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GROUNDWATER SPECIALISTS

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ADDITIONAL SOIL INVESTIGATION ALONG SCAJAQUADA CREEK

Iroquois Gas/Westwood Pharmaceutical Site

Prepared for:

New York State Department of Environmental Conservation
250 Michigan Avenue
Buffalo, New York 14203

March 1995

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March 2, 1995

Mr. Abul Barkat
New York State Department of
Environmental Conservation
Division of Solid and Hazardous
Waste Remediation and Hazardous
Substance Regulation
250 Michigan Avenue
Buffalo, NY 14203

Reference: Additional Soil Investigation Along Scajaquada Creek at the Iroquois Gas/Westwood Pharmaceutical Site.
NYSDEC No. 915141
GeoTrans Project No. 7647-060

Dear Abul:

Enclosed please find GeoTrans' report for the collection and analysis of soil borings along Scajaquada Creek for the above referenced project. This work was performed in accordance with the sampling plan (letter dated November 14, 1994) submitted to and approved by your office. This report includes the following: a summary of the investigative approach, a summary of the analytical results, final soil boring logs, and the analytical results of the soil samples.

Please do not hesitate to call me at (703) 444-7000 if you have any questions or comments.

Sincerely,

Charles R. Faust

Charles R. Faust, Ph.D.
Principal Hydrogeologist

CRF/eb

Enclosure: as stated

cc: Beverly Pauly, Westwood (w/encl.)
Herbert Hoffman, GeoTrans (w/encl.)
Daniel Darragh, Ecert, Seamans, Cherin, Mallot (w/encl.)

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Additional Soil Investigation Along Scajaquada Creek
Iroquois Gas/Westwood Pharmaceutical Site
NYSDEC Site No. 915141

Introduction

The New York State Department of Environmental Conservation (NYSDEC) requested that additional soil samples be collected at the Iroquois Gas/Westwood Pharmaceuticals (IG/WP) Site located in Buffalo, New York. Six soil borings were proposed to be drilled in the strip of land between the future location of a sheet-piling wall and the Scajaquada Creek water line[1]. This strip of land is reported to be owned by the City of Buffalo. The sheet-piling wall is to be installed as part of the remedial action that will take place at the site.

Soil Boring Drilling and Locations

Five of the six planned soil borings were drilled along the top of the bank of the Scajaquada Creek using a truck-mounted hollow-stem-auger drill rig (CME 75 with 4.25" HSA). The northern most soil boring (S1) was not advanced due to the presence of overhead power lines and tension guide wires which prohibited rig access[2]. The five borings were located evenly spaced from the northern to the southern property boundary at approximately 90-foot intervals as field conditions allowed. Figure 1 indicates the approximate locations (not surveyed) of the five soil borings. The borings were drilled as close to the slope of the creek bank as possible within practical health and safety limits. Generally, the borings were located approximately five feet east of the slope of the creek bank.

The borings were drilled through the fill layer to the top of the silty-clay layer at the site. Split-spoon samples were collected continuously to the water table and then at five-foot

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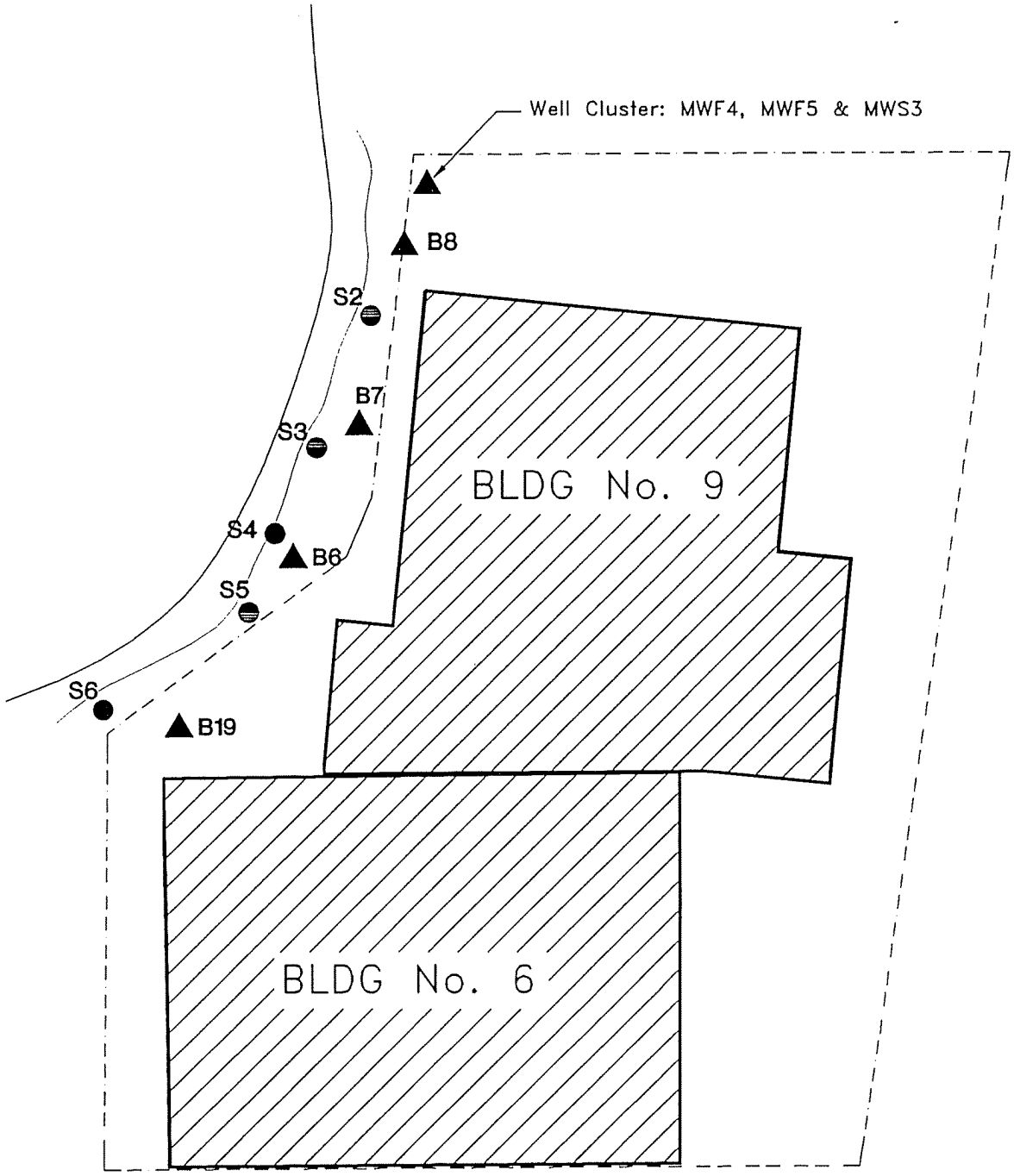
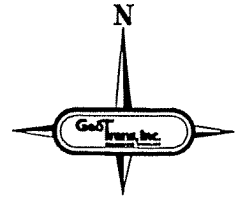
[1]Letter dated November 14, 1994, from GeoTrans to Abul Barkat, NYSDEC

[2]Letter dated December 13, 1994, from GeoTrans to Abul Barkat, NYSDEC





Legend

- ● Soil Borings (5)
- ▲ Existing Monitoring Well

GeoTrans, inc.
GROUNDWATER SPECIALISTS

ADDITIONAL SOIL BORINGS

PREPARED BY : A.V.	DATE : 9-12-94	FIGURE
CHECKED BY : A.V.	REVISED : 2-13-95	1
DRAWN BY : P.K.	DRAWING NO : 7647044A.DWG	

intervals to the top of the silty-clay layer. Geologic descriptions were consistent with practices used during the remedial investigation and as described in the IG/WP Field Sampling Plan (FSP) (dated January 1992).

The drill rig and all equipment were decontaminated in a manner consistent with practices described in the IG/WP FSP. Drilling spoil was containerized and tested in preparation for final disposal. Decontamination water was allowed to infiltrate into the subsurface around each borehole after the completion of each boring.

Chemical Sampling and Analysis

All split-spoon samples were logged and described for lithology in a manner consistent with practices described in the IG/WP FSP. Boring logs are included in Appendix A. A soil sample from each borehole was selected for chemical analysis with the exception of boring S6. Table 1 indicates the sampling depth and identification of samples collected. Selection of the interval sampled was based on visual, olfactory, and organic vapor readings which would have indicated elevated levels of contamination. Due to limited recovery (see boring log for S6) and no visual, olfactory, or organic vapor reading evidence of contamination, a soil sample from boring S6 was not collected. In addition, all of the drill rods, auger flights, and other equipment removed from borehole S6 were free from visual and olfactory evidence of contamination.

The chemical samples were analyzed for semivolatile organic compounds (NYSDEC Analytical Service Protocol Method II), lead (EPA 200 Series), and cyanide (EPA 200 Series). Additional quality assurance/quality control samples were collected in a manner consistent with those described in the IG/WP FSP. Specifically, one duplicate, matrix spike, matrix spike duplicate, and field blank were collected. Table 2 summarizes the analytical results where a particular chemical was detected in at least one of the samples. Dashes indicate that a specific compound was analyzed for but not detected. Analytes not detected in any of the samples are not included in this summary table, however, the entire results are included in Appendix B. Split samples were collected by NYSDEC field personnel where they deemed it necessary. Results of these split samples are not included in this report.

Table 1. Summary of samples collected.

Boring No.	Depth	Sample ID
S1[1]	N/A	N/A
S2	20 - 22 18 - 20	94S2-20 94S7-18 (Duplicate)
S3	20 - 22	94S3-20
S4	19 - 21	94S4-19
S5	4 - 6 6 - 8	94S5-4 94S5-6 (MS/MSD)
S6[2]	N/A	N/A
Field Blank	N/A	94FB-1
Drilling cutting	N/A	94TCLP-1

[1] No boring advanced due to the presence of overhead power lines and tension guide wires prohibiting drilling access.

[2] No sample collected due to limited recovery and no indication of contamination.

N/A Not Applicable

Table 2. Summary of analytical results.

	94S2-20	94S3-20	94S4-19	94S5-4	94S5-6 (MS/MSD)	94S7-18[5]	94FB-1[3] Field Blank	94TCLP-1
Cyanide[2]	1.62	1.65	23.2	-	-	2.65	-	
Lead[2]	81.3	104	3,530	26.8	35.2	22.3	-	
Naphthalene[4]	2,500,000	630,000	7,400	-	-	210,000	-	
Acenaphthylene	86,000	38,000	6,800	-	-	23,000	-	
Acenaphthene	480,000	230,000	6,300	-	-	130,000	-	
Fluorene	310,000	140,000	6,000	-	-	110,000	-	
Phenanthrene	790,000	390,000	6,100	610	-	270,000	-	
Anthracene	360,000	160,000	4,300	-	-	98,000	-	
Fluoranthene	340,000	140,000	18,000	1200	-	110,000	-	
Pyrene	610,000	270,000	25,000	1000	-	180,000	-	
Benzo(a)anthracene	210,000	84,000	8,700	620	-	63,000	-	
Chrysene	170,000	68,000	7,400	650	-	52,000	-	
Benzo(b)fluoranthene	120,000	45,000	9,100	860	-	36,000	-	
Benzo(k)fluoranthene	65,000	33,000	3,600	490	-	31,000	-	
Benzo(a)pyrene	190,000	75,000	7,500	540	-	54,000	-	
Indeno(1,2,3-cd)pyrene	49,000	20,000	-	-	-	-	-	
Benzo(g,h,i)perylene	67,000	28,000	-	-	-	-	-	
2-Methyl Naphthalene	1,400,000	400,000	-	-	-	140,000	-	
Dibenzofuran	66,000	27,000	-	-	-	--	-	
TCLP Metals								-
TCLP Volatiles								-
TCLP SVOCs								-
TCLP Pesticides								-
TCLP Herbicides								-

(1) See case narrative included with laboratory results.
(2) Results are reported as µg/g.
(3) Results are reported as mg/l.
(4) SVOC results are reported as µg/kg.
(5) Duplicate of 94S2-20.

Note: Dashes indicate undetected.

APPENDIX A

APPENDIX A
Soil Boring Logs

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S2
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 1 of 2
Logged By A. VINCENT

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	0-2	S1	0.6	5-11-50/31	Sandy clay (CL), dark reddish brown (10R 3/4), dry to slightly moist, soft, medium plasticity	Air Mont:(HNu)* BH = BG = S
2	2-4	S2	1	3-4-4-4 (8)	Same as S1	S = BG
4	4-6	S3	1	2-3-3-14 (6)	0-6" is same as S2 6-12" Silty sand (SM) Grayish black (N2), gap graded, loose, dry, asphaltic	S = BG = BH
6	6-8	S4	1	20-34 49-19 (83)	0-6" Fill, gravel size fragments of concrete, loose, dry 6-12" Fill, gravel size fragments of moderate reddish brown bricks (10R 4/6), dry to moist	S = BG = BH
8	8-10	S5	0.5	13-23-36-20 (59)	Same as S4	S = BG = BH
10	10-12	S6	0.3	9-10-10-9 (20)	Same as S5	S = BG = BH
12	12-14	S7	0.3	9-13--10-9 (23)	Same as S6	S = BG
14	H-16	S8	0.5	10-12-43-19 (55)	Same as S7 0-3" is same as S2	Air Mont:(HNu) S = BG

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S2
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 2 of 2
Logged By A. VINCENT

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
16	16-18	S9	0.25	9-37-32-9 (69)	Fill, angular crystalline rock (LS) fragments medium light gray (N6) with matrix of clayey gravel (GC) blackish red (5R 2/2), loose, moist, well graded, fine to coarse grained	Limited recovery due to rock jammed in split spoon S = BG = BH
18	18-20	S10	0.7	5-9-9-14 (18)	Clayey sand fill with gravel (SC) black (N1), oil saturated, oily sheen, fine to coarse grained, well graded, loose	Wet at 18" BH = 1-->5 ppm SS = 1, BZ = BG Duplicate chemical sample of 94S2-20 @ 1030 "94S7-18"
20	20-22	S11	1.3	N.R.	0-6" same as S10 with less gravel and some very light gray (N8) fluid mixed, fine grained to med, poorly graded. 6-14" Sandy clay (CL) oil saturated	BH = 15 NY DEC split S = 15 collected BZ = BG
22					0-8" same as lower section of S11 8-14" Silty Clay (CL) dark gray (N3), stiff, medium plasticity	Chemical sample 94S2-20 collected at 1040
	24-26	S12	1.3	N.R.	14-16" Silty Clay (CL) with some pebbles, rounded	BG = BZ BH = 15 S = 5
26					End of boring - 26' End of HSA - 22' End of SS - 26'	The borehole was pressure grouted to prevent migration pathways. S = spoon BH = borehole * Background (BG) = 0.5

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S3
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 1 of 2
Logged By A. VINCENT

Depth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	0-2	S1	0	3-5-13 50/0 (18)	No recovery due to concrete fill	Air Mont:(HNu,CGI, Dust)* BH = BG
2	2-4	S2	0	6-18- 26-22 (44)	No recovery due to fill - crystal-line limestone rock wedged in end of split spoon	BH = 0.3
4	4-6	S3	1	11-12 22-21 (34)	0-6" Clay (CL), grayish brown (5 YR 2/2), dry to slightly moist, stiff, low plasticity, 6-12" fill, gravel size brick and concrete fragments (GM), loose, dry	BH = BG S = BG
6	6-8	S4	1.2	13-11 -9-21 (20)	0-6" same as 0-6" of S3 6-14" Gravelly sand (SP) with orange wood chips, roots, coal, mottled colors - grey, black, orange brown, loose dry	BH = BG = S
8	8-10	S5	1.5	11-11 -12-21 (23)	0-9" clay with gravel (CL), very stiff, slightly moist, moderate yellow brown (10 YR 5/4) 9-18" fill, gravel size brick and concrete fragments	BH = BG = S
10	10-12	S6	1.3	13-19 40-24 (59)	0-6" same as S/5 (0-9") with less gravel 6-14" fill, red bricks, dry	BH = 0.3 BG = 0.2 S = 0.4
12	12-14	S7	1	17-16 -16-22 (32)	0-4" Silty clay (CL), with trace gravel, dark yellow brown (10 YR 4/2) dry to moist, firm 4-12" fill, gravelly sand, loose, moist	S = BH = BG
14	14-16	S8	1.3	4-6-6 -6 (12)	Clay (CL) moderate yellow brown (10 YR 5/4), firm, some gravel, similar to S7	BH = BG = S
16						

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S3
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 2 of 2
Logged By A. VINCENT

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
						Air Mont:(HNu,CGI,Dust)
	16-18	S9	0.5	5-13-8-8 (21)	0-3" Sand, (SP) oil-saturated black (N1), coal tar residue 3-6" Sandy clay (CL) pale yellow brown (10 YR 6/2) soft, moist to to v. moist, med. plasticity	S = 0.4 BH = BG
18	18-20	S10	0.5	5-8-12-6 (20)	Fill gravel size rock fragments coated with coal tar waste as above, grayish black oily sheen	wet @ 18" water table S = 0.4 BH = BG
20	20-22	S11	0.6	4-4-6-6 (10)	0-4" Gravel (GC) m. gray (N5) with light gray (N1) silty clay (CL) matrix, wet, loose, fine to coarse grained 4-8" fill, same as S10	Sample 94S3-20 collected at 1155 S = 20, BH = S, BZ = BG
22	22-24				No split spoon collected	
24	24-26	S12	2	2-2-4-5 (6)	First 6" is same as S10 6"-24" clay (CL) dark yellow brown (10 YR 4/2) soft, mod plasticity, v. moist	NYDEC collects split from this interval S = 5 BH = 5 BZ = BG
26					End of HSA 24' End of SS 26'	BG = Background = 0.2 BH = borehole; S =spoon *The borehole was pressure grouted to prevent migration pathways.

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S4
Date Started 12-13-94
Date Completed 12-13-94
Drilling Method 4.25" HSA CME 75
Page Number 1 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	0-2	S1	1	2-3-14-86 (17)	0-6" Sandy clay (CL) dark reddish brown (10R 3/4), moist, soft 6-12" concrete fragments, fill, dry, loose	Air Mont:(HNu)* BH = S = BG
2	2-3				No recovery due to concrete	
3	3-5	S2	1.2	2-4-5-7 (9)	Silty clay (CL) dark reddish brown (10R 3/4) slightly moist, firm to stiff, moderate plasticity	BH = S = BG
5	5-7	S3	0.7	7-8-13-14 (21)	Same as S2	BH = S = BG
7	7-9	S4	0.5	7-24-9-14 (33)	Poor recovery due to rock/concrete wedged in split spoon Fill, concrete g. size fragments dry	BH = S = BG
9	9-11	S5	0.25	11-9-9-7 (18)	Fill poor recovery due to med gray (N5) crystalline limestone fragment in split spoon	BH = S = BG
11	11-13	S6	1	12-12-21-26 (33)	0-6" Gravel (GM) size concrete fragments mixed with sand (SP) grayish brown (5 YR 3/2) fine to course grained, compact slightly moist	BH = S = BG
13					6-12" Fill, same as S3 slightly moist	

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S4
Date Started 12-13-94
Date Completed 12-13-94
Drilling Method 4.25" HSA CME 75
Page Number 2 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	13-15	S7	0.7	21-9-6 8 (15)	0-4" Fill, medium gray (N5) crystalline limestone rock fragments dry 4-8" Fill, same as 0-6" of S6 slightly moist	Air Mont:(HNu) BH = S = BG
15	15-17	S8	0	12-11- 8-6 (19)	No recovery due to concrete in split spoon tip	–
17	17-19	S9	0.5	6-6-6- 5 (12)	0-3" Fill, gravel same as S6 (0-6") 3-6" Same as S6 (6-12")	S = 0.2
19	19-21	S10	0.5	2-3-4- 7 (7)	0-3" Sandy gravel (GM), oil saturated, coal tar residue 3-6" Silty clay (CL), some silt, dusky brown (5 YR 2/2) firm, very moist, moderate plasticity	Wet @ 19' water coal tar odor sample 94S4-19 collected at 1620
21						–
	24-26	S11	1.8	2-3-3- 5 (6)	Same as S10 (3-6") no silt 16-20" Silty clay (CL), has gastropod shells, light brown	BG = S = BH –
26	26-28	S12	1.5	3-5-7- 4 (12)	Same as S11 with more silt	BG = S = BH –
28					End of HSA 24' End of SS 28'	BG = background = 0.1 BH = borehole S = spoon The borehole was pressure grouted to prevent migration pathways.

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S5
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 1 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	0-2	S1	0.7	3-4-19-23 (23)	0-4" Silty clay (CL), dusky brown (5 YR 2/2) moist, soft 4-8" Sand (SP) grayish brown (5 YR 3/2) red bricks, fine to	Air Mont:(HNu)
1					course grained, red bricks, gravely Limited recovery due to bricks	BH = BG S = BG
2	2-4	S2	0.5	8-6-8-10 (14)	Limited recovery due to red bricks 0-3" 3-6" Clay (CL), dark reddish brown (10 R 3/4) hard to stiff, dry to slightly moist	– S = BG
4	4-6	S3	0.5	6-11-12-24 (23)	Fill, same as S2	Little recovery due to red bricks S = BG Chemical Sample 94S5-4 collected at 1530
6	6-8	S4	1.2	18-20-27-18 (47)	Fill, same as S3	S = BG MS & MSD chemical sample 94MSS5-6 and 94MSDS5-6 collected at 1540
8	8-10	S5	0	16-19-19-17 (38)	No recovery	S = BH = BG
10	10-12	S6	1.3	11-9-11-11 (20)	Clay (CL), moderate brown (5 YR 3/4) hard, stiff, medium plasticity	S = BH = BG
12	12-14	S7	1	18-26-35-40 (61)	Same as S6	S = BH = BG
14						

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S5
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 2 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	14-16	S8	1	14-12-13-13 (25)	Same as S7	Air Mont:(HNu) S = BG
16					End of HSA @ 14' End of SS @ 16'	The borehole was pressure grouted to prevent migration pathways. No oil residue was encountered, no visual olfactory, or air monitoring indications of contamination. BG = background = 0.2 BH = borehole BZ = breathing zone S = spoon

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S6
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 1 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Interval	Sample Type &No.	Sample Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
	0-2	S1	0.5	5-5-6-15 (11)	Gravelly sand (SP), grayish brown (5 YR 3/2), fine to coarse grained, moist, loose, sharp contact to reddish brown clay (CL), dry to slightly moist at 3"	Air Mont:(HNu)* S = BH = BG
2	2-4	S2	0.7	16-10-21-11 (31)	Silty clay (CL) reddish brown (10 R 4/6), hard to very hard dry to slightly moist. Bottom 2" is concrete.	S = BH = BG
4	4-6	S3	0.1	2-7-7-6 (14)	Fill, concrete jammed in SS resulting in poor recovery	S = BG
6	6-8	S4	0.25	4-7-14-11 (21)	Same as S3 with gravelly sand (SP) dark brown, loose dry	S = BG
8	8-10	S5	0.5	8-10-10-10 (20)	Gravelly, sandy clay (CL), stiff, slightly moist, dark brown	S = BG
10	10-12	S6	0.1	18-19-14-7 (33)	Same as S5	S = BG
12	12-14	S7	0	13-12-16-14 (28)	No recovery	-
14	14-16	S8	0	4-6-7-9 (13)	No recovery	-

GEOLOGIC LOG

Project IG/WS
Location Buffalo, New York
Client Westwood Squibb
Driller Buffalo Drilling Inc.
Elevation
Water Level & Date

Boring Number S6
Date Started 12-14-94
Date Completed 12-14-94
Drilling Method 4.25" HSA CME 75
Page Number 2 of 2
Logged By A. Vincent

Depth BGS (ft)	Sample Int-erval	Type &No.	Rec. (ft)	SPT Result (N)	Description: Name & USCS Group Symbol, Color, Moisture Content, Rel. Density or Consistency, & Mineralogy	Remarks: incl Air, Mont, Depth of Casing, Dril Rate, & Fluid Loss
16	16-18	S9	1.1	3-5-11 -12 (16)	Clay (CL) moderate red brown (5 YR 3/4) hard-stiff, moderate plasticity	Air Mont:(HNu) S = BG = BH
18	18-20	S10	1.5	3-7-14 -16 (21)	Same as S9 Soft wet zone/saturated zone for 6" at 9"	S = BG = BH
20	20-22	S11	2	10-14- 18-20 (32)	Same as S10	S = BG = BH
22	22-24	S12	1.5	21-25- 43-36 (68)	Same as S11	S = BG = BH
24					End of HSA 20′ End of SS 24′	The borehole was pressure grouted to prevent migration pathways. No oil residue was encountered, no visual, olfactory, or air monitoring indications of contamination. BG = 0.2 ppm BH = borehole BG = background S = spoon BZ = breathing zone

APPENDIX B
Laboratory Report

General Testing Corporation

A Full Service Environmental Laboratory

JAN. 5 1995

Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Re: Westwood

Dear Mr. Anthony Bryda

Enclosed are the results of the analysis requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at 454-3760.

Thank you for letting us provide this service.

Sincerely,

GENERAL TESTING CORPORATION

Karen Bunker

Karen Bunker
Customer Service Representative

Enc.

710 Exchange Street • Rochester, NY 14608 • Tele: (716) 454-3760 • (716) 454-1245
85 Trinity Place • Hackensack, NJ 07601 • Tele: (201) 488-5242 • Fax: (201) 488-6386
435 Lawrence Bell Drive • Amherst, NY 14221 • Tele: (716) 634-0454 • Fax: (716) 634-9019
1201 E. Fayette Street, Suite 42 • Syracuse, NY 13210 • Tele: (315) 471-0936 • Fax: (315) 471-0943

General Testing Corporation

A Full Service Environmental Laboratory

Effective 10/1/91

GTC LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range and reanalysis could not be performed.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

N - Spiked sample recovery not within control limits. (Flag the entire batch - Inorganic analytes only)

* - Duplicate analysis not within control limits. (Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits. (Only used on the QC summary sheets)

M - Duplication injection precision not met (GFA only).

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

General Testing Corporation

CASE NARRATIVE

COMPANY: Geotrans Inc.
Westwood
JOB #: R94/05048

INORGANIC ANALYSIS

Geotrans soil samples were analyzed for Total Lead and Total Cyanide by SW-846 methods 6010 and 9010 respectfully. Sample 94TCLP-1 was analyzed for full TCLP metals following the TCLP extraction method 1311.

The Total Lead results have been fagged with a "N" since the matrix spike recovery on sample R94/05048-008 (68%) was outside of QC limits of 75 - 125 %. The variation in the distribution of the analytes within the soil and the difficulty in obtaining a consistent representative sample were probably the causes for the QC problems. According to EPA validation criteria all data is compliant and useable.

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

Geotrans soil sample 94TCLP-1 was analyzed for TCLP volatile organics using method 8260 following a Zero Headspace Extraction.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits for all samples.

The % RPD, the MS/MSD, and reference check recoveries associated with this analysis were all within QC limits.

The TCLP sample was analyzed at a 1/10 dilution as part of GTC's normal protocol for analyzing TCLP extracts.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

Geotrans soil samples were analyzed for the Target Compound List of semivolatile organics by method 8270 from SW-846. Soil sample 94TCLP-1 was analyzed for the TCLP list of semivolatile organics using SW-846 method 8270 following the TCLP extraction method 1311.

The initial and continuing calibration criteria were met for all analytes.

The Surrogate Standard recoveries for samples R94/05048-001, 003, and 006 were diluted due to the level of target compounds detected. The recoveries have been flagged with a "D".

The Matrix Spike/Matrix Spike Duplicate and Reference Check recoveries and the %RPD performed on sample R94/05048-008 were all within QC limits.

The TCLP sample R94/05048-005 was analyzed at 1/10 dilution as part of GTC's normal protocol for analyzing TCLP extracts.

Samples R94/05048-001, 002, 003, and 006 were analyzed at dilutions to bring target analytes within the calibration range of the method.

Di-n-butyl phthalate was detected in the Laboratory Blank. The Di-n-butyl phthalate detected in sample R94/05048-002 was flagged "B" indicating Blank contamination.

No other analytical or QC problems were encountered.

PESTICIDE/HERBICIDE ANALYSIS

Geotrans soil sample 94TCLP-1 was analyzed for TCLP Pesticides and TCLP Herbicides by SW-846 methods 8080 and 8150 after the TCLP extraction method 1311.

All initial and continuing calibration criteria were met.

The surrogate recoveries for the TCLP Pesticides, TCL Pesticides/PCBs, and TCLP Herbicides were all within QC advisory limits except for DBC on the TCLP Pesticides. This was due to matrix interferences and the recovery was flagged with an "*". The TCMX recovery was acceptable.

The TCLP Pesticides were analyzed at 1/10 dilution and the TCLP Herbicides at a 1/100 dilution as part of GTC's normal protocol.

No other analytical or QC problems were encountered.

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003		-006	
Location:		94S2-20		94S4-19		94S7-18		94S3-20	
Date Collected:	PQL	12/13/94		12/13/94		12/13/94		NA	
Time Collected:		10:40		16:20		14:40		11:55	
Solids, %		66.9		75.0		80.6		86.4	
Cyanide, Total	1.00	1.62		23.2		2.65		1.65	
Lead	5.00	81.3	N	3530	N	22.3	N	104	N

Michael K. Perry

Laboratory Director

000003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-007		-008			
Location:		94S5-4		94S5-6			
Date Collected:	PQL	12/14/94		12/14/94			
Time Collected:		15:30		15:40			
Solids, %		87.1		86.1			
Cyanide, Total	1.00	1.15 U		1.13 U			
Lead	5.00	26.8	N	35.2	N		

Michael K. Penny

Laboratory Director

000001

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference:

Westwood

Received : 12/15/94

P.O. #:

ANALYTICAL UNITS - mg/l

Location:		-004 94FB-1
Date Collected:		12/14/94
Time Collected:	PQL	17:00
Cyanide, Total	0.010	0.010 U
Lead	0.0500	0.0500 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Perry

Laboratory Director

000007

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-006	-007	-008
Location:		94S2-20	94S4-19	94S7-18	94S3-20	94S5-4	94S5-6
Date Collected:		12/13/94	12/13/94	12/13/94	NA	12/14/94	12/14/94
Time Collected:	PQL	10:40	16:20	14:40	11:55	15:30	15:40
Date Extracted:		12/19/94	12/19/94	12/19/94	12/19/94	12/19/94	12/19/94
Date Analyzed:		12/21/94	12/22/94	12/21/94	12/21/94	12/21/94	12/21/94
Dilution:		50	5	50	50	1	1
Phenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2-Chlorophenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2-Nitrophenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2,4-Dimethylphenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2,4-Dichlorophenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
4-Chloro-3-methylphenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2,4,6-Trichlorophenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2,4-Dinitrophenol	1300	100000 U	8900 U	82000 U	78000 U	1500 U	1600 U
4-Nitrophenol	1300	100000 U	8900 U	82000 U	78000 U	1500 U	1600 U
2-Methyl-4,6-dinitrophenol	1300	100000 U	8900 U	82000 U	78000 U	1500 U	1600 U
Pentachlorophenol	1300	100000 U	8900 U	82000 U	78000 U	1500 U	1600 U
2-Methylphenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
4-Methylphenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
2,4,5-Trichlorophenol	670	50000 U	4400 U	41000 U	39000 U	770 U	780 U
SURROGATE STANDARD RECOVERIES							
2-Fluorophenol	25-121%	D	93	D	D	91	69
Phenol-d6	24-113%	D	97	D	D	90	69
2,4,6-TriBromophenol	19-122%	D	93	D	D	96	72

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Pen

Laboratory Director

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General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-006	-007	-008
Location:		94S2-20	94S4-19	94S7-18	94S3-20	94S5-4	94S5-6
Date Collected:		12/13/94	12/13/94	12/13/94	NA	12/14/94	12/14/94
Time Collected:	PQL	10:40	16:20	14:40	11:55	15:30	15:40
Date Extracted:		12/19/94	12/19/94	12/19/94	12/19/94	12/19/94	12/19/94
Date Analyzed:		12/21/94	12/22/94	12/21/94	12/21/94	12/21/94	12/21/94
Dilution:		50	5	50	50	1	1
N-Nitrosodimethylamine	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Bis(2-chloroethyl) ether	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
1,3 Dichlorobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
,4 Dichlorobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
1,2 Dichlorobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
2,2'oxybis(1-Chloropropane)	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
N-Nitroso-Di-n-propylamine	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Hexachloroethane	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Nitrobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Isophorone	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
bis(-2-chloroethoxy)methane	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
1,2,4-Trichlorobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Naphthalene	330	2500000	7400	210000	630000	380 U	390 U
Hexachlorobutadiene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Hexachlorocyclopentadiene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
2-Chloronaphthalene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Dimethyl phthalate	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Acenaphthylene	330	86000	6800	23000	38000	380 U	390 U
Acenaphthene	330	480000	6300	130000	230000	380 U	390 U
2,4-Dinitrotoluene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
2,6-Dinitrotoluene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Diethyl phthalate	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
4-Chlorophenyl-phenyl-ether	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Fluorene	330	310000	6000	110000	140000	380 U	390 U
1,2-Diphenylhydrazine	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
N-Nitrosodiphenylamine	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
4-Bromophenyl-phenylether	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Hexachlorobenzene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
henanthrene	330	790000	6100	270000	390000	610	390 U
Anthracene	330	360000	4300	98000	160000	380 U	390 U
Di-n-butyl phthalate	330	25000 U	2400 B	21000 U	19000 U	380 U	390 U
Fluoranthene	330	340000	18000	110000	140000	1200	390 U
Pyrene	330	610000	25000	180000	270000	1000	390 U

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General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-006	-007	-008
Location:		94S2-20	94S4-19	94S7-18	94S3-20	94S5-4	94S5-6
Date Collected:		12/13/94	12/13/94	12/13/94	NA	12/14/94	12/14/94
Time Collected:	PQL	10:40	16:20	14:40	11:55	15:30	15:40
Date Extracted:		12/19/94	12/19/94	12/19/94	12/19/94	12/19/94	12/19/94
Date Analyzed:		12/21/94	12/22/94	12/21/94	12/21/94	12/21/94	12/21/94
Dilution:		50	5	50	50	1	1
Butyl benzyl phthalate	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
3,3'-Dichlorobenzidine	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Benzo(a)anthracene	330	210000	8700	63000	84000	620	390 U
Bis(2-ethylhexyl)phthalate	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Chrysene	330	170000	7400	52000	68000	650	390 U
Di-n-octyl phthalate	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Benzo(b)Fluoranthene	330	120000	9100	36000	45000	860	390 U
Benzo(k)fluoranthene	330	65000	3600	31000	33000	490	390 U
Benzo(a)pyrene	330	190000	7500	54000	75000	540	390 U
Indeno(1,2,3-cd)pyrene	330	49000	2200 U	21000 U	20000	380 U	390 U
Dibenzo(a,h)anthracene	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Benzo(g,h,i)perylene	330	67000	2200 U	21000 U	28000	380 U	390 U
4-Chloroaniline	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
2-Methyl Naphthalene	330	1400000	2200 U	140000	400000	380 U	390 U
2-Nitroaniline	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
3-Nitroaniline	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Dibenzofuran	330	66000	2200 U	21000 U	27000	380 U	390 U
4-Nitroaniline	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
Carbazole	330	25000 U	2200 U	21000 U	19000 U	380 U	390 U
SURROGATE STANDARD RECOVERIES							
Nitrobenzene-d5	23-120%	D	71	D	D	76	57
2-Fluorobiphenyl	30-115%	D	113	D	D	96	76
Terphenyl-d14	18-137%	D	114	D	D	88	67

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Michael K. Pearson

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-004						
Location:		94FB-1						
Date Collected:		12/14/94						
Time Collected:	PQL	17:00						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
Phenol	10	10 U						
2-Chlorophenol	10	10 U						
2-Nitrophenol	10	10 U						
2,4-Dimethylphenol	10	10 U						
2,4-Dichlorophenol	10	10 U						
4-Chloro-3-methylphenol	10	10 U						
2,4,6-Trichlorophenol	10	10 U						
2,4-Dinitrophenol	20	20 U						
4-Nitrophenol	20	20 U						
2-Methyl-4,6-dinitrophenol	20	20 U						
Pentachlorophenol	20	20 U						
2-Methylphenol	10	10 U						
4-Methylphenol	10	10 U						
2,4,5-Trichlorophenol	10	10 U						
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	21-100%	34						
Phenol-d6	10-94%	24						
2,4,6-TriBromophenol	10-123%	90						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
PA ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Pearson

Laboratory Director

000007

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-004						
Location:		94FB-1						
Date Collected:		12/14/94						
Time Collected:	PQL	17:00						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
N-Nitrosodimethylamine	5.0	5.0 U						
Bis(2-chloroethyl) ether	5.0	5.0 U						
1,3 Dichlorobenzene	5.0	5.0 U						
1,4 Dichlorobenzene	5.0	5.0 U						
1,2 Dichlorobenzene	5.0	5.0 U						
2,2'oxybis(1-Chloropropane)	5.0	5.0 U						
N-Nitroso-Di-n-propylamine	5.0	5.0 U						
Hexachloroethane	5.0	5.0 U						
Nitrobenzene	5.0	5.0 U						
Isophorone	5.0	5.0 U						
bis(-2-chloroethoxy)methane	5.0	5.0 U						
1,2,4-Trichlorobenzene	5.0	5.0 U						
Naphthalene	5.0	5.0 U						
Hexachlorobutadiene	5.0	5.0 U						
Hexachlorocyclopentadiene	5.0	5.0 U						
2-Chloronaphthalene	5.0	5.0 U						
Dimethyl phthalate	5.0	5.0 U						
Acenaphthylene	5.0	5.0 U						
Acenaphthene	5.0	5.0 U						
2,4-Dinitrotoluene	5.0	5.0 U						
2,6-Dinitrotoluene	5.0	5.0 U						
Diethyl phthalate	5.0	5.0 U						
4-Chlorophenyl-phenyl-ether	5.0	5.0 U						
Fluorene	5.0	5.0 U						
1,2-Diphenylhydrazine	5.0	5.0 U						
N-Nitrosodiphenylamine	5.0	5.0 U						
4-Bromophenyl-phenylether	5.0	5.0 U						
Hexachlorobenzene	5.0	5.0 U						
Phenanthrene	5.0	5.0 U						
Anthracene	5.0	5.0 U						
Di-n-butyl phthalate	5.0	5.0 U						
Fluoranthene	5.0	5.0 U						
Pyrene	5.0	5.0 U						

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference
Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-004						
Location:		94FB-1						
Date Collected:		12/14/94						
Time Collected:		17:00						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
Butyl benzyl phthalate	5.0	5.0 U						
3,3'-Dichlorobenzidine	5.0	5.0 U						
Benzo(a)anthracene	5.0	5.0 U						
Bis(2-ethylhexyl)phthalate	5.0	5.0 U						
Chrysene	5.0	5.0 U						
Di-n-octyl phthalate	5.0	5.0 U						
Benzo(b)Fluoranthene	5.0	5.0 U						
Benzo(k)fluoranthene	5.0	5.0 U						
Benzo(a)pyrene	5.0	5.0 U						
Indeno(1,2,3-cd)pyrene	5.0	5.0 U						
Dibenzo(a,h)anthracene	5.0	5.0 U						
Benzo(g,h,i)perylene	5.0	5.0 U						
4-Chloroaniline	5.0	5.0 U						
2-Methyl Naphthalene	5.0	5.0 U						
2-Nitroaniline	5.0	5.0 U						
3-Nitroaniline	5.0	5.0 U						
Dibenzofuran	5.0	5.0 U						
4-Nitroaniline	5.0	5.0 U						
Carbazole	5.0	5.0 U						
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	35-114%	65						
2-Fluorobiphenyl	43-116%	64						
Terphenyl-d14	33-141%	66						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Michael F. Kenny

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

ANALYTICAL RESULTS - mg/l

Sample:	-005							
Location:	94TCLP-1							
Date Collected:	12/14/94							
Time Collected:	16:30							
TCLP Extraction Metals								
Arsenic	0.500 U							
Barium	1.00 U							
Cadmium	0.100 U							
Chromium	0.100 U							
Lead	0.100 U							
Mercury	0.0020 U							
Selenium	0.500 U							
Silver	0.100 U							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation.

Michael F. Penny

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Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCLP VOLATILES BY EPA METHOD 8260*** ANALYTICAL RESULTS - ug/l

Sample:	-005							
Location:	94TCLP-1							
Date Collected:	12/14/94							
Time Collected:	16:30							
Date Analyzed:	12/26/94							
Dilution:	10							
Benzene	50 U							
Carbon Tetrachloride	50 U							
Chlorobenzene	50 U							
Chloroform	50 U							
1,2-Dichloroethane	50 U							
1,1-Dichloroethene	50 U							
2-Butanone (MEK)	100 U							
Tetrachloroethene	50 U							
Trichloroethene	50 U							
SURROGATE STANDARD RECOVERIES:								
Dibromofluoromethane	92							
(Acceptance Limits: 86-118%)								
Toluene d8	98							
(Acceptance Limits: 88-110%)								
4-Bromofluorobenzene	95							
(Acceptance Limits: 86-115%)								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.
Data reported is unbiased on the above regulation.

Michael K. Penny

Laboratory Director

000013

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCLP ACID EXTRACTABLES BY EPA METHOD 8270*** ANALYTICAL RESULTS - ug/l

Sample:	-005						
Location:	94TCLP-1						
Date Collected:	12/14/94						
Time Collected:	16:30						
Date Extracted:	12/21/94						
Date Analyzed:	12/21/94						
Dilution:	10						
4-Methylphenol	100 U						
2-Methylphenol	100 U						
Pentachlorophenol	200 U						
2,4,5-Trichlorophenol	100 U						
2,4,6-Trichlorophenol	100 U						
Surrogate Standard Recoveries:							
2-Fluorophenol	46						
(Acceptance Limits: 21-100%)							
Phenol-d6	30						
(Acceptance Limits: 10-94%)							
2,4,6-TriBromophenol	73						
(Acceptance Limits: 10-123%)							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation.

Michael K. Per

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCLP BASE NEUTRALS BY EPA METHOD 8270*** ANALYTICAL RESULTS - ug/l

Sample:	-005						
Location:	94TCLP-1						
Date Collected:	12/14/94						
Time Collected:	16:30						
Date Extracted:	12/21/94						
Date Analyzed:	12/21/94						
Dilution:	10						
1,4 Dichlorobenzene	50 U						
2,4-Dinitrotoluene	50 U						
Hexachlorobenzene	50 U						
Hexachloroethane	50 U						
Nitrobenzene	50 U						
Pyridine	100 U						
Hexachlorobutadiene	50 U						
Surrogate Standard Recovery:							
Nitrobenzene-d5	51						
(Acceptance Limits: 35-114%)							
2-Fluorobiphenyl	60						
(Acceptance Limits: 43-116%)							
Terphenyl-d14	73						
(Acceptance Limits: 33-141%)							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation.

000017

Michael K. Penny

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94

P.O. #:

TCLP PESTICIDES BY GC METHOD 8080 *** ANALYTICAL RESULTS - ug/l

Sample:	-005							
Location:	94TCLP-1							
Date Collected:	12/14/94							
Time Collected:	16:30							
Date Extracted:	12/21/94							
Date Analyzed:	12/23/94							
Dilution:	10							
Chlordane	20 U							
Endrin	5.0 U							
Heptachlor	5.0 U							
Heptachlor epoxide	5.0 U							
gamma-BHC (Lindane)	5.0 U							
Methoxychlor	20 U							
Toxaphene	100 U							
Surrogate Standard Recovery								
Dibutylchlorendate (Acceptance Limits: 24-154)	175*							
Tetrachloro-meta-xylene (Acceptance Limits: 60-150)	112							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation

Michael K. Perry

Laboratory Director

000016

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference:

Westwood

Received : 12/15/94

P.O. #:

TCLP HERBICIDES ANALYSIS BY GC METHOD 8150 *** ANALYTICAL RESULTS - ug/l

Sample:	-005						
Location:	94TCLP-1						
Date Collected:	12/14/94						
Time Collected:	16:30						
Date Extracted:	12/21/94						
Date Analyzed:	12/22/94						
Dilution:	100						
2,4-D	50 U						
2,4,5-TP (Silvex)	50 U						
SURROGATE STANDARD RECOVERIES							
% Recovery							
2,4-DB	64						
(Acceptance Limits 18-152)							

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

*** TCLP Toxcity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol.55, No. 126,
June 29, 1990

Data reported is unbiased on the above regulation.

Michael K. Pen

Laboratory Director

000017

GTC LABORATORY QUALITY CONTROL REPORT

CUSTOMER: Geotrans Inc. JOB # : R94/05048 UNITS: ug/g REPORT TYPE:SITE

PARAMETER	SAMPLE	ORIGINAL RESULT	DUPLICATE RESULT	% REL. ERROR	ACCEPT. LIMIT %	ORIGINAL RESULT	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMIT %	METHOD BLANK	SPIKE ADDED	PERCENT RECOVERY	ACCEPT. LIMITS %	REFERENCE #	KNOWN PMVAL	PERCENT RECOVERY	ACCEPT. LIMITS %
		* PRECISION				* MATRIX SPIKING				LCS/BLANK SPIKES				REFERENCE STANDARD			
Solids, %	-008	86.1	85.4	1	10	86.1	NA			NA				Ref Std	NA		
Lead	-008	30.3	36.0	17	20	30.3	50.0	68++	75-125	5.00 U	128	127	56-146	Ref Std	5.00	100	90-110
Cyanide, Total	-008	1.13 U	1.13 U	NC	20	1.13 U	11.0	107	50-135	1.00 U	180	64	39-140	Ref Std	0.250	104	90-110

*Quality control data has not been corrected for dilutions used.

** Reference check samples are not available for all analyses.

*+ No limits currently established

General Testing Corporation

A Full Service Environmental Laboratory

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp.

Matrix Spike - Sample No. : R94/05048-008

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC #	QC LIMITS REC.
1,4 Dichlorobenzene	7751	0	6500	84	20-124
N-Nitrosodi-n-propylamine	7751	0	6300	81	D-230
1,2,4-Trichlorobenzene	7751	0	6700	86	44-142
Acenaphthene	7751	0	6300	81	47-145
2,4-Dinitrotoluene	7751	0	7500	97	39-139
Pyrene	7751	0	7000	90	52-115
Phenol	15503	0	11000	71	5-112
2-Chlorophenol	15503	0	15000	97	23-134
4-Chloro-3-methylphenol	15503	0	11000	71	22-147
-Nitrophenol	15503	0	14000	90	D-132
entachlorophenol	15503	0	15000	97	14-176

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4 Dichlorobenzene	7751	6300	81	3	30	20-124
N-Nitrosodi-n-propylamin	7751	6200	80	2	30	D-230
1,2,4-Trichlorobenzene	7751	6600	85	2	30	44-142
Acenaphthene	7751	6300	81	0	30	47-145
2,4-Dinitrotoluene	7751	7500	97	0	30	39-139
Pyrene	7751	7000	90	0	30	52-115
Phenol	15503	11000	71	0	30	5-112
2-Chlorophenol	15503	15000	97	0	30	23-134
4-Chloro-3-methylphenol	15503	11000	71	0	30	22-147
4-Nitrophenol	15503	13000	84	7	30	D-132
Pentachlorophenol	15503	13000	84	14	30	14-176

- Columns to be used to flag recovery and RPD values with ++.
++ - Values outside of QC limits
MS QC Limits = EPA Acceptance Criteria
RPD Limits = Internal Acceptance Criteria

:___0____ out of ___11___ outside limits
pike Recovery:__0___ out of ___22__ outside limits

000010

COMMENTS: _____
_____

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Job No: R94/05048

Date: 5 JAN., 1995

EPA Method 8270	REFERENCE CHECK TRUE VALUE	% RECOVERY	ACCEPTANCE LIMITS (%)
Date Extracted: 12/19/94			
Date Analyzed: 12/21/94			
1,4 Dichlorobenzene	100	89	20 - 124
2,4-Dinitrotoluene	100	109	39 - 139
Phenol	100	76	5 - 112
2-Chlorophenol	100	104	23 -134
N-Nitrosodi-n-propylamine	100	91	D - 230
1,2,4-Trichlorobenzene	100	89	44 - 142
4-Chloro-3-methylphenol	100	79	22 - 147
Acenaphthene	100	83	47 - 145
4-Nitrophenol	100	121	D - 132
Pentachlorophenol	100	143	14 - 176
Pyrene	100	92	52 - 115

Michael K. Perry

Laboratory Director

000030

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 9 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-009						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		12/19/94						
Date Analyzed:		12/21/94						
Dilution:		1						
Phenol	670	670 U						
2-Chlorophenol	670	670 U						
2-Nitrophenol	670	670 U						
2,4-Dimethylphenol	670	670 U						
2,4-Dichlorophenol	670	670 U						
4-Chloro-3-methylphenol	670	670 U						
2,4,6-Trichlorophenol	670	670 U						
2,4-Dinitrophenol	1300	1300 U						
4-Nitrophenol	1300	1300 U						
2-Methyl-4,6-dinitrophenol	1300	1300 U						
Pentachlorophenol	1300	1300 U						
2-Methylphenol	670	670 U						
4-Methylphenol	670	670 U						
2,4,5-Trichlorophenol	670	670 U						
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	25-121%	57						
Phenol-d6	24-113%	57						
2,4,6-TriBromophenol	19-122%	62						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Pen

Laboratory Director

000021

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 9 1995

Sample(s) Reference

Westwood

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Received : 12/15/94

P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-009						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		12/19/94						
Date Analyzed:		12/21/94						
Dilution:		1						
N-Nitrosodimethylamine	330	330 U						
Bis(2-chloroethyl) ether	330	330 U						
1,3 Dichlorobenzene	330	330 U						
1,4 Dichlorobenzene	330	330 U						
1,2 Dichlorobenzene	330	330 U						
2,2'oxybis(1-Chloropropane)	330	330 U						
N-Nitroso-Di-n-propylamine	330	330 U						
Hexachloroethane	330	330 U						
Nitrobenzene	330	330 U						
Isophorone	330	330 U						
bis(-2-chloroethoxy)methane	330	330 U						
1,2,4-Trichlorobenzene	330	330 U						
Naphthalene	330	330 U						
Hexachlorobutadiene	330	330 U						
Hexachlorocyclopentadiene	330	330 U						
2-Chloronaphthalene	330	330 U						
Dimethyl phthalate	330	330 U						
Acenaphthylene	330	330 U						
Acenaphthene	330	330 U						
2,4-Dinitrotoluene	330	330 U						
2,6-Dinitrotoluene	330	330 U						
Diethyl phthalate	330	330 U						
4-Chlorophenyl-phenyl-ether	330	330 U						
Fluorene	330	330 U						
1,2-Diphenylhydrazine	330	330 U						
N-Nitrosodiphenylamine	330	330 U						
4-Bromophenyl-phenylether	330	330 U						
Hexachlorobenzene	330	330 U						
Phenanthrene	330	330 U						
Anthracene	330	330 U						
Di-n-butyl phthalate	330	2500						
Fluoranthene	330	330 U						
Pyrene	330	330 U						

000092

Job Number: R94/05048 Date: JAN. 9 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-009						
Location:		LAB METH						
		BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		12/19/94						
Date Analyzed:		12/21/94						
Dilution:		1						
Butyl benzyl phthalate	330	470						
3,3'-Dichlorobenzidine	330	330 U						
Benzo(a)anthracene	330	330 U						
Bis(2-ethylhexyl)phthalate	330	330 U						
Chrysene	330	330 U						
Di-n-octyl phthalate	330	330 U						
Benzo(b)Fluoranthene	330	330 U						
Benzo(k)fluoranthene	330	330 U						
Benzo(a)pyrene	330	330 U						
Indeno(1,2,3-cd)pyrene	330	330 U						
Dibenzo(a,h)anthracene	330	330 U						
Benzo(g,h,i)perylene	330	330 U						
4-Chloroaniline	330	330 U						
2-Methyl Naphthalene	330	330 U						
2-Nitroaniline	330	330 U						
3-Nitroaniline	330	330 U						
Dibenzofuran	330	330 U						
4-Nitroaniline	330	330 U						
Carbazole	330	330 U						
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	23-120%	49						
2-Fluorobiphenyl	30-115%	60						
Terphenyl-d14	18-137%	54						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Michael K. Per 000023

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 9 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94

P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-010						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
Phenol	10	10 U						
2-Chlorophenol	10	10 U						
2-Nitrophenol	10	10 U						
2,4-Dimethylphenol	10	10 U						
2,4-Dichlorophenol	10	10 U						
4-Chloro-3-methylphenol	10	10 U						
2,4,6-Trichlorophenol	10	10 U						
2,4-Dinitrophenol	20	20 U						
4-Nitrophenol	20	20 U						
2-Methyl-4,6-dinitrophenol	20	20 U						
Pentachlorophenol	20	20 U						
2-Methylphenol	10	10 U						
4-Methylphenol	10	10 U						
2,4,5-Trichlorophenol	10	10 U						
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	21-100%	44						
Phenol-d6	10-94%	33						
2,4,6-TriBromophenol	10-123%	95						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Pe

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 9 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-010						
Location:		LAB METH						
		BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
N-Nitrosodimethylamine	5.0	5.0 U						
Bis(2-chloroethyl) ether	5.0	5.0 U						
1,3 Dichlorobenzene	5.0	5.0 U						
1,4 Dichlorobenzene	5.0	5.0 U						
1,2 Dichlorobenzene	5.0	5.0 U						
2,2'oxybis(1-Chloropropane)	5.0	5.0 U						
N-Nitroso-Di-n-propylamine	5.0	5.0 U						
Hexachloroethane	5.0	5.0 U						
Nitrobenzene	5.0	5.0 U						
Isophorone	5.0	5.0 U						
bis(-2-chloroethoxy)methane	5.0	5.0 U						
1,2,4-Trichlorobenzene	5.0	5.0 U						
Naphthalene	5.0	5.0 U						
Hexachlorobutadiene	5.0	5.0 U						
Hexachlorocyclopentadiene	5.0	5.0 U						
2-Chloronaphthalene	5.0	5.0 U						
Dimethyl phthalate	5.0	5.0 U						
Acenaphthylene	5.0	5.0 U						
Acenaphthene	5.0	5.0 U						
2,4-Dinitrotoluene	5.0	5.0 U						
2,6-Dinitrotoluene	5.0	5.0 U						
Diethyl phthalate	5.0	5.0 U						
4-Chlorophenyl-phenyl-ether	5.0	5.0 U						
Fluorene	5.0	5.0 U						
1,2-Diphenylhydrazine	5.0	5.0 U						
N-Nitrosodiphenylamine	5.0	5.0 U						
4-Bromophenyl-phenylether	5.0	5.0 U						
Hexachlorobenzene	5.0	5.0 U						
Phenanthrene	5.0	5.0 U						
Anthracene	5.0	5.0 U						
Di-n-butyl phthalate	5.0	5.0 U						
Fluoranthene	5.0	5.0 U						
Pyrene	5.0	5.0 U						

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General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/05048 Date: JAN. 9 1995

Client:
Mr. Anthony Bryda
Geotrans Inc.
46050 Manekin Plaza Suite 100
Sterling, Va. 22170

Sample(s) Reference

Westwood

Received : 12/15/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-010						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:		--						
Date Extracted:		12/20/94						
Date Analyzed:		12/20/94						
Dilution:		1						
Butyl benzyl phthalate	5.0	5.0 U						
3,3'-Dichlorobenzidine	5.0	5.0 U						
Benzo(a)anthracene	5.0	5.0 U						
Bis(2-ethylhexyl)phthalate	5.0	5.0 U						
Chrysene	5.0	5.0 U						
Di-n-octyl phthalate	5.0	5.0 U						
Benzo(b)Fluoranthene	5.0	5.0 U						
Benzo(k)fluoranthene	5.0	5.0 U						
Benzo(a)pyrene	5.0	5.0 U						
Indeno(1,2,3-cd)pyrene	5.0	5.0 U						
Dibenzo(a,h)anthracene	5.0	5.0 U						
Benzo(g,h,i)perylene	5.0	5.0 U						
4-Chloroaniline	5.0	5.0 U						
2-Methyl Naphthalene	5.0	5.0 U						
2-Nitroaniline	5.0	5.0 U						
3-Nitroaniline	5.0	5.0 U						
Dibenzofuran	5.0	5.0 U						
4-Nitroaniline	5.0	5.0 U						
Carbazole	5.0	5.0 U						
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	35-114%	69						
2-Fluorobiphenyl	43-116%	70						
Terphenyl-d14	33-141%	69						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801

NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Michael K. Ferry 000026

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:

Geotrans Inc.

Sample(s) Reference

Westwood

Date Received: 12/15/94

Date Sample Taken: 12/13,14/94

LABORATORY CHRONICLE
DATE ANALYZED

Sample: / Location:		-001 / 94S2-20	-002 / 94S4-19	-003 / 94S7-18	-006 / 94S3-20	-007 / 94S5-4	-008 / 94S5-6
Cyanide, Total		12/27/94	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94
	Dilution:	1	1	1	1	1	1
Lead		12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94
	Dilution:	1	1	1	1	1	1
Solids, %		12/27/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94

000027

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:

Geotrans Inc.

Sample(s) Reference

Westwood

Date Received: 12/15/94

Date Sample Taken: 12/13,14/94

LABORATORY CHRONICLE
DATE ANALYZED

Sample:		-004	
Location:		94FB-1	
Cyanide, Total		12/27/94	
	Dilution:	1	
Lead		12/27/94	
	Dilution:	1	

000028

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/05048 Date: JAN. 5 1995

Client:

Geotrans Inc.

Sample(s) Reference

Westwood

Date Received: 12/15/94

Date Sample Taken: 12/13,14/94

LABORATORY CHRONICLE
DATE ANALYZED

Sample:	-005
Location:	94TCLP-1
TCLP Extraction Metals	
Arsenic	12/21/94
Barium	12/21/94
Cadmium	12/21/94
Chromium	12/21/94
Lead	12/21/94
Mercury	12/21/94
Selenium	12/21/94
Silver	12/21/94

9412000298

GENERAL TESTING CORPORATION / CHAIN-OF-CUSTODY RECORD

710 Exchange Street, Rochester, NY 14608 | 85 Trinity Place, Hackensack, NJ 07601 | 435 Lawrence Bell Drive, Amherst, NY 14221-7077

GTC Job. No. 1941/5248

Client Project No. _____

Sample Origination & Shipping Information

Collection Site GeoTrans - Westwood

Address 45050 Manekin Plaza Ste 100 Sterling VA 20166

Street City State Zip

Collector ALEX VINCENT (Print) Alex Vincent (Signature)

Bottles Prepared by _____ Rec'd by _____

Bottles Shipped to Client via _____ Seal/Shipping # _____

Samples Shipped via _____ Seal/Shipping # _____

Sample(s) Relinquished by:		Received by:		Date/Time
1. Sign	Alex Vincent 12-14-94	1. Sign	Custody Seal Intact	12/15/94
for	GeoTrans 2300	for	GTC	8:30
2. Sign		2. Sign	Click Courier	12/15/94
for	GTC	for		10:30
3. Sign		3. Sign		/ /
for		for		:

Sample(s) Received in Laboratory by DS/Gerahn 12/15/94 @ 12:20

	Client I.D. # / Lab #	Sample Location / Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep Preserved Y	Preserved N	Filtered Y	Filtered N	Bottle Set(s) (see below)
1	1 / 3517	9452-20 / 12/13/94 : 10:40	S-H	SVOC Pb Cyanide		X			10
2	2 / 3518	9454-19 / 12/13/94 16:20	S-H	SVOC Pb Cyanide		X			10
3	3 / 3519	9457-18 / 12/13/94 14:40	S-H	SVOC Pb Cyanide		X			10
4	4 / 3520	94FB-1 / 12/14/94 17:00		SVOC Pb Cyanide	X				
5	5 / 3521	94TCLP-1 / 12/14/94 16:30	S-H	# Contract Specified		X			11

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.	4oz	16oz
# of each										2	2

Additional Analytes _____

000000

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), _____(X), _____(Y).

GENERAL TESTING CORPORATION / CHAIN-OF-CUSTODY RECORD

710 Exchange Street, Rochester, NY 14608 | 85 Trinity Place, Hackensack, NJ 07601 | 435 Lawrence Bell Drive, Amherst, NY 14221-7077

GTC Job No. R94/3048

Client Project No. _____

Sample Origination & Shipping Information

Collection Site GeoTrans - Westwood

Address 46050 Manekin Plaza Ste 100 (Street) Sterling (City) VA (State) 20166 (Zip)

Collector Alex Vincent (Print) Alex Vincent (Signature)

Bottles Prepared by _____ Rec'd by _____

Bottles Shipped to Client via _____ Seal/Shipping # _____

Samples Shipped via _____ Seal/Shipping # _____

Sample(s) Relinquished by:			Received by:			Date//Time
1. Sign	Alex Vincent	12-14-94 2300	1. Sign	K Wagy	custody	12/15/94
for	GeoTrans		for	GTC	seal intact	8:30
2. Sign	L Wagy		2. Sign	Chris Carlson		12/15/94
for	GTC		for			10:30
3. Sign			3. Sign			/ /
for			for			:

Sample(s) Received in Laboratory by DS/Yandra 12-15-94 @ 18:30

	Client I.D. # / Lab #	Sample Location / Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep Preserved Y	Preserved N	Filtered Y	Filtered N	Bottle Set(s) (see below)
1	6 / 3522	9453-20 / / 11:55	S-H	Cyanide Pb SVOC		X			10
2	7 / 3523	9455-4 / 12/14/94 15:30	S-4	Cyanide Pb SVOC		X			10
3	8	94MSS5-6 / 12/14/94 15:40	S	Cyanide Pb SVOC		X			11
4	3524	94MSS5-6 / 12/14/94 15:40	S	Cyanide Pb SVOC		X			11
5		/ / :							

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.	4 oz	16 oz
# of each										2	2

Additional Analytes _____ 000031

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), _____(X), _____(Y).

STARLIMS # 9412000298-3517

_____ GTC # R94/5048-001

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
TCN		36.9 g	[signature]	[signature]	12/19/94	1800
		36.9g	[signature]	YM	12/27/94	0930
		31.9g	YM	YM	12/27/94	1300
DWPS		10.4 g	[signature]	[signature]	12/19/94	1800
			[signature]			

CC000

STARLIMS # 9412000298-3518

_____ GTC # R94/5048-002

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

rameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
CN		32.3 g	[signature]	[signature]	12/19/94	1800
		32.3 g	[signature]	nm	12/27/94	0930
		27.1 g	nm	nm	12/27/94	1300
)WPS		23.8 g	[signature]	[signature]	12/19/94	1800
			[signature]			

000030

STARLIMS # 9412000298-3519 Document I.D. #

_____ GTC # R94/5048-003 Date/Time Received 12/15/94 @ 15:00

rameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
CN		43.0 g	[signature]	[signature]	12/19/94	1800
		43.0g	[signature]	HM	12/27/94	0930
		37.6g	HM	HM	12/27/94	1300
WPS		17.5 g	[signature]	[signature]	12/19/94	1800
			[signature]			

0000

STARLIMS # 94/2000298-3520

_____ GTC # R94/5048-004

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
TCN		1000 ml	[redacted]	[illegible]	12/19/94	1800
		1000mL	[illegible]	HM	12/27/94	0930
		500mL	HM	HM	12/27/94	1300

0000000

STARLIMS # 9412000298-3522

_____ GTC # R94/5048-006

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
TCN		37.0 g	[redacted]	[redacted]	12/19/94	1800
		32.0g	[redacted]	YM	12/27/94	0930
		31.3g	YM	YM	12/27/94	1300
DWPS		17.3 g	[redacted]	[redacted]	12/19/94	1800
			[redacted]			

0000

STARLIMS # 9412000298-3523 Document I.D. #

_____ GTC # R94/5048-007 Date/Time Received 12/15/94 @ 15:00

rameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
TCN		53.3 g	[signature]	[signature]	12/19/94	1800
		53.3g	[signature]	nm	12/27/94	0930
		48.3g	nm	nm	12/27/94	1300
DWPS		19.3 g	[signature]	[signature]	12/19/94	1800
			[signature]			

0000

STARLIMS # 9412000298-3524 Document I.D. #

_____ GTC # R94/5048-008 QC Date/Time Received 12/15/94 @ 15:00

rameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
TCN		153.7 g	[signature]	[signature]	12/19/94	1800
		153.7g	[signature]	NM	12/27/94	0930
		138.0g	NM	NM	12/27/94	1300
DWPS		186.9 g	[signature]	[signature]	12/19/94	1800
			[signature]			

0000

STARLIMS # 9412000298-3517

_____ GTC # R94/5048-901

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
Pb		62.7 g	[signature]	[signature]	12/14/94	12:00
		6 L Dig	[signature]	[signature]	12/20/94	08:00
		digestate	[signature]	[signature]	12/20/94	15:00

000033

STARLIMS # 94120002 98-3518

_____ GTC # R94/5048-002

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by		Received by	Date	Time
2b		39.2 g	[signature]		[signature]	12/19/94	12:00
		38.2g	[signature]	x	BK	12/20/94	08:00
		digestate	x BK		CK	12/20/94	15:00

0003

STARLIMS # 94/2 000298 - 3519

_____ GTC # R94/5048 - 003

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
2b		59.0 g	[signature]	DW	12/14/94	12:00
		58.0g	DR	BK	12/20/94	08:00
		digestate	BK	CK	12/20/94	15:00

5000

STARLIMS # 9412000298-3520 Document I.D. #

_____ GTC # R94/5048-004 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by		Received by	Date	Time
Pb		500 ml	[illegible]		[illegible]	12/19/94	12:00
		200 ml	[illegible]	x	BK	12/20/94	08:00
		100 ml	x BR	x	BR	12/22/94	08:00
		digestate	x BR		CK	12/22/94	15:00

F3300

STARLIMS # 94120000298-3522

_____ GTC # R94/5048-0006

Document I.D. # _____

Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by		Received by	Date	Time
2b		119.6 g	[signature]		[signature]	12/19/94	12:00
		113.0g	[signature]	x	BK	12/20/94	08:00
		digestate	x BK		CK	12/20/94	15:00

00023

STARLIMS # 9412000298-3523 Document I.D. #

_____ GTC # R94/5048-007 Date/Time Received 12/15/94 @ 15:00

rameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
b		87.8g	[redacted]	[redacted]	12/14/94	12:00
		36.0g	[redacted]	BK	12/20/94	08:00
		digestate	BK	CK	12/20/94	15:00

ESCO

STARLIMS # 9412000298-3524 Document I.D. #

_____ GTC # R94/5048-008 QC Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
Pb		139.9 g			12/19/94	12:00
		136.0g		BR	12/20/94	08:00
		digestate	BR	CK	12/20/94	15:00

000535

STARLIMS # 9412000298-3521 Document I.D. #

_____ GTC # R94/5048-005 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
ALL TCLP		350.6g	[signature]	[signature]	12/19/94	12:00
(8240/8270 8150/8080 AS/Se/Cd/Cr Pb/Hg/Ag/Ba		220.0g	[signature]	[signature]	12/19	12:00
		metals	[signature]	BR	12/20	08:00
	8270, 8150, 8080		[signature]	[signature]	12/20	08:00
	8240		[signature]	[signature]	12/20	08:00

5000

STARLIMS # 9412000298-3517 Document I.D. #

_____ GTC # R94/5048-001 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		184.9 g		DJY	12/19/94	2:30
		154.9 g	DJY			
Extract (001)	8270	300 mls	DJY	DJY	12/21/94	10:42
Aliquot (001)	8270	1 ml	DJY	TEB	12/21/94	13:40

ACCOUNT

STARLIMS # 9412000298-3519 Document I.D. #

_____ GTC # R94/5048-002 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		118.7 g	~~~~	DJY	12/19/94	2:30
		98.7 g	DJY			
Extract (002)	8270	300 mls	DJY	DJY	12/21/94	10:42
Conc (002)	8270	1 ml	DJY	TEB	12/21/94	13:40

OCCS

STARLIMS # 9412000298-3519 Document I.D. #

_____ GTC # K94/5048-003 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		230.0 g		DJY	12/19/94	2:30
		200.0 g	DJY			
Extract (003)	8270	300mls	DJY	DJY	12/20/94	10:42
Conc (003)	8270	1mls	DJY	TEB	12/21/94	13:40

0003-43

STARLIMS # 9412000298-3520 Document I.D. #

_____ GTC # R94/5049-004 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		2000ml	[redacted]	DD	12/20/94	10:00
		1,000mls	DD			
Extract (004) 8270		360mls	DD	DJY	12/20/94	12:00
Conc (004) 8270		DJY		TEB	12/20/94	15:00

00033

STARLIMS # 9412000298-3522 Document I.D. #

; # GTC # R94/5043-006 Date/Time Received 12/15/94 @ 15:00

arameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		152.0 g		DJY	12/19/94	2:30
		122.0 g	DJY			
Extract (006) 8270		300 mL	DJY	DJY	12/21/94	10:42
Conc (006) 8270		1 mL	DJY	TEB	12/21/94	13:40

0005C1

STARLIMS # 9412000298 - 3523 Document I.D. #

_____ GTC # K94/5048-007 Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		168.6 g		DJY	12/19/94	2:30
		138.6 g	DJY			
Extract (007)	8270	300 mls	DJY	DJY	12/21/94	10:42
Conc (007)	8270	1 ml	DJY	TEB	12/21/94	13:40

0000

STARLIMS # 9412000298-3524 Document I.D. #

_____ GTC # R94/5048-008 QC Date/Time Received 12/15/94 @ 15:00

Parameters	Fraction I.D.	Volume	Relinquished by	Received by	Date	Time
8270		181.1 g	~~DJY~~	DJY	12/19/94	~~DJY~~ 7:30
		91.1 g	DJY			
Extract (008)	8270	300 mls	DJY	DJY	12/21/94	10:42
Conc (008)	8270	1 ml	DJY	TEB	12/21/94	13:40
Extract (008MS)	8270	300 mls	DJY	DJY	12/21/94	10:42
Conc (008)	8270	1 ml	DJY	TEB	12/21/94	13:40
Extract (008MSD)	8270	300 mls	DJY	DJY	12/21/94	10:42
Conc (008)	8270	1 ml	DJY	TEB	12/21/94	13:40

COC

Laboratory Support Documentation

COPY TO CT. / ORG CHEM
3K
12/21

Dry Weight Percent Solids

Analyst: B. Rebimbas

Date: 12/21/94

General Testing Corp.
710 Exchange St.
Rochester, N.Y. 14608

"S" weight initial: 10.00 final: 10.0

Job Number	Client	Dish I.D.	Wet Weight (g)		Dry Weight (g)	Percent Solid
ICB	—	1		Gross	1.59	—
			1.59	Tare	1.59	
				Diff.	0.00	
R5048-1 (3517)	GEO 2	2	11.58	Gross	2.27	66.9
			1.58	Tare	1.58	
			10.00	Diff.	6.69	
R5048-2 3518	Geo2	3	11.63	Gross	9.13	75.0
			1.63	Tare	1.63	
			10.00	Diff.	7.50	
R5048-3 3519	Geo2	4	11.60	Gross	9.66	80.6
			1.60	Tare	1.60	
			10.00	Diff.	8.06	
R5048-6 3522	Geo2	5	11.57	Gross	10.21	86.4
			1.57	Tare	1.57	
			10.00	Diff.	8.64	
R5048-7 3523	Geo2	6	11.58	Gross	10.29	97.1
			1.58	Tare	1.58	
			10.00	Diff.	5.71	
R5048-8 3524	Geo2	7	11.58	Gross	10.19	86.1
			1.58	Tare	1.58	
			10.00	Diff.	8.61	
R5048-8QC 3524	Geo2	8QC	11.59	Gross	10.13	85.4
			1.59	Tare	1.59	
			10.00	Diff.	8.54	

f:\1\1\g\forms\dwps.wk1

Dry Weight Percent Solids

Analyst: [illegible]

Date: [illegible]

General Testing Corp.
710 Exchange St.
Rochester, N.Y. 14608

"S" weight initial: _____ final: _____

Job Number	Client	Dish I.D.	Wet Weight (g)		Dry Weight (g)	Percent Solid
R5066-19 3597 BLA	Bla 2	9	11.61	Gross	6.13	45.2
			1.61	Tare	1.61	
			10.00	Diff.	4.52	
CCB	—	10		Gross	1.58	—
			1.58	Tare	1.58	
				Diff.	0.00	
				Gross		
				Tare		
				Diff.		
				Gross		
				Tare		
				Diff.		
				Gross		
				Tare		
				Diff.		
				Gross		
				Tare		
				Diff.		
				Gross		
				Tare		
				Diff.		
				Gross		
				Tare		000059
				Diff.		

Total and Free Cyanide

STD CAL = 167

General Testing Corp.
710 Exchange St.
Rochester, N.Y. 14608

Analyst: N.Mead Date: 12/27/94

Method #: 335.2 CC: 0.99995 Slope: 127.7 Y-int: 0.1186

#	Job Number	Client	Mx *	Peak Hght	(1) mg/L	(2) Orig Vol.	(3) Finl Vol.	(4) Tot. CN mg/L	DWPS	Tot. CN mg/kg Dry Wt.	Fixed mg/L	Free mg/L
1		0.700		set gain								
2		0.00		0.00								
3		0.0200		2.50								
4		0.0500		6.50								
5		0.100		13.25								
6		0.200		25.30								
7		0.400		51.75								
8		0.700		89.25								
		ICV		66.40	0.5190	500	250	0.260				
		ICB		0.00	<0.0028	↓	↓	<0.010				
11	MID-RANGE STD	LCS		72.00	0.5629	↓	↓	0.281				
12		CCV		40.00	0.3123	—	—	0.312				
13		CCB		0.00	<0.0028	—	—	<0.010				
14	R5037-1	[redacted]	1/4	0.00	<0.0028	500	250	<0.0400	—	matrix interference when run str - see chart recorder - rpt @ 1/2		#2
15	R5055-3	[redacted]	1/5	12.50	0.09696	300	250	0.4040				
16	R5042-1	[redacted]		0.00	<0.0028	500	250	<0.010				
17	R5046-2	[redacted]		0.80	0.00534	500	250	<0.010				
18	-2dup	↓		0.90	0.00612	↓	↓	<0.010				
19	-2spk	↓		24.25	0.1890	↓	↓	0.0945				
20	RS 108-3	[redacted]	1/5	28.30	0.2209	500	250	0.552				

1) mg/L in distillate; 2) Sample volume (mls); 3) Distillate volume (mls)

4) Total CN = mg/L dist. * dist. vol / sample vol; DWPS = dry wgt. % solid;

Tot CN mg/kg dry wgt. = mg/L CN wet wgt / percent solid, decimal

Free CN = Total CN - Fixed CN *Mx = Matrix. Blank = Water, S = Soil

Total and Free Cyanide

General Testing Corp.
710 Exchange St.
Rochester, N.Y. 14608

Analyst: N.Mead Date: 12/27/94

Method #: 335.2 CC: _____ Slope: _____ Y-int: _____

-2

#	Job Number	Client	Mx *	Peak Hght	(1) mg/L	(2) Orig Vol.	(3) Finl Vol.	(4) Tot. CN mg/L	DWPS	Tot. CN mg/kg Dry Wt.	Fixed mg/L	Free mg/L
21	RS108-4	[redacted]	1/200	45.10	0.3522	100	250	176				
22	-5		1/200	46.25	0.3612			181				
23	-6		1/200	45.20	0.3530			177				
24	~~nm 12829~~	~~nm CCV~~ (CCV)	1/200	40.50	0.3162	—	—	0.316				
25		CCB		0.00	<0.0028	—	—	<0.010				
26	RS108-7	[redacted]	1/200	41.10	0.3209	100	250	160				
27	RS037-1	[redacted]	1/2	0.00	<0.0028	500		<0.0200				
28	RS048-1	Geotrans	S	2.90	0.03178	5.01g	250	1.09	66.9	1.62		
29	-2		S	46.00	0.3593	5.17g		17.4	75.0	23.2		
30	-3		S	6.00	0.04606	5.39g		2.14	80.6	2.65		
31	-4			0.00	<0.0028	500		<0.010	—			
32	-6		S	4.30	0.03294	5.73g		1.43	86.4	1.65		
33	-7		S	1.00	0.00690	5.01g		<0.998	87.1	<1.15		
34	-8		S	1.40	0.0100	5.14g		<0.993	86.1	<1.13		
35	-8dup		S	0.00	<0.0028	5.23g		<0.956	86.1	<1.11		
36		CCV		41.00	0.3201	—	—	0.320				
37		CCB		0.00	<0.0028	—	—	<0.010				
38	RS048-8sp	Geotrans	S	27.60	0.2152	5.29g	250	10.2	86.1	11.8		
39		LCS (1/4)	S	42.50	0.3710	2.06g		180				
40		CCV		41.25	0.3221	—	—	0.322				

1) mg/L in distillate; 2) Sample volume (mls); 3) Distillate volume (mls)

4) Total CN = mg/L dist. * dist. vol / sample vol; DWPS = dry wgt. % solid;

Tot CN mg/kg dry wgt. = mg/L CN wet wgt / percent solid, decimal

Free CN = Total CN - Fixed CN *Mx = Matrix. Blank = Water, S = Soil

Total and Free Cyanide

General Testing Corp.
710 Exchange St.
Rochester, N.Y. 14608

Analyst: N. Mead Date: 12/27/94

Method #: 335.2 CC: _____ Slope: _____ Y-int: _____

-3

#	Job Number	Client	Mx *	Peak Hght	(1) mg/L	(2) Orig Vol.	(3) Finl Vol.	(4) Tot. CN mg/L	DWPS	Tot. CN mg/kg Dry Wt.	Fixed mg/L	Free mg/L
41		CCB				—	—					
42												
43												
44												
45												
46												
47												
48												
4												
50												
S1												
S2												
S3												
S4												
S5												
S6												
S7												
S8												
S9												
60												

1) mg/L in distillate; 2) Sample volume (mls); 3) Distillate volume (mls)

4) Total CN = mg/L dist. * dist. vol / sample vol; DWPS = dry wgt. % solid;

Tot CN mg/kg dry wgt. = mg/L CN wet wgt / percent solid, decimal

Free CN = Total CN - Fixed CN *Mx = Matrix. Blank = Water, S = Soil

Method: 335.2

ride Distillation

Stock ppm: 969 ppm

Start: 9:40

Stop: 10:50

Date Standardized: 12/27/94

10 ppm Spike Solution

Date Made: 12/27/94

ml Used: 1.632 ml

mments:

Cell #	Job #	Company	Orig. Volume	Final Volume	Factor	TCN	FCN	Reactivity
1		Blank	500	250		X		
2	5037-1	[redacted]	500	250				
3	5055-3	[redacted]	300	250				
4		ICV	500	250				
5		ICS	500 + 5 ml 10 ppm	250				
6	5042-1	[redacted]	500	250				
7	5046-2	[redacted]	500	250				
8	-2 dup	↓	500	250				
9	-2 spk		+5 ml 10 ppm 500	250				
10	R5108-3	[redacted]	500	250				* treated w/ $CdCO_3$
11	-4		100	250				
12	-5		100	250				
13	-6		100	250				
14	-7		100	250		V		
15				250				
16				250				
				250				
				250				
				250				
				250				

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Method: 335.2

nide Distillation

Stock ppm: 969 ppm

st: 2.1M/N.Merdt

Date Standardized: 12/27/94

te: 12/27/94

ON: 13:00
OFF: 14:30
COOL: 15:00

0 ppm Spike Solution

Date Made: 12/27/94

mments:

ml Used: 1,032 ml

11 #	Job #	Company	Orig. Volume	Final Volume	Factor	TCN	FCN	Reactivity
1	5048-1	Geotrans	5.01g	250		X		*treated with $CdCO_3$
2	-2	↓	5.17g	250		|		
3	-3		5.39g	250		|		
4	ERA lot#216 (TV=282)	ICV	2.01g	250		|		
5	5048-4	Geotrans	500	250		|		
6	-6		5.73	250		|		
7	-7		5.01g	250		|		
8	~~-7spk~~ (-8) ~~-7dup~~		5.14g	250		|		
9	~~-7dup~~ (-9dup) ~~-7spk~~		5.23g	250		|		
10	-8spk	↓	5.29g	250		↓		
11				250				
12				250				
13				250				
14				250				
15				250				
16				250				
17				250				
18				250				
19				250				
20				250				

000000

WET CHEM QUALITY CONTROL WORKSHEET

Parameter: Cyanide - Dist Analyst: N. MEAD Date: 12/27 1994

A.) Linear Regression (if applicable):

1) Number of Stds. used: 7 3) Y-intercept: 0.1186

2) Corr. Coefficient: 0.99995 4) Slope: 127.7

B.) Precision duplicates (as Relative Percent Deviation - RPD)

MDL = 0.01 Low Level = <5xMDL High Level = >=5xMDL

Job #	Original Result (mg/L)	Analytic Result #2 (mg/L)	High or Low Level	Rel. % Diff. (RPD)	Matrix	Dilution	In Limits (y or n) Low	In Limits (y or n) High	Data Flag
R5046-2	U	U	Low	N C	water	1	-----	-----	

C.) Spiked Recovery (one for every ten samples run)

Job #	Original Result (mg/L)	mls. of mg/L spk added	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recovery	Within Limits (y or n)	Data Flag
R5046-2	U	5.00	500	0.100	0.0945	95	Y	

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* = Analytical results prior to dilution.

WET CHEM QUALITY CONTROL WORKSHEET

Parameter: Cyanide - Dist Analyst: N. MEAD Date: 12/27

D.) Blank Spike Recovery (one for every ten samples run)

Job #	(B) Blank Average (mg/L) Less Than	mls. of 10 mg/L spk added	Sample Volume (mls)	(C) mg/L of Spike	(A) Value Spiked Sample (mg/L)	Percent Recovery	Within Limits (y or n)	Data Flag
Blk Spk	0.010	15.0	500	0.300	0.281	94	Y	

E. Reference Standard Recovery:

	True Valu	Result (mg/L)	% Recovery	W/in Limits (y or n)	Data Flag
Ref Std	0.250	0.260	104	Y	
Ref Std	0.300	0.312	104	Y	
Ref Std	0.300	0.316	105	Y	
Ref Std	0.300	0.320	107	Y	
Ref Std	0.300	0.322	107	Y	

NOTES:
1. All QC calculations to 3 sig. fig.
3. Sample duplicates out of limits (on Ave.) disqualify run.
3. Blank spikes out of limits (on Ave.) disqualify run.
4. Ref. Std. recovery out of limits (on Ave.) disqualify run.

WET CHEM QUALITY CONTROL WORKSHEET

Parameter: Cyanide - Dist Analyst: N. MEAD Date: 12/27 1994

A.) Linear Regression (if applicable):

1) Number of Stds. used: 7 3) Y-intercept: 0.1186

2) Corr. Coefficient: 0.99995 4) Slope: 127.7

B.) Precision duplicates (as Relative Percent Deviation - RPD)

PQL = 1 Low Level = <5xPQL High Level = >=5xPQL

Job #	Original Result (ug/g)	Analytic Result #2 (ug/g)	High or Low Level	Rel. % Diff. (RPD)	Matrix	Dilution	In Limits (y or n) Low	In Limits (y or n) High	Data Flag
R5048-8	U	U	Low	N C	soil	1	-----	-----	

C.) Spiked Recovery (one for every ten samples run)

Job #	Original Result (ug/g)	mls. of 10 mg/L spk added	Sample Weight (g)	mg/L of Spike	Spiked Sample (ug/g)	Percent Recovery	Within Limits (y or n)	Data Flag
R5048-8	U	5.00	4.55	11.0	11.8	107	Y	

WET CHEM QUALITY CONTROL WORKSHEET

Parameter: Cyanide - Dist Analyst: N. MEAD Date: 12/27

D.) Blank Spike Recovery (one for every ten samples run)

Job #	(B) Blank Average (ug/g) Less Than	mls. of 10 (ug/g) spk added	Sample Volume (g)	(C) mg/L of Spike	(A) Value Spiked Sample (ug/g	Percent Recovery	Within Limits (y or n)	Data Flag
LCS → ERA Lot # 216	1.004			282	180	64	y	

WNF 1/9/95

limits = 39-140%

(see attached)

E. Reference Standard Recovery:

	True Valu	Result (ug/g)	% Recovery	W/in Limits (y or n)	Data Flag
Ref Std	282	180	64	No Ref Std	

NOTES:

1. All QC calculations to 3 sig. fig.
3. Sample duplicates out of limits (on Ave.) disqualify run.
4. Blank spikes out of limits (on Ave.) disqualify run.
5. Ref. Std. recovery out of limits (on Ave.) disqualify run.
5. Spiked samples out of limits - repeat sample and all others similar.

ENVIRONMENTAL
RESOURCE ASSOCIATES
Arvada, Colorado 80002 1-800-ERA-0122

Certification

PriorityPollutnT™/CLP Quality Control Standards

Inorganics in Soil

Parameter	*Lot Number 216* Certified Value mg/kg	Advisory Range mg/kg
TRACE METALS		
aluminum	6000	3600 - 8400
antimony	27.8	14 - 117
arsenic	67.7	41 - 105
barium	187	131 - 243
beryllium	57.5	35 - 81
cadmium	110	55 - 166
calcium	2040	1220 - 2860
chromium	189	95 - 265
cobalt	87.0	43 - 130
copper	141	84 - 200
iron	10800	7020 - 15100
lead	100	55 - 140
magnesium	2050	1200 - 3080
manganese	294	206 - 383
mercury	2.36	1.3 - 3.8
molybdenum	124	93 - 167
nickel	79.6	40 - 112
potassium	2130	1280 - 2770
selenium	99.1	54 - 149
silver	124	62 - 186
sodium	527	316 - 738
thallium	67.9	34 - 102
vanadium	84.8	59 - 115
zinc	197	98 - 280
TOTAL CYANIDE	282	110 - 395

1. The Trace Metals Certified Values are equal to the mean recoveries for each parameter as determined in an interlaboratory round robin study (3 laboratories, 10 to 24 data points per parameter). The standard was digested using Method 3050, SW-846 and the digest analyzed by ICP and atomic absorption spectroscopy.

2. The Cyanide Certified Value is equal to the mean recovery as determined in an interlaboratory round robin study (2 laboratories, 10 data points). The standard was digested and analyzed following the procedure outlined in Method 9010, SW - 846.

3. The Advisory Ranges are listed as guidelines for acceptable recoveries given the limitations of the EPA methodologies commonly used to determine these parameters. The range closely approximates the 95% confidence interval for these parameters based upon experimental data from this lot, previous ERA lots and published USEPA data.

