7102	96	80	00
04	DF/S1/0138/GRAB/001 D	96	78	00
05	DF/S1/0138/GRAB/001 S	96	78	00

SURROGATES

SRG01 = Decachlorobiphenyl
SRG02 = Tetrachloro-m-xylene

QC LIMITS

(10-147)
(39-130)

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

FORM II

SW846 8081A CHECK SAMPLE RECOVERY

Lab Name. Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E230000

WO #: DDKW7102

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00165	66	49 - 137	
Heptachlor	0.00250	0.00192	77	57 - 124	
Heptachlor epoxide	0.00250	0.00201	80	53 - 135	
Endrin	0 00250	0.00205	82	46 - 137	
Methoxychlor	0 00250	0.00222	89	12 - 154	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

6571156

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: COE190257

WO #: DDFV610P

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
Lindane	0.00250	ND	0.00162	65	30 - 148	
Heptachlor	0.00250	ND	0.00188	75	25 - 135	
Heptachlor epoxide	0.00250	ND	0.00200	80	38 - 138	
Endrin	0.00250	ND	0.00208	83	28 - 148	
Methoxychlor	0.00250	ND	0.00226	90	13 - 154	

NOTES (S) :

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

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

COMMENTS:

FORM III

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610Q

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD		QC LIMITS			QUAL
			% REC	% RPD	RPD	REC		
=====	=====	=====	=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00164	65	1.1	22	30 - 148		
Heptachlor	0.00250	0.00190	76	0.84	32	25 - 135		
Heptachlor epoxide	0.00250	0.00200	80	0.25	31	38 - 138		
Endrin	0.00250	0.00210	84	1.0	40	28 - 148		
Methoxychlor	0.00250	0.00226	91	0.040	29	13 - 154		

NOTES (S) :

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

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

COMMENTS:

6571158

SW846 8081A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDKW7101

Lab Name: Severn Trent Laboratories, Inc

Lab Code: QESPIT

SDG Number:

Lab File ID: d-a2075.d

Lot Number C0E190257

Matrix: SOLID

Extraction Method: 1311/3510

Date Analyzed(1): 05/23/00

Date Extracted: 05/23/00

Date Analyzed(2): N/A

Time Analyzed(1): 19:47

Time Analyzed(2): N/A

Instrument ID(1): G/H

Instrument ID(2): N/A

GC Column(1): DB608/1701 ID: 053

GC Column(2): N/A

ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED (1)	DATE ANALYZED (2)
01	DF/S1/0138/GRAB/001	DDFV610P S	05/23/00	N/A
02	DF/S1/0138/GRAB/001	DDFV610Q D	05/23/00	N/A
03	DF/S1/0138/GRAB/001	DDFV6104	05/23/00	N/A
04	CHECK SAMPLE	DDKW7102 C	05/23/00	N/A
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E230000 491
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDKW7101 Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/23/00
Moisture %: NA

QC Batch: 0144491

Client Sample Id: INTRA-LAB BLANK

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

6571160

HERBICIDE SUMMARY

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV6105

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: 16

QC Batch: 0144493

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.0050	U
93-72-1	2,4,5-TP (Silvex)	0.0050	U

6571162

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc SDG Number:
Matrix: (soil/water) SOLID Lab Sample ID: C0E190257 001
Method: SW846 8151A
Herbicides (8151A)
Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDFV610R Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/26/00
Moisture %: 16
QC Batch: 0144493
Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.161	
93-72-1	2,4,5-TP (Silvex)	0.0392	

FORM I

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

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

Matrix. (soil/water) SOLID Lab Sample ID: C0E190257 001
Method: SW846 8151A
Herbicides (8151A)

Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDFV610T Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/26/00
Moisture %: 16

QC Batch: 0144493

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.174	
93-72-1	2,4,5-TP (Silvex)	0.0413	

6571164

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

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

Lab Sample ID: C0E230000 493

Sample WT/Vol: 100 / mL
Work Order: DDKWG102
Dilution factor: 1
Moisture %: NA

Date Received: 05/19/00
Date Extracted: 05/23/00
Date Analyzed: 05/26/00

QC Batch 0144493

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.157	
93-72-1	2,4,5-TP (Silvex)	0.0388	

SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT , 'QESSDG:

Lot #: COE190257

	CLIENT ID.	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0138/GRAB/001	74	00
02	METHOD BLK. DDKWG101	78	00
03	LCS DDKWG102	102	00
04	DF/S1/0138/GRAB/001 D	77	00
05	DF/S1/0138/GRAB/001 S	61	00

SURROGATES
 SRG01 = DCAA

QC LIMITS
 (42-125)

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

FORM II

6571166

SW846 8151A CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E230000

WO #: DDKWG102

BATCH: 0144493

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	0.160	0.157	98	28 - 136	
2,4,5-TP (Silvex)	0.0400	0.0388	97	50 - 128	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Lot #: C0E190257

WO #: DDFV610R

BATCH: 0144493

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
2,4-D	0.160	ND	0.161	101	35 - 133	
2,4,5-TP (Silvex)	0.0400	ND	0.0392	98	50 - 131	

NOTES(S) :

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

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

COMMENTS:

FORM III

6571168

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Lot #: C0E190257

WO #: DDFV610T

BATCH: 0144493

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD		QC LIMITS			QUAL
	(mg/L)	(mg/L)	% REC	% RPD	RPD	REC		
=====	=====	=====	=====	=====	=====	=====	=====	
2,4-D	0.160	0.174	109	8.0	20	35 - 133		
2,4,5-TP (Silvex)	0.0400	0.0413	103	5.2	20	50 - 131		

NOTES (S) :

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

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

COMMENTS:

FORM III

SW846 8151A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDKWG101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: a-a30040.

Lot Number: C0E190257

Matrix: SOLID

Extraction Method:

Date Extracted: 05/23/00

Date Analyzed(1): 05/26/00

Date Analyzed(2): N/A

Time Analyzed(1): 07:18

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/S1/0138/GRAB/001	DDFV610R S	05/26/00	N/A
02	DF/S1/0138/GRAB/001	DDFV610T D	05/26/00	N/A
03	DF/S1/0138/GRAB/001	DDFV6105	05/26/00	N/A
04	CHECK SAMPLE	DDKWG102 C	05/26/00	N/A
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

6571170

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E230000 493

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDKWG101

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0144493

Client Sample Id: INTRA-LAB BLANK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.0050	U
93-72-1	2,4,5-TP (Silvex)	0.0050	U

FORM I

METALS SUMMARY

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6 Client ID: DF/S1/0138/GRAB/001
Matrix: Soil Units: mg/kg Prep Date: 5/22/00 Prep Batch: 0143109
Weight: 1.00 Volume: 100 Percent Moisture: 15.62

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.30	1.2	10.1		1	ICPST	5/22/00	18:23

Comments: C0E190257 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

Preparation Blank Results

Lab Sample ID: DDH6LB

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/22/00 **Prep Batch:** 0143109

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

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	0.26	1.0	0.26	U	1	ICPST	5/22/00	18:15

Comments: _____

Version 3.63.4

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

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDH6LCMatrix: Soil Units: mg/kg Prep Date: 5/22/00 Prep Batch: 0143109Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	200	200	99.7		80-120	1	ICPST	5/22/00	18:19

Comments: _____

TCLP METALS SUMMARY

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001
Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117
Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000045	U	1	CVAA	5/24/00	9:57

Comments: _____

Version 3.63.4

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

Form 1 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001
 Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.23	B	1	ICP	5/24/00	13:53
Barium	493.41	0.00041	10.0	1.0	B	1	ICP	5/24/00	13:53
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:53
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:53
Lead	220.35	0.025	0.50	0.025	U	1	ICP	5/24/00	13:53
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	5/24/00	13:53
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:53

Comments: C0E190257001

Version 3.63.4

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

Form 1 Equivalent

6571178

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRN

Standard Source: _____

Standard ID: _____

			ICB1 5/24/00 9:45 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: J00524A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICB1 5/24/00 1:10 PM							
			Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	193.696	500	30.3	U						
Barium	493.409	10000	0.4	U						
Cadmium	228.802	100	2.8	U						
Chromium	267.716	500	3.8	U						
Lead	220.353	500	24.6	U						
Selenium	196.026	250	67.4	U						
Silver	328.068	500	3.1	U						

6571150

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRN

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 5/24/00 9:49 AM		CCB2 5/24/00 10:14 AM					
			Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	B	0.0	B				

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00524A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 5/24/00 1:25 PM		CCB2 5/24/00 2:06 PM		CCB3 5/24/00 2:15 PM		Found	Q
			Found	Q	Found	Q	Found	Q		
Arsenic	193.696	500	30.3	U	35.4	B	30.3	U		
Barium	493.409	10000	0.6	B	0.4	U	0.5	B		
Cadmium	228.802	100	2.8	U	2.8	U	2.8	U		
Chromium	267.716	500	3.8	U	3.8	U	3.8	U		
Lead	220.353	500	24.6	U	24.6	U	-50.0	B		
Selenium	196.026	250	67.4	U	67.4	U	67.4	U		
Silver	328.068	500	3.1	U	3.1	U	3.1	U		

6571182

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results**Lab Sample ID:** DDJPKBT**Matrix:** Water **Units:** mg/L **Prep Date:** 5/24/00 **Prep Batch:** 0145117**Weight:** NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.00012	B	1	CVAA	5/24/00	9:55

Comments: _____

Version 3 63.4

U Result is less than the MDL
B Result is between MDL and RL*Form 3 Equivalent*

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDL21BTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000045	U	1	CVAA	5/24/00	9:51

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 3 Equivalent

B Result is between MDL and RL

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDJPKBTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.17	B	1	ICP	5/24/00	13:34
Barium	493.409	0.00041	10.0	0.0077	B	1	ICP	5/24/00	13:34
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:34
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:34
Lead	220.353	0.025	0.50	-0.033	B	1	ICP	5/24/00	13:34
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	5/24/00	13:34
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:34

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDL9LBTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.030	U	1	ICP	5/24/00	13:31
Barium	493.409	0.00041	10.0	0.00041	U	1	ICP	5/24/00	13:31
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:31
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:31
Lead	220.353	0.025	0.50	-0.037	B	1	ICP	5/24/00	13:31
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	5/24/00	13:31
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:31

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DDFV6ST
 Original Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001S
 Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117
 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	0.000045	U	0.0050		0.005	100.6	1	1	CVAA	5/24/00	9:57	5/24/00	10:00

Comments: _____

Version 3.63.4

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

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DDFV6DT
 Original Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001D
 Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117
 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	0.000045	U	0.0050		0.005	100.6	1	1	CVAA	5/24/00	9:57	5/24/00	10:02

Comments: _____

Version 3.63.4

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

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DDFV6STOriginal Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001SMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	193.7	0.23	B	5.1		5	97.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Barium	493.4	1.0	B	44.7		50	87.3	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Cadmium	228.8	0.0028	U	0.94		1	93.5	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Chromium	267.7	0.0038	U	4.2		5	84.4	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Lead	220.4	0.025	U	4.4		5	88.2	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Selenium	196.0	0.067	U	1.0		1	103.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Silver	328.1	0.0031	U	0.87		1	87.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form SA Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DDFV6DTOriginal Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.7	0.23	B	5.2		5	100.1	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Barium	493.4	1.0	B	45.8		50	89.6	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Cadmium	228.8	0.0028	U	0.97		1	96.8	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Chromium	267.7	0.0038	U	4.3		5	86.4	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Lead	220.4	0.025	U	4.5		5	90.8	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Selenium	196.0	0.067	U	1.1		1	108.6	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Silver	328.1	0.0031	U	0.90		1	90.1	1	1	ICP	5/24/00	13:53	5/24/00	14:09

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDFV6DTMatrix Spike Sample ID: DDFV6ST Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.0050		0.0050			1	1	CVAA	5/24/00	10:00	5/24/00	10:02

Comments: _____

Version 3 63 4

U Result is less than the MDL

Form 6 Equivalent

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDFV6DTMatrix Spike Sample ID: DDFV6ST Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.696	5.1		5.2		3.2 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Barium	493.409	44.7		45.8		2.6 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Cadmium	228.802	0.94		0.97		3.4 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Chromium	267.716	4.2		4.3		2.3 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Lead	220.353	4.4		4.5		2.9 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Selenium	196.026	1.0		1.1		5.3 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Silver	328.068	0.87		0.90		3.5 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09

Comments: _____

Version 3.63.4

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

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDL21CTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.0025	0.0027	108.4		80-120	1	CVAA	5/24/00	9:53

Comments _____

Version 3.63.4

STL Pittsburgh

U Result is less than the MDL

B Result is between MDL and RL

Form 7 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDL9LCTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	2.0	2.3	112.4		80-120	1	ICP	5/24/00	13:37
Barium	493.409	2.0	1.9	94.7	B	80-120	1	ICP	5/24/00	13:37
Cadmium	228.802	0.050	0.044	88.0	B	80-120	1	ICP	5/24/00	13:37
Chromium	267.716	0.20	0.19	96.1	B	80-120	1	ICP	5/24/00	13:37
Lead	220.353	0.50	0.44	87.6	B	80-120	1	ICP	5/24/00	13:37
Selenium	196.026	2.0	2.2	110.8		80-120	1	ICP	5/24/00	13:37
Silver	328.068	0.050	0.050	99.3	B	80-120	1	ICP	5/24/00	13:37

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 7 Equivalent

B Result is between MDL and RL

GENERAL CHEMISTRY SUMMARY

UXB INTERNATIONAL

Client Sample ID: DF/S1/0138/GRAB/001

General Chemistry

Lot-Sample #...: C0E190257-001 Work Order #...: DDFV6 Matrix.....: SOLID
 Date Sampled...: 05/18/00 Date Received...: 05/19/00
 % Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	6.6		No Units	SW846 9045C	05/20/00	0141108
				Dilution Factor: 1	MS Run #..... 0141013	
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/21/00	0142115
				Dilution Factor: 1	MS Run #..... 0142021	
Percent Solids	84.4	1.0	%	MCAWW 160.3 MOD	05/20-05/21/00	0141094
				Dilution Factor: 1	MS Run #..... 0141005	
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/21/00	0142125
				Dilution Factor: 1	MS Run # 0142023	
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/21/00	0142124
				Dilution Factor: 1	MS Run #..... 0142022	

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C0E190257

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Reactive Cyanide	ND	Work Order #: DDH4W101 200	mg/kg	MB Lot-Sample #: A0E210000-125 SW846 7.3.3	05/21/00	0142125
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: DDH4V101 200	mg/kg	MB Lot-Sample #: A0E210000-124 SW846 7.3.4	05/21/00	0142124
		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 #....: C0E190257

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH	101	Work Order #: DDGEN101 (85 - 115)	LCS Lot-Sample#: C0E200000-108 SW846 9045C	05/20/00	0141108
		Dilution Factor: 1			

NOTE(S) :

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

6571198

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: C0E190257

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

Matrix.....: SOLID

Date Sampled....: 05/18/00

Date Received...: 05/19/00

% Moisture.....: 13

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u> <u>RPD</u>	<u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Solids	86.8	86.7	%	0.086	(0-20)	SD Lot-Sample #: C0E190169-007 MCAWW 160.3 MOD	05/20-05/21/00	0141094
Dilution Factor: 1								
Prep Date... . :			0141005	Analysis Date..:		Prep Batch #....:		

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: C0E190257

Work Order #...: DD91R-SMP
DD91R-DUP

Matrix.....: SOLID

Date Sampled...: 05/15/00

Date Received..: 05/16/00

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide	ND	ND	mg/kg	0	(0-20)	SD Lot-Sample #: G0E160250-002 SW846 7.3.3	05/21/00	0142125

Dilution Factor: 1

Prep Date.....: 0142023 Analysis Date..: Prep Batch #...:

Reactive Sulfide
ND

SD Lot-Sample #: G0E160250-002

mg/kg	0	(0-20)	SW846 7.3.4	05/21/00	0142124

Dilution Factor: 1

```
Prep Date... ..: 0142022   Analysis Date...           Prep Batch #   .:
```


6571200

GC/MS VOLATILE DATA

**GC/MS VOLATILE
QC SUMMARY**

6571202

SW846 8260B SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT QESSDG:

Lot #: C0E190257

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
	=====	=====	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	91	97	94	90	00
02	METHOD BLK. DDL31101	96	102	101	94	00
03	LCS DDL7A101	102	101	104	104	00
04	DF/S1/0138/GRAB/001 D	106	102	104	108	00
05	DF/S1/0138/GRAB/001 S	102	100	103	105	00

SURROGATES	QC LIMITS
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 #: DDL7A101

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Benzene	0.500	0.543	109	79 - 116	
2-Butanone	0.500	0.303	61	35 - 156	
Carbon tetrachloride	0.500	0.523	105	72 - 133	
Chlorobenzene	0.500	0.525	105	81 - 115	
Chloroform	0.500	0.534	107	81 - 122	
1,2-Dichloroethane	0.500	0.549	110	73 - 127	
1,1-Dichloroethene	0.500	0.532	106	65 - 119	
Tetrachloroethene	0.500	0.520	104	78 - 131	
Trichloroethene	0.500	0.527	105	80 - 122	
Vinyl chloride	0.500	0.625	125	53 - 134	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III

6571204

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/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610W

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
Benzene	0.500	ND	0.529	106	73 - 123	
2-Butanone	0.500	ND	0.264	53	10 - 151	
Carbon tetrachloride	0.500	ND	0.534	107	61 - 143	
Chlorobenzene	0.500	ND	0.519	104	70 - 122	
Chloroform	0.500	ND	0.544	109	65 - 131	
1,2-Dichloroethane	0.500	ND	0.544	109	67 - 132	
1,1-Dichloroethene	0.500	ND	0.541	108	57 - 138	
Tetrachloroethene	0.500	ND	0.516	103	70 - 130	
Trichloroethene	0.500	ND	0.519	104	58 - 141	
Vinyl chloride	0.500	ND	0.640	128	51 - 133	

NOTES (S) :

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

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

COMMENTS:

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/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610X

BATCH: 0145166

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	REC	QUAL
=====	=====	=====	=====	=====	=====	=====	=====
Benzene	0.500	0.598	120	12	20	73 - 123	
2-Butanone	0.500	0.319	64	19	34	10 - 151	
Carbon tetrachloride	0.500	0.613	123	14	20	61 - 143	
Chlorobenzene	0.500	0.576	115	11	20	70 - 122	
Chloroform	0.500	0.610	122	12	20	65 - 131	
1,2-Dichloroethane	0.500	0.622	124	13	20	67 - 132	
1,1-Dichloroethene	0.500	0.614	123	13	20	57 - 138	
Tetrachloroethene	0.500	0.574	115	11	20	70 - 130	
Trichloroethene	0.500	0.586	117	12	20	58 - 141	
Vinyl chloride	0.500	0.728	146*	13	20	51 - 133	a

NOTES (S) :

a Spiked analyte recovery is outside stated control limits

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

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

COMMENTS:

6571206

BLANK WORKORDER NO.

SW846 8260B METHOD BLANK SUMMARY

DDL31101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: 5052401.d

Lot Number: COE190257

Date Analyzed: 05/24/00

Time Analyzed: 07:50

Matrix: SOLID

Date Extracted: 05/24/00

GC Column: HP624 ID: .20

Extraction Method: 1311/5030B

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/S1/0138/GRAB/001	DDFV610W S	5052408.d	05/24/00	10:42
02	DF/S1/0138/GRAB/001	DDFV610X D	5052409.d	05/24/00	11:07
03	DF/S1/0138/GRAB/001	DDFV6102	5052405.d	05/24/00	09:28
04	CHECK SAMPLE	DDL7A101 C	5052403.d	05/24/00	08:39
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

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

6571207

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STL-PIT 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					

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E190257

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	DDL31101	5052401	05/24/00	0750
03	INTRA-LAB CH	DDL7A101	5052403	05/24/00	0839
04	DF/S1/0138/G	DDFV6102	5052405	05/24/00	0928
05	DF/S1/0138/G	DDFV610W	5052408	05/24/00	1042
06	DF/S1/0138/G	DDFV610X	5052409	05/24/00	1107
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E190257

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) AREA #	RT #	IS2 (DCB) AREA #	RT #	IS3 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	145785	9.97	214438	12.28	644708	6.89
02 INTRA-LAB CH	149772	9.97	230313	12.28	669876	6.89
03 DF/S1/0138/G	145813	9.97	215701	12.28	636737	6.89
04 DF/S1/0138/G	144050	9.97	219642	12.28	616326	6.89
05 DF/S1/0138/G	146832	9.97	212905	12.28	621894	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.

6571210

**GC/MS VOLATILE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/19/00

Work Order: DDFV6102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: 16

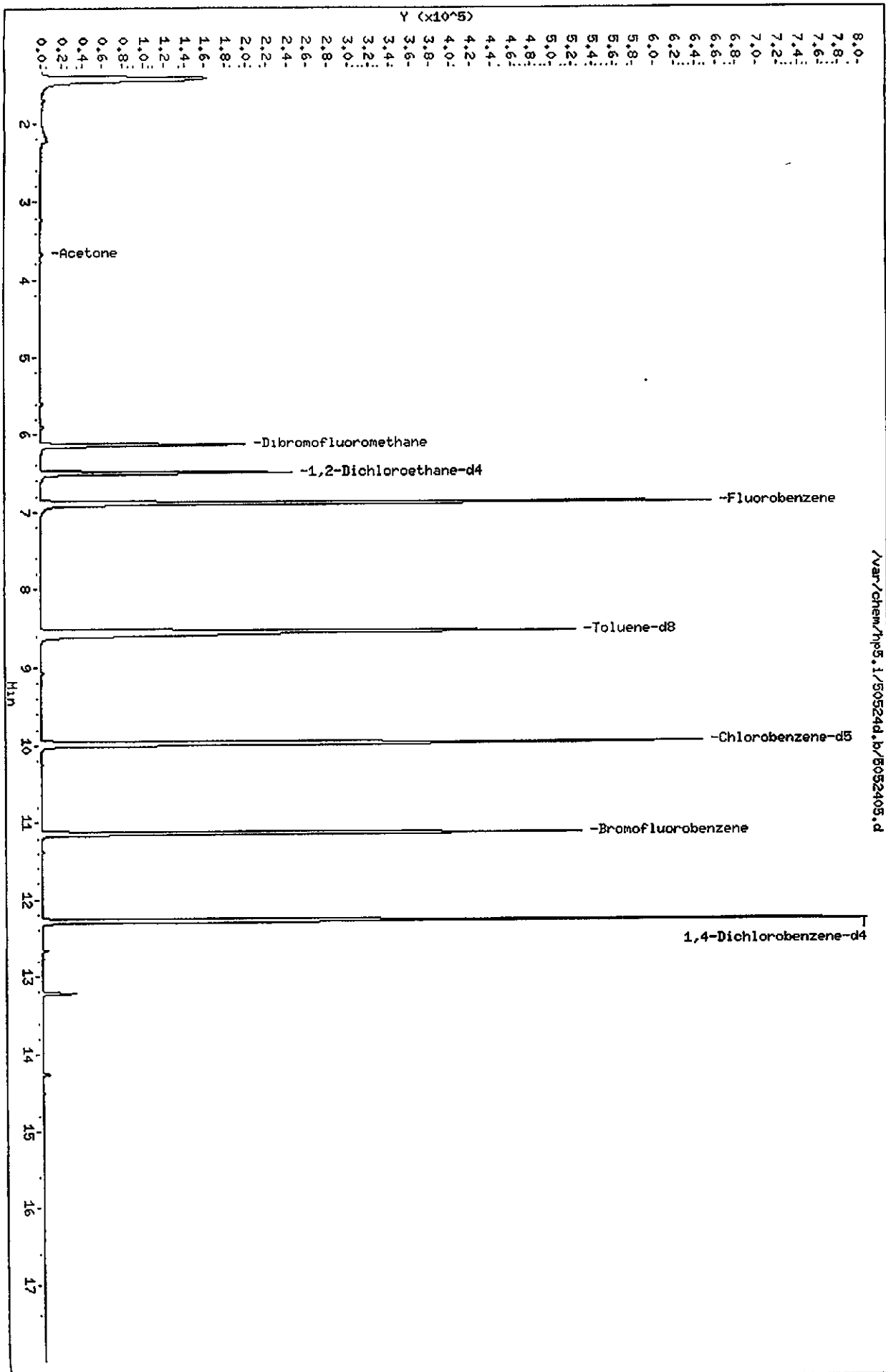
QC Batch: 0145166

Client Sample Id: DF/S1/0138/GRAB/001

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

Data File: /var/chem/hp5.i/50524d.b/5052405.d
Date : 24-MAY-2000 09:28
Client ID: DF/S1/0138/GRAB/001
Sample Info: COE190257-001 (4HL/10HL)/5HL
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/5052405.d
Report Date: 24-May-2000 12:05

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052405.d
Lab Smp Id: DDFV6102 Client Smp ID: DF/S1/0138/GRAB/001
Inj Date : 24-MAY-2000 09:28
Operator : 10099 Inst ID: hp5.i
Smp Info : C0E190257-001 (1ML/10ML)/5ML
Misc Info : ddfv6102,50524d.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: 8
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	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (UG/L)
* 46 Fluorobenzene		96	6.889	6.868	(1.000)	636737		
* 69 Chlorobenzene-d5		119	9.973	9.971	(1.000)	145813		
* 92 1,4-Dichlorobenzene-d4		152	12.279	12.282	(1.000)	215701		
\$ 39 Dibromofluoromethane		113	6.141	6.132	(0.891)	124926	225.183	45.04
\$ 43 1,2-Dichloroethane-d4		65	6.500	6.491	(0.943)	168781	228.107	45.62
\$ 59 Toluene-d8		98	8.544	8.529	(0.857)	570916	241.511	48.30
\$ 80 Bromofluorobenzene		95	11.135	11.145	(1.117)	209704	235.855	47.17
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	FINAL
	MASS					(ng)	(UG/L)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76.00				Compound Not Detected.		
13 Acetone	43	3 677	3.303	(0 534)	4399	11.0247	2 205
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.		

**GC/MS VOLATILE
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.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

6571217

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

Data File: /var/chem/hp5.i/50515d.b/1e50515.d
 Report Date: 05/15/2000

INITIAL CALIBRATION REPORT

Instrument ID: hp5.1
 Lab File ID: 1e50515.d
 Analysis Type: WATER

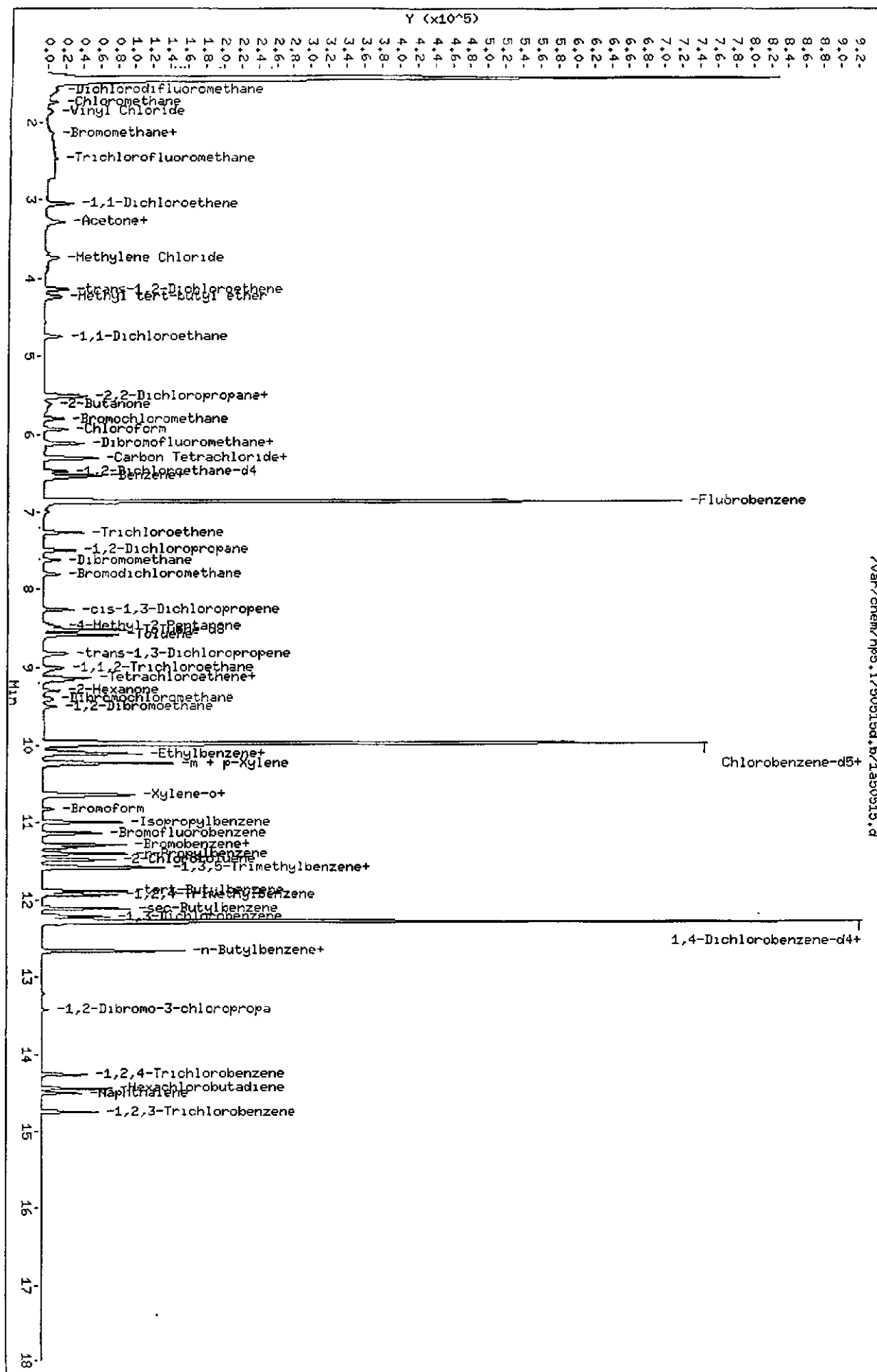
Injection Date: 15-MAY-2000 09:59
 Lab Sample ID: vstd200
 Method File: /var/chem/hp5.1/50515d.b/8260bh2

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
1,1,2,2-Tetrachloroethane	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 SML
 Purge Volume: 5.0
 Column phase: DB 624

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



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

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STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50515d.b/1a50515.d
 Lab Smp Id: vstd5 Client Smp ID: vstd5
 Inj Date : 15-MAY-2000 08:45
 Operator : 10099 Inst ID: hp5.i
 Smp Info : VSTD5 5ML
 Misc Info : vstd5,50515d.b,8260bh2o.m,3-dwlist.sub
 Comment :
 Method : /var/chem/hp5.i/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)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng)	ON-COL (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

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)	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

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

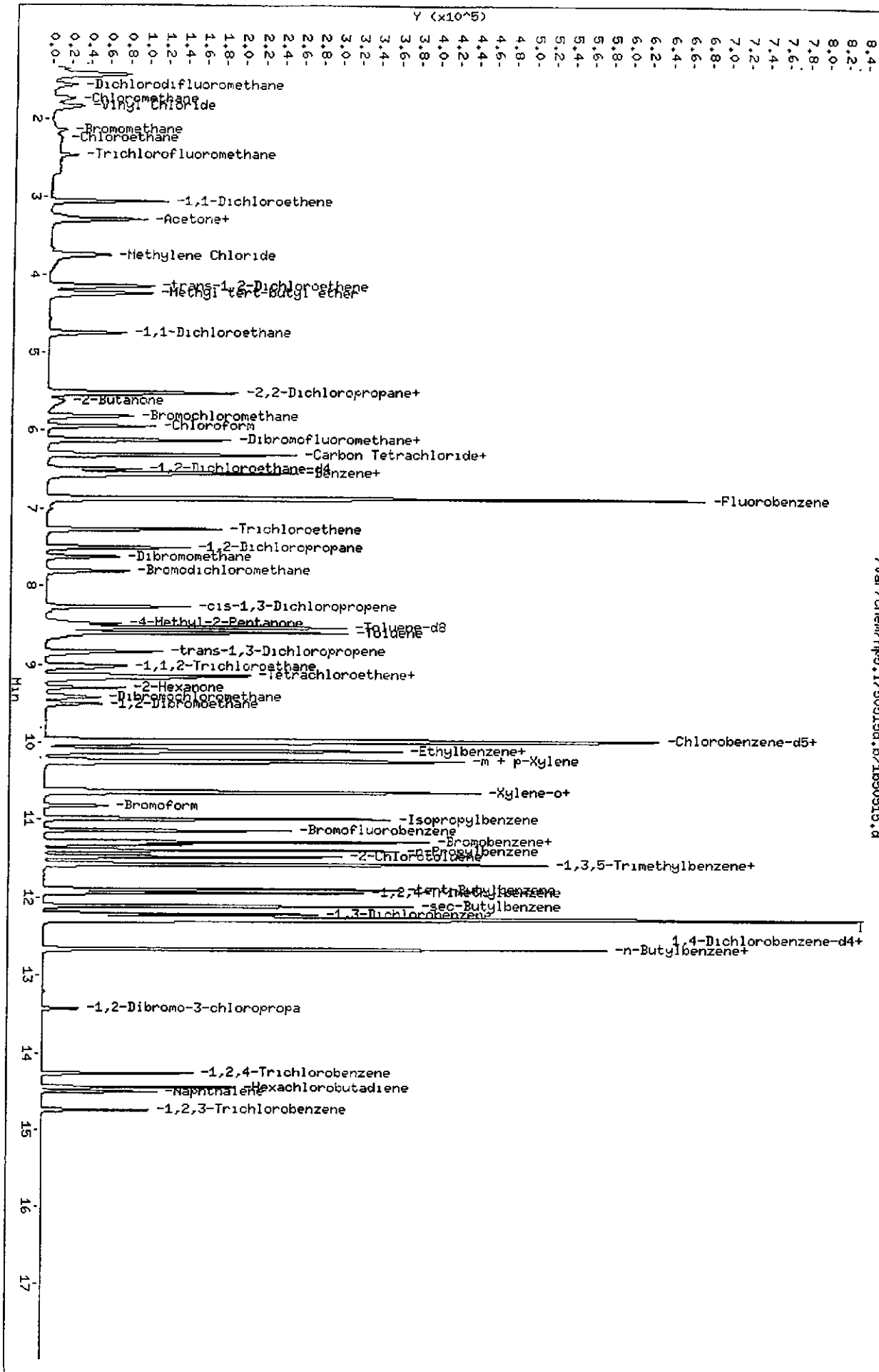
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Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
						(ng)	(ng)	
*****	****	==	*****	*****	*****	*****	*****	*****
90 4-Isopropyltoluene	119	12 251	12 251	(0 998)	53790	25 0000	25 23	
93 1,4-Dichlorobenzene	146	12 300	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 GML
 Purge Volume: 5.0
 Column Phase: DB 624

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

/var/chem/hp5.1/50515d.b/1b50515.d



Data File: /var/chem/hp5.i/50515d.b/1b50515.d
Report Date: 15-May-2000 09:52

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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

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)

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)	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-Dichloroethane	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

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	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

Data File: /var/chem/hp5.i/50515d.b/1b50515.d
 Report Date: 15-May-2000 09:52

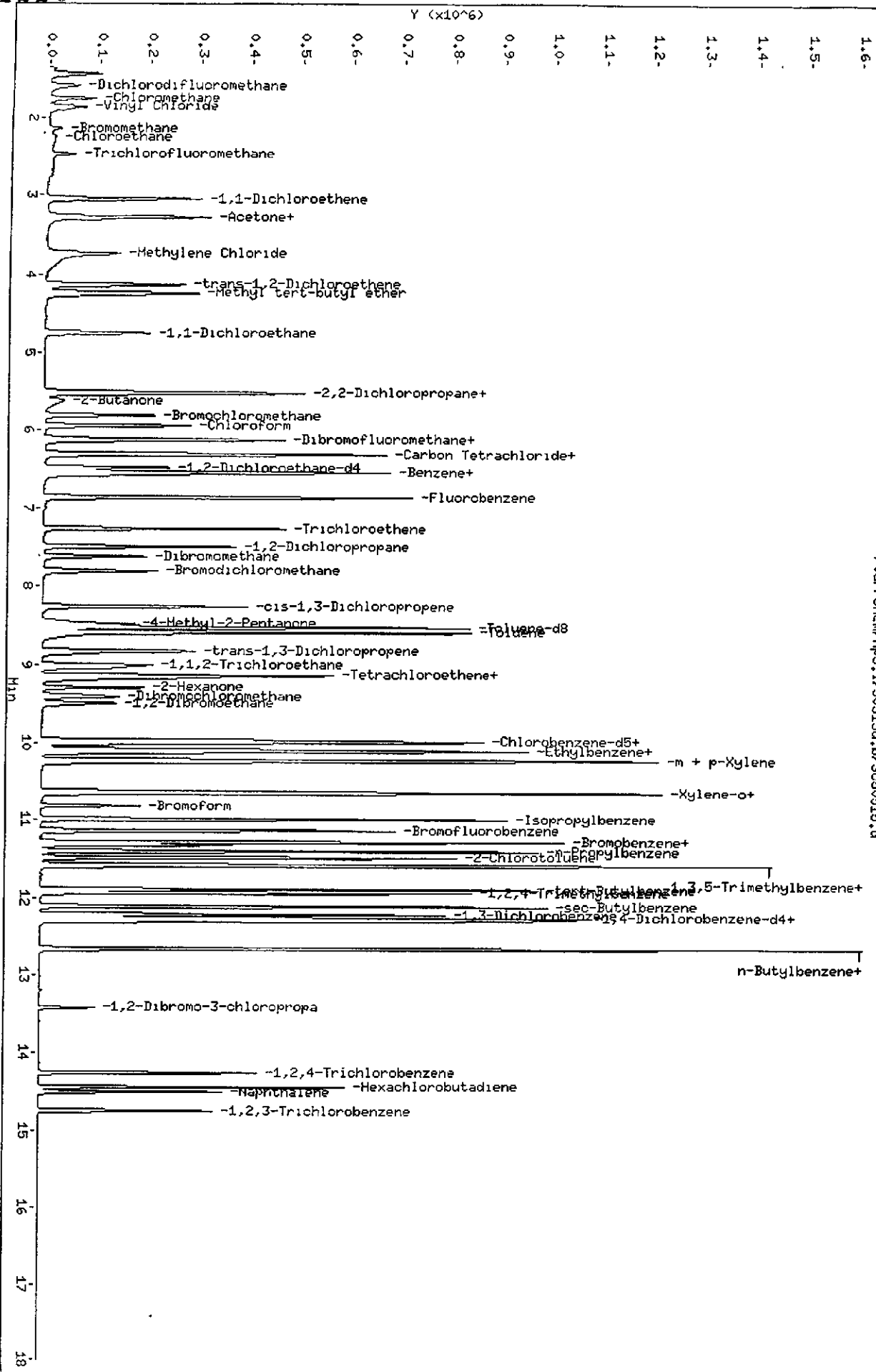
Page 3

						AMOUNTS	
		QUANT SIG				CAL AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(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/3050515.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

/var/chem/hp5.1/50515d.b/3050515.d



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

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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 :
 Method : /var/chem/hp5.i/50515d.b/8260bh2o.m
 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	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
* 46 Fluorobenzene	96	6.862	6.862	(1.000)	656862		
* 69 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

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		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

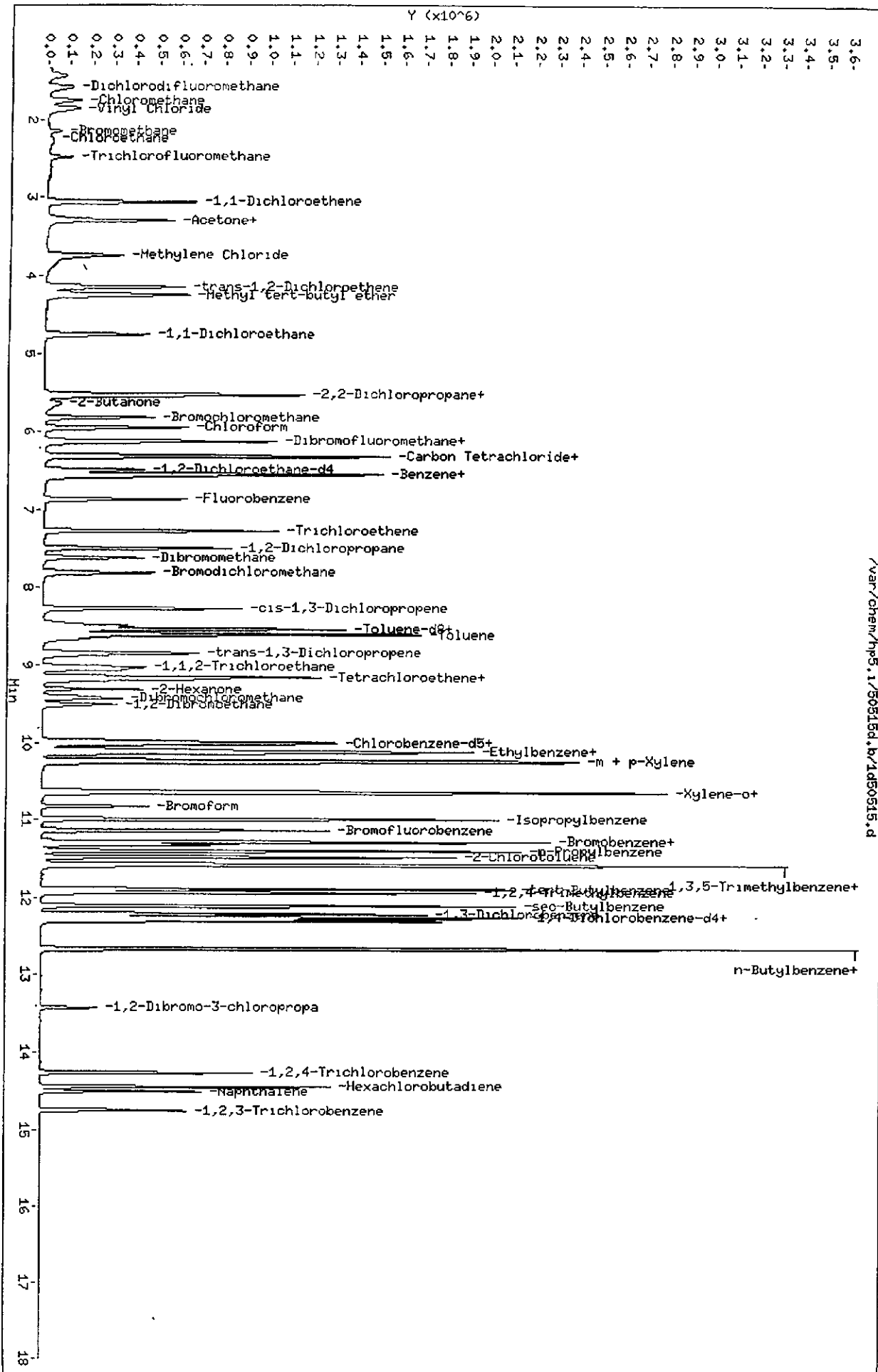
Data File: /var/chem/hp5.i/50515d.b/3c50515.d
 Report Date: 15-May-2000 08:27

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						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



Data File: /var/chem/hp5.i/50515d.b/1d50515.d
 Report Date: 15-May-2000 09:52

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VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/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.i/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	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	(1.116)	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

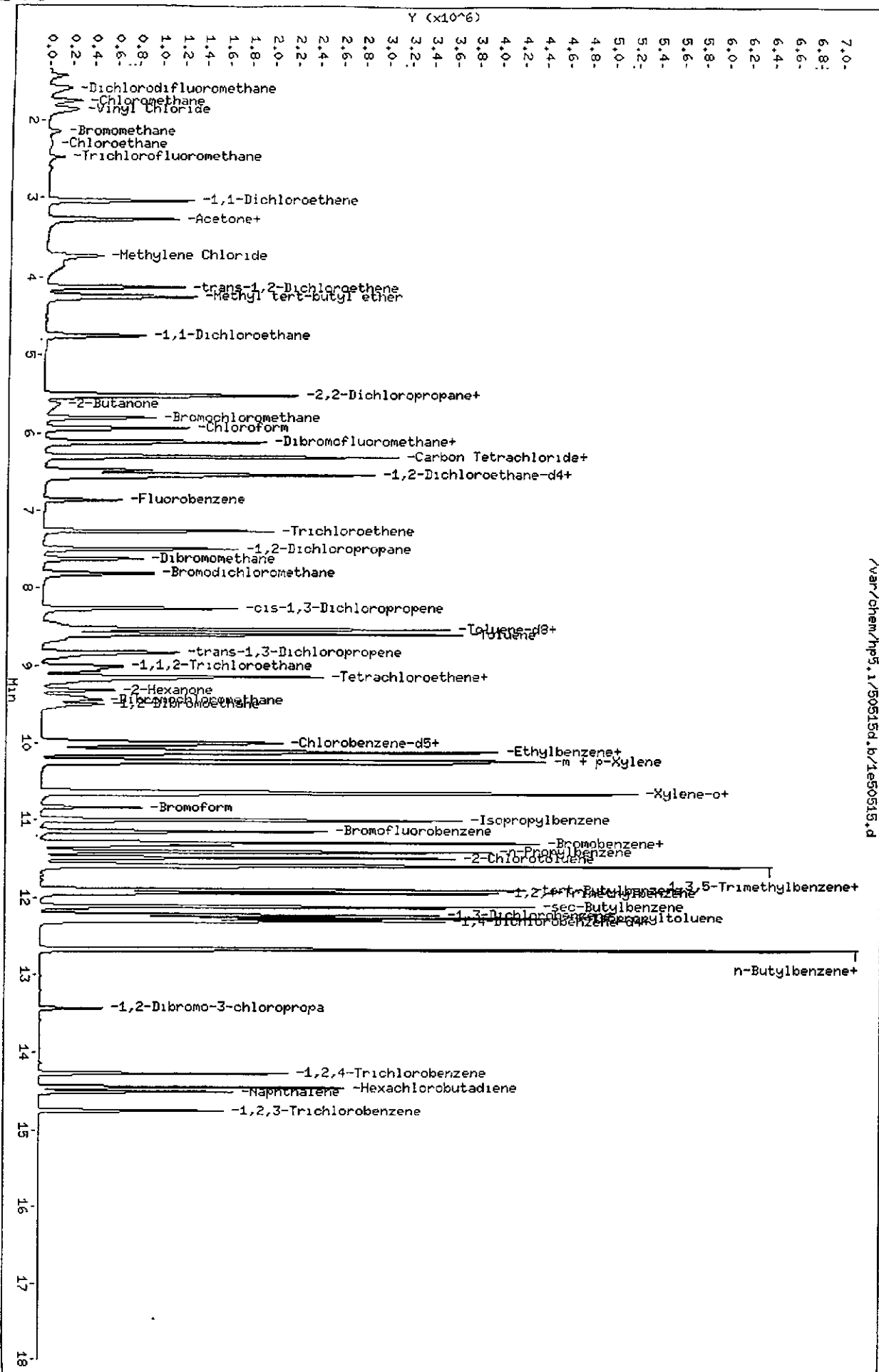
Data File: /var/chem/hp5.i/50515d.b/1d50515.d
 Report Date: 15-May-2000 09:52

Page 3

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)	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



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

Page 1

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

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	6.867	6.867	(1.000)	616507	
* 69 Chlorobenzene-d5	119	9.970	9.970	(1.000)	143792	
* 92 1,4 Dichlorobenzene-a4	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

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					AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	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	

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

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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 1

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 REPORT

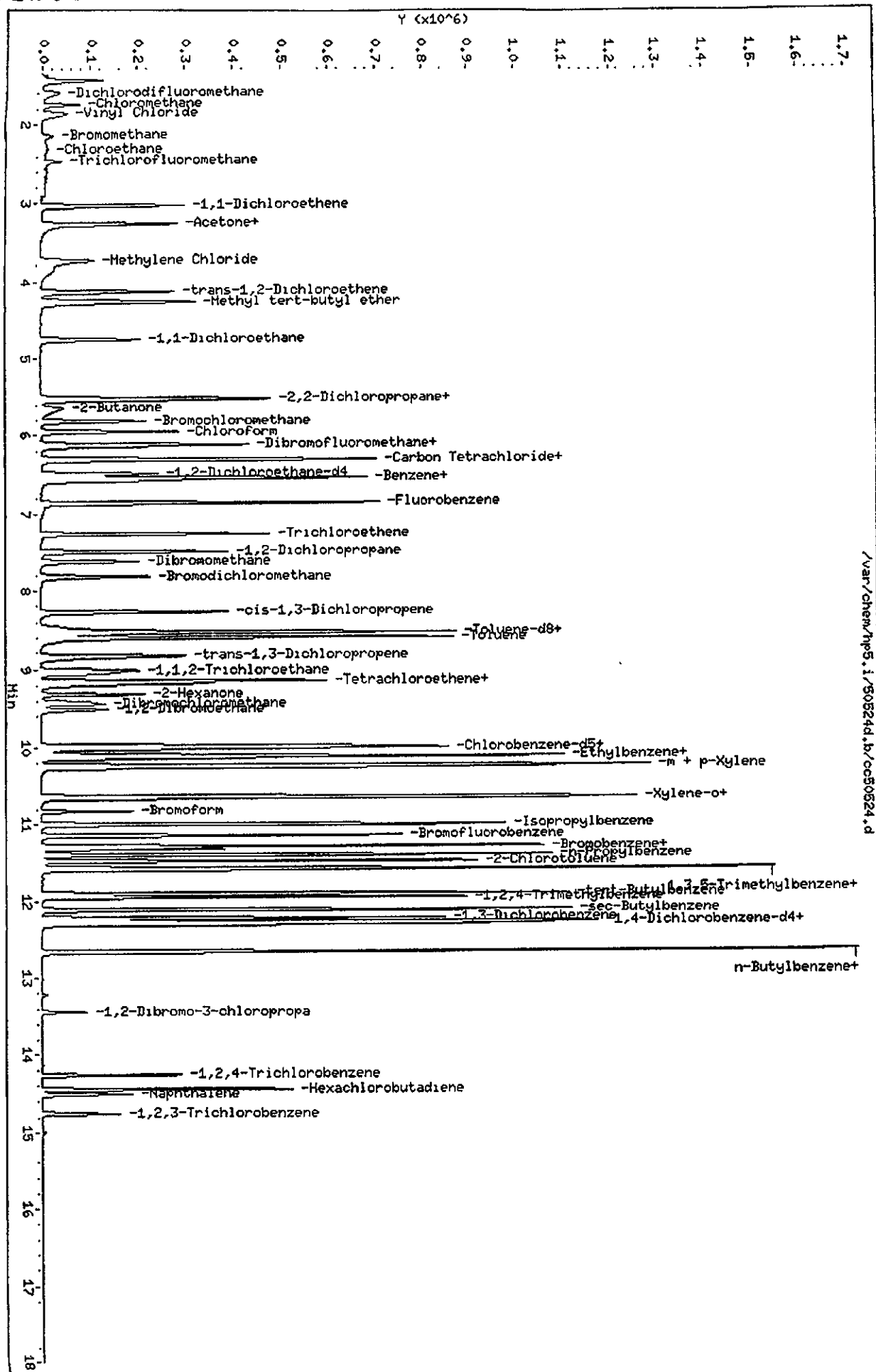
Instrument ID: hp5.i
Lab File ID: cc50524.d
Analysis Type: WATER

Injection 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.i/50524d.b/cc50524.d
 Date: 24-MAY-2000 06:46
 Client ID: vstd50
 Sample Info: VSTD50 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/cc50524.d
Report Date: 24-May-2000 07:05

Page 1

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-Dichloroethane		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

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

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

Page 3

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

6571248

**GC/MS VOLATILE
QC DATA**

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

Page 2

Date: 15-MAY-2000 05:23

Client ID: 50NCBFB

Instrument: hp5.1

Sample Info: BFB 192-180-11 50NC

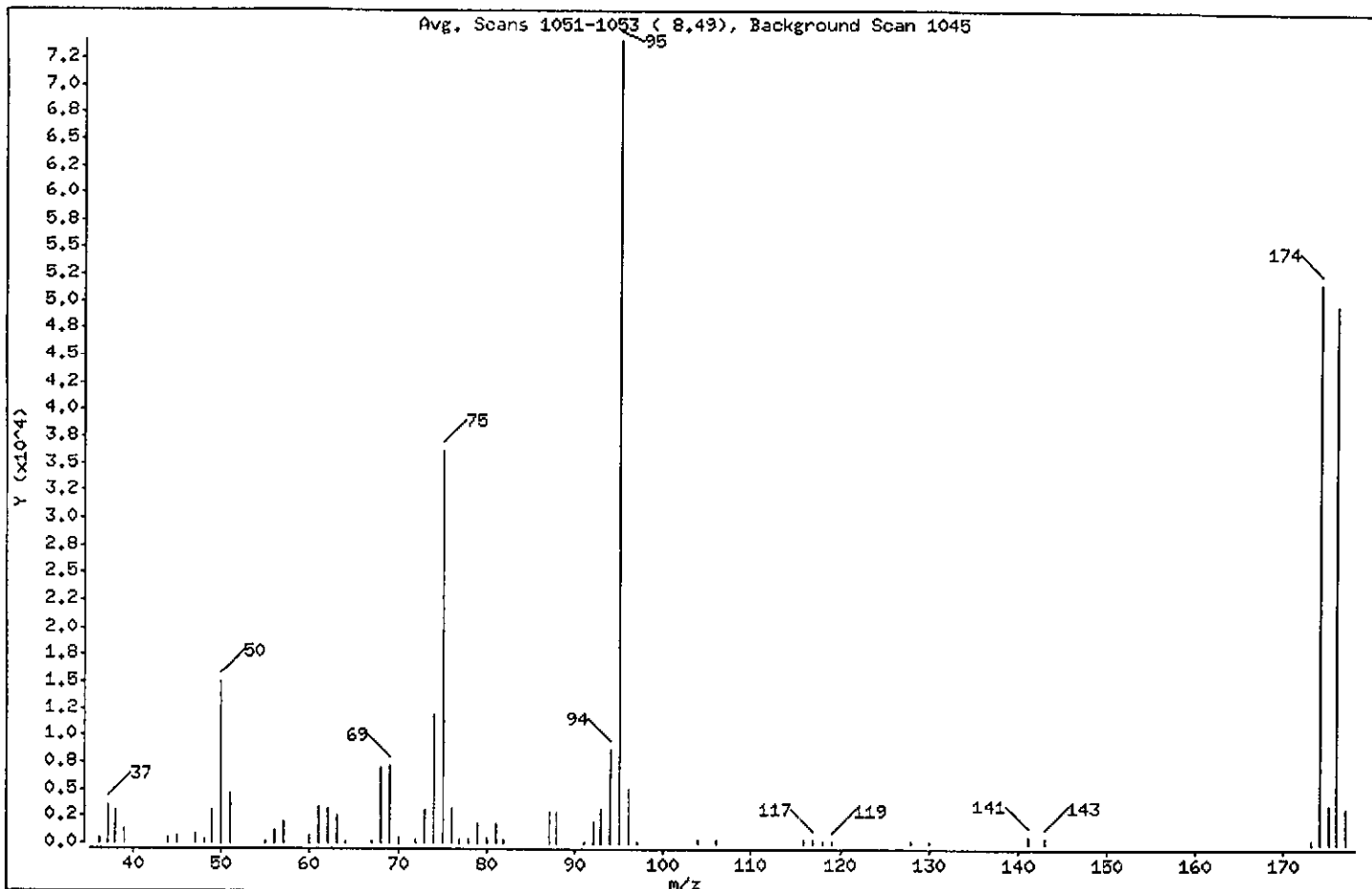
Volume Injected (uL): 1.0

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)

Date : 15-MAY-2000 05:23

Client ID: 50NCBFB

Instrument: hp5.1

Sample Info: BFB 192-180-11 50NC

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	3085	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: 50NCBFB

Sample Info: BFB 192-180-11 50NC

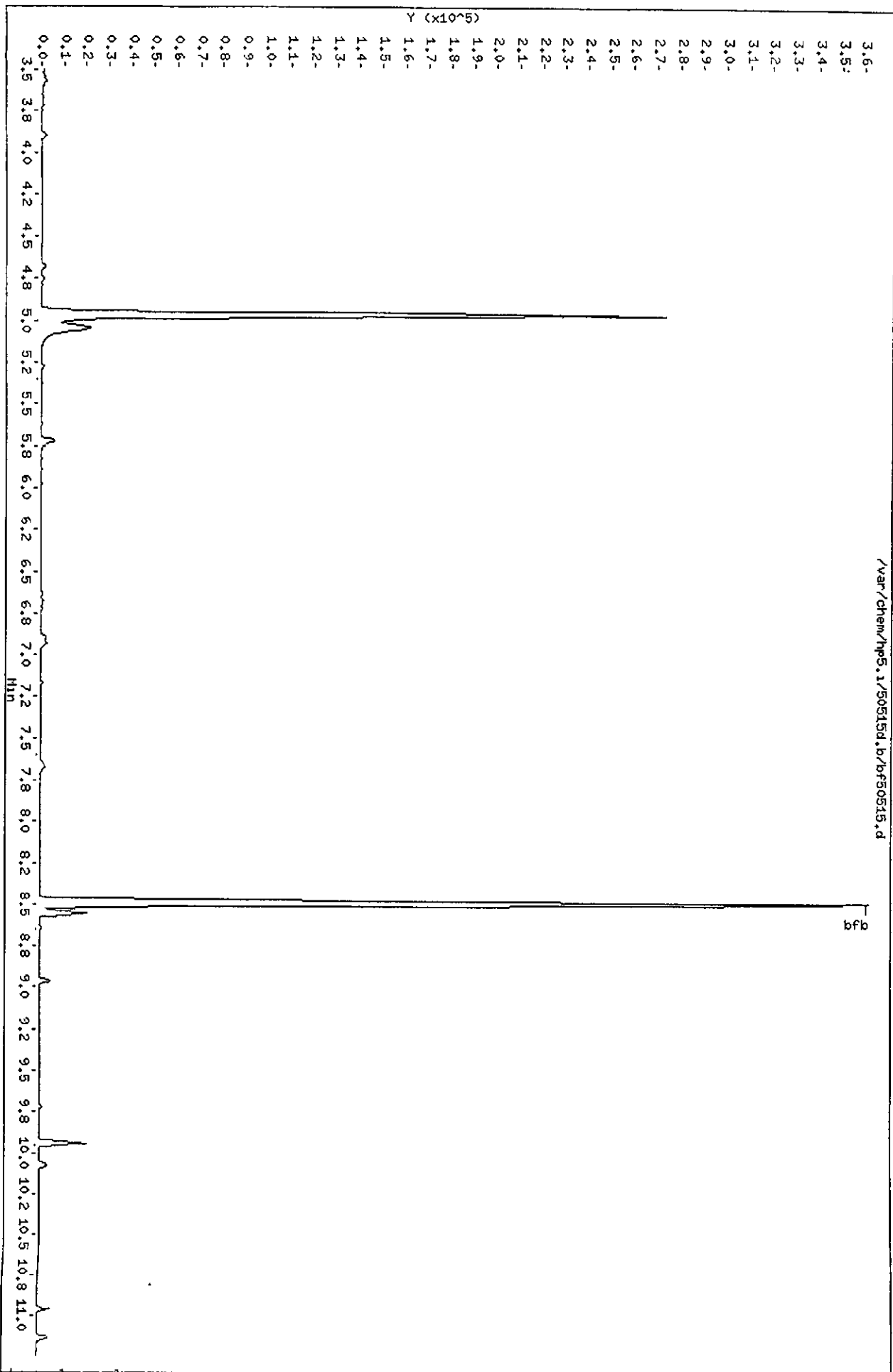
Volume Injected (uL): 1.0

Column phase: DB624 20m

Instrument: hp5.1

Operator: 10099

Column diameter: 0.20



Date : 24-MAY-2000 06:25

Client ID: 50NCBFB

Instrument: hp5.1

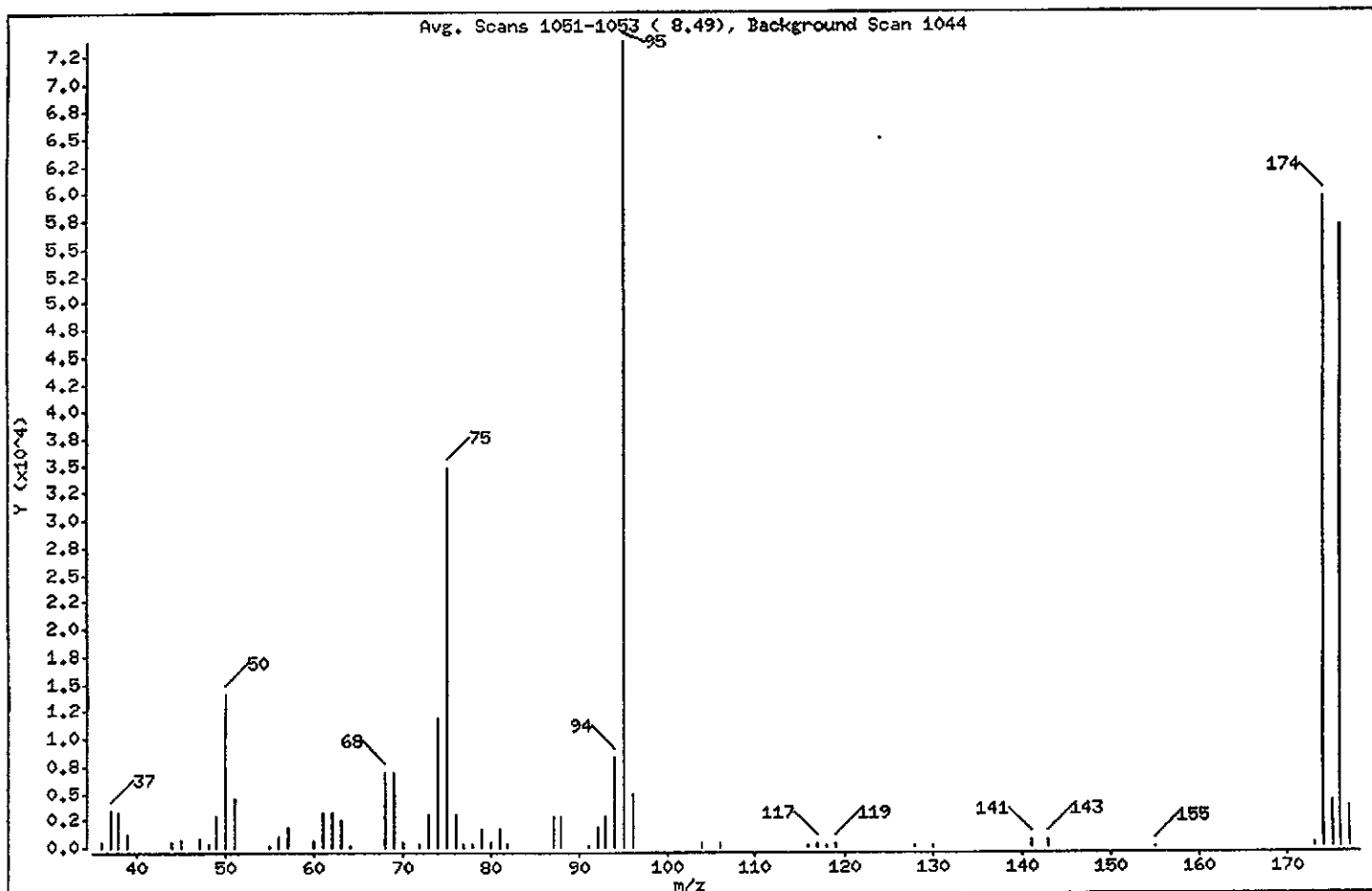
Sample Info: BFB 192-180-11 50NC

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	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	0.51 (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 (95.89)
177	5.00 - 9.00% of mass 176	5.06 (6.56)

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

Page 3

Date : 24-MAY-2000 06:23

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/hp5.1/50524d.b/bf50524.d
Date: 24-MAY-2000 06:25
Client ID: 50NGBFB
Sample Info: BFB 192-180-11 50NC

Instrument: hp5.1

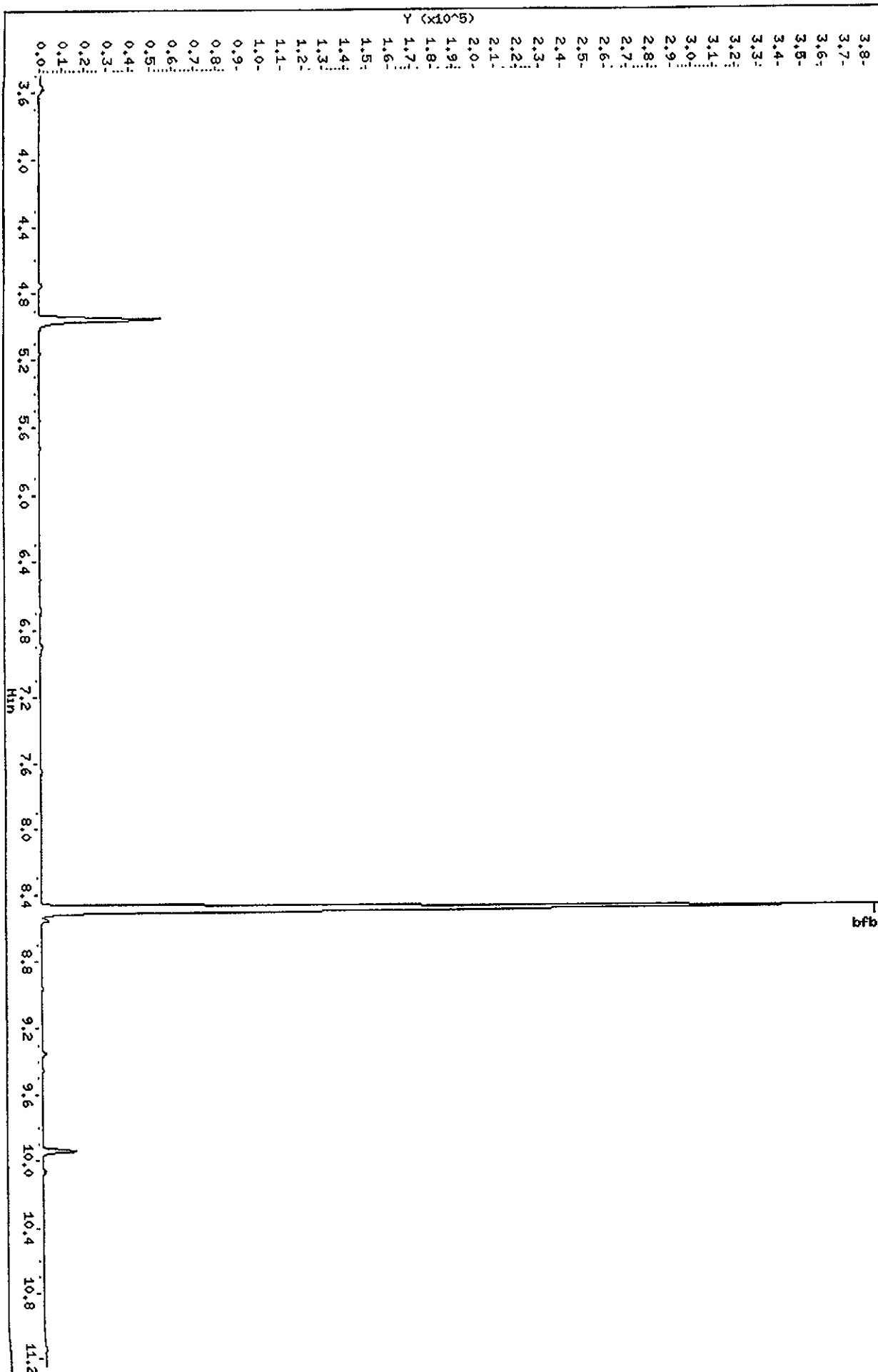
Operator: 10099

Column diameter: 0.20

Column phase: DB624 20m

/var/chem/hp5.1/50524d.b/bf50524.d

bfb



UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E240000 135

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

Sample WT/Vol: 5 / mL Date Received: 05/17/00

Work Order: DDL31101 Date Extracted: 05/24/00

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

Moisture %: NA QC Batch: 0145166

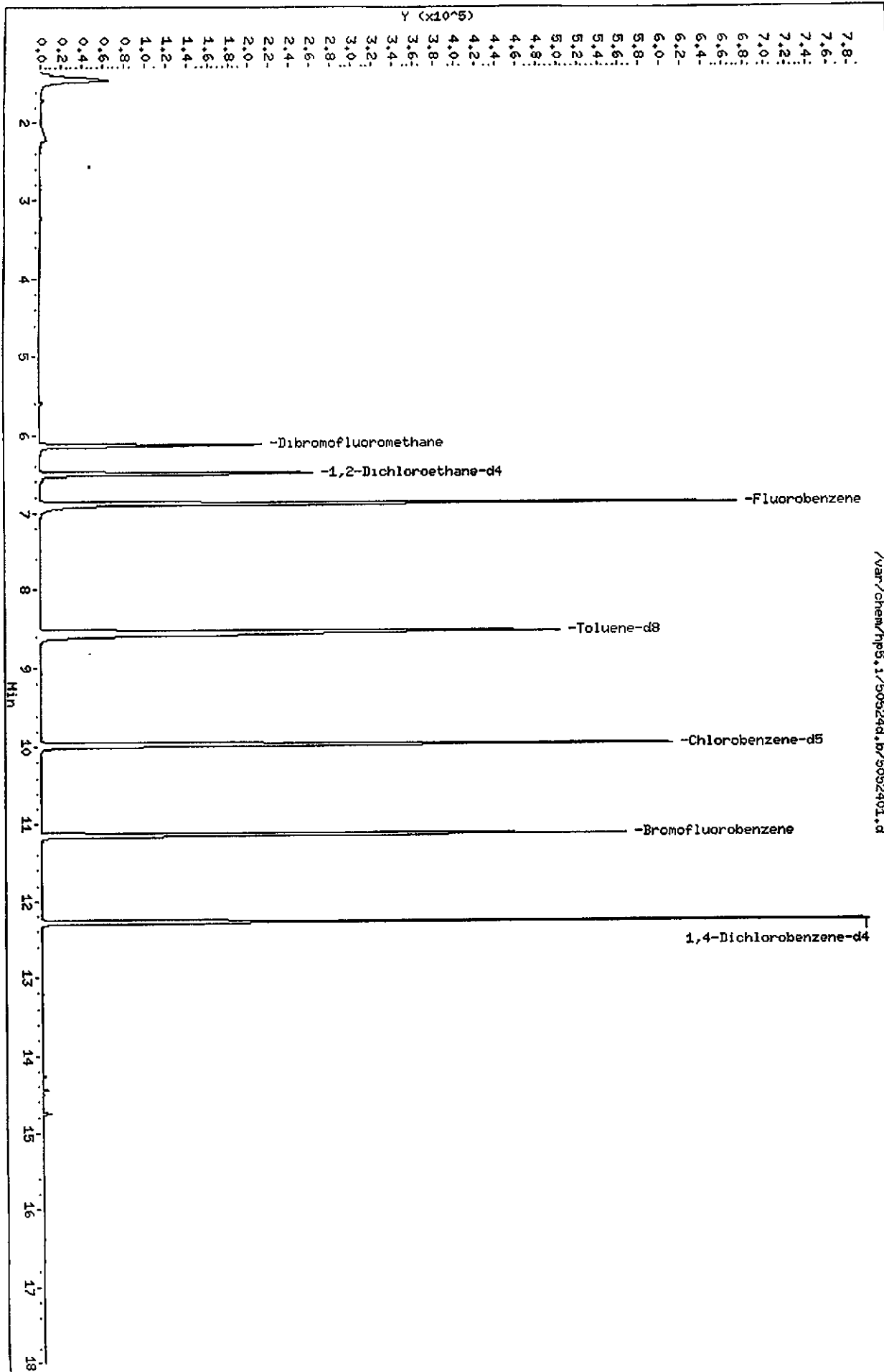
Client Sample Id: INTRA-LAB BLANK

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

Data File: /var/chem/hp5.i/50524d.b/5052401.d
Date: 24-MAY-2000 07:50
Client ID: INTRA-LAB BLANK
Sample Info: TCLP PREP BLANK 5/23/00 (1ML/10HL)/5HL
Purge Volume: 5.0
Column phase: DB 624

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

/var/chem/hp5.i/50524d.b/5052401.d



Data File: /var/chem/hp5.i/50524d.b/5052401.d

Page 1

Report Date: 24-May-2000 11:58

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052401.d
 Lab Smp Id: DDL31101 Client Smp ID: INTRA-LAB BLANK
 Inj Date : 24-MAY-2000 07:50
 Operator : 10099 Inst ID: hp5.i
 Smp Info : TCLP PREP BLANK 5/23/00 (1ML/10ML)/5ML
 Misc Info : ddl31101,50524d.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: 4 QC Sample: METHOD BLANK
 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	6.891	6.868	(1.000)	644708		
* 69 Chlorobenzene-d5	119	9.975	9.971	(1.000)	145785		
* 92 1,4-Dichlorobenzene-d4	152	12.281	12.282	(1.000)	214438		
\$ 39 Dibromofluoromethane	113	6.136	6.132	(0.891)	131984	234.964	46.99
\$ 43 1,2-Dichloroethane-d4	65	6.501	6.491	(0.943)	179655	239.801	47.96
\$ 59 Toluene-d8	98	8.539	8.529	(0.856)	604250	255.661	51.13
\$ 80 Bromofluorobenzene	95	11.137	11.145	(1.116)	223501	251.421	50.28
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 MASS	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	128.00		Compound	Not	Detected.		

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E240000 166
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 05/19/00
Work Order: DDL7A101 Date Extracted: 05/24/00
Dilution factor: 1 Date Analyzed: 05/24/00
Moisture %: NA

QC Batch: 0145166

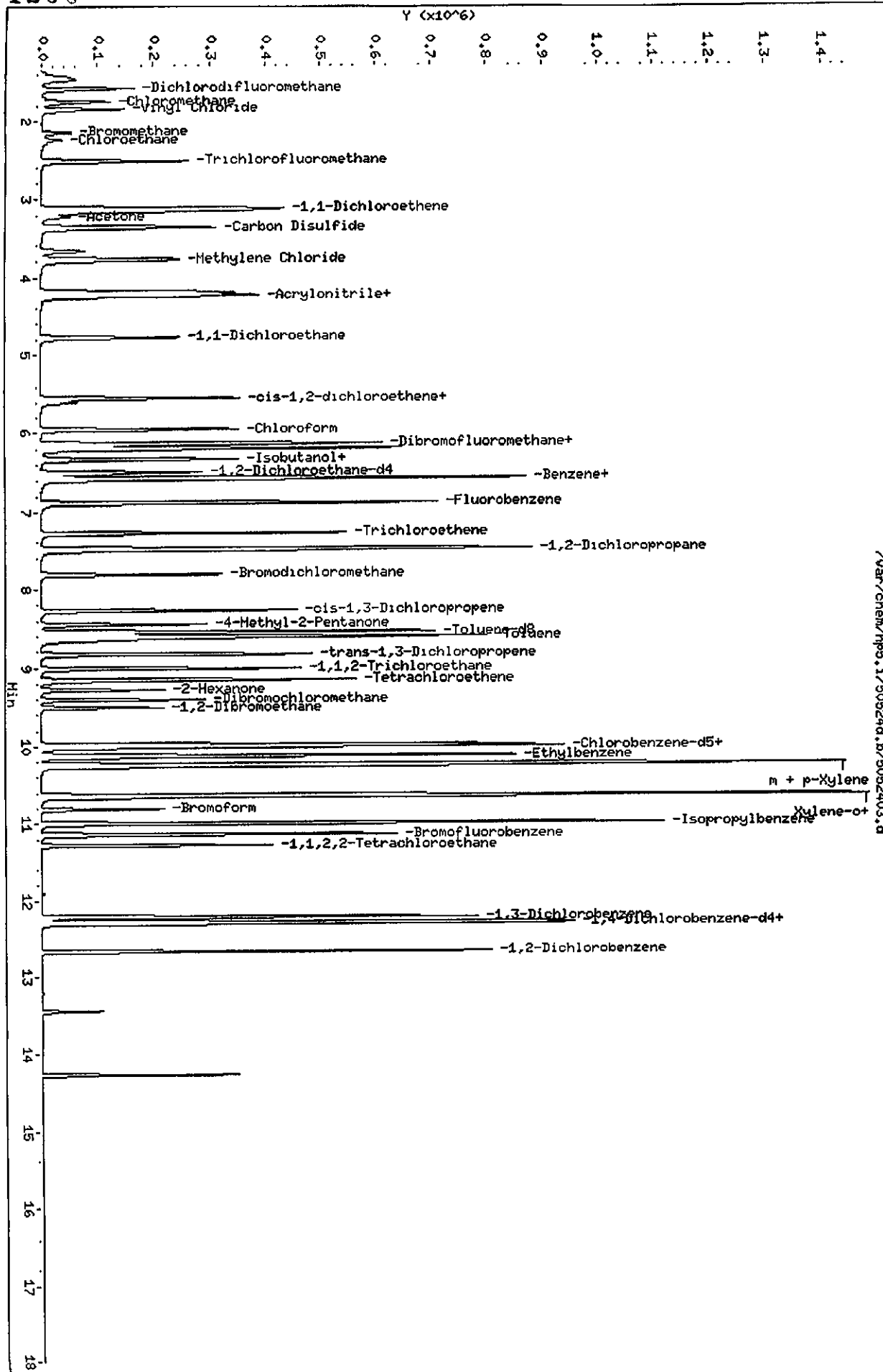
Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.543	
78-93-3	2-Butanone	0.303	
56-23-5	Carbon tetrachloride	0.523	
108-90-7	Chlorobenzene	0.525	
67-66-3	Chloroform	0.534	
107-06-2	1,2-Dichloroethane	0.549	
75-35-4	1,1-Dichloroethene	0.532	
127-18-4	Tetrachloroethene	0.520	
79-01-6	Trichloroethene	0.527	
75-01-4	Vinyl chloride	0.625	

Data File: /var/chem/hp5.i/50524d.b/5052403.d
 Date : 24-MAY-2000 08:39
 Client ID: INTR-LAB CHECK
 Sample Info: BLANK MS (4HL/10HL)/5HL
 Purge Volume: 5.0
 Column phase: DB 624

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

/var/chem/hp5.i/50524d.b/5052403.d



Data File: /var/chem/hp5.i/50524d.b/5052403.d
 Report Date: 24-May-2000 11:59

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VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052403.d
 Lab Smp Id: DDL7A101 Client Smp ID: INTRA-LAB CHECK
 Inj Date : 24-MAY-2000 08:39
 Operator : 007062 Inst ID: hp5.i
 Smp Info : BLANK MS (1ML/10ML)/5ML
 Misc Info : ddl7a101,50524d.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: 6 QC Sample: METHOD SPIKE
 Dil Factor: 1.00000
 Integrator: HP RTE
 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	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (UG/L)
* 46 Fluorobenzene	96	6.887	6.868	(1.000)	669876			
* 69 Chlorobenzene-d5	119	9.972	9.971	(1.000)	149772			
* 92 1,4-Dichlorobenzene-d4	152	12.277	12.282	(1.000)	230313			
\$ 39 Dibromofluoromethane	113	6.133	6.132	(0.890)	151851	260.175	52.04	
\$ 43 1,2-Dichloroethane-d4	65	6.498	6.491	(0.943)	198993	255.634	51.13	
\$ 59 Toluene-d8	98	8.542	8.529	(0.857)	612997	252.457	50.49	
\$ 80 Bromofluorobenzene	95	11.134	11.145	(1.117)	237782	260.365	52.07	
1 Dichlorodifluoromethane	85	1.577	1.588	(0.229)	189998	388.171	77.63	
22 Acrylonitrile	53	4.235	4.154	(0.615)	5066	22.8402	4.568	
44 Isobutanol	41	6.364	6.767	(0.924)	448	19.9291	3.986	
2 Chloromethane	50	1.747	1.740	(0.254)	193942	316.954	63.39	
3 Vinyl Chloride	62	1.850	1.867	(0.269)	197433	312.606	62.52	
4 Bromomethane	94	2.148	2.141	(0.312)	36172	371.441	74.29	
5 Chloroethane	64	2.313	2.305	(0.336)	5254	56.1144	11.22	
6 Trichlorofluoromethane	101	2.519	2.470	(0.366)	255574	1561.02	312.2	
12 1,1-Dichloroethene	96	3.116	3.029	(0.452)	168580	265.987	53.20	

Compounds	QUANT SIG	CONCENTRATIONS					
		ON-COLUMN	FINAL				
	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(UG/L)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.359	3.267	(0.488)	587720	314.269	62.85
13 Acetone	43	3.219	3.303	(0.467)	82355	196.187	39.24
14 Iodomethane	142.00	Compound Not Detected.					
18 Methylene Chloride	84	3.773	3.741	(0.548)	166378	242.298	48.46
19 trans-1,2-Dichloroethene	96	4.186	4.136	(0.608)	173388	263.798	52.76
20 Methyl tert-butyl ether	73	4.229	4.264	(0.614)	526944	289.553	57.91
23 Hexane	57	4.357	4.354	(0.633)	442		
24 1,1-Dichloroethane	63	4.776	4.751	(0.694)	298287	271.781	54.36
28 cis-1,2-dichloroethene	96	5.543	5.530	(0.805)	176764	261.376	52.28
M 29 1,2-Dichloroethene (total)	96				350152	525.139	105.0
31 2-Butanone	43	5.592	5.639	(0.812)	103181	151.426	30.28
35 Tetrahydrofuran	42	5.592	5.656	(0.812)	6150		
37 Chloroform	83	5.951	5.949	(0.864)	284775	267.242	53.45
38 1,1,1-Trichloroethane	97	6.133	6.114	(0.890)	270899	269.847	53.97
41 Carbon Tetrachloride	117	6.328	6.302	(0.919)	223631	266.621	53.32
42 Benzene	78	6.565	6.539	(0.953)	707671	271.603	54.32
45 1,2-Dichloroethane	62	6.583	6.576	(0.956)	254961	274.327	54.86
47 Trichloroethene	130	7.277	7.269	(1.057)	175943	263.614	52.72
49 1,2-Dichloropropane	63	7.502	7.501	(1.089)	174985	281.388	56.28
50 Dibromomethane	93.00	Compound Not Detected.					
53 Bromodichloromethane	83	7.806	7.811	(1.133)	204606	269.466	53.89
57 cis-1,3-Dichloropropene	75	8.268	8.267	(1.200)	237659	230.931	46.19
58 4-Methyl-2-Pentanone	43	8.445	8.504	(0.847)	181792	230.040	46.01
60 Toluene	91	8.609	8.596	(0.863)	735407	266.034	53.21
61 trans-1,3-Dichloropropene	75	8.834	8.833	(0.886)	245658	259.716	51.94
62 Ethyl methacrylate	69.00	Compound Not Detected.					
64 1,1,2-Trichloroethane	97	9.011	9.022	(0.904)	142282	257.020	51.40
65 Tetrachloroethene	164	9.150	9.143	(0.918)	137090	259.971	51.99
66 2-Hexanone	43	9.272	9.307	(0.930)	134811	243.079	48.62
67 Dibromochloromethane	129	9.400	9.435	(0.943)	145299	270.995	54.20
68 1,2-Dibromoethane	107	9.497	9.502	(0.952)	142563	252.557	50.51
70 Chlorobenzene	112	10.002	10.001	(1.003)	466495	262.351	52.47
72 Ethylbenzene	106	10.118	10.110	(1.015)	267196	258.590	51.72
73 m + p-Xylene	106	10.233	10.232	(1.026)	655462	555.909	111.2
74 Xylene-o	106	10.623	10.628	(1.065)	318571	277.497	55.50
M 75 Xylenes (total)	106				974033	848.450	169.7
76 Styrene	104	10.635	10.646	(1.066)	547559	288.958	57.79
77 Bromoform	173	10.805	10.822	(1.084)	94355	276.318	55.26
83 1,1,2,2-Tetrachloroethane	83	11.280	11.291	(0.919)	191082	246.192	49.24
84 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
91 1,3-Dichlorobenzene	146	12.216	12.215	(0.995)	333056	252.057	50.41
93 1,4-Dichlorobenzene	146	12.302	12.307	(1.002)	338026	252.946	50.59
95 1,2-Dichlorobenzene	146	12.667	12.672	(1.032)	307844	243.620	48.72
78 Isopropylbenzene	105	10.988	10.993	(1.102)	845573	287.980	57.60
99 Naphthalene	128.00	Compound Not Detected.					

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: C0E190257 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 05/19/00
Work Order: DDFV610W Date Extracted: 05/24/00
Dilution factor: 1 Date Analyzed: 05/24/00
Moisture %: 16

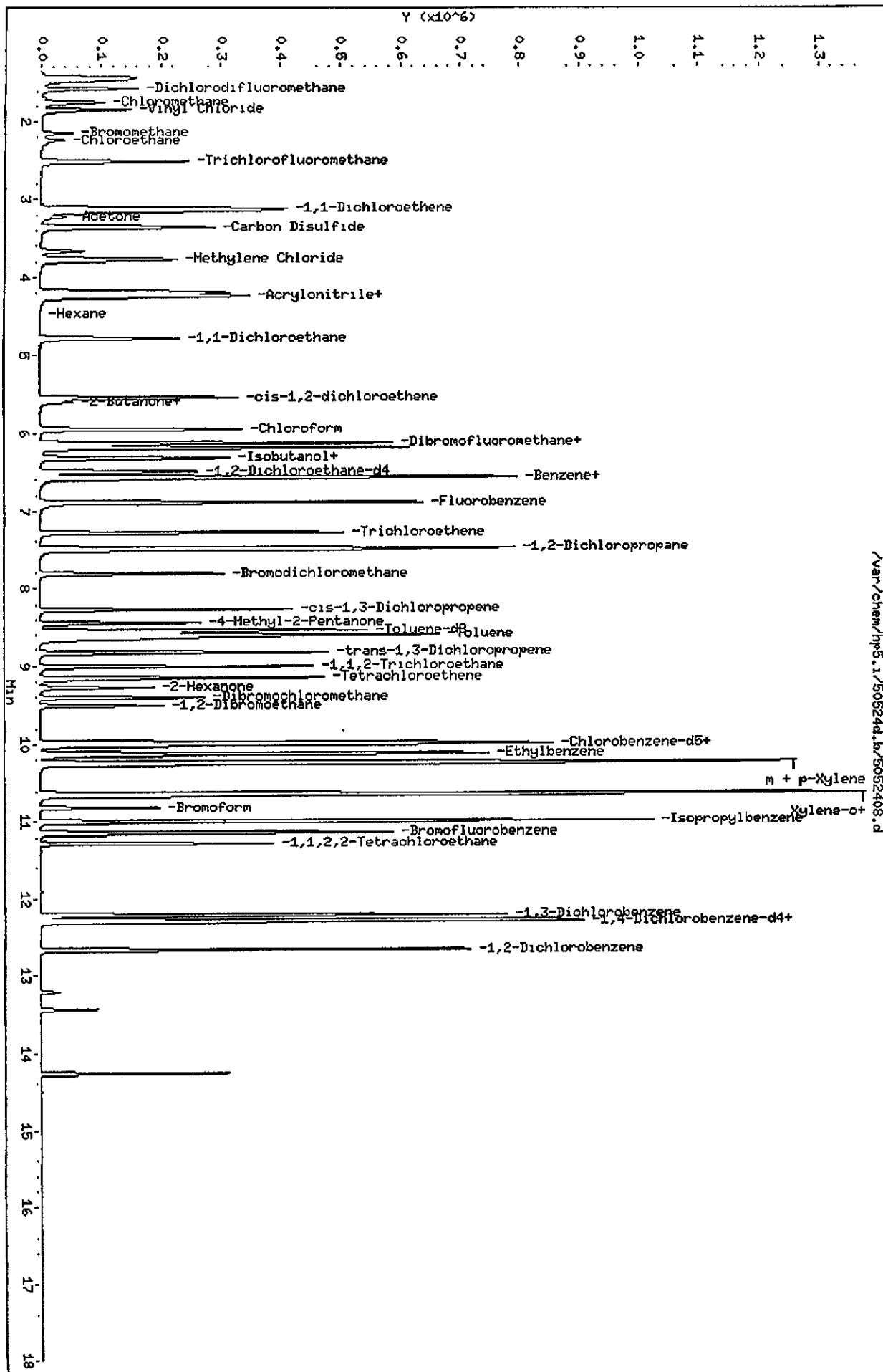
QC Batch: 0145166

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.529	
78-93-3	2-Butanone	0.264	
56-23-5	Carbon tetrachloride	0.534	
108-90-7	Chlorobenzene	0.519	
67-66-3	Chloroform	0.544	
107-06-2	1,2-Dichloroethane	0.544	
75-35-4	1,1-Dichloroethene	0.541	
127-18-4	Tetrachloroethene	0.516	
79-01-6	Trichloroethene	0.519	
75-01-4	Vinyl chloride	0.640	

Data File: /var/chem/hp5.i/50524d.b/5052408.d
 Date : 24-MAY-2000 10:42
 Client ID: DF/S1/0138/GRAB/001
 Sample Info: COE190267-001HS (1HL/10HL)/5HL
 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/5052408.d
 Report Date: 24-May-2000 12:05

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VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052408.d
 Lab Smp Id: DDFV610W Client Smp ID: DF/S1/0138/GRAB/001
 Inj Date : 24-MAY-2000 10:42
 Operator : 007062 Inst ID: hp5.i
 Smp Info : COE190257-001MS (1ML/10ML)/5ML
 Misc Info : ddfv610w,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: 11 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: tcl.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	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (UG/L)
* 46 Fluorobenzene	96	6.891	6.868	(1.000)	616326			
* 69 Chlorobenzene-d5	119	9.975	9.971	(1.000)	144050			
* 92 1,4-Dichlorobenzene-d4	152	12.281	12.282	(1.000)	219642			
\$ 39 Dibromofluoromethane	113	6.136	6.132	(0.891)	140585	261.801	52.36	
\$ 43 1,2-Dichloroethane-d4	65	6.501	6.491	(0.943)	183513	256.231	51.25	
\$ 59 Toluene-d8	98	8.539	8.529	(0.856)	581023	248.794	49.76	
\$ 80 Bromofluorobenzene	95	11.137	11.145	(1.116)	225462	256.682	51.34	
1 Dichlorodifluoromethane	85	1.574	1.588	(0.228)	176922	392.862	78.57	
22 Acrylonitrile	53	4.245	4.154	(0.616)	4430	21.7081	4.342	
44 Isobutanol	41	6.331	6.767	(0.919)	1940	93.7984	18.76	
2 Chloromethane	50	1.750	1.740	(0.254)	175142	311.099	62.22	
3 Vinyl Chloride	62	1.848	1.867	(0.268)	185854	319.840	63.97	
4 Bromomethane	94	2.146	2.141	(0.311)	34298	382.798	76.56	
5 Chloroethane	64	2.304	2.305	(0.334)	3991	46.3287	9.266	
6 Trichlorofluoromethane	101	2.517	2.470	(0.365)	240574	1597.07	319.4	
12 1,1-Dichloroethene	96	3.119	3.029	(0.453)	157647	270.349	54.07	

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ng)	FINAL (UG/L)
=====	=====	==	=====	=====	=====	=====	=====
15 Carbon Disulfide	76	3.356	3.267	(0.487)	554158	322.069	64.41
13 Acetone	43	3.222	3.303	(0.468)	60967	157.855	31.57
14 Iodomethane	142.00	Compound Not Detected.					
18 Methylene Chloride	84	3.776	3.741	(0.548)	152838	241.919	48.38
19 trans-1,2-Dichloroethene	96	4.190	4.136	(0.608)	161965	267.829	53.56
20 Methyl tert-butyl ether	73	4.232	4.264	(0.614)	476254	284.437	56.89
23 Hexane	57	4.384	4.354	(0.636)	164		
24 1,1-Dichloroethane	63	4.780	4.751	(0.694)	279992	277.277	55.46
28 cis-1,2-dichloroethene	96	5.546	5.530	(0.805)	161929	260.244	52.05
M 29 1,2-Dichloroethene (total)	96				323894	527.965	105.6
31 2-Butanone	43	5.595	5.639	(0.812)	82852	132.156	26.43
35 Tetrahydrofuran	42	5.595	5.656	(0.812)	4823		
37 Chloroform	83	5.954	5.949	(0.864)	266442	271.762	54.35
38 1,1,1-Trichloroethane	97	6.136	6.114	(0.891)	249900	270.558	54.11
41 Carbon Tetrachloride	117	6.331	6.302	(0.919)	206228	267.236	53.45
42 Benzene	78	6.568	6.539	(0.953)	633691	264.341	52.87
45 1,2-Dichloroethane	62	6.587	6.576	(0.956)	232367	271.740	54.35
47 Trichloroethene	130	7.280	7.269	(1.056)	159435	259.635	51.93
49 1,2-Dichloropropane	63	7.505	7.501	(1.089)	158722	277.412	55.48
50 Dibromomethane	93.00	Compound Not Detected.					
53 Bromodichloromethane	83	7.809	7.811	(1.133)	187190	267.949	53.59
57 cis-1,3-Dichloropropene	75	8.266	8.267	(1.200)	217835	230.060	46.01
58 4-Methyl-2-Pentanone	43	8.442	8.504	(0.846)	165982	218.377	43.68
60 Toluene	91	8.606	8.596	(0.863)	699247	263.001	52.60
61 trans-1,3-Dichloropropene	75	8.831	8.833	(0.885)	231983	255.001	51.00
62 Ethyl methacrylate	69.00	Compound Not Detected.					
64 1,1,2-Trichloroethane	97	9.014	9.022	(0.904)	135187	253.904	50.78
65 Tetrachloroethene	164	9.154	9.143	(0.918)	130846	257.987	51.60
66 2-Hexanone	43	9.269	9.307	(0.929)	117506	220.293	44.06
67 Dibromochloromethane	129	9.397	9.435	(0.942)	138995	269.535	53.91
68 1,2-Dibromoethane	107	9.501	9.502	(0.952)	134265	247.305	49.46
70 Chlorobenzene	112	9.999	10.001	(1.002)	443542	259.351	51.87
72 Ethylbenzene	106	10.115	10.110	(1.014)	254105	255.689	51.14
73 m + p-Xylene	106	10.237	10.232	(1.026)	620837	547.459	109.5
74 Xylene-o	106	10.626	10.628	(1.065)	298358	270.214	54.04
M 75 Xylenes (total)	106				919195	832.488	166.5
76 Styrene	104	10.638	10.646	(1.066)	512529	281.216	56.24
77 Bromoform	173	10.809	10.822	(1.084)	88044	268.078	53.62
83 1,1,2,2-Tetrachloroethane	83	11.277	11.291	(0.918)	175965	237.730	47.54
84 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
91 1,3-Dichlorobenzene	146	12.214	12.215	(0.995)	314871	249.872	49.97
93 1,4-Dichlorobenzene	146	12.299	12.307	(1.001)	320018	251.105	50.22
95 1,2-Dichlorobenzene	146	12.670	12.672	(1.032)	289205	239.989	48.00
78 Isopropylbenzene	105	10.991	10.993	(1.102)	794448	281.315	56.26
99 Naphthalene	128.00	Compound Not Detected.					

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8260B

Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL

Date Received: 05/19/00

Work Order: DDFV610X

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/24/00

Moisture %: 16

QC Batch: 0145166

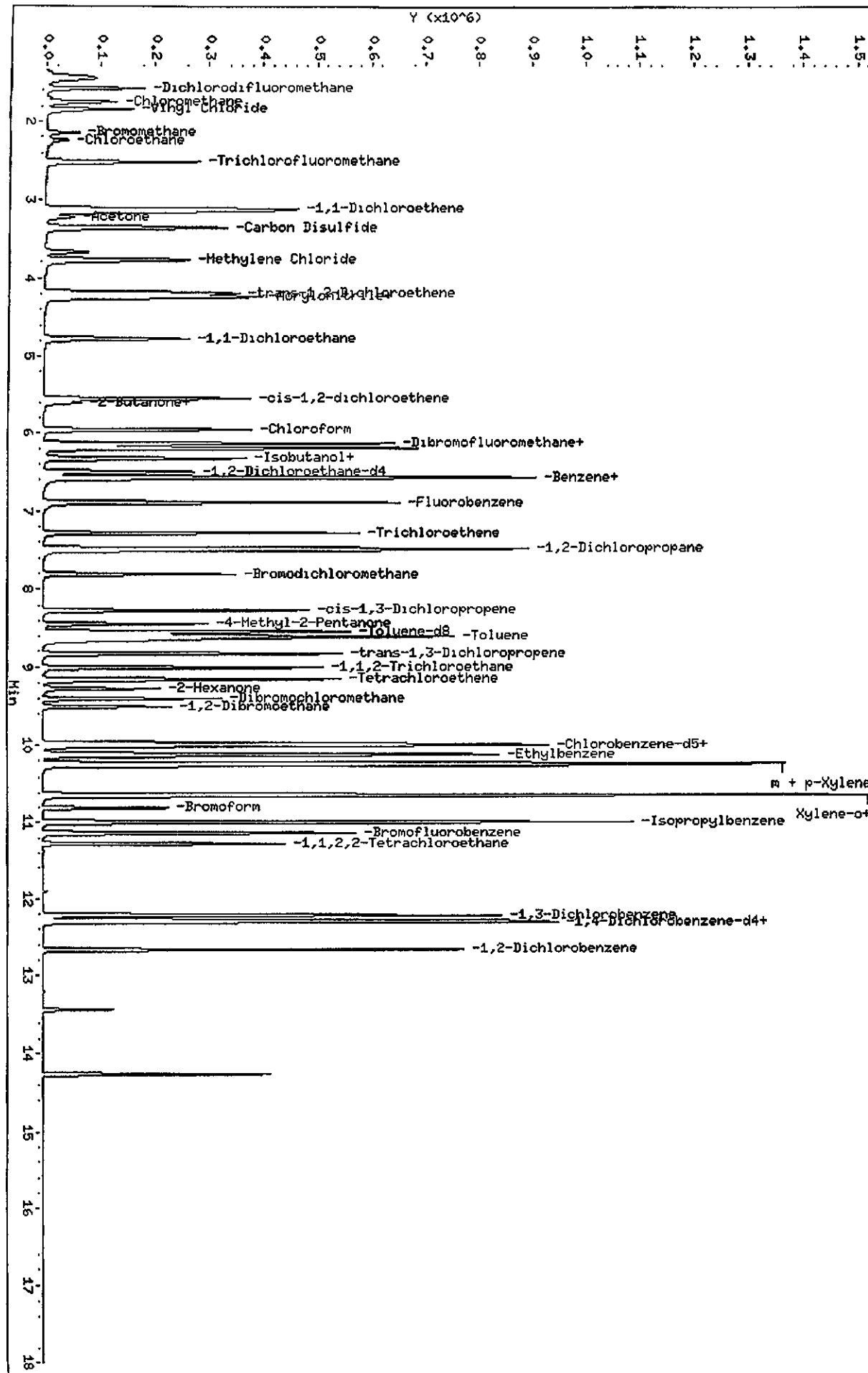
Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.598	
78-93-3	2-Butanone	0.319	
56-23-5	Carbon tetrachloride	0.613	
108-90-7	Chlorobenzene	0.576	
67-66-3	Chloroform	0.610	
107-06-2	1,2-Dichloroethane	0.622	
75-35-4	1,1-Dichloroethene	0.614	
127-18-4	Tetrachloroethene	0.574	
79-01-6	Trichloroethene	0.586	
75-01-4	Vinyl chloride	0.728	a

Data File: /var/chem/hp5.1/B0824d.b/B082409.d
 Date : 24-MAY-2000 11:07
 Client ID: DF/S1/0138/CRAB/001
 Sample Info: COE190257-001MSD (1ML/10ML)/BHL
 Purge Volume: 5.0
 Column phase: DB 624

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

/var/chem/hp5.1/B0824d.b/B082409.d



Data File: /var/chem/hp5.i/50524d.b/5052409.d
 Report Date: 24-May-2000 12:05

Page 1

STL-PITTSBURGH

VOLATILE REPORT SW-846 Method

Data file : /var/chem/hp5.i/50524d.b/5052409.d
 Lab Smp Id: DDFV610X Client Smp ID: DF/S1/0138/GRAB/001
 Inj Date : 24-MAY-2000 11:07
 Operator : 007062 Inst ID: hp5.i
 Smp Info : C0E190257-001MSD (1ML/10ML)/5ML
 Misc Info : ddfv610x,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: 12 QC Sample: MSD
 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	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng)	(UG/L)
* 46 Fluorobenzene		96	6.892	6.868	(1.000)	621894		
* 69 Chlorobenzene-d5		119	9.970	9.971	(1.000)	146832		
* 92 1,4-Dichlorobenzene-d4		152	12.276	12.282	(1.000)	212905		
\$ 39 Dibromofluoromethane		113	6.138	6.132	(0.891)	146659	270.667	54.13
\$ 43 1,2-Dichloroethane-d4		65	6.503	6.491	(0.944)	192319	266.122	53.22
\$ 59 Toluene-d8		98	8.541	8.529	(0.857)	607491	255.199	51.04
\$ 80 Bromofluorobenzene		95	11.132	11.145	(1.117)	231659	258.740	51.75
1 Dichlorodifluoromethane		85	1.575	1.588	(0.229)	203298	447.389	89.48
22 Acrylonitrile		53	4.240	4.154	(0.615)	5163	25.0735	5.015
44 Isobutanol		41	6.375	6.767	(0.925)	276	13.2250	2.645
2 Chloromethane		50	1.752	1.740	(0.254)	205833	362.341	72.47
3 Vinyl Chloride		62	1.849	1.867	(0.268)	213396	363.950	72.79
4 Bromomethane		94	2.147	2.141	(0.312)	39796	440.184	88.04
5 Chloroethane		64	2.305	2.305	(0.334)	7365	84.7296	16.94
6 Trichlorofluoromethane		101	2.518	2.470	(0.365)	274751	1807.63	361.5
12 1,1-Dichloroethene		96	3.120	3.029	(0.453)	180707	307.120	61.42

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng) FINAL (UG/L)
15 Carbon Disulfide	76	3.358	3.267	(0.487)	630787	363 322	72.66
13 Acetone	43	3 224	3 303	(0.468)	82138	210 767	42.15
14 Iodomethane	142.00	Compound Not Detected.					
18 Methylene Chloride	84	3.777	3.741	(0.548)	172867	271 172	54.23
19 trans-1,2-Dichloroethene	96	4 191	4.136	(0.608)	185536	304 060	60 81
20 Methyl tert-butyl ether	73	4 240	4 264	(0.615)	544832	322.481	64 50
23 Hexane	57	4.319	4.354	(0.627)	1435		
24 1,1-Dichloroethane	63	4 781	4.751	(0.694)	321795	315.822	63.16
28 cis-1,2-dichloroethene	96	5 548	5.530	(0.805)	184206	293.396	58 68
M 29 1,2-Dichloroethene (total)	96				369742	597 303	119 5
31 2-Butanone	43	5 596	5.639	(0.812)	101018	159.690	31.94
35 Tetrahydrofuran	42	5 602	5.656	(0.813)	5907		
37 Chloroform	83	5.955	5.949	(0.864)	301966	305 238	61.05
38 1,1,1-Trichloroethane	97	6 138	6.114	(0.891)	286711	307.633	61.53
41 Carbon Tetrachloride	117	6.332	6 302	(0.919)	238659	306.492	61 30
42 Benzene	78	6.570	6.539	(0.953)	723055	298.918	59.78
45 1,2-Dichloroethane	62	6.588	6.576	(0.956)	268142	310.769	62 15
47 Trichloroethene	130	7.281	7.269	(1.056)	181428	292.805	58.56
49 1,2-Dichloropropane	63	7.507	7.501	(1.089)	180130	312.010	62.40
50 Dibromomethane	93 00	Compound Not Detected.					
53 Bromodichloromethane	83	7.811	7 811	(1.133)	214317	304.033	60.81
57 cis-1,3-Dichloropropene	75	8 267	8 267	(1.199)	248773	260.381	52.08
58 4-Methyl-2-Pentanone	43	8.443	8 504	(0.847)	188283	243.024	48.60
60 Toluene	91	8.608	8.596	(0.863)	796463	293.890	58.78
61 trans-1,3-Dichloropropene	75	8.833	8.833	(0.886)	264061	284.762	56.95
62 Ethyl methacrylate	69.00	Compound Not Detected.					
64 1,1,2-Trichloroethane	97	9.015	9.022	(0.904)	155543	286.601	57.32
65 Tetrachloroethene	164	9.155	9.143	(0.918)	148284	286.829	57.36
66 2-Hexanone	43	9.271	9.307	(0.930)	138818	255.316	51.06
67 Dibromochloromethane	129	9.399	9.435	(0.943)	158475	301.488	60.30
68 1,2-Dibromoethane	107	9.502	9.502	(0.953)	154517	279.215	55.84
70 Chlorobenzene	112	10.001	10.001	(1.003)	502285	288.134	57.63
72 Ethylbenzene	106	10.116	10 110	(1 015)	288736	285.031	57.01
73 m + p-Xylene	106	10.232	10.232	(1.026)	685409	592.947	118.6
74 Xylene-o	106	10.627	10.628	(1.066)	334429	297.144	59.43
M 75 Xylenes (total)	106				1019838	906 137	181.2
76 Styrene	104	10.640	10.646	(1.067)	572609	308 228	61.64
77 Bromoform	173	10.810	10.822	(1 084)	101958	304.562	60.91
83 1,1,2,2-Tetrachloroethane	83	11.278	11.291	(0.919)	201314	280.582	56.12
84 1,2,3-Trichloropropane	110.00	Compound Not Detected.					
91 1,3-Dichlorobenzene	146	12.215	12.215	(0 995)	343762	281 431	56.29
93 1,4-Dichlorobenzene	146	12.300	12.307	(1.002)	349085	282 581	56.52
95 1,2-Dichlorobenzene	146	12.671	12.672	(1.032)	318311	272.500	54.50
78 Isopropylbenzene	105	10.992	10.993	(1.103)	896143	311.313	62.26
99 Naphthalene	128.00	Compound Not Detected.					