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Peak Material Mixed

100
90
80
70
60
50
40
30
20
10

1 2 3 4 5 6

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK

100
90
80
70
60
50
40
30
20
10
0

Sampler Pause

Restart @ 1x1 Pause Test

Highway Cruising

8 9 10 11

NO. 011-0173

100
90
80
70
60
50
40
30
20
10
0

restart @ #1

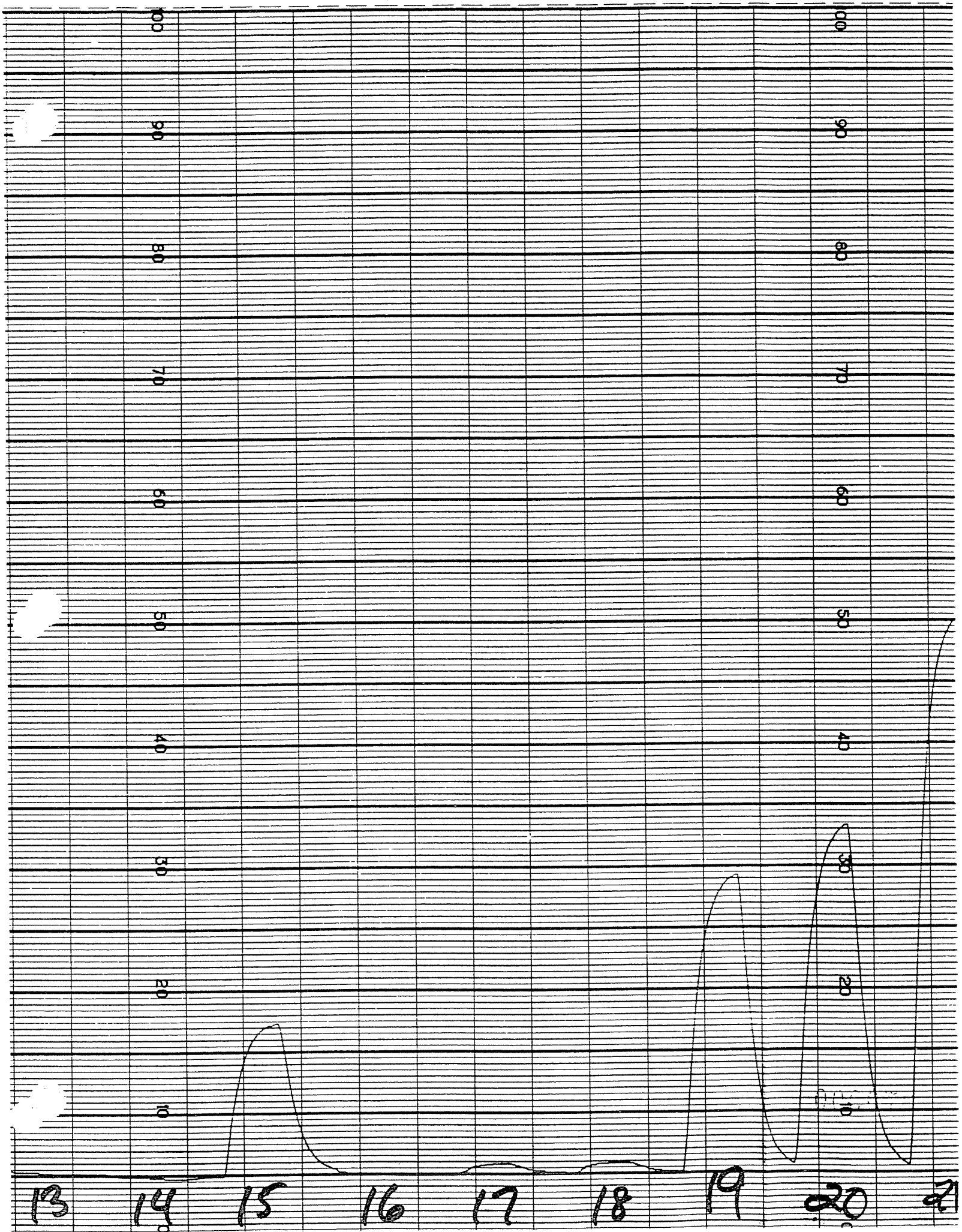
matrix interrupt @ 1/4 pb

Service power + pb's reloaded
Continuity check

restart @ #1 passing through

12 13

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK



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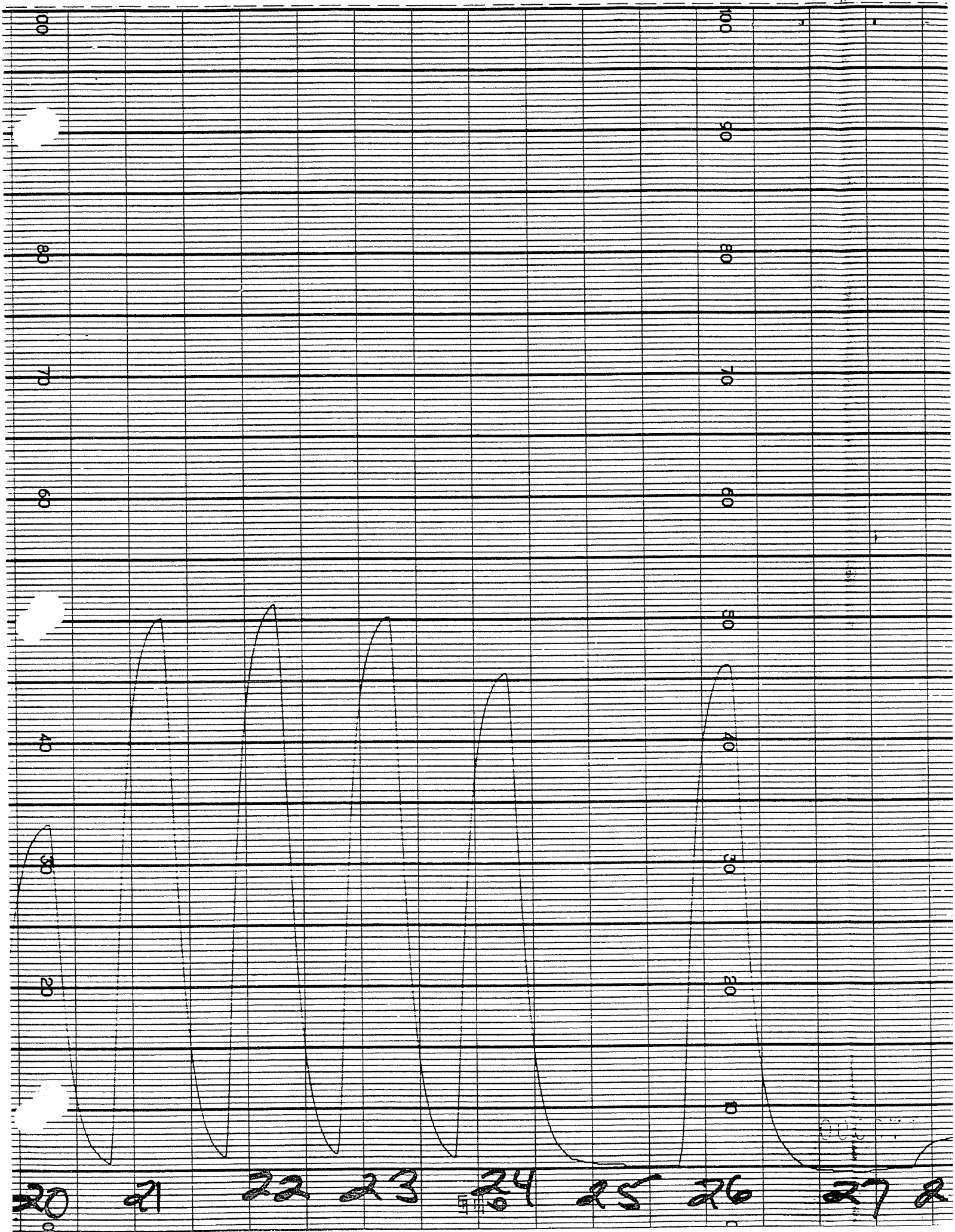

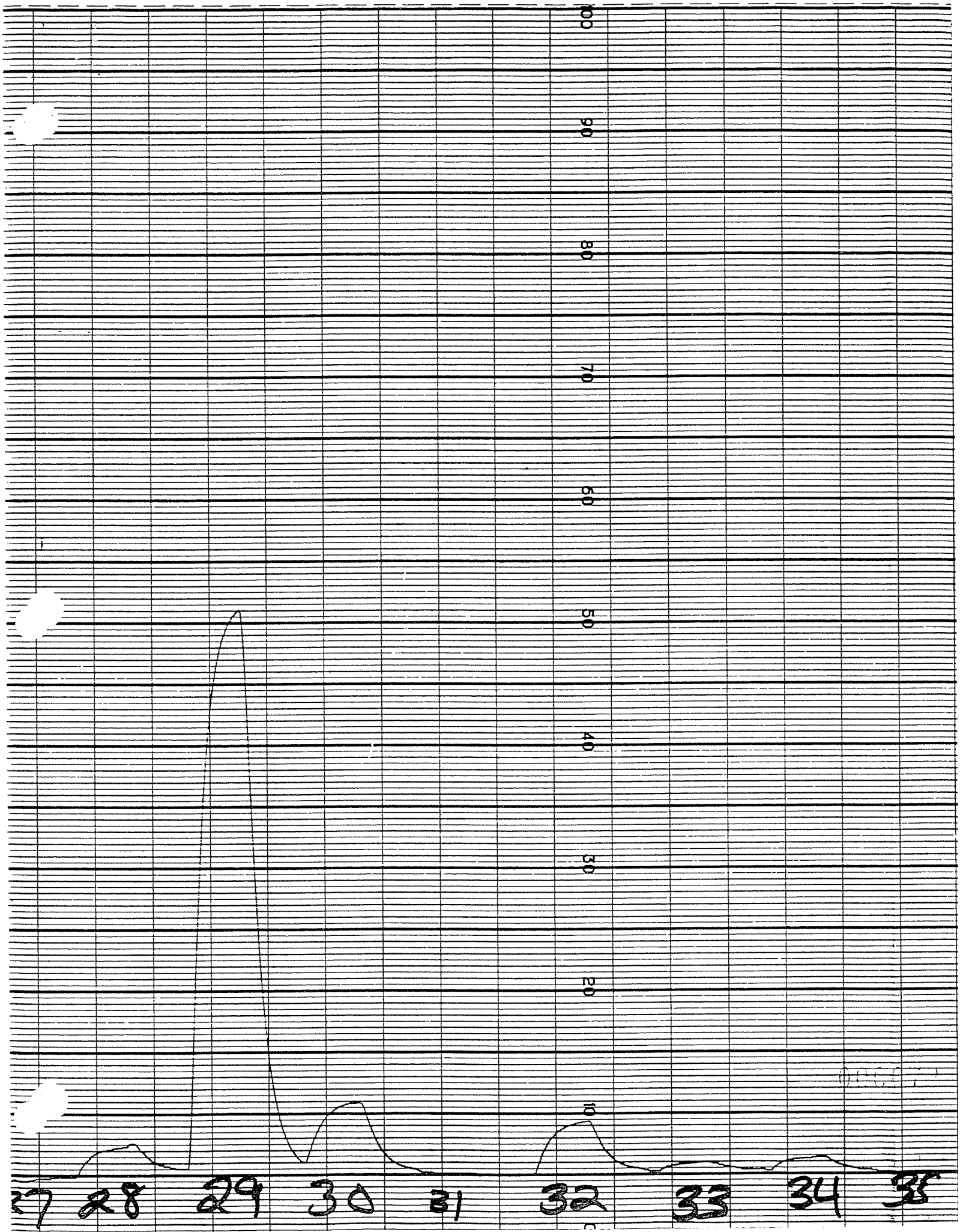
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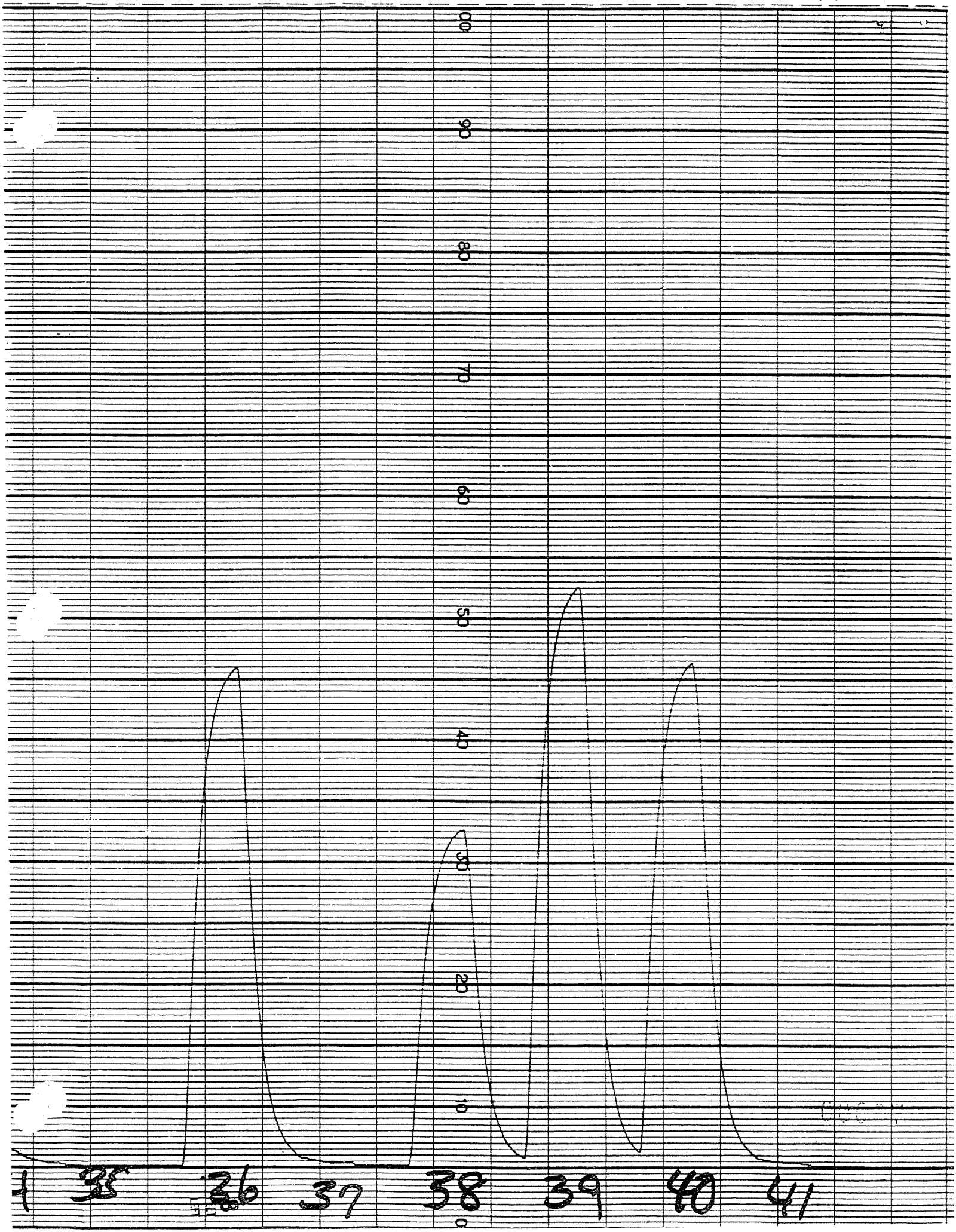
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36
37
38
39
40
41

Ag-1
Ba-1
Cd-1
Cr-1
Cu-1
Pb-11

Date 12/22 Name LCC
Date 12/22 Name QC ✓
Name
Name

2 Copies
R5048
R4924

D12-21-94	ID		CAL STD	ICV	ICB		CRII		ICSAI		ICSABI
5	Date		21-Dec-94	21-Dec-94	21-Dec-94		21-Dec-94		21-Dec-94		21-Dec-94
	Dil Vol		1	1	1		1		1		1
AG	0.01	0.0	2.02	0.964	0.010	U	0.0220		0.010	U	0.877
BA	0.02	0.0	2.02	9.95	0.0200	U	0.0200	U	0.0200	U	0.456
CD	0.005	0.0	2.05	1.06	0.0050	U	0.0120		0.0058		0.897
CR	0.01	0.0	10.0	1.01	0.010	U	0.0217		0.010	U	0.454
CU	0.02	0.0	10.1	1.26	0.0200	U	0.0516		0.0200	U	0.449
PB	0.05	0.0	10.1	1.03	0.0500	U	0.0851		0.0500	U	0.879

D12-21-94	CCV	CCB	PB 12/20	LCSS	Ck2	Ck3
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1		
AG	0.954	0.010 U	0.010 U	0.780	0.943	0.010 U
BA	0.972	0.0200 U	0.0200 U	4.65	0.952	0.0200 U
CD	0.990	0.0050 U	0.0050 U	0.819	0.994	0.0050 U
CR	4.91	0.010 U	0.010 U	0.681	4.80	0.010 U
CU	4.78	0.0200 U	0.0200 U	1.52	4.70	0.0200 U
PB	4.86	0.0500 U	0.0500 U	1.63	4.81	0.0500 U

ICP DE21 B ✓ → A ✓

see attached worklists ✓

D12-21-94	5053-1	5068-1	5048-1	5048-2	5048-3	5048-6
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1	1	1
AG	1.00 U	XXX	XXX	XXX	XXX	XXX
BA	17.2	XXX	XXX	XXX	XXX	XXX
CD	0.500 U	XXX	XXX	XXX	XXX	XXX
CR	1.00 U	XXX	XXX	XXX	XXX	XXX
CU	2.00 U	XXX	XXX	XXX	XXX	XXX
PB	5.00 U	49.7	XXX	XXX	XXX	XXX

D12-21-94	5048-7	5048-8S	5048-8QCS	5048-8SPS	Ck2	Ck3
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1		
AG	XXX	XXX	XXX	XXX	0.956	0.010 U
BA	XXX	XXX	XXX	XXX	0.968	0.0200 U
CD	XXX	XXX	XXX	XXX	0.988	0.0050 U
CR	XXX	XXX	XXX	XXX	4.85	0.010 U
CU	XXX	XXX	XXX	XXX	4.73	0.0200 U
PB	XXX	XXX	XXX	XXX	4.84	0.0500 U

D12-21-94	PB 12/20	LCS	5048-4	5048-4QC	5048-4SP	5033-1
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1	1	1
AG	0.010 U	0.0359	XXX	XXX	XXX	XXX
BA	0.0200 U	1.40	XXX	XXX	XXX	XXX
CD	0.0050 U	0.0422	XXX	XXX	XXX	XXX
CR	0.010 U	0.146	XXX	XXX	XXX	XXX
CU	0.0200 U	0.180	XXX	XXX	XXX	XXX
PB	0.0500 U	0.368	XXX	XXX	XXX	XXX

D12-21-94	5033-2	PB 12/20	LCS	4924-34	Ck2	Ck3
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1		
AG	XXX	0.010 U	0.010 U	XXX	0.944	0.010 U
BA	XXX	0.0200 U	0.0200 U	XXX	0.968	0.0200 U
CD	XXX	0.0050 U	0.0537	XXX	0.974	0.0050 U
CR	XXX	0.010 U	0.010 U	XXX	4.78	0.010 U
CU	XXX	0.0200 U	0.251	XXX	4.68	0.0200 U
PB	XXX	0.0500 U	0.490	XXX	4.76	0.0500 U

D12-21-94	4924-33	PB 12/19	LCS	5029-2	5029-2	BLK
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	5	1	1
AG	XXX	0.010 U	0.0525	XXX	XXX	0.010 U
BA	XXX	0.0317	1.99	XXX	XXX	0.0200 U
CD	XXX	0.0050 U	0.0521	XXX	XXX	0.0050 U
CR	XXX	0.010 U	0.200	XXX	XXX	0.010 U
CU	XXX	0.0200 U	0.248	XXX	0.0200 U	0.0200 U
PB	XXX	0.0500 U	0.475	0.250 U	XXX	0.0500 U

D12-21-94	BLK	CRIF	ICSAF	ICSABF	Ck2	Ck3
5	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94	21-Dec-94
	1	1	1	1		
AG	0.0383	0.0208	0.010 U	0.877	0.972	0.010 U
BA	1.42	0.0200 U	0.0200 U	0.448	0.972	0.0200 U
CD	0.0444	0.0118	0.0052	0.899	1.01	0.0050 U
CR	0.146	0.0213	0.010 U	0.443	4.89	0.010 U
CU	0.180	0.0502	0.0200 U	0.443	4.79	0.0200 U
PB	0.371	0.108	0.0500 U	0.875	4.98	0.0500 U

LABSAM — General Testing Corporation
12/22/94 — WORKLIST — 08:15
Page 1

DWPB,01,12/22/94 Ins: Seq: By: L. RILEY

Pos	*	WL_SORT	CLIENT	DATESAMP	QC	EC	-P#	-M#	DWPB		flag	dil	prep	an
1		1	Series							Wet Wt				
1	7	R5048001	Geotrans I	12/13,14	6	-1	-1	✓	✓	54.4		1	12/20	12/21
2	7	R5048002	Geotrans I	12/13,14	6	-1	-1	✓	✓	2650		1	↓	↓
3	7	R5048003	Geotrans I	12/13,14	6	-1	-1	✓	✓	18.0		1	↓	↓
4	7	R5048004	Geotrans I	12/13,14	6	-1	-1							
5	7	R5048006	Geotrans I	12/13,14	6	-1	-1	✓	✓	90.0		1	12/20	12/21
6	7	R5048007	Geotrans I	12/13,14	6	-1	-1	✓	✓	23.3		1	↓	↓
7	7	R5048008	Geotrans I	12/13,14 (Y)	6	-1	-1	✓	✓	30.3	N	1	↓	↓
8	9	R5077001	ERM Northe	12/15,16		-1	-1							
9	9	R5077002	ERM Northe	12/15,16		-1	-1							
10	9	R5077003	ERM Northe	12/15,16		-1	-1							
11	9	R5077004	ERM Northe	12/15,16		-1	-1							
12	9	R5077005	ERM Northe	12/15,16		-1	-1							
13	9	R5077006	ERM Northe	12/15,16		-1	-1							
14	9	R5077007	ERM Northe	12/15,16		-1	-1							
15	9	R5077008	ERM Northe	12/15,16		-1	-1							
16	9	R5077009	ERM Northe	12/15,16		-1	-1							
17	9	R5077010	ERM Northe	12/15,16		-1	-1							
18	9	R5077011	ERM Northe	12/15,16		-1	-1							
19	9	R5077012	ERM Northe	12/15,16		-1	-1							
20	9	R5077013	ERM Northe	12/15,16		-1	-1							
21	9	R5077014	ERM Northe	12/15,16		-1	-1							

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DWP8.01,12/22/94 Ins: Seq: By: L. RILEY

Pos	*	WL_SORT	CLIENT	DATESAMP	QC	EC	-P#-M#	DWP8
22	9	R5077015	ERM Northe	12/15,16		-1	-1	
23	9	R5077016	ERM Northe	12/15,16		-1	-1	
24	9	R5077017	ERM Northe	12/15,16		-1	-1	
25	9	R5077018	ERM Northe	12/15,16		-1	-1	
26	9	R5077019	ERM Northe	12/15,16		-1	-1	
27	9	R5077020	ERM Northe	12/15,16		-1	-1	
28	9	R5077021	ERM Northe	12/15,16		-1	-1	
29	9	R5077022	ERM Northe	12/15,16		-1	-1	
30	9	R5077023	ERM Northe	12/15,16		-1	-1	
31	9	R5077024	ERM Northe	12/15,16		-1	-1	
32	9	R5077025	ERM Northe	12/15,16		-1	-1	
33	9	R5077026	ERM Northe	12/15,16		-1	-1	
34	9	R5077027	ERM Northe	12/15,16		-1	-1	
35	9	R5077028	ERM Northe	12/15,16		-1	-1	
36	9	R5077029	ERM Northe	12/15,16		-1	-1	
37	9	R5077030	ERM Northe	12/15,16		-1	-1	
38	9	R5077031	ERM Northe	12/15,16		-1	-1	
39	9	R5077032	ERM Northe	12/15,16		-1	-1	
40	9	R5077033	ERM Northe	12/15,16		-1	-1	
41	9	R5077034	ERM Northe	12/15,16		-1	-1	
42	9	R5077035	ERM Northe	12/15,16		-1	-1	
43	9	R5077036	ERM Northe	12/15,16		-1	-1	
44	9	R5077037	ERM Northe	12/15,16		-1	-1	

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LABSAM — General Testing Corporation

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DWPB,01,12/22/94 Ins: Seq: By: L. RILEY

Pos	*	WL_SORT	CLIENT	DATESAMP	QC	EC	-P#-M#	DWPB
45	9	R5077038	ERM Northe	12/15,16		-1	-1	
46	9	R5077039	ERM Northe	12/15,16		-1	-1	
47	9	R5077040	ERM Northe	12/15,16		-1	-1	
48	9	R5077041	ERM Northe	12/15,16		-1	-1	
49	9	R5077042	ERM Northe	12/15,16		-1	-1	
50	9	R5077043	ERM Northe	12/15,16		-1	-1	
51	9	R5077044	ERM Northe	12/15,16		-1	-1	
52	9	R5077045	ERM Northe	12/15,16		-1	-1	

run on ICP
- high Pb levels

LABSAM — General Testing Corporation
12/22/94 — W O R K L I S T — 08:16
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PBW,01,12/22/94 Ins: Seq: By: L. RILEY

Pos	*	WL_SORT	CLIENT	DATESAMP	QC	EC	-P#	-M#	PBW		flag	dil ✓	prep	Mn ✓
1. Series														
1	4	R4924033	Tam Cerami	12/12-15	6	-1	-1	✓	1	3.01		1	12/20	12/21
2	4	R4924034	Tam Cerami	12/12-15	6	-1	-1	✓	1	9.67		1	↓	↓
3	5	R4924028	Tam Cerami	12/12-15	6	-1	-1							
4	9	R4658001	HydroQual,	12/02/94			-1	-1						
5	9	R4658002	HydroQual,	12/02/94			-1	-1						
6	9	R5011001	Will Drisc	12/12/94			-1	-1						
7	9	R5089001	John DeRyc	12/21/94			-1	-1						

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 2		12:58:17 21 Dec 1994 ICP		
Ag1	.0000	ppm		12362	20816	20787		
			Ave. Int. =	17988	S. D. =	4873		
Al3	.0000	ppm		310	59	3969		
			Ave. Int. =	1446	S. D. =	2189		
Ba1	.0000	ppm		2818	3419	3954		
			Ave. Int. =	3397	S. D. =	568		
Ca3	.0000	ppm		48755	62832	39713		
			Ave. Int. =	50433	S. D. =	11651		
Cd1	.0000	ppm		-291	-293	-403		
			Ave. Int. =	-329	S. D. =	64		
Cr4	.0000	ppm		5376	5887	3286		
			Ave. Int. =	4850	S. D. =	1378		
Cu1	.0000	ppm		51750	53904	55808		
			Ave. Int. =	53821	S. D. =	2030		
Fe2	.0000	ppm		1745	1380	952		
			Ave. Int. =	1359	S. D. =	397		
Mg4	.0000	ppm		-5223	-1727	-4304		
			Ave. Int. =	-3751	S. D. =	1812		
Pb1	.0000	ppm		-3574	-4284	-3034		
			Ave. Int. =	-3631	S. D. =	627		
Zn3	.0000	ppm		-795	-326	-1309		
			Ave. Int. =	-810	S. D. =	492		

Christine Kutzer 12/21/94

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 2				Seq: 3		12:59:04 21 Dec 1994 ICP		
Ag1	.0000	ppm		15624	14390	20702		
			Ave. Int. =	16905	S. D. =	3345		
Al3	.0000	ppm		271	2405	1027		
			Ave. Int. =	1234	S. D. =	1082		
Ba1	.0000	ppm		4106	2927	2862		
			Ave. Int. =	3298	S. D. =	700		
Ca3	.0000	ppm		36856	36214	38392		
			Ave. Int. =	37154	S. D. =	1119		
Cd1	.0000	ppm		-531	-372	-287		
			Ave. Int. =	-397	S. D. =	124		
Cr4	.0000	ppm		5992	4414	5370		
			Ave. Int. =	5259	S. D. =	795		
Cu1	.0000	ppm		53210	51251	45837		
			Ave. Int. =	50099	S. D. =	3819		
Fe2	.0000	ppm		1817	2333	1199		
			Ave. Int. =	1783	S. D. =	568		
Mg4	.0000	ppm		-3145	-4225	-4279		
			Ave. Int. =	-3883	S. D. =	640		
Pb1	.0000	ppm		-4293	-4632	-5142		
			Ave. Int. =	-4689	S. D. =	427		
Zn3	.0000	ppm		-1348	-1843	-1570		
			Ave. Int. =	-1587	S. D. =	248		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 1				Seq: 4		13:02:49 21 Dec 1994 ICP		
Ag1	.5000	ppm		764922	748670	755770		
			Ave. Int. =	756454	S. D. =	8148		
Al3	1.000	ppm		97928	97803	96736		
			Ave. Int. =	97489	S. D. =	655		
Ba1	.5000	ppm		1418467	1392663	1416050		
			Ave. Int. =	1409060	S. D. =	14252		
Ca3	10.00	ppm		6461990	6369659	6451996		
			Ave. Int. =	6427882	S. D. =	50669		
Cd1	.5000	ppm		36182	36077	36479		
			Ave. Int. =	36246	S. D. =	209		
Cr4	1.000	ppm		845468	834616	840922		
			Ave. Int. =	840335	S. D. =	5450		
Cu1	1.000	ppm		2849122	2793043	2840316		
			Ave. Int. =	2827494	S. D. =	30158		
Fe2	1.000	ppm		610691	598617	610160		
			Ave. Int. =	606489	S. D. =	6823		
Mg4	10.00	ppm		576933	562641	572316		
			Ave. Int. =	570630	S. D. =	7294		
Pb1	1.000	ppm		52940	53813	57214		
			Ave. Int. =	54656	S. D. =	2258		
Zn3	.5000	ppm		66787	65604	66429		
			Ave. Int. =	66273	S. D. =	607		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 2				Seq: 5		13:03:36 21 Dec 1994 ICP		
Ag1	.5000	ppm		784170	761776	762282		
			Ave. Int. =	769409	S. D. =	12786		
Al3	1.000	ppm		100940	101663	101456		
			Ave. Int. =	101353	S. D. =	372		
Ba1	.5000	ppm		1465330	1458502	1436864		
			Ave. Int. =	1453565	S. D. =	14861		
Ca3	10.00	ppm		6555387	6519856	6496526		
			Ave. Int. =	6523923	S. D. =	29641		
Cd1	.5000	ppm		36231	36446	36358		
			Ave. Int. =	36345	S. D. =	108		
Cr4	1.000	ppm		856430	851033	846985		
			Ave. Int. =	851483	S. D. =	4739		
Cu1	1.000	ppm		2927252	2902615	2875634		
			Ave. Int. =	2901834	S. D. =	25818		
Fe2	1.000	ppm		619147	613270	613366		
			Ave. Int. =	615261	S. D. =	3366		
Mg4	10.00	ppm		580753	578882	578780		
			Ave. Int. =	579472	S. D. =	1111		
Pb1	1.000	ppm		54274	53646	57468		
			Ave. Int. =	55129	S. D. =	2050		
Zn3	.5000	ppm		67692	66920	67831		
			Ave. Int. =	67481	S. D. =	491		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 1				Seq: 6		13:07:14 21 Dec 1994 ICP		
Ag1	2.000	ppm		2860420	2939338	2947248		
			Ave. Int. =	2915669	S. D. =	48010		
Al3	10.00	ppm		954352	972875	974219		
			Ave. Int. =	967149	S. D. =	11103		
Ba1	2.000	ppm		5426411	5561584	5574777		
			Ave. Int. =	5520924	S. D. =	82116		
Ca3	100.0	ppm		62565836	63235140	63341111		
			Ave. Int. =	63047362	S. D. =	420367		
Cd1	2.000	ppm		140986	142213	141558		
			Ave. Int. =	141586	S. D. =	614		
Cr4	10.00	ppm		8085586	8165074	8181198		
			Ave. Int. =	8143953	S. D. =	51186		
Cu1	10.00	ppm		27132351	27808636	27791869		
			Ave. Int. =	27577619	S. D. =	385704		
Fe2	10.00	ppm		5950052	6018408	6043522		
			Ave. Int. =	6003994	S. D. =	48373		
Mg4	100.0	ppm		5912145	5977684	6005957		
			Ave. Int. =	5965262	S. D. =	48124		
Pb1	10.00	ppm		563547	562622	565796		
			Ave. Int. =	563988	S. D. =	1632		
Zn3	2.000	ppm		259772	260766	260897		
			Ave. Int. =	260478	S. D. =	615		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 2				Seq: 7		13:08:01 21 Dec 1994 ICP		
Ag1	2.000	ppm		2926122	2933750	2933358		
			Ave. Int. =	2931077	S. D. =	4295		
Al3	10.00	ppm		975511	977625	978429		
			Ave. Int. =	977188	S. D. =	1507		
Ba1	2.000	ppm		5545152	5571590	5574732		
			Ave. Int. =	5563825	S. D. =	16247		
Ca3	100.0	ppm		62997554	62992034	63185401		
			Ave. Int. =	63058330	S. D. =	110082		
Cd1	2.000	ppm		140632	140491	142370		
			Ave. Int. =	141164	S. D. =	1047		
Cr4	10.00	ppm		8143417	8149590	8170170		
			Ave. Int. =	8154392	S. D. =	14008		
Cu1	10.00	ppm		27708636	27804528	27802803		
			Ave. Int. =	27771989	S. D. =	54872		
Fe2	10.00	ppm		5994361	6027784	6029736		
			Ave. Int. =	6017294	S. D. =	19884		
Mg4	100.0	ppm		5964689	5964312	5986169		
			Ave. Int. =	5971723	S. D. =	12512		
Pb1	10.00	ppm		565022	563598	569136		
			Ave. Int. =	565919	S. D. =	2876		
Zn3	2.000	ppm		261390	259322	260995		
			Ave. Int. =	260569	S. D. =	1098		
*** Sample ID: CAL STD 21-2				Seq: 9		13:13:38 21 Dec 1994 ICP		
Ag1	2.016	ppm	.8170 %	2.018	2.032	1.999		
Al3	10.14	ppm	.6604 %	10.13	10.21	10.08		
Ba1	2.021	ppm	1.064 %	2.022	2.042	1.999		
Ca3	100.8	ppm	.4846 %	100.8	101.2	100.3		
Cd1	2.046	ppm	.2197 %	2.051	2.045	2.043		
Cr4	10.00	ppm	.7402 %	10.02	10.07	9.923		
Cu1	10.11	ppm	1.013 %	10.12	10.21	10.01		
Fe2	10.16	ppm	.4529 %	10.15	10.21	10.12		
Mg4	101.1	ppm	.6297 %	101.0	101.8	100.6		
Pb1	10.08	ppm	.4592 %	10.03	10.12	10.07		
Zn3	2.041	ppm	.6625 %	2.026	2.053	2.044		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV			21-2	Seq: 10		13:17:03 21 Dec 1994 ICP		
Ag1	.9639	ppm	1.316 %	.9697	.9726	.9493		
Al3	9.928	ppm	1.677 %	9.994	10.05	9.739		
Ba1	9.948	ppm	1.738 %	9.999	10.09	9.755		
Ca3	49.15	ppm	1.382 %	49.37	49.70	48.39		
Cd1	1.061	ppm	.8220 %	1.060	1.070	1.052		
Cr4	1.010	ppm	1.579 %	1.016	1.023	.9922		
Cu1	1.257	ppm	1.602 %	1.258	1.277	1.236		
Fe2	5.133	ppm	1.617 %	5.154	5.203	5.041		
Mg4	49.50	ppm	1.324 %	49.63	50.09	48.79		
Pb1	1.034	ppm	2.506 %	1.062	1.010	1.031		
Zn3	2.072	ppm	.9877 %	2.081	2.087	2.049		
*** Sample ID: ICB			21-2	Seq: 11		13:20:28 21 Dec 1994 ICP		
Ag1	.0027 L	ppm	4.827 %	.0025	.0028	.0028		
Al3	-.0096 L	ppm	-255.0%	.0149	-.0096	-.0341		
Ba1	.0011 L	ppm	46.02 %	.0017	.0009	.0007		
Ca3	-.0180 L	ppm	-15.82%	-.0192	-.0200	-.0147		
Cd1	.0017 L	ppm	61.04 %	.0016	.0029	.0008		
Cr4	.0000 L	ppm	6014. %	.0003	-.0017	.0015		
Cu1	.0010 L	ppm	229.3 %	.0029	.0015	-.0015		
Fe2	-.0031 L	ppm	-81.05%	-.0036	-.0053	-.0004		
Mg4	.0176 L	ppm	2.727 %	.0176	.0181	.0171		
Pb1	.0300 L	ppm	38.06 %	.0375	.0356	.0168		
Zn3	.0009 L	ppm	298.4 %	-.0009	.0042	-.0004		
*** Sample ID: CRII			21-2	Seq: 13		13:23:53 21 Dec 1994 ICP		
Ag1	.0220	ppm	6.459 %	.0223	.0233	.0205		
Al3	-.0006 L	ppm	-1324.%	-.0050	-.0054	.0086		
Ba1	.0003 L	ppm	92.26 %	.0002	.0001	.0006		
Ca3	-.0233 L	ppm	-12.41%	-.0262	-.0232	-.0204		
Cd1	.0120	ppm	6.732 %	.0124	.0126	.0111		
Cr4	.0217	ppm	9.797 %	.0197	.0215	.0240		
Cu1	.0516	ppm	1.670 %	.0518	.0524	.0507		
Fe2	-.0042 L	ppm	-44.32%	-.0029	-.0063	-.0033		
Mg4	-.0020 L	ppm	-405.9%	.0061	-.0104	-.0018		
Pb1	.0851	ppm	14.63 %	.0708	.0932	.0914		
Zn3	.0427	ppm	4.515 %	.0415	.0449	.0417		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICSAI		21-2	Seq: 14	13:27:18 21 Dec 1994 ICP				
Ag1	.0056 L	ppm	34.89 %	.0074	.0035	.0061		
Al3	451.1	ppm	.7956 %	452.2	454.0	447.1		
Ba1	-.0006 L	ppm	-7.891%	-.0006	-.0007	-.0006		
Ca3	464.0	ppm	.7139 %	465.9	466.0	460.2		
Cd1	.0058	ppm	50.26 %	.0052	.0033	.0090		
Cr4	.0046 L	ppm	77.06 %	.0030	.0087	.0021		
Cu1	-.0050 L	ppm	-28.99%	-.0067	-.0044	-.0040		
Fe2	175.7	ppm	.7609 %	176.2	176.7	174.2		
Mg4	480.2	ppm	.7048 %	481.8	482.5	476.3		
Pb1	.0026 L	ppm	403.4 %	.0146	-.0009	-.0058		
Zn3	.0005 L	ppm	625.6 %	-.0032	.0031	.0017		
*** Sample ID: ICSABI		21-2	Seq: 15	13:30:43 21 Dec 1994 ICP				
Ag1	.8772	ppm	1.436 %	.8645	.8775	.8897		
Al3	453.1	ppm	1.583 %	445.0	455.6	458.6		
Ba1	.4556	ppm	1.682 %	.4469	.4588	.4612		
Ca3	465.5	ppm	.8354 %	461.0	467.9	467.7		
Cd1	.8970	ppm	.5194 %	.8920	.9012	.8976		
Cr4	.4536	ppm	.7398 %	.4508	.4527	.4573		
Cu1	.4489	ppm	1.604 %	.4410	.4507	.4551		
Fe2	177.4	ppm	1.150 %	175.1	178.5	178.8		
Mg4	479.0	ppm	.8401 %	474.4	481.4	481.4		
Pb1	.8795	ppm	5.661 %	.8747	.9315	.8323		
Zn3	.9023	ppm	1.516 %	.8925	.8965	.9179		
*** Sample ID: CCV		21-2	Seq: 17	13:34:09 21 Dec 1994 ICP				
Ag1	.9541	ppm	1.015 %	.9612	.9581	.9431		
Al3	4.810	ppm	1.944 %	4.887	4.838	4.706		
Ba1	.9721	ppm	1.557 %	.9818	.9799	.9547		
Ca3	49.05	ppm	1.034 %	49.36	49.33	48.47		
Cd1	.9900	ppm	.6507 %	.9945	.9928	.9826		
Cr4	4.908	ppm	1.080 %	4.936	4.941	4.847		
Cu1	4.780	ppm	1.436 %	4.824	4.815	4.701		
Fe2	5.047	ppm	1.376 %	5.101	5.071	4.969		
Mg4	46.97	ppm	.9937 %	47.23	47.25	46.43		
Pb1	4.862	ppm	1.426 %	4.880	4.921	4.786		
Zn3	1.025	ppm	.5090 %	1.019	1.026	1.029		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCB			21-2	Seq: 18		13:37:35 21 Dec 1994 ICP		
Ag1	.0016	L ppm	99.13 %	.0023	.0026	-.0002		
Al3	-.0043	L ppm	-192.0%	.0025	-.0020	-.0136		
Ba1	.0001	L ppm	34.77 %	.0001	.0002	.0002		
Ca3	-.0202	L ppm	-7.387%	-.0189	-.0200	-.0218		
Cd1	.0006	L ppm	111.8 %	.0001	.0004	.0014		
Cr4	.0006	L ppm	160.7 %	-.0005	.0009	.0013		
Cu1	.0023	L ppm	33.51 %	.0032	.0020	.0018		
Fe2	.0192	L ppm	4.952 %	.0192	.0182	.0201		
Mg4	-.0034	L ppm	-497.0%	-.0215	-.0011	.0123		
Pb1	-.0038	L ppm	-204.5%	-.0059	-.0102	.0048		
Zn3	-.0026	L ppm	-65.22%	-.0007	-.0040	-.0031		
*** Sample ID: PB 12/20			21-2	Seq: 19		13:41:01 21 Dec 1994 ICP		
Ag1	.0018	L ppm	33.02 %	.0025	.0015	.0014		
Al3	.0135	L ppm	75.35 %	.0018	.0192	.0196		
Ba1	.0022	L ppm	10.63 %	.0021	.0024	.0020		
Ca3	.0323	L ppm	13.15 %	.0292	.0307	.0372		
Cd1	.0032	L ppm	32.50 %	.0038	.0020	.0038		
Cr4	.0024	L ppm	36.88 %	.0035	.0021	.0017		
Cu1	.0046	L ppm	14.48 %	.0048	.0052	.0039		
Fe2	.0314	L ppm	7.907 %	.0343	.0301	.0299		
Mg4	.0106	L ppm	126.5 %	.0108	.0240	-.0029		
Pb1	-.0159	L ppm	-108.3%	-.0323	.0021	-.0177		
Zn3	.0070	L ppm	31.70 %	.0095	.0061	.0054		
*** Sample ID: LCSS 100			21-2	Seq: 21		13:44:27 21 Dec 1994 ICP		
Ag1	.7797	ppm	.6590 %	.7847	.7744	.7802		
Al3	35.82	ppm	.9425 %	36.20	35.59	35.65		
Ba1	4.654	ppm	.8547 %	4.700	4.630	4.632		
Ca3	21.81	ppm	.6638 %	21.97	21.78	21.69		
Cd1	.8187	ppm	.8504 %	.8212	.8242	.8109		
Cr4	.6811	ppm	1.276 %	.6885	.6831	.6715		
Cu1	1.523	ppm	.7591 %	1.536	1.515	1.517		
Fe2	79.75	ppm	.5567 %	80.24	79.62	79.38		
Mg4	25.49	ppm	.6369 %	25.67	25.43	25.36		
Pb1	1.631	ppm 103	3.722 %	1.691	1.570	1.632		
Zn3	1.107	ppm	1.112 %	1.117	1.109	1.093		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 22 13:47:56 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		94.35	.9435	1.000	ppm	2.448 %
Al3		93.97	4.698	5.000	ppm	1.624 %
Ba1		95.21	.9521	1.000	ppm	2.282 %
Ca3		96.24	48.12	50.00	ppm	1.616 %
Cd1		99.38	.9938	1.000	ppm	1.149 %
Cr4		95.96	4.798	5.000	ppm	1.702 %
Cu1		94.08	4.704	5.000	ppm	2.200 %
Fe2		98.16	4.908	5.000	ppm	1.973 %
Mg4		93.62	46.81	50.00	ppm	1.679 %
Pb1		96.23	4.811	5.000	ppm	1.299 %
Zn3		99.41	.9941	1.000	ppm	.8802 %

*** Check Standard: 3 Ck3 Seq: 23 13:51:27 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-7.749	-.0008	.0100	ppm	-32.01%
Al3		10.48	.0105	.1000	ppm	118.5 %
Ba1		2.454	.0001	.0050	ppm	159.7 %
Ca3		-3.478	-.0174	.5000	ppm	-15.24%
Cd1		40.91	.0020	.0050	ppm	72.87 %
Cr4		26.88	.0027	.0100	ppm	81.34 %
Cu1		9.947	.0020	.0200	ppm	19.73 %
Fe2		26.56	.0133	.0500	ppm	11.58 %
Mg4		3.992	.0200	.5000	ppm	70.45 %
Pb1		1.070	.0005	.0500	ppm	6321. %
Zn3		-38.53	-.0039	.0100	ppm	-41.96%

*** Sample ID: 5053-1 1.00 21-2 Seq: 24 13:54:55 21 Dec 1994 ICP

Ag1	**-.0009**	L ppm	1.00 U	-336.9%	-.0046	.0010	.0008
Al3	.4689	ppm		8.078 %	.4564	.5115	.4389
Ba1	**.1719**	ppm	17.2	.1651 %	.1718	.1716	.1722
Ca3	4.431	ppm		.3113 %	4.431	4.444	4.417
Cd1	**.0032**	L ppm	0.50 U	32.63 %	.0043	.0022	.0030
Cr4	**.0033**	L ppm	1.00 U	30.46 %	.0041	.0021	.0036
Cu1	.0156	L ppm		4.216 %	.0150	.0163	.0153
Fe2	1.023	ppm		.1154 %	1.022	1.024	1.023
Mg4	.0991	L ppm		21.43 %	.0783	.1207	.0983
Pb1	**-.0058**	L ppm	5.00 U	456.0 %	.0164	.0254	-.0244
Zn3	.0198	ppm		6.962 %	.0213	.0195	.0186

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5068-1 1.00 21-2			Seq: 25	13:58:21 21 Dec 1994 ICP				
Ag1	-.0003 L	ppm	-565.4%	.0015	-.0017	-.0007		
Al3	.3145	ppm	.8654 %	.3114	.3166	.3155		
Ba1	.2995	ppm	1.432 %	.3011	.3028	.2947		
Ca3	1.169	ppm	.7032 %	1.172	1.174	1.159		
Cd1	.2571	ppm	1.453 %	.2575	.2606	.2532		
Cr4	.0208	ppm	5.890 %	.0210	.0195	.0219		
Cu1	.2723	ppm	.8503 %	.2737	.2736	.2696		
Fe2	1.256	ppm	.4343 %	1.257	1.260	1.249		
Mg4	.1375 L	ppm	11.27 %	.1293	.1279	.1554		
Pb1	**.2471**	**ppm** 49.7	2.099 %	.4883	.5086	.4945		
Zn3	1.593	ppm	.7011 %	1.602	1.598	1.581		
*** Sample ID: 5048-1 1.00 21-2			Seq: 27	14:01:47 21 Dec 1994 ICP				
Ag1	.0017 L	ppm	74.33 %	.0026	.0022	.0003		
Al3	20.97	ppm	.9600 %	20.74	21.09	21.09		
Ba1	.4748	ppm	1.328 %	.4677	.4795	.4773		
Ca3	75.47	ppm	.6805 %	74.88	75.81	75.72		
Cd1	.0074	ppm	21.03 %	.0084	.0056	.0083		
Cr4	.0629	ppm	2.081 %	.0626	.0644	.0618		
Cu1	1.001	ppm	1.358 %	.9852	1.009	1.008		
Fe2	80.13	ppm	.9091 %	79.30	80.65	80.45		
Mg4	14.68	ppm	.5299 %	14.59	14.75	14.69		
Pb1	**.5438**	**ppm** 54.4	1.654 %	.5513	.5338	.5464		
Zn3	1.727	ppm	.0731 %	1.726	1.728	1.728		
*** Sample ID: 5048-2 1.00 21-2			Seq: 28	14:05:14 21 Dec 1994 ICP				
Ag1	.0053 L	ppm	24.32 %	.0055	.0039	.0065		
Al3	50.83	ppm	1.646 %	50.42	51.79	50.28		
Ba1	10.54	ppm	1.663 %	10.45	10.74	10.43		
Ca3	259.6	ppm	1.163 %	258.5	263.0	257.3		
Cd1	.0328	ppm	9.005 %	.0296	.0333	.0355		
Cr4	.1085	ppm	.6445 %	.1084	.1092	.1078		
Cu1	14.69	ppm	1.712 %	14.55	14.98	14.54		
Fe2	142.6	ppm	1.285 %	141.9	144.6	141.1		
Mg4	61.80	ppm	1.098 %	61.57	62.56	61.26		
Pb1	**26.47**	**ppm** 2650	1.272 %	26.32	26.86	26.24		
Zn3	13.16	ppm	.9320 %	13.12	13.30	13.07		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5048-3 1.00 21-2			Seq: 29	14:08:41 21 Dec 1994 ICP				
Ag1	.0019 L	ppm	53.16 %	.0010	.0017	.0030		
Al3	69.69	ppm	.1971 %	69.72	69.54	69.81		
Ba1	.4720	ppm	.3516 %	.4721	.4702	.4735		
Ca3	609.3	ppm	.0635 %	609.0	609.0	609.7		
Cd1	.0056	ppm	9.309 %	.0062	.0055	.0052		
Cr4	.1456	ppm	1.423 %	.1469	.1432	.1468		
Cu1	.1900	ppm	1.164 %	.1921	.1877	.1902		
Fe2	169.9	ppm	.0517 %	169.9	169.8	169.9		
Mg4	51.80	ppm	.2525 %	51.87	51.88	51.65		
Pb1	.1797	ppm 18.0	15.67 %	.1526	.2088	.1777		
Zn3	.6026	ppm	.8372 %	.6069	.6038	.5970		
*** Sample ID: 5048-6 1.00 21-2			Seq: 31	14:12:06 21 Dec 1994 ICP				
Ag1	.0014 L	ppm	124.0 %	.0028	.0021	-.0006		
Al3	54.46	ppm	1.517 %	54.94	54.93	53.50		
Ba1	.7381	ppm	1.583 %	.7457	.7439	.7246		
Ca3	627.3	ppm	1.255 %	631.6	632.0	618.2		
Cd1	.0073	ppm	16.85 %	.0079	.0082	.0059		
Cr4	.2844	ppm	1.873 %	.2885	.2863	.2784		
Cu1	.1577	ppm	1.802 %	.1593	.1593	.1544		
Fe2	140.3	ppm	1.315 %	141.4	141.4	138.2		
Mg4	66.32	ppm	1.403 %	66.83	66.89	65.25		
Pb1	.9003	ppm 90.0	8.493 %	.8647	.9881	.8481		
Zn3	.9634	ppm	1.177 %	.9661	.9731	.9509		
*** Sample ID: 5048-7 1.00 21-2			Seq: 32	14:15:27 21 Dec 1994 ICP				
Ag1	.0027 L	ppm	113.4 %	.0046	.0045	-.0009		
Al3	115.5	ppm	2.252 %	113.0	115.4	118.2		
Ba1	.9225	ppm	2.365 %	.9013	.9214	.9448		
Ca3	349.3	ppm	1.500 %	344.1	349.3	354.6		
Cd1	.0053	ppm	33.37 %	.0062	.0033	.0066		
Cr4	.1639	ppm	1.050 %	.1624	.1636	.1658		
Cu1	.2075	ppm	3.030 %	.2029	.2049	.2147		
Fe2	189.8	ppm	1.701 %	186.7	189.7	193.1		
Mg4	114.8	ppm	1.746 %	112.9	114.7	116.9		
Pb1	.2329	ppm 23.3	10.28 %	.2056	.2502	.2428		
Zn3	.6959	ppm	1.625 %	.6830	.7006	.7042		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5048-8S 1.00 21-2				Seq: 33		14:18:48 21 Dec 1994 ICP		
Ag1	.0016 L	ppm	122.1 %	.0014	-.0002	.0036		
Al3	127.7	ppm	.6915 %	128.0	126.7	128.4		
Ba1	1.015	ppm	.7560 %	1.018	1.006	1.020		
Ca3	343.3	ppm	.3461 %	343.9	341.9	344.1		
Cd1	.0056	ppm	32.76 %	.0046	.0045	.0077		
Cr4	.1742	ppm	2.310 %	.1730	.1708	.1786		
Cu1	.2408	ppm	.2526 %	.2405	.2405	.2415		
Fe2	208.9	ppm	.3949 %	209.4	207.9	209.3		
Mg4	99.41	ppm	.3915 %	99.54	98.97	99.72		
Pb1	.3034	ppm 303	1.102 %	.3061	.2997	.3044		
Zn3	.7096	ppm	.5834 %	.7118	.7048	.7121		
*** Sample ID: 5048-8QCS 1.00 21-2				Seq: 35		14:22:10 21 Dec 1994 ICP		
Ag1	.0025 L	ppm	159.1 %	.0044	.0051	-.0020		
Al3	132.9	ppm	1.052 %	133.0	131.5	134.3		
Ba1	.9370	ppm	1.279 %	.9383	.9244	.9483		
Ca3	208.1	ppm	.8918 %	208.3	206.1	209.8		
Cd1	.0051	ppm	50.69 %	.0081	.0039	.0034		
Cr4	.1834	ppm	1.926 %	.1793	.1851	.1857		
Cu1	.1806	ppm	1.937 %	.1837	.1768	.1814		
Fe2	215.4	ppm	.9472 %	215.6	213.3	217.4		
Mg4	58.78	ppm	.7329 %	58.66	58.42	59.26		
Pb1	.3601	ppm	5.889 %	.3413	.3560	.3831		
Zn3	.6745	ppm	.4288 %	.6775	.6717	.6743		
*** Sample ID: 5048-8SPS 1.00 21-2				Seq: 36		14:25:32 21 Dec 1994 ICP		
Ag1	.0448	ppm	2.133 %	.0438	.0449	.0457		
Al3	140.8	ppm	.7583 %	141.5	139.6	141.4		
Ba1	2.836	ppm	.7960 %	2.851	2.810	2.846		
Ca3	378.2	ppm	.6384 %	380.6	375.8	378.3		
Cd1	.0469	ppm	6.498 %	.0503	.0460	.0444		
Cr4	.3613	ppm	.9171 %	.3636	.3575	.3627		
Cu1	.4011	ppm	.2899 %	.4024	.4003	.4005		
Fe2	225.7	ppm	.6930 %	227.2	224.1	226.0		
Mg4	108.8	ppm	.7608 %	109.6	108.0	108.9		
Pb1	.6462	ppm	1.793 %	.6571	.6340	.6475		
Zn3	1.072	ppm	.8992 %	1.081	1.075	1.062		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 37 14:28:59 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		95.60	.9560	1.000	ppm	.7731 %
Al3		94.42	4.721	5.000	ppm	.7349 %
Ba1		96.85	.9685	1.000	ppm	.7220 %
Ca3		96.86	48.43	50.00	ppm	.5081 %
Cd1		98.78	.9878	1.000	ppm	.9055 %
Cr4		97.06	4.853	5.000	ppm	.7111 %
Cu1		94.70	4.735	5.000	ppm	.4690 %
Fe2		98.57	4.928	5.000	ppm	.7835 %
Mg4		93.37	46.68	50.00	ppm	.3901 %
Pb1		96.89	4.845	5.000	ppm	1.584 %
Zn3		100.3	1.003	1.000	ppm	.5561 %

*** Check Standard: 3 Ck3 Seq: 38 14:32:30 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		33.80	.0034	.0100	ppm	116.8 %
Al3		-7.635	-.0076	.1000	ppm	-52.31%
Ba1		2.598	.0001	.0050	ppm	34.97 %
Ca3		-2.733	-.0137	.5000	ppm	-19.19%
Cd1		27.83	.0014	.0050	ppm	46.96 %
Cr4		16.79	.0017	.0100	ppm	53.14 %
Cu1		7.321	.0015	.0200	ppm	44.36 %
Fe2		26.07	.0130	.0500	ppm	9.452 %
Mg4		1.069	.0053	.5000	ppm	592.3 %
Pb1		29.46	.0147	.0500	ppm	29.98 %
Zn3		-48.36	-.0048	.0100	ppm	-70.56%

*** Sample ID: PB 12/20 21-2 Seq: 39 14:35:56 21 Dec 1994 ICP

Ag1	.0015	L ppm	82.70 %	.0001	.0024	.0020
Al3	.0168	L ppm	58.04 %	.0057	.0240	.0209
Ba1	.0021	L ppm	6.571 %	.0021	.0019	.0022
Ca3	.0358	L ppm	16.49 %	.0329	.0320	.0427
Cd1	.0010	L ppm	43.56 %	.0014	.0011	.0005
Cr4	.0002	L ppm	285.0 %	.0009	-.0002	-.0001
Cu1	.0007	L ppm	187.8 %	-.0005	.0021	.0006
Fe2	.0145	L ppm	30.67 %	.0106	.0135	.0193
Mg4	-.0214	L ppm	-87.22%	-.0427	-.0084	-.0130
Pb1	-.0021	L ppm	-2117.%	-.0477	-.0020	.0433
Zn3	.0097	L ppm	17.29 %	.0116	.0084	.0092

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: LCS			21-2	Seq: 41		14:39:18 21 Dec 1994 ICP		
Ag1	.0359	ppm	7.640 %	.0381	.0367	.0328		
Al3	1.331	ppm	.8451 %	1.343	1.321	1.329		
Ba1	1.400	ppm	.4131 %	1.401	1.394	1.405		
Ca3	1.471	ppm	.7377 %	1.480	1.459	1.475		
Cd1	.0422	ppm	4.229 %	.0402	.0426	.0437		
Cr4	.1457	ppm	.6050 %	.1450	.1467	.1454		
Cu1	.1805	ppm	.4001 %	.1796	.1807	.1810		
Fe2	.7574	ppm	1.229 %	.7575	.7481	.7667		
Mg4	1.304	ppm	2.840 %	1.344	1.270	1.299		
Pb1	.3681	ppm	2.770 %	.3798	.3607	.3639		
Zn3	.3855	ppm	1.166 %	.3901	.3852	.3811		
*** Sample ID: 5048-4			21-2	Seq: 42		14:42:40 21 Dec 1994 ICP		
Ag1	.0022 L	ppm	139.1 %	-.0013	.0045	.0034		
Al3	.1277	ppm	13.96 %	.1448	.1093	.1291		
Ba1	.0034 L	ppm	8.187 %	.0031	.0036	.0034		
Ca3	1.056	ppm	.5775 %	1.061	1.049	1.057		
Cd1	.0007 L	ppm	210.6 %	.0010	-.0009	.0020		
Cr4	.0019 L	ppm	6.026 %	.0020	.0020	.0018		
Cu1	.0030 L	ppm	39.14 %	.0018	.0041	.0032		
Fe2	.2067	ppm	.6390 %	.2059	.2083	.2061		
Mg4	.2412 L	ppm	5.442 %	.2296	.2554	.2385		
Pb1	-.0035 L	ppm	-822.0%	-.0127	.0287	-.0265		
Zn3	.0079 L	ppm	43.31 %	.0043	.0111	.0085		
*** Sample ID: 5048-4QC			21-2	Seq: 43		14:46:02 21 Dec 1994 ICP		
Ag1	-.0008 L	ppm	-283.1%	-.0032	.0010	-.0002		
Al3	.1017	ppm	21.03 %	.0804	.1231	.1016		
Ba1	.0028 L	ppm	6.233 %	.0027	.0028	.0030		
Ca3	1.138	ppm	.6937 %	1.143	1.129	1.142		
Cd1	.0013 L	ppm	55.84 %	.0019	.0015	.0005		
Cr4	.0008 L	ppm	95.46 %	.0003	.0017	.0004		
Cu1	.0026 L	ppm	64.32 %	.0013	.0021	.0046		
Fe2	.2117	ppm	2.670 %	.2181	.2074	.2096		
Mg4	.2392 L	ppm	9.584 %	.2220	.2652	.2304		
Pb1	-.0018 L	ppm	-1938.%	-.0401	.0299	.0048		
Zn3	.0098 L	ppm	43.30 %	.0086	.0063	.0146		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5048-4SP 21-2 Seq: 45 14:49:24 21 Dec 1994 ICP								
Ag1	.0516	ppm	7.214 %	.0514	.0555	.0481		
Al3	1.953	ppm	1.450 %	1.971	1.921	1.968		
Ba1	1.936	ppm	.8842 %	1.924	1.956	1.928		
Ca3	10.57	ppm	.3979 %	10.57	10.62	10.54		
Cd1	.0523	ppm	1.787 %	.0528	.0513	.0529		
Cr4	.1990	ppm	.8006 %	.1974	.2006	.1990		
Cu1	.2400	ppm	1.251 %	.2397	.2432	.2372		
Fe2	1.206	ppm	1.192 %	1.195	1.222	1.201		
Mg4	9.229	ppm	.7394 %	9.154	9.288	9.244		
Pb1	.4894	ppm	1.315 %	.4906	.4952	.4825		
Zn3	.5227	ppm	.2528 %	.5226	.5241	.5214		
*** Sample ID: ~~5033~~ 5076-1 21-2 Seq: 46 14:52:46 21 Dec 1994 ICP								
Ag1	-.0006 L	ppm	-148.6%	.0002	-.0004	-.0016		
Al3	.0335 L	ppm	18.46 %	.0352	.0387	.0266		
Ba1	.0642	ppm	.9516 %	.0643	.0636	.0648		
Ca3	104.8	ppm	.8259 %	105.6	103.9	105.1		
Cd1	.0031 L	ppm	31.28 %	.0020	.0036	.0037		
Cr4	.0060 L	ppm	21.63 %	.0049	.0075	.0058		
Cu1	.0143 L	ppm	8.990 %	.0129	.0149	.0153		
Fe2	.1776	ppm	.7401 %	.1761	.1783	.1785		
Mg4	31.38	ppm	.8540 %	31.65	31.11	31.38		
Pb1	.0179 L	ppm	178.8 %	.0444	-.0177	.0271		
Zn3	.4089	ppm	.6865 %	.4057	.4103	.4108		
*** Sample ID: ~~5033-2~~ 5076-3 21-2 Seq: 47 14:56:09 21 Dec 1994 ICP								
Ag1	-.0001 L	ppm	-458.1%	.0003	-.0004	-.0001		
Al3	.1819	ppm	9.293 %	.2010	.1690	.1757		
Ba1	.0673	ppm	1.511 %	.0675	.0682	.0662		
Ca3	315.4	ppm	.8828 %	315.9	317.9	312.4		
Cd1	.0028 L	ppm	43.10 %	.0037	.0014	.0034		
Cr4	.0135	ppm	15.86 %	.0110	.0151	.0143		
Cu1	.0209	ppm	2.992 %	.0202	.0211	.0214		
Fe2	.2587	ppm	1.255 %	.2563	.2624	.2575		
Mg4	43.06	ppm	.6177 %	43.02	43.34	42.82		
Pb1	.0031 L	ppm	951.0 %	-.0003	-.0247	.0344		
Zn3	.9483	ppm	.3590 %	.9518	.9450	.9481		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PB 12/20	21-2		Seq: 49	14:59:32 21 Dec 1994 ICP				
Ag1	.0035 L	ppm	22.08 %	.0043	.0029	.0031		
Al3	.0132 L	ppm	61.62 %	.0191	.0166	.0039		
Ba1	.0016 L	ppm	12.52 %	.0014	.0018	.0015		
Ca3	.0262 L	ppm	6.225 %	.0250	.0281	.0256		
Cd1	.0014 L	ppm	75.95 %	.0003	.0016	.0024		
Cr4	.0097 L	ppm	15.79 %	.0080	.0110	.0100		
Cu1	.0021 L	ppm	58.70 %	.0033	.0008	.0022		
Fe2	.0138 L	ppm	13.04 %	.0130	.0126	.0159		
Mg4	.0153 L	ppm	54.62 %	.0173	.0226	.0062		
Pb1	.0127 L	ppm	197.3 %	-.0140	.0356	.0164		
Zn3	.0106	ppm	32.48 %	.0070	.0138	.0109		
*** Sample ID: LCS	21-2 BENCH		Seq: 50	15:02:56 21 Dec 1994 ICP				
Ag1	.0005 L	ppm	790.0 %	-.0034	.0007	.0042		
Al3	.0024 L	ppm	1109. %	.0156	.0204	-.0287		
Ba1	.0014 L	ppm	25.20 %	.0010	.0014	.0017		
Ca3	.0036 L	ppm	105.5 %	-.0008	.0054	.0062		
Cd1	.0537	ppm	1.331 %	.0529	.0537	.0543		
Cr4	.0096 L	ppm	8.336 %	.0087	.0100	.0101		
Cu1	.2510	ppm	2.243 %	.2568	.2455	.2508		
Fe2	1.065	ppm	2.148 %	1.091	1.052	1.051		
Mg4	.0068 L	ppm	123.5 %	-.0026	.0093	.0138		
Pb1	.4897	ppm	2.281 %	.5004	.4781	.4905		
Zn3	.5595	ppm	1.349 %	.5682	.5556	.5547		
*** Sample ID: 4924-34	21-2		Seq: 51	15:06:20 21 Dec 1994 ICP				
Ag1	.1256	ppm	.9364 %	.1244	.1256	.1267		
Al3	2.422	ppm	1.127 %	2.453	2.410	2.403		
Ba1	205.6 H	ppm	.3128 %	206.3	205.0	205.5		
Ca3	41.05	ppm	.3311 %	41.20	40.95	40.99		
Cd1	.1796	ppm	.2983 %	.1790	.1800	.1797		
Cr4	.0212	ppm	6.417 %	.0205	.0204	.0228		
Cu1	.3496	ppm	1.803 %	.3569	.3465	.3455		
Fe2	3.040	ppm	.1872 %	3.046	3.039	3.035		
Mg4	93.08	ppm	.4050 %	93.41	92.67	93.15		
Pb1	9.668	ppm	.8993 %	9.701	9.734	9.569		
Zn3	1.467	ppm	1.070 %	1.486	1.459	1.458		

AbW

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 52 15:09:48 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		94.36	.9436	1.000	ppm	1.102 %
Al3		93.41	4.671	5.000	ppm	.7750 %
Ba1		96.77	.9677	1.000	ppm	.6984 %
Ca3		94.85	47.42	50.00	ppm	.5125 %
Cd1		97.41	.9741	1.000	ppm	.8916 %
Cr4		95.60	4.780	5.000	ppm	.5102 %
Cu1		93.52	4.676	5.000	ppm	.4702 %
Fe2		95.82	4.791	5.000	ppm	.7768 %
Mg4		92.49	46.24	50.00	ppm	.4523 %
Pb1		95.22	4.761	5.000	ppm	1.570 %
Zn3		99.72	.9972	1.000	ppm	.3462 %

*** Check Standard: 3 Ck3 Seq: 53 15:13:18 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-12.91	-.0013	.0100	ppm	-163.9%
Al3		5.458	.0055	.1000	ppm	206.9 %
Ba1		25.90	.0013	.0050	ppm	14.15 %
Ca3		-3.446	-.0172	.5000	ppm	-1.415%
Cd1		12.89	.0006	.0050	ppm	92.94 %
Cr4		-1.607	-.0002	.0100	ppm	-1378.%
Cu1		7.014	.0014	.0200	ppm	114.0 %
Fe2		-.3322	-.0002	.0500	ppm	-234.1%
Mg4		-.6195	-.0031	.5000	ppm	-331.3%
Pb1		6.637	.0033	.0500	ppm	502.3 %
Zn3		-41.35	-.0041	.0100	ppm	-27.67%

*** Sample ID: 4924-33 21-2 Seq: 55 15:16:43 21 Dec 1994 ICP

Ag1	.0545	ppm	5.010 %	.0562	.0513	.0559
Al3	.3031	ppm	8.553 %	.2736	.3221	.3136
Ba1	82.34 H	ppm	1.886 %	80.98	82.02	84.04
Ca3	31.66	ppm	.7817 %	31.49	31.54	31.94
Cd1	.0477	ppm	.8910 %	.0482	.0475	.0475
Cr4	.0163	ppm	3.909 %	.0164	.0157	.0169
Cu1	.2198	ppm	1.042 %	.2192	.2180	.2224
Fe2	1.312	ppm	1.573 %	1.294	1.307	1.334
Mg4	158.9	ppm	.8264 %	158.2	158.2	160.4
Pb1	3.008	ppm	1.442 %	2.987	2.980	3.058
Zn3	.5578	ppm	1.220 %	.5535	.5542	.5656

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PB 12/19 21-2			Seq: 56		15:20:02 21 Dec 1994 ICP			
Ag1	.0008 L	ppm	85.96 %	.0002	.0015	.0008		
Al3	.0156 L	ppm	61.55 %	.0081	.0123	.0265		
Ba1	.0317	ppm	6.249 %	.0294	.0326	.0331		
Ca3	.0390 L	ppm	9.304 %	.0358	.0384	.0430		
Cd1	.0024 L	ppm	54.33 %	.0025	.0036	.0010		
Cr4	.0017 L	ppm	64.85 %	.0018	.0026	.0005		
Cu1	.0043 L	ppm	15.53 %	.0041	.0051	.0038		
Fe2	.0243 L	ppm	3.043 %	.0251	.0239	.0238		
Mg4	.0123 L	ppm	216.3 %	-.0183	.0298	.0253		
Pb1	.0049 L	ppm	558.6 %	.0009	-.0203	.0343		
Zn3	.0013 L	ppm	137.4 %	.0033	.0007	-.0001		
*** Sample ID: LCS			21-2 Seq: 57		15:23:21 21 Dec 1994 ICP			
Ag1	.0525	ppm	1.447 %	.0525	.0518	.0533		
Al3	1.910	ppm	.4291 %	1.916	1.914	1.901		
Ba1	1.993	ppm	.5638 %	1.988	2.006	1.985		
Ca3	1.980	ppm	.6814 %	1.978	1.995	1.968		
Cd1	.0521	ppm	3.344 %	.0522	.0502	.0537		
Cr4	.1999	ppm	1.335 %	.2030	.1991	.1979		
Cu1	.2478	ppm	.4145 %	.2477	.2489	.2468		
Fe2	1.009	ppm	.7709 %	1.004	1.018	1.005		
Mg4	1.833	ppm	.8109 %	1.818	1.848	1.834		
Pb1	.4751	ppm	4.809 %	.4837	.4492	.4924		
Zn3	.5152	ppm	2.235 %	.5222	.5216	.5020		
*** Sample ID: 5029-2			21-2 Seq: 59		15:26:40 21 Dec 1994 ICP			
Ag1	.0065 L	ppm	62.13 %	.0029	.0108	.0057		
Al3	.0609 L	ppm	21.72 %	.0462	.0718	.0647		
Ba1	.0056 L	ppm	4.541 %	.0058	.0053	.0057		
Ca3	6.593	ppm	.8497 %	6.646	6.598	6.534		
Cd1	.0030 L	ppm	34.66 %	.0038	.0033	.0018		
Cr4	.0137	ppm	10.55 %	.0131	.0127	.0154		
Cu1	.0045 L	ppm	8.747 %	.0045	.0041	.0049		
Fe2	.8306	ppm	1.419 %	.8412	.8326	.8179		
Mg4	2.344	ppm	1.456 %	2.355	2.371	2.305		
Pb1	-.0391 L	ppm	-49.99%	-.0166	-.0517	-.0490		
Zn3	.2744	ppm	.9389 %	.2727	.2774	.2732		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5029-2			21-2 STR	Seq: 60		15:29:59 21 Dec 1994 ICP		
Ag1	.0163	ppm	23.07 %	.0205	.0150	.0133		
Al3	.2997	ppm	1.592 %	.3021	.2942	.3028		
Ba1	.0204	ppm	1.513 %	.0200	.0206	.0205		
Ca3	31.94	ppm	1.166 %	31.51	32.18	32.12		
Cd1	.0012 L	ppm	179.5 %	.0016	.0033	-.0012		
Cr4	.0568	ppm	3.990 %	.0546	.0591	.0566		
Cu1	.0155 L	ppm	11.12 %	.0175	.0145	.0146		
Fe2	4.001	ppm	1.313 %	3.940	4.037	4.024		
Mg4	11.28	ppm	1.220 %	11.12	11.36	11.35		
Pb1	-.1750 L	ppm	-21.05%	-.1388	-.2124	-.1737		
Zn3	1.328	ppm	1.424 %	1.308	1.346	1.329		
*** Sample ID: BLK			21-2	Seq: 61		15:33:18 21 Dec 1994 ICP		
Ag1	.0002 L	ppm	844.9 %	-.0017	.0024	-.0000		
Al3	-.0029 L	ppm	-600.5%	-.0219	.0124	.0009		
Ba1	-.0000 L	ppm	-1221.%	-.0004	.0002	.0002		
Ca3	-.0231 L	ppm	-9.546%	-.0255	-.0223	-.0214		
Cd1	.0018 L	ppm	68.40 %	.0004	.0028	.0023		
Cr4	.0021 L	ppm	58.57 %	.0008	.0022	.0032		
Cu1	-.0017 L	ppm	-115.7%	-.0035	.0003	-.0017		
Fe2	.0042 L	ppm	87.58 %	.0005	.0080	.0042		
Mg4	-.0106 L	ppm	-160.8%	-.0012	-.0004	-.0303		
Pb1	.0008 L	ppm	2297. %	.0171	-.0188	.0041		
Zn3	.0026 L	ppm	53.20 %	.0038	.0011	.0031		
*** Sample ID: ~~BLK~~ LCS 12/20			21-2	Seq: 63		15:36:38 21 Dec 1994 ICP		
Ag1	.0383	ppm 76.6	5.720 %	.0407	.0364	.0378		
Al3	1.385	ppm 69%	.2335 %	1.389	1.383	1.384		
Ba1	1.423	ppm 71.2	.7101 %	1.426	1.412	1.432		
Ca3	1.482	ppm 74.1	.3880 %	1.483	1.476	1.488		
Cd1	.0444	ppm 88.8	.3257 %	.0443	.0445	.0446		
Cr4	.1460	ppm 73.0	1.445 %	.1437	.1477	.1466		
Cu1	.1799	ppm 89.9	.7264 %	.1794	.1788	.1813		
Fe2	.7373	ppm 73.7	.1601 %	.7370	.7363	.7386		
Mg4	1.358	ppm 67.9	.9519 %	1.362	1.344	1.369		
Pb1	.3711	ppm 74.2	5.393 %	.3942	.3603	.3588		
Zn3	.3955	ppm 79.1	2.408 %	.3864	.3946	.4054		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CRIF			21-2	Seq: 64		15:39:58 21 Dec 1994 ICP		
Ag1	.0208	ppm	9.928 %	.0204	.0231	.0191		
Al3	.0034 L	ppm	185.4 %	.0048	-.0035	.0088		
Ba1	.0003 L	ppm	60.41 %	.0004	.0001	.0004		
Ca3	-.0266 L	ppm	-8.913%	-.0261	-.0293	-.0246		
Cd1	.0118	ppm	7.969 %	.0129	.0110	.0117		
Cr4	.0213	ppm	8.482 %	.0232	.0211	.0197		
Cu1	.0502	ppm	4.449 %	.0523	.0479	.0504		
Fe2	-.0019 L	ppm	-31.18%	-.0024	-.0012	-.0020		
Mg4	.0090 L	ppm	473.9 %	.0168	-.0370	.0472		
Pb1	.1078	ppm	1.444 %	.1060	.1090	.1083		
Zn3	.0407	ppm	3.752 %	.0425	.0400	.0397		
*** Sample ID: ICSAF			21-2	Seq: 65		15:43:18 21 Dec 1994 ICP		
Ag1	.0041 L	ppm	61.99 %	.0017	.0039	.0068		
Al3	466.4	ppm	.4746 %	467.5	467.8	463.9		
Ba1	-.0008 L	ppm	-11.02%	-.0008	-.0009	-.0007		
Ca3	466.8	ppm	.5252 %	468.8	467.6	464.1		
Cd1	.0052	ppm	56.04 %	.0067	.0019	.0072		
Cr4	.0058 L	ppm	10.84 %	.0054	.0065	.0054		
Cu1	-.0074 L	ppm	-19.99%	-.0082	-.0083	-.0057		
Fe2	178.1	ppm	.4707 %	178.7	178.5	177.1		
Mg4	490.8	ppm	.5570 %	492.9	491.9	487.7		
Pb1	-.0053 L	ppm	-174.0%	-.0159	-.0013	.0012		
Zn3	.0006 L	ppm	528.3 %	-.0016	.0039	-.0006		
*** Sample ID: ICSABF			21-2	Seq: 67		15:46:39 21 Dec 1994 ICP		
Ag1	.8770	ppm	.8200 %	.8825	.8689	.8797		
Al3	449.5	ppm	.8907 %	453.0	445.1	450.5		
Ba1	.4479	ppm	.8594 %	.4509	.4436	.4493		
Ca3	456.9	ppm	.7931 %	460.8	453.7	456.2		
Cd1	.8992	ppm	.9807 %	.9090	.8918	.8970		
Cr4	.4428	ppm	.4931 %	.4441	.4403	.4440		
Cu1	.4429	ppm	.8398 %	.4459	.4388	.4442		
Fe2	173.5	ppm	.7820 %	174.9	172.2	173.5		
Mg4	479.0	ppm	.7938 %	482.9	475.3	478.7		
Pb1	.8747	ppm	3.752 %	.9111	.8653	.8475		
Zn3	.8824	ppm	.9730 %	.8920	.8755	.8798		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 68 15:50:05 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		97.18	.9718	1.000	ppm	1.787 %
Al3		95.17	4.759	5.000	ppm	1.126 %
Ba1		97.22	.9722	1.000	ppm	1.374 %
Ca3		98.14	49.07	50.00	ppm	1.078 %
Cd1		101.2	1.012	1.000	ppm	1.335 %
Cr4		97.76	4.888	5.000	ppm	1.031 %
Cu1		95.79	4.790	5.000	ppm	1.289 %
Fe2		100.1	5.004	5.000	ppm	.7013 %
Mg4		95.86	47.93	50.00	ppm	.9614 %
Pb1		99.61	4.981	5.000	ppm	2.689 %
Zn3		100.7	1.007	1.000	ppm	.3327 %

*** Check Standard: 3 Ck3 Seq: 69 15:53:35 21 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		21.35	.0021	.0100	ppm	24.95 %
Al3		-.6486	-.0006	.1000	ppm	-1879.%
Ba1		6.174	.0003	.0050	ppm	18.89 %
Ca3		-2.598	-.0130	.5000	ppm	-14.06%
Cd1		12.12	.0006	.0050	ppm	90.66 %
Cr4		21.33	.0021	.0100	ppm	5.995 %
Cu1		4.733	.0009	.0200	ppm	243.0 %
Fe2		43.13	.0216	.0500	ppm	9.620 %
Mg4		4.181	.0209	.5000	ppm	22.63 %
Pb1		14.03	.0070	.0500	ppm	394.1 %
Zn3		-25.48	-.0025	.0100	ppm	-34.04%

4. Ref. Std. recovery out of limits (on Ave.) disqualify run.
5. Spiked samples out of limits - repeat sample and all others similar.

PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Pb soil samples		MDL: 5.00			unit: ug/g				
5048-8S	30.3	36.0	High	17.2	soil	1	---	Y	

MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

'ALYST: c. kutzer
_ATE: 12/21/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Pb soil samples	MDL: 5.00		unit: uq/q		[spk sol.]=50.0 mg/L			
5048-8S	30.3	1.00	1.00	50.0	64.6	68.6	N	

BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Ag	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.050	.0525	105.0	Y	
Ag	MDL:1.00			unit: ug/g				
Blk Spike	1.00	1.00	1.00	85.0	78.0	91.8	Y	
Ba	MDL:0.020			unit: mg/L				
Blk Spike	0.020	1.00	100.0	2.000	1.99	99.5	Y	
Ba	MDL:2.00			unit: ug/g				
Blk Spike	2.00	1.00	1.00	319	465	145.8	Y	
Cd	MDL:0.0050			unit: mg/L				
Blk Spike	0.0050	1.00	100.0	0.050	.0521	104.2	Y	
Cd	MDL:0.50			unit: ug/g				
Blk Spike	1.00	1.00	1.00	81.5	81.9	100.5	Y	

(continued)
BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Cr	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.200	.200	100.0	Y	
Cr	MDL:1.00			unit: ug/g				
Blk Spike	1.00	1.00	1.00	57.4	68.1	118.6	Y	
Cu	MDL:0.020			unit: mg/L				
Blk Spike	0.020	1.00	100.0	0.250	.248	99.2	Y	
Cu	MDL:2.00			unit: ug/g				
Blk Spike	2.00	1.00	1.00	146	152	104.1	Y	
Pb	MDL:0.050			unit: mg/L				
Blk Spike	0.050	1.00	100.0	0.500	.475	95.0	Y	
Pb	MDL:5.00			unit: ug/g				
Blk Spike	5.00	1.00	1.00	128	163	127.3	Y	

GOT

REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Ag	unit: mg/L			
Ref Std	1.00	.954	95.4	Y
Ref Std	1.00	.944	94.4	Y
Ref Std	1.00	.956	95.6	Y
Ref Std	1.00	.944	94.4	Y
Ref Std	1.00	.972	97.2	Y
Ba	unit: mg/L			
Ref Std	1.00	.972	97.2	Y
Ref Std	1.00	.952	95.2	Y
Ref Std	1.00	.969	96.9	Y
Ref Std	1.00	.968	96.8	Y
Ref Std	1.00	.972	97.2	Y
Cd	unit: mg/L			
Ref Std	1.00	.990	99.0	Y
Ref Std	1.00	.994	99.4	Y
Ref Std	1.00	.988	98.8	Y
Ref Std	1.00	.974	97.4	Y
Ref Std	1.00	1.01	101.0	Y
Cr	unit: mg/L			
Ref Std	5.00	4.91	98.2	Y
Ref Std	5.00	4.80	96.0	Y
Ref Std	5.00	4.85	97.0	Y
Ref Std	5.00	4.78	95.6	Y
Ref Std	5.00	4.89	97.8	Y
Cu	unit: mg/L			
Ref Std	5.00	4.78	95.6	Y
Ref Std	5.00	4.70	94.0	Y
Ref Std	5.00	4.74	94.8	Y
Ref Std	5.00	4.68	93.6	Y
Ref Std	5.00	4.79	95.8	Y
Pb	unit: mg/L			
Ref Std	5.00	4.86	97.2	Y
Ref Std	5.00	4.81	96.2	Y
Ref Std	5.00	4.85	97.0	Y
Ref Std	5.00	4.76	95.2	Y
Ref Std	5.00	4.98	99.6	Y

Ag-11 Cu-16 V-7
Al-9 Fe-11 Zn-17
Ba-9 K-7
Be-8 Mg-9
Ca-7 Mn-7
Cd-14 Ni-10
Co-7 Pb-13
Cr-18 Sb-1
Tl-9

Date 12/28 Name [illegible] QC ✓
Date 12/28 Name QC
Name
Name

1 copy
R5048
R5115

D12-27-94 ID			CAL STD	ICV	ICB	CRII	ICSAI	ICSABI
5 Date			27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	Dil	Vol	1	1	1	1	1	1
AG	0.01	0.0	1.94	0.940	0.010 U	0.0178	0.010 U	0.893
AL	0.1	0.1	9.93	9.71	0.100 U	0.100 U	470	463
BA	0.02	0.0	1.95	9.73	0.0200 U	0.0200 U	0.0200 U	0.462
BE	0.005	0.0	1.99	0.238	0.0050 U	0.0098	0.0050 U	0.461
CA	0.5	0.5	99.2	47.4	0.500 U	0.500 U	480	478
CD	0.005	0.0	1.98	0.996	0.0050 U	0.0106	0.0050 U	0.899
CO	0.05	0.0	9.87	2.42	0.0500 U	0.102	0.0500 U	0.452
CR	0.01	0.0	9.91	1.00	0.010 U	0.0179	0.010 U	0.461
CU	0.02	0.0	9.84	1.24	0.0200 U	0.0486	0.0200 U	0.457
FE	0.05	0.0	9.81	5.00	0.0500 U	0.0500 U	179	177
K	1	1.0	9.83	47.6	1.00 U	1.00 U	1.00 U	1.00 U
MG	0.5	0.5	99.6	47.3	0.500 U	0.500 U	498	493
MN	0.01	0.0	1.93	1.44	0.010 U	0.0293	0.0334	0.468
NI	0.04	0.0	9.94	4.03	0.0400 U	0.0855	0.0400 U	0.901
PB	0.05	0.0	9.93	0.990	0.0500 U	0.108	0.0500 U	0.891
SB	0.1	0.1	9.71	5.56	0.100 U	0.129	0.100 U	0.100 U
TL	0.3	0.3	9.91	2.15	0.300 U	0.300 U	0.300 U	0.300 U
V	0.05	0.0	9.94	2.53	0.0500 U	0.108	0.0500 U	0.454
ZN	0.01	0.0	1.99	2.02	0.010 U	0.0447	0.010 U	0.890

ICP12276→A

see attached worklists ✓ (NO QC)

000100

D12-27-94	CCV	CCB		PB 12/23		LCSS	Ck2	Ck3		5097-1S	
	5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	
		1	1		1	1					1
AG		1.01	0.010	U	0.010	U	0.764	1.01	0.010	U	0.010 U
AL		5.04	0.100	U	0.100	U	36.3	5.07	0.100	U	46.7
BA		1.00	0.0200	U	0.0200	U	2.98	1.01	0.0200	U	0.247
BE		1.01	0.0050	U	0.0050	U	1.39	1.02	0.0050	U	0.0050 U
CA		50.7	0.500	U	0.500	U	22.9	50.8	0.500	U	1140
CD		1.03	0.0050	U	0.0050	U	0.758	1.04	0.0050	U	0.0050 U
CO		5.20	0.0500	U	0.0500	U	1.13	5.20	0.0500	U	0.0588
CR		5.09	0.010	U	0.010	U	0.523	5.14	0.010	U	0.0709
CU		5.06	0.0200	U	0.0200	U	1.35	5.07	0.0200	U	0.162
FE		5.09	0.0500	U	0.0500	U	89.4	5.08	0.0500	U	110
K		4.92	1.00	U	1.00	U	24.7	4.89	1.00	U	7.55
MG		50.3	0.500	U	0.500	U	26.1	50.5	0.500	U	189
MN		0.995	0.010	U	0.010	U	1.51	0.999	0.010	U	5.71
NI		5.19	0.0400	U	0.0400	U	0.329	5.22	0.0400	U	0.115
PB		5.19	0.0500	U	0.0500	U	1.13	5.22	0.0500	U	0.0819
SB		4.96	0.100	U	0.100	U	0.637	4.96	0.100	U	0.100 U
TL		5.20	0.300	U	0.300	U	1.02	5.23	0.300	U	0.300 U
V		5.14	0.0500	U	0.0500	U	0.479	5.23	0.0500	U	0.0980
ZN		1.02	0.010	U	0.010	U	0.619	1.03	0.010	U	0.487

D12-27-94	5097-1QCS	5097-1SPS	5097-2	5097-3	5079-1	5100-1	BLK	
5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	
	1	1	1	1	1	1	1	1
AG	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
AL	410	429	44.6	42.4	447	44.5	0.100 U	
BA	5.25	7.29	0.287	0.269	5.62	0.821	0.0200 U	
BE	0.0269	0.0265	0.0050 U	0.0050 U	0.0282	0.0050 U	0.0050 U	
CA	118	122	641	772	127	872	0.500 U	
CD	0.0053	0.0542	0.0050 U	0.0050 U	0.0063	0.0050 U	0.0050 U	
CO	0.173	0.180	0.0598	0.0580	0.185	0.0500 U	0.0500 U	
CR	1.10	1.28	0.0628	0.0701	1.27	0.0666	0.010 U	
CU	0.400	0.609	0.170	0.167	0.402	0.130	0.0200 U	
FE	576	596	113	112	605	69.0	0.0500 U	
K	64.7	67.3	7.52	7.94	70.8	7.36	1.00 U	
MG	25.8	27.0	218	305	28.4	150	0.500 U	
MN	1.39	1.91	5.36	5.21	1.52	2.82	0.010 U	
NI	0.736	1.18	0.0937	0.102	0.850	0.0761	0.0400 U	
PB	0.293	0.691	0.0848	0.100	0.268	0.106	0.0500 U	
SB	0.100 U	0.100 U	0.100 U	0.100 U	0.115	0.100 U	0.100 U	
TL	0.300 U	0.300 U	0.300 U	0.460	0.300 U	0.300 U	0.300 U	
V	0.729	0.762	0.104	0.101	0.779	0.0848	0.0500 U	
ZN	1.08	1.53	0.628	0.657	1.13	1.09	0.010 U	

D12-27-94	PB 12/22	LCS	Ck2	Ck3	5039-3	PB 12/23
	5 27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1			1	1
AG	0.010 U	0.0504	1.01	0.010 U	XXX	0.010 U
AL	0.100 U	1.99	5.04	0.100 U	XXX	0.100 U
BA	0.0200 U	2.02	1.01	0.0200 U	XXX	0.0200 U
BE	0.0050 U	0.0473	0.996	0.0050 U	XXX	0.0050 U
CA	0.500 U	0.500 U	49.9	0.500 U	XXX	0.500 U
CD	0.0050 U	0.0549	1.05	0.0050 U	XXX	0.0050 U
CO	0.0500 U	0.499	5.15	0.0500 U	XXX	0.0500 U
CR	0.010 U	0.205	5.09	0.010 U	XXX	0.010 U
CU	0.0200 U	0.250	5.03	0.0200 U	XXX	0.0200 U
FE	0.0500 U	1.05	4.99	0.0500 U	XXX	0.0500 U
K	1.00 U	1.00 U	4.97	1.00 U	XXX	1.00 U
MG	0.500 U	9.93	49.9	0.500 U	[illegible]	0.500 U
MN	0.010 U	0.496	0.996	0.010 U	XXX	0.010 U
NI	0.0400 U	0.521	5.12	0.0400 U	XXX	0.0400 U
PB	0.0500 U	0.541	5.12	0.0500 U	XXX	0.0500 U
SB	0.100 U	0.504	4.90	0.100 U	XXX	0.100 U
TL	0.300 U	2.23	5.30	0.300 U	XXX	0.300 U
V	0.0500 U	0.541	5.28	0.0500 U	XXX	0.0500 U
ZN	0.010 U	0.527	1.03	0.010 U	XXX	0.010 U

D12-27-94	LCS	5042-1	5116-2	5076-1	5076-3	CRIF
	5 27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1	1	1	1	1
AG	0.0487	0.010 U	0.010 U	0.010 U	0.010 U	0.0165
AL	1.94	0.990	0.119	0.100 U	1.56	0.100 U
BA	2.02	0.0225	0.232	0.0764	0.0879	0.0200 U
BE	0.0466	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0090
CA	2.06	17.7	79.6	110	347	0.500 U
CD	0.0548	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0093
CO	0.504	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.111
CR	0.207	0.0420	0.010 U	0.010 U	0.010 U	0.0175
CU	0.253	0.200	0.0200 U	0.0200 U	0.0200 U	0.0489
FE	1.05	1.26	0.307	0.118	1.56	0.0500 U
K	1.81	2.95	2.94	2.83	2.15	1.00 U
MG	1.98	5.24	8.01	34.1	49.0	0.500 U
MN	0.500	0.0326	0.0510	0.129	1.22	0.0304
NI	0.533	0.0407	0.0400 U	0.0400 U	0.0400 U	0.0797
PB	0.528	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.132
SB	0.539	0.100 U	0.100 U	0.100 U	0.100 U	0.159
TL	2.27	0.300 U	0.300 U	0.300 U	0.300 U	0.300 U
V	0.540	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.120
ZN	0.519	0.560	0.210	0.398	0.964	0.0417

D12-27-94	ICSAF	ICSABF	Ck2	Ck3	5037-1	5037-1QC
5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1			1	1
AG	0.010 U	0.914	1.01	0.010 U	0.010 U	0.010 U
AL	473	472	5.01	0.100 U	0.100 U	0.100 U
BA	0.0200 U	0.462	0.997	0.0200 U	0.0200 U	0.0200 U
BE	0.0050 U	0.447	0.976	0.0050 U	0.0050 U	0.0050 U
CA	466	467	49.5	0.500 U	14.5	14.6
CD	0.0050 U	0.924	1.05	0.0050 U	0.0050 U	0.0050 U
CO	0.0500 U	0.456	5.22	0.0500 U	0.0529	0.0503
CR	0.010 U	0.456	5.03	0.010 U	0.0913	0.0887
CU	0.0200 U	0.461	5.01	0.0200 U	0.124	0.129
FE	174	175	4.98	0.0500 U	< -PQL	< -PQL
K	1.00 U	1.00 U	5.08	1.00 U	137	143
MG	504	503	50.2	0.500 U	3.06	3.09
MN	0.0325	0.470	0.988	0.010 U	0.010 U	0.010 U
NI	0.0400 U	0.916	5.13	0.0400 U	< -PQL	< -PQL
PB	0.0500 U	0.889	5.14	0.0500 U	0.0500 U	0.0500 U
SB	0.100 U	0.147	4.96	0.100 U	0.100 U	0.100 U
TL	0.300 U	0.300 U	5.17	0.300 U	1.17	1.22
V	0.0500 U	0.482	5.32	0.0500 U	0.0500 U	0.0500 U
ZN	0.010 U	0.880	1.01	0.010 U	0.010 U	0.010 U

D12-27-94	5037-1SP	5091-1	5048-4	5055-2	BLK	5115-1
5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1	1	2	1	1
AG	0.0348	0.010 U	XXX	XXX	0.010 U	[illegible]
AL	0.785	0.100 U	XXX	XXX	0.100 U	[illegible]
BA	0.252	[illegible]	XXX	XXX	0.0200 U	[illegible]
BE	0.0196	0.0050 U	XXX	XXX	0.0050 U	[illegible]
CA	9.80	99.3	XXX	XXX	0.500 U	[illegible]
CD	0.0230	[illegible]	XXX	XXX	0.0050 U	[illegible]
CO	0.275	0.0500 U	XXX	XXX	0.0500 U	[illegible]
CR	0.134	[illegible]	XXX	XXX	0.010 U	[illegible]
CU	0.246	0.0781	XXX	XXX	0.0200 U	[illegible]
FE	< -PQL	0.0500 U	XXX	XXX	0.0500 U	[illegible]
K	120	5.28	XXX	XXX	1.00 U	[illegible]
MG	6.83	15.5	XXX	XXX	0.500 U	[illegible]
MN	0.136	0.010 U	XXX	XXX	0.010 U	[illegible]
— NI	0.158	0.0400 U	XXX	XXX	0.0400 U	XXX
PB	0.121	0.0500 U	[illegible]	XXX	0.0500 U	[illegible]
— SB	0.100 U	0.100 U	XXX	XXX	0.100 U	XXX
TL	2.35	0.300 U	XXX	XXX	0.300 U	[illegible]
V	0.214	0.0500 U	XXX	XXX	0.0500 U	[illegible]
ZN	0.277	0.0403	XXX	0.726	0.010 U	[illegible]

D12-27-94 5	5115-1QC 27-Dec-94 1	5115-1SP 27-Dec-94 1	Ck2 27-Dec-94	Ck3 27-Dec-94	5115-2 27-Dec-94 1	5115-3 27-Dec-94 1
AG	0.010 U	0.0499	1.01	0.010 U	0.010 U	0.010 U
AL	0.100 U	2.02	4.99	0.100 U	0.100 U	0.100 U
BA	0.303	2.33	0.993	0.0200 U	0.297	0.0384
BE	0.0050 U	0.0474	0.965	0.0050 U	0.0050 U	0.0050 U
CA	72.2	81.1	48.5	0.500 U	71.7	54.0
CD	0.0050 U	0.0530	1.03	0.0050 U	0.0050 U	0.0050 U
CO	0.0500 U	0.512	5.19	0.0500 U	0.0500 U	0.0500 U
CR	0.010 U	0.200	4.97	0.010 U	0.010 U	0.010 U
CU	0.0200 U	0.269	4.98	0.0200 U	0.0200 U	0.0200 U
FE	0.0500 U	1.02	4.80	0.0500 U	0.0500 U	0.0912
K	1.06	11.1	4.81	1.00 U	1.00 U	1.00 U
MG	22.7	32.4	49.5	0.500 U	22.5	21.8
MN	0.010 U	0.497	0.974	0.010 U	0.010 U	0.311
NI	XXX	XXX	5.10	0.0400 U	XXX	XXX
PB	0.0500 U	0.545	5.13	0.0500 U	0.0500 U	0.0500 U
SB	XXX	XXX	4.88	0.100 U	XXX	XXX
TL	0.300 U	2.39	5.08	0.300 U	0.300 U	0.300 U
V	0.0500 U	0.550	5.32	0.0500 U	0.0500 U	0.0500 U
ZN	0.0102	0.511	0.989	0.010 U	0.0118	0.010 U

D12-27-94	5115-4	5115-5	5115-6	5115-7	4746-1	5046-1
5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1	1	1	1	1
AG	0.010 U	0.010 U	0.010 U	0.010 U	XXX	[illegible]
AL	0.100 U	0.100 U	0.100 U	0.100 U	XXX	0.102
BA	0.0336	0.102	0.136	0.148	XXX	0.0415
BE	0.0050 U	0.0050 U	0.0050 U	0.0050 U	XXX	0.0050 U
CA	28.0	24.3	24.0	25.5	XXX	32.7
CD	0.0050 U	0.0050 U	0.0050 U	0.0050 U	XXX	[illegible]
CO	0.0500 U	0.0500 U	0.0500 U	0.0500 U	XXX	0.0500 U
CR	0.010 U	0.010 U	0.010 U	0.010 U	XXX	[illegible]
CU	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0379	[illegible] 0.466
FE	0.0500 U	0.0500 U	0.0500 U	0.0500 U	XXX	4.39
K	1.11	1.36	1.26	1.45	XXX	76.9
MG	21.9	19.2	19.1	17.9	XXX	7.75
MN	1.40	0.270	0.0245	0.135	XXX	0.118
NI	XXX	XXX	XXX	XXX	XXX	[illegible]
PB	0.0500 U	0.0500 U	0.0500 U	0.0500 U	XXX	[illegible]
SB	XXX	XXX	XXX	XXX	XXX	0.100 U
TL	0.300 U	0.300 U	0.300 U	0.300 U	XXX	0.300 U
V	0.0500 U	0.0500 U	0.0500 U	0.0500 U	XXX	0.0500 U
ZN	0.010 U	0.0118	0.010 U	0.010 U	XXX	[illegible]

D12-27-94	5073-1	5043-1	Ck2	Ck3	5043-2	5061-1
	5 27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	1	1			1	1
AG	0.010 U	XXX	0.985	0.010 U	XXX	0.010 U
AL	0.100 U	XXX	4.88	0.100 U	XXX	4.03
BA	0.0200 U	XXX	0.963	0.0200 U	XXX	0.0826
BE	0.0050 U	XXX	0.935	0.0050 U	XXX	0.0050 U
CA	20.1	XXX	47.5	0.500 U	XXX	83.3
CD	~~0.0050 U~~	XXX	1.02	0.0050 U	XXX	[redacted]
CO	0.0500 U	XXX	5.14	0.0500 U	XXX	0.0500 U
CR	~~0.0060 U~~	XXX	4.86	0.010 U	XXX	[redacted]
CU	~~0.0846~~	XXX	4.84	0.0200 U	XXX	[redacted]
FE	0.0500 U	~~0.730~~	4.70	0.0500 U	~~1.98~~	9.09
K	1.35	XXX	4.91	1.00 U	XXX	11.9
MG	4.53	XXX	48.8	0.500 U	XXX	8.32
MN	0.010 U	XXX	0.954	0.010 U	XXX	0.391
NI	~~0.0200 U~~	XXX	5.02	0.0400 U	XXX	[redacted]
PB	0.0500 U	XXX	5.05	0.0500 U	XXX	[redacted]
SB	0.100 U	XXX	4.72	0.100 U	XXX	0.100 U
TL	0.300 U	XXX	5.07	0.300 U	XXX	0.300 U
V	0.0500 U	XXX	5.22	0.0500 U	XXX	0.0500 U
ZN	0.0111	XXX	0.970	0.010 U	XXX	~~0.898~~

note : 5043 request for Fe - also on rush log
but not in computer requesting Fe.

5061 use Pb from ICP not PbF

D12-27-94	5108-2	BLK	CRIF	ICSAF	ICSABF	Ck2
5	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94	27-Dec-94
	2	1	1	1	1	
AG	XXX	0.010 U	0.0164	0.010 U	0.892	0.993
AL	XXX	0.100 U	0.100 U	467	455	4.90
BA	XXX	0.0200 U	0.0200 U	0.0200 U	0.447	0.980
BE	XXX	0.0050 U	0.0093	0.0050 U	0.432	0.955
CA	XXX	0.500 U	0.500 U	452	448	48.0
CD	XXX	0.0050 U	0.0090	0.0050 U	0.897	1.02
CO	XXX	0.0500 U	0.106	0.0500 U	0.457	5.16
CR	XXX	0.010 U	0.0188	0.010 U	0.443	4.95
CU	XXX	0.0200 U	0.0475	0.0200 U	0.445	4.90
FE	XXX	0.0500 U	0.0500 U	170	168	4.84
K	XXX	1.00 U	1.00 U	1.00 U	1.00 U	4.92
MG	XXX	0.500 U	0.500 U	494	487	48.9
MN	XXX	0.010 U	0.0289	0.0321	0.453	0.964
NI	XXX	0.0400 U	0.0781	0.0400 U	0.892	5.03
PB	XXX	0.0500 U	0.109	0.0500 U	0.872	5.06
SB	XXX	0.100 U	0.126	0.100 U	0.100 U	4.76
TL	XXX	0.300 U	0.300 U	0.373	0.300 U	4.86
V	XXX	0.0500 U	0.133	0.0500 U	0.478	5.33
ZN	0.593	0.010 U	0.0413	0.010 U	0.843	0.986

D12-27-94 Ck3
5 27-Dec-94

AG	0.010	U
AL	0.100	U
BA	0.0200	U
BE	0.0050	U
CA	0.500	U
CD	0.0050	U
CO	0.0500	U
CR	0.010	U
CU	0.0200	U
FE	0.0500	U
K	1.00	U
MG	0.500	U
MN	0.010	U
NI	0.0400	U
PB	0.0500	U
SB	0.100	U
TL	0.300	U
V	0.0500	U
ZN	0.010	U

results in mg/kg wet weight

Inorganics: ~~Rush Reporting Sheet~~ # samples: _____

: 5097 Client: _____ matrix: _____

12/27 = D/A

nalyte	DW Cd	DW Ni						
-1	6.88 ✓	11.1 ✓						
-2	6.22 ✓	9.28 ✓						
-3	6.74 ✓	9.83 ✓						
dil	1	1						
~~prep~~	12/23 →							
an	12/27 →	✓						

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000121

m mg/kg wet weight

Inorganics: ~~Rush Reporting Sheet~~ # samples: _____

: 5079-1 Client: _____ matrix: _____

alyte	Cr	Ni							
-1	127 ✓	85.0 ✓							
dl	1 →								
prep	12/23 →								
m	12/27 ✓ →								

\g\forms\rush.wk1

LABSAM	General Testing Corporation
12/28/94	W O R K L I S T 12:59
	Page 1

DWBA,01,12/28/94 Ins: Seq: By: L. RILEY

Pos	*	WL_SORT	CLIENT	DATESAMP	QC	EC	-P#-M#	DWBA	flag	qd	prep	run
1. Series												
1	9	R4804001	Conestoga-	12/01.02		-1	-1					
2	9	R5100001	H & A of N	12/21/94	Y	-1	-1	✓	80.5		1	12/23	12/27
3	9	R5119001	Frontier T	12/21/94		-1	-1					
4	9	R5119002	Frontier T	12/21/94		-1	-1					
5	9	R5119004	Frontier T	12/21/94		-1	-1					
6	9	R5122001	Frontier T	12/21/94		-1	-1					
7	9	R5138001	H & A of N	12/22/94	Y	-1	-1					
8	9	R5138002	H & A of N	12/22/94	Y	-1	-1					
9	9	R5138003	H & A of N	12/22/94	Y	-1	-1					
10	9	R5138004	H & A of N	12/22/94	Y	-1	-1					
11	9	R5138005	H & A of N	12/22/94	Y	-1	-1					
12	9	R5138006	H & A of N	12/22/94	Y	-1	-1					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 14		11:03:56 27 Dec 1994 ICP		
Ag1	.0000	ppm		14454	22918	17580		
			Ave. Int. =	18317	S. D. =	4280		
Al3	.0000	ppm		-2578	-2170	2739		
			Ave. Int. =	-670	S. D. =	2959		
Ba1	.0000	ppm		4063	4846	3510		
			Ave. Int. =	4140	S. D. =	671		
Be2	.0000	ppm		-1590	-1558	-1556		
			Ave. Int. =	-1568	S. D. =	19		
Ca3	.0000	ppm		30555	32342	33702		
			Ave. Int. =	32200	S. D. =	1578		
Cd1	.0000	ppm		-158	-319	-157		
			Ave. Int. =	-211	S. D. =	93		
Co1	.0000	ppm		1842	3492	820		
			Ave. Int. =	2051	S. D. =	1348		
Cr4	.0000	ppm		4742	6917	4245		
			Ave. Int. =	5301	S. D. =	1421		
Cu1	.0000	ppm		59390	62352	53133		
			Ave. Int. =	58292	S. D. =	4707		
Fe2	.0000	ppm		2062	2727	4343		
			Ave. Int. =	3044	S. D. =	1173		
K 1	.0000	ppm		286	321	247		
			Ave. Int. =	285	S. D. =	37		
Mg4	.0000	ppm		-4065	-2911	-4608		
			Ave. Int. =	-3861	S. D. =	867		
Mn1	.0000	ppm		4451	3732	4093		
			Ave. Int. =	4092	S. D. =	360		
Na2	.0000	ppm		2892	4587	848		
			Ave. Int. =	2776	S. D. =	1872		
Ni3	.0000	ppm		11216	9267	9073		
			Ave. Int. =	9852	S. D. =	1185		
Pb1	.0000	ppm		-4096	-4058	-3916		
			Ave. Int. =	-4023	S. D. =	95		
Sb1	.0000	ppm		2039	1930	1987		
			Ave. Int. =	1985	S. D. =	55		
Tl1	.0000	ppm		-766	-342	-390		
			Ave. Int. =	-499	S. D. =	232		
V 2	.0000	ppm		26511	26764	26648		
			Ave. Int. =	26641	S. D. =	127		
Zn3	.0000	ppm		-1761	-1758	-1208		
			Ave. Int. =	-1576	S. D. =	318		

Christine Kutzer 12/27/94

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 2			Seq: 15	11:04:45 27 Dec 1994 ICP				
Ag1	.0000	ppm		21284	16926	12220		
			Ave. Int. =	16810	S. D. =	4533		
Al3	.0000	ppm		1314	906	3163		
			Ave. Int. =	1794	S. D. =	1203		
Ba1	.0000	ppm		4605	4198	3842		
			Ave. Int. =	4215	S. D. =	382		
Be2	.0000	ppm		-1494	-1511	-1568		
			Ave. Int. =	-1524	S. D. =	39		
Ca3	.0000	ppm		32732	31970	30608		
			Ave. Int. =	31770	S. D. =	1076		
Cd1	.0000	ppm		-393	-272	-162		
			Ave. Int. =	-276	S. D. =	116		
Co1	.0000	ppm		2167	2299	1877		
			Ave. Int. =	2114	S. D. =	216		
Cr4	.0000	ppm		5480	6930	6680		
			Ave. Int. =	6363	S. D. =	775		
Cu1	.0000	ppm		65809	60123	65339		
			Ave. Int. =	63757	S. D. =	3156		
Fe2	.0000	ppm		2391	871	577		
			Ave. Int. =	1280	S. D. =	974		
K 1	.0000	ppm		421	459	166		
			Ave. Int. =	349	S. D. =	159		
Mg4	.0000	ppm		-3284	-4243	-3453		
			Ave. Int. =	-3660	S. D. =	512		
Mn1	.0000	ppm		3041	4233	3608		
			Ave. Int. =	3627	S. D. =	596		
Na2	.0000	ppm		3742	2394	2936		
			Ave. Int. =	3024	S. D. =	678		
Ni3	.0000	ppm		9516	8578	9598		
			Ave. Int. =	9231	S. D. =	567		
Pb1	.0000	ppm		-4524	-5305	-6192		
			Ave. Int. =	-5340	S. D. =	835		
Sb1	.0000	ppm		2345	1710	2386		
			Ave. Int. =	2147	S. D. =	379		
Tl1	.0000	ppm		-1126	-989	-332		
			Ave. Int. =	-816	S. D. =	424		
V 2	.0000	ppm		25791	27909	27689		
			Ave. Int. =	27130	S. D. =	1165		
Zn3	.0000	ppm		-1447	-1939	-2011		
			Ave. Int. =	-1799	S. D. =	307		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 1				Seq: 16		11:08:20 27 Dec 1994 ICP		
Ag1	.5000	ppm		754223	770659	768921		
			Ave. Int. =	764601	S. D. =	9030		
Al3	1.000	ppm		104169	102376	102401		
			Ave. Int. =	102982	S. D. =	1028		
Ba1	.5000	ppm		1482583	1509336	1484694		
			Ave. Int. =	1492204	S. D. =	14874		
Be2	.5000	ppm		89547	90607	89439		
			Ave. Int. =	89864	S. D. =	645		
Ca3	10.00	ppm		6675943	6683289	6650522		
			Ave. Int. =	6669918	S. D. =	17194		
Cd1	.5000	ppm		38774	38778	39026		
			Ave. Int. =	38859	S. D. =	144		
Co1	1.000	ppm		143965	145478	145054		
			Ave. Int. =	144832	S. D. =	780		
Cr4	1.000	ppm		865335	867893	870215		
			Ave. Int. =	867814	S. D. =	2441		
Cu1	1.000	ppm		2862188	2906357	2888232		
			Ave. Int. =	2885592	S. D. =	22203		
Fe2	1.000	ppm		654149	656591	648614		
			Ave. Int. =	653118	S. D. =	4087		
K 1	1.000	ppm		1241	1187	1191		
			Ave. Int. =	1206	S. D. =	30		
Mg4	10.00	ppm		591309	591488	585931		
			Ave. Int. =	589576	S. D. =	3158		
Mn1	.5000	ppm		784577	791318	780965		
			Ave. Int. =	785620	S. D. =	5255		
Na2	10.00	ppm		288753	296237	293798		
			Ave. Int. =	292929	S. D. =	3817		
Ni3	1.000	ppm		265515	269893	265382		
			Ave. Int. =	266930	S. D. =	2567		
Pb1	1.000	ppm		56227	56765	56552		
			Ave. Int. =	56515	S. D. =	271		
Sb1	1.000	ppm		12229	10881	10835		
			Ave. Int. =	11315	S. D. =	792		
Tl1	1.000	ppm		2707	2096	3353		
			Ave. Int. =	2719	S. D. =	629		
V 2	1.000	ppm		138264	142913	138332		
			Ave. Int. =	139836	S. D. =	2665		
Zn3	.5000	ppm		71810	72455	71841		
			Ave. Int. =	72035	S. D. =	364		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 2				Seq: 17		11:09:08 27 Dec 1994 ICP		
Ag1	.5000	ppm		760335	762305	779363		
			Ave. Int. =	767334	S. D. =	10464		
Al3	1.000	ppm		101334	99397	103013		
			Ave. Int. =	101248	S. D. =	1810		
Ba1	.5000	ppm		1485810	1480355	1530063		
			Ave. Int. =	1498743	S. D. =	27261		
Be2	.5000	ppm		89730	89705	91406		
			Ave. Int. =	90280	S. D. =	975		
Ca3	10.00	ppm		6635534	6628622	6739269		
			Ave. Int. =	6667808	S. D. =	61983		
Cd1	.5000	ppm		39134	38310	38599		
			Ave. Int. =	38681	S. D. =	418		
Co1	1.000	ppm		145211	143167	149530		
			Ave. Int. =	145969	S. D. =	3249		
Cr4	1.000	ppm		865974	867091	882787		
			Ave. Int. =	871951	S. D. =	9401		
Cu1	1.000	ppm		2880514	2877649	2956933		
			Ave. Int. =	2905032	S. D. =	44970		
Fe2	1.000	ppm		651494	645343	658753		
			Ave. Int. =	651863	S. D. =	6713		
K 1	1.000	ppm		1087	1146	1102		
			Ave. Int. =	1112	S. D. =	31		
Mg4	10.00	ppm		587255	580026	592289		
			Ave. Int. =	586523	S. D. =	6164		
Mn1	.5000	ppm		785270	777971	797662		
			Ave. Int. =	786968	S. D. =	9955		
Na2	10.00	ppm		293156	291714	295647		
			Ave. Int. =	293506	S. D. =	1990		
Ni3	1.000	ppm		266950	266880	268635		
			Ave. Int. =	267488	S. D. =	994		
Pb1	1.000	ppm		56824	54073	55838		
			Ave. Int. =	55578	S. D. =	1394		
Sb1	1.000	ppm		11752	12148	11836		
			Ave. Int. =	11912	S. D. =	209		
Tl1	1.000	ppm		2907	2489	2333		
			Ave. Int. =	2576	S. D. =	297		
V 2	1.000	ppm		141068	140903	145924		
			Ave. Int. =	142632	S. D. =	2852		
Zn3	.5000	ppm		71430	70822	71296		
			Ave. Int. =	71183	S. D. =	319		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 1				Seq: 18		11:12:43 27 Dec 1994 ICP		
Ag1	2.000	ppm		2884500	2891420	2898702		
			Ave. Int. =	2891541	S. D. =	7102		
Al3	10.00	ppm		982383	986768	977489		
			Ave. Int. =	982213	S. D. =	4642		
Ba1	2.000	ppm		5760436	5794873	5735150		
			Ave. Int. =	5763486	S. D. =	29978		
Be2	2.000	ppm		360526	362369	359754		
			Ave. Int. =	360883	S. D. =	1344		
Ca3	100.0	ppm		65099985	65120887	64891966		
			Ave. Int. =	65037613	S. D. =	126566		
Cd1	2.000	ppm		149020	148130	148510		
			Ave. Int. =	148553	S. D. =	447		
Co1	10.00	ppm		1350227	1352252	1352863		
			Ave. Int. =	1351781	S. D. =	1380		
Cr4	10.00	ppm		8276904	8286248	8262050		
			Ave. Int. =	8275067	S. D. =	12203		
Cu1	10.00	ppm		27488203	27734591	27452182		
			Ave. Int. =	27558325	S. D. =	153709		
Fe2	10.00	ppm		6314233	6319493	6282708		
			Ave. Int. =	6305478	S. D. =	19894		
K 1	10.00	ppm		8713	8628	8472		
			Ave. Int. =	8604	S. D. =	122		
Mg4	100.0	ppm		5975535	5964501	5956836		
			Ave. Int. =	5965624	S. D. =	9400		
Mn1	2.000	ppm		2995776	2997819	2988417		
			Ave. Int. =	2994004	S. D. =	4945		
Na2	100.0	ppm		2834963	2867512	2827881		
			Ave. Int. =	2843452	S. D. =	21135		
Ni3	10.00	ppm		2423071	2434871	2418914		
			Ave. Int. =	2425619	S. D. =	8278		
Pb1	10.00	ppm		564660	569648	564959		
			Ave. Int. =	566422	S. D. =	2798		
Sb1	10.00	ppm		97138	97005	97279		
			Ave. Int. =	97141	S. D. =	137		
Tl1	10.00	ppm		27954	28297	27932		
			Ave. Int. =	28061	S. D. =	205		
V 2	10.00	ppm		1132606	1143562	1140888		
			Ave. Int. =	1139019	S. D. =	5712		
Zn3	2.000	ppm		278118	275042	275614		
			Ave. Int. =	276258	S. D. =	1636		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 2				Seq: 19		11:13:31 27 Dec 1994 ICP		
Ag1	2.000	ppm		2910990	2881184	2925817		
			Ave. Int. =	2905997	S. D. =	22732		
Al3	10.00	ppm		986983	980384	994030		
			Ave. Int. =	987132	S. D. =	6824		
Ba1	2.000	ppm		5806875	5720114	5855817		
			Ave. Int. =	5794269	S. D. =	68724		
Be2	2.000	ppm		362741	358963	363732		
			Ave. Int. =	361812	S. D. =	2517		
Ca3	100.0	ppm		65340049	64641497	65165287		
			Ave. Int. =	65048944	S. D. =	363518		
Cd1	2.000	ppm		148488	148078	148568		
			Ave. Int. =	148378	S. D. =	263		
Co1	10.00	ppm		1359449	1346301	1361705		
			Ave. Int. =	1355818	S. D. =	8319		
Cr4	10.00	ppm		8332389	8233113	8313366		
			Ave. Int. =	8292956	S. D. =	52691		
Cu1	10.00	ppm		27746975	27365443	27922091		
			Ave. Int. =	27678170	S. D. =	284631		
Fe2	10.00	ppm		6353375	6256653	6364125		
			Ave. Int. =	6324718	S. D. =	59190		
K 1	10.00	ppm		8664	8486	8615		
			Ave. Int. =	8588	S. D. =	92		
Mg4	100.0	ppm		6011113	5920017	5967765		
			Ave. Int. =	5966298	S. D. =	45566		
Mn1	2.000	ppm		3011849	2976660	3019162		
			Ave. Int. =	3002557	S. D. =	22724		
Na2	100.0	ppm		2855626	2817552	2889156		
			Ave. Int. =	2854111	S. D. =	35826		
Ni3	10.00	ppm		2437804	2416758	2440033		
			Ave. Int. =	2431532	S. D. =	12843		
Pb1	10.00	ppm		563784	557100	556968		
			Ave. Int. =	559284	S. D. =	3898		
Sb1	10.00	ppm		96633	95031	97284		
			Ave. Int. =	96316	S. D. =	1159		
Tl1	10.00	ppm		27338	27840	28801		
			Ave. Int. =	27993	S. D. =	743		
V 2	10.00	ppm		1144849	1129816	1143732		
			Ave. Int. =	1139466	S. D. =	8375		
Zn3	2.000	ppm		278524	276186	277175		
			Ave. Int. =	277295	S. D. =	1174		

*** Sample ID: CAL STD 27-1 Seq: 21 11:17:03 27 Dec 1994 ICP

Line	Conc.	Units	SD/RSD	1	2	3	4	5
Ag1	1.936	ppm	1.409 %	1.905	1.954	1.950		
Al3	9.930	ppm	1.532 %	9.756	9.999	10.04		
Ba1	1.953	ppm	1.462 %	1.921	1.963	1.975		
Be2	1.991	ppm	1.104 %	1.968	1.993	2.012		
Ca3	99.24	ppm	.4740 %	98.79	99.20	99.73		
Cd1	1.983	ppm	.1870 %	1.979	1.986	1.985		
Co1	9.872	ppm	.6337 %	9.800	9.908	9.908		
Cr4	9.910	ppm	.6636 %	9.845	9.909	9.977		
Cu1	9.836	ppm	1.486 %	9.671	9.891	9.948		
Fe2	9.811	ppm	.6911 %	9.738	9.823	9.872		
K 1	9.827	ppm	2.165 %	10.00	9.890	9.590		
Mg4	99.58	ppm	.5483 %	98.95	99.87	99.92		
Mn1	1.934	ppm	.9669 %	1.914	1.936	1.951		
Na2	98.09	ppm	1.456 %	96.45	98.79	99.04		
Ni3	9.936	ppm	.3963 %	9.892	9.949	9.968		
Pb1	9.931	ppm	.8340 %	9.883	9.884	10.03		
Sb1	9.708	ppm	2.178 %	9.560	9.613	9.950		
Tl1	9.909	ppm	3.344 %	9.817	10.28	9.633		
V 2	9.940	ppm	1.534 %	9.781	9.955	10.08		
Zn3	1.986	ppm	.2126 %	1.982	1.986	1.990		

*** Sample ID: ICV 27-1 Seq: 22 11:20:29 27 Dec 1994 ICP

Line	Conc.	Units	SD/RSD	1	2	3	4	5
Ag1	.9403	ppm	1.658 %	.9257	.9567	.9387		
Al3	9.706	ppm	1.810 %	9.560	9.901	9.657		
Ba1	9.730	ppm	1.831 %	9.561	9.916	9.714		
Be2	.2382	ppm	1.793 %	.2359	.2431	.2356		
Ca3	47.43	ppm	1.025 %	46.96	47.93	47.41		
Cd1	.9961	ppm	.7915 %	.9926	1.005	.9907		
Co1	2.415	ppm	1.276 %	2.382	2.442	2.422		
Cr4	1.002	ppm	1.597 %	.9895	1.020	.9967		
Cu1	1.239	ppm	1.621 %	1.221	1.260	1.236		
Fe2	5.000	ppm	1.417 %	4.940	5.078	4.981		
K 1	47.62	ppm	1.637 %	46.78	48.31	47.78		
Mg4	47.33	ppm	1.137 %	46.82	47.89	47.27		
Mn1	1.445	ppm	1.420 %	1.424	1.465	1.445		
Na2	49.35	ppm	1.812 %	48.43	50.22	49.40		
Ni3	4.028	ppm	1.468 %	3.968	4.087	4.028		
Pb1	.9897	ppm	1.735 %	1.006	.9715	.9920		
Sb1	5.556	ppm	3.202 %	5.408	5.753	5.507		
Tl1	2.145	ppm	16.10 %	2.472	2.181	1.784		
V 2	2.527	ppm	1.965 %	2.474	2.572	2.536		
Zn3	2.016	ppm	1.147 %	1.991	2.036	2.023		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICB			27-1	Seq: 23		11:23:55 27 Dec 1994 ICP		
Ag1	-.0030	L ppm	-16.09%	-.0035	-.0030	-.0026		
Al3	-.0280	L ppm	-57.15%	-.0302	-.0110	-.0428		
Ba1	.0003	L ppm	50.98 %	.0002	.0004	.0002		
Be2	.0003	L ppm	137.4 %	.0008	-.0001	.0003		
Ca3	-.0120	L ppm	-28.59%	-.0146	-.0081	-.0134		
Cd1	.0011	L ppm	227.9 %	.0001	.0038	-.0007		
Co1	.0015	L ppm	180.5 %	.0004	.0047	-.0005		
Cr4	-.0026	L ppm	-90.34%	-.0013	-.0012	-.0052		
Cu1	-.0012	L ppm	-102.6%	-.0018	.0002	-.0019		
Fe2	-.0128	L ppm	-12.00%	-.0112	-.0143	-.0130		
K 1	-.0874	L ppm	-60.35%	-.0483	-.0665	-.1474		
Mg4	-.0195	L ppm	-148.7%	-.0531	-.0029	-.0027		
Mn1	-.0008	L ppm	-54.61%	-.0010	-.0003	-.0011		
Na2	.0240	L ppm	291.2 %	.0299	.0906	-.0486		
Ni3	.0009	L ppm	936.6 %	.0099	-.0015	-.0058		
Pb1	-.0072	L ppm	-196.3%	-.0013	.0030	-.0233		
Sb1	-.0395	L ppm	-181.5%	.0420	-.0674	-.0932		
Tl1	.0578	L ppm	83.62 %	.0507	.1093	.0134		
V 2	.0052	L ppm	54.54 %	.0028	.0083	.0044		
Zn3	-.0015	L ppm	-134.4%	-.0010	.0002	-.0038		
*** Sample ID: CRII			27-1	Seq: 25		11:27:21 27 Dec 1994 ICP		
			12/16					
Ag1	.0178	ppm	5.440 %	.0180	.0186	.0167		
Al3	-.0127	L ppm	-142.6%	-.0133	.0057	-.0305		
Ba1	-.0000	L ppm	-523.8%	.0001	.0001	-.0003		
Be2	.0098	ppm	2.274 %	.0100	.0098	.0096		
Ca3	-.0045	L ppm	-32.22%	-.0061	-.0037	-.0036		
Cd1	.0106	ppm	10.58 %	.0102	.0118	.0097		
Co1	.1019	ppm	2.216 %	.0995	.1024	.1040		
Cr4	.0179	ppm	7.958 %	.0189	.0163	.0186		
Cu1	.0486	ppm	4.461 %	.0510	.0480	.0468		
Fe2	-.0131	L ppm	-14.14%	-.0146	-.0110	-.0139		
K 1	-.0986	L ppm	-106.5%	-.1969	.0121	-.1111		
Mg4	-.0094	L ppm	-114.0%	-.0188	.0022	-.0114		
Mn1	.0293	ppm	1.110 %	.0291	.0291	.0297		
Na2	.0085	L ppm	103.8 %	.0135	.0138	-.0017		
Ni3	.0855	ppm	9.083 %	.0767	.0888	.0912		
Pb1	.1083	ppm	12.13 %	.1232	.0983	.1033		
Sb1	.1286	ppm	20.65 %	.1111	.1156	.1592		
Tl1	.1955	L ppm	47.81 %	.1086	.2944	.1835		
V 2	.1077	ppm	2.308 %	.1050	.1083	.1099		
Zn3	.0447	ppm	3.494 %	.0445	.0464	.0433		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICSAI			27-1 12/19	Seq: 26		11:30:47 27 Dec 1994 ICP		
Ag1	-.0014 L	ppm	-114.1%	-.0019	.0004	-.0028		
Al3	470.2	ppm	.6998 %	474.0	468.4	468.3		
Ba1	-.0010 L	ppm	-17.31%	-.0012	-.0009	-.0010		
Be2	-.0006 L	ppm	-150.6%	.0001	-.0003	-.0017		
Ca3	480.3	ppm	.4320 %	482.4	480.1	478.3		
Cd1	.0032 L	ppm	52.92 %	.0034	.0015	.0049		
Co1	.0129 L	ppm	19.07 %	.0158	.0117	.0114		
Cr4	.0025 L	ppm	9.910 %	.0025	.0022	.0027		
Cu1	-.0079 L	ppm	-19.44%	-.0095	-.0064	-.0078		
Fe2	178.5	ppm	.4946 %	179.5	178.2	177.9		
K 1	-.2545 L	ppm	-92.38%	-.4957	-.2421	-.0259		
Mg4	498.3	ppm	.3747 %	500.4	497.8	496.8		
Mn1	.0334	ppm	1.453 %	.0332	.0340	.0331		
Na2	-.0304 L	ppm	-98.59%	-.0046	-.0633	-.0234		
Ni3	.0173 L	ppm	23.96 %	.0127	.0185	.0208		
Pb1	.0068 L	ppm	587.1 %	.0491	-.0295	.0007		
Sb1	.0445 L	ppm	116.5 %	.1039	.0077	.0220		
Tl1	.2526	ppm	110.9 %	.5679	.0323	.1575		
V 2	-.0100 L	ppm	-95.90%	-.0055	-.0211	-.0035		
Zn3	.0051 L	ppm	23.17 %	.0060	.0054	.0037		
*** Sample ID: ICSABI			27-1 12/19	Seq: 27		11:34:14 27 Dec 1994 ICP		
Ag1	.8929	ppm	.3945 %	.8936	.8892	.8961		
Al3	463.1	ppm	.5913 %	460.4	465.9	463.1		
Ba1	.4616	ppm	.5404 %	.4595	.4644	.4609		
Be2	.4611	ppm	.6498 %	.4583	.4643	.4606		
Ca3	477.6	ppm	.1909 %	476.7	478.5	477.8		
Cd1	.8989	ppm	.1981 %	.8980	.9009	.8977		
Co1	.4519	ppm	1.497 %	.4468	.4596	.4492		
Cr4	.4613	ppm	.0912 %	.4608	.4615	.4616		
Cu1	.4569	ppm	.5510 %	.4549	.4597	.4560		
Fe2	177.2	ppm	.3245 %	176.6	177.8	177.2		
K 1	-.1510 L	ppm	-152.2%	.1143	-.2782	-.2891		
Mg4	492.9	ppm	.2692 %	491.5	494.1	493.3		
Mn1	.4681	ppm	.2771 %	.4671	.4696	.4677		
Na2	.0303 L	ppm	65.80 %	.0511	.0281	.0115		
Ni3	.9006	ppm	1.054 %	.8899	.9040	.9079		
Pb1	.8913	ppm	5.758 %	.8363	.8996	.9380		
Sb1	.0384 L	ppm	292.3 %	.0453	-.0771	.1469		
Tl1	.2445	ppm	113.1 %	.0876	.0820	.5640		
V 2	.4537	ppm	1.940 %	.4442	.4552	.4616		
Zn3	.8897	ppm	.2795 %	.8919	.8901	.8870		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCV			27-1	Seq: 29		11:37:41 27 Dec 1994 ICP		
Ag1	1.005	ppm	.0922 %	1.004	1.006	1.005		
Al3	5.039	ppm	1.232 %	5.059	5.088	4.969		
Ba1	1.004	ppm	.9584 %	1.003	1.015	.9957		
Be2	1.008	ppm	1.167 %	1.013	1.017	.9950		
Ca3	50.65	ppm	.8103 %	50.95	50.82	50.19		
Cd1	1.032	ppm	.4127 %	1.037	1.028	1.031		
Co1	5.195	ppm	.7927 %	5.221	5.217	5.148		
Cr4	5.087	ppm	.8648 %	5.113	5.111	5.036		
Cu1	5.060	ppm	.8541 %	5.056	5.105	5.019		
Fe2	5.086	ppm	.8743 %	5.112	5.111	5.035		
K 1	4.922	ppm	3.166 %	5.062	4.754	4.949		
Mg4	50.31	ppm	.9942 %	50.82	50.29	49.82		
Mn1	.9946	ppm	.7843 %	.9960	1.002	.9862		
Na2	50.36	ppm	.6266 %	50.03	50.65	50.41		
Ni3	5.192	ppm	.7163 %	5.219	5.207	5.150		
Pb1	5.189	ppm	.9530 %	5.232	5.135	5.200		
Sb1	4.965	ppm	1.172 %	4.898	4.998	4.999		
Tl1	5.201	ppm	1.466 %	5.288	5.167	5.147		
V 2	5.139	ppm	1.132 %	5.132	5.200	5.084		
Zn3	1.018	ppm	1.429 %	1.034	1.012	1.007		
*** Sample ID: CCB			27-1	Seq: 30		11:41:08 27 Dec 1994 ICP		
Ag1	-.0018 L	ppm	-55.44%	-.0023	-.0025	-.0007		
Al3	.0005 L	ppm	615.3 %	.0003	-.0024	.0035		
Ba1	-.0003 L	ppm	-27.41%	-.0002	-.0004	-.0002		
Be2	-.0005 L	ppm	-23.30%	-.0005	-.0004	-.0006		
Ca3	.0007 L	ppm	636.2 %	-.0018	-.0022	.0062		
Cd1	-.0016 L	ppm	-62.57%	-.0008	-.0012	-.0027		
Co1	.0020 L	ppm	313.0 %	-.0052	.0054	.0057		
Cr4	-.0018 L	ppm	-80.90%	-.0026	-.0001	-.0027		
Cu1	-.0018 L	ppm	-94.35%	-.0004	-.0013	-.0037		
Fe2	.0099 L	ppm	19.51 %	.0083	.0095	.0121		
K 1	-.1602 L	ppm	-171.2%	-.3672	-.2645	.1510		
Mg4	.0170 L	ppm	66.10 %	.0237	.0040	.0233		
Mn1	-.0006 L	ppm	-61.99%	-.0008	-.0009	-.0002		
Na2	.0103 L	ppm	508.5 %	.0647	.0064	-.0401		
Ni3	.0013 L	ppm	110.8 %	.0026	.0014	-.0002		
Pb1	-.0000 L	ppm	^^^^^^%	-.0085	-.0008	.0093		
Sb1	.0225 L	ppm	139.2 %	.0359	-.0133	.0450		
Tl1	.1774 L	ppm	59.63 %	.0685	.2798	.1839		
V 2	.0027 L	ppm	164.0 %	.0067	-.0020	.0033		
Zn3	-.0019 L	ppm	-75.93%	-.0036	-.0009	-.0013		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PB 12/23 27-1 Seq: 31 11:44:35 27 Dec 1994 ICP								
Ag1	.0014	L ppm	108.5 %	.0021	.0026	-.0003		
Al3	.0207	L ppm	92.12 %	.0260	.0367	-.0004		
-Ba1	.0016	L ppm	8.316 %	.0016	.0017	.0015		
Be2	.0001	L ppm	639.7 %	.0004	.0003	-.0005		
Ca3	.0772	L ppm	3.292 %	.0752	.0801	.0764		
Cd1	.0003	L ppm	165.4 %	-.0002	.0008	.0003		
Co1	-.0013	L ppm	-240.2%	.0001	.0009	-.0049		
-Cr4	-.0014	L ppm	-92.18%	-.0028	-.0012	-.0002		
Cu1	-.0002	L ppm	-575.0%	-.0013	.0001	.0007		
-Fe2	.0232	L ppm	9.818 %	.0206	.0240	.0250		
K 1	-.0725	L ppm	-70.94%	-.0628	-.0266	-.1280		
Mg4	.0252	L ppm	72.93 %	.0463	.0165	.0128		
Mn1	-.0005	L ppm	-64.15%	-.0003	-.0004	-.0009		
Na2	.0786	L ppm	35.51 %	.1089	.0539	.0730		
-Ni3	.0024	L ppm	100.8 %	.0027	.0048	-.0001		
Pb1	.0016	L ppm	1158. %	-.0103	.0225	-.0075		
Sb1	-.0078	L ppm	-691.1%	.0347	.0105	-.0688		
Tl1	.0830	L ppm	245.9 %	.3161	-.0650	-.0019		
V 2	-.0023	L ppm	-383.2%	.0059	-.0012	-.0115		
Zn3	.0077	L ppm	6.180 %	.0071	.0078	.0080		
*** Sample ID: LCSS 1.05 27-1 Seq: 33 11:48:02 27 Dec 1994 ICP								
Ag1	.7636	ppm	1.666 %	.7544	.7584	.7781		
Al3	36.26	ppm	1.566 %	35.84	36.04	36.91		
Ba1	2.975	ppm 283	1.853 %	2.941	2.946	3.039		
Be2	1.394	ppm	1.356 %	1.380	1.387	1.415		
Ca3	22.91	ppm	1.034 %	22.75	22.80	23.19		
Cd1	.7581	ppm	1.105 %	.7514	.7553	.7675		
Co1	1.127	ppm	.9954 %	1.117	1.124	1.139		
Cr4	.5228	ppm 49.8	.8318 %	.5211	.5195	.5277		
Cu1	1.353	ppm	2.043 %	1.335	1.339	1.385		
Fe2	89.43	ppm 8520	1.380 %	88.64	88.79	90.85		
K 1	24.71	ppm	.6474 %	24.52	24.78	24.82		
Mg4	26.07	ppm	1.236 %	25.88	25.89	26.44		
Mn1	1.511	ppm	1.544 %	1.493	1.502	1.537		
Na2	1.349	ppm	.6325 %	1.350	1.340	1.357		
Ni3	.3294	ppm 31.4	.7296 %	.3289	.3320	.3272		
Pb1	1.133	ppm	1.982 %	1.156	1.130	1.112		
Sb1	.6373	ppm	16.34 %	.5949	.7560	.5611		
Tl1	1.024	ppm	15.79 %	.8940	.9735	1.205		
V 2	.4785	ppm	1.739 %	.4775	.4708	.4873		
Zn3	.6190	ppm	.5761 %	.6174	.6164	.6230		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 34 11:51:32 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		100.9	1.009	1.000	ppm	.9386 %
Al3		101.4	5.072	5.000	ppm	1.489 %
Ba1		101.4	1.014	1.000	ppm	1.278 %
Be2		102.2	1.022	1.000	ppm	.7033 %
Ca3		101.6	50.80	50.00	ppm	.8621 %
Cd1		103.9	1.039	1.000	ppm	.8661 %
Co1		104.1	5.204	5.000	ppm	.7606 %
Cr4		102.8	5.138	5.000	ppm	.7712 %
Cu1		101.4	5.069	5.000	ppm	1.198 %
Fe2		101.6	5.078	5.000	ppm	.7381 %
K 1		97.75	4.887	5.000	ppm	3.067 %
Mg4		101.0	50.50	50.00	ppm	.6199 %
Mn1		99.91	.9991	1.000	ppm	.8615 %
Na2		102.0	50.99	50.00	ppm	1.381 %
Ni3		104.4	5.218	5.000	ppm	.6565 %
Pb1		104.4	5.218	5.000	ppm	2.115 %
Sb1		99.29	4.964	5.000	ppm	.6647 %
Tl1		104.6	5.229	5.000	ppm	5.949 %
V 2		104.5	5.227	5.000	ppm	.8200 %
Zn3		103.4	1.034	1.000	ppm	.6344 %

*** Check Standard: 3 Ck3 Seq: 35 11:55:04 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-21.32	-.0021	.0100	ppm	-205.0%
Al3		-19.23	-.0192	.1000	ppm	-107.0%
Ba1		-.2290	-.0000	.0050	ppm	-2761.%
Be2		7.658	.0004	.0050	ppm	45.27 %
Ca3		-.7722	-.0039	.5000	ppm	-68.93%
Cd1		14.20	.0007	.0050	ppm	88.84 %
Co1		2.066	.0010	.0500	ppm	733.9 %
Cr4		-23.09	-.0023	.0100	ppm	-109.8%
Cu1		-6.511	-.0013	.0200	ppm	-127.1%
Fe2		.7241	.0004	.0500	ppm	1018. %
K 1		-22.79	-.2279	1.000	ppm	-73.51%
Mg4		-1.517	-.0076	.5000	ppm	-193.3%
Mn1		-6.364	-.0006	.0100	ppm	-80.00%
Na2		-1.224	-.0061	.5000	ppm	-92.60%
Ni3		-13.27	-.0053	.0400	ppm	-41.08%
Pb1		3.739	.0019	.0500	ppm	255.4 %
Sb1		-52.92	-.0318	.0600	ppm	-54.26%
Tl1		5.480	.0164	.3000	ppm	312.6 %
V 2		-5.904	-.0030	.0500	ppm	-249.3%
Zn3		-20.37	-.0020	.0100	ppm	-82.18%

Line	Conc.	Units	SD/RSD	1	2	3	4	5

5097-1

*** Sample ID: ~~5097 1S~~ 1.03 27-1 Seq: 36 11:58:34 27 Dec 1994 ICP

CK 12/27

Ag1	-.0015 L	ppm	-140.1%	.0009	-.0025	-.0031		
Al3	46.69	ppm	.8818 %	46.94	46.92	46.21		
Ba1	.2465	ppm	.8685 %	.2478	.2478	.2441		
Be2	.0009 L	ppm	70.52 %	.0002	.0013	.0012		
Ca3	1140. H	ppm	.8259 %	1146.	1144.	1129.		
Cd1	.0022 L	ppm	78.92 %	.0019	.0040	.0006		
Co1	.0588	ppm	6.442 %	.0555	.0630	.0581		
Cr4	.0709	ppm 6.88	5.237 %	.0740	.0721	.0668		
Cu1	.1621	ppm	1.105 %	.1603	.1639	.1620		
Fe2	110.0	ppm	.7692 %	110.5	110.5	109.0		
K 1	7.550	ppm	1.546 %	7.443	7.531	7.674		
Mg4	189.4	ppm	.7007 %	190.0	190.3	187.9		
Mn1	5.705	ppm	.7620 %	5.724	5.736	5.656		
Na2	1.279	ppm	4.947 %	1.222	1.347	1.268		
Ni3	.1146	ppm 11.1	3.780 %	.1192	.1106	.1140		
Pb1	.0819	ppm	39.07 %	.1182	.0702	.0574		
Sb1	.0216 L	ppm	333.8 %	.0945	-.0494	.0195		
Tl1	.1757 L	ppm	139.0 %	.0123	.4566	.0582		
V 2	.0980	ppm	5.589 %	.0941	.1043	.0957		
Zn3	.4866	ppm	.8112 %	.4885	.4891	.4820		

5079-1QCS

*** Sample ID: ~~5097 1QCS~~ 27-1 Seq: 37 12:02:01 27 Dec 1994 ICP

CK 12/27 ~~1.01~~ 1.00

Ag1	.0009 L	ppm	316.1 %	.0039	.0002	-.0015		
Al3	410.1	ppm	.3967 %	411.8	408.6	409.9		
Ba1	5.251	ppm	.5177 %	5.279	5.225	5.249		
Be2	.0269	ppm	1.397 %	.0273	.0266	.0267		
Ca3	118.1	ppm	.4839 %	118.7	118.1	117.5		
Cd1	.0053	ppm	16.15 %	.0059	.0057	.0043		
Co1	.1729	ppm	1.578 %	.1760	.1710	.1716		
Cr4	1.097	ppm 110	.7276 %	1.106	1.095	1.091		
Cu1	.4001	ppm	.7606 %	.4024	.4013	.3967		
Fe2	575.8 H	ppm	.4820 %	578.9	575.1	573.5		
K 1	64.67	ppm	.9329 %	64.95	63.98	65.09		
Mg4	25.84	ppm	.3674 %	25.95	25.81	25.77		
Mn1	1.391	ppm	.3125 %	1.396	1.388	1.389		
Na2	15.81	ppm	1.567 %	15.90	15.53	16.00		
Ni3	.7361	ppm 73.6	2.175 %	.7380	.7512	.7193		
Pb1	.2928	ppm	11.85 %	.2956	.3261	.2569		
Sb1	.0714	ppm	55.31 %	.1147	.0373	.0622		
Tl1	.0244 L	ppm	570.2 %	-.1072	.0103	.1703		
V 2	.7286	ppm	.3684 %	.7308	.7293	.7256		
Zn3	1.077	ppm	.6019 %	1.080	1.082	1.070		

5079-ISPS

*** Sample ID: ~~5097-ISPS~~ 27-1 Seq: 39 12:05:29 27 Dec 1994 ICP

CK 12/27 ~~1.04~~ 1.00

Line	Conc.	Units	SD/RSD	1	2	3	4	5
Ag1	.0002 L	ppm	491.5 %	-.0004	-.0002	.0011		
Al3	429.4	ppm	.8015 %	431.0	431.8	425.5		
Ba1	7.287	ppm	.9568 %	7.320	7.334	7.207		
Be2	.0265	ppm	5.806 %	.0252	.0282	.0260		
Ca3	122.3	ppm	.5872 %	122.6	122.8	121.5		
Cd1	.0542	ppm	2.696 %	.0536	.0531	.0559		
Co1	.1795	ppm	1.508 %	.1765	.1818	.1803		
Cr4	1.281	ppm	.4339 %	1.285	1.283	1.275		
Cu1	.6086	ppm	.8500 %	.6101	.6130	.6029		
Fe2	595.8 H	ppm	.7207 %	598.2	598.4	590.9		
K 1	67.34	ppm	.8015 %	67.84	67.41	66.77		
Mg4	27.05	ppm	.7822 %	27.11	27.22	26.81		
Mn1	1.912	ppm	.8354 %	1.922	1.921	1.894		
Na2	16.08	ppm	.9640 %	16.19	16.15	15.90		
Ni3	1.183	ppm	.5914 %	1.179	1.191	1.179		
Pb1	.6914	ppm	4.953 %	.7146	.7076	.6521		
Sb1	.0222 L	ppm	555.8 %	-.0987	.1484	.0170		
Tl1	.0313 L	ppm	801.5 %	-.0034	.2975	-.2002		
V 2	.7618	ppm	2.459 %	.7672	.7772	.7409		
Zn3	1.533	ppm	.6728 %	1.541	1.536	1.521		

*** Sample ID: 5097-2 1.01 27-1 Seq: 40 12:08:56 27 Dec 1994 ICP

Ag1	-.0022 L	ppm	-123.3%	-.0045	.0008	-.0028		
Al3	44.59	ppm	.6096 %	44.63	44.30	44.84		
Ba1	.2870	ppm	.6417 %	.2865	.2854	.2890		
Be2	.0015 L	ppm	22.44 %	.0012	.0014	.0019		
Ca3	640.8	ppm	.3556 %	641.9	638.2	642.3		
Cd1	.0026 L	ppm	20.53 %	.0024	.0032	.0022		
Co1	.0598	ppm	4.899 %	.0632	.0579	.0584		
Cr4	**.0628**	**ppm** 6.22	1.723 %	.0637	.0616	.0630		
Cu1	.1698	ppm	.6206 %	.1689	.1695	.1710		
Fe2	113.4	ppm	.4194 %	113.6	112.8	113.7		
K 1	7.517	ppm	1.375 %	7.411	7.523	7.618		
Mg4	217.7	ppm	.4185 %	217.6	216.9	218.7		
Mn1	5.360	ppm	.4678 %	5.364	5.333	5.382		
Na2	1.121	ppm	1.393 %	1.117	1.107	1.138		
Ni3	**.0937**	**ppm** 9.28	2.038 %	.0944	.0915	.0951		
Pb1	.0848	ppm	4.888 %	.0824	.0896	.0825		
Sb1	.0762	ppm	75.92 %	.0122	.1246	.0918		
Tl1	.0354 L	ppm	449.1 %	.1985	-.1190	.0267		
V 2	.1036	ppm	3.879 %	.0991	.1047	.1070		
Zn3	.6278	ppm	.9520 %	.6235	.6252	.6346		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5097-3 1.04 27-1			Seq: 41		12:12:24 27 Dec 1994 ICP			
Ag1	-.0002 L	ppm	-2330. %	-.0028	-.0025	.0048		
Al3	42.43	ppm	.2606 %	42.40	42.33	42.55		
Ba1	.2688	ppm	.2008 %	.2686	.2683	.2693		
Be2	.0013 L	ppm	38.19 %	.0007	.0014	.0016		
Ca3	772.1	ppm	.1170 %	772.6	771.1	772.6		
Cd1	.0049 L	ppm	32.60 %	.0044	.0067	.0037		
Co1	.0580	ppm	9.447 %	.0530	.0572	.0639		
Cr4	**.0701**	**ppm** 6.74	.8146 %	.0697	.0699	.0708		
Cu1	.1667	ppm	.6687 %	.1655	.1676	.1670		
Fe2	111.7	ppm	.1543 %	111.7	111.5	111.8		
K 1	7.940	ppm	2.284 %	7.731	8.050	8.040		
Mg4	304.9	ppm	.1099 %	304.8	304.7	305.3		
Mn1	5.211	ppm	.1719 %	5.209	5.204	5.221		
Na2	1.341	ppm	3.602 %	1.292	1.388	1.344		
Ni3	**.1022**	**ppm** 9.83	2.573 %	.1027	.0994	.1046		
Pb1	.1005	ppm	8.326 %	.1085	.0918	.1012		
Sb1	.0772	ppm	43.17 %	.1013	.0910	.0392		
Tl1	.4603	ppm	5.680 %	.4750	.4301	.4758		
V 2	.1010	ppm	3.481 %	.1045	.0975	.1009		
Zn3	.6565	ppm	.8322 %	.6518	.6554	.6625		
*** Sample ID: 5079-1 1.00 27-1			Seq: 43		12:15:50 27 Dec 1994 ICP			
Ag1	.0038 L	ppm	64.68 %	.0012	.0061	.0042		
Al3	446.6	ppm	1.212 %	446.1	441.5	452.3		
Ba1	5.619	ppm	1.263 %	5.620	5.548	5.690		
Be2	.0282	ppm	3.902 %	.0270	.0286	.0291		
Ca3	127.1	ppm	.7549 %	126.9	126.3	128.2		
Cd1	.0063	ppm	28.15 %	.0078	.0043	.0067		
Co1	.1850	ppm	1.498 %	.1877	.1851	.1821		
Cr4	**1.267**	**ppm** 1.27	.9051 %	1.263	1.258	1.280		
Cu1	.4016	ppm	1.144 %	.4003	.3978	.4067		
Fe2	**605.5 H**	**ppm**	.8303 %	604.7	600.9	610.8		
K 1	70.82	ppm	1.589 %	70.52	69.88	72.07		
Mg4	28.36	ppm	.6925 %	28.32	28.18	28.57		
Mn1	1.523	ppm	.9875 %	1.520	1.510	1.539		
Na2	16.96	ppm	.8069 %	16.96	16.83	17.10		
Ni3	**.8502**	**ppm** 85.0	.1549 %	.8496	.8492	.8517		
Pb1	.2681	ppm	11.77 %	.2820	.2320	.2904		
Sb1	.1153	ppm	31.03 %	.1473	.0767	.1218		
Tl1	-.1756 L	ppm	-50.97%	-.2486	-.0757	-.2026		
V 2	.7788	ppm	1.065 %	.7854	.7695	.7815		
Zn3	1.125	ppm	.8585 %	1.119	1.120	1.136		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5100-1 1.02 27-1			Seq: 44		12:19:12 27 Dec 1994 ICP			
Ag1	-.0002 L	ppm	-1610.%	-.0009	-.0025	.0029		
Al3	44.51	ppm	1.323 %	44.25	44.10	45.19		
Ba1	.8207	ppm 80.5	1.312 %	.8157	.8132	.8330		
Be2	.0009 L	ppm	33.74 %	.0009	.0005	.0011		
Ca3	872.5	ppm	.7536 %	869.6	867.8	880.0		
Cd1	.0034 L	ppm	61.09 %	.0052	.0038	.0011		
Co1	.0370 L	ppm	6.516 %	.0380	.0387	.0342		
Cr4	.0666	ppm	1.450 %	.0658	.0664	.0677		
Cu1	.1303	ppm	2.351 %	.1307	.1270	.1331		
Fe2	68.98	ppm	.8377 %	68.74	68.55	69.63		
K 1	7.362	ppm	3.312 %	7.565	7.092	7.429		
Mg4	149.5	ppm	.8195 %	148.8	148.8	150.9		
Mn1	2.821	ppm	1.021 %	2.807	2.801	2.854		
Na2	1.032	ppm	1.622 %	1.013	1.038	1.044		
Ni3	.0761	ppm	7.488 %	.0719	.0738	.0826		
Pb1	.1059	ppm	19.49 %	.1296	.0959	.0921		
Sb1	.0277 L	ppm	341.9 %	-.0808	.0696	.0944		
Tl1	.0964 L	ppm	76.06 %	.1497	.0128	.1268		
V 2	.0848	ppm	8.645 %	.0771	.0917	.0856		
Zn3	1.085	ppm	1.446 %	1.079	1.074	1.103		
*** Sample ID: BLK			27-1 Seq: 45		12:22:34 27 Dec 1994 ICP			
Ag1	-.0037 L	ppm	-95.26%	-.0008	-.0026	-.0076		
Al3	-.0287 L	ppm	-35.22%	-.0402	-.0244	-.0214		
Ba1	-.0001 L	ppm	-311.4%	-.0003	.0002	-.0001		
Be2	-.0001 L	ppm	-322.7%	-.0006	-.0000	.0002		
Ca3	.0506 L	ppm	16.55 %	.0569	.0411	.0539		
Cd1	.0005 L	ppm	40.94 %	.0003	.0007	.0006		
Co1	-.0024 L	ppm	-119.7%	-.0037	.0009	-.0043		
Cr4	-.0026 L	ppm	-35.53%	-.0032	-.0031	-.0015		
Cu1	-.0031 L	ppm	-63.36%	-.0041	-.0008	-.0042		
Fe2	.0439 L	ppm	3.881 %	.0439	.0422	.0457		
K 1	-.1139 L	ppm	-52.31%	-.0930	-.0676	-.1812		
Mg4	.0151 L	ppm	157.2 %	-.0050	.0413	.0089		
Mn1	-.0003 L	ppm	-47.22%	-.0002	-.0005	-.0002		
Na2	-.0151 L	ppm	-335.4%	-.0699	-.0049	.0296		
Ni3	.0008 L	ppm	576.1 %	.0005	.0058	-.0038		
Pb1	.0065 L	ppm	337.5 %	-.0179	.0127	.0247		
Sb1	.0067 L	ppm	327.9 %	-.0185	.0217	.0169		
Tl1	.1867 L	ppm	62.18 %	.1257	.3206	.1138		
V 2	.0049 L	ppm	136.4 %	.0090	.0086	-.0028		
Zn3	-.0023 L	ppm	-86.10%	-.0001	-.0040	-.0028		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PB 12/22 27-1 Seq: 47 12:25:57 27 Dec 1994 ICP								
[illegible]1	.0012 L	ppm	258.4 %	.0002	-.0013	.0048		
[illegible]8	.0133 L	ppm	114.0 %	.0153	-.0028	.0272		
[illegible]1	.0022 L	ppm	1.195 %	.0022	.0022	.0023		
Be2	.0007 L	ppm	46.55 %	.0009	.0008	.0003		
Ca3	.0336 L	ppm	1.161 %	.0340	.0335	.0333		
[illegible]1	-.0002 L	ppm	-422.9%	.0009	-.0008	-.0008		
Co1	.0033 L	ppm	105.4 %	.0050	.0056	-.0007		
[illegible]	-.0028 L	ppm	-26.65%	-.0031	-.0033	-.0019		
[illegible]	-.0023 L	ppm	-57.94%	-.0025	-.0008	-.0034		
[illegible]2	.0214 L	ppm	9.344 %	.0197	.0209	.0236		
K 1	-.0746 L	ppm	-48.19%	-.0557	-.0521	-.1161		
[illegible]4	.0004 L	ppm	5127. %	-.0178	.0188	.0001		
Mn1	-.0006 L	ppm	-116.0%	-.0000	-.0014	-.0004		
Na2	.8605	ppm	3.634 %	.8247	.8743	.8826		
[illegible]3	-.0028 L	ppm	-145.1%	-.0010	-.0075	.0000		
[illegible]1	.0081 L	ppm	269.4 %	.0166	.0243	-.0167		
Sb1	-.0027 L	ppm	-1321.%	-.0311	.0365	-.0134		
Tl1	.1326 L	ppm	101.5 %	.2175	.2029	-.0226		
V 2	.0155 L	ppm	25.10 %	.0165	.0189	.0113		
[illegible]3	.0009 L	ppm	142.5 %	.0011	-.0005	.0021		
*** Sample ID: LCS 27-1 Seq: 48 12:29:20 27 Dec 1994 ICP								
[illegible]	.0504	ppm	3.974 %	.0485	.0503	.0525		
[illegible]3	1.994	ppm	2.173 %	2.030	1.946	2.006		
[illegible]1	2.022	ppm	.9365 %	2.039	2.002	2.024		
Be2	.0473	ppm	.5208 %	.0476	.0472	.0471		
Ca3	.0505 L	ppm	3.051 %	.0494	.0523	.0499		
[illegible]	.0549	ppm	.8206 %	.0544	.0553	.0549		
Co1	.4993	ppm	1.818 %	.4988	.5086	.4905		
[illegible]	.2050	ppm	1.410 %	.2042	.2025	.2081		
[illegible]	.2498	ppm	1.320 %	.2498	.2466	.2532		
[illegible]	1.046	ppm	.8830 %	1.054	1.036	1.048		
K 1	-.0657 L	ppm	-201.1%	-.2130	-.0258	.0418		
[illegible]4	9.927	ppm	.6225 %	9.987	9.863	9.930		
Mn1	.4959	ppm	.7947 %	.5003	.4926	.4948		
Na2	.8609	ppm	2.131 %	.8709	.8398	.8722		
[illegible]	.5212	ppm	.6906 %	.5253	.5186	.5198		
[illegible]	.5413	ppm	7.829 %	.5832	.5424	.4984		
Sb1	.5044	ppm	11.79 %	.5542	.4386	.5204		
Tl1	2.228	ppm	4.603 %	2.231	2.123	2.328		
V 2	.5408	ppm	.9660 %	.5468	.5370	.5388		
[illegible]	.5273	ppm	1.401 %	.5351	.5204	.5265		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 49 12:32:48 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		100.7	1.007	1.000	ppm	.3824 %
Al3		100.9	5.045	5.000	ppm	.6835 %
Ba1		100.9	1.009	1.000	ppm	.7012 %
Be2		99.65	.9965	1.000	ppm	.5349 %
Ca3		99.89	49.95	50.00	ppm	.5317 %
Cd1		105.1	1.051	1.000	ppm	.6234 %
Co1		103.0	5.151	5.000	ppm	.7752 %
Cr4		101.9	5.095	5.000	ppm	.2780 %
Cu1		100.7	5.034	5.000	ppm	.7624 %
Fe2		99.83	4.992	5.000	ppm	.6288 %
K 1		99.38	4.969	5.000	ppm	2.951 %
Mg4		99.75	49.88	50.00	ppm	.6849 %
Mn1		99.65	.9965	1.000	ppm	.6175 %
Na2		102.3	51.13	50.00	ppm	.8075 %
Ni3		102.3	5.115	5.000	ppm	.3817 %
Pb1		102.4	5.122	5.000	ppm	.8122 %
Sb1		98.00	4.900	5.000	ppm	.8556 %
Tl1		106.1	5.305	5.000	ppm	1.347 %
V 2		105.6	5.279	5.000	ppm	.6650 %
Zn3		103.4	1.034	1.000	ppm	1.109 %

*** Check Standard: 3 Ck3 Seq: 50 12:36:19 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-16.03	-.0016	.0100	ppm	-222.4%
Al3		-27.02	-.0270	.1000	ppm	-55.14%
Ba1		-2.352	-.0001	.0050	ppm	-213.3%
Be2		.9515	.0000	.0050	ppm	633.9 %
Ca3		-.6565	-.0033	.5000	ppm	-67.60%
Cd1		16.27	.0008	.0050	ppm	116.5 %
Co1		-1.531	-.0008	.0500	ppm	-220.4%
Cr4		-21.24	-.0021	.0100	ppm	-31.94%
Cu1		1.401	.0003	.0200	ppm	471.5 %
Fe2		-3.765	-.0019	.0500	ppm	-121.6%
K 1		-26.81	-.2681	1.000	ppm	-22.26%
Mg4		.5762	.0029	.5000	ppm	885.3 %
Mn1		-7.549	-.0008	.0100	ppm	-31.32%
Na2		-7.942	-.0397	.5000	ppm	-145.5%
Ni3		-1.262	-.0005	.0400	ppm	-587.9%
Pb1		35.08	.0175	.0500	ppm	114.9 %
Sb1		-80.32	-.0482	.0600	ppm	-35.01%
Tl1		44.76	.1343	.3000	ppm	19.34 %
V 2		42.27	.0211	.0500	ppm	16.26 %
Zn3		-10.95	-.0011	.0100	ppm	-185.8%

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5039-3		27-1	Seq: 51		12:39:46 27 Dec 1994 ICP			
Ag1	-.0023 L	ppm	-157.2%	-.0002	-.0066	-.0003		
Al3	.0603 L	ppm	28.32 %	.0748	.0645	.0415		
Ba1	.0651	ppm	1.776 %	.0644	.0664	.0644		
Be2	.0000 L	ppm	914.7 %	-.0003	-.0000	.0004		
Ca3	74.66	ppm	.5527 %	74.48	75.14	74.38		
Cd1	.0012 L	ppm	74.91 %	.0022	.0006	.0007		
Co1	.0070 L	ppm	66.23 %	.0103	.0017	.0091		
Cr4	-.0012 L	ppm	-174.0%	-.0035	-.0001	.0001		
Cu1	.0037 L	ppm	16.82 %	.0038	.0030	.0043		
Fe2	.2546	ppm	1.090 %	.2548	.2573	.2517		
K 1	7.392	ppm	1.719 %	7.292	7.348	7.535		
[illegible]	[illegible]	ppm	.6206 %	20.06	20.19	19.94		
Mn1	.0329	ppm	1.707 %	.0323	.0329	.0334		
Na2	179.2	ppm	1.759 %	176.8	182.8	178.1		
Ni3	-.0012 L	ppm	-344.9%	.0022	-.0060	.0001		
Pb1	-.0081 L	ppm	-316.3%	.0177	-.0086	-.0333		
Sb1	-.0206 L	ppm	-205.7%	-.0543	-.0343	.0269		
Tl1	.1641 L	ppm	69.85 %	.2855	.1490	.0577		
V 2	.0182 L	ppm	33.00 %	.0213	.0220	.0113		
Zn3	-.0003 L	ppm	-791.7%	.0021	-.0005	-.0025		
*** Sample ID: PB 12/23		27-1	Seq: 53		12:43:09 27 Dec 1994 ICP			
[illegible]g1	-.0013 L	ppm	-95.81%	.0000	-.0015	-.0025		
[illegible]	-.0071 L	ppm	-60.57%	-.0058	-.0036	-.0120		
[illegible]	.0002 L	ppm	54.31 %	.0001	.0003	.0003		
[illegible]2	.0002 L	ppm	264.0 %	.0003	.0005	-.0003		
[illegible]	.0355 L	ppm	7.908 %	.0367	.0323	.0375		
[illegible]1	-.0005 L	ppm	-278.0%	-.0021	.0009	-.0005		
[illegible]	-.0000 L	ppm	-44970%	.0036	-.0030	-.0007		
[illegible]4	-.0008 L	ppm	-126.4%	.0003	-.0012	-.0015		
[illegible]1	-.0032 L	ppm	-48.91%	-.0050	-.0022	-.0024		
[illegible]	-.0007 L	ppm	-276.5%	-.0029	.0007	.0001		
[illegible]	-.0616 L	ppm	-127.8%	-.0411	.0048	-.1486		
[illegible]4	.0249 L	ppm	55.38 %	.0099	.0369	.0279		
[illegible]	-.0009 L	ppm	-39.30%	-.0014	-.0008	-.0007		
Na2	.1031 L	ppm	58.21 %	.1465	.0346	.1283		
[illegible]3	-.0042 L	ppm	-62.96%	-.0020	-.0071	-.0035		
[illegible]1	.0020 L	ppm	292.6 %	.0002	.0084	-.0027		
[illegible]1	.0222 L	ppm	452.2 %	-.0766	.1239	.0192		
[illegible]1	.1667 L	ppm	24.26 %	.1571	.1320	.2111		
[illegible]2	.0089 L	ppm	49.20 %	.0045	.0089	.0133		
[illegible]3	.0052 L	ppm	35.83 %	.0063	.0062	.0030		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: LCS		27-1	Seq: 54	12:46:32 27 Dec 1994 ICP				
[redacted]		ppm	5.710 %	.0466	.0519	.0476		
[redacted]		ppm	.8600 %	1.963	1.933	1.935		
[redacted]		ppm	.8461 %	2.002	2.035	2.024		
[redacted]		ppm	1.635 %	.0461	.0464	.0475		
[redacted]		ppm	.4731 %	2.054	2.055	2.071		
[redacted]		ppm	1.036 %	.0544	.0554	.0545		
[redacted]		ppm	1.535 %	.5082	.5085	.4950		
[redacted]		ppm	1.345 %	.2035	.2090	.2071		
[redacted]		ppm	1.465 %	.2490	.2557	.2552		
[redacted]		ppm	.7651 %	1.037	1.052	1.051		
[redacted]		ppm	9.371 %	2.001	1.696	1.722		
[redacted]		ppm	1.615 %	2.018	1.965	1.961		
[redacted]		ppm	.9258 %	.4943	.5027	.5020		
Na2	2.056	ppm	3.584 %	2.139	1.999	2.029		
[redacted]		ppm	.7298 %	.5285	.5342	.5359		
[redacted]		ppm	8.098 %	.5696	.4842	.5312		
[redacted]		ppm	6.582 %	.5558	.5624	.4980		
[redacted]		ppm	3.106 %	2.321	2.188	2.296		
[redacted]		ppm	1.663 %	.5319	.5498	.5396		
[redacted]		ppm	1.496 %	.5123	.5274	.5168		
*** Sample ID: 5042-1		27-1	Seq: 55	12:49:55 27 Dec 1994 ICP				
[redacted]		ppm 0.010U	-7315. %	-.0025	-.0002	.0026		
Al3	.9904	ppm	86.41 %	.5127	.4802	1.978		
Ba1	.0225	ppm	68.92 %	.0137	.0134	.0404		
Be2	.0010 L	ppm	89.81 %	.0002	.0008	.0019		
Ca3	17.73	ppm	10.36 %	16.64	16.69	19.85		
[redacted]		ppm 0.0050U	121.5 %	.0002	.0006	.0029		
Co1	.0092 L	ppm	16.37 %	.0084	.0109	.0082		
[redacted]		ppm	8.952 %	.0400	.0397	.0464		
[redacted]		ppm 0.200	1.757 %	.1985	.1971	.2038		
Fe2	1.261	ppm	96.92 %	.5564	.5543	2.672		
K 1	2.953	ppm	7.205 %	2.868	2.797	3.195		
Mg4	5.235	ppm	9.348 %	4.940	4.966	5.800		
Mn1	.0326	ppm	65.58 %	.0201	.0204	.0573		
Na2	92.07	ppm	.7191 %	92.66	92.19	91.35		
[redacted]		ppm	13.95 %	.0421	.0345	.0456		
[redacted]		ppm 0.050U	313.3 %	-.0214	-.0034	.0727		
Sb1	.0409 L	ppm	147.2 %	.1011	-.0194	.0410		
Tl1	.0790 L	ppm	231.3 %	.2797	-.0781	.0356		
V 2	.0147 L	ppm	82.46 %	.0108	.0050	.0283		
[redacted]		ppm 0.560	.6842 %	.5622	.5558	.5626		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5116-2			27-1	Seq: 57		12:53:18 27 Dec 1994 ICP		
[redacted]		ppm	58.95 %	.0028	.0010	.0013		
Al3	.1193	ppm	2.235 %	.1207	.1209	.1162		
Ba1	.2316	ppm	1.264 %	.2308	.2291	.2348		
[redacted]		ppm	119.0 %	.0003	-.0001	.0008		
Ca3	79.64	ppm	.7212 %	79.42	79.21	80.29		
[redacted]		ppm	-352.9%	-.0017	.0004	.0003		
Co1	-.0020 L	ppm	-117.4%	-.0040	-.0025	.0006		
[redacted]		ppm	74.82 %	.0018	.0033	.0005		
[redacted]		ppm	7.448 %	.0159	.0180	.0159		
Fe2	.3073	ppm	1.986 %	.3120	.3004	.3096		
K 1	2.935	ppm	2.829 %	2.887	3.031	2.887		
Mg4	8.006	ppm	.5141 %	8.005	7.966	8.048		
Mn1	.0510	ppm	.6036 %	.0514	.0507	.0510		
Na2	32.49	ppm	1.686 %	32.22	32.13	33.12		
[redacted]		ppm	148.9 %	.0001	.0042	.0004		
[redacted]		ppm	46.78 %	.0268	.0129	.0365		
[redacted]		ppm	-349.9%	-.0533	.0283	-.0100		
[redacted]		ppm	649.9 %	.0306	.1349	-.1090		
V 2	.0204 L	ppm	42.54 %	.0166	.0143	.0303		
[redacted]		ppm	1.820 %	.2140	.2065	.2089		
*** Sample ID: 5076-1			27-1 PREP 12/22	Seq: 58		12:56:41 27 Dec 1994 ICP		
-Ag1	-.0013 L	ppm	-125.5%	-.0032	.0000	-.0008		
[redacted]		ppm	91.71 %	.0003	.0246	.0388		
Ba1	.0764	ppm	.6455 %	.0770	.0763	.0760		
Be2	.0000 L	ppm	1716. %	.0003	-.0007	.0005		
Ca3	110.0	ppm	.1703 %	109.8	110.1	110.2		
Cd1	-.0000 L	ppm	-5920.%	-.0012	.0026	-.0015		
Co1	.0008 L	ppm	438.7 %	-.0014	-.0011	.0049		
Cr4	-.0019 L	ppm	-136.2%	-.0047	-.0015	.0005		
[redacted]		ppm	25.99 %	.0050	.0058	.0081		
[redacted]		ppm	.8942 %	.1164	.1181	.1183		
K 1	2.828	ppm	2.808 %	2.744	2.838	2.902		
Mg4	34.09	ppm	.5911 %	33.90	34.07	34.30		
Mn1	.1295	ppm	.4653 %	.1292	.1291	.1302		
Na2	25.47	ppm	4.537 %	24.59	25.03	26.78		
Ni3	.0027 L	ppm	154.5 %	.0006	.0000	.0076		
Pb1	.0141 L	ppm	213.4 %	.0000	.0485	-.0063		
Sb1	.0719	ppm	115.6 %	.0918	.1432	-.0194		
Tl1	.1649 L	ppm	19.53 %	.1913	.1743	.1290		
V 2	.0319 L	ppm	20.01 %	.0355	.0245	.0356		
[redacted]		ppm	.9147 %	.3946	.4017	.3970		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5076-3		27-1	Seq: 59		13:00:05 27 Dec 1994 ICP			
Ag1	-.0014 L	ppm	-155.7%	-.0036	-.0011	.0006		
[redacted]		ppm	.9289 %	1.569	1.541	1.560		
Ba1	.0879	ppm	.4477 %	.0882	.0874	.0881		
Be2	.0001 L	ppm	70.05 %	.0002	.0001	.0001		
Ca3	347.5	ppm	.2706 %	347.0	346.8	348.5		
Cd1	.0018 L	ppm	83.25 %	.0005	.0034	.0015		
Co1	.0103 L	ppm	29.40 %	.0107	.0132	.0071		
Cr4	.0006 L	ppm	325.1 %	.0026	-.0008	-.0001		
[redacted]		ppm	47.45 %	.0020	.0060	.0051		
[redacted]		ppm	.4350 %	1.563	1.554	1.567		
K 1	2.145	ppm	13.12 %	2.392	1.839	2.205		
Mg4	49.01	ppm	.2123 %	49.13	48.96	48.94		
Mn1	1.217	ppm	.1798 %	1.216	1.216	1.220		
Na2	13.78	ppm	1.751 %	14.05	13.68	13.61		
Ni3	.0132 L	ppm	26.86 %	.0170	.0100	.0126		
Pb1	.0277 L	ppm	73.81 %	.0329	.0052	.0450		
Sb1	.0075 L	ppm	716.3 %	-.0413	-.0009	.0646		
Tl1	.1869 L	ppm	4.068 %	.1923	.1782	.1903		
V 2	.0250 L	ppm	18.84 %	.0292	.0199	.0259		
[redacted]		ppm	1.102 %	.9745	.9647	.9533		
*** Sample ID: CRIF		27-1	Seq: 61		13:03:29 27 Dec 1994 ICP			
Ag1	.0165	ppm	10.81 %	.0180	.0169	.0145		
Al3	-.0050 L	ppm	-548.3%	.0157	-.0362	.0055		
Ba1	-.0002 L	ppm	-41.33%	-.0001	-.0002	-.0003		
Be2	.0090	ppm	.9470 %	.0089	.0091	.0090		
Ca3	.0062 L	ppm	183.5 %	-.0009	.0002	.0194		
Cd1	.0093	ppm	17.00 %	.0108	.0093	.0077		
Co1	.1110	ppm	1.582 %	.1114	.1091	.1125		
Cr4	.0175	ppm	15.21 %	.0179	.0147	.0200		
Cu1	.0489	ppm	.5964 %	.0488	.0487	.0493		
Fe2	-.0097 L	ppm	-30.79%	-.0111	-.0118	-.0063		
K 1	-.2996 L	ppm	-44.49%	-.1607	-.4264	-.3116		
Mg4	.0153 L	ppm	169.1 %	-.0088	.0120	.0428		
Mn1	.0304	ppm	2.229 %	.0304	.0311	.0297		
Na2	.0334 L	ppm	57.28 %	.0380	.0124	.0499		
Ni3	.0797	ppm	2.727 %	.0817	.0800	.0774		
Pb1	.1315	ppm	26.73 %	.1018	.1225	.1703		
Sb1	.1586	ppm	39.40 %	.0903	.1726	.2129		
Tl1	.1924 L	ppm	69.56 %	.3390	.1612	.0769		
V 2	.1198	ppm	4.529 %	.1147	.1255	.1192		
Zn3	.0417	ppm	4.343 %	.0396	.0427	.0429		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICSAF		27-1		Seq: 62		13:06:54 27 Dec 1994 ICP		
Ag1	.0008 L	ppm	137.2 %	.0002	.0002	.0022		
Al3	473.0	ppm	.5478 %	471.3	471.7	476.0		
Ba1	-.0009 L	ppm	-24.49%	-.0007	-.0010	-.0011		
Be2	-.0008 L	ppm	-41.98%	-.0011	-.0009	-.0004		
Ca3	466.3	ppm	.2318 %	465.2	466.6	467.3		
Cd1	.0023 L	ppm	81.78 %	.0045	.0009	.0016		
Co1	.0197 L	ppm	34.82 %	.0273	.0176	.0141		
Cr4	.0022 L	ppm	38.04 %	.0015	.0020	.0032		
Cu1	-.0109 L	ppm	-12.17%	-.0094	-.0118	-.0116		
Fe2	174.1	ppm	.2330 %	173.7	174.0	174.5		
K 1	-.3196 L	ppm	-48.25%	-.3011	-.1755	-.4822		
Mg4	504.3	ppm	.2804 %	502.7	505.0	505.3		
Mn1	.0325	ppm	1.124 %	.0329	.0323	.0322		
Na2	.0945 L	ppm	40.30 %	.1201	.1127	.0508		
Ni3	.0140 L	ppm	49.16 %	.0091	.0219	.0111		
Pb1	.0256 L	ppm	123.2 %	.0582	-.0048	.0235		
Sb1	.0685	ppm	78.64 %	.0645	.0168	.1243		
Tl1	.1422 L	ppm	106.4 %	.0638	.3165	.0463		
V 2	-.0087 L	ppm	-157.4%	-.0135	-.0195	.0068		
Zn3	.0050 L	ppm	61.49 %	.0065	.0015	.0070		
*** Sample ID: ICSABF		27-1		Seq: 63		13:10:19 27 Dec 1994 ICP		
Ag1	.9141	ppm	.7795 %	.9221	.9086	.9116		
Al3	471.9	ppm	.7629 %	476.0	469.5	470.0		
Ba1	.4624	ppm	.9228 %	.4673	.4599	.4600		
Be2	.4473	ppm	.6470 %	.4503	.4469	.4446		
Ca3	466.9	ppm	.7257 %	470.8	464.9	464.8		
Cd1	.9239	ppm	1.480 %	.9395	.9139	.9183		
Co1	.4558	ppm	1.631 %	.4644	.4515	.4515		
Cr4	.4556	ppm	.7051 %	.4592	.4546	.4530		
Cu1	.4613	ppm	.8507 %	.4638	.4633	.4568		
Fe2	174.5	ppm	.8325 %	176.2	173.7	173.6		
K 1	-.4294 L	ppm	-33.35%	-.3287	-.5933	-.3662		
Mg4	502.8	ppm	.6522 %	506.6	501.2	500.7		
Mn1	.4697	ppm	1.148 %	.4756	.4682	.4651		
Na2	.0668 L	ppm	37.70 %	.0481	.0954	.0569		
Ni3	.9162	ppm	2.527 %	.9337	.9250	.8900		
Pb1	.8889	ppm	3.328 %	.8594	.9186	.8888		
Sb1	.1472	ppm	28.25 %	.1840	.1555	.1021		
Tl1	.2760	ppm	37.25 %	.1628	.3635	.3018		
V 2	.4820	ppm	1.130 %	.4883	.4786	.4790		
Zn3	.8795	ppm	1.495 %	.8932	.8784	.8669		

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 2 Ck2 Seq: 64 13:13:48 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		101.4	1.014	1.000	ppm	.3305 %
Al3		100.3	5.014	5.000	ppm	.9544 %
Ba1		99.67	.9967	1.000	ppm	.1528 %
Be2		97.56	.9756	1.000	ppm	.2070 %
Ca3		99.01	49.51	50.00	ppm	.4343 %
Cd1		105.1	1.051	1.000	ppm	.2628 %
Co1		104.4	5.221	5.000	ppm	.4362 %
Cr4		100.6	5.032	5.000	ppm	.4308 %
Cu1		100.3	5.013	5.000	ppm	.1155 %
Fe2		99.67	4.984	5.000	ppm	.5264 %
K 1		101.6	5.079	5.000	ppm	4.800 %
Mg4		100.3	50.16	50.00	ppm	.5529 %
Mn1		98.76	.9876	1.000	ppm	.3092 %
Na2		101.5	50.74	50.00	ppm	.3401 %
Ni3		102.6	5.128	5.000	ppm	.5037 %
Pb1		102.9	5.143	5.000	ppm	1.271 %
Sb1		99.11	4.955	5.000	ppm	2.323 %
Tl1		103.5	5.174	5.000	ppm	5.622 %
V 2		106.4	5.318	5.000	ppm	.8384 %
Zn3		100.7	1.007	1.000	ppm	.4298 %

*** Check Standard: 3 Ck3 Seq: 65 13:17:19 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-17.90	-.0018	.0100	ppm	-106.8%
Al3		-29.11	-.0291	.1000	ppm	-86.57%
Ba1		-2.716	-.0001	.0050	ppm	-172.0%
Be2		2.083	.0001	.0050	ppm	312.4 %
Ca3		-.5681	-.0028	.5000	ppm	-108.2%
Cd1		15.36	.0008	.0050	ppm	111.5 %
Co1		.8650	.0004	.0500	ppm	300.0 %
Cr4		-30.16	-.0030	.0100	ppm	-34.40%
Cu1		-3.522	-.0007	.0200	ppm	-150.2%
Fe2		13.69	.0068	.0500	ppm	24.63 %
K 1		-19.20	-.1920	1.000	ppm	-79.94%
Mg4		-1.564	-.0078	.5000	ppm	-77.62%
Mn1		-12.53	-.0013	.0100	ppm	-49.67%
Na2		-2.029	-.0101	.5000	ppm	-311.7%
Ni3		-11.06	-.0044	.0400	ppm	-69.71%
Pb1		19.45	.0097	.0500	ppm	236.3 %
Sb1		32.41	.0194	.0600	ppm	369.0 %
Tl1		1.219	.0037	.3000	ppm	2154. %
V 2		34.39	.0172	.0500	ppm	33.57 %
Zn3		-19.51	-.0020	.0100	ppm	-7.067%

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5037-1		27-1	Seq: 67	13:20:45 27 Dec 1994 ICP				
			PREP 12/22					
Ag1	-.0089	L ppm	20.80 %	.0071	.0108	.0088		
Al3	-.0820	L ppm	-2.162%	-.0840	-.0805	-.0817		
Ba1	-.0085	L ppm	-2.465%	-.0087	-.0085	-.0083		
Be2	-.0012	L ppm	-14.39%	-.0010	-.0014	-.0013		
Ca3	14.47	ppm	.4146 %	14.54	14.43	14.43		
Cd1	.0006	L ppm	178.5 %	.0009	.0016	-.0006		
Co1	.0529	ppm	5.749 %	.0558	.0532	.0497		
Cr4	.0913	ppm	1.171 %	.0926	.0906	.0909		
Cu1	.1240	ppm	2.057 %	.1266	.1215	.1241		
Fe2	-1.021	L ppm	-0.435%	-1.020	-1.026	-1.018		
K 1	136.6	ppm	1.077 %	138.3	136.2	135.4		
Mg4	3.061	ppm	.8163 %	3.072	3.032	3.078		
Mn1	-.0043	L ppm	-11.80%	-.0041	-.0039	-.0049		
Na2	5151.	H ppm	.3096 %	5157.	5164.	5134.		
Ni3	-.0458	L ppm	-1.602%	-.0465	-.0451	-.0458		
Pb1	-.0304	L ppm	-40.98%	-.0407	-.0338	-.0165		
Sb1	-.0675	L ppm	-111.8%	-.1303	-.0886	.0163		
Tl1	1.174	ppm	3.998 %	1.221	1.174	1.127		
V 2	-.0178	L ppm	-25.68%	-.0186	-.0220	-.0129		
Zn3	.0006	L ppm	356.1 %	.0014	-.0018	.0022		
*** Sample ID: 5037-1QC		27-1	Seq: 68	13:24:05 27 Dec 1994 ICP				
Ag1	.0073	L ppm	10.71 %	.0077	.0064	.0079		
Al3	-.0815	L ppm	-25.20%	-.0871	-.0986	-.0587		
Ba1	-.0063	L ppm	-2.430%	-.0062	-.0065	-.0062		
Be2	-.0010	L ppm	-26.71%	-.0007	-.0012	-.0009		
Ca3	14.57	ppm	.2240 %	14.54	14.56	14.60		
Cd1	.0010	L ppm	281.6 %	.0021	.0031	-.0022		
Co1	.0503	ppm	4.381 %	.0523	.0479	.0505		
Cr4	.0887	ppm	2.169 %	.0894	.0902	.0866		
Cu1	.1291	ppm	1.443 %	.1310	.1290	.1273		
Fe2	-.9713	L ppm	-0.533%	-.9764	-.9714	-.9660		
K 1	143.1	ppm	.2295 %	143.2	142.8	143.4		
Mg4	3.090	ppm	1.013 %	3.055	3.115	3.101		
Mn1	-.0032	L ppm	-5.962%	-.0034	-.0031	-.0031		
Na2	4878.	H ppm	.4096 %	4890.	4888.	4855.		
Ni3	-.0427	L ppm	-6.163%	-.0457	-.0417	-.0407		
Pb1	-.0268	L ppm	-105.0%	.0055	-.0399	-.0459		
Sb1	-.0116	L ppm	-58.09%	-.0084	-.0193	-.0071		
Tl1	1.220	ppm	10.43 %	1.086	1.235	1.339		
V 2	-.0064	L ppm	-70.89%	-.0023	-.0113	-.0057		
Zn3	.0006	L ppm	7.774 %	.0007	.0006	.0006		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5037-1SP 27-1 Seq: 69 13:27:25 27 Dec 1994 ICP								
Ag1	.0348	ppm	6.011 %	.0327	.0369	.0348		
Al3	.7853	ppm	.3892 %	.7848	.7886	.7825		
Ba1	.2515	ppm	2.944 %	.2579	.2434	.2533		
Be2	.0196	ppm	1.435 %	.0198	.0197	.0192		
Ca3	9.796	ppm	.2681 %	9.791	9.772	9.824		
Cd1	.0230	ppm	3.880 %	.0221	.0231	.0239		
Co1	.2748	ppm	1.107 %	.2728	.2783	.2733		
Cr4	.1336	ppm	1.328 %	.1352	.1317	.1338		
Cu1	.2465	ppm	.4536 %	.2454	.2464	.2476		
Fe2	-.9274 L	ppm	-0.163%	-.9259	-.9289	-.9274		
K 1	120.5	ppm	.1835 %	120.2	120.6	120.6		
Mg4	6.831	ppm	.7112 %	6.826	6.785	6.882		
Mn1	.1362	ppm	.1891 %	.1360	.1362	.1365		
Na2	6371. H	ppm	.2053 %	6382.	6376.	6357.		
Ni3	.1582	ppm	.5731 %	.1593	.1579	.1576		
Pb1	.1211	ppm	19.63 %	.1394	.0942	.1298		
Sb1	.0740	ppm	50.42 %	.0400	.1139	.0681		
Tl1	2.345	ppm	4.541 %	2.438	2.229	2.369		
V 2	.2145	ppm	5.664 %	.2004	.2212	.2218		
Zn3	.2767	ppm	1.787 %	.2745	.2734	.2824		
*** Sample ID: 5091-1 27-1 Seq: 71 13:30:45 27 Dec 1994 ICP								
Ag1	-.0011 L	ppm	-127.3%	-.0009	-.0026	.0002		
Al3	.0029 L	ppm	492.8 %	-.0112	.0022	.0178		
Ba1	.3710	ppm	.7122 %	.3740	.3701	.3690		
Be2	.0000 L	ppm	435.6 %	.0001	-.0001	.0000		
Ca3	99.32	ppm	.6428 %	100.1	98.96	98.95		
Cd1	.0019 L	ppm	24.32 %	.0016	.0016	.0024		
Co1	.0079 L	ppm	20.47 %	.0080	.0063	.0096		
Cr4	-.0024 L	ppm	-95.04%	-.0038	.0002	-.0036		
Cu1	.0781	ppm	2.391 %	.0764	.0801	.0777		
Fe2	-.0059 L	ppm	-31.63%	-.0060	-.0076	-.0039		
K 1	5.276	ppm	2.884 %	5.451	5.205	5.172		
Mg4	15.46	ppm	.3479 %	15.52	15.44	15.42		
Mn1	.0056 L	ppm	3.741 %	.0055	.0058	.0054		
Na2	100.3	ppm	2.256 %	102.9	99.20	98.86		
Ni3	.0055 L	ppm	95.89 %	.0018	.0115	.0031		
Pb1	.0339 L	ppm	49.22 %	.0530	.0218	.0271		
Sb1	-.0040 L	ppm	-1542.%	.0264	.0366	-.0749		
Tl1	.0923 L	ppm	68.40 %	.0520	.0599	.1651		
V 2	.0141 L	ppm	60.32 %	.0062	.0231	.0132		
Zn3	.0403	ppm	7.852 %	.0401	.0372	.0436		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5048-4			27-1	Seq: 72		13:34:05 27 Dec 1994 ICP		
Ag1	-.0000 L	ppm	-8598.%	-.0003	-.0037	.0039		
Al3	.1707	ppm	7.767 %	.1823	.1737	.1563		
Ba1	.0082 L	ppm	3.170 %	.0079	.0084	.0084		
Be2	.0004 L	ppm	78.22 %	.0008	.0002	.0003		
Ca3	1.263	ppm	1.481 %	1.252	1.252	1.285		
Cd1	-.0001 L	ppm	-742.1%	-.0009	.0009	-.0003		
Co1	.0001 L	ppm	885.0 %	-.0009	.0002	.0010		
Cr4	-.0005 L	ppm	-133.8%	.0003	-.0009	-.0008		
Cu1	-.0007 L	ppm	-423.3%	-.0011	.0025	-.0036		
Fe2	.3129	ppm	.9073 %	.3108	.3119	.3161		
K 1	.0146 L	ppm	1538. %	-.2438	.1390	.1484		
Mg4	.2849 L	ppm	5.807 %	.2735	.2772	.3039		
Mn1	.0152	ppm	2.219 %	.0155	.0151	.0149		
Na2	7.005	ppm	19.38 %	5.913	6.577	8.525		
Ni3	.0068 L	ppm	70.27 %	.0016	.0077	.0111		
Pb1	.0090 L	ppm	162.1 %	.0202	.0143	-.0075		
Sb1	.0284 L	ppm	93.48 %	.0214	.0061	.0577		
Tl1	.0584 L	ppm	216.9 %	.0098	-.0368	.2021		
V 2	.0218 L	ppm	21.17 %	.0264	.0172	.0218		
Zn3	.0130	ppm	8.505 %	.0136	.0117	.0137		
*** Sample ID: 5055-2			27-1	Seq: 73		13:37:25 27 Dec 1994 ICP		
Ag1	.0005 L	ppm	370.5 %	.0022	-.0017	.0011		
Al3	.2471	ppm	2.930 %	.2412	.2552	.2450		
Ba1	.0503	ppm	.7474 %	.0505	.0499	.0507		
Be2	-.0006 L	ppm	-68.34%	-.0011	-.0005	-.0002		
Ca3	14.04	ppm	.1818 %	14.06	14.06	14.01		
Cd1	.0009 L	ppm	197.3 %	.0018	-.0012	.0022		
Co1	.0219 L	ppm	10.58 %	.0200	.0214	.0245		
Cr4	.0344	ppm	.9019 %	.0348	.0342	.0343		
Cu1	.0101 L	ppm	14.54 %	.0115	.0086	.0101		
Fe2	-.1563 L	ppm	-3.311%	-.1623	-.1532	-.1535		
K 1	3.211	ppm	8.334 %	3.108	3.010	3.514		
Mg4	4.763	ppm	.6345 %	4.753	4.796	4.738		
Mn1	.0032 L	ppm	21.14 %	.0037	.0024	.0035		
Na2	2357. H	ppm	.5527 %	2369.	2343.	2358.		
Ni3	.0303 L	ppm	18.90 %	.0317	.0352	.0240		
Pb1	-.0327 L	ppm	-66.89%	-.0137	-.0567	-.0278		
Sb1	-.0349 L	ppm	-34.46%	-.0487	-.0286	-.0273		
Tl1	.6063	ppm	10.49 %	.6554	.6292	.5345		
V 2	.0025 L	ppm	254.2 %	.0097	-.0021	-.0001		
Zn3	.3630	ppm	0.726 .6062 %	.3629	.3608	.3652		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: BLK			27-1	Seq: 75		13:40:46 27 Dec 1994 ICP		
Ag1	-.0031	L ppm	-93.63%	-.0004	-.0061	-.0027		
Al3	-.0288	L ppm	-51.31%	-.0157	-.0257	-.0448		
Ba1	-.0002	L ppm	-40.82%	-.0003	-.0002	-.0001		
Be2	-.0000	L ppm	-1235.%	.0003	-.0002	-.0002		
Ca3	-.0086	L ppm	-6.654%	-.0080	-.0092	-.0087		
Cd1	.0005	L ppm	173.3 %	-.0005	.0011	.0010		
Co1	.0009	L ppm	84.02 %	.0006	.0004	.0018		
Cr4	-.0035	L ppm	-74.77%	-.0006	-.0041	-.0057		
Cu1	-.0051	L ppm	-41.06%	-.0053	-.0072	-.0030		
Fe2	.0023	L ppm	62.34 %	.0039	.0011	.0020		
K 1	-.1810	L ppm	-193.2%	-.1734	.1648	-.5345		
Mg4	-.0007	L ppm	-3385.%	-.0271	.0215	.0034		
Mn1	-.0008	L ppm	-11.86%	-.0007	-.0008	-.0009		
Na2	3.857	ppm	7.245 %	4.160	3.802	3.610		
Ni3	-.0021	L ppm	-48.99%	-.0028	-.0009	-.0025		
Pb1	-.0095	L ppm	-134.7%	-.0243	-.0007	-.0036		
Sb1	.0176	L ppm	233.0 %	.0588	.0173	-.0233		
Tl1	.0475	L ppm	50.37 %	.0579	.0645	.0201		
V 2	.0060	L ppm	92.24 %	.0092	-.0004	.0092		
Zn3	-.0035	L ppm	-25.45%	-.0045	-.0030	-.0029		
*** Sample ID: 5115-1			27-1 PREP 12/23	Seq: 76		13:44:07 27 Dec 1994 ICP		
Ag1	-.0005	L ppm	-207.2%	-.0014	.0007	-.0009		
Al3	-.0072	L ppm	-89.64%	-.0132	-.0003	-.0081		
Ba1	.2991	ppm	2.264 %	.3042	.2914	.3016		
Be2	-.0003	L ppm	94.59 %	.0002	.0007	.0001		
Ca3	72.14	ppm	1.629 %	73.01	70.80	72.60		
Cd1	.0003	L ppm	187.3 %	.0001	.0010	-.0001		
Co1	.0016	L ppm	204.4 %	.0009	-.0013	.0053		
Cr4	-.0003	L ppm	-81.24%	-.0002	-.0005	-.0001		
Cu1	.0100	L ppm	26.31 %	.0075	.0127	.0099		
Fe2	.0079	L ppm	38.73 %	.0076	.0050	.0111		
K 1	1.050	ppm	24.18 %	.8231	1.324	1.003		
Mg4	22.76	ppm	1.383 %	23.08	22.45	22.74		
Mn1	.0067	L ppm	2.077 %	.0066	.0068	.0069		
Na2	13.21	ppm	3.915 %	13.38	12.63	13.62		
Ni3	-.0031	L ppm	-49.39%	-.0047	-.0028	-.0017		
Pb1	.0142	L ppm	220.0 %	-.0004	-.0071	.0501		
Sb1	-.0399	L ppm	-180.3%	.0391	-.1016	-.0572		
Tl1	.1780	L ppm	43.14 %	.1410	.1267	.2662		
Va2	.0135	L ppm	15.42 %	.0120	.0126	.0158		
Zn3	.0088	L ppm	10.40 %	.0088	.0079	.0098		

Sb, Ni need current IDLs

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5115-1QC 27-1 Seq: 77 13:47:29 27 Dec 1994 ICP								
Ag1	-.0034	L ppm	-34.39%	-.0039	-.0021	-.0043		
Al3	.0022	L ppm	417.1 %	.0128	-.0017	-.0044		
Ba1	.3034	ppm	2.162 %	.3047	.3092	.2963		
Be2	.0002	L ppm	68.51 %	.0004	.0002	.0001		
Ca3	72.24	ppm	1.514 %	72.70	73.04	71.00		
Cd1	-.0011	L ppm	-37.73%	-.0010	-.0015	-.0007		
Co1	.0035	L ppm	47.67 %	.0036	.0051	.0018		
Cr4	-.0010	L ppm	-66.23%	-.0016	-.0010	-.0003		
Cu1	.0120	L ppm	20.33 %	.0147	.0114	.0099		
Fe2	.0185	L ppm	4.286 %	.0194	.0178	.0184		
K 1	1.058	ppm	2.026 %	1.033	1.065	1.074		
Mg4	22.67	ppm	1.418 %	22.80	22.92	22.31		
Mn1	.0064	L ppm	6.503 %	.0063	.0068	.0059		
Na2	12.68	ppm	1.751 %	12.46	12.67	12.90		
Ni3	-.0031	L ppm	-166.2%	.0009	-.0089	-.0013		
Pb1	.0176	L ppm	98.21 %	.0018	.0149	.0361		
Sb1	.0580	L ppm	94.65 %	-.0019	.1060	.0700		
Tl1	.1651	L ppm	66.69 %	.2541	.1991	.0420		
V 2	.0170	L ppm	25.59 %	.0167	.0128	.0214		
Zn3	.0102	ppm	37.61 %	.0069	.0144	.0093		
*** Sample ID: 5115-1SP 27-1 Seq: 79 13:50:51 27 Dec 1994 ICP								
Ag1	.0499	ppm	4.676 %	.0484	.0525	.0487		
Al3	2.016	ppm	1.761 %	2.056	2.007	1.987		
Ba1	2.331	ppm	1.702 %	2.375	2.319	2.298		
Be2	.0474	ppm	.8743 %	.0469	.0477	.0475		
Ca3	81.10	ppm	1.188 %	82.14	80.92	80.24		
Cd1	.0530	ppm	1.948 %	.0542	.0527	.0522		
Co1	.5121	ppm	.8411 %	.5164	.5123	.5078		
Cr4	.2003	ppm	.4461 %	.2011	.2005	.1993		
Cu1	.2687	ppm	1.854 %	.2727	.2702	.2631		
Fe2	1.017	ppm	1.107 %	1.028	1.018	1.005		
K 1	11.13	ppm	4.016 %	11.64	10.92	10.82		
Mg4	32.37	ppm	1.414 %	32.89	32.20	32.02		
Mn1	.4973	ppm	1.727 %	.5065	.4959	.4895		
Na2	22.29	ppm	1.210 %	22.51	21.99	22.36		
Ni3	.5279	ppm	1.912 %	.5363	.5308	.5167		
Pb1	.5450	ppm	5.268 %	.5782	.5292	.5277		
Sb1	.5179	ppm	11.45 %	.4547	.5724	.5265		
Tl1	2.394	ppm	4.025 %	2.367	2.314	2.501		
V 2	.5503	ppm	3.497 %	.5675	.5295	.5538		
Zn3	.5114	ppm	1.596 %	.5207	.5079	.5056		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 80 13:54:18 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		100.5	1.005	1.000	ppm	.6944 %
Al3		99.76	4.988	5.000	ppm	.2980 %
Ba1		99.35	.9935	1.000	ppm	.4675 %
Be2		96.53	.9653	1.000	ppm	.7845 %
Ca3		96.94	48.47	50.00	ppm	.2538 %
Cd1		103.3	1.033	1.000	ppm	.7512 %
Co1		103.9	5.193	5.000	ppm	.4932 %
Cr4		99.38	4.969	5.000	ppm	.1320 %
Cu1		99.61	4.981	5.000	ppm	.3029 %
Fe2		96.09	4.804	5.000	ppm	.2834 %
K 1		96.28	4.814	5.000	ppm	3.249 %
Mg4		98.97	49.48	50.00	ppm	.5087 %
Mn1		97.43	.9743	1.000	ppm	.3369 %
Na2		104.3	52.15	50.00	ppm	.3146 %
Ni3		101.9	5.097	5.000	ppm	.5290 %
Pb1		102.6	5.132	5.000	ppm	.9471 %
Sb1		97.55	4.877	5.000	ppm	1.389 %
Tl1		101.5	5.076	5.000	ppm	5.156 %
V 2		106.5	5.324	5.000	ppm	.1794 %
Zn3		98.93	.9893	1.000	ppm	1.236 %