**GC/MS VOLATILE
MISCELLANEOUS**

GCMS Volatile

Run Log

Method: 8260B

Inst. ID #PS

Analyst KLG

Reviewed by:

Date:

 Std: 92-180-11BFB Std: 92-178-8Lnt
 Std: 92-1759MS Std: 92-179-6 CS2

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

 Std: 92-180-7N4 Std: 92-180-8 Ketones
 Std: Std:

Date	File ID	Lot No./Sample No.	Vol./Wt.	pH	Port#	Comments
5/5/00	1. BFS0515	BFB	50ng			0523
	2. K50515	VSDSD Bonus	5ml			
	3. 3030515	VSDSD	5ml			
	4. 1A30515	VSDS	5ml			
	5. 1B30515	VSD20	5ml			
	6. 1D30515	VSD100	5ml			
	7. 1E30515	VSD200	5ml			7959
	8.					
	9.					
	10.					
	11.					
	12.					
	13.					
	14.					
	15.					
	16.					
	17.					
	18.					
	19.					
	20.					
	21.					
	22.					

GCMS Volatile**Run Log**Analyst: KLGMethod: StaticBInst. ID: HPS**STL**
Committed to Better ScienceSTL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238
412-820-8380

Reviewed by: _____

Date: _____

Std: 192.180-11BFB Std: 192-180-9UG4Std: 192-180-10gler Std: 192-182.3MSStd: 192-180-8 KetonesStd: 192.182-11 MTBE/CS2 Std: 192-R1-76A

Std: _____ Std: _____

Date	File ID	Lot No. /Sample No.	Vol. /Wt.	pH	Port#	Comments
5/24/00	1. J350524	BFB	50ng			OKS
	2. U50524	WdSO	5ml			
	3. U850524	YBLX	5ml			
	4. 50524D1	TCUP Prep Blank 5/23/00	(1ml/10ml)/5ml	5		
	5. 50524D2	Blank MS	5ml			
	6. 50524D3	Blank MS TCUP	(1ml/10ml)/5ml	5		
	7. 50524D4	WdE230195-001	5ml	1		
	8. 50524D5	WdE230195-001	(1ml/10ml)/5ml	5		
	9. 50524D6	WdE230195-001 MS	5ml	1		
	10. 50524D7	WdE230195-001 MSB	5ml	1		
	11. 50524D8	WdE230195-001 MS	(1ml/10ml)/5ml	5		
	12. 50524D9	WdE230195-001 MSB	(1ml/10ml)/5ml	5		
	13. 50524D10					
	14.					
	15.					
	16.					
	17.					
	18.					
	19.					
	20.					
	21.					
	22.					

Quanterra
Pittsburgh
Tel 412 492 4992

Temp: 20

6571274

GC/MS SEMIVOLATILE DATA

6571276

**GC/MS SEMIVOLATILE
QC SUMMARY**

Lab Name. Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: COE190257

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	96	97	106	85	89	110	00
02	METHOD BLK. DDP6L101	70	72	84	64	69	80	00
03	LCS DDP6L102	76	80	78	75	77	83	00
04	LCSD DDP6L103	75	78	80	73	76	82	00

SURROGATES

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

QC LIMITS

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

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

FORM II

6571278

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: COE250000

WO #: DDP6L102

BATCH: 0146281

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	0.192	77	28 - 110	
2,4-Dinitrotoluene	0.250	0.170	68	47 - 131	
Hexachlorobenzene	0.250	0.214	85	57 - 128	
Hexachlorobutadiene	0.250	0.195	78	36 - 116	
Hexachloroethane	0.250	0.195	78	30 - 110	
Nitrobenzene	0.250	0.192	77	45 - 130	
Pentachlorophenol	0.250	0.202	81	10 - 140	
Pyridine	0.250	0.340	136	10 - 148	
2,4,5-Trichlorophenol	0.250	0.201	80	41 - 125	
2,4,6-Trichlorophenol	0.250	0.200	80	46 - 135	
Cresols (total)	0.750	0.577	77	29 - 144	

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 #: COE250000

WO #: DDP6L103

BATCH: 0146281

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
1,4-Dichlorobenzene	0.250	0.185	74	28 - 110	
2,4-Dinitrotoluene	0.250	0.166	66	47 - 131	
Hexachlorobenzene	0.250	0.213	85	57 - 128	
Hexachlorobutadiene	0.250	0.190	76	36 - 116	
Hexachloroethane	0.250	0.190	76	30 - 110	
Nitrobenzene	0.250	0.189	76	45 - 130	
Pentachlorophenol	0.250	0.199	79	10 - 140	
Pyridine	0.250	0.329	132	10 - 148	
2,4,5-Trichlorophenol	0.250	0.194	77	41 - 125	
2,4,6-Trichlorophenol	0.250	0.198	79	46 - 135	
Cresols (total)	0.750	0.575	77	29 - 144	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS :

FORM III

6571280

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDP6L101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: S0526001.

Lot Number: C0E190257

Date Analyzed: 05/26/00

Time Analyzed: 10:18

Matrix: SOLID

Date Extracted: 05/24/00

GC Column: DB5MS ID: .25

Extraction Method: 1311/3520C

Instrument ID: 71

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/S1/0138/GRAB/001	DDFV6103	S0526004.	05/26/00	11:57
02	CHECK SAMPLE	DDP6L102 C	S0526002.	05/26/00	10:51
03	DUPLICATE CHECK	DDP6L103 L	S0526003.	05/26/00	11:24
04					
05					
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07					
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12					
13					
14					
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16					
17					
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30					

COMMENTS:

FORM IV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.

Lab File ID: S0519DF2

DFTPP Injection Date: 05/19/00

Instrument ID: 71

DFTPP Injection Time: 1144

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	49.8
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	23.3
365	Greater than 1.0% of mass 198	3.83
441	Present, but less than mass 443	14.4
442	Greater than 40.0% of mass 198	88.3
443	17.0 - 23.0% of mass 442	16.3 (18.4)2

1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD50	S0519CC3	05/19/00	1320
02	SSTD020	SSTD20	S0519CC2	05/19/00	1356
03	SSTD080	SSTD80	S0519CC4	05/19/00	1432
04	SSTD120	SSTD120	S0519CC5	05/19/00	1508
05	SSTD160	SSTD160	S0519CC6	05/19/00	1544
06					
07					
08					
09					
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16					
17					
18					
19					
20					
21					
22					

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Contract :

SDG No. :

DFTPP Injection Date: 05/26/00

DFTPP Injection Time: 0854

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	SSTD50	SSTD50	S0526CC3	05/26/00	0944
02	INTRA-LAB BL	DDP6L101	S0526001	05/26/00	1018
03	INTRA-LAB CH	DDP6L102	S0526002	05/26/00	1051
04	INTRA-LAB CH	DDP6L103	S0526003	05/26/00	1124
05	DF/S1/0138/G	DDFV6103	S0526004	05/26/00	1157
06					
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22					

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

6571283

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): S0526CC3 Date Analyzed: 05/26/00
 Instrument ID: 71 Time Analyzed: 0944

	IS1 (DCB)	RT #	IS2 (NPT)	RT #	IS3 (ANT)	RT #
	AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	157584	4.98	612623	6.50	312444	9.51
UPPER LIMIT	315168	5.48	1225246	7.00	624888	10.01
LOWER LIMIT	78792	4.48	306312	6.00	156222	9.01
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	160321	4.98	652950	6.50	351968	9.51
02 INTRA-LAB CH	123769	4.98	494686	6.49	261001	9.51
03 INTRA-LAB CH	141326	4.98	571425	6.50	301387	9.51
04 DF/S1/0138/G	111471	4.97	421249	6.49	215257	9.49
05						
06						
07						
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09						
10						
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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.

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: _

Lab File ID (Standard): S0526CC3

Date Analyzed: 05/26/00

Instrument ID: 71

Time Analyzed: 0944

	IS4 (PHN)	RT #	IS5 (CRY)	RT #	IS6 (PRY)	RT #
	AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	499444	12.80	382446	19.43	492173	22.79
UPPER LIMIT	998888	13.30	764892	19.93	984346	23.29
LOWER LIMIT	249722	12.30	191223	18.93	246087	22.29
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 INTRA-LAB BL	544595	12.80	411047	19.42	476187	22.79
02 INTRA-LAB CH	431139	12.80	407107	19.42	535892	22.78
03 INTRA-LAB CH	484922	12.80	429789	19.42	527120	22.78
04 DF/S1/0138/G	349052	12.78	373228	19.40	511027	22.76
05						
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08						
09						
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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) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDFV6103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: 16

QC Batch: 0146281

Client Sample Id: DF/S1/0138/GRAB/001

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

Data File: \\NPITPA02\chem\71.1\5052600.b\50526004.D

Date: 26-May-2000 11:57

Client ID: DF/SI/0138/GRAB/001

Sample Info: COE190257-001 S/24/00 8270bclp

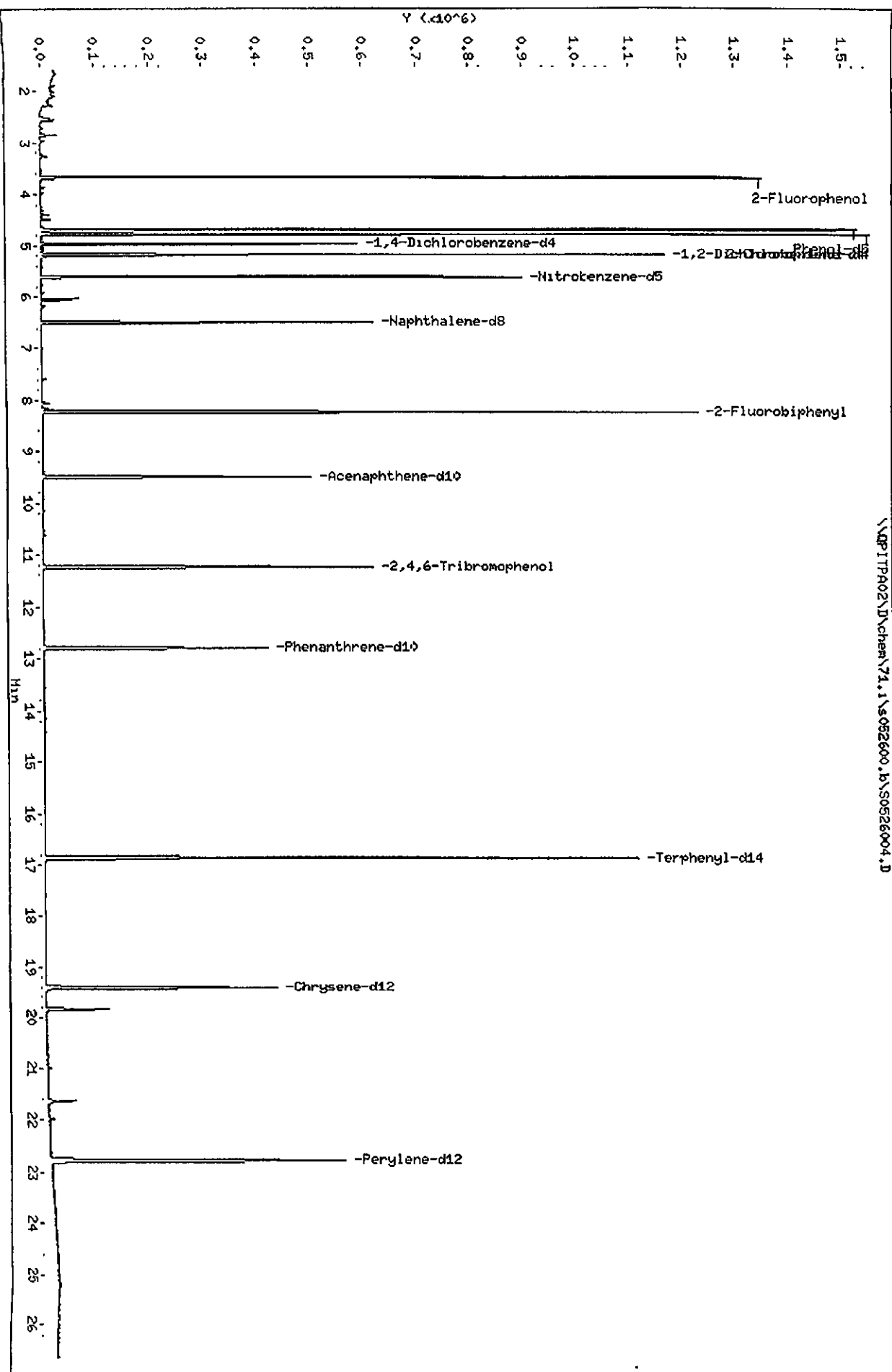
Volume Injected (uL): 2.0

Column phase: He5-MS

Instrument: 71.1

Operator: 045183

Column diameter: 0.25



6571288

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526004.D
 Report Date: 26-May-2000 12:31

Page 1

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s052600.b\S0526004.D
 Lab Smp Id: DDFV6103 Client Smp ID: DF/S1/0138/GRAB/001
 Inj Date : 26-MAY-2000 11:57
 Operator : 045183 Inst ID: 71.i
 Smp Info : C0E190257-001 5/24/00 8270tclp
 Misc Info : ddfv6103,s052600.b,8270clp.m,1-tclp.sub
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s052600.b\8270clp.m
 Meth Date : 26-May-2000 11:26 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 7
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.03
 Processing Host: PITPC050

PBB
3/26/00

Compound Sublist: 1-tclp.sub

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

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

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.970	4.976	(1.000)	111471	40.0000	(a)
* 2 Naphthalene-d8	136	6.487	6.498	(1.000)	421249	40.0000	(a)
* 3 Acenaphthene-d10	164	9.489	9.511	(1.000)	215257	40.0000	(a)
* 4 Phenanthrene-d10	188	12.780	12.802	(1.000)	349052	40.0000	(a)
* 5 Chrysene-d12	240	19.404	19.431	(1.000)	373228	40.0000	(a)
* 6 Perylene-d12	264	22.764	22.792	(1.000)	511027	40.0000	(a)
10 Pyridine	79	Compound Not Detected.					
28 1,4-Dichlorobenzene	146	Compound Not Detected.					
M 34 Cresols, total	100	Compound Not Detected.					
31 2-Methylphenol	108	Compound Not Detected.					
35 4-Methylphenol	108	Compound Not Detected.					
38 Hexachloroethane	117	Compound Not Detected.					
39 Nitrobenzene	77	Compound Not Detected.					
59 Hexachlorobutadiene	224	Compound Not Detected.					

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526004.D
 Report Date: 26-May-2000 12:31

Page 2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (mg/L)
69 2,4,6-Trichlorophenol	196				Compound Not Detected.		
70 2,4,5-Trichlorophenol	196				Compound Not Detected		
91 2,4-Dinitrotoluene	165				Compound Not Detected.		
113 Hexachlorobenzene	283				Compound Not Detected.		
117 Pentachlorophenol	265				Compound Not Detected.		
\$ 172 Nitrobenzene-d5	82	5.616	5.633	(0.866)	409795	96.1992	0.24050(a)
\$ 173 2-Fluorobiphenyl	172	8.213	8.229	(0.865)	633808	97.0670	0.24267(a)
\$ 174 Terphenyl-d14	244	16.856	16.867	(0.869)	884500	105.976	0.26494(a)
\$ 175 Phenol-d5	99	4.676	4.687	(0.941)	664146	133.560	0.33390(a)
\$ 176 2-Fluorophenol	112	3.666	3.672	(0.738)	474718	127.577	0.31894(a)
\$ 177 2,4,6-Tribromophenol	330	11.231	11.253	(0.879)	143579	165.688	0.41422(aA)
\$ 178 2-Chlorophenol-d4	132	4.777	4.783	(0.961)	512534	147.124	0.36781(a)
\$ 179 1,2-Dichlorobenzene-d4	152	5.173	5.184	(1.041)	211373	86.3609	0.21590(a)

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- A - Target compound detected but, quantitated amount
exceeded maximum amount.

6571290

**GC/MS SEMIVOLATILE
CALIBRATION DATA**

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument ID: 71

Calibration Date(s): 05/19/00

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

Max %RSD for CCC(*) = 30.0%

LAB FILE ID:		RRF1	=S0519CC2.D	RRF2	=S0519CC3.D			
RRF3 =S0519CC4.D		RRF4	=S0519CC5.D	RRF5	=S0519CC6.D			
COMPOUND		RRF1	RRF2	RRF3	RRF4	RRF5	$\overline{RRF}$	% RSD
Phenol	*	2.092	2.099	2.050	1.918	1.891	2.010	4.9*
bis(2-Chloroethyl) ether		1.638	1.667	1.636	1.593	1.589	1.625	2.0
2-Chlorophenol		1.405	1.430	1.420	1.360	1.347	1.392	2.6
1,3-Dichlorobenzene		1.571	1.609	1.567	1.488	1.473	1.542	3.8
1,4-Dichlorobenzene	*	1.612	1.626	1.589	1.509	1.486	1.564	4.0*
1,2-Dichlorobenzene		1.511	1.511	1.466	1.376	1.343	1.441	5.4
2-Methylphenol		1.365	1.395	1.386	1.326	1.319	1.358	2.5
2,2'-oxybis(1-Chloropropane		2.103	2.119	2.067	1.967	1.934	2.038	4.1
4-Methylphenol		1.442	1.466	1.452	1.380	1.356	1.419	3.4
Hexachloroethane		0.610	0.624	0.617	0.596	0.595	0.608	2.1
Nitrobenzene		0.432	0.448	0.444	0.430	0.431	0.437	1.9
Isophorone		0.715	0.741	0.734	0.718	0.720	0.726	1.5
2-Nitrophenol	*	0.176	0.190	0.196	0.193	0.194	0.190	4.2*
2,4-Dimethylphenol		0.337	0.355	0.358	0.350	0.349	0.350	2.3
bis(2-Chloroethoxy) methane		0.466	0.473	0.473	0.456	0.455	0.465	1.9
N-Nitroso-di-n-propylamine	#	1.122	1.157	1.155	1.143	1.140	1.143	1.3#
2,4-Dichlorophenol	*	0.267	0.283	0.280	0.271	0.270	0.274	2.5*
1,2,4-Trichlorobenzene		0.296	0.299	0.294	0.281	0.278	0.290	3.3
Naphthalene		1.103	1.110	1.085	1.017	1.003	1.064	4.7
4-Chloroaniline		0.421	0.441	0.439	0.429	0.423	0.431	2.1
Hexachlorobutadiene	*	0.151	0.154	0.152	0.142	0.140	0.148	4.1*
4-Chloro-3-Methylphenol	*	0.302	0.324	0.323	0.322	0.323	0.319	2.9*
2-Methylnaphthalene		0.720	0.730	0.716	0.680	0.670	0.703	3.7
Hexachlorocyclopentadiene	#	0.273	0.308	0.316	0.311	0.313	0.304	5.8#
2,4,6-Trichlorophenol	*	0.316	0.330	0.331	0.327	0.326	0.326	1.8*
2,4,5-Trichlorophenol		0.330	0.352	0.356	0.353	0.348	0.348	3.0
2-Chloronaphthalene		1.116	1.118	1.091	1.027	1.007	1.072	4.8
2-Nitroaniline		0.353	0.390	0.398	0.401	0.405	0.389	5.4
Dimethylphthalate		1.284	1.324	1.320	1.287	1.282	1.299	1.6
Acenaphthylene		1.828	1.878	1.861	1.784	1.758	1.822	2.8
2,6-Dinitrotoluene		0.265	0.294	0.298	0.296	0.298	0.290	4.9
3-Nitroaniline		0.331	0.367	0.374	0.372	0.374	0.364	5.0
Acenaphthene	*	1.162	1.180	1.158	1.114	1.103	1.143	2.9*
2,4-Dinitrophenol	#	0.094	0.140	0.158	0.175	0.187	0.151	24.0#
4-Nitrophenol	#	0.156	0.189	0.195	0.202	0.208	0.190	10.6#
Dibenzofuran		1.643	1.656	1.630	1.554	1.525	1.602	3.6
2,4-Dinitrotoluene		0.373	0.410	0.414	0.421	0.420	0.408	4.9

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument ID: 71

Calibration Date(s): 05/19/00

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

Max %RSD for CCC(*) = 30.0%

LAB FILE ID:		RRF1	=S0519CC2.D	RRF2	=S0519CC3.D		
RRF3 =S0519CC4.D		RRF4	=S0519CC5.D	RRF5	=S0519CC6.D		
COMPOUND	RRF1	RRF2	RRF3	RRF4	RRF5	$\overline{RRF}$	% RSD
Diethylphthalate	1.301	1.362	1.340	1.310	1.307	1.324	2.0
4-Chlorophenyl-phenylether	0.598	0.604	0.598	0.571	0.560	0.586	3.3
Fluorene	1.342	1.361	1.331	1.274	1.247	1.311	3.7
4-Nitroaniline	0.349	0.391	0.391	0.398	0.399	0.386	5.3
4,6-Dinitro-2-methylphenol	0.090	0.116	0.123	0.128	0.132	0.118	14.2
N-Nitrosodiphenylamine (1)	0.551	0.528	0.529	0.512	0.509	0.526	3.2*
4-Bromophenyl-phenylether	0.181	0.182	0.180	0.172	0.171	0.177	2.9
Hexachlorobenzene	0.194	0.194	0.193	0.184	0.183	0.190	3.0
Pentachlorophenol	0.080	0.108	0.115	0.121	0.123	0.109	16.1*
Phenanthrene	1.075	1.064	1.045	0.985	0.976	1.029	4.5
Anthracene	1.088	1.096	1.083	1.016	1.005	1.058	4.1
Carbazole	1.030	1.058	1.045	1.004	0.996	1.027	2.6
Di-n-Butylphthalate	1.204	1.299	1.294	1.243	1.230	1.254	3.3
Fluoranthene	1.097	1.142	1.118	1.068	1.050	1.095	3.4*
Pyrene	1.180	1.188	1.201	1.184	1.184	1.187	0.7
Butylbenzylphthalate	0.577	0.638	0.648	0.658	0.667	0.638	5.6
3,3'-Dichlorobenzidine	0.373	0.422	0.423	0.440	0.443	0.420	6.7
Benzo(a) Anthracene	1.089	1.143	1.135	1.131	1.145	1.129	2.0
Chrysene	1.078	1.103	1.094	1.075	1.080	1.086	1.1
bis(2-ethylhexyl) Phthalate	0.813	0.903	0.909	0.919	0.932	0.895	5.3
Di-n-octylphthalate	1.227	1.350	1.337	1.276	1.253	1.289	4.1*
Benzo(b) fluoranthene	1.039	1.086	1.037	1.035	1.108	1.061	3.2
Benzo(k) fluoranthene	1.254	1.156	1.144	0.928	0.958	1.088	12.8
Benzo(a) pyrene	1.031	1.068	1.044	0.998	0.990	1.026	3.1*
Indeno(1,2,3-cd) pyrene	1.415	1.442	1.442	1.379	1.394	1.414	2.0
Dibenz(a,h) anthracene	1.210	1.229	1.228	1.184	1.184	1.207	1.9
Benzo(g,h,i) perylene	1.232	1.282	1.289	1.241	1.252	1.259	2.0
Pyridine	0.961	0.961	0.962	0.972	0.766	0.924	9.6
N-Nitrosodimethylamine	0.504	0.533	0.515	0.514	0.406	0.494	10.3
Aniline	2.615	2.523	2.512	2.399	2.347	2.479	4.3
Benzyl Alcohol	0.996	1.020	1.034	1.023	1.017	1.018	1.3
Benzoic Acid	0.109	0.165	0.188	0.208	0.214	0.177	23.8
1-Methylnaphthalene	0.690	0.674	0.662	0.640	0.628	0.659	3.8
2,3,4,6-Tetrachlorophenol	0.265	0.267	0.272	0.270	0.261	0.267	1.7
2,3,5,6-Tetrachlorophenol	0.249	0.265	0.271	0.275	0.272	0.266	3.9

Contract:

SDG No. :

Calibration Date(s): 05/19/00

Max %RSD for CCC(*) = 30.0%

page 3 of 3

FORM VI SV-3

1/87 Rev.

6571294

Data File: \\QPITPA02\D\chem\71.i\s051900.b/S0519CC3.D
Report Date: 05/22/2000

INITIAL CALIBRATION REPORT

Instrument ID: 71.i
Lab File ID: S0519CC3.D
Analysis Type: NONE

Injection Date: 19-MAY-2000 13:20
Lab Sample ID: sstd50
Method File: \\QPITPA02\D\chem\71.i\s051900.b\

COMPOUND	%RSD
Benzo(b)fluoranthene	3.2
1,12-dimethylbenz(a)anthracene	5.7
Benzo(k)fluoranthene	12.8
Benzo(a)pyrene	3.1
Indeno(1,2,3-cd)pyrene	2.0
Dibenz(a,h)anthracene	1.9
Benzo(g,h,i)perylene	2.0

The average of all %RSD's in the initial calibration is 4.5

INITIAL CALIBRATION REPORT

Instrument ID: 71.i
 Lab File ID: S0519CC3.D
 Analysis Type: NONE

Injection Date: 19-MAY-2000 13:20
 Lab Sample ID: sstd50
 Method File: \\QPITPA02\D\chem\71.i\s051900.b\8270clp

COMPOUND	%RSD
N-Nitrosodimethylamine	10.3
Pyridine	9.6
Methyl methanesulfonate	0.7
2-Fluorophenol	1.1
Phenol d5	3.3
Phenol	4.9
Aniline	4.3
bis(2-Chloroethyl)ether	2.0
2-Chlorophenol-d4	2.6
2-Chlorophenol	2.6
1,3-Dichlorobenzene	3.8
1,4-Dichlorobenzene	4.0
Benzyl Alcohol	1.3
1,2-Dichlorobenzene-d4	4.6
1,2-Dichlorobenzene	5.4
2-Methylphenol	2.5
2,2'-oxybis(1-Chloropropane)	4.1
4-Methylphenol	3.4
N-Nitroso-di n-propylamine	1.3
Hexachloroethane	2.1
Nitrobenzene-d5	2.5
Nitrobenzene	1.9
Isophorone	1.5
2-Nitrophenol	4.2
2,4-Dimethylphenol	2.3
bis(2-Chloroethoxy)methane	1.9
Benzoic Acid	23.8
2,4-Dichlorophenol	2.5
1,2,4-Trichlorobenzene	3.3
Naphthalene	4.7
4-Chloroaniline	2.1
Hexachlorobutadiene	4.1
4-Chloro-3-Methylphenol	2.9
2-Methylnaphthalene	3.7
1-Methylnaphthalene	3.8
Hexachlorocyclopentadiene	5.8
2,4,6-Trichlorophenol	1.8
2,4,5-Trichlorophenol	3.0
2-Fluorobiphenyl	3.2

6571296

Data File: \\QPITPA02\D\chem\71.i\s051900.b/S0519CC3.D
 Report Date: 05/22/2000

INITIAL CALIBRATION REPORT

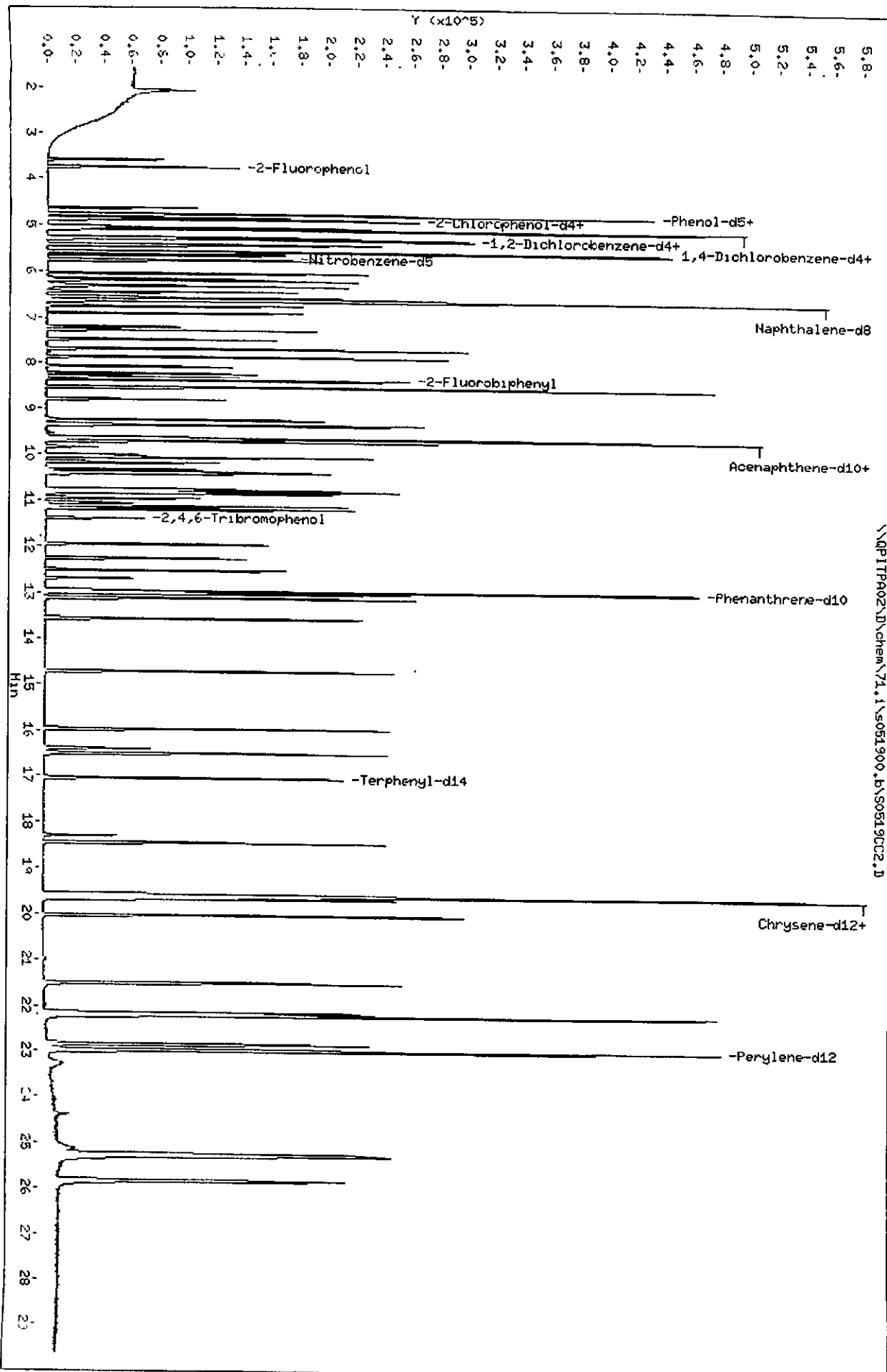
Instrument ID: 71.i
 Lab File ID: S0519CC3.D
 Analysis Type: NONE

Injection Date: 19-MAY-2000 13:20
 Lab Sample ID: sstd50
 Method File: \\QPITPA02\D\chem\71.i\s051900.b\

COMPOUND	%RSD
2-Chloronaphthalene	4.8
2-Nitroaniline	5.4
Diethylphthalate	1.6
Acenaphthylene	2.8
2,6-Dinitrotoluene	4.9
3-Nitroaniline	5.0
Acenaphthene	2.9
2,4-Dinitrophenol	24.0
4-Nitrophenol	10.6
Dibenzofuran	3.6
2,4-Dinitrotoluene	4.9
2,3,5,6-Tetrachlorophenol	3.9
2-Naphthylamine	6.4
2,3,4,6-Tetrachlorophenol	1.7
Diethylphthalate	2.0
Fluorene	3.7
4-Chlorophenyl-phenylether	3.3
4-Nitroaniline	5.3
2,6-Dinitro-2-methylphenol	14.2
N-Nitrosodiphenylamine (1)	3.2
1,2-Diphenylhydrazine	1.9
2,4,6-Tribromophenol	3.1
4-Bromophenyl-phenylether	2.9
Hexachlorobenzene	3.0
Pentachlorophenol	16.1
Phenanthrene	4.5
Anthracene	4.1
Carbazole	2.6
Di-n-Butylphthalate	3.3
Fluoranthene	3.4
Benzidine	12.0
Pyrene	0.7
Perophonyl-d14	1.5
Butylbenzylphthalate	5.6
Benzo(a)Anthracene	2.0
3,3'-Dichlorobenzidine	6.7
Chrysene	1.1
bis(2-ethylhexyl)Phthalate	5.3
Di-n-octylphthalate	4.1

Data File: \\QPI1PA02\\D\\chem\\71.1\\S051900.b\\S0519002.D
Date: 19-MAY-2000 13:56
Client ID: sstd020
Sample Info: sstd020(10.0ug/ml) 194-175-10 8270/c/p
Column phase: Hp5-MS

Instrument: 71.1
Operator: SAB: 2ul inj (100ul+1ul) int
Column diameter: 0.25



6571298

Data File: \\QPITPA02\D\chem\71.i\s051900.b\S0519CC2.D
Report Date: 19-May-2000 14:32

Page 1

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s051900.b\S0519CC2.D
Lab Smp Id: sstd20 Client Smp ID: sstd020
Inj Date : 19-MAY-2000 13:56
Operator : SAB: 2ul inj (100ul+1ul) int Inst ID: 71.i
Smp Info : sstd20(10.0ug/ml) 194-175-10 8270/clp
Misc Info : sstd20,s051900.b,8270clp.m,1-82701.sub,1,1
Comment :
Method : \\QPITPA02\D\chem\71.i\s051900.b\8270clp.m
Meth Date : 19-May-2000 14:28 bachas Quant Type: ISTD
Cal Date : 19-MAY-2000 13:56 Cal File: S0519CC2.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-82701.sub
Target Version: 4.03
Processing Host: PITPC050

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
* 1 1,4-Dichlorobenzene-d4	152	5.072	5.072	(1.000)	95582	40.0000	
* 2 Naphthalene-d8	136	6.616	6.616	(1.000)	387208	40.0000	
* 3 Acenaphthene-d10	164	9.661	9.661	(1.000)	222841	40.0000	
* 4 Phenanthrene d10	188	12.973	12.973	(1.000)	408296	40.0000	
* 5 Chrysene d12	240	19.608	19.608	(1.000)	403670	40.0000	
* 6 Perylene-d12	264	22.979	22.979	(1.000)	459326	40.0000	
13 N-Nitrosodimethylamine	74	2.048	2.048	(0.404)	24090	20.0000	19.435
10 Pyridine	79	2.070	2.070	(0.408)	45943	20.0000	20.004
19 Methyl methanesulfonate	80	3.582	3.582	(0.706)	41196	20.0000	20.164
22 Aniline	93	4.768	4.768	(0.940)	124962	20.0000	20.357
23 Phenol	94	4.762	4.762	(0.939)	99994	20.0000	19.969
24 bis(2-Chloroethyl)ether	93	4.837	4.837	(0.954)	78305	20.0000	19.830
25 2-Chlorophenol	128	4.880	4.880	(0.962)	67155	20.0000	19.825
27 1,3-Dichlorobenzene	146	5.029	5.029	(0.992)	75082	20.0000	19.761
28 1,4-Dichlorobenzene	146	5.088	5.088	(1.003)	77046	20.0000	19.913
29 1,2-Dichlorobenzene	146	5.296	5.296	(1.044)	72217	20.0700	19.999
30 Benzyl Alcohol	108	5.254	5.254	(1.036)	47626	20.0000	19.767
31 2-Methylphenol	108	5.403	5.403	(1.065)	65219	20.0000	19.781
32 2,2'-oxybis(1-Chloropropane)	45	5.430	5.430	(1.071)	100506	20.0000	19.922
33 N-Nitroso-di-n-propylamine	70	5.585	5.585	(1.101)	53598	20.0000	19.688
35 4-Methylphenol	108	5.558	5.558	(1.096)	68891	20.0000	19.833
38 Hexachloroethane	117	5.644	5.644	(1.113)	29139	20.0000	19.772
39 Nitrobenzene	77	5.750	5.750	(0.869)	83564	20.0000	19.638
44 Isophorone	82	6.028	6.028	(0.911)	138454	20.0000	19.643
45 2-Nitrophenol	139	6.146	6.146	(0.929)	34128	20.0000	19.242
46 2,4-Dimethylphenol	107	6.194	6.194	(0.936)	65287	20.0000	19.486

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ng)	ON-COL (ng)
47 Bis (2-Chloroethoxy) methane	93	6.317	6.317	(0.955)	90172	20.0000	19.849
51 2,4-Dichlorophenol	162	6.445	6.445	(0.974)	51708	20.0000	19.432
52 Benzoic Acid	122	6.295	6.295	(0.952)	21194	20.0000	15.930 (H)
53 1,2,4-Trichlorobenzene	180	6.557	6.557	(0.991)	57333	20.0000	19.904
54 Naphthalene	128	6.643	6.643	(1.004)	213576	20.0000	19.936
55 4-Chloroaniline	127	6.750	6.750	(1.020)	81495	20.0000	19.534
59 Hexachlorobutadiene	225	6.899	6.899	(1.043)	29278	20.0000	19.840
62 4-Chloro 3-Methylphenol	107	7.476	7.476	(1.130)	58580	20.0000	19.320
65 2-Methylnaphthalene	142	7.684	7.684	(1.161)	139480	20.0000	19.873
66 1-Methylnaphthalene	142	7.866	7.866	(1.189)	133562	20.0000	20.229
67 Hexachlorocyclopentadiene	237	8.074	8.074	(0.836)	30461	20.0000	18.821
69 2,4,6-Trichlorophenol	196	8.224	8.224	(0.851)	35177	20.0000	19.572
70 2,4,5-Trichlorophenol	196	8.288	8.288	(0.858)	36750	20.0000	19.360
73 2-Chloronaphthalene	162	8.534	8.534	(0.883)	124387	20.0000	19.980
77 2-Nitroaniline	64	8.796	8.796	(0.910)	39306	20.0000	19.004
80 Dimethylphthalate	163	9.239	9.239	(0.956)	143039	20.0000	19.690
82 2,6-Dinitrotoluene	165	9.362	9.362	(0.969)	29521	20.0000	18.969
83 Acenaphthylene	152	9.340	9.340	(0.967)	203685	20.0000	19.727
85 3-Nitroaniline	138	9.629	9.629	(0.997)	36916	20.0000	18.987
86 Acenaphthene	153	9.725	9.725	(1.007)	129485	20.0000	19.850
87 2,4-Dinitrophenol	184	9.848	9.848	(1.019)	10524	20.0000	16.078
89 4-Nitrophenol	109	10.014	10.014	(1.036)	17446	20.0000	18.123
90 Dibenzofuran	168	10.062	10.062	(1.041)	183368	20.0000	19.922
91 2,4-Dinitrotoluene	165	10.179	10.179	(1.054)	41582	20.0000	19.059
95 2,3,5,6-Tetrachlorophenol	232	10.339	10.339	(1.070)	27769	20.0000	19.379
92 2,3,4,6-Tetrachlorophenol	232	10.436	10.436	(1.080)	29522	20.0000	19.907
96 2-Naphthylamine	143	10.404	10.404	(1.077)	140631	20.0000	20.904
97 Dimethylphthalate	149	10.772	10.772	(1.115)	144938	20.0000	19.538
98 Fluorene	166	10.810	10.810	(1.119)	149566	20.0000	19.860
99 4-Chlorophenyl-phenylether	204	10.852	10.852	(1.123)	66595	20.0000	19.888
100 4-Nitroaniline	138	10.959	10.959	(1.134)	38927	20.0000	18.883
102 4,6-Dinitro 2-methylphenol	198	11.071	11.071	(0.853)	18357	20.0000	17.503
103 N-Nitrosodiphenylamine (1)	169	11.135	11.135	(0.858)	112441	20.0000	20.479
101 1,2-Diphenylhydrazine	77	11.199	11.199	(0.863)	181300	20.0000	19.897
112 4-Bromophenyl-phenylether	248	11.958	11.958	(0.922)	36896	20.0000	19.945
113 Hexachlorobenzene	284	12.263	12.263	(0.945)	39662	20.0000	19.996
117 Pentachlorophenol	266	12.706	12.706	(0.979)	16299	20.0000	17.037
122 Phenanthrene	178	13.021	13.021	(1.004)	219499	20.0000	20.102
123 Anthracene	178	13.128	13.128	(1.012)	222028	20.0000	19.919
126 Carbazole	167	13.565	13.565	(1.046)	210285	20.0000	19.737
130 Di-n Butylphthalate	149	14.709	14.709	(1.134)	245902	20.0000	19.245
135 Fluoranthene	202	15.965	15.965	(1.211)	224015	20.0000	19.604
136 Benzidine	184	16.392	16.392	(0.836)	82643	20.0000	17.263
137 Pyrene	202	16.510	16.510	(0.842)	238065	20.0000	19.924
144 Butylbenzylphthalate	149	18.454	18.454	(0.941)	116471	20.0000	18.988
149 3,3'-Dichlorobenzidine	252	19.624	19.624	(1.001)	75267	20.0000	18.770
150 Benzo(a)Anthracene	228	19.571	19.571	(0.998)	219875	20.0000	19.517

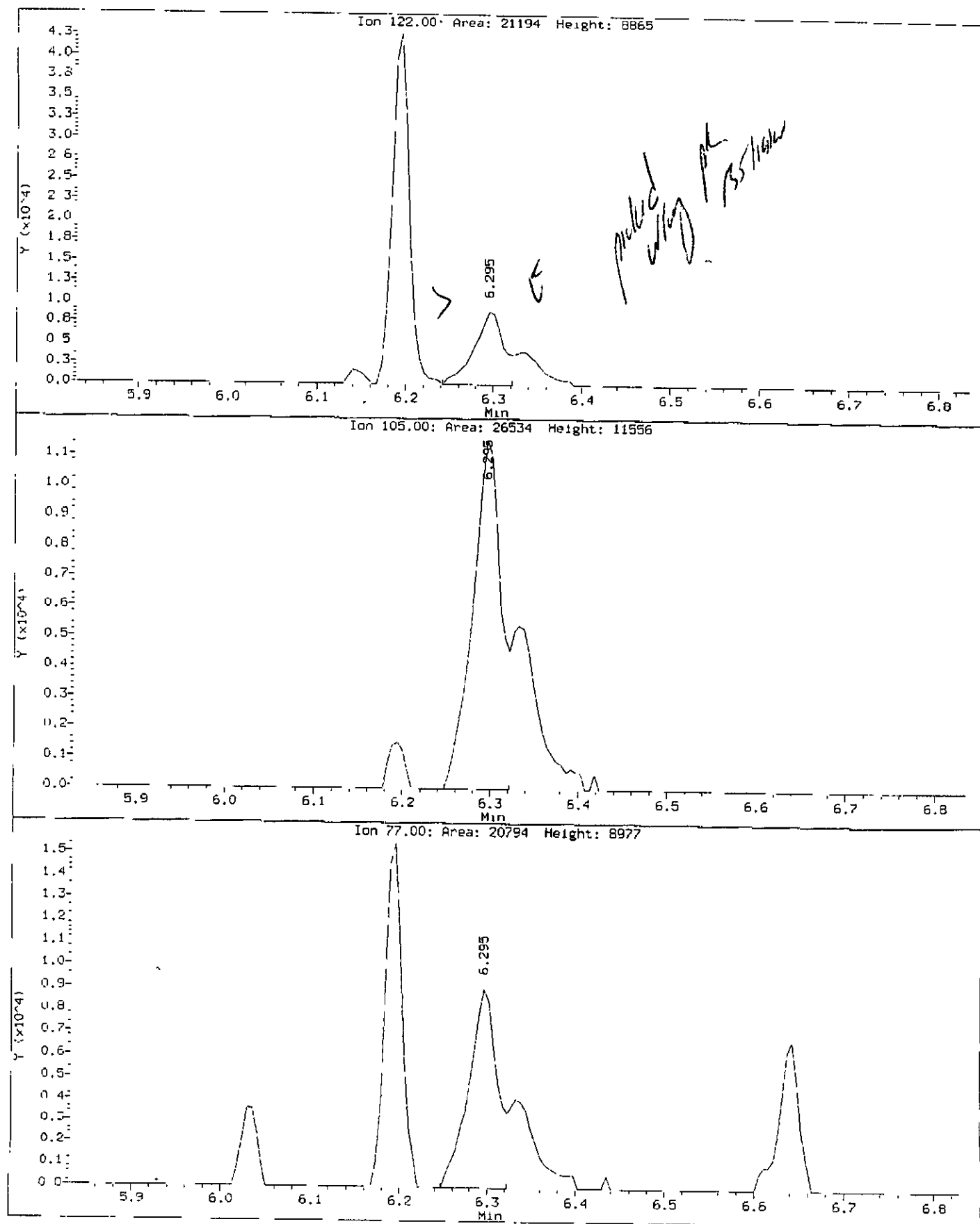
Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ng)	ON-COL (ng)
-----	----	==	=====	=====	-----	-----	-----
151 Chrysene	228	19.672	19.672	(1.003)	217527	20.0000	19.768
153 bis(2-ethylhexyl)phthalate	149	20.030	20.030	(1.022)	164169	20.0000	18.958
155 Di-n-octylphthalate	149	21.499	21.499	(0.936)	281772	20.0000	19.046
157 Benzo(b)fluoranthene	252	22.151	22.151	(0.964)	238605	20.0000	19.560
158 Benzo(k)fluoranthene	252	22.204	22.204	(0.966)	287901	20.0000	20.812
159 7,12-dimethylbenz(a)anthracene	256	22.204	22.204	(0.966)	112535	20.0000	20.460
161 Benzo(a)pyrene	252	22.845	22.845	(0.994)	236893	20.0000	19.649
169 Indeno(1,2,3-cd)pyrene	276	25.255	25.255	(1.099)	325005	20.0000	19.810
170 Dibenz(a,h)anthracene	278	25.303	25.303	(1.101)	277991	20.0000	19.848
171 Benzo(g,h,i)perylene	276	25.842	25.842	(1.125)	283066	20.0000	19.604
\$ 172 Nitrobenzene-d5	82	5.729	5.729	(0.866)	75344	20.0000	19.345
\$ 173 2-Fluorobiphenyl	172	8.363	8.363	(0.866)	136348	20.0000	19.732
\$ 174 Terphenyl-d14	244	17.038	17.038	(0.869)	175629	20.0000	19.656
\$ 175 Phenol-d5	99	4.746	4.746	(0.936)	88640	20.0000	20.242
\$ 176 2-Fluorophenol	112	3.742	3.742	(0.738)	64347	20.0000	20.001
\$ 177 2,4,6-Tribromophenol	330	11.402	11.402	(0.879)	19339	20.0000	19.695
\$ 178 2-Chlorophenol-d4	132	4.869	4.869	(0.960)	61637	20.0000	20.178
\$ 179 1,2-Dichlorobenzene-d4	157	5.280	5.280	(1.041)	43125	20.0000	19.809

QC Flag Legend

H - Operator selected an alternate compound hit.

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Instrument: 71.1
Client Sample ID: sstd020

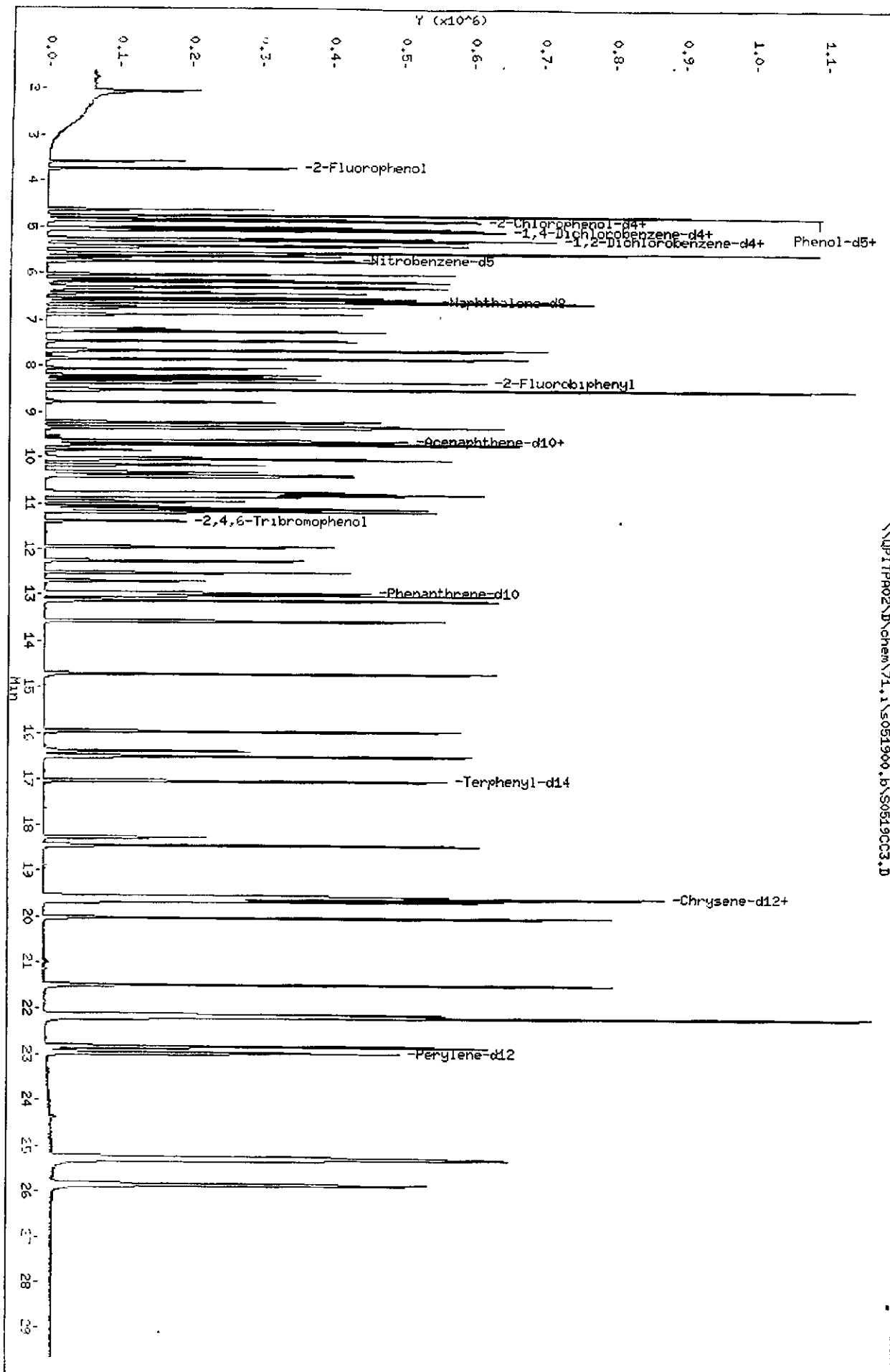
Compound: Benzoic Acid
CAS Number: 65-85-0



Data File: \\QP1TPA02\N\chem\71.1\5051900.b\50519003.D
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Client ID: sstd050
Sample Info: sstd50(25.0ug/ml) 194-176-9 8270/c/p
Column phase: HP5-MS

Instrument: 71.1
Operator: SAB: 2ul inj (100ul+1ul) int
Column diameter: 0.25

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Data File: \\QPITPA02\D\chem\71.i\s051900.b\S0519CC3.D
Report Date: 19-May-2000 14:10

Page 1

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

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Operator : SAB: 2ul inj (100ul+1ul) int Inst ID: 71.i
Smp Info : sstd50(25.0ug/ml) 194-176-9 8270/clp
Misc Info : sstd50,s051900.b,8270clp.m,1-82701.sub,1,2
Comment :
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Cal Date : 19-MAY-2000 13:20 Cal File: S0519CC3.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-82701.sub
Target Version: 4.03
Processing Host: PITPC050

Compounds	QUANT SIG	AMOUNTS						
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
							(ng)	(ng)
-----	----	==	-----	-----	-----	-----	-----	
* 1 1,4-Dichlorobenzene d4	152	5 064	5 064	(1 000)	90711	40 0000		
* 2 Naphthalene-d8	136	6 608	6 608	(1 000)	365257	40 0000		
* 3 Acenaphthene-d10	164	9 648	9 648	(1.000)	211027	40 0000		
* 4 Phenanthrene-d10	188	12 960	12 960	(1 000)	395064	40 0000		
* 5 Chrysene-d12	240	19 600	19.600	(1 000)	396681	40 0000		
* 6 Perylene d12	264	22 965	22 965	(1 000)	476712	40 0000		
13 N-N-trosodimethylamine	74	2 046	2 046	(0 404)	60479	50.0000	38 914	
10 Pyridine	79	2.051	2 051	(0 405)	108964	50 0000	40 778 (M)	
19 Methyl methanesulfonate	80	3 579	3 579	(0 707)	96149	50 0000	90.420	
22 Aniline	93	4 765	4 765	(0 941)	286086	50.0000	97 333	
23 Phenol	94	4 760	4 760	(0 940)	237977	50.0000	62 195	
24 bis(2-Chloroethyl)ether	93	4 829	4 829	(0.954)	188978	50 0000	61 781	
25 2-Chlorophenol	128	4 877	4 877	(0 963)	162137	50 0000	58 599	
27 1,3-Dichlorobenzene	146	5 027	5 027	(0.993)	182454	50 0000	59 318	
28 1,4-Dichlorobenzene	146	5 085	5.085	(1 004)	184390	50 0000	59 389	
29 1,2-Dichlorobenzene	146	5 288	5.288	(1 044)	171362	50 0000	60 083	
10 Benzyl Alcohol	108	5 246	5 246	(1 036)	115661	50 0000	58 782 (M)	
31 2-Methylphenol	108	5 395	5 395	(1 065)	158169	50.0000	58 616	
32 2,2'-oxybis(1-Chloropropane)	45	5 422	5 422	(1 071)	240324	50 0000	63 171	
33 N-Nitroso-di-n propylamine	70	5 577	5 577	(1 101)	131200	50 0000	60 868	
35 4-Methylphenol	108	5 556	5 556	(1 097)	166203	50 0000	60 879	
38 Hexachloroethane	117	5 636	5 636	(1 113)	70729	50 0000	59 768	
39 Nitrobenzene	77	5.748	5 748	(0 870)	204339	50 0000	63.049	
44 Isophorone	82	6 026	6.026	(0 917)	338383	50 0000	63 958	
45 2-Nitrophenol	139	6 138	6 138	(0 929)	86819	50 0000	57 466	
46 2,4-Dimethylpheno-	107	6 186	6 186	(0 936)	162083	50 0000	58 358	

Compound#	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
						(ng)	(ng)
=====	=====	=====	=====	=====	=====	=====	=====
47 bis(2-Chloroethoxy)methane	93	6.309	6.309	(0.955)	215890	50.0000	62.215
51 2,4-Dichlorophenol	162	6.437	6.437	(0.974)	129066	50.0000	58.934
52 Benzoic Acid	122	6.330	6.330	(0.958)	75522	50.0000	51.964 (II)
53 1,2,4-Trichlorobenzene	180	6.549	6.549	(0.991)	136509	50.0000	59.056
54 Naphthalene	128	6.635	6.635	(1.004)	506904	50.0000	61.464
55 4-Chloroaniline	127	6.736	6.736	(1.019)	201350	50.0000	66.461
59 Hexachlorobutadiene	225	6.891	6.891	(1.043)	70160	50.0000	59.670
62 4-Chloro-3-Methylphenol	107	7.473	7.473	(1.131)	147871	50.0000	59.252
65 2-Methylnaphthalene	142	7.676	7.676	(1.162)	333144	50.0000	61.897
66 1-Methylnaphthalene	142	7.858	7.858	(1.189)	307834	50.0000	59.252
67 Hexachlorocyclopentadiene	237	8.066	8.066	(0.836)	81147	50.0000	64.899
69 2,4,6-Trichlorophenol	196	8.210	8.210	(0.851)	86921	50.0000	59.217
70 2,4,6-Trichlorophenol	196	8.280	8.280	(0.858)	92756	50.0000	56.466
73 2-Chloronaphthalene	162	8.520	8.520	(0.883)	295057	50.0000	62.580
77 2-Nitroaniline	65	8.787	8.787	(0.911)	102811	50.0000	62.476
80 Dimethylphthalate	163	9.231	9.231	(0.957)	349292	50.0000	61.676
82 2,6-Dinitrotoluene	165	9.359	9.359	(0.970)	77490	50.0000	59.393
83 Acenaphthylene	152	9.332	9.332	(0.967)	495539	50.0000	61.478
85 3-Nitroaniline	138	9.621	9.621	(0.997)	96720	50.0000	58.882
86 Acenaphthene	153	9.717	9.717	(1.007)	311190	50.0000	61.143
87 2,4-Dinitrophenol	184	9.840	9.840	(1.020)	37072	50.0000	51.380
89 4-Nitrophenol	109	10.011	10.011	(1.038)	49859	50.0000	60.101
90 Dibenzofuran	168	10.048	10.048	(1.042)	436788	50.0000	61.637
91 2,4-Dinitrotoluene	165	10.171	10.171	(1.054)	108161	50.0000	58.791
95 2,3,5,6-Tetrachlorophenol	232	10.331	10.331	(1.071)	69954	50.0000	56.640
92 2,3,4,6-Tetrachlorophenol	232	10.427	10.427	(1.081)	70544	50.0000	57.647
96 2-Naphthylamine	143	10.395	10.395	(1.078)	304128	50.0000	61.776
97 Diethylphthalate	149	10.764	10.764	(1.116)	359343	50.0000	61.954
98 Fluorene	166	10.801	10.801	(1.120)	359063	50.0000	61.234
99 4-Chlorophenyl-phenylether	204	10.839	10.839	(1.123)	159438	50.0000	61.175
100 4-Nitroaniline	138	10.962	10.962	(1.136)	103061	50.0000	59.607
102 4,6-Dinitro-2-methylphenol	198	11.063	11.063	(0.854)	57074	50.0000	54.750
103 N-Nitrosodiphenylamine (I)	169	11.127	11.127	(0.859)	260561	50.0000	65.236
104 1,2-Diphenylhydrazine	77	11.186	11.186	(0.863)	443090	50.0000	68.648
112 4-Bromophenyl-phenylether	248	11.945	11.945	(0.922)	89743	50.0000	60.742
113 Hexachlorobenzene	284	12.249	12.249	(0.945)	95977	50.0000	60.065
117 Pentachlorophenol	266	12.693	12.693	(0.979)	53140	50.0000	49.791
122 Pteranthrene	178	13.013	13.013	(1.004)	525579	50.0000	62.316
123 Anthracene	178	13.120	13.120	(1.012)	541431	50.0000	64.977
126 Carbazole	167	13.558	13.558	(1.046)	522242	50.0000	62.257
130 Di-n-Butylphthalate	149	14.701	14.701	(1.134)	611526	50.0000	62.782
135 Fluoranthene	202	15.957	15.957	(1.231)	563796	50.0000	61.445
136 Benzidine	184	16.379	16.379	(0.836)	267421	50.0000	66.685
137 Pyrene	202	16.496	16.496	(0.842)	589294	50.0000	59.349
144 Butylbenzylphthalate	149	18.441	18.441	(0.941)	316631	50.0000	59.024
149 3,3'-Dichlorobenzidine	252	19.611	19.611	(1.001)	209147	50.0000	58.329
150 Benzo(a)Anthracene	228	19.563	19.563	(0.998)	566912	50.0000	57.901

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
*****	----	--	-----	-----	-----	-----	-----
151 Chrysene	228	19.664	19.664	(1.003)	546969	50.0000	57.235
153 bis(2-ethylhexyl)Phthalate	149	20.017	20.017	(1.021)	447632	50.0000	57.473
154 Di-n-octylphthalate	149	21.491	21.491	(0.936)	804314	50.0000	60.277
157 Benzo(b)fluoranthene	252	22.148	22.148	(0.964)	646950	50.0000	59.036
158 Benzo(k)fluoranthene	252	22.207	22.207	(0.967)	688682	50.0000	67.644
159 7,12-dimethylbenz[a]anthracene	256	22.202	22.202	(0.967)	278848	50.0000	65.952
167 Benzo(a)pyrene	252	22.843	22.843	(0.995)	636581	50.0000	63.178
169 Indeno(1,2,3-cd)pyrene	276	25.247	25.247	(1.099)	859402	50.0000	60.321
170 Dibenz(a,h)anthracene	278	25.295	25.295	(1.101)	732361	50.0000	61.072
171 Benzo(g,h,i)perylene	276	25.845	25.845	(1.125)	764160	50.0000	59.681
\$ 172 Nitrobenzene-d5	182	5.726	5.726	(0.867)	189711	50.0000	62.779
\$ 173 2-Fluorobiphenyl	172	8.355	8.355	(0.866)	331548	50.0000	60.980
\$ 174 Terphenyl-d14	244	17.030	17.030	(0.869)	446559	50.0000	61.330
\$ 175 Phenol-d5	99	4.744	4.744	(0.937)	205269	50.0000	62.855
\$ 176 2-Fluorophenol	112	3.734	3.734	(0.737)	152654	50.0000	57.140
\$ 177 2,4,6-Tribromophenol	330	11.389	11.389	(0.879)	48731	50.0000	57.752
\$ 178 2-Chlorophenol-d4	132	4.861	4.861	(0.950)	143652	50.0000	54.259
\$ 179 1,2-Dichlorobenzene-d4	152	5.272	5.272	(1.041)	104290	50.0000	59.318

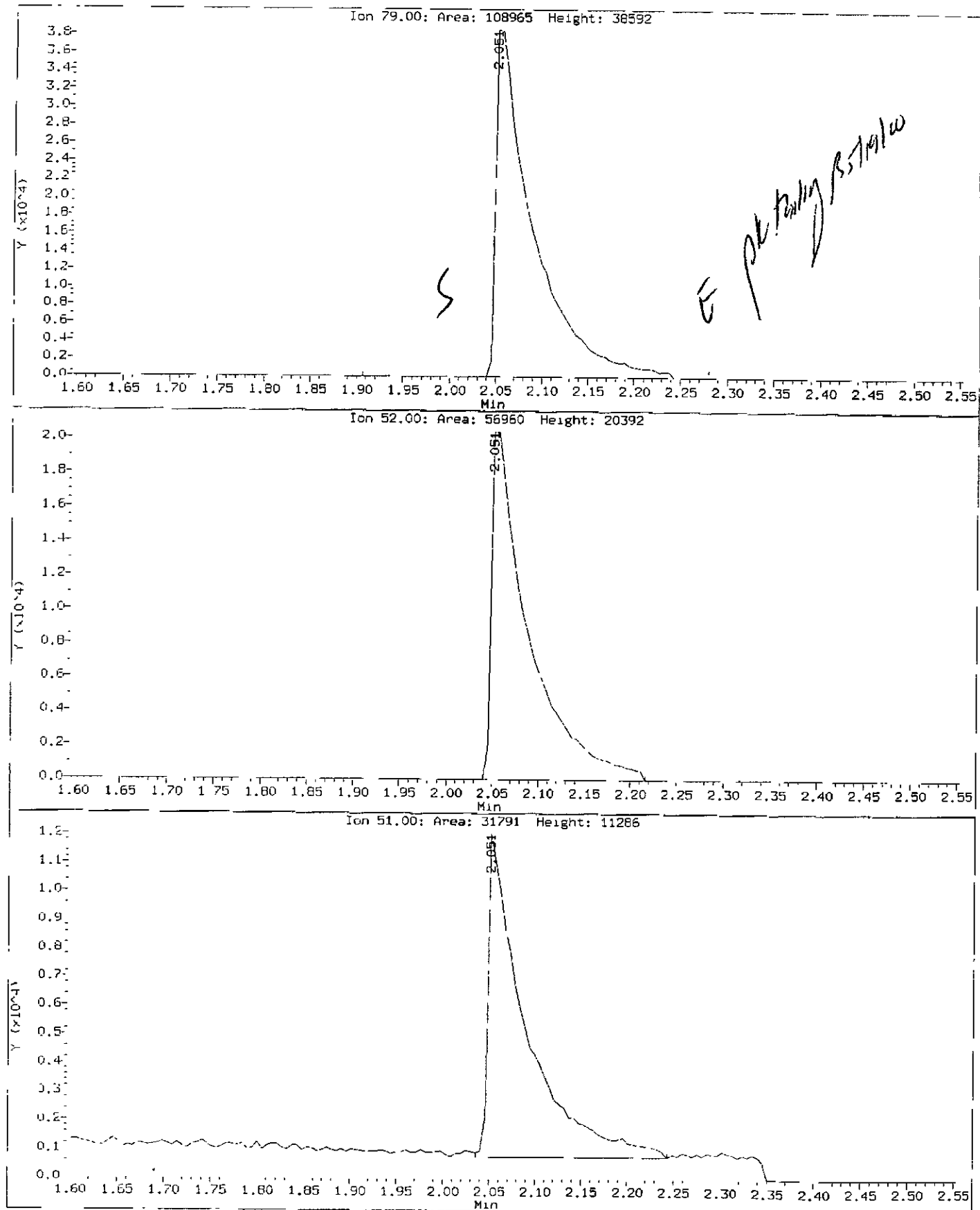
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M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

6571306

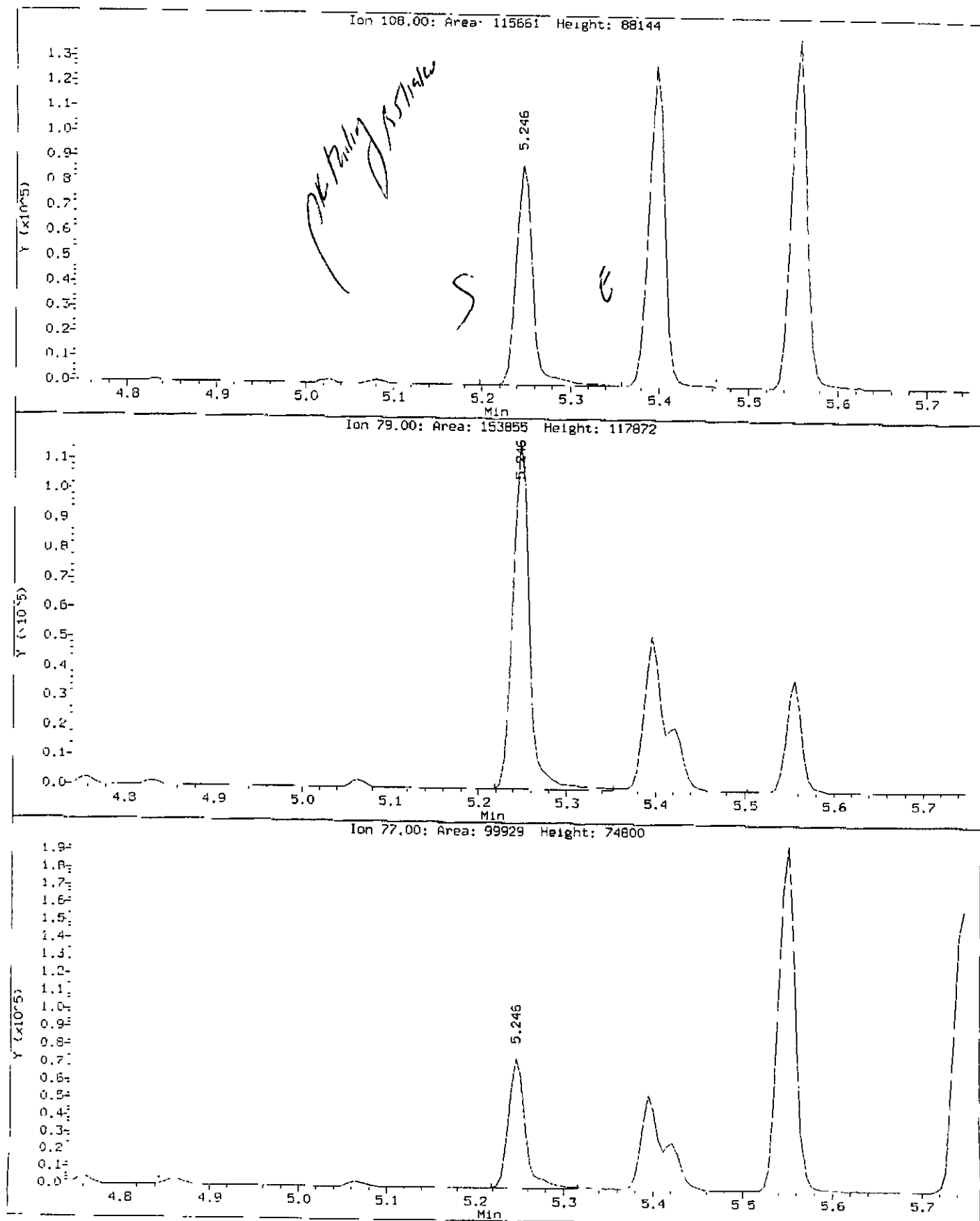
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Instrument: 71.1
Client Sample ID: sstd050

Compound: Pyridine
CAS Number: 110-86-1



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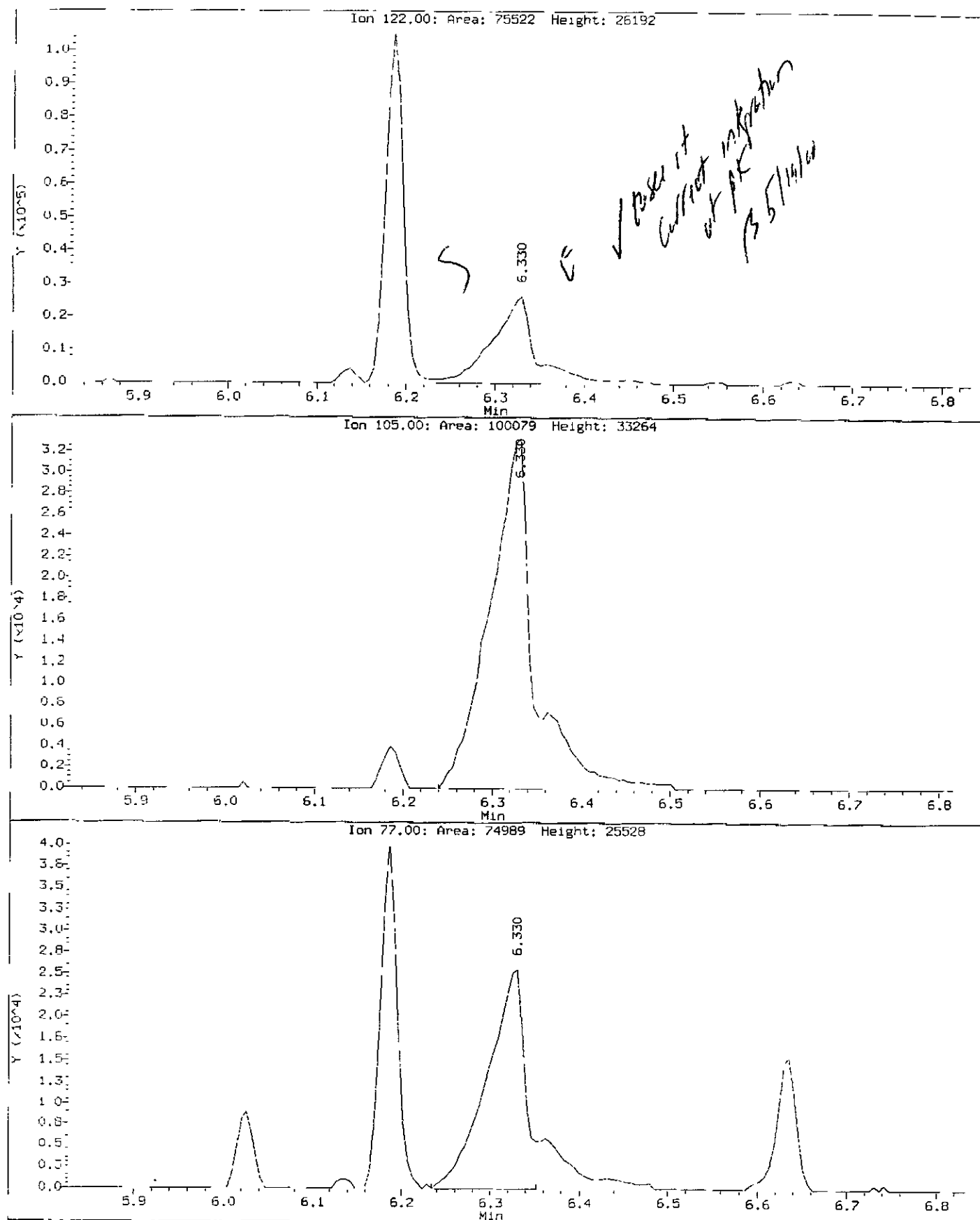
Compound: Benzyl Alcohol
CAS Number: 100-51-6



6571308

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Injection Date: 19-MAY-2000 13:20
Instrument: 71.1
Client Sample ID: sstd050

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

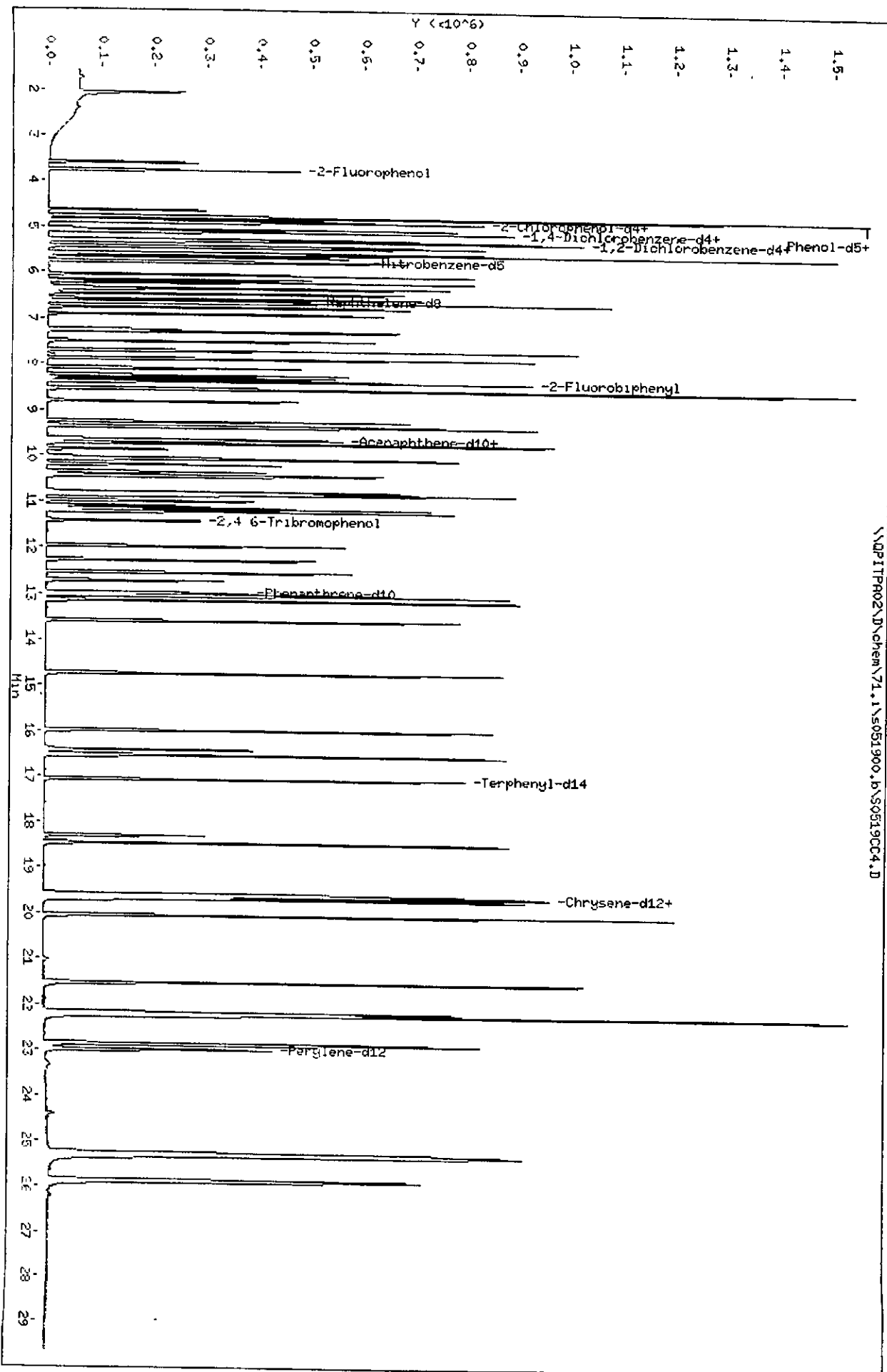


Data File: \\QPI1P002\\Nchem\\71.1\\s051900.b\\S051900C4.D
Date: 19-MAY-2000 14:32
Client ID: SST0080
Sample Info: sstd80(40.0ug/ml) 194-175-6 S270/c/p

Column phase: Hp5-MS

Instrument: 71.1
Operator: 45183
Column diameter: 0.25

\\QPI1P002\\Nchem\\71.1\\s051900.b\\S051900C4.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s051900.b\S0519CC4.D
 Lab Smp Id: sstd80 Client Smp ID: SSTD080
 Inj Date : 19-MAY-2000 14:32
 Operator : 45183 Inst ID: 71.i
 Smp Info : sstd80(40.0ug/ml) 194-175-6 8270/clp
 Misc Info : sstd80,s051900.b,8270clp.m,1-82701.sub,1,3
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s051900.b\8270clp.m
 Meth Date : 22-May-2000 07:54 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 5 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-82701.sub
 Target Version: 4.03
 Processing Host: PITPC050

A. J. M. W.

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
							(ng)	(ng)
=====	=====	=====	=====	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4		152	5.079	5.079 (1.000)		83213	40.0000	
* 2 Naphthalene-d8		136	6.623	6.623 (1.000)		335457	40.0000	
* 3 Acenaphthene d10		164	9.674	9.674 (1.000)		192142	40.0000	
* 4 Phenanthrene-d10		188	12.986	12.986 (1.000)		355838	40.0000	
* 5 Chrysene-d12		240	19.631	19.631 (1.000)		348071	40.0000	
* 6 Perylene-d12		264	22.992	22.992 (1.000)		426270	40.0000	
13 N Nitrosodimethylamine		74	2.051	2.051 (0.404)		85691	80.0000	80.000
16 Pyridine		79	2.056	2.056 (0.405)		160040	80.0000	80.000 (M)
19 Methyl methane-sulfonate		80	3.589	3.589 (0.707)		141969	80.0000	80.000
22 Aniline		93	4.775	4.775 (0.940)		418139	80.0000	80.000
23 Phenol		94	4.775	4.775 (0.940)		341209	80.0000	80.000
24 bis(2-Chloroethyl)ether		93	4.844	4.844 (0.954)		272240	80.0000	80.000
25 2-Chlorophenol		128	4.893	4.893 (0.963)		236318	80.0000	80.000
27 1,3-Dichlorobenzene		146	5.037	5.037 (0.992)		260823	80.0000	80.000
28 1,4-Dichlorobenzene		146	5.096	5.096 (1.003)		264477	80.0000	80.000
29 1,2-Dichlorobenzene		146	5.304	5.304 (1.044)		243921	80.0000	80.000
30 Benzyl Alcohol		108	5.261	5.261 (1.036)		172072	80.0000	80.000
31 2-Methylphenol		108	5.411	5.411 (1.065)		230744	80.0000	80.000
32 2,2'-oxybis(1-Chloropropane)		45	5.437	5.437 (1.070)		344031	80.0000	80.000
33 N-Nitroso-di-n-propylamine		70	5.598	5.598 (1.102)		192276	80.0000	80.000
35 4-Methylphenol		108	5.571	5.571 (1.097)		241650	80.0000	80.000
38 Hexachloroethane		127	5.651	5.651 (1.113)		102708	80.0000	80.000
39 Nitrobenzene		77	5.763	5.763 (0.870)		297844	80.0000	80.000
44 Isophorone		82	6.041	6.041 (0.912)		492451	80.0000	80.000
45 2-Nitrophenol		139	6.153	6.153 (0.929)		131199	80.0000	80.000
46 2,4-Dimethylphenol		107	6.201	6.201 (0.936)		240196	80.0000	80.000

Compounds	QUANT SIG			EXP RI	REL RT	RESPONSE	AMOUNTS	
	MASS	RT					CAL-AMT (ng)	ON-COL (ng)
47 bis(2-Chloroethoxy)methane	93	6.330	6.330 (0.956)			317418	80.0000	80.000
51 2,4-Dichlorophenol	162	6.452	6.452 (0.974)			187968	80.0000	80.000
52 Benzoic Acid	122	6.367	6.367 (0.961)			126174	80.0000	80.000 (M)
53 1,2,4-Trichlorobenzene	180	6.570	6.570 (0.992)			197612	80.0000	80.000
54 Naphthalene	128	6.650	6.650 (1.004)			728025	80.0000	80.000
55 4-Chloroaniline	127	6.757	6.757 (1.020)			294298	80.0000	80.000
59 Hexachlorobutadiene	225	6.907	6.907 (1.043)			101668	80.0000	80.000
62 4-Chloro-3-Methylphenol	107	7.494	7.494 (1.131)			216692	80.0000	80.000
65 2-Methylnaphthalene	147	7.697	7.697 (1.162)			480114	80.0000	80.000
66 1-Methylnaphthalene	142	7.879	7.879 (1.190)			444206	80.0000	80.000
67 Hexachlorocyclopentadiene	237	8.087	8.087 (0.836)			121425	80.0000	80.000
69 2,4,6-Trichlorophenol	196	8.237	8.237 (0.851)			127047	80.0000	80.000
70 2,4,5-Trichlorophenol	196	8.306	8.306 (0.859)			136886	80.0000	80.000
73 2-Chloronaphthalene	162	8.547	8.547 (0.883)			419213	80.0000	80.000
77 2-Nitroaniline	65	8.814	8.814 (0.911)			153125	80.0000	80.000
81 Dimethylphthalate	163	9.257	9.257 (0.957)			507295	80.0000	80.000
82 2,6-Dinitrotoluene	165	9.380	9.380 (0.970)			114569	80.0000	80.000
83 Acenaphthylene	152	9.358	9.358 (0.967)			715193	80.0000	80.000
85 3-Nitroaniline	138	9.652	9.652 (0.998)			143568	80.0000	80.000
86 Acenaphthene	153	9.738	9.738 (1.007)			445208	80.0000	80.000
97 2,4-Dinitrophenol	184	9.866	9.866 (1.020)			60669	80.0000	80.000
89 1-Nitrophenol	109	10.042	10.042 (1.038)			74944	80.0000	80.000
90 Dibenzofuran	168	10.074	10.074 (1.041)			626236	80.0000	80.000
91 2,4-Dinitrotoluene	165	10.203	10.203 (1.055)			159148	80.0000	80.000
95 2,3,5,6-Tetrachlorophenol	232	10.357	10.357 (1.071)			104207	80.0000	80.000
92 2,3,4,6-Tetrachlorophenol	232	10.459	10.459 (1.081)			104594	80.0000	80.000
96 2-Naphthylamine	143	10.427	10.427 (1.078)			448558	80.0000	80.000
97 Diethylphthalate	149	10.790	10.790 (1.115)			515007	80.0000	80.000
98 Fluorene	166	10.828	10.828 (1.119)			511605	80.0000	80.000
99 4-Chlorophenyl phenylether	204	10.865	10.865 (1.123)			229949	80.0000	80.000
100 4-Nitroaniline	138	10.993	10.993 (1.136)			150312	80.0000	80.000
102 4,6-Dinitro-2-methylphenol	198	11.095	11.095 (0.854)			87275	80.0000	80.000
103 N-Nitrosodiphenylamine (1)	169	11.159	11.159 (0.859)			376808	80.0000	80.000
104 1,2-Diphenylhydrazine	77	11.218	11.218 (0.864)			643013	80.0000	80.000
112 4-Bromophenyl phenylether	248	11.976	11.976 (0.922)			127898	80.0000	80.000
113 Hexachlorobenzene	284	12.281	12.281 (0.946)			137387	80.0000	80.000
117 Pentachlorophenol	266	12.724	12.724 (0.980)			81986	80.0000	80.000
122 Phenanthrene	178	13.045	13.045 (1.005)			743676	80.0000	80.000
123 Anthracene	178	13.151	13.151 (1.013)			770576	80.0000	80.000
126 Carbazole	167	13.589	13.589 (1.046)			743910	80.0000	80.000
140 Di-n Butyl-phthalate	149	14.727	14.727 (1.134)			920830	80.0000	80.000
135 Fluoranthene	202	15.983	15.983 (1.231)			795806	80.0000	80.000
136 Berzidine	184	16.410	16.410 (0.836)			373875	80.0000	80.000
137 Pyrene	202	16.528	16.528 (0.842)			836365	80.0000	80.000
144 Butyl-benzylphthalate	149	18.472	18.472 (0.941)			451147	80.0000	80.000
149 3,3'-Dichlorobenzidine	252	19.642	19.642 (1.001)			294462	80.0000	80.000
150 Benzo(a)Anthracene	228	19.589	19.589 (0.998)			790186	80.0000	80.000

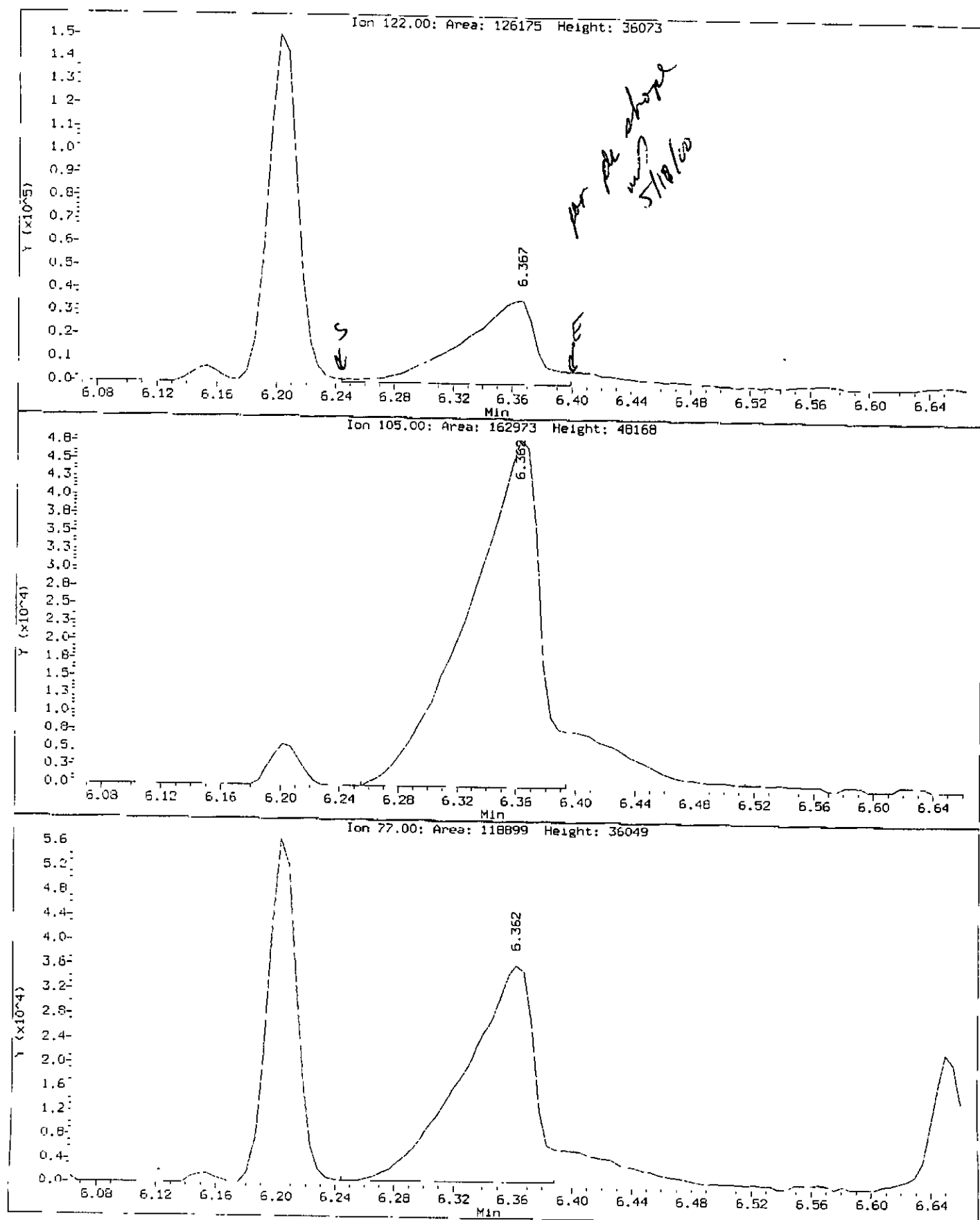
Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	RSL RT		CAL-AMT (ng)	ON-COL (ng)
====	====	==	=====	=====	==	====	=====
151 Chrysene	228	19.696	19.696 (1.003)		761847	80.0000	80.000
153 bis(2-ethylhexyl)Phthalate	149	20.048	20.048 (1.021)		632878	80.0000	80.000
155 Di-n-octylphthalate	149	21.517	21.517 (0.935)		1139934	80.0000	80.000
157 Benzo(b)fluoranthene	252	22.180	22.180 (0.965)		884166	80.0000	80.000
158 Benzo(k)fluoranthene	252	22.244	22.244 (0.967)		975293	80.0000	80.000
159 7,12-dimethylbenz[a]anthracene	256	22.238	22.238 (0.967)		396831	80.0000	80.000
167 Benzo(a)pyrene	252	22.874	22.874 (0.995)		889772	80.0000	80.000
169 Indeno(1,2,3-cd)pyrene	276	25.294	25.294 (1.100)		1229271	80.0000	80.000
170 Dibenz[a,h]anthracene	278	25.337	25.337 (1.102)		1047029	80.0000	80.000
171 Benzo(a,a1)perylene	276	25.892	25.892 (1.126)		1098690	80.0000	80.000
\$ 172 Nitrobenzene-d5	82	5.742	5.742 (0.967)		275632	80.0000	80.000
\$ 173 2-Fluorobiphenyl	172	8.376	8.376 (0.866)		476261	80.0000	80.000
\$ 174 Terphenyl-d14	244	17.057	17.057 (0.869)		627118	80.0000	80.000
\$ 175 Phenol-d5	93	4.759	4.759 (0.937)		300485	80.0000	80.000
\$ 176 2-Fluorophenol	112	3.749	3.749 (0.738)		223421	80.0000	80.000
\$ 177 2,4,6-Tribromophenol	330	11.421	11.421 (0.879)		12637	80.0000	80.000
\$ 178 2-Chlorophenol-d4	132	4.877	4.877 (0.960)		209317	80.0000	80.000
\$ 179 1,2-Dichlorobenzene-d4	152	5.288	5.288 (1.041)		149514	80.0000	80.000

QC Flag Legend

M - Compound response manually integrated.

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Instrument: 71.1
Client Sample ID:

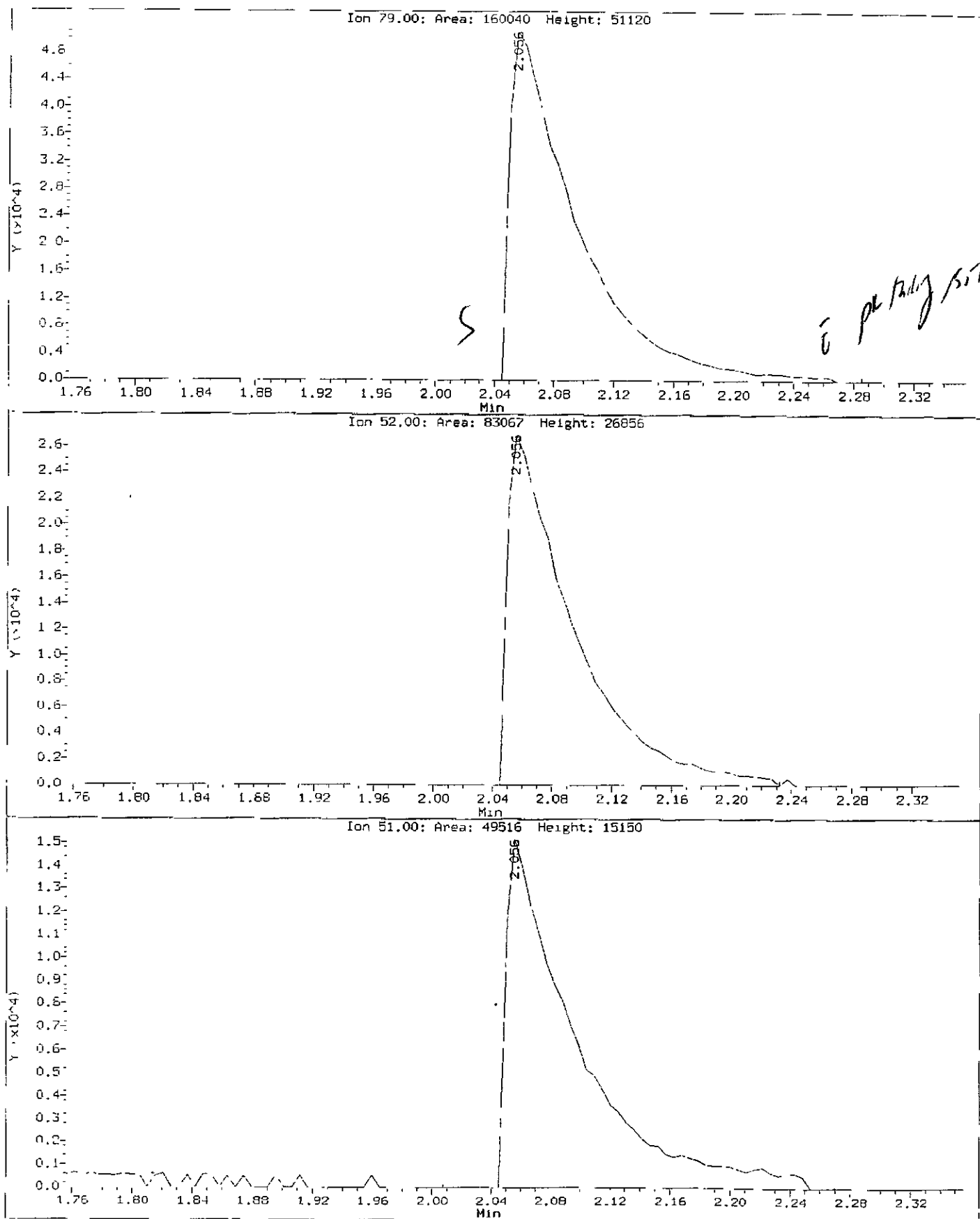
Compound: Benzoic Acid
CAS Number: 65-85-0



6571314

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Injection Date: 19-MAY-2000 14:32
Instrument: 71.1
Client Sample ID: 55TD080

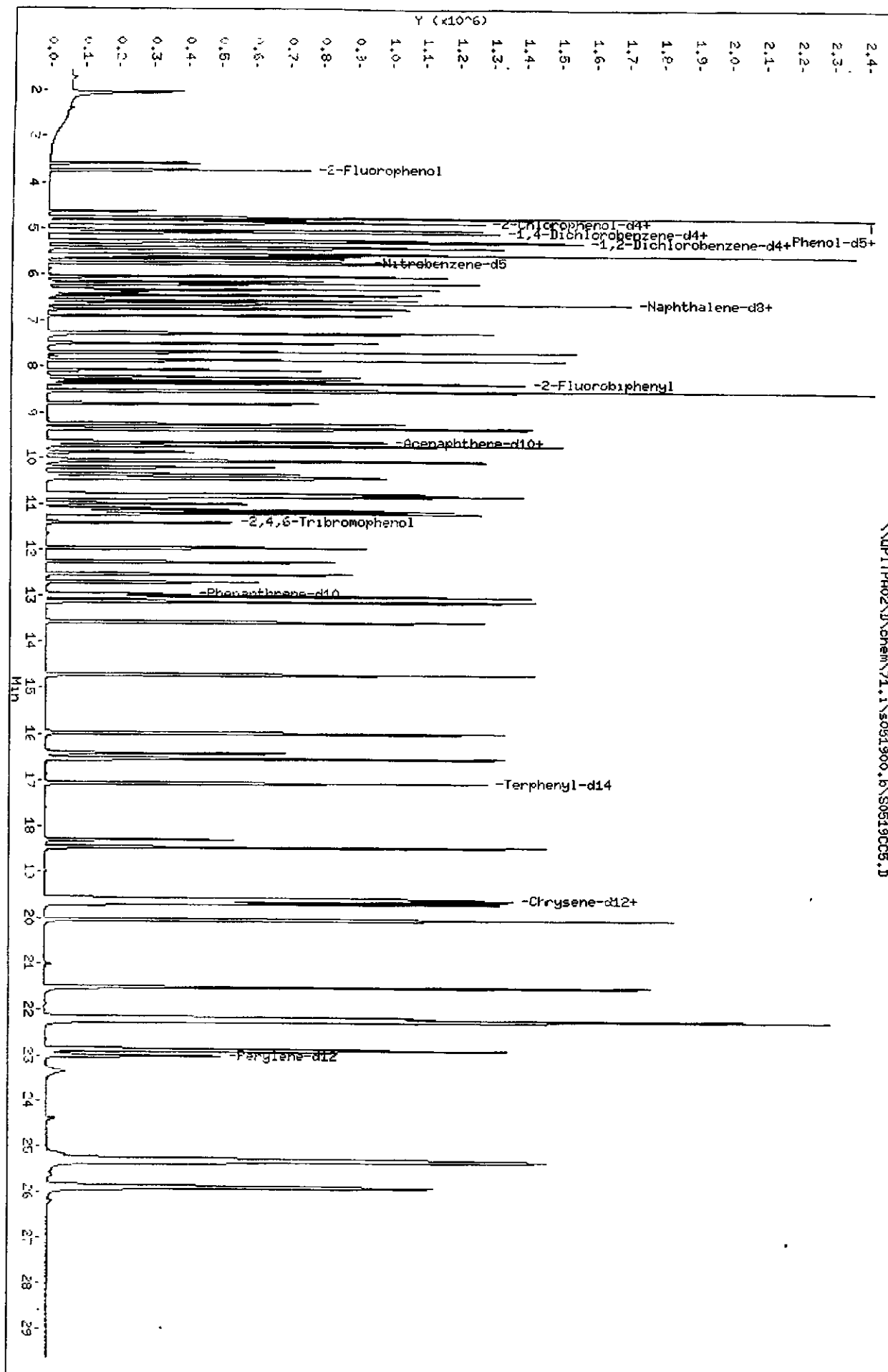
Compound: Pyridine
CAS Number: 110-86-1



Data File: \\NPITPA02\J\chem\71.1\5051900.b\50519005.D
Date: 19-MAY-2000 15:08
Client ID: SSTDI20
Sample Info: std120(60.0ug/ml) 194-175-13 8270/cip
Column phase: Hp5-MS

Instrument: 71.1
Operator: 46183
Column diameter: 0.25

\\NPITPA02\J\chem\71.1\5051900.b\50519005.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270
 Data file : \\QPITPA02\D\chem\71.i\s051900.b\S0519CC5.D
 Lab Smp Id: sstd120 Client Smp ID: SSTD120
 Inj Date : 19-MAY-2000 15:08
 Operator : 45183 Inst ID: 71.i
 Smp Info : sstd120(60.0ug/ml) 194-175-13 8270/clp
 Misc Info : sstd120,s051900.b,8270clp.m,1-82701.sub,1,4
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s051900.b\8270clp.m
 Meth Date : 19-May-2000 16:29 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 6 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.03
 Processing Host: PITPC050
 Compound Sublist: 1-82701.sub

6/19/00
5/19/00

Compounds	QUANT SIG			AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL AMT (ng)
ON-COL (ng)						
*****	*****	*****	*****	*****	*****	*****
* 1 1,4-Dichlorobenzene-d4	152	5.071	5.071	(1.000)	91018	40.0000
* 2 Naphthalene-d8	136	6.620	6.620	(1.000)	368841	40.0000
* 3 Acenaphthene-d10	164	9.665	9.665	(1.000)	212670	40.0000
* 4 Phenanthrene-d10	188	12.982	12.982	(1.000)	404163	40.0000
* 5 Chrysene-d12	240	19.628	19.628	(1.000)	376940	40.0000
* 6 Perylene-d12	264	22.988	22.988	(1.000)	495736	40.0000
13 N-Nitrosodimethylamine	74	2.047	2.047	(0.404)	140465	120.000
10 Pyridine	79	2.047	2.047	(0.404)	265319	120.000
19 Methyl methanesulfonate	80	3.586	3.586	(0.707)	232437	120.000
22 Aniline	93	4.772	4.772	(0.941)	654969	120.000
23 Phenol	94	4.772	4.772	(0.941)	523648	120.000
24 bis(2-Chloroethyl)ether	93	4.846	4.846	(0.956)	434951	120.000
25 2-Chlorophenol	128	4.889	4.889	(0.964)	371416	120.000
27 1,3-Dichlorobenzene	146	5.033	5.033	(0.993)	406256	120.000
28 1,4-Dichlorobenzene	146	5.092	5.092	(1.004)	411941	120.000
29 1,2-Dichlorobenzene	146	5.301	5.301	(1.045)	375651	120.000
30 Benzyl Alcohol	108	5.258	5.258	(1.037)	279444	120.000
31 2-Methylphenol	108	5.413	5.413	(1.067)	361956	120.000
32 2,2'-oxybis(1-Chloropropane)	45	5.429	5.429	(1.071)	517103	120.000
33 N-Nitroso-di-n-propylamine	70	5.600	5.600	(1.104)	312034	120.000
35 4-Methylphenol	108	5.573	5.573	(1.099)	376899	120.000
38 Hexachloroethane	117	5.642	5.642	(1.113)	162638	120.000
39 Nitrobenzene	77	5.760	5.760	(0.870)	476429	120.000
44 Isophorone	82	6.038	6.038	(0.912)	795086	120.000
45 2-Nitrophenol	139	6.150	6.150	(0.929)	213687	120.000
46 2,4-Dimethylphenol	107	6.198	6.198	(0.936)	366804	120.000

Data File: \\QPITPA02\D\chem\71.i\s051900.b\S0519CC5.D
Report Date: 19-May-2000 16:29

Page 2

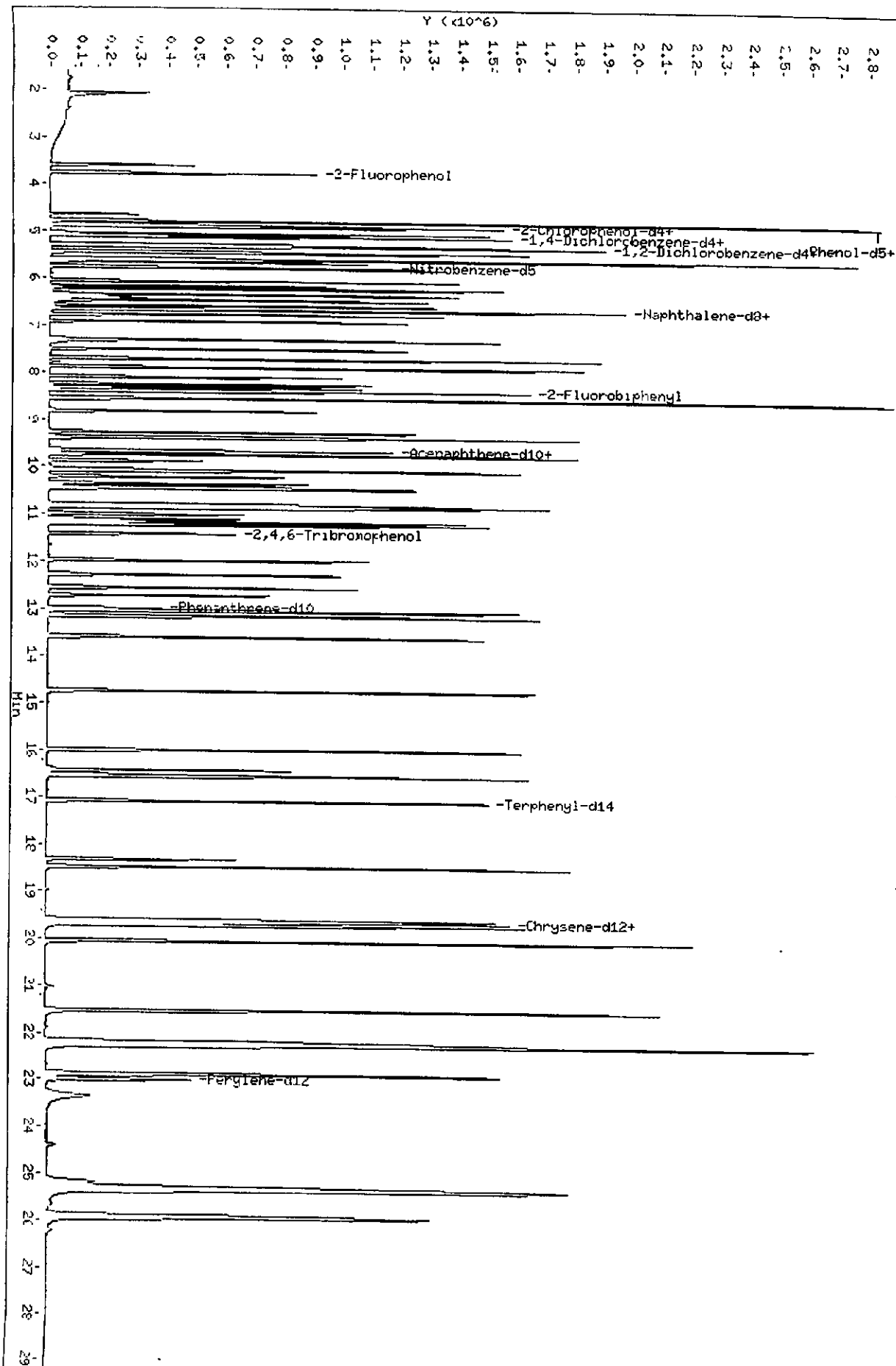
Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
47 bis(2-Chlorooctyloxy)methane	93	6.326	6.326 (0.956)		504646	120.000	117.20
51 2,4-Dichlorophenol	162	6.449	6.449 (0.974)		299590	120.000	118.07
52 Benzoic Acid	122	6.390	6.390 (0.965)		229616	120.000	147.96
53 1,2,4-Trichlorobenzene	180	6.561	6.561 (0.991)		310565	120.000	115.11
54 Naphthalene	128	6.647	6.647 (1.004)		1125211	120.000	113.11
55 4-Chloroaniline	127	6.754	6.754 (1.020)		474328	120.000	118.99
59 Hexachlorobutadiene	225	6.903	6.903 (1.043)		156918	120.000	113.78
62 4-Chloro-3-Methylphenol	107	7.491	7.491 (1.132)		356498	120.000	121.61
65 2-Methylnaphthalene	142	7.688	7.688 (1.161)		752903	120.000	114.75
66 1-Methylnaphthalene	142	7.870	7.870 (1.189)		708225	120.000	115.23
67 Hexachlorocyclopentadiene	237	8.078	8.078 (0.836)		198479	120.000	123.60
69 2,4,6-Trichlorophenol	196	8.228	8.228 (0.851)		208719	120.000	120.51
70 2,4,5-Trichlorophenol	196	8.303	8.303 (0.859)		225056	120.000	121.77
73 2-Chloronaphthalene	162	8.543	8.543 (0.884)		654994	120.000	113.22
77 2-Nitroaniline	65	8.810	8.810 (0.912)		255998	120.000	124.88
80 Dimethylphthalate	163	9.254	9.254 (0.957)		821238	120.000	118.47
82 2,6-Dinitrotoluene	165	9.377	9.377 (0.970)		189150	120.000	123.39
83 Acenaphthylene	152	9.350	9.350 (0.967)		1138427	120.000	116.49
85 3-Nitroaniline	138	9.649	9.649 (0.998)		237519	120.000	123.76
86 Acenaphthene	153	9.735	9.735 (1.007)		710547	120.000	115.86
87 2,4-Dinitrophenol	184	9.863	9.863 (1.020)		111904	120.000	148.15
89 4-Nitrophenol	109	10.044	10.044 (1.039)		128908	120.000	130.59
90 Dibenzofuran	168	10.071	10.071 (1.047)		991648	120.000	115.08
91 2,4-Dinitrotoluene	165	10.205	10.205 (1.056)		268722	120.000	124.91
95 2,3,5,6-Tetrachlorophenol	232	10.354	10.354 (1.071)		175722	120.000	124.60
92 2,3,4,6-Tetrachlorophenol	232	10.456	10.456 (1.082)		172017	120.000	120.48
96 2-Naphthylamine	143	10.424	10.424 (1.078)		703413	120.000	112.96
97 Diethylphthalate	149	10.787	10.787 (1.116)		836129	120.000	118.38
98 Fluorene	166	10.824	10.824 (1.120)		813051	120.000	115.21
99 4-Chlorophenyl-phenylether	204	10.856	10.856 (1.123)		364585	120.000	115.64
100 4-Nitroaniline	138	11.001	11.001 (1.138)		253630	120.000	124.82
102 4,6-Dinitro-2-methylphenol	198	11.102	11.102 (0.855)		155763	120.000	135.05
103 N-Nitrosodiphenylamine (1)	169	11.155	11.155 (0.859)		620978	120.000	115.96
104 1,2-Diphenylhydrazine	77	11.214	11.214 (0.864)		1049055	120.000	116.85
112 4-Bromophenyl-phenylether	248	11.967	11.967 (0.922)		208810	120.000	115.71
113 Hexachlorobenzene	284	12.272	12.272 (0.945)		273372	120.000	115.46
117 Pentachlorophenol	266	12.721	12.721 (0.980)		147159	120.000	137.39
120 Phorane	178	13.036	13.036 (1.004)		1193957	120.000	113.37
123 Anthracene	178	13.148	13.148 (1.013)		1231447	120.000	113.84
126 Carbazole	167	13.586	13.586 (1.046)		1218038	120.000	116.54
130 Di-n-Butylphthalate	149	14.724	14.724 (1.134)		1507329	120.000	118.38
135 Fluoranthene	202	15.979	15.979 (1.231)		1295419	120.000	115.88
136 Benzidine	184	16.401	16.401 (0.836)		626698	120.000	130.40
137 Pyrene	202	16.524	16.524 (0.842)		1338555	120.000	119.54
144 Butylbenzylphthalate	149	18.469	18.469 (0.941)		744600	120.000	125.31
149 3,3'-Dichlorobenzidine	252	19.639	19.639 (1.001)		497656	120.000	127.42
150 Benzo(a)Anthracene	228	19.585	19.585 (0.998)		1278544	120.000	120.64

Compounds	QUANT SIG	AMOUNTS						
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	=====	=====	=====	=====	=====	=====	=====	=====
151 Chrysene	228	19.698	19.698	(1.004)	1215822	120.000	118.63	
153 bis(2-ethylhexyl)Phthalate	149	20.039	20.039	(1.021)	1039131	120.000	124.45	
155 Di-n-octylphthalate	149	21.514	21.514	(0.936)	1898233	120.000	118.04	
157 Benzo(a)fluoranthene	252	22.187	22.187	(0.965)	1539369	120.000	118.38	
158 Benzo(k)fluoranthene	252	22.251	22.251	(0.968)	1379772	120.000	106.08	
159 7,12-dimethylbenz(a)anthracene	256	22.246	22.246	(0.968)	647032	120.000	112.63	
167 Benzo(a)pyrene	252	22.881	22.881	(0.995)	1485055	120.000	115.72	
169 Indeno(1,2,3-cd)pyrene	276	25.296	25.296	(1.100)	2051034	120.000	116.58	
170 Dibenz(a,h)anthracene	278	25.344	25.344	(1.102)	1761245	120.000	117.16	
171 Benzo(g,h,i)perylene	276	25.910	25.910	(1.127)	1846045	120.000	118.10	
\$ 172 Nitrobenzene-d5	82	5.739	5.739	(0.867)	445718	120.000	119.36	
\$ 173 2-Fluorobiphenyl	172	8.372	8.372	(0.866)	751389	120.000	115.42	
\$ 174 Terphenyl-d14	244	17.053	17.053	(0.869)	1015026	120.000	120.71	
\$ 175 Phenol-d5	99	4.761	4.761	(0.939)	476073	120.000	116.01	
\$ 176 2-Fluorophenol	112	3.746	3.746	(0.739)	362026	120.000	118.71	
\$ 177 2,4,6-Tribromophenol	330	11.417	11.417	(0.879)	122400	120.000	122.54	
\$ 178 2-Chlorophenol-d4	132	4.873	4.873	(0.961)	334707	120.000	116.74	
\$ 179 1,2-Dichlorobenzene-d4	152	5.285	5.285	(1.042)	229760	120.000	113.37	

Data File: \\QPI\PA02\J\chem\71.1\5051900.b\5051900C6.D
Date: 19-MAY-2000 15:44
Client ID: SSTJ160
Sample Info: sstd160(80.0ug/ml) 194-175-14 8270/c1p
Column phase: Hp5-MS

Instrument: 71.1
Operator: 45183
Column diameter: 0.25

\\QPI\PA02\J\chem\71.1\5051900.b\5051900C6.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s051900.b\S0519CC6.D
 Lab Smp Id: sstd160 Client Smp ID: SSTD160
 Inj Date : 19-MAY-2000 15:44
 Operator : 45183 Inst ID: 71.i
 Smp Info : sstd160(80.0ug/ml) 194-175-14 8270/clp
 Misc Info : sstd160,s051900.b,8270clp.m,1-82701.sub,1,5
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s051900.b\8270clp.m
 Meth Date : 22-May-2000 07:54 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 7 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-82701.sub
 Target Version: 4.03
 Processing Host: PITPC050

Compounds	QUANT STG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ng)	ON-COL (ng)
====	=====	=====	=====	=====	=====	=====	=====
* 1 1,4-Dichlorobenzene-d4	152	5.085	5.085	(1.000)	84332	40.0000	
* 2 Naphthalene-d8	136	6.629	6.629	(1.000)	342337	40.0000	
* 3 Acenaphthene-d10	164	9.679	9.679	(1.000)	196197	40.0000	
* 4 Phenanthrene-d10	188	12.991	12.991	(1.000)	372498	40.0000	
* 5 Chrysene-d12	240	19.637	19.637	(1.000)	342183	40.0000	
* 6 Perylene d12	264	23.003	23.003	(1.000)	464496	40.0000	
13 N-Nitrosodimethylamine	74	2.061	2.061	(0.405)	136800	160.000	140.99
10 Pyridine	79	2.056	2.056	(0.404)	258244	160.000	141.84 (M)
19 Methyl nonanesulfonate	80	3.595	3.595	(0.707)	286276	160.000	159.57
22 Aniline	93	4.781	4.781	(0.940)	791706	160.000	154.55
23 Phenol	94	4.781	4.781	(0.940)	637759	160.000	153.52
24 bis(2-Chloroethyl) ether	93	4.855	4.855	(0.955)	535994	160.000	157.67
25 2-Chlorophenol	128	4.898	4.898	(0.963)	454329	160.000	155.77
27 1,3-Dichlorobenzene	146	5.042	5.042	(0.992)	496776	160.000	155.02
26 1,4-Dichlorobenzene	146	5.101	5.101	(1.003)	501146	160.000	154.61
29 1,2-Dichlorobenzene	146	5.309	5.309	(1.044)	453120	160.000	153.03
30 Benzyl Alcohol	108	5.272	5.272	(1.037)	343171	160.000	158.73
31 2-Methylphenol	108	5.422	5.422	(1.066)	444907	160.000	156.00
32 2,2'-oxybis(1-Chloropropane)	45	5.443	5.443	(1.070)	652440	160.000	154.68
33 N-Nitroso-di-n-propylamine	70	5.609	5.609	(1.103)	384578	160.000	158.94
35 4-Methylphenol	108	5.582	5.582	(1.098)	457296	160.000	154.51
38 Hexachloroethane	117	5.651	5.651	(1.111)	200617	160.000	157.04
39 Nitrobenzene	77	5.769	5.769	(0.870)	590453	160.000	157.67
44 Toluene	82	6.052	6.052	(0.913)	986481	160.000	158.50
45 2-Nitrophenol	139	6.159	6.159	(0.929)	266358	160.000	159.57
46 2,4-Dimethylphenol	107	6.212	6.212	(0.937)	478492	160.000	158.06

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON COL (ng)
47 bis(2-(chloroethoxy)methane	93	6.335	6.335	(0.956)	623042	160.000	156.88
51 2,4-Dichlorophenol	162	6.463	6.463	(0.975)	369166	160.000	156.92
52 Benzoic Acid	122	6.415	6.415	(0.968)	292754	160.000	170.24 (A)
53 1,2,4-Trichlorobenzene	180	6.575	6.575	(0.992)	360572	160.000	155.35
54 Naphthalene	128	6.656	6.656	(1.004)	1373563	160.000	153.71
55 4-Chloroaniline	127	6.763	6.763	(1.020)	578694	160.000	157.02
59 Hexachlorocyclopentadiene	225	6.912	6.912	(1.043)	192320	160.000	153.92
62 4-Chloro-3-Methylphenol	107	7.505	7.505	(1.132)	442396	160.000	160.02 (A)
65 2-Methylnaphthalene	142	7.703	7.703	(1.162)	918080	160.000	154.79
66 1-Methylnaphthalene	142	7.884	7.884	(1.189)	860697	160.000	155.84
67 Hexachlorocyclopentadiene	237	8.087	8.087	(0.836)	245794	160.000	159.29
69 2,4,6-Trichlorophenol	196	8.242	8.242	(0.852)	256192	160.000	158.99
70 2,4,5-Trichlorophenol	196	8.317	8.317	(0.859)	272800	160.000	158.04
71 2-Chloronaphthalene	162	8.557	8.557	(0.884)	790346	160.000	153.61
72 2-Nitroaniline	65	8.825	8.825	(0.912)	317545	160.000	161.23 (A)
80 Dimethylphthalate	163	9.263	9.263	(0.957)	1006062	160.000	157.65
82 2,6-Dinitrotoluene	165	9.391	9.391	(0.970)	234010	160.000	160.01 (A)
83 Acenaphthylene	152	9.364	9.364	(0.967)	1379297	160.000	155.42
85 3-Nitroaniline	138	9.663	9.663	(0.998)	293952	160.000	160.21 (A)
86 Acenaphthene	153	9.749	9.749	(1.007)	865826	160.000	156.09
87 2,4-Dinitrophenol	184	9.882	9.882	(1.021)	146949	160.000	173.62 (A)
89 4-Nitrophenol	109	10.064	10.064	(1.040)	163553	160.000	165.31 (A)
90 Polychlorofuran	168	10.085	10.085	(1.042)	1197125	160.000	154.72
91 2,4-Dinitrotoluene	165	10.219	10.219	(1.056)	329538	160.000	161.11 (A)
95 2,3,5,6-Tetrachlorophenol	232	10.363	10.363	(1.071)	213723	160.000	160.34 (A)
92 2,3,4,6-Tetrachlorophenol	237	10.470	10.470	(1.082)	204574	160.000	156.54
96 2-Naphthylamine	143	10.443	10.443	(1.079)	838532	160.000	152.93
97 Diethylphthalate	149	10.801	10.801	(1.116)	1025661	160.000	157.99
98 Fluorene	166	10.839	10.839	(1.120)	978880	160.000	154.79
99 4-Chlorophenyl-phenylether	204	10.871	10.871	(1.123)	439916	160.000	154.78
100 4-Nitroaniline	148	11.020	11.020	(1.139)	313278	160.000	161.63 (A)
102 4,6-Dinitro-2-methylphenol	198	11.116	11.116	(0.856)	196078	160.000	165.64 (A)
103 N-Nitrosodiphenylamine (1)	169	11.175	11.175	(0.860)	758125	160.000	156.82
104 1,2-Diphenylhydrazine	77	11.228	11.228	(0.864)	1294965	160.000	156.89
112 4-Bromophenyl-pacnyl ether	248	11.976	11.976	(0.922)	254204	160.000	155.84
113 Hexachlorobenzene	284	12.286	12.286	(0.946)	272560	160.000	155.69
117 Pentachlorophenol	266	12.730	12.730	(0.980)	183247	160.000	165.23 (A)
122 Phthalene	178	13.050	13.050	(1.005)	1453970	160.000	154.52
123 Anthracene	178	13.162	13.162	(1.013)	1496932	160.000	154.01
126 Carbazole	167	13.600	13.600	(1.047)	1483447	160.000	156.10
130 Di-n-Butylphthalate	149	14.733	14.733	(1.134)	1832482	160.000	155.94
135 Fluoranthene	202	15.994	15.994	(1.231)	1565039	160.000	154.99
136 Benzydine	184	16.416	16.416	(0.836)	764670	160.000	163.15 (A)
147 Pyrene	202	16.539	16.539	(0.842)	1620466	160.000	158.82
144 Butylbenzylphthalate	149	18.478	18.478	(0.941)	913162	160.000	162.32 (A)
149 3,3'-Dichlorobenzidine	252	19.653	19.653	(1.001)	606162	160.000	163.67 (A)
150 Benzo(a)Anthracene	228	19.605	19.605	(0.998)	1567751	160.000	160.72 (A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL AMT (ng)	ON-COL (ng)
151 Chrysene	228	19.712	19.712	(1.004)	1478824	160.000	158.97
153 bis(2-ethylhexyl) Phthalate	149	20.048	20.048	(1.021)	1275518	160.000	161.98(A)
155 Di-n-octylphthalate	149	21.528	21.528	(0.936)	2328181	160.000	154.91
157 Benzo(b)fluoranthene	252	22.207	22.207	(0.965)	2758443	160.000	165.28(A)
158 Benzo(k)fluoranthene	252	22.276	22.276	(0.968)	1779718	160.000	145.83(M)
159 7,12-dimethylbenz(a)anthracene	256	22.265	22.265	(0.968)	789180	160.000	152.68
167 Benzo(a)pyrene	252	22.901	22.901	(0.996)	1840120	160.000	155.81
169 Indeno(1,2,3-cd)pyrene	276	25.316	25.316	(1.101)	2590118	160.000	157.30
170 Dibenzo(a,h)anthracene	278	25.374	25.374	(1.103)	2199257	160.000	157.05
171 Benzo(g,h,i)perylene	276	25.935	25.935	(1.127)	2325283	160.000	157.66
\$ 172 Nitrobenzene-d5	82	5.747	5.747	(0.861)	551411	160.000	158.11
\$ 173 2-Fluorotriphenyl	172	8.381	8.381	(0.866)	917.10	160.000	155.33
\$ 174 Terphenyl-d14	244	17.067	17.067	(0.869)	1236326	160.000	160.21(A)
\$ 175 Phenol-d5	99	4.770	4.770	(0.938)	576070	160.000	155.55
\$ 176 2-Fluorophenol	112	3.755	3.755	(0.738)	443659	160.000	158.36
\$ 177 2,4,6-Tribromophenol	330	11.426	11.426	(0.880)	150658	160.000	159.25
\$ 178 2-Chlorophenol-d4	132	4.882	4.882	(0.960)	408261	160.000	156.92
\$ 179 1,2-Dichlorobenzene-d4	152	5.293	5.293	(1.041)	279585	160.000	153.50

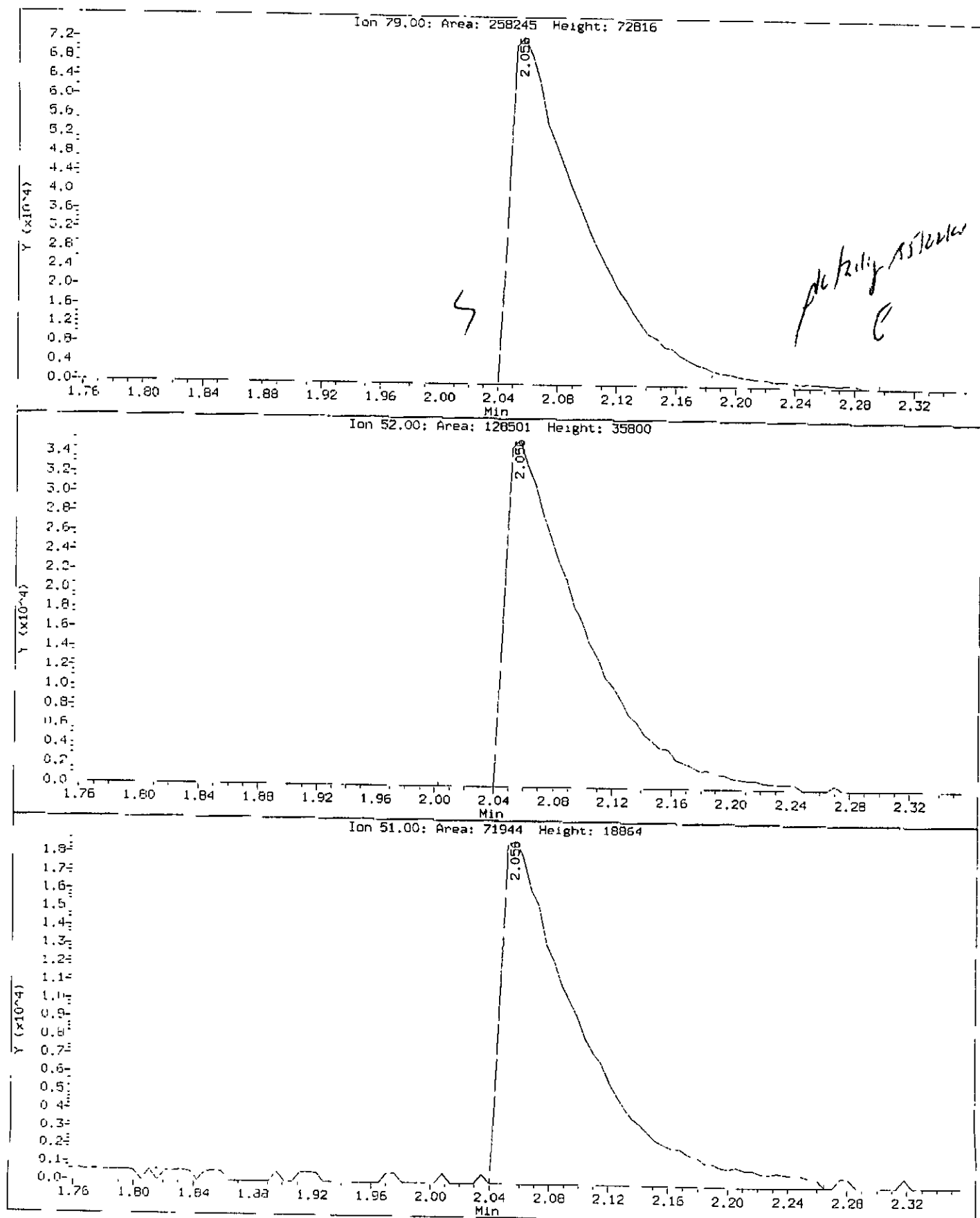
QC Flag Legend

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

M - Compound response manually integrated.

Data File: \\QPIIPA02\chem\71.1\5051900.b\50519CC6.D
Injection Date: 19-MAY-2000 15:44
Instrument: 71.1
Client Sample ID: S5TD160

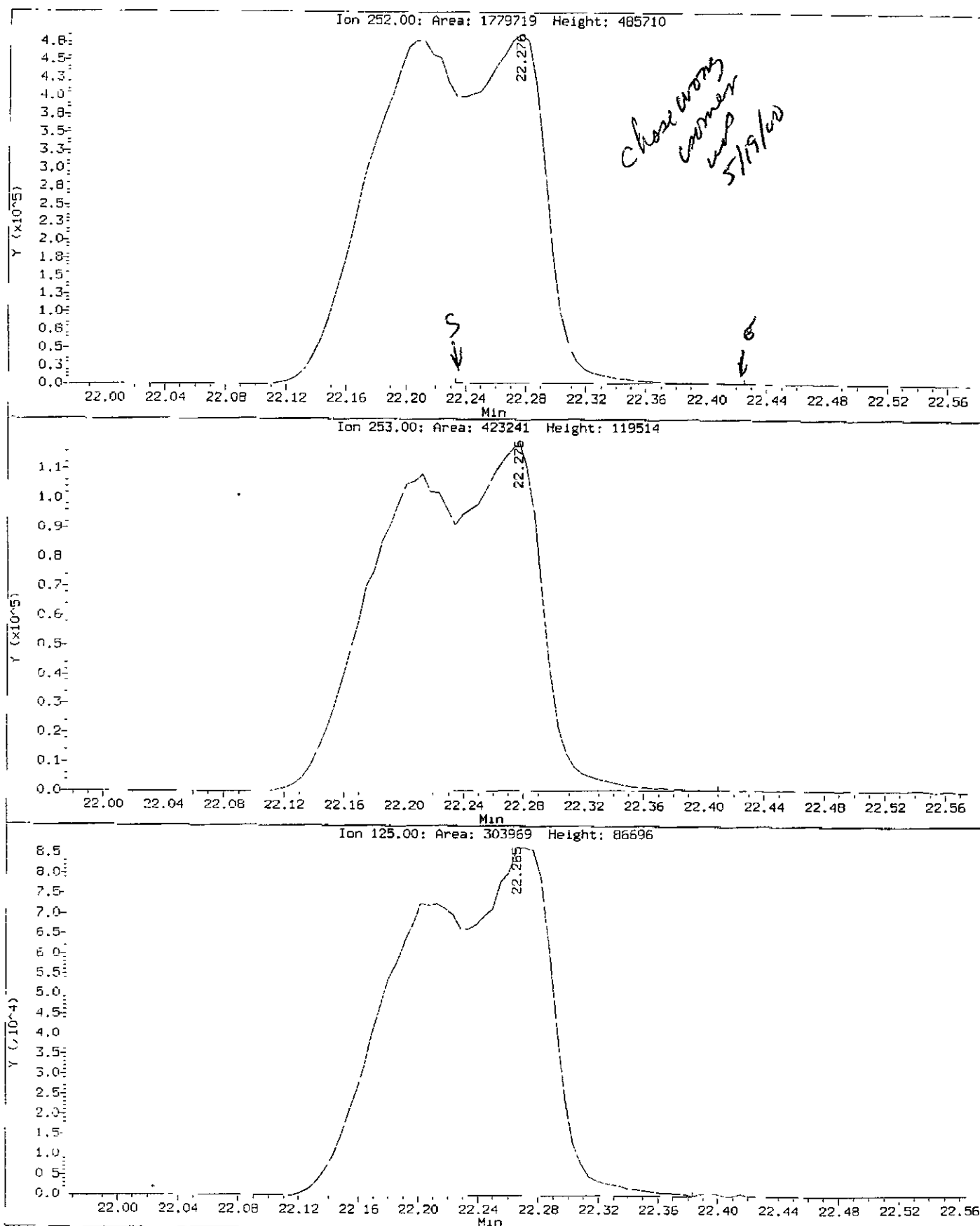
Compound: Pyridine
CAS Number: 110-86-1



6571324

Data File: \\QPITPA02\1\chem\71.1\5051900.b\50519CC6.D
Injection Date: 19-MAY-2000 15:44
Instrument: 71.1
Client Sample ID:

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



FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: 71 Calibration Date: 05/26/00 Time: 0944
 Lab File ID: S0526CC3 Init. Calib. Date(s): 05/19/00 05/19/00
 Init. Calib. Times: 1320 1544
 GC Column: HP5-MS ID: 0.25 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	2.010	2.026	0.01	0.8	20.0
bis(2-Chloroethyl) ether	1.625	1.641	0.01	1.0	50.0
2-Chlorophenol	1.392	1.431	0.01	2.8	50.0
1,3-Dichlorobenzene	1.542	1.594	0.01	3.4	50.0
1,4-Dichlorobenzene	1.564	1.601	0.01	2.4	20.0
1,2-Dichlorobenzene	1.441	1.477	0.01	2.5	50.0
2-Methylphenol	1.358	1.339	0.01	1.4	50.0
2,2'-oxybis(1-Chloropropane)	2.038	2.098	0.01	2.9	50.0
4-Methylphenol	1.419	1.401	0.01	1.3	50.0
Hexachloroethane	0.608	0.628	0.01	3.3	50.0
Nitrobenzene	0.437	0.443	0.01	1.4	50.0
Isophorone	0.726	0.712	0.01	1.9	50.0
2-Nitrophenol	0.190	0.201	0.01	5.8	20.0
2,4-Dimethylphenol	0.350	0.355	0.01	1.4	50.0
bis(2-Chloroethoxy) methane	0.465	0.467	0.01	0.4	50.0
N-Nitroso-di-n-propylamine	1.143	1.108	0.05	3.1	50.0
2,4-Dichlorophenol	0.274	0.279	0.01	1.8	20.0
1,2,4-Trichlorobenzene	0.290	0.302	0.01	4.1	50.0
Naphthalene	1.064	1.073	0.01	0.8	50.0
4-Chloroaniline	0.431	0.418	0.01	3.0	50.0
Hexachlorobutadiene	0.148	0.159	0.01	7.4	20.0
4-Chloro-3-Methylphenol	0.319	0.297	0.01	6.9	20.0
2-Methylnaphthalene	0.703	0.688	0.01	2.1	50.0
Hexachlorocyclopentadiene	0.304	0.326	0.05	7.2	50.0
2,4,6-Trichlorophenol	0.326	0.356	0.01	9.2	20.0
2,4,5-Trichlorophenol	0.348	0.369	0.01	6.0	50.0
2-Chloronaphthalene	1.072	1.143	0.01	6.6	50.0
2-Nitroaniline	0.389	0.377	0.01	3.1	50.0
Dimethylphthalate	1.299	1.269	0.01	2.3	50.0
Acenaphthylene	1.822	1.852	0.01	1.6	50.0
2,6-Dinitrotoluene	0.290	0.284	0.01	2.1	50.0
3-Nitroaniline	0.364	0.321	0.01	11.8	50.0
Acenaphthene	1.143	1.154	0.01	1.0	20.0
2,4-Dinitrophenol	0.151	0.115	0.05	23.8	50.0
4-Nitrophenol	0.190	0.150	0.05	21.0	50.0
Dibenzofuran	1.602	1.588	0.01	0.9	50.0
2,4-Dinitrotoluene	0.408	0.370	0.01	9.3	50.0

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: 71 Calibration Date: 05/26/00 Time: 0944

Lab File ID: S0526CC3 Init. Calib. Date(s): 05/19/00 05/19/00

Init. Calib. Times: 1320 1544

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

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.324	1.236	0.01	6.6	50.0
4-Chlorophenyl-phenylether	0.586	0.589	0.01	0.5	50.0
Fluorene	1.311	1.260	0.01	3.9	50.0
4-Nitroaniline	0.386	0.314	0.01	18.6	50.0
4,6-Dinitro-2-methylphenol	0.118	0.113	0.01	4.2	50.0
N-Nitrosodiphenylamine (1)	0.526	0.556	0.01	5.7	20.0
4-Bromophenyl-phenylether	0.177	0.198	0.01	11.9	50.0
Hexachlorobenzene	0.190	0.210	0.01	10.5	50.0
Pentachlorophenol	0.109	0.099	0.01	9.2	20.0
Phenanthrene	1.029	1.042	0.01	1.3	50.0
Anthracene	1.058	1.063	0.01	0.5	50.0
Carbazole	1.027	0.961	0.01	6.4	50.0
Di-n-Butylphthalate	1.254	1.252	0.01	0.2	50.0
Fluoranthene	1.095	0.990	0.01	9.6	20.0
Pyrene	1.187	1.309	0.01	10.3	50.0
Butylbenzylphthalate	0.638	0.663	0.01	3.9	50.0
3,3'-Dichlorobenzidine	0.420	0.483	0.01	15.0	50.0
Benzo(a)Anthracene	1.129	1.153	0.01	2.1	50.0
Chrysene	1.086	1.099	0.01	1.2	50.0
bis(2-ethylhexyl)Phthalate	0.895	0.933	0.01	4.2	50.0
Di-n-octylphthalate	1.289	1.270	0.01	1.5	20.0
Benzo(b)fluoranthene	1.061	1.081	0.01	1.9	50.0
Benzo(k)fluoranthene	1.088	1.086	0.01	0.2	50.0
Benzo(a)pyrene	1.026	1.065	0.01	3.8	20.0
Indeno(1,2,3-cd)pyrene	1.414	1.607	0.01	13.6	50.0
Dibenz(a,h)anthracene	1.207	1.399	0.01	15.9	50.0
Benzo(g,h,i)perylene	1.259	1.460	0.01	16.0	50.0
Pyridine	0.924	1.636	0.01	77.0	50.0 <-
N-Nitrosodimethylamine	0.494	0.917	0.01	85.6	50.0 <-
Aniline	2.479	2.386	0.01	3.8	50.0
Benzyl Alcohol	1.018	1.013	0.01	0.5	50.0
Benzoic Acid	0.177	0.167	0.01	5.6	50.0
1-Methylnaphthalene	0.659	0.626	0.01	5.0	50.0
2,3,4,6-Tetrachlorophenol	0.267	0.256	0.01	4.1	50.0
2,3,5,6-Tetrachlorophenol	0.266	0.249	0.01	6.4	50.0
1,2-Diphenylhydrazine	0.885	0.964	0.01	8.9	50.0
Benzidine	0.520	0.630	0.01	21.2	50.0

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: 71 Calibration Date: 05/26/00 Time: 0944

Lab File ID: S0526CC3 Init. Calib. Date(s): 05/19/00 05/19/00

Init. Calib. Times: 1320 1544

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

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
Methyl methanesulfonate	0.852	0.840	0.01	1.4	50.0
2-Naphthylamine	1.150	0.835	0.01	27.4	50.0
7,12-dimethylbenz[a]anthrace	0.457	0.444	0.01	2.8	50.0
=====	=====	=====	=====	=====	=====
Nitrobenzene-d5	0.405	0.408	0.01	0.7	50.0
2-Fluorobiphenyl	1.213	1.325	0.01	9.2	50.0
Terphenyl-d14	0.894	1.002	0.01	12.1	50.0
Phenol-d5	1.785	1.709	0.01	4.2	50.0
2-Fluorophenol	1.335	1.384	0.01	3.7	50.0
2,4,6-Tribromophenol	0.099	0.106	0.01	7.1	50.0
2-Chlorophenol-d4	1.250	1.228	0.01	1.8	50.0
1,2-Dichlorobenzene-d4	0.878	0.896	0.01	2.0	50.0

6571328

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526CC3.D
 Report Date: 05/26/2000

P

CONTINUING CALIBRATION COMPOUNDS
 PERCENT DRIFT REPORT

Instrument ID: 71.i
 Lab File ID: S0526CC3.D
 Analysis Type: NONE

Injection Date: 26-MAY-2000 09:44
 Lab Sample ID: sstd50
 Method File: \\QPITPA02\D\chem\71.i\s052600.b\8270clp

COMPOUND	EXPECTED CONC.	MEASURED CONC.	%D	MAX %D
67 N-Nitrosodimethylamine	50.0000	92.6956	85.4	50.0
66 Pyridine	50.0000	88.5081	77.0	50.0
87 Methyl methanesulfonate	50.0000	49.2850	1.4	50.0
185 2-Fluorophenol	50.0000	51.8280	3.7	50.0
68 Aniline	50.0000	48.1238	3.8	50.0
184 Phenol-d5	50.0000	47.8934	4.2	50.0
1 Phenol	50.0000	50.3978	0.8	20.0
2 bis(2-Chloroethyl)ether	50.0000	50.5036	1.0	50.0
187 2-Chlorophenol-d4	50.0000	49.1230	1.8	50.0
3 2-Chlorophenol	50.0000	51.3990	2.8	50.0
4 1,3-Dichlorobenzene	50.0000	51.7185	3.4	50.0
11 1,4-Dichlorobenzene-d4	40.0000	40.0000	0.0	50.0
5 1,4-Dichlorobenzene	50.0000	51.1657	2.3	20.0
69 Benzyl Alcohol	50.0000	49.7418	0.5	50.0
188 1,2-Dichlorobenzene-d4	50.0000	50.9881	2.0	50.0
6 1,2-Dichlorobenzene	50.0000	51.2331	2.5	50.0
7 2-Methylphenol	50.0000	49.3092	1.4	50.0
8 2,2'-oxybis(1-Chloropropane)	50.0000	51.4788	3.0	50.0
9 4-Methylphenol	50.0000	49.3739	1.3	50.0
18 N-Nitroso-di-n-propylamine	50.0000	48.4584	3.1	50.0
12 Hexachloroethane	50.0000	51.5972	3.2	50.0
181 Nitrobenzene-d5	50.0000	50.4379	0.9	50.0
13 Nitrobenzene	50.0000	50.7024	1.4	50.0
14 Isophorone	50.0000	49.0423	1.9	50.0
15 2-Nitrophenol	50.0000	52.8147	5.6	20.0
16 2,4-Dimethylphenol	50.0000	50.7044	1.4	50.0
17 bis(2-Chloroethoxy)methane	50.0000	50.2887	0.6	50.0
71 Benzoic Acid	50.0000	47.1648	5.7	50.0
18 2,4-Dichlorophenol	50.0000	50.9770	2.0	20.0
19 1,2,4-Trichlorobenzene	50.0000	52.0841	4.2	50.0
32 Naphthalene-d8	40.0000	40.0000	0.0	50.0
20 Naphthalene	50.0000	50.4393	0.9	50.0
21 4-Chloroaniline	50.0000	48.6138	2.8	50.0
22 Hexachlorobutadiene	50.0000	53.6846	7.4	20.0
23 4-Chloro-3-Methylphenol	50.0000	46.5530	6.9	20.0
24 2-Methylnaphthalene	50.0000	48.9265	2.1	50.0
72 1-Methylnaphthalene	50.0000	47.4712	5.1	50.0
25 Hexachlorocyclopentadiene	50.0000	53.5982	7.2	50.0
26 2,4,6-Trichlorophenol	50.0000	54.5838	9.2	20.0

Data File: \\QPITPA02\D\chem\71.i\s052600.b/S0526CC3.D
Report Date: 05/26/2000

CONTINUING CALIBRATION COMPOUNDS
PERCENT DRIFT REPORT

Instrument ID: 71.i
Lab File ID: S0526CC3.D
Analysis Type: NONE

Injection Date: 26-MAY-2000 09:44
Lab Sample ID: sstd50
Method File: \\QPITPA02\D\chem\71.i\s052600.b\

COMPOUND	EXPECTED CONC	MEASURED CONC.	%D	MAX %D
27 2,4,5-Trichlorophenol	50.0000	53.1145	6.2	50.0
182 2-Fluorobiphenyl	50.0000	54.6010	9.2	50.0
28 2-Chloronaphthalene	50.0000	53.3095	6.6	50.0
29 2-Nitroaniline	50.0000	48.4180	3.2	50.0
30 Dimethylphthalate	50.0000	48.8370	2.3	50.0
31 Acenaphthylene	50.0000	50.8156	1.6	50.0
32 2,6-Dinitrotoluene	50.0000	48.9716	2.1	50.0
33 3-Nitroaniline	50.0000	44.1109	11.8	50.0
52 Acenaphthene-d10	40.0000	40.0000	0.0	50.0
34 Acenaphthene	50.0000	50.4528	0.9	20.0
35 2,4-Dinitrophenol	50.0000	37.9724	24.1	50.0
37 Dibenzofuran	50.0000	49.5668	0.9	50.0
36 4-Nitrophenol	50.0000	39.4903	21.0	50.0
38 2,4-Dinitrotoluene	50.0000	45.3266	9.3	50.0
77 2,3,5,6-Tetrachlorophenol	50.0000	46.6959	6.6	50.0
114 2-Naphthylamine	50.0000	36.2786	27.4	50.0
76 2,3,4,6-Tetrachlorophenol	50.0000	47.8805	4.2	50.0
39 Diethylphthalate	50.0000	46.6638	6.7	50.0
41 Fluorene	50.0000	48.0312	3.9	50.0
40 4-Chlorophenyl-phenylether	50.0000	50.2390	0.5	50.0
42 4-Nitroaniline	50.0000	40.6712	18.7	50.0
43 4,6-Dinitro-2-methylphenol	50.0000	48.0224	4.0	50.0
44 N-Nitrosodiphenylamine (1)	50.0000	52.8508	5.7	20.0
78 1,2-Diphenylhydrazine	50.0000	54.4871	9.0	50.0
186 2,4,6-Tribromophenol	50.0000	53.3437	6.7	50.0
45 4-Bromophenyl-phenylether	50.0000	56.0452	12.1	50.0
46 Hexachlorobenzene	50.0000	55.4543	10.9	50.0
47 Pentachlorophenol	50.0000	45.3075	9.4	20.0
78 Phenanthrene-d10	40.0000	40.0000	0.0	50.0
48 Phenanthrene	50.0000	50.6189	1.2	50.0
49 Anthracene	50.0000	50.2509	0.5	50.0
50 Carbazole	50.0000	46.8011	6.4	50.0
51 Di-n-Butylphthalate	50.0000	49.9396	0.1	50.0
52 Fluoranthene	50.0000	45.2022	9.6	20.0
79 Benzidine	50.0000	60.6552	21.3	50.0
53 Pyrene	50.0000	55.1408	10.3	50.0
183 Terphenyl-d14	50.0000	56.0039	12.0	50.0
54 Butylbenzylphthalate	50.0000	51.9858	4.0	50.0
56 Benzo(a)Anthracene	50.0000	51.0940	2.2	50.0

6571330

Data File: \\QPITPA02\D\chem\71.i\s052600.b/S0526CC3.D
 Report Date: 05/26/2000

CONTINUING CALIBRATION COMPOUNDS
 PERCENT DRIFT REPORT

Instrument ID: 71.i
 Lab File ID: S0526CC3.D
 Analysis Type: NONE

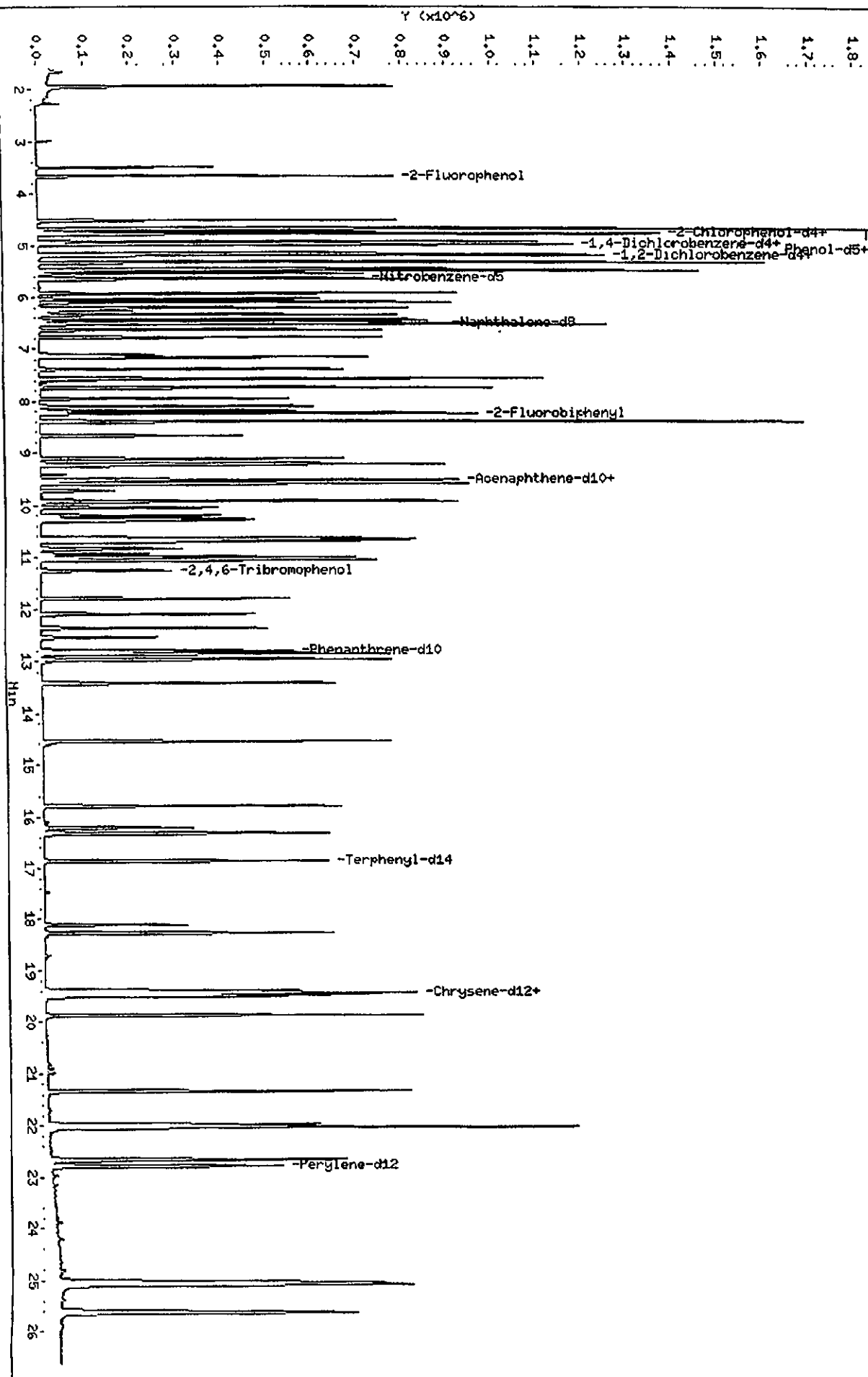
Injection Date: 26-MAY-2000 09:44
 Lab Sample ID: sstd50
 Method File: \\QPITPA02\D\chem\71.i\s052600.b\

COMPOUND	EXPECTED CONC.	MEASURED CONC	%D	MAX %D
90 Chrysene-d12	40.0000	40.0000	0.0	50.0
55 3,3'-Dichlorobenzidine	50.0000	57.4634	14.9	50.0
57 Chrysene	50.0000	50.5846	1.2	50.0
58 bis(2-ethylhexyl)Phthalate	50.0000	52.1206	4.2	50.0
59 Di-n-octylphthalate	50.0000	49.2633	1.5	20.0
60 Benzo(b)fluoranthene	50.0000	50.9283	1.9	50.0
61 Benzo(k)fluoranthene	50.0000	49.9304	0.1	50.0
143 7,12-dimethylbenz(a)anthracen	50.0000	48.5701	2.9	50.0
62 Benzo(a)pyrene	50.0000	51.8966	3.8	20.0
101 Perylene-d12	40.0000	40.0000	0.0	50.0
63 Indeno(1,2,3-cd)pyrene	50.0000	56.8007	13.6	50.0
64 Dibenzo(a,h)anthracene	50.0000	57.9376	15.9	50.0
65 Benzo(g,h,i)perylene	50.0000	57.9705	15.9	50.0

Data File: \\QPIF002\\chem\\74.1\\s052600.b\\s0526CC3.D
 Date: 26-MAY-2000 09:44
 Client ID: sstd50
 Sample Info: sstd50(25 ug/ml) 194-176-9 8270
 Column phase: Hp5-MS

Instrument: 74.1
 Operator: 045183
 Column diameter: 0.25

\\QPIF002\\chem\\74.1\\s052600.b\\s0526CC3.D



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s052600.b\S0526CC3.D
 Lab Smp Id: sstd50 Client Smp ID: sstd50
 Inj Date : 26-MAY-2000 09:44
 Operator : 045183 Inst ID: 71.i
 Smp Info : sstd50(25 ug/ml) 194-176-9 8270
 Misc Info : sstd50,s052600.b,8270clp.m,1-82701.sub,22
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s052600.b\8270clp.m
 Meth Date : 26-May-2000 10:13 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 3 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-82701.sub
 Target Version: 4.03
 Processing Host: PITPC050

3/12/00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
*****	----	--	-----	-----	-----	-----	-----
* 1 1,4-Dichlorobenzene-d4	152	4.976	4.976	(1.000)	157584	40.0000	
* 2 Naphthalene-d8	136	6.498	6.498	(1.000)	612623	40.0000	
* 3 Acenaphthene-d10	164	9.511	9.511	(1.000)	312444	40.0000	
* 4 Phenanthrene-d10	188	12.802	12.802	(1.000)	499444	40.0000	
* 5 Chrysene-d12	240	19.431	19.431	(1.000)	382446	40.0000	
* 6 Perylene-d12	264	22.792	22.792	(1.000)	492173	40.0000	
13 N-Nitrosodimethylamine	74	1.931	1.931	(0.388)	180569	50.0000	92.696
10 Pyridine	79	1.931	1.931	(0.388)	322269	50.0000	88.508
19 Methyl methanesulfonate	80	3.496	3.496	(0.703)	165535	50.0000	49.285
22 Aniline	93	4.682	4.682	(0.941)	470028	50.0000	48.124
23 Phenol	94	4.698	4.698	(0.944)	399069	50.0000	50.398
24 bis(2-Chloroethyl)ether	93	4.751	4.751	(0.955)	323230	50.0000	50.504
25 2-Chlorophenol	128	4.799	4.799	(0.965)	281956	50.0000	51.399
27 1,3-Dichlorobenzene	146	4.938	4.938	(0.992)	314097	50.0000	51.718
28 1,4-Dichlorobenzene	146	4.997	4.997	(1.004)	315331	50.0000	51.166
29 1,2-Dichlorobenzene	146	5.200	5.200	(1.045)	290931	50.0000	51.233
30 Benzyl Alcohol	108	5.168	5.168	(1.039)	199527	50.0000	49.742
31 2-Methylphenol	108	5.323	5.323	(1.070)	263826	50.0000	49.309
32 2,2'-oxybis(1-Chloropropane)	45	5.328	5.328	(1.071)	413354	50.0000	51.479
33 N-Nitroso-di-n-propylamine	70	5.489	5.489	(1.103)	218274	50.0000	48.458
35 4-Methylphenol	108	5.483	5.483	(1.102)	276025	50.0000	49.374
38 Hexachloroethane	117	5.537	5.537	(1.113)	123630	50.0000	51.597
39 Nitrobenzene	77	5.654	5.654	(0.870)	339326	50.0000	50.702
44 Isophorone	82	5.926	5.926	(0.912)	545190	50.0000	49.042
45 2-Nitrophenol	139	6.039	6.039	(0.929)	153626	50.0000	52.815
46 2,4-Dimethylphenol	107	6.098	6.098	(0.938)	271678	50.0000	50.704

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526CC3.D
Report Date: 26-May-2000 10:13

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Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ng)	ON-COL (ng)
47 bis(2-Chloroethoxy)methane	93	6.210	6.210	(0.956)	357800	50.0000	50.289
51 2,4-Dichlorophenol	162	6.343	6.343	(0.976)	213966	50.0000	50.977
52 Benzoic Acid	122	6.263	6.263	(0.964)	127748	50.0000	47.165
53 1,2,4-Trichlorobenzene	180	6.445	6.445	(0.992)	231053	50.0000	52.084
54 Naphthalene	128	6.525	6.525	(1.004)	821714	50.0000	50.439
55 4-Chloroaniline	127	6.637	6.637	(1.021)	320433	50.0000	48.614
59 Hexachlorobutadiene	225	6.781	6.781	(1.044)	121471	50.0000	53.684
62 4-Chloro-3-Methylphenol	107	7.380	7.380	(1.136)	227396	50.0000	46.553
65 2-Methylnaphthalene	142	7.556	7.556	(1.163)	527022	50.0000	48.926
66 1-Methylnaphthalene	142	7.737	7.737	(1.191)	479093	50.0000	47.471
67 Hexachlorocyclopentadiene	237	7.941	7.941	(0.835)	127380	50.0000	53.598
69 2,4,6-Trichlorophenol	196	8.095	8.095	(0.851)	138944	50.0000	54.584
70 2,4,5-Trichlorophenol	196	8.176	8.176	(0.860)	144216	50.0000	53.114
73 2-Chloronaphthalene	162	8.395	8.395	(0.883)	446348	50.0000	53.309
77 2-Nitroaniline	65	8.667	8.667	(0.911)	147260	50.0000	48.418
80 Dimethylphthalate	163	9.100	9.100	(0.957)	495697	50.0000	48.837
82 2,6-Dinitrotoluene	165	9.228	9.228	(0.970)	111046	50.0000	48.972
83 Acenaphthylene	152	9.196	9.196	(0.967)	723170	50.0000	50.816
85 3-Nitroaniline	138	9.495	9.495	(0.998)	125309	50.0000	44.111
86 Acenaphthene	153	9.575	9.575	(1.007)	450632	50.0000	50.453
87 2,4-Dinitrophenol	184	9.709	9.709	(1.021)	44817	50.0000	37.972
89 4-Nitrophenol	109	9.928	9.928	(1.044)	58673	50.0000	39.490
90 Dibenzofuran	168	9.912	9.912	(1.042)	620110	50.0000	49.567
91 2,4-Dinitrotoluene	165	10.040	10.040	(1.056)	144344	50.0000	45.326
95 2,3,5,6-Tetrachlorophenol	232	10.195	10.195	(1.072)	97266	50.0000	46.696
92 2,3,4,6-Tetrachlorophenol	232	10.291	10.291	(1.082)	99847	50.0000	47.880
96 2-Naphthylamine	143	10.259	10.259	(1.079)	326073	50.0000	36.279
97 Diethylphthalate	149	10.622	10.622	(1.117)	482645	50.0000	46.664
98 Fluorene	166	10.654	10.654	(1.120)	491974	50.0000	48.031
99 4-Chlorophenyl-phenylether	204	10.697	10.697	(1.125)	230155	50.0000	50.239
100 4-Nitroaniline	138	10.831	10.831	(1.139)	122496	50.0000	40.671
102 4,6-Dinitro-2-methylphenol	198	10.921	10.921	(0.853)	70537	50.0000	48.022
103 N-Nitrosodiphenylamine (1)	169	10.991	10.991	(0.859)	346956	50.0000	52.851
104 1,2-Diphenylhydrazine	77	11.044	11.044	(0.863)	601845	50.0000	54.487
112 4-Bromophenyl-phenylether	248	11.798	11.798	(0.922)	123862	50.0000	56.045
113 Hexachlorobenzene	284	12.097	12.097	(0.945)	131396	50.0000	55.454
117 Pentachlorophenol	266	12.556	12.556	(0.981)	61889	50.0000	45.307
122 Phenanthrene	178	12.861	12.861	(1.005)	650361	50.0000	50.619
123 Anthracene	178	12.962	12.962	(1.013)	663456	50.0000	50.251
126 Carbazole	167	13.411	13.411	(1.048)	599916	50.0000	46.801
130 Di-n-Butylphthalate	149	14.549	14.549	(1.136)	781999	50.0000	49.940
135 Fluoranthene	202	15.788	15.788	(1.233)	618127	50.0000	45.202
136 Benzidine	184	16.221	16.221	(0.835)	301416	50.0000	60.655
137 Pyrene	202	16.328	16.328	(0.840)	626009	50.0000	55.141
144 Butylbenzylphthalate	149	18.283	18.283	(0.941)	317045	50.0000	51.986
149 3,3'-Dichlorobenzidine	252	19.447	19.447	(1.001)	230826	50.0000	57.463
150 Benzo(a)Anthracene	228	19.383	19.383	(0.998)	551422	50.0000	51.094

6571334

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526CC3.D
 Report Date: 26-May-2000 10:13

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Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng)	ON-COL (ng)
=====	====	==	=====	=====	=====	=====	=====
151 Chrysene	228	19.490	19.490	(1.003)	525321	50.0000	50.585
153 bis(2-ethylhexyl)Phthalate	149	19.859	19.859	(1.022)	446115	50.0000	52.121
155 Di-n-octylphthalate	149	21.328	21.328	(0.936)	781112	50.0000	49.263
157 Benzo(b)fluoranthene	252	21.974	21.974	(0.964)	664823	50.0000	50.928
158 Benzo(k)fluoranthene	252	22.028	22.028	(0.966)	668290	50.0000	49.930
159 7,12-dimethylbenz[a]anthracene	256	22.033	22.033	(0.967)	273063	50.0000	48.570
167 Benzo(a)pyrene	252	22.669	22.669	(0.995)	655458	50.0000	51.896
169 Indeno(1,2,3-cd)pyrene	276	25.035	25.035	(1.098)	988574	50.0000	56.801
170 Dibenz(a,h)anthracene	278	25.083	25.083	(1.101)	860523	50.0000	57.938
171 Benzo(g,h,i)perylene	276	25.618	25.618	(1.124)	898232	50.0000	57.970
\$ 172 Nitrobenzene-d5	82	5.633	5.633	(0.867)	312468	50.0000	50.438
\$ 173 2-Fluorobiphenyl	172	8.229	8.229	(0.865)	517490	50.0000	54.601
\$ 174 Terphenyl-d14	244	16.867	16.867	(0.868)	478967	50.0000	56.004
\$ 175 Phenol-d5	99	4.687	4.687	(0.942)	336677	50.0000	47.893
\$ 176 2-Fluorophenol	112	3.672	3.672	(0.738)	272634	50.0000	51.828
\$ 177 2,4,6-Tribromophenol	330	11.253	11.253	(0.879)	66142	50.0000	53.344
\$ 178 2-Chlorophenol-d4	132	4.783	4.783	(0.961)	241923	50.0000	49.123
\$ 179 1,2-Dichlorobenzene-d4	152	5.184	5.184	(1.042)	176422	50.0000	50.988

**GC/MS SEMIVOLATILE
QC DATA**

Date : 19-MAR-2000 11:44

Client ID: DFTPP02

Instrument: 71.1

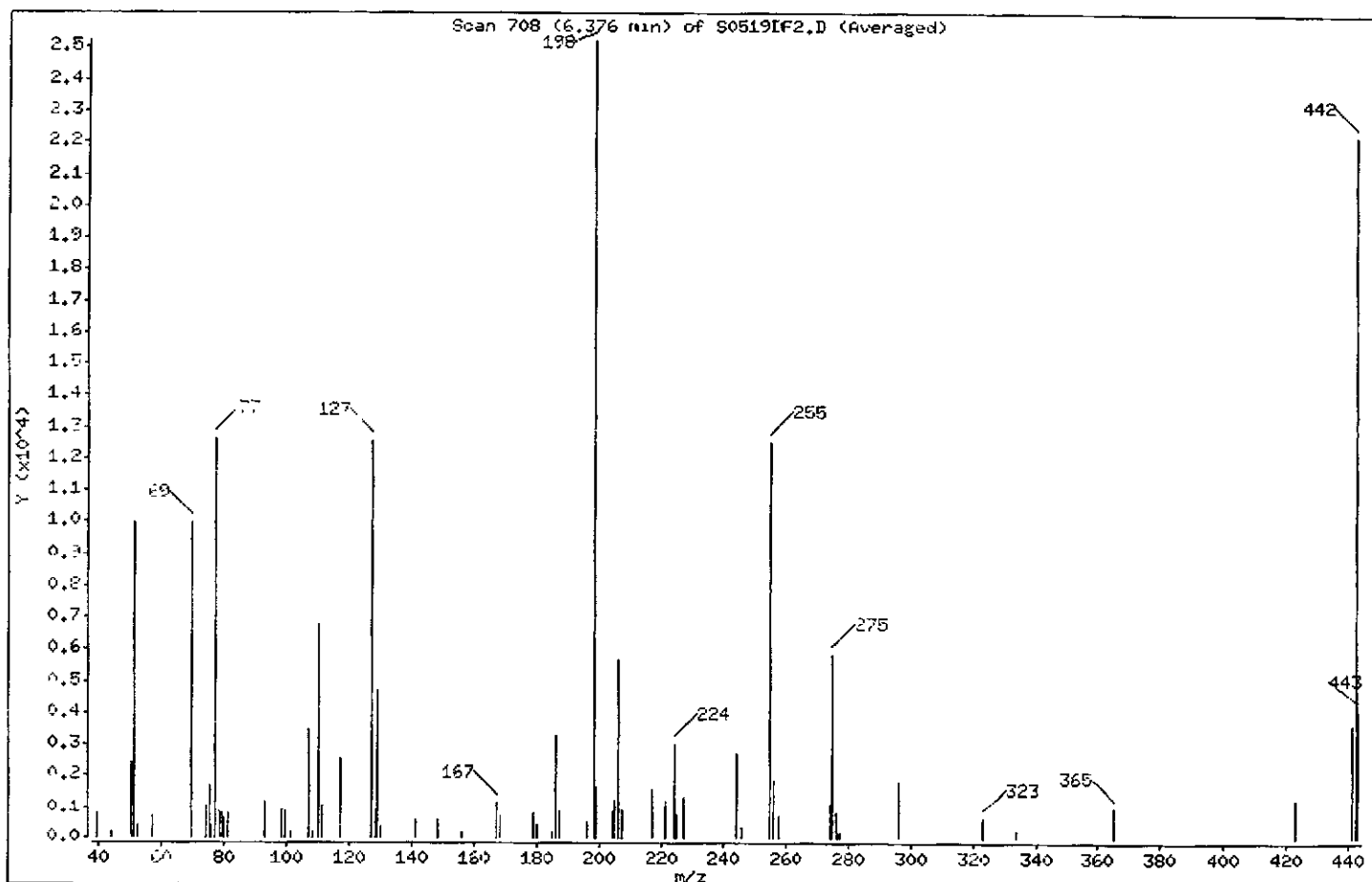
Sample Info: DFTPP050 (15;ph) 194-158-6

Operator: SAB; 2ul inj (100ul+1ul) int

Column phase:

Column diameter: 2.00

1 dftpp



m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.61
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	39.64
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	49.82
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.71
275	10.00 - 30.00% of mass 198	23.37
365	Greater than 1.00% of mass 198	3.83
441	Present, but less than mass 443	14.44
442	Greater than 40.00% of mass 198	88.27
443	17.00 - 23.00% of mass 442	16.26 (18.42)

Date : 19-MAR-2000 11:44

Client ID: DFTPP02

Instrument: 71.1

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

Operator: SAB: 2ul inj (100ul+1ul) int

Column phase:

Column diameter: 2.00

Data File: S0519DF2.D

Spectrum: Scan 709 (6.376 min) of S0519DF2.D (Averaged)

Location of Maximum: 198.00

Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	811	99.00	850	180.00	413	246.00	347
44.00	167	101.00	193	185.00	189	255.00	12521
50.00	2417	107.00	3462	186.00	3323	256.00	1846
51.00	9981	108.00	188	187.00	854	258.00	676
52.00	400	110.00	6758	196.00	512	274.00	1112
57.00	697	111.00	1025	198.00	25200	275.00	5865
69.00	9989	117.00	2547	199.00	1692	276.00	799
74.00	1019	127.00	12555	204.00	890	277.00	178
75.00	1653	128.00	899	205.00	1258	296.00	1789
76.00	384	129.00	4713	206.00	5689	323.00	664
77.00	12033	130.00	346	207.00	917	334.00	208
78.00	876	141.00	577	217.00	1552	365.00	966
79.00	793	148.00	596	221.00	1189	423.00	1286
80.00	620	156.00	190	224.00	3011	441.00	3638
81.00	830	167.00	1136	225.00	779	442.00	22245
93.00	1235	168.00	690	227.00	1333	443.00	4098
98.00	922	179.00	836	244.00	2715		

Data File: \\QPI1P002\\Nchem\\71.1\\S051900.b\\S0519DF2.D
Date: 19-MAY-2000 11:44

Client ID: DF1P02

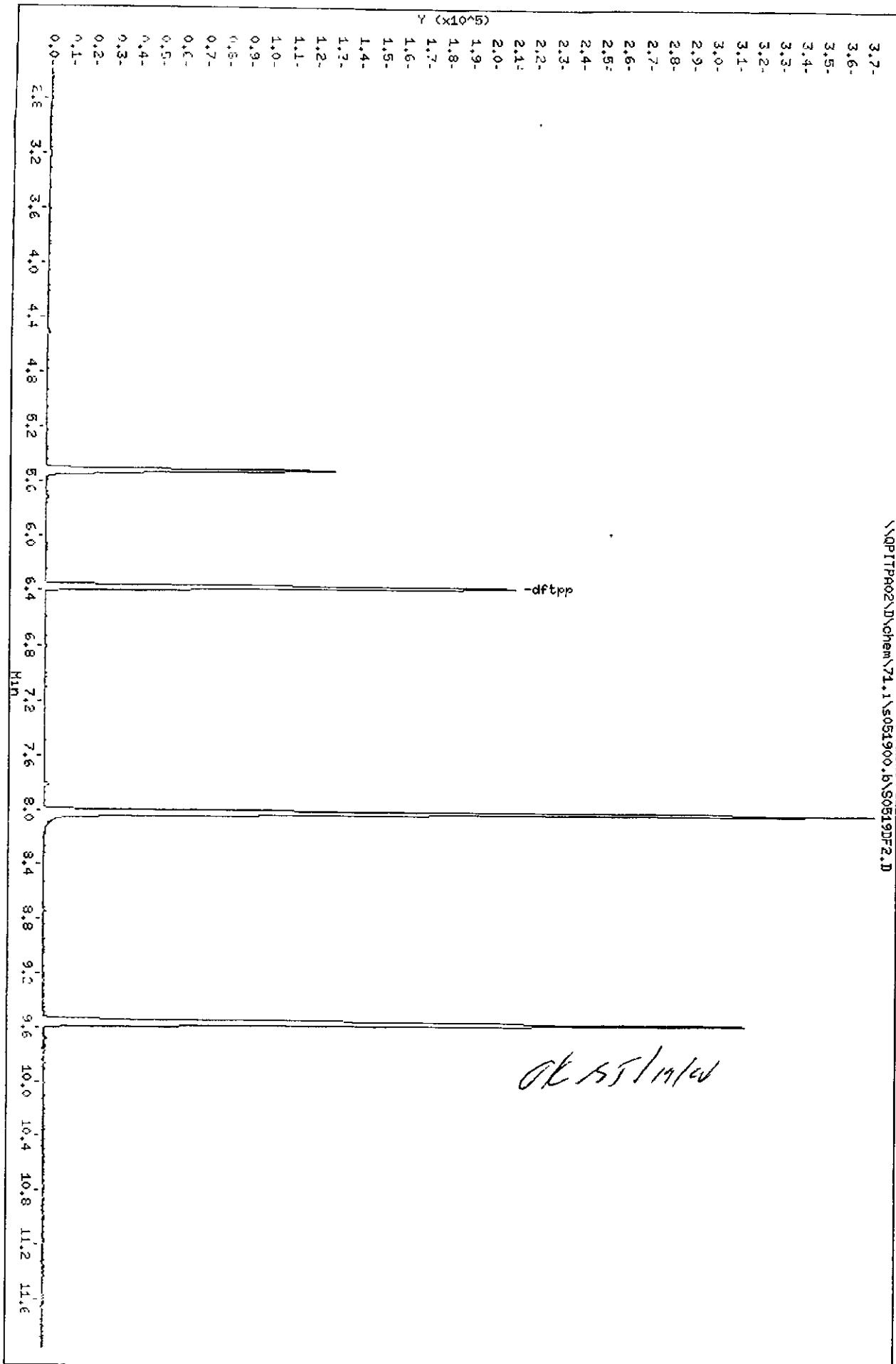
Sample Info: DF1P050 (25ppb) 194-158-6

Instrument: 71.1

Column phase:

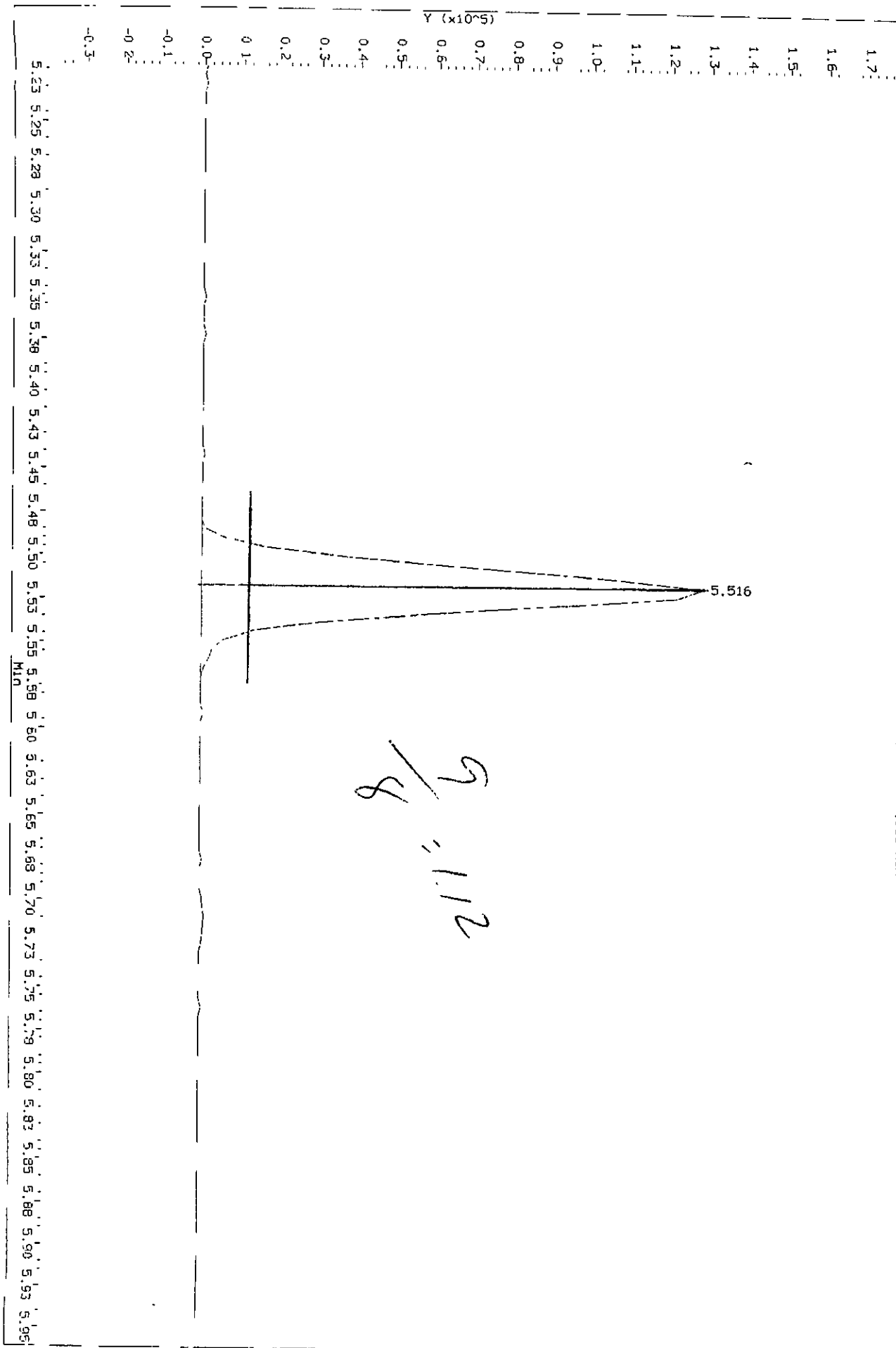
Operator: SAB; 2ul inj (100ul+1ul) int
Column diameter: 2.00

\\QPI1P002\\Nchem\\71.1\\S051900.b\\S0519DF2.D



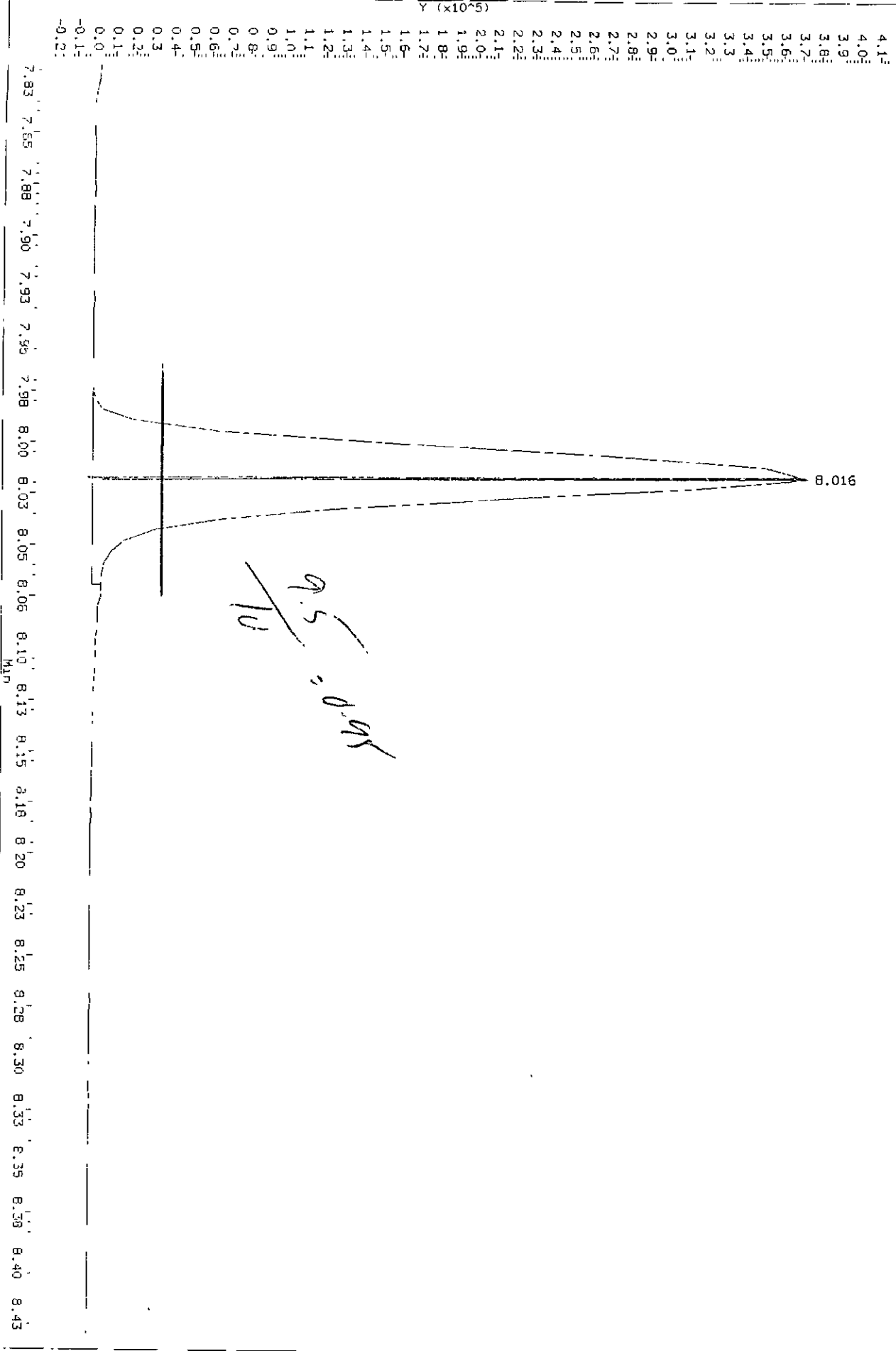
Data File: \\QFT1P002\\D\\chem\\71.1\\S051900.b\\S05190F2.D
Injection Date: 19-MAY-2000 11:44
Instrument: 71.1
Client Sample ID: QFT1P002

HP ChemStation MS data.ms: 5.218 to 5.951 Min



Data File: \\QF1TP02\N\chem\71.1\5051900.b\50519DF2.D
Injection Date: 19-MAY-2000 11:44
Instrument: 71.1
Client Sample ID: DFTP02

HP ChemStation MS data.ms: 7.814 to 8.435 Min



E270

6571341

Data File: \\QPITPA02\chem\71.1\s052600.b\S0526DF3.D

Page 3

Date : 26-MAY-2000 08:54

Client ID: DFTPP02

Instrument: 71.1

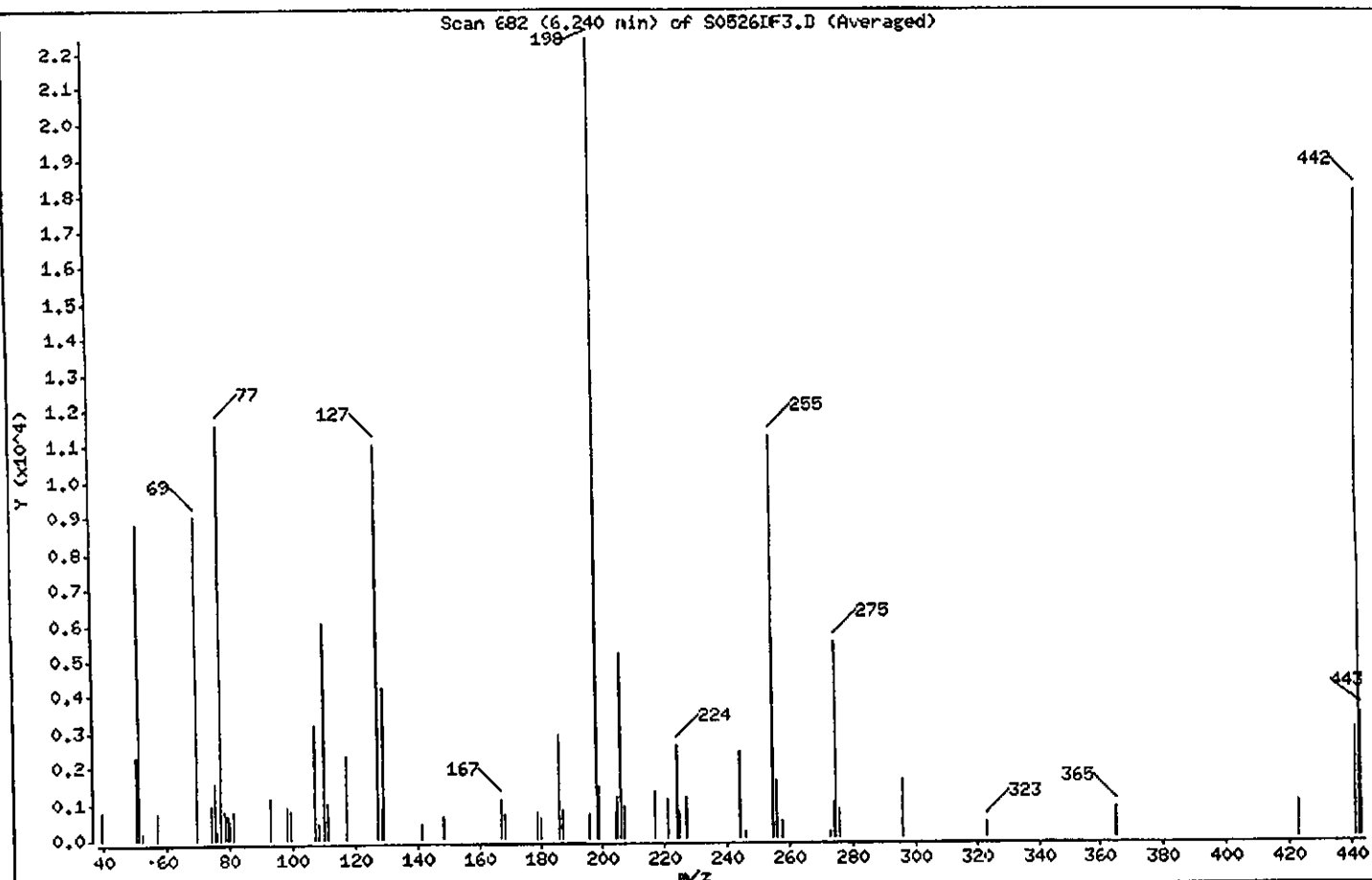
Sample Info: DFTPP050 (25ppb) 194-158-6

Operator: 045183

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	39.21
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	40.31
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	49.29
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.51
275	10.00 - 30.00% of mass 198	24.47
365	Greater than 1.00% of mass 198	3.76
441	Present, but less than mass 443	13.57
442	Greater than 40.00% of mass 198	80.69
443	17.00 - 23.00% of mass 442	15.48 (19.18)

Data File: \\QPITPA02\D\chem\71.1\5052600.b\S0526DF3.D

Page 4

Date : 26-MAY-2000 08:54

Client ID: DFTPP02

Instrument: 71.1

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

Operator: 045183

Column phase:

Column diameter: 2.00

Data File: S0526DF3.D

Spectrum: Scan 683 (6.240 min) of S0526DF3.D (Averaged)

Location of Maximum: 198.00

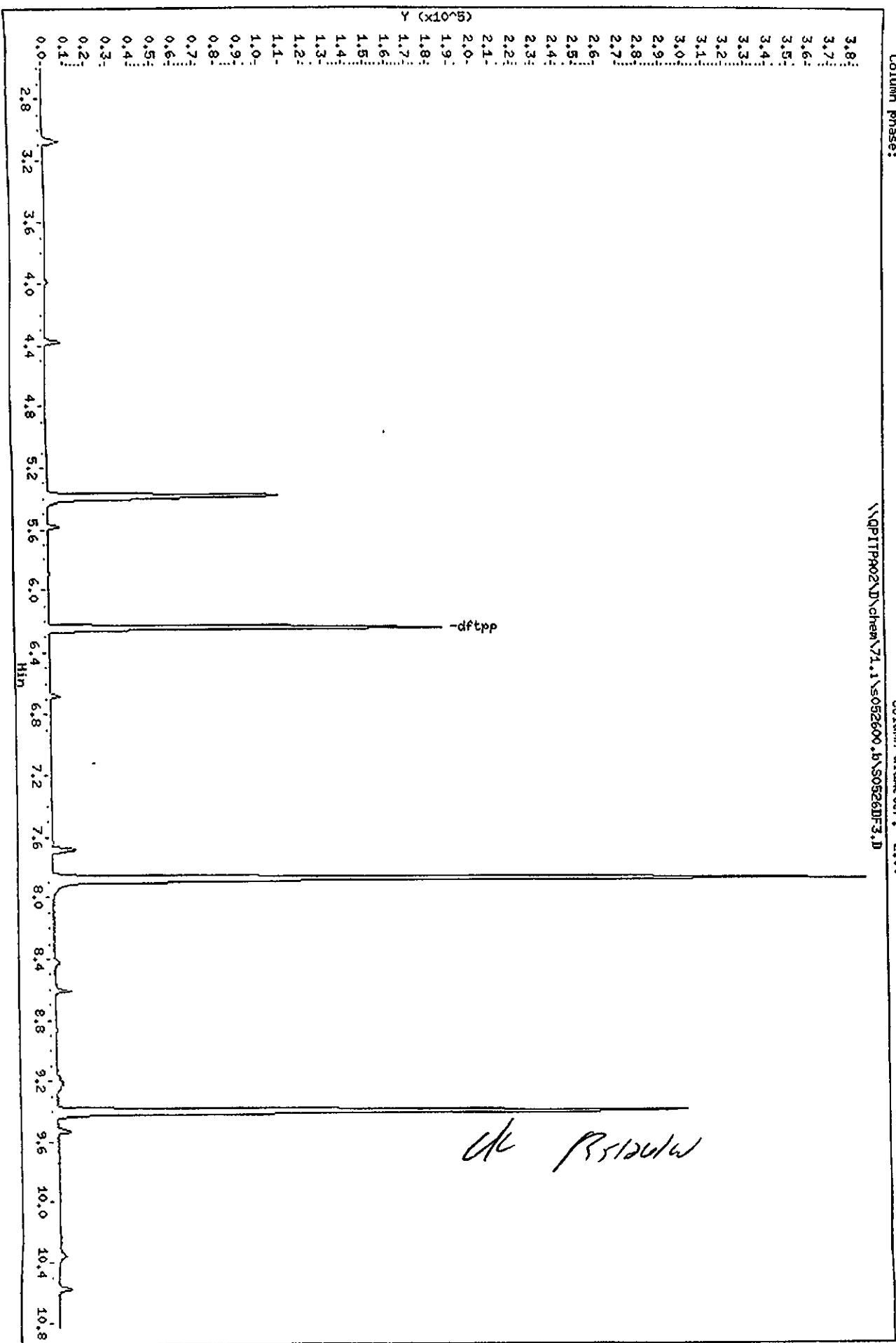
Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	778	99.00	750	187.00	767	256.00	1622
50.00	2308	107.00	3216	196.00	647	258.00	470
51.00	8786	108.00	395	198.00	22410	273.00	168
52.00	177	110.00	6038	199.00	1488	274.00	991
57.00	700	111.00	986	204.00	739	275.00	5483
69.00	9033	117.00	2344	205.00	1145	276.00	749
74.00	921	127.00	11045	206.00	5170	296.00	1897
75.00	1552	128.00	799	207.00	860	323.00	411
76.00	230	129.00	4231	217.00	1284	365.00	842
77.00	11617	141.00	400	221.00	1065	423.00	999
78.00	795	148.00	603	224.00	2595	441.00	3042
79.00	675	167.00	1063	225.00	717	442.00	18082
80.00	536	168.00	660	227.00	1152	443.00	3469
81.00	793	179.00	719	244.00	2431		
93.00	1143	180.00	565	246.00	168		
98.00	859	186.00	2906	255.00	11241		

Data File: \\QPIITP002\\D\\chem\\71.1\\S052600.b\\S0526DF3.D
Date: 26-MAY-2000 08:54
Client ID: DFTPP02
Sample Info: DFTPP050 (25ppb) 194-158-6

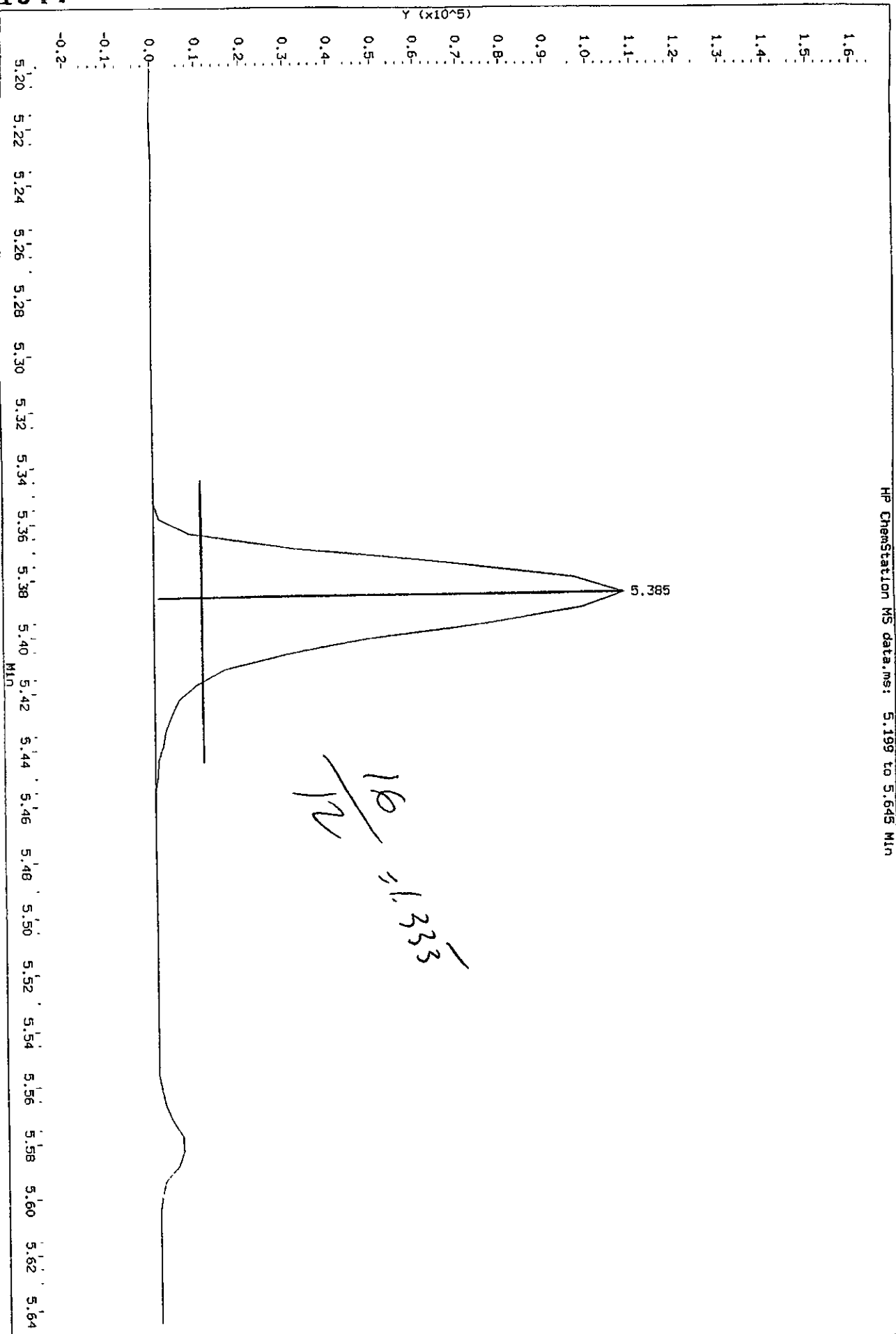
Instrument: 71.1
Operator: 045183
Column diameter: 2.00
Column phase:

\\QPIITP002\\D\\chem\\71.1\\S052600.b\\S0526DF3.D



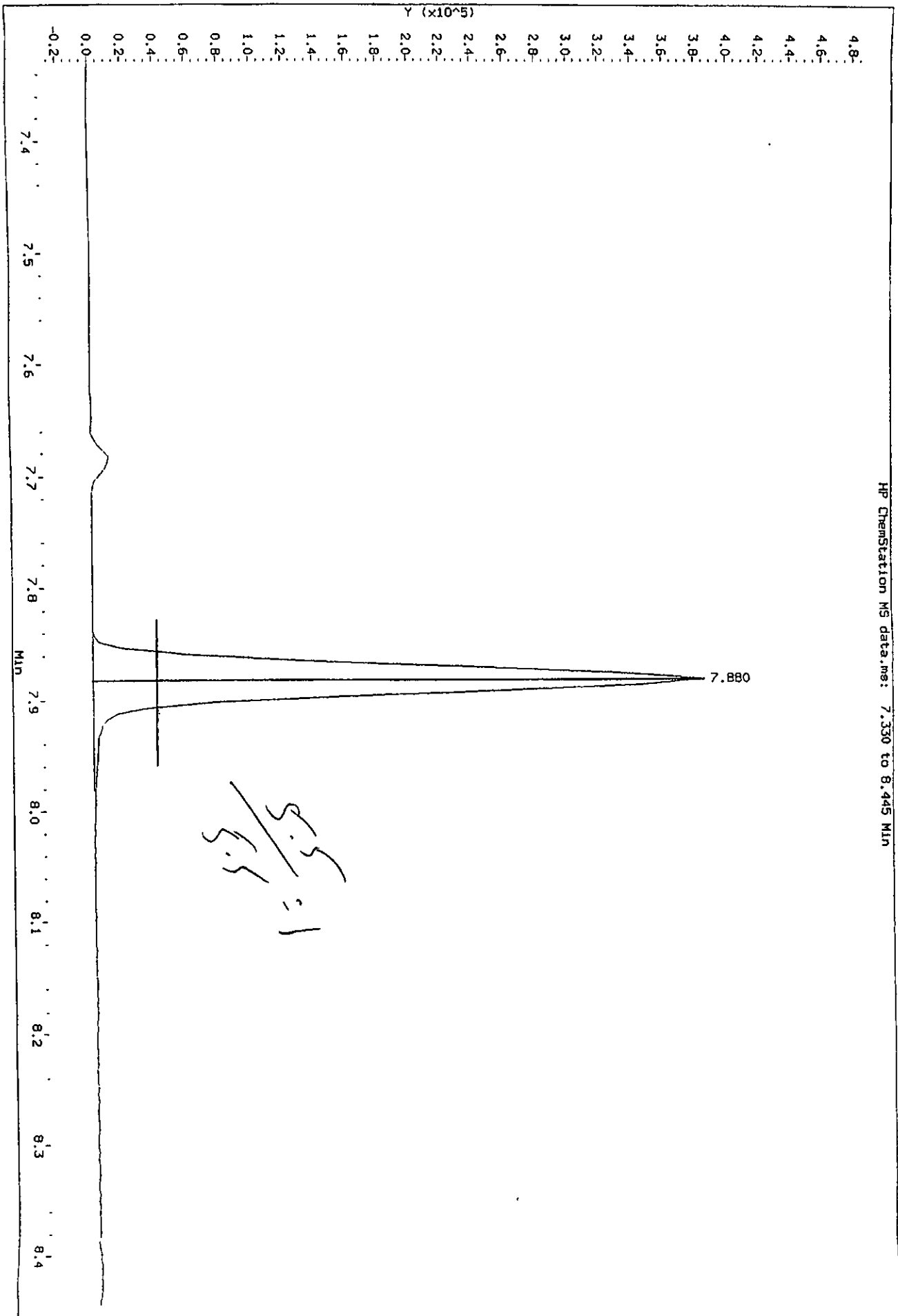
Data File: \\EPITPA02\chem\71.1\5052600.b\50526DF3.D
 Injection Date: 26-May-2000 08:54
 Instrument: 71.1
 Client Sample ID: DTFP02

HP ChemStation MS data.ms: 5.199 to 5.645 Min



Data File: \\QPIFPA02\chem\71.1\5052600.b\50526003.D
Injection Date: 26-MAY-2000 08:54
Instrument: 71.1
Client Sample ID: DFIP02

HP ChemStation MS data.ms: 7.330 to 8.445 Min



6571346

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E250000 281

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDP6L101

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146281

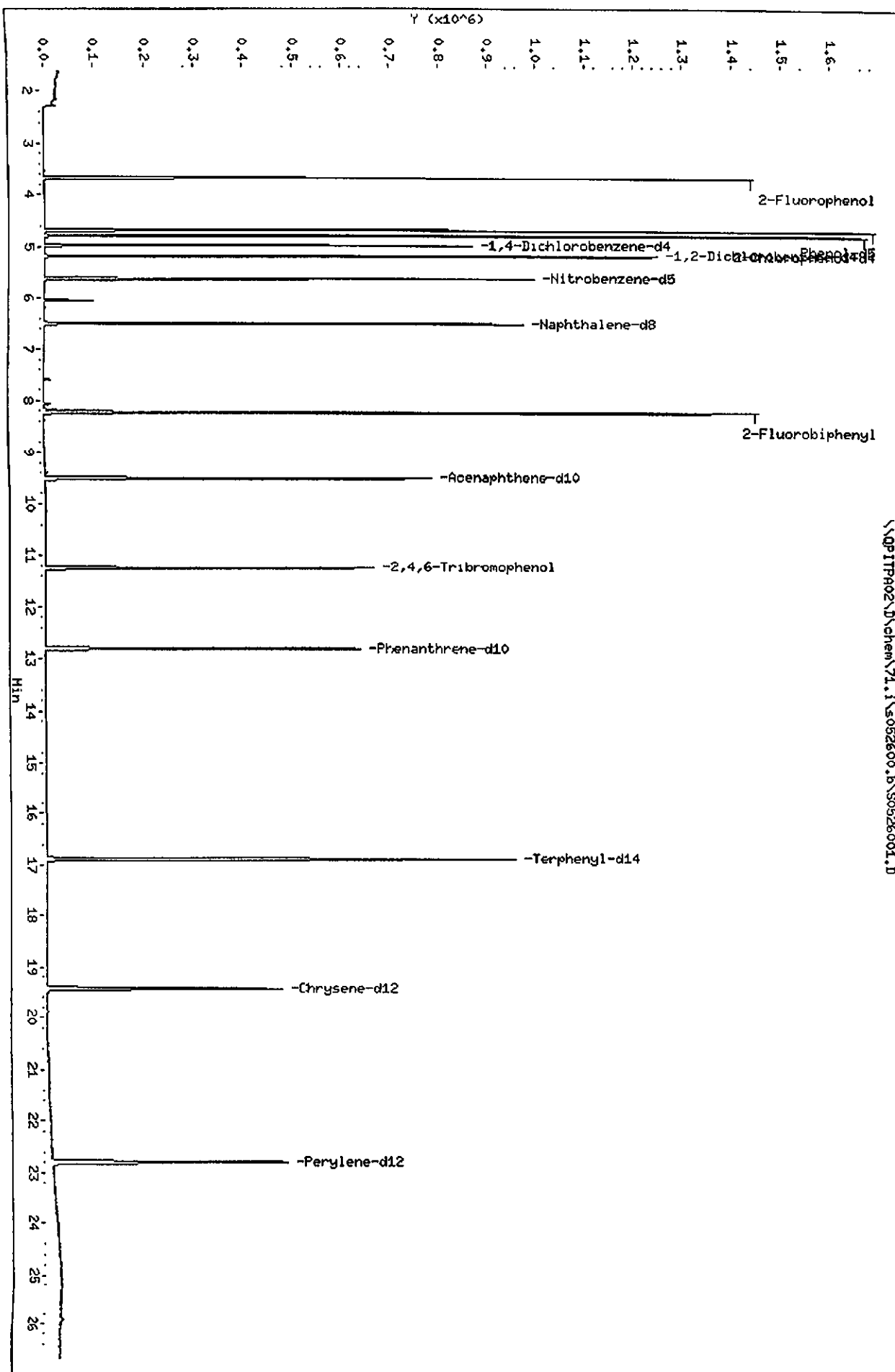
Client Sample Id: INTRA-LAB BLANK

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

FORM I

Data File: \\QPI7PA02\\chem\\71.i\\s052600.b\\s0526001.D
Date: 26-MAY-2000 10:18
Client ID: INTRA-LAB BLANK
Sample Info: C0E190257-sb1k 5/24/00 8270c1p
Volume Injected (uL): 2.0
Column phase: Hp5-MS

Instrument: 71.1
Operator: 045183
Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s052600.b\S0526001.D
 Lab Smp Id: DDP6L101 Client Smp ID: INTRA-LAB BLANK
 Inj Date : 26-MAY-2000 10:18
 Operator : 045183 Inst ID: 71.i
 Smp Info : C0E190257-sblk 5/24/00 8270tclp
 Misc Info : ddp6l101,s052600.b,8270clp.m,1-tclp.sub
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s052600.b\8270clp.m
 Meth Date : 26-May-2000 10:13 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 4 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-tclp.sub
 Target Version: 4.03
 Processing Host: PITPC050

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

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

Compounds	QUANT SIG	CONCENTRATIONS					
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.980	4.976	(1.000)	160321	40.0000	(a)
* 2 Naphthalene-d8	136	6.497	6.498	(1.000)	652950	40.0000	(a)
* 3 Acenaphthene-d10	164	9.510	9.511	(1.000)	351968	40.0000	(a)
* 4 Phenanthrene-d10	188	12.801	12.802	(1.000)	544595	40.0000	(a)
* 5 Chrysene-d12	240	19.425	19.431	(1.000)	411047	40.0000	(a)
* 6 Perylene-d12	264	22.785	22.792	(1.000)	476187	40.0000	(a)
10 Pyridine	79	Compound Not Detected					
28 1,4-Dichlorobenzene	146	Compound Not Detected.					
M 34 Cresols, total	100	Compound Not Detected.					
31 2-Methylphenol	108	Compound Not Detected.					
35 4-Methylphenol	108	Compound Not Detected.					
38 Hexachloroethane	117	Compound Not Detected.					
39 Nitrobenzene	77	Compound Not Detected.					
59 Hexachlorobutadiene	224	Compound Not Detected.					