*** Check Standard: 3 Ck3 Seq: 81 13:57:50 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-15.03	-.0015	.0100	ppm	-301.2%
Al3		-18.82	-.0188	.1000	ppm	-30.11%
Ba1		-1.538	-.0001	.0050	ppm	-387.4%
Be2		11.49	.0006	.0050	ppm	87.93 %
Ca3		-.4229	-.0021	.5000	ppm	-41.12%
Cd1		33.05	.0017	.0050	ppm	167.6 %
Co1		5.206	.0026	.0500	ppm	75.94 %
Cr4		-19.87	-.0020	.0100	ppm	-50.26%
Cu1		.1890	.0000	.0200	ppm	4924. %
Fe2		-16.02	-.0080	.0500	ppm	-15.27%
K 1		-21.98	-.2198	1.000	ppm	-92.95%
Mg4		-.3506	-.0018	.5000	ppm	-520.1%
Mn1		-8.022	-.0008	.0100	ppm	-21.84%
~~Na2~~		459.4	2.297	.5000	ppm	1.535 %
Ni3		-2.916	-.0012	.0400	ppm	-134.5%
Pb1		16.99	.0085	.0500	ppm	82.01 %
Sb1		25.50	.0153	.0600	ppm	503.5 %
Tl1		47.52	.1426	.3000	ppm	11.99 %
V 2		46.04	.0230	.0500	ppm	14.34 %
Zn3		-15.96	-.0016	.0100	ppm	-75.22%

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5115-2		27-1	Seq: 82		14:01:17 27 Dec 1994 ICP			
[illegible]	-.0032	L ppm	-61.00%	-.0040	-.0010	-.0047		
[illegible]	.0275	L ppm	22.17 %	.0262	.0342	.0222		
Ba1	.2966	ppm	1.173 %	.2928	.2996	.2975		
[illegible]	.0001	L ppm	381.8 %	-.0000	.0005	-.0002		
[illegible]	71.72	ppm	.7598 %	71.20	72.28	71.68		
[illegible]	.0009	L ppm	95.36 %	.0014	.0013	-.0001		
Cd1	.0041	L ppm	106.7 %	.0025	.0091	.0007		
[illegible]	-.0010	L ppm	-117.0%	-.0022	.0001	-.0008		
[illegible]	.0123	L ppm	7.357 %	.0115	.0133	.0120		
[illegible]	.0024	L ppm	-45.24%	-.0018	-.0017	-.0037		
[illegible]	.8112	L ppm	27.99 %	.5854	.8088	1.040		
[illegible]	22.50	ppm	1.165 %	22.22	22.74	22.55		
Mn1	.0069	L ppm	8.139 %	.0064	.0068	.0075		
[illegible]	11.89	ppm	1.709 %	11.65	11.98	12.02		
[illegible]	.0017	L ppm	231.8 %	.0022	.0053	-.0025		
Pb1	.0057	L ppm	170.1 %	-.0037	.0052	.0158		
[illegible]	-.0145	L ppm	-626.8%	.0737	-.0089	-.1084		
[illegible]	.2716	ppm	54.32 %	.3509	.3625	.1014		
[illegible]	.0245	L ppm	16.09 %	.0288	.0211	.0237		
[illegible]	.0118	ppm	12.08 %	.0135	.0108	.0112		
*** Sample ID: 5115-3		27-1	Seq: 83		14:04:39 27 Dec 1994 ICP			
Ag1	-.0001	L ppm	-981.5%	-.0010	.0007	.0000		
[illegible]	.0149	L ppm	38.63 %	.0129	.0214	.0104		
Ba1	.0384	ppm	1.371 %	.0378	.0386	.0388		
[illegible]	.0001	L ppm	527.7 %	.0005	-.0002	-.0002		
[illegible]	34.35	ppm	.6574 %	34.11	34.56	34.38		
[illegible]	.0002	L ppm	100.5 %	-.0000	.0003	.0003		
Co1	.0006	L ppm	612.9 %	-.0014	.0046	-.0015		
Cr4	.0005	L ppm	72.79 %	.0009	.0006	.0001		
Cu1	-.0021	L ppm	-62.31%	-.0029	-.0028	-.0006		
[illegible]	.0912	ppm	2.476 %	.0887	.0931	.0919		
[illegible]	.9506	L ppm	6.706 %	.9200	.9079	1.024		
[illegible]	21.82	ppm	.8721 %	21.60	21.93	21.93		
Mn1	.3112	ppm	1.252 %	.3068	.3137	.3133		
[illegible]	11.44	ppm	1.199 %	11.31	11.58	11.43		
[illegible]	.0034	L ppm	60.41 %	.0013	.0035	.0054		
Pb1	-.0036	L ppm	-357.6%	.0014	-.0182	.0061		
[illegible]	.0017	L ppm	1016. %	.0203	-.0029	-.0124		
[illegible]	.0079	L ppm	2878. %	.1895	.0815	-.2473		
[illegible]	.0148	L ppm	48.79 %	.0212	.0163	.0070		
Zn3	.0061	L ppm	34.81 %	.0044	.0085	.0053		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5115-4		27-1	Seq: 85		14:08:01 27 Dec 1994 ICP			
Ag1	-.0052	L ppm	-37.60%	-.0032	-.0070	-.0053		
Al3	-.0126	L ppm	-89.25%	-.0252	-.0091	-.0035		
Ba1	.0336	ppm	.4487 %	.0337	.0337	.0334		
Be2	-.0001	L ppm	-246.6%	-.0003	-.0003	.0002		
Ca3	27.97	ppm	.5325 %	28.12	27.96	27.83		
Cd1	-.0014	L ppm	-57.07%	-.0019	-.0005	-.0019		
Co1	-.0004	L ppm	-145.1%	-.0009	.0002	-.0004		
Cr4	-.0031	L ppm	-38.80%	-.0045	-.0023	-.0026		
Cu1	-.0042	L ppm	-20.53%	-.0032	-.0049	-.0045		
Fe2	.0001	L ppm	627.1 %	-.0009	.0010	.0004		
K 1	1.108	ppm	14.04 %	1.095	1.270	.9597		
Mg4	21.86	ppm	.6056 %	21.93	21.94	21.71		
Mn1	1.401	ppm	.7314 %	1.411	1.402	1.391		
Na2	11.09	ppm	.6601 %	11.12	11.14	11.00		
Ni3	-.0039	L ppm	-129.6%	.0016	-.0084	-.0050		
Pb1	.0084	L ppm	114.3 %	-.0027	.0131	.0149		
Sb1	-.0011	L ppm	-7875.%	-.0946	.0068	.0843		
Se1	.1476	L ppm	88.57 %	.1403	.0207	.2818		
V 2	.0191	L ppm	6.805 %	.0203	.0191	.0178		
Zn3	.0069	L ppm	8.129 %	.0072	.0072	.0062		
*** Sample ID: 5115-5		27-1	Seq: 86		14:11:24 27 Dec 1994 ICP			
Ag1	.0008	L ppm	496.1 %	.0055	-.0006	-.0024		
Al3	-.0136	L ppm	-160.8%	-.0288	.0114	-.0234		
Ba1	.1018	ppm	.6232 %	.1012	.1025	.1018		
Be2	.0001	L ppm	132.0 %	-.0001	.0003	.0002		
Ca3	24.34	ppm	.5406 %	24.23	24.49	24.31		
Cd1	-.0001	L ppm	-577.4%	-.0001	.0006	-.0010		
Co1	.0038	L ppm	56.76 %	.0057	.0015	.0040		
Cr4	-.0014	L ppm	-106.7%	-.0030	-.0001	-.0011		
Cu1	-.0003	L ppm	-29.45%	-.0003	-.0002	-.0003		
Fe2	-.0025	L ppm	-31.71%	-.0017	-.0027	-.0033		
K 1	1.360	ppm	9.202 %	1.256	1.498	1.325		
Mg4	19.18	ppm	.4431 %	19.17	19.27	19.10		
Mn1	.2700	ppm	.8972 %	.2672	.2716	.2711		
Na2	10.76	ppm	1.185 %	10.63	10.89	10.75		
Ni3	-.0006	L ppm	-515.7%	-.0016	.0029	-.0031		
Pb1	.0200	L ppm	226.3 %	.0563	.0343	-.0307		
Sb1	.0460	L ppm	174.1 %	.1015	.0824	-.0458		
Tl1	.0515	L ppm	369.9 %	.2079	-.1609	.1076		
V 2	.0104	L ppm	45.25 %	.0144	.0116	.0052		
Zn3	.0118	ppm	11.66 %	.0110	.0134	.0110		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5115-6		27-1	Seq: 87		14:14:48 27 Dec 1994 ICP			
Ag1	-.0040	L ppm	-56.56%	-.0017	-.0041	-.0061		
Al3	.0242	L ppm	48.23 %	.0173	.0177	.0378		
Ba1	.1363	ppm	.3939 %	.1358	.1362	.1369		
Be2	-.0004	L ppm	-53.46%	-.0002	-.0004	-.0006		
Ca3	23.96	ppm	.0623 %	23.94	23.97	23.97		
Cd1	-.0026	L ppm	-81.55%	-.0018	-.0010	-.0050		
Co1	-.0014	L ppm	-316.4%	-.0065	.0010	.0013		
Cr4	-.0019	L ppm	-50.45%	-.0030	-.0014	-.0013		
Cu1	-.0052	L ppm	-42.84%	-.0060	-.0026	-.0068		
Fe2	-.0069	L ppm	-13.25%	-.0076	-.0059	-.0072		
K 1	1.256	ppm	5.120 %	1.187	1.269	1.314		
Mg4	19.07	ppm	.1547 %	19.10	19.05	19.05		
Mn1	.0245	ppm	1.655 %	.0244	.0250	.0242		
Na2	10.99	ppm	.2074 %	10.98	11.02	10.98		
Ni3	-.0045	L ppm	-23.20%	-.0033	-.0052	-.0050		
Pb1	.0169	L ppm	93.57 %	-.0001	.0196	.0312		
Sb1	-.0038	L ppm	-1268.%	-.0223	-.0397	.0507		
Tl1	.1435	L ppm	25.30 %	.1742	.1530	.1034		
V 2	.0136	L ppm	24.30 %	.0098	.0156	.0154		
Zn3	.0060	L ppm	52.98 %	.0030	.0094	.0057		
*** Sample ID: 5115-7		27-1	Seq: 89		14:18:11 27 Dec 1994 ICP			
Ag1	.0026	L ppm	44.74 %	.0039	.0018	.0021		
Al3	.0198	L ppm	110.5 %	.0045	.0448	.0100		
Ba1	.1481	ppm	.4410 %	.1488	.1475	.1481		
Be2	.0000	L ppm	2888. %	.0003	.0003	-.0005		
Ca3	25.55	ppm	.5191 %	25.70	25.45	25.49		
Cd1	-.0002	L ppm	-688.1%	.0015	-.0007	-.0014		
Co1	.0008	L ppm	750.4 %	-.0055	.0010	.0070		
Cr4	-.0011	L ppm	-72.02%	-.0003	-.0011	-.0020		
Cu1	-.0053	L ppm	-24.16%	-.0059	-.0038	-.0062		
Fe2	-.0020	L ppm	-85.02%	-.0024	-.0034	-.0001		
K 1	1.451	ppm	19.44 %	1.125	1.601	1.625		
Mg4	17.94	ppm	.7015 %	18.08	17.83	17.90		
Mn1	.1352	ppm	.6497 %	.1359	.1355	.1343		
Na2	11.34	ppm	1.803 %	11.56	11.16	11.30		
Ni3	-.0015	L ppm	-220.7%	-.0050	.0017	-.0013		
Pb1	.0260	L ppm	33.06 %	.0177	.0253	.0349		
Sb1	-.0022	L ppm	-2669.%	-.0680	.0144	.0469		
Tl1	.1368	L ppm	178.1 %	.4071	-.0657	.0689		
V 2	.0147	L ppm	77.42 %	.0116	.0273	.0052		
Zn3	.0029	L ppm	66.69 %	.0049	.0010	.0028		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 4746-1		27-1	Seq: 90		14:21:33 27 Dec 1994 ICP			
Ag1	.0115	ppm	6.095 %	.0107	.0120	.0119		
Al3	.1707	ppm	4.891 %	.1651	.1666	.1803		
Ba1	27.08	ppm	.4949 %	27.24	27.02	26.99		
Be2	-.0010 L	ppm	-7.938%	-.0011	-.0010	-.0010		
Ca3	104.9	ppm	.6063 %	105.7	104.6	104.5		
Cd1	.0012 L	ppm	133.6 %	.0004	.0002	.0031		
Co1	.0185 L	ppm	7.987 %	.0169	.0191	.0197		
Cr4	.0080 L	ppm	16.64 %	.0077	.0068	.0094		
Cu1	.0379	ppm	1.525 %	.0380	.0383	.0372		
Fe2	-.0226 L	ppm	-5.810%	-.0240	-.0224	-.0214		
K 1	2.118	ppm	2.424 %	2.059	2.156	2.139		
Mg4	5.594	ppm	.6895 %	5.625	5.551	5.605		
Mn1	.1001	ppm	1.424 %	.1014	.0986	.1003		
Na2	1269. H	ppm	.5291 %	1277.	1265.	1265.		
Ni3	-.0086 L	ppm	-77.59%	-.0046	-.0162	-.0048		
Pb1	.0061 L	ppm	315.4 %	.0050	-.0126	.0260		
Sb1	.0010 L	ppm	4965. %	.0564	-.0343	-.0192		
Tl1	.4473	ppm	12.62 %	.5119	.4223	.4077		
V 2	.0031 L	ppm	113.6 %	.0046	.0057	-.0009		
Zn3	.0882	ppm	.4693 %	.0886	.0879	.0879		
*** Sample ID: 5046-1		27-1	Seq: 91		14:24:55 27 Dec 1994 ICP			
Ag1	.0592	ppm	1.557 %	.0587	.0586	.0603		
Al3	.1018	ppm	11.88 %	.1091	.1084	.0878		
Ba1	.0415	ppm	2.003 %	.0408	.0415	.0424		
Be2	.0000 L	ppm	3937. %	.0003	-.0003	.0000		
Ca3	32.67	ppm	.4230 %	32.57	32.83	32.60		
Cd1	-.0003 L	ppm	-498.2%	.0010	-.0018	-.0000		
Co1	.0003 L	ppm	574.5 %	.0021	-.0006	-.0007		
Cr4	.0042 L	ppm	56.54 %	.0065	.0017	.0046		
Cu1	.4661	ppm	.7383 %	.4668	.4691	.4624		
Fe2	4.390	ppm	.8135 %	4.366	4.431	4.372		
K 1	76.93	ppm	.3503 %	77.11	77.06	76.62		
Mg4	7.751	ppm	.4395 %	7.712	7.767	7.775		
Mn1	.1178	ppm	1.345 %	.1164	.1195	.1175		
Na2	42.71	ppm	1.156 %	42.88	43.10	42.16		
Ni3	.2648	ppm	1.298 %	.2624	.2634	.2688		
Pb1	.0818	ppm	16.66 %	.0975	.0746	.0732		
Sb1	-.0132 L	ppm	-175.9%	-.0397	-.0028	.0030		
Tl1	.1339 L	ppm	186.2 %	.3056	-.1521	.2482		
V 2	.0177 L	ppm	38.77 %	.0124	.0152	.0255		
Zn3	.0215	ppm	4.208 %	.0206	.0224	.0216		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5073-1		27-1	Seq: 93	14:28:18 27 Dec 1994 ICP				
Ag1	-.0025 L	ppm	-65.00%	-.0009	-.0041	-.0025		
Al3	.0309 L	ppm	80.86 %	.0043	.0539	.0346		
Ba1	.0132 L	ppm	5.986 %	.0125	.0141	.0130		
Be2	.0001 L	ppm	629.4 %	.0010	-.0004	-.0003		
Ca3	20.09	ppm	1.002 %	20.10	20.29	19.88		
Cd1	-.0001 L	ppm	-1103.%	-.0005	-.0008	.0011		
Co1	-.0002 L	ppm	-1847.%	-.0005	.0036	-.0037		
Cr4	-.0020 L	ppm	-38.72%	-.0028	-.0018	-.0013		
Cu1	.0846	ppm	.8181 %	.0851	.0848	.0838		
Fe2	.0079 L	ppm	14.44 %	.0068	.0090	.0078		
K 1	1.355	ppm	4.773 %	1.307	1.328	1.428		
Mg4	4.528	ppm	.7557 %	4.488	4.551	4.544		
Mn1	.0039 L	ppm	8.310 %	.0040	.0042	.0035		
Na2	20.80	ppm	1.061 %	20.81	21.02	20.58		
Ni3	-.0047 L	ppm	-158.6%	-.0131	.0009	-.0019		
Pb1	.0290 L	ppm	120.2 %	-.0103	.0561	.0411		
Sb1	.0276 L	ppm	165.8 %	-.0232	.0405	.0656		
Tl1	.2270	ppm	104.8 %	.0526	.1304	.4981		
V 2	.0183 L	ppm	42.60 %	.0176	.0265	.0109		
Zn3	.0111	ppm	21.26 %	.0136	.0106	.0090		
*** Sample ID: 5043-1		27-1	Seq: 94	14:31:41 27 Dec 1994 ICP				
Ag1	-.0001 L	ppm	-2895.%	.0000	.0021	-.0023		
Al3	.0184 L	ppm	49.52 %	.0079	.0236	.0237		
Ba1	.1766	ppm	.3400 %	.1772	.1764	.1761		
Be2	.0000 L	ppm	640.5 %	-.0002	.0002	.0001		
Ca3	182.6	ppm	.4902 %	182.8	183.3	181.6		
Cd1	-.0007 L	ppm	-150.1%	-.0001	-.0001	-.0020		
Co1	.0077 L	ppm	42.31 %	.0049	.0113	.0070		
Cr4	-.0001 L	ppm	-2930.%	-.0018	.0021	-.0006		
Cu1	-.0019 L	ppm	-88.18%	-.0011	-.0008	-.0039		
Fe2	.7302	ppm	.2589 %	.7320	.7304	.7282		
K 1	5.715	ppm	3.226 %	5.547	5.912	5.684		
Mg4	32.70	ppm	.4456 %	32.77	32.81	32.54		
Mn1	.4421	ppm	.2889 %	.4425	.4432	.4407		
Na2	438.0	ppm	.2541 %	438.9	438.4	436.8		
Ni3	.0015 L	ppm	142.9 %	.0011	.0040	-.0004		
Pb1	.0249 L	ppm	96.82 %	-.0010	.0288	.0467		
Sb1	.0525 L	ppm	143.6 %	.0507	.1287	-.0220		
Tl1	.1711 L	ppm	52.45 %	.2358	.0686	.2089		
V 2	.0145 L	ppm	20.95 %	.0145	.0114	.0175		
Zn3	.0123	ppm	10.99 %	.0111	.0120	.0138		

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 Seq: 95 14:35:09 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		98.55	.9855	1.000	ppm	.6906 %
Al3		97.65	4.883	5.000	ppm	.8819 %
Ba1		96.31	.9631	1.000	ppm	1.017 %
Be2		93.48	.9348	1.000	ppm	.8322 %
Ca3		94.95	47.47	50.00	ppm	.5543 %
Cd1		102.2	1.022	1.000	ppm	1.089 %
Co1		102.8	5.141	5.000	ppm	.6018 %
Cr4		97.26	4.863	5.000	ppm	.5700 %
Cu1		96.73	4.837	5.000	ppm	.8367 %
Fe2		93.91	4.695	5.000	ppm	.9037 %
K 1		98.21	4.911	5.000	ppm	1.568 %
Mg4		97.69	48.84	50.00	ppm	.5733 %
Mn1		95.42	.9542	1.000	ppm	.6399 %
Na2		97.83	48.92	50.00	ppm	1.035 %
Ni3		100.5	5.024	5.000	ppm	.5764 %
Pb1		101.0	5.048	5.000	ppm	.9056 %
Sb1		94.39	4.720	5.000	ppm	2.210 %
Tl1		101.3	5.066	5.000	ppm	9.613 %
V 2		104.5	5.223	5.000	ppm	.6657 %
Zn3		97.00	.9700	1.000	ppm	.6612 %

*** Check Standard: 3 Ck3 Seq: 96 14:38:41 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-16.52	-.0017	.0100	ppm	-159.0%
Al3		-31.37	-.0314	.1000	ppm	-18.70%
Ba1		-3.366	-.0002	.0050	ppm	-82.65%
Be2		8.462	.0004	.0050	ppm	59.63 %
Ca3		-.8519	-.0043	.5000	ppm	-24.43%
Cd1		.0438	.0000	.0050	ppm	56580 %
Co1		.9456	.0005	.0500	ppm	357.8 %
Cr4		-25.20	-.0025	.0100	ppm	-23.98%
Cu1		-14.13	-.0028	.0200	ppm	-9.818%
Fe2		-18.19	-.0091	.0500	ppm	-13.77%
K 1		-19.26	-.1926	1.000	ppm	-62.71%
Mg4		.3276	.0016	.5000	ppm	244.8 %
Mn1		-8.918	-.0009	.0100	ppm	-57.43%
~~Na2~~		171.7	.8584	.5000	ppm	5.994 %
Ni3		-15.84	-.0063	.0400	ppm	-70.29%
Pb1		-6.616	-.0033	.0500	ppm	-362.5%
Sb1		17.37	.0104	.0600	ppm	538.7 %
Tl1		29.71	.0891	.3000	ppm	158.4 %
V 2		45.91	.0230	.0500	ppm	32.77 %
Zn3		-17.75	-.0018	.0100	ppm	-15.73%

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5043-2		27-1	Seq: 97	14:42:09 27 Dec 1994 ICP				
Ag1	-.0022 L	ppm	-38.13%	-.0013	-.0029	-.0024		
Al3	-.0012 L	ppm	-917.0%	.0075	.0026	-.0137		
Ba1	.1894	ppm	.5321 %	.1901	.1898	.1882		
Be2	-.0006 L	ppm	-30.52%	-.0006	-.0004	-.0007		
Ca3	190.3	ppm	.4662 %	190.8	190.8	189.3		
Cd1	-.0003 L	ppm	-291.1%	-.0013	-.0004	.0007		
Co1	.0083 L	ppm	29.76 %	.0103	.0056	.0092		
Cr4	.0002 L	ppm	129.0 %	-.0001	.0005	.0003		
Cu1	.0052 L	ppm	18.75 %	.0043	.0050	.0062		
[illegible]		ppm	.5305 %	1.990	1.987	1.970		
K 1	5.801	ppm	4.955 %	5.954	5.470	5.980		
Mg4	32.92	ppm	.6009 %	32.88	33.13	32.74		
Mn1	.3508	ppm	.3242 %	.3519	.3509	.3497		
Na2	435.3	ppm	.8278 %	438.2	436.3	431.2		
Ni3	.0020 L	ppm	213.5 %	-.0018	.0065	.0012		
Pb1	-.0128 L	ppm	-107.5%	-.0060	-.0286	-.0038		
Sb1	.0335 L	ppm	98.21 %	.0649	-.0007	.0363		
Tl1	.2829	ppm	12.73 %	.2894	.2440	.3152		
V 2	.0153 L	ppm	50.84 %	.0223	.0069	.0167		
Zn3	.0045 L	ppm	37.41 %	.0026	.0056	.0053		
*** Sample ID: 5061-1		27-1	Seq: 99	14:45:32 27 Dec 1994 ICP				
Ag1	-.0035 L	ppm	-97.38%	-.0073	-.0019	-.0012		
Al3	4.034	ppm	.8646 %	3.996	4.043	4.064		
Ba1	.0826	ppm	1.144 %	.0819	.0822	.0837		
Be2	.0004 L	ppm	56.68 %	.0002	.0006	.0006		
Ca3	83.34	ppm	.4318 %	83.15	83.10	83.75		
[illegible]		ppm	43.09 %	.0029	.0064	.0076		
Co1	.0218 L	ppm	5.812 %	.0203	.0225	.0225		
[illegible]		ppm	2.252 %	.0958	.0984	.0941		
[illegible]		ppm	1.174 %	.2198	.2238	.2248		
Fe2	9.086	ppm	.6295 %	9.041	9.067	9.151		
K 1	11.86	ppm	1.556 %	11.73	11.78	12.07		
Mg4	8.315	ppm	1.210 %	8.317	8.214	8.415		
Mn1	.3913	ppm	.4300 %	.3907	.3901	.3932		
Na2	36.78	ppm	1.047 %	36.47	36.66	37.21		
[illegible]		ppm	2.201 %	.1441	.1498	.1443		
[illegible]		ppm	8.839 %	.2850	.2457	.2451		
Sb1	.0324 L	ppm	127.2 %	.0757	.0282	-.0065		
Tl1	.1327 L	ppm	47.14 %	.1851	.0634	.1496		
V 2	.0419 L	ppm	10.44 %	.0399	.0469	.0388		
[illegible]		ppm	1.093 %	.8876	.8980	.9072		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 5108-2			27-1	Seq: 100		14:48:55 27 Dec 1994 ICP		
Ag1	.0052	L ppm	85.91 %	.0060	.0004	.0092		
Al3	2.178	ppm	.6892 %	2.195	2.165	2.175		
Ba1	-.0066	L ppm	-2.636%	-.0068	-.0065	-.0064		
Be2	-.0014	L ppm	-7.474%	-.0013	-.0013	-.0015		
Ca3	12.49	ppm	.2805 %	12.45	12.52	12.51		
Cd1	-.0009	L ppm	-171.6%	.0007	-.0011	-.0025		
Co1	.0397	L ppm	2.379 %	.0395	.0389	.0407		
Cr4	.0357	ppm	5.802 %	.0361	.0375	.0334		
Cu1	-.0009	L ppm	-115.7%	-.0022	-.0003	-.0004		
Fe2	-.3248	L ppm	-0.182%	-.3244	-.3255	-.3246		
K 1	5.148	ppm	2.992 %	4.977	5.194	5.274		
Mg4	3.093	ppm	1.474 %	3.072	3.061	3.145		
Mn1	.0024	L ppm	12.91 %	.0023	.0028	.0022		
~~Na2~~	4092.	H ppm	.3303 %	4083.	4108.	4087.		
Ni3	-.0105	L ppm	-45.82%	-.0055	-.0151	-.0110		
Pb1	-.0973	L ppm	-27.51%	-.1255	-.0943	-.0722		
Sb1	-.0072	L ppm	-1035.%	.0085	.0583	-.0884		
Tl1	1.014	ppm	12.32 %	1.062	1.108	.8725		
V 2	-.0115	L ppm	-24.18%	-.0106	-.0092	-.0146		
[redacted]	0.593		1.068 %	.2928	.2971	.2990		
*** Sample ID: BLK			27-1	Seq: 101		14:52:18 27 Dec 1994 ICP		
Ag1	-.0027	L ppm	-104.4%	-.0049	-.0037	.0005		
Al3	-.0288	L ppm	-22.28%	-.0287	-.0353	-.0225		
Ba1	-.0004	L ppm	-79.92%	-.0005	-.0006	-.0000		
Be2	.0002	L ppm	181.1 %	-.0001	.0001	.0007		
Ca3	-.0055	L ppm	-23.94%	-.0043	-.0070	-.0053		
Cd1	-.0006	L ppm	-243.4%	-.0007	-.0020	.0009		
Co1	-.0022	L ppm	-100.1%	-.0047	-.0003	-.0017		
Cr4	-.0012	L ppm	-64.64%	-.0020	-.0012	-.0005		
Cu1	-.0051	L ppm	-49.74%	-.0080	-.0039	-.0034		
Fe2	-.0052	L ppm	-49.37%	-.0063	-.0071	-.0023		
K 1	-.0582	L ppm	-297.2%	-.0788	-.2201	.1242		
Mg4	.0012	L ppm	2720. %	-.0350	.0212	.0173		
Mn1	-.0007	L ppm	-23.29%	-.0009	-.0006	-.0007		
~~Na2~~	1.451	ppm	10.82 %	1.607	1.454	1.293		
Ni3	-.0002	L ppm	-714.1%	.0004	-.0018	.0008		
Pb1	-.0120	L ppm	-251.1%	-.0003	.0105	-.0463		
Sb1	.0457	L ppm	106.7 %	.0789	-.0103	.0683		
Tl1	.1684	L ppm	41.95 %	.1131	.2480	.1441		
V 2	.0173	L ppm	32.96 %	.0158	.0236	.0125		
Zn3	-.0019	L ppm	-95.96%	-.0007	-.0040	-.0011		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CRIF			27-1	Seq: 103		14:55:42 27 Dec 1994 ICP		
Ag1	.0164	ppm	7.900 %	.0151	.0177	.0166		
Al3	.0097 L	ppm	38.52 %	.0069	.0082	.0139		
Ba1	-.0002 L	ppm	-49.35%	-.0002	-.0001	-.0002		
Be2	.0093	ppm	4.298 %	.0091	.0090	.0097		
Ca3	-.0079 L	ppm	-75.58%	-.0097	-.0129	-.0013		
Cd1	.0090	ppm	12.13 %	.0081	.0103	.0087		
Co1	.1061	ppm	1.239 %	.1072	.1066	.1047		
Cr4	.0188	ppm	8.351 %	.0206	.0179	.0180		
Cu1	.0475	ppm	3.438 %	.0467	.0494	.0465		
Fe2	-.0118 L	ppm	-19.68%	-.0129	-.0133	-.0091		
K 1	-.1233 L	ppm	-35.21%	-.0919	-.1052	-.1729		
Mg4	-.0039 L	ppm	-352.4%	-.0040	-.0174	.0098		
Mn1	.0289	ppm	.2214 %	.0289	.0288	.0288		
~~Na2~~	.7839	ppm	17.51 %	.7118	.6978	.9422		
Ni3	.0781	ppm	4.441 %	.0803	.0800	.0741		
Pb1	.1086	ppm	33.55 %	.1290	.1304	.0666		
Sb1	.1261	ppm	78.36 %	.0923	.0486	.2373		
Tl1	.2034	ppm	53.99 %	.0903	.3096	.2103		
V 2	.1330	ppm	4.864 %	.1255	.1374	.1360		
Zn3	.0413	ppm	5.233 %	.0389	.0431	.0418		
*** Sample ID: ICSAF			27-1	Seq: 104		14:59:06 27 Dec 1994 ICP		
Ag1	.0015 L	ppm	72.41 %	.0003	.0022	.0021		
Al3	466.8	ppm	.7415 %	464.7	470.8	465.0		
Ba1	-.0012 L	ppm	-11.81%	-.0010	-.0013	-.0012		
Be2	-.0003 L	ppm	-97.69%	-.0005	-.0000	-.0003		
Ca3	452.3	ppm	.5155 %	451.4	454.9	450.5		
Cd1	.0023 L	ppm	69.26 %	.0038	.0006	.0025		
Co1	.0194 L	ppm	13.58 %	.0210	.0208	.0163		
Cr4	.0007 L	ppm	362.8 %	.0009	-.0020	.0033		
Cu1	-.0101 L	ppm	-10.04%	-.0104	-.0090	-.0110		
Fe2	169.8	ppm	.5874 %	169.3	170.9	169.1		
K 1	-.1570 L	ppm	-31.82%	-.2145	-.1251	-.1313		
Mg4	493.7	ppm	.5171 %	492.0	496.6	492.3		
Mn1	.0321	ppm	3.118 %	.0309	.0327	.0326		
~~Na2~~	.5897	ppm	4.074 %	.5920	.5646	.6125		
Ni3	.0116 L	ppm	27.81 %	.0095	.0153	.0099		
Pb1	.0114 L	ppm	195.8 %	.0057	-.0075	.0359		
Sb1	.0669	ppm	183.2 %	-.0583	.1866	.0723		
Tl1	.3729	ppm	42.03 %	.2155	.3742	.5289		
V 2	.0040 L	ppm	51.68 %	.0064	.0025	.0032		
Zn3	.0023 L	ppm	132.8 %	-.0010	.0049	.0029		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICSABF 27-1 Seq: 105 15:02:30 27 Dec 1994 ICP								
Ag1	.8920	ppm	.5175 %	.8867	.8949	.8944		
Al3	455.4	ppm	.2427 %	454.4	456.6	455.2		
Ba1	.4474	ppm	.3001 %	.4465	.4489	.4468		
Be2	.4318	ppm	.2661 %	.4331	.4310	.4313		
Ca3	448.1	ppm	.0775 %	448.5	447.9	447.9		
Cd1	.8965	ppm	.1915 %	.8946	.8973	.8977		
Co1	.4575	ppm	.9874 %	.4626	.4558	.4541		
Cr4	.4435	ppm	.2642 %	.4428	.4427	.4448		
Cu1	.4447	ppm	.3593 %	.4465	.4434	.4441		
Fe2	167.8	ppm	.0895 %	167.8	167.9	167.6		
K 1	-.1517 L	ppm	-55.66%	-.2459	-.1263	-.0829		
Mg4	486.6	ppm	.1179 %	487.0	485.9	486.8		
Mn1	.4531	ppm	.2045 %	.4540	.4531	.4522		
Na2	.4993 L	ppm	3.196 %	.4809	.5069	.5100		
Ni3	.8916	ppm	.9857 %	.8996	.8822	.8929		
Pb1	.8721	ppm	1.651 %	.8657	.8620	.8886		
Sb1	-.0397 L	ppm	-106.7%	-.0819	.0028	-.0400		
Tl1	.0556 L	ppm	351.3 %	.0872	.2334	-.1537		
V 2	.4783	ppm	1.734 %	.4842	.4819	.4688		
Zn3	.8433	ppm	1.101 %	.8503	.8467	.8328		

*** Check Standard: 2 Ck2 Seq: 106 15:05:59 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		99.28	.9928	1.000	ppm	2.069 %
Al3		98.05	4.903	5.000	ppm	2.681 %
Ba1		98.01	.9801	1.000	ppm	2.090 %
Be2		95.50	.9550	1.000	ppm	1.271 %
Ca3		96.05	48.03	50.00	ppm	1.373 %
Cd1		101.8	1.018	1.000	ppm	1.509 %
Co1		103.2	5.158	5.000	ppm	1.348 %
Cr4		99.03	4.951	5.000	ppm	1.531 %
Cu1		97.91	4.896	5.000	ppm	1.964 %
Fe2		96.89	4.844	5.000	ppm	1.731 %
K 1		98.39	4.920	5.000	ppm	4.180 %
Mg4		97.83	48.92	50.00	ppm	1.175 %
Mn1		96.38	.9638	1.000	ppm	1.454 %
Na2		99.59	49.80	50.00	ppm	2.377 %
Ni3		100.6	5.030	5.000	ppm	1.255 %
Pb1		101.3	5.064	5.000	ppm	1.541 %
Sb1		95.27	4.763	5.000	ppm	4.001 %
Tl1		97.25	4.862	5.000	ppm	5.821 %
V 2		106.7	5.334	5.000	ppm	1.788 %
Zn3		98.62	.9862	1.000	ppm	.8842 %

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 3 Ck3 Seq: 107 15:09:31 27 Dec 1994 ICP

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Ag1		-7.168	-.0007	.0100	ppm	-555.9%
Al3		-13.34	-.0133	.1000	ppm	-125.8%
Ba1		-3.913	-.0002	.0050	ppm	-104.6%
Be2		14.61	.0007	.0050	ppm	14.12 %
Ca3		.8586	.0043	.5000	ppm	25.64 %
Cd1		-9.827	-.0005	.0050	ppm	-197.1%
Co1		-5.347	-.0027	.0500	ppm	-105.7%
Cr4		-23.47	-.0023	.0100	ppm	-31.48%
Cu1		-8.051	-.0016	.0200	ppm	-110.4%
Fe2		20.63	.0103	.0500	ppm	8.566 %
K 1		-33.63	-.3363	1.000	ppm	-79.21%
Mg4		1.845	.0092	.5000	ppm	207.6 %
Mn1		-9.406	-.0009	.0100	ppm	-4.586%
Na2		149.5	.7476	.5000	ppm	3.103 %
Ni3		3.684	.0015	.0400	ppm	202.4 %
Pb1		24.88	.0124	.0500	ppm	261.5 %
Sb1		57.44	.0345	.0600	ppm	81.37 %
Tl1		23.08	.0692	.3000	ppm	213.5 %
V 2		47.58	.0238	.0500	ppm	14.75 %
Zn3		-16.03	-.0016	.0100	ppm	-98.69%

PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/27/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Ag water samples		MDL:0.010			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1	U	U	Low	NC	water	1	---	---	
Al water samples		MDL:0.100			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1	U	U	Low	NC	water	1	---	---	
Ba water samples		MDL:0.020			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1	.299	.303	High	1.3	water	1	---	Y	
Be water samples		MDL:0.0050			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1	U	U	Low	NC	water	1	---	---	
Ca water samples		MDL:0.500			unit: mg/L				
5037-1	14.5	14.6	High	0.7	water	1	---	Y	
5115-1	72.1	72.2	High	0.1	water	1	---	Y	

PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Cd water samples		MDL:0.0050			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1 ✓	U	U	Low	NC	water	1	---	---	
Co water samples		MDL:0.050			unit: mg/L				
5037-1 ✓	.0529	.0503	Low	5.0	water	1	Y	---	
5115-1 ✓	U	U	Low	NC	water	1	---	---	
Cr water samples		MDL:0.010			unit: mg/L				
5037-1	.0913	.0887	High	2.9	water	1	---	Y	
5115-1 ✓	U	U	Low	NC	water	1	---	---	
Cr soil samples		MDL: 1.00			unit: ug/g				
5079-1S	127 ~~6.89~~	110	High	~~176.4~~ 14.3	soil	1	---	~~N~~ Y	cc 12/28/94
Cu water samples		MDL:0.020			unit: mg/L				
5037-1 ✓	.124	.129	High	4.0	water	1	---	Y	
5115-1 ✓	U	U	Low	NC	water	1	---	---	
Fe water samples		MDL:0.050			unit: mg/L				
5037-1 ✓	U	U	Low	NC	water	1	---	---	
5115-1 ✓	U	U	Low	NC	water	1	---	---	

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PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
K water samples		MDL:1.00			unit: mg/L				
5037-1 ✓	137	143	High	4.3	water	1	---	Y	
5115-1 ✓	1.05	1.06	Low	0.9	water	1	Y	---	
Mg water samples		MDL:0.500			unit: mg/L				
5037-1 ✓	3.06	3.09	High	1.0	water	1	---	Y	
5115-1 ✓	22.8	22.7	High	0.4	water	1	---	Y	
Mn water samples		MDL:0.010			unit: mg/L				
5037-1 ✓	U	U	Low	NC	water	1	---	---	
5115-1 ✓	U	U	Low	NC	water	1	---	---	
Ni water samples		MDL:0.040			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
Ni soil samples		MDL: 4.00			unit: ug/g				
5079-1S	~~11.2~~ 85.0	73.6	Low	~~147.2~~ 14.4	soil	1	~~N~~ Y	---	mc 12/28/94
Pb water samples		MDL:0.050			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
5115-1 ✓	U	U	Low	NC	water	1	---	---	

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(continued)
PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: C. KUTZER
DATE: 12/27/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Sb water samples		MDL:0.100			unit: mg/L				
5037-1	U	U	Low	NC	water	1	---	---	
Tl water samples		MDL:0.300			unit: mg/L				
5037-1 ✓	1.17	1.22	Low	4.2	water	1	Y	---	
✗ 5115-1 ✓	U	U	Low	NC	water	1	---	---	
V water samples		MDL:0.050			unit: mg/L				
5037-1 ✓	U	U	Low	NC	water	1	---	---	
✗ 5115-1 ✓	U	U	Low	NC	water	1	---	---	
Zn water samples		MDL:0.010			unit: mg/L				
5037-1 ✓	U	U	Low	NC	water	1	---	---	
✗ 5115-1 ✓	U	.0102	Low	NC	water	1	---	---	

MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/27/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Ag water samples		MDL:0.010		unit: mg/L		[spk sol.]=5.00 mg/L		
5037-1	U	1.00	100.0	.0500	.0348	69.6	N	
5115-1	U	1.00	100.0	.0500	.0499	99.8	Y	
Al water samples		MDL:0.100		unit: mg/L		[spk sol.]=200 mg/L		
5037-1	U	1.00	100.0	2.00	.785	39.3	N -ch not requested	
5115-1	U	1.00	100.0	2.00	2.02	101.0	Y	
Ba water samples		MDL:0.020		unit: mg/L		[spk sol.]=200 mg/L		
5037-1	U	1.00	100.0	2.00	.252	12.6	N-diss not requested	
5115-1	.299	1.00	100.0	2.00	2.33	101.6	Y	
Be water samples		MDL:0.0050		unit: mg/L		[spk sol.]=5.00 mg/L		
5037-1	U	1.00	100.0	.0500	.0196	39.2	N -diss not requested	
5115-1	U	1.00	100.0	.0500	.0474	94.8	Y	
Ca water samples		MDL:0.500		unit: mg/L		[spk sol.]=1000 mg/L		
5037-1	14.5	1.00	100.0	10.0	9.80	47.0	N -diss not requested	
5115-1	72.1	1.00	100.0	10.0	81.1	V	----	

MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Cd water samples		**MDL:0.0050**		**unit: mg/L**		**[spk sol.]=5.00 mg/L**		
5037-1	U	1.00	100.0	.0500	.0230	46.0	N	
5115-1	U	1.00	100.0	.0500	.0530	106.0	Y	
Co water samples		**MDL:0.050**		**unit: mg/L**		**[spk sol.]=50.0 mg/L**		
5037-1	.0529	1.00	100.0	.500	.275	44.4	N dilution not required	
5115-1	U	1.00	100.0	.500	.512	102.4	Y	
Cr water samples		**MDL:0.010**		**unit: mg/L**		**[spk sol.]=20.0 mg/L**		
5037-1	.0913	1.00	100.0	.200	.134	21.4	N	
5115-1	U	1.00	100.0	.200	.200	100.0	Y	
Cr soil samples		**MDL: 1.00**		**unit: ug/g**		**[spk sol.]=20.0 mg/L**		
5079-1S	~~6.89~~ 127	1.00	1.00	20.0	128	~~605.5~~ V6	~~N~~ LLC 12/28	
Cu water samples		**MDL:0.020**		**unit: mg/L**		**[spk sol.]=25.0 mg/L**		
5037-1	.124	1.00	100.0	.250	.247	49.2	N	
5115-1	U	1.00	100.0	.250	.269	107.6	Y	
Fe water samples		**MDL:0.050**		**unit: mg/L**		**[spk sol.]=100 mg/L**		
5037-1	U	1.00	100.0	1.00	U	-93.0	N not req	
5115-1	U	1.00	100.0	1.00	1.02	102.0	Y	

MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
K water samples		MDL:1.00		unit: mg/L		[spk sol.]=1000 mg/L		
5037-1	137	1.00	100.0	10.0	121	V	----	
5115-1	1.05	1.00	100.0	10.0	11.1	100.5	Y	
Mg water samples		MDL:0.500		unit: mg/L		[spk sol.]=1000 mg/L		
5037-1	3.06	1.00	100.0	10.0	6.83	37.7	N - not req	
5115-1	22.8	1.00	100.0	10.0	32.4	96.0	Y	
Mn water samples		MDL:0.010		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	.136	27.2	N - not req.	
5115-1	U	1.00	100.0	.500	.497	99.4	Y	
Ni water samples		MDL:0.040		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	.158	31.6	N	
Ni soil samples		MDL: 4.00		unit: ug/g		[spk sol.]=50.0 mg/L		
5079-1S	~~11.2~~ 85.0	1.00	1.00	50.0	118	~~213.6~~ 66.0	~~N~~ N MC 12/28	
Pb water samples		MDL:0.050		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	.121	24.2	N	
5115-1	U	1.00	100.0	.500	.545	109.0	Y	

(continued)
MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: C. KUTZER
DATE: 12/27/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Sb water samples		MDL:0.100		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	U	14.8	N not req	
Tl water samples		MDL:0.300		unit: mg/L		[spk sol.]=200 mg/L		
5037-1	1.17	1.00	100.0	2.00	2.35	59.0	N not req.	
5115-1	U	1.00	100.0	2.00	2.39	119.5	Y	
V water samples		MDL:0.050		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	.215	43.0	N not req.	
5115-1	U	1.00	100.0	.500	.550	110.0	Y	
Zn water samples		MDL:0.010		unit: mg/L		[spk sol.]=50.0 mg/L		
5037-1	U	1.00	100.0	.500	.277	55.4	N	
5115-1	U	1.00	100.0	.500	.511	102.2	Y	

BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/27/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Ag	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.050	.0504	100.8	Y	
Blk Spike	0.010	1.00	100.0	0.050	.0487	97.4	Y	
Al	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	2.000	1.99	99.5	Y	
Blk Spike	0.100	1.00	100.0	2.000	1.94	97.0	Y	
Ba	MDL:0.020			unit: mg/L				
Blk Spike	0.020	1.00	100.0	2.000	2.02	101.0	Y	
Blk Spike	0.020	1.00	100.0	2.000	2.02	101.0	Y	
Ba	MDL:2.00			unit: ug/g				
Blk Spike	2.00	1.00	1.05	319	284	89.0	Y	
Be	MDL:0.0050			unit: mg/L				
Blk Spike	0.0050	1.00	100.0	0.050	.0473	94.6	Y	
Blk Spike	0.0050	1.00	100.0	0.050	.0467	93.4	Y	
Ca	MDL:0.500			unit: mg/L				
~~Blk Spike~~	~~0.500~~	~~1.00~~	~~100.0~~	~~2.000~~	~~.0505~~	~~2.5~~	~~N~~	
Blk Spike	0.500	1.00	100.0	2.000	2.06	103.0	Y	

cc 12/28

BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Cd	MDL:0.0050			unit: mg/L				
Blk Spike	0.0050	1.00	100.0	0.050	.0549	109.8	Y	
Blk Spike	0.0050	1.00	100.0	0.050	.0548	109.6	Y	
Co	MDL:0.050			unit: mg/L				
Blk Spike	0.050	1.00	100.0	0.500	.499	99.8	Y	
Blk Spike	0.050	1.00	100.0	0.500	.504	100.8	Y	
Cr	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.200	.205	102.5	Y	
Blk Spike	0.010	1.00	100.0	0.200	.207	103.5	Y	
Cr	MDL:1.00			unit: ug/g				
Blk Spike	1.00	1.00	1.05	57.4	49.8	86.8	Y	
Cu	MDL:0.020			unit: mg/L				
Blk Spike	0.020	1.00	100.0	0.250	.250	100.0	Y	
Blk Spike	0.020	1.00	100.0	0.250	.253	101.2	Y	
Fe	MDL:0.050			unit: mg/L				
Blk Spike	0.050	1.00	100.0	1.000	1.05	105.0	Y	
Blk Spike	0.050	1.00	100.0	1.000	1.05	105.0	Y	

(continued)
BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: C. KUTZER
DATE: 12/27/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Fe	MDL:5.00			unit: ug/g				
Blk Spike	5.00	1.00	1.05	9500	8510	89.6	Y	

BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
K	MDL:1.00			unit: mg/L				
Blk Spike	1.00	1.00	100.0	2.000	1.81	90.5	Y	
Mg	MDL:0.500			unit: mg/L				
Blk Spike	0.500	1.00	100.0	~~p.c 2.000~~	9.93	~~496.5~~	N 99.3 Y	KC 4/28
Blk Spike	0.500	1.00	100.0	2.000	1.98	99.0	Y	
Mn	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.500	.496	99.2	Y	
Blk Spike	0.010	1.00	100.0	0.500	.500	100.0	Y	
Ni	MDL:0.040			unit: mg/L				
Blk Spike	0.040	1.00	100.0	0.500	.521	104.2	Y	
Blk Spike	0.040	1.00	100.0	0.500	.533	106.6	Y	
Ni	MDL:4.00			unit: ug/g				
Blk Spike	4.00	1.00	1.05	35.8	31.3	87.5	Y	
Pb	MDL:0.050			unit: mg/L				
Blk Spike	0.050	1.00	100.0	0.500	.541	108.2	Y	
Blk Spike	0.050	1.00	100.0	0.500	.528	105.6	Y	

(continued)
BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: C. KUTZER
DATE: 12/27/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Sb	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	0.500	.504	100.8	Y	
Blk Spike	0.100	1.00	100.0	0.500	.539	107.8	Y	
Tl	MDL:0.300			unit: mg/L				
Blk Spike	0.300	1.00	100.0	2.000	2.23	111.5	Y	
Blk Spike	0.300	1.00	100.0	2.000	2.27	113.5	Y	
V	MDL:0.050			unit: mg/L				
Blk Spike	0.050	1.00	100.0	0.500	.541	108.2	Y	
Blk Spike	0.050	1.00	100.0	0.500	.541	108.2	Y	
Zn	MDL:0.010			unit: mg/L				
Blk Spike	0.010	1.00	100.0	0.500	.527	105.4	Y	
Blk Spike	0.010	1.00	100.0	0.500	.519	103.8	Y	

REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/27/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Ag	unit: mg/L			
Ref Std	1.00	1.00	100.0	Y
Ref Std	1.00	1.01	101.0	Y
Ref Std	1.00	1.01	101.0	Y
Ref Std	1.00	1.01	101.0	Y
Ref Std	1.00	1.00	100.0	Y
Ref Std	1.00	.986	98.6	Y
Ref Std	1.00	.993	99.3	Y
Al	unit: mg/L			
Ref Std	5.00	5.04	100.8	Y
Ref Std	5.00	5.07	101.4	Y
Ref Std	5.00	5.05	101.0	Y
Ref Std	5.00	5.01	100.2	Y
Ref Std	5.00	4.99	99.8	Y
Ref Std	5.00	4.88	97.6	Y
Ref Std	5.00	4.90	98.0	Y
Ba	unit: mg/L			
f Std	1.00	1.00	100.0	Y
f Std	1.00	1.01	101.0	Y
ef Std	1.00	1.01	101.0	Y
Ref Std	1.00	.997	99.7	Y
Ref Std	1.00	.994	99.4	Y
Ref Std	1.00	.963	96.3	Y
Ref Std	1.00	.980	98.0	Y
Be	unit: mg/L			
Ref Std	1.00	1.01	101.0	Y
Ref Std	1.00	1.02	102.0	Y
Ref Std	1.00	.997	99.7	Y
Ref Std	1.00	.976	97.6	Y
Ref Std	1.00	.965	96.5	Y
Ref Std	1.00	.935	93.5	Y
Ref Std	1.00	.955	95.5	Y
Ca	unit: mg/L			
Ref Std	50.0	50.7	101.4	Y
Ref Std	50.0	50.8	101.6	Y
Ref Std	50.0	50.0	100.0	Y
Ref Std	50.0	49.5	99.0	Y
Ref Std	50.0	48.5	97.0	Y
Ref Std	50.0	47.5	95.0	Y
Ref Std	50.0	48.0	96.0	Y

REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Cd	unit: mg/L			
Ref Std	1.00	1.03	103.0	Y
Ref Std	1.00	1.04	104.0	Y
Ref Std	1.00	1.05	105.0	Y
Ref Std	1.00	1.05	105.0	Y
Ref Std	1.00	1.03	103.0	Y
Ref Std	1.00	1.02	102.0	Y
Ref Std	1.00	1.02	102.0	Y
Co	unit: mg/L			
Ref Std	5.00	5.20	104.0	Y
Ref Std	5.00	5.20	104.0	Y
Ref Std	5.00	5.15	103.0	Y
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.19	103.8	Y
Ref Std	5.00	5.14	102.8	Y
Ref Std	5.00	5.16	103.2	Y
Cr	unit: mg/L			
f Std	5.00	5.09	101.8	Y
f Std	5.00	5.14	102.8	Y
ef Std	5.00	5.10	102.0	Y
Ref Std	5.00	5.03	100.6	Y
Ref Std	5.00	4.97	99.4	Y
Ref Std	5.00	4.86	97.2	Y
Ref Std	5.00	4.95	99.0	Y
Cu	unit: mg/L			
Ref Std	5.00	5.06	101.2	Y
Ref Std	5.00	5.07	101.4	Y
Ref Std	5.00	5.03	100.6	Y
Ref Std	5.00	5.01	100.2	Y
Ref Std	5.00	4.98	99.6	Y
Ref Std	5.00	4.84	96.8	Y
Ref Std	5.00	4.90	98.0	Y
Fe	unit: mg/L			
Ref Std	5.00	5.09	101.8	Y
Ref Std	5.00	5.08	101.6	Y
Ref Std	5.00	4.99	99.8	Y
Ref Std	5.00	4.98	99.6	Y
Ref Std	5.00	4.80	96.0	Y
Ref Std	5.00	4.70	94.0	Y
Ref Std	5.00	4.85	97.0	Y

REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ALYST: C. KUTZER
ATE: 12/27/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
K	unit: mg/L			
Ref Std	5.00	4.92	98.4	Y
Ref Std	5.00	4.89	97.8	Y
Ref Std	5.00	4.97	99.4	Y
Ref Std	5.00	5.08	101.6	Y
Ref Std	5.00	4.81	96.2	Y
Ref Std	5.00	4.91	98.2	Y
Ref Std	5.00	4.92	98.4	Y
Mg	unit: mg/L			
Ref Std	50.0	50.3	100.6	Y
Ref Std	50.0	50.5	101.0	Y
Ref Std	50.0	49.9	99.8	Y
Ref Std	50.0	50.2	100.4	Y
Ref Std	50.0	49.5	99.0	Y
Ref Std	50.0	48.8	97.6	Y
Ref Std	50.0	48.9	97.8	Y
Mn	unit: mg/L			
f Std	1.00	.995	99.5	Y
ef Std	1.00	.999	99.9	Y
ef Std	1.00	.997	99.7	Y
Ref Std	1.00	.988	98.8	Y
Ref Std	1.00	.974	97.4	Y
Ref Std	1.00	.954	95.4	Y
Ref Std	1.00	.964	96.4	Y
Ni	unit: mg/L			
Ref Std	5.00	5.19	103.8	Y
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.12	102.4	Y
Ref Std	5.00	5.13	102.6	Y
Ref Std	5.00	5.10	102.0	Y
Ref Std	5.00	5.02	100.4	Y
Ref Std	5.00	5.03	100.6	Y
Pb	unit: mg/L			
Ref Std	5.00	5.19	103.8	Y
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.12	102.4	Y
Ref Std	5.00	5.14	102.8	Y
Ref Std	5.00	5.13	102.6	Y
Ref Std	5.00	5.05	101.0	Y
Ref Std	5.00	5.06	101.2	Y

(continued)
REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: C. KUTZER
DATE: 12/27/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Sb	unit: mg/L			
Ref Std	5.00	4.97	99.4	Y
Ref Std	5.00	4.96	99.2	Y
Ref Std	5.00	4.90	98.0	Y
Ref Std	5.00	4.96	99.2	Y
Ref Std	5.00	4.88	97.6	Y
Ref Std	5.00	4.72	94.4	Y
Ref Std	5.00	4.76	95.2	Y
Tl	unit: mg/L			
Ref Std	5.00	5.20	104.0	Y
Ref Std	5.00	5.23	104.6	Y
Ref Std	5.00	5.31	106.2	Y
Ref Std	5.00	5.17	103.4	Y
Ref Std	5.00	5.08	101.6	Y
Ref Std	5.00	5.07	101.4	Y
Ref Std	5.00	4.86	97.2	Y
	unit: mg/L			
Ref Std	5.00	5.14	102.8	Y
Ref Std	5.00	5.23	104.6	Y
Ref Std	5.00	5.28	105.6	Y
Ref Std	5.00	5.32	106.4	Y
Ref Std	5.00	5.32	106.4	Y
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.33	106.6	Y
Zn	unit: mg/L			
Ref Std	1.00	1.02	102.0	Y
Ref Std	1.00	1.03	103.0	Y
Ref Std	1.00	1.03	103.0	Y
Ref Std	1.00	1.01	101.0	Y
Ref Std	1.00	.989	98.9	Y
Ref Std	1.00	.970	97.0	Y
Ref Std	1.00	.986	98.6	Y

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 2 09:06:03 21 Dec 1994 ICP

Ag1	.0000	ppm	17862	18234	18447			
			Ave. Int. =	18181	S. D. =	296		
Al3	.0000	ppm	-454	-624	-1086			
			Ave. Int. =	-721	S. D. =	327		
As2	.0000	ppm	147	558	362			
			Ave. Int. =	356	S. D. =	206		
Ba1	.0000	ppm	3058	3386	3559			
			Ave. Int. =	3334	S. D. =	254		
Ca3	.0000	ppm	28864	31422	31981			
			Ave. Int. =	30756	S. D. =	1662		
Cd1	.0000	ppm	-120	-148	-228			
			Ave. Int. =	-165	S. D. =	56		
Cr4	.0000	ppm	3013	5004	4676			
			Ave. Int. =	4231	S. D. =	1067		
Fe2	.0000	ppm	6367	4364	5041			
			Ave. Int. =	5257	S. D. =	1019		
Mg4	.0000	ppm	-2189	-3098	-3485			
			Ave. Int. =	-2924	S. D. =	665		
Pb1	.0000	ppm	-6233	-4346	-1207			
			Ave. Int. =	-3929	S. D. =	2539		
Se4	.0000	ppm	-811	-981	-1104			
			Ave. Int. =	-965	S. D. =	147		

Pb CCV ↑ at end of run - decay to use TCLP Pb results - all read < PQL

ROUTE.PRN

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 2 Seq: 3 09:06:50 21 Dec 1994 ICP

Ag1	.0000	ppm		16534	23890	19188		
			Ave. Int. =	19871	S. D. =	3725		
Al3	.0000	ppm		-1435	1756	-1471		
			Ave. Int. =	-383	S. D. =	1853		
As2	.0000	ppm		1025	804	439		
			Ave. Int. =	756	S. D. =	296		
Ba1	.0000	ppm		4371	4787	3746		
			Ave. Int. =	4301	S. D. =	524		
Ca3	.0000	ppm		31763	35119	30608		
			Ave. Int. =	32497	S. D. =	2343		
Cd1	.0000	ppm		-272	-206	-164		
			Ave. Int. =	-214	S. D. =	54		
Cr4	.0000	ppm		5459	4601	4732		
			Ave. Int. =	4931	S. D. =	462		
Fe2	.0000	ppm		5081	7997	2545		
			Ave. Int. =	5208	S. D. =	2728		
Mg4	.0000	ppm		-3849	-2529	-2122		
			Ave. Int. =	-2833	S. D. =	903		
Pb1	.0000	ppm		-4233	-4331	-3078		
			Ave. Int. =	-3881	S. D. =	697		
Se4	.0000	ppm		-1117	-643	-394		
			Ave. Int. =	-718	S. D. =	367		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 1				Seq: 4		09:10:14 21 Dec 1994 ICP		
Ag1	1.000	ppm		1499255	1485891	1456485		
			Ave. Int. =	1480544	S. D. =	21881		
Al3	1.000	ppm		100241	98442	97578		
			Ave. Int. =	98754	S. D. =	1359		
As2	1.000	ppm		8378	7948	8234		
			Ave. Int. =	8187	S. D. =	219		
Ba1	1.000	ppm		2987322	3005689	2902640		
			Ave. Int. =	2965217	S. D. =	54966		
Ca3	10.00	ppm		6279251	6284375	6184351		
			Ave. Int. =	6249326	S. D. =	56328		
Cd1	1.000	ppm		66977	66831	66301		
			Ave. Int. =	66703	S. D. =	356		
Cr4	1.000	ppm		842870	839675	817836		
			Ave. Int. =	833460	S. D. =	13625		
Fe2	1.000	ppm		619485	625352	607036		
			Ave. Int. =	617291	S. D. =	9353		
Mg4	10.00	ppm		531055	525819	519575		
			Ave. Int. =	525483	S. D. =	5747		
Pb1	1.000	ppm		50100	52672	48852		
			Ave. Int. =	50541	S. D. =	1948		
Se4	1.000	ppm		7570	7073	7559		
			Ave. Int. =	7401	S. D. =	284		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 2 Rep: 2				Seq: 5		09:11:01 21 Dec 1994 ICP		
Ag1	1.000	ppm		1490395	1483673	1486330		
			Ave. Int. =	1486799	S. D. =	3385		
Al3	1.000	ppm		98873	97124	99581		
			Ave. Int. =	98526	S. D. =	1265		
As2	1.000	ppm		8423	8087	8135		
			Ave. Int. =	8215	S. D. =	182		
Ba1	1.000	ppm		2979003	2952952	3005559		
			Ave. Int. =	2979171	S. D. =	26304		
Ca3	10.00	ppm		6315340	6258186	6336388		
			Ave. Int. =	6303305	S. D. =	40466		
Cd1	1.000	ppm		67653	66461	67143		
			Ave. Int. =	67086	S. D. =	598		
Cr4	1.000	ppm		846380	832104	841774		
			Ave. Int. =	840086	S. D. =	7286		
Fe2	1.000	ppm		619086	614317	627060		
			Ave. Int. =	620154	S. D. =	6438		
Mg4	10.00	ppm		532489	524599	534822		
			Ave. Int. =	530637	S. D. =	5357		
Pb1	1.000	ppm		48406	47275	48341		
			Ave. Int. =	48007	S. D. =	635		
Se4	1.000	ppm		7475	7058	7532		
			Ave. Int. =	7355	S. D. =	259		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 1				Seq: 6		09:14:25 21 Dec 1994 ICP		
Ag1	10.00	ppm		14189369	14031275	14301945		
			Ave. Int. =	14174196	S. D. =	135971		
Al3	10.00	ppm		962084	956847	976472		
			Ave. Int. =	965134	S. D. =	10162		
As2	10.00	ppm		74303	75084	76607		
			Ave. Int. =	75331	S. D. =	1172		
Ba1	10.00	ppm		28885586	28543028	29377471		
			Ave. Int. =	28935362	S. D. =	419442		
Ca3	100.0	ppm		61443963	61149934	61502493		
			Ave. Int. =	61365463	S. D. =	188934		
Cd1	10.00	ppm		636056	634928	634599		
			Ave. Int. =	635194	S. D. =	764		
Cr4	10.00	ppm		8014452	7944889	8035237		
			Ave. Int. =	7998193	S. D. =	47318		
Fe2	10.00	ppm		5958034	5913908	5980040		
			Ave. Int. =	5950661	S. D. =	33677		
Mg4	100.0	ppm		5423923	5391883	5429082		
			Ave. Int. =	5414963	S. D. =	20153		
Pb1	10.00	ppm		507029	508637	503471		
			Ave. Int. =	506379	S. D. =	2644		
Se4	10.00	ppm		83760	81912	82977		
			Ave. Int. =	82883	S. D. =	928		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 3 Rep: 2				Seq: 7		09:15:12 21 Dec 1994 ICP		
Ag1	10.00	ppm		14250566	14049890	14041111		
			Ave. Int. =	14113856	S. D. =	118476		
Al3	10.00	ppm		971631	957701	952634		
			Ave. Int. =	960655	S. D. =	9837		
As2	10.00	ppm		77682	72834	75922		
			Ave. Int. =	75479	S. D. =	2454		
Ba1	10.00	ppm		29158472	28640447	28598933		
			Ave. Int. =	28799284	S. D. =	311758		
Ca3	100.0	ppm		61999405	61344768	61415208		
			Ave. Int. =	61586460	S. D. =	359351		
Cd1	10.00	ppm		641571	638028	639011		
			Ave. Int. =	639537	S. D. =	1829		
Cr4	10.00	ppm		8075910	7956972	7973072		
			Ave. Int. =	8001985	S. D. =	64525		
Fe2	10.00	ppm		6011309	5919926	5927320		
			Ave. Int. =	5952852	S. D. =	50760		
Mg4	100.0	ppm		5452077	5399171	5413008		
			Ave. Int. =	5421419	S. D. =	27437		
Pb1	10.00	ppm		507860	503257	508081		
			Ave. Int. =	506399	S. D. =	2724		
Se4	10.00	ppm		84961	83175	83453		
			Ave. Int. =	83863	S. D. =	961		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CAL STD		21-1	Seq: 9		09:18:32 21 Dec 1994 ICP			
Ag1	9.800	ppm	.8187 %	9.718	9.804	9.879		
Al3	9.808	ppm	.6579 %	9.751	9.795	9.878		
As2	10.02	ppm	2.451 %	9.767	10.02	10.26		
Ba1	9.885	ppm	.6748 %	9.815	9.894	9.947		
Ca3	100.6	ppm	.7284 %	100.1	100.3	101.4		
Cd1	9.791	ppm	1.035 %	9.695	9.782	9.897		
Cr4	10.06	ppm	.6950 %	10.00	10.05	10.14		
Fe2	10.08	ppm	.8164 %	10.01	10.06	10.17		
Mg4	100.6	ppm	.9697 %	99.93	100.1	101.7		
Pb1	9.996	ppm	1.500 %	9.880	9.943	10.17		
Se4	9.970	ppm	1.549 %	9.870	9.892	10.15		
*** Sample ID: ICV		21-1	Seq: 10		09:21:47 21 Dec 1994 ICP			
Ag1	4.833	ppm	.8019 %	4.878	4.808	4.815		
Al3	4.916	ppm	.7124 %	4.951	4.881	4.915		
As2	4.996	ppm	1.522 %	5.065	4.914	5.008		
Ba1	4.886	ppm	1.232 %	4.955	4.850	4.852		
Ca3	51.03	ppm	.1516 %	51.12	50.99	50.98		
Cd1	5.014	ppm	.2712 %	4.999	5.026	5.016		
Cr4	5.153	ppm	.3806 %	5.176	5.140	5.144		
Fe2	5.150	ppm	.4198 %	5.174	5.132	5.144		
Mg4	49.85	ppm	.1649 %	49.89	49.75	49.90		
Pb1	5.147	ppm	.8504 %	5.195	5.136	5.110		
Se4	5.090	ppm	1.498 %	5.169	5.083	5.017		
*** Sample ID: ICB		21-1	Seq: 11		09:25:02 21 Dec 1994 ICP			
Ag1	-.0020 L	ppm	-57.80%	-.0028	-.0007	-.0024		
Al3	.0031 L	ppm	663.7 %	-.0199	.0187	.0104		
As2	-.0261 L	ppm	-188.1%	-.0814	.0128	-.0098		
Ba1	.0003 L	ppm	161.3 %	.0008	.0002	-.0001		
Ca3	.0002 L	ppm	957.9 %	.0010	.0020	-.0023		
Cd1	.0011 L	ppm	175.1 %	.0022	-.0012	.0024		
Cr4	-.0005 L	ppm	-269.7%	-.0005	.0009	-.0020		
Fe2	-.0042 L	ppm	-52.59%	-.0030	-.0028	-.0067		
Mg4	-.0038 L	ppm	-407.6%	-.0153	.0138	-.0098		
Pb1	.0039 L	ppm	328.1 %	.0051	.0158	-.0094		
Se4	.0224 L	ppm	163.5 %	-.0114	.0614	.0174		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CRII			21-1	Seq: 13		09:28:17 21 Dec 1994 ICP		
Ag1	.0185	ppm	15.58 %	.0186	.0213	.0155		
Al3	-.0009 L	ppm	-1232.%	-.0054	-.0091	.0118		
As2	.0260 L	ppm	412.1 %	-.0978	.0864	.0895		
Ba1	-.0001 L	ppm	-391.7%	-.0001	-.0003	.0002		
Ca3	-.0025 L	ppm	-106.0%	-.0006	-.0014	-.0054		
Cd1	.0112	ppm	15.91 %	.0092	.0119	.0125		
Cr4	.0226	ppm	10.08 %	.0202	.0229	.0248		
Fe2	-.0051 L	ppm	-24.64%	-.0060	-.0056	-.0037		
Mg4	-.0066 L	ppm	-95.50%	-.0075	.0001	-.0123		
Pb1	.1232	ppm	5.350 %	.1264	.1276	.1156		
Se4	.0074 L	ppm	1157. %	-.0495	-.0342	.1058		
*** Sample ID: ICSAI			21-1	Seq: 14		09:31:32 21 Dec 1994 ICP		
Ag1	.0086 L	ppm	14.94 %	.0071	.0096	.0090		
Al3	506.0 H	ppm	.5637 %	503.6	509.2	505.3		
As2	.2983 L	ppm	69.94 %	.2712	.1045	.5191		
Ba1	-.0039 L	ppm	-3.367%	-.0041	-.0040	-.0038		
Ca3	514.4	ppm	.1101 %	513.7	514.8	514.6		
Cd1	.0037 L	ppm	55.51 %	.0026	.0024	.0061		
Cr4	-.0028 L	ppm	-80.99%	-.0012	-.0054	-.0017		
Fe2	195.1	ppm	.2951 %	194.6	195.7	194.9		
Mg4	551.5	ppm	.0775 %	551.3	551.1	551.9		
Pb1	-.0049 L	ppm	-775.5%	-.0343	.0379	-.0183		
Se4	.1936 L	ppm	39.77 %	.1138	.2675	.1996		
*** Sample ID: ICSABI			21-1	Seq: 15		09:34:48 21 Dec 1994 ICP		
Ag1	.9611	ppm	1.549 %	.9561	.9493	.9778		
Al3	494.6	ppm	2.174 %	489.0	487.8	507.0		
As2	.4639 L	ppm	20.25 %	.4264	.5708	.3944		
Ba1	.4808	ppm	2.300 %	.4751	.4739	.4936		
Ca3	513.3	ppm	1.294 %	511.3	508.0	520.8		
Cd1	.9799	ppm	1.016 %	.9776	.9713	.9908		
Cr4	.4823	ppm	.8411 %	.4790	.4811	.4868		
Fe2	193.7	ppm	1.575 %	192.5	191.5	197.2		
Mg4	546.5	ppm	1.377 %	543.9	540.5	554.9		
Pb1	1.025	ppm	2.459 %	1.007	1.013	1.053		
Se4	.0370 L	ppm	133.0 %	.0927	-.0006	.0190		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCV		21-1	Seq: 17	09:38:04 21 Dec 1994 ICP				
Ag1	4.870	ppm	.6479 %	4.859	4.845	4.905		
Al3	4.896	ppm	1.141 %	4.869	4.858	4.960		
As2	5.215	ppm	1.697 %	5.170	5.317	5.158		
Ba1	4.836	ppm	.9440 %	4.831	4.793	4.884		
Ca3	51.75	ppm	.6201 %	51.63	51.50	52.11		
Cd1	5.128	ppm	.5669 %	5.111	5.111	5.162		
Cr4	5.163	ppm	.6606 %	5.145	5.141	5.202		
Fe2	5.254	ppm	.8094 %	5.251	5.213	5.298		
Mg4	50.98	ppm	.7844 %	50.70	50.80	51.44		
Pb1	5.223	ppm	1.493 %	5.212	5.152	5.307		
Se4	5.175	ppm	.8607 %	5.133	5.222	5.172		
*** Sample ID: CCB		21-1	Seq: 18	09:41:20 21 Dec 1994 ICP				
Ag1	-.0010 L	ppm	-76.98%	-.0004	-.0019	-.0008		
Al3	-.0010 L	ppm	-341.6%	-.0010	.0024	-.0044		
As2	-.0430 L	ppm	-36.21%	-.0560	-.0258	-.0472		
Ba1	.0000 L	ppm	710.6 %	.0003	-.0000	-.0002		
Ca3	.0010 L	ppm	328.7 %	.0045	.0001	-.0017		
Cd1	-.0006 L	ppm	-239.6%	.0003	-.0022	.0002		
Cr4	.0021 L	ppm	88.13 %	.0042	.0009	.0012		
Fe2	.0217 L	ppm	3.579 %	.0220	.0209	.0223		
Mg4	-.0117 L	ppm	-144.0%	.0077	-.0204	-.0222		
Pb1	.0019 L	ppm	633.1 %	.0097	.0084	-.0123		
Se4	.0015 L	ppm	853.9 %	.0162	-.0070	-.0047		
*** Sample ID: PB 12/20		21-1	Seq: 19	09:44:36 21 Dec 1994 ICP				
Ag1	-.0006 L	ppm	-852.6%	-.0046	.0049	-.0020		
Al3	.0770 L	ppm	15.70 %	.0644	.0885	.0782		
As2	-.0182 L	ppm	-311.1%	-.0722	-.0228	.0405		
Ba1	.2022	ppm	1.891 %	.2062	.1986	.2018		
Ca3	.2725 L	ppm	1.554 %	.2736	.2679	.2762		
Cd1	-.0017 L	ppm	-87.09%	-.0000	-.0022	-.0028		
Cr4	.0029 L	ppm	60.06 %	.0009	.0039	.0040		
Fe2	.0550	ppm	1.465 %	.0547	.0544	.0559		
Mg4	.0048 L	ppm	512.4 %	-.0236	.0209	.0171		
Pb1	.0192 L	ppm	173.1 %	-.0010	.0576	.0010		
Se4	.0097 L	ppm	724.6 %	-.0542	-.0017	.0850		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: LCS		21-1	Seq: 21		09:47:52 21 Dec 1994 ICP			
Ag1	4.744	ppm	.6409 %	4.772	4.712	4.749		
Al3	.1112	ppm	15.33 %	.1281	.1116	.0940		
As2	5.522	ppm	.6586 %	5.553	5.532	5.482		
Ba1	5.328	ppm	1.011 %	5.364	5.266	5.353		
Ca3	.7584	ppm	.1600 %	.7583	.7596	.7572		
Cd1	1.087	ppm	.4085 %	1.091	1.082	1.088		
Cr4	5.241	ppm	.5806 %	5.266	5.207	5.249		
Fe2	.1391	ppm	2.353 %	.1423	.1358	.1392		
Mg4	.0662 L	ppm	25.04 %	.0514	.0631	.0841		
Pb1	5.540	ppm	1.457 %	5.621	5.539	5.460		
Se4	2.569	ppm	4.206 %	2.595	2.450	2.662		
*** Sample ID: 4954-1TC		21-1	Seq: 22		09:51:08 21 Dec 1994 ICP			
Ag1	.0466	ppm	5.927 %	.0492	.0437	.0469		
Al3	1.006	ppm	3.895 %	1.040	1.013	.9632		
As2	.0558 L	ppm	38.87 %	.0525	.0790	.0360		
Ba1	1.199	ppm	1.200 %	1.187	1.215	1.194		
Ca3	588.6	ppm	1.191 %	582.7	596.3	586.7		
Cd1	.0193	ppm	9.584 %	.0185	.0214	.0179		
Cr4	.0499	ppm	3.938 %	.0521	.0483	.0494		
Fe2	2.755	ppm	.9731 %	2.749	2.785	2.732		
Mg4	27.94	ppm	.9318 %	27.69	28.21	27.93		
Pb1	.0558	ppm	20.52 %	.0681	.0537	.0455		
Se4	.0573 L	ppm	117.7 %	.1073	-.0194	.0840		
*** Sample ID: 4954-1QC		21-1	Seq: 23		09:54:24 21 Dec 1994 ICP			
Ag1	.0210	ppm	14.01 %	.0176	.0229	.0225		
Al3	.8266	ppm	1.661 %	.8412	.8248	.8139		
As2	-.0159 L	ppm	-461.8%	-.0024	-.0948	.0497		
Ba1	1.115	ppm	.4455 %	1.114	1.120	1.110		
Ca3	607.1	ppm	.2597 %	605.9	606.5	608.9		
Cd1	.0100	ppm	7.569 %	.0105	.0091	.0103		
Cr4	.0232	ppm	3.947 %	.0238	.0238	.0222		
Fe2	2.782	ppm	.3047 %	2.774	2.791	2.779		
Mg4	28.38	ppm	.1552 %	28.43	28.34	28.38		
Pb1	.0540	ppm	76.79 %	.0281	.1018	.0320		
Se4	.0501 L	ppm	80.24 %	.0564	.0868	.0071		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 4954-1SP 21-1 Seq: 25 09:57:40 21 Dec 1994 ICP								
Ag1	4.240	ppm	1.036 %	4.190	4.272	4.258		
Al3	1.230	ppm	1.140 %	1.240	1.214	1.236		
As2	5.490	ppm	2.042 %	5.378	5.603	5.489		
Ba1	5.654	ppm	1.508 %	5.556	5.712	5.694		
Ca3	569.0	ppm	.7814 %	564.8	568.6	573.7		
Cd1	.9764	ppm	1.387 %	.9649	.9730	.9913		
Cr4	4.873	ppm	.7654 %	4.834	4.876	4.908		
Fe2	3.337	ppm	.8581 %	3.312	3.330	3.368		
Mg4	26.83	ppm	.9607 %	26.59	26.81	27.10		
Pb1	4.964	ppm	.2391 %	4.967	4.974	4.951		
Se4	2.572	ppm	1.477 %	2.547	2.616	2.554		
*** Sample ID: 5048-5 21-1 Seq: 26 10:00:56 21 Dec 1994 ICP								
Ag1	.0393	ppm	24.21 %	.0466	.0429	.0286		
Al3	.1492	ppm	31.01 %	.2022	.1288	.1167		
As2	.0641 L	ppm	166.6 %	-.0236	.0329	.1828		
Ba1	.6699	ppm	1.099 %	.6774	.6626	.6697		
Ca3	1210. H	ppm	.8393 %	1209.	1201.	1221.		
Cd1	.0116	ppm	35.42 %	.0138	.0142	.0069		
Cr4	.0840	ppm	12.26 %	.0905	.0894	.0721		
Fe2	.2110	ppm	12.76 %	.2414	.2011	.1904		
Mg4	41.48	ppm	.7789 %	41.51	41.15	41.79		
Pb1	.0185 L	ppm	295.0 %	.0630	.0349	-.0424		
Se4	.0901 L	ppm	148.1 %	.0496	-.0183	.2390		
*** Sample ID: 5005-1 21-1 Seq: 27 10:04:13 21 Dec 1994 ICP								
Ag1	.0681	ppm	5.599 %	.0659	.0659	.0725		
Al3	1.825	ppm	2.097 %	1.837	1.856	1.782		
As2	.2771 L	ppm	28.39 %	.2025	.2696	.3593		
Ba1	1.322	ppm	1.204 %	1.336	1.326	1.305		
Ca3	37.73	ppm	.5702 %	37.91	37.80	37.49		
Cd1	.0142	ppm	9.474 %	.0129	.0143	.0156		
Cr4	.0594	ppm	2.625 %	.0612	.0586	.0584		
Fe2	284.8	ppm	.7013 %	286.3	285.6	282.5		
Mg4	2.512	ppm	1.202 %	2.495	2.494	2.547		
Pb1	.6241	ppm	6.298 %	.6370	.6554	.5800		
Se4	.0807 L	ppm	5.481 %	.0857	.0794	.0771		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PB 12/16 21-1 Seq: 29 10:07:28 21 Dec 1994 ICP								
Ag1	-.0001 L	ppm	-3135.%	.0030	-.0042	.0009		
Al3	.0375 L	ppm	23.79 %	.0329	.0319	.0478		
As2	.0371 L	ppm	149.6 %	.0896	-.0209	.0425		
Ba1	.3094	ppm	.5567 %	.3114	.3086	.3084		
Ca3	.2131 L	ppm	.6405 %	.2140	.2139	.2116		
Cd1	-.0002 L	ppm	-534.1%	-.0010	-.0003	.0008		
Cr4	.0024 L	ppm	46.22 %	.0022	.0035	.0014		
Fe2	.0352 L	ppm	1.065 %	.0355	.0348	.0353		
Mg4	-.0090 L	ppm	-61.14%	-.0125	-.0117	-.0027		
Pb1	.0091 L	ppm	234.0 %	-.0149	.0257	.0163		
Se4	.0678 L	ppm	62.48 %	.1163	.0488	.0383		
*** Sample ID: LCS 21-1 Seq: 30 10:10:39 21 Dec 1994 ICP								
Ag1	4.633	ppm	.1459 %	4.630	4.641	4.628		
Al3	.0346 L	ppm	43.09 %	.0442	.0174	.0423		
As2	5.462	ppm	2.985 %	5.400	5.340	5.647		
Ba1	4.886	ppm	.5310 %	4.898	4.903	4.856		
Ca3	.1940 L	ppm	3.418 %	.1986	.1969	.1864		
Cd1	1.102	ppm	1.138 %	1.089	1.102	1.114		
Cr4	5.330	ppm	.1357 %	5.332	5.323	5.337		
Fe2	.0350 L	ppm	2.709 %	.0340	.0353	.0358		
Mg4	-.0093 L	ppm	-266.5%	.0168	-.0123	-.0323		
Pb1	5.469	ppm	.3672 %	5.472	5.487	5.447		
Se4	2.658	ppm	.5059 %	2.673	2.646	2.656		
*** Sample ID: CCV 21-1 Seq: 31 10:13:51 21 Dec 1994 ICP								
Ag1	4.769	ppm	1.281 %	4.745	4.723	4.838		
Al3	4.832	ppm	1.541 %	4.800	4.780	4.917		
As2	5.111	ppm	2.108 %	5.066	5.032	5.233		
Ba1	4.769	ppm	1.328 %	4.747	4.719	4.840		
Ca3	52.85	ppm	1.307 %	52.69	52.26	53.61		
Cd1	5.260	ppm	1.126 %	5.249	5.207	5.324		
Cr4	5.295	ppm	1.350 %	5.269	5.241	5.376		
Fe2	5.233	ppm	1.492 %	5.204	5.174	5.322		
Mg4	51.63	ppm	1.613 %	51.50	50.86	52.51		
Pb1	5.398	ppm	1.249 %	5.377	5.343	5.473		
Se4	5.034	ppm	4.651 %	5.021	4.807	5.275		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCB			21-1	Seq: 33		10:17:03 21 Dec 1994 ICP		
Ag1	-.0001	L ppm	-4300.%	.0026	.0008	-.0036		
Al3	-.0084	L ppm	-123.3%	-.0116	-.0169	.0032		
As2	-.0327	L ppm	-75.19%	-.0099	-.0587	-.0295		
Ba1	.0001	L ppm	208.6 %	-.0001	.0004	.0000		
Ca3	.0037	L ppm	123.0 %	-.0015	.0071	.0055		
Cd1	.0009	L ppm	237.4 %	.0012	.0027	-.0013		
Cr4	.0014	L ppm	52.93 %	.0010	.0023	.0010		
Fe2	.0013	L ppm	190.8 %	-.0006	.0042	.0004		
Mg4	-.0172	L ppm	-53.71%	-.0273	-.0148	-.0094		
Pb1	.0061	L ppm	131.3 %	.0141	-.0020	.0063		
Se4	-.0184	L ppm	-388.6%	-.0746	-.0431	.0623		
*** Sample ID: 4988-1TC			21-1	Seq: 34		10:20:15 21 Dec 1994 ICP		
Ag1	.0055	L ppm	91.22 %	.0075	-.0002	.0093		
Al3	.0866	L ppm	14.75 %	.0759	.1008	.0833		
As2	.5876	ppm	20.81 %	.7193	.4775	.5661		
Ba1	2.129	ppm	.6653 %	2.136	2.138	2.113		
Ca3	191.8	ppm	.2972 %	192.3	191.2	191.9		
Cd1	.0004	L ppm	263.2 %	-.0002	.0015	-.0002		
Cr4	.0161	ppm	4.329 %	.0158	.0169	.0156		
Fe2	707.5	H ppm	.2302 %	709.2	706.0	707.2		
Mg4	7.413	ppm	.8025 %	7.472	7.353	7.415		
Pb1	.0247	L ppm	120.0 %	.0158	.0005	.0577	ok <PQL	
Se4	.1348	L ppm	57.43 %	.2225	.1058	.0761		
*** Sample ID: 4988-1QC			21-1	Seq: 35		10:23:27 21 Dec 1994 ICP		
Ag1	.0050	L ppm	54.88 %	.0020	.0073	.0056		
Al3	.0829	L ppm	11.16 %	.0815	.0927	.0744		
As2	.6440	ppm	7.536 %	.6038	.6301	.6979		
Ba1	2.118	ppm	.3551 %	2.111	2.117	2.126		
Ca3	195.5	ppm	.2917 %	194.8	195.9	195.7		
Cd1	.0008	L ppm	308.1 %	-.0016	.0036	.0006		
Cr4	.0150	ppm	3.859 %	.0154	.0152	.0143		
Fe2	720.9	H ppm	.2883 %	718.5	722.4	721.7		
Mg4	7.503	ppm	.7196 %	7.498	7.452	7.559		
Pb1	.0345	L ppm	141.2 %	-.0177	.0425	.0786		
Se4	.1243	L ppm	109.8 %	.0918	.0069	.2741		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 4988-1SP 21-1 Seq: 37 10:26:39 21 Dec 1994 ICP								
Ag1	4.683	ppm	.8799 %	4.686	4.722	4.640		
Al3	.0726 L	ppm	8.735 %	.0775	.0750	.0655		
As2	6.308	ppm	.3513 %	6.282	6.320	6.321		
Ba1	6.759	ppm	1.038 %	6.737	6.837	6.702		
Ca3	199.2	ppm	.3984 %	199.1	200.0	198.5		
Cd1	1.078	ppm	.2686 %	1.075	1.080	1.079		
Cr4	5.205	ppm	.5623 %	5.199	5.237	5.179		
Fe2	733.3 H	ppm	.4891 %	732.7	737.1	730.0		
Mg4	7.608	ppm	.4526 %	7.582	7.647	7.596		
Pb1	5.437	ppm	1.009 %	5.407	5.404	5.500		
Se4	2.664	ppm	4.144 %	2.748	2.705	2.539		
*** Sample ID: 4988-2 21-1 Seq: 38 10:29:51 21 Dec 1994 ICP								
Ag1	.0056 L	ppm	27.36 %	.0061	.0039	.0068		
Al3	.1456	ppm	8.744 %	.1310	.1520	.1539		
As2	.1100 L	ppm	5.847 %	.1157	.1030	.1113		
Ba1	1.958	ppm	1.107 %	1.939	1.982	1.954		
Ca3	547.3	ppm	.7880 %	542.9	551.5	547.6		
Cd1	.0071	ppm	9.365 %	.0064	.0072	.0077		
Cr4	.0135	ppm	7.877 %	.0125	.0146	.0133		
Fe2	238.8	ppm	.8414 %	237.0	241.0	238.6		
Mg4	13.51	ppm	1.006 %	13.39	13.66	13.47		
Pb1	.0204 L	ppm	150.3 %	-.0128	.0478	.0262		
Se4	.0804 L	ppm	90.61 %	.1549	.0771	.0093		
*** Sample ID: PB 12/20 21-1 Seq: 39 10:33:03 21 Dec 1994 ICP								
Ag1	-.0026 L	ppm	-169.0%	.0011	-.0015	-.0075		
Al3	.0171 L	ppm	148.9 %	.0422	.0178	-.0087		
As2	-.0202 L	ppm	-117.4%	-.0176	-.0451	.0021		
Ba1	.0027 L	ppm	8.373 %	.0030	.0025	.0026		
Ca3	.0890 L	ppm	7.120 %	.0931	.0921	.0817		
Cd1	-.0006 L	ppm	-366.2%	.0020	-.0019	-.0019		
Cr4	.0005 L	ppm	201.0 %	.0012	.0012	-.0007		
Fe2	.0529	ppm	7.621 %	.0524	.0571	.0491		
Mg4	-.0161 L	ppm	-37.02%	-.0155	-.0105	-.0224		
Pb1	.0148 L	ppm	232.4 %	.0379	.0314	-.0248		
Se4	.0463 L	ppm	52.74 %	.0725	.0421	.0243		

May < PQL

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: LCSS		21-1	Seq: 41	10:36:15 21 Dec 1994 ICP				
Ag1	.8477	ppm	1.369 %	.8597	.8365	.8468		
Al3	39.26	ppm	1.231 %	39.80	38.85	39.14		
As2	.7153	ppm	27.05 %	.5845	.6238	.9376		
Ba1	4.957	ppm	1.780 %	5.053	4.881	4.936		
Ca3	25.04	ppm	.8496 %	25.28	24.88	24.95		
Cd1	.9524	ppm	.9398 %	.9611	.9433	.9529		
Cr4	.7729	ppm	1.111 %	.7817	.7646	.7723		
Fe2	89.17	ppm	1.116 %	90.29	88.37	88.87		
Mg4	30.42	ppm	1.241 %	30.83	30.09	30.35		
Pb1	1.933	ppm	1.471 %	1.918	1.915	1.966		
Se4	.5599	ppm	4.855 %	.5674	.5825	.5297		
*** Sample ID: 5053-1		21-1	Seq: 42	10:39:27 21 Dec 1994 ICP				
Ag1	-.0020 L	ppm	-84.00%	-.0022	-.0002	-.0036		
Al3	.4991	ppm	.6712 %	.4955	.5021	.4998		
As2	-.0008 L	ppm	-4439.%	.0166	.0233	-.0423		
Ba1	.1751	ppm	.7212 %	.1737	.1759	.1758		
Ca3	5.004	ppm	.3411 %	4.987	5.021	5.005		
Cd1	-.0003 L	ppm	-871.1%	.0004	.0021	-.0035		
Cr4	.0045 L	ppm	52.96 %	.0046	.0020	.0068		
Fe2	1.129	ppm	.4730 %	1.122	1.132	1.132		
Mg4	.1349 L	ppm	8.477 %	.1293	.1481	.1274		
Pb1	.0166 L	ppm	192.8 %	.0095	.0514	-.0112		
Se4	-.0545 L	ppm	-230.1%	-.1871	.0623	-.0388		
*** Sample ID: 5068-1		21-1	Seq: 43	10:42:40 21 Dec 1994 ICP				
Ag1	.0009 L	ppm	310.7 %	.0012	-.0020	.0035		
Al3	.3120	ppm	8.242 %	.2987	.3416	.2956		
As2	-.0122 L	ppm	-418.2%	-.0517	.0456	-.0306		
Ba1	.2994	ppm	1.630 %	.2962	.3050	.2970		
Ca3	1.351	ppm	.8067 %	1.346	1.363	1.343		
Cd1	.2908	ppm	.3143 %	.2915	.2897	.2911		
Cr4	.0222	ppm	5.057 %	.0212	.0234	.0220		
Fe2	1.362	ppm	1.043 %	1.361	1.377	1.348		
Mg4	.1384 L	ppm	1.331 %	.1370	.1405	.1379		
Pb1	.5666	ppm	3.664 %	.5867	.5681	.5452		
Se4	.0264 L	ppm	375.9 %	-.0640	.1329	.0105		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCV			21-1	Seq: 45		10:45:53 21 Dec 1994 ICP		
Ag1	4.986	ppm	.7736 %	5.028	4.953	4.975		
Al3	5.010	ppm	.6746 %	5.036	4.972	5.021		
As2	5.202	ppm	3.306 %	5.363	5.221	5.021		
Ba1	4.909	ppm	1.059 %	4.964	4.860	4.903		
Ca3	53.26	ppm	.3016 %	53.43	53.11	53.25		
Cd1	5.426	ppm	.0667 %	5.425	5.423	5.430		
Cr4	5.344	ppm	.4166 %	5.364	5.320	5.348		
Fe2	5.293	ppm	.5173 %	5.313	5.262	5.305		
Mg4	53.95	ppm	.3937 %	54.17	53.75	53.94		
Pb1	5.585	ppm	1.128 %	5.647	5.522	5.587		
Se4	5.453	ppm	1.411 %	5.515	5.476	5.367		
*** Sample ID: CCB			21-1	Seq: 46		10:49:07 21 Dec 1994 ICP		
Ag1	-.0011	L ppm	-137.8%	-.0020	-.0021	.0007		
Al3	-.0001	L ppm	-3213.%	.0019	.0021	-.0044		
As2	.0077	L ppm	341.8 %	-.0208	.0131	.0307		
Ba1	.0001	L ppm	110.1 %	-.0000	.0003	.0001		
Ca3	.0041	L ppm	88.44 %	.0040	.0079	.0005		
Cd1	-.0002	L ppm	-1424.%	-.0026	.0001	.0021		
Cr4	.0031	L ppm	17.28 %	.0025	.0032	.0036		
Fe2	.0093	L ppm	13.37 %	.0087	.0085	.0107		
Mg4	-.0243	L ppm	-109.3%	-.0301	-.0475	.0047		
Pb1	-.0042	L ppm	-331.9%	.0087	-.0191	-.0023		
Se4	-.0133	L ppm	-389.7%	-.0306	-.0543	.0449		
*** Sample ID: CRIF			21-1	Seq: 47		10:52:21 21 Dec 1994 ICP		
Ag1	.0178	ppm	5.436 %	.0186	.0180	.0167		
Al3	-.0001	L ppm	-34990%	-.0095	-.0176	.0269		
As2	-.0129	L ppm	-511.4%	-.0024	-.0837	.0472		
Ba1	-.0003	L ppm	-65.23%	-.0006	-.0002	-.0003		
Ca3	-.0001	L ppm	-2631.%	-.0010	-.0022	.0028		
Cd1	.0098	ppm	15.88 %	.0099	.0082	.0113		
Cr4	.0233	ppm	8.571 %	.0256	.0222	.0222		
Fe2	.0026	L ppm	37.64 %	.0037	.0022	.0019		
Mg4	-.0412	L ppm	-14.57%	-.0403	-.0476	-.0357		
Pb1	.1082	ppm	24.69 %	.1118	.1330	.0799		
Se4	.0620	L ppm	130.2 %	.0143	.0165	.1551		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICSAF		21-1	Seq: 49	10:55:33 21 Dec 1994 ICP				
Ag1	.0079 L	ppm	12.13 %	.0082	.0069	.0088		
Al3	494.9	ppm	.3092 %	496.2	493.2	495.2		
As2	.3824 L	ppm	47.21 %	.5822	.2310	.3339		
Ba1	-.0040 L	ppm	-2.950%	-.0041	-.0038	-.0040		
Ca3	526.5	ppm	.3508 %	526.8	528.2	524.6		
Cd1	.0038 L	ppm	87.64 %	.0076	.0019	.0019		
Cr4	-.0031 L	ppm	-40.98%	-.0044	-.0033	-.0018		
Fe2	195.4	ppm	.1764 %	195.6	195.6	195.0		
Mg4	569.5	ppm	.3743 %	570.2	571.2	567.1		
Pb1	.0090 L	ppm	586.3 %	.0659	-.0013	-.0377		
Se4	-.0224 L	ppm	-219.7%	.0144	-.0782	-.0033		
*** Sample ID: ICSABF		21-1	Seq: 50	10:58:42 21 Dec 1994 ICP				
Ag1	.9323	ppm	1.175 %	.9436	.9217	.9318		
Al3	480.7	ppm	1.175 %	484.5	474.2	483.4		
As2	.3065 L	ppm	28.93 %	.3260	.2097	.3838		
Ba1	.4640	ppm	1.322 %	.4677	.4569	.4674		
Ca3	521.0	ppm	.9534 %	526.8	517.9	518.4		
Cd1	1.015	ppm	1.033 %	1.027	1.012	1.007		
Cr4	.4924	ppm	.9947 %	.4980	.4899	.4891		
Fe2	192.4	ppm	.9057 %	194.2	190.8	192.2		
Mg4	559.1	ppm	.8854 %	564.8	555.8	556.6		
Pb1	1.002	ppm	4.049 %	1.037	.9573	1.012		
Se4	.0722 L	ppm	144.7 %	.0985	.1610	-.0429		
*** Sample ID: CCV		21-1	Seq: 51	11:01:51 21 Dec 1994 ICP				
Ag1	4.763	ppm	1.201 %	4.721	4.740	4.828		
Al3	4.785	ppm	1.569 %	4.749	4.734	4.871		
As2	4.910	ppm	2.819 %	4.883	4.787	5.060		
Ba1	4.664	ppm	1.395 %	4.611	4.644	4.736		
Ca3	52.58	ppm	.7486 %	52.37	52.33	53.03		
Cd1	5.336	ppm	.8000 %	5.310	5.313	5.385		
Cr4	5.236	ppm	.8229 %	5.210	5.212	5.286		
Fe2	5.205	ppm	1.025 %	5.170	5.179	5.266		
Mg4	52.45	ppm	.8364 %	52.30	52.11	52.95		
Pb1	5.526	ppm	.1145 %	5.522	5.533	5.522		
Se4	5.124	ppm	2.709 %	5.201	5.208	4.964		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: CCB			21-1	Seq: 53		11:05:00 21 Dec 1994 ICP		
Ag1	-.0005	L ppm	-224.3%	.0004	-.0019	-.0001		
Al3	.0125	L ppm	40.90 %	.0068	.0140	.0167		
As2	-.0266	L ppm	-228.1%	-.0480	-.0738	.0419		
Ba1	.0001	L ppm	248.6 %	.0003	.0002	-.0002		
Ca3	.0103	L ppm	43.83 %	.0154	.0068	.0087		
Cd1	.0001	L ppm	2072. %	-.0019	.0001	.0020		
Cr4	.0008	L ppm	97.24 %	.0015	.0011	-.0001		
Fe2	.0280	L ppm	3.592 %	.0291	.0271	.0278		
Mg4	-.0009	L ppm	-3282.%	-.0361	.0161	.0172		
Pb1	-.0138	L ppm	-135.9%	-.0304	.0066	-.0176		
Se4	-.0106	L ppm	-973.3%	-.1166	-.0037	.0886		

PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/21/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Ag water samples		MDL:0.100			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	U	U	Low	NC	water	1	---	---	
As water samples		MDL:0.500			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	.588	.644	Low	9.1	water	1	Y	---	
Ba water samples		MDL:1.00			unit: mg/L				
4954-1TC	1.20	1.12	Low	6.9	water	1	Y	---	
4988-1TC	2.13	2.12	Low	0.5	water	1	Y	---	
Cd water samples		MDL:0.100			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	U	U	Low	NC	water	1	---	---	
Cr water samples		MDL:0.100			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	U	U	Low	NC	water	1	---	---	
Pb water samples		MDL:0.100			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	U	U	Low	NC	water	1	---	---	

(continued)
PRECISION DUPLICATE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

Job #	Original Result	Analytic Result #2	High or Low	Rel. % Diff.	Matrix	Dilut'n	In Limits Low	In Limits High	Data Flag
Se water samples		MDL:0.500			unit: mg/L				
4954-1TC	U	U	Low	NC	water	1	---	---	
4988-1TC	U	U	Low	NC	water	1	---	---	

MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/21/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Ag water samples		MDL:0.100		unit: mg/L		[spk sol.]=500 mg/L		
4954-1TC	U	1.00	100.0	5.00	4.24	84.8	Y	
4988-1TC	U	1.00	100.0	5.00	4.68	93.6	Y	
As water samples		MDL:0.500		unit: mg/L		[spk sol.]=500 mg/L		
4954-1TC	U	1.00	100.0	5.00	5.49	109.8	Y	
4988-1TC	.588	1.00	100.0	5.00	6.31	114.4	Y	
Ba water samples		MDL:1.00		unit: mg/L		[spk sol.]=500 mg/L		
4954-1TC	1.20	1.00	100.0	5.00	5.65	89.0	Y	
4988-1TC	2.13	1.00	100.0	5.00	6.76	92.6	Y	
Cd water samples		MDL:0.100		unit: mg/L		[spk sol.]=100 mg/L		
4954-1TC	U	1.00	100.0	1.00	.976	97.6	Y	
4988-1TC	U	1.00	100.0	1.00	1.08	108.0	Y	
Cr water samples		MDL:0.100		unit: mg/L		[spk sol.]=500 mg/L		
4954-1TC	U	1.00	100.0	5.00	4.87	97.4	Y	
4988-1TC	U	1.00	100.0	5.00	5.21	104.2	Y	
Pb water samples		MDL:0.100		unit: mg/L		[spk sol.]=500 mg/L		
4954-1TC	U	1.00	100.0	5.00	4.96	99.2	Y	
4988-1TC	U	1.00	100.0	5.00	5.44	108.8	Y	

(continued)
MATRIX SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

Job #	Original Result	mls. of spk added	Sample Vol/Wgt	mg/L of Spike	Spiked Sample	Percent Recover	In Limits (y or n)	Data Flag
Se water samples		MDL:0.500		unit: mg/L		[spk sol.]=250 mg/L		
4954-1TC	U	1.00	100.0	2.50	2.57	102.8	Y	
4988-1TC	U	1.00	100.0	2.50	2.66	106.4	Y	

000203

BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ALYST: c. kutzer
ATE: 12/21/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Ag	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	5.000	4.74	94.8	Y	
Blk Spike	0.100	1.00	100.0	5.000	4.63	92.6	Y	
As	MDL:0.500			unit: mg/L				
Blk Spike	0.500	1.00	100.0	5.000	5.52	110.4	Y	
Blk Spike	0.500	1.00	100.0	5.000	5.46	109.2	Y	
Ba	MDL:1.00			unit: mg/L				
Blk Spike	1.00	1.00	100.0	5.000	5.33	106.6	Y	
Blk Spike	1.00	1.00	100.0	5.000	4.89	97.8	Y	
Cd	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	1.000	1.09	109.0	Y	
Blk Spike	0.100	1.00	100.0	1.000	1.10	110.0	Y	
Cr	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	5.000	5.24	104.8	Y	
Blk Spike	0.100	1.00	100.0	5.000	5.33	106.6	Y	
Pb	MDL:0.100			unit: mg/L				
Blk Spike	0.100	1.00	100.0	5.000	5.54	110.8	Y	
Blk Spike	0.100	1.00	100.0	5.000	5.47	109.4	Y	

(continued)
BLANK SPIKE ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

	Blk Ave. Less Than (mg/L)	mls. of spk added (mg/L)	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Data Flag
Se	MDL:0.500			unit: mg/L				
Blk Spike	0.500	1.00	100.0	2.500	2.57	102.8	Y	
Blk Spike	0.500	1.00	100.0	2.500	2.66	106.4	Y	

REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

LYST: c. kutzer
ATE: 12/21/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Ag	unit: mg/L			
Ref Std	5.00	4.87	97.4	Y
Ref Std	5.00	4.77	95.4	Y
Ref Std	5.00	4.99	99.8	Y
As	unit: mg/L			
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.11	102.2	Y
Ref Std	5.00	5.20	104.0	Y
Ba	unit: mg/L			
Ref Std	5.00	4.84	96.8	Y
Ref Std	5.00	4.77	95.4	Y
Ref Std	5.00	4.91	98.2	Y
Cd	unit: mg/L			
Ref Std	5.00	5.13	102.6	Y
Ref Std	5.00	5.26	105.2	Y
Ref Std	5.00	5.43	108.6	Y
Cr	unit: mg/L			
Ref Std	5.00	5.16	103.2	Y
Ref Std	5.00	5.30	106.0	Y
Ref Std	5.00	5.34	106.8	Y
Pb	unit: mg/L			
Ref Std	5.00	5.22	104.4	Y
Ref Std	5.00	5.40	108.0	Y
Ref Std	5.00	5.59	111.8	N - okay, samples all <PQL

000208

(continued)
REFERENCE STANDARD ICP METALS QUALITY CONTROL WORKSHEET

ANALYST: c. kutzer
DATE: 12/21/94

	True Valu	Result (mg/L)	% Recovery	In Limits (y/n)
Se	unit: mg/L			
Ref Std	5.00	5.18	103.6	Y
Ref Std	5.00	5.03	100.6	Y
Ref Std	5.00	5.45	109.0	Y

MERCURY/CR+6 ANALYSIS DATA SHEET

Wave Length 253.7 Lamp Voltage _____ Lamp Current 4MA

Date 12/21/94 Analyst: L. Nowicki Method No.: Hg: 7470 Cr+6: 7471 ; 7197

STANDARD CALIBRATION

Standard	Conc. ug/ml	Absor.	Actual Conc. ug/ml	Absor.	Actual Conc. ug/ml	Absor.	Actual Conc. ug/ml	
Blank	0.000	[illegible]						1
Std #1	0.0005	0.029						2
Std #2	0.001	0.058						3
Std #3	0.002	0.108						4
Std #4	0.005	0.275						5
Std #5	0.010	0.549						6

START TIME: 13:30

Correlation Coefficient 0.9999 Signature: L. Nowicki

Sample ID	Absorb.	Initial Conc.ug/ml	Init. Vol./wt.	Final Volume	Dil	Final Conc. ug/ml : ug/g	Description	
ICV	0.133	0.00330	100	100ml		0.00330	110%	7
ICB	0.004	<0.00020				<0.00020		8
CRI	0.028	0.00049				0.00049	122%	9
PB	0.005	<0.00020				<0.00020		10
LCS	0.059	0.00106				0.00106	106%	11
CCV	0.172	0.00312				0.00312	104%	12
CCB	0.005	<0.00020	↓			<0.00020		13
TCLP BLK	0.005	<0.00020	10ml			<0.00200		14
BS	0.045	0.00080				0.00080	80%	15
5043-5	0.004	<0.00020				<0.00200		16
-5DUP	0.004	<0.00020				<0.00200		17
-5SPK	0.042	0.00746				0.00746	75%	18
5005-1	0.005	<0.00020				<0.00200		19
4654-1	0.002	<0.00020	↓			~~<0.00020~~ <0.00200		20
BLKHg	0.002	<0.00020	100ml			<0.00020		21
4649-1	0.036	0.00636				0.00636		23
4641-1	0.018	0.00307			2	0.00615		25
CCV	0.151	0.00274				0.00274	91%	24
CCB	0.004	<0.00020	↓	↓		<0.00020		25
LCSS	0.144	0.00261	0.22		10	1.26	23, last 5%	26
5053-1	0.005	<0.00020	0.23	↓	10	<0.100	Sample too dry to report with high MDL	27
CCV	0.164	0.00297	100	100		0.00297	99%	
CCB	0.004	<0.00020	↓	↓		<0.00020		

000000

METALS (DIRECT ASPIRATION) QUALITY CONTROL WORKSHEET

Parameter:Hg Analyst:L.NOWICKI Date: 12/21 1990

A.) Linear Regression (if applicable):

1) Number of Stds. used: N.A. 3) Y-intercept: N.A.