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526001.D
 Report Date: 26-May-2000 10:53

Page 2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng)	FINAL (mg/L)
69 2,4,6-Trichlorophenol	196				Compound Not Detected.		
70 2,4,5-Trichlorophenol	196				Compound Not Detected.		
91 2,4-Dinitrotoluene	165				Compound Not Detected.		
113 Hexachlorobenzene	283				Compound Not Detected.		
117 Pentachlorophenol	265				Compound Not Detected.		
\$ 172 Nitrobenzene-d5	82	5.632	5.633	(0.867)	459687	69 6188	0.17405(a)
\$ 173 2-Fluorobiphenyl	172	8.228	8.229	(0.865)	766611	71.8030	0.17951(a)
\$ 174 Terphenyl-d14	244	16.866	16.867	(0.868)	767934	83 5439	0.20886(a)
\$ 175 Phenol-d5	99	4.686	4.687	(0.941)	742951	103 883	0.25971(a)
\$ 176 2-Fluorophenol	112	3.676	3.672	(0.738)	516291	96 4718	0.24118(a)
\$ 177 2,4,6-Tribromophenol	330	11.246	11.253	(0.879)	161544	119 484	0.29871(a)
\$ 178 2-Chlorophenol-d4	132	4.787	4.783	(0.961)	556265	111 022	0.27756(a)
\$ 179 1,2-Dichlorobenzene-d4	152	5.188	5.184	(1.042)	242215	68 8081	0.17202(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

6571350

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E250000 281

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDP6L102

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146281

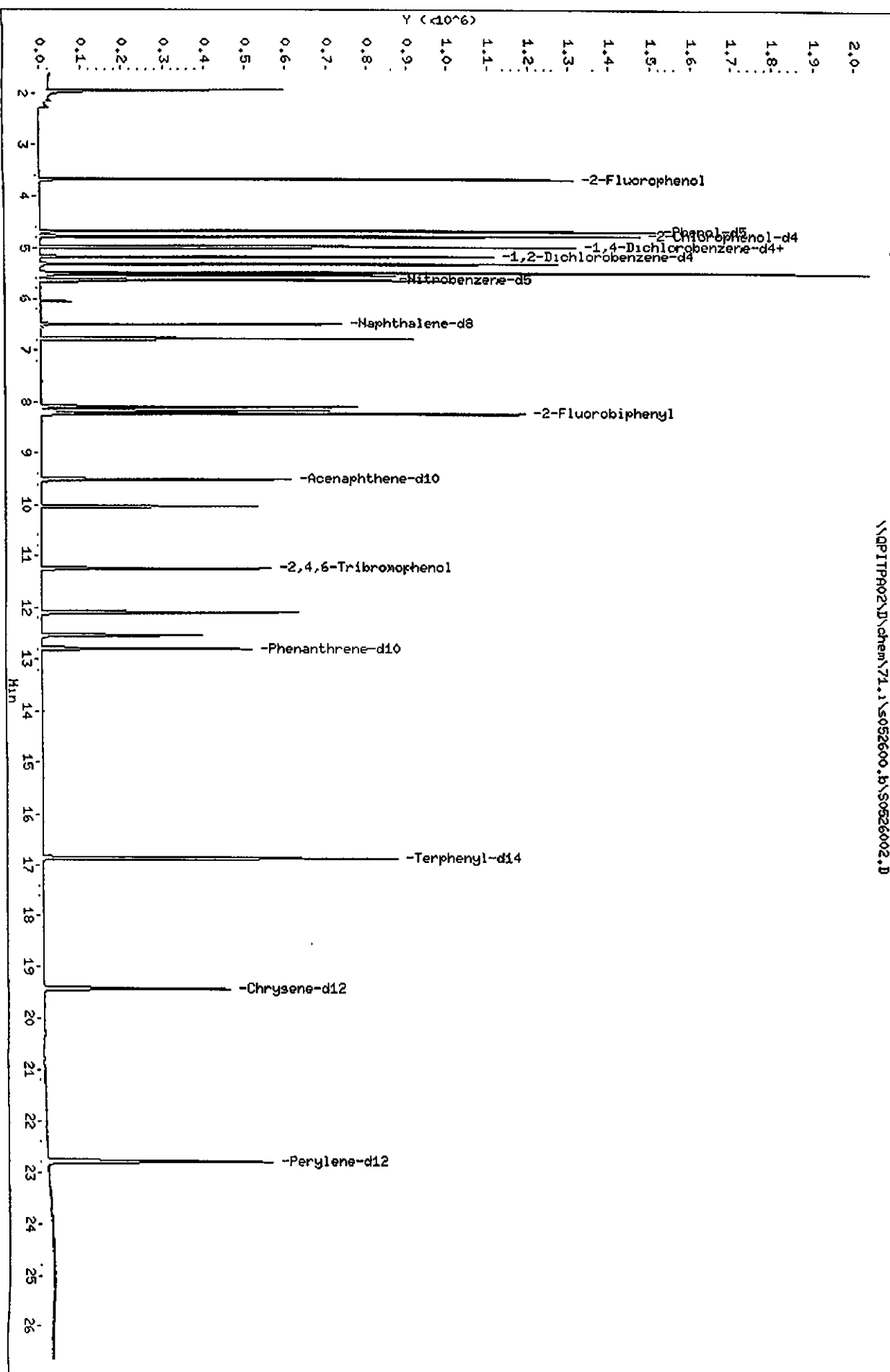
Client Sample Id: CHECK SAMPLE

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.192	
121-14-2	2,4-Dinitrotoluene	0.170	
118-74-1	Hexachlorobenzene	0.214	
87-68-3	Hexachlorobutadiene	0.195	
67-72-1	Hexachloroethane	0.195	
98-95-3	Nitrobenzene	0.192	
87-86-5	Pentachlorophenol	0.202	
110-86-1	Pyridine	0.340	
95-95-4	2,4,5-Trichlorophenol	0.201	
88-06-2	2,4,6-Trichlorophenol	0.200	
1319-77-3	Cresols (total)	0.577	

FORM I

Data File: \\GPITPA02\chem\71.1\S052600.b\S0526002.D
 Date: 26-May-2000 10:51
 Client ID: INTRA-LAB CHECK
 Sample Info: C0E190257-1cs 5/24/00 82701c1p
 Volume Injected (uL): 2.0
 Column phase: Hp5-MS

Instrument: 71.1
 Operator: 045183
 Column diameter: 0.25



STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s052600.b\S0526002.D
 Lab Smp Id: DDP6L102 Client Smp ID: INTRA-LAB CHECK
 Inj Date : 26-MAY-2000 10:51
 Operator : 045183 Inst ID: 71.i
 Smp Info : C0E190257-lcs 5/24/00 8270tclp
 Misc Info : ddp6l102,s052600.b,8270clp.m,1-tclp.sub
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s052600.b\8270clp.m
 Meth Date : 26-May-2000 11:26 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 5 QC Sample: LCS
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-tclp.sub
 Target Version: 4.03
 Processing Host: PITPC050

File
5/26/00

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

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

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (mg/L)
*****	****	---	---	-----	-----	-----	-----	-----
* 1 1,4-Dichlorobenzene-d4		152	4.977	4.976 (1.000)	123769	40.0000		(a)
* 2 Naphthalene-d8		136	6.494	6.498 (1.000)	494686	40.0000		(a)
* 3 Acenaphthene-d10		164	9.507	9.511 (1.000)	261001	40.0000		(a)
* 4 Phenanthrene-d10		188	12.798	12.802 (1.000)	431139	40.0000		(a)
* 5 Chrysene-d12		240	19.422	19.431 (1.000)	407107	40.0000		(a)
* 6 Perylene-d12		264	22.783	22.792 (1.000)	535892	40.0000		(a)
10 Pyridine		79	1.916	1.931 (0.385)	388502	135.850	0.33962	(a)
28 1,4-Dichlorobenzene		146	4.993	4.997 (1.003)	370823	76.6091	0.19152	(a)
M 34 Cresols, total		100			998663	230.818	0.57704	(a)
31 2-Methylphenol		108	5.319	5.323 (1.069)	330395	78.6223	0.19656	(a)
35 4-Methylphenol		108	5.485	5.483 (1.102)	668268	152.196	0.38049	(a)
38 Hexachloroethane		117	5.538	5.537 (1.113)	146440	77.8152	0.19454	(a)
39 Nitrobenzene		77	5.650	5.654 (0.870)	415652	76.9139	0.19228	(a)
59 Hexachlorobutadiene		225	6.778	6.781 (1.044)	142396	77.9358	0.19484	(a)

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526002.D
 Report Date: 26-May-2000 11:28

Page 2

Compounds	QUANT SIG							CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	(ng)	(mg/L)
-----	----	--	-----	-----	-----	-----	-----		
69 2,4,6-Trichlorophenol	196	8.092	8.095	(0.851)	170360	80 1163	0.20029(a)		
70 2,4,5-Trichlorophenol	196	8.166	8.176	(0.859)	182589	80 5015	0.20125(a)		
91 2,4-Dinitrotoluene	165	10.031	10.040	(1.055)	180956	68.0230	0.17006(a)		
113 Hexachlorobenzene	284	12.098	12.097	(0.945)	174726	85 4241	0.21356(a)		
117 Pentachlorophenol	266	12.547	12.556	(0.980)	95168	80 7075	0.20177(a)		
\$ 172 Nitrobenzene-d5	82	5.629	5.633	(0.867)	382377	76.4374	0.19109(a)		
\$ 173 2-Fluorobiphenyl	172	8.225	8.229	(0.865)	633105	79 9659	0.19991(a)		
\$ 174 Terphenyl-d14	244	16.869	16.867	(0.869)	712576	78 2719	0.19568(a)		
\$ 175 Phenol-d5	99	4.684	4.687	(0.941)	636120	115.213	0.28803(a)		
\$ 176 2-Fluorophenol	112	3.668	3.672	(0.737)	462969	112 057	0.28014(a)		
\$ 177 2,4,6-Tribromophenol	330	11.244	11.253	(0.879)	132698	123.976	0.30994(a)		
\$ 178 2-Chlorophenol-d4	132	4.780	4.783	(0.960)	489778	126.622	0.31656(a)		
\$ 179 1,2-Dichlorobenzene-d4	152	5.180	5.184	(1.041)	213118	78.4220	0.19606(a)		

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

6571354

UXB INTERNATIONAL
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E250000 281

Method: SW846 8270C

Base/Neutrals and Acids (8270C)

Sample WT/Vol: 200 / mL

Date Received: 05/19/00

Work Order: DDP6L103

Date Extracted: 05/24/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0146281

Client Sample Id: DUPLICATE CHECK

CONCENTRATION UNITS:			
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
106-46-7	1,4-Dichlorobenzene	0.185	
121-14-2	2,4-Dinitrotoluene	0.166	
118-74-1	Hexachlorobenzene	0.213	
87-68-3	Hexachlorobutadiene	0.190	
67-72-1	Hexachloroethane	0.190	
98-95-3	Nitrobenzene	0.189	
87-86-5	Pentachlorophenol	0.199	
110-86-1	Pyridine	0.329	
95-95-4	2,4,5-Trichlorophenol	0.194	
88-06-2	2,4,6-Trichlorophenol	0.198	
1319-77-3	Cresols (total)	0.575	

FORM I

Data File: \\QIPITPA02\J\chem\71.i\5052600.b\50526003.D

Date: 26-May-2000 11:24

Client ID: INTRA-LAB CHECK

Sample Info: COE190257-1csd 5/24/00 8270c1p

Volume Injected (uL): 2.0

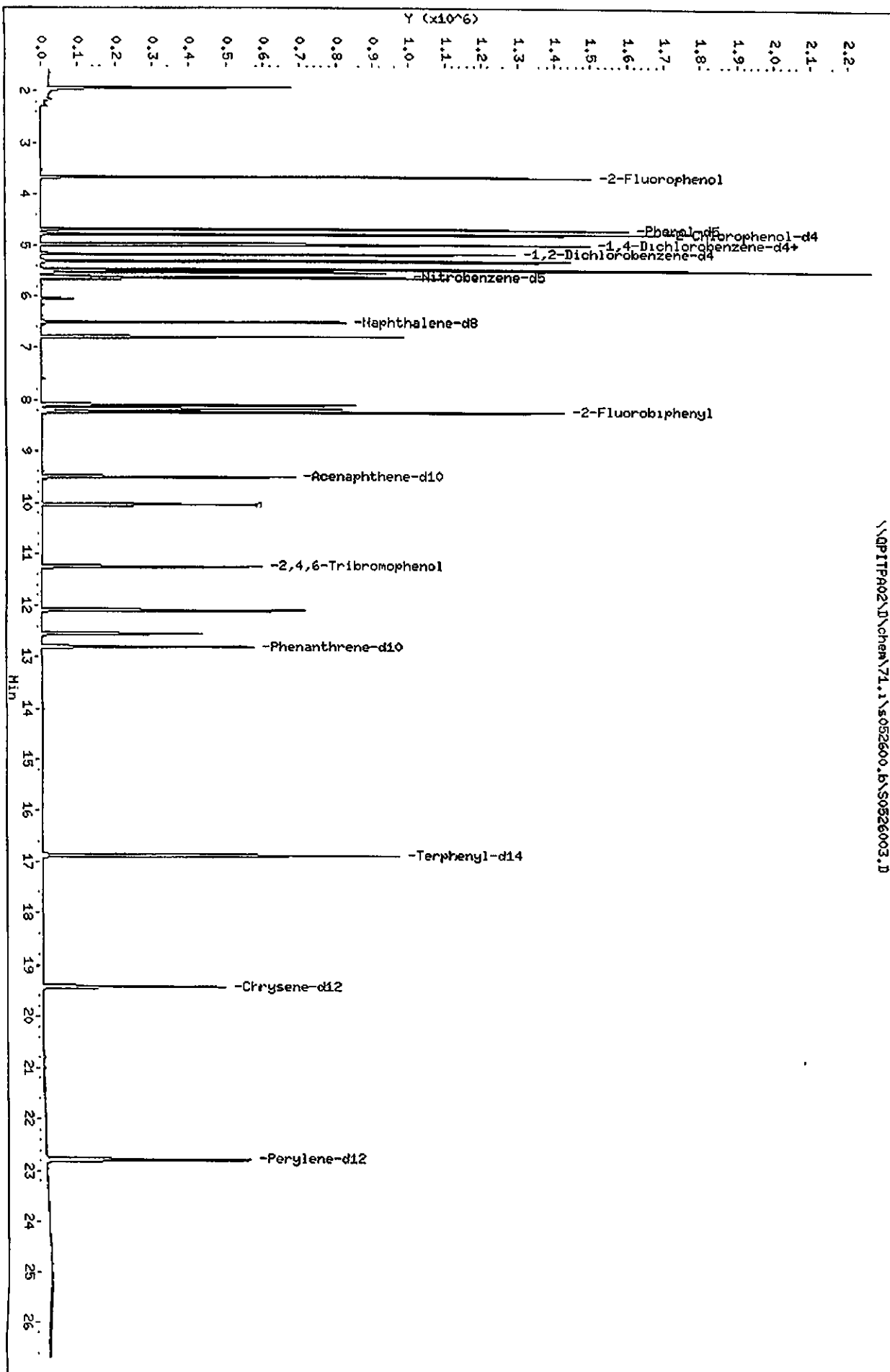
Column phase: HP5-MS

Instrument: 71.1

Operator: 045183

Column diameter: 0.25

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6571356

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526003.D
 Report Date: 26-May-2000 11:56

Page 1

STL Pittsburgh

Semivolatile REPORT SW-846 Method 8270

Data file : \\QPITPA02\D\chem\71.i\s052600.b\S0526003.D
 Lab Smp Id: DDP6L103 Client Smp ID: INTRA-LAB CHECK
 Inj Date : 26-MAY-2000 11:24
 Operator : 045183 Inst ID: 71.i
 Smp Info : C0E190257-lcsd 5/24/00 8270tclp
 Misc Info : ddp6l103,s052600.b,8270clp.m,1-tclp.sub
 Comment :
 Method : \\QPITPA02\D\chem\71.i\s052600.b\8270clp.m
 Meth Date : 26-May-2000 11:26 bachas Quant Type: ISTD
 Cal Date : 19-MAY-2000 15:44 Cal File: S0519CC6.D
 Als bottle: 6 QC Sample: LCSD
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: 1-tclp.sub
 Target Version: 4.03
 Processing Host: PITPC050

PPB
3/26/00

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

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

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng)	FINAL (mg/L)
* 1 1,4-Dichlorobenzene-d4	152	4.975	4.976	(1.000)	141326	40.0000	(a)	
* 2 Naphthalene-d8	136	6.498	6.498	(1.000)	571425	40.0000	(a)	
* 3 Acenaphthene-d10	164	9.511	9.511	(1.000)	301387	40.0000	(a)	
* 4 Phenanthrene-d10	188	12.802	12.802	(1.000)	484922	40.0000	(a)	
* 5 Chrysene-d12	240	19.420	19.431	(1.000)	429789	40.0000	(a)	
* 6 Perylene-d12	264	22.781	22.792	(1.000)	527120	40.0000	(a)	
10 Pyridine	79	1.920	1.931	(0.386)	430031	131.691	0.32923(a)	
28 1,4-Dichlorobenzene	146	4.991	4.997	(1.003)	410063	74.1915	0.18548(a)	
M 34 Cresols, total	100				1135433	229.855	0.57464(a)	
31 2-Methylphenol	108	5.317	5.323	(1.069)	378670	78.9156	0.19729(a)	
35 4-Methylphenol	108	5.488	5.483	(1.103)	756763	150.939	0.37735(a)	
38 Hexachloroethane	117	5.536	5.537	(1.113)	163023	75.8653	0.18966(a)	
39 Nitrobenzene	77	5.654	5.654	(0.870)	471600	75.5473	0.18887(a)	
59 Hexachlorobutadiene	225	6.781	6.781	(1.044)	160350	75.9764	0.18994(a)	

Data File: \\QPITPA02\D\chem\71.i\s052600.b\S0526003.D
 Report Date: 26-May-2000 11:56

Page 2

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
						(ng)	(mg/L)	
=====	=====	==	=====	=====	=====	=====	=====	
69 2,4,6-Trichlorophenol	196	8.095	8.095	(0.851)	194159	79.0731	0.19768(a)	
70 2,4,5-Trichlorophenol	196	8.165	8.176	(0.858)	202796	77.4295	0.19357(a)	
91 2,4-Dinitrotoluene	165	10.034	10.040	(1.055)	204179	66.4679	0.16617(a)	
113 Hexachlorobenzene	284	12.096	12.097	(0.945)	196055	85.2209	0.21305(a)	
117 Pentachlorophenol	266	12.545	12.556	(0.980)	105338	79.4243	0.19856(a)	
\$ 172 Nitrobenzene-d5	82	5.632	5.633	(0.867)	435580	75.3793	0.18845(a)	
\$ 173 2-Fluorobiphenyl	172	8.229	8.229	(0.865)	717334	78.4636	0.19616(a)	
\$ 174 Terphenyl-d14	244	16.867	16.867	(0.869)	764933	79.5886	0.19897(a)	
\$ 175 Phenol-d5	99	4.687	4.687	(0.942)	719259	114.088	0.28522(a)	
\$ 176 2-Fluorophenol	112	3.667	3.672	(0.737)	518674	109.944	0.27486(a)	
\$ 177 2,4,6-Tribromophenol	330	11.247	11.253	(0.879)	148562	123.403	0.30851(a)	
\$ 178 2-Chlorophenol-d4	132	4.783	4.783	(0.961)	542071	122.731	0.30683(a)	
\$ 179 1,2-Dichlorobenzene-d4	152	5.184	5.184	(1.042)	237571	76.5599	0.19140(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
 Below Limit Of Quantitation(BLOQ).

6571358

**GC/MS SEMIVOLATILE
MISCELLANEOUS**

Continuous L-L Extraction Worksheet



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

Began	5-24-00	Time	14:15	Prep Meth #	35-20C	H2SO4	186-15-12	Solvent	MeL/2	Solvent Lot	NaSO4 Lot Number	Clean up Method
Change over	5/25/00	Time	18:30	Analysis	8270	NaOH	9299-07	Solvent Mfg.	BAKER	708-256	BAKER	NA
Completed	5-26-00	Time	0740	Client ID		Extract Vol (mL)	Final Volume mL	pH		Surrogate Lot #	Surr Vol (mL)	Matrix Spike Lot #
1.	GALE190257	BLK	NA	200	1.0	5.2/11	194-176-5	0.5	NA	194-165-6	0.5	NA
2.	↓	LCS	↓	↓	5.2/11	↓	194-165-6	0.5	↓	NA	NA	NA
3.	↓	LCS D.P.	↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
4.	↓	001	↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
5.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
6.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
7.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
8.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
9.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
10.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
11.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
12.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
13.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
14.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
15.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
16.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
17.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
18.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
19.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
20.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
21.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
22.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
23.	↓		↓	↓	5.2/11	↓	194-176-5	0.5	↓	NA	NA	NA
Prep Analyst:	SM	SM	WT	KG	WT	SM	WT	SM	WT	SM	WT	SM
Extract(s)	SM	SM	WT	KG	WT	SM	WT	SM	WT	SM	WT	SM
Extract(s) Received	WT	KG	WT	KG	WT	SM	WT	SM	WT	SM	WT	SM
Extract(s) Relinquished	WT	KG	WT	KG	WT	SM	WT	SM	WT	SM	WT	SM
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst	Location	Date	Time	Analyst	Location
116 Above	5-26-00	0730	KE. J. J.	NA	5-26-00	0740	KE. J. J.	NA	5-26-00	0740	KE. J. J.	NA
117 Above	5-26-00	0730	KE. J. J.	NA	5-26-00	0740	KE. J. J.	NA	5-26-00	0740	KE. J. J.	NA
Batch Number:	0146224	0146281	0146281	0146281	0146281	0146281	0146281	0146281	0146281	0146281	0146281	0146281
Reviewed By	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.	KE. J. J.

TCLP (Method 1311)

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



Serial Number 041 Log Book Number 96-MI-526

QUA-4181
By Dee H. O. Grant Date 5-22-00 Checked by William Doyle
Project Number CE200159 Log Number CE200159 Client Codes 39441, 34156
Date 5-23-00 pH Instrument Hewlett Probe SW062030 Balance C94817
Solution Number 1 - Log Book Number 995404-12 Solution Number 2 - Log Book Number

Fluid Determination

Sample ID	Wgt/Vol	Init. pH	Final pH	Extract Fluid #1, or #2	Conc. HNO ₃ to Acidity (for Metals)	Sample ID	Wgt (g)	Fluid Vol	Final pH After Tumbling
DDIVL	5.00g/16.5ml	8.85	1.56	501#1	0 ml	1. AB-TCLP 5-22-00	100.00g	16.5ml	4.93
DDG18		9.98	1.65		7 ml	2. DDIVL			6.30
DDGIN		9.76	1.52		6 ml	3. DDIVL			6.31
DDGTQ		10.19	1.71		5 ml	4. DDG18			6.15
DDGTW		9.90	1.54		6 ml	5. DDGIN			5.86
					6 ml	6. DDGTQ			6.27
					6 ml	7. DDGTW			5.89

TCLP Extraction

Sample ID	Wgt (g)	Fluid Vol	Final pH After Tumbling
1. AB-TCLP 5-22-00	100.00g	16.5ml	4.93
2. DDIVL			6.30
3. DDIVL			6.31
4. DDG18			6.15
5. DDGIN			5.86
6. DDGTQ			6.27
7. DDGTW			5.89

Extract(s)

(Record line number from above)

Extract(s)	Date	Time	Analyst	Location	Date	Time	Analyst	Location
5-23-00 1155			Dee H. O. Grant	Metals Rm	5-23-00 1200		Dee H. O. Grant	30D

Extract(s) Relinquished

Sample ID	Wgt (g)	Fluid Vol	Final pH After Tumbling
1. AB-TCLP 5-22-00	100.00g	16.5ml	4.93
2. DDIVL			6.30
3. DDIVL			6.31
4. DDG18			6.15
5. DDGIN			5.86
6. DDGTQ			6.27
7. DDGTW			5.89

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

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

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

Room Temp 220

Date/Time On	Date/Time Off	Agitation Apparatus RPMs
5-22-00 1700	5-23-00 0900	30 ± 2
5-22-00 1700	5-23-00 0900	(4.0)
5-22-00 1700	5-23-00 0900	(7.0)
5-22-00 1700	5-23-00 0900	(10.0)

Comments

Sequence Name: D:\HPCHEM\1\SEQUENCE\0051900.S

Comment: STL PITTSBURGH-RUN LOGBOOK hp597371-A
Operator: SAB: 2ul inj (100ul+1ul) int
Data Path: D:\HPCHEM\1\DATA\s051900.b\
Pre-Seq Cmd:
Post-Seq Cmd:

86571361
E270
IS: 194-159-7

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name	
1	Sample	C 1144	1	S0519DF2	DFTPP1	DFTPP050 (25ppb) 194-158-6
2	Sample		2	S0519CC1	EARLY	sstd50(25.0ug/ml) 194-176-9 8270
3	Sample	AOC	4	S0519CC3	EARLY	sstd50(25.0ug/ml) 194-176-9 8270
4	Sample	AOC	3	S0519CC2	EARLY	sstd20(10.0ug/ml) 194-175-10 8270
5	Sample	AOC	5	S0519CC4	EARLY	sstd80(40.0ug/ml) 194-175-6 8270
6	Sample	AOC	6	S0519CC5	EARLY	sstd120(60.0ug/ml) 194-175-13 8270
7	Sample	AOC	7	S0519CC6	EARLY	sstd160(80.0ug/ml) 194-175-14 8270
8	Sample	AOC	8	S0519VER	EARLY	ver050(25.0ug/ml) 194-175-7 8270
9	Sample		1	S0519DF3	DFTPP1	dftpp050(25.0ug/ml) 194-158-6
10	Sample	1708	1	S0519DF4	DFTPP1	dftpp050(25.0ug/ml) 194-158-6
11	Sample	AOC	2	S0519CC7	EARLY	sstd50(25.0ug/ml) 194-176-9 8270
12	Sample	AOC	9	S0519001	LATE	c0e120206-sblk 5/17/00 8270w
13	Sample	AOC	10	S0519002	LATE	c0e120206-lcs 5/17/00 8270w
14	Sample	AOC	11	S0519003	LATE	c0e120206-lcsd 5/17/00 8270w
15	Sample	AOC	12	S0519004	LATE	c0e120206-001 5/17/00 8270w
16	Sample	AOC	13	S0519005	LATE	c0e120206-002 5/17/00 8270w
17	Sample	AOC	14	S0519006	LATE	c0e120206-003 5/17/00 8270w
18	Sample	AOC	15	S0519007	LATE	c0e120206-004 5/17/00 8270w
19	Sample	AOC	16	S0519008	LATE	c0e120206-005 5/17/00 8270w
20	Sample	AOC	17	S0519009	LATE	c0e120206-006 5/17/00 8270w
21	Sample	AOC	18	S0519010	LATE	c0e120206-007 5/17/00 8270w
22	Sample	AOC	19	S0519011	LATE	c0e120206-008 5/17/00 8270w
23	Sample	AOC	20	S0519012	LATE	c0e120206-009 5/17/00 8270w
24	Sample	AOC	21	S0519013	LATE	c0e120236-001 x50 5/17/00 8270
25	Sample	AOC	22	S0519014	LATE	c0e120236-002 x50 5/17/00 8270
26	Sample	AOC	23	S0519015	LATE	c0e120236-003 x50 5/17/00 8270
27	Sample	AOC	24	S0519016	LATE	c0e120236-004 x50 5/17/00 8270
28	Sample	AOC	25	S0519017	LATE	c0e120236-005 5/17/00 8270w
29	Sample	AOC	26	S0519018	LATE	c0e120236-006 5/17/00 8270w
30						

Sequence Name: D:\HPCHEM\1\SEQUENCE\S052600.S
6571362 Comment: STL PITT HP597371A LOG 2ul inj (100ul+1ul IS)
Operator: 045183
Data Path: D:\HPCHEM\1\DATA\s052600.b\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Handwritten:
IS = 144-170-1 SM
IS = 144-174-1 E22

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	S0526DF1	DFTPPSIM	DFTPP050 (25ppb) 194-158-6
2	Sample	1	S0526DF2	DFTPPSIM	DFTPP050 (25ppb) 194-158-6
3	Sample	1	S0526DF3	DFTPP1	DFTPP050 (25ppb) 194-158-6
4	Sample	2	S0526CC2	SIMEX	sstd4.0(2.0ug/ml) 194-177-2 s
5	Sample	3	S0526CC3	EARLY	sstd50(25 ug/ml) 194-176-9 82
6	Sample	4	S0526001	EARLY	C0E190257-sblk 5/24/00 8270tc
7	Sample	5	S0526002	EARLY	C0E190257-lcs 5/24/00 8270tcl
8	Sample	6	S0526003	EARLY	C0E190257-lcsd 5/24/00 8270tc
9	Sample	7	S0526004	EARLY	C0E190257-001 5/24/00 8270tcl
10	Sample	8	S0526005	SIMEX	C0E170258-003 5/23/00 8270sim
11	Sample	9	S0526006	SIMEX	C0E170258-004 5/23/00 8270sim
12	Sample	10	S0526007	LATE	C0E160242-sblk 5/22/00 8270w
13	Sample	11	S0526008	LATE	C0E160242-lcs 5/22/00 8270w
14	Sample	12	S0526009	LATE	C0E160242-lcsd 5/22/00 8270w
15	Sample	13	S0526010	LATE	C0E160242-001 5/22/00 8270w
16	Sample	14	S0526011	LATE	C0E160242-002 5/22/00 8270w
17	Sample	15	S0526012	LATE	C0E160242-003 5/22/00 8270w
18	Sample	16	S0526013	LATE	C0E160242-004 5/22/00 8270w
19	Sample	17	S0526014	LATE	C0E160242-005 5/22/00 8270w
20	Sample	18	S0526015	LATE	C0E160242-006 5/22/00 8270w
21	Sample	19	S0526016	LATE	C0E160242-007 5/22/00 8270w
22	Sample	20	S0526017	LATE	C0E160242-008 5/22/00 8270w
23	Sample	21	S0526018	LATE	C0E160242-009 5/22/00 8270w
24	Sample	22	S0526019	LATE	C0E180204-001 5/22/00 8270w
25	Sample	23	S0526020	LATE	C0E170151-001 x20 5/22/00 827
26	Sample	24	S0526021	LATE	C0E170159-001 x20 5/22/00 827

PSR024 5/24/00 6:01:28 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: TROUTB

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

<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>
4A 300	DDFV6-1-03	— — —	236324	399411	A-59-QL	COE190257	001		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

Ken Suh.
B Trout

B Trout
Ken Suh.

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

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

6571364

PESTICIDE DATA

**PESTICIDE
QC SUMMARY**

6571366

SW846 8081A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

QESSDG:

Lot #: C0E190257

	CLIENT ID.	SRG01	SRG02	TOT OUT
	=====	=====	=====	=====
01	DF/S1/0138/GRAB/001	96	88	00
02	METHOD BLK. DDKW7101	98	65	00
03	LCS DDKW7102	96	80	00
04	DF/S1/0138/GRAB/001 D	96	78	00
05	DF/S1/0138/GRAB/001 S	96	78	00

SURROGATES

SRG01 = Decachlorobiphenyl
SRG02 = Tetrachloro-m-xylene

QC LIMITS

(10-147)
(39-130)

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

FORM II

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E230000

WO #: DDKW7102

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
Lindane	0.00250	0.00165	66	49 - 137	
Heptachlor	0.00250	0.00192	77	57 - 124	
Heptachlor epoxide	0.00250	0.00201	80	53 - 135	
Endrin	0.00250	0.00205	82	46 - 137	
Methoxychlor	0.00250	0.00222	89	12 - 154	

NOTES (S) :

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

6571368

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610P

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
Lindane	0.00250	ND	0.00162	65	30 - 148	
Heptachlor	0.00250	ND	0.00188	75	25 - 135	
Heptachlor epoxide	0.00250	ND	0.00200	80	38 - 138	
Endrin	0.00250	ND	0.00208	83	28 - 148	
Methoxychlor	0.00250	ND	0.00226	90	13 - 154	

NOTES (S) :

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

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

COMMENTS:

FORM III

SW846 8081A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Level: (low/med) LOW

Lot #: C0E190257

WO #: DDFV610Q

BATCH: 0144491

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	REC	QUAL
Lindane	0.00250	0.00164	65	1.1	22	30 - 148	
Heptachlor	0.00250	0.00190	76	0.84	32	25 - 135	
Heptachlor epoxide	0.00250	0.00200	80	0.25	31	38 - 138	
Endrin	0.00250	0.00210	84	1.0	40	28 - 148	
Methoxychlor	0.00250	0.00226	91	0.040	29	13 - 154	

NOTES (S) :

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

* Values outside of QC limits

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

COMMENTS:

6571370

SW846 8081A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDKW7101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

SDG Number:

Lab File ID: d-a2075.d

Lot Number: C0E190257

Matrix: SOLID

Extraction Method: 1311/3510

Date Analyzed(1): 05/23/00

Date Extracted: 05/23/00

Date Analyzed(2): N/A

Time Analyzed(1): 19:47

Time Analyzed(2): N/A

Instrument ID(1): G/H

Instrument ID(2): N/A

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

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED (1)	DATE ANALYZED (2)
01	DF/S1/0138/GRAB/001	DDFV610P S	05/23/00	N/A
02	DF/S1/0138/GRAB/001	DDFV610Q D	05/23/00	N/A
03	DF/S1/0138/GRAB/001	DDFV6104	05/23/00	N/A
04	CHECK SAMPLE	DDKW7102 C	05/23/00	N/A
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

**PESTICIDE
SAMPLE DATA**

UXB INTERNATIONAL

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV6104

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2072.d
 Report Date: 26-May-2000 07:17

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2072.d
 Lab Smp Id: DDFV6104 Client Smp ID: DF/S1/0138/GRAB/001
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DDFV6104,2260-G.b,,PEST.sub,,,
 Misc Info : 190257001
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

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

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

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC				Compound Not Detected.		
4 HEXACHLOROBENZENE	6.613	6.650	-0.037	2403		(a)
6 gamma-BHC (Lindane)				Compound Not Detected.		
7 beta-BHC				Compound Not Detected.		
9 Chlordane				Compound Not Detected.		
10 Heptachlor				Compound Not Detected.		
8 delta-BHC				Compound Not Detected.		
11 Aldrin				Compound Not Detected.		
12 Heptachlor epoxide				Compound Not Detected.		
13 gamma-Chlordane				Compound Not Detected.		
14 alpha-Chlordane				Compound Not Detected.		
15 Endosulfan I				Compound Not Detected.		
16 4,4'-DDE				Compound Not Detected.		
17 Dieldrin	14.320	14.320	0.000	3279	0.000942	0.00009418(a)
20 Endrin	14.853	14.893	-0.040	2001	0.000664	0.00006643(a)
18 Toxaphene				Compound Not Detected.		

Data File: /var/chem/gc4.i/2260-G.b/d-a2072.d
 Report Date: 26-May-2000 07:17

Compounds	RT	EXP RT	DLT RT	RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
						(ng)	(mg/L)
=====	==	=====	=====		=====	=====	=====
21 4,4'-DDD	15.053	15.047	0.006	2635	0.000964	0.00009637(a)	
22 Endosulfan II				Compound Not Detected.			
23 4,4'-DDT				Compound Not Detected.			
24 Endrin aldehyde				Compound Not Detected.			
26 Endosulfan sulfate				Compound Not Detected.			
25 Methoxychlor				Compound Not Detected.			
27 Endrin ketone				Compound Not Detected.			
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	49880	0.01760	0.001760(aR)	
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007	35126	0.01930	0.001930(aR)	

QC Flag Legend

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

Data File: /var/chem/ec4.1/2260-G.b/d-a2072.d

Date : 23-MAY-2000 19:47

Client ID: DF/S1/0438/GRAB/001

Sample Info: DDFV6104, 2260-G.b, PEST, sub,,

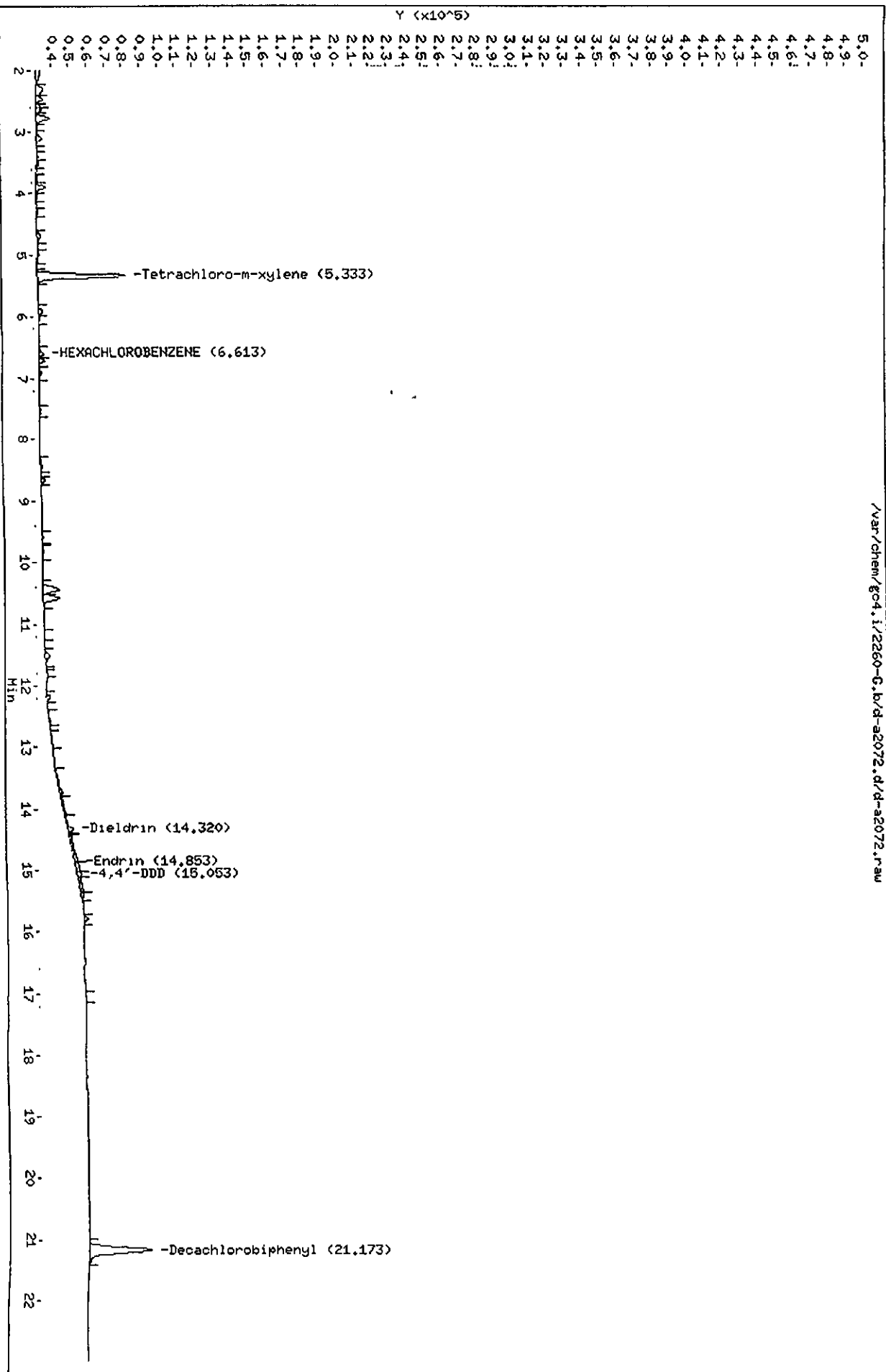
Volume Injected (uL): 1.0

Column phase: DB608

Instrument: ec4.1

Operator: 1891

Column diameter: 0.53



6571376

**PESTICIDE
CALIBRATION DATA**

Report Date : 26-May-2000 06:57

6D
H2889046
DB608

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc4.i/2260-G.b/PESTA.m
 Quant Method : ESTD Target Version : 3.40
 Last Update : 26-May-2000 06:57 Number of CpnDs : 30
 Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events

Values

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

Compound	RT	RT Window	RF
\$ 1 Tetrachloro-m-xylene	5.333	5.283-5.383	2.835e+06
2 Diallate A	6.340	6.290-6.390	
3 Diallate B	6.620	6.570-6.670	
4 HEXACHLOROBENZENE	6.650	6.600-6.700	
5 alpha-BHC	7.587	7.537-7.637	3.426e+06
6 gamma-BHC (Lindane)	8.967	8.917-9.017	3.202e+06
7 beta-BHC	9.247	9.197-9.297	1.732e+06
8 delta-BHC	10.680	10.630-10.730	2.978e+06
9 Chlordane	9.573	9.523-9.623	8.156e+04
	10.193	10.143-10.243	1.341e+05
	13.407	13.357-13.457	3.362e+05
	13.727	13.677-13.777	2.573e+05
10 Heptachlor	10.193	10.143-10.243	2.505e+06
11 Aldrin	11.400	11.350-11.450	2.556e+06
12 Heptachlor epoxide	13.047	12.997-13.097	3.206e+06
13 gamma-Chlordane	13.407	13.357-13.457	3.411e+06
14 alpha-Chlordane	13.727	13.677-13.777	3.506e+06
15 Endosulfan I	13.773	13.723-13.823	3.243e+06
16 4,4'-DDE	14.187	14.137-14.237	3.514e+06
17 Dieldrin	14.320	14.270-14.370	3.481e+06
18 Toxaphene	15.067	15.017-15.117	4.601e+04
	15.213	15.163-15.263	6.095e+04
	15.567	15.517-15.617	4.279e+04
	16.700	16.650-16.750	4.732e+04

6571378

Report Date : 26-May-2000 06:57

6D
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DB608

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc4.i/2260-G.b/PESTA.m

Compound	RT	RT Window	RF
19 Isodrin	12.613	12.563-12.663	
20 Endrin	14.893	14.843-14.943	3.012e+06
21 4,4'-DDD	15.047	14.997-15.097	2.734e+06
22 Endosulfan II	15.180	15.130-15.230	3.027e+06
23 4,4'-DDT	15.527	15.477-15.577	2.687e+06
24 Endrin aldehyde	15.720	15.670-15.770	2.413e+06
25 Methoxychlor	17.200	17.150-17.250	1.213e+06
26 Endosulfan sulfate	15.940	15.890-15.990	2.461e+06
27 Endrin ketone	17.607	17.557-17.657	2.507e+06
28 Chlorobenzilate	15.313	15.263-15.363	
29 Kepone	15.533	15.483-15.583	
\$ 30 Decachlorobiphenyl	21.180	21.130-21.230	1.820e+06

Report Date : 26-May-2000 06:57

65
HP589046
03608

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 23-MAY-2000 19:47
 End Cal Date : 23-MAY-2000 19:47
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc4.i/2260-G.b/PESTA.m
 Cal Date : 26-May-2000 06:57 eppinged
 Curve Type : Average

Calibration File Names:

Level 1: /var/chem/gc4.i/2260-G.b/d-a2064.d
 Level 2: /var/chem/gc4.i/2260-G.b/d-a2065.d
 Level 3: /var/chem/gc4.i/2260-G.b/d-a2066.d
 Level 4: /var/chem/gc4.i/2260-G.b/d-a2067.d
 Level 5: /var/chem/gc4.i/2260-G.b/d-a2068.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Diallylate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 HEXACHLOROBENZENE	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 alpha-BHC	3160400	3260000	3447120	3627300	3635850	3426134	6.245
6 gamma-BHC (Lindane)	3058200	3101500	3256040	3335760	3260610	3202422	3.662
7 beta-BHC	1813600	1844000	1713800	1698380	1591000	1732156	5.812
8 delta-BHC	2587000	2825200	2963960	3272900	3242030	2978218	9.690
9 Chlordane(1)	+++++	+++++	81556	+++++	+++++	81556	0.000
(2)	+++++	+++++	134060	+++++	+++++	134060	0.000
(3)	+++++	+++++	336232	+++++	+++++	336232	0.000
(4)	+++++	+++++	257348	+++++	+++++	257348	0.000
10 Heptachlor	2556800	2504900	2469800	2491500	2501280	2504856	1.281
11 Aldrin	2393000	2499300	2508080	2684100	2693080	2555512	5.075
12 Heptachlor epoxide	3017600	3180500	3138680	3373220	3321500	3206300	4.465
13 gamma-Chlordane	3237600	3463000	3369680	3546020	3438420	3410944	3.389
14 alpha-Chlordane	3413800	3551000	3456280	3601660	3505920	3505732	2.123
15 Endosulfan I	3203600	3211000	3234120	3304020	3262230	3242994	1.267
16 4,4'-DDE	3190400	3444100	3472040	3755780	3706680	3513800	6.473
17 Dieldrin	3200000	3320900	3507400	3704020	3675060	3481476	6.304
18 Toxaphene(1)	+++++	+++++	46007	+++++	+++++	46007	0.000
(2)	+++++	+++++	60946	+++++	+++++	60946	0.000
(3)	+++++	+++++	42794	+++++	+++++	42794	0.000
(4)	+++++	+++++	47322	+++++	+++++	47322	0.000
19 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Endrin	2906400	2918100	2993240	3118040	3125280	3012212	3.498
21 4,4'-DDD	2607000	2651600	2739800	2822600	2850690	2734338	3.854

6571380

Report Date : 26-May-2000 06:57

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DB608

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 23-MAY-2000 19:47
 End Cal Date : 23-MAY-2000 19:47
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc4.i/2260-G.b/PESTA.m
 Cal Date : 26-May-2000 06:57 eppinged
 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	2798200	2946300	3012000	3208220	3172330	3027410	5.553
23 4,4'-DDT	2505600	2590100	2679240	2816460	2845400	2687360	5.399
24 Endrin aldehyde	2338600	2438000	2377720	2466520	2446460	2413460	2.211
25 Methoxychlor	1213600	1201000	1215420	1237240	1199420	1213336	1.251
26 Endosulfan sulfate	2241600	2423500	2420360	2618460	2598670	2460518	6.261
27 Endrin ketone	2294800	2441000	2472360	2676780	2647930	2506574	6.285
28 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 1 Tetrachloro-m-xylene	3100000	3005100	2816160	2718560	2532930	2834550	7.973
\$ 30 Decachlorobiphenyl	1939400	1930200	1814960	1752880	1660940	1819676	6.516

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

6571381

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STL-PIT

Case No.:

SAS No.: 40325

SDG No.: SDGA18738

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 05/23/00 05/23/00

EPA Sample No. (PIBLK): _____

Date Analyzed : _____

Lab Sample ID (PIBLK): _____

Time Analyzed : _____

EPA Sample No. (PEM):

Date Analyzed : 05/23/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 1947

PEM COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
=====	=====	=====	=====	=====	=====	=====
Endrin	14.89	14.84	14.94	0.02450	0.02500	-2.0
4,4'-DDT	15.52	15.48	15.58	0.02543	0.02500	1.7

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

0.00

Endrin % breakdown (1):

5.7
~~7.29~~

Combined % breakdown (1):

~~7.29~~

5.7

DE
57600

6571382

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: SDGA18738

GC Column: DB608

ID: 0.53

(mm)

Init. Calib. Date(s): 05/23/00 05/23/00

EPA Sample No. (PIBLK): _____

Date Analyzed : _____

Lab Sample ID (PIBLK): _____

Time Analyzed : _____

EPA Sample No. (PEM): _____

Date Analyzed : 05/23/00

Lab Sample ID (PEM): EVALB

Time Analyzed : 1947

PEM COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Endrin	14.89	14.84	14.94	0.02378	0.02500	-4.9
4,4'-DDT	15.52	15.48	15.58	0.02540	0.02500	1.6

4,4'-DDT % breakdown (1): 0.00

Endrin % breakdown (1):

Combined % breakdown (1):

~~8.85~~

7.1

DE
526.00~~7.1~~
~~8.85~~

Data File: /var/chem/gc4.i/2260-G.b/d-a2077.d
Report Date: 26-May-2000 07:09

7E HP589046
DB608

6571383

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
Lab File ID: d-a2077.d
Analysis Type:
Lab Sample ID: MEDA
Quant Type: ESTD

Injection Date: 23-MAY-2000 19:47
Init. Calibration Date(s): 05/23/0 05/23/0
Init. Calibration Times: 19:47 19:47
Method File: /var/chem/gc4.i/2260-G.b/PESTA.m

COMPOUND	RRF	RFO	MIN	MAX
1 Tetrachloro-m-xylene	2834550.000	2865760.000	0.000	-1.1 15.0
5 alpha-BHC	3426134.000	3517600.000	0.010	-2.7 15.0
6 gamma-BHC (Lindane)	3202422.000	3279080.000	0.010	-2.4 15.0
10 Heptachlor	2504856.000	2490960.000	0.010	0.6 15.0
15 Endosulfan I	3242994.000	3285560.000	0.010	-1.3 15.0
17 Dieldrin	3481476.000	3551960.000	0.010	-2.0 15.0
20 Endrin	3012212.000	3137480.000	0.010	-4.2 15.0
21 4,4'-DDD	2734338.000	2801720.000	0.010	-2.5 15.0
23 4,4'-DDT	2687360.000	2776680.000	0.010	-3.3 15.0
25 Methoxychlor	1213336.000	1245040.000	0.010	-2.6 15.0
30 Decachlorobiphenyl	1819676.000	1841920.000	0.010	-1.2 15.0

6571384

Data File: /var/chem/gc4.i/2260-G.b/d-a2078.d
Report Date: 26-May-2000 07:09

7E HP589046
DB608

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc4.i
Lab File ID: d-a2078.d
Analysis Type:
Lab Sample ID: MEDB
Quant Type: ESTD

Injection Date: 23-MAY-2000 19:47
Init. Calibration Date(s): 05/23/00 05/23/00
Init. Calibration Times: 19:47 19:47
Method File: /var/chem/gc4.i/2260-G.b/PESTA.m

COMPOUND	RRF	RFO	MIN	RRF	%D	MAX
-----	-----	-----	-----	-----	-----	-----
11 Aldrin	2555512.000	2577000.000	0.010	-0.8	15.0	
7 beta-BHC	1732156.000	1761320.000	0.010	-1.7	15.0	
8 delta-BHC	2978218.000	3046560.000	0.010	-2.3	15.0	
12 Heptachlor epoxide	3206300.000	3259560.000	0.010	-1.7	15.0	
13 gamma-Chlordane	3410944.000	3448480.000	0.010	-1.1	15.0	
14 alpha-Chlordane	3505732.000	3571760.000	0.010	-1.9	15.0	
16 4,4'-DDE	3513800.000	3586840.000	0.010	-2.1	15.0	
22 Endosulfan II	3027410.000	3160600.000	0.010	-4.4	15.0	
24 Endrin aldehyde	2413460.000	2470240.000	0.010	-2.4	15.0	
26 Endosulfan sulfate	2460518.000	2528360.000	0.010	-2.8	15.0	
27 Endrin ketone	2506574.000	2614320.000	0.010	-4.3	15.0	

Data File: /var/chem/gc4.i/2260-G.b/d-a2056.d
 Report Date: 26-May-2000 07:11

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2056.d
 Lab Smp Id: EVALB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : EVALB, 2260-G.b, , EVALBR.sub, , 3, 1
 Misc Info : 190-88-8
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1 QC Sample: PEM
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: EVALBR.sub
 Target Version: 3.40

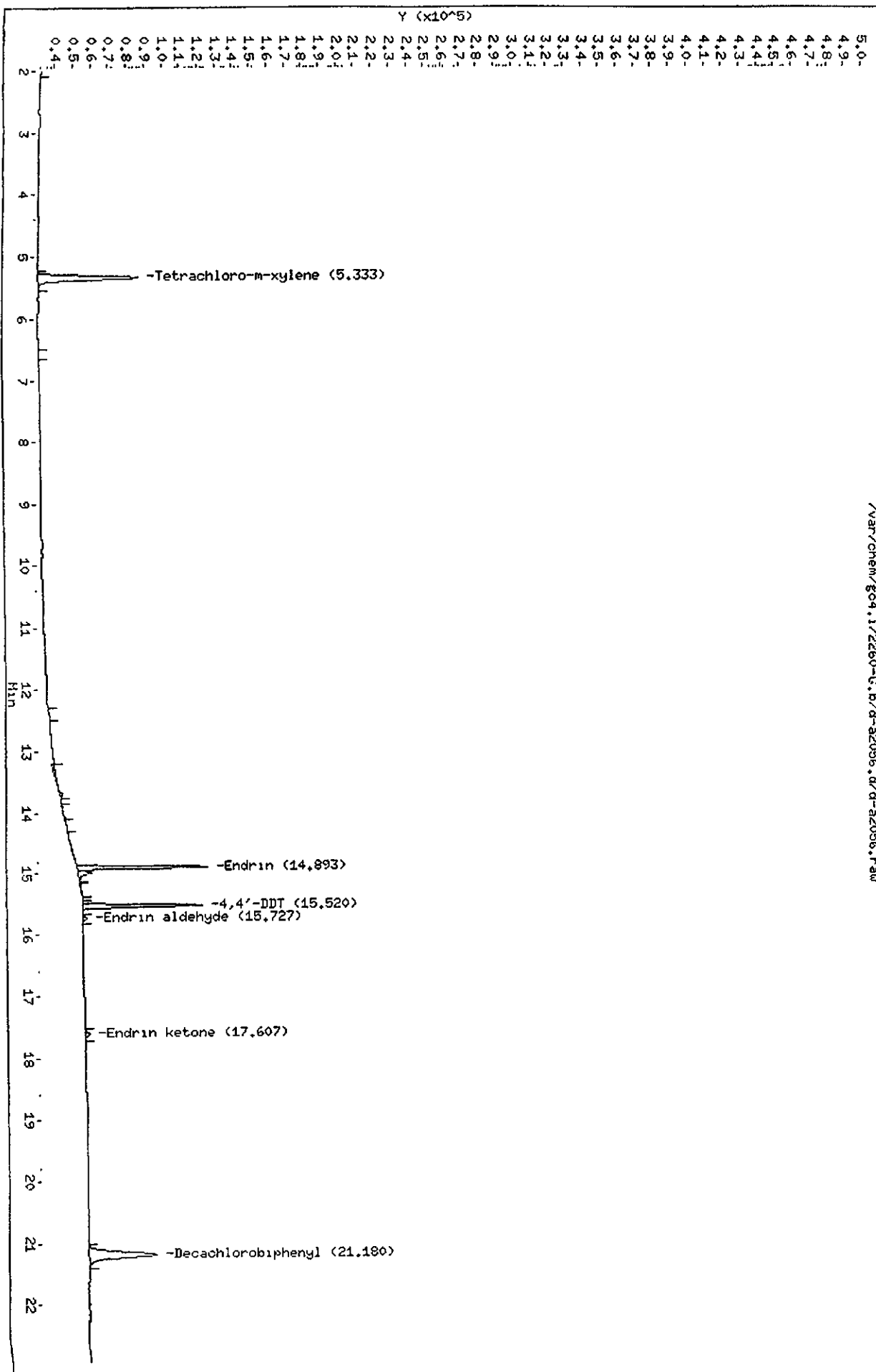
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (ng)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	56651	0.01999	0.01998(R)
16 4,4'-DDE	Compound Not Detected					
20 Endrin	14.893	14.893	0.000	73812	0.02450	0.02450
21 4,4'-DDD	Compound Not Detected					
23 4,4'-DDT	15.520	15.527	-0.007	68350	0.02543	0.02543
24 Endrin aldehyde	15.727	15.720	0.007	2284	0.000946	0.0009464
27 Endrin ketone	17.607	17.607	0.000	2197	0.000876	0.0008765
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	37824	0.02079	0.02079(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

DOT 07%
 ENDRIN 5.7%

$$\text{Endrin Recovery} = \frac{(2284 + 2197)}{(2284 + 2197 + 73812)} \times 100 = 3.7\%$$



Data File: /var/chem/ec4.1/2260-G.b/d-d-a2056.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: EVALB,2260-G.b.,EVALBR,sub,,3,1
Column phase: DB608

Instrument: EC4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/2260-G.b/d-a2057.d
 Report Date: 26-May-2000 06:57

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2057.d
 Lab Smp Id: MEDTOX
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDTOX,2260-G.b,,1-TOX.sub,,1,3
 Misc Info : 190-84-13
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2057.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 1-TOX.sub
 Target Version: 3.40

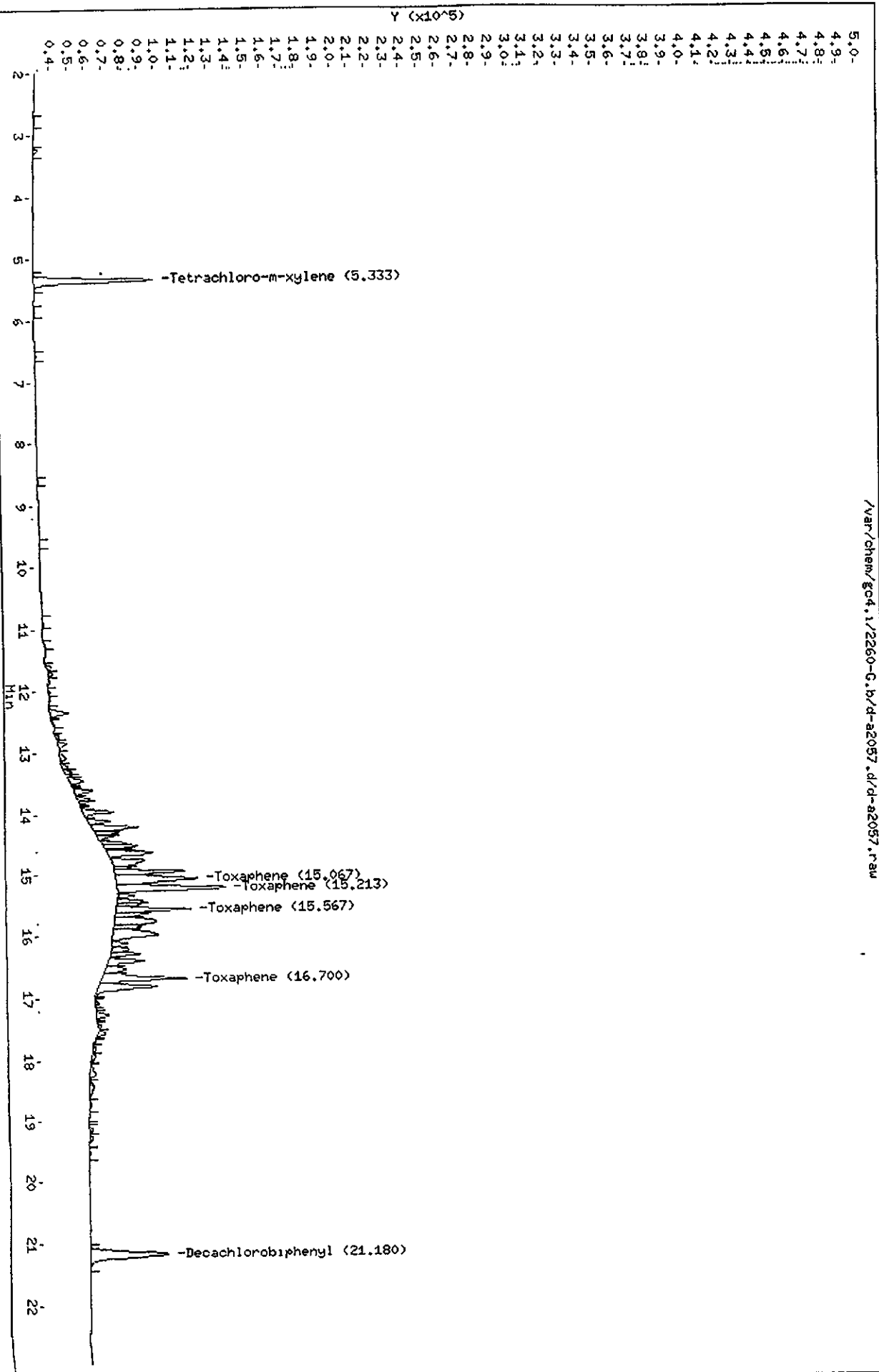
Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
18 Toxaphene	15.067	15.067	0.000	46007	1.00000	1.000 (M)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	68376	0.02500	0.02500 (M)
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	44294	0.02500	0.02500

QC Flag Legend

M - Compound response manually integrated.

Data File: /var/chem/gc4.1/2260-G.b/d-a2057.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HEDTOX,2260-G.b.,1-TOX.sub.,1,3
Column phase: DB608

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



Data File: /var/chem/gc4.i/2260-G.b/d-a2058.d
 Report Date: 26-May-2000 06:57

STL-PITTSBURGH

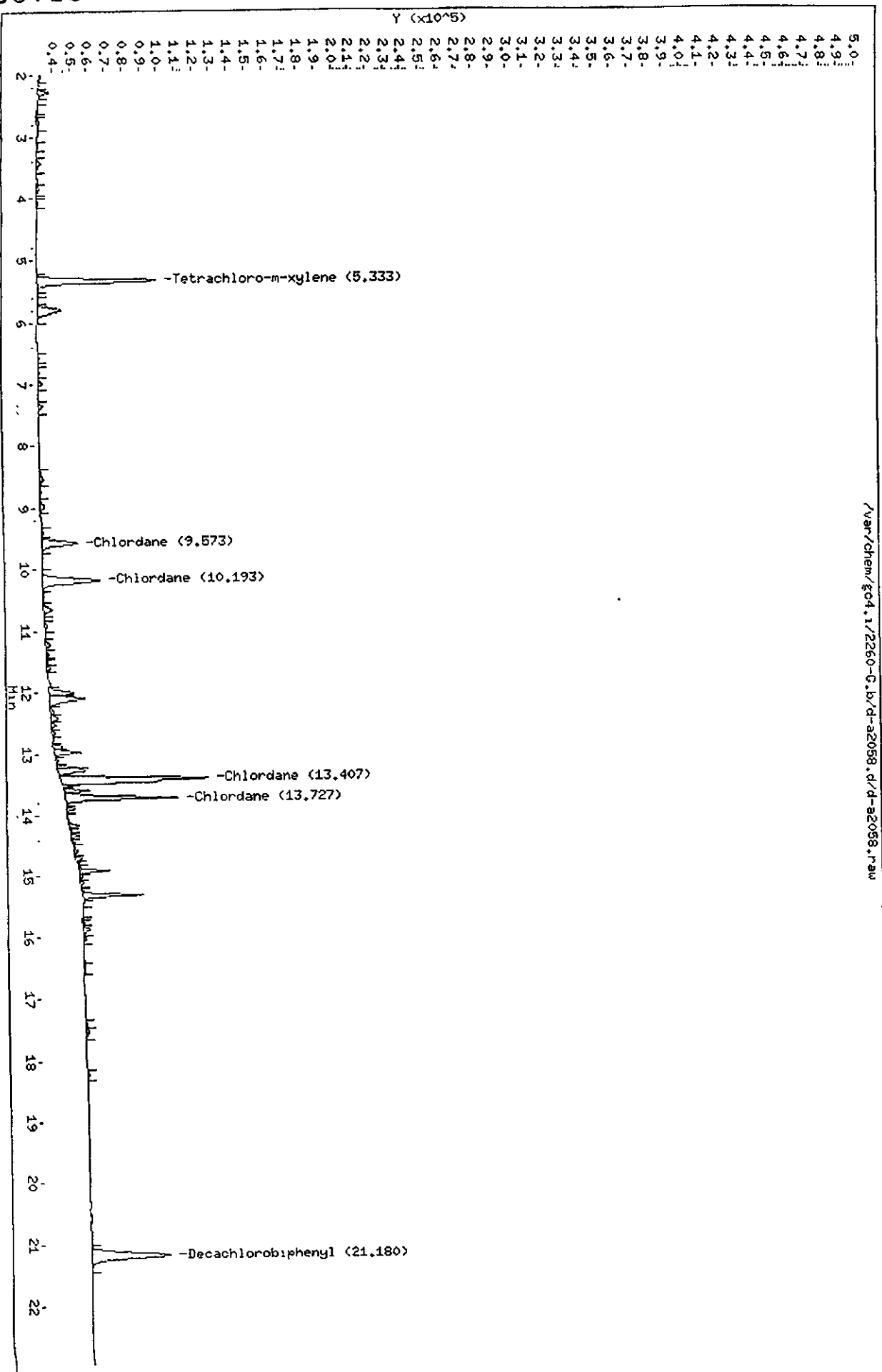
Data file : /var/chem/gc4.i/2260-G.b/d-a2058.d
 Lab Smp Id: MEDCHLOR
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDCHLOR, 2260-G.b, , 2-CHLO.sub, , 1, 3
 Misc Info : 190-85-10
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2058.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 (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
9 Chlordane	9.573	9.573	0.000	20389	0.25000	0.2500 (M)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	68262	0.02500	0.02500 (M)
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	45026	0.02500	0.02500 (M)

QC Flag Legend

M - Compound response manually integrated.

6571390



Data File: /var/chem/gc4.1/2260-G.b/d-a2058.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HEDCHLOR,2260-G.b,,2-CHLD,sub,,1,3
Column phase: DB608

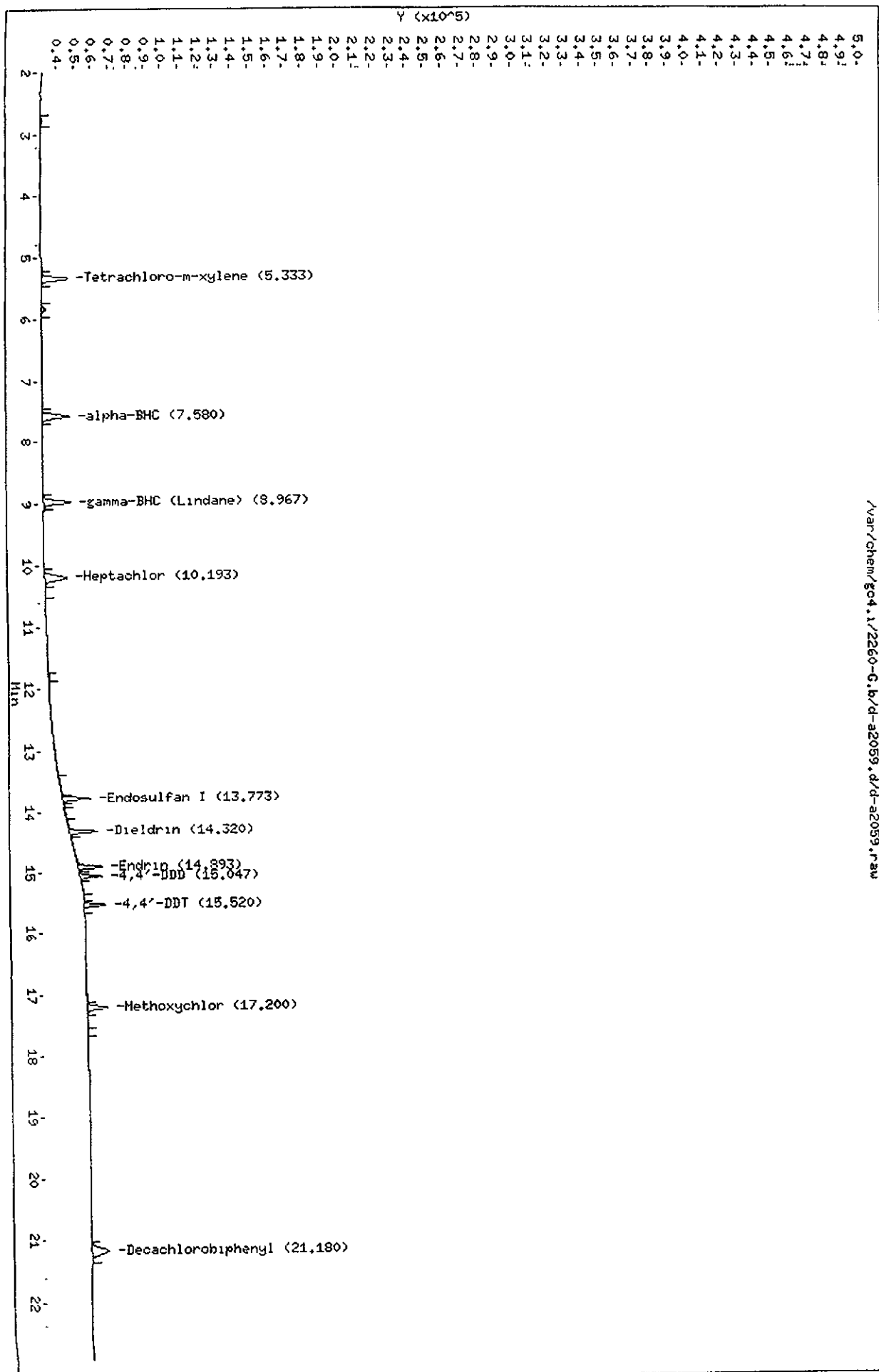
Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/2260-G.b/d-a2059.d
 Report Date: 26-May-2000 06:57

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2059.d
 Lab Smp Id: LOWA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : LOWA,2260-G.b,,3-INDA.sub,,1,1
 Misc Info : 190-84-1
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2059.d
 Als bottle: 1 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	15500	0.00500	0.005317
5 alpha-BHC	7.580	7.587	-0.007	15802	0.00500	0.005000
6 gamma-BHC (Lindane)	8.967	8.967	0.000	15291	0.00500	0.005000
10 Heptachlor	10.193	10.193	0.000	12784	0.00500	0.005000
15 Endosulfan I	13.773	13.773	0.000	16018	0.00500	0.005000
17 Dieldrin	14.320	14.320	0.000	16000	0.00500	0.005000
20 Endrin	14.893	14.893	0.000	14532	0.00500	0.005000
21 4,4'-DDD	15.047	15.047	0.000	13035	0.00500	0.005000
23 4,4'-DDT	15.520	15.527	-0.007	12528	0.00500	0.005000
25 Methoxychlor	17.200	17.200	0.000	12136	0.01000	0.010000
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	9697	0.00500	0.005185



Data File: /var/chem/gc04.1/2260-G.b/d-a2059.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: LOM, 2260-G.b, 3-IND, sub, 1,1
Column phase: DB608

/var/chem/gc04.1/2260-G.b/d-a2059.d/d-a2059.raw

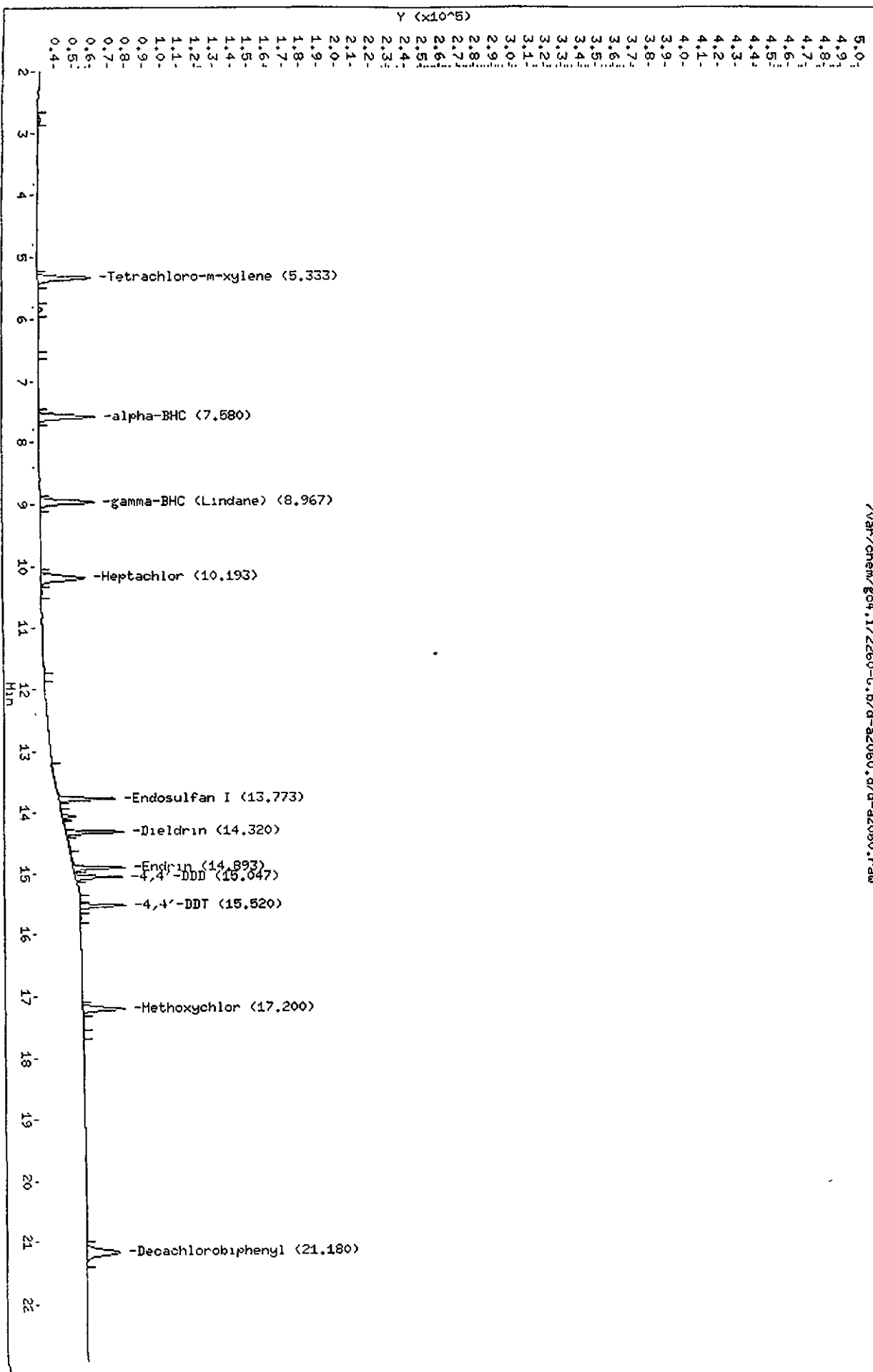
Instrument: gc04.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/2260-G.b/d-a2060.d
 Report Date: 26-May-2000 06:57

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2060.d
 Lab Smp Id: MLOWA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MLOWA,2260-G.b,,3-INDA.sub,,1,2
 Misc Info : 190-84-2
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2060.d
 Als bottle: 1 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ng)	(ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	30051	0.01000	0.01020
5 alpha-BHC	7.580	7.587	-0.007	32600	0.01000	0.01016
6 gamma-BHC (Lindane)	8.967	8.967	0.000	31015	0.01000	0.01007
10 Heptachlor	10.193	10.193	0.000	25049	0.01000	0.009897
15 Endosulfan I	13.773	13.773	0.000	32110	0.01000	0.01001
17 Dieldrin	14.320	14.320	0.000	33209	0.01000	0.01018
20 Endrin	14.893	14.893	0.000	29181	0.01000	0.01002
21 4,4'-DDD	15.047	15.047	0.000	26516	0.01000	0.01008
23 4,4'-DDT	15.520	15.527	-0.007	25901	0.01000	0.01016
25 Methoxychlor	17.200	17.200	0.000	24020	0.02000	0.01990
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	19302	0.01000	0.01021



Data File: /var/chem/gc4.1/2260-G.b/d-a2060.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HLOMA,2260-G.b,,3-INDA.sub,,1,2
Column phase: DB608

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2061.d
 Report Date: 26-May-2000 06:57

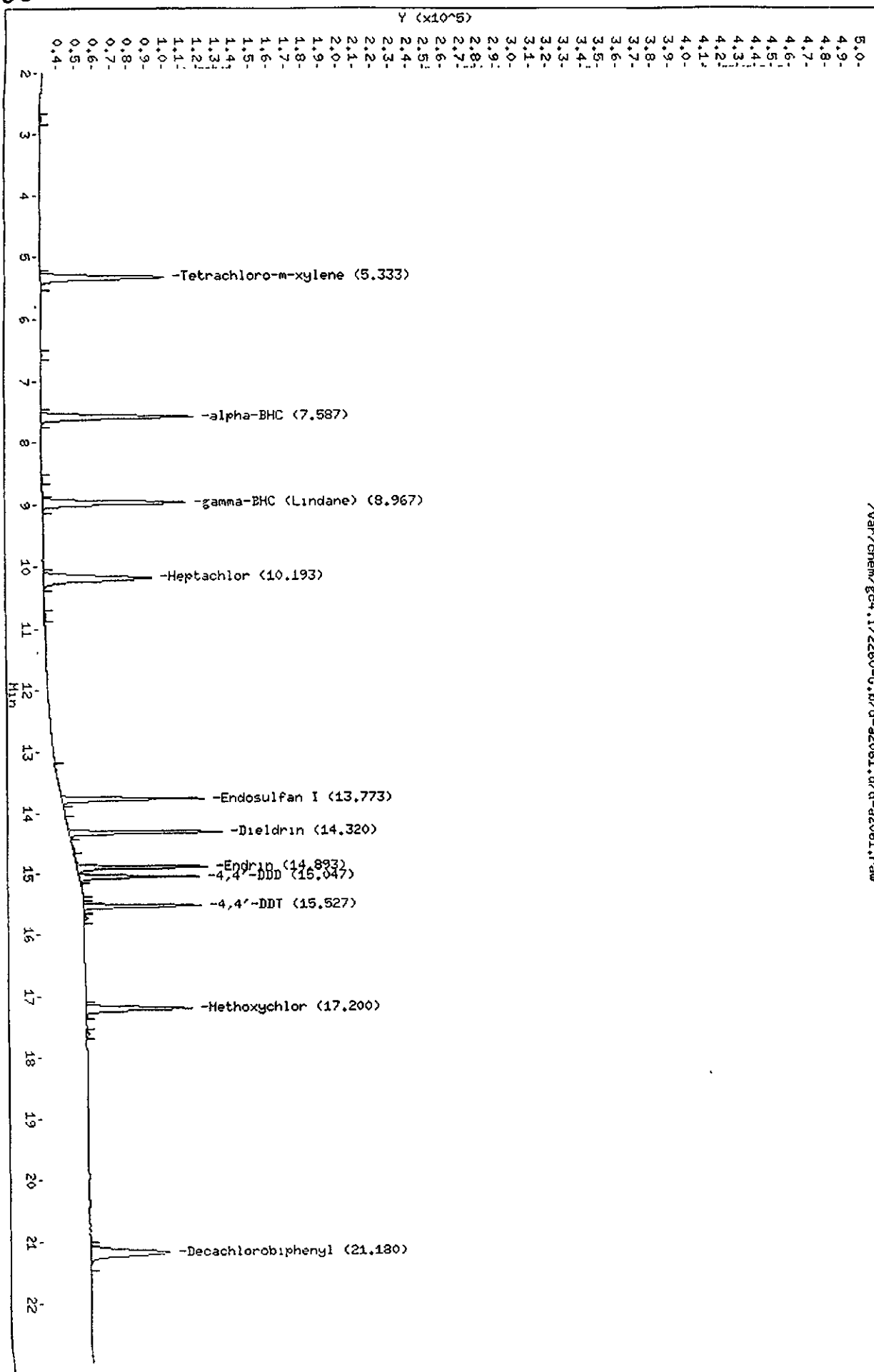
STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2061.d
 Lab Smp Id: MEDA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDA, 2260-G.b, , 3-INDA.sub, , 1, 3
 Misc Info : 190-84-3
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2061.d
 Als bottle: 1 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	**	*****	*****	*****	*****	*****
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	70404	0.02500	0.02368(M)
5 alpha-BHC	7.587	7.587	0.000	86178	0.02500	0.02620(M)
6 gamma-BHC (Lindane)	8.967	8.967	0.000	81401	0.02500	0.02594(M)
10 Heptachlor	10.193	10.193	0.000	61745	0.02500	0.02459(M)
15 Endosulfan I	13.773	13.773	0.000	80853	0.02500	0.02514
17 Dieldrin	14.320	14.320	0.000	87685	0.02500	0.02623
20 Endrin	14.893	14.893	0.000	74831	0.02500	0.02546
21 4,4'-DDD	15.047	15.047	0.000	68495	0.02500	0.02569
23 4,4'-DDT	15.527	15.527	0.000	66981	0.02500	0.02584
25 Methoxychlor	17.200	17.200	0.000	60771	0.05000	0.05022
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	45374	0.02500	0.02394

QC Flag Legend

M - Compound response manually integrated.



Data File: /var/chem/ec4.1/2260-G.b/d-a2061.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HEDA, 2260-G.b./3-INDA, sub., 1,3
Column phase: DB608

Instrument: ec4.1
Operator: 1891
Column diameter: 0.53

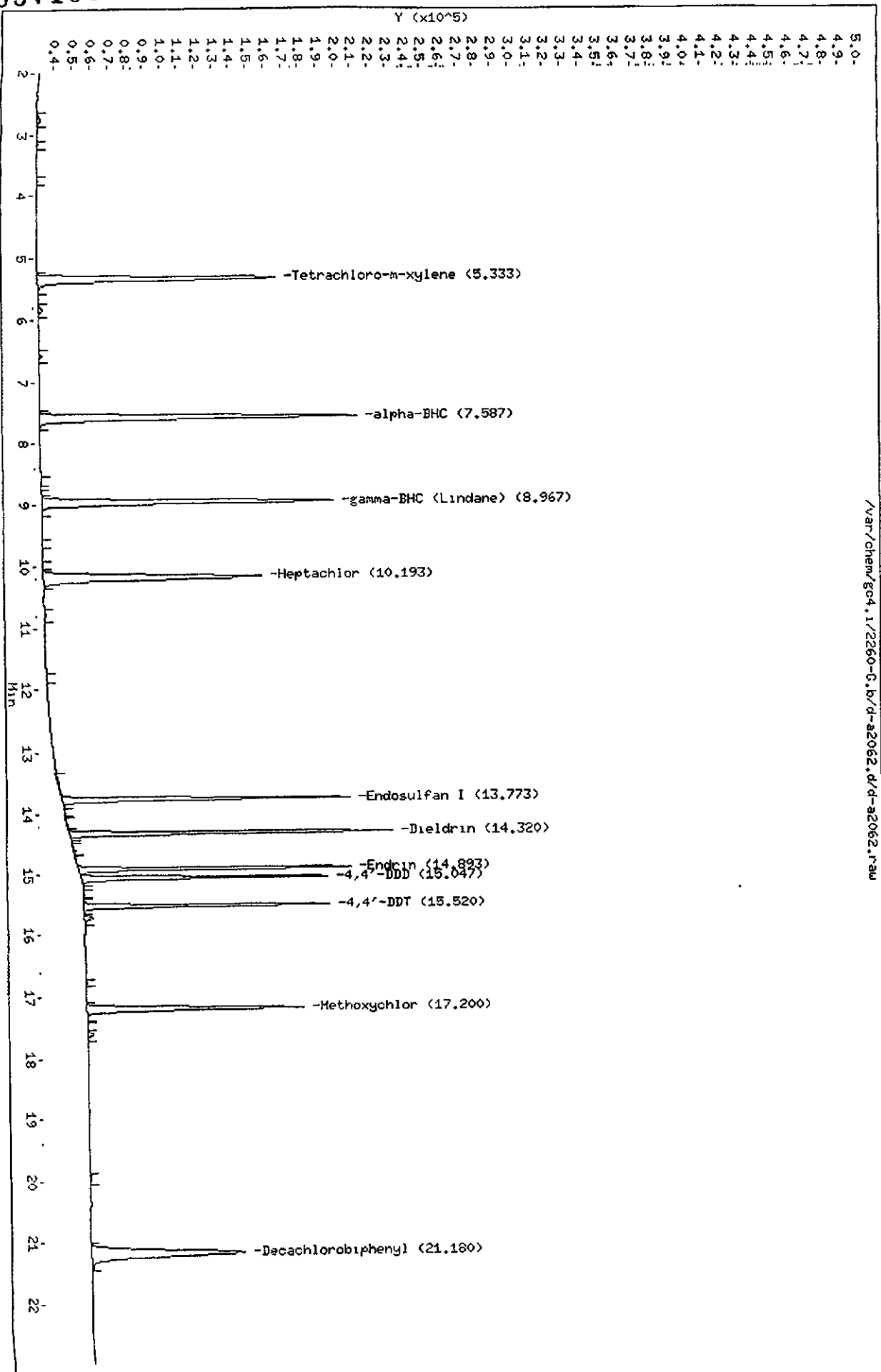
Data File: /var/chem/gc4.i/2260-G.b/d-a2062.d
 Report Date: 26-May-2000 06:57

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2062.d
 Lab Smp Id: MHIGHA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MHIGHA, 2260-G.b, , 3-INDA.sub, , 1, 4
 Misc Info : 190-84-4
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2062.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	5.333	5.333	0.000	135928	0.05000	0.04671
5 alpha-BHC	7.587	7.587	0.000	181365	0.05000	0.05376
6 gamma-BHC (Lindane)	8.967	8.967	0.000	166788	0.05000	0.05232
10 Heptachlor	10.193	10.193	0.000	124575	0.05000	0.04972
15 Endosulfan I	13.773	13.773	0.000	165201	0.05000	0.05102
17 Dieldrin	14.320	14.320	0.000	185201	0.05000	0.05395
20 Endrin	14.893	14.893	0.000	155902	0.05000	0.05225
21 4,4'-DDD	15.047	15.047	0.000	141130	0.05000	0.05217
23 4,4'-DDT	15.520	15.527	-0.007	140823	0.05000	0.05318
25 Methoxychlor	17.200	17.200	0.000	123724	0.10000	0.1017
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	87644	0.05000	0.04714

6571398



Data File: /var/chem/gc4.1/2260-G.b/d-a2062.d
Date : 23-MAY-2000 19:47
Client ID:
Sample Info: NHICHA,2260-G.b,3-INDA,sub,1,4
Column phase: DB608

/var/chem/gc4.1/2260-G.b/d-a2062.d-d-a2062.raw

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2063.d
 Report Date: 26-May-2000 06:58

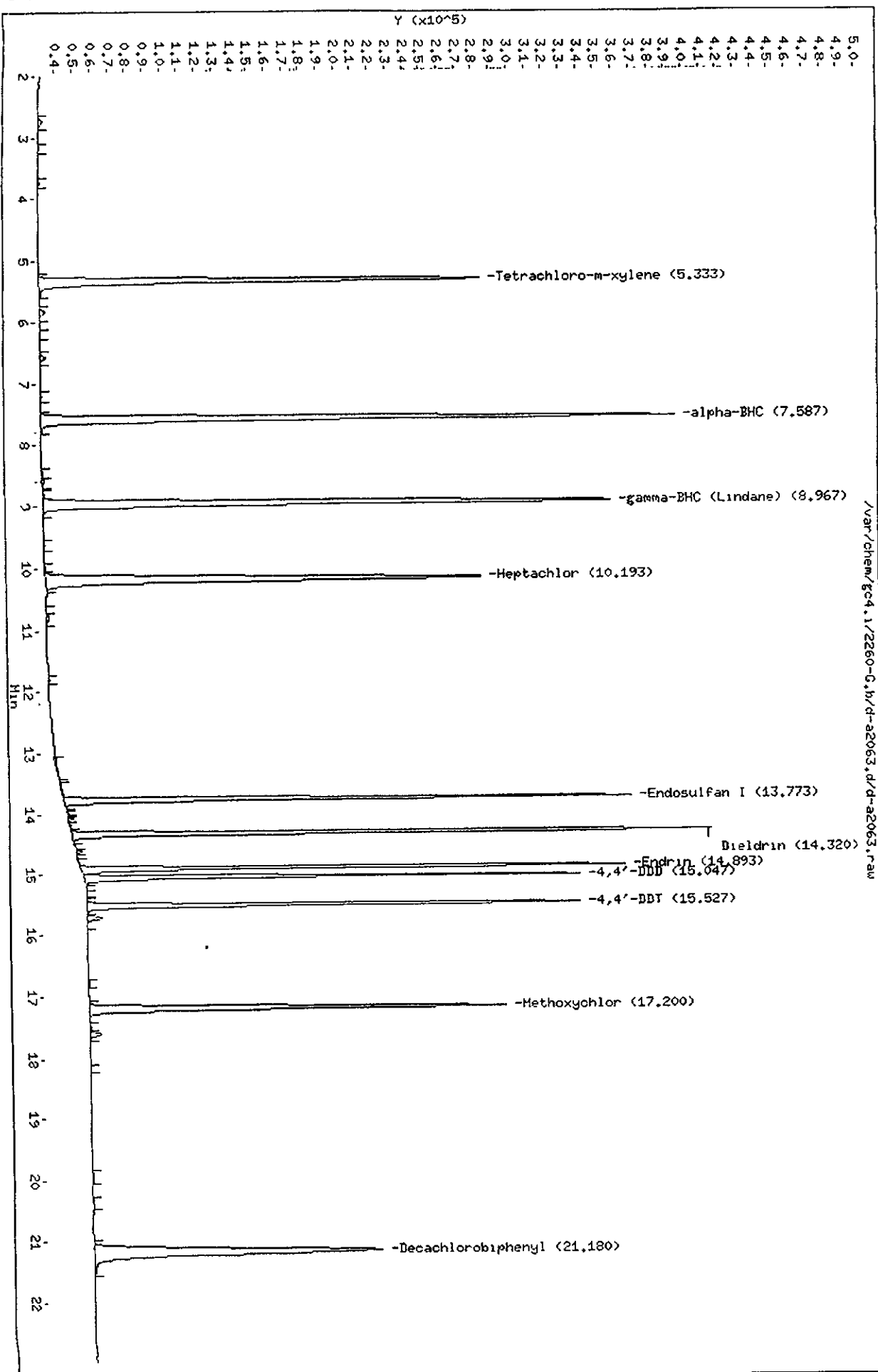
STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2063.d
 Lab Smp Id: HIGHA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : HIGHA,2260-G.b,,3-INDA.sub,,1,5
 Misc Info : 190-84-5
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2063.d
 Als bottle: 1 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 3-INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	253293	0.10000	0.08936
5 alpha-BHC	7.587	7.587	0.000	363585	0.10000	0.1061(A)
6 gamma-BHC (Lindane)	8.967	8.967	0.000	326061	0.10000	0.1018(A)
10 Heptachlor	10.193	10.193	0.000	250128	0.10000	0.09986
15 Endosulfan I	13.773	13.773	0.000	326223	0.10000	0.1006(A)
17 Dieldrin	14.320	14.320	0.000	367506	0.10000	0.1056(A)
20 Endrin	14.893	14.893	0.000	312528	0.10000	0.1038(A)
21 4,4'-DDD	15.047	15.047	0.000	285069	0.10000	0.1042(A)
23 4,4'-DDT	15.527	15.527	0.000	284540	0.10000	0.1059(A)
25 Methoxychlor	17.200	17.200	0.000	239884	0.20000	0.1977
\$ 30 Decachlorobiphenyl	21.180	21.180	0.000	166094	0.10000	0.09128

QC Flag Legend

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



Data File: /var/chem/gc4.1/2260-G,b/d-a2063.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HIGHA.2260-G,b,3-INDA.sub,1.5
Column phase: DB608

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2064.d
 Report Date: 26-May-2000 06:58

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2064.d
 Lab Smp Id: LOWB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : LOWB,2260-G.b,,4-INDB.sub,,1,1
 Misc Info : 190-84-7
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2064.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	11.400	11.400	0.000	11965	0.00500	0.005000
7 beta-BHC	9.240	9.247	-0.007	9068	0.00500	0.005000
8 delta-BHC	10.680	10.680	0.000	12935	0.00500	0.005000
12 Heptachlor epoxide	13.047	13.047	0.000	15088	0.00500	0.005000
13 gamma-Chlordane	13.407	13.407	0.000	16188	0.00500	0.005000
14 alpha-Chlordane	13.727	13.727	0.000	17069	0.00500	0.005000
16 4,4'-DDB	14.187	14.187	0.000	15952	0.00500	0.005000
22 Endosulfan II	15.180	15.180	0.000	13991	0.00500	0.005000
24 Endrin aldehyde	15.720	15.720	0.000	11693	0.00500	0.005000
26 Endosulfan sulfate	15.940	15.940	0.000	11208	0.00500	0.005000
27 Endrin ketone	17.607	17.607	0.000	11474	0.00500	0.005000

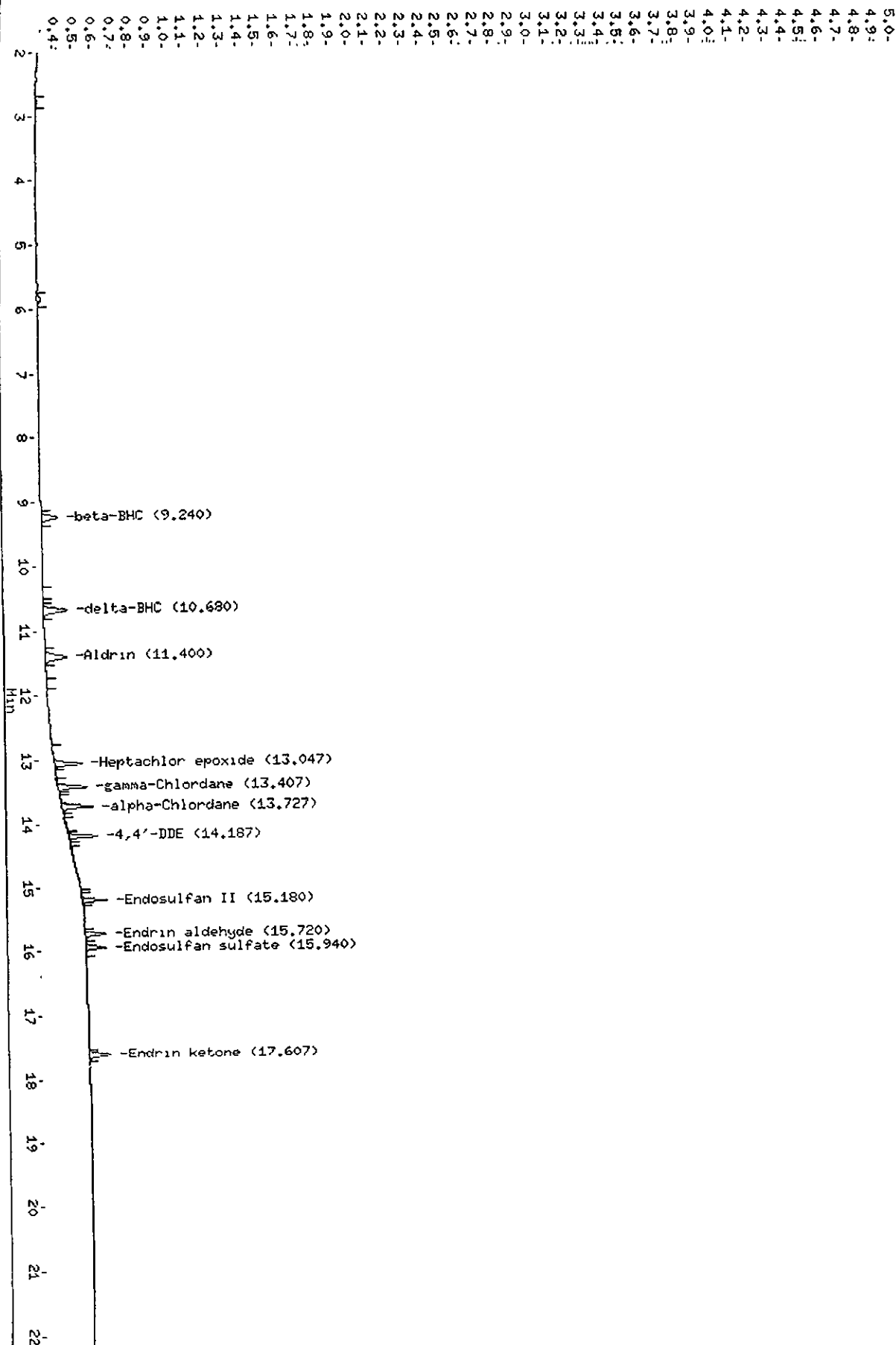
6571402

Y (x10⁵)

Data File: /var/chem/gc4.1/2260-G,b/d-a2064.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: LOAB,2260-G,b,4-INDB,sub,1,1
Column phase: DB608

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

/var/chem/gc4.1/2260-G,b/d-a2064.d/d-a2064.i.raw



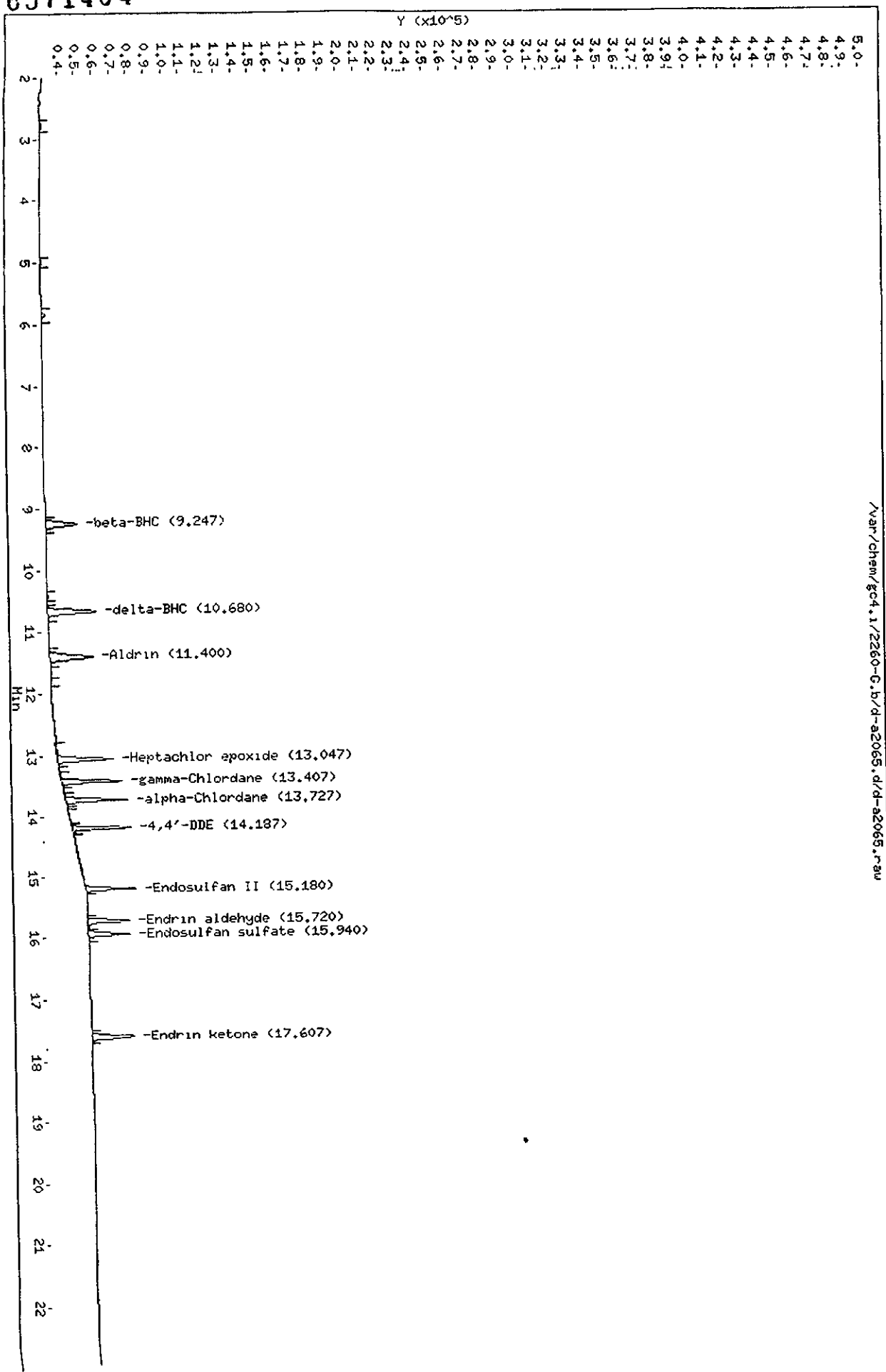
Data File: /var/chem/gc4.i/2260-G.b/d-a2065.d
 Report Date: 26-May-2000 06:58

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2065.d
 Lab Smp Id: MLOWB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MLOWB,2260-G.b,,4-INDB.sub,,1,2
 Misc Info : 190-84-8
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2065.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	11.400	11.400	0.000	24993	0.01000	0.01022
7 beta-BHC	9.247	9.247	0.000	18440	0.01000	0.01008
8 delta-BHC	10.680	10.680	0.000	28252	0.01000	0.01044
12 Heptachlor epoxide	13.047	13.047	0.000	31805	0.01000	0.01026
13 gamma-Chlordane	13.407	13.407	0.000	34630	0.01000	0.01034
14 alpha-Chlordane	13.727	13.727	0.000	35510	0.01000	0.01020
16 4,4'-DDE	14.187	14.187	0.000	34441	0.01000	0.01038
22 Endosulfan II	15.180	15.180	0.000	29463	0.01000	0.01026
24 Endrin aldehyde	15.720	15.720	0.000	24380	0.01000	0.01021
26 Endosulfan sulfate	15.940	15.940	0.000	24235	0.01000	0.01039
27 Endrin ketone	17.607	17.607	0.000	24410	0.01000	0.01031

6571404



Column phase: DB608

Data File: /var/chem/gc4.1/2260-G.b/d-a2065.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: MLOUB,2260-G.b,4-INDR,sub,1,2

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2066.d
 Report Date: 26-May-2000 06:58

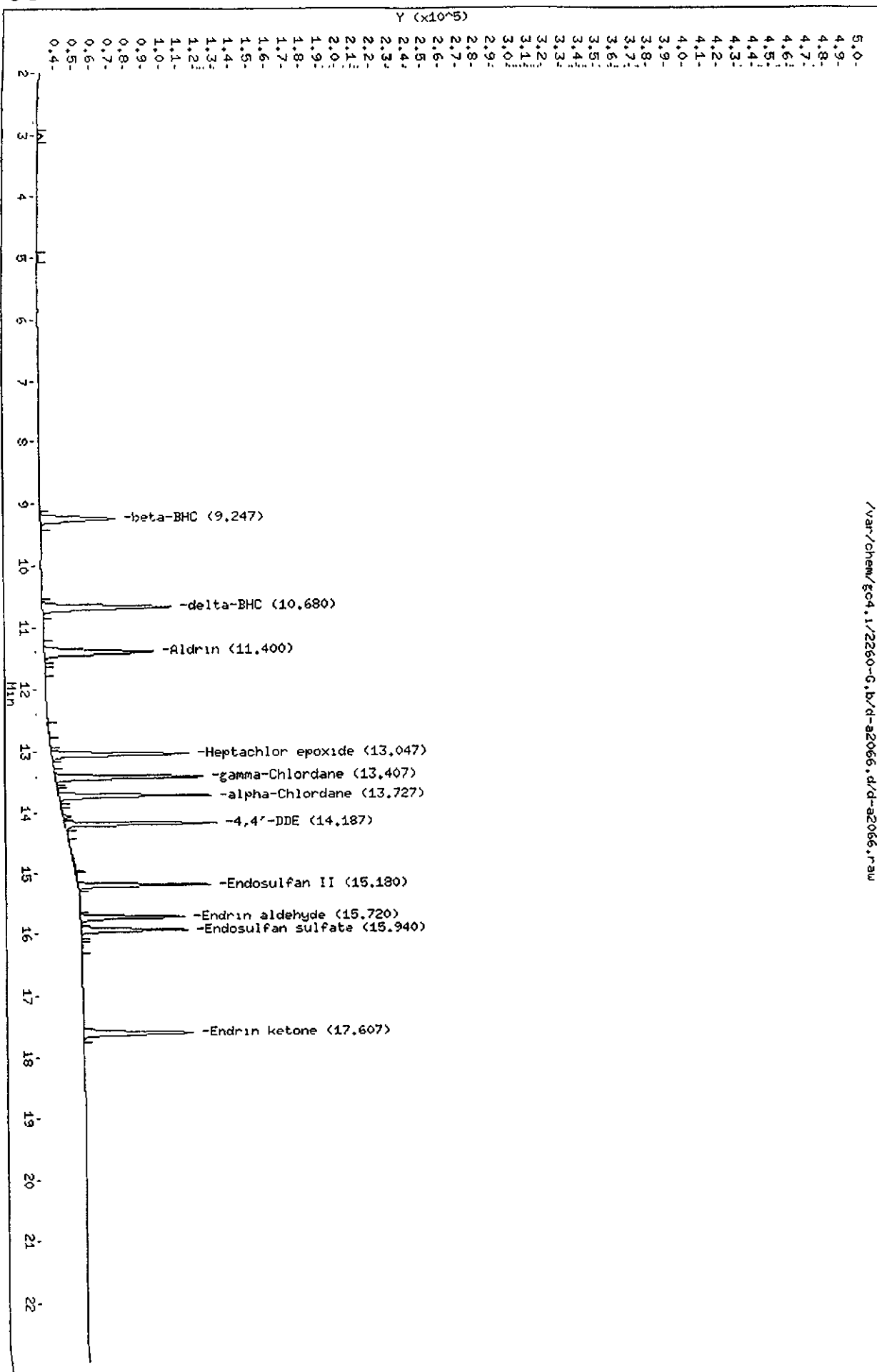
STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2066.d
 Lab Smp Id: MEDB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MEDB,2260-G.b,,4-INDB.sub,,1,3
 Misc Info : 190-84-9
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2066.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	11.400	11.400	0.000	62702	0.02500	0.02542
7 beta-BHC	9.247	9.247	0.000	42845	0.02500	0.02393 (M)
8 delta-BHC	10.680	10.680	0.000	74099	0.02500	0.02654 (M)
12 Heptachlor epoxide	13.047	13.047	0.000	78467	0.02500	0.02521
13 gamma-Chlordane	13.407	13.407	0.000	84242	0.02500	0.02510
14 alpha-Chlordane	13.727	13.727	0.000	86407	0.02500	0.02487
16 4,4'-DDE	14.187	14.187	0.000	86801	0.02500	0.02576
22 Endosulfan II	15.180	15.180	0.000	75300	0.02500	0.02580
24 Endrin aldehyde	15.720	15.720	0.000	59443	0.02500	0.02493
26 Endosulfan sulfate	15.940	15.940	0.000	60509	0.02500	0.02562
27 Endrin ketone	17.607	17.607	0.000	61809	0.02500	0.02572

QC Flag Legend

M - Compound response manually integrated.



Data File: /var/chem/gc4.1/2260-G,b/d-a2066.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: NEDB,2260-G,b,,4-INDB,sub,,1,3
Column phase: DB608

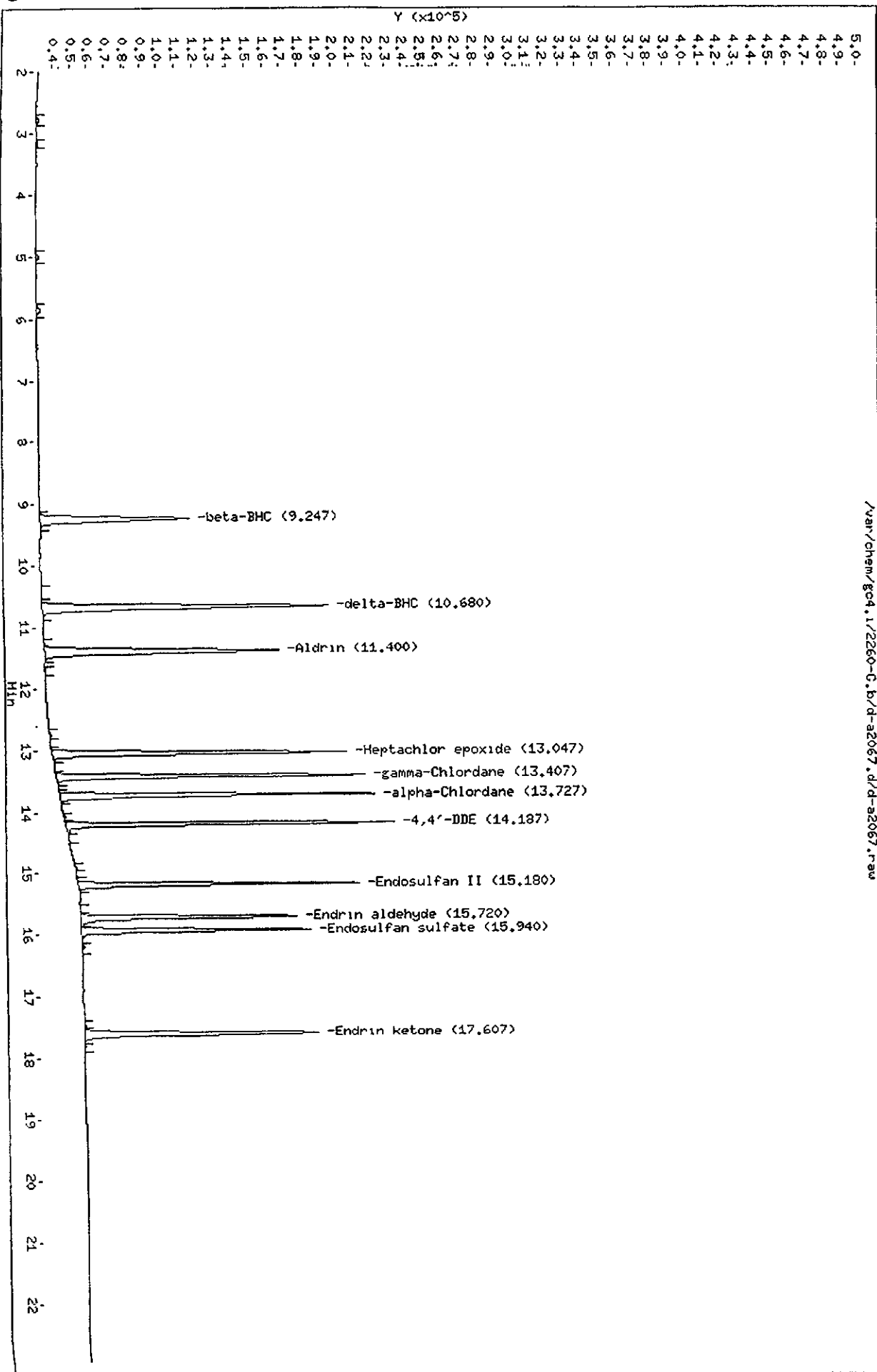
Instrument: gc4.1
Operator: 1891
Column diameter: 0.53

Data File: /var/chem/gc4.i/2260-G.b/d-a2067.d
 Report Date: 26-May-2000 06:58

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2067.d
 Lab Smp Id: MHIGHB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : MHIGHB, 2260-G.b, , 4-INDB.sub, , 1, 4
 Misc Info : 190-84-10
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2067.d
 Als bottle: 1 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: 4-INDB.sub
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====
11 Aldrin	11.400	11.400	0.000	134205	0.05000	0.05323
7 beta-BHC	9.247	9.247	0.000	84919	0.05000	0.04805
8 delta-BHC	10.680	10.680	0.000	163645	0.05000	0.05619
12 Heptachlor epoxide	13.047	13.047	0.000	168661	0.05000	0.05308
13 gamma-Chlordane	13.407	13.407	0.000	177301	0.05000	0.05208
14 alpha-Chlordane	13.727	13.727	0.000	180083	0.05000	0.05137
16 4,4'-DDE	14.187	14.187	0.000	187789	0.05000	0.05419
22 Endosulfan II	15.180	15.180	0.000	160411	0.05000	0.05363
24 Endrin aldehyde	15.720	15.720	0.000	123326	0.05000	0.05127
26 Endosulfan sulfate	15.940	15.940	0.000	130923	0.05000	0.05397
27 Endrin ketone	17.607	17.607	0.000	133839	0.05000	0.05416



Data File: /var/chem/gc4.1/2260-G.b/d-a2067.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HHICB,2260-G.b,4-INDB.sub,1,4
Column phase: DB608

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

/var/chem/gc4.1/2260-G.b/d-a2067.d/d-a2067.raw

Data File: /var/chem/gc4.i/2260-G.b/d-a2068.d
 Report Date: 26-May-2000 06:58

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2068.d
 Lab Smp Id: HIGHB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891
 Smp Info : HIGHB,2260-G.b,,4-INDB.sub,,1,5
 Misc Info : 190-84-11
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 06:57 eppinged
 Cal Date : 23-MAY-2000 19:47
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

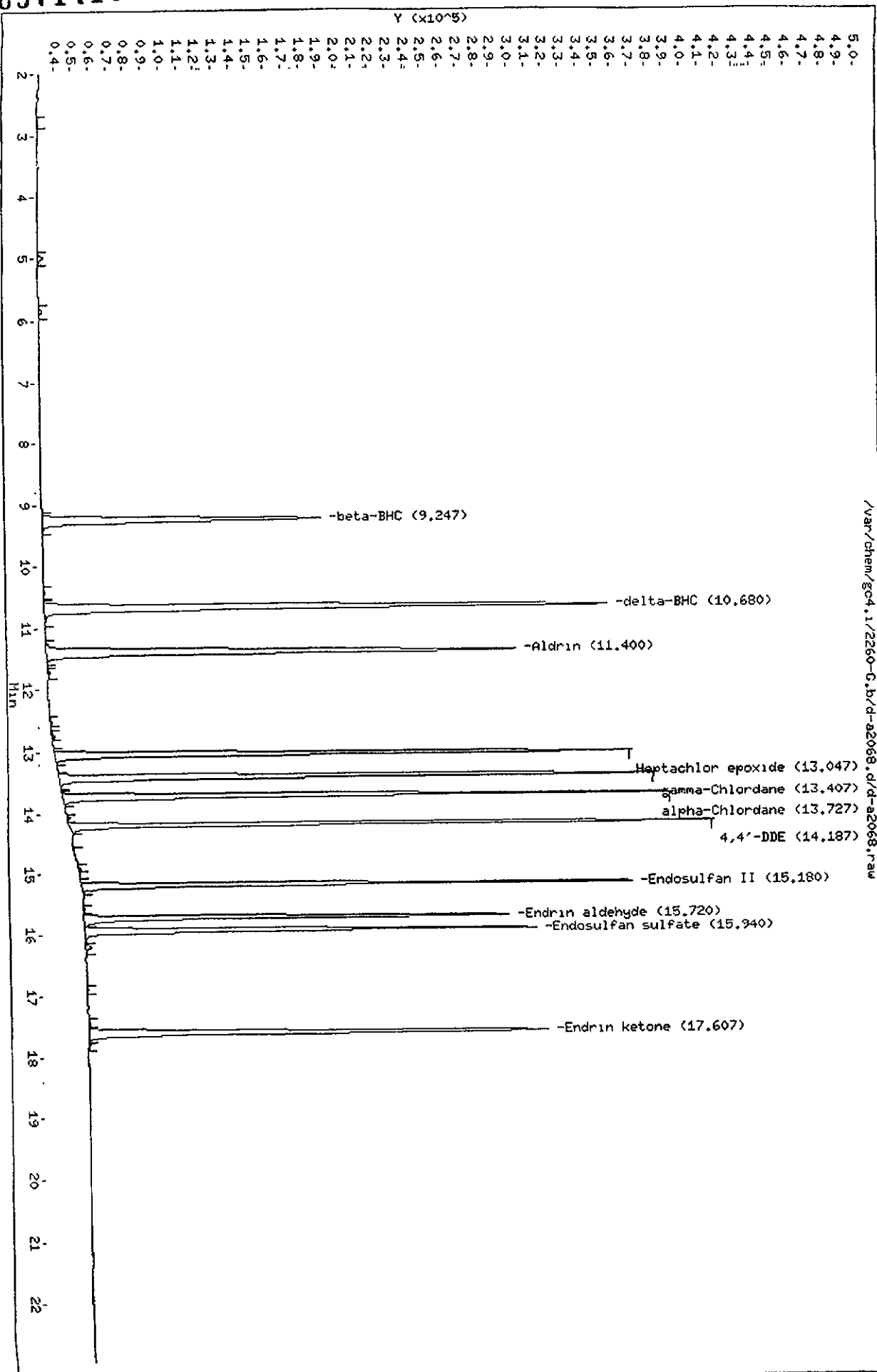
Inst ID: gc4.i
 Quant Type: ESTD
 Cal File: d-a2068.d
 Calibration Sample, Level: 5
 Compound Sublist: 4-INDB.sub

Compoundo					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	11 400	11 400	0 000	269308	0.10000	0 1054 (A)
7 beta-BHC	9 247	9.247	0 000	159100	0 10000	0 09185
8 delta-BHC	10 680	10 680	0.000	324203	0.10000	0 1088 (A)
12 Heptachlor epoxide	13.047	13 047	0.000	332150	0 10000	0.1036 (A)
13 gamma-Chlordane	13 407	13.407	0 000	343842	0.10000	0 1008 (A)
14 alpha-Chlordane	13 727	13.727	0 000	350592	0 10000	0 1000 (A)
16 4,4'-DDE	14 187	14 187	0.000	370668	0 10000	0 1055 (A)
22 Endosulfan II	15 180	15 180	0 000	317233	0.10000	0 1048 (A)
24 Endrin aldehyde	15 720	15 720	0 000	244646	0 10000	0 1014 (A)
26 Endosulfan sulfate	15 940	15 940	0.000	259867	0 10000	0 1056 (A)
27 Endrin ketone	17.607	17 607	0 000	264793	0.10000	0 1056 (A)

QC Flag Legend

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

6571410



Column phase: DB608

Data File: /var/chem/gc4.1/2260-G.b/d-a2068.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HICHB,2260-G.b,4-INDR,sub,1,5

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

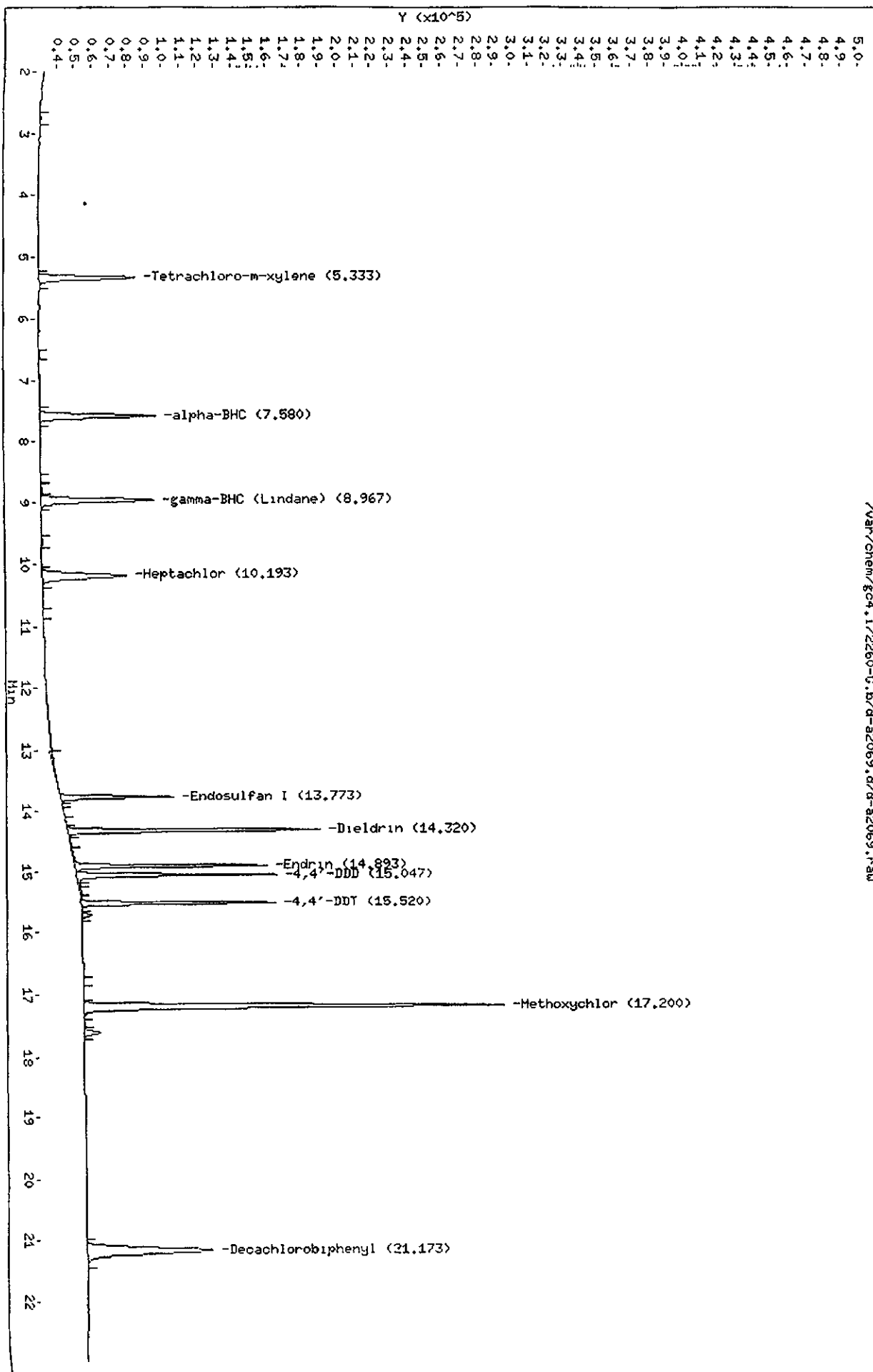
Data File: /var/chem/gc4.i/2260-G.b/d-a2069.d
 Report Date: 26-May-2000 07:11

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2069.d
 Lab Smp Id: 2ND A
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : 2ND A,2260-G.b,, INDA.sub,,2,3
 Misc Info : 190-82-2
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDA.sub
 Target Version: 3.40

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ng)	ON-COL (ng)
*****	==	*****	*****	*****	*****	*****
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	54690	0.02500	0.01929
5 alpha-BHC	7.580	7.587	-0.007	66502	0.02500	0.01941
6 gamma-BHC (Lindane)	8.967	8.967	0.000	64234	0.02500	0.02006
10 Heptachlor	10.193	10.193	0.000	48674	0.02500	0.01943
15 Endosulfan I	13.773	13.773	0.000	64694	0.02500	0.01995
17 Dieldrin	14.320	14.320	0.000	145086	0.02500	0.04167
20 Endrin	14.893	14.893	0.000	110174	0.02500	0.03658
21 4,4'-DDD	15.047	15.047	0.000	114637	0.02500	0.04192
23 4,4'-DDT	15.520	15.527	-0.007	111430	0.02500	0.04146
25 Methoxychlor	17.200	17.200	0.000	241064	0.05000	0.1987
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007	71418	0.02500	0.03925

6571412



/var/chem/gc4.1/2260-G.b/d-a2069.d/d-a2069.raw

Column phase: DB608

Data File: /var/chem/gc4.1/2260-G.b/d-a2069.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: 2ND A, 2260-G.b, INDA.sub, 2,3

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

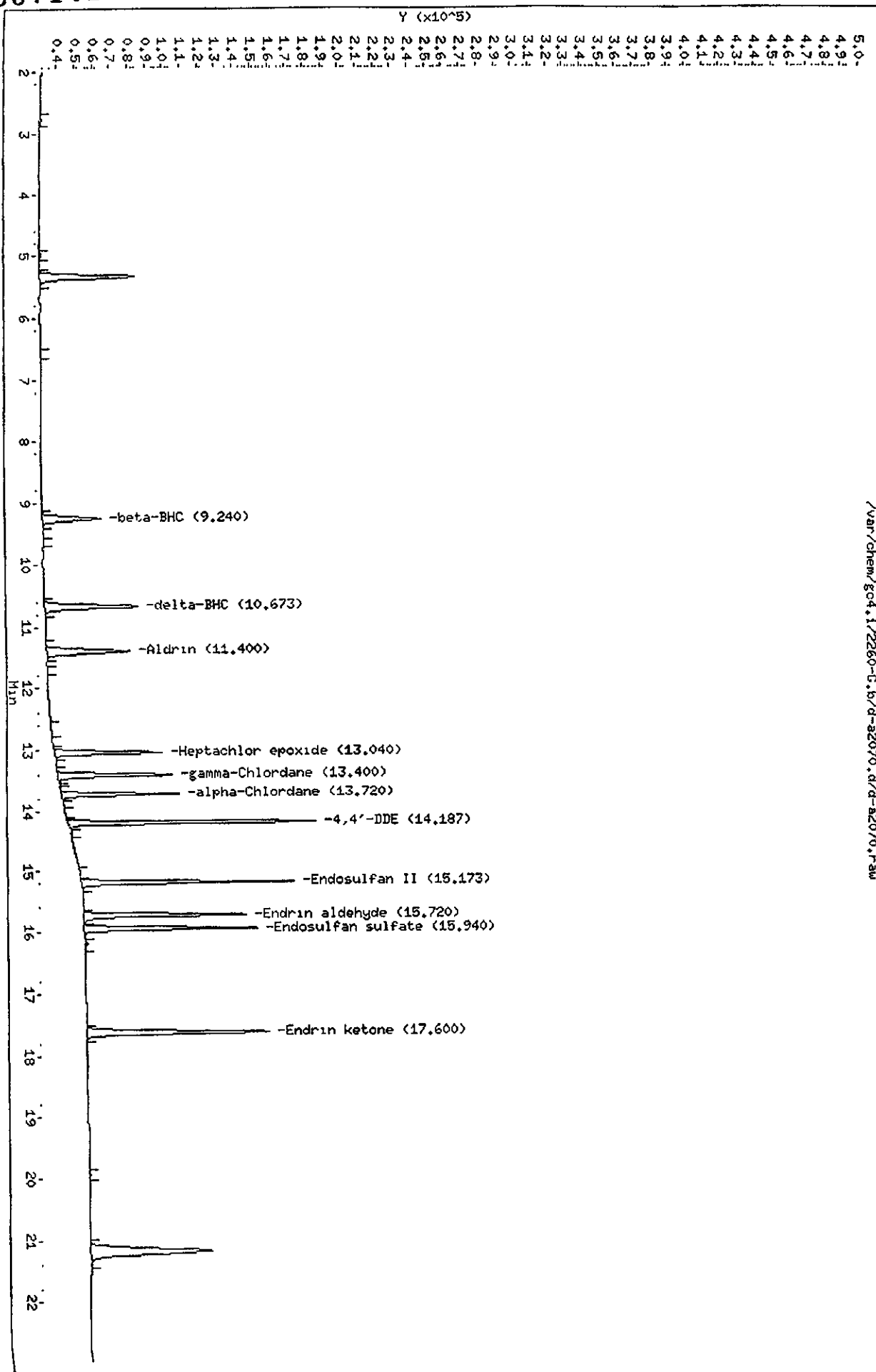
Data File: /var/chem/gc4.i/2260-G.b/d-a2070.d
 Report Date: 26-May-2000 07:11

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2070.d
 Lab Smp Id: 2ND B
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : 2ND B,2260-G.b,,INDB.sub,,2,3
 Misc Info : 190-82-5
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: INDB.sub
 Target Version: 3.40

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	**	*****	*****	*****	*****	*****
11 Aldrin	11.400	11.400	0.000	47600	0.02500	0.01863
7 beta-BHC	9.240	9.247	-0.007	33369	0.02500	0.01926
8 delta-BHC	10.673	10.680	-0.007	53721	0.02500	0.01804
12 Heptachlor epoxide	13.040	13.047	-0.007	61611	0.02500	0.01922
13 gamma-Chlordane	13.400	13.407	-0.007	65333	0.02500	0.01915
14 alpha-Chlordane	13.720	13.727	-0.007	66812	0.02500	0.01906
16 4,4'-DDE	14.187	14.187	0.000	141622	0.02500	0.04030
22 Endosulfan II	15.173	15.180	-0.007	121466	0.02500	0.04012
24 Endrin aldehyde	15.720	15.720	0.000	92604	0.02500	0.03837
26 Endosulfan sulfate	15.940	15.940	0.000	99290	0.02500	0.04035
27 Endrin ketone	17.600	17.607	-0.007	103606	0.02500	0.04133

6571414



Data File: /var/chem/gc4.i/2260-G.b/d-a2070.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: 2ND B, 2260-G.b., INDB.sub., 2,3
Column Phase: DB608

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2071.d
 Report Date: 26-May-2000 07:11

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2071.d
 Lab Smp Id: EVALB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : EVALB, 2260-G.b, , EVALBR.sub, , 3, 1
 Misc Info : 190-88-8
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1 QC Sample: PEM
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: EVALBR.sub
 Target Version: 3.40

Compounds						CONCENTRATIONS	
	RT	EXP RT	DLT RT	RT	RESPONSE	ON-COLUMN (ng)	FINAL (ng)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000		56932	0.02009	0.02008(R)
16 4,4'-DDE	Compound Not Detected						
20 Endrin	14.893	14.893	0.000		71622	0.02378	0.02378
21 4,4'-DDD	Compound Not Detected.						
23 4,4'-DDT	15.520	15.527	-0.007		68271	0.02540	0.02540
24 Endrin aldehyde	15.720	15.720	0.000		2859	0.00118	0.001185
27 Endrin ketone	17.600	17.607	-0.007		2574	0.00103	0.001027
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007		37881	0.02082	0.02082(R)

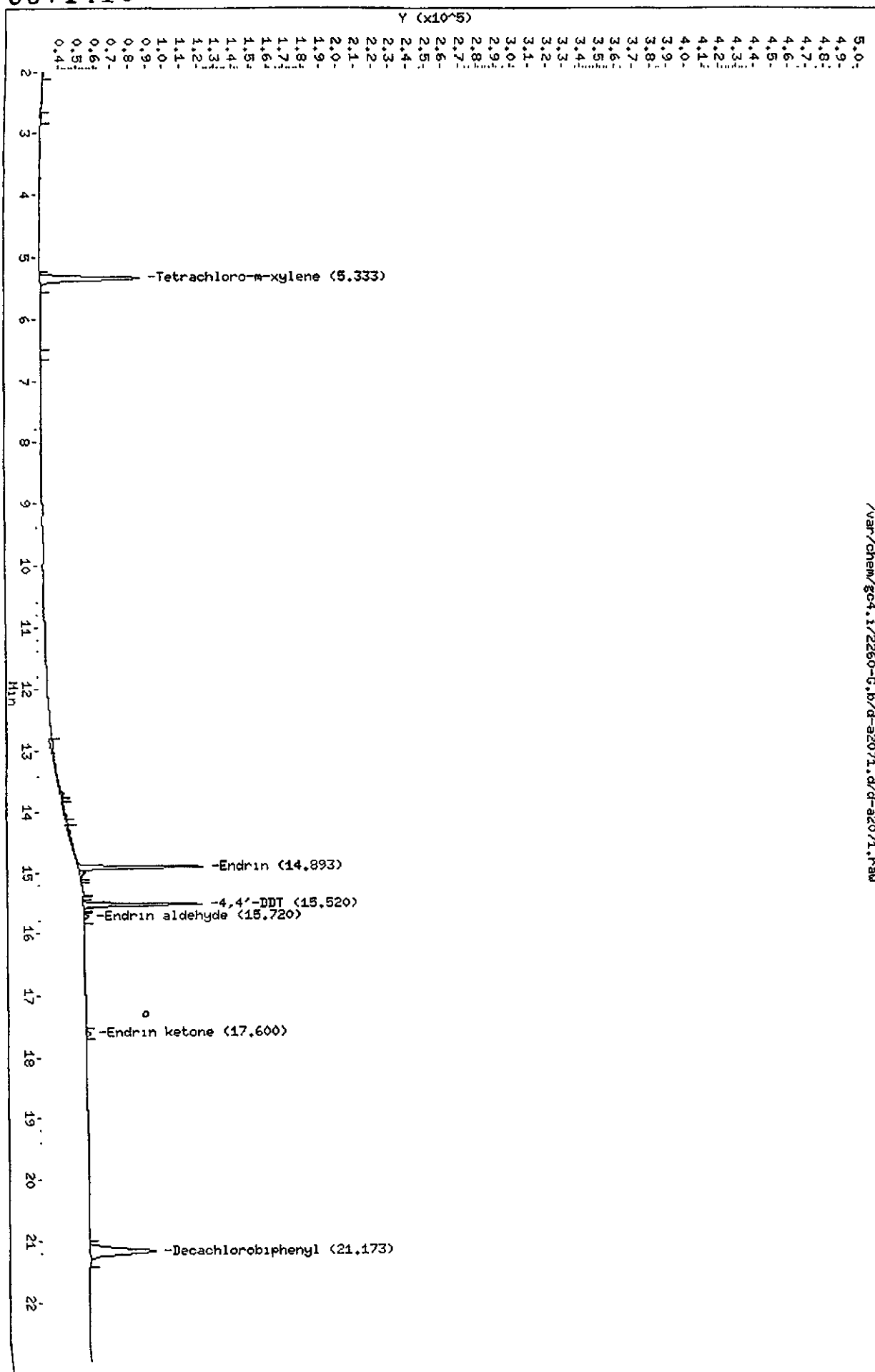
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

DOT 0.070
 ENDRIN 7.107

$$\text{Endrin Recovery} = \frac{(2859 + 2574) \times 100}{(2859 + 2574 + 71622)} = 7.1\%$$

6571416



Data File: /var/chem/gc4.1/2260-G.b/d-a2071.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: EVALB,2260-G.b,EVALBR,sdb,3,1
Column phase: DB608

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

Data File: /var/chem/gc4.i/2260-G.b/d-a2077.d
 Report Date: 26-May-2000 07:11

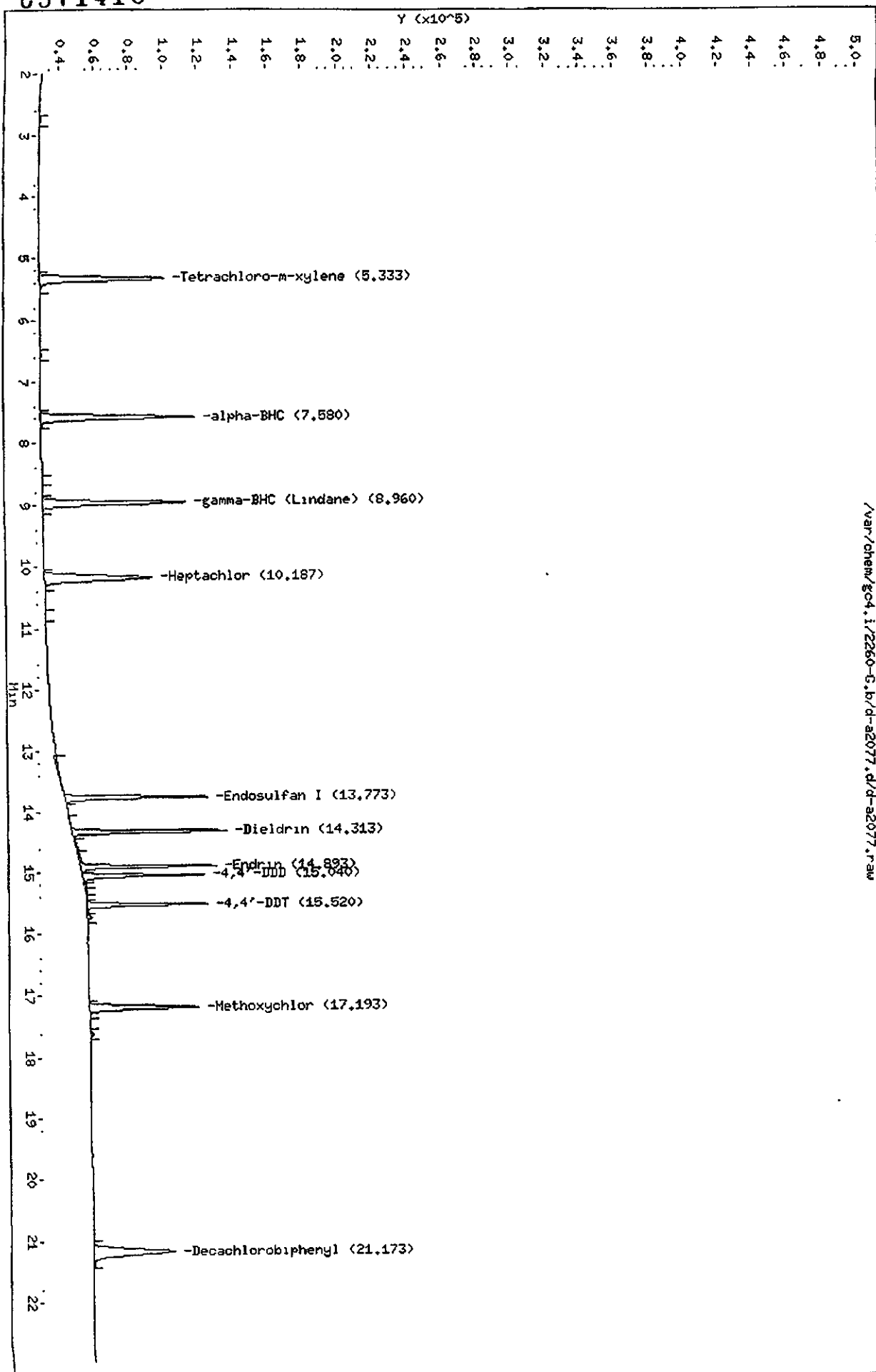
STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2077.d
 Lab Smp Id: MEDA
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891
 Smp Info : MEDA,2260-G.b,,INDA.sub,,2,3
 Misc Info : 190-84-3
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g
 Cal Date : 23-MAY-2000 19:47
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc4.i
 Quant Type: ESTD
 Cal File: d-a2068.d
 Continuing Calibration Sample
 Compound Sublist: INDA.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	71644	0.02500	0.02528
5 alpha-BHC	7.580	7.587	-0.007	87940	0.02500	0.02567
6 gamma-BHC (Lindane)	8.960	8.967	-0.007	81977	0.02500	0.02560
10 Heptachlor	10.187	10.193	-0.006	62274	0.02500	0.02486
15 Endosulfan I	13.773	13.773	0.000	82139	0.02500	0.02533
17 Dieldrin	14.313	14.320	-0.007	88799	0.02500	0.02551
20 Endrin	14.893	14.893	0.000	78437	0.02500	0.02604
21 4,4'-DDD	15.040	15.047	-0.007	70043	0.02500	0.02562
23 4,4'-DDT	15.520	15.527	-0.007	69417	0.02500	0.02583
25 Methoxychlor	17.193	17.200	-0.007	62252	0.05000	0.05131
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007	46048	0.02500	0.02530

6571418



Data File: /var/chem/gc4.i/2260-G.b/d-a2077.d
 Date: 23-MAY-2000 19:47
 Client ID:
 Sample Info: MEDA,2260-G.b,,INDA,sub,,2,3
 Column phase: DB608

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

/var/chem/gc4.i/2260-G.b/d-a2077.d/d-a2077.raw

Data File: /var/chem/gc4.i/2260-G.b/d-a2078.d
 Report Date: 26-May-2000 07:11

STL-PITTSBURGH

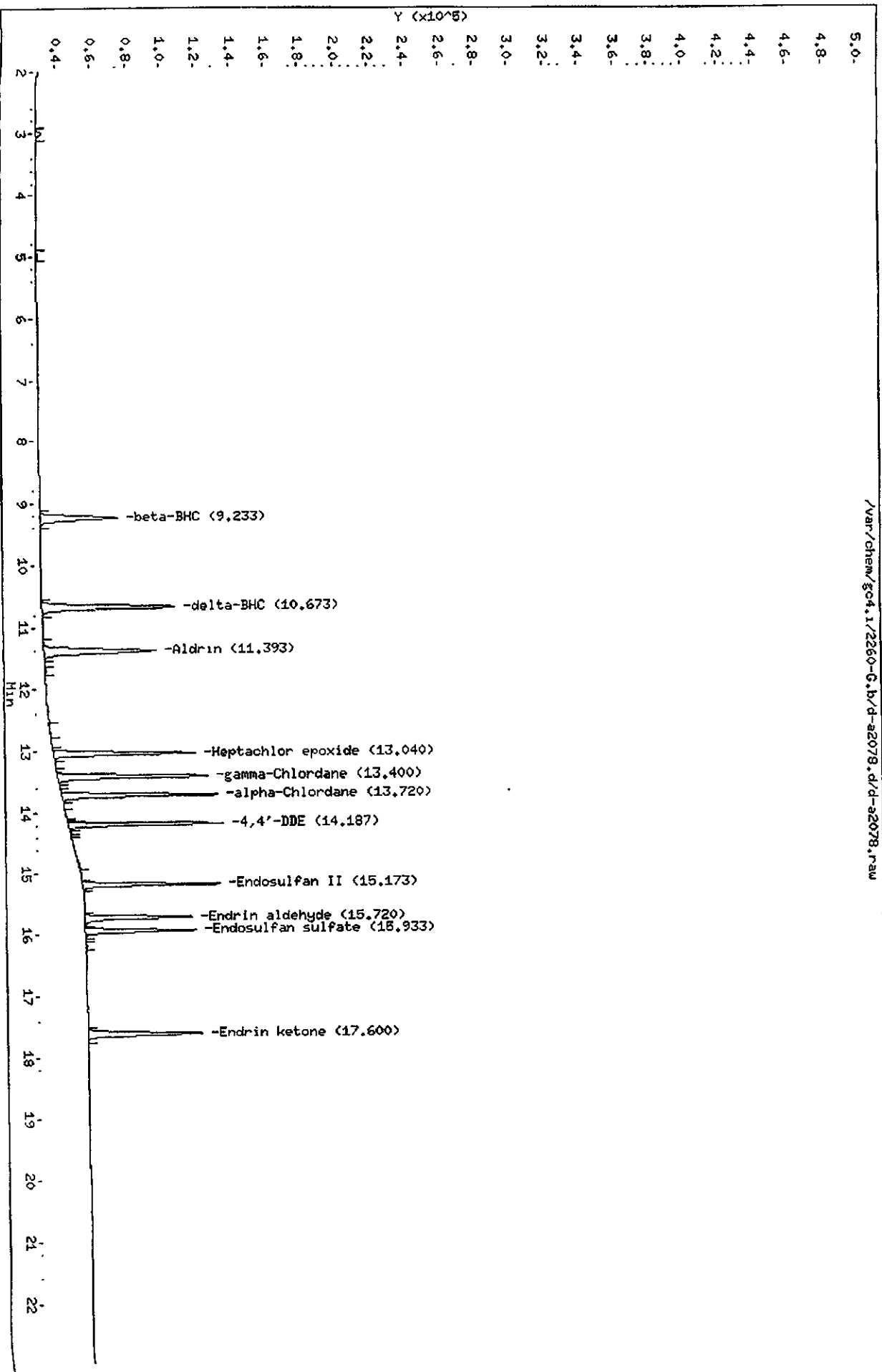
Data file : /var/chem/gc4.i/2260-G.b/d-a2078.d
 Lab Smp Id: MEDB
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891
 Smp Info : MEDB,2260-G.b,,INDB.sub,,2,3
 Misc Info : 190-84-9
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g
 Cal Date : 23-MAY-2000 19:47
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc4.i
 Quant Type: ESTD
 Cal File: d-a2068.d
 Continuing Calibration Sample
 Compound Sublist: INDB.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
11 Aldrin	11.393	11.400	-0.007	64425	0.02500	0.02521
7 beta-BHC	9.233	9.247	-0.014	44033	0.02500	0.02542
8 delta-BHC	10.673	10.680	-0.007	76164	0.02500	0.02557
12 Heptachlor epoxide	13.040	13.047	-0.007	81489	0.02500	0.02542
13 gamma-Chlordane	13.400	13.407	-0.007	86212	0.02500	0.02528
14 alpha-Chlordane	13.720	13.727	-0.007	89294	0.02500	0.02547
16 4,4'-DDE	14.187	14.187	0.000	89671	0.02500	0.02552
22 Endosulfan II	15.173	15.180	-0.007	79015	0.02500	0.02610
24 Endrin aldehyde	15.720	15.720	0.000	61756	0.02500	0.02559
26 Endosulfan sulfate	15.933	15.940	-0.007	63209	0.02500	0.02569
27 Endrin ketone	17.600	17.607	-0.007	65358	0.02500	0.02607

Data File: /var/chem/gc04.1/2260-G.b/d-a2078.d
Date: 23-MAY-2000 19:47
Client ID:
Sample Info: HEDB,2260-G.b,1HDB.sub,2,3
Column phase: DB608

Instrument: gc04.1
Operator: 1891
Column diameter: 0.53



**PESTICIDE
QC DATA**

6571422

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E230000 491

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDKW7101

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: NA

QC Batch: 0144491

Client Sample Id: INTRA-LAB BLANK

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

FORM I

Data File: /var/chem/gc4.i/2260-G.b/d-a2075.d
 Report Date: 26-May-2000 07:17

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2075.d
 Lab Smp Id: DDKW7101 Client Smp ID: PBLK
 Inj Date : 23-MAY-2000 19:47
 Operator : 1891 Inst ID: gc4.i
 Smp Info : DDKW7101,2260-G.b,,PEST.sub,,3,
 Misc Info : 190257BLK
 Comment :
 Method : /var/chem/gc4.i/2260-G.b/PESTA.m
 Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
 Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
 Als bottle: 1 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: PEST.sub
 Target Version: 3.40

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

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

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

6571424

Data File: /var/chem/gc4.i/2260-G.b/d-a2075.d
Report Date: 26-May-2000 07:17

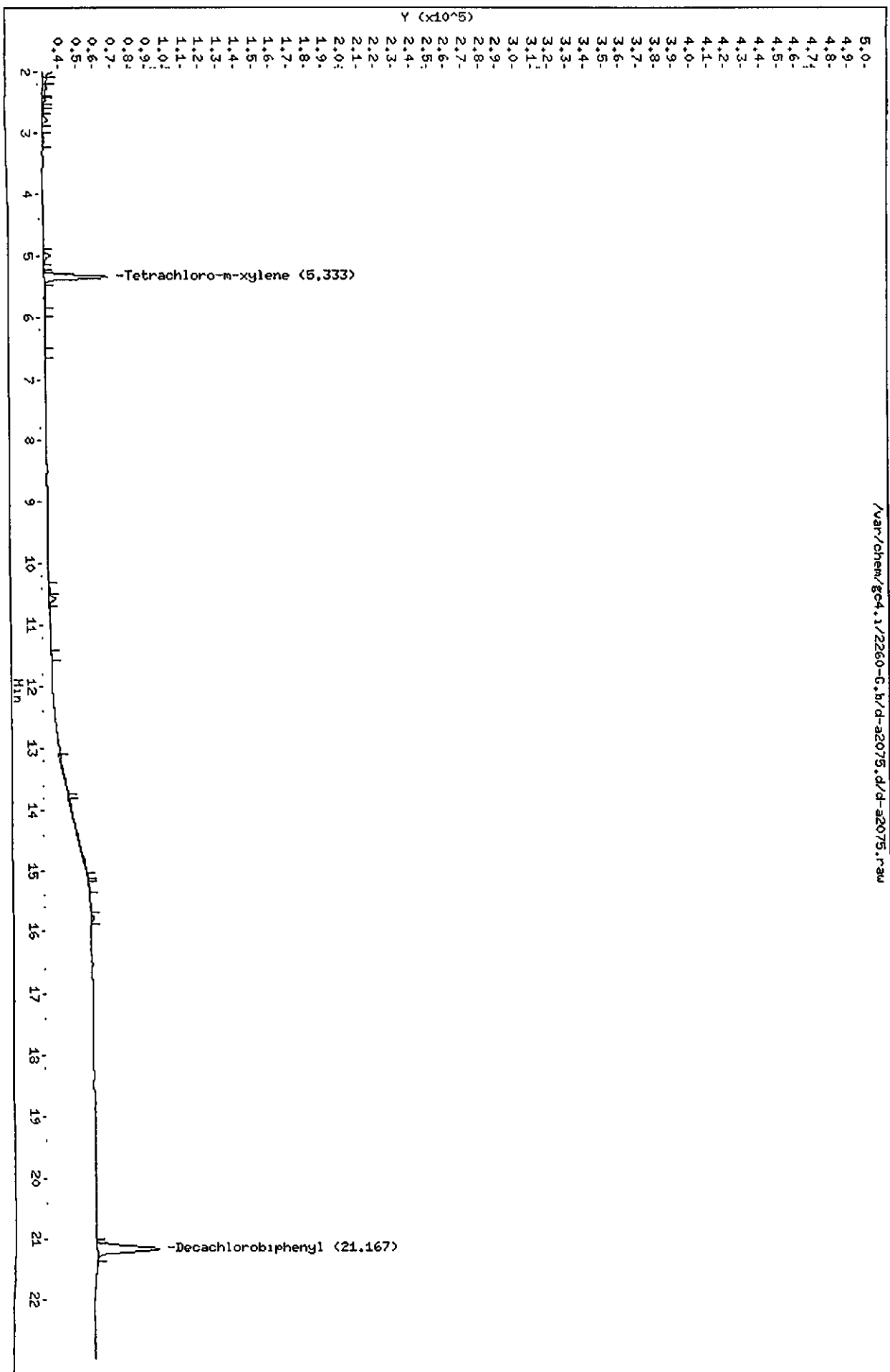
Compounds	RT	EXP	RT	DLT	RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ng)	(mg/L)
=====	==	=====	=====	=====	=====	=====	=====	=====
21 4,4'-DDD					Compound Not Detected			
22 Endosulfan II					Compound Not Detected			
23 4,4'-DDT					Compound Not Detected.			
24 Endrin aldehyde					Compound Not Detected.			
26 Endosulfan sulfate					Compound Not Detected			
25 Methoxychlor					Compound Not Detected.			
27 Endrin ketone					Compound Not Detected			
\$ 1 Tetrachloro-m-xylene	5.333	5	333	0	000	36590	0 01291	0 001291(aR)
\$ 30 Decachlorobiphenyl	21.167	21	180	-0	013	35529	0 01952	0 001952(aR)

QC Flag Legend

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

Data File: /var/chem/gc4.1/2260-G.b/d-a2075.d
 Date : 23-MAY-2000 19:47
 Client ID: PBLK
 Sample Info: DDKN7101.2260-G.b, PEST, sub, 3,
 Volume Injected (uL): 1.0
 Column phase: DB608

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



6571426

UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) SOLID Lab Sample ID: COE230000 491
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDKW7102 Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/23/00
Moisture %: NA

QC Batch: 0144491

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00205	
76-44-8	Heptachlor	0.00192	
1024-57-3	Heptachlor epoxide	0.00201	
58-89-9	Lindane	0.00165	
72-43-5	Methoxychlor	0.00222	

FORM I

Data File: /var/chem/gc4.i/2260-G.b/d-a2076.d
Report Date: 26-May-2000 07:18

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2076.d
Lab Smp Id: DDKW7102 Client Smp ID: LCS
Inj Date : 23-MAY-2000 19:47
Operator : 1891 Inst ID: gc4.i
Smp Info : DDKW7102,2260-G.b,,PEST.sub,,3,
Misc Info : 190257LCS
Comment :
Method : /var/chem/gc4.i/2260-G.b/PESTA.m
Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PEST.sub
Target Version: 3.40

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

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

Compoundo	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.580	7.587	-0.007	47627	0.01390	0.001390(a)
4 HEXACHLOROBENZENE	Compound Not Detected					
6 gamma-BHC (Lindane)	8.960	8.967	-0.007	52975	0.01654	0.001654(aR)
7 beta-BHC	9.240	9.247	-0.007	35503	0.02050	0.002050(a)
9 Chlordane	9.580	9.573	0.007	311	0.21878	0.02188(a)
10 Heptachlor	10.187	10.193	-0.006	48103	0.01920	0.001920(aR)
8 delta-BHC	10.667	10.680	-0.013	5168	0.00174	0.0001735(a)
11 Aldrin	11.393	11.400	-0.007	48424	0.01895	0.001895(aR)
12 Heptachlor epoxide	13.040	13.047	-0.007	64331	0.02006	0.002006(a)
13 gamma-Chlordane	13.400	13.407	-0.007	72233	0.02118	0.002118(a)
14 alpha-Chlordane	13.727	13.727	0.000	76605	0.02185	0.002185(a)
15 Endosulfan I	13.767	13.773	-0.006	75541	0.02329	0.002329(a)
16 4,4'-DDE	14.187	14.187	0.000	78766	0.02242	0.002242(a)
17 Dieldrin	14.313	14.320	-0.007	72382	0.02079	0.002079(aR)
20 Endrin	14.893	14.893	0.000	61696	0.02048	0.002048(aR)
18 Toxaphene	Compound Not Detected					

6571428

Data File: /var/chem/gc4.i/2260-G.b/d-a2076.d
 Report Date: 26-May-2000 07:18

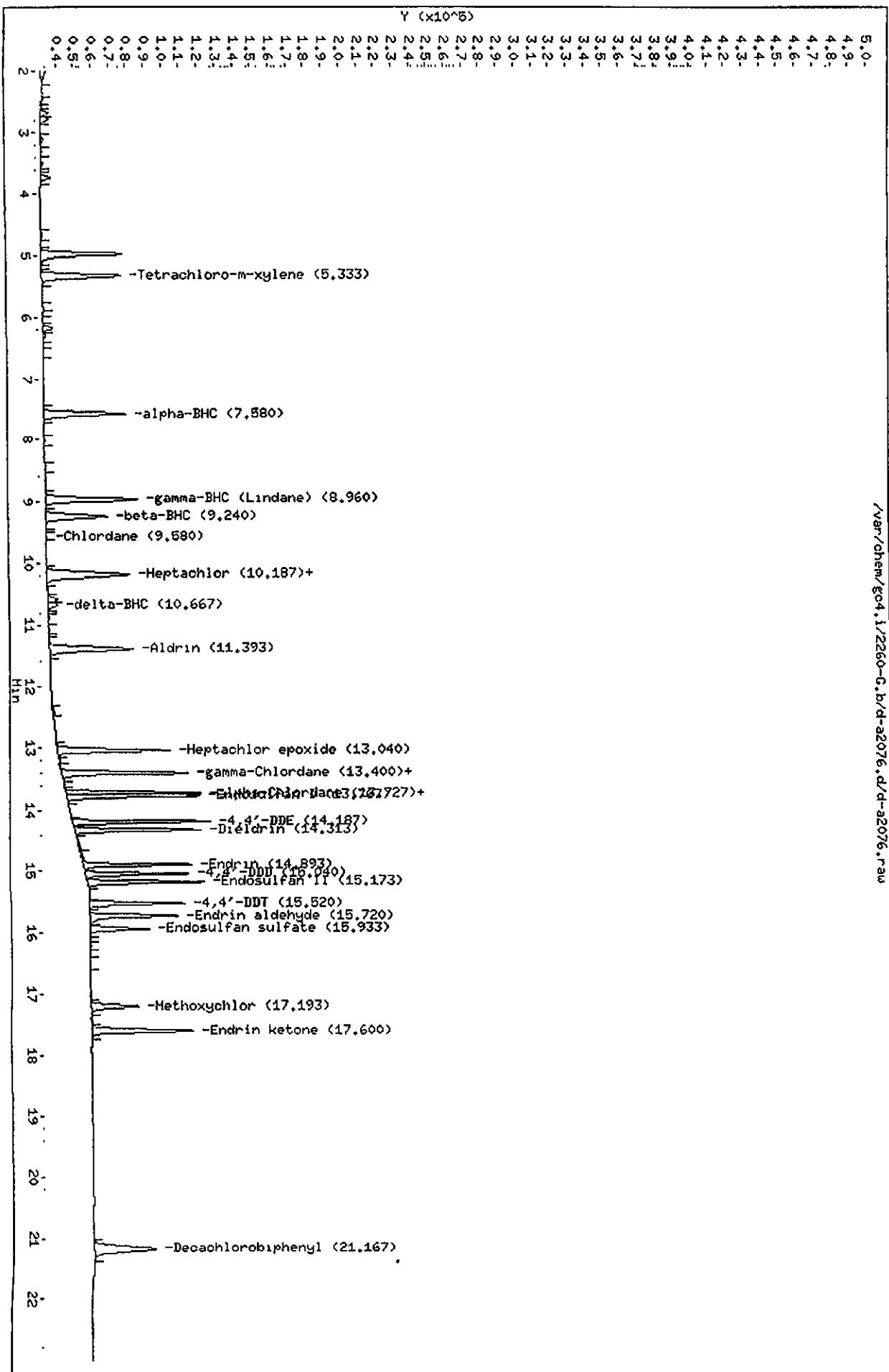
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	**	*****	*****	=====	=====	=====
21 4,4'-DDD	15.040	15.047	-0.007	59023	0.02159	0.002158 (a)
22 Endosulfan II	15.173	15.180	-0.007	65821	0.02174	0.002174 (a)
23 4,4'-DDT	15.520	15.527	-0.007	54765	0.02038	0.002038 (aR)
24 Endrin aldehyde	15.720	15.720	0.000	50590	0.02096	0.002096 (a)
26 Endosulfan sulfate	15.933	15.940	-0.007	34148	0.01388	0.001388 (a)
25 Methoxychlor	17.193	17.200	-0.007	26925	0.02219	0.002219 (a)
27 Endrin ketone	17.600	17.607	-0.007	57919	0.02311	0.002311 (a)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	45191	0.01594	0.001594 (aR)
\$ 30 Decachlorobiphenyl	21.167	21.180	-0.013	35125	0.01930	0.001930 (aR)

QC Flag Legend

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

Data File: /var/chem/gc04.1/2260-G.b/d-a2076.d
 Date : 23-May-2000 19:47
 Client ID: LCS
 Sample Info: DDMK7102/2260-G.b, PEST, sub, 3,
 Volume Injected (uL): 1.0
 Column phase: DB608

Instrument: gc04.1
 Operator: 1891
 Column diameter: 0.53



6571430

UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV610P

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00208	
76-44-8	Heptachlor	0.00188	
1024-57-3	Heptachlor epoxide	0.00200	
58-89-9	Lindane	0.00162	
72-43-5	Methoxychlor	0.00226	

FORM I

Data File: /var/chem/gc4.i/2260-G.b/d-a2073.d
Report Date: 26-May-2000 07:17

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2073.d
Lab Smp Id: DDFV610P Client Smp ID: DF/S1/0138/GRAB/MS
Inj Date : 23-MAY-2000 19:47
Operator : 1891 Inst ID: gc4.i
Smp Info : DDFV610P,2260-G.b,,PEST.sub,,3,
Misc Info : 190257001S
Comment :
Method : /var/chem/gc4.i/2260-G.b/PESTA.m
Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PEST.sub
Target Version: 3.40

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

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

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.580	7.587	-0.007	47179	0.01377	0.001377(a)
4 HEXACHLOROBENZENE	6.613	6.650	-0.037	2669		(a)
6 gamma-BHC (Lindane)	8.960	8.967	-0.007	51816	0.01618	0.001618(aR)
7 beta-BHC	9.240	9.247	-0.007	34838	0.02011	0.002011(a)
9 Chlordane	9.587	9.573	0.014	509	0.21613	0.02161(a)
10 Heptachlor	10.193	10.193	0.000	47100	0.01880	0.001880(aR)
8 delta-BHC	10.667	10.680	-0.013	5470	0.00184	0.0001837(a)
11 Aldrin	11.393	11.400	-0.007	47718	0.01867	0.001867(aR)
12 Heptachlor epoxide	13.040	13.047	-0.007	64049	0.01998	0.001998(a)
13 gamma-Chlordane	13.400	13.407	-0.007	71516	0.02097	0.002097(a)
14 alpha-Chlordane	13.727	13.727	0.000	75724	0.02160	0.002160(a)
15 Endosulfan I	13.767	13.773	-0.006	73830	0.02277	0.002276(a)
16 4,4'-DDE	14.187	14.187	0.000	78362	0.02230	0.002230(a)
17 Dieldrin	14.320	14.320	0.000	74232	0.02132	0.002132(aR)
20 Endrin	14.893	14.893	0.000	62517	0.02075	0.002075(aR)
18 Toxaphene						Compound Not Detected.

6571432

Data File: /var/chem/gc4.i/2260-G.b/d-a2073.d

Report Date: 26-May-2000 07:17

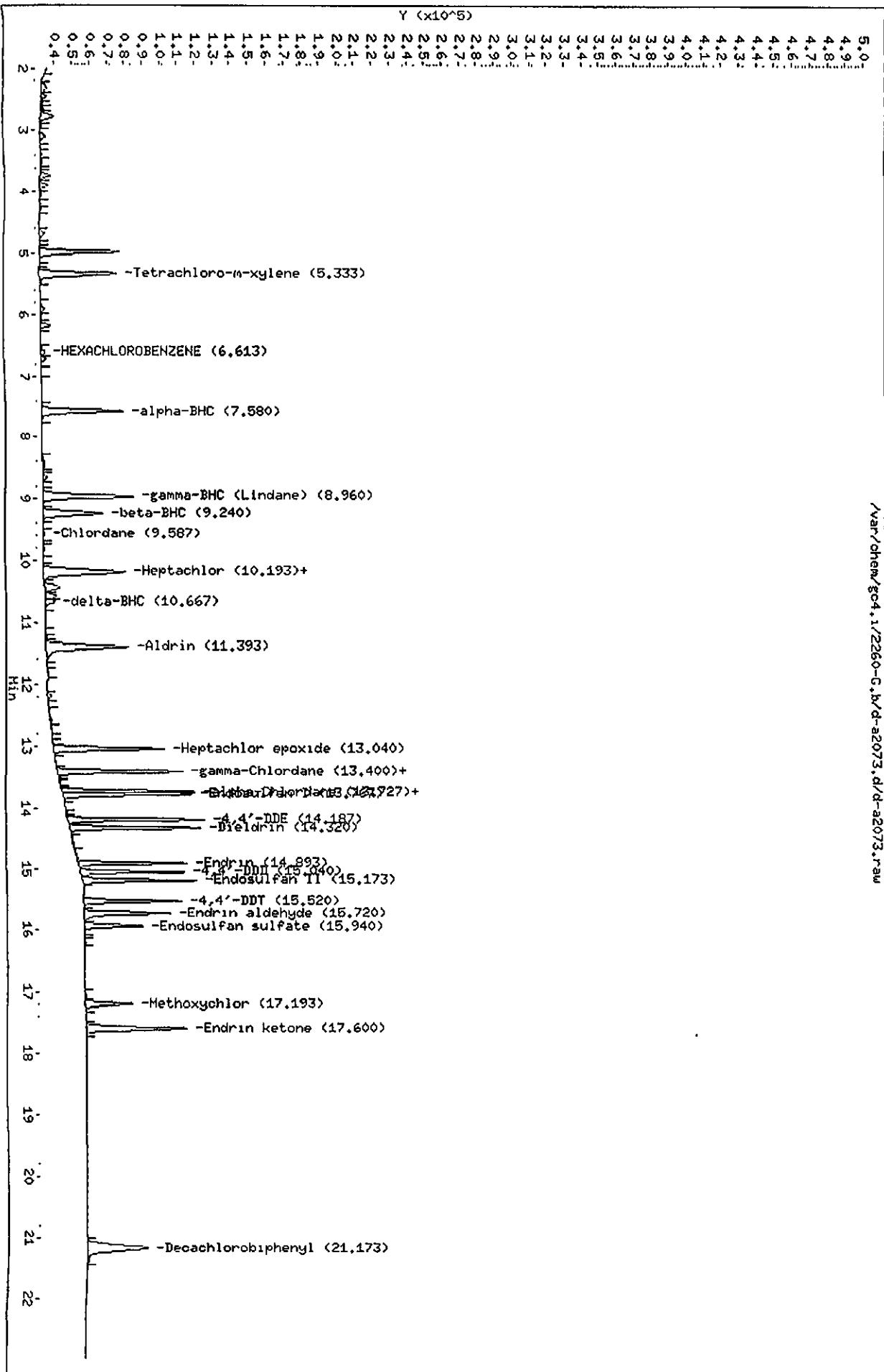
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD	15.040	15.047	-0.007	59012	0.02158	0.002158(a)
22 Endosulfan II	15.173	15.180	-0.007	65634	0.02168	0.002168(a)
23 4,4'-DDT	15.520	15.527	-0.007	56106	0.02088	0.002088(aR)
24 Endrin aldehyde	15.720	15.720	0.000	49838	0.02065	0.002065(a)
26 Endosulfan sulfate	15.940	15.940	0.000	33867	0.01376	0.001376(a)
25 Methoxychlor	17.193	17.200	-0.007	27448	0.02262	0.002262(a)
27 Endrin ketone	17.600	17.607	-0.007	57578	0.02297	0.002297(a)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	44002	0.01552	0.001552(aR)
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007	34817	0.01913	0.001913(aR)

QC Flag Legend

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

Data File: /var/chem/gc4.1/2260-G.b/d-a2073.d
 Date: 23-MAY-2000 19:47
 Client ID: DF/SI/0138/ORA8/MS
 Sample Info: DDFV610P, 2260-G.b, PEST, sub, 3,
 Volume Injected (uL): 1.0
 Column phase: DB608

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



6571434

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8081A

Pesticides (8081A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV610Q

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/23/00

Moisture %: 16

QC Batch: 0144491

Client Sample Id: DF/S1/0138/GRAB/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
72-20-8	Endrin	0.00210	
76-44-8	Heptachlor	0.00190	
1024-57-3	Heptachlor epoxide	0.00200	
58-89-9	Lindane	0.00164	
72-43-5	Methoxychlor	0.00226	

FORM I

Data File: /var/chem/gc4.i/2260-G.b/d-a2074.d
Report Date: 26-May-2000 07:17

STL-PITTSBURGH

Data file : /var/chem/gc4.i/2260-G.b/d-a2074.d
Lab Smp Id: DDFV610Q Client Smp ID: DF/S1/0138/GRAB/MSD
Inj Date : 23-MAY-2000 19:47
Operator : 1891 Inst ID: gc4.i
Smp Info : DDFV610Q, 2260-G.b, , PEST.sub, , 3,
Misc Info : 190257001D
Comment :
Method : /var/chem/gc4.i/2260-G.b/PESTA.m
Meth Date : 26-May-2000 07:09 g Quant Type: ESTD
Cal Date : 23-MAY-2000 19:47 Cal File: d-a2068.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: PEST.sub
Target Version: 3.40

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

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

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
5 alpha-BHC	7.580	7.587	-0.007	47653	0.01391	0.001391 (a)
4 HEXACHLORO BENZENE	6.613	6.650	-0.037	2878		(a)
6 gamma-BHC (Lindane)	8.960	8.967	-0.007	52383	0.01636	0.001636 (aR)
7 beta-BHC	9.240	9.247	-0.007	35170	0.02030	0.002030 (a)
9 Chlordane	9.580	9.573	0.007	508	0.21803	0.02180 (a)
10 Heptachlor	10.193	10.193	0.000	47480	0.01896	0.001896 (aR)
8 delta-BHC	10.667	10.680	-0.013	5579	0.00187	0.0001873 (a)
11 Aldrin	11.393	11.400	-0.007	48468	0.01897	0.001897 (aR)
12 Heptachlor epoxide	13.040	13.047	-0.007	64216	0.02003	0.002003 (a)
13 gamma-Chlordane	13.400	13.407	-0.007	72127	0.02115	0.002114 (a)
14 alpha-Chlordane	13.727	13.727	0.000	76481	0.02182	0.002182 (a)
15 Endosulfan I	13.767	13.773	-0.006	75270	0.02321	0.002321 (a)
16 4,4'-DDE	14.187	14.187	0.000	78681	0.02239	0.002239 (a)
17 Dieldrin	14.313	14.320	-0.007	75163	0.02159	0.002159 (aR)
20 Endrin	14.893	14.893	0.000	63127	0.02096	0.002096 (aR)
18 Toxaphene				Compound Not Detected		

6571436

Data File: /var/chem/gc4.i/2260-G.b/d-a2074.d

Report Date: 26-May-2000 07:17

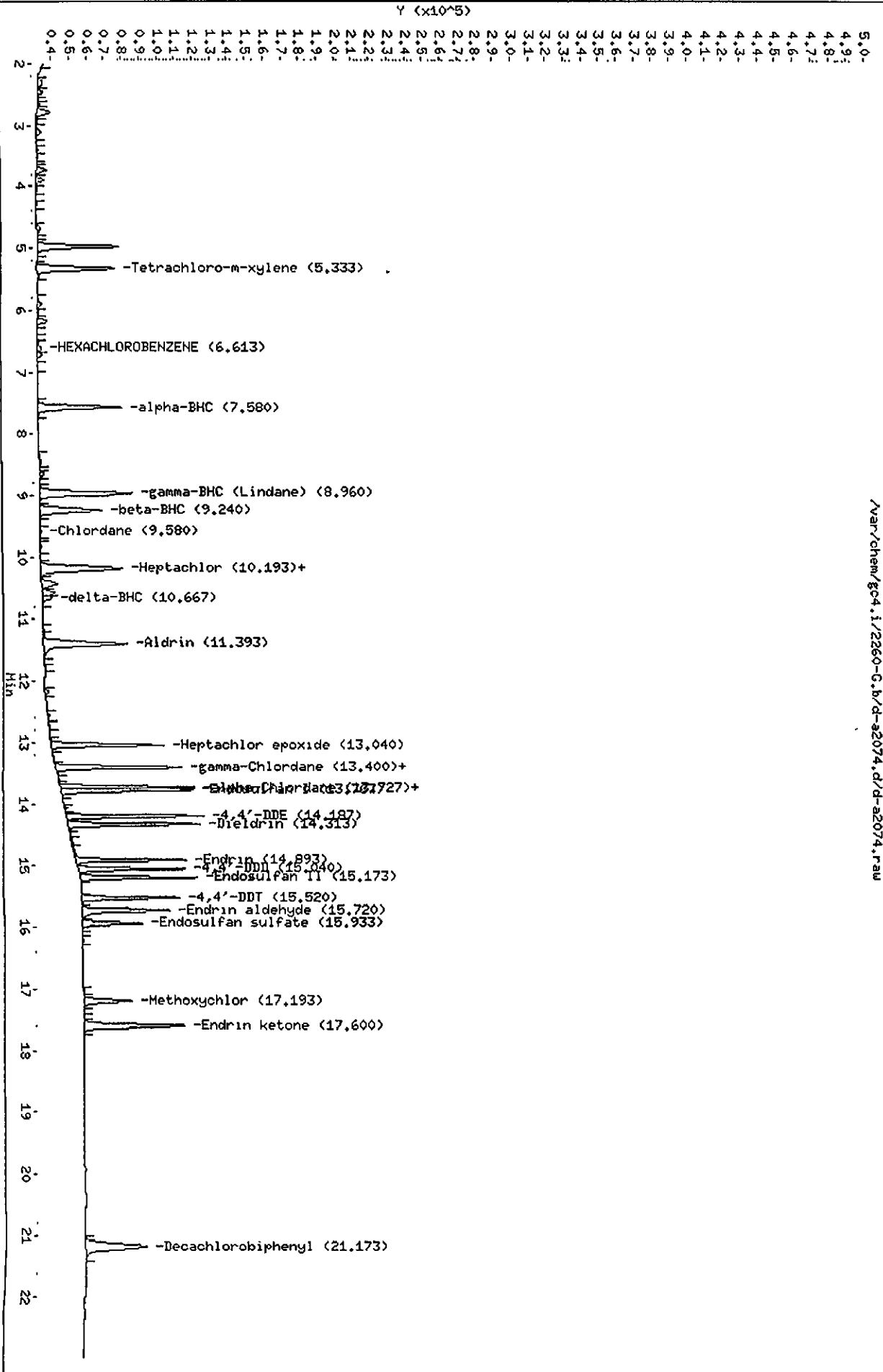
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (mg/L)
=====	==	=====	=====	=====	=====	=====
21 4,4'-DDD	15.040	15.047	-0.007	60451	0.02211	0.002211(a)
22 Endosulfan II	15.173	15.180	-0.007	66887	0.02209	0.002209(a)
23 4,4'-DDT	15.520	15.527	-0.007	55822	0.02077	0.002077(aR)
24 Endrin aldehyde	15.720	15.720	0.000	50275	0.02083	0.002083(a)
26 Endosulfan sulfate	15.933	15.940	-0.007	34497	0.01402	0.001402(a)
25 Methoxychlor	17.193	17.200	-0.007	27457	0.02263	0.002263(a)
27 Endrin ketone	17.600	17.607	-0.007	57774	0.02305	0.002305(a)
\$ 1 Tetrachloro-m-xylene	5.333	5.333	0.000	44493	0.01570	0.001570(aR)
\$ 30 Decachlorobiphenyl	21.173	21.180	-0.007	35050	0.01926	0.001926(aR)

QC Flag Legend

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

Data File: /var/chem/gc4.1/2260-G.b/d-a2074.d
 Date : 23-May-2000 19:47
 Client ID: IF/S4/0138/CRA8/MSD
 Sample Info: DDFW610Q,2260-G.b.,PEST.sub.,3,
 Volume Injected (uL): 1.0
 Column phase: DB608

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



6571438

**PESTICIDE
MISCELLANEOUS**

Preparatory Funnel Extraction Worksheet

6 #0144491

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

TRIP

Date Extraction Began	Date Completed	Parameter	Method	Solvent	Surrogate	Matrix Spike	Cleanup
Lot Number	Sample ID	Client ID	pH	Volume (mL)	Volume (mL)	Volume (mL)	Date
5-23-00	5-25-00	Ref (80814)	3510	MEP	100	1.0	NA
1	POE 190-257	BPB	5	100	10.0	190-90-8	1.0
2	BPB	NA	5	100	10.0	190-85-8	1.0
3	001ms	7	7	10.0	1.0	NA	NA
4	001ms	7	7	10.0	1.0	NA	NA
5	001	7	7	10.0	1.0	NA	NA
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
Analyst	py	py	py	py	py	py	py
Extract(s)	py	py	py	py	py	py	py
Record (ing number from above)	Date	Time	Analyst	Location	Date	Time	Analyst
APR A 6022	5-23-00	1800	py	Lab	5-23-00	1810	py
All APR A 6022	5-23-00	1800	py	Lab	5-23-00	1810	py
All APR A 6022	5-23-00	1800	py	Lab	5-23-00	1810	py
Sodium Sulfate Mfg.	BA	BA	BA	BA	BA	BA	BA
Lot Number	NA	NA	NA	NA	NA	NA	NA
Reviewed By	NA	NA	NA	NA	NA	NA	NA
Date	5-23-00	5-23-00	5-23-00	5-23-00	5-23-00	5-23-00	5-23-00

P. Grubbs
5-23-00

6571440

Turbochrom Sequence File : H:\ACQUIRE\MET_SEQ\2260-G.SEQ
 Created by : DE11/02/98 on : 5/26/00 06:21
 Edited by : DE05/25/00 on : 5/26/00 06:43
 Description : QUANTERRA PGH 8081 RUN ON GC#4 DB608/DB1701
 REVIEWED BY:

Number of Times Edited : 1

Sequence File Header Information:

Number of Rows : 23
 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, 2260-G.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-G.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-G	190-85-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
4	Cal:Replace	LOWA, 2260-G.b,,	190-84-1		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
5	Cal:Replace	MLOWA, 2260-G.b,	190-84-2		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
6	Cal:Replace	MEDA, 2260-G.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
7	Cal:Replace	MHIGHA, 2260-G.b	190-84-4		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
8	Cal:Replace	HIGHA, 2260-G.b,	190-84-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
9	Cal:Replace	LOWB, 2260-G.b,,	190-84-7		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
10	Cal:Replace	MLOWB, 2260-G.b,	190-84-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
11	Cal:Replace	MEDB, 2260-G.b,,	190-84-9		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
12	Cal:Replace	MHIGHB, 2260-G.b	190-84-10		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
13	Cal:Replace	HIGHB, 2260-G.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, 2260-G.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, 2260-G.b,	190-82-5		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
16	Std Check	EVALB, 2260-G.b,	190-88-8		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
17	Sample	DDFV6104, 2260-G	190257001		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
18	Sample	DDFV610P, 2260-G	190257001S		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
19	Sample	DDFV610Q, 2260-G	190257001D		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
20	Sample	DDKW7101, 2260-G	190257BLK		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
21	Sample	DDKW7102, 2260-G	190257LCS		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
22	Std Check	MEDA, 2260-G.b,,	190-84-3		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
23	Std Check	MEDB, 2260-G.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	GEN4C	GEN4A	122190A	EVAL	D-A2056	D-A2056		D-A2056	-	-	-	LPT1
2	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A2057	D-A2057		D-A2057	N	MED	N	LPT1 ,LP
3	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A2058	D-A2058		D-A2058	N	MED	N	LPT1 ,LP
4	-	1	4	GEN4C	GEN4A	122190A	INDA	D-A2059	D-A2059		D-A2059	N	LOW	N	LPT1
5	-	1	5	GEN4C	GEN4A	122190A	INDA	D-A2060	D-A2060		D-A2060	N	MLOW	N	LPT1
6	-	1	6	GEN4C	GEN4A	122190A	INDA	D-A2061	D-A2061		D-A2061	N	MLOW	N	LPT1
7	-	1	7	GEN4C	GEN4A	122190A	INDA	D-A2062	D-A2062		D-A2062	N	MLOW	N	LPT1
8	-	1	8	GEN4C	GEN4A	122190A	INDA	D-A2063	D-A2063		D-A2063	N	MLOW	N	LPT1
9	-	1	9	GEN4C	GEN4A	122190A	INDA	D-A2064	D-A2064		D-A2064	N	LOW	N	LPT1
10	-	1	10	GEN4C	GEN4A	122190A	INDA	D-A2065	D-A2065		D-A2065	N	MLOW	N	LPT1
11	-	1	11	GEN4C	GEN4A	122190A	INDA	D-A2066	D-A2066		D-A2066	N	MLOW	N	LPT1
12	-	1	12	GEN4C	GEN4A	122190A	INDA	D-A2067	D-A2067		D-A2067	N	MLOW	N	LPT1
13	-	1	13	GEN4C	GEN4A	122190A	INDA	D-A2068	D-A2068		D-A2068	N	MLOW	N	LPT1
14	-	1	23	GEN4C	GEN4A	122190A	INDA	D-A2069	D-A2069		D-A2069	-	-	-	LPT1
15	-	1	24	GEN4C	GEN4A	122190A	INDA	D-A2070	D-A2070		D-A2070	-	-	-	LPT1
16	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A2071	D-A2071		D-A2071	-	-	-	LPT1
17	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A2072	D-A2072		D-A2072	-	-	-	LPT1
18	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A2073	D-A2073		D-A2073	-	-	-	LPT1 ,LP
19	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A2074	D-A2074		D-A2074	-	-	-	LPT1 ,LP
20	-	1	2	GEN4C	GEN4A	122190A	TOX	D-A2075	D-A2075		D-A2075	-	-	-	LPT1 ,LP
21	-	1	1	GEN4C	GEN4A	122190A	EVAL	D-A2076	D-A2076		D-A2076	-	-	-	LPT1
22	-	1	6	GEN4C	GEN4A	122190A	INDA	D-A2077	D-A2077		D-A2077	-	-	-	LPT1
23	-	1	11	GEN4C	GEN4A	122190A	INDA	D-A2078	D-A2078		D-A2078	-	-	-	LPT1

PSR024 5/23/00 13:44:25 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>
4A	DDFV6-1-Q4	— — —	236225	399411	A-36-QJ	COE190257	001		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

P. Yushinski
P. Yushinski

P. Yushinski
P. Yushinski

5-23-00 1600
5-23-00 1950

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

6571442

HERBICIDE DATA

**HERBICIDE
QC SUMMARY**

6571444

SW846 8151A SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT QESSDG:

Lot #: C0E190257

	CLIENT ID.	SRG01	TOT OUT
	=====	=====	=====
01	DF/S1/0138/GRAB/001	74	00
02	METHOD BLK. DDKWG101	78	00
03	LCS DDKWG102	102	00
04	DF/S1/0138/GRAB/001 D	77	00
05	DF/S1/0138/GRAB/001 S	61	00

SURROGATES
SRG01 = DCAA

QC LIMITS
(42-125)

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

FORM II

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Lot #: C0E230000

WO #: DDKWG102

BATCH: 0144493

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====
2,4-D	0.160	0.157	98	28 - 136	
2,4,5-TP (Silvex)	0.0400	0.0388	97	50 - 128	

NOTES(S) :

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

6571446

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Lot #: C0E190257

WO #: DDFV610R

BATCH: 0144493

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
=====	=====	=====	=====	=====	=====	=====
2,4-D	0.160	ND	0.161	101	35 - 133	
2,4,5-TP (Silvex)	0.0400	ND	0.0392	98	50 - 131	

NOTES (S) :

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

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

COMMENTS:

FORM III

SW846 8151A MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc.

Client: UXB INTERNATIONAL

Lab Code: QESPIT

SDG No:

Matrix Spike ID: DF/S1/0138/GRAB/001

Lot #: COE190257

WO #: DDFV610T

BATCH: 0144493

COMPOUND	SPIKE	MSD	MSD	QC LIMITS				QUAL
	ADDED (mg/L)	CONCENT. (mg/L)	% REC	% RPD	RPD	REC		
2,4-D	0.160	0.174	109	8.0	20	35 - 133		
2,4,5-TP (Silvex)	0.0400	0.0413	103	5.2	20	50 - 131		

NOTES (S) :

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

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

COMMENTS:

6571448

SW846 8151A METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DDKWG101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESPIT

Lab File ID: a-a30040.

Matrix: SOLID

SDG Number:

Lot Number: C0E190257

Extraction Method:

Date Extracted: 05/23/00

Date Analyzed(1): 05/26/00

Date Analyzed(2): N/A

Time Analyzed(1): 07:18

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/S1/0138/GRAB/001	DDFV610R S	05/26/00	N/A
02	DF/S1/0138/GRAB/001	DDFV610T D	05/26/00	N/A
03	DF/S1/0138/GRAB/001	DDFV6105	05/26/00	N/A
04	CHECK SAMPLE	DDKWG102 C	05/26/00	N/A
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

**HERBICIDE
SAMPLE DATA**

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV6105

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: 16

QC Batch: 0144493

Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.0050	U
93-72-1	2,4,5-TP (Silvex)	0.0050	U

Data File: /var/chem/gc1.i/2250.b/a-a30037.d
 Report Date: 26-May-2000 12:10

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30037.d
 Lab Smp Id: DDFV6105 Client Smp ID: DF/S1/0138/GRAB/001
 Inj Date : 26-MAY-2000 05:50
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DDFV6105,2250.b
 Misc Info : 190257-1
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol Quant Type: ESTD
 Cal Date : 25-MAY-2000 14:51 Cal File: a-a30006.d
 Als bottle: 38
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

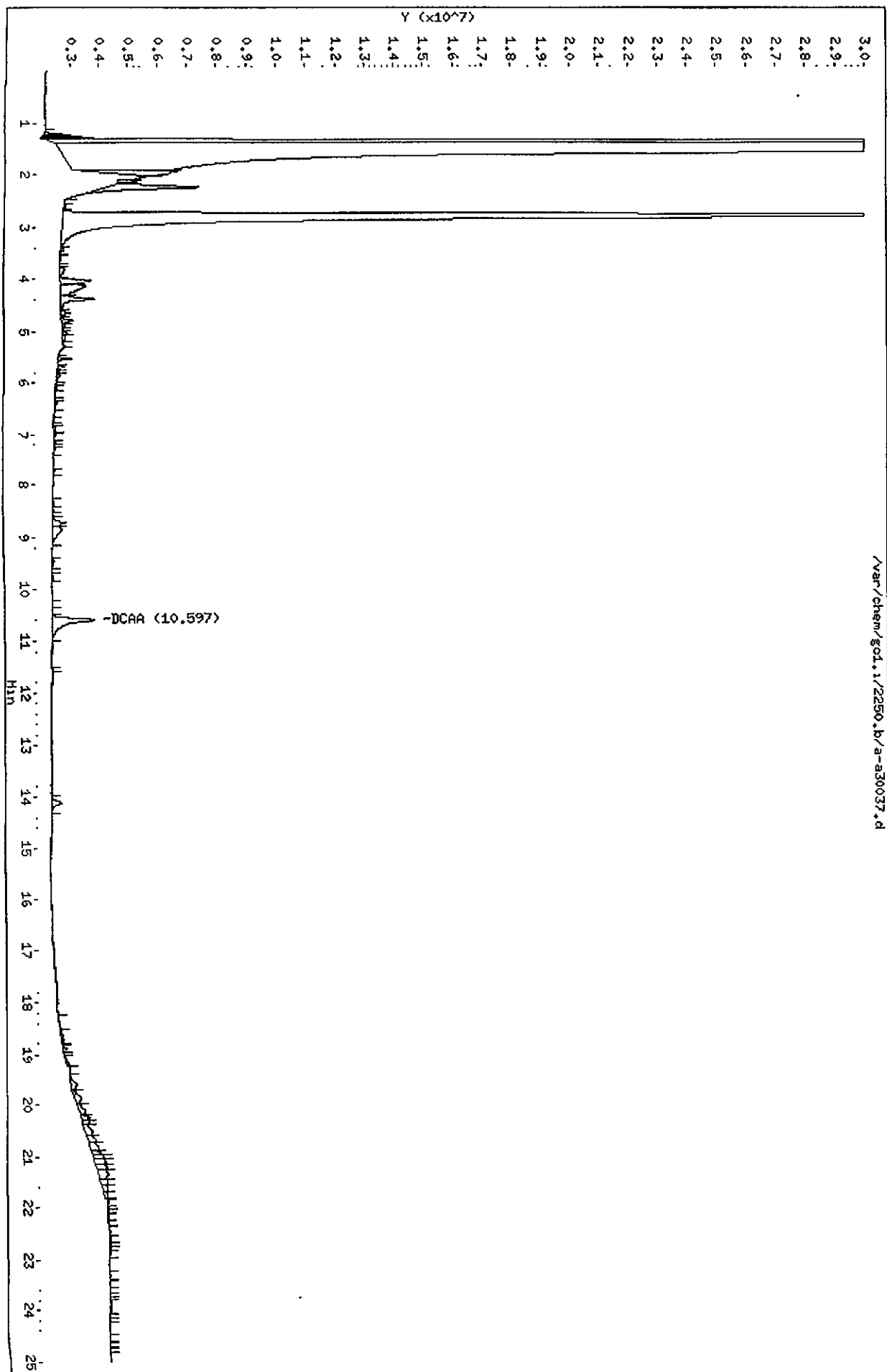
Concentration Formula: $\text{Amt} * \text{DF} * 20 * \text{Vt} / \text{Vo} / \text{Vi}$

Name	Value	Description
DF	1.000	Dilution Factor
Vt	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	RSPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (ug/L)
1 DALAPON				Compound Not Detected.		
\$ 2 DCAA	10.597	10.593	0.004	10730058	0.03717	7.434
3 MCPP				Compound Not Detected.		
4 DICAMBA				Compound Not Detected.		
5 MCPA				Compound Not Detected.		
6 DICHLOROPROP				Compound Not Detected.		
7 2,4-D				Compound Not Detected.		
8 PENTACHLOROPHENOL				Compound Not Detected.		
9 2,4,5-TP(SILVEX)				Compound Not Detected.		
10 2,4,5-T				Compound Not Detected.		
11 DINOSEB				Compound Not Detected.		
12 2,4-DB				Compound Not Detected.		

Data File: /var/chem/gcd.1/2250.b/a-a30037.d
Date : 26-MAY-2000 05:50
Client ID: DF/S1/0138/GRAB/001
Sample Info: DDFV6105,2250.b
Volume Injected (uL): 1.0
Column Phase: DB608

Instrument: gcd.i
Operator: 01797
Column diameter: 0.53



**HERBICIDE
CALIBRATION DATA**

6571454

6D
68901A
D8608

Report Date : 26-May-2000 12:00

STL-PITTSBURGH

COMPOUND LISTING

Method file : /var/chem/gc1.i/2250.b/LONGH.m
Quant Method : ESTD
Last Update : 26-May-2000 12:00
Data Type : GC MULTI COMP

Target Version : 3.40
Number of Cpnds : 12

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	3608.000000
Initial:End Threshold	1804.000000
Initial:Area Threshold	36080.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	10.000000
Initial:Negative Peaks	ON
Initial:Tension	0.200000

Compound	RT	RT Window	RF
1 DALAPON	3.735	3.665-3.805	8.683e+07
\$ 2 DCAA	10.593	10.523-10.663	2.887e+08
3 MCPP	11.032	10.962-11.102	4.234e+05
4 DICAMBA	11.211	11.141-11.281	2.139e+08
5 MCPA	12.003	11.933-12.073	5.123e+05
6 DICHLOROPROP	12.835	12.765-12.905	5.373e+07
7 2,4-D	14.347	14.277-14.417	3.429e+08
8 PENTACHLOROPHENOL	15.577	15.507-15.647	5.337e+08
9 2,4,5-TP(SILVEX)	16.791	16.721-16.861	1.602e+09
10 2,4,5-T	17.910	17.840-17.980	1.255e+09
11 DINOSEB	18.080	18.010-18.150	1.288e+09
12 2,4-DB	18.578	18.508-18.648	1.663e+08

Report Date : 26-May-2000 12:00

STL-PITTSBURGH

INITIAL CALIBRATION DATA

Start Cal Date : 25-MAY-2000 12:56
 End Cal Date : 25-MAY-2000 14:51
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.40
 Integrator : Falcon
 Method file : /var/chem/gc1.i/2250.b/LONGH.m
 Cal Date : 26-May-2000 12:00 g
 Curve Type : Average

Calibration File Names:

Level 1: /var/chem/gc1.i/2250.b/a-a30002.d
 Level 2: /var/chem/gc1.i/2250.b/a-a30003.d
 Level 3: /var/chem/gc1.i/2250.b/a-a30004.d
 Level 4: /var/chem/gc1.i/2250.b/a-a30005.d
 Level 5: /var/chem/gc1.i/2250.b/a-a30006.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	95191364	92865591	89703713	79726014	76666750	86830686	9.433
3 MCPP	624861	531746	428035	307628	224531	423360	38.324 <-
4 DICAMBA	213740377	224577230	229157694	208384101	193882941	213948469	6.518
5 MCPA	741517	636895	511921	377390	293859	512316	35.724 <-
6 DICHLOROPROP	56459104	57701250	57084198	50842712	46586327	53734718	9.014
7 2,4-D	358380853	372944306	370428155	324513094	288313859	342916053	10.532
8 PENTACHLOROPHENOL	492462030	533653195	574309774	541904746	526263995	533718748	5.520
9 2,4,5-TP(SILVEX)	1.629e+09	1.663e+09	1.703e+09	1.551e+09	1.463e+09	1.602e+09	5.974
10 2,4,5-T	1.237e+09	1.292e+09	1.349e+09	1.226e+09	1.171e+09	1.255e+09	5.403
11 DINOSBB	1.353e+09	1.373e+09	1.379e+09	1.231e+09	1.105e+09	1.288e+09	9.217
12 2,4-DB	199231754	190966848	167337538	143706077	130432136	166334871	17.761
\$ 2 DCAA	321767042	315288918	304901716	265662494	235802624	288684559	12.718

AVE=13.8

6571456

Data File: /var/chem/gc1.i/2250.b/a-a30027.d
 Report Date: 26-May-2000 12:03

7E
 68901A
 DB608

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc1.i
 Lab File ID: a-a30027.d
 Analysis Type:
 Lab Sample ID: Mherb
 Quant Type: ESTD

Injection Date: 26-MAY-2000 01:00
 Init. Calibration Date(s): 05/25/0 05/25/0
 Init. Calibration Times: 12:56 14:51
 Method File: /var/chem/gc1.i/2250.b/LONGH.m

COMPOUND	RRF	RFD	MIN	RRF	%D	MAX
1 DALAPON	86830686.239	94575945.330	0.010	-8.9	15.0	
2 DCAA	288684558.635	337659729.730	0.010	-17.0	15.0	<-
3 MCPP	423360.208	460208.451	0.010	-8.7	15.0	
4 DICAMBA	213948468.751	249295905.882	0.010	-16.5	15.0	<-
5 MCPA	512316.464	540533.294	0.010	-5.5	15.0	
6 DICHLOROPROP	53734718.217	64037382.075	0.010	-19.2	15.0	<-
7 2,4-D	342916053.403	411532103.408	0.010	-20.0	15.0	<-
8 PENTACHLOROPHENOL	533718748.308	605949248.120	0.010	-13.5	15.0	
9 2,4,5-TP(SILVEX)	1601791609.542	1876082464.455	0.010	-17.1	15.0	<-
10 2,4,5-T	1255062160.770	1487171279.621	0.010	-18.5	15.0	<-
11 DINOSEB	1288162087.744	1469067086.614	0.010	-14.0	15.0	
12 2,4-DB	166334870.675	185275597.633	0.010	-11.4	15.0	

AVE = 14.2

Data File: /var/chem/gc1.i/2250.b/a-a30048.d
Report Date: 26-May-2000 12:05

7E
68901A
DB608

STL-PITTSBURGH

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gc1.i Injection Date: 26-MAY-2000 11:10
Lab File ID: a-a30048.d Init. Calibration Date(s): 05/25/00 05/25/00
Analysis Type: Init. Calibration Times: 12:56 14:51
Lab Sample ID: Mherb Method File: /var/chem/gc1.i/2250.b/LONGH.m
Quant Type: ESTD

COMPOUND	RRF	RFO	MIN	MAX
1 DALAPON	86830686.239	92892687.927	0.010	-7.0 15.0
2 DCAA	288684558.635	318327179.788	0.010	-10.3 15.0
3 MCPP	423360.208	454162.793	0.010	-7.3 15.0
4 DICAMBA	213948468.751	234785482.353	0.010	-9.7 15.0
5 MCPA	512316.464	530876.636	0.010	-3.6 15.0
6 DICHLOROPROP	53734718.217	63150070.755	0.010	-17.5 15.0
7 2,4-D	342916053.403	400779247.944	0.010	-16.9 15.0
8 PENTACHLOROPHENOL	533718748.308	585543984.962	0.010	-9.7 15.0
9 2,4,5-TP(SILVEX)	1601791609.542	1769148009.479	0.010	-10.4 15.0
10 2,4,5-T	1255062160.770	1490079763.033	0.010	-18.7 15.0
11 DINOSEB	1288162087.744	1224307244.094	0.010	5.0 15.0
12 2,4-DB	166334870.675	175144828.402	0.010	-5.3 15.0

AVE = 10.1

FORM 8
HERB ANALYTICAL SEQUENCE

Lab Name: STL-PITTSBURGH

Contract:

Lab Code: STLPIT

Case No.:

SAS No.: 40325

SDG No.: C0E190257

GC Column: DB608

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 : 10.59					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	LHERB	05/25/00	1256	10.59	
02	MLHERB	05/25/00	1324	10.59	
03	MHERB	05/25/00	1354	10.59	
04	MHHERB	05/25/00	1422	10.59	
05	HHERB	05/25/00	1451	10.59	
06	MHERB	05/26/00	0100	10.59	
07	DF/S1/0138/G DDFV6105	05/26/00	0550	10.60	
08	DF/S1/0138/G DDFV610R	05/26/00	0619	10.60	
09	DF/S1/0138/G DDFV610T	05/26/00	0648	10.59	
10	PBLK1	05/26/00	0718	10.60	
11	LCS1	05/26/00	0747	10.59	
12	DDKWG102	05/26/00	1110	10.59	
13	MHERB				
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.

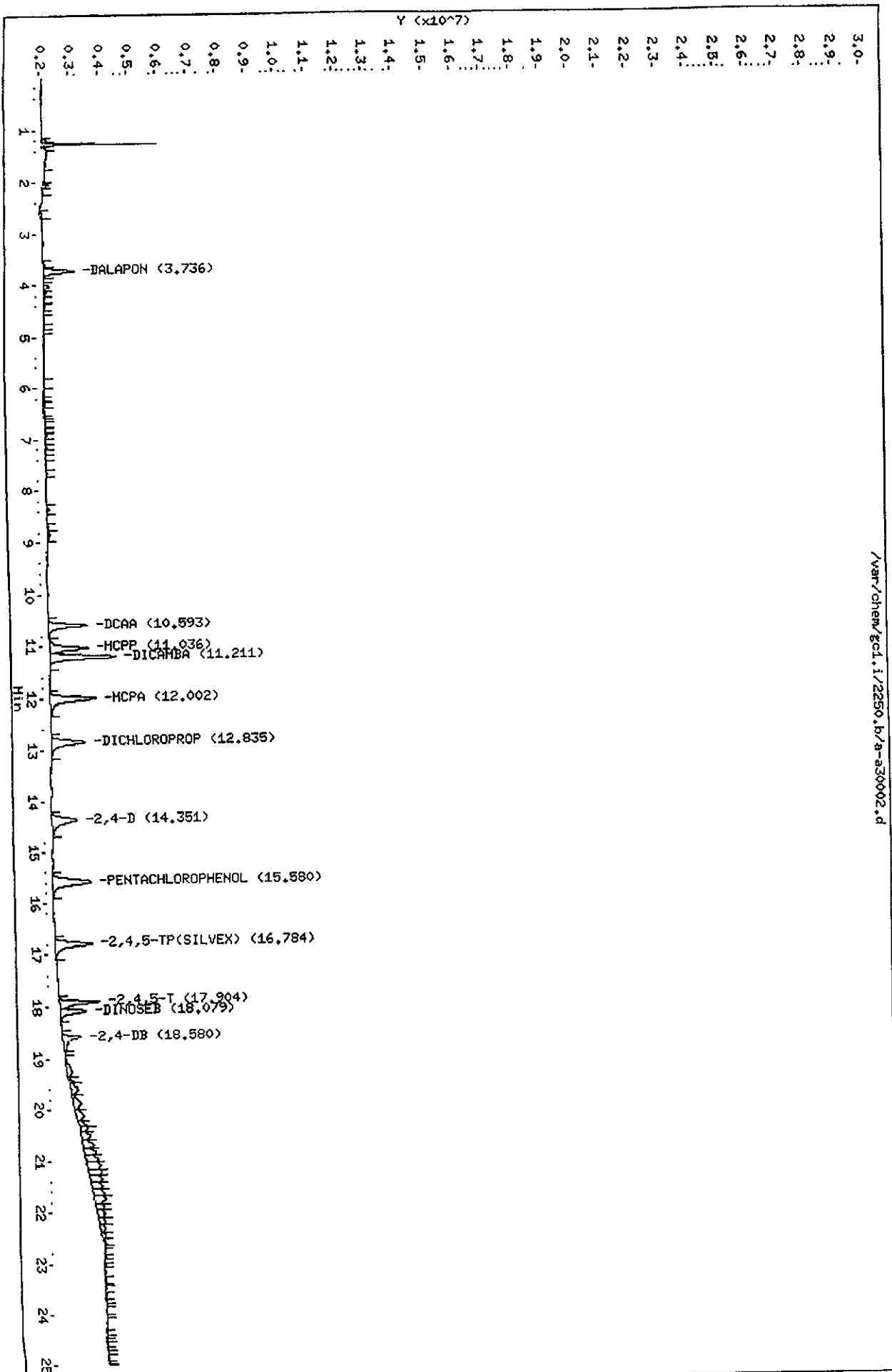
Data File: /var/chem/gc1.i/2250.b/a-a30002.d
 Report Date: 26-May-2000 12:07

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30002.d
 Lab Smp Id: Lherb
 Inj Date : 25-MAY-2000 12:56
 Operator : 01797
 Smp Info : Lherb,2250.b
 Misc Info : 190-80-1
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 12:56
 Als bottle: 3
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30002.d
 Calibration Sample, Level: 1
 Compound Sublist: 1-all.sub

					AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	*****	=====	=====	=====
1 DALAPON	3.736	3.735	0.001	1047105	0.01100	0.01100
\$ 2 DCAA	10.593	10.593	0.000	6853638	0.02130	0.02130
3 MCPP	11.036	11.032	0.004	1324705	2.12000	2.120
4 DICAMBA	11.211	11.211	0.000	2265648	0.01060	0.01060
5 MCPA	12.002	12.003	-0.001	1586847	2.14000	2.140
6 DICHLOROPROP	12.835	12.835	0.000	1196933	0.02120	0.02120
7 2,4-D	14.351	14.347	0.004	7561836	0.02110	0.02110
8 PENTACHLOROPHENOL	15.580	15.577	0.003	1309949	0.00266	0.002660
9 2,4,5-TP(SILVEX)	16.784	16.791	-0.007	8554472	0.00525	0.005250
10 2,4,5-T	17.904	17.910	-0.006	6519003	0.00527	0.005270
11 DINOSEB	18.079	18.080	-0.001	4289061	0.00317	0.003170
12 2,4-DB	18.580	18.578	0.002	4203790	0.02110	0.02110



Column phase: DB608

/var/chem/gc1.i/2250.b/a-a30002.d

Data File: /var/chem/gc1.i/2250.b/a-a30002.d
Date : 25-MAY-2000 12:56
Client ID:
Sample Info: Lherb,2250.b

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30003.d
 Report Date: 26-May-2000 12:07

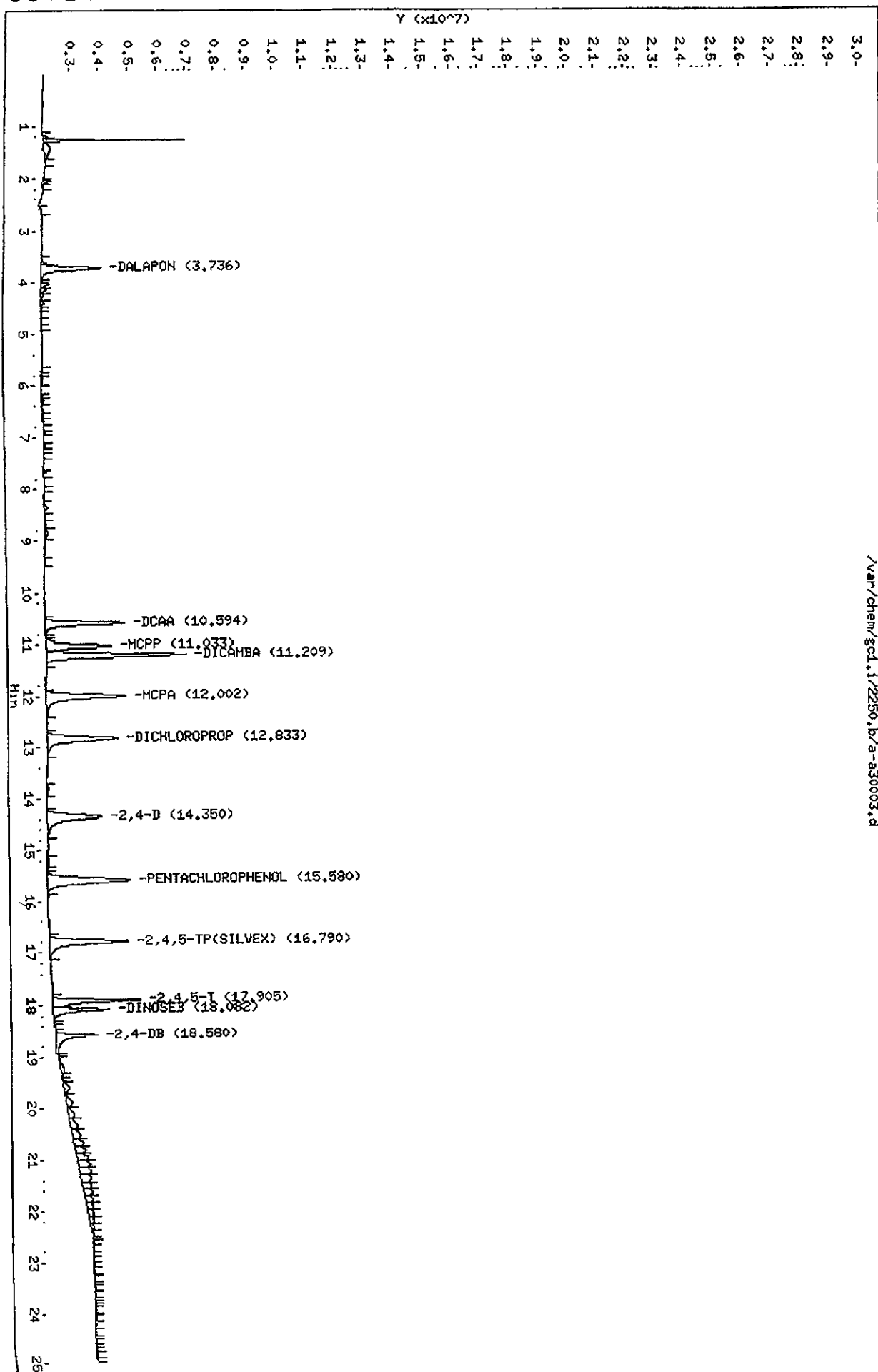
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30003.d
 Lab Smp Id: MLherb
 Inj Date : 25-MAY-2000 13:24
 Operator : 01797
 Smp Info : MLherb, 2250.b
 Misc Info : 190-80-2
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 13:24
 Als bottle: 4
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30003.d
 Calibration Sample, Level: 2
 Compound Sublist: all.sub

Compound					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.736	3.735	0.001	2043043	0.02200	0.02173
\$ 2 DCAA	10.594	10.593	0.001	13399779	0.04250	0.04207
3 MCPP	11.033	11.032	0.001	2265238	4.26000	3.917
4 DICAMBA	11.209	11.211	-0.002	4783495	0.02130	0.02183
5 MCPA	12.002	12.003	-0.001	2725912	4.28000	3.955
6 DICHLOROPROP	12.833	12.835	-0.002	2446533	0.04240	0.04286
7 2,4-D	14.350	14.347	0.003	15850133	0.04250	0.04335
8 PENTACHLOROPHENOL	15.580	15.577	0.003	2839035	0.00532	0.005534
9 2,4,5-TP(SILVEX)	16.790	16.791	-0.001	17466690	0.01050	0.01061
10 2,4,5-T	17.905	17.910	-0.005	13564232	0.01050	0.01073
11 DINOSEB	18.082	18.080	0.002	8719375	0.00635	0.006397
12 2,4-DB	18.580	18.578	0.002	8058801	0.04220	0.04131

6571462



Data File: /var/chem/gc1.i/2250.b/a-a30003.d
Date: 25-MAY-2000 13:24
Client ID:
Sample Info: HLherb,2250.b
Column phase: DB608

/var/chem/gc1.i/2250.b/a-a30003.d

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30004.d
 Report Date: 26-May-2000 12:07

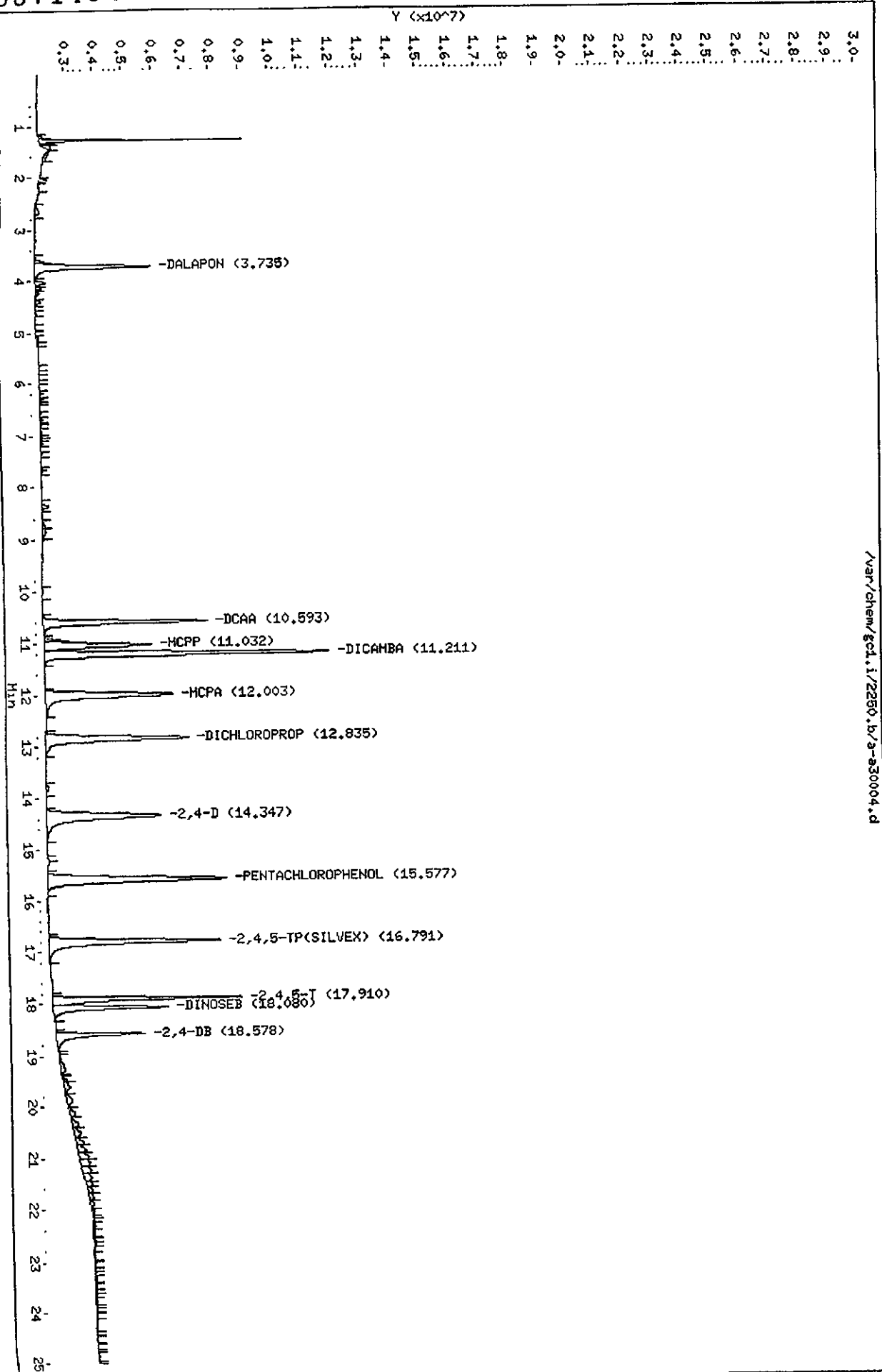
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30004.d
 Lab Smp Id: Mherb
 Inj Date : 25-MAY-2000 13:54
 Operator : 01797
 Smp Info : Mherb,2250.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 13:54
 Als bottle: 5
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30004.d
 Calibration Sample, Level: 3
 Compound Sublist: 1-all.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.735	3.735	0.000	3937993	0.04390	0.04253
\$ 2 DCAA	10.593	10.593	0.000	25947136	0.08510	0.08264
3 MCPP	11.032	11.032	0.000	3646856	8.52000	6.904
4 DICAMBA	11.211	11.211	0.000	9739202	0.04250	0.04377
5 MCPA	12.003	12.003	0.000	4382048	8.56000	6.954
6 DICHLOROPROP	12.835	12.835	0.000	4840740	0.08480	0.08480
7 2,4-D	14.347	14.347	0.000	31523436	0.08510	0.08584
8 PENTACHLOROPHENOL	15.577	15.577	0.000	6110656	0.01064	0.01145
9 2,4,5-TP(SILVEX)	16.791	16.791	0.000	35923236	0.02110	0.02157
10 2,4,5-T	17.910	17.910	0.000	28465173	0.02110	0.02202
11 DINOSEB	18.080	18.080	0.000	17508308	0.01270	0.01280
12 2,4-DB	18.578	18.578	0.000	14140022	0.08450	0.07608

6571464



/var/chem/gcl.i/2250.b/a-a30004.d

Column phase: DB608

Data File: /var/chem/gcl.i/2250.b/a-a30004.d
Date: 25-MAY-2000 13:54
Client ID:
Sample Info: Mherb,2250.b

Instrument: gcl.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30005.d
 Report Date: 26-May-2000 12:07

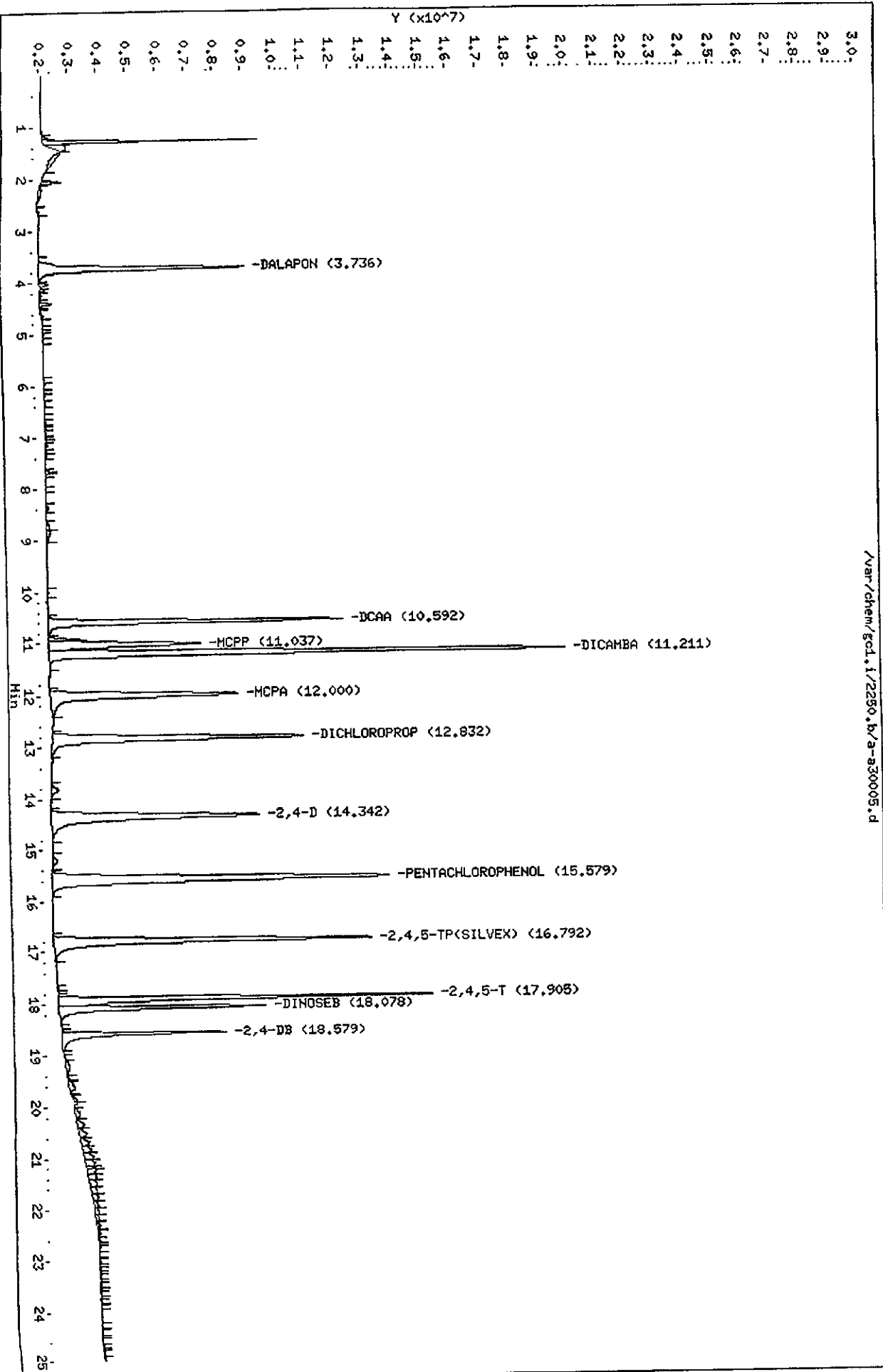
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30005.d
 Lab Smp Id: MHherb
 Inj Date : 25-MAY-2000 14:22
 Operator : 01797
 Smp Info : MHherb,2250.b
 Misc Info : 190-80-4
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 14:22
 Als bottle: 6
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30005.d
 Calibration Sample, Level: 4
 Compound Sublist: all.sub

Compounds					AMOUNTS	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.736	3.735	0.001	6999944	0.08780	0.07832
\$ 2 DCAA	10.592	10.593	-0.001	45162624	0.17000	0.1496
3 MCPP	11.037	11.032	0.005	5229682	17.0000	11.05
4 DICAMBA	11.211	11.211	0.000	17733487	0.08510	0.08099
5 MCPA	12.000	12.003	-0.003	6453361	17.1000	11.38
6 DICHLOROPROP	12.832	12.835	-0.003	8643261	0.17000	0.1557
7 2,4-D	14.342	14.347	-0.005	55167226	0.17000	0.1547
8 PENTACHLOROPHENOL	15.579	15.577	0.002	11531733	0.02128	0.02153
9 2,4,5-TP(SILVEX)	16.792	16.791	0.001	65279582	0.04210	0.03989
10 2,4,5-T	17.905	17.910	-0.005	51751818	0.04220	0.04056
11 DINOSBB	18.078	18.080	-0.002	31265997	0.02540	0.02344
12 2,4-DB	18.579	18.578	0.001	24286327	0.16900	0.1385

6571466



Data File: /var/chem/gc1.i/2250.b/a-a30005.d
Date: 25-MAY-2000 14:22
Client ID:
Sample Info: HHerb, 2250.b
Column phase: DB608

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30006.d
 Report Date: 26-May-2000 12:08

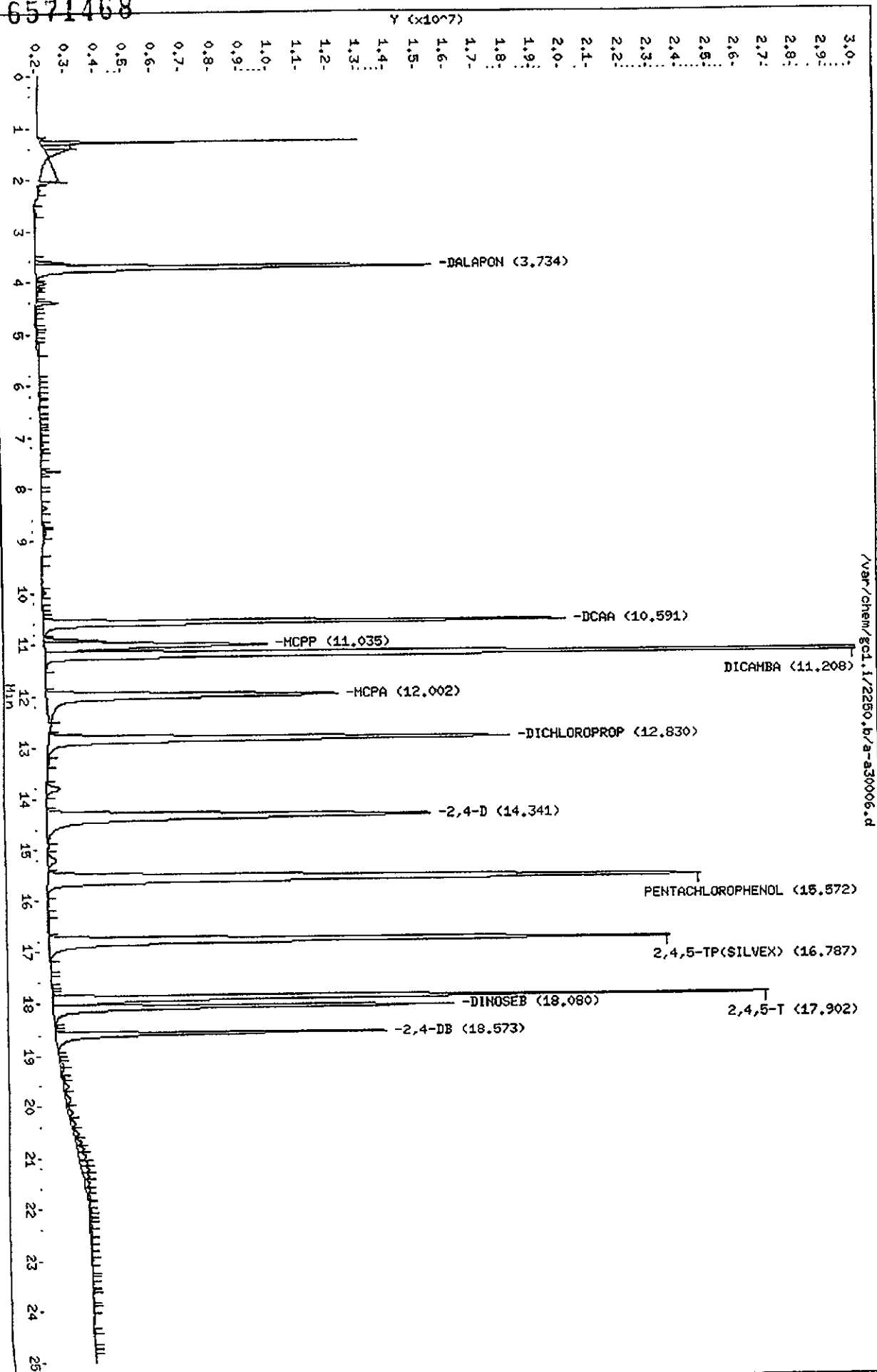
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30006.d
 Lab Smp Id: Hherb
 Inj Date : 25-MAY-2000 14:51
 Operator : 01797
 Smp Info : Hherb,2250.b
 Misc Info : 190-80-5
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 14:51
 Als bottle: 7
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30006.d
 Calibration Sample, Level: 5
 Compound Sublist: all.sub

Compounds	AMOUNTS				ON-COL	
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	(ng)
*****	..	*****	*****	*****	*****	*****
1 DALAPON	3.734	3.735	-0.001	13493348	0.17600	0.1554
\$ 2 DCAA	10.591	10.593	-0.002	80172892	0.34000	0.2777
3 MCPP	11.035	11.032	0.003	7656510	34.1000	18.08
4 DICAMBA	11.208	11.211	-0.003	32960100	0.17000	0.1540
5 MCPA	12.002	12.003	-0.001	9991195	34.0000	19.50
6 DICHLOROPROP	12.830	12.835	-0.005	15792765	0.33900	0.2939
7 2,4-D	14.341	14.347	-0.006	98026712	0.34000	0.2859
8 PENTACHLOROPHENOL	15.572	15.577	-0.005	22392533	0.04255	0.04196
9 2,4,5-TP(SILVEX)	16.787	16.791	-0.004	122886422	0.08400	0.07672
10 2,4,5-T	17.902	17.910	-0.008	98838307	0.08440	0.07875
11 DINOSEB	18.080	18.080	0.000	56139727	0.05080	0.04358
12 2,4-DB	18.573	18.578	-0.005	44086062	0.33800	0.2650

6571468



Column phase: IB608

Data File: /var/chem/gcol.1/2250.b/a-a30006.d
Date: 25-MAY-2000 14:51
Client ID:
Sample Info: Therb/2250.b

Instrument: gcol.1
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30027.d
 Report Date: 26-May-2000 12:09

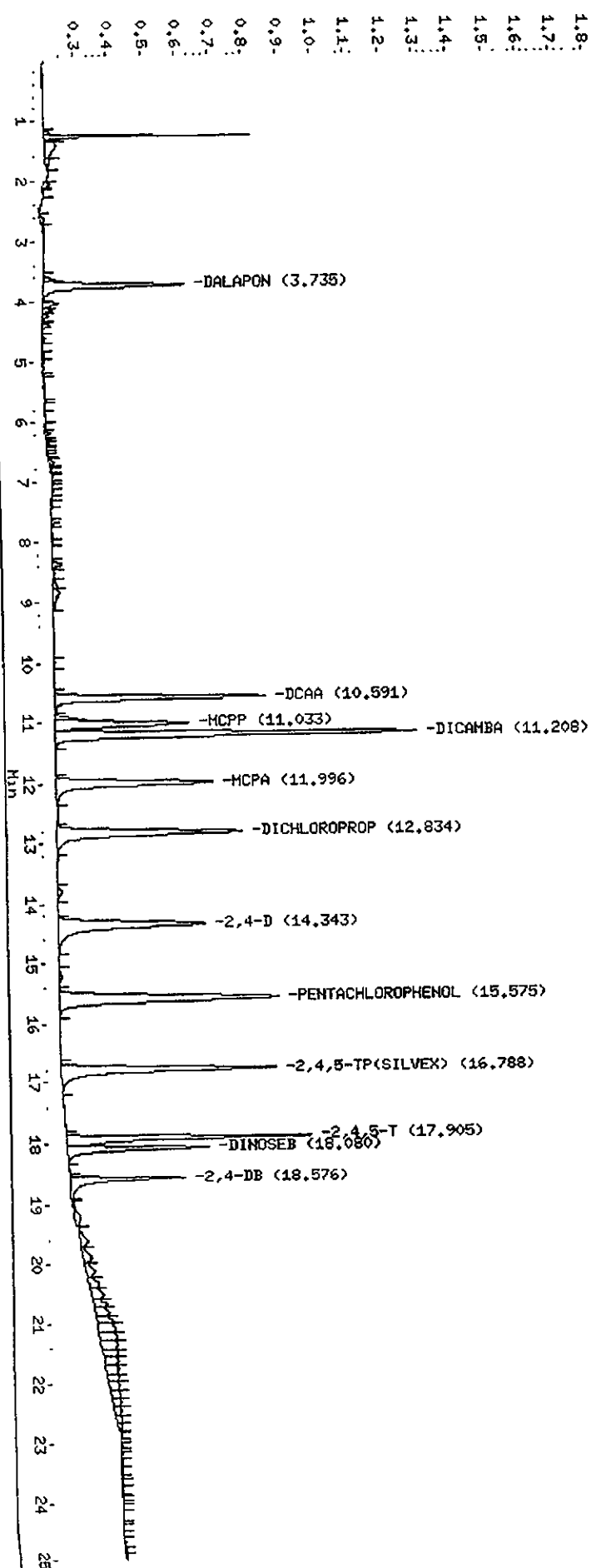
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30027.d
 Lab Smp Id: Mherb
 Inj Date : 26-MAY-2000 01:00
 Operator : 01797
 Smp Info : Mherb,2250.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 14:51
 Als bottle: 28
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30006.d
 Continuing Calibration Sample
 Compound Sublist: all.sub

Compounds	AMOUNTS					
	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
=====	==	=====	=====	=====	=====	=====
1 DALAPON	3.735	3.735	0.000	4151884	0.04390	0.04782
\$ 2 DCAA	10.591	10.593	-0.002	28734843	0.08510	0.09954
3 MCPP	11.033	11.032	0.001	3920976	8.52000	9.262
4 DICAMBA	11.208	11.211	-0.003	10595076	0.04250	0.04952
5 MCPA	11.996	12.003	-0.007	4626965	8.56000	9.031
6 DICHLOROPROP	12.834	12.835	-0.001	5430370	0.08480	0.1010
7 2,4-D	14.343	14.347	-0.004	35021382	0.08510	0.1021
8 PENTACHLOROPHENOL	15.575	15.577	-0.002	6447300	0.01064	0.01208
9 2,4,5-TP (SILVEX)	16.788	16.791	-0.003	39585340	0.02110	0.02471
10 2,4,5-T	17.905	17.910	-0.005	31379314	0.02110	0.02500
11 DINOSEB	18.080	18.080	0.000	18657152	0.01270	0.01448
12 2,4-DB	18.576	18.578	-0.002	15655788	0.08450	0.09412

6571470

Y (x10⁷)

Column phase: DB608

/var/chem/gc1.i/2250.b/a-a30027.d

Data file: /var/chem/gc1.i/2250.b/a-a30027.d
Date: 26-MAY-2000 01:00
Client ID:
Sample Info: Hherb,2250.b

Instrument: gc1.i
Operator: 01797
Column diameter: 0.53

Data File: /var/chem/gc1.i/2250.b/a-a30048.d
 Report Date: 26-May-2000 12:11

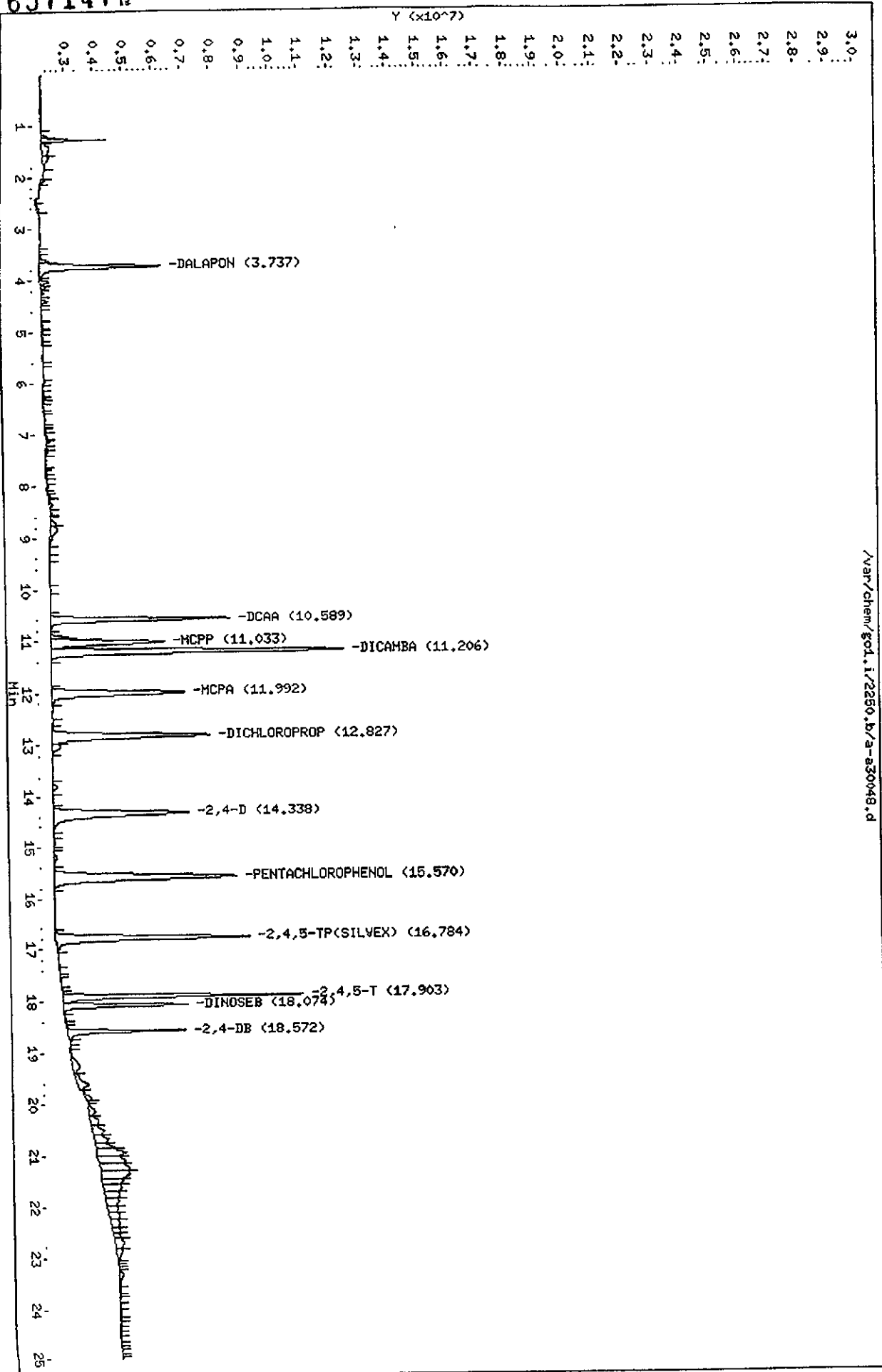
STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30048.d
 Lab Smp Id: Mherb
 Inj Date : 26-MAY-2000 11:10
 Operator : 01797
 Smp Info : Mherb,2250.b
 Misc Info : 190-80-3
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol
 Cal Date : 25-MAY-2000 14:51
 Als bottle: 49
 Dil Factor: 1.00000
 Integrator: Falcon
 Target Version: 3.40

Inst ID: gc1.i
 Quant Type: ESTD
 Cal File: a-a30006.d
 Continuing Calibration Sample
 Compound Sublist: all.sub

Compounds						AMOUNTS	
	RT	BXP RT	DLT RT	RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
*****	==	=====	=====	=====	=====	=====	=====
1 DALAPON	3.737	3.735	0.002		4077989	0.04390	0.04696
2 DCAA	10.589	10.593	-0.004		27089643	0.08510	0.09384
3 MCPP	11.033	11.032	0.001		3869467	8.52000	9.140
4 DICAMBA	11.206	11.211	-0.005		9978383	0.04250	0.04664
5 MCPA	11.992	12.003	-0.011		4544304	8.56000	8.870
6 DICHLOROPROP	12.827	12.835	-0.008		5355126	0.08480	0.09966
7 2,4-D	14.338	14.347	-0.009		34106314	0.08510	0.09946
8 PENTACHLOROPHENOL	15.570	15.577	-0.007		6230188	0.01064	0.01167
9 2,4,5-TP(SILVEX)	16.784	16.791	-0.007		37329023	0.02110	0.02330
10 2,4,5-T	17.903	17.910	-0.007		31440683	0.02110	0.02505
11 DINOSBB	18.074	18.080	-0.006		15548702	0.01270	0.01207
12 2,4-DB	18.572	18.578	-0.006		14799738	0.08450	0.08898

6571472



/var/chem/gcd.i/2250.b/a-a30048.d

Data File: /var/chem/gcd.i/2250.b/a-a30048.d
Date: 26-MAY-2000 11:10
Client ID:
Sample Info: Mherb,2250.b
Column phase: DB608

Instrument: gcd.i
Operator: 01797
Column diameter: 0.53

**HERBICIDE
QC DATA**

6571474

UXB INTERNATIONAL
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc.