2) Corr. Coefficient: 0.999 4) Slope: N.A.

B.) Precision duplicates (as Relative Percent Deviation - RPD)

MDL = 0.0002 Low Level = <5xMDL High Level = >=5xMDL

Job #	Original Result (mg/L)	Analytic Result #2 (mg/L)	High or Low Level	Rel. % Diff. (RPD)	Matrix	Dilut'n	In Limits (y or n) Low	High	Dat Fla
R/5048-5	U	U	Low	N C	water	1	----	----	

C.) Spiked Recovery (one for every ten samples run)

Job #	Original Result (mg/L)	mls. of 0.1 mg/L spk added	Sample Volume (mls)	mg/L of Spike	Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Dat Fla
R/5048-5	U	1.00	10.0	0.010	0.01	74.6	Y	

000209

METALS (DIRECT ASPIRATION) QUALITY CONTROL WORKSHEET

Parameter:Hg L.NOWICKI Date: 12/21

D.) Blank Spike Recovery (one for every ten samples run)

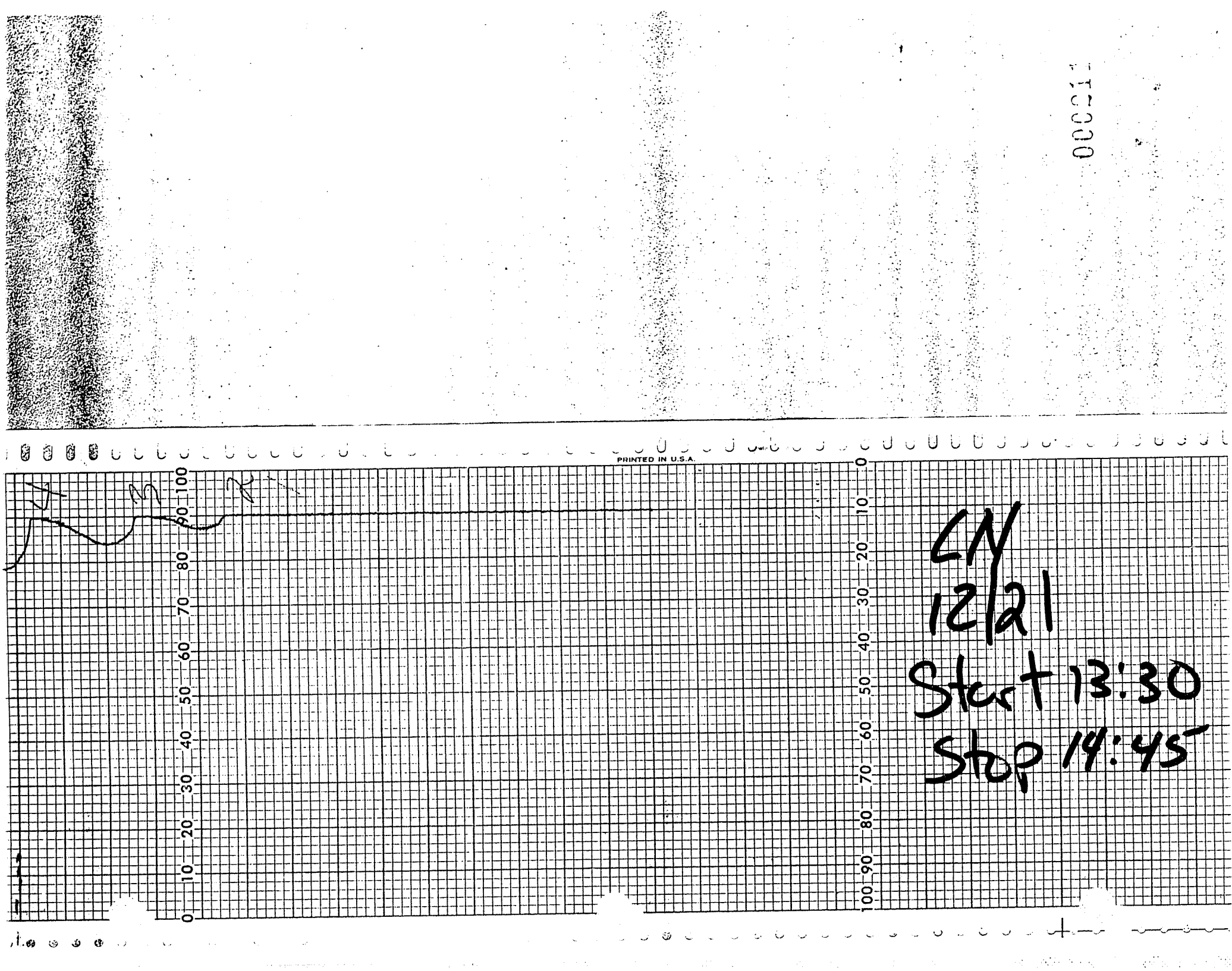
Job #	(B) Blank Average (mg/L) Less Than	mls. of 0.1 mg/L spk added	Sample Volume (mls)	(C) mg/L of Spike	(A) Value Spiked Sample (mg/L)	Percent Recover	Within Limits (y or n)	Dat Fla
Blk Spk	0.000	1.00	100	0.001	0.001	106.0	Y	
Blk Spk	0.000	1.00	10.0	0.010	0.008	80.0	Y	

E. Reference Standard Recovery:

	True Valu	Result (mg/L)	% Recovery	W/in Limits (y or n)	Dat Fla
Ref Std	0.003	0.003	110.0	Y	
Ref Std	0.003	0.003	104.0	Y	
Ref Std	0.003	0.003	91.3	Y	
Ref Std	0.003	0.003	99.0	Y	

000210

NOTES:
1. All QC calculations to 3 sig. fig.
3. Sample duplicates out of limits (on Ave.) disqualify run.
3. Blank spikes out of limits (on Ave.) disqualify run.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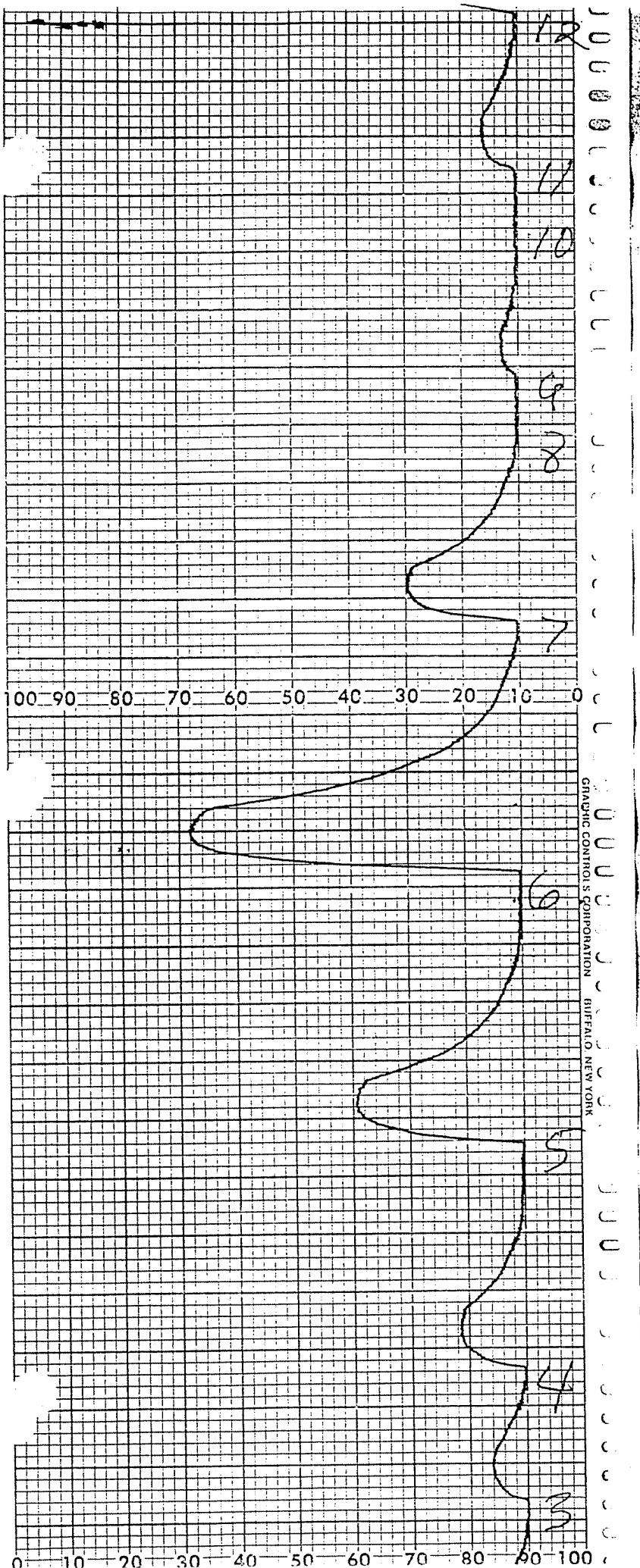
CN
12/21
Start 13:30
Stop 14:45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11
10
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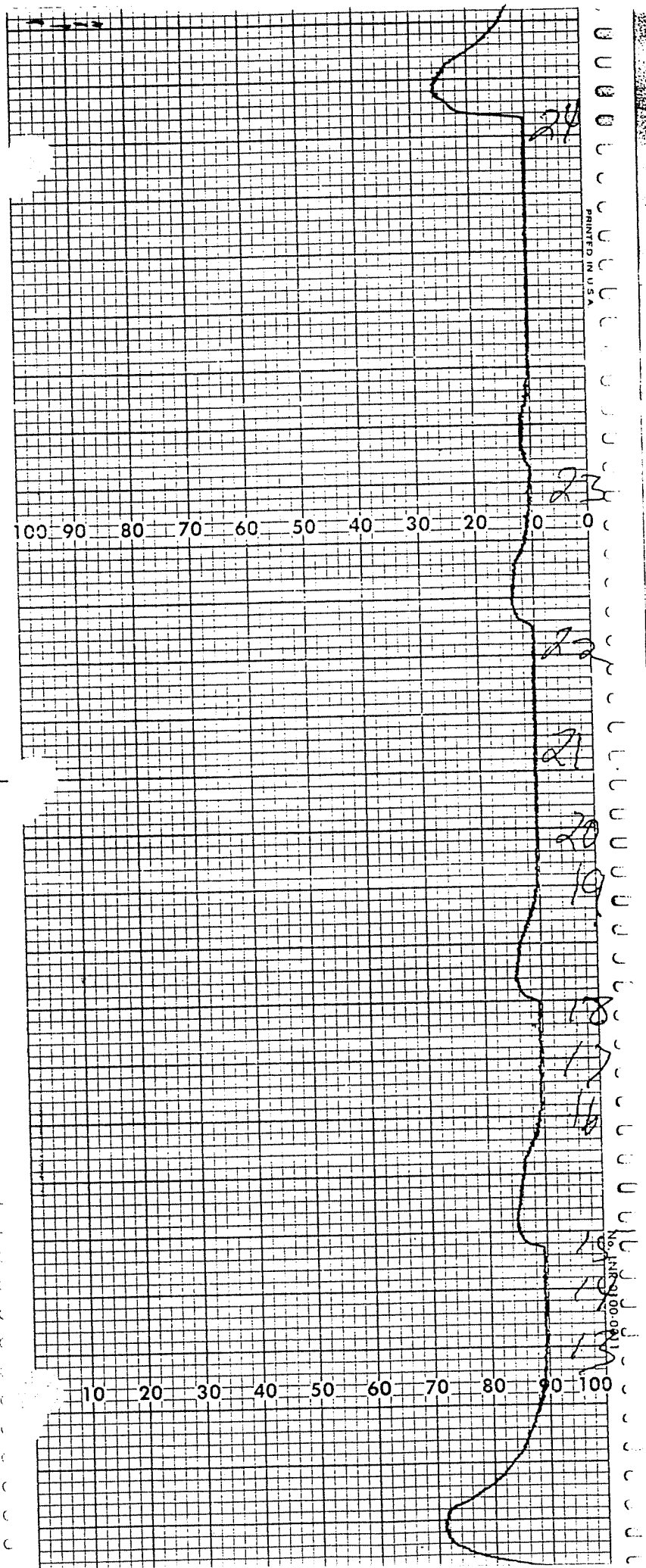
GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK

000212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No. NR-000-001

000219

ROLS CORPORATION BUFFALO, NEW YORK
0 10 20 30 40 50 60 70 80 90 100
PRINTED

GC/MS DATA SHEET

FILE XDF421

LAMPLE R94/05048-001
EXT 12/19/94
E ANALY 12/21/94
DILUTION 50
DATA FILE XDF421
MS NO. MS#4 .87

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg
Pyridine	625ZZL	50000 U
N-Nitrosodimethylamine	625A	25000 U
Aniline	HSL50	25000 U
Phenol	625ZU	50000 U
bis(-2-Chloroethyl)Ether	625B	25000 U
2-Chlorophenol	625ZV	50000 U
1,3-Dichlorobenzene	625C	25000 U
1,4-Dichlorobenzene	625D	25000 U
1,2-Dichlorobenzene	625E	25000 U
Benzyl Alcohol	HSL51	25000 U
2,2'-oxybis(1-Chloropropane)	625F	25000 U
2-Methylphenol	HSL46	50000 U
N-Nitroso-Di-n-propylamine	625G	25000 U
Hexachloroethane	625H	25000 U
4-Methylphenol	HSL47	50000 U
Nitrobenzene	625I	25000 U
Isophorone	625J	25000 U
Nitrophenol	625ZW	50000 U
Benzoic acid	HSL48	250000 U
2,4-Dimethylphenol	625ZX	50000 U
bis(-2-Chloroethoxy)Methane	625K	25000 U
2,4-Dichlorophenol	625ZY	50000 U
1,2,4-Trichlorobenzene	625L	25000 U
Naphthalene	625M	~~1300000~~ 2,500,000
4-Chloroaniline	HSL52	25000 U
Hexachlorobutadiene	625N	25000 U
2-Methylnaphthalene	HSL53	~~880000~~ 1,400,000
4-Chloro-3-methylphenol	625ZZ	50000 U
Hexachlorocyclopentadiene	625O	25000 U
2,4,5-Trichlorophenol	HSL49	50000 U
2,4,6-Trichlorophenol	625ZZA	50000 U
2-Chloronaphthalene	625P	25000 U
2-Nitroaniline	HSL54	25000 U
Dimethyl Phthalate	625Q	25000 U
Acenaphthylene	625R	86000
3-Nitroaniline	HSL55	25000 U
Acenaphthene	625S	480000
2,4-Dinitrophenol	625ZZB	100000 U
Dibenzofuran	HSL56	66000
4-Nitrophenol	625ZZC	100000 U
2,4-Dinitrotoluene	625T	25000 U
2,6-Dinitrotoluene	625U	25000 U
Diethylphthalate	625V	25000 U
4-Chlorophenyl-phenylether	625W	25000 U
Fluorene	625X	310000
4-Nitroaniline	HSL57	25000 U

SAMPLE R94/05048-001
DATE 12/21/94
[illegible]TION 50
[illegible]A FILE /DF421
MS NO. MS#4

FILE XDF421

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	100000 U
1,2 Diphenylhydrazine	625Y	25000 U
N-Nitrosodiphenylamine	625Z	25000 U
4-Bromophenyl-phenylether	625ZA	25000 U
Hexachlorobenzene	625ZB	25000 U
Pentachlorophenol	625ZZE	100000 U
Phenanthrene	625ZC	790000
Anthracene	625ZD	360000
Carbazole	HSL70	25000 U
Di-n-Butylphthalate	625ZE	25000 U
Fluoranthene	625ZG	340000
Benzidine	625ZF	250000 U
Pyrene	625ZH	610000
Butyl benzyl phthalate	625ZI	25000 U
3,3'-Dichlorobenzidine	625ZJ	25000 U
Benzo(a)Anthracene	625ZK	210000
Bis(2-Ethylhexyl)Phthalate	625ZL	25000 U
Chrysene	625ZM	170000
Di-n-octyl phthalate	625ZN	25000 U
[illegible]zo(b)fluoranthene	625ZO	~~170000~~ 120000
[illegible]zo(k)Fluoranthene	625ZP	~~180000~~ 65000
Benzo(a)Pyrene	625ZQ	190000
Indeno(1,2,3-cd)Pyrene	625ZR	49000
Dibenz(a,h)anthracene	625ZS	25000 U
Benzo(g,h,i)Perylene	625ZT	67000

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	~~0~~ D
Phenol-d6	625ZZG	~~83~~
Nitrobenzene-d5	625ZZI	~~0~~
2-Fluorobiphenyl	625ZZJ	~~126~~
2,4,6-Tribromophenol	625ZZH	~~0~~
Terphenyl-d14	625ZZK	~~121~~

SURROGATE RECOVERY LIMITS

SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

QUANT REPORT

Operator ID: TODDB
Current File: DF421::D3
Data File: DF421::D5
Name: R94/3048-001 1/50
Misc: GEO2 8270 TCL

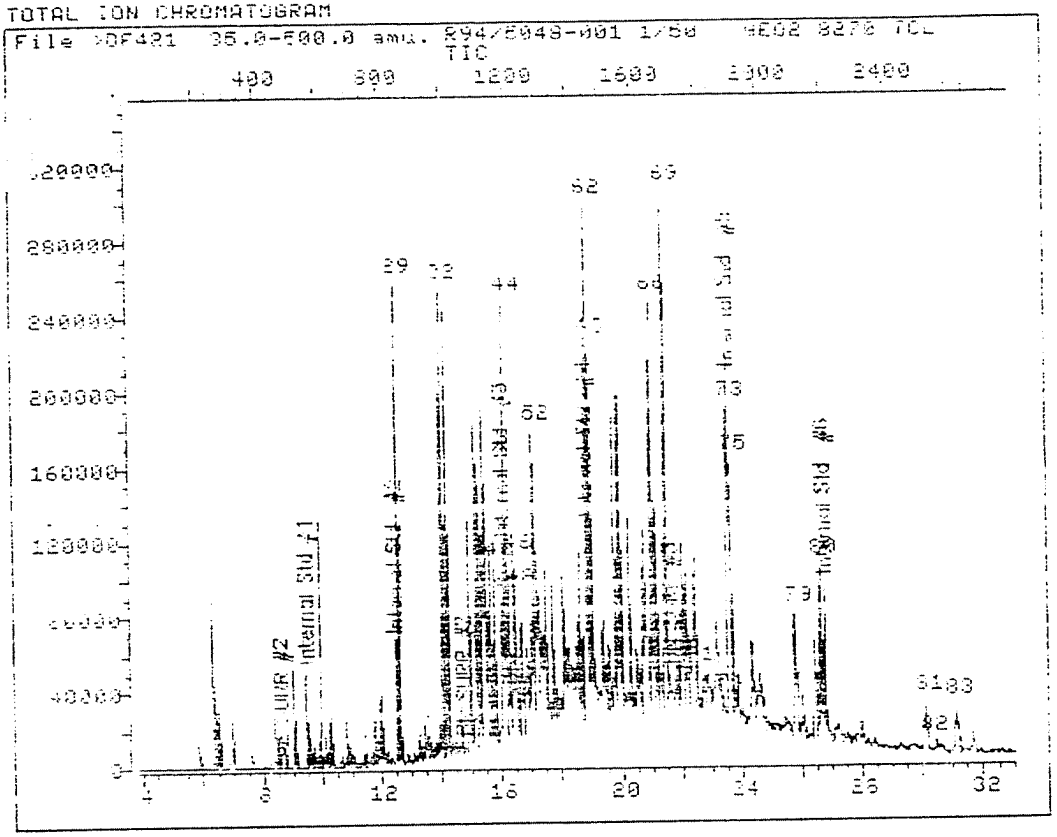
Quant Rev: 7
Quant Time: 941221 19:09
Injected at: 941221 18:35
Dilution Factor: 1.00000
Instrument ID: MS#4
BTL# 3

Data File: ID1XX::QT
Title: STC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:44
Last Qual Data: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	16620	40.00	mg/L	95
6)	Phenol-d6 (Surr)	8.58	99.0	1187	1.66	mg/L	94
18)	*d8-Naphthalene	12.48	136.0	70270	40.00	mg/L	96
19)	Naphthalene	12.54	128.0	486039	257.99	mg/L	98
32)	2-Methylnaphthalene	14.01	142.0	228435	176.52	mg/L	98
34)	*d10-Acenaphthene	16.03	164.0	48163	40.00	mg/L	94
39)	2-Fluorobiphenyl (Surr)	14.70	172.0	1950	1.26	mg/L	94
42)	Acenaphthylene	15.76	152.0	34532	17.32	mg/L	90
44)	Acenaphthene	16.11	153.0	148257	95.66	mg/L	96
46)	Dibenzofuran	16.41	168.0	27963	13.26	mg/L	89
47)	4-Nitrophenol	15.99	65.0	1412	3.90	mg/L	65
48)	2,4-Dinitrotoluene	16.48	165.0	1955	2.80	mg/L	91
52)	Fluorene	17.06	166.0	107014	62.91	mg/L	97
57)	*d10-Phenanthrene	18.80	188.0	91871	40.00	mg/L	95
	Phenanthrene	18.86	178.0	435558	157.73	mg/L	95
63)	Anthracene	18.94	178.0	192416	71.50	mg/L	97
64)	Carbazole	19.21	167.0	3298	1.18	mg/L	99
66)	Fluoranthene	20.59	202.0	236833	69.24	mg/L	82
67)	*d12-Chrysene	23.55	240.0	93619	40.00	mg/L	83
69)	Pyrene	21.43	202.0	389168	122.39	mg/L	96
70)	Terphenyl-d14 (Surr)	21.60	244.0	2839	1.21	mg/L	82
71)	Butyl benzyl phthalate	22.42	149.0	1592	.744	mg/L	85
73)	Benzo(a)Anthracene	23.52	228.0	134626	42.85	mg/L	91
74)	Bis(2-Ethylhexyl)Phthalate	23.36	149.0	1081	.351	mg/L	99
75)	Chrysene	23.59	228.0	104065	34.68	mg/L	93
76)	*d12-Perylene	26.72	264.0	105169	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.74	252.0	90833M	24.98	mg/L	82
79)	Benzo(k)Fluoranthene	25.76	252.0	43907M	13.01	mg/L	94
80)	Benzo(a)Pyrene	26.37	252.0	125232	38.43	mg/L	93
81)	Indeno(1,2,3-cd)Pyrene	30.03	276.0	38564	9.78	mg/L	83
82)	Dibenz(a,h)anthracene	30.19	278.0	3026	.968	mg/L	96
83)	Benzo(g,h,i)Perylene	31.07	276.0	45198	13.38	mg/L	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Name: R94/5048-001 1/50
Misc: GEO2 8270 TCL

Quant Output File: ^DF421::D3
Instrument ID: MS#4
BTL# 3

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 19:09
Injected at: 941221 18:35

QUANT REPORT

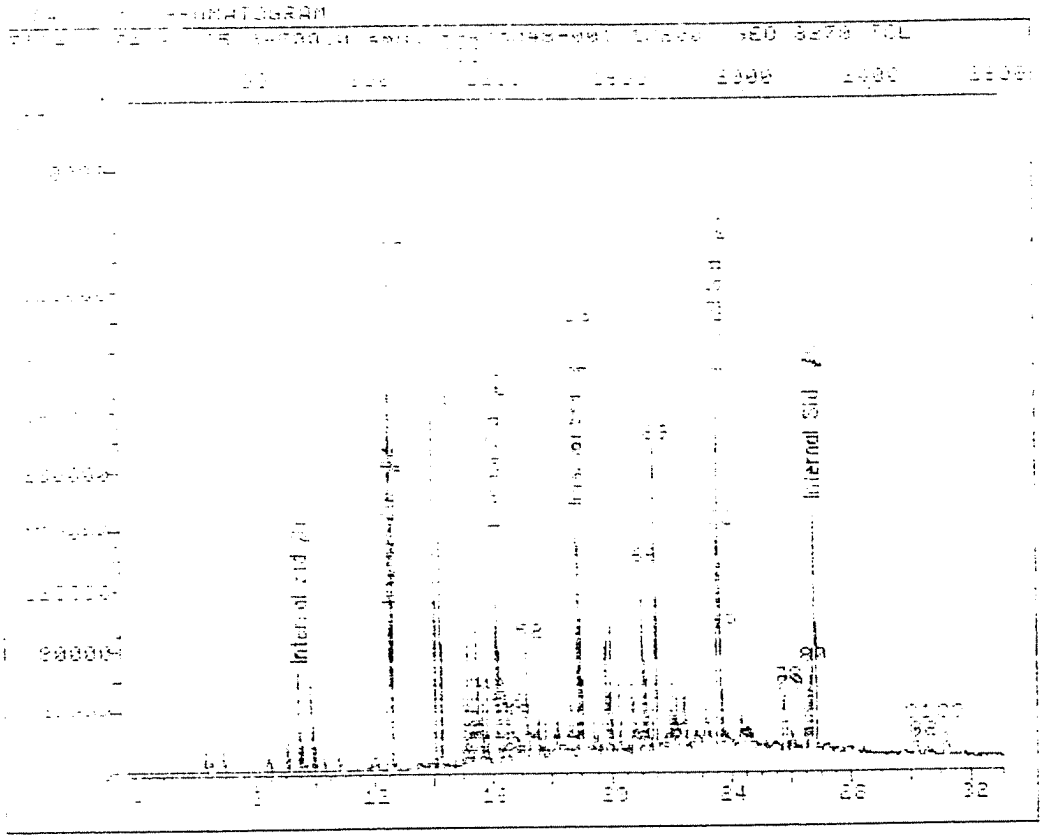
perator ID: LARRYN
urrent File: DF436::D3
Data File: DF436::D3
Sample: 894/5048-001 1/200
Misc: GEO 8270 TCL

Quant Rev: 7 Quant Time: 941222 14:34
Injected at: 941222 14:00
Dilution Factor: 1.00000
Instrument ID: MS#4
BTL# 1

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941111 10:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.47	152.0	19126	40.00	mg/L	94
19)	*d8-Napnthalene	12.48	136.0	88683	40.00	mg/L	91
20)	Naphthalene	12.64	128.0	311032	125.56	mg/L	98
32)	2-Methylnaphthalene	15.99	142.0	117289	69.32	mg/L	96
34)	*d10-Acenaphthene	16.04	164.0	60072	40.00	mg/L	93
42)	Acenaphthylene	15.77	152.0	11643	4.76	mg/L	91
44)	Acenaphthene	16.10	153.0	65340	32.82	mg/L	98
46)	Dibenzofuran	16.43	168.0	9499	3.57	mg/L	92
47)	4-Nitrophenol	16.00	65.0	1093	1.96	mg/L	87
48)	2,4-Dinitrotoluene	16.61	165.0	1204	1.41	mg/L	57
52)	Fluorene	17.06	166.0	42034	18.58	mg/L	96
55)	*d10-Phenanthrene	18.80	188.0	126722	40.00	mg/L	95
62)	Phenanthrene	18.85	178.0	240179	64.47	mg/L	95
	Anthracene	18.90	178.0	78529	20.96	mg/L	96
	Carbazole	19.21	167.0	1023	.281	mg/L	91
66)	Fluoranthene	20.99	202.0	108391	21.19	mg/L	84
67)	*d12-Chrysene	23.55	240.0	185315	40.00	mg/L	80
69)	Pyrene	21.41	202.0	205342	57.19	mg/L	97
70)	Benzo(a)Anthracene	23.53	228.0	68050	11.16	mg/L	91
75)	Chrysene	23.60	228.0	56469	10.49	mg/L	88
76)	*d12-Perylene	26.74	264.0	235383	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.76	252.0	44306M	8.81	mg/L	95
79)	Benzo(k)Fluoranthene	25.78	252.0	22036M	3.62	mg/L	93
80)	Benzo(a)Pyrene	26.56	252.0	70685	10.14	mg/L	89
81)	Indeno(1,2,3-cd)Pyrene	30.06	276.0	26584	3.04	mg/L	63
82)	Dibenz(a,h)anthracene	30.23	278.0	2509	.352	mg/L	86
83)	Benzo(g,h,i)Perylene	31.10	276.0	33139	4.80	mg/L	91

* Compound is ISTD



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Misc: GEO 8270 TCL BTL# 1

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941222 13:13

Operator ID: LARRYN
Quant Time : 941222 14:04
Injected at: 941222 14:00

GC/MS DATA SHEET

FILE XDF430

SAMPLE	[illegible]
EXT	12/13/94
ANALY	12/22/94
DILUTION	5
DATA FILE	XDF430
CB NO.	MS#4 .73

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

CAT. NO	NAME	DRY WEIGHT ug/Kg	
	Pyridine	625ZZL	4400 U
	N-Nitrosodimethylamine	625A	2200 U
	Aniline	HSL50	2200 U
	Phenol	625ZU	4400 U
	bis(-2-Chloroethyl)Ether	625B	2200 U
	2-Chlorophenol	625ZV	4400 U
	1,3-Dichlorobenzene	625C	2200 U
	1,4-Dichlorobenzene	625D	2200 U
	1,2-Dichlorobenzene	625E	2200 U
	Benzyl Alcohol	HSL51	2200 U
	2,2'-oxybis(1-Chloropropane)	625F	2200 U
	2-Methylphenol	HSL46	4400 U
	N-Nitroso-Di-n-propylamine	625G	2200 U
	Hexachloroethane	625H	2200 U
	4-Methylphenol	HSL47	4400 U
	Nitrobenzene	625I	2200 U
	Isophorone	625J	2200 U
	2-Nitrophenol	625ZW	4400 U
	Benzoic acid	HSL48	22000 U
	2,4-Dimethylphenol	625ZX	4400 U
	bis(-2-Chloroethoxy)Methane	625K	2200 U
	2,4-Dichlorophenol	625ZY	4400 U
	1,2,4-Trichlorobenzene	625L	2200 U
	Napnthalene	625M	7400
	4-Chloroaniline	HSL52	2200 U
	Hexachlorobutadiene	625N	2200 U
	2-Methylnaphthalene	HSL53	2200 U
	4-Chloro-3-methylphenol	625ZZ	4400 U
	Hexachlorocyclopentadiene	625O	2200 U
	2,4,5-Trichlorophenol	HSL49	4400 U
	2,4,6-Trichlorophenol	625ZZA	4400 U
	2-Chloronapnthalene	625P	2200 U
	2-Nitroaniline	HSL54	2200 U
	Dimethyl Phthalate	625Q	2200 U
	Acenaphthylene	625R	6800
	3-Nitroaniline	HSL55	2200 U
	Acenapnthene	625S	6300
	2,4-Dinitrophenol	625ZZB	8900 U
	Dibenzofuran	HSL56	2200 U
	4-Nitrophenol	625ZZC	8900 U
	2,4-Dinitrotoluene	625T	2200 U
	2,6-Dinitrotoluene	625U	2200 U
	Diethylphthalate	625V	2200 U
	4-Chlorophenyl-phenylether	625W	2200 U
	Fluorene	625X	6000
	4-Nitroaniline	HSL57	2200 U

SAMPLE R94/05048-002 FILE XDF430
DATE 12/22/94
UTION 5
.TA FILE >DF430
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	8900 U
1,2 Diphenylhydrazine	625Y	2200 U
N-Nitrosodiphenylamine	625Z	2200 U
4-Bromophenyl-phenylether	625ZA	2200 U
Hexachlorobenzene	625ZB	2200 U
Pentachlorophenol	625ZZE	8900 U
Phenanthrene	625ZC	6100
Anthracene	625ZD	4300
Carbazole	HSL70	2200 U
Di-n-Butylphthalate	625ZE	2400
Fluoranthene	625ZG	18000
Benzidine	625ZF	22000 U
Pyrene	625ZH	25000
Butyl benzyl phthalate	625ZI	2200 U
3,3'-Dichlorobenzidine	625ZJ	2200 U
Benzo(a)Anthracene	625ZK	8700
Bis(2-Ethylhexyl)Phthalate	625ZL	2200 U
Chrysene	625ZM	7400
Di-n-octyl phthalate	625ZN	2200 U
zo(b)fluoranthene	625ZO	~~13000~~ 9100
.zo(k)Fluoranthene	625ZP	~~14000~~ 3600
Benzo(a)Pyrene	625ZQ	7500
Indeno(1,2,3-cd)Pyrene	625ZR	2200 U
Dibenz(a,h)anthracene	625ZS	2200 U
Benzo(g,h,i)Perylene	625ZT	2200 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	93
Phenol-d6	625ZZG	97
Nitrobenzene-d5	625ZZI	71
2-Fluorobiphenyl	625ZZJ	113
2,4,6-Tribromophenol	625ZZH	93
Terphenyl-d14	625ZZK	114

SURROGATE RECOVERY LIMITS

SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

QUANT REPORT

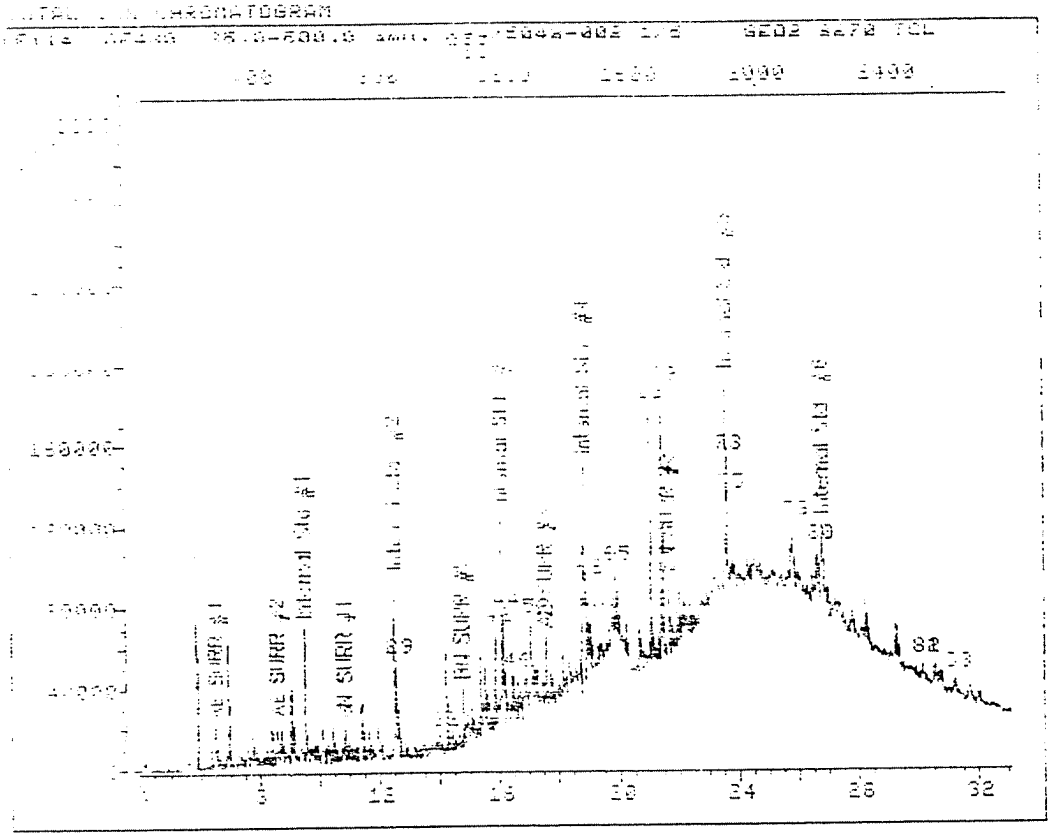
Operator ID: TODDB
Output File: [illegible]DF450::D5
Data File: [illegible]DF450::D5
Lab ID: R94/5048-002 1/5
Misc: GEO2 8270 TCL

Quant Rev: 7 Quant Time: 941212 01:59
Injected at: 941211 01:25
Dilution Factor: 1.00000
Instrument ID: MS#4
BTL#12

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941130 13:40 Last Cal Date: 941201 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	xd4-1,4-Dichlorobenzene	9.46	152.0	17368	40.00	mg/L	94
4)	2-Fluorophenol (Surr)	8.51	112.0	9232	18.74	mg/L	88
6)	Phenol-d6 (Surr)	8.57	99.0	14569	19.61	mg/L	94
19)	xd8-Naphthalene	12.47	136.0	74195	40.00	mg/L	97
20)	Nitrobenzene-d5 (Surr)	10.83	82.0	6334	7.19	mg/L	87
39)	Naphthalene	12.51	128.0	32969	16.57	mg/L	97
51)	2-Methylnaphthalene	13.98	142.0	4417	3.25	mg/L	98
54)	xd10-Acenapnthene	16.03	164.0	46742	40.00	mg/L	96
59)	2-Fluorobiphenyl (Surr)	14.72	172.0	16961	11.30	mg/L	95
62)	Acenaphthylene	15.77	152.0	29474	15.23	mg/L	94
64)	Acenaphthene	16.09	153.0	21361	14.20	mg/L	96
66)	Dibenzofuran	16.42	168.0	4209	2.06	mg/L	86
82)	Fluorene	17.06	166.0	22327	13.52	mg/L	99
[illegible]	2,4,6-Tribromophenol (Surr)	17.30	329.7	5779	18.58	mg/L	96
[illegible]	xd10-Phenanthrene	18.79	188.0	87674	40.00	mg/L	92
92)	Phenanthrene	18.83	178.0	36073	13.69	mg/L	95
93)	Anthracene	18.93	178.0	24828	9.67	mg/L	89
94)	Carbazole	19.22	167.0	3186	1.20	mg/L	95
95)	Di-n-Butylphthalate	19.76	149.0	23004	5.34	mg/L	97
96)	Fluoranthene	20.39	202.0	134964	41.35	mg/L	85
97)	xd12-Chrysene	23.55	240.0	72051	40.00	mg/L	82
[illegible]	Pyrene	21.42	202.0	136953	35.96	mg/L	96
70)	Terphenyl-d14 (Surr)	21.61	244.0	20606	11.37	mg/L	77
73)	Benzo(a)Anthracene	23.53	228.0	47355	19.59	mg/L	95
75)	Chrysene	23.60	228.0	38518	16.68	mg/L	95
76)	xd12-Perylene	26.74	264.0	55376	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.76	252.0	39276M	20.51	mg/L	89
79)	Benzo(k)Fluoranthene	25.79	252.0	14494M	8.16	mg/L	99
80)	Benzo(a)Pyrene	26.59	252.0	28866	16.82	mg/L	91
81)	Indeno(1,2,3-cd)Pyrene	30.09	276.0	9893	4.77	mg/L	75
82)	Dibenz(a,h)anthracene	30.08	278.0	2372	1.44	mg/L	93
83)	Benzo(g,h,i)Perylene	31.12	276.0	8921	5.01	mg/L	95

x Compound is ISTD



Data File: >DF430::D5
Name: R94/5048-002 1/5
Misc: GEO2 8270 TCL

Quant Output File: `DF430::D3
Instrument ID: MS#4
BTL#12

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941222 01:59
Injected at: 941222 01:25

GC/MS DATA SHEET

FILE XDF423

SAMPLE	R94/03648-003	CLIENT:	
[illegible] E.T	12/19/94	REFERENCE:	
[illegible] E ANALY	12/21/94	LOCATION:	
DILUTION	50	DATE SAMPLED:	
DATA FILE	DF423	TIME SAMPLED:	
MS NO.	MS#4 .61		

COMPOUND NAME		DRY WEIGHT ug/Kg	
Pyridine	625ZZL	41000	U
N-Nitrosodimethylamine	625A	21000	U
Aniline	HSL50	21000	U
Phenol	625ZU	41000	U
bis(-2-Chloroethyl)Ether	625B	21000	U
2-Chlorophenol	625ZV	41000	U
1,3-Dichlorobenzene	625C	21000	U
1,4-Dichlorobenzene	625D	21000	U
1,2-Dichlorobenzene	625E	21000	U
Benzyl Alcohol	HSL51	21000	U
2,2'-oxybis(1-Chloropropane)	625F	21000	U
2-Methylphenol	HSL46	41000	U
N-Nitroso-Di-n-propylamine	625G	21000	U
Hexachloroethane	625H	21000	U
4-Methylphenol	HSL47	41000	U
Nitrobenzene	625I	21000	U
Isophorone	625J	21000	U
[illegible]itrophenol	625ZW	41000	U
[illegible]nzoic acid	HSL48	210000	U
2,4-Dimethylphenol	625ZX	41000	U
bis(-2-Chloroethoxy)Methane	625K	21000	U
2,4-Dichlorophenol	625ZY	41000	U
1,2,4-Trichlorobenzene	625L	21000	U
Naphthalene	625M	210000	
4-Chloroaniline	HSL52	21000	U
Hexachlorobutadiene	625N	21000	U
2-Methylnaphthalene	HSL53	140000	
4-Chloro-3-methylphenol	625ZZ	41000	U
Hexachlorocyclopentadiene	625O	21000	U
2,4,5-Trichlorophenol	HSL49	41000	U
2,4,6-Trichlorophenol	625ZZA	41000	U
2-Chloronaphthalene	625P	21000	U
2-Nitroaniline	HSL54	21000	U
Dimethyl Phthalate	625Q	21000	U
Acenaphthylene	625R	23000	
3-Nitroaniline	HSL55	21000	U
Acenaphthene	625S	130000	
2,4-Dinitrophenol	625ZZB	82000	U
Dibenzofuran	HSL56	21000	U
4-Nitrophenol	625ZZC	82000	U
2,4-Dinitrotoluene	625T	21000	U
2,6-Dinitrotoluene	625U	21000	U
[illegible]ethylphthalate	625V	21000	U
[illegible]chlorophenyl-phenylether	625W	21000	U
[illegible]luorene	625X	110000	
4-Nitroaniline	HSL57	21000	U

000223

GC/MS DATA SHEET PAGE 2

SAMPLE R94/05048-003 FILE XDF423
DATE 12/21/94
[illegible]TION 30
[illegible]TA FILE >DF423
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	82000 U
1,2 Diphenylhydrazine	625Y	21000 U
N-Nitrosodiphenylamine	625Z	21000 U
4-Bromophenyl-phenylether	625ZA	21000 U
Hexachlorobenzene	625ZB	21000 U
Pentachlorophenol	625ZZE	82000 U
Phenanthrene	625ZC	270000
Anthracene	625ZD	98000
Carbazole	HSL70	21000 U
Di-n-Butylphthalate	625ZE	21000 U
Fluoranthene	625ZG	110000
Benzidine	625ZF	210000 U
Pyrene	625ZH	180000
Butyl benzyl phthalate	625ZI	21000 U
3,3'-Dichlorobenzidine	625ZJ	21000 U
Benzo(a)Anthracene	625ZK	63000
Bis(2-Ethylhexyl)Phthalate	625ZL	21000 U
Chrysene	625ZM	52000
Di-n-octyl phthalate	625ZN	21000 U
[illegible]zo(b)fluoranthene	625ZO	~~54000~~ 36000
[illegible]nzo(k)Fluoranthene	625ZP	~~58000~~ 31000
Benzo(a)Pyrene	625ZQ	54000
Indeno(1,2,3-cd)Pyrene	625ZR	21000 U
Dibenz(a,h)anthracene	625ZS	21000 U
Benzo(g,h,i)Perylene	625ZT	21000 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	~~0~~ D
Phenol-d6	625ZZG	~~59~~
Nitrobenzene-d5	625ZZI	~~0~~
2-Fluorobiphenyl	625ZZJ	~~105~~
2,4,6-Tribromophenol	625ZZH	~~0~~
Terphenyl-d14	625ZZK	~~97~~

SURROGATE RECOVERY LIMITS

SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

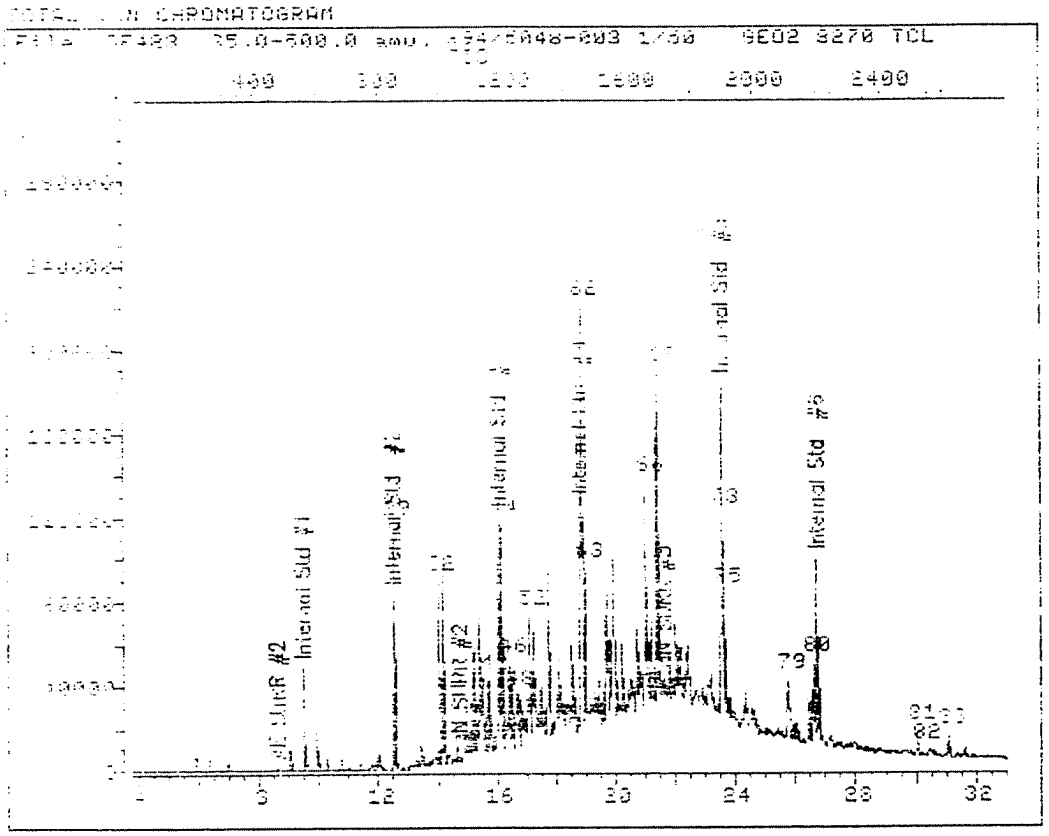
000220

perator ID: TODDB Quant Rev: 7 Quant Time: 941221 20:40
utput File: `DF423::D3 Injected at: 941221 20:06
File: /DF423::D5 Dilution Factor: 1.00000
e: R94/5048-003 1/50 Instrument ID: MS#4
isc: GEO2 8270 TCL BTL# 5

Data File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 17:40 Last Qual Date: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.44	152.0	17288	40.00	mg/L	93
5)	Phenol-d6 (Surr)	8.58	99.0	1035	1.39	mg/L	96
19)	*d8-Naphthalene	13.47	136.0	74283	40.00	mg/L	96
29)	Naphthalene	12.51	128.0	100871	50.65	mg/L	97
32)	2-Methylnaphthalene	13.98	142.0	45303	33.12	mg/L	99
34)	*d10-Acenaphthene	16.02	164.0	48474	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.71	172.0	1623	1.05	mg/L	94
42)	Acenaphthylene	15.75	152.0	11203	5.58	mg/L	91
44)	Acenaphthene	16.09	153.0	49975	32.04	mg/L	96
46)	Dibenzofuran	16.40	168.0	9058	4.27	mg/L	89
48)	2,4-Dinitrotoluene	16.60	165.0	1606	2.28	mg/L	56
52)	Fluorene	17.05	166.0	44241	25.84	mg/L	99
55)	*d10-Phenanthrene	18.78	188.0	96234	40.00	mg/L	90
57)	Phenanthrene	18.83	178.0	187305	64.75	mg/L	95
	Anthracene	18.92	178.0	67045	23.79	mg/L	95
64)	Carbazole	19.20	167.0	1955	.670	mg/L	90
66)	Fluoranthene	20.98	202.0	97391	27.18	mg/L	86
67)	*d12-Chrysene	23.53	240.0	103738	40.00	mg/L	83
69)	Pyrene	21.40	202.0	158221	44.90	mg/L	97
70)	Terphenyl-d14 (Surr)	21.59	244.0	2535	.671	mg/L	81
73)	Benzo(a)Anthracene	23.51	228.0	53217	15.29	mg/L	94
74)	Chrysene	23.58	228.0	42042	12.64	mg/L	92
76)	*d12-Peryiene	26.70	264.0	112597	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.73	252.0	33974M	8.73	mg/L	76
79)	Benzo(k)Fluoranthene	25.73	252.0	26990M	7.47	mg/L	96
80)	Benzo(a)Pyrene	26.55	252.0	45550	13.06	mg/L	94
81)	Indeno(1,2,3-cd)Pyrene	30.01	276.0	16116	3.82	mg/L	86
82)	Dibenz(a,h)anthracene	30.18	278.0	1593	.476	mg/L	94
83)	Benzo(g,h,i)Perylene	31.04	276.0	17826	4.93	mg/L	89

* Compound is ISTD



Data File: >DF423::D5 Quant Output File: ^DF423::D3
Name: R94/5048-003 1/50 Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 5

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 20:40
Injected at: 941221 20:06

GC/MS DATA SHEET

FILE XDF402

[illegible]MPLE	B94/05048-004	CLIENT:	
[illegible]EXT	12/20/94	REFERENCE:	
[illegible] ANALY	12/20/94	LOCATION:	
DILUTION	1	DATE SAMPLED:	
DATA FILE	XDF402	TIME SAMPLED:	
[illegible] NO.	MS#4		

COMPOUND NAME		UG/L
Pyridine	625ZZL	10 U
N-Nitrosodimethylamine	625A	5.0 U
Aniline	HSL50	5.0 U
Phenol	625ZU	10 U
bis(-2-Chloroethyl)Ether	625B	5.0 U
2-Chlorophenol	625ZV	10 U
1,3-Dichlorobenzene	625C	5.0 U
1,4-Dichlorobenzene	625D	5.0 U
1,2-Dichlorobenzene	625E	5.0 U
Benzyl Alcohol	HSL51	5.0 U
2,2'-oxybis(1-Chloropropane)	625F	5.0 U
2-Methylphenol	HSL46	10 U
N-Nitroso-Di-n-propylamine	625G	5.0 U
Hexachloroethane	625H	5.0 U
4-Methylphenol	HSL47	10 U
Nitrobenzene	625I	5.0 U
Isophorone	625J	5.0 U
[illegible]itrophenol	625ZW	10 U
[illegible]nzoic acid	HSL48	50 U
2,4-Dimethylphenol	625ZX	10 U
bis(-2-Chloroethoxy)Methane	625K	5.0 U
2,4-Dichlorophenol	625ZY	10 U
1,2,4-Trichlorobenzene	625L	5.0 U
Naphthalene	625M	5.0 U
4-Chloroaniline	HSL52	5.0 U
Hexachlorobutadiene	625N	5.0 U
2-Methylnaphthalene	HSL53	5.0 U
4-Chloro-3-methylphenol	625ZZ	10 U
Hexachlorocyclopentadiene	625O	5.0 U
2,4,5-Tricnlorophenol	HSL49	10 U
2,4,6-Trichlorophenol	625ZZA	10 U
2-Chloronapnthalene	625P	5.0 U
2-Nitroaniline	HSL54	5.0 U
Dimethyl Phtnalate	625Q	5.0 U
Acenaphthylene	625R	5.0 U
3-Nitroaniline	HSL55	5.0 U
Acenaphthene	625S	5.0 U
2,4-Dinitrophenol	625ZZB	20 U
Dibenzofuran	HSL56	5.0 U
4-Nitrophenol	625ZZC	20 U
2,4-Dinitrotoluene	625T	5.0 U
2,6-Dinitrotoluene	625U	5.0 U
[illegible]thylphthalate	625V	5.0 U
[illegible]Chlorophenyl-phenylether	625W	5.0 U
[illegible]luorene	625X	5.0 U
4-Nitroaniline	HSL57	5.0 U

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GC/MS DATA SHEET PAGE 2

SAMPLE R94/05048-004 FILE XDF402
DATE 12/20/94
DILUTION 1
DATA FILE >DF402
MS NO. MS#4

COMPOUND NAME		ug/L
4,6-Dinitro-2-methylphenol	625ZZD	20 U
1,2 Diphenylhydrazine	625Y	5.0 U
N-Nitrosodiphenylamine	625Z	5.0 U
4-Bromophenyl-phenylether	625ZA	5.0 U
Hexachlorobenzene	625ZB	5.0 U
Pentachlorophenol	625ZZE	20 U
Phenanthrene	625ZC	5.0 U
Anthracene	625ZD	5.0 U
Carbazole	HSL70	5.0 U
Di-n-Butylphthalate	625ZE	5.0 U
Fluoranthene	625ZG	5.0 U
Benzidine	625ZF	50 U
Pyrene	625ZH	5.0 U
Butyl benzyl phthalate	625ZI	5.0 U
3,3'-Dichlorobenzidine	625ZJ	5.0 U
Benzo(a)Anthracene	625ZK	5.0 U
Bis(2-Ethylhexyl)Phthalate	625ZL	5.0 U
Chrysene	625ZM	5.0 U
Di-n-octyl phthalate	625ZN	5.0 U
zo(b)fluoranthene	625ZO	5.0 U
nzo(k)Fluoranthene	625ZP	5.0 U
Benzo(a)Pyrene	625ZQ	5.0 U
Indeno(1,2,3-cd)Pyrene	625ZR	5.0 U
Dibenz(a,h)anthracene	625ZS	5.0 U
Benzo(g,h,i)Perylene	625ZT	5.0 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	34
Phenol-d6	625ZZG	24
Nitrobenzene-d5	625ZZI	65
2-Fluorobiphenyl	625ZZJ	64
2,4,6-Tribromophenol	625ZZH	90
Terphenyl-d14	625ZZK	66

SURROGATE RECOVERY LIMITS

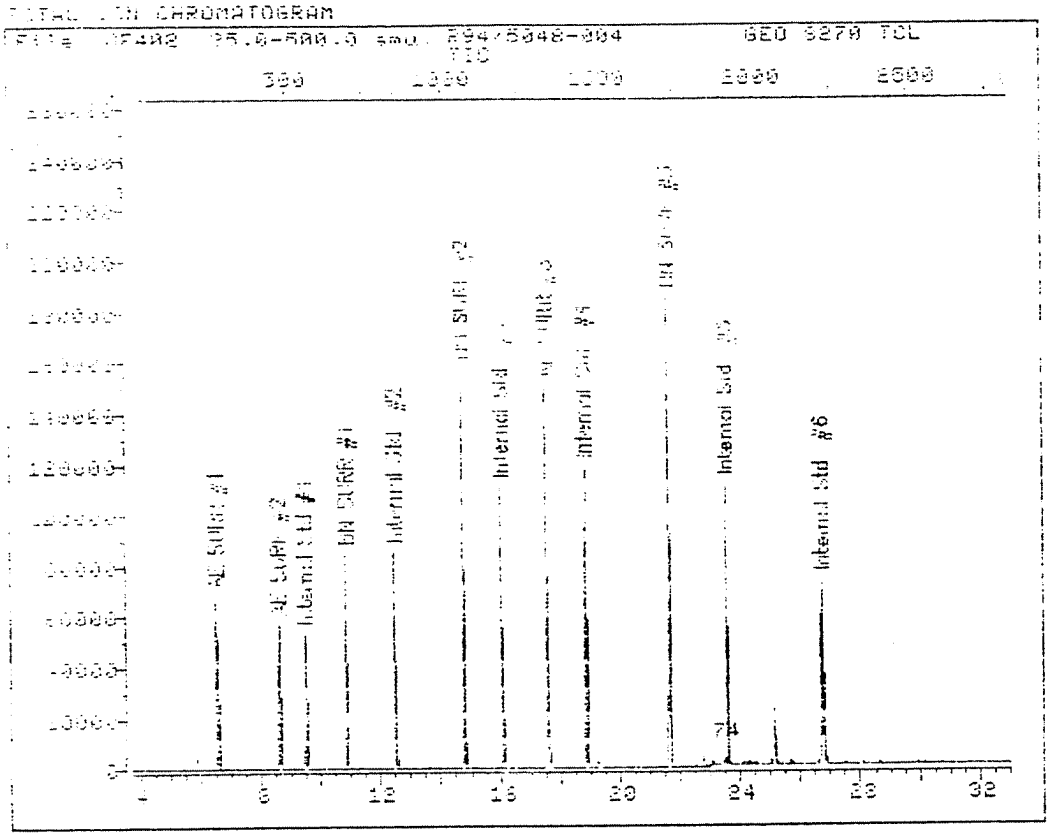
SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

perator ID: LARRYN Quant Rev: 7 Quant Time: 941220 19:37
utput File: \DF402::D3 Injected at: 941220 19:03
File: /DF402::D3 Dilution Factor: 1.00000
e: R94/5048-004 Instrument ID: MS#4
isc: GEO 5270 TCL BTL# 6

ID File: ID1KX::QT
itle: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
ast Calibration: 941220 18:40 Last Anal Time: 941220 18:40

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.46	152.0	17857	40.00	mg/L	95
4)	2-Fluorophenol (Surr)	6.51	112.0	38375	69.65	mg/L	90
6)	Phenol-d6 (Surr)	8.58	99.0	39058	49.33	mg/L	92
19)	*d8-Naphthalene	12.47	136.0	76787	40.00	mg/L	97
20)	Nitrobenzene-d5 (Surr)	10.85	82.0	56349	65.00	mg/L	86
34)	*d10-Acenaphthene	16.04	164.0	46851	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.73	172.0	101227	64.41	mg/L	94
54)	2,4,6-Tribromophenol (Surr)	17.52	329.7	46251	180.45	mg/L	96
55)	*d10-Phenanthrene	18.80	188.0	88016	40.00	mg/L	98
67)	*d12-Chrysene	23.55	240.0	86373	40.00	mg/L	87
70)	Terphenyl-d14 (Surr)	21.62	244.0	154170	66.78	mg/L	75
74)	Bis(2-Ethylhexyl)Phthalate	23.57	149.0	2859	.917	mg/L	92
76)	*d12-Perylene	26.73	264.0	89278	40.00	mg/L	85

Compound is ISTD



Data File: >DF402::D5
Name: R94/5048-004
Misc: GEO 8270 TCL

Quant Output File: ^DF402::D3
Instrument ID: MS#4

BTL# 5

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941220 12:40

Operator ID: LARRYN
Quant Time : 941220 19:37
Injected at: 941220 19:03

GC/MS DATA SHEET

FILE XDF424

AMPLE	R94/05048-006
EXT	12/19/94
E ANALY	12/21/94
ILUTION	50
ATA FILE	XDF424
IS NO.	MS#4 .86

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg	
Pyridine	625ZZL	39000	U
N-Nitrosodimethylamine	625A	19000	U
Aniline	HSL50	19000	U
Phenol	625ZU	39000	U
bis(-2-Chloroethyl)Ether	625B	19000	U
2-Chlorophenol	625ZV	39000	U
1,3-Dichlorobenzene	625C	19000	U
1,4-Dichlorobenzene	625D	19000	U
1,2-Dichlorobenzene	625E	19000	U
Benzyl Alcohol	HSL51	19000	U
2,2'-oxybis(1-Chloropropane)	625F	19000	U
2-Methylphenol	HSL46	39000	U
N-Nitroso-Di-n-propylamine	625G	19000	U
Hexachloroethane	625H	19000	U
4-Methylphenol	HSL47	39000	U
Nitrobenzene	625I	19000	U
Isophorone	625J	19000	U
Nitrophenol	625ZW	39000	U
Benzoic acid	HSL48	190000	U
2,4-Dimethylphenol	625ZX	39000	U
bis(-2-Chloroethoxy)Methane	625K	19000	U
2,4-Dichlorophenol	625ZY	39000	U
1,2,4-Trichlorobenzene	625L	19000	U
Naphthalene	625M	630000	
4-Chloroaniline	HSL52	19000	U
Hexachlorobutadiene	625N	19000	U
2-Methylnaphthalene	HSL53	400000	
4-Chloro-3-methylphenol	625ZZ	39000	U
Hexachlorocyclopentadiene	625O	19000	U
2,4,5-Trichlorophenol	HSL49	39000	U
2,4,6-Trichlorophenol	625ZZA	39000	U
2-Chloronaphthalene	625P	19000	U
2-Nitroaniline	HSL54	19000	U
Dimethyl Phthalate	625Q	19000	U
Acenaphthylene	625R	38000	
3-Nitroaniline	HSL55	19000	U
Acenaphthene	625S	230000	
2,4-Dinitrophenol	625ZZB	78000	U
Dibenzofuran	HSL56	27000	
4-Nitrophenol	625ZZC	78000	U
2,4-Dinitrotoluene	625T	19000	U
2,6-Dinitrotoluene	625U	19000	U
Diethylphtnalate	625V	19000	U
4-Chlorophenyl-phenylether	625W	19000	U
Fluorene	625X	140000	
4-Nitroaniline	HSL57	19000	U

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SAMPLE R94/05048-006 FILE XDF424
DATE 12/21/94
...JTION 50
...TA FILE >DF424
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	78000 U
1,2 Diphenylhydrazine	625Y	19000 U
N-Nitrosodiphenylamine	625Z	19000 U
4-Bromophenyl-phenylether	625ZA	19000 U
Hexachlorobenzene	625ZB	19000 U
Pentachlorophenol	625ZZE	78000 U
Phenanthrene	625ZC	390000
Anthracene	625ZD	160000
Carbazole	HSL70	19000 U
Di-n-Butylphthalate	625ZE	19000 U
Fluoranthene	625ZG	140000
Benzidine	625ZF	190000 U
Pyrene	625ZH	270000
Butyl benzyl phthalate	625ZI	19000 U
3,3'-Dichlorobenzidine	625ZJ	19000 U
Benzo(a)Anthracene	625ZK	84000
Bis(2-Ethylhexyl)Phthalate	625ZL	19000 U
Chrysene	625ZM	68000
Di-n-octyl phthalate	625ZN	19000 U
...zo(b)fluoranthene	625ZO	~~64000~~ 45000
...nzo(k)Fluoranthene	625ZP	~~69000~~ 33000
Benzo(a)Pyrene	625ZQ	75000
Indeno(1,2,3-cd)Pyrene	625ZR	20000
Dibenz(a,h)anthracene	625ZS	19000 U
Benzo(g,h,i)Perylene	625ZT	28000

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	~~0~~ D
Phenol-d6	625ZZG	~~79~~
Nitrobenzene-d5	625ZZI	~~0~~
2-Fluorobiphenyl	625ZZJ	~~116~~
2,4,6-Tribromophenol	625ZZH	~~0~~
Terphenyl-d14	625ZZK	~~92~~

SURROGATE RECOVERY LIMITS

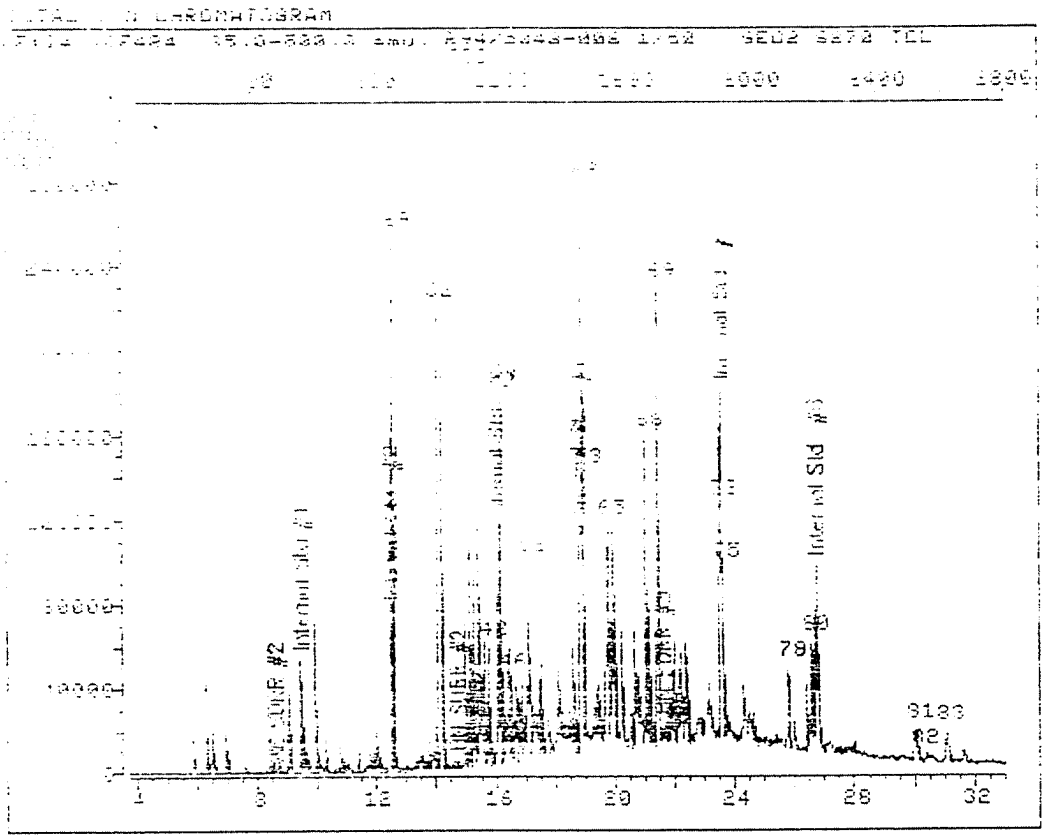
SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

Operator ID: TODDB Quant Rev: 7 Quant Time: 941111 11:26
Output File: DF424::D3 Injected at: 941111 10:52
Data File: DF424::D3 Dilution Factor: 1.00000
Name: R94/5048-006 1/50 Instrument ID: MS#4
Misc: SEC2 8270 TCL BTL# 6

ID File: ID1XX::QT
Title: STC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941110 17:40 Last Cal Date: 941031 15:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	17749	40.00	mg/L	93
2)	Phenol-d6 (Surr)	8.87	99.0	1207	1.58	mg/L	88
19)	*d8-Naphthalene	12.46	136.0	76428	40.00	mg/L	97
29)	Naphthalene	12.83	128.0	382562	162.30	mg/L	97
32)	2-Methylnaphthalene	13.99	142.0	144153	102.42	mg/L	99
34)	*d10-Acenaphthene	16.02	164.0	49707	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.71	172.0	1846	1.16	mg/L	92
42)	Acenaphthylene	15.75	152.0	20390	9.51	mg/L	92
44)	Acenaphthene	16.09	153.0	96729	60.47	mg/L	96
46)	Dibenzofuran	16.41	168.0	15397	7.07	mg/L	86
48)	2,4-Dinitrotoluene	16.09	165.0	1600	2.22	mg/L	93
52)	Fluorene	17.05	166.0	63684	36.27	mg/L	97
55)	*d10-Phenanthrene	18.78	188.0	96881	40.00	mg/L	93
56)	Phenanthrene	18.85	178.0	293812	100.89	mg/L	95
57)	Anthracene	18.93	178.0	115117	40.57	mg/L	98
64)	Carbazole	19.30	167.0	3005	1.02	mg/L	94
65)	Di-n-Butylphthalate	19.74	149.0	5062	1.66	mg/L	78
66)	Fluoranthene	20.98	202.0	133725	37.00	mg/L	85
67)	*d12-Chrysene	23.54	240.0	100836	40.00	mg/L	84
68)	Pyrene	21.40	202.0	338657	89.68	mg/L	96
70)	Terphenyl-d14 (Surr)	21.60	244.0	2349	.926	mg/L	88
73)	Benzo(a)Anthracene	22.51	228.0	72945	21.56	mg/L	94
75)	Chrysene	22.58	228.0	56694	17.34	mg/L	92
76)	*d12-Perylene	26.71	264.0	110911	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.74	252.0	44770M	11.67	mg/L	74
79)	Benzo(k)Fluoranthene	25.74	252.0	30523M	8.58	mg/L	94
80)	Benzo(a)Pyrene	26.56	252.0	66510	19.35	mg/L	94
81)	Indeno(1,2,3-cd)Pyrene	30.01	276.0	20951	5.04	mg/L	85
82)	Dibenz(a,h)anthracene	30.19	278.0	1913	.580	mg/L	93
83)	Benzo(g,h,i)Perylene	31.05	276.0	25459	7.14	mg/L	86

* Compound is ISTD



Data File: >DF424::D5 Quant Output File: ^DF424::D3
Name: R94/5048-006 1/50 Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 6

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 21:26
Injected at: 941221 20:52

GC/MS DATA SHEET

FILE XDF425

SAMPLE	R94/05048-007
EXT	12/19/94
E ANALY	12/21/94
DILUTION	1
DATA FILE	DF425
MS NO.	MS#4 .67

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg	
Pyridine	625ZZL	770	U
N-Nitrosodimethylamine	625A	380	U
Aniline	HSL50	380	U
Phenol	625ZU	770	U
Bis(-2-Chloroethyl)Ether	625B	380	U
2-Chlorophenol	625ZV	770	U
1,3-Dichlorobenzene	625C	380	U
1,4-Dichlorobenzene	625D	380	U
1,2-Dichlorobenzene	625E	380	U
Benzyl Alcohol	HSL51	380	U
2,2'-oxybis(1-Chloropropane)	625F	380	U
2-Methylphenol	HSL46	770	U
N-Nitroso-Di-n-propylamine	625G	380	U
Hexachloroethane	625H	380	U
4-Methylphenol	HSL47	770	U
Nitrobenzene	625I	380	U
Isophorone	625J	380	U
Nitrophenol	625ZW	770	U
Benzoic acid	HSL48	3800	U
2,4-Dimethylphenol	625ZX	770	U
Bis(-2-Chloroethoxy)Methane	625K	380	U
2,4-Dichlorophenol	625ZY	770	U
1,2,4-Trichlorobenzene	625L	380	U
Naphthalene	625M	380	U
4-Chloroaniline	HSL52	380	U
Hexachlorobutadiene	625N	380	U
2-Methylnaphthalene	HSL53	380	U
4-Chloro-3-methylphenol	625ZZ	770	U
Hexachlorocyclopentadiene	625O	380	U
2,4,5-Trichlorophenol	HSL49	770	U
2,4,6-Trichlorophenol	625ZZA	770	U
2-Chloronaphthalene	625P	380	U
2-Nitroaniline	HSL54	380	U
Dimethyl Phthalate	625Q	380	U
Acenaphthylene	625R	380	U
3-Nitroaniline	HSL55	380	U
Acenaphthene	625S	380	U
2,4-Dinitrophenol	625ZZB	1500	U
Dibenzofuran	HSL56	380	U
4-Nitrophenol	625ZZC	1500	U
2,4-Dinitrotoluene	625T	380	U
2,6-Dinitrotoluene	625U	380	U
Diethylphthalate	625V	380	U
4-Chlorophenyl-phenylether	625W	380	U
Fluorene	625X	380	U
4-Nitroaniline	HSL57	380	U

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SAMPLE R94/05048-007 FILE XDF425
DATE 12/21/94
[illegible]TION 1
[illegible]A FILE >DF425
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	1500 U
1,2 Diphenylhydrazine	625Y	380 U
N-Nitrosodiphenylamine	625Z	380 U
4-Bromophenyl-phenylether	625ZA	380 U
Hexachlorobenzene	625ZB	380 U
Pentachlorophenol	625ZZE	1500 U
Phenanthrene	625ZC	610
Anthracene	625ZD	380 U
Carbazole	HSL78	380 U
Di-n-Butylphthalate	625ZE	380 U
Fluoranthene	625ZG	1200
Benzidine	625ZF	3800 U
Pyrene	625ZH	1000
Butyl benzyl phthalate	625ZI	380 U
3,3'-Dichlorobenzidine	625ZJ	380 U
Benzo(a)Anthracene	625ZK	620
Bis(2-Ethylhexyl)Phthalate	625ZL	380 U
Chrysene	625ZM	650
Di-n-octyl phthalate	625ZN	380 U
[illegible]zo(b)fluoranthene	625ZO	~~1100~~ 960
[illegible]zo(k)Fluoranthene	625ZP	~~1200~~ 490
Benzo(a)Pyrene	625ZQ	540
Indeno(1,2,3-cd)Pyrene	625ZR	380 U
Dibenz(a,h)anthracene	625ZS	380 U
Benzo(g,h,i)Perylene	625ZT	380 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	91
Phenol-d6	625ZZG	90
Nitrobenzene-d5	625ZZI	76
2-Fluorobiphenyl	625ZZJ	96
2,4,6-Tribromophenol	625ZZH	96
Terphenyl-d14	625ZZK	88

SURROGATE RECOVERY LIMITS

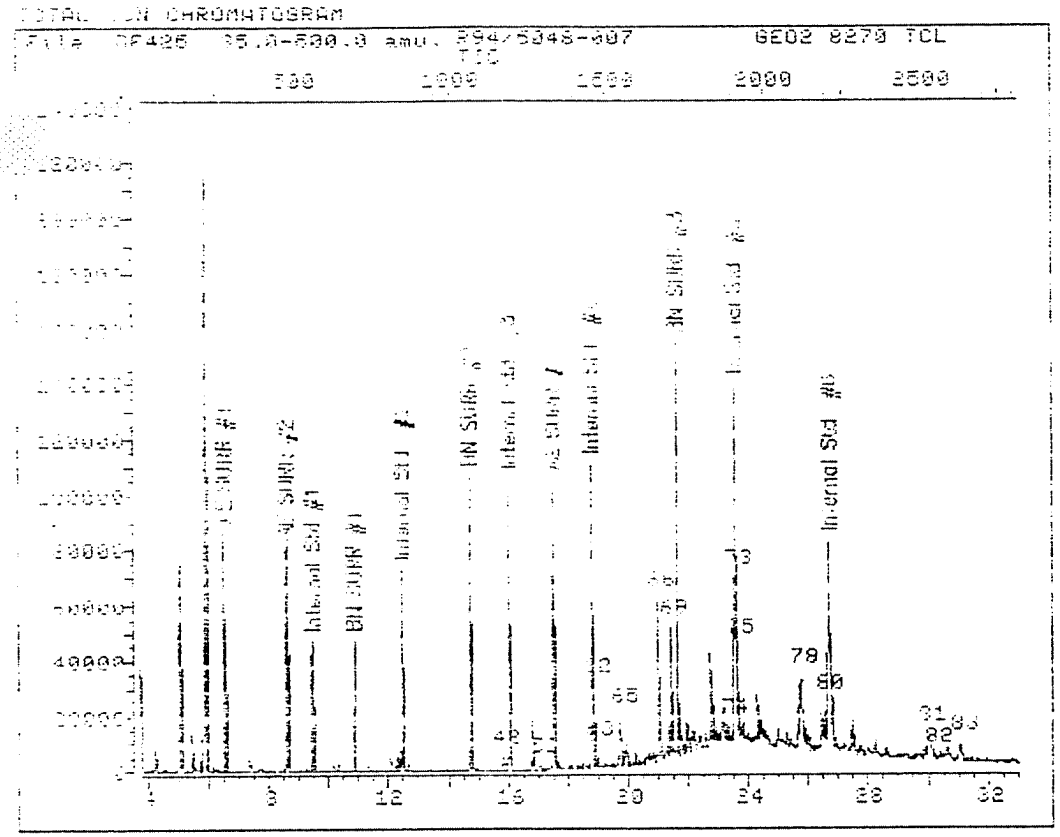
SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

Operator ID: TODDB Quant Rev: 7 Quant Time: 941221 22:12
Output File: `DF423::D3 Injected at: 941121 21:38
Data File: `DF423::D3 Dilution Factor: 1.00000
File: R94/5048-007 Instrument ID: MS#4
Misc: SEQ 8270 TCL BTL# 7

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 41120 .0.40 Last Cal Date: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	15685	40.00	mg/L	95
4)	2-Fluorophenol (Surr)	6.51	112.0	40496	91.02	mg/L	90
6)	Phenol-d6 (Surr)	8.57	99.0	60749	89.94	mg/L	94
19)	*d8-Naphthalene	12.45	136.0	86565	40.00	mg/L	97
20)	Nitrobenzene-d5 (Surr)	10.83	82.0	30267	38.31	mg/L	90
34)	*d10-Acenaphthene	16.02	164.0	43577	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.71	172.0	67197	48.02	mg/L	94
42)	Acenaphthylene	15.75	152.0	4049	2.24	mg/L	95
52)	Fluorene	17.05	166.0	1163	.756	mg/L	96
54)	2,4,6-Tribromophenol (Surr)	17.49	329.7	28011	96.62	mg/L	95
55)	*d10-Phenanthrene	18.77	188.0	86072	40.00	mg/L	92
62)	Phenanthrene	18.82	178.0	20638	7.98	mg/L	97
63)	Anthracene	18.91	178.0	5218	2.07	mg/L	96
6	Di-n-Butylphthalate	19.73	149.0	6588	1.56	mg/L	95
	Fluoranthene	20.97	202.0	51967	16.22	mg/L	90
67)	*d12-Chrysene	23.32	240.0	94106	40.00	mg/L	84
69)	Pyrene	21.38	202.0	42018	13.15	mg/L	95
70)	Terphenyl-d14 (Surr)	21.60	244.0	104587	44.18	mg/L	78
73)	Benzo(a)Anthracene	23.50	228.0	25702	8.14	mg/L	97
74)	Bis(2-Ethylhexyl)Phthalate	23.36	149.0	1852	.598	mg/L	92
75)	Chrysene	23.58	228.0	25591	8.48	mg/L	96
76)	*d12-Perylene	26.70	264.0	89401	40.00	mg/L	84
78)	Benzo(b)fluoranthene	25.72	252.0	34890M	11.39	mg/L	81
79)	Benzo(k)Fluoranthene	25.73	252.0	21031M	7.33	mg/L	95
80)	Benzo(a)Pyrene	26.54	252.0	19357	6.99	mg/L	94
81)	Indeno(1,2,3-cd)Pyrene	30.00	276.0	13134	5.92	mg/L	89
82)	Dibenz(a,h)anthracene	30.18	278.0	1203	.453	mg/L	89
83)	Benzo(g,h,i)Perylene	31.05	276.0	11853	4.13	mg/L	87

* Compound is ISTD



Data File: >DF425::D5 Quant Output File: ^DF425::D3
Name: R94/5048-007 Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 7

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 22:12
Injected at: 941221 21:58

GC/MS DATA SHEET

FILE NDF426

SAMPLE [illegible]
DATE 12/19/94
ANALYZED 12/21/94
DILUTION 1
DATA FILE NDF426
GC NO. MS#4 .86

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/kg	
Pyridine	625ZZL	780	U
N-Nitrosodimethylamine	625A	390	U
Aniline	HSL50	390	U
Phenol	625ZU	780	U
Bis(-2-Chloroethyl)Ether	625B	390	U
2-Chlorophenol	625ZV	780	U
1,3-Dichlorobenzene	625C	390	U
1,4-Dichlorobenzene	625D	390	U
1,2-Dichlorobenzene	625E	390	U
Benzyl Alcohol	HSL51	390	U
2,2'-oxybis(1-Chloropropane)	625F	390	U
2-Methylphenol	HSL46	780	U
N-Nitroso-Di-n-propylamine	625G	390	U
Hexachloroethane	625H	390	U
4-Methylphenol	HSL47	780	U
Nitrobenzene	625I	390	U
Isophorone	625J	390	U
[illegible]itrophenol	625ZW	780	U
[illegible]zoic acid	HSL48	3900	U
2,4-Dimethylphenol	625ZX	780	U
bis(-2-Chloroethoxy)Methane	625K	390	U
2,4-Dichlorophenol	625ZY	780	U
1,2,4-Trichlorobenzene	625L	390	U
Naphthalene	625M	390	U
4-Chloroaniline	HSL52	390	U
Hexachlorobutadiene	625N	390	U
2-Methylnaphthalene	HSL53	390	U
4-Chloro-3-methylphenol	625ZZ	780	U
Hexachlorocyclopentadiene	625O	390	U
2,4,5-Trichlorophenol	HSL49	780	U
2,4,6-Trichlorophenol	625ZZA	780	U
2-Chloronaphthalene	625P	390	U
2-Nitroaniline	HSL54	390	U
Dimethyl Phthalate	625Q	390	U
Acenaphthylene	625R	390	U
3-Nitroaniline	HSL55	390	U
Acenaphthene	625S	390	U
2,4-Dinitrophenol	625ZZB	1600	U
Dibenzofuran	HSL56	390	U
4-Nitrophenol	625ZZC	1600	U
2,4-Dinitrotoluene	625T	390	U
2,6-Dinitrotoluene	625U	390	U
[illegible]thylphthalate	625V	390	U
[illegible]hlorophenyl-phenylether	625W	390	U
[illegible]luorene	625X	390	U
4-Nitroaniline	HSL57	390	U

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GC/MS DATA SHEET PAGE 2

SAMPLE R94/05048-008 FILE XDF426
DATE 12/21/94
UTION 1
.IA FILE >DF426
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	1600 U
1,2 Diphenylhydrazine	625Y	390 U
N-Nitrosodiphenylamine	625Z	390 U
4-Bromophenyl-phenylether	625ZA	390 U
Hexachlorobenzene	625ZB	390 U
Pentachlorophenol	625ZZE	1600 U
Phenanthrene	625ZC	390 U
Anthracene	625ZD	390 U
Carbazole	HSL70	390 U
Di-n-Butylphthalate	625ZE	390 U
Fluoranthene	625ZG	390 U
Benzidine	625ZF	3900 U
Pyrene	625ZH	390 U
Butyl benzyl phthalate	625ZI	390 U
3,3'-Dichlorobenzidine	625ZJ	390 U
Benzo(a)Anthracene	625ZK	390 U
Bis(2-Ethylhexyl)Phthalate	625ZL	390 U
Chrysene	625ZM	390 U
Di-n-octyl phthalate	625ZN	390 U
zo(b)fluoranthene	625ZO	390 U
.nzo(k)Fluoranthene	625ZP	390 U
Benzo(a)Pyrene	625ZQ	390 U
Indeno(1,2,3-cd)Pyrene	625ZR	390 U
Dibenz(a,h)anthracene	625ZS	390 U
Benzo(g,h,i)Perylene	625ZT	390 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	69
Phenol-d6	625ZZG	69
Nitrobenzene-d5	625ZZI	57
2-Fluorobiphenyl	625ZZJ	76
2,4,6-Tribromophenol	625ZZH	72
Terphenyl-d14	625ZZK	67

SURROGATE RECOVERY LIMITS

SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

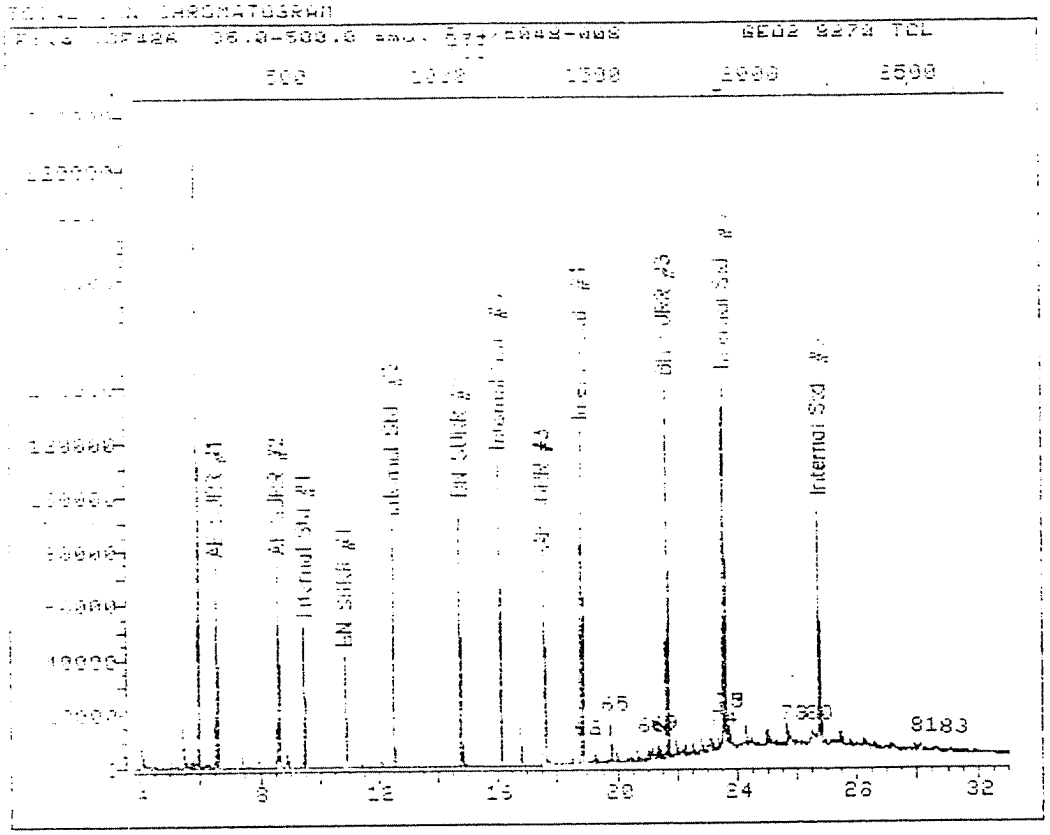
Operator ID: TODDB
Output File: ^DF426::D3
Data File: >DF426::D5
[illegible]: A94/S048-008
[illegible]c: GEO2 8270 TCL

Quant Rev: 7 Quant Time: 941221 22:57
Injected at: 941221 22:23
Dilution Factor: 1.00000
Instrument ID: MS#4
BTL# 8

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.46	152.0	17798	40.00	mg/L	96
4)	2-Fluorophenol (Surr)	8.52	112.0	35142	69.61	mg/L	89
6)	Phenol-d6 (Surr)	8.57	99.0	53327	69.58	mg/L	94
19)	*d8-Napnthalene	12.47	136.0	74779	40.00	mg/L	96
20)	Nitrobenzene-d5 (Surr)	10.84	82.0	25440	28.67	mg/L	90
34)	*d10-Acenaphthene	16.03	164.0	47634	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.71	172.0	58363	38.15	mg/L	94
54)	2,4,6-Tribromophenol (Surr)	17.49	329.7	22883	72.21	mg/L	95
55)	*d10-Phenanthrene	18.78	188.0	94682	40.00	mg/L	94
62)	Phenanthrene	18.83	178.0	1964	.690	mg/L	98
63)	Anthracene	18.83	178.0	1964	.708	mg/L	96
65)	Di-n-Butylphthalate	19.74	149.0	10407	2.24	mg/L	98
66)	Fluoranthene	20.98	202.0	4759	1.35	mg/L	91
67)	*d12-Chrysene	23.54	240.0	107117	40.00	mg/L	85
[illegible]	Pyrene	21.40	202.0	4582	1.26	mg/L	95
[illegible])	Terphenyl-d14 (Surr)	21.60	244.0	91505	33.96	mg/L	79
73)	Benzo(a)Anthracene	23.58	228.0	2689	.748	mg/L	91
74)	Bis(2-Ethylhexyl)Phthalate	23.36	149.0	1349	.383	mg/L	88
75)	Chrysene	23.58	228.0	3019	.879	mg/L	91
76)	*d12-Perylene	26.71	264.0	111201	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.72	252.0	5264	1.37	mg/L	86
79)	Benzo(k)Fluoranthene	25.72	252.0	5279	1.48	mg/L	97
80)	Benzo(a)Pyrene	26.55	252.0	2508	.728	mg/L	90
81)	Indeno(1,2,3-cd)Pyrene	30.03	276.0	1793	.430	mg/L	96
83)	Benzo(g,h,i)Perylene	31.05	276.0	1669	.467	mg/L	85

* Compound is ISTD



Data File: >DF426::D5
Name: R94/5048-008
Misc: GEO2 8270 TCL

Quant Output File: ^DF426::D3
Instrument ID: MS#4
BTL# 8

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 22:57
Injected at: 941221 22:23

3D

SOIL SEMIVOLATILE MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: GENERAL TESTING CORP. Contract: GEO

Lab Code: 10145 Case No.: --- SAS No.: --- SDG No.: -----

Matrix Spike - EPA Sample No.: R94/5048-008

COMPOUND 625	SPIKE ADDED (ug/Kg)	SAMPLE CONCENT. (ug/Kg)	MS CONCENT. (ug/Kg)	MS % REC	#	QC LIMITS % REC.
Phenol 2U	15503	0.00	11000	71		5-112
2'Chlorophenol 2V	15503	0.00	15000	97		23-134
1_4'Dichlorobenzene D	7751	0.00	6500	84		20-124
N'Nitroso'Di'n'Prop.(1) G	7751	0.00	6300	81		D-230
1_2_4'Trichlorobenzene L	7751	0.00	6700	86		44-142
4'Chloro'3'Methylphenol 22	15503	0.00	11000	71		22-147
Acenaphthene S	7751	0.00	6300	81		47-145
4'Nitrophenol 22C	15503	0.00	14000	90		D-132
' 4'Dinitrotoluene T	7751	0.00	7500	97		39-139
itachlorophenol 22E	15503	0.00	15000	97		14-176
yrene 2H	7751	0.00	7000	90		52-115

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENT. (ug/Kg)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS %REC
Phenol	15503	11000	71	0	30	5-112
2'Chlorophenol	15503	15000	97	0	30	23-134
1_4'Dichlorobenzene	7751	6300	81	3	30	20-124
N'Nitroso'Di'n'Prop.(1)	7751	6200	80	2	30	D-230
1_2_4'Trichlorobenzene	7751	6600	85	2	30	44-142
4'Chloro'3'Methylphenol	15503	11000	71	0	30	22-147
Acenaphthene	7751	6300	81	0	30	47-145
4'Nitrophenol	15503	13000	84	7	30	D-132
2_4'Dinitrotoluene	7751	7500	97	0	30	39-139
Pentachlorophenol	15503	13000	84	14	30	14-176
Pyrene	7751	7000	90	0	30	52-115

(1) N-Nitroso-di-n-propylamine
Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

): 0 out of 11 outside limits.