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E230000 493

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDKWG101

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: NA

QC Batch: 0144493

Client Sample Id: INTRA-LAB BLANK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.0050	U
93-72-1	2,4,5-TP (Silvex)	0.0050	U

FORM I

Data File: /var/chem/gc1.i/2250.b/a-a30040.d
 Report Date: 26-May-2000 12:10

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30040.d
 Lab Smp Id: DDKWG101 Client Smp ID: PBLK1
 Inj Date : 26-MAY-2000 07:18
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DDKWG101,2250.b
 Misc Info : 190257-BLK
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol Quant Type: ESTD
 Cal Date : 25-MAY-2000 14:51 Cal File: a-a30006.d
 Als bottle: 41 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: $\text{Amt} * \text{DF} * 20 * \text{Vt} / \text{Vo} / \text{Vi}$

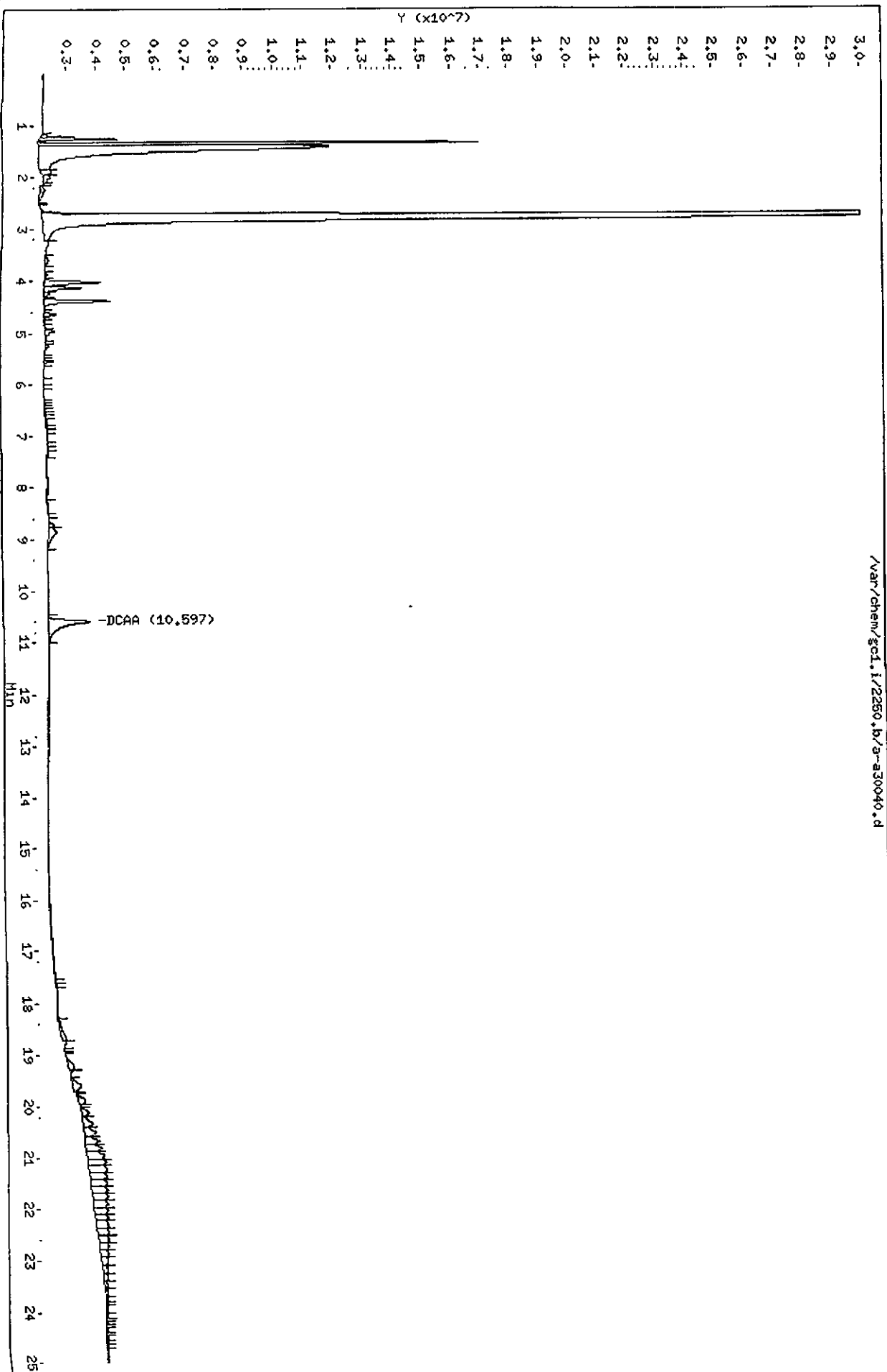
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Compound	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng)	FINAL (ug/L)
1 DALAPON				Compound Not Detected		
\$ 2 DCAA	10.597	10.593	0.004	11255650	0.03899	7.798
3 MCPP				Compound Not Detected.		
4 DICAMBA				Compound Not Detected.		
5 MCPA				Compound Not Detected.		
6 DICHLOROPROP				Compound Not Detected.		
7 2,4-D				Compound Not Detected		
8 PENTACHLOROPHENOL				Compound Not Detected		
9 2,4,5-TP(SILVEX)				Compound Not Detected.		
10 2,4,5-T				Compound Not Detected.		
11 DINOSRB				Compound Not Detected		
12 2,4-DB				Compound Not Detected.		

6571476

Data File: /var/chem/gc1.i/2250.b/b-a30040.d
 Date: 26-MAY-2000 07:18
 Client ID: PBLK1
 Sample Info: DDK43101.2250.b
 Volume Injected (uL): 1.0
 Column phase: DB608

Instrument: gc1.i
 Operator: 01797
 Column diameter: 0.53



UXB INTERNATIONAL
CHECK SAMPLE COMPOUNDS

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

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

Lab Sample ID: C0E230000 493

Sample WT/Vol: 100 / mL
Work Order: DDKWG102
Dilution factor: 1
Moisture %: NADate Received: 05/19/00
Date Extracted: 05/23/00
Date Analyzed: 05/26/00

QC Batch: 0144493

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.157	
93-72-1	2,4,5-TP (Silvex)	0.0388	

FORM I

6571478

Data File: /var/chem/gc1.i/2250.b/a-a30041.d
 Report Date: 26-May-2000 12:10

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30041.d
 Lab Smp Id: DDKWG102 Client Smp ID: LCS1
 Inj Date : 26-MAY-2000 07:47
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DDKWG102,2250.b
 Misc Info : 190257-LCS
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol Quant Type: ESTD
 Cal Date : 25-MAY-2000 14:51 Cal File: a-a30006.d
 Als bottle: 42 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	3.737	3.735	0.002	2511410	0.02892	5.785
\$ 2 DCAA	10.589	10.593	-0.004	14701531	0.05093	10.18
3 MCPP	11.032	11.032	0.000	3374247	7.97016	1594
4 DICAMBA	11.209	11.211	-0.002	8745053	0.04087	8.175
5 MCPA	11.998	12.003	-0.005	3833138	7.48197	1496
6 DICHLOROPROP	12.829	12.835	-0.006	4215434	0.07845	15.69
7 2,4-D	14.344	14.347	-0.003	26866493	0.07835	15.67
8 PENTACHLOROPHENOL	15.574	15.577	-0.003	5387726	0.01009	2.019(R)
9 2,4,5-TP(SILVEX)	16.787	16.791	-0.004	31056212	0.01939	3.878
10 2,4,5-T	17.904	17.910	-0.006	23806917	0.01897	3.794
11 DINOSEB	18.079	18.080	-0.001	13024755	0.01011	2.022
12 2,4-DB	18.576	18.578	-0.002	12099832	0.07274	14.55

Data File: /var/chem/gc1.i/2250.b/a-a30041.d
Report Date: 26-May-2000 12:10

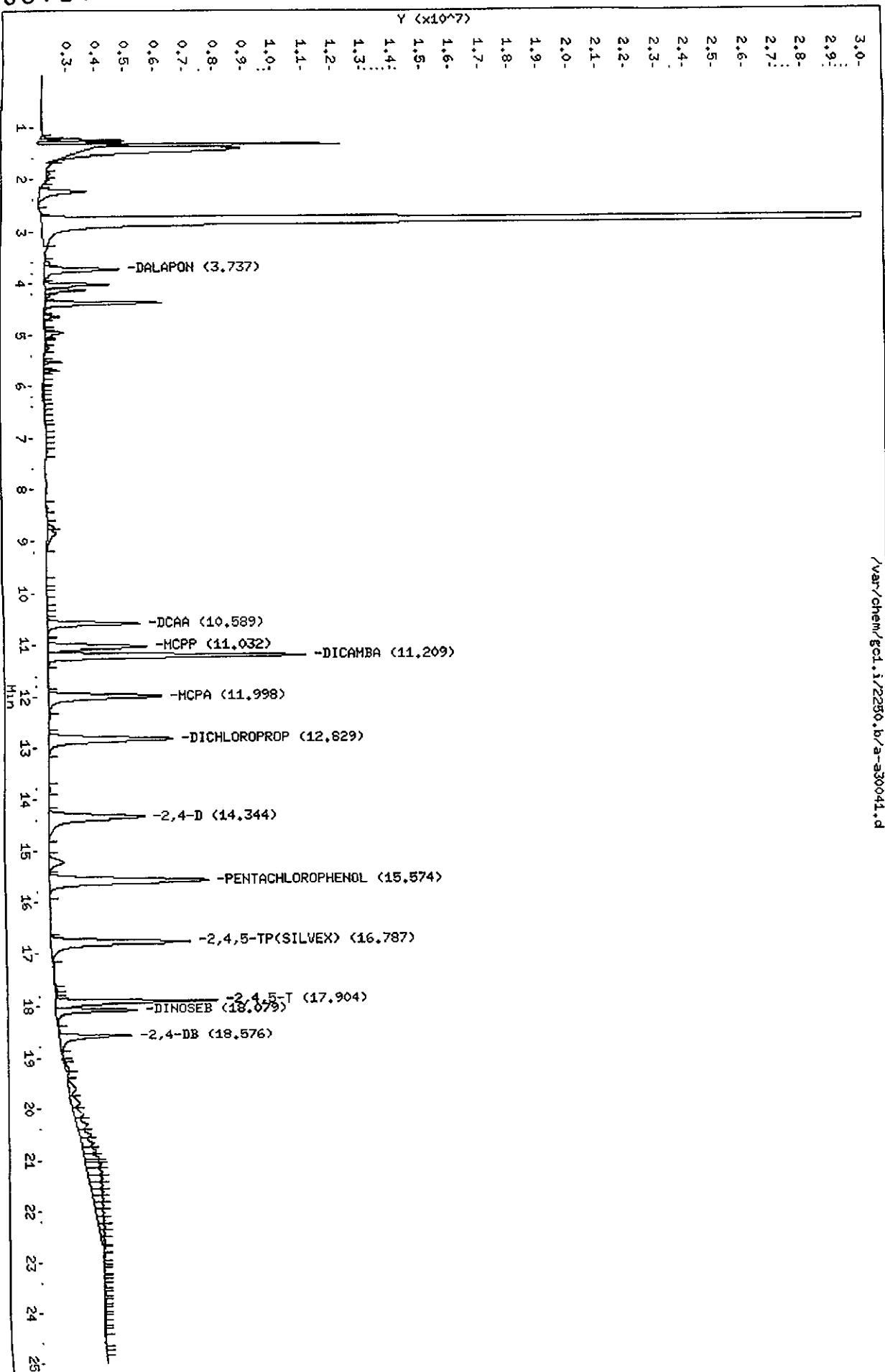
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

6571480

Data File: /var/chem/gcd.i/2250.b/a-a30041.d
 Date: 26-MAY-2000 07:47
 Client ID: LCS1
 Sample Info: DBKNC102,2250.b
 Volume Injected (uL): 1.0
 Column phase: DB608

Instrument: gcd.i
 Operator: 01797
 Column diameter: 0.53



UXB INTERNATIONAL
MATRIX SPIKE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number:
Matrix: (soil/water) SOLID Lab Sample ID: C0E190257 001
Method: SW846 8151A
Herbicides (8151A)
Sample WT/Vol: 100 / mL Date Received: 05/19/00
Work Order: DDFV610R Date Extracted: 05/23/00
Dilution factor: 1 Date Analyzed: 05/26/00
Moisture %: 16
QC Batch: 0144493
Client Sample Id: DF/S1/0138/GRAB/001

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.161	
93-72-1	2,4,5-TP (Silvex)	0.0392	

6571482

Data File: /var/chem/gc1.i/2250.b/a-a30038.d
 Report Date: 26-May-2000 12:10

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30038.d
 Lab Smp Id: DDFV610R Client Smp ID: DF/S1/0138/GRABS
 Inj Date : 26-MAY-2000 06:19
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DDFV610R,2250.b
 Misc Info : 190257-1S
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol Quant Type: ESTD
 Cal Date : 25-MAY-2000 14:51 Cal File: a-a30006.d
 Als bottle: 39 QC Sample: MS
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

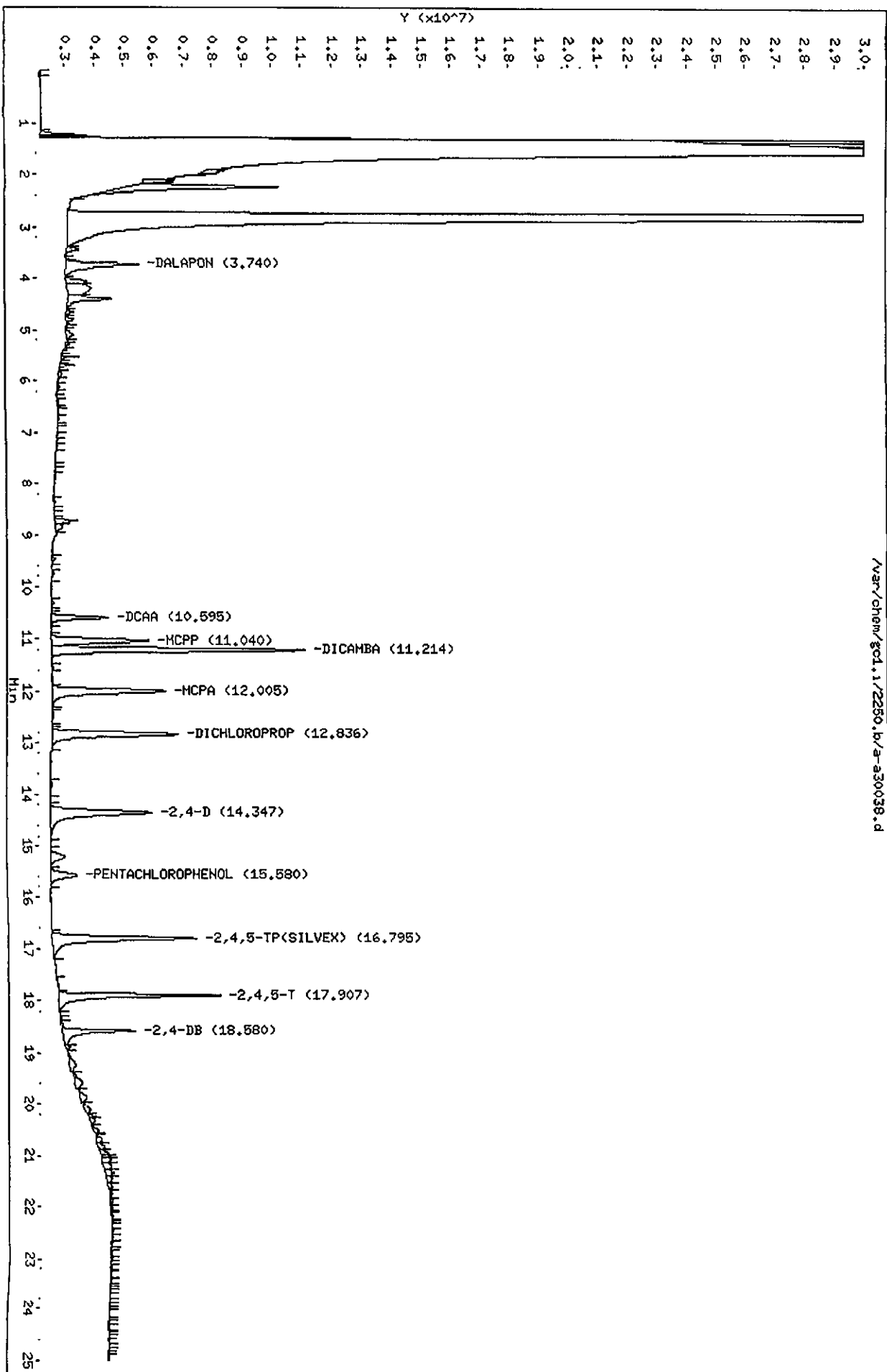
Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	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	3.740	3.735	0.005	2516551	0.02898	5.796
\$ 2 DCAA	10.595	10.593	0.002	8854080	0.03067	6.134
3 MCPP	11.040	11.032	0.008	3358961	7.93405	1587
4 DICAMBA	11.214	11.211	0.003	8596694	0.04018	8.036
5 MCPA	12.005	12.003	0.002	3895793	7.60427	1521
6 DICHLOROPROP	12.836	12.835	0.001	4316154	0.08032	16.06
7 2,4-D	14.347	14.347	0.000	27598658	0.08048	16.10
8 PENTACHLOROPHENOL	15.580	15.577	0.003	908194	0.00170	0.3403
9 2,4,5-TP (SILVEX)	16.795	16.791	0.004	31417904	0.01961	3.923
10 2,4,5-T	17.907	17.910	-0.003	25729452	0.02050	4.100
11 DINOSEB	Compound Not Detected.					
12 2,4-DB	18.580	18.578	0.002	12690319	0.07629	15.26

Data File: /var/chem/gc1.1/2250.b/a-a30038.d
Date: 26-MAY-2000 06:19
Client ID: DF/SL/0138/GRASS
Sample Info: DDFV610R.2250.b
Volume Injected (uL): 1.0
Column phase: DB608

Instrument: gc1.1
Operator: 01797
Column diameter: 0.53



6571484

UXB INTERNATIONAL
MATRIX SPIKE DUPLICATE COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc

SDG Number:

Matrix: (soil/water) SOLID

Lab Sample ID: C0E190257 001

Method: SW846 8151A

Herbicides (8151A)

Sample WT/Vol: 100 / mL

Date Received: 05/19/00

Work Order: DDFV610T

Date Extracted: 05/23/00

Dilution factor: 1

Date Analyzed: 05/26/00

Moisture %: 16

QC Batch: 0144493

Client Sample Id: DF/S1/0138/GRAB/001

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) mg/L	Q
94-75-7	2,4-D	0.174	
93-72-1	2,4,5-TP (Silvex)	0.0413	

Data File: /var/chem/gc1.i/2250.b/a-a30039.d
 Report Date: 26-May-2000 12:10

STL-PITTSBURGH

Data file : /var/chem/gc1.i/2250.b/a-a30039.d
 Lab Smp Id: DDFV610T Client Smp ID: DF/S1/0138/GRABD
 Inj Date : 26-MAY-2000 06:48
 Operator : 01797 Inst ID: gc1.i
 Smp Info : DDFV610T,2250.b
 Misc Info : 190257-1D
 Comment :
 Method : /var/chem/gc1.i/2250.b/LONGH.m
 Meth Date : 26-May-2000 12:07 matkol Quant Type: ESTD
 Cal Date : 25-MAY-2000 14:51 Cal File: a-a30006.d
 Als bottle: 40 QC Sample: MSD
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: all.sub
 Target Version: 3.40

Concentration Formula: Amt * DF * 20*Vt/Vo/Vi

Name	Value	Description
DF	1.000	Dilution Factor
Vt	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	3.739	3.735	0.004	2453510	0.02826	5.651
\$ 2 DCAA	10.592	10.593	-0.001	11137743	0.03858	7.716
3 MCPP	11.033	11.032	0.001	3469356	8.19481	1639
4 DICAMBA	11.209	11.211	-0.002	9384356	0.04386	8.772
5 MCPA	11.999	12.003	-0.004	4055106	7.91524	1583
6 DICHLOROPROP	12.834	12.835	-0.001	4654066	0.08661	17.32
7 2,4-D	14.344	14.347	-0.003	29910770	0.08722	17.44
8 PENTACHLOROPHENOL	15.581	15.577	0.004	1464499	0.00274	0.5488
9 2,4,5-TP(SILVEX)	16.793	16.791	0.002	33100484	0.02066	4.133
10 2,4,5-T	17.905	17.910	-0.005	28299094	0.02255	4.510(R)
11 DINOSEB				Compound Not Detected.		
12 2,4-DB	18.574	18.578	-0.004	14224102	0.08551	17.10

6571486

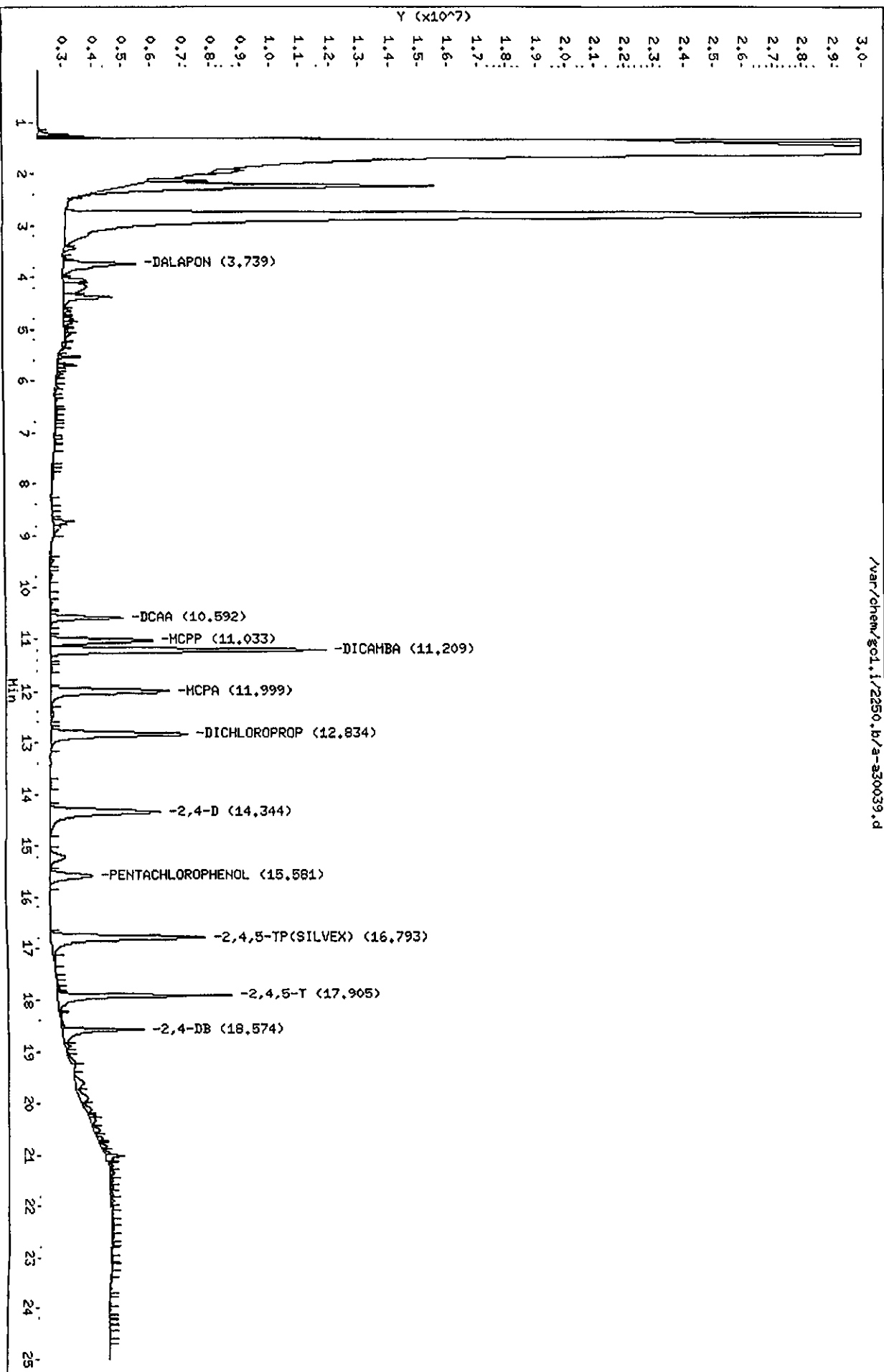
Data File: /var/chem/gc1.i/2250.b/a-a30039.d
Report Date: 26-May-2000 12:10

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gc1.1/2250.b/a-a30039.d
Date: 26-MAY-2000 06:48
Client ID: DF/S1/0138/GRABD
Sample Info: DDFV6101,2250.b
Volume Injected (ul): 1.0
Column phase: DB608

Instrument: gc1.1
Operator: 01797
Column diameter: 0.53



6571488

**HERBICIDE
MISCELLANEOUS**

Separatory Funnel

Extraction Worksheet

$$(T_n, \rho)$$

B# 014493



STL Pittsburgh
450 William Pitt Way
Pittsburgh, PA 15238

048

Date Extraction Began	Date Completed	Packaging	Method	Solvent	Solvent Lot	Solvent Mfg.	Clean up Method			
5-23-00	5-25-00	85.51A	3510C	MELD	0764703381	06276	65			
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 190 357	BDL	NA	5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
2. POE 190 357	LP5		5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
3. POE 190 357	001 M5		5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
4. POE 190 357	001 M5D		5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
5. POE 190 357	001		5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
6. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
7. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
8. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
9. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
10. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
11. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
12. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
13. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
14. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
15. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
16. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
17. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
18. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
19. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
20. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
21. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
22. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
23. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA
24. POE 190 357			5.1	100	10.0	190-89-3	1.0	NA	1.0	NA

Created by *lm 5/25/00*

Sequence Table (Front Injector):

Vial Information Part:

Line Vial Vial Information

====	====	=====
1	2	RINSE
2	3	190-80-1
3	4	190-80-2
4	5	190-80-3
5	6	190-80-4
6	7	190-80-5
7	8	170150BLK
8	9	170150LCS
9	10	170150003S
10	11	170150003D
11	12	170150002
12	13	170150003
13	14	180158001
14	15	190181001
15	16	190181002
16	17	190181003
17	18	180303BLK
18	19	180303LCS
19	20	180303001S
20	21	180303001D
21	22	180303001
22	23	170151001 ✓
23	24	170159001 ✓
24	25	170151BLK ✓
25	26	170151LCS

A

✓ CONT

6571492

Line	Vial	Vial Information
26	27	170151LCD
27	28	190-80-3
28	29	230156001
29	30	230156002
30	31	230156003 ✓
31	32	230156003S ✓
32	33	230156003D ✓
33	34	230156004 ✓
34	35	130142001
35	36	230156BLK ✓
36	37	230156LCS
37	38	190257001
38	39	190257001S
39	40	190257001D
40	41	190257BLK
41	42	190257LCS
42	43	130141001
43	44	170152-2
44	45	170158-2
45	46	170160-2
46	47	240137-2
47	48	130141BLK
~~48~~	~~49~~	~~190-80-3~~
49	50	130141LCS
50	51	130141LCD
51	52	240124BLK
52	53	240124LCS
53	54	240124LCD

Line	Vial	Vial Information
====	====	=====
54	55	240124003
55	56	240124004
56	57	230195-1
57	58	240144-1
58	2	RINSE
59	59	190188-2
60	60	190188-4
61	61	190188-5
62	62	230195BLK
63	63	230195LCS
64	64	230195LCD
65	65	190-80-3

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
====	====	=====	=====	===	=====	=====	=====
1	2	HEXANE	HERB	1	Sample		
2	3	Lherb, 2250.b	HERB	1	Sample		
3	4	MLherb, 2250.b	HERB	1	Sample		
4	5	Mherb, 2250.b	HERB	1	Sample		
5	6	MHherb, 2250.b	HERB	1	Sample		
6	7	Hherb, 2250.b	HERB	1	Sample		
7	8	DDH3H101, 2250.b	HERB	1	Sample		
8	9	DDH3H102, 2250.b	HERB	1	Sample		
9	10	DD9N6105, 2250.b	HERB	1	Sample		
10	11	DD9N6106, 2250.b	HERB	1	Sample		
11	12	DD9MW102, 2250.b	HERB	1	Sample		
12	13	DD9N6104, 2250.b	HERB	1	Sample		
13	14	DDCJ8101, 2250.b	HERB	1	Sample		
14	15	DDF6M101, 2250.b	HERB	1	Sample		
15	16	DDF6P101, 2250.b	HERB	1	Sample		
16	17	DDF6Q101, 2250.b	HERB	1	Sample		
17	18	DDH3F101, 2250.b	HERB	1	Sample		
18	19	DDH3F102, 2250.b	HERB	1	Sample		
19	20	DDD1110, 2250.b	HERB	1	Sample		
20	21	DDD1111, 2250.b	HERB	1	Sample		
21	22	DDD1105, 2250.b	HERB	1	Sample		
22	23	DD9NN11D, 2250.b	HERB	1	Sample		
23	24	DD9PJ12G, 2250.b	HERB	1	Sample		
24	25	DDJCV101, 2250.b	HERB	1	Sample		
25	26	DDJCV102, 2250.b	HERB	1	Sample		
26	27	DDJCV103, 2250.b	HERB	1	Sample		
27	28	Mherb, 2250.b	HERB	1	Sample		

6571494

PSR024 5/23/00 13:43:49 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>
4A	DDFV6-1-05	— — —	236224	399411	A-64-QS	COE190257	001		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

P. Yushinski
P. Yushinski

P. Yushinski
P. Yushinski

5-23-00 1600
5-23-00 1950

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

STL Pittsburgh

4053

METALS DATA

STL-Pittsburgh

Cover Page - Inorganic Analysis Data Package

Client ID

DF/S1/0138/GRAB/001

Lab Sample ID:

DDFV6

Comments: UXB, DUNN FIELD
C0E190257
6010B

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

REVIEWED BY: <u>MTW</u>
DATE: <u>5-23-00</u>

**METALS
RESULTS**

6571498

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6 Client ID: DF/S1/0138/GRAB/001
Matrix: Soil Units: mg/kg Prep Date: 5/22/00 Prep Batch: 0143109
Weight: 1.00 Volume: 100 Percent Moisture: 15.62

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.30	1.2	10.1		1	ICPST	5/22/00	18:23

Comments. C0E190257 Sample#1

Version 3.63.4

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

Form 1 Equivalent

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-079-6

Element	WL/ Mass	True Conc	ICV3-1 5/22/00 3:11 PM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	250.0	265.82	106.3								

6571500

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-084-5

Element	WL/ Mass	True Conc	CCV3-1 5/22/00 4:03 PM		CCV3-2 5/22/00 4:53 PM		CCV3-3 5/22/00 5:37 PM		CCV3-4 5/22/00 6:06 PM		CCV3-5 5/22/00 6:52 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	500.0	509.50	101.9	531.94	106.4	527.43	105.5	521.51	104.3	511.14	102.2

STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARC

Standard Source: _____

Standard ID: _____

			ICBI 5/22/00 3:15 PM				
Element	WL/ Mass	Report Limit	Found Q	Found Q	Found Q	Found Q	Found Q
Arsenic	189.042	10	2.6 U				

6571502

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 5/22/00 4:08 PM	CCB2 5/22/00 4:58 PM	CCB3 5/22/00 5:42 PM	CCB4 5/22/00 6:11 PM	CCB5 5/22/00 6:56 PM
			Found Q	Found Q	Found Q	Found Q	Found Q
Arsenic	189.042	10	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDH6LBMatrix: Soil Units: mg/kg Prep Date: 5/22/00 Prep Batch: 0143109Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	0.26	1.0	0.26	U	1	ICPST	5/22/00	18:15

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 3 Equivalent

B Result is between MDL and RL

6571504

STL-Pittsburgh
Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARCAcceptable Range: 0% - 0%Standard Source: Inorganic VenturesStandard ID: 0014-088-12

				ICSA 5/22/00 3:20 PM				
Element	WL/ Mass	Reporting Limit	True Conc	Found	Found	Found	Found	Found
Arsenic	189.042	10		-2				

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPSTUnits: ug/LChart Number: T00522C.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-075-12

Element	WL/ Mass	True Conc	ICSAB 5/22/00 3:24 PM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	189.042	1000	1050.7	105.1						

6571506

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDH6LCMatrix: Soil Units: mg/kg Prep Date: 5/22/00 Prep Batch: 0143109Weight: 1.00 Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	200	200	99.7		80-120	1	ICPST	5/22/00	18:19

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 7 Equivalent

B Result is between MDL and RL

STL-Pittsburgh

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPSTUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Arsenic	189.04	10	2.6	4/1/00

6571508

STL-Pittsburgh

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICPSTDate of IEC's: 3/23/00

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	Pb(0.000521), Tl(-0.000024)
Aluminum	308.215	Pb(-0.00021)
Chromium	267.716	Sb(0.006657)
Chromium	267.716	As(-0.002866), Sb(0.011574)
Cobalt	228.616	Pb(0.000021), Se(-0.000486)
Cobalt	228.616	Cd(-0.000119), Fe(0.078354), Ni(-0.000459), Pb(-0.000632), Se(0.000542), Tl(0.002839)
Iron	271.441	Pb(0.000053), Sb(0.000025), Se(-0.000357)
Iron	271.441	Cd(0.000097), Cr(-0.00001), Pb(0.00011), Sb(0.000021), Se(0.000012), V(-0.000261), Zn(0.000116)
Magnesium	279.078	Fe(-0.00063)
Manganese	257.61	Se(0.000566)
Manganese	257.61	Se(0.000509), Tl(-0.00542)
Molybdenum	202.03	As(-0.000973), Pb(-0.000443), Sb(-0.002114), Se(0.000412)
Molybdenum	202.03	Pb(-0.00095), Sb(-0.009783)
Nickel	231.604	Pb(0.000115)
Nickel	231.604	Pb(0.00033), Sb(-0.001031), Zn(0.004462)
Vanadium	292.402	Pb(-0.000387)
Vanadium	292.402	Al(0.024171), Be(-0.008664), Cr(-0.000104), Fe(0.013874), Pb(0.00004), Sb(-0.007914), Se(0.000373), Tl(0.001639)

STL-Pittsburgh
Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPST

Units: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Arsenic	189.04	10000	3/15/00

6571510

STL-Pittsburgh
Metals Data Reporting Form

Preparation Log

Preparation Batch: 0143109 **Instrument:** ICP **Matrix:** Soil

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DDH6LB	5/22/00	1.00	100	NA
DDH6LC	5/22/00	1.00	100	NA
DDFV6	5/22/00	1.00	100	15.62

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPSTChart Number: T00522C.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/22/00	2:40 PM
ZZZZZZ	5/22/00	2:44 PM
ZZZZZZ	5/22/00	2:48 PM
STD1	5/22/00	2:59 PM
STD6	5/22/00	3:03 PM
STD7	5/22/00	3:08 PM
ICV3-1	5/22/00	3:11 PM
ICB1	5/22/00	3:15 PM
ICSA	5/22/00	3:20 PM
ICSAB	5/22/00	3:24 PM
ZZZZZZ	5/22/00	3:30 PM
ZZZZZZ	5/22/00	3:34 PM
ZZZZZZ	5/22/00	3:39 PM
ZZZZZZ	5/22/00	3:43 PM
ZZZZZZ	5/22/00	3:47 PM
ZZZZZZ	5/22/00	3:51 PM
ZZZZZZ	5/22/00	3:55 PM
ZZZZZZ	5/22/00	3:59 PM
CCV3-1	5/22/00	4:03 PM
CCB1	5/22/00	4:08 PM
ZZZZZZ	5/22/00	4:12 PM
ZZZZZZ	5/22/00	4:16 PM
ZZZZZZ	5/22/00	4:20 PM
ZZZZZZ	5/22/00	4:24 PM
ZZZZZZ	5/22/00	4:28 PM
ZZZZZZ	5/22/00	4:33 PM
ZZZZZZ	5/22/00	4:37 PM
ZZZZZZ	5/22/00	4:41 PM
ZZZZZZ	5/22/00	4:45 PM
ZZZZZZ	5/22/00	4:49 PM
CCV3-2	5/22/00	4:53 PM
CCB2	5/22/00	4:58 PM
ZZZZZZ	5/22/00	5:04 PM
ZZZZZZ	5/22/00	5:08 PM
ZZZZZZ	5/22/00	5:12 PM
ZZZZZZ	5/22/00	5:17 PM
ZZZZZZ	5/22/00	5:21 PM
ZZZZZZ	5/22/00	5:25 PM
ZZZZZZ	5/22/00	5:29 PM
ZZZZZZ	5/22/00	5:33 PM
CCV3-3	5/22/00	5:37 PM

STL-Pittsburgh
Metals Data Reporting Form

Instrument Runlog**Instrument:** ICPST**Chart Number:** T00522C.ARC

Sample Name	Date of Analysis	Time of Analysis
CCB3	5/22/00	5:42 PM
ZZZZZZ	5/22/00	5:46 PM
ZZZZZZ	5/22/00	5:50 PM
ZZZZZZ	5/22/00	5:54 PM
ZZZZZZ	5/22/00	5:58 PM
ZZZZZZ	5/22/00	6:02 PM
CCV3-4	5/22/00	6:06 PM
CCB4	5/22/00	6:11 PM
DDH6LB	5/22/00	6:15 PM
DDH6LC	5/22/00	6:19 PM
DDFV6	5/22/00	6:23 PM
ZZZZZZ	5/22/00	6:27 PM
ZZZZZZ	5/22/00	6:31 PM
ZZZZZZ	5/22/00	6:36 PM
ZZZZZZ	5/22/00	6:40 PM
ZZZZZZ	5/22/00	6:44 PM
ZZZZZZ	5/22/00	6:48 PM
CCV3-5	5/22/00	6:52 PM
CCB5	5/22/00	6:56 PM
ZZZZZZ	5/22/00	7:01 PM
ZZZZZZ	5/22/00	7:05 PM
ZZZZZZ	5/22/00	7:09 PM
ZZZZZZ	5/22/00	7:13 PM
ZZZZZZ	5/22/00	7:17 PM
ZZZZZZ	5/22/00	7:21 PM
ZZZZZZ	5/22/00	7:26 PM
ZZZZZZ	5/22/00	7:30 PM
ZZZZZZ	5/22/00	7:34 PM
ZZZZZZ	5/22/00	7:38 PM

**METALS
RAW DATA**

6571514

Analysis Report

05/23/00 07:04:01 AM

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COE190257

60103

Averages

Phurkya 52300

Sample Name AS

1	STD1	-.00375
2	STD6	5.11323
3	STD7	
4	ICV3-1 0014-079-6	.26582
5	ICB1	-.00163
6	ICSA 0014-088-12	-.00166
7	ICSAB 0014-075-12	1.0507
8	DDH6FB	-.00163
9	DDH6FC	1.9873
10	DDF4R	.00901
11	DDFED	.14386
12	DDFEF	.10772
13	DDFEG	.05150
14	DDFEK	.13601
15	DDFEN	.03197
16	CCV3-1 0014-084-5	.50950
17	CCB1	-.00072
18	DDFER	.03785
19	DDFERP5	.00701
20	DDFERS	1.9399
21	DDFERD	1.9088
22	DDFEV	.02608
23	DDFF0	.10183
24	DDFF1	.03301
25	DDFF2	.00668
26	DDFF4	.00671
27	DDFF9	.47314
28	CCV3-2	.53194
29	CCB2	-.00089
30	DDFFA	.15612
31	DDFFD	.11144
32	DDFFF	.13444
33	DDFFG	.02992
34	DDFFGP5	.00633
35	DDFFGS	1.9390
36	DDFFGD	1.8841
37	DDFFH	.01158
38	CCV3-3	.52743
39	CCB3	-.00092
40	DDH6DB	-.00255
41	DDH6DC	2.0465
42	DDH6DL	2.0561
43	DDFFK	-.00004
44	DDFFKP5	-.00198
45	CCV3-4	.52151
46	CCB4	-.00133
47	DDH6LB	-.00092
48	DDH6LC	1.9948
49	DDFV6	.08519
50	DDGNW	.15082
51	DDGNWP5	.03295
52	DDGNWS	1.9667
53	DDGNWD	1.9747

#	Sample Name	AS
54	DDGNX	.11115
55	DDGP0	.03880
56	CCV3-5	.51114
57	CCB5	-.00030
58	DD1NR	.00100
59	DD1NT	.01123
60	DD1NRF	.01158
61	DD1NTF	-.00016
62	DD1NR Raw Sample	.03004
63	DD1NT Raw Sample	.02661
64	DD1NRF Raw Sample	.02316
65	DD1NTF Raw Sample	.02163
66	CCV3-6	.51477
67	CCB6	-.00139

6571516

Analysis Report

Summary

05/23/00 07:04:01 AM

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R652300

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	T00522C	METTRA	05/22/00	14:59		X	IR
2	STD6	T00522C	METTRA	05/22/00	15:03		X	IR
3	STD7	T00522C	METTRA	05/22/00	15:08		X	IR
4	ICV3-1 0014-079-6	T00522C	METTRA	05/22/00	15:11	RJG	S	CONC
5	ICB1	T00522C	METTRA	05/22/00	15:15	RJG	S	CONC
6	ICSA 0014-088-12	T00522C	METTRA	05/22/00	15:20	RJG	Q	CONC
7	ICSAB 0014-075-12	T00522C	METTRA	05/22/00	15:24	RJG	Q	CONC
8	DDH6FB	T00522C	METTRA	05/22/00	15:30	RJG	S	CONC
9	DDH6FC	T00522C	METTRA	05/22/00	15:34	RJG	S	CONC
10	DDF4R	T00522C	METTRA	05/22/00	15:39	RJG	S	CONC
11	DDFED	T00522C	METTRA	05/22/00	15:43	RJG	S	CONC
12	DDFEF	T00522C	METTRA	05/22/00	15:47	RJG	S	CONC
13	DDFEG	T00522C	METTRA	05/22/00	15:51	RJG	S	CONC
14	DDFEK	T00522C	METTRA	05/22/00	15:55	RJG	S	CONC
15	DDFEN	T00522C	METTRA	05/22/00	15:59	RJG	S	CONC
16	CCV3-1 0014-084-5	T00522C	METTRA	05/22/00	16:03	RJG	S	CONC
17	CCB1	T00522C	METTRA	05/22/00	16:08	RJG	S	CONC
18	DDFER	T00522C	METTRA	05/22/00	16:12	RJG	S	CONC
19	DDFERP5	T00522C	METTRA	05/22/00	16:16	RJG	S	CONC
20	DDFERS	T00522C	METTRA	05/22/00	16:20	RJG	S	CONC
21	DDFERD	T00522C	METTRA	05/22/00	16:24	RJG	S	CONC
22	DDFEV	T00522C	METTRA	05/22/00	16:28	RJG	S	CONC
23	DDFF0	T00522C	METTRA	05/22/00	16:33	RJG	S	CONC
24	DDFF1	T00522C	METTRA	05/22/00	16:37	RJG	S	CONC
25	DDFF2	T00522C	METTRA	05/22/00	16:41	RJG	S	CONC
26	DDFF4	T00522C	METTRA	05/22/00	16:45	RJG	S	CONC
27	DDFF9	T00522C	METTRA	05/22/00	16:49	RJG	S	CONC
28	CCV3-2	T00522C	METTRA	05/22/00	16:53	RJG	S	CONC
29	CCB2	T00522C	METTRA	05/22/00	16:58	RJG	S	CONC
30	DDFFA	T00522C	METTRA	05/22/00	17:04	RJG	S	CONC
31	DDFFD	T00522C	METTRA	05/22/00	17:08	RJG	S	CONC
32	DDFFF	T00522C	METTRA	05/22/00	17:12	RJG	S	CONC
33	DDFFG	T00522C	METTRA	05/22/00	17:17	RJG	S	CONC
34	DDFFGP5	T00522C	METTRA	05/22/00	17:21	RJG	S	CONC
35	DDFFGS	T00522C	METTRA	05/22/00	17:25	RJG	S	CONC
36	DDFFGD	T00522C	METTRA	05/22/00	17:29	RJG	S	CONC
37	DDFFH	T00522C	METTRA	05/22/00	17:33	RJG	S	CONC
38	CCV3-3	T00522C	METTRA	05/22/00	17:37	RJG	S	CONC
39	CCB3	T00522C	METTRA	05/22/00	17:42	RJG	S	CONC
40	DDH6DB	T00522C	METTRA	05/22/00	17:46	RJG	S	CONC
41	DDH6DC	T00522C	METTRA	05/22/00	17:50	RJG	S	CONC
42	DDH6DL	T00522C	METTRA	05/22/00	17:54	RJG	S	CONC
43	DDFFK	T00522C	METTRA	05/22/00	17:58	RJG	S	CONC
44	DDFFKP5	T00522C	METTRA	05/22/00	18:02	RJG	S	CONC
45	CCV3-4	T00522C	METTRA	05/22/00	18:06	RJG	S	CONC
46	CCB4	T00522C	METTRA	05/22/00	18:11	RJG	S	CONC
47	DDH6LB	T00522C	METTRA	05/22/00	18:15	RJG	S	CONC
48	DDH6LC	T00522C	METTRA	05/22/00	18:19	RJG	S	CONC
49	DDFV6	T00522C	METTRA	05/22/00	18:23	RJG	S	CONC
50	DDGNW	T00522C	METTRA	05/22/00	18:27	RJG	S	CONC
51	DDGNWP5	T00522C	METTRA	05/22/00	18:31	RJG	S	CONC
52	DDGNWS	T00522C	METTRA	05/22/00	18:36	RJG	S	CONC
53	DDGNWD	T00522C	METTRA	05/22/00	18:40	RJG	S	CONC

Analysis Report

Summary

05/23/00 07:04:01 AM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
54	DDGNX	T00522C	METTRA	05/22/00	18:44	RJG	S	CONC
55	DDGP0	T00522C	METTRA	05/22/00	18:48	RJG	S	CONC
56	CCV3-5	T00522C	METTRA	05/22/00	18:52	RJG	S	CONC
57	CCB5	T00522C	METTRA	05/22/00	18:56	RJG	S	CONC
58	DD1NR	T00522C	METTRA	05/22/00	19:01	RJG	S	CONC
59	DD1NT	T00522C	METTRA	05/22/00	19:05	RJG	S	CONC
60	DD1NRF	T00522C	METTRA	05/22/00	19:09	RJG	S	CONC
61	DD1NTF	T00522C	METTRA	05/22/00	19:13	RJG	S	CONC
62	DD1NR Raw Sample	T00522C	METTRA	05/22/00	19:17	RJG	S	CONC
63	DD1NT Raw Sample	T00522C	METTRA	05/22/00	19:21	RJG	S	CONC
64	DD1NRF Raw Sample	T00522C	METTRA	05/22/00	19:26	RJG	S	CONC
65	DD1NTF Raw Sample	T00522C	METTRA	05/22/00	19:30	RJG	S	CONC
66	CCV3-6	T00522C	METTRA	05/22/00	19:34	RJG	S	CONC
67	CCB6	T00522C	METTRA	05/22/00	19:38	RJG	S	CONC

Method: METTRA Standard: STD1
Run Time: 05/22/00 14:59:46

Elem	AG	AL	AS	BA	BE	CA	CD
Avge	-.00141	.09220	-.00375	.00155	-.03582	.00408	.00126
SDev	.00061	.00180	.00443	.00006	.00034	.00012	.00043
%RSD	43.256	1.9534	118.12	3.9151	.93803	2.8431	34.378
#1	-.00184	.09348	-.00688	.00151	-.03605	.00400	.00095
#2	-.00098	.09093	-.00062	.00159	-.03558	.00416	.00156
Elem	CO	CR	CU	FE	MG	MN	MO
Avge	-.00113	.00049	.00406	-.00095	.00029	.00326	.00199
SDev	.00040	.00060	.00042	.00032	.00023	.00044	.00059
%RSD	35.360	122.43	10.243	33.617	78.185	13.596	29.612
#1	-.00141	.00007	.00377	-.00072	.00013	.00295	.00157
#2	-.00085	.00091	.00436	-.00117	.00046	.00358	.00241
Elem	NI	PB/1	PB/2	SB/1	SB/2	SE/1	SE/2
Avge	-.00036	.03403	-.00578	-.02918	.02270	-.08745	.06968
SDev	.00078	.00268	.01179	.00806	.01555	.01586	.00223
%RSD	219.33	7.8786	203.98	27.611	68.484	18.138	3.2019
#1	.00020	.03592	.00256	-.03487	.03369	-.07624	.07126
#2	-.00091	.03213	-.01411	-.02348	.01171	-.09867	.06810
Elem	TL	V	ZN				
Avge	-.03899	.00010	.00052				
SDev	.00215	.00005	.00004				
%RSD	5.5252	46.650	8.2896				
#1	-.04051	.00007	.00049				
#2	-.03746	.00013	.00055				

Standardization Rpt.

05/22/00 03:03:52 PM

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15315	--	--	--	--	--	--
SDev	84.42883	--	--	--	--	--	--
%RSD	.5512945	--	--	--	--	--	--
#1	15255	--	--	--	--	--	--
#2	15374	--	--	--	--	--	--

Method: METTRA Standard: STD6
Run Time: 05/22/00 15:03:58

0014-087-8

Elem	AG	AS	CD	PB/1	PB/2	SB/1	SB/2
Avge	11.070	5.1132	13.293	5.8282	7.5217	9.9461	6.5712
SDev	.129	.0513	.146	.0350	.1198	.2318	.0462
%RSD	1.1679	1.0028	1.0979	.60001	1.5933	2.3304	.70269

#1	10.979	5.0770	13.189	5.8035	7.4370	9.7822	6.5385
#2	11.162	5.1495	13.396	5.8529	7.6064	10.110	6.6038

Elem	SE/1	SE/2	TL
Avge	4.8578	4.9510	4.5238
SDev	.0348	.1462	.0549
%RSD	.71611	2.9538	1.2133

#1	4.8332	4.8476	4.4850
#2	4.8824	5.0544	4.5626

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15138	--	--	--	--	--	--
SDev	136.9315	--	--	--	--	--	--
%RSD	.9045772	--	--	--	--	--	--

#1	15234	--	--	--	--	--	--
#2	15041	--	--	--	--	--	--

Method: METTRA Standard: STD7
Run Time: 05/22/00 15:08:09

0014-0879

Elem	AL	BA	BE	CA	CO	CR	CU
Avge	7.1177	13.808	11.928	5.2584	3.2166	13.252	3.3676
SDev	.0037	.009	.010	.0030	.0040	.010	.0003
%RSD	.05154	.06664	.08323	.05711	.12534	.07550	.01007

#1	7.1203	13.814	11.935	5.2606	3.2195	13.259	3.3673
#2	7.1151	13.801	11.921	5.2563	3.2138	13.245	3.3678

Elem	FE	MG	MN	MO	NI	V	ZN
Avge	4.3982	14.483	11.374	2.2206	2.6237	.90154	3.0736
SDev	.0005	.008	.007	.0121	.0022	.00032	.0020
%RSD	.01117	.05576	.06504	.54429	.08529	.03550	.06391

#1	4.3978	14.489	11.380	2.2121	2.6221	.90176	3.0750
#2	4.3985	14.478	11.369	2.2292	2.6253	.90131	3.0722

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14513	--	--	--	--	--	--
SDev	31.81980	--	--	--	--	--	--
%RSD	.2192504	--	--	--	--	--	--

#1	14490	--	--	--	--	--	--
#2	14536	--	--	--	--	--	--

Method: METTRA

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD6	STD1	.180642	.000254	05/22/00 03:08:09
AL	308.215	STD7	STD1	7.13074	-.657485	05/22/00 03:08:09
AS	189.042	STD6	STD1	.195428	.000733	05/22/00 03:08:09
BA	493.409	STD7	STD1	.289726	-.000449	05/22/00 03:08:09
BE	313.042	STD7	STD1	.331434	.011871	05/22/00 03:08:09
CA	317.933	STD7	STD1	19.0319	-.077664	05/22/00 03:08:09
CD	226.502	STD6	STD1	.075237	-.000094	05/22/00 03:08:09
CO	228.616	STD7	STD1	1.24310	.001402	05/22/00 03:08:09
CR	267.716	STD7	STD1	.301787	-.000147	05/22/00 03:08:09
CU	324.753	STD7	STD1	1.18923	-.004833	05/22/00 03:08:09
FE	271.441	STD7	STD1	11.4354	.010817	05/22/00 03:08:09
MG	279.078	STD7	STD1	6.90458	-.002024	05/22/00 03:08:09
MN	257.610	STD7	STD1	.351769	-.001148	05/22/00 03:08:09
MO	202.030	STD7	STD1	1.80292	-.003588	05/22/00 03:08:09
NI	231.604	STD7	STD1	1.52365	.000544	05/22/00 03:08:09
PB/1	220.351	STD6	STD1	.172587	-.005873	05/22/00 03:08:09
PB/2	220.352	STD6	STD1	.132847	.000768	05/22/00 03:08:09
PB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SB/1	206.831	STD6	STD1	.100248	.002925	05/22/00 03:08:09
SB/2	206.832	STD6	STD1	.152707	-.003467	05/22/00 03:08:09
SB	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
SE/1	196.021	STD6	STD1	.202215	.017685	05/22/00 03:08:09
SE/2	196.022	STD6	STD1	.204864	-.014274	05/22/00 03:08:09
SE	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
TL	190.864	STD6	STD1	.438331	.017090	05/22/00 03:08:09
V	292.402	STD7	STD1	4.42288	-.000433	05/22/00 03:08:09
Z $\bar{N}$	213.856	STD7	STD1	1.30933	-.000684	05/22/00 03:08:09

Analysis Report

05/22/00 03:15:55 PM

Method: METTRA Sample Name: ICV3-1 0014-079-6 Operator: RJG
Run Time: 05/22/00 15:11:49
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	.52082	12.386	.26583	1.0280	1.0062	25.659	.25913
SDev	.00261	.010	.00189	.0009	.0081	.225	.00113
%RSD	.50124	.08332	.71103	.08526	.80891	.87859	.43584
#1	.52267	12.394	.26716	1.0274	1.0120	25.819	.25992
#2	.51898	12.379	.26449	1.0287	1.0005	25.500	.25833
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
Avg	1.0265	1.0336	1.0045	12.744	24.626	1.0100	1.0245
SDev	.0061	.0069	.0030	.044	.171	.0055	.0080
%RSD	.59848	.67097	.30197	.34627	.69607	.54865	.78389
#1	1.0308	1.0385	1.0066	12.775	24.747	1.0139	1.0302
#2	1.0222	1.0287	1.0023	12.713	24.505	1.0061	1.0188
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
Avg	1.0348	.26298	.26480	.26420	.26618	.26109	.26279
SDev	.0136	.00252	.00418	.00363	.00220	.00386	.00331
%RSD	1.3127	.95903	1.5798	1.3740	.82769	1.4805	1.2603
#1	1.0444	.26476	.26776	.26676	.26774	.26382	.26513
#2	1.0252	.26119	.26185	.26163	.26462	.25836	.26044
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	
Avg	.26214	.26912	.26679	.53180	1.0202	1.0435	
SDev	.00237	.00279	.00107	.01073	.0111	.0085	
%RSD	.90481	1.0383	.40251	2.0185	1.0834	.81012	
#1	.26382	.26714	.26603	.53939	1.0280	1.0495	
#2	.26046	.27109	.26755	.52421	1.0123	1.0375	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.27500	.55000	1.1000	1.1000	
Low			.22500	.45000	.90000	.90000	

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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	14831	--	--	--	--	--	--
SDev	68.73092	--	--	--	--	--	--
%RSD	.4634336	--	--	--	--	--	--
#1	14782	--	--	--	--	--	--
#2	14879	--	--	--	--	--	--

Method: METTRA Sample Name: ICB1

Operator: RJG

Run Time: 05/22/00 15:15:59

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	-.00009	.00799	-.00163	.00024	-.00037	.00866	.00002
SDev	.00043	.00248	.00016	.00006	.00001	.00452	.00018
%RSD	496.55	31.071	9.8716	26.029	2.6022	52.237	745.53
#1	-.00039	.00975	-.00174	.00019	-.00036	.00546	-.00010
#2	.00022	.00624	-.00152	.00028	-.00038	.01186	.00015
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	.00068	.00043	.00082	.00735	.00461	.00007	.00322
SDev	.00015	.00025	.00048	.00481	.00227	.00012	.00118
%RSD	21.271	58.724	58.439	65.380	49.248	155.37	36.577
#1	.00058	.00061	.00048	.00395	.00300	-.00001	.00405
#2	.00078	.00025	.00116	.01075	.00621	.00016	.00238
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	.00004	.00161	.00141	.00148	-.00049	-.00121	-.00097
SDev	.00071	.00112	.00022	.00022	.00024	.00052	.00027
%RSD	1779.6	69.198	15.823	15.161	49.238	43.082	27.532
#1	-.00046	.00240	.00125	.00163	-.00066	-.00084	-.00078
#2	.00054	.00082	.00156	.00132	-.00032	-.00158	-.00116
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	-.00148	.00205	.00087	-.00243	.00074	.00064	
SDev	.00356	.00209	.00021	.00481	.00000	.00009	
%RSD	240.40	101.89	23.769	197.92	.29334	14.005	
#1	.00104	.00057	.00073	-.00583	.00074	.00057	
#2	-.00399	.00352	.00102	.00097	.00074	.00070	
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	15103	--	--	--	--	--	--
SDev	11.84404	--	--	--	--	--	--
%RSD	.0784232	--	--	--	--	--	--
#1	15111	--	--	--	--	--	--
#2	15094	--	--	--	--	--	--

Method: METTRA Sample Name: ICSA 0014-088-12 Operator: RJG
 Run Time: 05/22/00 15:20:09
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00030	514.63	-.00167	.00164	-.00210	475.40	.00135
SDev	.00021	2.10	.00467	.00004	.00003	1.72	.00034
%RSD	70.939	.40773	279.76	2.3295	1.5007	.36148	25.237
#1	.00045	513.15	-.00497	.00161	-.00207	476.62	.00111
#2	.00015	516.12	.00163	.00166	-.00212	474.19	.00159
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	.00068	.00350	-.00128	198.42	518.08	.00751	-.00215
SDev	.00038	.00035	.00026	.19	1.31	.00005	.00055
%RSD	55.643	10.073	20.530	.09373	.25234	.60853	25.518
#1	.00095	.00325	-.00147	198.29	519.01	.00748	-.00254
#2	.00041	.00375	-.00110	198.55	517.16	.00754	-.00176
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	.00203	-.02192	.01737	.00429	.00697	-.00165	.00122
SDev	.00085	.00334	.00134	.00022	.00103	.00351	.00200
%RSD	41.990	15.248	7.7384	5.0434	14.797	212.24	164.06
#1	.00143	-.01956	.01642	.00444	.00624	.00083	.00263
#2	.00264	-.02428	.01832	.00414	.00769	-.00413	-.00019
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	-.00080	.00058	.00012	.00461	-.00597	.00179	
SDev	.00338	.00342	.00116	.00156	.00068	.00003	
%RSD	420.59	586.30	949.78	33.937	11.443	1.7411	
#1	.00159	-.00184	-.00070	.00350	-.00548	.00177	
#2	-.00319	.00301	.00094	.00572	-.00645	.00181	
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	
Value							
Range							

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Analysis Report

QC Standard

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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	13814	--	--	--	--	--	--
SDev	42.00173	--	--	--	--	--	--
%RSD	.3040552	--	--	--	--	--	--
#1	13784	--	--	--	--	--	--
#2	13844	--	--	--	--	--	--

Analysis Report

QC Standard

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Method: METTRA Sample Name: ICSAB 0014-075-12 Operator: RJG
Run Time: 05/22/00 15:24:19
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	1.1027	518.07	1.0507	.52080	.48647	477.96	.95294
SDev	.0089	8.08	.0113	.00725	.00284	2.15	.00641
%RSD	.80510	1.5592	1.0778	1.3921	.58292	.44952	.67306
#1	1.0964	512.36	1.0427	.51568	.48446	476.44	.94840
#2	1.1090	523.79	1.0587	.52593	.48847	479.48	.95747
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	.49047	.49995	.53399	200.11	519.29	.50293	.99353
SDev	.00463	.00249	.00598	1.80	3.72	.00343	.01157
%RSD	.94335	.49875	1.1205	.89794	.71723	.68214	1.1640
#1	.48719	.49818	.52976	198.84	516.65	.50050	.98535
#2	.49374	.50171	.53822	201.38	521.92	.50535	1.0017
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	.97897	1.0315	1.0354	1.0341	1.0638	1.0732	1.0700
SDev	.00126	.0113	.0006	.0041	.0044	.0013	.0005
%RSD	.12889	1.0982	.05412	.40091	.41647	.12415	.04726
#1	.97808	1.0395	1.0358	1.0370	1.0607	1.0741	1.0697
#2	.97986	1.0234	1.0350	1.0311	1.0670	1.0723	1.0704
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	1.0651	1.0685	1.0674	1.0784	.49958	1.0423	
SDev	.0066	.0055	.0015	.0138	.00202	.0086	
%RSD	.61727	.51571	.13922	1.2782	.40398	.82358	
#1	1.0698	1.0646	1.0663	1.0686	.49815	1.0362	
#2	1.0605	1.0724	1.0684	1.0881	.50101	1.0483	
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	

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Analysis Report

QC Standard

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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	13739	--	--	--	--	--	--
SDev	36.27444	--	--	--	--	--	--
%RSD	.2640282	--	--	--	--	--	--
#1	13713	--	--	--	--	--	--
#2	13764	--	--	--	--	--	--

Analysis Report

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Method: METTRA Sample Name: DDH6FB Operator: RJG
 Run Time: 05/22/00 15:30:46
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00024	.02800	-.00163	.00032	-.00080	.09253	-.00002
SDev	.00003	.01017	.00127	.00012	.00007	.00759	.00004
%RSD	13.793	36.320	77.620	38.789	9.0872	8.2043	198.88
#1	.00027	.02081	-.00074	.00023	-.00075	.08716	-.00005
#2	.00022	.03520	-.00253	.00040	-.00085	.09790	.00001
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00035	.00034	.00107	.02571	.04080	-.00007	-.00012
SDev	.00034	.00010	.00029	.00741	.00588	.00004	.00040
%RSD	98.090	29.511	27.553	28.842	14.407	52.328	345.81
#1	.00011	.00027	.00086	.02047	.03664	-.00009	.00017
#2	.00059	.00041	.00127	.03095	.04495	-.00004	-.00040
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	.00039	.00213	.00092	.00132	.00039	-.00182	-.00109
SDev	.00049	.00295	.00135	.00188	.00068	.00126	.00106
%RSD	124.99	138.45	146.64	142.25	172.56	68.815	97.918
#1	.00074	.00422	.00187	.00265	-.00009	-.00271	-.00184
#2	.00005	.00004	-.00003	-.00001	.00087	-.00094	-.00033
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	-.00149	.00064	-.00007	-.00081	.00333	.00645	
SDev	.00265	.00199	.00045	.00138	.00001	.00003	
%RSD	177.54	310.85	638.99	170.10	.43221	.38776	
#1	.00038	-.00077	-.00038	-.00178	.00332	.00643	
#2	-.00337	.00205	.00025	.00016	.00334	.00646	
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	15321	--	--	--	--	--	--
SDev	50.80535	--	--	--	--	--	--
%RSD	.3315989	--	--	--	--	--	--
#1	15357	--	--	--	--	--	--
#2	15285	--	--	--	--	--	--

Analysis Report

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Method: METTRA Sample Name: DDH6FC Operator: RJG
 Run Time: 05/22/00 15:34:55
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04999	1.8467	1.9873	1.9853	.04777	L.02243	.04986
SDev	.00015	.0146	.0067	.0169	.00003	.00403	.00004
%RSD	.29345	.79150	.33737	.84943	.06965	17.976	.08719
#1	.04988	1.8363	1.9825	1.9734	.04780	L.01958	.04983
#2	.05009	1.8570	1.9920	1.9972	.04775	L.02529	.04989
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	.49735	.19991	.24115	1.0400	L.01131	.49075	L-.00119
SDev	.00199	.00090	.00217	.0057	.00396	.00305	.00069
%RSD	.40051	.44913	.89890	.55085	35.001	.62197	58.169
#1	.49594	.19928	.23961	1.0360	L.00851	.48859	L-.00167
#2	.49876	.20055	.24268	1.0441	L.01411	.49291	L-.00070
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49920	.50154	.49833	.49940	-.00049	-.00074	L-.00066
SDev	.00166	.00193	.00501	.00398	.00092	.00100	.00098
%RSD	.33340	.38384	1.0056	.79770	188.22	135.39	148.52
#1	.49802	.50018	.49479	.49658	.00016	-.00003	L.00003
#2	.50038	.50290	.50188	.50221	-.00114	-.00145	L-.00135
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.9692	1.9750	1.9731	1.9844	.48683	.50428	
SDev	.0150	.0264	.0226	.0141	.00136	.00353	
%RSD	.76333	1.3378	1.1469	.71254	.27823	.70048	
#1	1.9586	1.9563	1.9571	1.9744	.48587	.50178	
#2	1.9799	1.9937	1.9891	1.9944	.48779	.50678	
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	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15022	--	--	--	--	--	--
SDev	67.42304	--	--	--	--	--	--
%RSD	.4488369	--	--	--	--	--	--
#1	15069	--	--	--	--	--	--
#2	14974	--	--	--	--	--	--

Method: METTRA Sample Name: DDF4R

Operator: RJG

Run Time: 05/22/00 15:39:04

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00033	10.690	.00901	.01970	-.00012	.67969	.00066
SDev	.00037	.023	.00104	.00028	.00010	.00146	.00027
%RSD	113.71	.21105	11.519	1.3968	81.011	.21501	40.504
#1	.00059	10.674	.00975	.01951	-.00019	.67865	.00047
#2	.00006	10.706	.00828	.01990	-.00005	.68072	.00085
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	.00140	.13403	.01250	30.017	.93985	.02886	-.00032
SDev	.00000	.00052	.00007	.057	.00030	.00005	.00007
%RSD	.00000	.38992	.60331	.19152	.03210	.16792	23.346
#1	.00140	.13440	.01256	29.977	.93963	.02883	-.00037
#2	.00140	.13366	.01245	30.058	.94006	.02890	-.00027
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	.00546	.02861	.02566	.02664	.00214	-.00020	.00058
SDev	.00058	.00187	.00153	.00040	.00117	.00025	.00023
%RSD	10.640	6.5503	5.9708	1.4933	54.738	120.64	39.241
#1	.00588	.02993	.02458	.02636	.00131	-.00003	.00042
#2	.00505	.02728	.02674	.02692	.00297	-.00038	.00074
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	-.00679	.00658	.00213	-.00061	.12804	.04819	
SDev	.00038	.00068	.00058	.00317	.00010	.00006	
%RSD	5.5576	10.271	27.109	523.86	.07416	.13527	
#1	-.00652	.00705	.00253	-.00285	.12797	.04815	
#2	-.00706	.00610	.00172	.00164	.12811	.04824	
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	

6571536

Analysis Report

05/22/00 03:43:10 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15178	--	--	--	--	--	--
SDev	41.78973	--	--	--	--	--	--
%RSD	.2753273	--	--	--	--	--	--
#1	15149	--	--	--	--	--	--
#2	15208	--	--	--	--	--	--

Analysis Report

05/22/00 03:47:19 PM

page 1

Method: METTRA Sample Name: DDFED

Operator: RJG

Run Time: 05/22/00 15:43:13

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00069	82.216	.14387	.50162	.00723	7.7136	.00260
SDev	.00017	.065	.00036	.00049	.00004	.0288	.00094
%RSD	24.985	.07881	.25392	.09702	.58240	.37273	36.064
#1	.00057	82.170	.14413	.50127	.00726	7.7339	.00193
#2	.00081	82.262	.14361	.50196	.00720	7.6933	.00326
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	.02905	.36047	.28600	305.15	7.5963	.48531	.00373
SDev	.00029	.00140	.00032	.30	.0149	.00151	.00049
%RSD	.99383	.38897	.11374	.09710	.19581	.31075	13.134
#1	.02926	.36146	.28623	305.36	7.6068	.48638	.00407
#2	.02885	.35948	.28577	304.94	7.5858	.48425	.00338
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	.06895	.95435	.95758	.95650	.00860	.00535	.00643
SDev	.00068	.00353	.00971	.00765	.00056	.00004	.00021
%RSD	.98726	.36981	1.0142	.80009	6.4849	.69653	3.2744
#1	.06847	.95685	.96445	.96192	.00900	.00537	.00658
#2	.06943	.95186	.95071	.95109	.00821	.00532	.00628
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	.00694	.01930	.01518	-.00110	.55047	.97918	
SDev	.00268	.00057	.00127	.00164	.00439	.00289	
%RSD	38.595	2.9698	8.3903	149.40	.79770	.29560	
#1	.00504	.01889	.01428	-.00226	.55358	.98122	
#2	.00883	.01970	.01608	.00006	.54737	.97713	
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	16273	--	--	--	--	--	--
SDev	42.77996	--	--	--	--	--	--
%RSD	.2628819	--	--	--	--	--	--
#1	16243	--	--	--	--	--	--
#2	16304	--	--	--	--	--	--

Analysis Report

05/22/00 03:51:28 PM

page 1

Method: METTRA Sample Name: DDFEF

Operator: RJG

Run Time: 05/22/00 15:47:22

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	-.00114	51.426	.10772	.23564	.00471	7.3308	.00034
SDev	.00007	.311	.00205	.00136	.00005	.0791	.00002
%RSD	6.2772	.60438	1.9006	.57686	1.0865	1.0787	5.3803
#1	-.00109	51.645	.10917	.23660	.00474	7.3867	.00035
#2	-.00119	51.206	.10627	.23468	.00467	7.2748	.00032
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	.04916	.15882	.03163	138.59	6.1087	.25812	.00706
SDev	.00035	.00161	.00021	1.04	.0558	.00234	.00010
%RSD	.72090	1.0155	.65751	.75027	.91351	.90851	1.3847
#1	.04941	.15996	.03178	139.33	6.1482	.25978	.00699
#2	.04891	.15768	.03148	137.85	6.0693	.25646	.00713
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	20.000	10.000	500.00	600.00	10.000	20.000
Low	-.05000	-.01000	-.02500	-.10000	-5.0000	-.01500	-.04000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08258	.07774	.07691	.07719	.00424	.00115	.00218
SDev	.00134	.00033	.00034	.00012	.00129	.00205	.00180
%RSD	1.6214	.42021	.43920	.15097	30.464	178.51	82.464
#1	.08353	.07751	.07715	.07727	.00333	-.00030	.00091
#2	.08164	.07797	.07667	.07711	.00516	.00259	.00345
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	.00367	.01274	.00972	-.00046	.22815	.26545	
SDev	.00292	.00162	.00011	.00008	.00351	.00215	
%RSD	79.510	12.721	1.1164	17.323	1.5377	.80892	
#1	.00161	.01389	.00980	-.00052	.23063	.26697	
#2	.00574	.01160	.00965	-.00040	.22567	.26394	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16080	--	--	--	--	--	--
SDev	91.71189	--	--	--	--	--	--
%RSD	.5703635	--	--	--	--	--	--
#1	16015	--	--	--	--	--	--
#2	16144	--	--	--	--	--	--

Analysis Report

05/22/00 03:55:36 PM

page 1

Method: METTRA Sample Name: DDFEG

Operator: RJG

Run Time: 05/22/00 15:51:31

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	22.009	.05150	.09493	.00206	6.7944	.00052
SDev	.00038	.107	.00012	.00025	.00004	.0457	.00036
%RSD	1392.6	.48504	.22734	.26316	2.1075	.67200	70.549
#1	-.00030	22.085	.05142	.09511	.00203	6.8266	.00026
#2	.00024	21.934	.05158	.09475	.00209	6.7621	.00077
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	.01032	.09528	.01783	187.59	4.1868	.22538	.00581
SDev	.00017	.00067	.00012	.97	.0229	.00130	.00038
%RSD	1.6357	.70765	.69199	.51772	.54599	.57688	6.6249
#1	.01044	.09575	.01774	188.28	4.2030	.22630	.00554
#2	.01020	.09480	.01791	186.90	4.1707	.22446	.00608
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	.03543	.03525	.03659	.03614	.00075	-.00197	-.00107
SDev	.00185	.00267	.00082	.00034	.00193	.00181	.00056
%RSD	5.2152	7.5817	2.2479	.94433	258.65	91.825	52.972
#1	.03673	.03336	.03717	.03590	.00211	-.00325	-.00147
#2	.03412	.03713	.03600	.03638	-.00062	-.00069	-.00067
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	.00083	.01149	.00794	-.00263	.12183	.11750	
SDev	.00022	.00089	.00067	.00084	.00047	.00071	
%RSD	26.729	7.7499	8.4123	31.786	.38655	.60800	
#1	.00099	.01211	.00841	-.00323	.12216	.11800	
#2	.00067	.01086	.00747	-.00204	.12150	.11699	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15444	--	--	--	--	--	--
SDev	45.82038	--	--	--	--	--	--
%RSD	.2966853	--	--	--	--	--	--
#1	15412	--	--	--	--	--	--
#2	15476	--	--	--	--	--	--

Analysis Report

05/22/00 03:59:46 PM

page 1

Method: METTRA Sample Name: DDFEK

Operator: RJG

Run Time: 05/22/00 15:55:40

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	.00089	94.830	.13602	.56384	.00844	9.5614	.00429
SDev	.00010	.537	.00097	.00191	.00014	.0256	.00030
%RSD	10.865	.56629	.71381	.33946	1.6298	.26739	7.1071
#1	.00082	94.450	.13670	.56249	.00853	9.5433	.00408
#2	.00096	95.210	.13533	.56519	.00834	9.5794	.00451
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	.04076	.39923	.36605	320.05	14.217	.49567	.00570
SDev	.00006	.00127	.00136	1.42	.051	.00181	.00067
%RSD	.15196	.31682	.37169	.44381	.35995	.36605	11.800
#1	.04081	.39834	.36509	319.04	14.181	.49439	.00522
#2	.04072	.40013	.36702	321.05	14.253	.49695	.00617
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	.08225	.95232	.95397	.95342	.01036	.00306	.00549
SDev	.00087	.01170	.00388	.00648	.00037	.00179	.00132
%RSD	1.0587	1.2285	.40681	.68010	3.6126	58.405	23.989
#1	.08163	.94404	.95122	.94883	.01062	.00433	.00642
#2	.08286	.96059	.95671	.95800	.01009	.00180	.00456
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	.00880	.02140	.01720	-.00050	.63029	1.0402	
SDev	.00328	.00052	.00144	.00187	.00002	.0036	
%RSD	37.297	2.4480	8.3874	370.14	.00299	.34930	
#1	.01113	.02177	.01822	-.00183	.63031	1.0376	
#2	.00648	.02103	.01618	.00082	.63028	1.0428	
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	16509	--	--	--	--	--	--
SDev	96.83910	--	--	--	--	--	--
%RSD	.5865988	--	--	--	--	--	--
#1	16577	--	--	--	--	--	--
#2	16440	--	--	--	--	--	--

Analysis Report

05/22/00 04:03:55 PM

page 1

Method: METTRA Sample Name: DDFEN

Operator: RJG

Run Time: 05/22/00 15:59:49

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00014	31.326	.03198	.04142	.00107	.73927	-.00002
SDev	.00021	.053	.00093	.00000	.00001	.00224	.00017
%RSD	151.81	.16838	2.9225	.00978	.67474	.30226	691.91
#1	-.00001	31.288	.03132	.04142	.00107	.74085	-.00014
#2	.00029	31.363	.03264	.04141	.00108	.73769	.00009
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	.00548	.31142	.02516	89.219	3.0624	.09998	.00042
SDev	.00022	.00075	.00016	.084	.0059	.00014	.00061
%RSD	3.9683	.24127	.65140	.09431	.19275	.13974	145.41
#1	.00533	.31195	.02505	89.278	3.0666	.10008	.00085
#2	.00563	.31089	.02528	89.159	3.0582	.09988	-.00001
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	.01433	.06843	.06604	.06684	.00332	.00130	.00197
SDev	.00116	.00274	.00257	.00080	.00038	.00075	.00037
%RSD	8.1046	4.0094	3.8905	1.1971	11.434	57.779	18.933
#1	.01351	.06649	.06786	.06741	.00305	.00183	.00224
#2	.01515	.07038	.06423	.06627	.00359	.00077	.00171
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	-.00472	.01204	.00646	-.00378	.31576	.10341	
SDev	.00183	.00188	.00186	.00006	.00156	.00003	
%RSD	38.691	15.640	28.868	1.7101	.49331	.02575	
#1	-.00601	.01071	.00514	-.00383	.31686	.10339	
#2	-.00343	.01337	.00778	-.00374	.31466	.10343	
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	

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Analysis Report

05/22/00 04:03:55 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15085	--	--	--	--	--	--
SDev	57.73486	--	--	--	--	--	--
%RSD	.3827372	--	--	--	--	--	--
#1	15044	--	--	--	--	--	--
#2	15126	--	--	--	--	--	--

Analysis Report

05/22/00 04:08:04 PM

page 1

Method: METTRA Sample Name: CCV3-1 0014-084-5 Operator: RJG
 Run Time: 05/22/00 16:03:59
 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	1.0223	24.342	.50951	2.0080	1.9586	49.048	.49225
SDev	.0070	.091	.00362	.0068	.0149	.375	.00387
%RSD	.68521	.37225	.71001	.33657	.75816	.76428	.78558
#1	1.0272	24.406	.51207	2.0127	1.9691	49.313	.49498
#2	1.0173	24.278	.50695	2.0032	1.9481	48.783	.48952
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	1.9699	1.9694	1.9495	24.704	47.877	1.9489	1.9643
SDev	.0164	.0155	.0091	.163	.360	.0140	.0029
%RSD	.83463	.78928	.46930	.65862	.75151	.71707	.14820
#1	1.9815	1.9804	1.9560	24.819	48.131	1.9588	1.9664
#2	1.9582	1.9584	1.9431	24.589	47.623	1.9391	1.9623
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	1.9693	.50921	.50985	.50964	.51232	.50770	.50924
SDev	.0133	.00254	.00949	.00718	.00601	.00216	.00345
%RSD	.67376	.49832	1.8623	1.4085	1.1738	.42639	.67680
#1	1.9787	.51101	.51656	.51471	.51657	.50923	.51168
#2	1.9599	.50742	.50313	.50456	.50806	.50617	.50680
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	.51583	.52386	.52119	1.0259	1.9655	1.9905	
SDev	.00552	.00314	.00393	.0049	.0154	.0167	
%RSD	1.0696	.59843	.75371	.47343	.78382	.84026	
#1	.51973	.52608	.52396	1.0293	1.9764	2.0023	
#2	.51193	.52164	.51841	1.0224	1.9546	1.9786	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15032	--	--	--	--	--	--
SDev	122.6478	--	--	--	--	--	--
%RSD	.8159182	--	--	--	--	--	--
#1	14945	--	--	--	--	--	--
#2	15119	--	--	--	--	--	--

Analysis Report

05/22/00 04:12:13 PM

page 1

Method: METTRA Sample Name: CCB1

Operator: RJG

Run Time: 05/22/00 16:08:08

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	.00030	.00312	-.00073	.00041	-.00080	.01856	.00013
SDev	.00045	.00297	.00044	.00020	.00014	.00527	.00003
%RSD	152.29	95.110	60.280	49.835	17.653	28.379	26.107
#1	-.00002	.00102	-.00104	.00026	-.00090	.01484	.00010
#2	.00061	.00522	-.00042	.00055	-.00070	.02229	.00015
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	.00091	.00072	.00193	.04004	.01244	.00026	.00457
SDev	.00035	.00040	.00055	.00060	.00876	.00026	.00137
%RSD	38.824	55.372	28.582	1.4918	70.370	102.83	29.890
#1	.00066	.00044	.00154	.04046	.00625	.00007	.00554
#2	.00115	.00100	.00232	.03962	.01863	.00044	.00360
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	.00141	.00018	.00201	.00140	.00208	-.00139	-.00023
SDev	.00122	.00383	.00019	.00115	.00228	.00046	.00045
%RSD	86.684	2149.7	9.7107	81.746	109.65	33.299	192.30
#1	.00227	-.00253	.00215	.00059	.00370	-.00172	.00008
#2	.00054	.00289	.00187	.00221	.00047	-.00106	-.00055
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	-.00357	.00122	-.00038	.00013	.00046	.00137	
SDev	.00032	.00398	.00255	.00322	.00042	.00010	
%RSD	8.9080	326.40	678.56	2444.6	90.157	6.9628	
#1	-.00379	.00403	.00143	.00241	.00017	.00131	
#2	-.00334	-.00159	-.00218	-.00214	.00075	.00144	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

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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	15031	--	--	--	--	--	--
SDev	16.19302	--	--	--	--	--	--
%RSD	.1077330	--	--	--	--	--	--
#1	15019	--	--	--	--	--	--
#2	15042	--	--	--	--	--	--

Analysis Report

05/22/00 04:16:23 PM

page 1

Method: METTRA Sample Name: DDFER Operator: RJG
 Run Time: 05/22/00 16:12:17
 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	-.00022	51.163	.03786	.09299	.00177	.91535	.00011
SDev	.00023	.118	.00128	.00028	.00003	.00192	.00022
%RSD	106.44	.22972	3.3846	.30696	1.6778	.20999	195.69
#1	-.00038	51.080	.03695	.09279	.00175	.91671	-.00004
#2	-.00005	51.246	.03876	.09319	.00179	.91399	.00027
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	.01242	.31923	.02526	118.26	5.2384	.24010	.00149
SDev	.00030	.00008	.00027	.17	.0008	.00005	.00033
%RSD	2.4076	.02592	1.0657	.14114	.01520	.01993	21.827
#1	.01263	.31917	.02507	118.14	5.2379	.24006	.00172
#2	.01221	.31929	.02545	118.38	5.2390	.24013	.00126
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	.02452	.03534	.03511	.03519	.00494	.00145	.00261
SDev	.00018	.00088	.00009	.00023	.00303	.00101	.00168
%RSD	.73362	2.4979	.25666	.66465	61.310	69.712	64.423
#1	.02439	.03472	.03517	.03502	.00708	.00217	.00380
#2	.02465	.03597	.03504	.03535	.00280	.00074	.00142
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	.00185	.00837	.00620	.00081	.32237	.13352	
SDev	.00105	.00301	.00236	.00278	.00052	.00037	
%RSD	56.646	35.979	38.031	341.62	.16001	.27787	
#1	.00259	.01050	.00786	-.00115	.32200	.13325	
#2	.00111	.00624	.00453	.00278	.32273	.13378	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15256	--	--	--	--	--	--
SDev	24.67830	--	--	--	--	--	--
%RSD	.1617623	--	--	--	--	--	--
#1	15273	--	--	--	--	--	--
#2	15238	--	--	--	--	--	--

Analysis Report

05/22/00 04:20:33 PM

page 1

Method: METTRA Sample Name: DDFERP5 Operator: RJG
 Run Time: 05/22/00 16:16:27
 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	-.00001	9.8301	.00702	.01830	-.00042	.18143	-.00013
SDev	.00028	.1476	.00160	.00027	.00015	.00374	.00024
%RSD	2397.7	1.5014	22.829	1.4802	34.462	2.0631	185.27
#1	.00018	9.7257	.00589	.01811	-.00032	.17878	-.00029
#2	-.00021	9.9344	.00815	.01850	-.00052	.18408	.00004
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00285	.06361	.00567	23.385	1.0339	.04724	-.00056
SDev	.00036	.00049	.00045	.325	.0121	.00067	.00095
%RSD	12.711	.77375	7.9592	1.3879	1.1721	1.4116	170.46
#1	.00260	.06326	.00535	23.156	1.0254	.04677	.00011
#2	.00311	.06396	.00599	23.615	1.0425	.04771	-.00123
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00557	.00613	.00697	.00669	.00221	-.00222	-.00074
SDev	.00132	.00192	.00052	.00029	.00050	.00058	.00055
%RSD	23.758	31.246	7.4212	4.3837	22.759	25.984	74.334
#1	.00651	.00749	.00660	.00690	.00257	-.00181	-.00035
#2	.00464	.00478	.00733	.00648	.00185	-.00262	-.00113
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00382	.00330	.00093	-.00170	.06660	.02669	
SDev	.00269	.00035	.00066	.00055	.00117	.00031	
%RSD	70.417	10.687	71.310	32.498	1.7533	1.1737	
#1	-.00192	.00305	.00140	-.00209	.06577	.02647	
#2	-.00573	.00355	.00046	-.00131	.06742	.02691	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15427	--	--	--	--	--	--
SDev	222.8802	--	--	--	--	--	--
%RSD	1.444708	--	--	--	--	--	--
#1	15585	--	--	--	--	--	--
#2	15270	--	--	--	--	--	--

Analysis Report

05/22/00 04:24:42 PM

page '1

Method: METTRA Sample Name: DDFERS Operator: RJG
 Run Time: 05/22/00 16:20:37
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04846	49.460	1.9399	2.0072	.04935	.87373	.04757
SDev	.00055	.220	.0001	.0087	.00007	.00129	.00020
%RSD	1.1407	.44509	.00388	.43339	.14173	.14811	.42577
#1	.04885	49.304	1.9399	2.0011	.04930	.87465	.04743
#2	.04807	49.616	1.9400	2.0134	.04940	.87282	.04771
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	.48841	.56061	.26298	116.54	5.6484	.65045	.00069
SDev	.00047	.00043	.00070	.13	.0035	.00005	.00057
%RSD	.09631	.07656	.26662	.10754	.06156	.00726	82.185
#1	.48808	.56091	.26248	116.45	5.6509	.65048	.00029
#2	.48875	.56030	.26347	116.63	5.6459	.65041	.00109
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	.50328	.51937	.51905	.51916	.00554	.00333	.00407
SDev	.00322	.00171	.00603	.00459	.00142	.00269	.00227
%RSD	.63946	.32893	1.1618	.88434	25.538	80.691	55.678
#1	.50556	.52058	.52332	.52240	.00654	.00524	.00567
#2	.50101	.51816	.51479	.51591	.00454	.00143	.00247
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	1.8779	1.9105	1.8997	1.9384	.81546	.62076	
SDev	.0019	.0201	.0140	.0013	.00004	.00029	
%RSD	.10310	1.0499	.73821	.06490	.00498	.04726	
#1	1.8793	1.9247	1.9096	1.9375	.81549	.62096	
#2	1.8766	1.8963	1.8897	1.9393	.81543	.62055	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15383	--	--	--	--	--	--
SDev	49.21435	--	--	--	--	--	--
%RSD	.3199217	--	--	--	--	--	--
#1	15348	--	--	--	--	--	--
#2	15418	--	--	--	--	--	--

Analysis Report

05/22/00 04:28:52 PM

page 1

Method: METTRA Sample Name: DDFERD Operator: RJG
 Run Time: 05/22/00 16:24:46
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04755	51.191	1.9088	1.9937	.04869	.79186	.04702
SDev	.00044	.098	.0052	.0039	.00011	.00306	.00007
%RSD	.91891	.19129	.27028	.19623	.21946	.38646	.14915
#1	.04786	51.122	1.9124	1.9910	.04877	.79402	.04707
#2	.04724	51.261	1.9051	1.9965	.04861	.78969	.04697
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	.48270	.51726	.26169	112.83	5.4097	.65877	.00005
SDev	.00118	.00044	.00029	.07	.0088	.00096	.00033
%RSD	.24486	.08594	.11144	.06273	.16229	.14583	659.05
#1	.48353	.51758	.26189	112.88	5.4159	.65945	-.00018
#2	.48186	.51695	.26148	112.78	5.4035	.65809	.00028
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	.49519	.51356	.51223	.51267	.00359	.00112	.00194
SDev	.00131	.00271	.00234	.00246	.00115	.00022	.00024
%RSD	.26364	.52776	.45692	.48055	31.960	19.415	12.250
#1	.49611	.51548	.51388	.51442	.00440	.00096	.00211
#2	.49427	.51165	.51057	.51093	.00278	.00127	.00177
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	1.8451	1.8713	1.8626	1.9144	.79153	.61068	
SDev	.0029	.0117	.0087	.0185	.00361	.00159	
%RSD	.15764	.62332	.46971	.96630	.45588	.26066	
#1	1.8471	1.8796	1.8688	1.9275	.79408	.61181	
#2	1.8430	1.8631	1.8564	1.9013	.78897	.60955	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15365	--	--	--	--	--	--
SDev	23.12253	--	--	--	--	--	--
%RSD	.1504859	--	--	--	--	--	--
#1	15349	--	--	--	--	--	--
#2	15382	--	--	--	--	--	--

Analysis Report

05/22/00 04:33:01 PM

page 1

Method: METTRA Sample Name: DDFEV

Operator: RJG

Run Time: 05/22/00 16:28:56

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00006	33.244	.02609	.05444	.00087	.96815	-.00023
SDev	.00023	.142	.00008	.00025	.00002	.00223	.00030
%RSD	404.02	.42673	.31025	.45291	2.5892	.23045	127.03
#1	-.00010	33.344	.02603	.05462	.00089	.96973	-.00044
#2	.00022	33.144	.02614	.05427	.00086	.96657	-.00002
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	.00669	.31997	.02033	86.896	3.7750	.10166	-.00043
SDev	.00043	.00074	.00005	.256	.0142	.00026	.00008
%RSD	6.4229	.23022	.25191	.29507	.37642	.25916	18.827
#1	.00638	.32049	.02029	87.077	3.7850	.10184	-.00048
#2	.00699	.31945	.02036	86.715	3.7649	.10147	-.00037
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	.01607	.03182	.03014	.03070	.00371	.00084	.00180
SDev	.00030	.00189	.00181	.00184	.00026	.00092	.00070
%RSD	1.8967	5.9272	6.0059	5.9788	7.0593	109.46	39.016
#1	.01629	.03315	.03142	.03199	.00390	.00149	.00229
#2	.01586	.03048	.02886	.02940	.00353	.00019	.00130
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	-.00215	.00735	.00419	-.00212	.31269	.09273	
SDev	.00265	.00084	.00032	.00103	.00106	.00004	
%RSD	123.14	11.436	7.6790	48.415	.33900	.04357	
#1	-.00028	.00676	.00442	-.00285	.31344	.09276	
#2	-.00403	.00795	.00396	-.00139	.31194	.09271	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15114	--	--	--	--	--	--
SDev	19.37431	--	--	--	--	--	--
%RSD	.1281917	--	--	--	--	--	--
#1	15100	--	--	--	--	--	--
#2	15127	--	--	--	--	--	--

Analysis Report

05/22/00 04:37:11 PM

page 1

Method: METTRA Sample Name: DDFF0

Operator: RJG

Run Time: 05/22/00 16:33:05

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	-.00111	55.199	.10183	.33931	.00607	8.5902	.00134
SDev	.00024	.057	.00131	.00030	.00007	.0396	.00035
%RSD	21.620	.10295	1.2883	.08796	1.2112	.46098	26.054
#1	-.00128	55.239	.10090	.33952	.00612	8.6182	.00109
#2	-.00094	55.159	.10276	.33910	.00602	8.5622	.00159
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	.04995	.14380	.03109	130.88	6.8735	.26204	.00212
SDev	.00041	.00084	.00028	.23	.0231	.00071	.00068
%RSD	.81972	.58638	.89919	.17746	.33567	.27090	32.300
#1	.04966	.14439	.03089	131.04	6.8898	.26254	.00163
#2	.05024	.14320	.03129	130.71	6.8572	.26154	.00260
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	.08555	.06677	.07242	.07054	.00467	-.00295	-.00041
SDev	.00122	.00132	.00114	.00032	.00044	.00049	.00047
%RSD	1.4278	1.9804	1.5728	.45276	9.3979	16.581	114.54
#1	.08642	.06584	.07322	.07076	.00498	-.00261	-.00008
#2	.08469	.06771	.07161	.07031	.00436	-.00330	-.00075
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	.00914	.01285	.01161	.00403	.19765	.32261	
SDev	.00068	.00076	.00073	.00082	.00009	.00086	
%RSD	7.4861	5.8893	6.3078	20.279	.04500	.26538	
#1	.00866	.01231	.01109	.00346	.19759	.32321	
#2	.00962	.01338	.01213	.00461	.19771	.32200	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	16593	--	--	--	--	--	--
SDev	23.01688	--	--	--	--	--	--
%RSD	.1387154	--	--	--	--	--	--
#1	16577	--	--	--	--	--	--
#2	16609	--	--	--	--	--	--

Analysis Report

05/22/00 04:41:20 PM

page 1

Method: METTRA Sample Name: DDDFF1

Operator: RJG

Run Time: 05/22/00 16:37:15

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	.00017	15.968	.03302	.11771	.00147	6.3314	.00003
SDev	.00000	.481	.00079	.00335	.00029	.1559	.00001
%RSD	1.1116	3.0128	2.3876	2.8445	19.586	2.4631	41.276
#1	.00017	15.627	.03246	.11535	.00167	6.2211	.00002
#2	.00017	16.308	.03357	.12008	.00127	6.4417	.00005
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	.01116	.08411	.01287	102.51	3.7835	.18060	.00064
SDev	.00037	.00239	.00098	2.79	.1052	.00478	.00035
%RSD	3.2831	2.8463	7.6487	2.7188	2.7794	2.6451	54.140
#1	.01090	.08242	.01218	100.54	3.7091	.17722	.00040
#2	.01142	.08581	.01357	104.48	3.8579	.18398	.00089
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	.02487	.01939	.01992	.01974	-.00029	.00031	.00011
SDev	.00190	.00097	.00045	.00003	.00187	.00100	.00128
%RSD	7.6530	4.9869	2.2374	.12533	639.41	318.07	1151.7
#1	.02353	.01871	.02024	.01973	.00103	.00102	.00102
#2	.02622	.02008	.01961	.01976	-.00161	-.00039	-.00080
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	-.00125	.00924	.00575	.00185	.08842	.07845	
SDev	.00275	.00241	.00069	.00029	.00317	.00198	
%RSD	219.01	26.087	12.070	15.881	3.5827	2.5223	
#1	-.00320	.01095	.00624	.00164	.08618	.07705	
#2	.00069	.00754	.00526	.00206	.09066	.07985	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15140	--	--	--	--	--	--
SDev	343.1940	--	--	--	--	--	--
%RSD	2.266829	--	--	--	--	--	--
#1	15382	--	--	--	--	--	--
#2	14897	--	--	--	--	--	--