000245

GC/MS DATA SHEET

FILE XDF427

SAMPLE R94/05048-8MS
EXT 12/19/94
E ANALY 12/21/94
DILUTION 1
DATA FILE XDF427
MS NO. MS#4 .86

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg	
Pyridine	625ZZL	780	U
N-Nitrosodimethylamine	625A	390	U
Aniline	HSL50	390	U
Phenol	625ZU	11000	
bis(-2-Chloroethyl)Ether	625B	390	U
2-Chlorophenol	625ZV	15000	
1,3-Dichlorobenzene	625C	390	U
1,4-Dichlorobenzene	625D	6500	
1,2-Dichlorobenzene	625E	390	U
Benzyl Alcohol	HSL51	390	U
2,2'-oxybis(1-Chloropropane)	625F	390	U
2-Methylphenol	HSL46	780	U
N-Nitroso-Di-n-propylamine	625G	6300	
Hexachloroethane	625H	390	U
4-Methylphenol	HSL47	780	U
Nitrobenzene	625I	390	U
Isophorone	625J	390	U
Nitrophenol	625ZW	780	U
Benzoic acid	HSL48	3900	U
2,4-Dimethylphenol	625ZX	780	U
bis(-2-Chloroethoxy)Methane	625K	390	U
2,4-Dichlorophenol	625ZY	780	U
1,2,4-Trichlorobenzene	625L	6700	
Naphthalene	625M	390	U
4-Chloroaniline	HSL52	390	U
Hexachlorobutadiene	625N	390	U
2-Methylnaphthalene	HSL53	390	U
4-Chloro-3-methylphenol	625ZZ	11000	
Hexachlorocyclopentadiene	625O	390	U
2,4,5-Trichlorophenol	HSL49	780	U
2,4,6-Trichlorophenol	625ZZA	780	U
2-Chloronaphthalene	625P	390	U
2-Nitroaniline	HSL54	390	U
Dimethyl Phthalate	625Q	390	U
Acenaphthylene	625R	390	U
3-Nitroaniline	HSL55	390	U
Acenaphthene	625S	6300	
2,4-Dinitrophenol	625ZZB	1600	U
Dibenzofuran	HSL56	390	U
4-Nitrophenol	625ZZC	14000	
2,4-Dinitrotoluene	625T	7500	
2,6-Dinitrotoluene	625U	390	U
Diethylphthalate	625V	390	U
4-Chlorophenyl-phenylether	625W	390	U
Fluorene	625X	390	U
4-Nitroaniline	HSL57	390	U

SAMPLE R94/05048-8MS FILE XDF427
DATE 12/21/94
DILUTION 1
DATA FILE XDF427
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	1600 U
1,2 Diphenylhydrazine	625Y	390 U
N-Nitrosodiphenylamine	625Z	390 U
4-Bromophenyl-phenylether	625ZA	390 U
Hexachlorobenzene	625ZB	390 U
Pentachlorophenol	625ZZE	15000
Phenanthrene	625ZC	390 U
Anthracene	625ZD	390 U
Carbazole	HSL70	390 U
Di-n-Butylphthalate	625ZE	2900
Fluoranthene	625ZG	390 U
Benzidine	625ZF	3900 U
Pyrene	625ZH	7000
Butyl benzyl phthalate	625ZI	390 U
3,3'-Dichlorobenzidine	625ZJ	390 U
Benzo(a)Anthracene	625ZK	390 U
Bis(2-Ethylhexyl)Phthalate	625ZL	390 U
Chrysene	625ZM	390 U
Di-n-octyl phthalate	625ZN	390 U
Benzo(b)fluoranthene	625ZO	390 U
Benzo(k)Fluoranthene	625ZP	390 U
Benzo(a)Pyrene	625ZQ	390 U
Indeno(1,2,3-cd)Pyrene	625ZR	390 U
Dibenz(a,h)anthracene	625ZS	390 U
Benzo(g,h,i)Perylene	625ZT	390 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	83
Phenol-d6	625ZZG	83
Nitrobenzene-d5	625ZZI	70
2-Fluorobiphenyl	625ZZJ	88
2,4,6-Tribromophenol	625ZZH	91
Terphenyl-d14	625ZZK	83

SURROGATE RECOVERY LIMITS

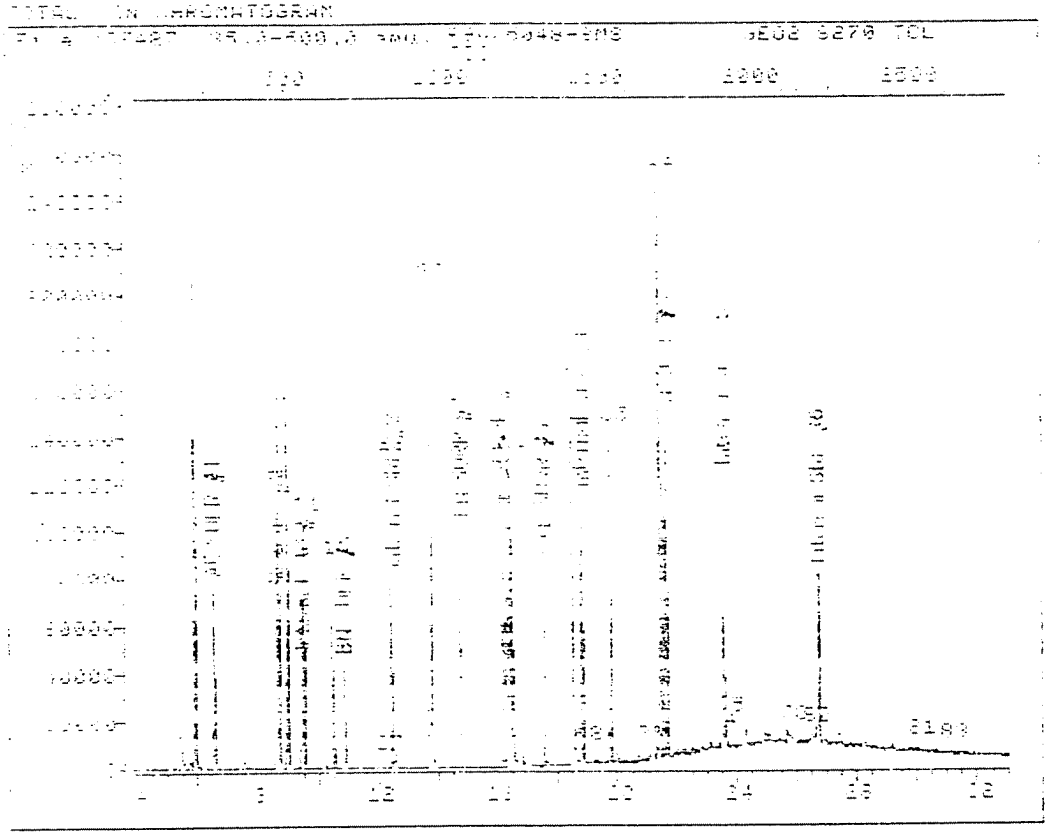
SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

Operator ID: TODDB Quant Rev: 7 Quant Time: 941221 23:43
Output file: DF427::D Injected at: 941221 23:09
Data File: DF427::D3 Dilution Factor: 1.00000
Method: SW8/8040-GMS Instrument ID: MS#4
Sample: 8270 ICAL BTL# 3

Cal File: 1DLMX::QT
Title: STD HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 18:40 Last Qcal Time: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.43	152.0	15246	40.00	mg/L	97
4)	2-Fluorophenol (Surr)	6.51	112.0	35997	83.34	mg/L	88
5)	Phenol-d6 (Surr)	8.59	99.0	54708	83.33	mg/L	94
7)	Phenol	8.65	94.0	103951	159.55	mg/L	82
9)	2-Chlorophenol	8.95	128.0	107394	194.76	mg/L	96
11)	1,4-Dichlorobenzene	9.49	146.0	51863	83.99	mg/L	95
16)	N-Nitroso-Di-n-propylamine	10.47	70.0	35319	80.96	mg/L	94
19)	*d8-Napthnalene	12.46	136.0	65007	40.00	mg/L	96
20)	Nitrobenzene-d5 (Surr)	10.33	82.0	27088	35.11	mg/L	88
27)	2,4-Dichlorophenol	12.18	162.0	1173	2.14	mg/L	98
28)	1,2,4-Trichlorobenzene	12.34	180.0	51604	86.80	mg/L	93
33)	4-Chloro-3-methylphenol	13.69	107.0	103630	144.96	mg/L	86
34)	*d10-Acenaphthene	16.02	164.0	42288	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.71	172.0	59977	44.17	mg/L	94
	Acenaphthene	16.09	153.0	111097	81.64	mg/L	95
41)	4-Nitrophenol	16.30	65.0	56435	177.63	mg/L	76
48)	2,4-Dinitrotoluene	16.40	165.0	59569	97.07	mg/L	98
54)	2,4,6-Tribromophenol (Surr)	17.49	329.7	25694	91.33	mg/L	96
55)	*d10-Phenanthrene	18.78	188.0	83192	40.00	mg/L	96
61)	Pentachlorophenol	18.43	266.0	52919	194.06	mg/L	94
62)	Phenanthrene	18.82	178.0	2179	.871	mg/L	98
63)	Anthracene	18.82	178.0	2179	.894	mg/L	96
65)	Di-n-Butylphthalate	19.74	149.0	151087	36.98	mg/L	98
66)	Fluoranthene	20.97	202.0	4310	1.39	mg/L	90
67)	*d12-Chrysene	23.52	240.0	89287	40.00	mg/L	85
68)	Pyrene	21.40	202.0	275468	90.83	mg/L	96
70)	Terphenyl-d14 (Surr)	21.60	244.0	93838	41.78	mg/L	78
73)	Benzo(a)Anthracene	23.57	228.0	1981	.661	mg/L	87
74)	Bis(2-Ethylhexyl)Phthalate	23.36	149.0	1400	.476	mg/L	90
75)	Chrysene	23.57	228.0	2291	.801	mg/L	91
76)	*d12-Perylene	26.69	264.0	88761	40.00	mg/L	86
78)	Benzo(b)fluoranthene	25.72	252.0	3930	1.28	mg/L	81
79)	Benzo(k)Fluoranthene	25.72	252.0	3930	1.38	mg/L	93
80)	Benzo(a)Pyrene	26.54	252.0	2008	.730	mg/L	87
81)	Indeno(1,2,3-cd)Pyrene	30.01	276.0	1273	.383	mg/L	92
83)	Benzo(g,h,i)Perylene	31.06	276.0	1277	.448	mg/L	88

* Compound is ISTD



Data File: >DF427::D5 Quant Output File: ^DF427::D3
Name: R94/5048-8MS Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 9

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 13:40 Last Qcal Time: 941231 16:17

Operator ID: TODDB
Quant Time : 941221 20:48
Injected at: 941221 19:49

GC/MS DATA SHEET

FILE XDF428

SAMPLE ID: 494/63048-8MSD
EXT: 12/13/94
ANALYZ: 12/21/94
DILUTION: 1
DATA FILE: XDF428
MS NO.: MS#4 .86

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg	
Pyridine	625ZZL	780	U
N-Nitrosodimethylamine	625A	390	U
Aniline	HSL50	390	U
Phenol	625ZU	11000	
bis(-2-Chloroethyl)Ether	625B	390	U
2-Chlorophenol	625ZV	15000	
1,3-Dichlorobenzene	625C	390	U
1,4-Dichlorobenzene	625D	6300	
1,2-Dichlorobenzene	625E	390	U
Benzyl Alcohol	HSL51	390	U
2,2'-oxybis(1-Chloropropane)	625F	390	U
2-Methylphenol	HSL46	780	U
N-Nitroso-Di-n-propylamine	625G	6200	
Hexachloroethane	625H	390	U
4-Methylphenol	HSL47	780	U
Nitrobenzene	625I	390	U
Isophorone	625J	390	U
[illegible]itrophenol	625ZW	780	U
[illegible]nzoic acid	HSL48	3900	U
2,4-Dimethylphenol	625ZX	780	U
bis(-2-Chloroethoxy)Methane	625K	390	U
2,4-Dichlorophenol	625ZY	780	U
1,2,4-Trichlorobenzene	625L	6600	
Naphthalene	625M	390	U
4-Chloroaniline	HSL52	390	U
Hexachlorobutadiene	625N	390	U
2-Methylnaphthalene	HSL53	390	U
4-Chloro-3-methylphenol	625ZZ	11000	
Hexachlorocyclopentadiene	625O	390	U
2,4,5-Trichlorophenol	HSL49	780	U
2,4,6-Trichlorophenol	625ZZA	780	U
2-Chloronaphthalene	625P	390	U
2-Nitroaniline	HSL54	390	U
Dimethyl Phthalate	625Q	390	U
Acenaphthylene	625R	390	U
3-Nitroaniline	HSL55	390	U
Acenaphthene	625S	6300	
2,4-Dinitrophenol	625ZZB	1600	U
Dibenzofuran	HSL56	390	U
4-Nitrophenol	625ZZC	13000	
2,4-Dinitrotoluene	625T	7500	
2,6-Dinitrotoluene	625U	390	U
[illegible]ethylphthalate	625V	390	U
[illegible]Chlorophenyl-phenylether	625W	390	U
[illegible]luorene	625X	390	U
4-Nitroaniline	HSL57	390	U

000[illegible]

SAMPLE R94/05048-8MSD FILE XDF428
DATE 12/21/94
DILUTION 1
DATA FILE >DF428
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	1600 U
1,2 Diphenylhydrazine	625Y	390 U
N-Nitrosodiphenylamine	625Z	390 U
4-Bromophenyl-phenylether	625ZA	390 U
Hexachlorobenzene	625ZB	390 U
Pentachlorophenol	625ZZE	13000
Phenanthrene	625ZC	390 U
Anthracene	625ZD	390 U
Carbazole	HSL70	390 U
Di-n-Butylphthalate	625ZE	1300
Fluoranthene	625ZG	390 U
Benzidine	625ZF	3900 U
Pyrene	625ZH	7000
Butyl benzyl phthalate	625ZI	390 U
3,3'-Dichlorobenzidine	625ZJ	390 U
Benzo(a)Anthracene	625ZK	390 U
Bis(2-Ethylhexyl)Phthalate	625ZL	390 U
Chrysene	625ZM	390 U
Di-n-octyl phthalate	625ZN	390 U
zo(b)fluoranthene	625ZO	390 U
nzo(k)Fluoranthene	625ZP	390 U
Benzo(a)Pyrene	625ZQ	390 U
Indeno(1,2,3-cd)Pyrene	625ZR	390 U
Dibenz(a,h)anthracene	625ZS	390 U
Benzo(g,h,i)Perylene	625ZT	390 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	82
Phenol-d6	625ZZG	84
Nitrobenzene-d5	625ZZI	68
2-Fluorobiphenyl	625ZZJ	88
2,4,6-Tribromophenol	625ZZH	92
Terphenyl-d14	625ZZK	85

SURROGATE RECOVERY LIMITS

SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

Operator ID: TODDB
Output File: ^DF428::D3
Data File: ^DF428::D5
Method: R94/5048-8MSD
Sample: GEO2 8270 TCL

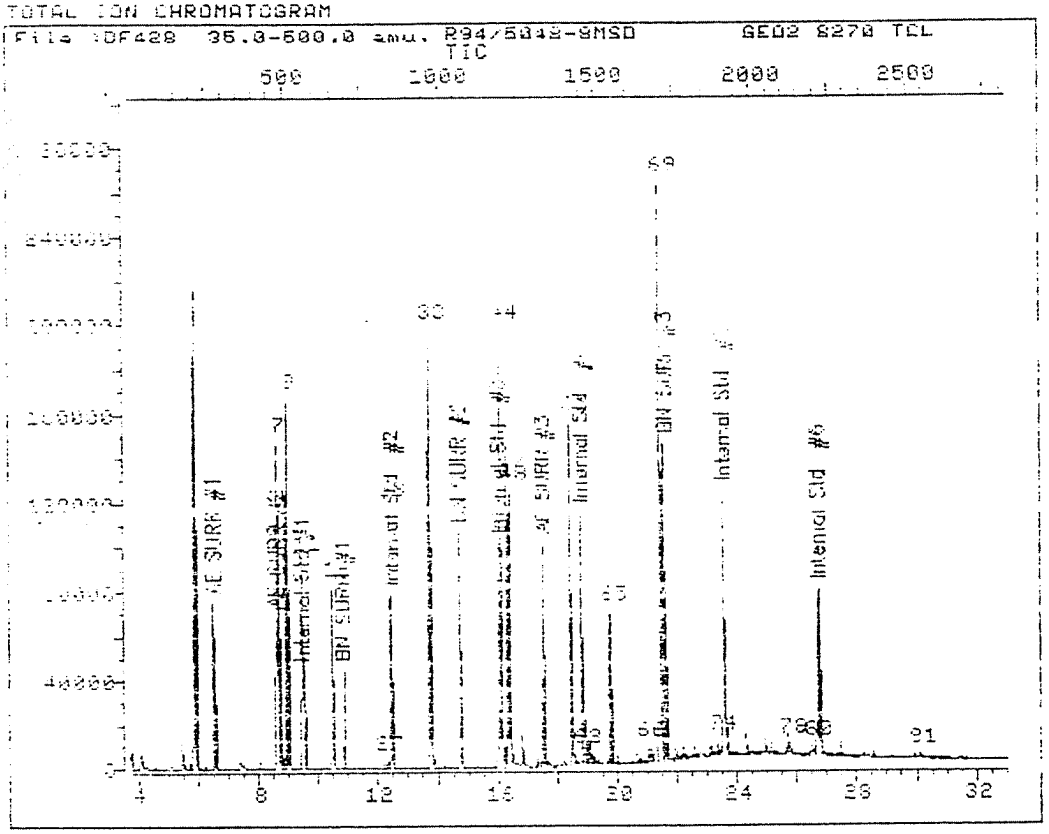
Quant Rev: 7
Quant Time: 941222 00:28
Injected at: 941221 23:54
Dilution Factor: 1.00000
Instrument ID: MS#4
BTL#10

ID File: ID1KK::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40
Last Qcal Time: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	15451	40.00	mg/L	95
4)	2-Fluorophenol (Surr)	6.51	112.0	35888	81.88	mg/L	88
6)	Phenol-d6 (Surr)	8.59	99.0	55919	84.04	mg/L	94
7)	Phenol	8.63	94.0	104514	138.45	mg/L	82
9)	2-Chlorophenol	8.95	128.0	107081	191.61	mg/L	95
11)	1,4-Dichlorobenzene	9.49	146.0	51127	81.70	mg/L	96
16)	N-Nitroso-Di-n-propylamine	10.47	70.0	35384	80.03	mg/L	93
19)	*d8-Naphthalene	12.46	136.0	66167	40.00	mg/L	96
20)	Nitrobenzene-d5 (Surr)	10.83	82.0	26727	34.04	mg/L	88
27)	2,4-Dichlorophenol	12.18	162.0	1210	2.17	mg/L	93
28)	1,2,4-Trichlorobenzene	12.34	180.0	51526	85.15	mg/L	96
33)	4-Chloro-3-methylphenol	13.69	107.0	101302	139.22	mg/L	87
34)	*d10-Acenaphthene	16.02	164.0	43571	40.00	mg/L	97
39)	2-Fluorobiphenyl (Surr)	14.70	172.0	61965	44.29	mg/L	94
	Acenaphthene	16.10	153.0	113164	80.71	mg/L	96
)	4-Nitrophenol	16.29	65.0	56900	173.82	mg/L	76
48)	2,4-Dinitrotoluene	16.40	165.0	61206	96.80	mg/L	99
54)	2,4,6-Tribromophenol (Surr)	17.50	329.7	26640	91.90	mg/L	98
55)	*d10-Phenanthrene	18.78	188.0	86269	40.00	mg/L	94
61)	Pentachlorophenol	18.43	266.0	49134	173.75	mg/L	94
62)	Phenanthrene	18.82	178.0	1755	.677	mg/L	94
63)	Anthracene	18.82	178.0	1755	.695	mg/L	98
65)	Di-n-Butylphthalate	19.73	149.0	69775	16.47	mg/L	97
66)	Fluoranthene	20.97	202.0	4315	1.34	mg/L	86
67)	*d12-Chrysene	23.53	240.0	93534	40.00	mg/L	86
69)	Pyrene	21.41	202.0	286062	90.04	mg/L	97
70)	Terphenyl-d14 (Surr)	21.61	244.0	100097	42.54	mg/L	80
74)	Bis(2-Ethylhexyl)Phthalate	23.36	149.0	2668	.867	mg/L	91
76)	*d12-Perylene	26.69	264.0	93292	40.00	mg/L	85
78)	Benzo(b)fluoranthene	25.73	252.0	4282	1.33	mg/L	86
79)	Benzo(k)Fluoranthene	25.73	252.0	4282	1.43	mg/L	91
80)	Benzo(a)Pyrene	26.54	252.0	1994	.690	mg/L	88
81)	Indeno(1,2,3-cd)Pyrene	30.01	276.0	1300	.372	mg/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >DF428::D5 Quant Output File: ^DF428::D3
Name: R94/5048-8MSD Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL#10

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941222 00:28
Injected at: 941221 20:54

REFERENCE CHECK RECOVERIES GC/MS SEMIVOA

FILE XDF420

SAMPLE	R94/05048-REFSPK
DATE	12/21/94
DILUTION	1
DATA FILE	>DF420
MS NO.	MS#4

COMPOUND NAME		% REC	LIMITS
Phenol	625ZU	76.	5-112
2-Chlorophenol	625ZV	104.	23-134
1,4-Dichlorobenzene	625D	89.	20-124
N-Nitroso-Di-n-propylamine	625G	91.	D-230
1,2,4-Trichlorobenzene	625L	89.	44-142
4-Chloro-3-methylphenol	625ZZ	79.	22-147
Acenaphthene	625S	83.	47-145
4-Nitrophenol	625ZZC	121.	D-132
2,4-Dinitrotoluene	625T	109.	39-139
Pentachlorophenol	625ZZE	143.	14-176
Pyrene	625ZH	92.	52-115

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	89.
Phenol-d6	625ZZG	92.
Nitrobenzene-d5	625ZZI	77.
2-Fluorobiphenyl	625ZZJ	92.
2,4,6-Tribromophenol	625ZZH	106.
Terphenyl-d14	625ZZK	89.

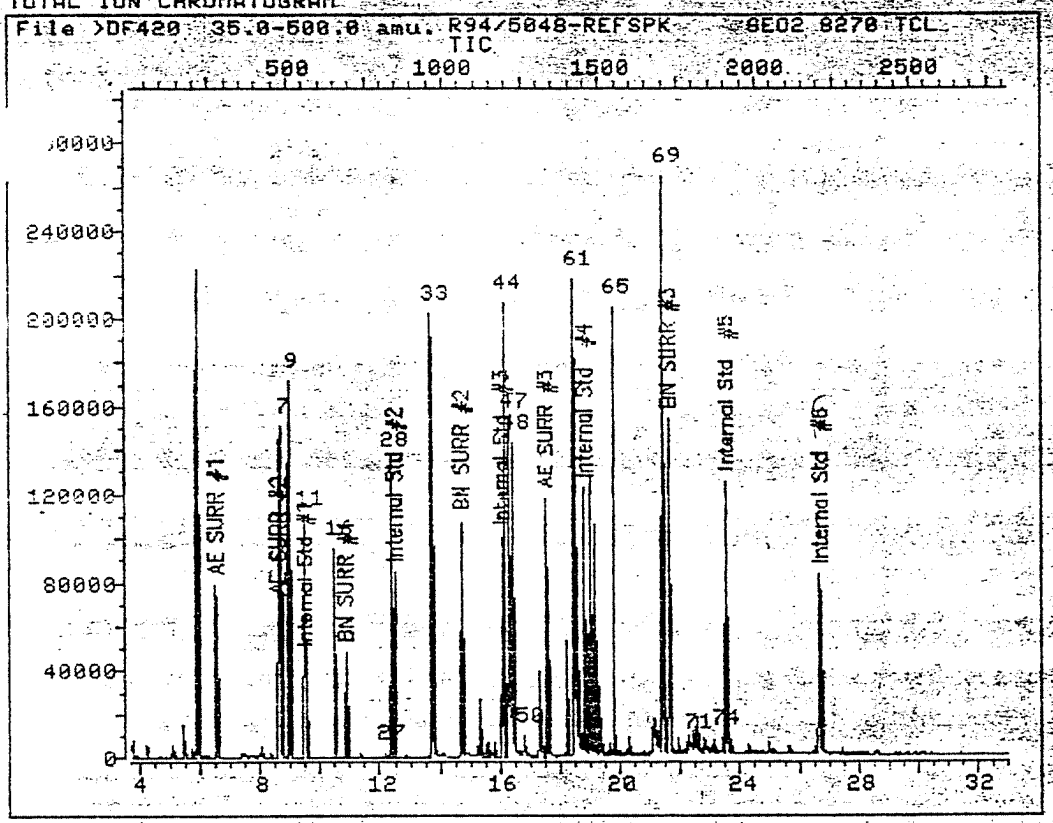
Operator ID: TODDB Quant Rev: 7 Quant Time: 941221 18:23
Output File: ^DF420::D3 Injected at: 941221 17:49
Data File: >DF420::D5 Dilution Factor: 1.00000
M : R94/5048-REFSPK Instrument ID: MS#4
M c: GEO2 8270 TCL BTL# 2

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	15122	40.00	mg/L	97
4)	2-Fluorophenol (Surr)	6.51	112.0	38232	89.13	mg/L	89
6)	Phenol-d6 (Surr)	8.59	99.0	60094	92.28	mg/L	94
7)	Phenol	8.64	94.0	111833	151.36	mg/L	82
9)	2-Chlorophenol	8.95	128.0	112969	206.55	mg/L	96
11)	1,4-Dichlorobenzene	9.49	146.0	54496	88.98	mg/L	95
16)	N-Nitroso-Di-n-propylamine	10.47	70.0	39380	91.01	mg/L	98
19)	*d8-Naphthalene	12.46	136.0	66957	40.00	mg/L	95
20)	Nitrobenzene-d5 (Surr)	10.83	82.0	30632	38.55	mg/L	88
27)	2,4-Dichlorophenol	12.18	162.0	1280	2.27	mg/L	90
28)	1,2,4-Trichlorobenzene	12.34	180.0	54667	89.28	mg/L	94
33)	4-Chloro-3-methylphenol	13.69	107.0	115771	157.23	mg/L	88
34)	*d10-Acenaphthene	16.02	164.0	45062	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.70	172.0	66271	45.80	mg/L	94
)	Acenaphthene	16.09	153.0	119601	82.48	mg/L	96
)	4-Nitrophenol	16.31	65.0	81941	242.04	mg/L	83
48)	2,4-Dinitrotoluene	16.41	165.0	71525	109.38	mg/L	96
50)	Diethylphthalate	16.80	149.0	6716	3.23	mg/L	94
54)	2,4,6-Tribromophenol (Surr)	17.50	329.7	31664	105.62	mg/L	96
55)	*d10-Phenanthrene	18.78	188.0	90144	40.00	mg/L	93
61)	Pentachlorophenol	18.44	266.0	84327	285.38	mg/L	94
65)	Di-n-Butylphthalate	19.74	149.0	221599	50.05	mg/L	98
67)	*d12-Chrysene	23.53	240.0	100098	40.00	mg/L	85
69)	Pyrene	21.41	202.0	311725	91.68	mg/L	97
70)	Terphenyl-d14 (Surr)	21.60	244.0	112121	44.52	mg/L	77
71)	Butyl benzyl phthalate	22.41	149.0	1170	.511	mg/L	87
74)	Bis(2-Ethylhexyl)Phthalate	23.35	149.0	3210	.974	mg/L	90
76)	*d12-Perylene	26.69	264.0	101898	40.00	mg/L	85

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >DF420::D5 Quant Output File: ^DF420::D3
Name: R94/5048-REFSPK Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 2

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 18:23
Injected at: 941221 17:49

GC/MS DATA SHEET

FILE XDF419

SAMPLE METHOD BLANK 5048-9
D/ EXT 12/19/94
D ANALY 12/21/94
DILUTION 1
DATA FILE >DF419
MS NO. MS#4 1.00

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		DRY WEIGHT ug/Kg
Pyridine	625ZZL	670 U
N-Nitrosodimethylamine	625A	330 U
Aniline	HSL50	330 U
Phenol	625ZU	670 U
bis(-2-Chloroethyl)Ether	625B	330 U
2-Chlorophenol	625ZV	670 U
1,3-Dichlorobenzene	625C	330 U
1,4-Dichlorobenzene	625D	330 U
1,2-Dichlorobenzene	625E	330 U
Benzyl Alcohol	HSL51	330 U
2,2'-oxybis(1-Chloropropane)	625F	330 U
2-Methylphenol	HSL46	670 U
N-Nitroso-Di-n-propylamine	625G	330 U
Hexachloroethane	625H	330 U
4-Methylphenol	HSL47	670 U
Nitrobenzene	625I	330 U
Isophorone	625J	330 U
[illegible]itrophenol	625ZW	670 U
[illegible]zoic acid	HSL48	3300 U
[illegible],4-Dimethylphenol	625ZX	670 U
bis(-2-Chloroethoxy)Methane	625K	330 U
2,4-Dichlorophenol	625ZY	670 U
1,2,4-Trichlorobenzene	625L	330 U
Naphthalene	625M	330 U
4-Chloroaniline	HSL52	330 U
Hexachlorobutadiene	625N	330 U
2-Methylnaphthalene	HSL53	330 U
4-Chloro-3-methylphenol	625ZZ	670 U
Hexachlorocyclopentadiene	625O	330 U
2,4,5-Trichlorophenol	HSL49	670 U
2,4,6-Trichlorophenol	625ZZA	670 U
2-Chloronaphthalene	625P	330 U
2-Nitroaniline	HSL54	330 U
Dimethyl Phthalate	625Q	330 U
Acenaphthylene	625R	330 U
3-Nitroaniline	HSL55	330 U
Acenaphthene	625S	330 U
2,4-Dinitrophenol	625ZZB	1300 U
Dibenzofuran	HSL56	330 U
4-Nitrophenol	625ZZC	1300 U
2,4-Dinitrotoluene	625T	330 U
2,6-Dinitrotoluene	625U	330 U
D[illegible]ethylphthalate	625V	330 U
[illegible]hlorophenyl-phenylether	625W	330 U
[illegible]luorene	625X	330 U
4-Nitroaniline	HSL57	330 U

SAMPLE METHOD BLANK FILE XDF419
DATE 12/21/94
...UTION 1
...TA FILE /DF419
MS NO. MS#4

COMPOUND NAME		DRY WEIGHT ug/Kg
4,6-Dinitro-2-methylphenol	625ZZD	1300 U
1,2 Diphenylhydrazine	625Y	330 U
N-Nitrosodiphenylamine	625Z	330 U
4-Bromophenyl-phenylether	625ZA	330 U
Hexachlorobenzene	625ZB	330 U
Pentachlorophenol	625ZZE	1300 U
Phenanthrene	625ZC	330 U
Anthracene	625ZD	330 U
Carbazole	HSL70	330 U
Di-n-Butylphthalate	625ZE	2500
Fluoranthene	625ZG	330 U
Benzidine	625ZF	3300 U
Pyrene	625ZH	330 U
Butyl benzyl phthalate	625ZI	470
3,3'-Dichlorobenzidine	625ZJ	330 U
Benzo(a)Anthracene	625ZK	330 U
Bis(2-Ethylhexyl)Phthalate	625ZL	330 U
Chrysene	625ZM	330 U
Di-n-octyl phthalate	625ZN	330 U
...zo(b)fluoranthene	625ZO	330 U
...nzo(k)Fluoranthene	625ZP	330 U
Benzo(a)Pyrene	625ZQ	330 U
Indeno(1,2,3-cd)Pyrene	625ZR	330 U
Dibenz(a,h)anthracene	625ZS	330 U
Benzo(g,h,i)Perylene	625ZT	330 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	57
Phenol-d6	625ZZG	57
Nitrobenzene-d5	625ZZI	49
2-Fluorobiphenyl	625ZZJ	60
2,4,6-Tribromophenol	625ZZH	62
Terphenyl-d14	625ZZK	54

SURROGATE RECOVERY LIMITS

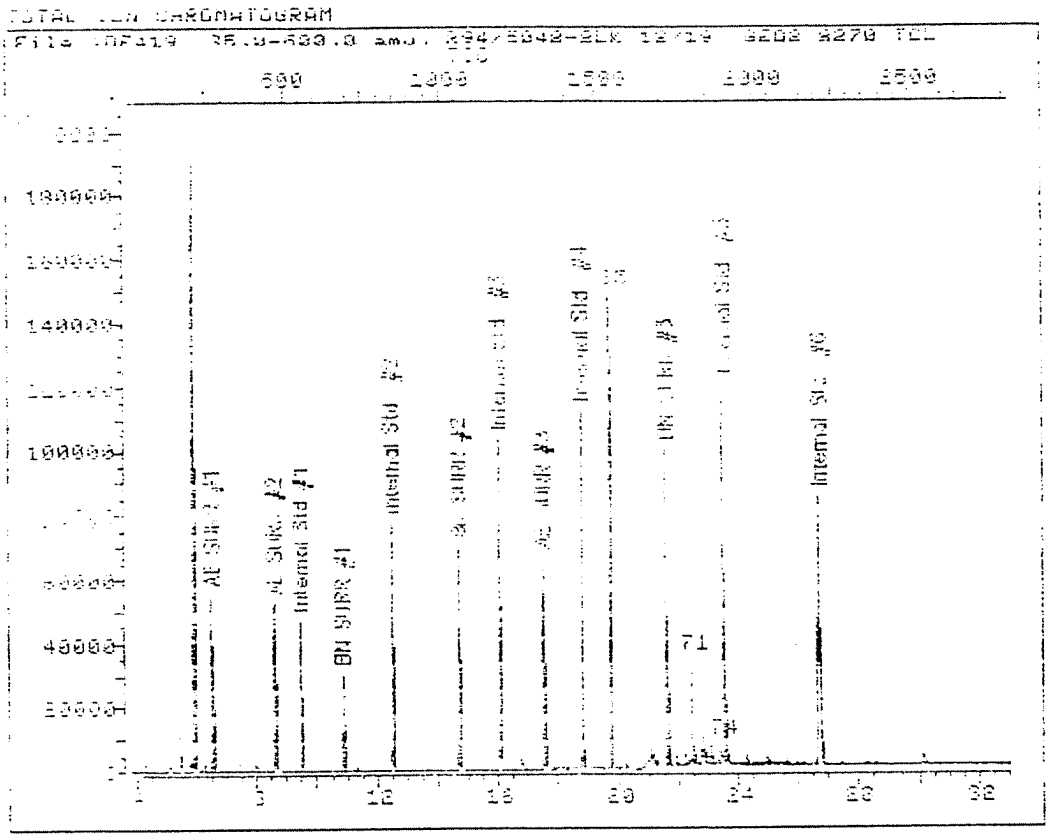
SURROGATE	SOIL
2-Fluorophenol	25-121 %
Phenol-d6	24-113
Nitrobenzene-d5	23-120
2-Fluorobiphenyl	30-115
2,4,6-Tribromophenol	19-122
Terphenyl-d14	18-137

Operator ID: TODDB Quant Rev: 7 Quant Time: 941221 17:37
Output File: ^DF419::D3 Injected at: 941221 17:03
Data File: >DF419::D5 Dilution Factor: 1.00000
Name: R94/5048-BLK 12/19 Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 1

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.45	152.0	14645	40.00	mg/L	92
4)	2-Fluorophenol (Surr)	6.51	112.0	23729	57.12	mg/L	93
6)	Phenol-d6 (Surr)	8.56	99.0	36043	57.15	mg/L	94
19)	*d8-Naphthalene	12.46	136.0	63532	40.00	mg/L	94
20)	Nitrobenzene-d5 (Surr)	10.83	82.0	18538	24.59	mg/L	87
34)	*d10-Acenaphthene	16.02	164.0	41853	40.00	mg/L	95
39)	2-Fluorobiphenyl (Surr)	14.70	172.0	40620	30.22	mg/L	95
54)	2,4,6-Tribromophenol (Surr)	17.50	329.7	17207	61.80	mg/L	99
55)	*d10-Phenanthrene	18.78	188.0	83993	40.00	mg/L	94
65)	Di-n-Butylphthalate	19.73	149.0	152820	37.04	mg/L	97
67)	*d12-Chrysene	23.53	240.0	97991	40.00	mg/L	85
70)	Terphenyl-d14 (Surr)	21.59	244.0	67228	27.27	mg/L	79
71)	Butyl benzyl phthalate	22.41	149.0	15822	7.06	mg/L	85
	Bis(2-Ethylhexyl)Phthalate	23.35	149.0	2477	.768	mg/L	93
	*d12-Perylene	26.70	264.0	103109	40.00	mg/L	85

* Compound is ISTD



Data File: >DF419::D5 Quant Output File: `DF419::D3
Name: R94/5048-BLK 12/19 Instrument ID: MS#4
Misc: GEO2 8270 TCL BTL# 1

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941221 16:17

Operator ID: TODDB
Quant Time : 941221 17:37
Injected at: 941221 17:03

GC/MS DATA LABEL

FILE ADF401

SAMPLE METHOD BLANK
DA: 12/20/94
D ANALY 12/20/94
DILUTION 1
DATA FILE DF401
MS NO. MS#4

S048-10

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	10 U
N-Nitrosodimethylamine	625A	5.0 U
Aniline	HSL50	5.0 U
Phenol	625ZU	10 U
bis(-2-Chloroethyl)Ether	625B	5.0 U
2-Chlorophenol	625ZV	10 U
1,3-Dichlorobenzene	625C	5.0 U
1,4-Dichlorobenzene	625D	5.0 U
1,2-Dichlorobenzene	625E	5.0 U
Benzyl Alcohol	HSL51	5.0 U
2,2'-oxybis(1-Chloropropane)	625F	5.0 U
2-Methylphenol	HSL46	10 U
N-Nitroso-Di-n-propylamine	625G	5.0 U
Hexachloroethane	625H	5.0 U
4-Methylphenol	HSL47	10 U
Nitrobenzene	625I	5.0 U
Isophorone	625J	5.0 U
2-Nitrophenol	625ZW	10 U
Benzoic acid	HSL48	50 U
2,4-Dimethylphenol	625ZX	10 U
bis(-2-Chloroethoxy)Methane	625K	5.0 U
2,4-Dichlorophenol	625ZY	10 U
1,2,4-Trichlorobenzene	625L	5.0 U
Naphthalene	625M	5.0 U
4-Chloroaniline	HSL52	5.0 U
Hexachlorobutadiene	625N	5.0 U
2-Methylnaphthalene	HSL53	5.0 U
4-Chloro-3-methylphenol	625ZZ	10 U
Hexachlorocyclopentadiene	625O	5.0 U
2,4,5-Trichlorophenol	HSL49	10 U
2,4,6-Trichlorophenol	625ZZA	10 U
2-Chloronaphthalene	625P	5.0 U
2-Nitroaniline	HSL54	5.0 U
Dimethyl Phthalate	625Q	5.0 U
Acenaphthylene	625R	5.0 U
3-Nitroaniline	HSL55	5.0 U
Acenaphthene	625S	5.0 U
2,4-Dinitrophenol	625ZZB	20 U
Dibenzofuran	HSL56	5.0 U
4-Nitrophenol	625ZZC	20 U
2,4-Dinitrotoluene	625T	5.0 U
2,6-Dinitrotoluene	625U	5.0 U
Diethylphthalate	625V	5.0 U
4-Chlorophenyl-phenylether	625W	5.0 U
Fluorene	625X	5.0 U
4-Nitroaniline	HSL57	5.0 U

000001

SAMPLE METHOD BLANK FILE XDF401
DATE 12/20/94
DILUTION 1
DATA FILE >DF401
MS NO. MS#4

COMPOUND NAME		ug/L
4,6-Dinitro-2-methylphenol	625ZZD	20 U
1,2 Diphenylhydrazine	625Y	5.0 U
N-Nitrosodiphenylamine	625Z	5.0 U
4-Bromophenyl-phenylether	625ZA	5.0 U
Hexachlorobenzene	625ZB	5.0 U
Pentachlorophenol	625ZZE	20 U
Phenanthrene	625ZC	5.0 U
Anthracene	625ZD	5.0 U
Carbazole	HSL70	5.0 U
Di-n-Butylphthalate	625ZE	5.0 U
Fluoranthene	625ZG	5.0 U
Benzidine	625ZF	50 U
Pyrene	625ZH	5.0 U
Butyl Benzyl pnthalate	625ZI	5.0 U
3,3'-Dichlorobenzidine	625ZJ	5.0 U
Benzo(a)Anthracene	625ZK	5.0 U
Bis(2-Ethylhexyl)Phthalate	625ZL	5.0 U
Chrysene	625ZM	5.0 U
Di-n-octyl phthalate	625ZN	5.0 U
[illegible]zo(b)fluoranthene	625ZO	5.0 U
[illegible]nzo(k)Fluoranthene	625ZP	5.0 U
Benzo(a)Pyrene	625ZQ	5.0 U
Indeno(1,2,3-cd)Pyrene	625ZR	5.0 U
Dibenz(a,h)anthracene	625ZS	5.0 U
Benzo(g,h,i)Perylene	625ZT	5.0 U

SURROGATE REC		% REC
2-Fluorophenol	625ZZF	44
Phenol-d6	625ZZG	33
Nitrobenzene-d5	625ZZI	69
2-Fluorobiphenyl	625ZZJ	70
2,4,6-Tribromophenol	625ZZH	95
Terphenyl-d14	625ZZK	69

SURROGATE RECOVERY LIMITS

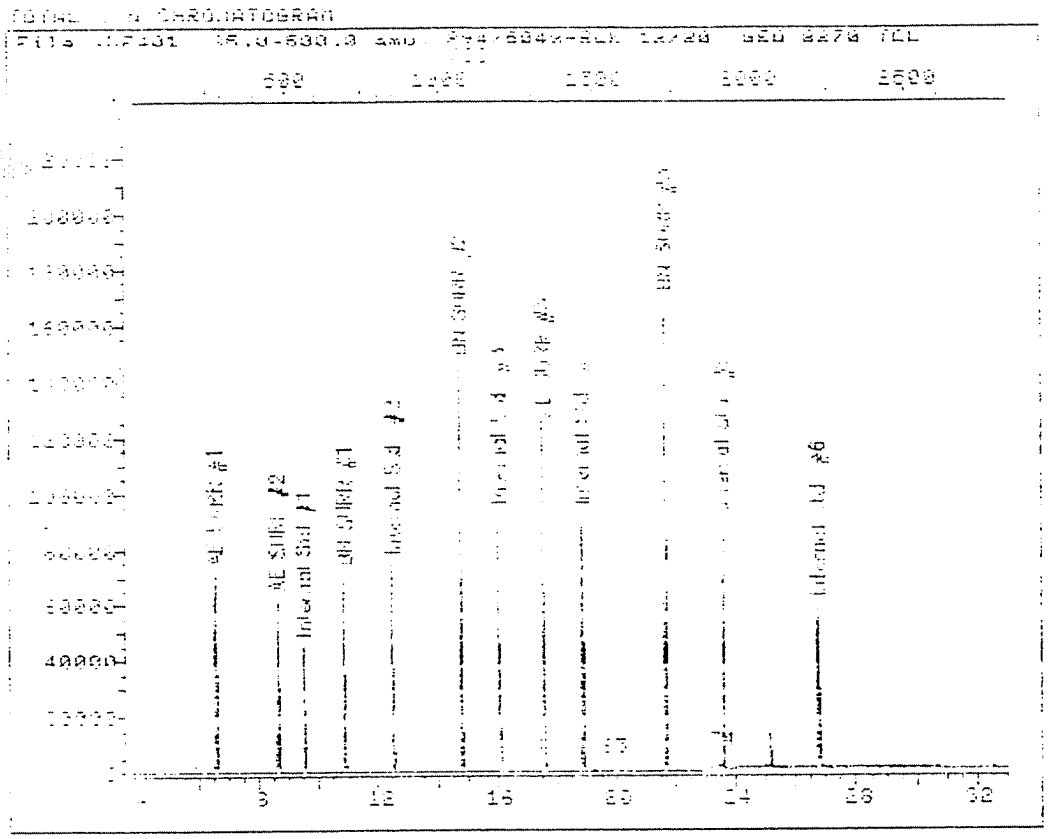
SURROGATE	WATER
2-Fluorophenol	21-100
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

Operator ID: LARRYN Quant Rev: 7 Quant Time: 941220 16:52
Output File: ^DF401::D3 Injected at: 941220 18:18
Data File: ^DF401::D5 Dilution Factor: 1.00000
Name: R94/5048-BLK 12/20 Instrument ID: MS#4
Misc: GEO 8270 TCL BTL# 4

ID File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941220 12:40

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.46	152.0	15037	40.00	mg/L	96
4)	2-Fluorophenol (Surr)	6.51	112.0	41477	89.39	mg/L	89
6)	Phenol-d6 (Surr)	8.58	99.0	43888	66.62	mg/L	93
19)	*d8-Naphthalene	12.48	136.0	62749	40.00	mg/L	95
20)	Nitrobenzene-d5 (Surr)	10.86	82.0	49355	69.66	mg/L	89
34)	*d10-Acenaphthene	16.03	164.0	38013	40.00	mg/L	96
39)	2-Fluorobiphenyl (Surr)	14.72	172.0	90064	70.63	mg/L	94
54)	2,4,6-Tribromophenol (Surr)	17.51	329.7	39670	190.76	mg/L	95
55)	*d10-Phenanthrene	18.79	188.0	70642	40.00	mg/L	96
65)	Di-n-Butylphthalate	19.75	149.0	1751	.510	mg/L	96
67)	*d12-Chrysene	23.54	240.0	69634	40.00	mg/L	87
70)	Terphenyl-d14 (Surr)	21.62	244.0	130135	69.92	mg/L	76
74)	Bis(2-Ethylhexyl)Phthalate	23.37	149.0	1608	.640	mg/L	95
	*d12-Perylene	26.72	264.0	70193	40.00	mg/L	85

* Compound is ISTD



Data File: >DF401::D5 Quant Output File: ^DF401::D3
Name: R94/5048-BLK 12/20 Instrument ID: MS#4
Misc: GEO 8270 TCL BTL# 4

Id File: ID1XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES GC/MS #4
Last Calibration: 941220 15:40 Last Qcal Time: 941220 12:40

Operator ID: LARRYN
Quant Time : 941220 18:52
Injected at: 941220 16:18

BLANK SUMMARY

Date of Extraction 12/20/94 Data File Name DF402

Date of Analysis 12/20/94 Method 8020

Time of Analysis 18:18 Water

Samples analyzed with this method blank:

Sample #	Data File
R94/5048-4	DF402

BLANK SUMMARY

Date of Extraction 12/19/94 Data File Name DF418

Date of Analysis 12/20/94 Method 8270

Time of Analysis 17:03 Soil

Samples analyzed with this method blank:

Sample #	Data File
294/5048 - Refspk	DF420
1 Y50	DF421
1 Y200	DF436
2 Y5	DF430
3 Y50	DF423
6 Y50	DF424
7	DF425
8	DF426
8MS	DF427
8MSD	DF428

INITIAL CALIBRATION SUMMARY

STANDARD	DATA FILE	DATE	TIME
~~ST~~ Tune Check	DF392	12/20/94	11:39
20 ppm std	DF393		11:57
50	DF394		12:40
80	DF395		13:25
120	DF396		14:09
160	DF397		14:52
R94/5048-Blk	DF401	12/20/94	18:18
4	DF402	↓	19:03

000206

SAMPLE SUMMARY

	DATA FILE	DATE	TIME
TUNE CHECK	DF417	12/21/94	15:59
CALIBRATION CHECK	DF418	12/21/94	16:17

SAMPLE	DATA FILE	DATE	TIME
R94/5048-Blk	DF419	12/21/94	17:03
Ref-pk	DF420		17:49
1 Y50	DF421		18:35
3 Y50	DF423		20:02
6 Y50	DF424		20:52
7	DF425		21:38
8	DF426		22:23
8MS	DF427		23:05
8MS0	DF428	↓	23:54
2 Y5	DF430	12/22/94	1:25

000080

SAMPLE SUMMARY

	DATA FILE	DATE	TIME
TUNE CHECK	DF435	12/22/94	12:55
CALIBRATION CHECK	DF435	12/22/94	13:13

SAMPLE	DATA FILE	DATE	TIME
R94/5048-1 Y200	DF436	12/22/94	14:00

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/20/94

Contractor: GENERAL TESTING CORP Time: 12:40

Contract No: CRL1XX/ID1XX/ID1625 Laboratory ID: >DF394

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Pyridine	1.61269	1.61834	.35			
N-Nitrosodimethylamine	.74974	.75995	1.36			
2-Fluorophenol (Surr)	1.14803	1.23424	7.51			(Conc=50.00)
Aniline	1.76046	1.85343	5.28			
Phenol-d6 (Surr)	1.67198	1.75237	4.81			(Conc=50.00)
Phenol	1.86667	1.93775	3.81	*		
bis(-2-Chloroethyl)Ether	1.72223	1.82474	5.95			
2-Chlorophenol	1.39199	1.47089	5.67			
1,3-Dichlorobenzene	1.47478	1.54080	4.48			
1,4-Dichlorobenzene	1.50487	1.59871	6.24	*		
1,2-Dichlorobenzene	1.41003	1.53367	8.77			
Benzyl Alcohol	.90753	1.05050	15.75			
2,2'-oxybis(1-Chloropropane)	4.04077	4.19682	3.86			
2-Methylphenol	1.29287	1.39908	8.28			
N-Nitroso-Di-n-propylamine	1.00711	1.00553	.16		**	
Hexachloroethane	.71319	.75491	5.85			
4-Methylphenol	1.41812	1.41030	.55			
Nitrobenzene-d5 (Surr)	.43890	.45162	2.90			(Conc=50.00)
Nitrobenzene	.42599	.44491	4.44			
Isophorone	.94443	.97286	3.01			
2-Nitrophenol	.22862	.23694	3.64	*		
Benzoic acid	.23475	.24724	5.32			
2,4-Dimethylphenol	.38942	.40450	3.87			
bis(-2-Chloroethoxy)Methane	.56688	.60767	7.20			
2,4-Dichlorophenol	.31797	.33930	6.71	*		
1,2,4-Trichlorobenzene	.33972	.36226	6.64			
Naphthalene	.97242	1.05478	8.47			
4-Chloroaniline	.36353	.41822	15.05			
Hexachlorobutadiene	.19147	.20257	5.80	*		
2-Methylnaphthalene	.63860	.69608	9.00			
4-Chloro-3-methylphenol	.39267	.41542	5.79	*		
Hexachlorocyclopentadiene	.21097	.19726	6.50		**	

RF - Response factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/20/94

Contractor: GENERAL TESTING CORP Time: 12:40

Contract No: CRL1XX/ID1XX/ID1625 Laboratory ID: >DF394

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
2,4,5-Trichlorophenol	.48444	.51363	6.03			
2,4,6-Trichlorophenol	.40463	.42435	4.87	*		
2-Chloronaphthalene	1.16345	1.25975	8.28			
2-Fluorobiphenyl (Surr)	1.22924	1.34188	9.16			(Conc=50.00)
2-Nitroaniline	.55260	.57477	4.00			
Dimethyl Phthalate	1.58297	1.67127	5.58			
Acenaphthylene	1.72618	1.82420	5.68			
3-Nitroaniline	.47208	.50867	7.75			
Acenaphthene	1.18563	1.29810	9.49	*		
2,4-Dinitrophenol	.22367	.18925	15.39		**	
Dibenzofuran	1.52401	1.73705	13.98			
4-Nitrophenol	.32661	.30610	6.28		**	
2,4-Dinitrotoluene	.49475	.56171	13.53			
2,6-Dinitrotoluene	.42128	.44060	4.59			
Diethylphthalate	1.63925	1.78447	8.86			
4-Chlorophenyl-phenylether	.59795	.66597	11.38			
Fluorene	1.20501	1.35466	12.42			
4-Nitroaniline	.50091	.54166	8.13			
2,4,6-Tribromophenol (Surr)	.21443	.21883	2.05			(Conc=50.00)
4,6-Dinitro-2-methylphenol	.17379	.17055	1.83			
1,2 Diphenylhydrazine	1.01796	1.08987	7.06			
N-Nitrosodiphenylamine	.54004	.57974	7.35	*		
4-Bromophenyl-phenylether	.23205	.24559	5.83			
Hexachlorobenzene	.30118	.31667	5.14			
Pentachlorophenol	.16013	.13569	15.26	*		
Phenanthrene	1.10358	1.19033	7.86			
Anthracene	1.11211	1.21959	9.66			
Carbazole	1.14399	1.21873	6.53			
Di-n-Butylphthalate	1.76010	1.94527	10.52			
Fluoranthene	1.28411	1.38246	7.66	*		
Benzidine	.19517	.18618	4.61			
Pyrene	1.44480	1.52363	5.46			

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

000271

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/20/94

Contractor: GENERAL TESTING CORP Time: 12:40

Contract No: CRL1XX/IO1XX/IO1625 Laboratory ID: 30F394

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Terphenyl-d14 (Surr)	1.01247	1.06920	5.60			(Conc=50.00)
Butyl benzyl phthalate	.96057	1.02715	6.93			
3,3'-Dichlorobenzidine	.52378	.53231	1.63			
Benzo(a)Anthracene	1.32443	1.34574	1.61			
Bis(2-Ethylhexyl)Phthalate	1.30006	1.44390	11.06			
Chrysene	1.17675	1.24994	6.22			
Di-n-octyl phthalate	2.24413	2.46583	9.88	*		
Benzo(b)fluoranthene	1.36499	1.37735	.90			
Benzo(k)fluoranthene	1.23425	1.27020	2.91			
Benzo(a)Pyrene	1.21255	1.25004	3.09	*		
Indeno(1,2,3-cd)Pyrene	1.39475	1.44098	3.31			
Dibenz(a,h)anthracene	1.11271	1.15642	3.93			
Benzo(g,h,i)Perylene	1.19300	1.22665	2.82			

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: MS4

Contractor: GENERAL TESTING CORP Calibration Date: 12/20/94

Act No: CAL1XX/ID1XX/ID1625

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Laboratory ID: >DF393 >DF394 >DF395 >DF396 >DF397

Comp No.	Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
1)	Pyridine	1.65138	1.61834	1.65105	1.53978	1.60292	.433	1.61269	2.844		
2)	N-Nitrosodimethylamine	.88150	.75995	.71645	.69307	.69771	.427	.74974	10.437		
3)	2-Fluorophenol (Surr)	1.20333	1.23424	1.16412	1.08682	1.05166	.688	1.14803	6.717		
4)	Aniline	2.38856	1.85345	1.63261	1.52874	1.39894	.918	1.76046	22.071		
5)	Phenol-d6 (Surr)	1.77471	1.75237	1.71243	1.57826	1.54213	.909	1.67198	6.294		
6)	Phenol	1.99614	1.93775	2.03851	1.83542	1.52553	.912	1.86667	11.002	*	
7)	bis(-2-Chloroethyl)Ether	1.78067	1.82474	1.73138	1.57320	1.50112	.935	1.72223	11.108		
8)	2-Chlorophenol	1.53385	1.47089	1.42276	1.29797	1.23451	.947	1.39199	8.867		
9)	1,3-Dichlorobenzene	1.66260	1.54080	1.50139	1.37938	1.26975	.985	1.47478	9.807		
10)	1,4-Dichlorobenzene	1.71220	1.59871	1.52023	1.40198	1.29125	1.004	1.50487	10.931	*	
11)	1,2-Dichlorobenzene	1.67009	1.53367	1.45061	1.31389	1.08187	1.044	1.41003	15.917		
12)	Benzyl Alcohol	.93049	1.05050	.95991	.83165	.76512	1.040	.90753	12.288		
13)	2,2'-oxybis(1-Chloropropane)	4.62230	4.19682	4.10912	3.73326	3.54236	1.074	4.04072	10.428		
14)	2-Methylphenol	1.51683	1.39908	1.31633	1.17825	1.04986	1.068	1.29207	14.175		
15)	N-Nitroso-Di-n-propylamine	1.19609	1.00553	.98524	.90042	.94828	1.111	1.00711	11.216		**
	Hexachloroethane	.82008	.75491	.72611	.65681	.60805	1.131	.71319	11.640		
	)-Methylphenol	1.57669	1.41030	1.48589	1.35385	1.26389	1.110	1.41812	8.470		
18)	Nitrobenzene-d5 (Surr)	.48909	.45162	.44422	.40730	.40225	.870	.43890	8.097		
19)	Nitrobenzene	.49983	.44491	.42783	.39019	.36719	.874	.42599	12.058		
20)	Isophorone	1.07819	.97286	.93776	.86057	.87278	.920	.94443	9.308		
21)	2-Nitrophenol	.23732	.23694	.23501	.21885	.21478	.933	.22862	4.727	*	
22)	Benzoic acid	-	.24724	.24655	.22180	.22340	.974	.23475	5.983		
23)	2,4-Dimethylphenol	.41635	.40450	.39808	.36668	.36151	.942	.38742	6.190		
24)	bis(-2-Chloroethoxy)Methane	.67258	.60707	.57086	.51141	.47183	.959	.56680	13.935		
25)	2,4-Dichlorophenol	.34874	.33730	.32774	.30207	.27261	.977	.31797	9.773	*	
26)	1,2,4-Trichlorobenzene	.38800	.36226	.34344	.31489	.29000	.990	.33972	11.345		
27)	Naphthalene	1.17746	1.05478	.98208	.87665	.77115	1.004	.97242	16.145		
28)	4-Chloroaniline	.52265	.41822	.35170	.30016	.22470	1.015	.36353	31.284		
29)	Hexachlorobutadiene	.21755	.20257	.19313	.17984	.16427	1.024	.19147	10.707	*	
30)	2-Methylnaphthalene	.79112	.69600	.63862	.57428	.49287	1.121	.63860	17.844		

RF - Response Factor (Subscript is amount in mg/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

000279

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: MS4

Contractor: GENERAL TESTING CORP Calibration Date: 12/20/84

Lab Doc No: CAL1XX/ID1XX/ID1025

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Laboratory ID: >0F393 >0F394 >0F395 >0F396 >0F397

Comp No.	Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	RRT	$\overline{RF}$	% RSD	CCC	SPCC
31)	4-Chloro-3-methylphenol	.43823	.41542	.40071	.36415	.34403	1.098	.39267	9.604	*	
32)	Hexachlorocyclopentadiene	.12478	.19726	.22719	.25767	.26775	.891	.21097	25.786		**
33)	2,4,5-Trichlorophenol	.51552	.51363	.49943	.46600	.42761	.915	.48444	7.732		
34)	2,4,6-Trichlorophenol	.43523	.42435	.40999	.38256	.37307	.708	.40463	6.446	*	
35)	2-Chloronaphthalene	1.38446	1.25975	1.16544	1.05621	.95141	.933	1.16345	14.547		
36)	2-Fluorobiphenyl (Surr)	1.50436	1.34188	1.23306	1.09286	.97402	.918	1.22924	16.876		
37)	2-Nitroaniline	.60725	.57471	.55841	.50585	.51677	.947	.55260	7.558		
38)	Dimethyl Phthalate	1.80230	1.67127	1.57217	1.43758	1.43170	.968	1.58297	9.993		
39)	Acenaphthylene	2.12820	1.82426	1.70727	1.54399	1.42744	.784	1.72623	15.708		
40)	3-Nitroaniline	-	.50367	.49083	.44502	.44382	.997	.47208	6.941		
41)	Acenaphthene	1.47415	1.29810	1.17280	1.04760	.93548	1.004	1.18563	17.776	*	
42)	2,4-Dinitrophenol	-	.18925	.22160	.22496	.25883	1.009	.22367	12.725		**
43)	Dibenzofuran	2.05046	1.73705	1.48078	1.29287	1.05887	1.025	1.52401	25.289		
44)	4-Nitrophenol	-	.30610	.32686	.30869	.36681	1.017	.32661	8.720		**
45)	2,4-Dinitrotoluene	.62078	.56171	.49266	.43013	.36846	1.024	.49475	20.337		
	2,6-Dinitrotoluene	.44116	.44060	.42683	.39500	.40280	.976	.42128	5.079		
	Diethylphthalate	2.01389	1.78447	1.62851	1.45930	1.30969	1.050	1.63925	16.777		
48)	4-Chlorophenyl-phenylether	.76585	.66597	.59287	.53210	.43276	1.063	.59795	21.220		
49)	Fluorene	1.57929	1.35466	1.18853	1.03975	.86217	1.065	1.20501	23.033		
50)	4-Nitroaniline	-	.54166	.52341	.47877	.45982	1.070	.50091	7.598		
51)	2,4,6-Tribromophenol (Surr)	.20856	.21883	.22242	.20715	.21520	1.092	.21443	3.051		
52)	4,6-Dinitro-2-methylphenol	-	.17055	.13272	.17157	.17011	.915	.17374	9.404		
53)	1,2 Diphenylhydrazine	1.28140	1.08987	.99236	.91067	.81548	.923	1.01796	17.585		
54)	N-Nitrosodiphenylamine	.63711	.57974	.54673	.49761	.44002	.919	.54804	13.931	*	
55)	4-Bromophenyl-phenylether	.26106	.24559	.23472	.21781	.20067	.955	.23205	10.125		
56)	Hexachlorobenzene	.32380	.31667	.30764	.28521	.27258	.962	.30118	7.171		
57)	Pentachlorophenol	-	.13569	.15984	.16068	.18409	.981	.16013	13.544	*	
58)	Phenanthrene	1.35024	1.19033	1.09648	1.00165	.87877	1.005	1.10358	16.286		
59)	Anthracene	1.35530	1.21959	1.10504	1.00529	.87734	1.008	1.11211	16.684		
60)	Carbazole	1.38567	1.21873	1.14427	1.05187	.93941	1.022	1.14399	15.041		

RF - Response Factor (Subscript is amount in mg/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Test)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

000374

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: MS4

Contractor: GENERAL TESTING CORP Calibration Date: 12/26/84

Lab No: CALIBR/IB1RR/IB1623

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Laboratory ID: >0F393 >0F394 >0F395 >0F396 >0F397

Comp No.	Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
61)	Di-n-Butylphthalate	2.25076	1.94527	1.72973	1.56301	1.31172	1.051	1.76010	20.403		
62)	Fluoranthene	1.53945	1.38246	1.27984	1.17408	1.04469	1.117	1.28411	14.792	*	
63)	Benzidine	-	.18618	.18909	.18240	.22303	.899	.19517	9.618		
64)	Pyrene	1.61411	1.52363	1.44823	1.33776	1.30424	.909	1.44480	8.956		
65)	Terphenyl-d14 (Surr)	1.12528	1.06920	1.02865	.93897	.90027	.917	1.01247	9.133		
66)	Butyl benzyl phthalate	1.11693	1.02715	.76747	.87772	.81358	.952	.96057	12.471		
67)	3,3'-Dichlorobenzidine	.55872	.53251	.53103	.49379	.50305	.995	.52378	4.937		
68)	Benzo(a)Anthracene	1.38231	1.34574	1.34149	1.27524	1.27736	.999	1.32443	3.528		
69)	Bis(2-Ethylhexyl)Phthalate	1.63783	1.44390	1.28740	1.15931	.97204	.998	1.30006	19.694		
70)	Chrysene	1.30847	1.24994	1.19057	1.09108	1.04369	1.002	1.17675	9.303		
71)	Di-n-octyl phthalate	2.74606	2.46583	2.23742	2.05787	1.71347	.920	2.24413	17.507	*	
72)	Benzo(b)fluoranthene	1.36208	1.37735	1.38956	1.28272	1.41326	.964	1.36499	3.638		
73)	Benzo(k)Fluoranthene	1.35608	1.27020	1.38040	1.00331	1.16125	.967	1.23425	12.562		
74)	Benzo(a)Pyrene	1.29629	1.25004	1.22677	1.16267	1.12696	.995	1.21255	5.599	*	
75)	Indeno(1,2,3-cd)Pyrene	1.47889	1.44098	1.41864	1.33714	1.29811	1.129	1.39475	5.371		
	Dibenz(a,h)anthracene	1.16216	1.15642	1.12617	1.07286	1.04595	1.129	1.11271	4.623		
	Benzo(g,h,i)Perylene	1.24347	1.22665	1.22147	1.15036	1.12304	1.137	1.19300	4.436		

RF - Response Factor (Subscript is amount in mg/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

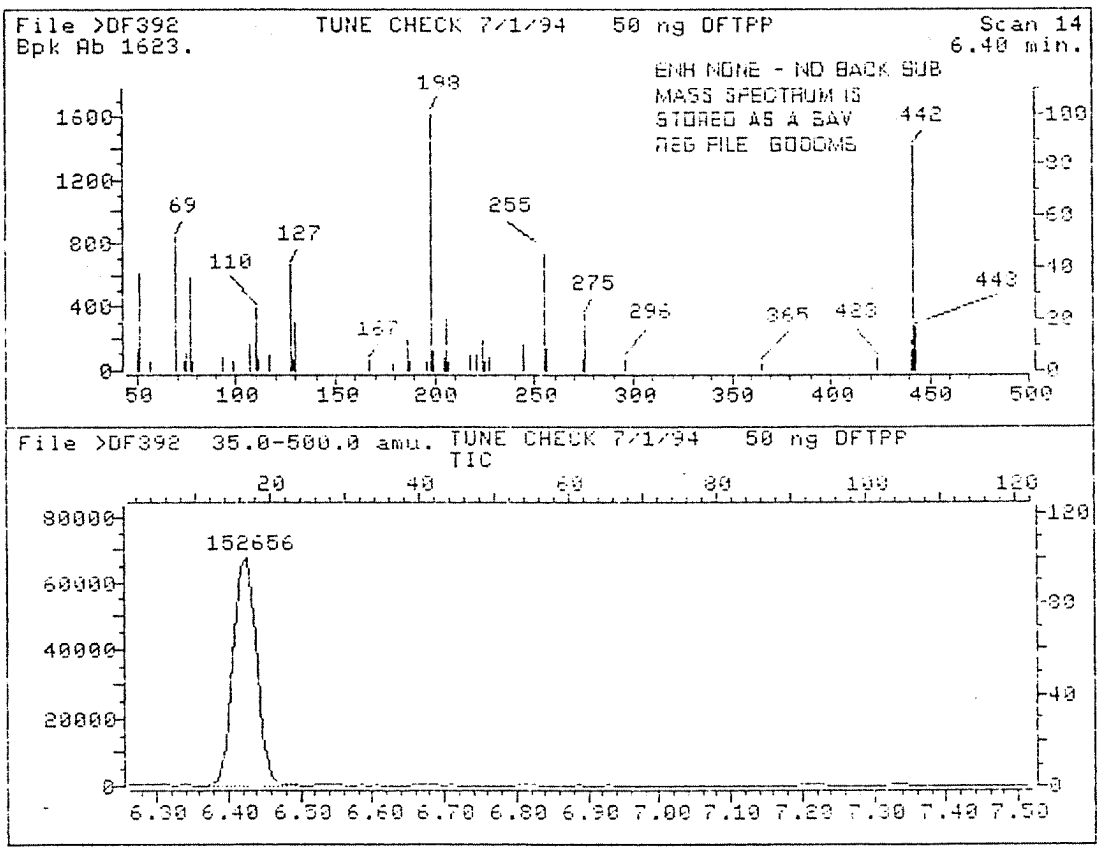
000370

GC/MS PERFORMANCE STANDARD

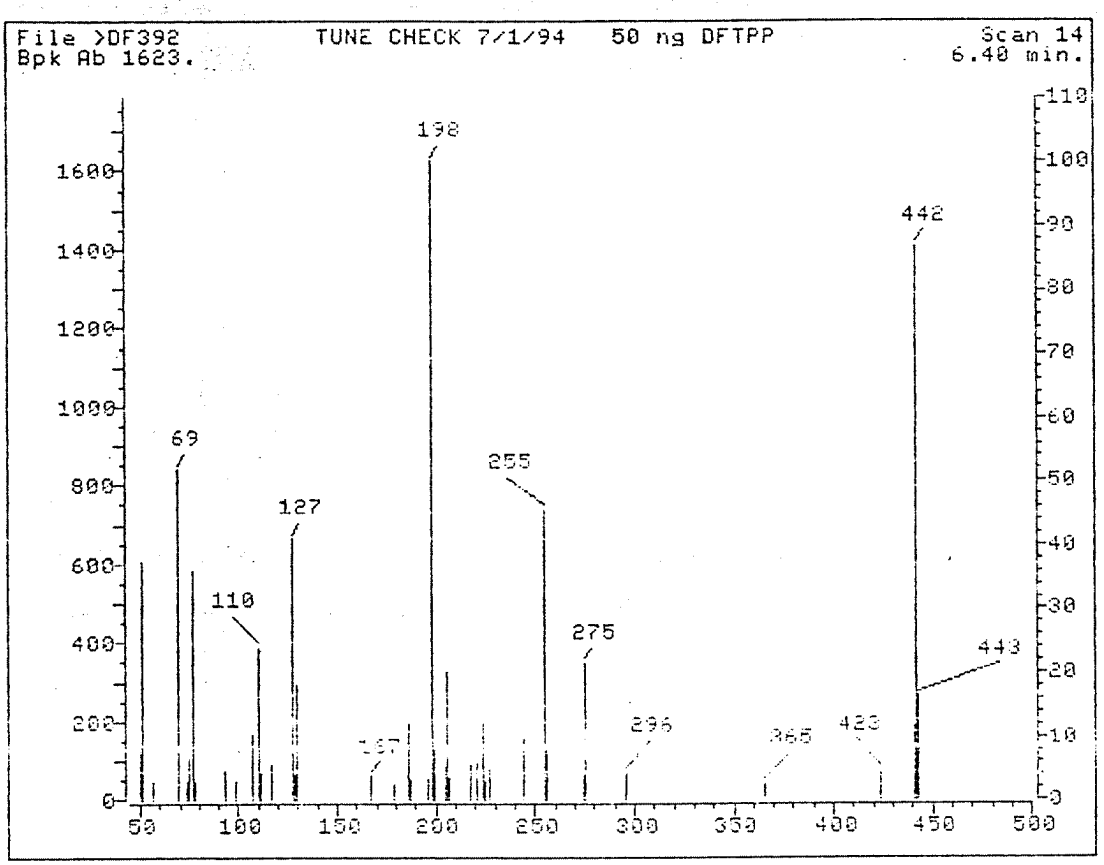
Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	37.15	37.15	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	51.63	51.63	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	40.91	40.91	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	7.70	7.70	Ok
275	10-30% of mass 198	21.38	21.38	Ok
365	Greater than 1% of mass 198	2.46	2.46	Ok
441	0-100% of mass 443	11.52	70.83	Ok
442	Greater than 40% of mass 198	86.75	86.75	Ok
443	17-23% of mass 442	16.27	18.75	Ok

Injection Date: 12/20/94 Injection Time: 11:39
Data File: >DF392 Scan: 14



Instrument ID: MS#4 Analyzed on: 12/20/94 11:39



Instrument ID: MS#4 Analyzed on: 12/20/94 11:39

> 92 TUNE CHECK 7/1/94 50 ng DFTPP
14 NRM

File: >DF392 Scan #: 14 Retn. time: 6.40

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.10	3.389	78.05	2.957	129.05	17.868	206.10	20.148	256.00	7.948
44.00	32.286	93.05	4.621	167.15	3.635	207.10	3.389	274.10	3.635
50.10	8.256	98.05	2.834	179.00	2.465	217.00	5.422	275.10	21.380
51.00	37.153	107.05	10.166	186.10	11.892	221.10	5.792	295.95	4.190
57.00	2.896	110.05	23.906	187.00	3.204	224.00	11.892	365.05	2.465
69.05	51.633	110.95	4.190	196.00	3.019	225.00	2.773	423.10	4.498
74.05	2.773	117.05	5.545	198.00	100.000	227.10	4.683	441.10	11.522
75.05	6.593	127.05	40.912	199.00	7.702	244.00	9.612	442.10	86.753
77.05	36.044	128.05	3.882	205.00	5.114	255.00	45.410	443.10	16.266

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP | Time: 16:17

Lot No: CAL1Xx/I01XX/I01625 | Laboratory ID: 0F418

Instrument ID: MS4 | Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 | Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Pyridine	1.61269	1.55548	3.55			
N-Nitrosodimethylamine	.74974	.91958	22.67			
2-Fluorophenol (Surr)	1.14803	1.13462	1.17			(Conc=50.00)
Aniline	1.76046	1.72435	2.05			
Phenol-d6 (Surr)	1.67198	1.72248	3.02			(Conc=50.00)
Phenol	1.86667	1.95433	4.70	*		
bis(-2-Chloroethyl)Ether	1.72223	1.78341	3.55			
2-Chlorophenol	1.39199	1.44674	3.93			
1,3-Dichlorobenzene	1.47478	1.55445	5.37			
1,4-Dichlorobenzene	1.50467	1.62066	7.69	*		
1,2-Dichlorobenzene	1.41003	1.59315	13.03			
Benzyl Alcohol	.90753	1.15587	27.37			
2,2'-oxybis(1-Chloropropane)	4.04077	4.99125	23.52			
2-Methylphenol	1.29207	1.37810	6.66			
N-Nitroso-Di-n-propylamine	1.00711	1.14457	13.65		**	
Hexachloroethane	.71319	.85415	19.76			
Nitrophenol	1.41812	1.64756	16.18			
Nitrobenzene-d5 (Surr)	.43890	.47471	8.16			(Conc=50.00)
Nitrobenzene	.42599	.47322	11.09			
Isophorone	.94443	1.00091	5.98			
2-Nitrophenol	.22862	.27103	1.06	*		
Benzoic acid	.23475	.22767	2.92			
2,4-Dimethylphenol	.38942	.41967	7.77			
bis(2-Chloroethoxy)Methane	.56688	.77776	5.02			
2,4-Dichlorophenol	.31797	.33678	5.92	*		
1,2,4-Trichlorobenzene	.33972	.36500	7.44			
Naphthalene	.97242	1.07241	10.28			
4-Chloroaniline	.36353	.42279	16.36			
Hexachlorobutadiene	.19147	.22599	17.95	*		
2-Methylnaphthalene	.63860	.73663	15.35			
4-Chloro-3-methylphenol	.39267	.43987	12.02	*		
Hexachlorocyclopentadiene	.21097	.16009	24.12		**	

$\overline{RF}$ - Response Factor from daily standard file at 50.00 ug/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

0000270

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP | Time: 16:17

Project No: CAL1XX/IO1XX/IO1625 | Laboratory ID: >DF410

Instrument ID: MS4 | Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 | Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
2,4,5-Trichlorophenol	.48444	.48931	1.01			
2,4,6-Trichlorophenol	.40463	.40906	1.29	*		
2-Chloronaphthalene	1.16345	1.19857	3.02			
2-Fluorobiphenyl (Surr)	1.22924	1.28454	4.50			(Conc=50.00)
2-Nitroaniline	.55260	.59229	7.18			
Dimethyl Phthalate	1.58297	1.62501	2.66			
Acenaphthylene	1.72618	1.65576	4.08			
3-Nitroaniline	.47208	.48189	2.08			
Acenaphthene	1.18563	1.28714	8.56	*		
2,4-Dinitrophenol	.22367	.18983	15.13		**	
Dibenzofuran	1.52401	1.75141	14.92			
4-Nitrophenol	.32661	.30051	7.99		**	
2,4-Dinitrotoluene	.49475	.58047	17.33			
2,6-Dinitrotoluene	.42128	.43422	3.07			
Diethylphthalate	1.63925	1.84757	12.71			
4-Chlorophenyl-phenylether	.59795	.71103	18.91			
Fluorene	1.20501	1.41283	17.25			
4-Nitroaniline	.50091	.52813	5.43			
2,4,6-Tribromophenol (Surr)	.21443	.26612	24.10			(Conc=50.00)
4,6-Dinitro-2-methylphenol	.17374	.16954	2.41			
1,2 Diphenylhydrazine	1.01796	1.06349	4.47			
N-Nitrosodiphenylamine	.54004	.55775	3.28	*		
4-Bromophenyl-phenylether	.23205	.25885	11.55			
Hexachlorobenzene	.39118	.33641	14.00			
Pentachlorophenol	.16013	.13112	18.12	*		
Phenanthrene	1.10358	1.20233	8.95			
Anthracene	1.11211	1.17183	5.35			
Carbazole	1.14399	1.21231	5.97			
Di-n-butylphthalate	1.76010	1.96463	11.62			
Fluoranthene	1.28411	1.48918	15.97	*		
Benzidine	.19517	.10460	46.40			
Pyrene	1.44400	1.35866	5.91			

RF - Response Factor from daily standard file at 50.00 ug/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

0000279

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP Time: 16:17

Lact No: CAL1XX/ID1XX/ID1625 Laboratory ID: >DF418

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14 (Surr)	1.01247	1.00651	.61		(Conc=50.00)
Butyl benzyl phthalate	.96057	.91454	4.79		
3,3'-Dichlorobenzidine	.52378	.53934	2.97		
Benzo(a)Anthracene	1.32443	1.34228	1.35		
Bis(2-Ethylhexyl)Phthalate	1.30006	1.31675	1.28		
Chrysene	1.17675	1.28203	8.95		
Di-n-octyl phthalate	2.24413	2.20921	1.56	*	
Benzo(b)fluoranthene	1.36499	1.38303	1.32		
Benzo(k)Fluoranthene	1.23425	1.28331	3.98		
Benzo(a)Pyrene	1.21255	1.23945	2.22	*	
Indeno(1,2,3-cd)Pyrene	1.39475	1.49899	7.47		
Dibenz(a,h)anthracene	1.11271	1.16897	6.85		
Benzo(g,h,i)Perylene	1.19300	1.28521	7.73		

RF - Response Factor from daily standard file at 50.00 mg/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

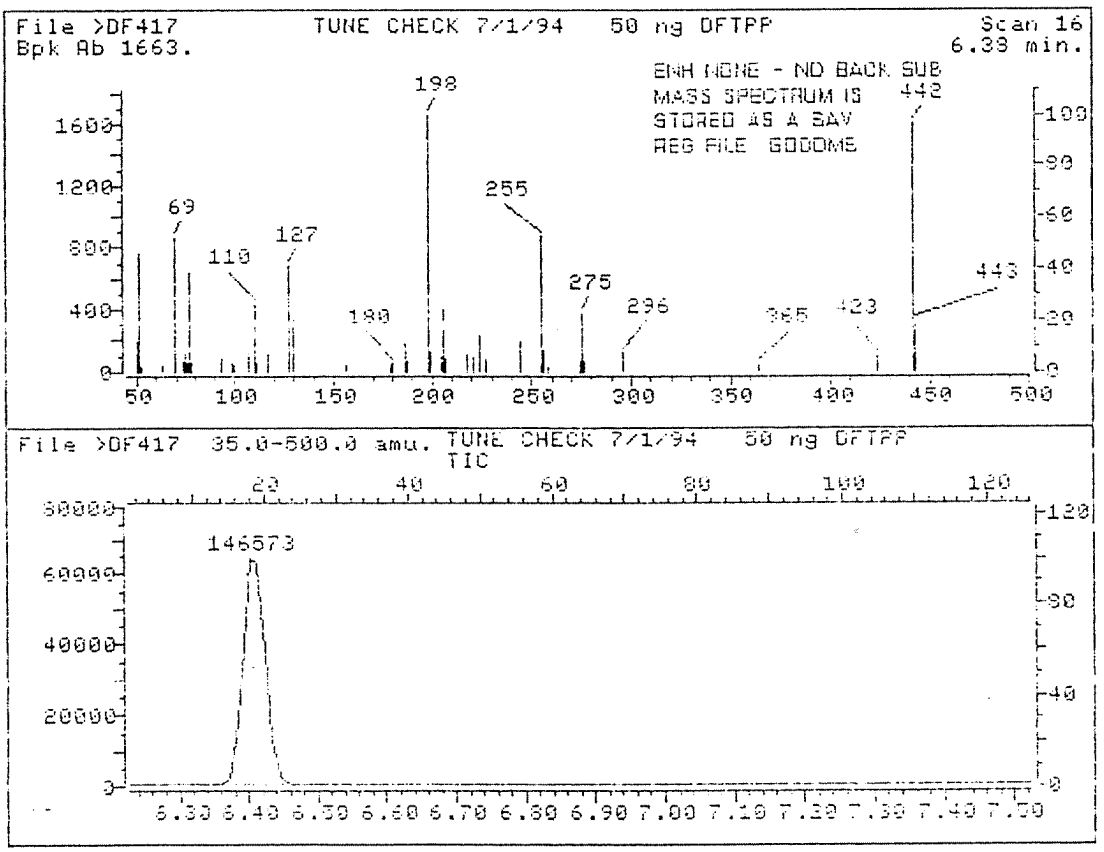
000000

GC/MS PERFORMANCE STANDARD

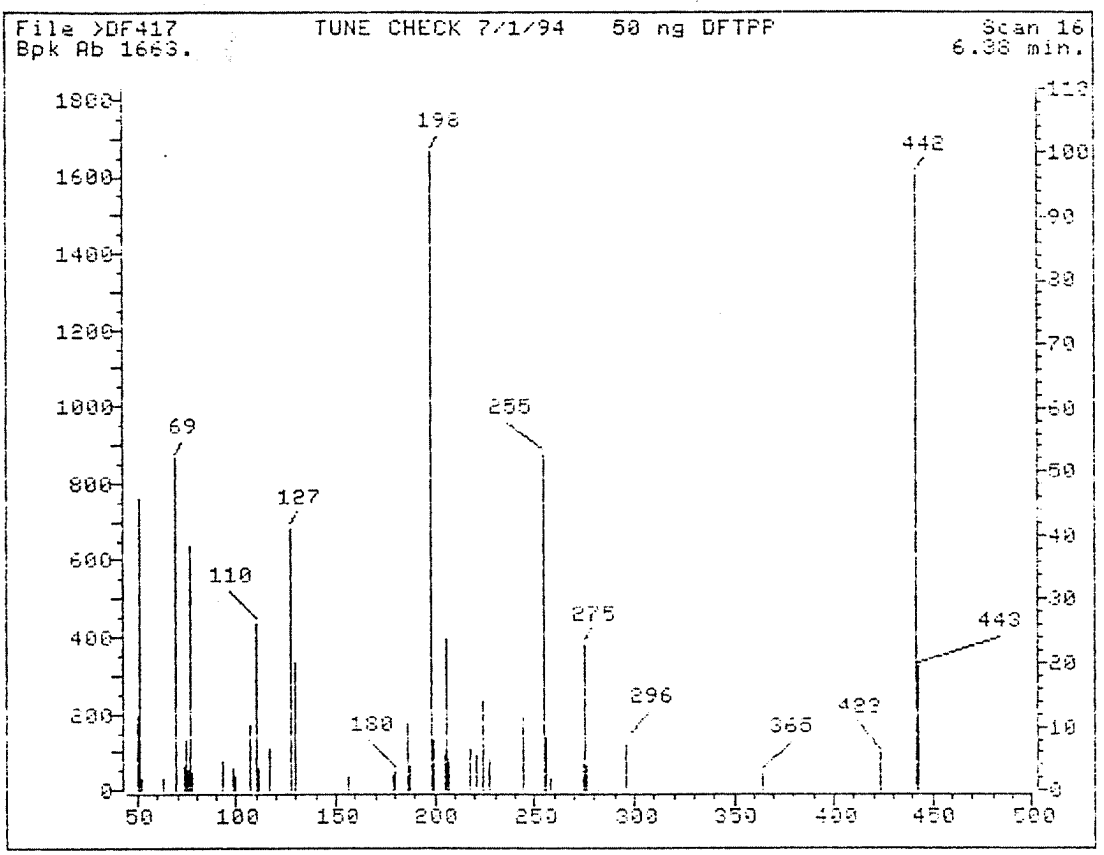
Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	45.82	45.82	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	52.01	52.01	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	41.13	41.13	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	7.76	7.76	Ok
275	10-30% of mass 198	22.85	22.85	Ok
365	Greater than 1% of mass 198	2.59	2.59	Ok
441	0-100% of mass 443	12.21	63.64	Ok
442	Greater than 40% of mass 198	96.45	96.45	Ok
443	17-23% of mass 442	19.18	19.89	Ok

Injection Date: 12/21/94 Injection Time: 15:59
Data File: >DF417 Scan: 16



Instrument ID: MS#4 Analyzed on: 12/21/94 15:59



Instrument ID: MS#4 Analyzed on: 12/21/94 15:59

> 17 TUNE CHECK 7/1/94 50 ng DFTPP
16 NRM

File: >DF417 Scan #: 16 Retn. time: 6.38

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.10	5.652	77.15	38.364	129.05	19.904	206.10	23.752	274.10	4.269
44.00	40.890	78.05	2.766	155.95	1.984	207.10	4.931	275.10	22.850
50.10	11.485	93.05	4.630	179.00	2.465	217.00	6.494	276.00	3.668
51.10	45.821	98.05	3.548	180.10	2.886	221.10	5.652	296.05	7.216
51.90	1.684	98.95	2.044	186.10	10.463	224.10	13.891	364.95	2.586
63.05	1.924	107.05	10.283	187.10	3.848	227.10	4.811	423.00	5.773
69.05	52.014	110.05	26.158	198.00	100.000	244.00	11.425	441.20	12.207
74.05	3.668	111.05	3.548	199.10	7.757	255.00	52.495	442.10	96.452
75.05	7.757	116.95	6.374	204.10	2.706	256.10	8.178	443.10	19.182
76.15	3.187	127.05	41.130	205.10	5.472	258.00	1.744		

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/22/94

Contractor: GENERAL TESTING CORP Time: 13:13

Contract No: CAL1XX/ID1XX/ID1625 Laboratory ID:)DF435

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Pyridine	1.61269	1.84400	14.34			
N-Nitrosodimethylamine	.74974	1.27390	69.91			
2-Fluorophenol (Surr)	1.14803	1.15039	.21			(Conc=50.00)
Aniline	1.76046	1.98533	12.77			
Phenol-d6 (Surr)	1.67198	1.87018	11.85			(Conc=50.00)
Phenol	1.86667	2.23566	19.77	*		
bis(-2-Chloroethyl)Ether	1.72223	2.02684	17.69			
2-Chlorophenol	1.39199	1.48639	6.78			
1,3-Dichlorobenzene	1.47478	1.56502	6.12			
1,4-Dichlorobenzene	1.50487	1.62949	8.28	*		
1,2-Dichlorobenzene	1.41003	1.61588	14.60			
Benzyl Alcohol	.90753	1.44705	59.45			
2,2'-oxybis(1-Chloropropane)	4.04077	6.43840	59.34			
2-Methylphenol	1.29207	1.70560	32.00			
N-Nitroso-Di-n-propylamine	1.00711	1.53300	52.22		**	
Hexachloroethane	.71319	.87710	22.98			
4-Methylphenol	1.41812	1.81035	27.66			
Nitrobenzene-d5 (Surr)	.43890	.55114	25.57			(Conc=50.00)
Nitrobenzene	.42599	.56187	31.90			
Isophorone	.94443	1.18349	25.31			
2-Nitrophenol	.22862	.21783	4.72	*		
Benzoic acid	.23475	.21045	10.35			
2,4-Dimethylphenol	.38942	.45115	15.85			
bis(-2-Chloroethoxy)Methane	.56688	.66579	17.45			
2,4-Dichlorophenol	.31797	.32852	3.32	*		
1,2,4-Trichlorobenzene	.33972	.36239	6.67			
Naphthalene	.97242	1.11733	14.90			
4-Chloroaniline	.36353	.44536	22.51			
Hexachlorobutadiene	.19147	.20134	5.15	*		
2-Methylnaphthalene	.63860	.76316	19.51			
4-Chloro-3-methylphenol	.39267	.46572	18.61	*		
Hexachlorocyclopentadiene	.21097	.06595	68.74		**	

RF - Response Factor from daily standard file at 50.00 mg/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/22/94

Contractor: GENERAL TESTING CORP Time: 13:13

Contract No: CAL1XX/ID1XX/ID1625 Laboratory ID:)DF435

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
2,4,5-Trichlorophenol	.48444	.49760	2.72			
2,4,6-Trichlorophenol	.40463	.41492	2.54	*		
2-Chloronaphthalene	1.16345	1.16048	.26			
2-Fluorobiphenyl (Surr)	1.22924	1.27302	3.56			(Conc=50.00)
2-Nitroaniline	.55260	.65820	19.11			
Dimethyl Phthalate	1.58297	1.62014	2.35			
Acenaphthylene	1.72618	1.62838	5.67			
3-Nitroaniline	.47208	.45128	4.41			
Acenaphthene	1.18563	1.32579	11.82	*		
2,4-Dinitrophenol	.22367	.15728	29.69		**	
Dibenzofuran	1.52401	1.77052	16.18			
4-Nitrophenol	.32661	.37206	13.91		**	
2,4-Dinitrotoluene	.49475	.56703	14.61			
2,6-Dinitrotoluene	.42128	.41179	2.25			
Diethylphthalate	1.63925	1.92893	17.67			
4-Chlorophenyl-phenylether	.59795	.77715	29.97			
Fluorene	1.20501	1.50625	25.00			
4-Nitroaniline	.50091	.50026	.13			
2,4,6-Tribromophenol (Surr)	.21443	.32043	49.43			(Conc=50.00)
4,6-Dinitro-2-methylphenol	.17374	.14804	14.79			
1,2 Diphenylhydrazine	1.01796	1.10046	8.10			
N-Nitrosodiphenylamine	.54004	.51674	4.31	*		
4-Bromophenyl-phenylether	.23205	.29853	28.65			
Hexachlorobenzene	.30118	.43512	44.47			
Pentachlorophenol	.16013	.18830	17.60	*		
Phenanthrene	1.10358	1.17598	6.56			
Anthracene	1.11211	1.18285	6.36			
Carbazole	1.14399	1.14736	.29			
Di-n-Butylphthalate	1.76010	1.95744	11.21			
Fluoranthene	1.28411	1.61763	25.97	*		
Benzidine	.19517	.08433	56.79			
Pyrene	1.44480	1.19188	17.51			

RF - Response factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

000284

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/22/94

Contractor: GENERAL TESTING CORP Time: 13:13

Contract No: CRL1XX/ID1XX/ID1625 Laboratory ID: X0F435

Instrument ID: MS4 Initial Calibration Date: 12/20/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Terphenyl-d14 (Surr)	1.01247	1.00502	.74			(Conc=50.00)
Butyl benzyl phthalate	.96057	.74676	22.26			
3,3'-Dichlorobenzidine	.52378	.58182	11.08			
Benzo(a)Anthracene	1.32443	1.31639	.61			
Bis(2-Ethylhexyl)Phthalate	1.30006	1.09982	15.40			
Chrysene	1.17675	1.20386	2.30			
Di-n-octyl phthalate	2.24413	1.58058	29.57	*		
Benzo(b)fluoranthene	1.36499	1.29694	4.99			
Benzo(k)Fluoranthene	1.23425	1.03513	16.13			
Benzo(a)Pyrene	1.21255	1.18472	2.29	*		
Indeno(1,2,3-cd)Pyrene	1.39475	1.48750	6.65			
Dibenz(a,h)anthracene	1.11271	1.21031	8.77			
Benzo(g,h,i)Perylene	1.19300	1.17223	1.74			

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

0000283

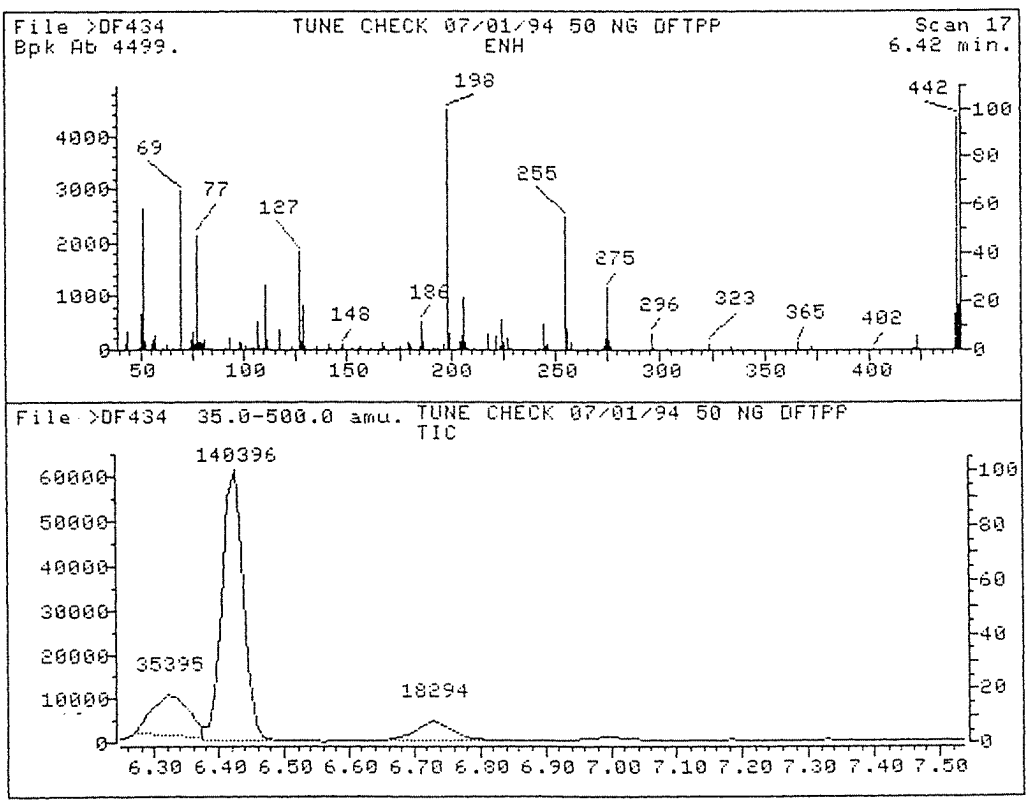
GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

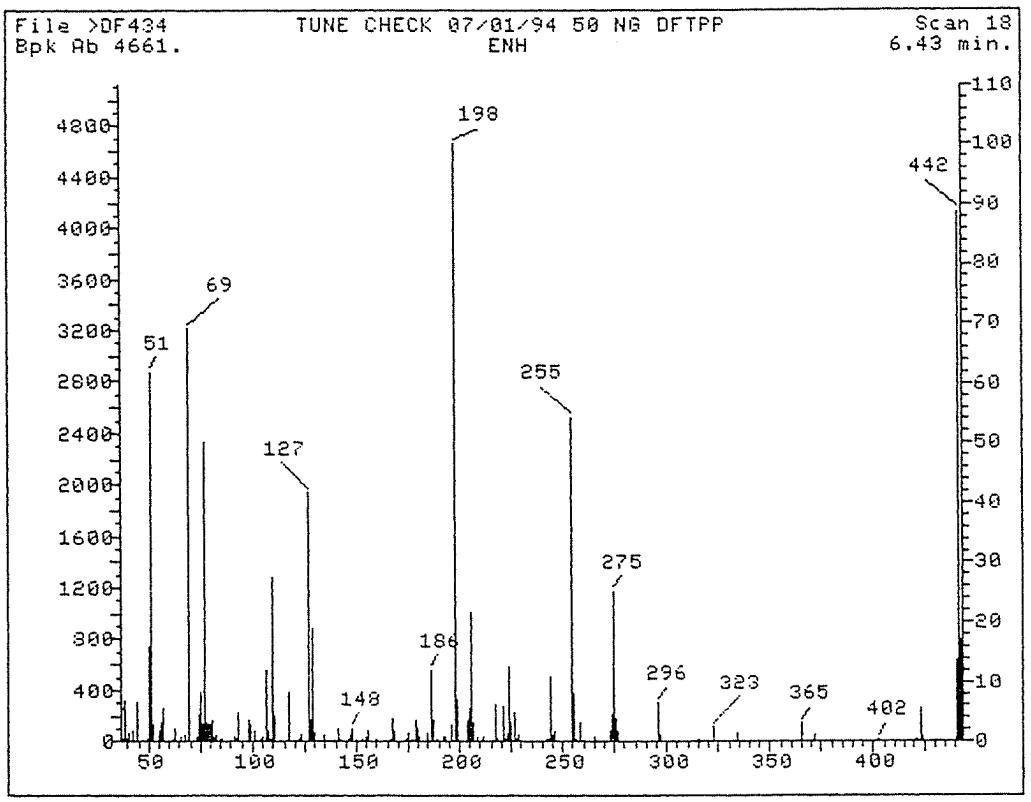
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	58.39	58.39	Ok
68	Less than 2% of mass 69	.91	1.38	Ok
69	(reference only)	65.80	65.80	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	40.72	40.72	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.92	6.92	Ok
275	10-30% of mass 198	25.50	25.50	Ok
365	Greater than 1% of mass 198	2.95	2.95	Ok
441	0-100% of mass 443	14.59	79.31	Ok
442	Greater than 40% of mass 198	96.55	96.55	Ok
443	17-23% of mass 442	18.39	19.05	Ok

Injection Date: 12/22/94 Injection Time: 12:55

Data File: >DF434 Scan: 17



000280



>DF434 TUNE CHECK 07/01/94 50 NG DFTPP
18 NRM ENH

File: >DF434 Scan #: 18 Retn. time: 6.43

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	.137	81.05	3.463	141.05	2.017	198.00	100.000	258.00	3.146
38.00	.300	82.05	.639	142.05	.382	199.00	6.845	265.00	.794
39.10	6.960	83.15	.991	145.85	.270	201.60	.129	273.00	1.901
40.00	.459	85.05	.352	147.05	.970	204.10	3.317	274.00	4.579
41.00	1.330	86.05	.566	148.05	2.137	205.10	5.437	275.00	25.186
43.00	1.884	91.05	.712	149.05	.172	206.10	21.692	276.10	3.836
44.10	6.544	92.05	.524	153.05	.528	207.10	3.261	277.00	1.789
48.80	.352	93.05	4.918	154.95	.845	208.10	.781	296.05	6.377
49.00	.167	98.05	3.476	156.05	1.665	211.20	.674	297.05	.931
50.00	15.921	99.05	2.734	157.85	.133	217.00	6.102	315.05	.554
51.10	61.704	101.05	1.622	160.05	.352	218.10	.455	323.15	2.304
52.10	2.819	104.05	.588	165.95	.438	221.00	5.707	334.05	1.498
55.10	1.708	105.15	.927	167.05	3.712	222.00	.502	334.95	.137
56.00	3.047	107.05	12.016	167.95	1.811	223.00	1.339	352.05	.236
57.10	5.540	108.05	1.931	173.95	.451	224.10	12.475	354.05	.189
62.05	.348	109.15	.541	175.05	1.326	225.10	3.266	365.05	3.004
63.15	2.086	110.05	27.477	177.00	.511	227.10	4.969	372.05	1.107
65.15	.760	111.05	4.042	179.00	3.489	228.00	.459	402.05	.318
67.95	1.034	117.05	8.359	180.00	2.150	229.00	.957	403.05	.245
69.05	68.931	118.05	.223	181.10	.785	242.10	.425	421.00	.571
73.15	.596	122.05	.433	185.00	1.378	243.10	.369	422.00	.352
74.15	4.484	123.05	1.107	186.10	11.951	244.10	10.823	423.10	5.348
75.05	8.093	124.05	.232	187.10	3.412	245.10	1.069	424.10	.850
76.15	2.725	127.05	41.583	189.10	.343	246.00	1.807	441.10	13.462
77.15	50.187	128.05	3.446	192.00	.807	254.00	.167	442.10	88.765

CLIENT: GEO 2 JOB #: R94/5048 METHOD: 8270 TCL EXTRACTION: 3550

SAMPLE #	INITIAL WT. OF SOIL	EXTRACT. FINAL VOL.	APPEARANCE	SPIKES ADDED	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLEAN-UP	DATE	COMMENTS	DATE DUE
1	30.0g	10ml	Black, muddy soil	For 8ms, 8msd, RS;	12/20	GPC (1/5)	12/20			Concentrated to 1ml	12/
2	30.0g		Black, rocky oily soil	2mL GC/MS							
3	30.0g		Brown, rocky soil	11 compound spike							
6	30.0g		Brown, clay like rocky soil	100 → 200 ppm							
7	30.0g		Brown, rocky soil	9/20/94 mix L/g 94 V1							
8	30.0g		Brown, clay like soil								
8ms	30.0g										
8msd	30.0g										
13lk	30.0g		Na_2SO_4								
RS	30.0g										

DATE EXTRACTED: 12/19/94 INIT. MF 12/21/94

CLIENT: GEO 2 R94/5048 ANALYTE: 8270 TCL ANALYTE: DF/Leonard

METHOD SUMMARY:

Sonicate 30g Soil w/ 60g Na_2SO_4 in 100mls 1:1 CH_2Cl_2 : Acetone 3x for 3min. each time

SURROGATE: 1 ml GC/MS AE/BN Surrogate 200ppm AE/100ppm BN in Me OH 12/6/94 MR1 p.62 GC/MS V4

CLIENT: GeO JOB #: R941 5048 METHOD: 8270 EXTRACTION: 3510

IT #	INITIAL WT./VOL.	EXTRACT VOL.	APPEARANCE	TYPE ANALYSIS	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLN	DATE	COMMENTS	DATE DONE
4	1000ml	1ml			12/20						12/20
31C	1,000ml	↓			↓						↓

EXTRACTED: 12/20/94 MIS

UNIT: GeO - 5048 ANALYST: 8270 ANALYST: DHowery

SURROGATE: IM | 6C | MSAE | BNSurr.
200ppm AE | 100ppm BN
12/6/94 MRL pg62 V6

Extraction of Water Samples using 60ml mech, 3x at pH<2 Then 3x60ml

GENERAL TESTING CORPORATION

METHOD	8260		
SAMPLE	R94/05048-005	CLIENT	
DATE ANALYZED	12/26/94	REFERENCE	
DILUTION	10	LOCATION	
SAMPLE MATRIX	WATER	DATE SAMPLED	
FILE	XJ2095	TIME SAMPLED	

COMPOUND NAME	IDC	ug/L	1.00
Vinyl chloride	HSL03	50 U	
1,1-Dichloroethene	HSL12	50 U	
2-Butanone	HSL16	100 U	
Chloroform	HSL15	50 U	
1,2-Dichloroethane	HSL17	50 U	
Carbon tetrachloride	HSL19	50 U	
Benzene	HSL26	50 U	
Trichloroethene	HSL23	50 U	
Tetrachloroethene	HSL32	50 U	
Chlorobenzene	HSL35	50 U	

SURROGATE REC		% REC	LIMITS WATER & SOIL	
Dibromofluoromethane	62622H	92	86-118	70-121
Toluene-d8	HSL44	98	88-110	81-117
Bromofluorobenzene	HSL45	95	86-115	74-121

000230

DL
12/29/94

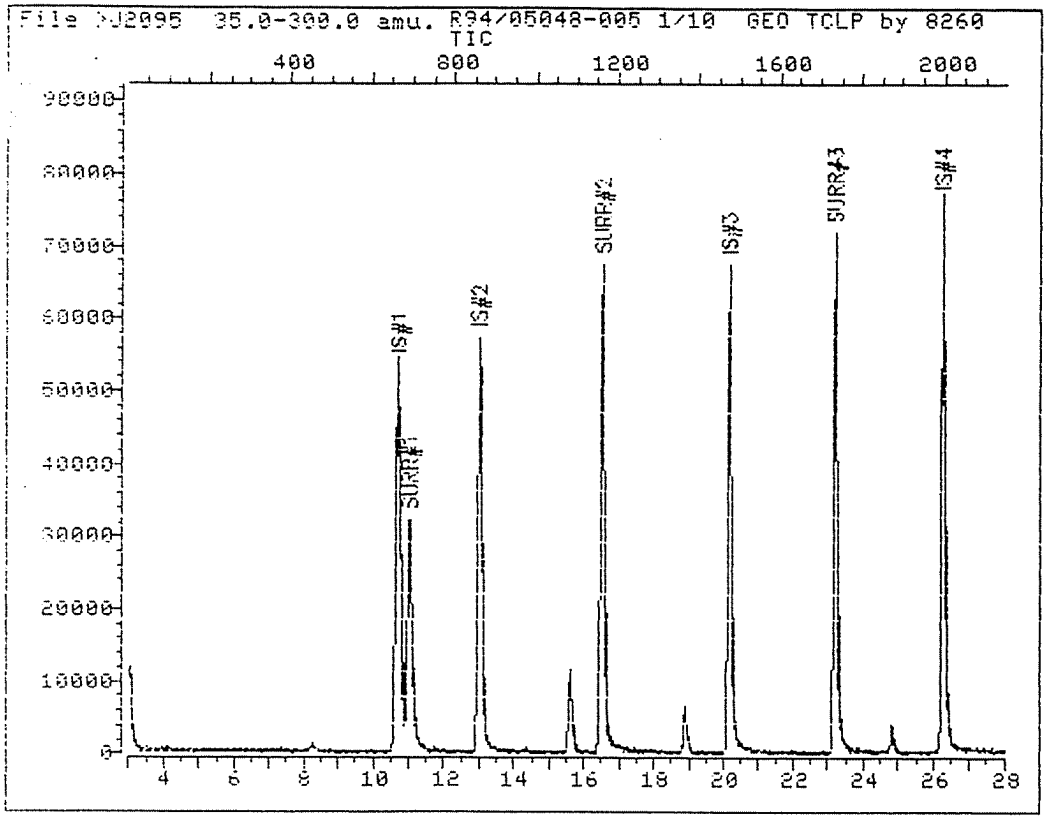
Operator ID: RODH Quant Rev: 7 Quant Time: 941226 21:51
Output File: ^J2095::D3 Injected at: 941226 21:22
Data File: >J2095::D3 Dilution Factor: 1.00000
Name: R94/05048-005 1/10 Instrument ID: MSE3
Misc: GEO TCLP by 8260

ID File: 1DJ826::D0
Title: 8260 Compounds on MSE3
Last Calibration: 941122 16:16 Last Qcal Time: 941226 10:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Pentafluorobenzene	10.69	99.0	101026	50.00	PPB	91
23)	*1,4-Difluorobenzene	12.98	114.0	198080	50.00	PPB	94
24)	Dibromofluoromethane	11.01	113.0	93001	46.23	PPB	85
38)	Toluene-d8	16.50	98.0	193321	48.90	PPB	94
40)	Bromofluorobenzene	23.17	95.0	97196	47.60	PPB	88
41)	*Chlorobenzene-d5	20.12	117.0	148155	50.00	PPB	95
53)	*1,4-Dichlorobenzene-d4	26.23	152.0	85614	50.00	PPB	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >J2095::D3
Name: R94/05048-005 1/10
Misc: GEO TCLP by 8260

Quant Output File: ^J2095::D3
Instrument ID: MS£3

Id File: IDJ826::D0
Title: 8260 Compounds on MS£3
Last Calibration: 941122 16:16

Last Qcal Time: 941226 10:54

Operator ID: RODH
Quant Time : 941226 21:51
Injected at: 941226 21:22

GENERAL TESTING CORPORATION

METHOD	8260		
SAMPLE	METHOD BLANK	CLIENT	
DATE ANALYZED	12/26/94	REFERENCE	
DILUTION	1	LOCATION	
SAMPLE MATRIX	WATER	DATE SAMPLED	
FILE	XT2083	TIME SAMPLED	

COMPOUND NAME	IDC	ug/L	1.00
Vinyl chloride	HSL03	5.0 U	
1,1-Dichloroethene	HSL12	5.0 U	
2-Butanone	HSL16	10 U	
Chloroform	HSL15	5.0 U	
1,2-Dichloroethane	HSL17	5.0 U	
Carbon tetrachloride	HSL19	5.0 U	
Benzene	HSL26	5.0 U	
Trichloroethene	HSL23	5.0 U	
Tetrachloroethene	HSL32	5.0 U	
Chlorobenzene	HSL35	5.0 U	

SURROGATE REC		% REC	LIMITS WATER & SOIL
Dibromofluoromethane	626ZZH	95	86-118 70-121
Toluene-d8	HSL44	96	88-110 81-117
Bromofluorobenzene	HSL45	93	86-115 74-121

000201

DL

12/29/94

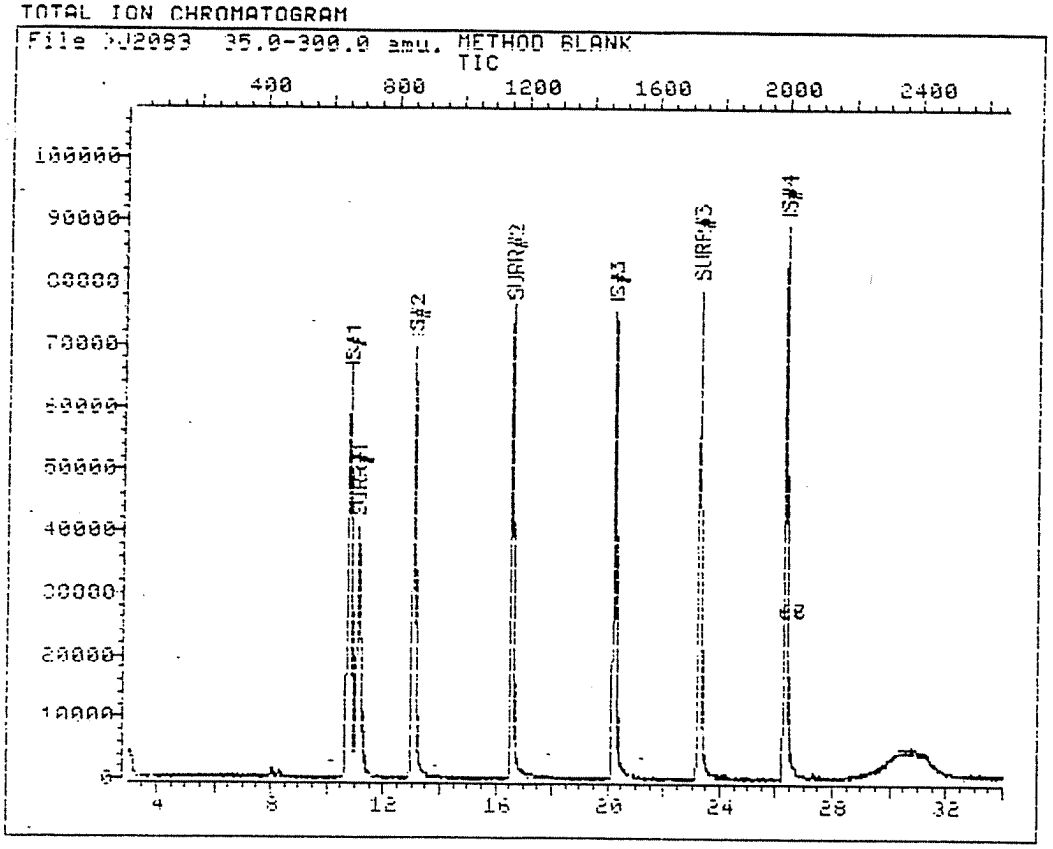
Operator ID: RODH Quant Rev: ? Quant Time: 941226 12:30
Input File: >J2083::D3 Injected at: 941226 11:55
Data File: >J2083::D3 Dilution Factor: 1.00000
Name: METHOD BLANK Instrument ID: MSE3
Misc:

ID File: 1DJ826::DD
Title: 8260 Compounds on MSE3
Last Calibration: 941122 16:16 Last Qcal Time: 941226 10:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Pentafluorobenzene	10.75	99.0	124212	50.00	PPB	99
23)	*1,4-Difluorobenzene	13.01	114.0	232920	50.00	PPB	97
24)	Dibromofluoromethane	11.06	113.0	112813	47.70	PPB	98
38)	Toluene-d8	16.53	98.0	223517	48.08	PPB	99
40)	Bromofluorobenzene	23.21	95.0	111499	46.43	PPB	95
41)	*Chlorobenzene-d5	20.16	117.0	174567	50.00	PPB	99
53)	*1,4-Dichlorobenzene-d4	26.27	152.0	97669	50.00	PPB	92
66)	1,3-Dichlorobenzene	26.35	146.0	6330	2.11	PPB	99
67)	1,4-Dichlorobenzene	26.55	146.0	6330	2.13	PPB	89

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >J2083::D3
Name: METHOD BLANK
Misc:

Quant Output File: ^J2083::D3
Instrument ID: MSE3

Id File: IDJ826::D0
Title: 826U Compounds on MSE3
Last Calibration: 941122 16:16

Last Wcal Time: 941226 10:54

Operator ID: RUDH
Quant Time : 941226 12:50
Injected at: 941226 11:55

GC/MS DATA SHEET

FILE XBE205

SAMPLE R94/05048-005
DATE EXT 12/21/94
DATE ANALY 12/21/94
DILUTION 10
DATA FILE >BE205
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	100 U
1,4-Dichlorobenzene	625D	50 U
2-Methylphenol	HSL46	100 U
Hexachloroethane	625H	50 U
3+4-Methylphenol	HSL47	100 U
Nitrobenzene	625I	50 U
Hexachlorobutadiene	625N	50 U
2,4,5-Trichlorophenol	HSL49	100 U
2,4,6-Trichlorophenol	625ZZA	100 U
2,4-Dinitrotoluene	625T	50 U
Hexachlorobenzene	625ZB	50 U
Pentachlorophenol	625ZZE	200 U
SURROGATE REC		% REC
2-Fluorophenol	625ZZF	46
Phenol-d6	625ZZG	30
Nitrobenzene-d5	625ZZI	51
2-Fluorobiphenyl	625ZZJ	60
2,4,6-Tribromophenol	625ZZH	73
Terphenyl-d14	625ZZK	73

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

Operator ID: LARRYN
Output File: ^BE205::D2
Data File: >BE205::D4
[illegible]: R94/5048-005
[illegible]: GEO 8270 TCLP

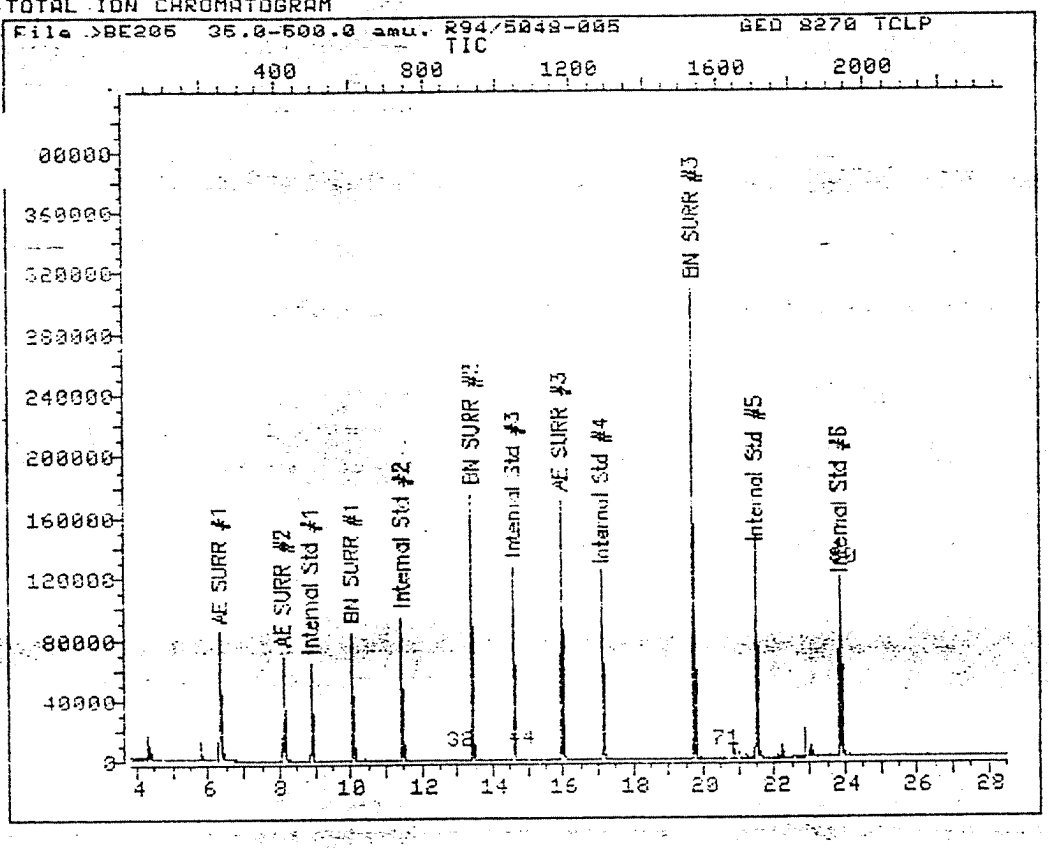
Quant Rev: 7 Quant Time: 941221 19:36
Injected at: 941221 19:07
Dilution Factor: 1.00000
Instrument ID: MS#2
BTL# 4

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.87	152.0	19114	40.00	mg/L	99
4)	2-Fluorophenol (Surr)	6.31	112.0	52313	92.14	mg/L	92
6)	Phenol-d6 (Surr)	8.08	99.0	47854	60.57	mg/L	88
19)	*d8-Naphthalene	11.43	136.0	72819	40.00	mg/L	94
20)	Nitrobenzene-d5 (Surr)	10.02	82.0	42415	51.58	mg/L	87
32)	2-Methylnaphthalene	12.94	142.0	169	.137	mg/L	87
34)	*d10-Acenaphthene	14.59	164.0	40887	40.00	mg/L	79
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	84518	59.98	mg/L	99
44)	Acenaphthene	14.65	153.0	149	.111	mg/L	90
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	40393	147.26	mg/L	94
55)	*d10-Phenanthrene	17.09	188.0	74567	40.00	mg/L	94
67)	*d12-Chrysene	21.46	240.0	84822	40.00	mg/L	81
70)	Terphenyl-d14 (Surr)	19.72	244.0	162333	73.34	mg/L	98
71)	Butyl benzyl phthalate	20.49	149.0	380	.245	mg/L	98
	*d12-Perylene	23.85	264.0	86549	40.00	mg/L	95
	Benzo(a)Pyrene	23.86	252.0	329	.120	mg/L	89

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >BE205::D4 Quant Output File: ^BE205::D2
Name: R94/5048-005 Instrument ID: MS#2
Misc: GEO 8270 TCLP BTL# 4

Id File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN
Quant Time : 941221 19:36
Injected at: 941221 19:07

GC/MS DATA SHEET

FILE XBE203

SAMPLE R94/05048-EQBLK
EXT 12/21/94
E ANALY 12/21/94
DILUTION 10
DATA FILE >BE203
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	100 U
1,4-Dichlorobenzene	625D	50 U
2-Methylphenol	HSL46	100 U
Hexachloroethane	625H	50 U
3+4-Methylphenol	HSL47	100 U
Nitrobenzene	625I	50 U
Hexachlorobutadiene	625N	50 U
2,4,5-Trichlorophenol	HSL49	100 U
2,4,6-Trichlorophenol	625ZZA	100 U
2,4-Dinitrotoluene	625T	50 U
Hexachlorobenzene	625ZB	50 U
Pentachlorophenol	625ZZE	200 U
SURROGATE REC		% REC
2-Fluorophenol	625ZZF	46
Phenol-d6	625ZZG	31
Nitrobenzene-d5	625ZZI	56
luorobiphenyl	625ZZJ	64
4,6-Tribromophenol	625ZZH	72
erphenyl-d14	625ZZK	74

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

Operator ID: LARRYN
Output File: ^BE203::D2
Data File: >BE203::D4
: R94/5048-EQBLK
c: GEO 8270 TCLP

Quant Rev: 7 Quant Time: 941221 18:17
Injected at: 941221 17:47
Dilution Factor: 1.00000
Instrument ID: MS#2
BTL# 2

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.87	152.0	21848	40.00	mg/L	91
4)	2-Fluorophenol (Surr)	6.32	112.0	60369	93.03	mg/L	98
6)	Phenol-d6 (Surr)	8.08	99.0	56827	62.93	mg/L	89
19)	*d8-Naphthalene	11.43	136.0	80619	40.00	mg/L	95
20)	Nitrobenzene-d5 (Surr)	10.02	82.0	50987	56.00	mg/L	89
34)	*d10-Acenaphthene	14.59	164.0	46031	40.00	mg/L	77
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	102124	64.38	mg/L	99
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	44768	144.97	mg/L	98
55)	*d10-Phenanthrene	17.10	188.0	84568	40.00	mg/L	96
67)	*d12-Chrysene	21.47	240.0	95742	40.00	mg/L	86
70)	Terphenyl-d14 (Surr)	19.72	244.0	185086	74.08	mg/L	99
71)	Butyl benzyl phthalate	20.49	149.0	409	.234	mg/L	93
74)	Bis(2-Ethylhexyl)Phthalate	21.41	149.0	1245	.525	mg/L	85
76)	*d12-Perylene	23.85	264.0	102870	40.00	mg/L	90
	Benzo(a)Pyrene	23.86	252.0	300	.0919	mg/L	68

* Compound is ISTD

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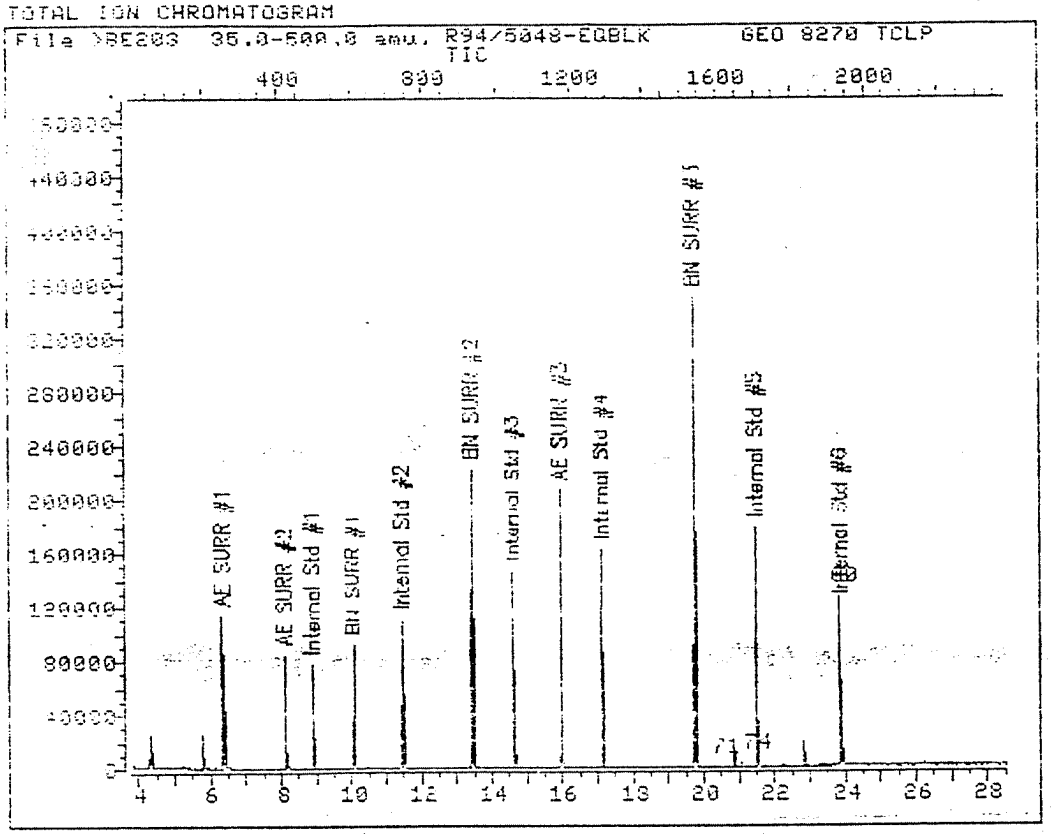
TOTAL ION CHROMATOGRAM



Data File: >BE203::D4 Quant Output File: ^BE203::D2
Name: R94/5048-EQBLK Instrument ID: MS#2
Misc: GEO 8270 TCLP BTL# 2

Id File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN
Quant Time : 941221 18:17
Injected at: 941221 17:47

000001

GC/MS DATA SHEET

FILE XBE202

SAMPLE METHOD BLANK
EXT 12/21/94
E ANALY 12/21/94
DILUTION 10
DATA_FILE >BE202
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	100 U
1,4-Dichlorobenzene	625D	50 U
2-Methylphenol	HSL46	100 U
Hexachloroethane	625H	50 U
3+4-Methylphenol	HSL47	100 U
Nitrobenzene	625I	50 U
Hexachlorobutadiene	625N	50 U
2,4,5-Trichlorophenol	HSL49	100 U
2,4,6-Trichlorophenol	625ZZA	100 U
2,4-Dinitrotoluene	625T	50 U
Hexachlorobenzene	625ZB	50 U
Pentachlorophenol	625ZZE	200 U
SURROGATE REC		% REC
2-Fluorophenol	625ZZF	55
Phenol-d6	625ZZG	37
Nitrobenzene-d5	625ZZI	70
Fluorobiphenyl	625ZZJ	75
,6-Tribromophenol	625ZZH	80
erphenyl-d14	625ZZK	72

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

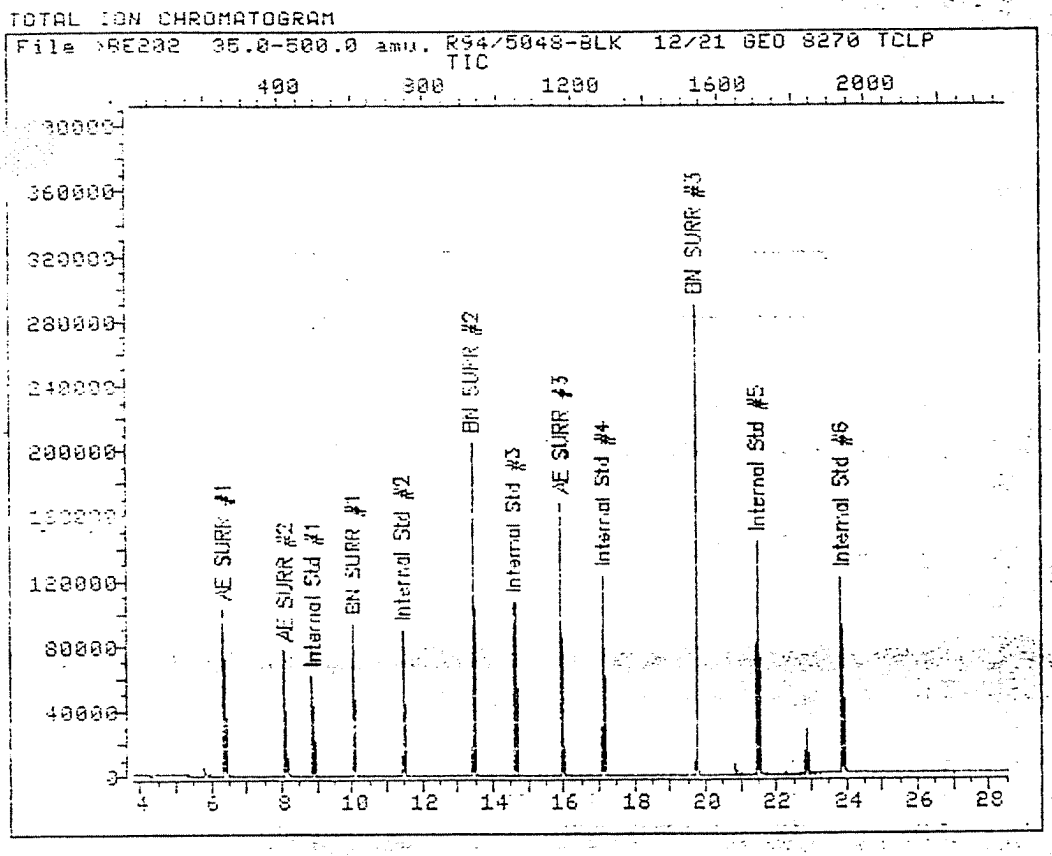
Operator ID: LARRYN Quant Rev: 7 Quant Time: 941221 17:40
Output File: ^BE202::D2 Injected at: 941221 17:08
Data File: >BE202::D4 Dilution Factor: 1.00000
[illegible] R94/5048-BLK 12/21 Instrument ID: MS#2
[illegible]: GEO 8270 TCLP BTL# 1

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.86	152.0	16528	40.00	mg/L	98
4)	2-Fluorophenol (Surr)	6.31	112.0	54394	110.80	mg/L	96
6)	Phenol-d6 (Surr)	8.07	99.0	51583	75.50	mg/L	91
19)	*d8-Naphthalene	11.43	136.0	63576	40.00	mg/L	94
20)	Nitrobenzene-d5 (Surr)	10.03	82.0	50653	70.55	mg/L	86
34)	*d10-Acenaphthene	14.59	164.0	36621	40.00	mg/L	82
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	95376	75.57	mg/L	97
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	39641	161.35	mg/L	90
55)	*d10-Phenanthrene	17.10	188.0	68735	40.00	mg/L	99
67)	*d12-Chrysene	21.46	240.0	77327	40.00	mg/L	82
70)	Terphenyl-d14 (Surr)	19.72	244.0	145462	72.09	mg/L	94
76)	*d12-Perylene	23.85	264.0	88177	40.00	mg/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >BE202::D4 Quant Output File: ^BE202::D2
Name: R94/5048-BLK 12/21 Instrument ID: MS#2
Misc: GEO 8270 TCLP BTL# 1

Id File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN
Quant Time : 941221 17:40
Injected at: 941221 17:08

BLANK SUMMARY

Date of Extraction 12/21/94 Data File Name BE202

Date of Analysis 12/21/94 Method 8270 TCLP

Time of Analysis 17:08

Samples analyzed with this method blank:

Sample #	Data File
R94/5048 - Eq Blk	BE203
RE Splk	BE204
5	BE205
5MS	BE206
5MSD	BE207

INITIAL CALIBRATION SUMMARY

STANDARD	DATA FILE	DATE	TIME
Tune Check	BD716	11/8/94	12:17
20PPM STD	BD717	↓	12:33
50	BD718	↓	13:11
80	BD719	↓	13:49
120	BD720	↓	14:27
160 ↓	BD721	↓	15:06

SAMPLE SUMMARY

	DATA FILE	DATE	TIME
TUNE CHECK	BE200	12/21/94	16:07
CALIBRATION CHECK	BE201	12/21/94	16:23

SAMPLE	DATA FILE	DATE	TIME
R94/5048 - Blk	BE202	12/21/94	17:08
EqBlk	BE203	↓	17:47
Rfgd	BE204		18:27
5	BE205		19:07
5MS	BE206		19:46
5MSD	BE207	✓	20:26

00030

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: GC/MS #2

Contractor: GENERAL TESTING CORP Calibration Date: 11/08/94

Contract No: CALZXX/IDZXX/ID2625

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Laboratory ID: >80717 >80718 >80719 >80720 >80721

Comp No.	Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
1)	Pyridine	2.05472	2.02205	2.10347	1.96587	2.01032	.476	2.03129	2.530		
2)	N-Nitrosodimethylamine	1.03404	.95907	1.01955	.98094	.98528	.469	.99578	3.057		
3)	2-Fluorophenol (Surr)	1.43581	1.41891	1.35284	1.25206	1.26490	.713	1.34490	6.312		
4)	Aniline	2.05877	1.70915	1.60623	1.46656	1.44289	.924	1.65672	15.055		
5)	Phenol-d6 (Surr)	1.87593	1.81727	1.82134	1.62517	1.65737	.912	1.75942	6.303		
6)	Phenol	2.11956	2.02855	1.89497	1.69205	1.67721	.916	1.88247	10.494	*	
7)	bis(-2-Chloroethyl)Ether	1.85379	1.66007	1.61098	1.45497	1.45674	.939	1.60731	10.291		
8)	2-Chlorophenol	1.66270	1.46550	1.45954	1.27972	1.25822	.951	1.42514	11.544		
9)	1,3-Dichlorobenzene	1.75254	1.54401	1.44654	1.30913	1.24577	.986	1.45960	13.766		
10)	1,4-Dichlorobenzene	1.77071	1.49130	1.48751	1.31362	1.22556	1.004	1.45774	14.334	*	
11)	1,2-Dichlorobenzene	1.65272	1.43310	1.36745	1.13881	1.08920	1.040	1.33625	17.168		
12)	Benzyl Alcohol	1.36240	1.54269	1.43851	1.21148	1.19321	1.033	1.34966	11.845		
13)	2,2'-oxybis(1-Chloropropane)	3.49991	3.19520	3.25810	2.99623	2.90140	1.064	3.17017	7.391		
14)	2-Methylphenol	1.62968	1.39518	1.35603	1.21654	1.17982	1.057	1.35545	13.142		
15)	N-Nitroso-Di-n-propylamine	1.53158	1.34233	1.37706	1.23937	1.28025	1.097	1.35412	8.321		**
16)	Hexachloroethane	.73262	.64484	.61102	.54310	.52390	1.118	.61110	13.723		
17)	4-Methylphenol	1.66961	1.44249	1.34027	1.16110	1.18304	1.094	1.35930	15.340		
18)	Nitrobenzene-d5 (Surr)	.51550	.48801	.45424	.44763	.42323	.879	.46572	7.770		
19)	Nitrobenzene	.55211	.49039	.45774	.44707	.42052	.882	.47356	10.673		
20)	Isophorone	1.03947	.93483	.84761	.83660	.82260	.924	.89622	10.188		
21)	2-Nitrophenol	.25027	.23662	.22153	.21514	.19814	.936	.22434	8.920	*	
22)	Benzoic acid	-	.19438	.25093	.26398	.26442	.970	.24343	13.675		
23)	2,4-Dimethylphenol	.44674	.39853	.37856	.38217	.36186	.943	.39357	8.245		
24)	bis(-2-Chloroethoxy)Methane	.61155	.55335	.48144	.45875	.42541	.960	.50610	14.889		
25)	2,4-Dichlorophenol	.34574	.31349	.27399	.26536	.23576	.977	.28687	15.008	*	
26)	1,2,4-Trichlorobenzene	.37447	.33758	.29590	.26450	.24379	.991	.30325	17.559		
27)	Naphthalene	1.23883	1.07651	.88602	.82063	.72368	1.004	.94913	21.814		
28)	4-Chloroaniline	.46162	.39575	.29471	.27191	.21664	1.014	.32813	30.131		
29)	Hexachlorobutadiene	.21060	.17828	.16566	.15612	.13570	1.023	.16927	16.451	*	
30)	2-Methylnaphthalene	.76626	.65327	.52614	.49310	.42992	1.115	.57374	23.520		

RF - Response Factor (Subscript is amount in ng/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: GC/MS #2

Contractor: GENERAL TESTING CORP Calibration Date: 11/08/94

Contract No: CALZXX/ID2XX/ID2625

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Comp No.	Compound	Laboratory ID:)B0717 RF 20.00	)B0718 RF 50.00	)B0719 RF 80.00	)B0720 RF 120.00	)B0721 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
31)	4-Chloro-3-methylphenol	.40846	.37632	.34583	.34683	.31142	1.091	.35777	10.197	*	
32)	Hexachlorocyclopentadiene	.29037	.29806	.32143	.29069	.29264	.893	.29864	4.390		**
33)	2,4,5-Trichlorophenol	.53614	.47931	.45356	.42093	.40272	.914	.45853	11.441		
34)	2,4,6-Trichlorophenol	.49666	.44240	.38802	.37401	.36922	.909	.41406	13.183	*	
35)	2-Chloronaphthalene	1.49882	1.31189	1.09019	.98454	.91928	.934	1.16095	20.721		
36)	2-Fluorobiphenyl (Surr)	1.73889	1.42387	1.21436	1.02145	.97856	.919	1.27543	24.582		
37)	2-Nitroaniline	.65958	.62029	.61920	.56663	.60012	.947	.61317	5.517		
38)	Dimethyl Phthalate	1.86272	1.63121	1.47461	1.37270	1.38654	.968	1.54556	13.265		
39)	Acenaphthylene	2.37988	1.91284	1.72869	1.48279	1.43522	.984	1.78788	21.427		
40)	3-Nitroaniline	-	.46847	.45035	.42735	.43990	.997	.44652	3.896		
41)	Acenaphthene	1.60938	1.32260	1.10813	.97027	.95706	1.004	1.19349	23.047	*	
42)	2,4-Dinitrophenol	-	.21784	.26882	.25488	.27347	1.008	.25375	9.936		**
43)	Dibenzofuran	2.24090	1.71677	1.36235	1.23092	1.04536	1.024	1.51926	31.085		
44)	4-Nitrophenol	-	.38794	.36570	.36813	.39125	1.016	.37825	3.490		**
45)	2,4-Dinitrotoluene	.63521	.55027	.45849	.40143	.34971	1.023	.47902	23.947		
46)	2,6-Dinitrotoluene	.46380	.42157	.39131	.36743	.36010	.976	.40084	10.629		
47)	Diethylphthalate	2.07579	1.78835	1.51755	1.36923	1.28208	1.050	1.60660	20.235		
48)	4-Chlorophenyl-phenylether	.78973	.60143	.49558	.41132	.36822	1.063	.53325	31.651		
49)	Fluorene	1.65861	1.22653	.97702	.90375	.77617	1.064	1.10842	31.454		
50)	4-Nitroaniline	-	.51630	.49336	.46648	.45629	1.069	.48311	5.609		
51)	2,4,6-Tribromophenol (Surr)	.27047	.25334	.24783	.22596	.22419	1.092	.24420	7.970		
52)	4,6-Dinitro-2-methylphenol	-	.18218	.19857	.18414	.17103	.915	.18398	6.147		
53)	1,2 Diphenylhydrazine	1.36133	1.10809	1.06365	.98239	.84854	.924	1.07280	17.627		
54)	N-Nitrosodiphenylamine	.71733	.58042	.55132	.48958	.43383	.920	.55450	19.334	*	
55)	4-Bromophenyl-phenylether	.28324	.24267	.23295	.19468	.18122	.956	.22695	17.877		
56)	Hexachlorobenzene	.36082	.29253	.27484	.26420	.23380	.962	.28524	16.595		
57)	Pentachlorophenol	-	.14518	.15958	.14732	.15506	.981	.15177	4.400	*	
58)	Phenanthrene	1.46453	1.11014	1.03831	.91173	.80349	1.003	1.06564	23.659		
59)	Anthracene	1.47428	1.07327	1.01665	.91149	.77902	1.008	1.05094	24.917		
60)	Carbazole	1.43821	1.14070	1.06258	.95357	.81933	1.023	1.08288	21.469		

RF - Response Factor (Subscript is amount in ng/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

0003C9

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: GC/MS #2

Contractor: GENERAL TESTING CORP Calibration Date: 11/08/94

Contract No: CRLZXX/IDZXX/ID2625

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30.0%

Comp No.	Compound	Laboratory ID:)B0717 RF 20.00	)B0718 RF 50.00	)B0719 RF 80.00	)B0720 RF 120.00	)B0721 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
61)	Di-n-Butylphthalate	2.20017	1.63104	1.39073	1.33823	1.13835	1.054	1.53970	26.550		
62)	Fluoranthene	1.61710	1.25471	1.10663	1.02744	.90088	1.117	1.18135	23.305	*	
63)	Benzidine	-	.11709	.13810	.13902	.13388	.899	.13202	7.730		
64)	Pyrene	1.66134	1.46749	1.39745	1.33006	1.19226	.908	1.40972	12.309		
65)	Terphenyl-d14 (Surr)	1.20470	1.01951	.89184	.90690	.84167	.918	.97292	14.899		
66)	Butyl benzyl phthalate	1.01973	.88024	.83047	.81914	.77985	.955	.86589	10.759		
67)	3,3'-Dichlorobenzidine	.65508	.50442	.39105	.34506	.28841	.996	.43600	33.281		
68)	Benzo(a)Anthracene	1.52641	1.31107	1.22413	1.24934	1.14537	.999	1.29126	11.172		
69)	Bis(2-Ethylhexyl)Phthalate	1.06445	1.06293	.79078	.67114	.59631	.997	.83712	26.060		
70)	Chrysene	1.53032	1.18007	1.05321	1.10441	.98070	1.002	1.16974	18.321		
71)	Di-n-octylphthalate	2.31791	1.75897	1.53939	1.47802	1.50303	.939	1.71947	20.506	*	
72)	Benzo(b)fluoranthene	1.46842	1.33919	1.23506	1.15978	1.29843	.971	1.30018	8.919		
73)	Benzo(k)Fluoranthene	1.41484	1.09119	1.04169	.93251	.86311	.973	1.06867	19.953		
74)	Benzo(a)Pyrene	1.32751	1.10597	1.06725	.96797	1.00375	.996	1.09449	12.874	*	
75)	Indeno(1,2,3-cd)Pyrene	1.47768	1.24956	1.14075	1.00949	.94317	1.098	1.16413	18.166		
76)	Dibenz(a,h)anthracene	1.20458	1.00797	.85658	.76301	.74800	1.100	.91603	20.920		
77)	Benzo(g,h,i)Perylene	1.27926	1.06976	.89792	.84262	.75687	1.128	.96929	21.421		

RF - Response Factor (Subscript is amount in ng/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

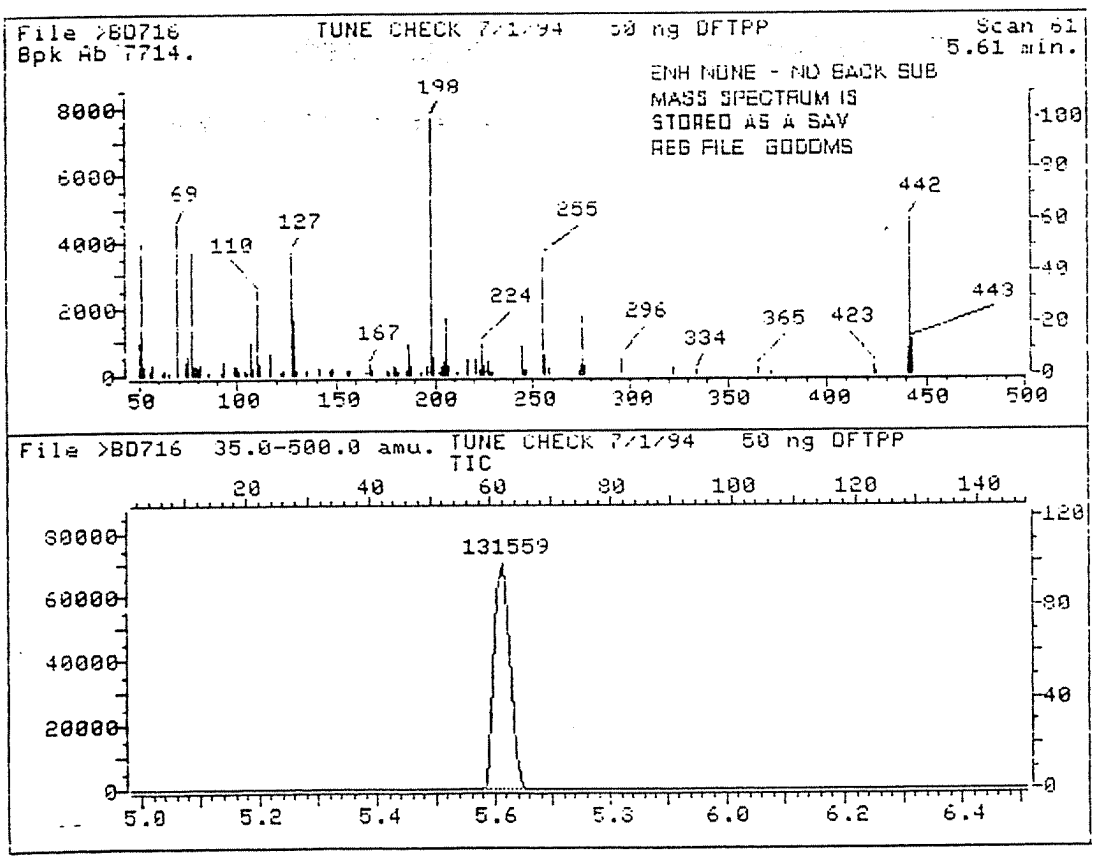
000210

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	51.30	51.30	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	58.28	58.28	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	47.43	47.43	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.74	6.74	Ok
275	10-30% of mass 198	22.17	22.17	Ok
365	Greater than 1% of mass 198	2.64	2.64	Ok
441	0-100% of mass 443	9.71	74.60	Ok
442	Greater than 40% of mass 198	60.58	60.58	Ok
443	17-23% of mass 442	13.02	21.49	Ok

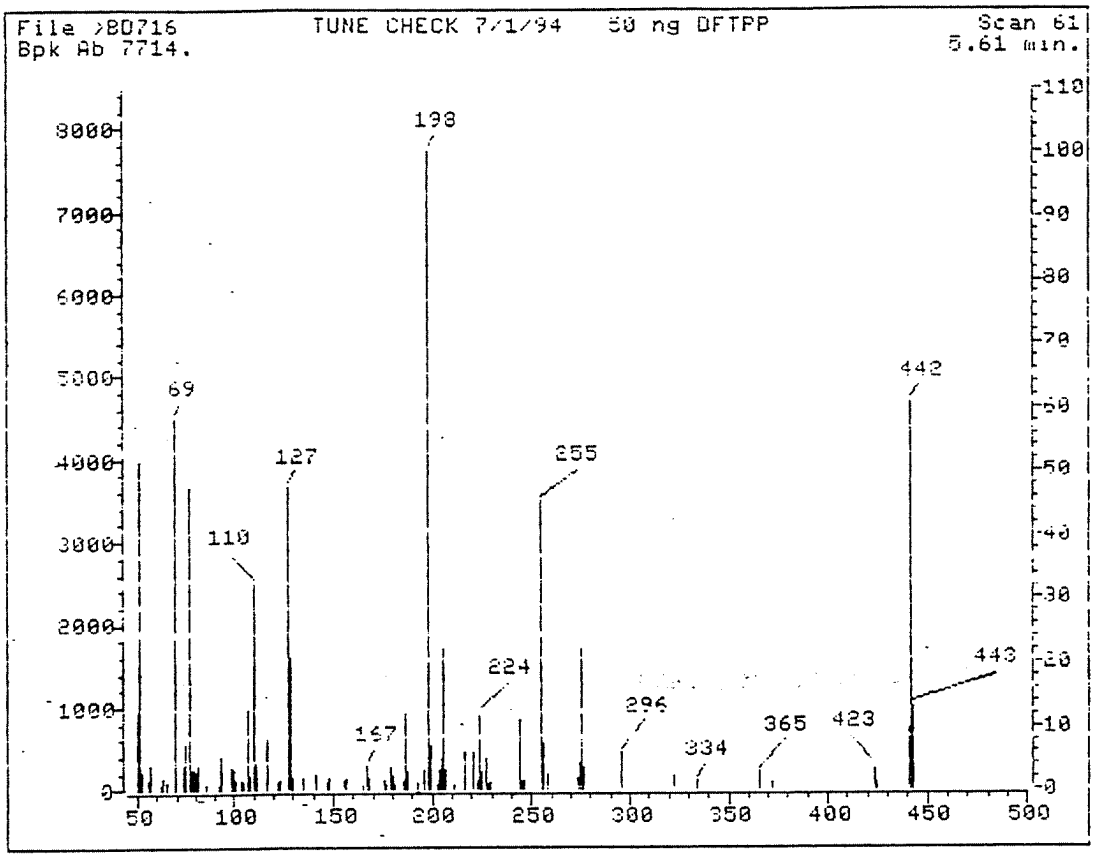
Injection Date: 11/08/94 Injection Time: 12:17
Data File: >BD716 Scan: 61



Instrument ID: MS#2 Analyzed on: 11/08/94 12:17

TCB

00031



Instrument ID: MS#2 Analyzed on: 11/08/94 12:17

16 TUNE CHECK 7/1/94 50 ng DFTPP
51 NRM

le: >BD716 Scan #: 61 Retn. time: 5.61

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
9.10	4.654	93.00	5.134	147.10	1.154	199.05	6.741	255.05	45.204
9.95	12.393	98.00	3.474	148.00	1.919	202.95	.791	256.05	7.104
0.95	51.296	99.00	3.293	155.00	1.374	204.05	3.008	258.05	2.502
1.95	2.761	101.00	1.582	156.00	1.763	205.05	4.745	273.00	1.685
5.95	1.491	104.00	1.322	165.00	.856	206.05	21.986	274.00	4.317
6.95	3.746	105.00	1.024	167.00	3.695	207.00	3.215	275.10	22.167
1.95	.739	107.00	12.652	168.00	1.698	210.90	.817	276.00	3.358
2.95	1.789	108.00	1.957	175.10	1.582	216.90	5.691	277.00	1.504
5.05	.933	110.00	32.279	176.95	.907	221.00	5.950	296.00	5.743
8.95	58.284	111.00	4.226	178.95	3.319	223.00	1.296	323.05	1.970
4.05	4.498	116.95	7.973	180.05	2.048	224.10	11.641	334.00	1.387
5.05	7.117	121.95	.959	180.95	.869	225.00	2.943	365.00	2.645
7.05	47.446	122.95	1.517	185.05	1.582	227.00	4.887	372.05	1.024
8.05	3.098	127.05	47.433	186.05	11.900	228.00	.648	423.10	3.280
9.05	3.137	127.95	3.954	187.05	2.748	229.00	.998	424.10	.946
0.00	2.658	128.95	20.560	193.05	.933	244.05	10.954	441.05	9.710
1.00	3.876	129.95	1.685	196.05	3.111	245.05	1.465	442.15	60.578
00	.791	134.95	1.698	198.05	100.000	245.95	1.569	443.15	13.015
00	.843	141.05	2.411						

000312

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP Time: 16:23

Contract No: CRLZXX/ID2XX/ID2625 Laboratory ID: >BE201

Instrument ID: GC/MS #2 Initial Calibration Date: 11/08/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	2.03129	1.68796	16.90		
N-Nitrosodimethylamine	.99578	.98970	.61		
2-Fluorophenol (Surr)	1.34490	1.18811	11.66		
Aniline	1.65672	1.72473	4.11		
Phenol-d6 (Surr)	1.75942	1.65340	6.03		
Phenol	1.88247	1.91559	1.76	*	
bis(-2-Chloroethyl)Ether	1.60731	1.56553	2.60		
2-Chlorophenol	1.42514	1.41297	.85		
1,3-Dichlorobenzene	1.45960	1.59816	9.49		
1,4-Dichlorobenzene	1.45774	1.58585	8.79	*	
1,2-Dichlorobenzene	1.33625	1.54766	15.82		
Benzyl Alcohol	1.34966	1.40569	4.15		
2,2'-oxybis(1-Chloropropane)	3.17017	3.88425	22.53		
2-Methylphenol	1.35545	1.36970	1.05		
N-Nitroso-Di-n-propylamine	1.35412	1.33524	1.39		**
Hexachloroethane	.61110	.68444	12.00		
4-Methylphenol	1.35930	1.47011	8.15		
Nitrobenzene-d5 (Surr)	.46572	.45171	3.01		
Nitrobenzene	.47356	.44682	5.65		
Isophorone	.89622	.89147	.53		
2-Nitrophenol	.22434	.21792	2.86	*	
Benzoic acid	.24343	.18240	25.07		
2,4-Dimethylphenol	.39357	.36219	7.97		
bis(-2-Chloroethoxy)Methane	.50610	.50003	1.20		
2,4-Dichlorophenol	.28687	.29893	4.20	*	
1,2,4-Trichlorobenzene	.30325	.33876	11.71		
Naphthalene	.94913	1.10690	16.62		
4-Chloroaniline	.32813	.38896	18.54		
Hexachlorobutadiene	.16927	.20422	20.64	*	
2-Methylnaphthalene	.57374	.67554	17.74		
4-Chloro-3-methylphenol	.35777	.36253	1.33	*	
Hexachlorocyclopentadiene	.29864	.20353	31.85		**

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP Time: 16:23

Contract No: EAL2XX/ID2XX/ID2625 Laboratory ID: >BE201

Instrument ID: GC/MS #2 Initial Calibration Date: 11/08/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,5-Trichlorophenol	.45853	.43620	4.87		
2,4,6-Trichlorophenol	.41406	.35973	13.12	*	
2-Chloronaphthalene	1.16095	1.20491	3.79		
2-Fluorobiphenyl (Surr)	1.27543	1.37850	8.08		
2-Nitroaniline	.61317	.48432	21.01		
Dimethyl Phthalate	1.54556	1.44676	6.39		
Acenaphthylene	1.78788	1.59238	10.93		
3-Nitroaniline	.44652	.41414	7.25		
Acenaphthene	1.19349	1.31271	9.99	*	
2,4-Dinitrophenol	.25375	.18514	27.04		**
Dibenzofuran	1.51926	1.82824	20.34		
4-Nitrophenol	.37825	.25259	33.22		**
2,4-Dinitrotoluene	.47902	.53981	12.69		
2,6-Dinitrotoluene	.40084	.38534	3.87		
Diethylphthalate	1.60660	1.69800	5.69		
4-Chlorophenyl-phenylether	.53325	.71308	33.72		
Fluorene	1.10842	1.42057	28.16		
4-Nitroaniline	.48311	.41486	14.13		
2,4,6-Tribromophenol (Surr)	.24420	.26835	9.89		
4,6-Dinitro-2-methylphenol	.18398	.17070	7.22		
1,2 Diphenylhydrazine	1.07280	.96251	10.28		
N-Nitrosodiphenylamine	.55450	.59342	7.02	*	
4-Bromophenyl-phenylether	.22695	.25486	12.30		
Hexachlorobenzene	.28524	.32456	13.78		
Pentachlorophenol	.15177	.12437	18.05	*	
Phenanthrene	1.06564	1.23520	15.91		
Anthracene	1.05094	1.21477	15.59		
Carbazole	1.08288	1.13136	4.48		
Di-n-Butylphthalate	1.53970	1.56461	1.62		
Fluoranthene	1.18135	1.38851	17.54	*	
Benzidine	.13202	.10884	17.56		
Pyrene	1.40972	1.38200	1.97		

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00003

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/21/94

Contractor: GENERAL TESTING CORP Time: 16:23

Contract No: CHL2XX/ID2XX/ID2625 Laboratory ID: >8E201

Instrument ID: GC/MS #2 Initial Calibration Date: 11/08/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14 (Surr)	.97292	1.04379	7.28		
Butyl benzyl phthalate	.86589	.73177	15.49		
3,3'-Dichlorobenzidine	.43600	.47517	8.98		
Benzo(a)Anthracene	1.29126	1.36727	5.89		
Bis(2-Ethylhexyl)Phthalate	.83712	.99012	18.28		
Chrysene	1.16974	1.22738	4.93		
Di-n-octylphthalate	1.71947	1.70903	.61	*	
Benzo(b)fluoranthene	1.30018	1.39451	7.26		
Benzo(k)fluoranthene	1.06867	1.32925	24.38		
Benzo(a)Pyrene	1.09449	1.26876	15.92	*	
Indeno(1,2,3-cd)Pyrene	1.16413	1.48076	27.20		
Dibenz(a,h)anthracene	.91603	1.19004	29.91		
Benzo(g,h,i)Perylene	.96929	1.19215	22.99		

RF - Response Factor from daily standard file at 50.00 ng/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

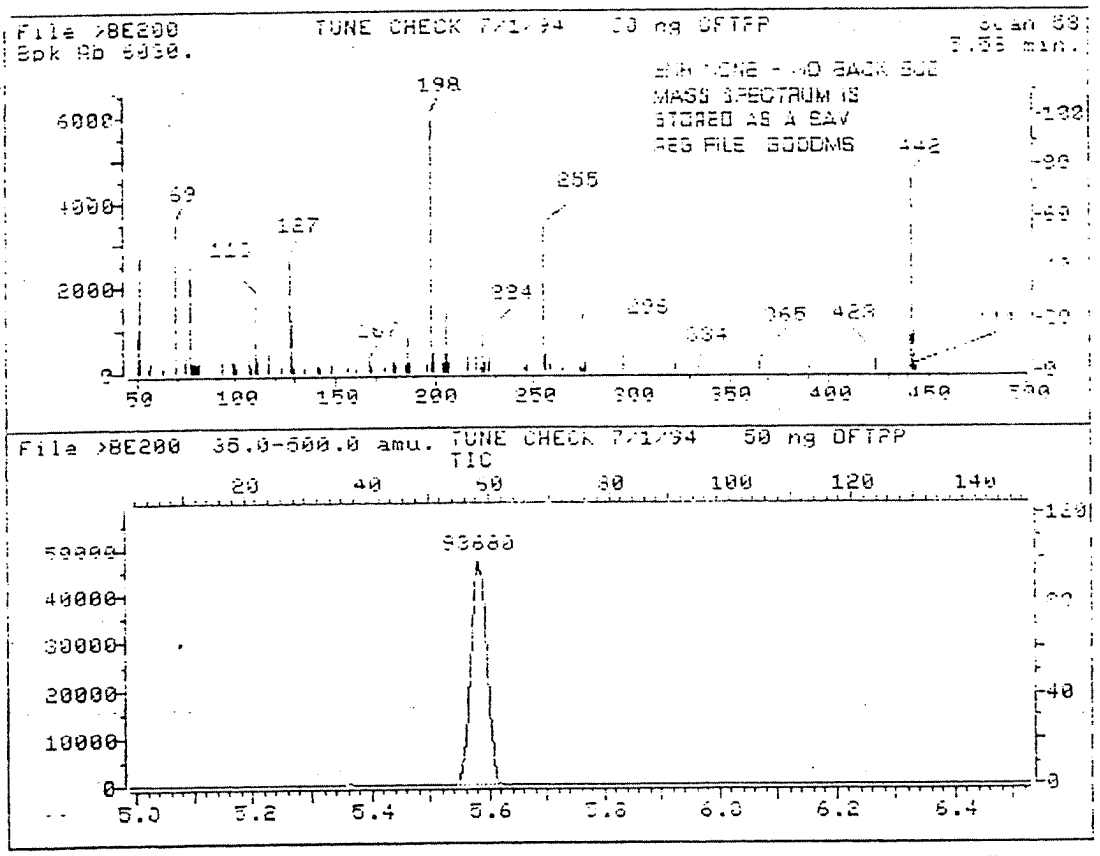
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

GC/MS PERFORMANCE STANDARD

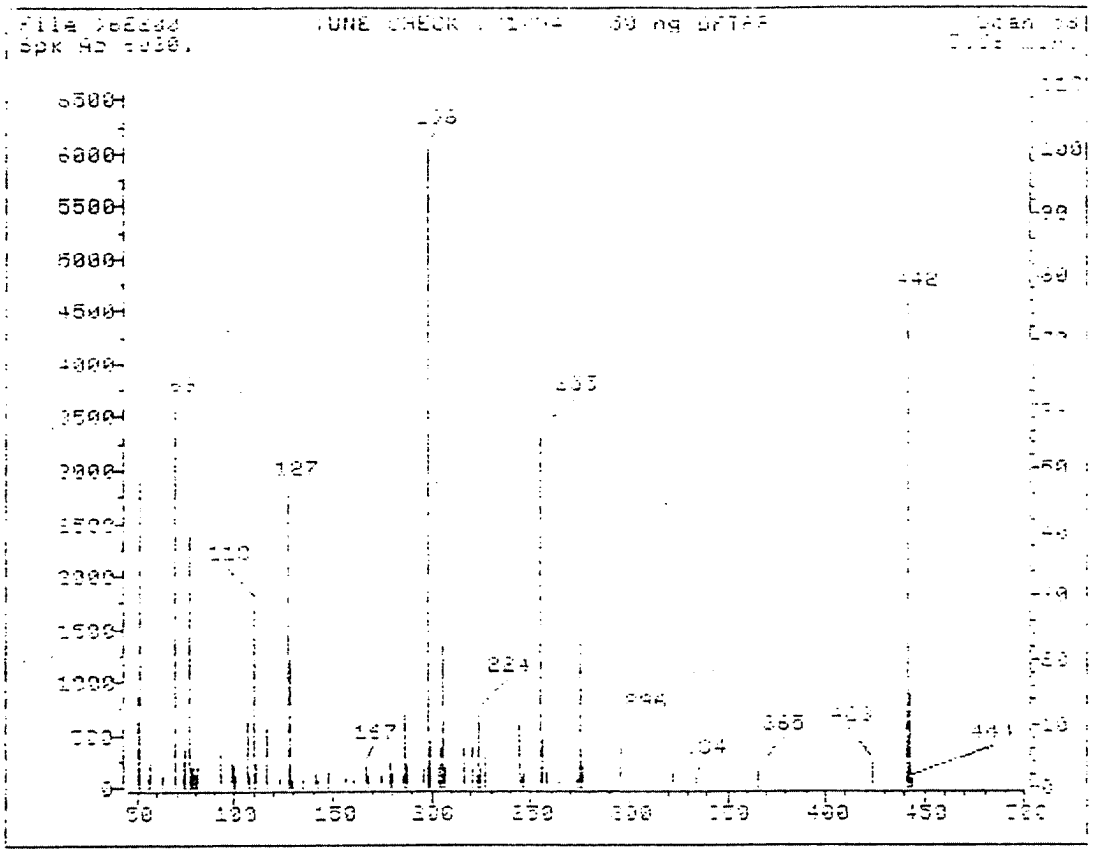
Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	47.86	47.86	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	36.13	58.13	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	45.02	45.02	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	7.10	7.10	Ok
275	10-30% of mass 198	23.81	23.81	Ok
365	Greater than 1% of mass 198	2.79	2.79	Ok
441	0-100% of mass 443	12.94	87.54	Ok
442	Greater than 40% of mass 198	74.36	74.36	Ok
443	17-23% of mass 442	14.71	19.73	Ok

Injection Date: 12/21/94 Injection Time: 16:07
Data File: >BE200 Scan: 58



Instrument ID: MS#2 Analyzed on: 12/21/94 16:07



Instrument ID: MS#2 Analyzed on: 12/21/94 16:07

0 TUNE CHECK 7/1/94 50 mg DFTPP
58 NRM

le: >BE200 Scan #: 58 Retn. time: 5.58

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
7.90	1.012	92.90	5.008	141.95	1.061	205.05	6.202	264.95	.873
9.00	5.572	98.00	3.881	147.90	2.637	206.05	22.040	272.90	1.526
4.00	1.774	99.00	3.400	156.00	1.559	207.00	3.250	274.00	4.743
9.95	14.163	101.00	1.609	161.00	1.012	216.90	6.285	275.00	23.814
1.05	47.861	107.00	10.216	167.00	3.947	221.00	6.003	276.00	3.101
5.95	1.559	107.90	1.675	167.90	1.824	223.00	1.791	276.90	1.592
6.95	3.930	110.00	29.287	175.00	1.642	224.00	11.857	296.00	6.003
2.95	1.791	111.00	3.665	178.95	3.665	225.00	2.753	323.05	2.438
3.95	58.126	116.95	9.071	179.85	1.990	227.00	4.876	334.00	1.526
3.95	4.594	122.85	1.559	185.05	1.907	243.95	9.967	365.00	2.786
4.95	6.551	127.05	45.025	185.95	12.869	244.95	1.459	423.10	4.013
7.05	41.244	128.05	3.781	187.05	3.416	245.95	2.189	441.05	12.935
7.95	3.035	128.95	20.033	195.95	2.803	255.05	55.804	442.05	74.561
9.05	3.085	129.95	1.260	197.95	100.000	255.95	7.546	443.05	14.710
9.90	2.255	134.95	1.393	198.95	7.098	258.05	2.620	444.05	1.426
0.90	3.184	140.95	2.488	204.05	3.433				

CLIENT: Geo JOB #: R94/5048 METHOD: TCLP 8270 EXTRACTION: 3510

SAMPLE #	INITIAL WT. or VOL.	EXTRACTION FINAL VOL.	APPEARANCE	SPIKE ADDED	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLU	DATE	COMMENTS
5	100ml	1ml	clear colorless	FOR ms-msd + REFSPK	12/21					diluted to 1,000ml
5MS	100ml									
5MSD	100ml			1ml 6E ms stock 8270 100ppm 0.6 pg/ul 9/28/94						
EQBLK	100ml									
BLK	1,000ml									
REFSPK	1000ml									

EXTRACTED: 12/21/94 MS: mf 12/21

CLIENT: Geo 5048 ANALYSIS: TCLP 8270 ANALYST: D. Hanney

SUMMARY: Extracting of water samples using 60ml's mech 3x at pH<2 Then 3x 60ml mech at pH>12.