Analysis Report

05/22/00 04:45:29 PM

Method: METTRA Sample Name: DDDFF2

Operator: RJG

Run Time: 05/22/00 16:41:24

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	-.00050	21.523	.00669	.39011	.00208	8.8666	.00028
SDev	.00006	.065	.00053	.00081	.00006	.0014	.00006
%RSD	11.185	.30128	7.9890	.20734	2.6402	.01564	22.357
#1	-.00054	21.477	.00707	.38954	.00212	8.8656	.00024
#2	-.00046	21.569	.00631	.39068	.00204	8.8676	.00033
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	.00479	.09540	.01103	37.719	2.7789	.12029	-.00137
SDev	.00005	.00058	.00045	.093	.0054	.00030	.00067
%RSD	1.0141	.61253	4.0655	.24678	.19284	.25199	48.810
#1	.00482	.09499	.01071	37.653	2.7751	.12008	-.00184
#2	.00475	.09581	.01135	37.785	2.7827	.12051	-.00089
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	.01408	.03220	.02894	.03003	-.00061	.00033	.00002
SDev	.00122	.00159	.00144	.00043	.00313	.00086	.00047
%RSD	8.6913	4.9483	4.9852	1.4382	513.09	259.70	2591.8
#1	.01494	.03107	.02996	.03033	.00160	-.00028	.00035
#2	.01321	.03333	.02792	.02972	-.00282	.00094	-.00031
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	-.00526	.00715	.00302	-.00203	.07737	.03925	
SDev	.00127	.00001	.00043	.00080	.00019	.00019	
%RSD	24.176	.17702	14.305	39.262	.25066	.49796	
#1	-.00436	.00716	.00333	-.00259	.07723	.03911	
#2	-.00616	.00715	.00271	-.00147	.07750	.03939	
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	15425	--	--	--	--	--	--
SDev	38.50210	--	--	--	--	--	--
%RSD	.2496145	--	--	--	--	--	--
#1	15452	--	--	--	--	--	--
#2	15397	--	--	--	--	--	--

Analysis Report

05/22/00 04:49:39 PM

page 1

Method: METTRA Sample Name: DDFF4

Operator: RJG

Run Time: 05/22/00 16:45:33

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	-.00016	10.171	.00672	.01119	-.00134	1.6967	-.00020
SDev	.00094	.053	.00111	.00002	.00008	.0044	.00022
%RSD	594.44	.52167	16.473	.20301	6.2543	.26047	108.03

#1	-.00082	10.209	.00594	.01117	-.00128	1.6999	-.00036
#2	.00051	10.134	.00750	.01121	-.00140	1.6936	-.00005

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	.00140	.02590	.01438	40.385	.40152	.02406	-.00060
SDev	.00000	.00067	.00024	.059	.00426	.00015	.00035
%RSD	.00000	2.5964	1.6953	.14724	1.0605	.62494	57.531

#1	.00140	.02542	.01420	40.427	.39851	.02417	-.00084
#2	.00140	.02637	.01455	40.343	.40453	.02395	-.00036

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	.00357	.01323	.01015	.01117	-.00174	-.00097	-.00122
SDev	.00001	.00494	.00007	.00160	.00095	.00036	.00008
%RSD	.21487	37.368	.70219	14.308	54.618	36.699	6.4656

#1	.00357	.00973	.01020	.01004	-.00241	-.00072	-.00128
#2	.00358	.01672	.01010	.01230	-.00107	-.00122	-.00117

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	-.00676	.00758	.00281	-.00100	.04264	.01537
SDev	.00128	.00388	.00216	.00062	.00035	.00022
%RSD	18.974	51.252	77.134	62.550	.81509	1.4089

#1	-.00585	.00483	.00128	-.00056	.04288	.01553
#2	-.00766	.01033	.00434	-.00144	.04239	.01522

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

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15091	--	--	--	--	--	--
SDev	38.25489	--	--	--	--	--	--
%RSD	.2534939	--	--	--	--	--	--
#1	15118	--	--	--	--	--	--
#2	15064	--	--	--	--	--	--

Analysis Report

05/22/00 04:53:48 PM

page 1

Method: METTRA Sample Name: DDFF9 Operator: RJG
 Run Time: 05/22/00 16:49:42
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00000	53.011	.47314	.33330	.00569	4.5823	.00109
SDev	.00001	.305	.00247	.00186	.00013	.0204	.00029
%RSD	144.93	.57461	.52116	.55643	2.2198	.44465	26.521
#1	-.00001	52.796	.47140	.33199	.00578	4.5679	.00088
#2	.00000	53.226	.47489	.33462	.00560	4.5967	.00129
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	.04245	1.1529	.13308	411.03	6.0317	.41358	-.00095
SDev	.00005	.0059	.00022	2.21	.0180	.00169	.00034
%RSD	.12173	.51167	.16233	.53835	.29904	.40915	35.813
#1	.04241	1.1487	.13293	409.46	6.0190	.41238	-.00119
#2	.04248	1.1571	.13324	412.59	6.0445	.41478	-.00071
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	.04483	.46968	.46846	.46887	.01591	.01527	.01548
SDev	.00247	.00372	.00468	.00436	.00353	.00198	.00015
%RSD	5.5174	.79164	.99997	.93047	22.182	13.000	.96262
#1	.04658	.46705	.46515	.46578	.01341	.01667	.01559
#2	.04308	.47231	.47177	.47195	.01840	.01387	.01538
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	.00945	.02201	.01783	-.00813	.85521	.67840	
SDev	.00203	.00227	.00219	.00113	.00168	.00304	
%RSD	21.468	10.317	12.286	13.910	.19586	.44889	
#1	.00802	.02041	.01628	-.00733	.85639	.67625	
#2	.01089	.02362	.01938	-.00892	.85402	.68055	
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	15726	--	--	--	--	--	--
SDev	94.75231	--	--	--	--	--	--
%RSD	.6025182	--	--	--	--	--	--
#1	15793	--	--	--	--	--	--
#2	15659	--	--	--	--	--	--

Analysis Report

05/22/00 04:57:57 PM

Method: METTRA Sample Name: CCV3-2 Operator: RJG
Run Time: 05/22/00 16:53:52
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	1.0702	25.730	.53195	2.1164	2.0571	51.534	.51581
SDev	.0053	.117	.00401	.0086	.0110	.340	.00365
%RSD	.49976	.45280	.75394	.40627	.53687	.66057	.70849
#1	1.0740	25.813	.53479	2.1225	2.0649	51.775	.51839
#2	1.0664	25.648	.52911	2.1103	2.0493	51.293	.51322
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	2.0675	2.0681	2.0460	26.018	50.215	2.0450	2.0535
SDev	.0125	.0105	.0117	.124	.297	.0106	.0027
%RSD	.60347	.50796	.57392	.47572	.59109	.51794	.13169
#1	2.0763	2.0755	2.0543	26.106	50.425	2.0525	2.0516
#2	2.0587	2.0607	2.0377	25.931	50.005	2.0375	2.0555
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	2.0651	.53224	.52699	.52874	.52898	.52907	.52904
SDev	.0194	.00247	.00470	.00396	.00014	.00376	.00256
%RSD	.94145	.46492	.89202	.74885	.02616	.71115	.48310
#1	2.0788	.53399	.53032	.53154	.52908	.53173	.53085
#2	2.0513	.53049	.52367	.52594	.52888	.52641	.52724
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	.53299	.54254	.53936	1.0678	2.0643	2.0862	
SDev	.00083	.00619	.00385	.0042	.0144	.0142	
%RSD	.15623	1.1400	.71342	.39520	.69884	.68297	
#1	.53240	.54691	.54208	1.0708	2.0745	2.0963	
#2	.53358	.53816	.53664	1.0649	2.0541	2.0762	
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	

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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	14549	--	--	--	--	--	--
SDev	24.25362	--	--	--	--	--	--
%RSD	.1667076	--	--	--	--	--	--
#1	14531	--	--	--	--	--	--
#2	14566	--	--	--	--	--	--

Analysis Report

05/22/00 05:02:06 PM

page 1

Method: METTRA Sample Name: CCB2

Operator: RJG

Run Time: 05/22/00 16:58:01

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	.00036	-.00243	-.00090	.00038	-.00159	.01336	.00049
SDev	.00028	.00060	.00193	.00025	.00002	.00548	.00008
%RSD	76.517	24.687	214.65	65.854	1.3398	41.028	16.923
#1	.00017	-.00201	.00047	.00020	-.00161	.00948	.00043
#2	.00056	-.00286	-.00226	.00056	-.00158	.01724	.00054
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	.00062	.00075	.00252	.03187	.00977	.00023	.00454
SDev	.00027	.00054	.00051	.01213	.00600	.00022	.00140
%RSD	43.934	71.909	20.398	38.062	61.422	94.221	30.749
#1	.00042	.00037	.00216	.02329	.00553	.00008	.00553
#2	.00081	.00113	.00288	.04044	.01401	.00039	.00356
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	.00117	.00161	.00072	.00102	-.00055	-.00007	-.00023
SDev	.00029	.00145	.00011	.00055	.00171	.00228	.00209
%RSD	25.183	89.568	14.865	54.331	307.83	3127.7	896.14
#1	.00096	.00059	.00064	.00063	.00065	.00154	.00125
#2	.00138	.00264	.00080	.00141	-.00176	-.00169	-.00171
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	-.00175	.00197	.00073	-.00069	.00018	.00101	
SDev	.00149	.00333	.00271	.00056	.00000	.00069	
%RSD	84.935	168.52	369.79	82.303	1.6264	68.771	
#1	-.00070	.00433	.00265	-.00029	.00018	.00052	
#2	-.00280	-.00038	-.00119	-.00108	.00018	.00150	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

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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	14636	--	--	--	--	--	--
SDev	5.727979	--	--	--	--	--	--
%RSD	.0391366	--	--	--	--	--	--
#1	14632	--	--	--	--	--	--
#2	14640	--	--	--	--	--	--

Analysis Report

05/22/00 05:08:40 PM

page 1

Method: METTRA Sample Name: DDDFA Operator: RJG
 Run Time: 05/22/00 17:04:35
 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	.00021	36.810	.15612	.33629	.00412	3.2780	.00121
SDev	.00031	.021	.00312	.00063	.00003	.0180	.00030
%RSD	146.45	.05676	1.9974	.18649	.71366	.54896	25.078
#1	-.00001	36.825	.15833	.33674	.00410	3.2907	.00099
#2	.00043	36.795	.15392	.33585	.00415	3.2652	.00142
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	.03617	.59482	.14602	254.47	4.0012	.21506	.00117
SDev	.00004	.00221	.00009	.71	.0135	.00089	.00046
%RSD	.11166	.37105	.06192	.28020	.33721	.41276	39.741
#1	.03614	.59638	.14595	254.97	4.0108	.21569	.00084
#2	.03620	.59326	.14608	253.96	3.9917	.21444	.00149
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	.03878	.77657	.77179	.77339	.00744	.00407	.00519
SDev	.00088	.00372	.00754	.00379	.00299	.00258	.00073
%RSD	2.2735	.47937	.97693	.48998	40.205	63.492	14.001
#1	.03940	.77394	.77713	.77606	.00955	.00224	.00468
#2	.03815	.77920	.76646	.77071	.00532	.00589	.00570
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	-.00136	.01965	.01265	-.00533	.59853	.82374	
SDev	.00595	.00012	.00206	.00213	.00367	.00464	
%RSD	437.12	.62745	16.297	40.019	.61385	.56386	
#1	-.00556	.01956	.01120	-.00382	.60113	.82702	
#2	.00284	.01974	.01411	-.00684	.59594	.82045	
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	15929	--	--	--	--	--	--
SDev	57.34609	--	--	--	--	--	--
%RSD	.3600128	--	--	--	--	--	--
#1	15888	--	--	--	--	--	--
#2	15969	--	--	--	--	--	--

Analysis Report

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page 1

Method: METTRA Sample Name: DDFFD Operator: RJG
 Run Time: 05/22/00 17:08:44
 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	-.00066	44.177	.11144	.13200	.00399	2.7132	-.00004
SDev	.00007	.188	.00111	.00032	.00001	.0278	.00051
%RSD	10.791	.42596	.99462	.24371	.15898	1.0261	1189.3
#1	-.00061	44.310	.11223	.13222	.00399	2.7329	-.00040
#2	-.00071	44.044	.11066	.13177	.00400	2.6935	.00032
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	.02809	.60175	.02834	221.44	5.9262	.22344	-.00214
SDev	.00059	.00583	.00005	1.73	.0529	.00206	.00007
%RSD	2.1006	.96901	.17666	.77907	.89345	.92232	3.0494
#1	.02851	.60587	.02830	222.66	5.9637	.22490	-.00219
#2	.02767	.59762	.02837	220.22	5.8888	.22199	-.00209
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	.03057	.16214	.16797	.16603	.00572	.00290	.00384
SDev	.00000	.00027	.00309	.00197	.00406	.00064	.00092
%RSD	.00012	.16504	1.8370	1.1859	71.054	22.167	24.097
#1	.03057	.16195	.17015	.16742	.00859	.00244	.00449
#2	.03057	.16233	.16579	.16464	.00284	.00335	.00318
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	-.00044	.01497	.00984	-.00239	.60642	.30572	
SDev	.00264	.00246	.00252	.00049	.00457	.00366	
%RSD	605.86	16.452	25.639	20.329	.75314	1.1967	
#1	-.00230	.01322	.00805	-.00204	.60965	.30831	
#2	.00143	.01671	.01162	-.00273	.60319	.30313	
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	

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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	15559	--	--	--	--	--	--
SDev	179.3227	--	--	--	--	--	--
%RSD	1.152508	--	--	--	--	--	--
#1	15433	--	--	--	--	--	--
#2	15686	--	--	--	--	--	--

Analysis Report

05/22/00 05:16:59 PM

page 1

Method: METTRA Sample Name: DDDFF

Operator: RJG

Run Time: 05/22/00 17:12:54

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00014	58.858	.13444	.44756	.00699	6.0692	.00821
SDev	.00014	.067	.00053	.00050	.00014	.0139	.00008
%RSD	96.618	.11337	.39636	.11130	1.9359	.22931	.96922
#1	.00024	58.905	.13407	.44791	.00690	6.0790	.00826
#2	.00005	58.811	.13482	.44720	.00709	6.0594	.00815
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	.01834	.19876	.24978	147.07	4.8244	.15496	.00591
SDev	.00038	.00076	.00087	.25	.0064	.00021	.00059
%RSD	2.0975	.38026	.34858	.17075	.13271	.13624	10.051
#1	.01861	.19929	.25039	147.25	4.8289	.15511	.00633
#2	.01807	.19822	.24916	146.90	4.8199	.15481	.00549
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	.06169	.94302	.93876	.94018	.01135	.00560	.00752
SDev	.00085	.00459	.00931	.00774	.00140	.00188	.00079
%RSD	1.3792	.48689	.99125	.82279	12.326	33.512	10.457
#1	.06229	.94627	.94534	.94565	.01234	.00427	.00696
#2	.06109	.93978	.93218	.93471	.01036	.00693	.00807
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	.00679	.01856	.01464	.00131	.30441	.87476	
SDev	.00184	.00016	.00051	.00006	.00053	.00160	
%RSD	27.057	.83992	3.4711	4.1717	.17533	.18256	
#1	.00809	.01845	.01500	.00127	.30479	.87589	
#2	.00549	.01867	.01428	.00135	.30404	.87363	
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	

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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	16424	--	--	--	--	--	--
SDev	87.53968	--	--	--	--	--	--
%RSD	.5330034	--	--	--	--	--	--
#1	16362	--	--	--	--	--	--
#2	16486	--	--	--	--	--	--

Analysis Report

05/22/00 05:21:09 PM

page 1

Method: METTRA Sample Name: DDDFG

Operator: RJG

Run Time: 05/22/00 17:17:03

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
Avge	-.00010	27.648	.02993	.07847	.00074	1.4683	.00007
SDev	.00029	.485	.00268	.00137	.00010	.0317	.00010
%RSD	281.39	1.7533	8.9630	1.7403	13.769	2.1572	143.79
#1	-.00031	27.990	.03182	.07944	.00067	1.4907	.00014
#2	.00010	27.305	.02803	.07751	.00081	1.4459	-.00000
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	.00630	.16931	.01546	61.880	2.3446	.04861	-.00017
SDev	.00036	.00266	.00003	1.036	.0349	.00088	.00079
%RSD	5.7861	1.5738	.16583	1.6737	1.4890	1.7993	459.91
#1	.00604	.17119	.01544	62.612	2.3693	.04923	-.00073
#2	.00656	.16742	.01548	61.148	2.3199	.04799	.00039
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	.01202	.04266	.04092	.04150	.00325	.00005	.00112
SDev	.00044	.00262	.00063	.00130	.00093	.00096	.00095
%RSD	3.6486	6.1455	1.5489	3.1223	28.662	1756.5	84.941
#1	.01233	.04451	.04137	.04241	.00391	.00073	.00179
#2	.01171	.04080	.04047	.04058	.00259	-.00062	.00045
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	-.00567	.00816	.00355	-.00135	.29391	.07611	
SDev	.00305	.00109	.00174	.00150	.00448	.00127	
%RSD	53.839	13.312	49.009	111.01	1.5234	1.6652	
#1	-.00783	.00739	.00232	-.00029	.29708	.07701	
#2	-.00351	.00893	.00478	-.00241	.29075	.07522	
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	

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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	15280	--	--	--	--	--	--
SDev	208.5965	--	--	--	--	--	--
%RSD	1.365169	--	--	--	--	--	--
#1	15132	--	--	--	--	--	--
#2	15427	--	--	--	--	--	--

Analysis Report

05/22/00 05:25:19 PM

page 1

Method: METTRA Sample Name: DDFFGP5 Operator: RJG
 Run Time: 05/22/00 17:21:13
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00021	5.5205	.00634	.01585	-.00142	.29863	.00002
SDev	.00028	.0091	.00111	.00001	.00002	.00118	.00013
%RSD	130.73	.16440	17.535	.05071	1.3495	.39523	823.91

#1	.00041	5.5269	.00555	.01585	-.00143	.29779	.00010
#2	.00002	5.5141	.00712	.01586	-.00140	.29946	-.00007

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00148	.03475	.00457	12.638	.47760	.00959	-.00115
SDev	.00029	.00028	.00021	.048	.00117	.00002	.00042
%RSD	19.531	.80676	4.5237	.37666	.24582	.16539	36.128

#1	.00169	.03495	.00443	12.672	.47677	.00957	-.00145
#2	.00128	.03456	.00472	12.605	.47843	.00960	-.00086

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00215	.01009	.00865	.00913	-.00043	-.00085	-.00071
SDev	.00015	.00071	.00137	.00115	.00120	.00077	.00011
%RSD	6.7249	7.0724	15.875	12.635	279.16	90.703	16.000

#1	.00225	.01059	.00962	.00994	.00042	-.00139	-.00079
#2	.00205	.00958	.00768	.00831	-.00128	-.00030	-.00063

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00189	-.00005	-.00066	-.00266	.05985	.01387
SDev	.00118	.00021	.00053	.00022	.00031	.00007
%RSD	62.189	406.03	80.374	8.1322	.51533	.52208

#1	-.00106	.00010	-.00029	-.00281	.06007	.01382
#2	-.00272	-.00020	-.00104	-.00251	.05963	.01392

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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	15173	--	--	--	--	--	--
SDev	23.93529	--	--	--	--	--	--
%RSD	.1577463	--	--	--	--	--	--
#1	15156	--	--	--	--	--	--
#2	15190	--	--	--	--	--	--

Analysis Report

05/22/00 05:29:28 PM

page 1

Method: METTRA Sample Name: DDFFGS Operator: RJG
 Run Time: 05/22/00 17:25:23
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04882	41.531	1.9390	2.0604	.04887	1.5548	.04809
SDev	.00037	.104	.0016	.0060	.00017	.0040	.00033
%RSD	.74988	.25059	.08126	.28971	.34621	.25818	.67915
#1	.04856	41.605	1.9379	2.0646	.04899	1.5576	.04832
#2	.04908	41.458	1.9401	2.0561	.04875	1.5519	.04786
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	.49159	.40933	.25990	82.979	4.1903	.54768	.00031
SDev	.00014	.00068	.00120	.080	.0124	.00116	.00026
%RSD	.02755	.16489	.46028	.09668	.29544	.21158	83.335
#1	.49168	.40981	.26075	83.036	4.1990	.54849	.00013
#2	.49149	.40885	.25905	82.922	4.1815	.54686	.00050
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	.49912	.53884	.53746	.53792	.00028	-.00072	-.00039
SDev	.00327	.00120	.00070	.00007	.00092	.00034	.00008
%RSD	.65512	.22286	.13079	.01282	325.33	46.704	21.147
#1	.50143	.53799	.53796	.53797	-.00037	-.00048	-.00044
#2	.49681	.53969	.53696	.53787	.00093	-.00096	-.00033
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	1.8679	1.8964	1.8869	1.9360	.78496	.59935	
SDev	.0156	.0020	.0065	.0111	.00104	.00163	
%RSD	.83309	.10531	.34522	.57225	.13299	.27188	
#1	1.8569	1.8949	1.8823	1.9438	.78570	.60050	
#2	1.8789	1.8978	1.8915	1.9281	.78423	.59820	
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	15016	--	--	--	--	--	--
SDev	29.02660	--	--	--	--	--	--
%RSD	.1933022	--	--	--	--	--	--
#1	15037	--	--	--	--	--	--
#2	14996	--	--	--	--	--	--

Analysis Report

05/22/00 05:33:38 PM

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Method: METTRA Sample Name: DDFFGD Operator: RJG
 Run Time: 05/22/00 17:29:32
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04756	29.523	1.8841	2.0006	.04753	1.3774	.04707
SDev	.00004	.037	.0116	.0020	.00026	.0037	.00025
%RSD	.08422	.12413	.61443	.09867	.55585	.27174	.53210

#1	.04758	29.497	1.8923	1.9992	.04772	1.3801	.04725
#2	.04753	29.549	1.8759	2.0020	.04735	1.3748	.04690

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	.47820	.30350	.25225	48.893	2.5111	.51460	-.00009
SDev	.00163	.00073	.00038	.057	.0053	.00096	.00091
%RSD	.34163	.24057	.15224	.11677	.20993	.18644	956.07

#1	.47936	.30402	.25252	48.934	2.5148	.51527	-.00074
#2	.47705	.30299	.25198	48.853	2.5073	.51392	.00055

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	.48840	.52339	.51709	.51919	.00121	.00162	.00149
SDev	.00122	.00363	.00332	.00343	.00068	.00101	.00045
%RSD	.25058	.69413	.64250	.65983	55.823	62.036	30.096

#1	.48927	.52596	.51944	.52161	.00169	.00091	.00117
#2	.48754	.52082	.51474	.51677	.00073	.00234	.00180

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	1.8102	1.8295	1.8231	1.8929	.66102	.57929
SDev	.0143	.0118	.0126	.0028	.00287	.00138
%RSD	.79202	.64337	.69251	.14780	.43361	.23916

#1	1.8204	1.8379	1.8320	1.8949	.66305	.58027
#2	1.8001	1.8212	1.8142	1.8910	.65899	.57831

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

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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	15218	--	--	--	--	--	--
SDev	66.89203	--	--	--	--	--	--
%RSD	.4395528	--	--	--	--	--	--
#1	15171	--	--	--	--	--	--
#2	15266	--	--	--	--	--	--

Analysis Report

05/22/00 05:37:48 PM

page 1

Method: METTRA Sample Name: DDDFH

Operator: RJG

Run Time: 05/22/00 17:33:42

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00026	9.1769	.01159	.01495	-.00150	1.6612	-.00014
SDev	.00003	.0178	.00057	.00012	.00002	.0029	.00028
%RSD	12.959	.19404	4.9588	.83061	1.3601	.17266	206.72

#1	-.00023	9.1895	.01200	.01504	-.00152	1.6632	-.00033
#2	-.00028	9.1643	.01118	.01486	-.00149	1.6592	.00006

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	.00140	.03542	.01612	47.608	.47020	.05113	-.00051
SDev	.00000	.00001	.00015	.042	.00002	.00000	.00017
%RSD	.00000	.02193	.94672	.08754	.00477	.00067	33.480

#1	.00140	.03543	.01601	47.578	.47019	.05113	-.00039
#2	.00140	.03542	.01622	47.637	.47022	.05113	-.00063

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	.00390	.02207	.01932	.02024	-.00114	.00030	-.00018
SDev	.00092	.00508	.00064	.00212	.00098	.00139	.00125
%RSD	23.661	23.026	3.3218	10.476	86.137	464.26	696.93

#1	.00455	.02566	.01978	.02174	-.00045	.00128	.00071
#2	.00325	.01847	.01887	.01874	-.00183	-.00068	-.00107

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	-.00705	.00786	.00290	-.00047	.05676	.02278
SDev	.00201	.00047	.00098	.00089	.00043	.00016
%RSD	28.470	5.9595	33.862	187.07	.75504	.71781

#1	-.00847	.00753	.00220	-.00110	.05706	.02266
#2	-.00563	.00820	.00359	.00015	.05646	.02290

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

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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	15213	--	--	--	--	--	--
SDev	9.616376	--	--	--	--	--	--
%RSD	.0632099	--	--	--	--	--	--
#1	15207	--	--	--	--	--	--
#2	15220	--	--	--	--	--	--

Analysis Report

05/22/00 05:41:57 PM

Method: METTRA Sample Name: CCV3-3 Operator: RJG
Run Time: 05/22/00 17:37:52
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	1.0621	25.601	.52744	2.1033	2.0274	50.825	.50815
SDev	.0028	.060	.00310	.0041	.0090	.224	.00255
%RSD	.26054	.23334	.58859	.19412	.44445	.44116	.50274
#1	1.0641	25.558	.52963	2.1004	2.0338	50.983	.50996
#2	1.0602	25.643	.52524	2.1062	2.0211	50.666	.50634
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	2.0414	2.0396	2.0284	25.564	49.563	2.0180	2.0278
SDev	.0074	.0064	.0017	.059	.165	.0052	.0016
%RSD	.36312	.31617	.08570	.23075	.33283	.25958	.08064
#1	2.0467	2.0441	2.0297	25.606	49.679	2.0217	2.0266
#2	2.0362	2.0350	2.0272	25.523	49.446	2.0142	2.0290
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	2.0349	.52457	.52560	.52525	.52694	.52520	.52578
SDev	.0114	.00295	.00460	.00405	.00671	.00000	.00223
%RSD	.55945	.56236	.87455	.77073	1.2732	.00001	.42491
#1	2.0430	.52665	.52885	.52812	.53169	.52520	.52736
#2	2.0269	.52248	.52235	.52239	.52220	.52520	.52420
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	.52408	.54226	.53620	1.0580	2.0410	2.0628	
SDev	.00197	.00614	.00475	.0045	.0099	.0087	
%RSD	.37554	1.1316	.88551	.42466	.48288	.42077	
#1	.52547	.54660	.53956	1.0612	2.0480	2.0689	
#2	.52268	.53792	.53285	1.0548	2.0341	2.0567	
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	

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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	14631	--	--	--	--	--	--
SDev	86.12547	--	--	--	--	--	--
%RSD	.5886546	--	--	--	--	--	--
#1	14570	--	--	--	--	--	--
#2	14692	--	--	--	--	--	--

Analysis Report

05/22/00 05:46:07 PM

page 1

Method: METTRA Sample Name: CCB3

Operator: RJG

Run Time: 05/22/00 17:42:01

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	.00009	-.01705	-.00092	.00057	-.00164	.01803	.00018
SDev	.00043	.00568	.00001	.00016	.00021	.00729	.00018
%RSD	459.60	33.331	.54769	28.056	12.962	40.414	99.693
#1	.00040	-.01303	-.00093	.00046	-.00179	.01288	.00031
#2	-.00021	-.02107	-.00092	.00068	-.00149	.02318	.00005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00068	.00064	.00294	.01771	.00900	.00024	.00413
SDev	.00024	.00036	.00048	.00657	.00431	.00027	.00121
%RSD	34.981	56.380	16.411	37.107	47.881	113.35	29.420
#1	.00051	.00039	.00260	.01306	.00595	.00005	.00499
#2	.00085	.00090	.00329	.02236	.01205	.00043	.00327
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	.00148	.00106	-.00058	-.00003	.00254	-.00105	.00014
SDev	.00000	.00188	.00003	.00065	.00112	.00072	.00011
%RSD	.01199	177.47	4.8102	2058.8	43.915	68.220	75.143
#1	.00148	.00239	-.00056	.00043	.00175	-.00055	.00022
#2	.00148	-.00027	-.00060	-.00049	.00333	-.00156	.00007
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	-.00226	.00187	.00050	.00133	.00363	.00224	
SDev	.00291	.00141	.00191	.00050	.00021	.00025	
%RSD	128.97	75.322	383.53	37.683	5.8685	11.143	
#1	-.00020	.00287	.00185	.00168	.00348	.00207	
#2	-.00431	.00088	-.00085	.00097	.00378	.00242	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

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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	14718	--	--	--	--	--	--
SDev	4.525760	--	--	--	--	--	--
%RSD	.0307509	--	--	--	--	--	--
#1	14714	--	--	--	--	--	--
#2	14721	--	--	--	--	--	--

Analysis Report

05/22/00 05:50:16 PM

page 1

Method: METTRA Sample Name: DDH6DB Operator: RJG
 Run Time: 05/22/00 17:46:11
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00054	-.04007	-.00255	.00004	-.00190	.02358	.00022
SDev	.00041	.01791	.00001	.00003	.00021	.00074	.00011
%RSD	75.375	44.690	.48638	89.050	10.822	3.1221	48.097
#1	.00083	-.02741	-.00254	.00006	-.00204	.02410	.00015
#2	.00025	-.05274	-.00256	.00001	-.00175	.02306	.00030
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	.00005	-.00008	.00261	.02103	-.00017	.00046	-.00008
SDev	.00021	.00057	.00015	.00068	.00326	.00001	.00036
%RSD	439.64	682.74	5.6358	3.2518	1878.3	1.5631	479.06
#1	.00020	.00032	.00272	.02151	.00213	.00045	-.00033
#2	-.00010	-.00048	.00251	.02054	-.00248	.00046	.00018
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	.00080	.00167	.00140	.00149	-.00190	-.00012	-.00071
SDev	.00050	.00172	.00101	.00125	.00163	.00107	.00017
%RSD	62.845	102.80	72.236	83.628	85.710	889.59	24.571
#1	.00116	.00288	.00212	.00237	-.00075	-.00088	-.00084
#2	.00044	.00046	.00069	.00061	-.00305	.00064	-.00059
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	-.00638	.00103	-.00144	-.00110	-.00043	.01826	
SDev	.00139	.00017	.00035	.00339	.00000	.00012	
%RSD	21.757	16.428	24.309	308.72	.04177	.64821	
#1	-.00736	.00115	-.00168	.00130	-.00043	.01834	
#2	-.00540	.00091	-.00119	-.00350	-.00043	.01817	
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	15134	--	--	--	--	--	--
SDev	242.9616	--	--	--	--	--	--
%RSD	1.605455	--	--	--	--	--	--
#1	14962	--	--	--	--	--	--
#2	15305	--	--	--	--	--	--

Analysis Report

05/22/00 05:54:26 PM

page 1

Method: METTRA Sample Name: DDH6DC Operator: RJG
 Run Time: 05/22/00 17:50:20
 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	.05160	1.9245	2.0465	2.0848	.04811	L.05813	.05096
SDev	.00017	.0007	.0038	.0024	.00008	.00013	.00024
%RSD	.32447	.03893	.18450	.11376	.16873	.21626	.48136
#1	.05172	1.9239	2.0492	2.0831	.04817	L.05804	.05078
#2	.05148	1.9250	2.0438	2.0865	.04806	L.05822	.05113
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	.51153	.20449	.25157	1.0353	L-.00063	.50285	L-.00061
SDev	.00018	.00006	.00041	.0109	.00197	.00002	.00008
%RSD	.03491	.02925	.16185	1.0571	312.24	.00289	13.518
#1	.51165	.20444	.25128	1.0430	L.00076	.50284	L-.00056
#2	.51140	.20453	.25185	1.0275	L-.00202	.50287	L-.00067
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51286	.51370	.50931	.51077	.00042	-.00007	L.00009
SDev	.00004	.00238	.00090	.00139	.00065	.00023	.00006
%RSD	.00758	.46413	.17707	.27320	156.99	308.44	73.050
#1	.51283	.51539	.50995	.51176	.00088	-.00024	L.00014
#2	.51289	.51201	.50867	.50978	-.00005	.00009	L.00004
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	2.0441	2.0679	2.0600	2.0162	.50103	.52544	
SDev	.0061	.0169	.0133	.0038	.00185	.00074	
%RSD	.30036	.81518	.64506	.18743	.37013	.14077	
#1	2.0484	2.0798	2.0694	2.0189	.50235	.52492	
#2	2.0398	2.0560	2.0506	2.0136	.49972	.52597	
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	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14856	--	--	--	--	--	--
SDev	13.75337	--	--	--	--	--	--
%RSD	.0925764	--	--	--	--	--	--
#1	14866	--	--	--	--	--	--
#2	14846	--	--	--	--	--	--

Analysis Report

05/22/00 05:58:35 PM

page 1

Method: METTRA Sample Name: DDH6DL

Operator: RJG

Run Time: 05/22/00 17:54:30

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05231	1.9288	2.0561	2.0930	.04822	L.00822	.05146
SDev	.00064	.0167	.0099	.0176	.00033	.00088	.00022
%RSD	1.2152	.86448	.48232	.84089	.68123	10.704	.42516
#1	.05276	1.9170	2.0491	2.0805	.04799	L.00760	.05162
#2	.05186	1.9406	2.0631	2.1054	.04845	L.00884	.05131
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	.51403	.20598	.25302	1.1330	L-.00296	.50715	L-.00169
SDev	.00064	.00049	.00124	.0027	.00663	.00217	.00130
%RSD	.12369	.23548	.49037	.24022	223.82	.42699	76.778
#1	.51358	.20632	.25215	1.1311	L.00172	.50562	L-.00077
#2	.51448	.20563	.25390	1.1349	L-.00765	.50868	L-.00261
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51625	.51882	.51550	.51660	-.00225	-.00192	L-.00203
SDev	.00119	.00159	.00552	.00315	.00233	.00146	.00020
%RSD	.23033	.30672	1.0706	.60997	103.47	76.199	9.7690
#1	.51541	.51769	.51940	.51883	-.00390	-.00088	L-.00189
#2	.51709	.51994	.51160	.51437	-.00060	-.00295	L-.00217
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	2.0693	2.0898	2.0830	2.0166	.50288	.52398	
SDev	.0020	.0252	.0161	.0006	.00447	.00098	
%RSD	.09778	1.2066	.77511	.02796	.88970	.18764	
#1	2.0679	2.1076	2.0944	2.0170	.49972	.52329	
#2	2.0708	2.0719	2.0716	2.0162	.50605	.52468	
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	

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14736	--	--	--	--	--	--
SDev	5.727289	--	--	--	--	--	--
%RSD	.0388648	--	--	--	--	--	--
#1	14732	--	--	--	--	--	--
#2	14740	--	--	--	--	--	--

Analysis Report

05/22/00 06:02:45 PM

page 1

Method: METTRA Sample Name: DDFFK

Operator: RJG

Run Time: 05/22/00 17:58:39

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
Avge	.00008	-.05043	-.00005	.00024	-.00201	.00738	.00007
SDev	.00018	.00682	.00035	.00003	.00005	.00151	.00001
%RSD	214.18	13.527	761.50	13.101	2.4952	20.464	19.770
#1	.00021	-.04561	-.00029	.00022	-.00197	.00631	.00006
#2	-.00004	-.05525	.00020	.00026	-.00204	.00844	.00008
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	-.00001	.00016	.00240	.00742	-.00270	-.00005	-.00157
SDev	.00015	.00021	.00003	.01116	.00032	.00005	.00033
%RSD	1919.6	131.62	1.3860	150.29	11.786	91.118	20.897
#1	-.00011	.00031	.00237	-.00047	-.00248	-.00008	-.00181
#2	.00010	.00001	.00242	.01531	-.00293	-.00002	-.00134
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	.00109	.00494	.00027	.00183	-.00047	-.00034	-.00038
SDev	.00035	.00089	.00024	.00046	.00030	.00088	.00068
%RSD	32.209	17.972	88.998	24.994	63.309	261.27	179.73
#1	.00084	.00557	.00044	.00215	-.00026	.00028	.00010
#2	.00134	.00432	.00010	.00150	-.00068	-.00096	-.00087
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	-.00401	.00336	.00091	-.00255	-.00043	.00228	
SDev	.00030	.00043	.00019	.00479	.00000	.00054	
%RSD	7.5032	12.798	20.570	187.94	.67592	23.514	
#1	-.00422	.00367	.00104	.00084	-.00043	.00190	
#2	-.00379	.00306	.00078	-.00593	-.00043	.00266	
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	

6571602

Analysis Report

05/22/00 06:02:45 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15218	--	--	--	--	--	--
SDev	46.42184	--	--	--	--	--	--
%RSD	.3050441	--	--	--	--	--	--
#1	15185	--	--	--	--	--	--
#2	15251	--	--	--	--	--	--

Analysis Report

05/22/00 06:06:54 PM

page 1

Method: METTRA Sample Name: DDFFKP5 Operator: RJG
 Run Time: 05/22/00 18:02:49
 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	-.04200	-.00198	-.00011	-.00233	.00195	.00000
SDev	.00007	.01147	.00149	.00003	.00007	.00033	.00010
%RSD	29.667	27.303	75.199	30.266	2.9896	17.153	2492.1
#1	.00028	-.03389	-.00303	-.00013	-.00238	.00171	-.00007
#2	.00018	-.05011	-.00093	-.00008	-.00228	.00218	.00008
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00001	.00003	.00239	.00467	-.00365	-.00030	-.00123
SDev	.00002	.00003	.00026	.00871	.00230	.00001	.00010
%RSD	243.80	86.038	10.802	186.58	62.985	2.0076	8.2702
#1	.00002	.00006	.00221	-.00149	-.00528	-.00030	-.00116
#2	-.00001	.00001	.00257	.01082	-.00202	-.00030	-.00131
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00060	.00134	.00216	.00189	.00100	-.00247	-.00131
SDev	.00051	.00006	.00203	.00138	.00026	.00062	.00050
%RSD	84.659	4.6420	93.823	72.713	25.625	25.202	38.148
#1	.00095	.00139	.00360	.00286	.00119	-.00203	-.00096
#2	.00024	.00130	.00073	.00092	.00082	-.00291	-.00167
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00377	.00380	.00128	-.00069	-.00043	.00030	
SDev	.00331	.00269	.00290	.00128	.00000	.00009	
%RSD	87.882	70.877	226.39	187.13	.52657	29.199	
#1	-.00143	.00571	.00333	.00022	-.00043	.00024	
#2	-.00611	.00190	-.00077	-.00159	-.00043	.00036	

6571604

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	14941	--	--	--	--	--	--
SDev	106.3132	--	--	--	--	--	--
%RSD	.7115643	--	--	--	--	--	--
#1	14866	--	--	--	--	--	--
#2	15016	--	--	--	--	--	--

Analysis Report

05/22/00 06:11:03 PM

page 1

Method: METTRA Sample Name: CCV3-4 Operator: RJG
 Run Time: 05/22/00 18:06:58
 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	1.0540	25.517	.52151	2.0953	2.0129	50.408	.50291
SDev	.0019	.020	.00062	.0017	.0058	.202	.00192
%RSD	.18126	.07707	.11887	.08088	.28841	.40105	.38243
#1	1.0554	25.503	.52195	2.0941	2.0170	50.551	.50427
#2	1.0527	25.531	.52108	2.0965	2.0088	50.265	.50155
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	2.0253	2.0229	2.0158	25.341	49.128	2.0012	2.0122
SDev	.0045	.0066	.0018	.019	.137	.0032	.0053
%RSD	.22199	.32594	.09133	.07468	.27912	.15914	.26118
#1	2.0285	2.0275	2.0171	25.355	49.225	2.0034	2.0084
#2	2.0221	2.0182	2.0145	25.328	49.031	1.9989	2.0159
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	2.0179	.52550	.52257	.52355	.52307	.52217	.52247
SDev	.0090	.00381	.00445	.00424	.00572	.00109	.00118
%RSD	.44577	.72453	.85258	.80978	1.0935	.20786	.22599
#1	2.0242	.52819	.52572	.52654	.52711	.52140	.52330
#2	2.0115	.52280	.51942	.52055	.51902	.52293	.52163
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	.52769	.53472	.53238	1.0376	2.0317	2.0476	
SDev	.00235	.00833	.00634	.0026	.0041	.0073	
%RSD	.44524	1.5575	1.1904	.25295	.20262	.35846	
#1	.52935	.54061	.53686	1.0394	2.0346	2.0528	
#2	.52603	.52883	.52790	1.0357	2.0288	2.0424	
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	

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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	14734	--	--	--	--	--	--
SDev	43.80541	--	--	--	--	--	--
%RSD	.2973149	--	--	--	--	--	--
#1	14703	--	--	--	--	--	--
#2	14765	--	--	--	--	--	--

Analysis Report

05/22/00 06:15:13 PM

page 1

Method: METTRA Sample Name: CCB4

Operator: RJG

Run Time: 05/22/00 18:11:08

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	.00077	-.05795	-.00133	.00069	-.00107	.02977	.00020
SDev	.00022	.00529	.00081	.00050	.00019	.01136	.00002
%RSD	28.845	9.1241	60.694	72.791	17.925	38.165	10.603
#1	.00061	-.06169	-.00191	.00034	-.00120	.02173	.00019
#2	.00093	-.05421	-.00076	.00105	-.00093	.03780	.00022
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	.00118	.00079	.00334	.01548	.01557	.00038	.00420
SDev	.00082	.00069	.00060	.01298	.01104	.00043	.00197
%RSD	69.589	87.459	18.047	83.832	70.863	113.14	46.819
#1	.00060	.00030	.00291	.00631	.00777	.00008	.00560
#2	.00176	.00128	.00376	.02466	.02338	.00069	.00281
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	.00256	.00166	.00118	.00134	.00096	-.00069	-.00014
SDev	.00021	.00067	.00022	.00037	.00119	.00041	.00067
%RSD	8.2161	40.379	18.581	27.563	124.42	59.534	468.06
#1	.00241	.00213	.00133	.00160	.00180	-.00040	.00033
#2	.00271	.00118	.00102	.00108	.00011	-.00098	-.00062
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	-.00392	.00167	-.00019	.00068	.00357	.00141	
SDev	.00071	.00241	.00137	.00147	.00041	.00030	
%RSD	18.057	144.17	722.60	215.44	11.488	21.040	
#1	-.00342	-.00003	-.00116	-.00036	.00328	.00120	
#2	-.00442	.00337	.00078	.00172	.00386	.00163	
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	15501	--	--	--	--	--	--
SDev	10.81929	--	--	--	--	--	--
%RSD	.0697953	--	--	--	--	--	--
#1	15509	--	--	--	--	--	--
#2	15494	--	--	--	--	--	--

Analysis Report

05/22/00 06:19:23 PM

page 1

Method: METTRA Sample Name: DDH6LB

Operator: RJG

Run Time: 05/22/00 18:15:17

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00010	-.05140	-.00093	.00020	-.00212	.00356	.00003
SDev	.00014	.00455	.00011	.00003	.00005	.00101	.00005
%RSD	145.93	8.8443	12.134	13.849	2.4135	28.294	185.20
#1	-.00020	-.04819	-.00085	.00022	-.00216	.00427	.00007
#2	.00000	-.05462	-.00101	.00018	-.00209	.00285	-.00001
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.20000	.01000	.20000	.00500	5.0000	.00500
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00000	-.00012	.00313	.03200	-.00248	.00113	-.00019
SDev	.00047	.00018	.00002	.01598	.00000	.00010	.00008
%RSD	16114.	156.88	.52004	49.956	.02662	9.0064	42.303
#1	-.00033	.00001	.00312	.02069	-.00248	.00121	-.00024
#2	.00033	-.00025	.00315	.04330	-.00248	.00106	-.00013
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	.00039	.00214	.00188	.00197	.00079	-.00219	-.00120
SDev	.00093	.00054	.00061	.00022	.00102	.00100	.00101
%RSD	236.52	25.102	32.172	11.428	128.06	45.591	83.859
#1	-.00026	.00176	.00231	.00213	.00151	-.00149	-.00049
#2	.00105	.00252	.00146	.00181	.00007	-.00290	-.00191
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	-.00990	.00504	.00006	-.00395	-.00042	.00271	
SDev	.00001	.00053	.00036	.00153	.00000	.00002	
%RSD	.11172	10.598	558.47	38.642	.98301	.72746	
#1	-.00991	.00466	-.00019	-.00503	-.00043	.00270	
#2	-.00989	.00542	.00032	-.00287	-.00042	.00273	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

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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	15113	--	--	--	--	--	--
SDev	21.84988	--	--	--	--	--	--
%RSD	.1445777	--	--	--	--	--	--
#1	15097	--	--	--	--	--	--
#2	15128	--	--	--	--	--	--

Analysis Report

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page 1

Method: METTRA Sample Name: DDH6LC Operator: RJG
 Run Time: 05/22/00 18:19:27
 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	.05026	1.8606	1.9948	2.0413	.04646	L.02233	.04965
SDev	.00081	.0009	.0047	.0004	.00016	.00110	.00023
%RSD	1.6068	.05068	.23704	.01951	.34469	4.9406	.46605
#1	.04969	1.8613	1.9915	2.0411	.04657	L.02155	.04949
#2	.05083	1.8600	1.9982	2.0416	.04634	L.02311	.04981
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	.49707	.19924	.24525	1.0220	L-.00271	.49131	L-.00121
SDev	.00164	.00036	.00037	.0187	.00355	.00081	.00033
%RSD	.33005	.17863	.15002	1.8285	131.15	.16410	27.543
#1	.49591	.19899	.24499	1.0088	L-.00521	.49074	L-.00097
#2	.49823	.19950	.24551	1.0352	L-.00020	.49188	L-.00144
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	.60000	.24000	.30000	1.2000	60.000	.60000	1.2000
Low	.40000	.16000	.20000	.80000	40.000	.40000	.80000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50071	.50191	.49770	.49910	-.00099	-.00225	L-.00183
SDev	.00235	.00147	.00158	.00154	.00106	.00044	.00065
%RSD	.46895	.29223	.31660	.30844	107.92	19.677	35.538
#1	.50237	.50087	.49659	.49801	-.00174	-.00256	L-.00229
#2	.49905	.50294	.49882	.50019	-.00023	-.00193	L-.00137
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Low
High	.60000			.60000			.60000
Low	.40000			.40000			.40000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.9926	2.0079	2.0028	1.9478	.48665	.50863	
SDev	.0078	.0104	.0095	.0042	.00084	.00015	
%RSD	.38925	.51743	.47496	.21598	.17239	.03025	
#1	1.9871	2.0006	1.9961	1.9448	.48605	.50852	
#2	1.9980	2.0152	2.0095	1.9508	.48724	.50874	
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	

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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	15132	--	--	--	--	--	--
SDev	32.35014	--	--	--	--	--	--
%RSD	.2137901	--	--	--	--	--	--
#1	15155	--	--	--	--	--	--
#2	15109	--	--	--	--	--	--

Analysis Report

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page 1

Method: METTRA Sample Name: DDFV6

Operator: RJG

Run Time: 05/22/00 18:23:37

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01245	182.48	.08520	2.2120	.00268	H838.67	.00432
SDev	.00018	.07	.00145	.0024	.00006	1.55	.00010
%RSD	1.4474	.03661	1.6993	.10807	2.3378	.18440	2.3138
#1	.01232	182.43	.08417	2.2137	.00263	H839.77	.00425
#2	.01257	182.52	.08622	2.2104	.00272	H837.58	.00439
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	2.0000	600.00	10.000	10.000	10.000	600.00	5.0000
Low	-.01000	-.20000	-.01000	-.20000	-.00500	-5.0000	-.00500
Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05477	.39638	1.6125	167.72	38.977	3.0943	.00515
SDev	.00005	.00092	.0020	.07	.045	.0045	.00147
%RSD	.09030	.23089	.12143	.04128	.11651	.14693	28.473
#1	.05481	.39703	1.6139	167.77	39.009	3.0975	.00619
#2	.05474	.39574	1.6111	167.67	38.945	3.0911	.00411
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	.14398	2.3141	2.2636	2.2804	.05705	.04726	.05052
SDev	.00036	.0070	.0161	.0084	.00196	.00168	.00047
%RSD	.24810	.30403	.71038	.36760	3.4309	3.5568	.92924
#1	.14373	2.3091	2.2750	2.2863	.05843	.04607	.05019
#2	.14423	2.3190	2.2522	2.2745	.05567	.04845	.05085
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	-.00522	.00692	.00287	.00847	.32323	1.8820	
SDev	.00502	.00003	.00165	.00174	.00100	.0010	
%RSD	96.121	.49687	57.365	20.504	.31045	.05339	
#1	-.00877	.00694	.00171	.00724	.32394	1.8827	
#2	-.00167	.00689	.00404	.00969	.32252	1.8813	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14964	--	--	--	--	--	--
SDev	30.33516	--	--	--	--	--	--
%RSD	.2027175	--	--	--	--	--	--
#1	14943	--	--	--	--	--	--
#2	14986	--	--	--	--	--	--

Analysis Report

05/22/00 06:31:52 PM

page 1

Method: METTRA Sample Name: DDGNW

Operator: RJG

Run Time: 05/22/00 18:27:47

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00114	38.104	.15083	.28599	.00163	4.0968	.00499
SDev	.00030	.080	.00006	.00043	.00012	.0359	.00003
%RSD	25.941	.21037	.03855	.14955	7.0717	.87599	.57233
#1	.00135	38.160	.15079	.28630	.00155	4.0715	.00497
#2	.00093	38.047	.15087	.28569	.00171	4.1222	.00501
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	.02606	.14390	.22016	161.06	3.5582	.24344	.00144
SDev	.00014	.00148	.00045	.88	.0115	.00103	.00044
%RSD	.54276	1.0273	.20410	.54430	.32452	.42298	30.479
#1	.02616	.14494	.22048	161.68	3.5664	.24417	.00175
#2	.02596	.14285	.21984	160.44	3.5501	.24272	.00113
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	.07074	1.1289	1.1207	1.1234	.00848	.00422	.00564
SDev	.00002	.0077	.0157	.0131	.00246	.00036	.00058
%RSD	.02726	.68270	1.4041	1.1627	28.968	8.5242	10.253
#1	.07075	1.1343	1.1318	1.1327	.01022	.00397	.00605
#2	.07073	1.1234	1.1096	1.1142	.00675	.00448	.00523
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	.00597	.01477	.01184	.00001	.28054	1.1580	
SDev	.00007	.00097	.00062	.00118	.00174	.0086	
%RSD	1.2309	6.5432	5.2381	13109.	.62066	.74165	
#1	.00602	.01409	.01140	-.00082	.28177	1.1641	
#2	.00592	.01545	.01228	.00084	.27931	1.1520	
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	

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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	15956	--	--	--	--	--	--
SDev	127.1736	--	--	--	--	--	--
%RSD	.7970179	--	--	--	--	--	--
#1	15866	--	--	--	--	--	--
#2	16046	--	--	--	--	--	--

Method: METTRA Sample Name: DDGNWP5 Operator: RJG
 Run Time: 05/22/00 18:31:56
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00075	7.8380	.03296	.06062	-.00176	.87327	.00110
SDev	.00033	.0037	.00047	.00014	.00015	.00586	.00003
%RSD	43.900	.04721	1.4272	.23603	8.3409	.67078	2.8569

#1	.00052	7.8354	.03262	.06072	-.00165	.86913	.00108
#2	.00098	7.8406	.03329	.06052	-.00186	.87742	.00112

Elem	CO	CR	CU	FE	MG	MN	MO
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00573	.03087	.04767	34.278	.75476	.05149	-.00162
SDev	.00040	.00016	.00040	.014	.00166	.00006	.00025
%RSD	7.0195	.50753	.84572	.04089	.22034	.11887	15.515

#1	.00544	.03075	.04739	34.268	.75594	.05144	-.00179
#2	.00601	.03098	.04796	34.288	.75359	.05153	-.00144

Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01584	.24098	.23743	.23861	-.00030	.00244	.00153
SDev	.00048	.00119	.00201	.00173	.00153	.00209	.00191
%RSD	3.0261	.49223	.84482	.72624	518.28	85.687	124.61

#1	.01550	.24182	.23884	.23983	.00079	.00392	.00288
#2	.01618	.24014	.23601	.23738	-.00138	.00096	.00018

Elem	SE/1	SE/2	SE	TL	V_	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00374	.00518	.00470	-.00097	.06098	.24934
SDev	.00237	.00203	.00214	.00038	.00297	.00038
%RSD	63.330	39.164	45.563	39.176	4.8678	.15061

#1	.00207	.00375	.00319	-.00070	.06308	.24961
#2	.00541	.00662	.00622	-.00124	.05888	.24908

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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	15090	--	--	--	--	--	--
SDev	20.25889	--	--	--	--	--	--
%RSD	.1342508	--	--	--	--	--	--
#1	15076	--	--	--	--	--	--
#2	15105	--	--	--	--	--	--

Analysis Report

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page 1

Method: METTRA Sample Name: DDGNWS Operator: RJG
 Run Time: 05/22/00 18:36:06
 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	.04710	41.075	1.9667	2.1492	.04664	4.0977	.04965
SDev	.00068	.189	.0125	.0096	.00026	.0318	.00018
%RSD	1.4475	.46123	.63415	.44712	.54713	.77543	.36173
#1	.04758	41.209	1.9756	2.1560	.04682	4.1202	.04977
#2	.04661	40.941	1.9579	2.1424	.04646	4.0752	.04952
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	.48169	.32607	.43723	172.66	3.4522	.65766	.00117
SDev	.00402	.00287	.00253	1.18	.0238	.00493	.00053
%RSD	.83430	.88183	.57963	.68489	.68942	.75029	45.321
#1	.48453	.32810	.43902	173.50	3.4690	.66115	.00080
#2	.47885	.32404	.43543	171.83	3.4353	.65417	.00155
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	.52273	1.5986	1.5862	1.5903	.01046	.00309	.00555
SDev	.00329	.0140	.0246	.0210	.00057	.00132	.00069
%RSD	.62902	.87272	1.5493	1.3228	5.4343	42.808	12.508
#1	.52506	1.6085	1.6036	1.6052	.01006	.00403	.00604
#2	.52041	1.5888	1.5688	1.5755	.01086	.00216	.00506
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	1.8625	1.8811	1.8749	1.7997	.73225	1.5391
SDev	.0148	.0317	.0261	.0125	.00793	.0122
%RSD	.79292	1.6865	1.3909	.69630	1.0831	.79508
#1	1.8729	1.9035	1.8933	1.8086	.73786	1.5478
#2	1.8520	1.8587	1.8565	1.7908	.72664	1.5305
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

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Analysis Report

05/22/00 06:40:12 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15708	--	--	--	--	--	--
SDev	119.5363	--	--	--	--	--	--
%RSD	.7610006	--	--	--	--	--	--
#1	15623	--	--	--	--	--	--
#2	15792	--	--	--	--	--	--

Analysis Report

05/22/00 06:44:21 PM

page 1

Method: METTRA Sample Name: DDGNWD Operator: RJG
 Run Time: 05/22/00 18:40:16
 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	.04678	50.484	1.9747	2.1775	.04691	4.6501	.05100
SDev	.00072	.574	.0325	.0273	.00053	.0703	.00039
%RSD	1.5367	1.1367	1.6479	1.2515	1.1380	1.5108	.76091
#1	.04729	50.889	1.9977	2.1968	.04729	4.6997	.05127
#2	.04627	50.078	1.9517	2.1582	.04653	4.6004	.05073
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	.47710	.35790	.47866	205.41	4.6667	.75035	.00136
SDev	.00659	.00491	.00646	2.70	.0634	.01025	.00030
%RSD	1.3812	1.3731	1.3494	1.3161	1.3576	1.3658	22.100
#1	.48176	.36138	.48323	207.32	4.7115	.75759	.00157
#2	.47244	.35443	.47409	203.50	4.6219	.74310	.00115
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	.53674	1.8099	1.7963	1.8008	.01088	.00943	.00991
SDev	.00711	.0280	.0246	.0257	.00216	.00100	.00138
%RSD	1.3242	1.5457	1.3704	1.4291	19.853	10.583	13.969
#1	.54176	1.8296	1.8137	1.8190	.01240	.01014	.01089
#2	.53171	1.7901	1.7789	1.7826	.00935	.00873	.00894
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	1.7977	1.8339	1.8218	1.7935	.79080	1.9955
SDev	.0393	.0241	.0292	.0251	.01408	.0292
%RSD	2.1883	1.3134	1.6009	1.4007	1.7810	1.4610
#1	1.8256	1.8509	1.8425	1.8113	.80076	2.0161
#2	1.7699	1.8168	1.8012	1.7757	.78084	1.9749
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

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Analysis Report

05/22/00 06:44:21 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15858	--	--	--	--	--	--
SDev	190.1061	--	--	--	--	--	--
%RSD	1.198789	--	--	--	--	--	--
#1	15724	--	--	--	--	--	--
#2	15993	--	--	--	--	--	--

Analysis Report

05/22/00 06:48:31 PM

page 1

Method: METTRA Sample Name: DDGNX

Operator: RJG

Run Time: 05/22/00 18:44:25

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	-.00006	57.411	.11116	.34421	.00411	5.3558	.00202
SDev	.00015	.011	.00230	.00046	.00013	.0161	.00031
%RSD	261.87	.01858	2.0682	.13351	3.1326	.30080	15.511
#1	-.00017	57.419	.11278	.34454	.00420	5.3672	.00180
#2	.00005	57.404	.10953	.34389	.00402	5.3444	.00224
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	.02901	.25389	.14620	310.10	5.7287	.48835	.00044
SDev	.00067	.00067	.00040	.78	.0210	.00109	.00039
%RSD	2.3045	.26488	.27215	.25094	.36675	.22396	89.469
#1	.02853	.25437	.14648	310.65	5.7435	.48913	.00016
#2	.02948	.25342	.14592	309.55	5.7138	.48758	.00071
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	.05376	.39300	.39400	.39367	.00409	.00226	.00287
SDev	.00127	.00371	.00271	.00304	.00128	.00052	.00008
%RSD	2.3681	.94404	.68874	.77361	31.320	22.755	2.9001
#1	.05286	.39562	.39592	.39582	.00500	.00190	.00293
#2	.05466	.39037	.39208	.39151	.00318	.00263	.00281
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00			5.0000			10.000
Low	-.04000			-.00300			-.06000
Elem	SE/1	SE/2	SE	TL	V_	ZN	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.00650	.02158	.01656	-.00129	.36186	.78253	
SDev	.00175	.00029	.00077	.00035	.00139	.00361	
%RSD	26.878	1.3335	4.6713	26.974	.38323	.46188	
#1	.00526	.02138	.01601	-.00153	.36284	.78509	
#2	.00773	.02179	.01711	-.00104	.36088	.77998	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15908	--	--	--	--	--	--
SDev	44.68928	--	--	--	--	--	--
%RSD	.2809313	--	--	--	--	--	--
#1	15876	--	--	--	--	--	--
#2	15939	--	--	--	--	--	--

Analysis Report

05/22/00 06:52:41 PM

page 1

Method: METTRA Sample Name: DDGP0

Operator: RJG

Run Time: 05/22/00 18:48:35

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	-.00051	20.165	.03880	.08304	.00106	14.944	-.00002
SDev	.00062	.102	.00215	.00031	.00023	.012	.00025
%RSD	121.00	.50750	5.5406	.37782	21.634	.07714	1018.7
#1	-.00007	20.092	.04032	.08282	.00090	14.936	-.00020
#2	-.00095	20.237	.03728	.08326	.00122	14.953	.00015
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	.00864	.07220	.01639	140.89	9.0074	.18316	.01015
SDev	.00060	.00017	.00008	.21	.0113	.00028	.00042
%RSD	6.9484	.23052	.47044	.15146	.12560	.15397	4.1024
#1	.00906	.07208	.01634	140.74	8.9994	.18296	.01044
#2	.00821	.07232	.01645	141.04	9.0154	.18336	.00985
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	.02629	.01858	.01844	.01849	.00274	-.00237	-.00067
SDev	.00090	.00036	.00019	.00025	.00098	.00037	.00008
%RSD	3.4326	1.9495	1.0185	1.3301	35.993	15.562	12.261
#1	.02565	.01832	.01831	.01832	.00204	-.00211	-.00073
#2	.02692	.01884	.01858	.01866	.00343	-.00263	-.00061
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	.00335	.01766	.01290	-.00195	.08293	.05333	
SDev	.00052	.00293	.00213	.00130	.00016	.00020	
%RSD	15.509	16.565	16.474	66.667	.18975	.36727	
#1	.00298	.01559	.01140	-.00286	.08305	.05319	
#2	.00372	.01973	.01440	-.00103	.08282	.05346	
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	

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Analysis Report

05/22/00 06:52:41 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	15422	--	--	--	--	--	--
SDev	3.393975	--	--	--	--	--	--
%RSD	.0220079	--	--	--	--	--	--
#1	15419	--	--	--	--	--	--
#2	15424	--	--	--	--	--	--

Analysis Report

05/22/00 06:56:51 PM

page 1

Method: METTRA Sample Name: CCV3-5

Operator: RJG

Run Time: 05/22/00 18:52:45

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	1.0431	25.339	.51114	2.0866	1.9854	49.733	.49645
SDev	.0055	.125	.00222	.0139	.0151	.423	.00328
%RSD	.52985	.49514	.43362	.66533	.75981	.84979	.66045
#1	1.0470	25.427	.51271	2.0964	1.9961	50.032	.49877
#2	1.0392	25.250	.50957	2.0768	1.9747	49.434	.49413
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	2.0001	1.9952	1.9989	25.120	48.436	1.9732	1.9812
SDev	.0127	.0137	.0147	.125	.331	.0130	.0033
%RSD	.63329	.68421	.73513	.49914	.68428	.65668	.16468
#1	2.0090	2.0049	2.0093	25.209	48.671	1.9824	1.9836
#2	1.9911	1.9856	1.9885	25.031	48.202	1.9640	1.9789
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	2.2000	2.2000	27.500	55.000	2.2000	2.2000
Low	1.8000	1.8000	1.8000	22.500	45.000	1.8000	1.8000
Elem	NI	PB/1	PB/2	PB	SB/1	SB/2	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9955	.51588	.51243	.51358	.51467	.51153	.51258
SDev	.0230	.00054	.00115	.00094	.00100	.00095	.00097
%RSD	1.1546	.10418	.22423	.18408	.19370	.18605	.18861
#1	2.0118	.51626	.51324	.51424	.51538	.51220	.51326
#2	1.9792	.51550	.51162	.51291	.51397	.51086	.51189
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	.51188	.52519	.52076	1.0144	2.0092	2.0189	
SDev	.00317	.00436	.00185	.0088	.0194	.0142	
%RSD	.61981	.83010	.35551	.86515	.96325	.70401	
#1	.50963	.52827	.52206	1.0206	2.0229	2.0290	
#2	.51412	.52211	.51945	1.0081	1.9955	2.0089	
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	14883	--	--	--	--	--	--
SDev	51.44202	--	--	--	--	--	--
%RSD	.3456353	--	--	--	--	--	--
#1	14847	--	--	--	--	--	--
#2	14920	--	--	--	--	--	--

Analysis Report

05/22/00 07:01:00 PM

page 1

Method: METTRA Sample Name: CCB5

Operator: RJG

Run Time: 05/22/00 18:56:55

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00061	-.04454	-.00030	.00051	-.00202	.02735	.00016
SDev	.00036	.00205	.00059	.00013	.00005	.00321	.00013
%RSD	59.690	4.6047	194.64	26.519	2.6860	11.747	78.471
#1	.00086	-.04309	.00011	.00041	-.00206	.02508	.00007
#2	.00035	-.04599	-.00072	.00060	-.00198	.02962	.00025
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	.00054	.00067	.00393	.04302	.01052	.00032	.00400
SDev	.00026	.00003	.00030	.01622	.00071	.00016	.00200
%RSD	48.262	4.7642	7.7700	37.699	6.7099	50.628	50.080
#1	.00073	.00069	.00371	.03155	.01102	.00021	.00542
#2	.00036	.00064	.00415	.05449	.01002	.00043	.00258
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	.00214	.00135	.00102	.00113	.00265	-.00159	-.00018
SDev	.00095	.00207	.00081	.00015	.00086	.00013	.00037
%RSD	44.437	152.84	79.034	13.375	32.481	8.3395	205.90
#1	.00281	.00281	.00045	.00124	.00204	-.00169	-.00045
#2	.00146	-.00011	.00159	.00102	.00325	-.00150	.00008
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	.00119	.00311	.00247	.00043	.00345	.00146	
SDev	.00279	.00192	.00035	.00163	.00001	.00006	
%RSD	235.42	61.536	14.092	380.39	.31487	3.8512	
#1	.00316	.00176	.00223	-.00072	.00346	.00142	
#2	-.00079	.00447	.00272	.00158	.00344	.00150	
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	
High			.00500	.01000	.05000	.02000	
Low			-.00500	-.01000	-.05000	-.02000	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14860	--	--	--	--	--	--
SDev	57.94754	--	--	--	--	--	--
%RSD	.3899572	--	--	--	--	--	--
#1	14819	--	--	--	--	--	--
#2	14901	--	--	--	--	--	--

Analysis Report

05/22/00 07:05:10 PM

page 1

Method: METTRA Sample Name: DD1NR

Operator: RJG

Run Time: 05/22/00 19:01:05

Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP

Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00076	.00307	.00100	.03715	-.00368	427.09	-.00005
SDev	.00017	.00338	.00128	.00011	.00007	.09	.00004
%RSD	21.849	110.05	128.05	.30259	1.9251	.02066	87.703
#1	.00088	.00546	.00009	.03707	-.00373	427.16	-.00002
#2	.00064	.00068	.00191	.03723	-.00363	427.03	-.00008
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	.00806	.00150	.00486	.88637	211.67	5.9810	-.00034
SDev	.00002	.00016	.00007	.00281	.16	.0013	.00036
%RSD	.28317	10.456	1.5138	.31751	.07499	.02181	108.03
#1	.00804	.00161	.00491	.88836	211.78	5.9820	-.00059
#2	.00808	.00138	.00481	.88438	211.56	5.9801	-.00008
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	.01165	.00192	.00115	.00141	-.00155	-.00039	-.00078
SDev	.00157	.00000	.00049	.00033	.00014	.00309	.00211
%RSD	13.470	.05892	42.391	23.155	8.9875	789.69	271.51
#1	.01276	.00191	.00150	.00164	-.00165	-.00258	-.00227
#2	.01054	.00192	.00081	.00118	-.00145	.00180	.00071
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	-.00757	.00185	-.00129	-.00713	.00762	.00525	
SDev	.00299	.00082	.00045	.00289	.00204	.00000	
%RSD	39.520	44.417	34.836	40.527	26.804	.01518	
#1	-.00545	.00127	-.00097	-.00917	.00906	.00525	
#2	-.00968	.00243	-.00161	-.00509	.00617	.00525	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13862	--	--	--	--	--	--
SDev	18.49043	--	--	--	--	--	--
%RSD	.1333847	--	--	--	--	--	--
#1	13849	--	--	--	--	--	--
#2	13876	--	--	--	--	--	--

Analysis Report

05/22/00 07:09:20 PM

page 1

Method: METTRA Sample Name: DD1NT

Operator: RJG

Run Time: 05/22/00 19:05:14

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	-.00026	.21435	.01123	.18557	-.00305	32.135	.00002
SDev	.00001	.00334	.00078	.00027	.00005	.106	.00031
%RSD	4.4433	1.5580	6.9098	.14598	1.5970	.33059	1585.1
#1	-.00027	.21671	.01178	.18577	-.00308	32.210	.00024
#2	-.00025	.21199	.01069	.18538	-.00301	32.059	-.00020
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	.00091	.00056	.00402	.92159	15.476	.43145	.00906
SDev	.00027	.00006	.00008	.01486	.068	.00113	.00033
%RSD	29.372	11.046	1.9079	1.6130	.44217	.26266	3.6443
#1	.00110	.00061	.00408	.93210	15.525	.43225	.00930
#2	.00072	.00052	.00397	.91108	15.428	.43065	.00883
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	.00211	.00357	.00155	.00222	.00067	-.00032	.00001
SDev	.00043	.00094	.00081	.00023	.00218	.00078	.00021
%RSD	20.588	26.245	52.056	10.221	327.68	241.35	3404.5
#1	.00180	.00291	.00212	.00238	-.00088	.00023	-.00014
#2	.00241	.00423	.00098	.00206	.00221	-.00088	.00015
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	-.00383	.00462	.00180	-.00172	.00162	.00509	
SDev	.00175	.00194	.00188	.00278	.00001	.00019	
%RSD	45.770	42.054	104.18	161.45	.84426	3.7251	
#1	-.00259	.00599	.00313	.00024	.00163	.00496	
#2	-.00507	.00324	.00047	-.00368	.00161	.00523	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14607	--	--	--	--	--	--
SDev	79.09031	--	--	--	--	--	--
%RSD	.5414484	--	--	--	--	--	--
#1	14551	--	--	--	--	--	--
#2	14663	--	--	--	--	--	--

Analysis Report

05/22/00 07:13:30 PM

page 1

Method: METTRA Sample Name: DD1NRF Operator: RJG
 Run Time: 05/22/00 19:09:24
 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	-.00014	-.03641	.01158	.15752	-.00306	31.263	.00082
SDev	.00014	.00822	.00180	.00049	.00002	.092	.00007
%RSD	98.890	22.587	15.505	.31258	.81129	.29521	8.4952
#1	-.00024	-.03059	.01285	.15787	-.00305	31.329	.00077
#2	-.00004	-.04223	.01031	.15718	-.00308	31.198	.00087
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	.00023	.00064	.00378	.08731	15.163	.40790	.00895
SDev	.00039	.00009	.00004	.00398	.043	.00100	.00059
%RSD	168.70	13.521	1.1172	4.5569	.28418	.24439	6.6133
#1	.00051	.00058	.00381	.09013	15.193	.40861	.00853
#2	-.00004	.00070	.00375	.08450	15.132	.40720	.00937
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	.00279	.00268	.00067	.00134	-.00076	-.00208	-.00164
SDev	.00170	.00331	.00022	.00096	.00196	.00077	.00014
%RSD	60.988	123.57	32.574	71.278	259.26	36.724	8.7151
#1	.00399	.00034	.00083	.00067	.00063	-.00262	-.00154
#2	.00159	.00502	.00052	.00202	-.00214	-.00154	-.00174
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	-.00537	.00191	-.00051	-.00537	.00201	.00335	
SDev	.00422	.00226	.00010	.00277	.00001	.00003	
%RSD	78.590	118.15	19.961	51.600	.23956	.89488	
#1	-.00835	.00351	-.00044	-.00734	.00202	.00337	
#2	-.00238	.00031	-.00058	-.00341	.00201	.00333	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14597	--	--	--	--	--	--
SDev	22.80419	--	--	--	--	--	--
%RSD	.1562201	--	--	--	--	--	--
#1	14581	--	--	--	--	--	--
#2	14614	--	--	--	--	--	--

Analysis Report

05/22/00 07:17:40 PM

page 1

Method: METTRA Sample Name: DD1NTF Operator: RJG
 Run Time: 05/22/00 19:13:34
 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	.00067	-.01992	-.00016	.03522	-.00352	392.22	.00004
SDev	.00069	.00939	.00135	.00014	.00016	2.16	.00015
%RSD	103.85	47.144	826.54	.39625	4.4765	.54953	369.06
#1	.00116	-.01328	-.00112	.03532	-.00363	393.74	-.00007
#2	.00018	-.02656	.00079	.03512	-.00341	390.70	.00015
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	.00725	.00105	.00416	.75926	191.63	5.4795	-.00045
SDev	.00028	.00015	.00015	.00393	.63	.0222	.00012
%RSD	3.8388	14.716	3.6458	.51775	.32650	.40602	27.285
#1	.00745	.00094	.00427	.76204	192.07	5.4952	-.00036
#2	.00706	.00116	.00406	.75648	191.18	5.4637	-.00054
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	.01007	.00320	-.00000	.00106	-.00053	-.00276	-.00202
SDev	.00006	.00024	.00015	.00002	.00303	.00129	.00015
%RSD	.55054	7.6404	4755.0	1.8951	571.33	46.795	7.3354
#1	.01003	.00337	-.00011	.00105	-.00267	-.00185	-.00212
#2	.01011	.00303	.00010	.00108	.00161	-.00367	-.00191
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	-.00545	.00423	.00101	-.00857	.00636	.00351	
SDev	.00170	.00107	.00015	.00345	.00007	.00004	
%RSD	31.231	25.308	14.653	40.282	1.0774	1.2560	
#1	-.00666	.00499	.00111	-.00613	.00641	.00354	
#2	-.00425	.00348	.00090	L-.01101	.00631	.00348	
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	

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Analysis Report

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page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14079	--	--	--	--	--	--
SDev	144.1082	--	--	--	--	--	--
%RSD	1.023587	--	--	--	--	--	--
#1	13977	--	--	--	--	--	--
#2	14181	--	--	--	--	--	--

Analysis Report

05/22/00 07:21:50 PM

page 1

Method: METTRA Sample Name: DD1NR Raw Sample Operator: RJG
 Run Time: 05/22/00 19:17:44
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00046	-.03568	.03004	.03515	-.00331	403.60	.00005
SDev	.00010	.00743	.00008	.00016	.00001	3.15	.00002
%RSD	22.375	20.825	.25894	.44361	.16667	.78230	35.942
#1	.00039	-.03043	.03010	.03526	-.00332	405.84	.00004
#2	.00054	-.04094	.02999	.03504	-.00331	401.37	.00006
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	.00789	.00108	.00438	.78703	193.45	5.6531	.00075
SDev	.00022	.00004	.00020	.00176	1.48	.0415	.00055
%RSD	2.8179	3.4164	4.6366	.22324	.76632	.73456	73.966
#1	.00805	.00111	.00452	.78827	194.50	5.6824	.00114
#2	.00773	.00106	.00423	.78578	192.40	5.6237	.00036
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	.00986	.00546	.00272	.00363	.03391	-.00523	.00780
SDev	.00053	.00125	.00079	.00094	.00017	.00095	.00069
%RSD	5.4027	22.903	28.990	25.944	.50995	18.104	8.8409
#1	.00948	.00634	.00328	.00430	.03379	-.00591	.00731
#2	.01023	.00458	.00216	.00297	.03404	-.00456	.00829
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	.12942	.03650	.06744	.06301	.00478	.00156	
SDev	.00202	.00487	.00392	.00321	.00061	.00005	
%RSD	1.5632	13.357	5.8202	5.0949	12.797	2.9589	
#1	.13085	.03994	.07021	.06074	.00435	.00153	
#2	.12799	.03305	.06466	.06528	.00522	.00160	
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	

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Analysis Report

05/22/00 07:21:50 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14562	--	--	--	--	--	--
SDev	92.56055	--	--	--	--	--	--
%RSD	.6356308	--	--	--	--	--	--
#1	14497	--	--	--	--	--	--
#2	14627	--	--	--	--	--	--

Analysis Report

05/22/00 07:25:59 PM

page 1

Method: METTRA Sample Name: DD1NT Raw Sample Operator: RJG
 Run Time: 05/22/00 19:21:54
 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	.04198	.02661	.18639	-.00316	32.586	.00002
SDev	.00021	.03584	.00079	.00785	.00039	1.592	.00019
%RSD	65.882	85.376	2.9670	4.2133	12.252	4.8840	1172.0
#1	-.00048	.06732	.02606	.19194	-.00343	33.712	.00015
#2	-.00017	.01664	.02717	.18084	-.00289	31.461	-.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	.00118	.00042	.00394	.74056	15.426	.43451	.00681
SDev	.00026	.00001	.00003	.05767	.728	.01992	.00173
%RSD	21.974	2.2345	.87725	7.7873	4.7220	4.5846	25.346
#1	.00136	.00043	.00391	.78133	15.941	.44860	.00559
#2	.00099	.00042	.00396	.69978	14.911	.42043	.00803
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	.00051	.00128	.00169	.00156	.02019	-.00442	.00378
SDev	.00080	.00133	.00136	.00046	.00139	.00177	.00072
%RSD	157.16	103.97	80.157	29.820	6.8939	40.053	18.985
#1	.00108	.00034	.00265	.00188	.02117	-.00567	.00327
#2	-.00006	.00222	.00073	.00123	.01921	-.00317	.00428
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	.07638	.01869	.03790	.03921	.00200	.00100	
SDev	.00304	.00312	.00107	.00296	.00010	.00000	
%RSD	3.9839	16.695	2.8187	7.5565	5.1721	.05914	
#1	.07423	.02090	.03866	.04131	.00193	.00100	
#2	.07853	.01649	.03715	.03712	.00208	.00100	
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	14776	--	--	--	--	--	--
SDev	612.8489	--	--	--	--	--	--
%RSD	4.147470	--	--	--	--	--	--
#1	14343	--	--	--	--	--	--
#2	15210	--	--	--	--	--	--

Analysis Report

05/22/00 07:30:09 PM

page 1

Method: METTRA Sample Name: DD1NRF Raw Sample Operator: RJG
 Run Time: 05/22/00 19:26:03
 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
Avge	.00040	-.04506	.02317	.15762	-.00337	31.849	.00013
SDev	.00012	.01044	.00102	.00323	.00014	.694	.00005
%RSD	29.557	23.171	4.3810	2.0508	4.2388	2.1781	40.525
#1	.00032	-.03767	.02388	.15990	-.00347	32.339	.00009
#2	.00048	-.05244	.02245	.15533	-.00326	31.358	.00017
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	.00144	.00069	.00422	.05098	15.229	.41159	.00666
SDev	.00006	.00034	.00012	.00581	.327	.00899	.00060
%RSD	4.1409	49.802	2.8659	11.403	2.1444	2.1853	8.9721
#1	.00149	.00045	.00431	.04687	15.460	.41795	.00708
#2	.00140	.00094	.00414	.05509	14.998	.40523	.00624
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	.00204	.00199	.00175	.00183	.01667	-.00396	.00291
SDev	.00140	.00042	.00015	.00005	.00119	.00318	.00252
%RSD	68.623	21.331	8.2916	2.4298	7.1284	80.366	86.432
#1	.00303	.00169	.00186	.00180	.01583	-.00621	.00113
#2	.00105	.00229	.00165	.00187	.01751	-.00171	.00469
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	.06278	.01402	.03026	.03413	.00181	.00082	
SDev	.00305	.00374	.00351	.00087	.00017	.00007	
%RSD	4.8571	26.635	11.589	2.5595	9.6741	9.0256	
#1	.06493	.01666	.03274	.03351	.00169	.00077	
#2	.06062	.01138	.02778	.03474	.00193	.00087	
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	

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Analysis Report

05/22/00 07:30:09 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14875	--	--	--	--	--	--
SDev	245.2252	--	--	--	--	--	--
%RSD	1.648523	--	--	--	--	--	--
#1	14702	--	--	--	--	--	--
#2	15049	--	--	--	--	--	--

Analysis Report

05/22/00 07:34:19 PM

page 1

Method: METTRA Sample Name: DD1NTF Raw Sample Operator: RJG
 Run Time: 05/22/00 19:30:13
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00061	-.03681	.02164	.03548	-.00357	397.20	.00010
SDev	.00073	.00233	.00146	.00000	.00009	2.41	.00008
%RSD	120.18	6.3386	6.7395	.01118	2.5069	.60793	78.991
#1	.00112	-.03516	.02061	.03547	-.00363	398.90	.00015
#2	.00009	-.03846	.02267	.03548	-.00350	395.49	.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
Avge	.00855	.00147	.00482	.73802	190.41	5.5438	-.00051
SDev	.00005	.00017	.00038	.00303	.97	.0287	.00046
%RSD	.56710	11.791	7.8882	.41088	.50889	.51852	89.721
#1	.00852	.00159	.00455	.73587	191.09	5.5641	-.00019
#2	.00859	.00134	.00509	.74016	189.72	5.5234	-.00084
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	.01024	.00412	.00196	.00268	.02653	-.00502	.00549
SDev	.00013	.00233	.00151	.00178	.00360	.00156	.00016
%RSD	1.3025	56.672	76.948	66.577	13.571	31.156	2.8461
#1	.01034	.00577	.00303	.00394	.02399	-.00391	.00538
#2	.01015	.00247	.00090	.00142	.02908	-.00612	.00560
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	.09828	.02629	.05026	.04645	.00591	.00246	
SDev	.00922	.00061	.00347	.00489	.00047	.00017	
%RSD	9.3804	2.3104	6.9137	10.532	7.9712	7.0512	
#1	.10479	.02672	.05272	.04299	.00625	.00234	
#2	.09176	.02586	.04780	.04991	.00558	.00258	
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	14381	--	--	--	--	--	--
SDev	86.79736	--	--	--	--	--	--
%RSD	.6035694	--	--	--	--	--	--
#1	14319	--	--	--	--	--	--
#2	14442	--	--	--	--	--	--

Analysis Report

05/22/00 07:38:29 PM

page 1

Method: METTRA Sample Name: CCV3-6 Operator: RJG
 Run Time: 05/22/00 19:34:23
 Comment: STL PITTSBURGH ICP METALS ANALYSIS-INSTRUMENT TRACEICP
 Mode: CONC Corr. Factor: 1

Elem	AG	AL	AS	BA	BE	CA	CD
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0453	25.485	.51477	2.1004	1.9950	49.928	.49993
SDev	.0074	.201	.00519	.0133	.0162	.439	.00410
%RSD	.70340	.78865	1.0092	.63102	.81343	.87913	.81940
#1	1.0505	25.627	.51845	2.1098	2.0065	50.239	.50283
#2	1.0401	25.342	.51110	2.0910	1.9835	49.618	.49704
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	2.0119	2.0049	2.0008	25.150	48.354	1.9747	1.9938
SDev	.0155	.0165	.0167	.229	.391	.0150	.0063
%RSD	.76947	.82465	.83660	.91108	.80841	.75967	.31490
#1	2.0228	2.0166	2.0127	25.312	48.631	1.9854	1.9982
#2	2.0009	1.9932	1.9890	24.988	48.078	1.9641	1.9893
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	2.0010	.52002	.51736	.51825	.51658	.51639	.51645
SDev	.0176	.00282	.00669	.00540	.00582	.00192	.00321
%RSD	.87772	.54173	1.2929	1.0419	1.1261	.37079	.62238
#1	2.0134	.52201	.52209	.52207	.52069	.51774	.51872
#2	1.9886	.51803	.51263	.51443	.51246	.51503	.51418
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	.51945	.53536	.53006	1.0209	2.0177	2.0312	
SDev	.00457	.00662	.00594	.0103	.0211	.0182	
%RSD	.87918	1.2370	1.1202	1.0097	1.0449	.89490	
#1	.52268	.54004	.53426	1.0282	2.0326	2.0441	
#2	.51622	.53068	.52586	1.0136	2.0028	2.0183	
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	

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Analysis Report

05/22/00 07:38:29 PM

page 2

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14723	--	--	--	--	--	--
SDev	94.78753	--	--	--	--	--	--
%RSD	.6437981	--	--	--	--	--	--
#1	14656	--	--	--	--	--	--
#2	14790	--	--	--	--	--	--

Analysis Report

05/22/00 07:42:39 PM

6571649
page 1

Method: METTRA Sample Name: CCB6

Operator: RJG

Run Time: 05/22/00 19:38:33

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	.00048	-.07104	-.00139	.00045	-.00202	.06197	.00022
SDev	.00022	.00296	.00192	.00048	.00018	.04780	.00027
%RSD	45.879	4.1649	137.65	107.47	8.7358	77.132	122.99
#1	.00033	-.07314	-.00004	.00011	-.00215	.02817	.00003
#2	.00064	-.06895	-.00275	.00078	-.00190	.09577	.00041
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	.00064	.00046	.00422	.02328	.03078	.00121	.00514
SDev	.00090	.00071	.00095	.01447	.02635	.00097	.00183
%RSD	140.86	156.00	22.514	62.137	85.617	79.694	35.618
#1	.00000	-.00005	.00355	.01305	.01215	.00053	.00644
#2	.00128	.00096	.00490	.03351	.04941	.00189	.00385
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	.00262	.00082	.00095	.00091	.00069	-.00129	-.00063
SDev	.00165	.00029	.00055	.00046	.00135	.00048	.00013
%RSD	63.052	34.679	58.398	51.221	196.37	37.405	20.425
#1	.00145	.00062	.00056	.00058	-.00027	-.00095	-.00072
#2	.00379	.00103	.00134	.00123	.00164	-.00163	-.00054
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	-.00053	.00123	.00064	.00043	.00354	.00093	
SDev	.00190	.00128	.00022	.00007	.00064	.00040	
%RSD	357.14	104.18	34.148	17.227	18.087	42.483	
#1	.00081	.00032	.00049	.00049	.00308	.00065	
#2	-.00188	.00213	.00080	.00038	.00399	.00121	
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	15069	--	--	--	--	--	--
SDev	50.62857	--	--	--	--	--	--
%RSD	.3359683	--	--	--	--	--	--
#1	15105	--	--	--	--	--	--
#2	15034	--	--	--	--	--	--

6571652

PSR024 5/22/00 3:42:38 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: HOYLEM

METHOD: QM Inductively Coupled Plasma (6010B Trace)

<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>
4A	DDFV6	___	235657	399411	A-46-QM	COE190257	001		SOLID	0	3
4A	DDGNW	___	235654	346167	A-46-QM	COE200130	014		SOLID	0	1
4A	DDGNX	___	235655	346167	A-46-QM	COE200130	015		SOLID	0	1
4A	DDGPO	___	235656	346167	A-46-QM	COE200130	016		SOLID	0	1

RELINQUISHED BYRECEIVED BYDATE/TIMEWilliam A HoyleWilliam A Hoyle5-22-0006:20William A HoyleWilliam A Hoyle5-22-0006:50

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

STL Pittsburgh

5158

METALS DATA

6571654

**METALS
RESULTS**

STL-Pittsburgh**Cover Page - Inorganic Analysis Data Package**

<u>Client ID</u>	<u>Lab Sample ID:</u>
<u>DF/S1/0138/GRAB/001</u>	<u>DDFV6T</u>
<u>DF/S1/0138/GRAB/001D</u>	<u>DDFV6DT</u>
<u>DF/S1/0138/GRAB/001S</u>	<u>DDFV6ST</u>

Comments: UXB/DUNN FIELD
C0E190257
TCLP
6010B, 7470A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
Date: _____ Title: _____

REVIEWED BY: <u>MTW</u> DATE: <u>5-26-00</u>

0571656

STL-Pittsburgh
Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6T **Client ID:** DF/S1/0138/GRAB/001
Matrix: Water **Units:** mg/L **Prep Date:** 5/24/00 **Prep Batch:** 0145117
Weight: NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0 00020	0.000045	U	1	CVAA	5/24/00	9:57

Comments: _____

Version 3.63.4

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

Form 1 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Sample Results

Lab Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001
 Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185
 Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.7	0.030	0.50	0.23	B	1	ICP	5/24/00	13:53
Barium	493.41	0.00041	10.0	1.0	B	1	ICP	5/24/00	13:53
Cadmium	228.80	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:53
Chromium	267.72	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:53
Lead	220.35	0.025	0.50	0.025	U	1	ICP	5/24/00	13:53
Selenium	196.03	0.067	0.25	0.067	U	1	ICP	5/24/00	13:53
Silver	328.07	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:53

Comments: C0E190257001

Version 3.63.4

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

Form 1 Equivalent

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRNAcceptable Range: 90% - 110%Standard Source: UltraStandard ID: 0014-107-5

			ICV5-1 5/24/00 9:43 AM									
Element	WL/ Mass	True Conc	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: J00524A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-061-7

Element	WL/ Mass	True Conc	ICV2-1 5/24/00 1:07 PM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	193.696	1000.0	993.24	99.3								
Barium	493.409	1000.0	989.11	98.9								
Cadmium	228.802	1000.0	1001.60	100.2								
Chromium	267.716	1000.0	1002.22	100.2								
Lead	220.353	1000.0	981.00	98.1								
Selenium	196.026	1000.0	1025.72	102.6								
Silver	328.068	500.0	502.25	100.4								

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRNAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-107-6

Element	WL/ Mass	True Conc	CCV5-1 5/24/00 9:46 AM		CCV5-2 5/24/00 10:12 AM							
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	5.12	102.4	5.04	100.8						

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPUnits: ug/LChart Number: J00524A.ARCAcceptable Range: 90% - 110%Standard Source: Inorganic VenturesStandard ID: 0014-087-7

Element	WL/ Mass	True Conc	CCV2-1 5/24/00 1:22 PM		CCV2-2 5/24/00 2:03 PM		CCV2-3 5/24/00 2:12 PM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	193.696	5000.0	4969.69	99.4	5160.12	103.2	5131.15	102.6		
Barium	493.409	5000.0	4802.84	96.1	5087.50	101.8	4994.15	99.9		
Cadmium	228.802	5000.0	4939.96	98.8	4875.37	97.5	4870.64	97.4		
Chromium	267.716	5000.0	4850.99	97.0	4835.98	96.7	4833.84	96.7		
Lead	220.353	5000.0	4910.60	98.2	4889.28	97.8	4889.13	97.8		
Selenium	196.026	5000.0	5004.51	100.1	5274.76	105.5	5187.18	103.7		
Silver	328.068	1000.0	985.66	98.6	988.46	98.8	984.98	98.5		

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STL-Pittsburgh

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRN

Standard Source: _____

Standard ID: _____

			ICB1 5/24/00 9:45 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: J00524A.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICBI 5/24/00 1:10 PM							
			Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	193.696	500	30.3	U						
Barium	493.409	10000	0.4	U						
Cadmium	228.802	100	2.8	U						
Chromium	267.716	500	3.8	U						
Lead	220.353	500	24.6	U						
Selenium	196.026	250	67.4	U						
Silver	328.068	500	3.1	U						

6571664

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRN

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	CCB1 5/24/00 9:49 AM	CCB2 5/24/00 10:14 AM			
			Found Q	Found Q	Found Q	Found Q	Found Q
Mercury	253.7	0.2	0.1 B	0.0 B			

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPUnits: ug/LChart Number: J00524A.ARC

Standard Source: _____

Standard ID: _____

			CCB1 5/24/00 1:25 PM		CCB2 5/24/00 2:06 PM		CCB3 5/24/00 2:15 PM			
Element	WL/ Mass	Report Limit	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	193.696	500	30.3	U	35.4	B	30.3	U		
Barium	493.409	10000	0.6	B	0.4	U	0.5	B		
Cadmium	228.802	100	2.8	U	2.8	U	2.8	U		
Chromium	267.716	500	3.8	U	3.8	U	3.8	U		
Lead	220.353	500	24.6	U	24.6	U	-50.0	B		
Selenium	196.026	250	67.4	U	67.4	U	67.4	U		
Silver	328.068	500	3.1	U	3.1	U	3.1	U		

6571666

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results**Lab Sample ID:** DDJPKBT**Matrix:** Water **Units:** mg/L **Prep Date:** 5/24/00 **Prep Batch:** 0145117**Weight:** NA **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.00012	B	1	CVAA	5/24/00	9:55

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 3 Equivalent

B Result is between MDL and RL

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDL21BTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.000045	0.00020	0.000045	U	1	CVAA	5/24/00	9:51

Comments: _____

Version 3.63.4

U Result is less than the MDL

Form 3 Equivalent

B Result is between MDL and RL

6571668

STL-Pittsburgh

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDJPKBTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.17	B	1	ICP	5/24/00	13:34
Barium	493.409	0.00041	10.0	0.0077	B	1	ICP	5/24/00	13:34
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:34
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:34
Lead	220.353	0.025	0.50	-0.033	B	1	ICP	5/24/00	13:34
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	5/24/00	13:34
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:34

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DDL9LBT

Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185

Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	0.030	0.50	0.030	U	1	ICP	5/24/00	13:31
Barium	493.409	0.00041	10.0	0.00041	U	1	ICP	5/24/00	13:31
Cadmium	228.802	0.0028	0.10	0.0028	U	1	ICP	5/24/00	13:31
Chromium	267.716	0.0038	0.50	0.0038	U	1	ICP	5/24/00	13:31
Lead	220.353	0.025	0.50	-0.037	B	1	ICP	5/24/00	13:31
Selenium	196.026	0.067	0.25	0.067	U	1	ICP	5/24/00	13:31
Silver	328.068	0.0031	0.50	0.0031	U	1	ICP	5/24/00	13:31

Comments: _____

Version 3.63.4

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

Form 3 Equivalent

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPUnits: ug/LChart Number: J00524A.ARCAcceptable Range: 0% - 0%Standard Source: Inorganic VenturesStandard ID: 0014-088-12

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 5/24/00 1:13 PM				
				Found	Found	Found	Found	Found
Arsenic	193.696	500		-200				
Barium	493.409	10000		2				
Cadmium	228.802	100		-2				
Chromium	267.716	500		2				
Lead	220.353	500		105				
Selenium	196.026	250		184				
Silver	328.068	500		0				

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPUnits: ug/LChart Number: J00524A.ARCAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-043-1

Element	WL/ Mass	True Conc	ICSAB 5/24/00 1:16 PM									
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Arsenic	193.696	1000	906.8	90.7								
Barium	493.409	500	462.5	92.5								
Cadmium	228.802	1000	976.7	97.7								
Chromium	267.716	500	440.3	88.1								
Lead	220.353	1000	1000.2	100.0								
Selenium	196.026	1000	1116.6	111.7								
Silver	328.068	1000	963.1	96.3								

6571672

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DDFV6STOriginal Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001SMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: 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	0.000045	U	0.0050		0.005	100.6	1	1	CVAA	5/24/00	9:57	5/24/00	10:00

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: DDFV6DTOriginal Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: 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	0.000045	U	0 0050		0.005	100.6	1	1	CVAA	5/24/00	9:57	5/24/00	10:02

Comments: _____

Version 3 63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: DDFV6ST

Original Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001S

Matrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185

Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	193.7	0.23	B	5.1		5	97.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Barium	493.4	1.0	B	44.7		50	87.3	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Cadmium	228.8	0.0028	U	0.94		1	93.5	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Chromium	267.7	0.0038	U	4.2		5	84.4	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Lead	220.4	0.025	U	4.4		5	88.2	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Selenium	196.0	0.067	U	1.0		1	103.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59
Silver	328.1	0.0031	U	0.87		1	87.0	1	1	ICP	5/24/00	13:53	5/24/00	13:59

Comments: _____

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: DDFV6DTOriginal Sample ID: DDFV6T Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.7	0.23	B	5.2		5	100.1	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Barium	493.4	1.0	B	45.8		50	89.6	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Cadmium	228.8	0.0028	U	0.97		1	96.8	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Chromium	267.7	0.0038	U	4.3		5	86.4	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Lead	220.4	0.025	U	4.5		5	90.8	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Selenium	196.0	0.067	U	1.1		1	108.6	1	1	ICP	5/24/00	13:53	5/24/00	14:09
Silver	328.1	0.0031	U	0.90		1	90.1	1	1	ICP	5/24/00	13:53	5/24/00	14:09

Comments: _____

Version 3.63.4

U Result is less than the MDL

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

Form 5A Equivalent

6571676

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDFV6DTMatrix Spike Sample ID: DDFV6ST Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Mercury	253.7	0.0050		0.0050			1	1	CVAA	5/24/00	10:00	5/24/00	10:02

Comments: _____

Version 3.63.4

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

Form 6 Equivalent

STL-Pittsburgh

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: DDFV6DTMatrix Spike Sample ID: DDFV6ST Client ID: DF/S1/0138/GRAB/001DMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	193.696	5.1		5.2		3.2 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Barium	493.409	44.7		45.8		2.6 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Cadmium	228.802	0.94		0.97		3.4 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Chromium	267.716	4.2		4.3		2.3 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Lead	220.353	4.4		4.5		2.9 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Selenium	196.026	1.0		1.1		5.3 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09
Silver	328.068	0.87		0.90		3.5 %	1	1	ICP	5/24/00	13:59	5/24/00	14:09

Comments: _____

Version 3 63.4

U Result is less than the MDL

Form 6 Equivalent

B Result is between MDL and RL

N Spike recovery failed

NC Percent recovery was not calculated

* Duplicate analysis RPD was not within limits

6571678

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDL21CTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145117Weight: NA Volume: 100 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.0025	0.0027	108.4		80-120	1	CVAA	5/24/00	9:53

Comments: _____

Version 3.63.4

STL Pittsburgh

U Result is less than the MDL

B Result is between MDL and RL

Form 7 Equivalent

6026

STL-Pittsburgh

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: DDL9LCTMatrix: Water Units: mg/L Prep Date: 5/24/00 Prep Batch: 0145185Weight: NA Volume: 50 Percent Moisture: NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	193.696	2.0	2.3	112.4		80-120	1	ICP	5/24/00	13:37
Barium	493.409	2.0	1.9	94.7	B	80-120	1	ICP	5/24/00	13:37
Cadmium	228.802	0.050	0.044	88.0	B	80-120	1	ICP	5/24/00	13:37
Chromium	267.716	0.20	0.19	96.1	B	80-120	1	ICP	5/24/00	13:37
Lead	220.353	0.50	0.44	87.6	B	80-120	1	ICP	5/24/00	13:37
Selenium	196.026	2.0	2.2	110.8		80-120	1	ICP	5/24/00	13:37
Silver	328.068	0.050	0.050	99.3	B	80-120	1	ICP	5/24/00	13:37

Comments: _____

Version 3 63.4

U Result is less than the MDL

Form 7 Equivalent

B Result is between MDL and RL

6571660

STL-Pittsburgh

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAAUnits: ug/LChart Number: 0524HGA.PRNAcceptable Range: 80% - 120%Standard Source: Inorganic VenturesStandard ID: 0014-107-6

Element	WL/ Mass	True Conc	CCV5-1 5/24/00 9:46 AM		CCV5-2 5/24/00 10:12 AM					
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	5.12	102.4	5.04	100.8				

STL-Pittsburgh
Metals Data Reporting Form

Instrument Detection Limits

Instrument: CVAA

Units: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Mercury	253 70	0.2	0.045	3/20/00

6571682

STL-Pittsburgh

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPUnits: ppb

Element	Wavelength /Mass	Reporting Limit	MDL	Date of MDL
Arsenic	193.70	500	30.3	4/1/00
Barium	493.41	10000	0.41	4/1/00
Cadmium	228.80	100	2.8	4/1/00
Chromium	267.72	500	3.8	4/1/00
Lead	220.35	500	24.6	4/1/00
Selenium	196.03	250	67.4	4/1/00
Silver	328.07	500	3.1	4/1/00

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)

6571684

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: ICP

Units: ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Arsenic	193.70	100000	4/5/00
Barium	493.41	100000	4/5/00
Cadmium	228.80	100000	4/5/00
Chromium	267.72	100000	4/5/00
Lead	220.35	100000	4/5/00
Selenium	196.03	100000	4/5/00
Silver	328.07	2000	4/5/00

6571686

STL-Pittsburgh
Metals Data Reporting Form

Preparation Log

Preparation Batch: 0145117 **Instrument:** CVAA **Matrix:** Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DDJPKBT	5/24/00	NA	100	NA
DDL21BT	5/24/00	NA	100	NA
DDL21CT	5/24/00	NA	100	NA
DDFV6DT	5/24/00	NA	100	NA
DDFV6ST	5/24/00	NA	100	NA
DDFV6T	5/24/00	NA	100	NA

Metals Data Reporting Form

Preparation Log

Preparation Batch: 0145185 Instrument: ICP Matrix: Water

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
DDJPKBT	5/24/00	NA	50	NA
DDL9LBT	5/24/00	NA	50	NA
DDL9LCT	5/24/00	NA	50	NA
DDFV6DT	5/24/00	NA	50	NA
DDFV6ST	5/24/00	NA	50	NA
DDFV6T	5/24/00	NA	50	NA

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STL-Pittsburgh
Metals Data Reporting Form

Instrument Runlog

Instrument: CVAAChart Number: 0524HGA.PRN

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	5/24/00	9:29 AM
Std2Rep1	5/24/00	9:32 AM
Std3Rep1	5/24/00	9:34 AM
Std4Rep1	5/24/00	9:36 AM
Std5Rep1	5/24/00	9:38 AM
Std6Rep1	5/24/00	9:40 AM
ICV5-1	5/24/00	9:43 AM
ICB1	5/24/00	9:45 AM
CCV5-1	5/24/00	9:46 AM
CCB1	5/24/00	9:49 AM
DDL21BT	5/24/00	9:51 AM
DDL21CT	5/24/00	9:53 AM
DDJPKBT	5/24/00	9:55 AM
DDFV6T	5/24/00	9:57 AM
DDFV6ST	5/24/00	10:00 AM
DDFV6DT	5/24/00	10:02 AM
ZZZZZZ	5/24/00	10:04 AM
ZZZZZZ	5/24/00	10:06 AM
ZZZZZZ	5/24/00	10:08 AM
ZZZZZZ	5/24/00	10:10 AM
CCV5-2	5/24/00	10:12 AM
CCB2	5/24/00	10:14 AM
ZZZZZZ	5/24/00	10:17 AM
ZZZZZZ	5/24/00	10:19 AM
ZZZZZZ	5/24/00	10:20 AM
ZZZZZZ	5/24/00	10:22 AM
ZZZZZZ	5/24/00	10:25 AM
ZZZZZZ	5/24/00	10:27 AM
ZZZZZZ	5/24/00	10:29 AM
ZZZZZZ	5/24/00	10:31 AM
ZZZZZZ	5/24/00	10:32 AM
ZZZZZZ	5/24/00	10:34 AM
ZZZZZZ	5/24/00	10:37 AM
ZZZZZZ	5/24/00	10:39 AM
ZZZZZZ	5/24/00	10:41 AM
ZZZZZZ	5/24/00	10:43 AM
ZZZZZZ	5/24/00	10:45 AM
ZZZZZZ	5/24/00	10:47 AM
ZZZZZZ	5/24/00	10:49 AM
ZZZZZZ	5/24/00	10:50 AM
ZZZZZZ	5/24/00	10:53 AM

STL-Pittsburgh
Metals Data Reporting Form

0571689

Instrument Runlog

Instrument: CVAA

Chart Number: 0524HGA.PRN

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/24/00	10:55 AM
ZZZZZZ	5/24/00	10:57 AM
ZZZZZZ	5/24/00	10:59 AM
ZZZZZZ	5/24/00	11:01 AM
ZZZZZZ	5/24/00	11:03 AM
ZZZZZZ	5/24/00	11:05 AM
ZZZZZZ	5/24/00	11:07 AM
ZZZZZZ	5/24/00	11:10 AM
ZZZZZZ	5/24/00	11:12 AM
ZZZZZZ	5/24/00	11:15 AM
ZZZZZZ	5/24/00	11:17 AM
ZZZZZZ	5/24/00	11:19 AM
ZZZZZZ	5/24/00	11:21 AM
ZZZZZZ	5/24/00	11:24 AM
ZZZZZZ	5/24/00	11:26 AM
ZZZZZZ	5/24/00	11:28 AM
ZZZZZZ	5/24/00	11:30 AM
ZZZZZZ	5/24/00	11:32 AM
ZZZZZZ	5/24/00	11:34 AM
ZZZZZZ	5/24/00	11:38 AM
ZZZZZZ	5/24/00	11:40 AM

STL-Pittsburgh

6571690

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPChart Number: J00524A.ARC

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	5/24/00	12:43 PM
ZZZZZZ	5/24/00	12:46 PM
ZZZZZZ	5/24/00	12:49 PM
ZZZZZZ	5/24/00	12:53 PM
STD1	5/24/00	12:57 PM
STD5A	5/24/00	1:01 PM
STD5B	5/24/00	1:04 PM
ICV2-1	5/24/00	1:07 PM
ICB1	5/24/00	1:10 PM
ICSA	5/24/00	1:13 PM
ICSAB	5/24/00	1:16 PM
CCV2-1	5/24/00	1:22 PM
CCB1	5/24/00	1:25 PM
DDL9LBT	5/24/00	1:31 PM
DDJPKBT	5/24/00	1:34 PM
DDL9LCT	5/24/00	1:37 PM
ZZZZZZ	5/24/00	1:40 PM
ZZZZZZ	5/24/00	1:44 PM
ZZZZZZ	5/24/00	1:47 PM
ZZZZZZ	5/24/00	1:50 PM
DDFV6T	5/24/00	1:53 PM
DDFV6PT	5/24/00	1:56 PM
DDFV6ST	5/24/00	1:59 PM
CCV2-2	5/24/00	2:03 PM
CCB2	5/24/00	2:06 PM
DDFV6DT	5/24/00	2:09 PM
CCV2-3	5/24/00	2:12 PM
CCB3	5/24/00	2:15 PM

**METALS
RAW DATA**

6571692

COE170257 (Tclp's) - 60108

Analysis Report

Averages

05/24/00 02:19:57 PM

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Michael W. Wernicki 5-24-00

#	Sample Name	AG	AS	BA	CD	CR	PB
1	STD1	-.00075	-.0007	0	-.00004	.00019	.001
2	STD5A	.2662	.55874	4.24101	.90315	3.73839	.26389
3	STD5B						
4	ICV2-1 0014-061-7	.50225	.99324	.98911	1.0016	1.0022	.98100
5	ICB1	.00109	.02004	.00023	.00100	.00227	-.00922
6	ICSA 0014-088-12	.00029	-.20243	.00186	-.00222	.00187	.10463
7	ICSAB 0014-043-1	.96313	.90683	.46251	.97669	.44031	1.0002
8	CCV2-1 0014-087-7	.98566	4.9697	4.8028	4.9400	4.8510	4.9106
9	CCB1	-.00034	.01995	.00058	.00057	.00080	.00925
10	DDL9LBT	-.00036	.01369	.00009	.00198	.00067	-.03696
11	DDJPKBT	-.00036	.17087	.00771	.00011	.00160	-.03319
12	DDL9LCT	.04964	2.2471	1.8941	.04399	.19226	.43805
13	DDGT8T	-.00378	.24756	1.2967	.00067	.08509	6.0237
14	DDGTNT	-.00384	.15605	.85180	.00412	.00013	13.214
15	DDGTQT	-.00382	.16622	.58517	.00064	-.00321	4.3437
16	DDGTWT	-.00197	.17332	1.2477	.00297	-.00174	31.136
17	DDFV6T	-.00475	.22552	1.0163	-.00107	-.00294	.00359
18	DDFV6TP5	-.00145	.06252	.21302	.00088	-.00027	-.01664
19	DDFV6ST	.87017	5.0741	44.652	.93544	4.2214	4.4088
20	CCV2-2	.98846	5.1601	5.0875	4.8754	4.8360	4.8893
21	CCB2	.00072	.03542	.00035	.00062	.00080	-.02400
22	DDFV6DT	.90086	5.2303	45.814	.96822	4.3195	4.5382
23	CCV2-3	.98498	5.1312	4.9942	4.8706	4.8338	4.8891
24	CCB3	.00000	.02733	.00047	.00058	.00094	-.04984