Blank used w/ R94/495

SURROGATE: 1ml 6E 1ml SAE 1ml BN 1ml SINN 200ppm AE 100ppm BN

12/6/94 mpl pg 62

TCLP SEMIVOLATILE LIST
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: GENERAL TESTING CORP. Contract: GEO
Lab Code: 10145 Case No.: --- SAS No.: --- SDG No.: -----
Matrix Spike - EPA Sample No.: R94/05048-005

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	#	QC LIMITS % REC.
Pyridine	1000	0.0	250	25		D-120
1,4-Dichlorobenzene	1000	0.0	480	48		20-124
2-Methylphenol	1000	0.0	450	45		D-120
Hexachloroethane	1000	0.0	420	42		40-113
3+4-Methylphenol	2000	0.0	810	41		D-120
Nitrobenzene	1000	0.0	510	51		35-180
Hexachlorobutadiene	1000	0.0	490	49		24-116
2,4,5-Trichlorophenol	1000	0.0	640	64		39-124
2,4,6-Trichlorophenol	1000	0.0	680	68		37-144
2,4-Dinitrotoluene	1000	0.0	580	58		39-139
Hexachlorobenzene	1000	0.0	720	72		D-152
Pentachlorophenol	1000	0.0	890	89		14-176

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	#	RPD	#	QC LIMITS RPD	QC LIMITS %REC
Pyridine	1000	260	26		4		30	D-120
1,4-Dichlorobenzene	1000	500	50		4		30	20-124
2-Methylphenol	1000	510	51		13		30	D-120
Hexachloroethane	1000	420	42		0		30	40-113
3+4-Methylphenol	2000	930	47		14		30	D-120
Nitrobenzene	1000	580	58		13		30	35-180
Hexachlorobutadiene	1000	470	47		4		30	24-116
2,4,5-Trichlorophenol	1000	720	72		12		30	39-124
2,4,6-Trichlorophenol	1000	740	74		8		30	37-144
2,4-Dinitrotoluene	1000	650	65		11		30	39-139
Hexachlorobenzene	1000	880	88		20		30	D-152
Pentachlorophenol	1000	1200	120		30		30	14-176

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

RPD: 0 out of 12 outside limits.
Spike Recovery: 0 out of 24 outside limits.
COMMENTS: _____

TCLP SEMIVOLATILE LIST
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Name: GENERAL TESTING CORP. Contract: GEO
Code: 10145 Case No.: --- SAS No.: --- SDG No.: -----
Matrix Spike - EPA Sample No.: R94/05048-REFSPK

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC #	QC LIMITS % REC.
Pyridine	1000	0.0	360	36	D-120
1,4-Dichlorobenzene	1000	0.0	530	53	20-124
2-Methylphenol	1000	0.0	560	56	D-120
Hexachloroethane	1000	0.0	460	46	40-113
3+4-Methylphenol	2000	0.0	980	49	D-120
Nitrobenzene	1000	0.0	630	63	35-180
Hexachlorobutadiene	1000	0.0	490	49	24-116
2,4,5-Trichlorophenol	1000	0.0	770	77	39-124
2,4,6-Trichlorophenol	1000	0.0	810	81	37-144
2,4-Dinitrotoluene	1000	0.0	680	68	39-139
Hexachlorobenzene	1000	0.0	730	73	D-152
Pentachlorophenol	1000	0.0	940	94	14-176

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS %REC
P idine	1000				30	D-120
-Dichlorobenzene	1000				30	20-124
-Methylphenol	1000				30	D-120
Hexachloroethane	1000				30	40-113
3+4-Methylphenol	2000				30	D-120
Nitrobenzene	1000				30	35-180
Hexachlorobutadiene	1000				30	24-116
2,4,5-Trichlorophenol	1000				30	39-124
2,4,6-Trichlorophenol	1000				30	37-144
2,4-Dinitrotoluene	1000				30	39-139
Hexachlorobenzene	1000				30	D-152
Pentachlorophenol	1000				30	14-176

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

RPD: -- out of -- outside limits.
Spike Recovery: 0 out of 12 outside limits.
COMMENTS: _____

GC/MS DATA SHEET

FILE XBE206

SAMPLE R94/05048-5MS
EXT 12/21/94
LE ANALY 12/21/94
DILUTION 10
DATA FILE >BE206
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	250
1,4-Dichlorobenzene	625D	480
2-Methylphenol	HSL46	450
Hexachloroethane	625H	420
3+4-Methylphenol	HSL47	810
Nitrobenzene	625I	510
Hexachlorobutadiene	625N	490
2,4,5-Trichlorophenol	HSL49	640
2,4,6-Trichlorophenol	625ZZA	680
2,4-Dinitrotoluene	625T	580
Hexachlorobenzene	625ZB	720
Pentachlorophenol	625ZZE	890
SURROGATE REC		% REC
2-Fluorophenol	625ZZF	38
Phenol-d6	625ZZG	26
Nitrobenzene-d5	625ZZI	51
luorobiphenyl	625ZZJ	53
4,6-Tribromophenol	625ZZH	64
Terphenyl-d14	625ZZK	75

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

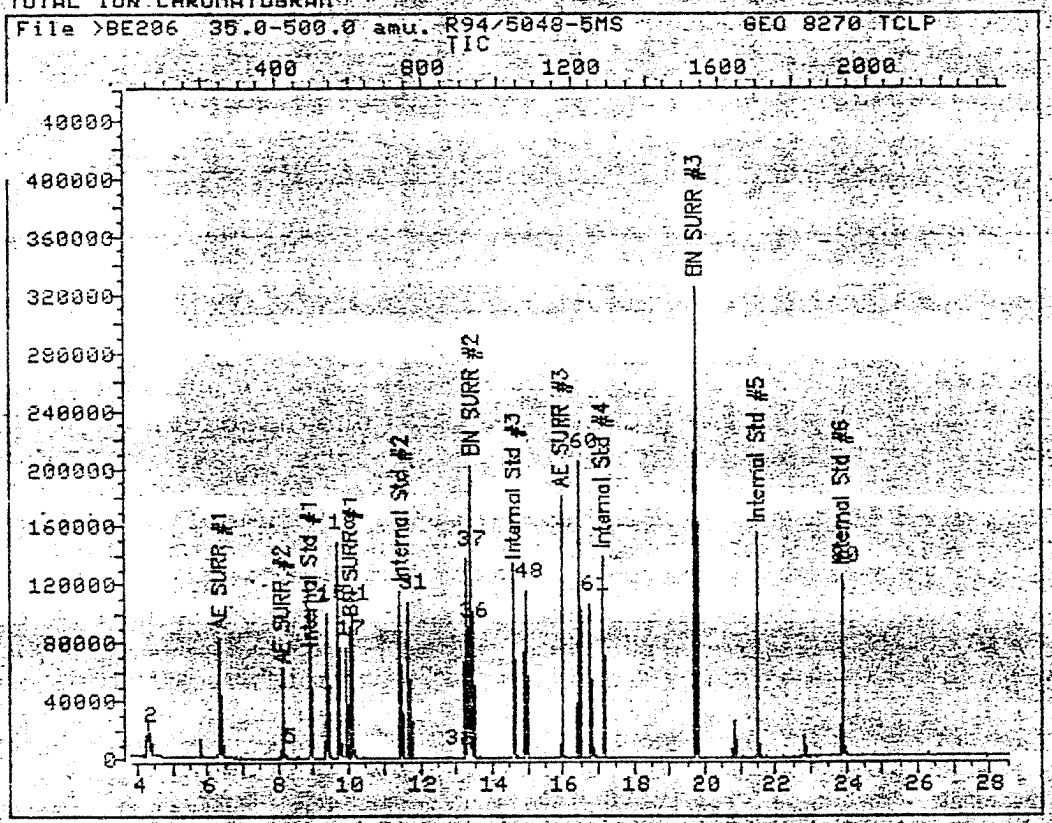
Operator ID: LARRYN Quant Rev: 7 Quant Time: 941221 20:16
Output File: ^BE206::D2 Injected at: 941221 19:46
Data File: >BE206::D4 Dilution Factor: 1.00000
[illegible]: R94/5048-5MS Instrument ID: MS#2
Matrix: GEO 8270 TCLP BTL# 5

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	Q
1)	*d4-1,4-Dichlorobenzene	8.87	152.0	21463	40.00	mg/L	98
2)	Pyridine	4.25	79.0	22344	24.67	mg/L	84
4)	2-Fluorophenol (Surr)	6.32	112.0	49680	77.93	mg/L	95
5)	Aniline	8.22	93.0	118	.128	mg/L	100
6)	Phenol-d6 (Surr)	8.07	99.0	46921	52.89	mg/L	89
11)	1,4-Dichlorobenzene	8.91	146.0	40560	47.67	mg/L	94
15)	2-Methylphenol	9.38	108.0	33044	44.96	mg/L	96
17)	Hexachloroethane	9.92	117.0	15321	41.72	mg/L	98
18)	4-Methylphenol	9.71	108.0	64007	81.14	mg/L	88
19)	*d8-Naphthalene	11.44	136.0	82205	40.00	mg/L	94
20)	Nitrobenzene-d5 (Surr)	10.03	82.0	47924	51.62	mg/L	90
21)	Nitrobenzene	10.07	77.0	46668	50.82	mg/L	98
31)	Hexachlorobutadiene	11.70	225.0	20626	49.15	mg/L	93
32)	2-Methylnaphthalene	12.95	142.0	144	.104	mg/L	82
	*d10-Acenaphthene	14.59	164.0	47267	40.00	mg/L	98
)	2,4,5-Trichlorophenol	13.33	196.0	32901	63.83	mg/L	97
37)	2,4,6-Trichlorophenol	13.27	196.0	28793	67.74	mg/L	99
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	87851	53.93	mg/L	96
48)	2,4-Dinitrotoluene	14.93	165.0	37095	58.15	mg/L	87
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	40666	128.24	mg/L	82
55)	*d10-Phenanthrene	17.10	188.0	85366	40.00	mg/L	92
60)	Hexachlorobenzene	16.45	284.0	49604	71.61	mg/L	92
61)	Pentachlorophenol	16.78	266.0	23593	88.89	mg/L	94
67)	*d12-Chrysene	21.47	240.0	83489	40.00	mg/L	88
70)	Terphenyl-d14 (Surr)	19.72	244.0	163523	75.06	mg/L	95
76)	*d12-Perylene	23.86	264.0	100405	40.00	mg/L	97
80)	Benzo(a)Pyrene	23.86	252.0	300	.0942	mg/L	87

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >BE206::D4 Quant Output File: ^BE206::D2
Name: R94/5048-5MS Instrument ID: MS#2
Misc: GEO 8270 TCLP BTL# 5

Id File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN
Quant Time : 941221 20:16
Injected at: 941221 19:46

GC/MS DATA SHEET

FILE XBE207

SAMPLE R94/05048-5MSD
D EXT 12/21/94
[illegible] ANALY 12/21/94
DILUTION 10
DATA_FILE >BE207
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	260
1,4-Dichlorobenzene	625D	500
2-Methylphenol	HSL46	510
Hexachloroethane	625H	420
3+4-Methylphenol	HSL47	930
Nitrobenzene	625I	580
Hexachlorobutadiene	625N	470
2,4,5-Trichlorophenol	HSL49	720
2,4,6-Trichlorophenol	625ZZA	740
2,4-Dinitrotoluene	625T	650
Hexachlorobenzene	625ZB	880
Pentachlorophenol	625ZZE	1200
SURROGATE REC		% REC
2-Fluorophenol	625ZZF	42
Phenol-d6	625ZZG	29
Nitrobenzene-d5	625ZZI	55
luorobiphenyl	625ZZJ	57
,6-Tribromophenol	625ZZH	72
Terphenyl-d14	625ZZK	73

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

00032

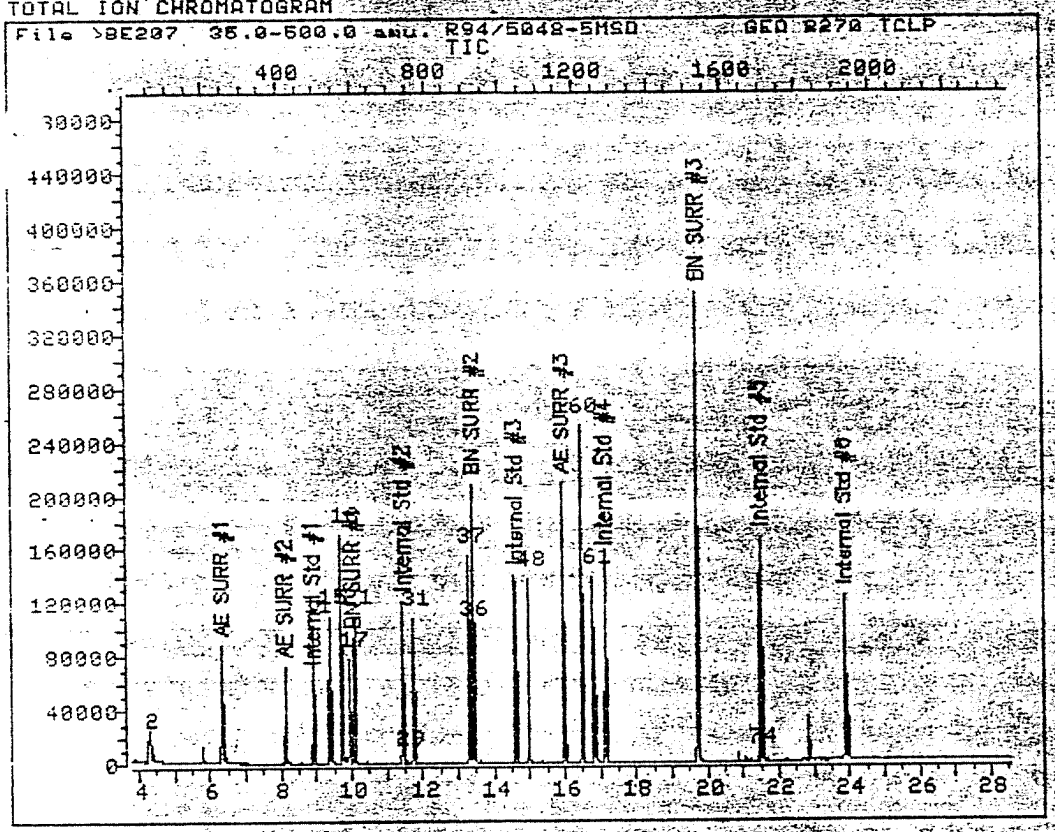
Operator ID: LARRYN Quant Rev: 7 Quant Time: 941221 20:55
Output File: ^BE207::D2 Injected at: 941221 20:26
Data File: >BE207::D4 Dilution Factor: 1.00000
N : R94/5048-5MSD Instrument ID: MS#2
M c: GEO 8270 TCLP BTL# 6

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.86	152.0	21613	40.00	mg/L	93
2)	Pyridine	4.26	79.0	23887	26.19	mg/L	83
4)	2-Fluorophenol (Surr)	6.32	112.0	53934	84.01	mg/L	93
6)	Phenol-d6 (Surr)	8.08	99.0	52109	58.33	mg/L	92
11)	1,4-Dichlorobenzene	8.90	146.0	42449	49.54	mg/L	98
15)	2-Methylphenol	9.37	108.0	37955	51.28	mg/L	96
17)	Hexachloroethane	9.91	117.0	15666	42.36	mg/L	93
18)	4-Methylphenol	9.70	108.0	74207	93.42	mg/L	87
19)	*d8-Naphthalene	11.43	136.0	82924	40.00	mg/L	95
20)	Nitrobenzene-d5 (Surr)	10.03	82.0	52184	55.73	mg/L	91
21)	Nitrobenzene	10.07	77.0	53617	57.88	mg/L	95
29)	Naphthalene	11.47	128.0	622	.271	mg/L	82
31)	Hexachlorobutadiene	11.69	225.0	20068	47.40	mg/L	89
34)	*d10-Acenaphthene	14.59	164.0	48904	40.00	mg/L	78
	2,4,5-Trichlorophenol	13.33	196.0	38578	72.34	mg/L	94
	2,4,6-Trichlorophenol	13.26	196.0	32413	73.70	mg/L	94
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	96485	57.25	mg/L	95
48)	2,4-Dinitrotoluene	14.93	165.0	43130	65.35	mg/L	87
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	47285	144.12	mg/L	82
55)	*d10-Phenanthrene	17.10	188.0	83950	40.00	mg/L	93
60)	Hexachlorobenzene	16.45	284.0	59880	87.91	mg/L	89
61)	Pentachlorophenol	16.77	266.0	31855	122.04	mg/L	93
67)	*d12-Chrysene	21.47	240.0	93160	40.00	mg/L	87
70)	Terphenyl-d14 (Surr)	19.72	244.0	179711	73.93	mg/L	98
74)	Bis(2-Ethylhexyl)Phthalate	21.41	149.0	1356	.588	mg/L	84
76)	*d12-Perylene	23.85	264.0	95975	40.00	mg/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >BE207::D4 Quant Output File: ^BE207::D2
Name: R94/5048-5MSD Instrument ID: MS#2
Misc: GEO 8270 TCLP BTL# 6

Id File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN
Quant Time : 941221 20:55
Injected at: 941221 20:26

CCC930

GC/MS DATA SHEET

FILE XBE204

SAMPLE R94/05048-REFSPK
D EXT 12/21/94
L E ANALY 12/21/94
DILUTION 10
DATA_FILE >BE204
MS NO. MS#2

CLIENT:
REFERENCE:
LOCATION:
DATE SAMPLED:
TIME SAMPLED:

COMPOUND NAME		ug/L
Pyridine	625ZZL	360
1,4-Dichlorobenzene	625D	530
2-Methylphenol	HSL46	560
Hexachloroethane	625H	460
3+4-Methylphenol	HSL47	980
Nitrobenzene	625I	630
Hexachlorobutadiene	625N	490
2,4,5-Trichlorophenol	HSL49	770
2,4,6-Trichlorophenol	625ZZA	810
2,4-Dinitrotoluene	625T	680
Hexachlorobenzene	625ZB	730
Pentachlorophenol	625ZZE	940
SURROGATE REC		**% REC**
2-Fluorophenol	625ZZF	46
Phenol-d6	625ZZG	30
Nitrobenzene-d5	625ZZI	63
luorobiphenyl	625ZZJ	64
,6-Tribromophenol	625ZZH	72
erphenyl-d14	625ZZK	68

SURROGATE RECOVERY LIMITS

SURROGATE	WATER
2-Fluorophenol	21-100 %
Phenol-d6	10-94
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

0000

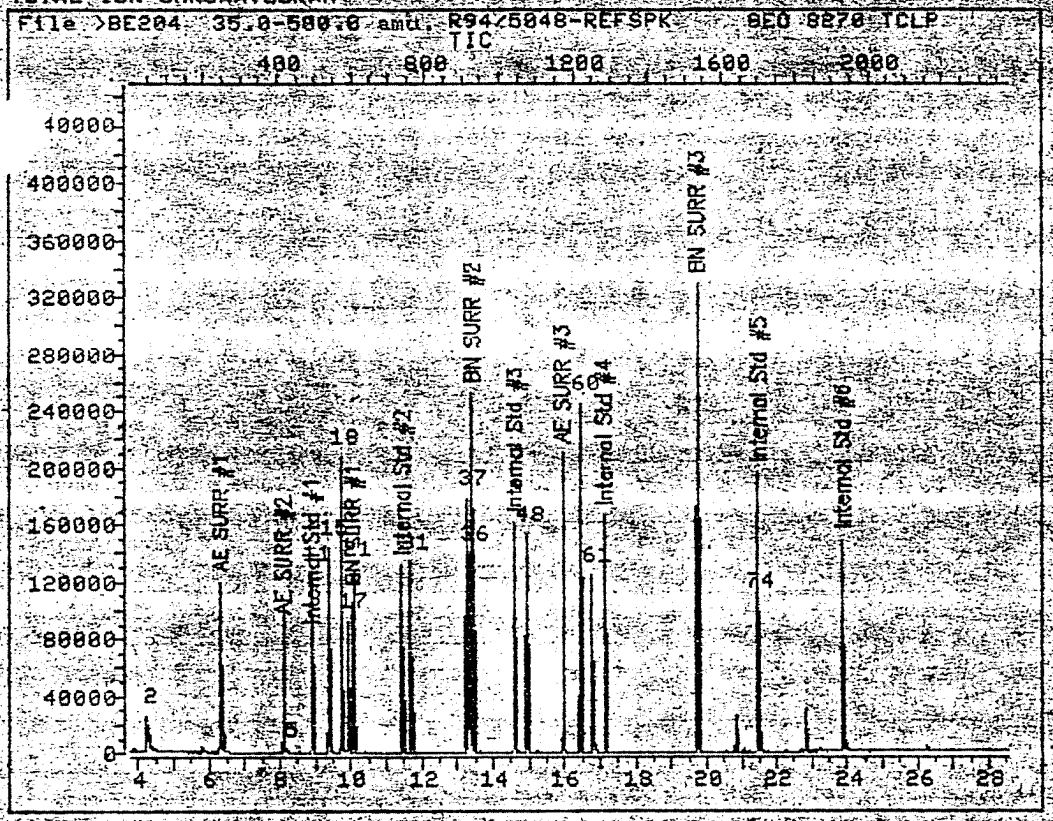
Operator ID: LARRYN Quant Rev: 7 Quant Time: 941221 18:57
Output File: ^BE204::D2 Injected at: 941221 18:27
Data File: >BE204::D4 Dilution Factor: 1.00000
N : R94/5048-REFSPK Instrument ID: MS#2
M : GEO 8270 TCLP BTL# 3

ID File: ID2XX::QT
Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2
Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.87	152.0	24642	40.00	mg/L	99
2)	Pyridine	4.23	79.0	37064	35.64	mg/L	89
4)	2-Fluorophenol (Surr)	6.31	112.0	67986	92.89	mg/L	96
5)	Aniline	8.22	93.0	163	.153	mg/L	100
6)	Phenol-d6 (Surr)	8.07	99.0	60986	59.87	mg/L	94
11)	1,4-Dichlorobenzene	8.90	146.0	51409	52.62	mg/L	94
15)	2-Methylphenol	9.37	108.0	47146	55.87	mg/L	97
17)	Hexachloroethane	9.91	117.0	19377	45.96	mg/L	93
18)	4-Methylphenol	9.72	108.0	88619	97.85	mg/L	86
19)	*d8-Naphthalene	11.43	136.0	94915	40.00	mg/L	94
20)	Nitrobenzene-d5 (Surr)	10.04	82.0	67810	63.26	mg/L	92
21)	Nitrobenzene	10.08	77.0	67206	63.39	mg/L	98
31)	Hexachlorobutadiene	11.69	225.0	23718	48.95	mg/L	92
34)	*d10-Acenaphthene	14.60	164.0	53793	40.00	mg/L	78
	2,4,5-Trichlorophenol	13.33	196.0	44986	76.69	mg/L	90
	2,4,6-Trichlorophenol	13.27	196.0	39364	81.37	mg/L	98
39)	2-Fluorobiphenyl (Surr)	13.41	172.0	120239	64.86	mg/L	95
48)	2,4-Dinitrotoluene	14.93	165.0	49451	68.12	mg/L	88
54)	2,4,6-Tribromophenol (Surr)	15.93	329.8	51935	143.91	mg/L	85
55)	*d10-Phenanthrene	17.10	188.0	98497	40.00	mg/L	91
60)	Hexachlorobenzene	16.45	284.0	58152	72.76	mg/L	91
61)	Pentachlorophenol	16.77	266.0	28828	94.13	mg/L	97
67)	*d12-Chrysene	21.47	240.0	103603	40.00	mg/L	86
70)	Terphenyl-d14 (Surr)	19.72	244.0	184795	68.35	mg/L	99
74)	Bis(2-Ethylhexyl)Phthalate	21.40	149.0	38266	14.92	mg/L	85
76)	*d12-Perylene	23.86	264.0	114501	40.00	mg/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >BE204::D4 Quant Output File: ^BE204::D2

Name: R94/5048-REESPK Instrument ID: MS#2

Misc: GEO 8270 TCLP BTL# 3

Id File: ID2XX::QT

Title: GTC HAZARDOUS SUBSTANCES: AE/BN SEMI-VOLATILES - GC/MS#2

Last Calibration: 941108 15:44 Last Qcal Time: 941221 16:23

Operator ID: LARRYN

Quant Time : 941221 18:57

Injected at: 941221 18:27

DCCC

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y.
(716)454-3760
LABORATORY REPORT

Analyst: Dave Masucci
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/23/94	14	1/10

Instrument #: HP5890II-F
Client: GEO
Job #: R94/5048-05
Cleanup: S=

Initial Vol/Wt.	Final Vol.
100 mls	10 mls

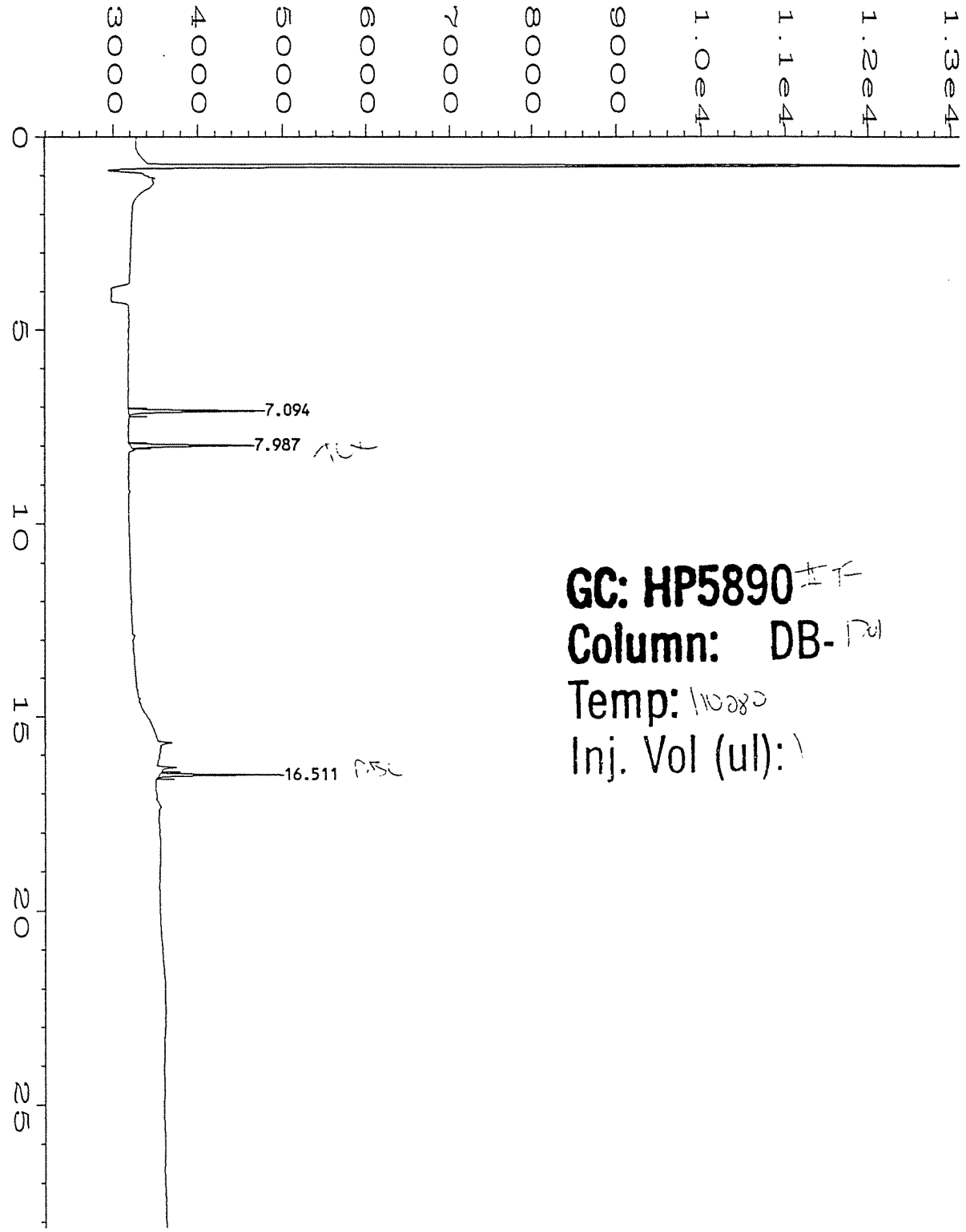
TCLP 8080

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
Gamma BHC (Lindane)			5.00 U	10	10	5.0 U	
Heptachlor			5.00 U	10	10	5.0 U	
Heptachlor Epoxide			5.00 U	10	10	5.0 U	
Endrin			5.00 U	10	10	5.0 U	
Methoxychlor			20.0 U	10	10	20 U	
Chlordane			20.0 U	10	10	20 U	
Toxaphene			100 U	10	10	100 U	

Surrogate Standards	Reten. Time	Area Units	Total Recovery	Amount Added	Percent Recovery	Q.C. Limits	Q
Tetrachloro-m-xylene	7.99	0.0484	11.2	10	112	60-150	
Dibutylchlorendate	16.51	0.0351	17.5	10	175	24-154	*

Surrogate is outside of recommended Q.C. limits.

Analyst's Signature



GC: HP5890 土F
Column: DB-1701
Temp: 110280
Inj. Vol (ul): 1

Data File Name	: C:\HPCHEM\2\DATA\1223R\014F0101.D		
Operator	: DAVE MASUCCI	Page Number	: 1
Instrument	: 5890II-F	Vial Number	: 14
Sample Name	: ~~4954~~-05 1/10 PM 12/27	Injection Number	: 1
Time Bar Code	: 5048	Sequence Line	: 1
Acquired on	: 23 Dec 94 03:16 PM	Instrument Method	: CLPF.MTH
Report Created on	: 23 Dec 94 03:47 PM	Analysis Method	: CLPF.MTH
Last Recalib on	: 20 JUL 93 01:07 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	: 00000

External Standard Report

Data File Name : C:\HPCHEM\2\DATA\1223R\014F0101.D
Operator : DAVE MASUCCI
Instrument : 5890II-F
Sample Name : ~~4954~~-05 1/10
Run Time Bar Code: 5048
Acquired on : 23 Dec 94 03:16 PM
Report Created on: 23 Dec 94 03:47 PM
Last Recalib on : 20 JUL 93 01:07 PM
Multiplier : 1

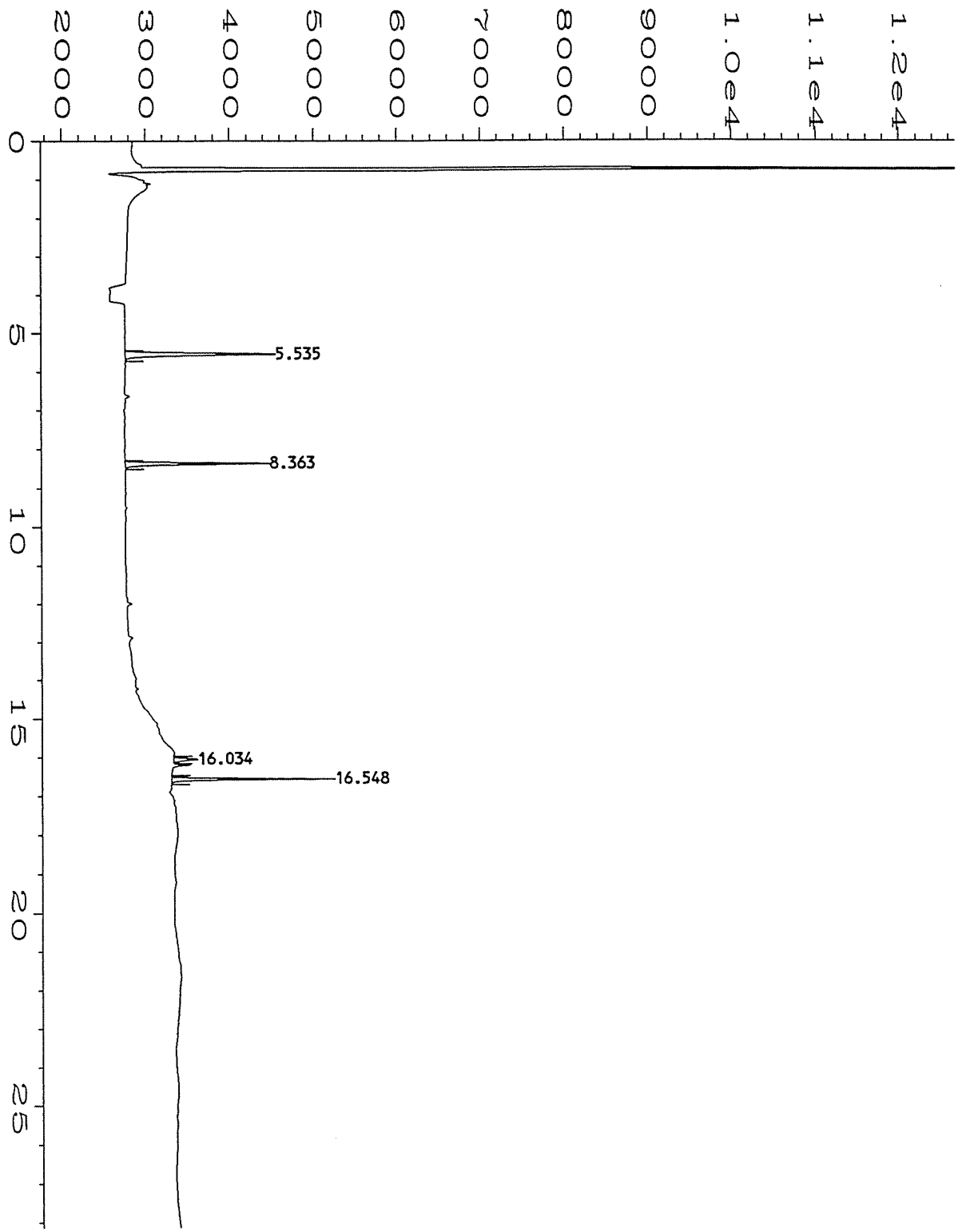
Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 1
Instrument Method: CLPF.MTH
Analysis Method : CLPF.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\2\DATA\1223R\014F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
7.987	4835	BB	0.051	1	0.000	TETRACHLORO-M-XYLENE
10.440	* not found *			1		ALPHA-BHC
11.440	* not found *			1		GAMMA-BHC
11.860	* not found *			1		HEPTACHLOR
12.400	* not found *			1		ALDRIN
12.960	* not found *			1		BETA-BHC
13.350	* not found *			1		DELTA-BHC
13.630	* not found *			1		HEPTACHLOR EPOXIDE
14.030	* not found *			1		ENDOSULFAN I
14.100	* not found *			1		GAMMA-CHLORDANE
14.200	* not found *			1		ALPHA-CHLORDANE
14.300	* not found *			1		4,4,'DDE
14.560	* not found *			1		DIELDRIN
14.840	* not found *			1		ENDRIN
15.330	* not found *			1		4,4,'DDD
15.490	* not found *			1		ENDOSULFAN II
15.540	* not found *			1		4,4'DDT
16.010	* not found *			1		ENDRIN ALDEHYDE
16.360	* not found *			1		METHOXYCHLOR
16.470	* not found *			1		ENDOSULFAN SULFATE
17.130	* not found *			1		ENDRIN KETONE
19.330	* not found *			1		DECACHLOROBIPHENYL
7.094	5482	BB	0.052		5481.942	* uncalibrated *
16.511	3509	BB	0.036		3509.095	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found



Data File Name : C:\HPCHEM\2\DATA\1223R\014R0101.D
Operator : DAVE MASUCCI
Instrument : 5890II-F
Sample Name : ~~4954~~-05 1/10 pm 12/27
Time Bar Code: 5048
Acquired on : 23 Dec 94 03:16 PM
Report Created on: 23 Dec 94 03:47 PM
Last Recalib on : 20 JUL 93 01:07 PM
Multiplier : 1

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

000030

External Standard Report

Data File Name : C:\HPCHEM\2\DATA\1223R\014R0101.D
Operator : DAVE MASUCCI
Instrument : 5890II-F
Sample Name : ~~4954~~-05 1/10
Run Time Bar Code:
Acquired on : 23 Dec 94 03:16 PM
Report Created on: 23 Dec 94 03:47 PM
Last Recalib on : 20 JUL 93 01:07 PM
Multiplier : 1

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

Sig. 2 in C:\HPCHEM\2\DATA\1223R\014R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
8.363	5904	BB	0.052	1	0.000	TETRACHLORO-M-XYLENE
10.370	* not found *			1		ALPHA-BHC
11.420	* not found *			1		GAMMA-BHC(LINDANE)
11.620	* not found *			1		ALDRIN
12.160	* not found *			1		HEPTACHLOR
12.430	* not found *			1		BETA-BHC
12.820	* not found *			1		DELTA-BHC
13.970	* not found *			1		HEPTACHLOR EPOXIDE
14.020	* not found *			1		GAMMA-CHLORDANE
14.300	* not found *			1		ALPHA-CHLORDANE
14.350	* not found *			1		ENDOSULFAN I
14.670	* not found *			1		4,4'-DDE
14.790	* not found *			1		DIELDRIN
5.300	* not found *			1		ENDRIN
15.410	* not found *			1		4,4'-DDD
15.540	* not found *			1		ENDOSULFAN II
15.820	* not found *			1		4,4'-DDT
16.034	1152	BB	0.064	1	0.000	ENDRIN ALDEHYDE
16.180	* not found *			1		ENDOSULFAN SULFATE
17.000	* not found *			1		METHOXYCHLOR
17.570	* not found *			1		ENDRIN KETONE
21.400	* not found *			1		DECACHLOROBIPHENYL
5.535	7826	BB	0.067		7825.638	* uncalibrated *
16.548	5107	BB	0.040		5106.965	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found

Use as BLK w/ R94/5048 COPY

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y.
(716)454-3760
LABORATORY REPORT

Analyst: Dave Masucci
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/23/94	08	1/10

Instrument #: HP5890II-F
Client: HQ
Job #: R94/4954-BLK
Cleanup: S=

Initial Vol/Wt.	Final Vol.
100 mls	10 mls

TCLP 8080

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
Gamma BHC (Lindane)			5.00 U	10	10	5.0 U	
Heptachlor			5.00 U	10	10	5.0 U	
Heptachlor Epoxide			5.00 U	10	10	5.0 U	
Endrin			5.00 U	10	10	5.0 U	
Methoxychlor			20.0 U	10	10	20 U	
Chlordane			20.0 U	10	10	20 U	
Toxaphene			100 U	10	10	100 U	

Surrogate Standards	Reten. Time	Area Units	Total Recovery	Amount Added	Percent Recovery	Q.C. Limits	Q
Tetrachloro-m-xylene	7.99	0.0454	10.5	10	105	60-150	
Dibutylchlorendate	16.51	0.0325	16.2	10	162	24-154	*

Surrogate is outside of recommended Q.C. limits.

Analyst's Signature

000085

4C

TCLP PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK01

Lab Name: General Testing Contract: Geo.

Lab Code: 10145 Case No. SAS No.: SDG No.:

Lab Sample ID: R94/4954-BLK Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc)SEPF

Sulfur Cleanup: (Y/N) Y Date Extracted: 12/21/94

Date Analyzed: (1): 12/23/94 Date Analyzed: (2):

Time Analyzed: (1): 12:05 Time Analyzed: (2):

Instrument ID (1): HP5890II-F Instrument ID (2): HP5890II-F

GC Column (1):DB-1701 ID: 0.32(mm) GC Column (2):DB-17 ID: 0.32(mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01		5048-05	12/23/94	
02				
03				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

3/90

FORM IV AROCLOR

000039

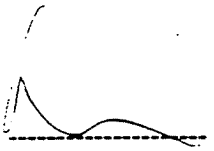
...ERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760

Analysis: TCLP 8080
Pesticides

Analyst: Dave Masucci
Date: 12/23/94
Time: 09:20
Inst. Id: 5890II-F
Column: DB-1701
Oven Temp: 110-280 C

INITIAL CALIBRATION DATA:
RESPONSE FACTOR SUMMARY

Compound	Avg. R.T.	R F Std 1	R F Std 2	R F Std 3	R F Std 4	R F Std 5	Avg R F	% RSD
gamma-BHC (Lindane)	11.44	164	160	164	170	175	167	4
Heptachlor	11.86	181	172	169	157	147	165	8
Heptachlorepoxide	13.63	166	160	158	153	145	156	5
Endrin	14.84	248	245	250	248	243	247	1
Methoxychlor	16.36	2053	2246	2646	3197	2439	2516	17



ANALYST

..ERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760

Analyst: Dave Masucci
Date: 12/23/94
Time: 15:47

Analysis: TCLP 8080 Pesticides

Run #: 15
Calibration Date: 12/23/94
Column: DB-1701
Oven Temp: 150-275 C

Instrument ID: HP 5890II-F
Standard #: 3

Compound	R.T. Window From	R.T. Window To	Daily Std R.T.	Area Units	True Conc. (ug/L)	Initial R.F.	Daily Std R.F.	% DEV
gamma-BHC (Lindane)	11.42	11.46	11.44	0.309	50	167	162	3
Heptachlor	11.84	11.88	11.86	0.300	50	165	167	1
Heptachlorepoxide	13.61	13.65	13.63	0.319	50	156	157	0
Endrin	14.82	14.86	14.84	0.204	50	247	245	1
Methoxychlor	16.34	16.38	16.36	0.018	50	2516	2841	13

ANALYST

CLIENT: GeO JOB #: K9415019 METHOD: TCLP 1010 EXTRACTION: 3510

SAMPLE #	INITIAL WT. or VOL.	EXTRACT. FINAL VOL.	APPEARANCE	SPIKE ADDED	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLU	DATE	COMMENTS	DATE DIGEST
5	100ml	10ml	clear colorless		12/21	5=	12/21	1/10	12/21	Diluted to 1,000ml	12/2

Blank WBN1149241

Extraction of liquid samples using 60ml
[illegible]

Appendix IX Post Per Surrogate
from DBC from Rem X
DL 12/15/94 pg 62 V1

4C - TCLP 8150 METHOD BLANK SUMMARY

Lab Name: GENERAL TESTING CORP. Contract: Geotrans
Lab Code: 10145 Case No. _____ SAS No. _____ SDG No.:
Lab Sample ID: R94/5048-BLK Lab File ID:
Matrix:(soil/water) WATER
Date Extracted: 12/21/94 Extraction: (SepF/Cont/Sonc) SepF
Date Analyzed: (1): 12/22/94 Date Analyzed: (2):
Time Analyzed: (1): 18:48 Time Analyzed: (2):
Instrument ID (1): HP5890A-C Instrument ID (2):
GC Column ID (1): DB-1701 GC Column ID (2):

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBLK01MS	5048-RS	12/22/94	
02	5048-EQBLK	5048-EQBLK	12/22/94	
03	5048-005	5048-005	12/22/94	
04	5048-005MS	5048-005MS	12/22/94	
05	5048-005MSD	5048-005MSD	12/22/94	
06				
07				
08				
09				
10				
11				
12				
13				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

000340

ERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760

Analyst: Mike Cymbal
Date: 12/22/94
Time: 09:47
Inst. Id: HP5890A-C
Column: DB-1701
Oven Temp: 110-280 C

Analysis: 8150
Appen. IX Herbicides

INITIAL CALIBRATION DATA:
RESPONSE FACTOR SUMMARY

Compound	Avg. R.T.	R F Std	R F Std	R F Std	R F Std 4	R F Std 5	Avg R F	% RSD
2,4-D	9.14	373	347	345	306	313	337	8
Silvex	10.20	106	102	105	100	105	104	3
2,4,5-t	10.83	115	109	112	106	117	112	4
Dinoseb	12.23	145	138	141	132	140	139	3

ANALYST

.ERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760

Analyst: Mike Cymbal
Date: 12/22/94
Time: 09:47
Inst. Id: HP5890A-C

Analysis: 8150
Appen. IX HERBS

R.T. WINDOWS SUMMARY

Compound	1st non-consec. Std.	2nd non consec. Std.	3rd non-consec. Std.	Std Dev of 72h avg	3 x S.D.of 72h av
2,4-D	9.14	9.13	9.14	0.006	0.02
Silvex	10.21	10.20	10.20	0.006	0.02
2,4,5-t	10.83	10.83	10.84	0.006	0.02
Dinoseb	12.23	12.22	12.23	0.006	0.02

ANALYST

ERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760

Analyst: Mike Cymbal
Date: 12/22/94
Time: 18:14

Analysis: 8150
Appen IX. Herbicides

Run #: 16
Calibration Date: 12/22/94
Column: DB-1701
Oven Temp: 110-280 C

Instrument ID: HP 5890A-C
Standard #: 3

Compound	R.T. From	Window To	Daily Std R.T.	Area Units	True Conc. (ug/L)	Initial R.F.	Daily Std R.F.	DEV
2,4-D	9.11	9.15	9.13	0.146	50	337	342	1
Silvex	10.18	10.22	10.20	0.449	50	104	111	7
2,4,5-T	10.81	10.85	10.83	0.406	50	112	123	10
Dinoseb	12.20	12.24	12.22	0.342	50	139	146	5

ANALYST

000340

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	20	1/100

Instrument #: HP5890A-C
Client: Beak
Job #: R94/5048-005

Initial Vol/Wt.	Final Vol.
100 mls	10 mls

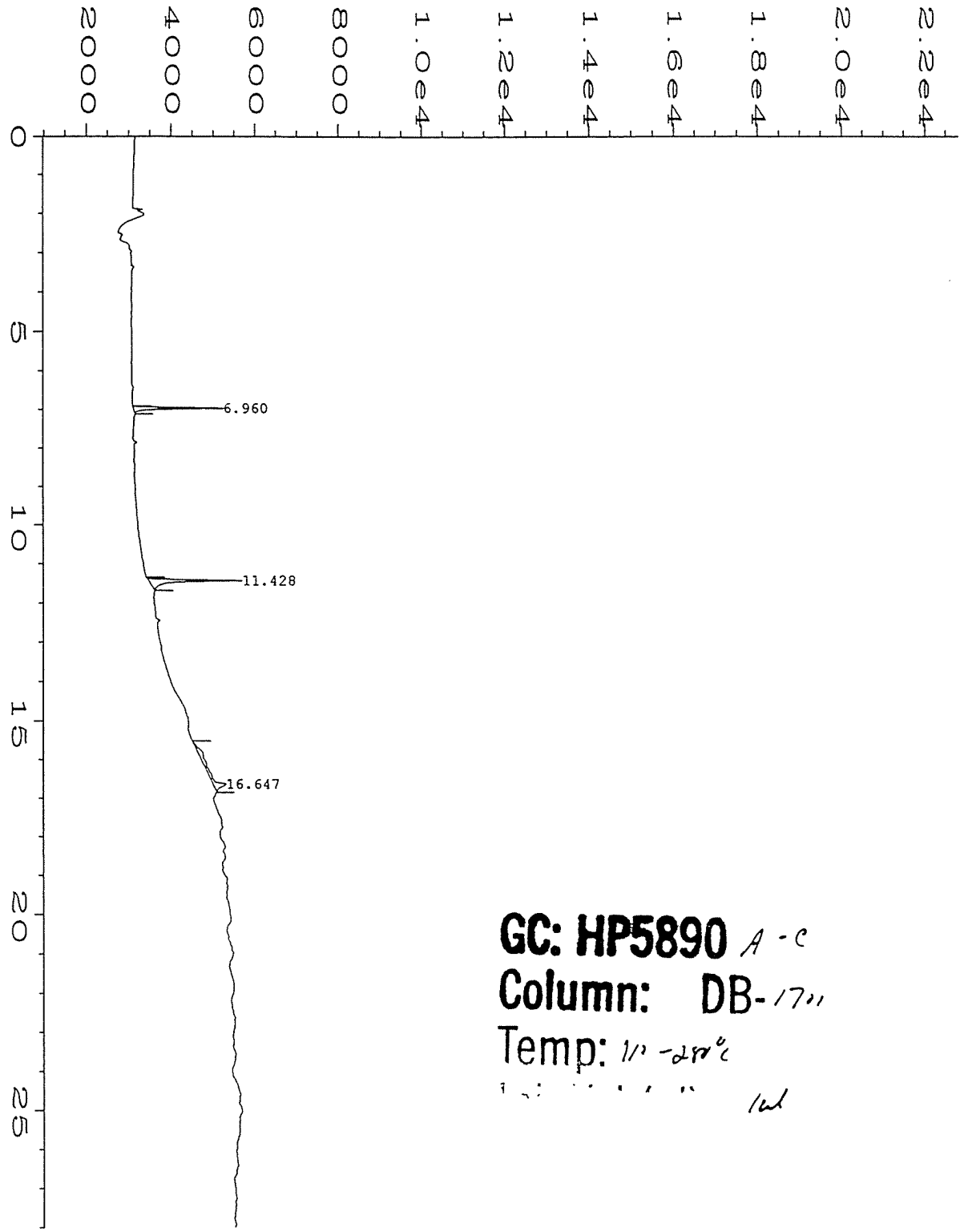
Analysis: 8150 TCLP
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D			5.00 U	10	100	50 U	
2,4,5-TP(Silvex)			5.00 U	10	100	50 U	

Surrogate Standard	Time	Area Units	Recovery	Added	Recovery	Limits	Q
2,4-DB	11.43	0.087	639	1000	64	18-152	

Analyst's Signature

000044



GC: HP5890 A-C
Column: DB-17
Temp: 1/1 -28°C

Data File Name : C:\HPCHEM\1\DATA\1222R\020F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05 1/100
Time Bar Code:
Acquired on : 22 Dec 94 08:28 PM
Report Created on: 22 Dec 94 09:01 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\020F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 08:28 PM
Report Created on: 22 Dec 94 09:01 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

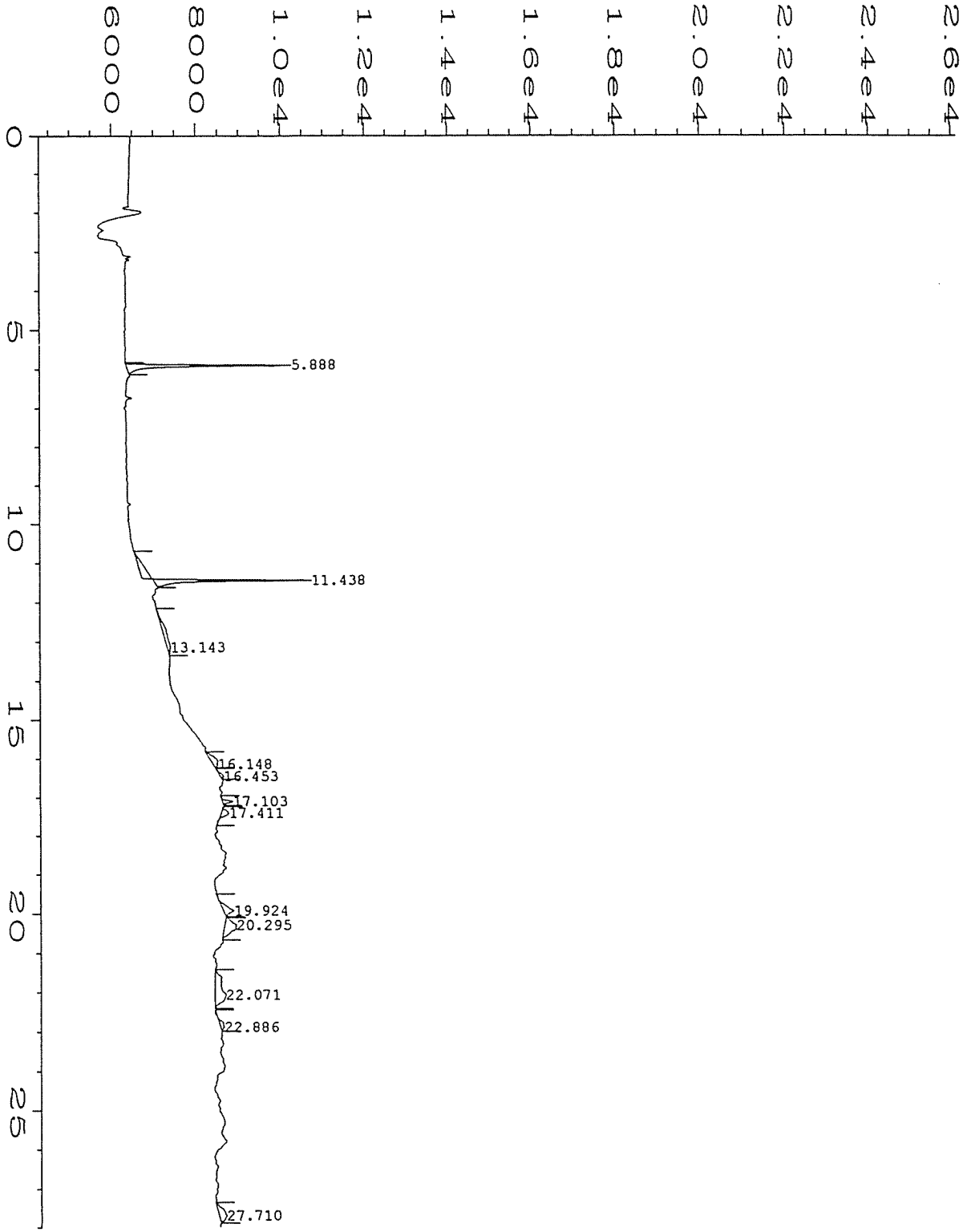
Page Number : 1
Vial Number : 20
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERB.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\1\DATA\1222R\020F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.130	* not found *			1		2,4-D
10.200	* not found *			1		2,4,5-TP (SILVEX)
10.830	* not found *			1		2,4,5-T
11.428	8695	BB	0.056	1	0.000	2,4-DB
12.220	* not found *			1		DINOSEB
6.960	6158	BB	0.044		6157.702	* uncalibrated *
16.647	6557	BB	0.265		6556.839	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found



Data File Name : C:\HPCHEM\1\DATA\1222R\020R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05 1/100
Bar Code:
Acquired on : 22 Dec 94 08:28 PM
Report Created on: 22 Dec 94 09:02 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 20
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 0.0047
ISTD Amount :

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\020R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 08:28 PM
Report Created on: 22 Dec 94 09:02 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 2 in C:\HPCHEM\1\DATA\1222R\020R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.260	* not found *			1		2,4-D
10.160	* not found *			1		2,4,5-TP (SILVEX)
10.860	* not found *			1		2,4,5-T
11.000	* not found *			1		DINOSEB
11.438	6999	BB	0.032	1	0.000	2,4-DB
5.888	13193	BB	0.050		13192.77	* uncalibrated *
13.143	4127	BB	0.731		4126.688	* uncalibrated *
16.148	2419	BB	0.316		2419.245	* uncalibrated *
16.453	564	BB	0.131		564.348	* uncalibrated *
17.103	1044	BB	0.066		1044.038	* uncalibrated *
17.411	1630	BB	0.125		1629.806	* uncalibrated *
19.924	2723	BB	0.148		2723.217	* uncalibrated *
20.295	5243	BB	0.236		5243.053	* uncalibrated *
2.071	8307	BB	0.408		8306.572	* uncalibrated *
22.886	1105	BB	0.161		1105.115	* uncalibrated *
27.710	3343	BB	0.238		3342.584	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	17	1/100

Instrument #: HP5890A-C
Client: Beak
Job #: R94/5048-BLK

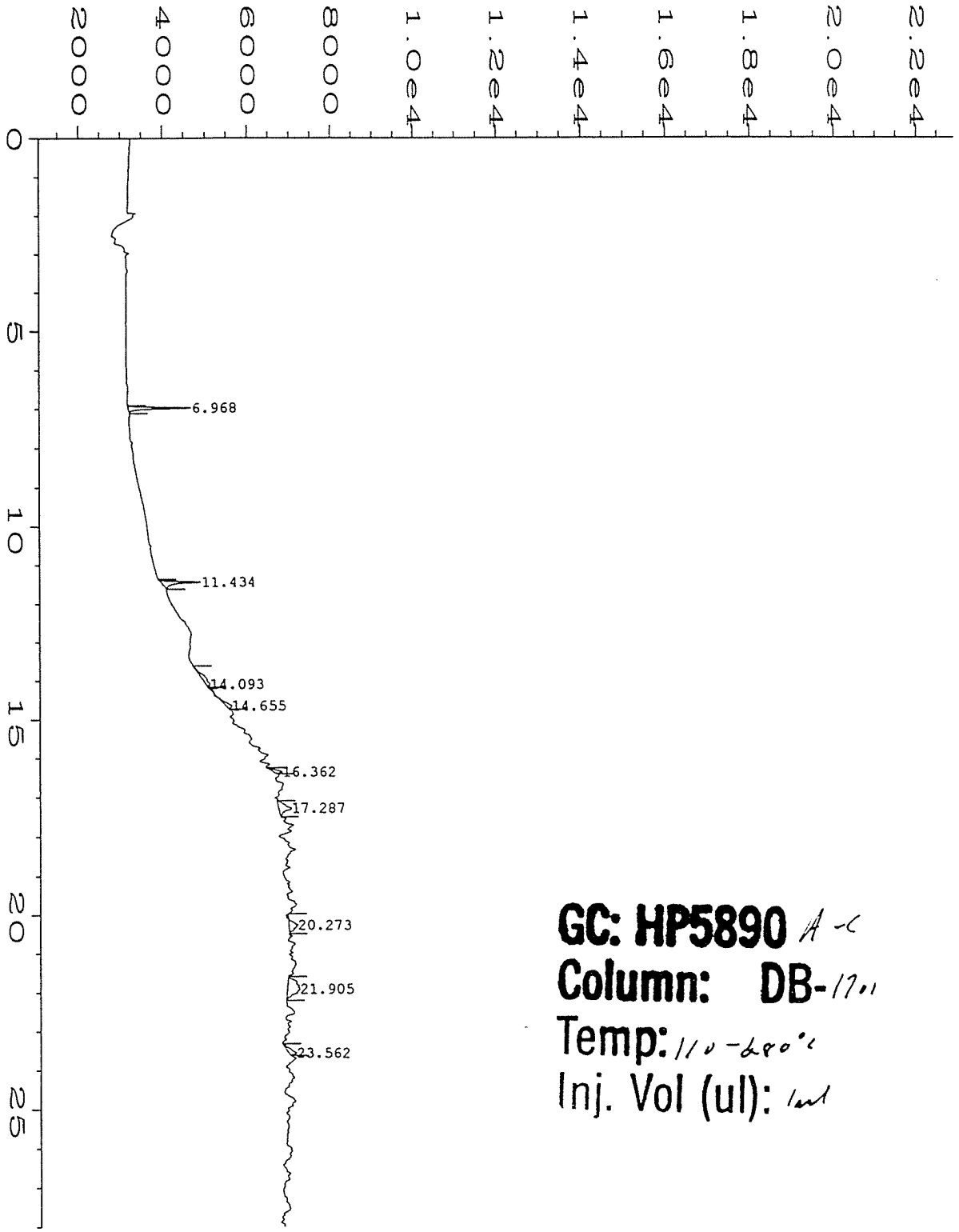
Initial Vol/Wt.	Final Vol.
100 mls	10 mls

Analysis: 8150 TCLP
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D			5.00 U	10	100	50 U	
2,4,5-TP(Silvex)			5.00 U	10	100	50 U	

Surrogate Standard	Time	Area Units	Recovery	Added	Recovery	Limits	Q
2,4-DB	11.43	0.04	273	1000	27	18-152	

Analyst's Signature



GC: HP5890 A-C
Column: DB-17.1
Temp: 110-280°C
Inj. Vol (ul): 1ul

Data File Name : C:\HPCHEM\1\DATA\1222R\017F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-BLK 1/100
Bar Code:
Acquired on : 22 Dec 94 06:48 PM
Report Created on: 22 Dec 94 07:20 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

000050

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\017F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-BLK 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 06:48 PM
Report Created on: 22 Dec 94 07:21 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

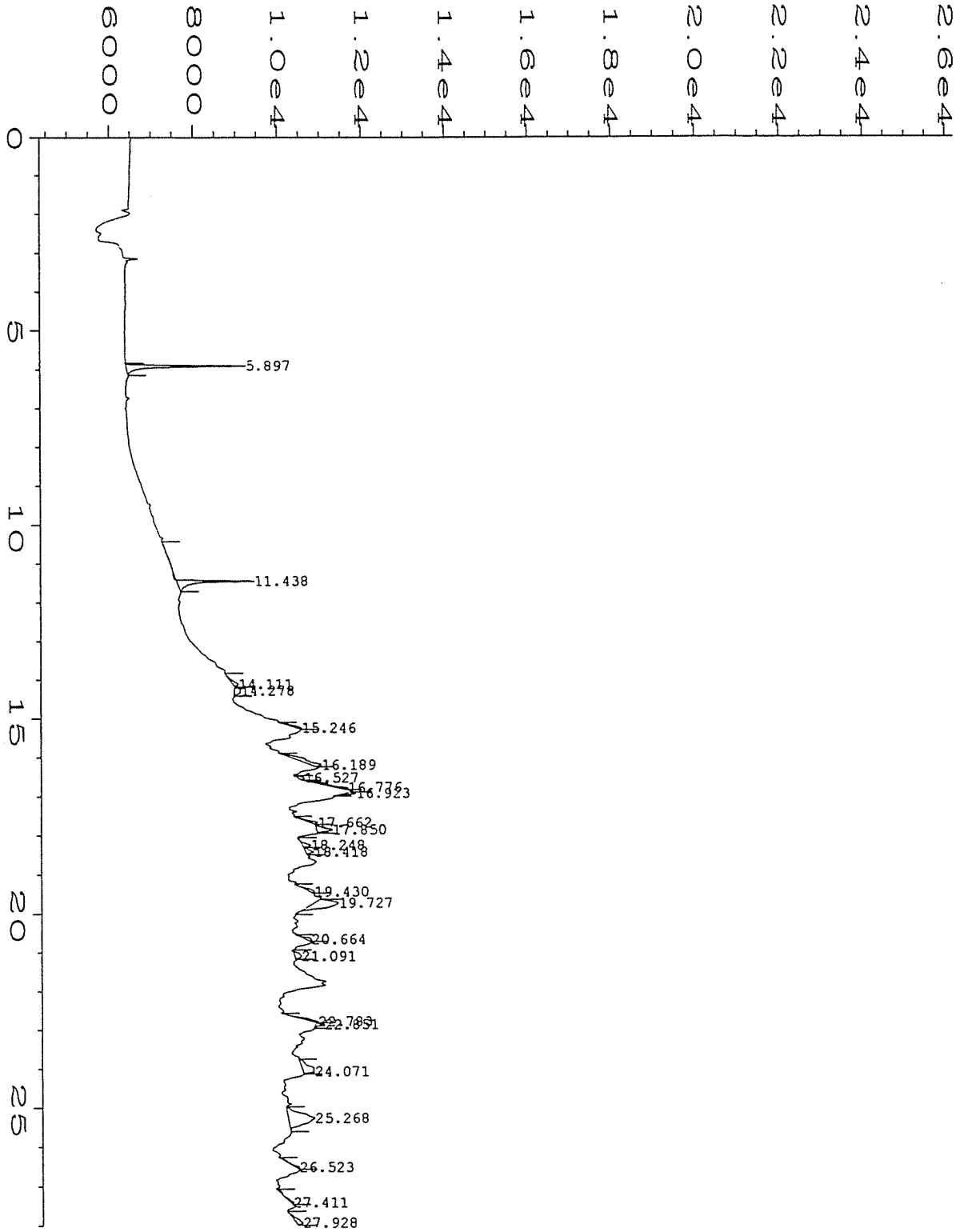
Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERB.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\1\DATA\1222R\017F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.130	* not found *			1		2,4-D
10.200	* not found *			1		2,4,5-TP (SILVEX)
10.830	* not found *			1		2,4,5-T
11.434	3713	BB	0.056	1	0.000	2,4-DB
12.220	* not found *			1		DINOSEB
6.968	4264	BB	0.043		4263.876	* uncalibrated *
14.093	2148	BB	0.267		2148.203	* uncalibrated *
14.655	1446	BB	0.147		1446.401	* uncalibrated *
16.362	1063	BB	0.069		1062.792	* uncalibrated *
17.287	3233	BB	0.144		3233.037	* uncalibrated *
20.273	2044	BB	0.126		2043.929	* uncalibrated *
21.905	6150	BB	0.286		6149.969	* uncalibrated *
23.562	1621	BB	0.119		1621.451	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found



Data File Name : C:\HPCHEM\1\DATA\1222R\017R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-BLK 1/100
Time Bar Code:
Acquired on : 22 Dec 94 06:48 PM
Report Created on: 22 Dec 94 07:21 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\017R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-BLK 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 06:48 PM
Report Created on: 22 Dec 94 07:21 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 2 in C:\HPCHEM\1\DATA\1222R\017R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.260	* not found *			1		2,4-D
10.160	* not found *			1		2,4,5-TP (SILVEX)
10.860	* not found *			1		2,4,5-T
11.000	* not found *			1		DINOSEB
11.438	7049	BB	0.054	1	0.000	2,4-DB
5.897	9641	BB	0.050		9641.463	* uncalibrated *
14.111	978	BB	0.102		978.310	* uncalibrated *
14.278	1284	BB	0.110		1283.949	* uncalibrated *
15.246	700	BB	0.146		699.835	* uncalibrated *
16.189	3492	BB	0.186		3491.624	* uncalibrated *
16.527	638	BB	0.068		637.791	* uncalibrated *
16.776	1608	BB	0.094		1607.681	* uncalibrated *
16.923	756	BB	0.042		755.790	* uncalibrated *
7.662	634	BB	0.052		634.475	* uncalibrated *
17.850	2044	BB	0.077		2043.564	* uncalibrated *
18.248	915	BB	0.072		914.503	* uncalibrated *
18.418	1046	BB	0.070		1046.454	* uncalibrated *
19.430	792	BB	0.099		792.172	* uncalibrated *
19.727	7243	BB	0.147		7242.530	* uncalibrated *
20.664	817	BB	0.088		817.171	* uncalibrated *
21.091	1141	BB	0.090		1140.960	* uncalibrated *
22.783	969	BB	0.105		969.163	* uncalibrated *
22.851	771	BB	0.050		771.351	* uncalibrated *
24.071	3790	BB	0.171		3790.019	* uncalibrated *
25.268	11198	BB	0.210		11197.84	* uncalibrated *
26.523	682	BB	0.113		681.960	* uncalibrated *
27.411	753	BB	0.130		753.131	* uncalibrated *
27.928	1296	BB	0.108		1296.144	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found

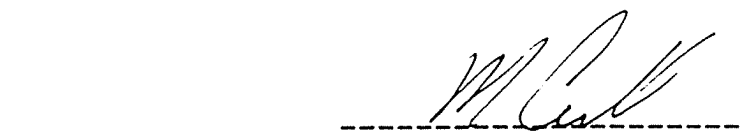
GENERAL TESTING CORPORATION
710 Exchange St.,Rochester, N.Y
(716)454-3760

Analyst: Mike Cymbal
Date: 12/23/94
Job: R94/5048
Analysis: 8150

HERBICIDE
TCLP (8150)

REFERENCE SPIKE RECOVERY

COMPOUND	SPIKE ADDED	BLANK CONC. (ug/l)	RS CONC. (ug/l)	RS % REC	REC LIMITS
2,4-D	200	0.0	140	70	46-127
Silvex	200	0.0	150	75	59-132



Analyst's Signature

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	18	1/100

Instrument #: HP5890A-C
Client: Beak
JOB #: R94/5048-RS

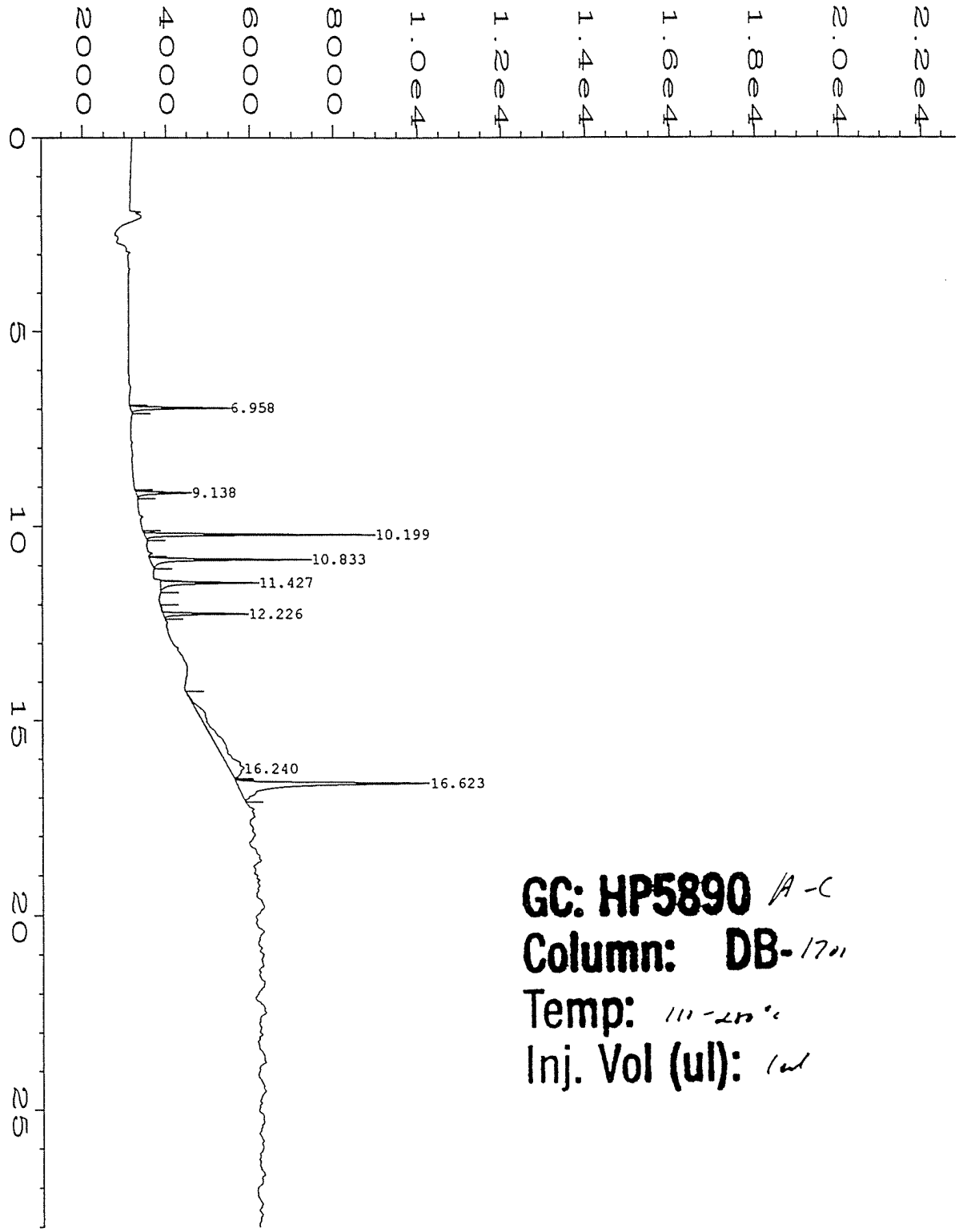
Initial Vol/Wt.	Final Vol.
100 mls	10 mls

Analysis: 8150
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D	9.14	0.042	14.1	10	100	140	
2,4,5-TP(Silvex)	10.20	0.142	14.8	10	100	150	

Surrogate Standard	Reten. Time	Area Units	Total Recovery	Amount Added	Percent Recovery	Rec Limits	Q
2,4-DB	11.43	0.083	607	1000	61	18-152	

Analyst's Signature



GC: HP5890 A-C
Column: DB- 1701
Temp: 110-220°C
Inj. Vol (ul): 1ul

Data File Name : C:\HPCHEM\1\DATA\1222R\018F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-RS 1/100
Time Bar Code:
Acquired on : 22 Dec 94 07:21 PM
Report Created on: 22 Dec 94 07:54 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERB.MTH
Sample Amount : 0
ISTD Amount : 000356

External Standard Report

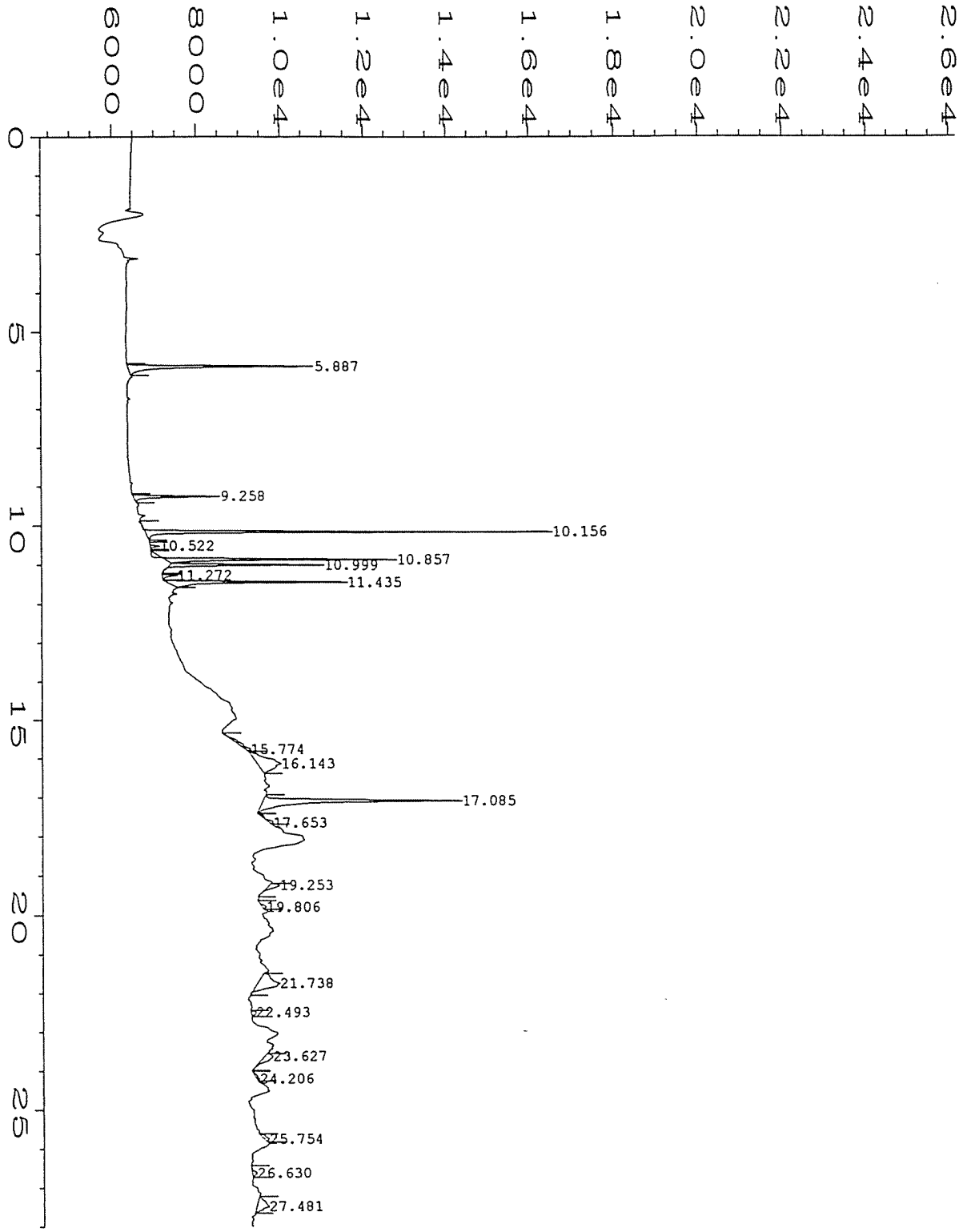
Data File Name : C:\HPCHEM\1\DATA\1222R\018F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-RS 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 07:21 PM
Report Created on: 22 Dec 94 07:54 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 1 in C:\HPCHEM\1\DATA\1222R\018F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.138	4183	BB	0.047	1	0.000	2,4-D
10.199	14206	BB	0.039	1	0.000	2,4,5-TP (SILVEX)
10.833	12080	BB	0.046	1	0.000	2,4,5-T
11.427	8260	BB	0.051	1	0.000	2,4-DB
12.226	5800	BB	0.043	1	0.000	DINOSEB
6.958	6881	BB	0.043		6881.369	* uncalibrated *
16.240	21776	BB	0.731		21776.44	* uncalibrated *
16.623	29717	BB	0.089		29717.01	* uncalibrated *

Calibration table contains at least one peak with amt = 0



Data File Name : C:\HPCHEM\1\DATA\1222R\018R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-RS 1/100
n Time Bar Code:
cquired on : 22 Dec 94 07:21 PM
Report Created on: 22 Dec 94 07:54 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 8
ISTD Amount :

000358

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\018R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-RS 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 07:21 PM
Report Created on: 22 Dec 94 07:55 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 2 in C:\HPCHEM\1\DATA\1222R\018R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.258	5713	BB	0.043	1	0.000	2,4-D
10.156	23369	BB	0.036	1	0.000	2,4,5-TP (SILVEX)
10.857	13097	BB	0.037	1	0.000	2,4,5-T
10.999	9030	BB	0.038	1	0.000	DINOSEB
11.435	13160	BB	0.045	1	0.000	2,4-DB
5.887	14876	BB	0.049		14876.41	* uncalibrated *
10.522	561	BB	0.038		560.762	* uncalibrated *
11.272	1024	BB	0.043		1023.506	* uncalibrated *
15.774	1744	BB	0.181		1744.239	* uncalibrated *
16.143	10125	BB	0.222		10124.96	* uncalibrated *
17.085	23702	BB	0.070		23701.83	* uncalibrated *
17.653	972	BB	0.139		971.778	* uncalibrated *
19.253	1875	BB	0.105		1874.595	* uncalibrated *
19.806	505	BB	0.071		505.244	* uncalibrated *
21.738	8492	BB	0.199		8492.288	* uncalibrated *
22.493	706	BB	0.091		706.283	* uncalibrated *
23.627	2698	BB	0.168		2698.286	* uncalibrated *
24.206	613	BB	0.106		613.156	* uncalibrated *
25.754	940	BB	0.107		939.514	* uncalibrated *
26.630	734	BB	0.085		734.133	* uncalibrated *
27.481	3924	BB	0.163		3924.107	* uncalibrated *

Calibration table contains at least one peak with amt = 0

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	19	1/100

Instrument #: HP5890A-C
Client: Beak
Job #: R94/5048-EQBLK

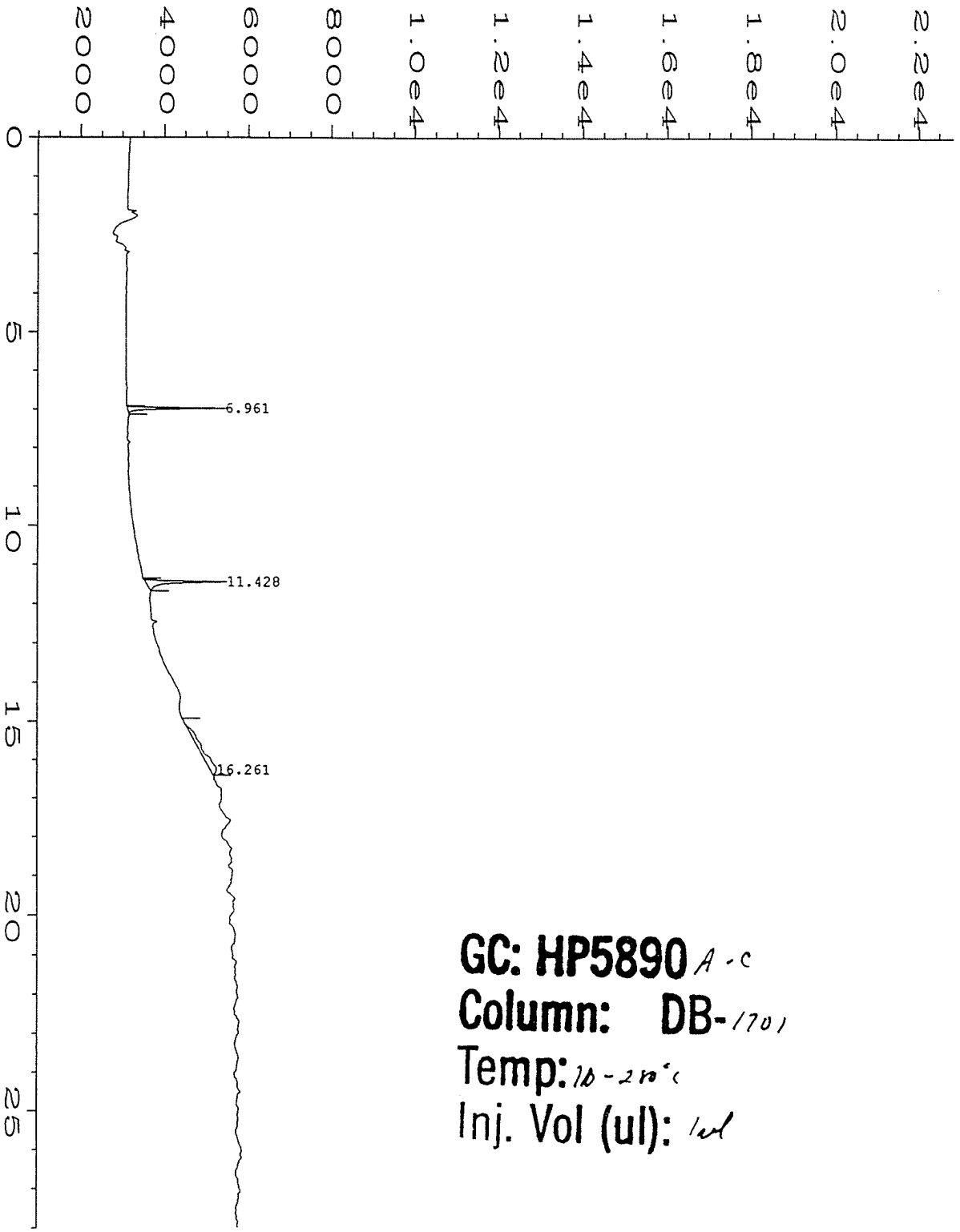
Initial Vol/Wt.	Final Vol.
100 mls	10 mls

Analysis: 8150 TCLP
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D			5.00 U	10	100	50 U	
2,4,5-TP(Silvex)			5.00 U	10	100	50 U	

Surrogate Standard	Time	Area Units	Recovery	Added	Recovery	Limits	Q
2,4-DB	11.43	0.077	563	1000	56	18-152	

Analyst's Signature



GC: HP5890 A-C
Column: DB- 1701
Temp: 10-210°C
Inj. Vol (ul): 1ul

Data File Name	: C:\HPCHEM\1\DATA\1222R\019F0101.D		
Operator	: MIKR CYMBAL	Page Number	: 1
Instrument	: 5890A-C	Vial Number	: 19
Sample Name	: 5048-EB 1/100	Injection Number	: 1
Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Dec 94 07:55 PM	Instrument Method	: HERB.MTH
Report Created on	: 22 Dec 94 08:28 PM	Analysis Method	: HERB.MTH
Last Recalib on	: 06 APR 93 09:07 AM	Sample Amount	: 8.0000
Multiplier	: 1	ISTD Amount	:

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\019F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-EB 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 07:55 PM
Report Created on: 22 Dec 94 08:28 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

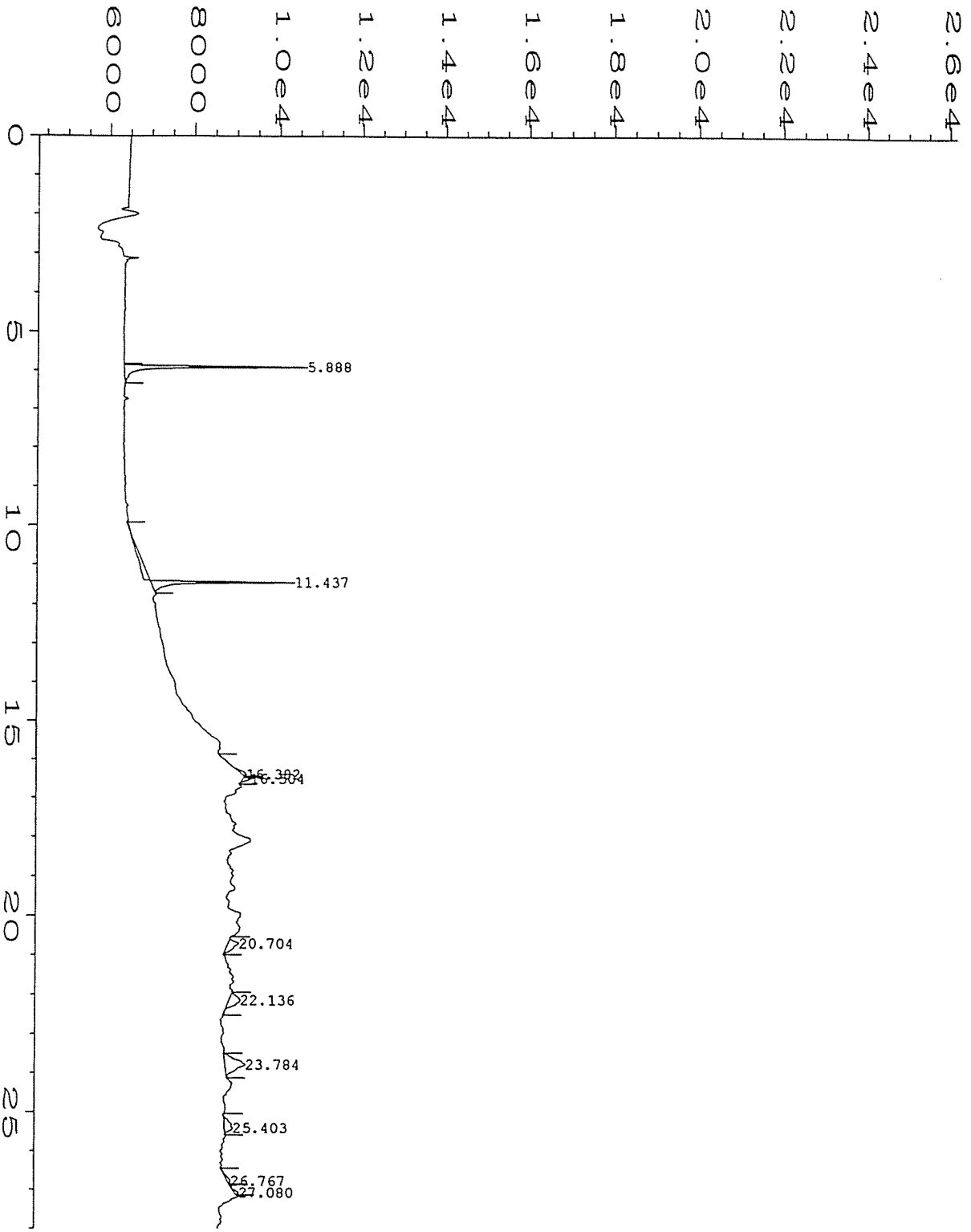
Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERB.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\1\DATA\1222R\019F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.130	* not found *			1		2,4-D
10.200	* not found *			1		2,4,5-TP (SILVEX)
10.830	* not found *			1		2,4,5-T
11.428	7657	BB	0.056	1	0.000	2,4-DB
12.220	* not found *			1		DINOSEB
6.961	6775	BB	0.044		6774.579	* uncalibrated *
16.261	7736	BB	0.657		7735.797	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found



Data File Name : C:\HPCHEM\1\DATA\1222R\019R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-EB 1/100
Time Bar Code:
Acquired on : 22 Dec 94 07:55 PM
Report Created on: 22 Dec 94 08:28 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\019R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-EB 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 07:55 PM
Report Created on: 22 Dec 94 08:28 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 2 in C:\HPCHEM\1\DATA\1222R\019R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.260	* not found *			1		2,4-D
10.160	* not found *			1		2,4,5-TP (SILVEX)
10.860	* not found *			1		2,4,5-T
11.000	* not found *			1		DINOSEB
11.437	7271	BB	0.036	1	0.000	2,4-DB
5.888	15798	BB	0.052		15798.02	* uncalibrated *
16.382	561	BB	0.075		560.647	* uncalibrated *
16.504	985	BB	0.077		985.043	* uncalibrated *
20.704	3164	BB	0.160		3163.550	* uncalibrated *
22.136	4082	BB	0.197		4081.759	* uncalibrated *
23.784	8368	BB	0.214		8367.899	* uncalibrated *
25.403	2939	BB	0.205		2938.869	* uncalibrated *
26.767	828	BB	0.151		828.257	* uncalibrated *
27.080	609	BB	0.091		608.781	* uncalibrated *

Calibration table contains at least one peak with amt = 0

Not all calibrated peaks were found

GENERAL TESTING CORPORATION
710 Exchange St.,Rochester, N.Y
(716)454-3760

TCLP 8150

Analyst: Mike Cymbal
Date: 12/23/94
Instrument #: HP5890A-C
Date Extracted: 12/21/94
Date Analyzed: 12/22/94

WATER PESTICIDE MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Client: Beak
Job: R94/5048-005

Lab Name: General Testing Corp.
Lab Code: GTC Case No.:_____SAS No.:_____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/l)	MS CONC. (ug/l)	MS % REC	QC LIMITS % REC.
2,4-D	200	50 U	170	85	49-127
2,4,5-TP(Silvex)	200	50 U	130	65	59-132

COMPOUND	SPIKE ADDED (ug/l)	MSD CONC. (ug/l)	MSD % REC.	% RPD	QC LIMITS RPD	QC LIMITS %REC
2,4-D	200	170	85	0	30	49-127
2,4,5-TP(Silvex)	200	170	85	27	30	59-132

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

* Values outside QC limits

RPD: 0 out of 2 outside limits.

Spike Recovery: 0 out of 4 outside limits.

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Instrument #: HP5890A-C
Client: Beak
JOB #: R94/5048-005MS

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	21	1/100

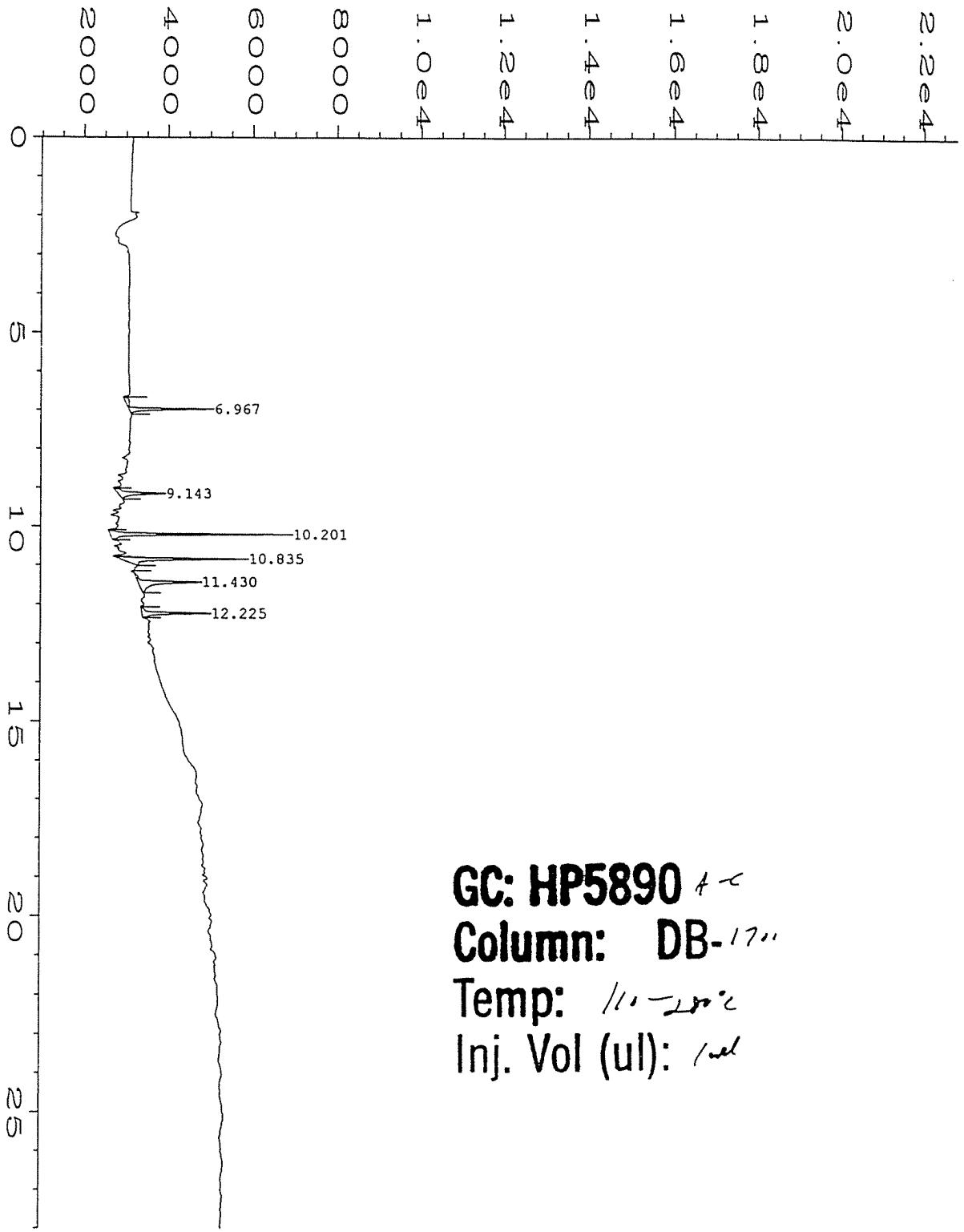
Initial Vol/Wt.	Final Vol.
100 mls	10 mls

Analysis: 8150
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D	9.14	0.050	16.9	10	100	170	
2,4,5-TP(Silvex)	10.20	0.129	13.4	10	100	130	

Surrogate Standard	Reten. Time	Area Units	Total Recovery	Amount Added	Percent Recovery	Rec Limits	Q
2,4-DB	11.43	0.079	581	1000	58	18-152	

Analyst's Signature



GC: HP5890 4-C
Column: DB-17
Temp: 110-280°C
Inj. Vol (ul): 1ul

Data File Name	: C:\HPCHEM\1\DATA\1222R\021F0101.D		
Operator	: MIKR CYMBAL	Page Number	: 1
Instrument	: 5890A-C	Vial Number	: 21
Sample Name	: 5048-05MS 1/100	Injection Number	: 1
Bar Code:		Sequence Line	: 1
quired on	: 22 Dec 94 09:02 PM	Instrument Method	: HERB.MTH
Report Created on	: 23 Dec 94 08:47 AM	Analysis Method	: HERB.MTH
Last Recalib on	: 06 APR 93 09:07 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

0000067

External Standard Report

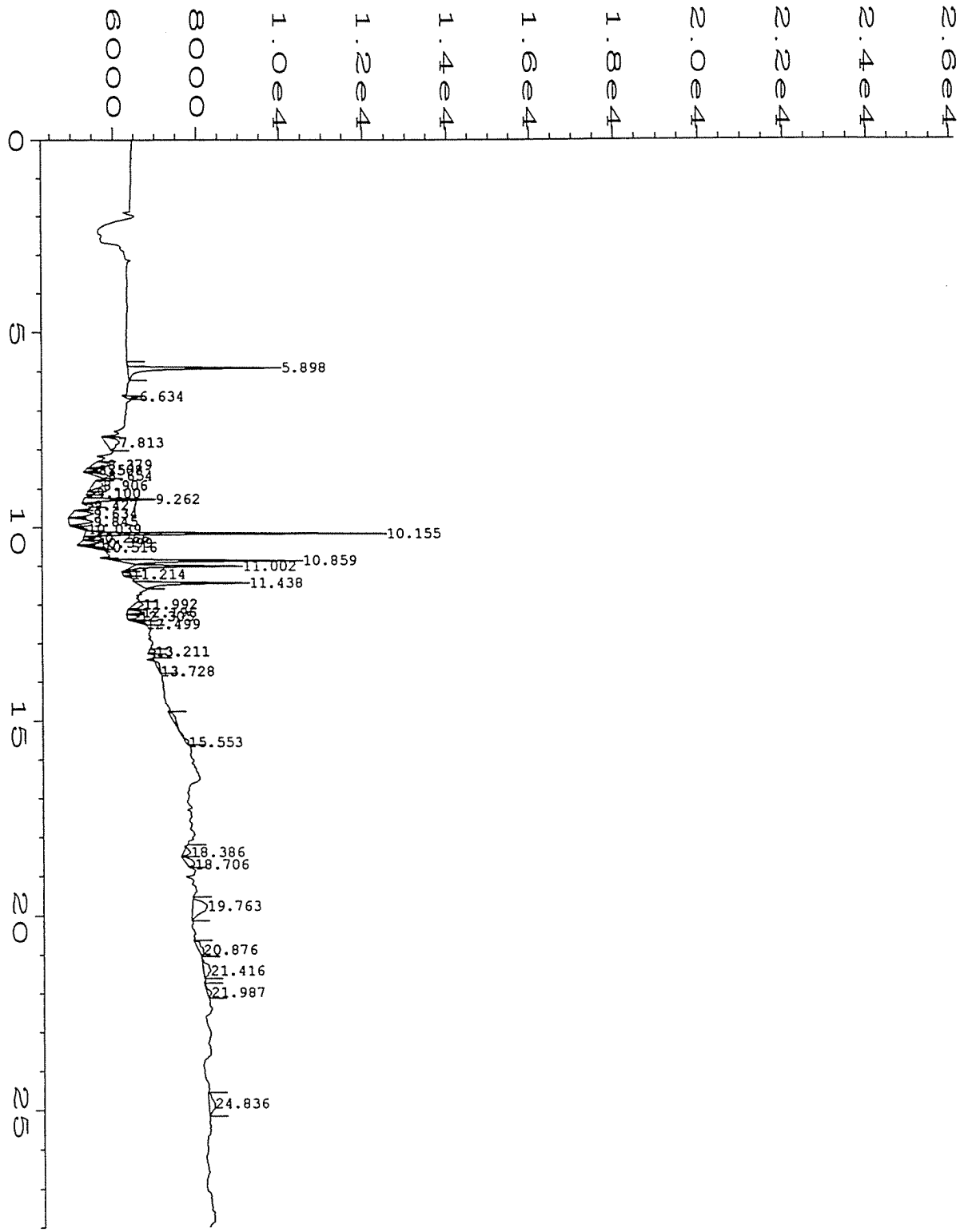
Data File Name : C:\HPCHEM\1\DATA\1222R\021F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MS 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 09:02 PM
Report Created on: 23 Dec 94 08:47 AM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERB.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\1\DATA\1222R\021F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.143	5013	BB	0.062	1	0.000	2,4-D
10.201	12912	BB	0.044	1	0.000	2,4,5-TP (SILVEX)
10.835	10267	BB	0.049	1	0.000	2,4,5-T
11.430	7902	BB	0.072	1	0.000	2,4-DB
12.225	5375	BB	0.048	1	0.000	DINOSEB
6.967	7010	BB	0.050		7009.957	* uncalibrated *

Calibration table contains at least one peak with amt = 0



Data File Name : C:\HPCHEM\1\DATA\1222R\021R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MS 1/100
Time Bar Code:
Acquired on : 22 Dec 94 09:02 PM
Report Created on: 22 Dec 94 09:35 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 0
ISTD Amount :

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\021R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MS 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 09:02 PM
Report Created on: 22 Dec 94 09:35 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 0
ISTD Amount :

Sig. 2 in C:\HPCHEM\1\DATA\1222R\021R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.262	5706	BB	0.048	1	0.000	2,4-D
10.155	19068	BB	0.040	1	0.000	2,4,5-TP (SILVEX)
10.859	13048	BB	0.045	1	0.000	2,4,5-T
11.002	7380	BB	0.042	1	0.000	DINOSEB
11.438	9472	BB	0.051	1	0.000	2,4-DB
5.898	12892	BB	0.051		12891.70	* uncalibrated *
6.634	939	BB	0.041		939.101	* uncalibrated *
7.813	4297	BB	0.181		4296.939	* uncalibrated *
8.379	2554	BB	0.099		2554.201	* uncalibrated *
8.508	949	BB	0.050		949.076	* uncalibrated *
8.654	1968	BB	0.103		1968.460	* uncalibrated *
8.906	2611	BB	0.122		2610.630	* uncalibrated *
9.100	657	BB	0.049		657.144	* uncalibrated *
9.427	670	BB	0.064		669.765	* uncalibrated *
9.634	3574	BB	0.092		3573.964	* uncalibrated *
9.845	3980	BB	0.121		3980.035	* uncalibrated *
10.039	590	BB	0.070		590.259	* uncalibrated *
10.266	750	BB	0.044		749.937	* uncalibrated *
10.399	1969	BB	0.073		1969.345	* uncalibrated *
10.516	929	BB	0.052		928.548	* uncalibrated *
11.214	895	BB	0.073		894.912	* uncalibrated *
11.992	1890	BB	0.115		1889.660	* uncalibrated *
12.196	1579	BB	0.071		1579.234	* uncalibrated *
12.305	1404	BB	0.072		1403.654	* uncalibrated *
12.499	703	BB	0.169		702.584	* uncalibrated *
13.211	738	BB	0.066		738.336	* uncalibrated *
13.728	522	BB	0.164		522.276	* uncalibrated *
15.553	2323	BB	0.409		2323.240	* uncalibrated *
18.386	1293	BB	0.094		1293.339	* uncalibrated *
18.706	2303	BB	0.164		2303.467	* uncalibrated *
19.763	6925	BB	0.231		6924.989	* uncalibrated *
20.876	2173	BB	0.240		2172.801	* uncalibrated *
21.416	2984	BB	0.208		2983.993	* uncalibrated *
21.987	1060	BB	0.139		1059.636	* uncalibrated *
24.836	3051	BB	0.293		3051.254	* uncalibrated *

Calibration table contains at least one peak with amt = 0

GENERAL TESTING CORPORATION
710 Exchange St., Rochester, N.Y
(716)454-3760
LABORATORY REPORT

Analyst: Mike Cymbal
Date: 12/23/94
Date Extracted: 12/21/94

Date Analyzed	RUN #	DIL.
12/22/94	22	1/100

Instrument #: HP5890A-C
Client: Beak
JOB #: R94/5048-005MSD

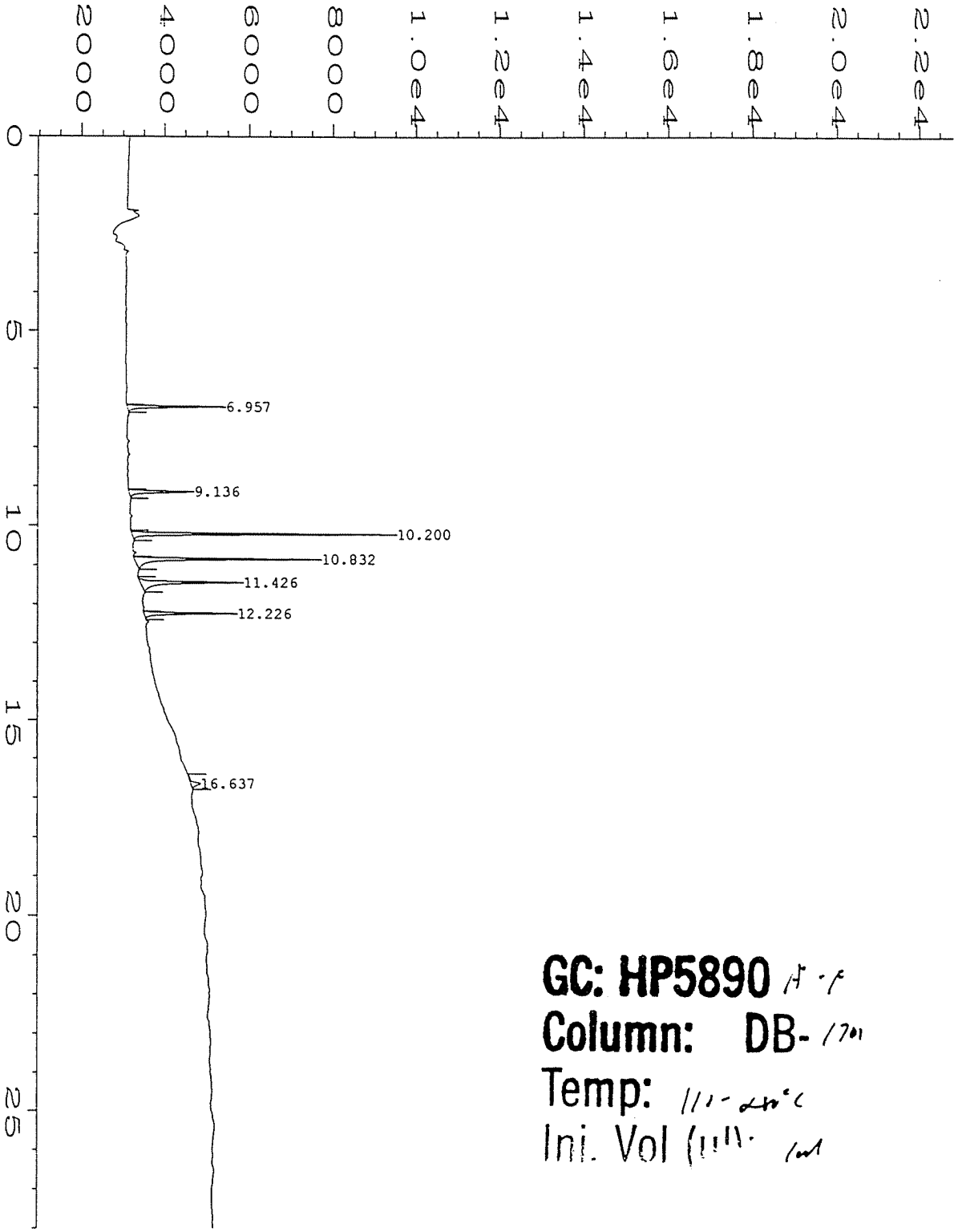
Initial Vol/Wt.	Final Vol.
100 mls	10 mls

Analysis: 8150
Herbicides

Compound	Reten. Time	Area Units	Initial Conc. (ug/l)	Conc. Factor	Dil. Factor	Final Conc. (ug/l)	Q
2,4-D	9.14	0.052	17.4	10	100	170	
2,4,5-TP(Silvex)	10.20	0.167	17.4	10	100	170	

Surrogate Standard	Reten. Time	Area Units	Total Recovery	Amount Added	Percent Recovery	Rec Limits	Q
2,4-DB	11.43	0.098	719	1000	72	18-152	

Analyst's Signature



GC: HP5890 A-F
Column: DB- 1701
Temp: 110-270°C
Inj. Vol (1111 1ml

Data File Name	: C:\HPCHEM\1\DATA\1222R\022F0101.D		
Operator	: MIKR CYMBAL	Page Number	: 1
Instrument	: 5890A-C	Vial Number	: 22
Sample Name	: 5048-05MSD 1/100	Injection Number	: 1
Time Bar Code:		Sequence Line	: 1
Acquired on	: 22 Dec 94 09:36 PM	Instrument Method	: HERB.MTH
Report Created on	: 22 Dec 94 10:08 PM	Analysis Method	: HERB.MTH
Last Recalib on	: 06 APR 93 09:07 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

000372

External Standard Report