#	Sample Name	SE
1	STD1	.00024
2	STD5A	.5486
3	STD5B	
4	ICV2-1 0014-061-7	1.0257
5	ICB1	.00639
6	ICSA 0014-088-12	.18347
7	ICSAB 0014-043-1	1.1166
8	CCV2-1 0014-087-7	5.0045
9	CCB1	-.02003
10	DDL9LBT	-.01639
11	DDJPKBT	-.01455
12	DDL9LCT	2.2167
13	DDGT8T	.03704
14	DDGTNT	.00732
15	DDGTQT	-.00908
16	DDGTWT	.00001
17	DDFV6T	-.01347
18	DDFV6TP5	-.01272
19	DDFV6ST	1.0297
20	CCV2-2	5.2748
21	CCB2	.00821
22	DDFV6DT	1.0862
23	CCV2-3	5.1872
24	CCB3	-.01913

MTW 5-24-00

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STD1	J00524A	QUANMET	05/24/00	12:57		X	IR
2	STD5A	J00524A	QUANMET	05/24/00	13:01		X	IR
3	STD5B	J00524A	QUANMET	05/24/00	13:04		X	IR
4	ICV2-1 0014-061-7	J00524A	QUANMET	05/24/00	13:07	MTW	S	CONC
5	ICB1	J00524A	QUANMET	05/24/00	13:10	MTW	S	CONC
6	ICSA 0014-088-12	J00524A	QUANMET	05/24/00	13:13	MTW	Q	CONC
7	ICSAB 0014-043-1	J00524A	QUANMET	05/24/00	13:16	MTW	Q	CONC
8	CCV2-1 0014-087-7	J00524A	QUANMET	05/24/00	13:22	MTW	S	CONC
9	CCB1	J00524A	QUANMET	05/24/00	13:25	MTW	S	CONC
10	DDL9LBT	J00524A	QUANMET	05/24/00	13:31	MTW	S	CONC
11	DDJPKBT	J00524A	QUANMET	05/24/00	13:34	MTW	S	CONC
12	DDL9LCT	J00524A	QUANMET	05/24/00	13:37	MTW	S	CONC
13	DDGT8T	J00524A	QUANMET	05/24/00	13:40	MTW	S	CONC
14	DDGTNT	J00524A	QUANMET	05/24/00	13:44	MTW	S	CONC
15	DDGTQT	J00524A	QUANMET	05/24/00	13:47	MTW	S	CONC
16	DDGTWT	J00524A	QUANMET	05/24/00	13:50	MTW	S	CONC
17	DDFV6T	J00524A	QUANMET	05/24/00	13:53	MTW	S	CONC
18	DDFV6TP5	J00524A	QUANMET	05/24/00	13:56	MTW	S	CONC
19	DDFV6ST	J00524A	QUANMET	05/24/00	13:59	MTW	S	CONC
20	CCV2-2	J00524A	QUANMET	05/24/00	14:03	MTW	S	CONC
21	CCB2	J00524A	QUANMET	05/24/00	14:06	MTW	S	CONC
22	DDFV6DT	J00524A	QUANMET	05/24/00	14:09	MTW	S	CONC
23	CCV2-3	J00524A	QUANMET	05/24/00	14:12	MTW	S	CONC
24	CCB3	J00524A	QUANMET	05/24/00	14:15	MTW	S	CONC

Method: QUANMET Standard: STD1
Run Time: 05/24/00 12:57:58

Elem	AG	AL	AS	B	BA	BE	CA
Avge	-.00075	.01270	-.00070	.00045	.00000	.00335	-.00176
SDev	.00025	.00096	.00161	.00090	.00000	.00019	.00051
%RSD	33.555	7.5525	230.35	200.00	.00000	5.7160	28.964
#1	-.00040	.01360	.00020	.00000	.00000	.00360	-.00120
#2	-.00080	.01220	-.00060	.00000	.00000	.00320	-.00167
#3	-.00100	.01160	.00060	.00000	.00000	.00320	-.00244
#4	-.00080	.01340	-.00300	.00180	.00000	.00340	-.00173
Elem	CD	CO	CR	CU	FE	K	LI
Avge	-.00005	.00005	.00020	.00045	.00020	-.02265	-.00060
SDev	.00012	.00019	.00016	.00019	.00016	.00290	.00023
%RSD	241.01	382.97	81.650	42.552	81.650	12.804	38.490
#1	.00008	.00020	.00020	.00060	.00040	-.02140	-.00040
#2	-.00008	.00020	.00000	.00060	.00020	-.02440	-.00040
#3	.00000	.00000	.00020	.00020	.00000	-.02560	-.00080
#4	-.00020	-.00020	.00040	.00040	.00020	-.01920	-.00080
Elem	MG	MN	MO	NA	NI	PB	SB
Avge	.00035	.00010	.00010	.06030	-.00041	.00100	.00010
SDev	.00055	.00012	.00026	.00109	.00081	.00033	.00012
%RSD	157.36	115.47	258.20	1.8065	195.33	32.660	115.47
#1	.00060	.00020	-.00020	.05940	-.00081	.00140	.00020
#2	.00000	.00000	.00040	.06080	-.00136	.00100	.00000
#3	-.00020	.00000	.00000	.05940	.00024	.00060	.00000
#4	.00100	.00020	.00020	.06160	.00028	.00100	.00020
Elem	SE	SI	SN	SR	TI	TL	V
Avge	.00025	.00250	-.00050	.00016	.00195	.00040	.00015
SDev	.00161	.00020	.00217	.00005	.00010	.00036	.00030
%RSD	644.57	8.0000	433.90	29.937	5.1282	91.287	200.00
#1	-.00200	.00240	-.00160	.00020	.00200	.00060	.00060
#2	.00080	.00240	-.00300	.00012	.00200	.00000	.00000
#3	.00180	.00240	.00160	.00012	.00200	.00080	.00000
#4	.00040	.00280	.00100	.00020	.00180	.00020	.00000
Elem	ZN						
Avge	.00037						
SDev	.00014						
%RSD	37.716						
#1	.00020						
#2	.00032						
#3	.00044						
#4	.00052						

Method: QUANMET Standard: STD5A 0014-072-2
Run Time: 05/24/00 13:01:07

Elem	AG	AS	B	BA	BE	CD	CO
Avg	.26620	.55875	.60774	4.2410	15.796	.90316	1.4748
SDev	.00148	.00894	.00692	.0653	.210	.00441	.0090
%RSD	.55550	1.6003	1.1379	1.5403	1.3301	.48792	.60891
#1	.26720	.56640	.61160	4.2891	15.905	.90767	1.4820
#2	.26760	.55280	.61160	4.2534	15.904	.90620	1.4804
#3	.26560	.56640	.61034	4.2760	15.895	.89952	1.4748
#4	.26440	.54940	.59740	4.1456	15.481	.89924	1.4622

Elem	CR	CU	LI	MN	MO	NI	PB
Avg	3.7384	2.3721	4.4305	2.0231	.42315	1.7976	.26390
SDev	.0232	.0371	.0742	.0141	.00278	.0147	.00174
%RSD	.62042	1.5620	1.6738	.69806	.65761	.81889	.65924
#1	3.7588	2.3946	4.5067	2.0350	.42640	1.8142	.26560
#2	3.7542	2.3826	4.3883	2.0318	.42320	1.8043	.26520
#3	3.7324	2.3942	4.4782	2.0222	.42340	1.7912	.26240
#4	3.7082	2.3172	4.3490	2.0036	.41960	1.7806	.26240

Elem	SB	SE	SI	SN	SR	TI	TL
Avg	.20350	.54860	.34840	.98985	8.3066	6.2068	.36305
SDev	.00136	.00835	.00290	.00937	.1181	.0702	.00112
%RSD	.66898	1.5230	.83188	.94661	1.4213	1.1310	.30959
#1	.20360	.54400	.34560	.99940	8.3937	6.2570	.36240
#2	.20480	.54840	.35100	.99540	8.3350	6.2342	.36400
#3	.20400	.56040	.35080	.98600	8.3647	6.2332	.36400
#4	.20160	.54160	.34620	.97860	8.1332	6.1028	.36180

Elem	V	ZN
Avg	1.6494	1.5601
SDev	.0153	.0092
%RSD	.92996	.59270
#1	1.6622	1.5676
#2	1.6568	1.5664
#3	1.6512	1.5592
#4	1.6274	1.5474

Method: QUANMET Standard: STD5B 0014-072-3
Run Time: 05/24/00 13:04:16

Elem	AL	CA	FE	K	MG	NA
Avge	11.539	23.953	29.657	2.2174	7.7313	50.955
SDev	.032	.163	.121	.0260	.0218	.329
%RSD	.27625	.67983	.40819	1.1712	.28212	.64585
#1	11.502	23.757	29.488	2.2182	7.7034	51.008
#2	11.524	23.884	29.652	2.1822	7.7420	50.563
#3	11.572	24.065	29.744	2.2444	7.7538	51.360
#4	11.557	24.107	29.746	2.2248	7.7260	50.891

Method: QUANMET

Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AG	328.068	STD5A	STD1	7.30970	.005482	05/24/00 01:04:16
AL	308.215	STD5B	STD1	8.67596	-.110185	05/24/00 01:04:16
AS	193.696	STD5A	STD1	18.1829	.012728	05/24/00 01:04:16
B	249.600	STD5A	STD1	16.4998	-.007425	05/24/00 01:04:16
BA	493.409	STD5A	STD1	2.35793	.000000	05/24/00 01:04:16
BE	313.042	STD5A	STD1	.634872	-.002127	05/24/00 01:04:16
CA	317.933	STD5B	STD1	4.17447	.007342	05/24/00 01:04:16
CD	228.802	STD5A	STD1	11.2376	.000562	05/24/00 01:04:16
CO	228.616	STD5A	STD1	6.81296	-.000341	05/24/00 01:04:16
CR	267.716	STD5A	STD1	2.67582	-.000535	05/24/00 01:04:16
CU	324.754	STD5A	STD1	4.21255	-.001896	05/24/00 01:04:16
FE	259.940	STD5B	STD1	3.37186	-.000674	05/24/00 01:04:16
K	766.491	STD5B	STD1	44.6419	1.01114	05/24/00 01:04:16
LI	670.789	STD5A	STD1	2.25675	.001354	05/24/00 01:04:16
MG	279.079	STD5B	STD1	12.9350	-.004527	05/24/00 01:04:16
MN	257.610	STD5A	STD1	4.94140	-.000494	05/24/00 01:04:16
MO	202.030	STD5A	STD1	23.6379	-.002364	05/24/00 01:04:16
NA	588.995	STD5B	STD1	1.96483	-.118479	05/24/00 01:04:16
NI	231.604	STD5A	STD1	5.55922	.002305	05/24/00 01:04:16
PB	220.353	STD5A	STD1	36.9183	-.036918	05/24/00 01:04:16
SB	206.838	STD5A	STD1	49.2212	-.004922	05/24/00 01:04:16
SE	196.026	STD5A	STD1	18.2365	-.004559	05/24/00 01:04:16
SI	288.158	STD5A	STD1	28.5411	-.071353	05/24/00 01:04:16
SN	189.989	STD5A	STD1	10.0869	.005043	05/24/00 01:04:16
SR	409.552	STD5A	STD1	1.20388	-.000191	05/24/00 01:04:16
TI	334.941	STD5A	STD1	1.61164	-.003143	05/24/00 01:04:16
TL	190.864	STD5A	STD1	55.4081	-.022163	05/24/00 01:04:16
V	292.402	STD5A	STD1	5.93423	-.000890	05/24/00 01:04:16
ZN	213.856	STD5A	STD1	6.43319	-.002365	05/24/00 01:04:16

6571698

Analysis Report

05/24/00 01:10:31 PM

page 1

Method: QUANMET Sample Name: ICV2-1 0014-061-7 Operator: MTW
 Run Time: 05/24/00 13:07:25
 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	.50226	25.104	.99324	1.0089	.98912	.97302	25.484
SDev	.00302	.053	.04336	.0060	.00143	.00219	.051
%RSD	.60069	.21255	4.3657	.59766	.14414	.22531	.20080

#1	.50481	25.024	.95940	1.0051	.98708	.97360	25.477
#2	.49898	25.124	.98392	1.0130	.99011	.97461	25.473
#3	.50484	25.136	1.0565	1.0026	.98916	.97410	25.554
#4	.50041	25.129	.97313	1.0151	.99011	.96979	25.432

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.55000	27.500	1.1000	1.1000	1.1000	1.1000	27.500
Low	.45000	22.500	.90000	.90000	.90000	.90000	22.500

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0016	.99336	1.0022	.98220	26.169	24.531	.98546
SDev	.0048	.00698	.0015	.00280	.041	.475	.01128
%RSD	.47617	.70285	.15341	.28485	.15726	1.9379	1.1452

#1	1.0004	.99235	1.0010	.97925	26.137	24.046	.97423
#2	1.0078	.99641	1.0042	.98600	26.196	24.386	.98912
#3	.99626	1.0005	1.0010	.98179	26.213	24.511	.97890
#4	1.0021	.98417	1.0026	.98177	26.131	25.180	.99958

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	1.1000	1.1000	1.1000	27.500	27.500	1.1000
Low	.90000	.90000	.90000	.90000	22.500	22.500	.90000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.368	.99663	.98252	24.828	.99968	.98101	.95140
SDev	.083	.00207	.01251	.271	.00542	.00720	.00945
%RSD	.32754	.20758	1.2733	1.0925	.54183	.73412	.99284

#1	25.271	.99612	.96597	24.517	1.0023	.97733	.94903
#2	25.470	.99713	.98016	24.871	1.0025	.97739	.95881
#3	25.346	.99911	.99435	24.753	.99156	.97749	.95875
#4	25.387	.99415	.98961	25.170	1.0023	.99181	.93902

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	1.1000	1.1000	27.500	1.1000	1.1000	1.1000
Low	22.500	.90000	.90000	22.500	.90000	.90000	.90000

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0257	1.0073	.95958	.98496	.98020	4.8679	.98706
SDev	.0286	.0072	.01886	.00149	.00189	.0947	.00222
%RSD	2.7865	.71568	1.9651	.15119	.19245	1.9463	.22483

#1	1.0320	1.0087	.97722	.98285	.97867	4.7630	.98703
#2	1.0577	1.0144	.96516	.98622	.98254	4.8289	.98850

#3	.98850	1.0087	.93289	.98574	.98093	4.8951	.98877
#4	1.0247	.99723	.96305	.98502	.97867	4.9848	.98393

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	.98998
SDev	.00246
%RSD	.24836

#1	.98633
#2	.99092
#3	.99173
#4	.99093

Errors	LC Pass
High	1.1000
Low	.90000

Method: QUANMET Sample Name: ICB1

Operator: MTW

Run Time: 05/24/00 13:10:33

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	.00110	-.00616	.02004	.01568	.00024	.00003	-.00031
SDev	.00118	.01024	.01902	.01547	.00027	.00001	.00097
%RSD	107.70	166.37	94.901	98.708	115.47	32.171	314.45

#1	.00256	-.00615	.03825	.02228	.00000	.00003	.00032
#2	.00108	.00777	.00183	.02557	.00000	.00004	.00071
#3	.00111	-.00969	.03457	.02228	.00047	.00002	-.00120
#4	-.00034	-.01656	.00552	-.00742	.00047	.00002	-.00106

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	.00100	.00034	.00228	-.00042	.00202	.03125	.00023
SDev	.00382	.00078	.00091	.00042	.00123	.16534	.00054
%RSD	380.73	230.72	40.037	100.03	60.818	529.09	241.01

#1	.00014	.00102	.00214	-.00021	.00135	-.09598	-.00045
#2	H.00637	.00100	.00108	-.00105	.00068	.13616	.00082
#3	.00017	-.00034	.00321	-.00021	.00270	-.12277	.00045
#4	-.00267	-.00033	.00267	-.00021	.00337	.20758	.00008

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	-.01294	.00000	.00946	-.00147	.00583	-.00922	-.00500
SDev	.01572	.00057	.00473	.00228	.00455	.01106	.00007
%RSD	121.52	14938.	49.997	154.54	77.916	119.92	1.3969

#1	.00065	.00050	.01182	.00098	.00217	-.01474	-.00508
#2	-.00970	-.00049	.01182	-.00098	.00531	-.02213	-.00499
#3	-.03557	.00050	.01182	-.00138	.00348	-.00001	-.00501
#4	-.00711	-.00049	.00236	-.00452	.01238	-.00001	-.00491

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	.00639	.01142	.02570	-.00006	.00000	-.00834	.00048
SDev	.02248	.01091	.01259	.00016	.00041	.04186	.00370
%RSD	351.81	95.548	48.971	266.47	1239e6	501.97	764.19

#1	.01368	.00855	.03932	-.00005	.00008	.04431	-.00066
#2	.02462	.01992	.01309	-.00029	.00040	.00001	-.00422

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#3	-.02643	-.00282	.01713	.00005	-.00056	-.02221	.00291
#4	.01369	.02003	.03326	.00005	.00008	-.05547	.00391
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	-.00072
SDev	.00117
%RSD	164.09

#1	-.00109
#2	.00093
#3	-.00183
#4	-.00087

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: ICSA 0014-088-12 Operator: MTW

Run Time: 05/24/00 13:13:41

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	.00030	490.91	-.20244	-.06467	.00187	.00001	485.12
SDev	.00191	1.64	.21705	.00109	.00004	.00001	2.40
%RSD	642.11	.33469	107.22	1.6922	2.2304	47.258	.49467

#1	-.00048	492.80	.07925	-.06431	.00189	.00002	482.18
#2	.00110	491.00	-.44090	-.06349	.00180	.00001	486.27
#3	-.00191	491.04	-.26982	-.06479	.00189	.00001	484.33
#4	.00248	488.79	-.17828	-.06610	.00189	.00001	487.71

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	-.00223	.01162	.00187	-.00533	183.39	.01116	.00198
SDev	.00347	.00205	.00216	.00084	.19	.32373	.00094
%RSD	155.75	17.638	115.54	15.775	.10602	2900.7	47.791

#1	-.00653	.01334	-.00107	-.00576	183.25	-.41740	.00098
#2	-.00150	.00923	.00160	-.00573	183.68	.06473	.00226
#3	.00186	.01059	.00374	-.00576	183.30	.02902	.00151
#4	-.00273	.01333	.00321	-.00407	183.33	.36830	.00316

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	481.01	.00593	.00497	.00452	-.00324	.10464	.02473
SDev	1.02	.00074	.00455	.00540	.01096	.02259	.09339
%RSD	.21231	12.515	91.579	119.44	338.09	21.588	377.61

#1	481.79	.00684	.00613	-.00295	-.00953	.09814	-.00483
#2	481.35	.00502	.01092	.00452	.01177	.07689	.11349
#3	481.40	.00590	.00141	.00688	-.00225	.11363	-.09336
#4	479.51	.00595	.00141	.00963	-.01296	.12989	.08363

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	.18348	.05717	-.03809	.01297	-.02119	.36689	.00722
SDev	.03868	.03566	.02940	.00021	.00059	.14482	.00225
%RSD	21.085	62.372	77.171	1.6421	2.7768	39.474	31.136

#1	.18388	.02003	-.04481	.01328	-.02152	.35726	.00397
#2	.18179	.05433	-.06436	.01290	-.02087	.44149	.00882

#3	.23148	.04863	-.04723	.01280	-.02184	.16834	.00864
#4	.13676	.10569	.00403	.01290	-.02055	.50047	.00745

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	ZN
Units	ppm
Avge	-.00163
SDev	.00123
%RSD	75.509

#1	-.00102
#2	-.00217
#3	-.00027
#4	-.00305

Errors	NOCHECK
Value	
Range	

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QC Standard

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Method: QUANMET Sample Name: ICSAB 0014-043-1 Operator: MTW

Run Time: 05/24/00 13:16:50

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	.96314	494.97	.90683	.90623	.46251	.44185	485.14
SDev	.00185	1.60	.06601	.00913	.00227	.00103	1.48
%RSD	.19166	.32281	7.2790	1.0076	.49125	.23429	.30464

#1	.96523	495.25	.87230	.89730	.46265	.44056	483.67
#2	.96097	497.10	.85620	.90413	.46568	.44296	484.19
#3	.96242	493.49	1.0027	.91899	.46096	.44234	485.83
#4	.96393	494.04	.89609	.90448	.46077	.44156	486.88

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	500.00	1.0000	1.0000	.50000	.50000	500.00
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97669	.45325	.44031	.48525	183.97	9.7676	.96863
SDev	.00866	.00191	.00491	.00268	.26	.2419	.00982
%RSD	.88667	.42200	1.1154	.55255	.14370	2.4769	1.0134

#1	.96989	.45054	.43295	.48753	183.59	9.8145	.97627
#2	.97457	.45325	.44258	.48757	184.01	9.5824	.97755
#3	.97295	.45462	.44259	.48252	184.07	9.5824	.95769
#4	.98935	.45457	.44312	.48337	184.19	10.091	.96302

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	482.45	.45820	.90447	9.8822	.89279	1.0002	.94440
SDev	.70	.00156	.00771	.1009	.00794	.0221	.00984
%RSD	.14503	.34152	.85273	1.0207	.88954	2.2046	1.0422

#1	481.81	.45685	.90442	9.9650	.89815	1.0037	.93950
#2	483.44	.45694	.90448	9.9689	.88574	.97324	.95916
#3	482.19	.45900	.91395	9.7677	.90103	1.0268	.93945
#4	482.35	.46001	.89505	9.8271	.88625	.99697	.93948

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	1.1166	1.0248	.85775	.92101	.87939	9.2664	.46133
SDev	.1149	.0093	.02579	.00351	.00079	.2751	.00264
%RSD	10.292	.91182	3.0064	.38062	.08978	2.9688	.57313

#1	1.1516	1.0248	.88641	.92182	.87843	9.1817	.45894
#2	Q1.2517	1.0248	.82606	.92563	.88004	9.3767	.46371

#3	.97835	1.0134	.86834	.91817	.87907	9.5756	.45915
#4	1.0846	1.0363	.85021	.91841	.88004	8.9316	.46353
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	10.000	.50000
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	ZN
Units	ppm
Avge	.94648
SDev	.00857
%RSD	.90552

#1	.93702
#2	.94219
#3	.95038
#4	.95634

Errors	QC Pass
Value	1.0000
Range	20.000

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Method: QUANMET Sample Name: CCV2-1 0014-087-7 Operator: MTW
 Run Time: 05/24/00 13:22:13
 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	.98567	49.344	4.9697	4.8760	4.8028	4.8235	50.442
SDev	.00241	.218	.0286	.0340	.0221	.0089	.078
%RSD	.24487	.44273	.57648	.69665	.46069	.18403	.15469
#1	.98273	49.265	4.9523	4.8843	4.8021	4.8248	50.416
#2	.98553	49.071	4.9507	4.8299	4.7719	4.8134	50.344
#3	.98863	49.518	5.0117	4.8784	4.8170	4.8211	50.505
#4	.98578	49.523	4.9641	4.9115	4.8205	4.8348	50.505
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9400	4.8671	4.8510	4.8167	50.996	48.838	4.7904
SDev	.0184	.0136	.0084	.0163	.120	.508	.0496
%RSD	.37177	.27929	.17258	.33913	.23607	1.0404	1.0354
#1	4.9176	4.8641	4.8505	4.8081	50.976	48.564	4.7691
#2	4.9441	4.8504	4.8398	4.7988	50.841	48.340	4.7307
#3	4.9363	4.8708	4.8596	4.8249	51.038	49.501	4.8370
#4	4.9619	4.8830	4.8542	4.8351	51.128	48.948	4.8249
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	49.471	4.8547	4.8439	48.816	4.8378	4.9106	4.8648
SDev	.126	.0073	.0383	.511	.0225	.0422	.0387
%RSD	.25441	.15082	.79125	1.0468	.46466	.85930	.79580
#1	49.384	4.8544	4.8274	48.612	4.8166	4.9050	4.8525
#2	49.343	4.8455	4.8037	48.201	4.8224	4.8826	4.8330
#3	49.578	4.8554	4.8510	49.341	4.8649	4.8829	4.8525
#4	49.581	4.8634	4.8936	49.112	4.8474	4.9719	4.9212
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	5.0045	4.8383	4.8819	4.8002	4.8086	9.7615	4.8497
SDev	.0405	.0098	.0722	.0191	.0109	.1083	.0153
%RSD	.81008	.20327	1.4799	.39757	.22659	1.1091	.31603
#1	5.0072	4.8254	4.8395	4.8002	4.8070	9.9224	4.8470
#2	4.9483	4.8366	4.8091	4.7732	4.7941	9.7134	4.8299

#3	5.0183	4.8483	4.9706	4.8121	4.8141	9.7222	4.8558
#4	5.0442	4.8427	4.9084	4.8151	4.8192	9.6879	4.8661
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	4.9081
SDev	.0133
%RSD	.27060

#1	4.9048
#2	4.8944
#3	4.9068
#4	4.9262

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB1

Operator: MTW

Run Time: 05/24/00 13:25:21

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	-.00035	-.00144	.01995	.02476	.00059	.00037	.01220
SDev	.00120	.01239	.02038	.00316	.00024	.00030	.00734
%RSD	345.31	858.19	102.15	12.762	40.000	79.589	60.143

#1	-.00034	-.00444	.03815	.02888	.00047	.00015	.00597
#2	-.00183	-.01664	.02378	.02228	.00047	.00016	.00661
#3	.00112	.00242	-.00920	.02228	.00047	.00040	.01486
#4	-.00034	.01289	.02708	.02560	.00094	.00078	.02139

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	.00057	.00136	.00081	.00021	.00793	.20089	.00068
SDev	.00178	.00232	.00103	.00049	.00565	.18318	.00086
%RSD	309.32	170.83	127.50	229.93	71.323	91.183	127.66

#1	.00199	.00102	.00053	-.00021	.00472	.45758	.00135
#2	-.00196	-.00170	.00161	-.00021	.00270	.20758	-.00045
#3	.00068	.00374	.00161	.00064	.00877	.06473	.00135
#4	.00159	.00238	-.00053	.00064	.01551	.07366	.00045

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	.00582	.00050	.01418	.00363	.00369	.00926	-.00499
SDev	.00559	.00114	.00610	.00686	.00222	.00370	.00006
%RSD	96.011	227.48	43.029	188.78	60.220	40.003	1.1579

#1	-.00194	.00149	.00709	.00373	.00361	.00741	-.00496
#2	.00841	-.00049	.01655	-.00373	.00067	.00734	-.00506
#3	.00582	-.00048	.02128	.00177	.00590	.00748	-.00501
#4	.01099	.00149	.01182	.01277	.00459	.01482	-.00493

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	-.02003	.00717	.01259	.00042	.00048	-.06106	.00295
SDev	.05557	.00721	.00579	.00018	.00041	.03788	.00234
%RSD	277.41	100.53	46.035	42.816	83.887	62.045	79.600

#1	.00275	.00861	.01914	.00029	.00040	-.09981	.00400
#2	.04651	-.00286	.01309	.00029	.00008	-.01109	-.00057

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#3	-.07747	.01433	.01309	.00043	.00105	-.07772	.00427
#4	-.05192	.00861	.00502	.00067	.00040	-.05561	.00408
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	.00191
SDev	.00159
%RSD	83.373

#1	.00173
#2	-.00010
#3	.00376
#4	.00225

Errors	LC Pass
High	.02000
Low	-.02000

Method: QUANMET Sample Name: DDL9LBT Operator: MTW
Run Time: 05/24/00 13:31:19
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
Avg	-.00037	-.00569	.01369	-.00741	.00010	.00000	.02987
SDev	.00119	.00696	.03649	.00001	.00011	.00006	.00193
%RSD	324.19	122.22	266.55	.09936	115.47	2999.7	6.4453

#1	-.00037	-.01131	.02010	-.00741	.00019	.00003	.03219
#2	-.00183	-.00609	-.02722	-.00742	.00000	.00003	.02954
#3	.00109	.00422	.05997	-.00740	.00019	.00003	.03023
#4	-.00037	-.00960	.00191	-.00741	.00000	-.00009	.02753

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		

Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00199	-.00171	.00067	-.00042	.00573	.00446	.00045
SDev	.00228	.00294	.00110	.00081	.00087	.09736	.00085
%RSD	114.69	171.95	164.49	191.39	15.191	2181.0	188.97

#1	.00125	-.00171	.00161	-.00105	.00607	-.12277	.00082
#2	.00537	.00237	.00000	.00063	.00472	.10044	.00098
#3	.00079	-.00443	.00161	-.00021	.00674	-.01562	.00082
#4	.00052	-.00307	-.00053	-.00106	.00539	.05580	-.00082

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00905	.00050	.00473	.00815	-.00427	-.03697	-.00253
SDev	.00999	.00000	.00273	.00328	.00390	.00008	.00494
%RSD	110.35	.16304	57.725	40.201	91.457	.21039	195.01

#1	-.01488	.00050	.00236	.01277	-.00692	-.03697	-.00502
#2	-.01488	.00050	.00709	.00806	.00021	-.03686	-.00496
#3	.00582	.00050	.00709	.00531	-.00227	-.03704	.00488
#4	-.01229	.00050	.00236	.00648	-.00810	-.03701	-.00504

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	

Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01639	.00427	-.00354	-.00022	.00000	-.03882	-.00080
SDev	.01939	.00547	.01437	.00005	.00016	.03447	.00005
%RSD	118.26	127.95	405.92	22.951	197e6	88.780	6.6559

#1	-.04466	.00855	-.00305	-.00019	.00008	-.05545	-.00084
#2	-.00819	.00284	.00099	-.00019	.00008	-.06655	-.00075

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#3	-.00089	-.00286	-.02318	-.00019	.00008	-.04435	-.00075
#4	-.01183	.00855	.01107	-.00029	-.00024	.01106	-.00085

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.00966
SDev	.00063
%RSD	6.5546

#1	.00999
#2	.00996
#3	.00998
#4	.00871

Errors	NOCHECK
High	
Low	

Method: QUANMET Sample Name: DDJPKBT

Operator: MTW

Run Time: 05/24/00 13:34:27

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
Avg	-.00036	.00349	.17087	.04539	.00771	-.00003	.11021
SDev	.00120	.00731	.09891	.00001	.00022	.00007	.00322
%RSD	332.47	209.81	57.886	.01387	2.8926	214.68	2.9185
#1	-.00037	-.00435	.19460	.04539	.00755	.00003	.11038
#2	.00112	.00787	.25260	.04538	.00755	.00002	.11450
#3	-.00037	.01129	.02718	.04539	.00802	-.00009	.10910
#4	-.00183	-.00086	.20911	.04539	.00774	-.00009	.10684
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK
High	.50000		.50000		10.000		
Low	-.50000		-.50000		-10.000		
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.00136	.00161	-.00021	.00860	.24553	.00036
SDev	.00063	.00358	.00157	.00119	.00085	.34312	.00076
%RSD	561.88	263.73	98.037	571.30	9.8722	139.75	212.07
#1	-.00029	-.00034	.00161	.00063	.00742	.23437	.00008
#2	.00094	.00647	.00374	.00064	.00944	.72543	.00135
#3	.00025	-.00171	.00107	-.00021	.00877	.09152	.00045
#4	-.00045	.00102	.00000	-.00189	.00877	-.06919	-.00045
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.10000		.50000				
Low	-.10000		-.50000				
Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00453	.00025	.00000	S-.11848	.00554	-.03320	-.00493
SDev	.00495	.00049	.00273	.00000	.00753	.01958	.00013
%RSD	109.42	198.31	212240.	.00000	135.84	58.980	2.5370
#1	.00582	.00050	.00236	S-.11848	.00956	-.02217	-.00485
#2	.01099	.00050	-.00236	S-.11848	.00891	-.01460	-.00487
#3	.00065	-.00049	-.00236	S-.11848	.00943	-.03698	-.00487
#4	.00065	.00050	.00237	S-.11848	-.00574	-.05905	-.00511
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK
High						.50000	
Low						-.50000	
Elem	SE	SI	SN	SR	TI	TL	V_
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01456	.04710	.02066	.00252	.00008	.00821	.00030
SDev	.02939	.03138	.02632	.00012	.00026	.02097	.00235
%RSD	201.85	66.624	127.43	4.7820	326.60	255.33	782.38
#1	.01370	.01997	-.00708	.00246	.00008	-.02223	-.00084
#2	-.00452	.02003	.02318	.00246	.00040	.01091	.00382

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#3	-.05559	.07134	.01107	.00270	.00008	.02209	-.00093
#4	-.01182	.07705	.05546	.00246	-.00024	.02207	-.00084

Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High	.25000						
Low	-.25000						

Elem	ZN
Units	ppm
Avge	.00422
SDev	.00066
%RSD	15.599

#1	.00479
#2	.00375
#3	.00479
#4	.00356

Errors	NOCHECK
High	
Low	

Method: QUANMET Sample Name: DDL9LCT

Operator: MTW

Run Time: 05/24/00 13:37:34

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	.04965	1.9614	2.2471	.99912	1.8941	.04642	L.17964
SDev	.00145	.0222	.0266	.00696	.0178	.00030	.00247
%RSD	2.9181	1.1335	1.1841	.69648	.93836	.65338	1.3727

#1	.05036	1.9449	2.2746	.98883	1.8744	.04605	L.18056
#2	.05038	1.9397	2.2127	1.0020	1.8857	.04629	L.17948
#3	.04748	1.9830	2.2596	1.0042	1.9149	.04666	L.17633
#4	.05038	1.9779	2.2415	1.0015	1.9015	.04667	L.18218

Errors	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Low
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	.04400	.46664	.19226	.24652	1.0203	L.21875	.96867
SDev	.00311	.00342	.00216	.00042	.0085	.22272	.01774
%RSD	7.0684	.73306	1.1216	.17197	.83091	101.82	1.8312

#1	.04267	.46188	.18972	.24630	1.0143	L.27901	.95153
#2	.04828	.46731	.19132	.24631	1.0136	L.10044	.96416
#3	.04102	.46732	.19346	.24631	1.0217	L-.00670	.99356
#4	.04401	.47004	.19454	.24716	1.0318	L.50222	.96544

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	L.00517	.47389	-.00103	S-.11848	.46988	.43806	L.00131
SDev	.00533	.00306	.00236	.00000	.01070	.02509	.00011
%RSD	103.08	.64618	229.76	.00000	2.2775	5.7269	8.6580

#1	L.00582	.47216	-.00221	S-.11848	.45509	.46193	L.00115
#2	L-.00194	.47117	-.00221	S-.11848	.47104	.40302	L.00133
#3	L.00582	.47413	-.00221	S-.11848	.48059	.43991	L.00140
#4	L.01099	.47809	.00252	S-.11848	.47281	.44737	L.00137

Errors	LC Low	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	2.2167	.07585	.02794	.95221	.00008	1.8856	.46442
SDev	.0361	.03464	.01658	.00808	.00046	.1258	.00342
%RSD	1.6296	45.672	59.361	.84884	565.69	6.6722	.73536

#1	2.1656	.10576	.03752	.94264	.00008	1.8027	.45994
#2	2.2204	.08870	.03349	.94890	-.00024	1.9577	.46469

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#3	2.2496	.02595	.03752	.96094	-.00024	1.7582	.46825
#4	2.2314	.08299	.00323	.95637	.00073	2.0240	.46479
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	.51239						
SDev	.00596						
%RSD	1.1626						
#1	.50519						
#2	.51576						
#3	.51007						
#4	.51855						
Errors	LC Pass						
High	.60000						
Low	.40000						

Method: QUANMET Sample Name: DDGT8T

Operator: MTW

Run Time: 05/24/00 13:40:47

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	-.00378	.05134	.24756	.04730	1.2967	.00016	H700.54
SDev	.00140	.00283	.02644	.00136	.0085	.00000	3.35
%RSD	37.106	5.5188	10.678	2.8840	.65383	1.1961	.47849
#1	-.00488	.04787	.21214	.04701	1.2911	.00016	H697.26
#2	-.00341	.05481	.24479	.04894	1.2918	.00016	H704.44
#3	-.00488	.05135	.25940	.04759	1.2949	.00016	H698.27
#4	-.00195	.05134	.27392	.04565	1.3092	.00016	H702.17
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	.00068	.01304	.08509	.04973	.15647	6.5110	.02005
SDev	.00185	.00171	.00293	.00144	.00201	.2891	.00061
%RSD	272.59	13.126	3.4452	2.8960	1.2876	4.4406	3.0511
#1	-.00043	.01134	.08349	.04784	.15698	6.4574	.02031
#2	.00241	.01542	.08937	.05121	.15698	6.9306	.01994
#3	-.00134	.01270	.08295	.04952	.15361	6.2789	.01925
#4	.00207	.01269	.08456	.05036	.15833	6.3771	.02068
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	10.527	.80698	.00357	S-.11848	.03645	6.0237	.05136
SDev	.069	.00352	.00236	.00000	.01533	.0291	.11000
%RSD	.65496	.43591	66.231	.00000	42.065	.48370	214.20
#1	10.442	.80203	.00239	S-.11848	.01550	5.9812	.11269
#2	10.535	.80895	.00711	S-.11848	.05238	6.0330	.10316
#3	10.519	.80697	.00239	S-.11848	.03908	6.0327	L-.11351
#4	10.610	.80994	.00239	S-.11848	.03885	6.0477	.10309
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	.03705	5.0218	.02715	1.5510	-.04263	.01945	-.00006
SDev	.03212	.0548	.00973	.0082	.00042	.05830	.00072
%RSD	86.708	1.0919	35.846	.52557	.97618	299.71	1207.2
#1	-.00034	4.9747	.03400	1.5446	-.04279	.04714	-.00068
#2	.05802	5.0603	.01983	1.5471	-.04214	.02497	.00061

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#3	.06895	4.9747	.03698	1.5494	-.04311	.06936	-.00068
#4	.02155	5.0775	.01781	1.5629	-.04247	-.06366	.00051
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	.02858
SDev	.00087
%RSD	3.0565

#1	.02822
#2	.02885
#3	.02965
#4	.02761

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDGTNT Operator: MTW
 Run Time: 05/24/00 13:44:00
 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	-.00384	.02896	.15605	.05971	.85181	.00015	566.73
SDev	.00140	.00710	.04540	.00222	.00701	.00000	2.78
%RSD	36.461	24.529	29.096	3.7201	.82249	.00358	.49070
#1	-.00201	.03245	.11057	.05990	.84156	.00015	564.97
#2	-.00348	.03065	.20513	.05661	.85720	.00015	565.26
#3	-.00494	.01853	.18342	.06048	.85343	.00015	565.85
#4	-.00494	.03420	.12510	.06184	.85504	.00015	570.87
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	.00412	.02516	.00013	.41580	.00915	6.9485	.00542
SDev	.00091	.00249	.00101	.00278	.00115	.1822	.00081
%RSD	22.095	9.8822	773.70	.66915	12.571	2.6229	14.858
#1	.00487	.02653	-.00054	.41180	.00798	6.8860	.00534
#2	.00287	.02244	-.00054	.41770	.00932	6.7342	.00443
#3	.00404	.02380	-.00000	.41770	.00865	7.0110	.00550
#4	.00471	.02789	.00160	.41602	.01067	7.1628	.00640
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	8.4977	1.0298	-.00236	S-.11848	.01816	13.214	.06186
SDev	.0540	.0054	.00000	.00000	.00543	.045	.04433
%RSD	.63496	.52274	.00728	.00000	29.896	.34315	71.659
#1	8.4188	1.0234	-.00236	S-.11848	.02386	13.181	.08412
#2	8.5197	1.0313	-.00236	S-.11848	.01741	13.217	-.00463
#3	8.5119	1.0283	-.00236	S-.11848	.02033	13.181	.08407
#4	8.5403	1.0362	-.00236	S-.11848	.01104	13.277	.08390
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	.00733	3.1110	.00546	.82007	-.03425	-.04439	.00381
SDev	.02938	.0189	.02218	.00628	.00056	.05613	.00000
%RSD	400.97	.60854	406.45	.76529	1.6302	126.46	.05266
#1	.02465	3.0853	-.01462	.81093	-.03344	.02761	.00381
#2	-.01182	3.1253	.02129	.82513	-.03441	-.02773	.00381

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#3	.03924	3.1253	-.01259	.82162	-.03473	-.09424	.00381
#4	-.02276	3.1082	.02775	.82262	-.03441	-.08317	.00381
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	.08538
SDev	.00216
%RSD	2.5336

#1	.08466
#2	.08723
#3	.08699
#4	.08264

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDGTQT

Operator: MTW

Run Time: 05/24/00 13:47:08

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	-.00383	.01047	.16622	.00942	.58517	.00006	H740.95
SDev	.00074	.00102	.03773	.00172	.00061	.00007	1.98
%RSD	19.329	9.6938	22.698	18.250	.10460	122.52	.26682

#1	-.00346	.01130	.18347	.01044	.58452	.00002	H743.24
#2	-.00494	.01140	.19444	.00908	.58479	.00016	H741.21
#3	-.00346	.00956	.17621	.00715	.58565	.00002	H738.42
#4	-.00346	.00962	.11076	.01102	.58574	.00002	H740.92

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	.00065	.00625	-.00321	.02381	.00979	3.1071	.00190
SDev	.00113	.00193	.00107	.00146	.00115	.3896	.00053
%RSD	174.09	30.851	33.330	6.1362	11.766	12.540	28.193

#1	.00211	.00625	-.00268	.02423	.00861	3.1986	.00189
#2	.00067	.00761	-.00268	.02507	.00996	3.4129	.00263
#3	.00046	.00352	-.00482	.02170	.01131	2.5379	.00173
#4	-.00064	.00762	-.00268	.02423	.00928	3.2789	.00135

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	7.6414	.95073	-.00118	S-.11848	.00699	4.3437	.08876
SDev	.0308	.00206	.00236	.00000	.00350	.0509	.04300
%RSD	.40296	.21642	200.24	.00000	50.036	1.1728	48.443

#1	7.6452	.95320	.00237	S-.11848	.00591	4.3787	.02464
#2	7.6789	.95122	-.00236	S-.11848	.00765	4.3346	.11341
#3	7.6039	.94826	-.00236	S-.11848	.00301	4.2754	.11343
#4	7.6375	.95023	-.00236	S-.11848	.01138	4.3862	.10358

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	-.00908	1.5855	.01975	.98448	-.04561	.08553	.00294
SDev	.04933	.0257	.03385	.00065	.00031	.06971	.00179
%RSD	543.09	1.6187	171.42	.06609	.67662	81.510	61.108

#1	.05383	1.5727	.06585	.98410	-.04537	.00520	.00390
#2	.00642	1.6240	.00776	.98396	-.04601	.13817	.00025

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#3	-.04464	1.5727	-.01443	.98444	-.04537	.04950	.00380
#4	-.05194	1.5727	.01982	.98540	-.04569	.14923	.00381
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	.05753
SDev	.00121
%RSD	2.0976

#1	.05746
#2	.05668
#3	.05673
#4	.05926

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDGTWT

Operator: MTW

Run Time: 05/24/00 13:50:20

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
Avge	-.00198	.03237	.17333	.02341	1.2477	.00025	567.17
SDev	.00239	.00997	.06497	.01660	.0139	.00012	2.25
%RSD	120.66	30.809	37.483	70.892	1.1145	47.993	.39654

#1	-.00197	.02371	.12519	.03680	1.2336	.00028	569.26
#2	-.00200	.04103	.11785	.00906	1.2480	.00016	564.33
#3	-.00490	.02376	.19429	.03874	1.2428	.00040	566.45
#4	.00095	.04098	.25596	.00905	1.2666	.00015	568.66

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	.00297	.01849	-.00174	.02045	.00477	4.9441	.00519
SDev	.00436	.00303	.00301	.00319	.00209	.5317	.00030
%RSD	146.55	16.361	172.54	15.604	43.806	10.755	5.7492

#1	.00601	.02224	-.00000	.02003	.00460	5.1807	.00512
#2	.00738	.01542	-.00428	.01834	.00595	4.5378	.00534
#3	-.00020	.01953	.00160	.02508	.00190	5.5825	.00550
#4	-.00130	.01679	-.00428	.01834	.00662	4.4753	.00481

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	12.277	.82274	-.00473	S-.11848	.01343	31.136	.07654
SDev	.061	.00333	.00473	.00000	.00986	.155	.03441
%RSD	.49729	.40450	100.02	.00000	73.442	.49756	44.950

#1	12.240	.82176	-.00236	S-.11848	.02226	31.108	.02493
#2	12.263	.82077	-.00236	S-.11848	-.00066	31.004	.09365
#3	12.237	.82076	-.01182	S-.11848	.01687	31.071	.09383
#4	12.367	.82768	-.00236	S-.11848	.01523	31.359	.09377

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	.00002	3.3208	.02368	.94735	-.03489	-.00666	.00258
SDev	.03553	.0257	.00824	.00897	.00032	.02860	.00235
%RSD	203860.	.77382	34.781	.94699	.92378	429.43	91.164

#1	-.03737	3.3080	.02344	.93855	-.03473	.02654	.00381
#2	-.01913	3.3079	.01368	.94746	-.03473	.00445	-.00094

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#3	.01368	3.3080	.02377	.94375	-.03538	-.03990	.00363
#4	.04288	3.3593	.03385	.95964	-.03473	-.01773	.00380

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	.10505
SDev	.00156
%RSD	1.4870

#1	.10632
#2	.10638
#3	.10321
#4	.10431

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDFV6T Operator: MTW
Run Time: 05/24/00 13:53:28
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
Avge	-.00476	.08450	.22553	.05310	1.0163	.00012	H777.02
SDev	.00267	.01437	.01397	.00204	.0084	.00012	11.97
%RSD	56.120	17.007	6.1962	3.8402	.82260	104.20	1.5408
#1	-.00768	.07363	.20471	.05480	1.0278	.00002	H759.40
#2	-.00183	.10494	.23353	.05480	1.0154	.00028	H785.91
#3	-.00329	.07536	.23015	.05209	1.0077	.00015	H780.28
#4	-.00622	.08408	.23372	.05072	1.0142	.00002	H782.48
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	-.00107	-.00146	-.00294	.06003	.05648	1.7879	.00117
SDev	.00207	.00261	.00404	.00109	.00276	.2269	.00119
%RSD	193.44	179.43	137.20	1.8145	4.8784	12.692	101.88
#1	.00183	-.00351	-.00642	.06045	.05446	1.6718	-.00008
#2	-.00296	.00195	-.00000	.06130	.06053	2.0468	.00279
#3	-.00203	-.00349	.00107	.05877	.05514	1.8950	.00098
#4	-.00113	-.00077	-.00642	.05961	.05581	1.5379	.00098
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	100.00	100.00	400.00	1000.0	20.000
Low	-.00500	-.05000	-.01000	-.02500	-.10000	-5.0000	-.05000

Elem	MG	MN	MO	NA	NI	PB	SB
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.726	.19075	.00237	S-.11848	.01197	.00360	.00509
SDev	.055	.00206	.00000	.00000	.00423	.02796	.01608
%RSD	.30857	1.0787	.01737	.00000	35.367	776.68	315.99
#1	17.781	.18828	.00237	S-.11848	.00688	.00721	-.01456
#2	17.758	.19322	.00237	S-.11848	.01723	.02217	.02481
#3	17.660	.19026	.00237	S-.11848	.01159	.02201	.00504
#4	17.704	.19125	.00237	S-.11848	.01218	-.03699	.00506
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	-.01347	1.6797	.01887	2.6018	-.04698	.01710	.00390
SDev	.04321	.0086	.02234	.0164	.00083	.05312	.00001
%RSD	320.77	.50975	118.42	.63098	1.7715	310.67	.20523
#1	-.05542	1.6697	-.00896	2.6233	-.04795	.01158	.00389
#2	-.00434	1.6868	.01744	2.6019	-.04601	.06691	.00390

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#3	-.03718	1.6754	.02139	2.5835	-.04666	-.05491	.00391
#4	.04306	1.6868	.04560	2.5983	-.04730	.04481	.00389
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	.07218
SDev	.00197
%RSD	2.7351

#1	.06962
#2	.07397
#3	.07166
#4	.07347

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: DDFV6TP5 Operator: MTW
Run Time: 05/24/00 13:56:41
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	-.00146	.01823	.06252	.03550	.21302	.00006	161.09
SDev	.00140	.00919	.03586	.00381	.00154	.00006	.92
%RSD	96.498	50.433	57.357	10.742	.72312	106.24	.57029
#1	-.00184	.02696	.08524	.03880	.21260	.00003	160.87
#2	-.00035	.01649	.04160	.03219	.21260	.00015	161.80
#3	-.00035	.02337	.09973	.03880	.21166	.00002	161.82
#4	-.00328	.00608	.02353	.03220	.21524	.00003	159.89
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	.00089	-.00044	-.00027	.01159	.01126	.44642	.00028
SDev	.00233	.00192	.00271	.00119	.00128	.54813	.00078
%RSD	262.76	441.42	1003.2	10.275	11.355	122.78	279.24
#1	.00371	-.00044	-.00214	.01074	.01211	-.23883	.00029
#2	.00143	.00229	.00053	.01075	.01211	.65400	-.00008
#3	-.00188	-.00179	.00321	.01327	.01143	1.0558	.00135
#4	.00029	-.00180	-.00268	.01158	.00941	.31473	-.00045
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	3.7363	.04101	-.00473	279.16	.00443	-.01664	-.00487
SDev	.0269	.00000	.00273	4.58	.00250	.02855	.00005
%RSD	.71956	.00255	57.757	1.6390	56.561	171.52	1.1141
#1	3.7285	.04101	-.00709	282.78	.00368	-.04434	-.00481
#2	3.7130	.04102	-.00236	276.09	.00368	.01481	-.00492
#3	3.7285	.04102	-.00236	274.40	.00806	-.00007	-.00491
#4	3.7751	.04101	-.00709	283.36	.00230	-.03698	-.00483
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	-.01272	.33539	.01565	.54673	-.00911	-.03868	.00228
SDev	.00547	.02810	.01859	.00331	.00085	.09974	.00229
%RSD	43.021	8.3791	118.79	.60531	9.3655	257.82	100.38
#1	-.01546	.35675	-.00503	.54643	-.00927	-.17719	-.00103
#2	-.00816	.34540	.03330	.54594	-.00830	-.04427	.00381

#3	-.00816	.34540	.02926	.54330	-.00862	.02226	.00382
#4	-.01911	.29401	.00506	.55124	-.01023	.04446	.00253
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 .01476
SDev .00031
%RSD 2.1261

#1 .01482
#2 .01484
#3 .01505
#4 .01431

Errors LC Pass
High 100.00
Low -.02000

Method: QUANMET Sample Name: DDFV6ST Operator: MTW
 Run Time: 05/24/00 13:59:49
 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
Avge	.87017	.07705	5.0741	.05078	44.652	.00015	H728.91
SDev	.00768	.00241	.1626	.00092	.626	.00001	2.28
%RSD	.88294	3.1260	3.2045	1.8028	1.4021	3.1994	.31223
#1	.86215	.08044	4.8303	.05074	43.863	.00014	H726.19
#2	.86505	.07709	5.1614	.05015	44.433	.00015	H728.97
#3	.87675	.07533	5.1468	.05209	45.148	.00015	H728.71
#4	.87675	.07533	5.1577	.05016	45.162	.00015	H731.76
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	.93545	-.00623	4.2214	.05371	.05633	1.5424	.00162
SDev	.01031	.00102	.0182	.00069	.00064	.3371	.00056
%RSD	1.1027	16.437	.43191	1.2796	1.1439	21.857	34.802
#1	.92056	-.00716	4.2005	.05371	.05583	2.0111	.00189
#2	.93841	-.00477	4.2214	.05287	.05650	1.3504	.00098
#3	.94438	-.00651	4.2187	.05371	.05583	1.2522	.00135
#4	.93844	-.00650	4.2449	.05455	.05717	1.5558	.00226
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	16.292	.17766	.00355	S-.11848	.01527	4.4088	-.01731
SDev	.150	.00169	.00236	.00000	.00720	.0527	.04430
%RSD	.91903	.94970	66.507	.00000	47.163	1.1957	255.95
#1	16.110	.17544	.00710	S-.11848	.02428	4.3368	-.03925
#2	16.229	.17741	.00237	S-.11848	.00863	4.4550	-.03952
#3	16.400	.17939	.00237	S-.11848	.01037	4.4034	.04914
#4	16.428	.17840	.00237	S-.11848	.01779	4.4402	-.03960
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	1.0297	1.4727	.01975	2.3692	-.04223	-.00233	.00367
SDev	.0674	.0033	.01077	.0311	.00055	.09331	.00180
%RSD	6.5474	.22290	54.501	1.3108	1.3037	4007.5	48.956
#1	1.0825	1.4698	.03326	2.3301	-.04150	.13340	.00637
#2	1.0680	1.4755	.02318	2.3584	-.04214	-.07714	.00276

#3	1.0351	1.4755	.01351	2.3935	-.04247	-.02170	.00276
#4	.93301	1.4698	.00906	2.3948	-.04279	-.04388	.00281
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	.06654
SDev	.00243
%RSD	3.6504

#1	.06370
#2	.06654
#3	.06964
#4	.06628

Errors	LC Pass
High	100.00
Low	-.02000

Method: QUANMET Sample Name: CCV2-2

Operator: MTW

Run Time: 05/24/00 14:03:02

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	.98847	51.387	5.1601	5.0564	5.0875	5.0337	49.459
SDev	.00460	.125	.0242	.0153	.0143	.0104	.362
%RSD	.46542	.24281	.46853	.30177	.28138	.20665	.73261

#1	.99067	51.466	5.1276	5.0523	5.0913	5.0310	49.585
#2	.99362	51.233	5.1803	5.0464	5.0668	5.0242	49.761
#3	.98321	51.341	5.1765	5.0789	5.0920	5.0311	48.933
#4	.98636	51.508	5.1560	5.0478	5.0998	5.0485	49.559

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	4.8754	4.8682	4.8360	5.1483	51.841	52.981	5.2531
SDev	.0105	.0154	.0221	.0227	.135	.520	.0426
%RSD	.21636	.31713	.45798	.44142	.26006	.98180	.81084

#1	4.8847	4.8774	4.8424	5.1393	51.860	53.546	5.2678
#2	4.8824	4.8801	4.8547	5.1224	51.918	53.278	5.1971
#3	4.8615	4.8461	4.8039	5.1754	51.646	52.680	5.2987
#4	4.8729	4.8692	4.8429	5.1561	51.942	52.421	5.2489

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	51.312	4.8798	4.8984	52.236	4.8656	4.8893	5.0422
SDev	.089	.0174	.0334	.288	.0148	.0266	.0200
%RSD	.17389	.35578	.68281	.55177	.30353	.54341	.39578

#1	51.342	4.8853	4.9079	52.483	4.8618	4.8747	5.0395
#2	51.208	4.8942	4.8937	51.850	4.8803	4.9118	5.0398
#3	51.280	4.8546	4.8558	52.427	4.8466	4.8592	5.0206
#4	51.417	4.8853	4.9363	52.184	4.8735	4.9114	5.0689

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	5.2748	5.0005	4.8364	5.0538	4.9649	9.9518	4.9305
SDev	.0517	.0110	.1023	.0121	.0086	.2576	.0134
%RSD	.98091	.21911	2.1151	.24018	.17364	2.5883	.27126

#1	5.2037	4.9920	4.9065	5.0602	4.9665	9.7022	4.9328
#2	5.3243	4.9920	4.8238	5.0364	4.9643	9.7570	4.9349

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#3	5.2978	5.0032	4.6966	5.0551	4.9539	10.181	4.9115
#4	5.2733	5.0150	4.9187	5.0636	4.9749	10.167	4.9428

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	4.8986
SDev	.0193
%RSD	.39469

#1	4.9013
#2	4.9121
#3	4.8705
#4	4.9105

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB2

Operator: MTW

Run Time: 05/24/00 14:06:10

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	.00073	.00424	.03543	.00743	.00035	.00019	.00157
SDev	.00073	.00548	.04922	.01715	.00024	.00012	.00370
%RSD	100.41	129.32	138.93	230.88	66.667	63.277	235.30
#1	.00109	.00248	.08908	.02228	.00047	.00003	-.00317
#2	.00109	.00771	.00540	-.00743	.00047	.00016	.00179
#3	-.00037	-.00268	.06367	-.00742	.00000	.00029	.00179
#4	.00109	.00944	-.01644	.02228	.00047	.00029	.00587
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	.00063	.00034	.00081	-.00021	.00253	.10714	-.00000
SDev	.00236	.00176	.00127	.00069	.00150	.21704	.00037
%RSD	375.84	519.71	157.94	328.11	59.123	202.57	420e6
#1	-.00177	-.00170	-.00053	-.00105	.00202	-.17634	-.00045
#2	-.00081	.00239	.00215	.00063	.00202	.34151	.00008
#3	.00342	.00101	.00161	-.00021	.00135	.18080	.00045
#4	.00167	-.00035	.00000	-.00021	.00472	.08259	-.00008
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	-.00517	.00050	.01300	.00216	-.00089	-.02401	-.01489
SDev	.01274	.00000	.00236	.00977	.00326	.04108	.02408
%RSD	246.22	.14318	18.181	451.99	366.97	171.11	161.73
#1	-.01488	.00050	.01182	-.00020	-.00188	-.08126	.00479
#2	.00582	.00050	.01655	-.00138	-.00456	-.00731	.00476
#3	.00582	.00050	.01182	-.00609	-.00039	.01476	-.02473
#4	-.01746	.00050	.01182	.01631	.00327	-.02223	-.04438
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	.00822	-.05852	.01405	-.00014	.00040	-.04989	-.00064
SDev	.04174	.02569	.00624	.00006	.00026	.03447	.00005
%RSD	508.09	43.897	44.402	40.415	65.320	69.089	7.4464
#1	-.03373	-.07136	.01919	-.00009	.00008	-.02216	-.00066
#2	.01004	-.01999	.00506	-.00019	.00040	-.03328	-.00057

Analysis Report

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#3	.06474	-.07136	.01703	-.00019	.00040	-.04434	-.00066
#4	-.00819	-.07136	.01492	-.00009	.00073	-.09977	-.00066

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	.00011
SDev	.00037
%RSD	327.48

#1	-.00031
#2	-.00009
#3	.00043
#4	.00042

Errors	LC Pass
High	.02000
Low	-.02000

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Analysis Report

05/24/00 02:12:24 PM

page 1

Method: QUANMET Sample Name: DDFV6DT

Operator: MTW

Run Time: 05/24/00 14:09:18

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
Avg	.90087	.08797	5.2304	.04981	45.814	.00012	H749.45
SDev	.00189	.01100	.0853	.00258	.199	.00006	3.56
%RSD	.20950	12.500	1.6307	5.1845	.43424	53.213	.47522
#1	.90160	.10141	5.2193	.05286	45.967	.00015	H744.79
#2	.90014	.07538	5.1795	.04879	45.775	.00015	H749.36
#3	.89868	.09096	5.1685	.05073	45.548	.00015	H750.20
#4	.90306	.08412	5.3540	.04685	45.966	.00002	H753.43
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	.96822	-.00180	4.3195	.05413	.05768	1.6026	.00177
SDev	.00749	.00124	.0188	.00084	.00101	.1701	.00057
%RSD	.77383	69.280	.43454	1.5561	1.7553	10.613	32.334
#1	.95801	-.00014	4.2974	.05456	.05852	1.4397	.00135
#2	.97285	-.00281	4.3220	.05455	.05650	1.7165	.00119
#3	.97469	-.00270	4.3156	.05455	.05852	1.7790	.00226
#4	.96733	-.00153	4.3429	.05287	.05717	1.4754	.00226
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	16.742	.18186	.00355	S-.11848	.01187	4.5382	-.04029
SDev	.037	.00057	.00453	.00000	.00666	.0457	.00029
%RSD	.21975	.31354	127.35	.00000	56.093	1.0060	.70860
#1	16.757	.18137	.00710	S-.11848	.01648	4.4995	-.03997
#2	16.759	.18136	.00237	S-.11848	.01864	4.6028	-.04024
#3	16.687	.18236	.00710	S-.11848	.00693	4.5142	-.04030
#4	16.764	.18235	-.00236	S-.11848	.00543	4.5364	-.04066
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	1.0862	1.5269	.02620	2.4417	-.04295	.06968	.00298
SDev	.0193	.0276	.04965	.0096	.00032	.04819	.00006
%RSD	1.7769	1.8059	189.46	.39417	.75047	69.161	1.8632
#1	1.0680	1.5497	-.02524	2.4478	-.04279	.11121	.00300
#2	1.0752	1.5383	.02318	2.4394	-.04343	.08909	.00296

#3	1.1117	1.5326	.01309	2.4291	-.04279	.00042	.00304
#4	1.0898	1.4869	.09378	2.4504	-.04279	.07800	.00291

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	.06785
SDev	.00151
%RSD	2.2319

#1	.06886
#2	.06681
#3	.06942
#4	.06633

Errors	LC Pass
High	100.00
Low	-.02000

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Analysis Report

05/24/00 02:15:37 PM

page 1

Method: QUANMET Sample Name: CCV2-3

Operator: MTW

Run Time: 05/24/00 14:12:31

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
Avge	.98498	50.708	5.1312	4.9727	4.9942	4.9776	49.718
SDev	.00256	.243	.0833	.0264	.0332	.0241	.113
%RSD	.25977	.47988	1.6236	.53071	.66512	.48440	.22652
#1	.98615	50.947	5.1216	4.9899	5.0348	5.0073	49.625
#2	.98755	50.666	5.1788	4.9732	4.9782	4.9682	49.879
#3	.98158	50.387	5.0180	4.9353	4.9584	4.9506	49.709
#4	.98466	50.833	5.2063	4.9925	5.0053	4.9843	49.659
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000	55.000	5.5000	5.5000	5.5000	5.5000	55.000
Low	.90000	45.000	4.5000	4.5000	4.5000	4.5000	45.000
Elem	CD	CO	CR	CU	FE	K_	LI
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8706	4.8533	4.8338	5.0421	51.579	51.427	5.0682
SDev	.0211	.0094	.0106	.0408	.119	.382	.0670
%RSD	.43316	.19324	.21974	.80994	.23159	.74259	1.3225
#1	4.8544	4.8598	4.8419	5.0887	51.708	51.733	5.1198
#2	4.9012	4.8516	4.8440	5.0246	51.577	51.671	5.0606
#3	4.8675	4.8408	4.8264	4.9951	51.420	50.894	4.9762
#4	4.8594	4.8612	4.8231	5.0600	51.609	51.412	5.1161
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	50.719	4.8664	4.8653	50.669	4.8387	4.8891	4.9239
SDev	.321	.0086	.0173	.587	.0304	.0218	.0653
%RSD	.63225	.17767	.35493	1.1577	.62877	.44509	1.3266
#1	51.115	4.8714	4.8559	51.142	4.8410	4.9113	4.8821
#2	50.522	4.8694	4.8842	50.617	4.8574	4.8670	4.9114
#3	50.403	4.8535	4.8464	49.860	4.7950	4.8744	5.0196
#4	50.835	4.8714	4.8748	51.058	4.8614	4.9040	4.8823
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	5.1872	4.9360	4.8779	4.9756	4.9137	9.7663	4.9038
SDev	.1032	.0257	.0427	.0295	.0176	.0886	.0111
%RSD	1.9891	.52063	.87548	.59239	.35902	.90684	.22690
#1	5.3308	4.9232	4.8675	5.0112	4.9356	9.6707	4.9116
#2	5.1917	4.9745	4.9363	4.9590	4.9056	9.8827	4.9050

Analysis Report

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page 2

#3	5.1255	4.9229	4.8340	4.9451	4.8946	9.7736	4.8876
#4	5.1007	4.9232	4.8736	4.9872	4.9188	9.7382	4.9107
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	4.8906
SDev	.0046
%RSD	.09348

#1	4.8912
#2	4.8917
#3	4.8843
#4	4.8952

Errors	LC Pass
High	5.5000
Low	4.5000

Method: QUANMET Sample Name: CCB3

Operator: MTW

Run Time: 05/24/00 14:15:39

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
Avge	-.00000	-.00621	.02733	.01568	.00047	.00026	.00566
SDev	.00140	.00738	.03095	.01548	.00034	.00012	.00323
%RSD	78728.	118.77	113.26	98.680	71.077	47.590	57.084
#1	.00109	-.00273	.00912	.02558	.00019	.00016	.00715
#2	-.00037	-.01146	.02738	.02229	.00047	.00016	.00327
#3	-.00183	-.01316	.00193	.02228	.00028	.00029	.00273
#4	.00110	.00248	.07089	-.00741	.00094	.00041	.00950
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	.00058	-.00034	.00094	.00084	.00422	.04911	.00027
SDev	.00036	.00193	.00119	.00042	.00178	.15333	.00090
%RSD	61.771	561.94	126.01	49.990	42.096	312.24	339.61
#1	.00046	.00102	.00161	.00063	.00405	.17187	.00045
#2	.00024	-.00307	.00054	.00063	.00337	-.10491	-.00082
#3	.00054	-.00034	.00215	.00147	.00270	.18973	.00008
#4	.00109	.00102	-.00053	.00063	.00675	-.06027	.00135
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	-.00259	-.00049	.01655	.00275	.00311	-.04985	-.00256
SDev	.00574	.00000	.00000	.00599	.00489	.02209	.00492
%RSD	221.74	.07766	.00160	217.75	157.48	44.320	192.35
#1	-.00453	-.00049	.01655	.00020	-.00247	-.04428	-.00508
#2	-.00453	-.00049	.01655	-.00413	.00884	-.08131	-.00495
#3	.00582	-.00049	.01655	.00531	.00499	-.02953	.00482
#4	-.00711	-.00049	.01655	.00963	.00106	-.04428	-.00501
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	-.01913	-.03140	.00755	-.00019	.00016	-.00281	-.00057
SDev	.01428	.02677	.00688	.00000	.00048	.04282	.00000
%RSD	74.621	85.261	91.051	.00000	300.00	1523.9	.41216
#1	-.00454	-.01999	.01309	-.00019	.00073	-.02221	-.00057
#2	-.02278	-.07136	-.00103	-.00019	-.00024	-.00001	-.00057

#3	-.01184	-.01999	.01314	-.00019	-.00024	.05538	-.00057
#4	-.03736	-.01428	.00502	-.00019	.00040	-.04440	-.00057
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	.00082
SDev	.00027
%RSD	33.266

#1	.00097
#2	.00093
#3	.00041
#4	.00096

Errors	LC Pass
High	.02000
Low	-.02000

Metals Preparation Log



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

Method: 3010 A		Matrix: Water		Start Time: 0900		SDG: _____		Balance# _____		Replicate: 3rd conc. HNO ₃		6425N 20050611/12/13	
Analyst: D. O. Smith		Date: 5-24-00		Lot Number: CCE90057		Lab Lot No. (book, page, line): 0014-089-1		4850.114-13		5th 1:1 HCl		0014-095-3	
Reviewed by: _____		Date: 5-24-00		CCE900139		MS 14.5 AEU		Tul 5 PLVE					
Sample ID	Init Wt/Vol g/mL	Final Vol mL	Comments	Color Pre	Color Post	Clarity Pre	Clarity Post	Texture Pre	Texture Post	Artifacts	Artifact Codes		
1. DDEVL	50.1	50.1	6.5-5-24-00								S=Stones		
2. DDEVL 5			6.5-5-24-00								O=Organic (plant mat)		
3. DDEVL D			6.5-5-24-00								W=free H ₂ O		
4. DDEVL 8			6.5-5-24-00								G=Glass		
5. DDEVL 10			6.5-5-24-00								M=Metal Fragments		
6. DDEVL 10			6.5-5-24-00								R=Rubber/Plastic		
7. DDEVL 10			6.5-5-24-00								C=Clath		
8. DDEVL 10			6.5-5-24-00								P=Paper		
9. DDEVL 10			6.5-5-24-00								I=Insects		
10. DDEVL 10			6.5-5-24-00										
11. DDEVL 10			6.5-5-24-00										
12. DDEVL 10			6.5-5-24-00										
13. DDEVL 10			6.5-5-24-00										
14. DDEVL 10			6.5-5-24-00										
15. DDEVL 10			6.5-5-24-00										
16. DDEVL 10			6.5-5-24-00										
17. DDEVL 10			6.5-5-24-00										
18. DDEVL 10			6.5-5-24-00										
19. DDEVL 10			6.5-5-24-00										
20. DDEVL 10			6.5-5-24-00										
21. DDEVL 10			6.5-5-24-00										
22. DDEVL 10			6.5-5-24-00										
23. DDEVL 10			6.5-5-24-00										
24. DDEVL 10			6.5-5-24-00										

6571742

PSR024 5/22/00 2:18:34 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: FAUSTG

METHOD: QO Inductively Coupled Plasma (6010B)

<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>
4A	DDFV6	___	235412	399411	A-34-QO	C0E190257	001		SOLID	0	3
4A	DDGT8	___	235413	054156	A-34-QO	C0E200139	001		SOLID	0	1
4A	DDGTN	___	235414	054156	A-34-QO	C0E200139	002		SOLID	0	1
4A	DDGTQ	___	235415	054156	A-34-QO	C0E200139	003		SOLID	0	1
4A	DDGTW	___	235416	054156	A-34-QO	C0E200139	004		SOLID	0	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

Geoffrey O. Braust
Geoffrey O. Braust

Geoffrey O. Braust
Geoffrey O. Braust

5-22-00 0440
5-22-00 0510

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

PSR024 5/24/00 5:38:03 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 003

REQUESTED BY: FAUSTG

METHOD: QO Inductively Coupled Plasma (6010B)

<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>
4A	DDFV6	— — —	236289	399411	A-34-QO	COE190257	001		SOLID	0	3 1

RELINQUISHED BY

Geoffrey O. Graust
Geoffrey O. Graust

RECEIVED BY

Geoffrey O. Graust
Geoffrey O. Graust

DATE/TIME

5-24-00 0745
5-24-00 0910

6571744

PSR024 5/24/00 5:38:03 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 004

REQUESTED BY: FAUSTG

METHOD: QM Inductively Coupled Plasma (60108 Trace)

STORAGE LOCATION	WORK ORDER #	PICKED	CONTROL #	CLIENT #	ANALYSIS	LOTID	SMP#	SFX	MATRIX DESCRIPTION	QTY	QTY
		CNTR#								RCVD	REQD
4A	DDGT8	___	236290	054156	A-46-QM	COE200139	001		SOLID	0	1 1
4A	DDGTN	___	236291	054156	A-46-QM	COE200139	002		SOLID	0	1 1
4A	DDGTQ	___	236292	054156	A-46-QM	COE200139	003		SOLID	0	1 1
4A	DDGTW	___	236293	054156	A-46-QM	COE200139	004		SOLID	0	1 1
4F	DDK90	___	236294	399411	I-05-QM	COE230195	001		WATER	0	9 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

Geoffrey O. Braust
Geoffrey O. Braust

Geoffrey O. Braust
Geoffrey O. Braust

5-24-00 0745
5-24-00 0910

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

STL-Pittsburgh Atomic Absorption Data for Mercury

Instrument: PS200HG

Analyst Name: William A. HopleDate of Analysis: 5-24-00File ID: 0524HGAMatrix: WATER

Lot Number/SDG

Method

COE190257 (TCLP)7470ACOE170258COE180333COE190253

↓

09:29:52 24 May 2000

Folder: 0524HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0	09:29:52 24 May 2000 HG			
Hg	.000	ppb	3193					
*** Standard: 2 Rep: 1				Seq: 1	09:32:11 24 May 2000 HG			
Hg	.200	ppb	49591	0014-106-5				
*** Standard: 3 Rep: 1				Seq: 2	09:34:25 24 May 2000 HG			
Hg	.500	ppb	124535	0014-107-1				
*** Standard: 4 Rep: 1				Seq: 3	09:36:28 24 May 2000 HG			
Hg	1.00	ppb	244448	0014-107-2				
*** Standard: 5 Rep: 1				Seq: 4	09:38:22 24 May 2000 HG			
Hg	5.00	ppb	1253295	0014-107-3				
*** Standard: 6 Rep: 1				Seq: 5	09:40:20 24 May 2000 HG			
Hg	10.0	ppb	2464536	0014-107-4				

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS

RunFold: 0524HGA Seq: 6 Batch:

Prnt: R/T On

Pump: On

Rev: 4.2 09:48:36 24 May 2000 Xmit: Off Gas: 0.30 LPM

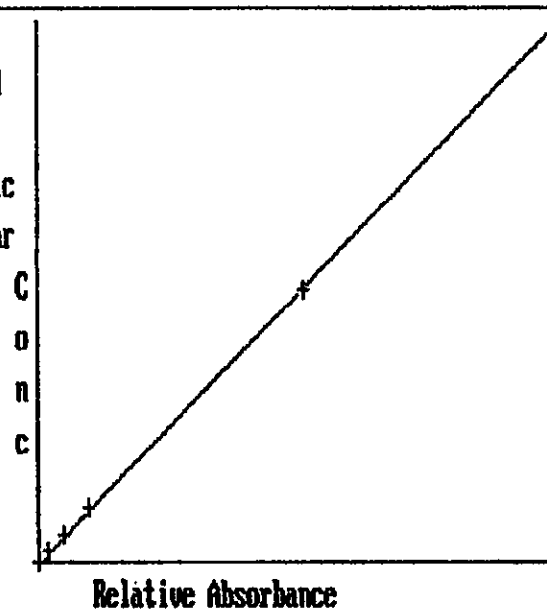
State: Idle

User: WAH

A/S: On

CALIBRATION: Line proto: HGMET

	Hg	Accepted
	Conc.	Calc. Dev. ->linear
S1	.000	.002 .002 Quadratic
S2	.200	.190 -.010 Wtdlinear
S3	.500	.494 -.006
S4	1.00	.979 -.021 Accept
S5	5.00	5.06 .065
S6	10.0	9.97 -.030
A	.000000	r .999965
B	4.04954e-6	C -1.05796e-2



	Mean	SD
S1	3193	3193
S2	49591	49591
S3	124535	124535
S4	244448	244448
S5	1253295	1253295
S6	2464536	2464536

New cal coefficients stored

6571748

William a Hoyle 5-24-00

09:43:02 24 May 2000				Folder: 0524HGA	Page 894
				Protocol: HGMET	
Line	Conc.	Units	SD/RSD	1	2
*** Sample ID: ICV5-1				Seq: 6	09:43:02 24 May 2000 HG
Hg	2.56	ppb	634360		0014-107-5
*** Sample ID: ICB1				Seq: 7	09:45:03 24 May 2000 HG
Hg	-.003	ppb	1860		
*** Sample ID: CCV5-1				Seq: 8	09:46:57 24 May 2000 HG
Hg	5.12	ppb	1267264		0014-107-6
*** Sample ID: CCB1				Seq: 9	09:49:41 24 May 2000 HG
Hg	.064	ppb	18508		
*** Sample ID: DDL21BT				Seq: 10	09:51:51 24 May 2000 HG
Hg	-.023	ppb	-3024		
*** Sample ID: DDL21CT				Seq: 11	09:53:40 24 May 2000 HG
Hg	2.71	ppb	672347		0014-107-7
*** Sample ID: DDJPKBT				Seq: 12	09:55:51 24 May 2000 HG
Hg	.122	ppb	32707		
*** Sample ID: DDFV6T				Seq: 13	09:57:40 24 May 2000 HG
Hg	.037	ppb	11847		
*** Sample ID: DDFV6ST				Seq: 14	10:00:05 24 May 2000 HG
Hg	5.03	ppb	1244943		SP.REC. 100%
*** Sample ID: DDFV6DT				Seq: 15	10:02:07 24 May 2000 HG
Hg	5.03	ppb	1243854		SP.REC. 100%
*** Sample ID: DDL23B				Seq: 16	10:04:19 24 May 2000 HG
Hg	.056	ppb	16482		
*** Sample ID: DDL23C				Seq: 17	10:06:23 24 May 2000 HG
Hg	2.47	ppb	612054		0014-107-8

10:08:52 24 May 2000

Folder: 0524HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDALR				Seq: 18	10:08:52 24 May 2000 HG			
Hg	.063	ppb	18051					
*** Sample ID: DDALT				Seq: 19	10:10:45 24 May 2000 HG			
Hg	-.023	ppb	-3098					
*** Sample ID: CCV5-2				Seq: 20	10:12:32 24 May 2000 HG			
Hg	5.04	ppb	1247079					
*** Sample ID: CCB2				Seq: 21	10:14:50 24 May 2000 HG			
Hg	.045	ppb	13648					
*** Sample ID: DDALV				Seq: 22	10:17:00 24 May 2000 HG			
Hg	.116	ppb	31327					
*** Sample ID: DDALW				Seq: 23	10:19:02 24 May 2000 HG			
Hg	.037	ppb	11716					
*** Sample ID: DDE30				Seq: 24	10:20:54 24 May 2000 HG			
Hg	.013	ppb	5826					
*** Sample ID: DDE33				Seq: 25	10:22:58 24 May 2000 HG			
Hg	.112	ppb	30350					
*** Sample ID: DDE33S				Seq: 26	10:25:19 24 May 2000 HG			
Hg	1.12	ppb	280386					SP.REC. 101%
*** Sample ID: DDE33D				Seq: 27	10:27:24 24 May 2000 HG			
Hg	1.03	ppb	256472					SP.REC. 92%
*** Sample ID: DDE34				Seq: 28	10:29:15 24 May 2000 HG			
Hg	.192	ppb	49961					
*** Sample ID: DDE35				Seq: 29	10:31:05 24 May 2000 HG			
Hg	.021	ppb	7820					

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10:32:54 24 May 2000 Folder: 0524HGA Page 896
 Protocol: HGMET

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDE36				Seq: 30		10:32:54 24 May 2000	HG	
Hg	.039	ppb	12326					
*** Sample ID: DDFTA				Seq: 31		10:34:43 24 May 2000	HG	
Hg	.099	ppb	27045					
*** Sample ID: CCV5-3				Seq: 32		10:37:22 24 May 2000	HG	
Hg	5.04	ppb	1247428					
*** Sample ID: CCB3				Seq: 33		10:39:12 24 May 2000	HG	
Hg	-.047	ppb	-9074					
*** Sample ID: DDFTD				Seq: 34		10:41:03 24 May 2000	HG	
Hg	.012	ppb	5542					
*** Sample ID: DDFTE				Seq: 35		10:43:18 24 May 2000	HG	
Hg	.207	ppb	53714					
*** Sample ID: DDFTF				Seq: 36		10:45:10 24 May 2000	HG	
Hg	-.023	ppb	-2944					
*** Sample ID: DDFTG				Seq: 37		10:47:14 24 May 2000	HG	
Hg	.009	ppb	4756					
*** Sample ID: DDL25BF				Seq: 38		10:49:05 24 May 2000	HG	
Hg	.022	ppb	7926					
*** Sample ID: DDL25CF				Seq: 39		10:50:58 24 May 2000	HG	
Hg	2.52	ppb	624104		0014-106-9			
*** Sample ID: DDALRF				Seq: 40		10:53:21 24 May 2000	HG	
Hg	.029	ppb	9778					
*** Sample ID: DDALTF				Seq: 41		10:55:34 24 May 2000	HG	
Hg	.095	ppb	26081					

10:57:44 24 May 2000

Folder: 0524HGA
Protocol: HGMET

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDALVF				Seq: 42	10:57:44 24 May 2000 HG			
Hg	.023	ppb	8237					
*** Sample ID: DDALWF				Seq: 43	10:59:46 24 May 2000 HG			
Hg	.029	ppb	9744					
*** Sample ID: CCV5-4				Seq: 44	11:01:50 24 May 2000 HG			
Hg	4.94	ppb	1223030					
*** Sample ID: CCB4				Seq: 45	11:03:42 24 May 2000 HG			
Hg	.024	ppb	8471					
*** Sample ID: DDE30F				Seq: 46	11:05:56 24 May 2000 HG			
Hg	.107	ppb	28918					
*** Sample ID: DDE33F				Seq: 47	11:07:59 24 May 2000 HG			
Hg	.006	ppb	4159					
*** Sample ID: DDE33SF				Seq: 48	11:10:40 24 May 2000 HG			
Hg	.995	ppb	248415					
*** Sample ID: DDE33DF				Seq: 49	11:12:34 24 May 2000 HG			
Hg	1.05	ppb	262056					
*** Sample ID: DDE34F				Seq: 50	11:15:07 24 May 2000 HG			
Hg	.077	ppb	21616					
*** Sample ID: DDE35F				Seq: 51	11:17:25 24 May 2000 HG			
Hg	.091	ppb	25049					
*** Sample ID: DDE36F				Seq: 52	11:19:28 24 May 2000 HG			
Hg	.061	ppb	17719					
*** Sample ID: DDFTAF				Seq: 53	11:21:20 24 May 2000 HG			
Hg	.007	ppb	4322					

SP. REC.
100%SP. REC.
105%

6571752

11:24:06 24 May 2000 Folder: 0524HGA Page 898
Protocol: HGMET

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: DDFTDF								
Hg	.082	ppb	22958					
Seq: 54								11:24:06 24 May 2000 HG
*** Sample ID: DDFTEF								
Hg	.021	ppb	7899					
Seq: 55								11:26:04 24 May 2000 HG
*** Sample ID: CCV5-5								
Hg	4.92	ppb	1217068					
Seq: 56								11:28:27 24 May 2000 HG
*** Sample ID: CCB5								
Hg	.071	ppb	20027					
Seq: 57								11:30:32 24 May 2000 HG
*** Sample ID: DDFTFF								
Hg	.053	ppb	15727					
Seq: 58								11:32:48 24 May 2000 HG
*** Sample ID: DDFTGF								
Hg	.061	ppb	17686					
Seq: 59								11:34:43 24 May 2000 HG
*** Sample ID: CCV5-6								
Hg	4.92	ppb	1218242					
Seq: 60								11:38:19 24 May 2000 HG
*** Sample ID: CCB6								
Hg	.027	ppb	9279					
Seq: 61								11:40:43 24 May 2000 HG

END OF ANALYSIS

WAH

5-24-00

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 0524HGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
State: Idle	Rev: 4.2	08:32:03 24 May 2000	Xmit: Off Gas: LPM
		User: WAM	A/S: On

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	DDL21BT	1.0000	1.0000		
6	DDL21CT	1.0000	1.0000		
7	DDJPKBT	1.0000	1.0000		
8	DDFV6T	1.0000	1.0000		
9	DDFV6ST	1.0000	1.0000		
10	DDFV6DT	1.0000	1.0000		
11	DDL23B	1.0000	1.0000		
12	DDL23C	1.0000	1.0000		
13	DDALR	1.0000	1.0000		
14	DDALT	1.0000	1.0000		
15	CCV5-2	1.0000	1.0000		

PgDn

Cup 1 ID: ICV5-1	Cell down mode Ins to switch

6571754

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 0524HGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
Rev: 4.2	08:32:04 24 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
16 CCB2		1.0000	1.0000		
17 DDALV		1.0000	1.0000		
18 DDALW		1.0000	1.0000		
19 DDE30		1.0000	1.0000		
20 DDE33		1.0000	1.0000		
21 DDE33S		1.0000	1.0000		
22 DDE33D		1.0000	1.0000		
23 DDE34		1.0000	1.0000		
24 DDE35		1.0000	1.0000		
25 DDE36		1.0000	1.0000		
26 DDFTA		1.0000	1.0000		
27 CCV5-3		1.0000	1.0000		
28 CCB3		1.0000	1.0000		
29 DDFTD		1.0000	1.0000		
30 DDFTE		1.0000	1.0000		

PgDn

Cup 16 ID: CCB2	Cell down mode Ins to switch

RunProt: HGMET	STL-PITTSBURGH METALS ANALYSIS		
RunFold: 0524HGA	Seq: 0	Batch:	
	Prnt: R/T On	Pump: Off	
State: Idle	Rev: 4.2	08:32:06 24 May 2000	Xmit: Off Gas: LPM
		User: WAH	A/S: On

AUTOSAMPLER: Rack Edit		rack: RACK1	PgUp
cup ID	Extended id	Weight Volume Macro	check macros
31 DDFTF		1.0000 1.0000	
32 DDFTG		1.0000 1.0000	
33 DDL25BF		1.0000 1.0000	
34 DDL25CF		1.0000 1.0000	
35 DDALRF		1.0000 1.0000	
36 DDALTF		1.0000 1.0000	
37 DDALVF		1.0000 1.0000	
38 DDALWF		1.0000 1.0000	
39 CCV5-4		1.0000 1.0000	
40 CCB4		1.0000 1.0000	
41 DDE30F		1.0000 1.0000	
42 DDE33F		1.0000 1.0000	
43 DDE33SF		1.0000 1.0000	
44 DDE33DF		1.0000 1.0000	

PgDn

Cup 31 ID: DDFTF

Cell down mode Ins to switch

RunProt: HGMET STL-PITTSBURGH METALS ANALYSIS
RunFold: 0524HGA Seq: 0 Batch:
Prnt: R/T On Pump: Off
Rev: 4.2 08:37:10 24 May 2000 Xmit: Off Gas: LPM
State: Idle User: WAH A/S: On

AUTOSAMPLER: Rack Edit rack: RACK2
cup ID Extended id Weight Volume Macro check macros
1 DDE34F 1.0000 1.0000
2 DDE35F 1.0000 1.0000
3 DDE36F 1.0000 1.0000
4 DDFTAF 1.0000 1.0000
5 DDFTDF 1.0000 1.0000
6 DDFTEF 1.0000 1.0000
7 CCV5-5 1.0000 1.0000
8 CCB5 1.0000 1.0000
9 DDFTFF 1.0000 1.0000
10 DDFTGF 1.0000 1.0000
11 CCV5-6 1.0000 1.0000
12 CCB6 1.0000 1.0000
13 1.0000 1.0000
14 1.0000 1.0000
15 1.0000 1.0000

PgDn

Cup 13 ID:

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



014-4169

Serial Number 069 Log Book Number 96-MT-576 Start Time 08:00-08:15

Sample ID	Date Rec'd	Prep Date	Prepared By	Wt/Vol	Sample Type	Run Date	Comments
1. STD0	N/A	5-24-00	WAAH	100ml	WATER	5-24-00	N/A
2. STD1							0014-106-5
3. STD2							0014-107-1
4. STD3							0014-107-3
5. STD4							0014-107-3
6. STD5							0014-107-4
7. ICLV							0014-107-5
8. TCB							N/A
9. CCV							0014-102-6
10. CCB							N/A
11. DDL21BT							0014-107-7
12. DDL31CT							N/A
13. DD3PKBT							0014-107-7
14. DDLV6T	5-19-00						N/A
15. DDLV6ST							+5ml 0014-106-3
16. DDLV6BT							+5ml 0014-106-3
17. DDL23B	N/A						N/A
18. DDL23C							0014-107-8
19. DDL23A	5-17-00						N/A
20. DDL23T							
21. DDL23V							
22. DDL23W							
23. DDL230	5-18-00						
24. DDL233							
25. DDL235							+1ml 0014-106-3
Reagents		Vol (ml)			Ref. Number		Method
HNO3	3.5ml				MAILLACKRODT 6623 N35058		7470A AUTOCALAVE 15PSI 120°C
H2SO4	5.0ml				MAILLACKRODT 5557 N21813		5NCL2 = 0014-094-10
KMNO4	15.0ml				0014-099-8		46CL-NH2OH = 0014-097-7
K2S2O4	8.0ml				0014-090-11		WAAH 5-24-00
Extract(s)			Extract(s) Received				Extract(s) Relinquished
(Record line number from above)	Date	Time	Analyst	Location	Date	Time	Analyst
			WAAH		5-24-00		

Hg Digestion Log

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



QUA-4169

Serial Number 070 Log Book Number 96-MT-576 Start Time 08:00 → 08:15

Sample ID	Date Rec'd	Prep Date	Prepared By	WVVol	Sample Type	Run Date	Comments	
1. DDE33D	5-18-00	5-24-00	WAH	100ml	WATER	5-24-00	+1ml 0014-106-3	
2. DDE34							N/A	
3. DDE35								
4. DDE36								
5. DDE37A	5-19-00							
6. DDE37D								
7. DDE37E								
8. DDE37F								
9. DDE37G								
10. DDE35BF	N/A							
11. DDE35CF							0014-107-9	
12. DDE35DF	5-17-00						N/A	
13. DDE35EF								
14. DDE35FF								
15. DDE35GF								
16. DDE35HF	5-18-00							
17. DDE35IF								
18. DDE35JF							+1ml 0014-106-3	
19. DDE35KF							+1ml 0014-106-3	
20. DDE35LF								
21. DDE35MF							N/A	
22. DDE35NF								
23. DDE35OF	5-19-00							
24. DDE35PF								
25. DDE35QF								
Reagents		Vol (mL)		Ref. Number			Method	
HNO3	2.5ml			MAILLACKRODT 6623 N35058			7410A AUTOCLAVE 15PSI 120°C	
H2SO4	5.0ml			MAILLACKRODT 5557 N21813			SACLA = 0014-094-10	
KMNO4	15.0ml			0014-099-8			NaCl-NH3OH = 0014-097-1	
K2S2O4	8.0ml			0014-090-11			WAH 5-24-00	
Extract(s)	(Record line number from above)	Extract(s) Received						Extract(s) Relinquished
	Date	Time	Analyst	Location	Date	Time	Analyst	Location

6571758

Quanterra Incorporated
450 William Pitt Way
Pittsburgh, Pennsylvania 15238
412/836-5477 FAX-412/836-5571



Environmental

[illegible]

6571760

PSR024 5/23/00 11:17:21 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: HOYLEW

METHOD: 08 Mercury (7470A, Cold Vapor) - Liquid

<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>
4A	DDFV6 DDJPKB	— — —	236167	399411	A-OM-08	COE190257	001		SOLID TCP LEACHATE	0	3 1

RELINQUISHED BYRECEIVED BYDATE/TIME

<u>William A Hoyle</u>	<u>William A Hoyle</u>	<u>5-24-00</u>	<u>05:50</u>
<u>William A Hoyle</u>	<u>William A Hoyle</u>	<u>5-24-00</u>	<u>07:05</u>

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

STL Pittsburgh

6108

GENERAL CHEMISTRY DATA

6571762

UXB INTERNATIONAL

Client Sample ID: DF/S1/0138/GRAB/001

General Chemistry

Lot-Sample #....: C0E190257-001 Work Order #....: DDFV6 Matrix.....: SOLID
 Date Sampled....: 05/18/00 Date Received...: 05/19/00
 % Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	6.6		No Units	SW846 9045C	05/20/00	0141108
		Dilution Factor: 1		MS Run #.. 0141013		
Ignitability	NO	--	No Units	SW846 SECTION 7.1	05/21/00	0142115
		Dilution Factor: 1		MS Run #. ... 0142021		
Percent Solids	84.4	1.0	%	MCAWW 160.3 MOD	05/20-05/21/00	0141094
		Dilution Factor: 1		MS Run #..... 0141005		
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	05/21/00	0142125
		Dilution Factor: 1		MS Run #.....: 0142023		
Reactive Sulfide	ND	200	mg/kg	SW846 7.3.4	05/21/00	0142124
		Dilution Factor: 1		MS Run #..... 0142022		

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C0E190257

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Reactive Cyanide	ND	Work Order #: DDH4W101 200	mg/kg	MB Lot-Sample #: A0E210000-125 SW846 7.3 3	05/21/00	0142125
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: DDH4V101 200	mg/kg	MB Lot-Sample #: A0E210000-124 SW846 7.3.4	05/21/00	0142124
		Dilution Factor: 1				

NOTE(S) :

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

6571764

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: COE190257

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
pH	101	Work Order #: DDGEN101 (85 - 115)	LCS Lot-Sample#: COE200000-108 SW846 9045C	05/20/00	0141108
		Dilution Factor: 1			

NOTE(S) :

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: C0E190257

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

Matrix.....: SOLID

Date Sampled...: 05/18/00

Date Received..: 05/19/00

‡ Moisture.....: 13

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Solids	86.8	86.7	%	0.086	(0-20)	SD Lot-Sample #: MCAWW 160.3 MOD	COE190169-007 05/20-05/21/00	0141094
Dilution Factor: 1								
Prep Date..... 0141005 Analysis Date... Prep Batch #....								

Dilution Factor: 1

Prep Date..... 0141005 Analysis Date...

Prep Batch #...:

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: C0E190257

Work Order #...: DD91R-SMP
DD91R-DUP

Matrix.....: SOLID

Date Sampled...: 05/15/00

Date Received..: 05/16/00

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide						SD Lot-Sample #:	G0E160250-002	
ND	ND		mg/kg	0	(0-20)	SW846 7.3.3	05/21/00	0142125

Dilution Factor: 1

Prep Date.....: 0142023 Analysis Date. . Prep Batch #....:

Reactive Sulfide					SD Lot-Sample #: G0E160250-002			
ND	ND	mg/kg	0	(0-20)	SW846 7.3.4	05/21/00	0142124	

Dilution Factor. 1

Prep Date.....: 0142022 Analysis Date...: Prep Batch #...:

Method: *Ignitability*ANALYST: *ERIC L. WESOLOSKI*DATE: *5-21-00*BATCH: *0142115*TIME: *10:40*

SAMPLE ID

RESULT

*COE190257-001**NO**↓ -001 Dup**NO**COE180303-001**NO**CHK
5-21-00*

Reviewed by

REKURAGUA

Date

*5-21-00**E. L. W.*
5-21-00

0071

7008

Quanterra Environmental Services

pH LOG SHEET

Lot No. COE190257 Batch No. 0141108 SDG No. ~~0141108~~ ^{ELW} Includes attachment(s) BALANCE Page 094817 of 5-20-00
Analyst: ERIC L. WISLOSKI
Date: 5-20-00
Start Time: 09:45

pH Meter Calibration

Reading	Buffer	Manf. Lot No.	Rec'd	Expire
7.00	7.0	LAB CHEM 9291-13	2-29-00	11-12-01
4.00	4.0	91167-08	5-9-00	6-25-01
10.00	10.0	0010-07	2-29-00	1-11-01

LCS ID No.: 0026-06

COE190257-001=
Relative Percent Difference = 3.41.

Range = $\pm .05$ pH units

$$\frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} \times 100$$

X₁ =Original Result

X₂ = Duplicate

Sample ID	pH Reading
LCS	7.05
COE 190257-001	6.61
↓ -001 Dep	6.04
LCS	7.03

6571770

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM: 0005013

TESTED: ELW

5/20/00

CHECKED:

CREATED: 5/20/00 8:53:40 AM

REVISED: 5/20/00 9:05:41 AM

COMMENTS:

C0E190178/C0E180303/C0E190182/C0E190257/C0E190169

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.	TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC.
C0E190178	001	SMP 177	1.12	6.34	5.86	8:50	6:30	0.48	9.195	90.805
C0E190178	001 DUP	SMP 38	1.1	6.4	5.88	8:50	6:30	0.52	9.811	90.189
C0E190178	002	SMP 111	1.12	7.36	6.98	8:50	6:30	0.38	6.09	93.91
C0E190178	003	SMP C	1.12	6.38	5.75	8:50	6:30	0.63	11.977	88.023
C0E180303	001	SMP 1551	1.09	6.43	5.64	8:50	6:30	0.79	14.794	85.206
C0E190182	001	SMP 157	1.11	7.3	7.09	8:50	6:30	0.21	3.393	96.607
C0E190257	001	SMP 1051	1.13	6.7	5.83	8:50	6:30	0.87	15.619	84.381
C0E190169	001	SMP 154	1.1	6.72	5.95	8:50	6:30	0.77	13.701	86.299
C0E190169	002	SMP V	1.11	6.56	3.67	8:50	6:30	2.89	53.028	46.972
C0E190169	003	SMP 25	1.11	6.26	3.66	8:50	6:30	2.6	50.485	49.515
C0E190169	004	SMP 33	1.12	6.38	3.32	8:50	6:30	3.06	58.175	41.825
C0E190169	005	SMP 80	1.12	6.58	4.12	8:50	6:30	2.46	45.055	54.945
C0E190169	006	SMP 4	1.11	6.37	5.92	8:50	6:30	0.45	8.555	91.445
C0E190169	007	SMP 173	1.12	6.41	5.71	8:50	6:30	0.7	13.233	86.767
C0E190169	007 DUP	SMP 110	1.13	6.39	5.69	8:50	6:30	0.7	13.308	86.692
C0E190169	008	SMP 96	1.1	6.6	5.92	8:50	6:30	0.68	12.364	87.636
C0E190169	009	SMP 158	1.1	6.74	3.53	8:50	6:30	3.21	56.915	43.085
C0E190169	010	SMP 46	1.12	6.33	3.52	8:50	6:30	2.81	53.935	46.065

STL - Pittsburgh WATER CONTENT SHEET

SHEET NUM 10005013

CREATED: 5/20/00 8:53:40 AM

TESTED: ELW 5/20/00

CHECKED: *10* 5-22-00

REVISED: 5/20/00 9:05:41 AM

COMMENTS:

C0E190178/C0E190303/C0E190182/C0E190257/C0E190169

CLIENT SAMPLE IDENTIFICATION	LAB SAMP IDENT.		TARE NO.	WEIGHT TARE	WEIGHT TARE + WET SMP	WEIGHT TARE + DRY SAMP	TIME IN	TIME OUT	WEIGHT WATER	WATER CONTENT CALC.	SOLIDS CONTENT CALC.	
C0E190169	011		SMP	12	1.12	6.41	5.57	8:50	6:30	0.84	15.879	84.121 ✓
C0E190169	012		SMP	104	1.11	6.58	6.06	8:50	6:30	0.52	9.506	90.494 ✓
C0E190169	013		SMP	115	1.13	6.63	5.72	8:50	6:30	0.91	16.545	83.455 ✓
C0E190169	014		SMP	150	1.14	6.27	5.28	8:50	6:30	0.99	19.298	80.702 ✓
C0E190169	015		SMP	152	1.12	6.32	5.4	8:50	6:30	0.92	17.692	82.308 ✓
C0E190169	016		SMP	28	1.09	6.43	3.54	8:50	6:30	2.89	54.12	45.88 ✓
C0E190169	017		SMP	123	1.12	6.71	5.53	8:50	6:30	1.18	21.109	78.891 ✓
C0E190169	017 DUP		SMP	166	1.1	6.68	5.58	8:50	6:30	1.1	19.713	80.287 ✓
C0E190169	018		SMP	129	1.14	7.05	6.5	8:50	6:30	0.55	9.306	90.694 ✓
C0E190169	020		SMP	51	1.1	6.28	5.59	8:50	6:30	0.69	13.32	86.68 ✓
C0E190169	021		SMP	188	1.11	6.48	5.92	8:50	6:30	0.56	10.428	89.572 ✓
C0E190169	021 DUP		SMP	42	1.12	6.47	5.88	8:50	6:30	0.59	11.028	88.972 ✓
C0E190169	022		SMP	165	1.1	7.04	3.7	8:50	6:30	3.34	56.229	43.771 ✓
C0E190169	023		SMP	118	1.15	6.25	5.53	8:50	6:30	0.72	14.118	85.882 ✓
C0E190169	024		SMP	PU	1.1	6.39	5.59	8:50	6:30	0.8	15.123	84.877 ✓
C0E190169	025		SMP	182	1.1	6.29	5.72	8:50	6:30	0.57	10.983	89.017 ✓
C0E190169	026		SMP	1108	1.13	6.38	5.74	8:50	6:30	0.64	12.19	87.81 ✓

Oven Temperature: 103°C

Calculations:

1. $A - C = D$ 2. $B - C = E$
 3. $\frac{D}{E} \times 100 = F$ 4. $100 - F = G$

Page 5 of 10
 Includes attachment(s) BALANCE 194817
 5-20-00
 Analyst: ERIC L. WESOLOSKI
 Date 5-20-00 Time in 08:50
 Date 5-21-00 Time out 06:30
 Batch No(s): _____

SAMPLE ID	TARE NO.	(A) DRIED SAMPLE + TARE	(B) SAMPLE + TARE	(C) TARE	(D) WEIGHT OF DRY SAMPLE IN GRAMS	(E) WEIGHT OF SAMPLE IN GRAMS	(F) PERCENT SOLIDS	(G) PERCENT MOISTURE
COE190178-001	177	5.86	6.34	1.12				
-001 Dp	38	5.83	6.40	1.10				
-002	111	6.98	7.36	1.12				
-003	C	5.75	6.38	1.12				
COE180303-001	1551	5.64	6.43	1.09				
COE190182-001	157	7.09	7.30	1.11				
COE190257-001	1051	5.83	6.70	1.13				
COE190169-001	154	5.95	6.72	1.10				
-002	V	3.67	6.56	1.11				
-003	25	3.66	6.26	1.11				
-004	33	3.32	6.38	1.12				
-005	80	4.12	6.58	1.12				
-006	4	5.92	6.37	1.11				
-007	173	5.71	6.41	1.12				
-007 Dp	110	5.69	6.39	1.13				
-008	96	5.92	6.60	1.10				
-009	158	3.53	6.74	1.10				
-010	46	3.52	6.33	1.12				
-011	12	5.51	6.41	1.12				
-012	104	6.06	6.58	1.11				
-013	115	5.72	6.63	1.13				
-014	150	5.28	6.27	1.14				
-015	152	5.40	6.32	1.12				
-016	166	5.58	6.48	1.10				
-017	123	5.53	6.71	1.12				
-018	28	3.54	6.43	1.09				
-019	129	6.50	7.05	1.14				
-020	51	5.59	6.28	1.10				
-021	188	5.92	6.48	1.11				
-021 Dp	42	5.88	6.47	1.12				
-022	115	3.70	7.04	1.10				
-023	118	5.53	6.25	1.15				
-024	PU	5.59	6.39	1.10				

QUANTERRA ENVIRONMENTAL SERVICES
TOTAL SOLIDS/PERCENT MOISTURE LOG SHEET

Oven Temperature: 103°C

Page 1 of 1
Includes attachment(s) BALANCE # 194817

Calculations:

Analyst: ERIC L. WESOLOSKI

Date 5-20-00 Time in 08:50

Date 5-21-00 Time out 06:30

Batch No(s).: _____

1. $A - C = D$
2. $B - C = E$
3. $\frac{D}{E} \times 100 = F$
4. $100 - F = G$

[illegible]

6571774

PSR024 5/21/00 7:33:29 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: MESOLOSE

METHOD: IQ Ignitability (SW7.1.2)

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
4A	DDFV6-1-0G	___	235357	399411	A-88-IQ	C0E190257	001		SOLID	3	1
5E	DDDVI-1-0E	___	235356	016459	A-88-IQ	C0E180303	001		SOLID	4	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

E. L. White
E. L. White

E. L. White
E. L. White

5/21/00 (09:35)
5/21/00 (10:50)

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

6571775

PSR024 5/20/00 3:45:32 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: WESOLOSE

METHOD: OZ pH (9045C) - Non-Aqueous

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
4A	DDFV6-1-0F	— — —	235221	399411	A-88-OZ	COE190257	001		SOLID	3	1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

E. L. White
E. L. White

E. L. White
E. L. White

5/20/00 (05:45)
5/20/00 (07:15)

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

6571776

PSR024 5/20/00 3:42:56 MT

SAMPLE CUSTODIAN REMOVAL REQUEST

PAGE 001

REQUESTED BY: MESOLOSE

METHOD: SM Solids, Percent (as TS - 160.3 MOD) - Solids

<u>STORAGE LOCATION</u>	<u>WORK ORDER #</u>	<u>PICKED</u> <u>CNTR#</u>	<u>CONTROL #</u>	<u>CLIENT #</u>	<u>ANALYSIS</u>	<u>LOTID</u>	<u>SMP#</u>	<u>SFX</u>	<u>MATRIX</u> <u>DESCRIPTION</u>	<u>QTY</u> <u>RCVD</u>	<u>QTY</u> <u>REQD</u>
4A	DDFV6-1-01	— — —	235212	399411	A-88-SM	COE190257	001		SOLID	0	3 1

RELINQUISHED BY

RECEIVED BY

DATE/TIME

E. L. Moly
E. L. Moly

E. L. Moly
E. L. Moly

5/20/00 (07:40)
5/20/00 (09:15)

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

QUANTERRA- NORTH CANTON
TITRIMETRIC LOGSHEET

Analysis Sulfide React
Prep/ Anal. Date 5/21/00
Analyst JAK

Batch Number 0142124
LCS Number —
LCS Prep Date —
RL 200mg/Kg

Titrant Name N/AthioSulfate

Titrant Normality 0.02083

Titrant Standardization Date/ Initials 5-8-00, TAR

Iodine
MFG 0.02947
4/27/00

Sample Number	Sample Volume	Dil.	Titrant Vol (mL)	Final Conc.	Units	QC Calculations and Comments
BK	100mL		22.2	ND		
DD91R			22.7	ND		
DD91R (Dup)			22.0	ND		
DD920			22.1	ND		
DD921			22.3	ND		
DD94E			22.2	ND		
DD9V1			22.7	ND		
DDFV6			22.7	ND		
N/A 5-21-00						

6571778

QUANTERRA- NORTH CANTON
TITRIMETRIC LOGSHEET

Analysis CN-React
 Prep/ Anal. Date 5/21/00
 Analyst JAK

Batch Number 0142125
 LCS Number
 LCS Prep Date
 RL 200mg/kg

Titrant Name Silver Nitrate
 Titrant Normality 0.0192 N
 Titrant Standardization Date/ Initials

Sample Number	Sample Volume	Dil.	Titrant Vol (mL)	Final Conc.	Units	QC Calculations and Comments
BA	100.00		0.005	ND		
DD91R			0.005	ND		
DD91R (dup)			0.005	ND		
DD920			0.005	ND		
DD921			0.005	ND		
DD94E			0.005	ND		
DD9V1			0.005	ND		
DD9V6			0.005	ND		
JAK 5.21.00						

Rev. 10/30/98
 N:MetalsWet Log

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE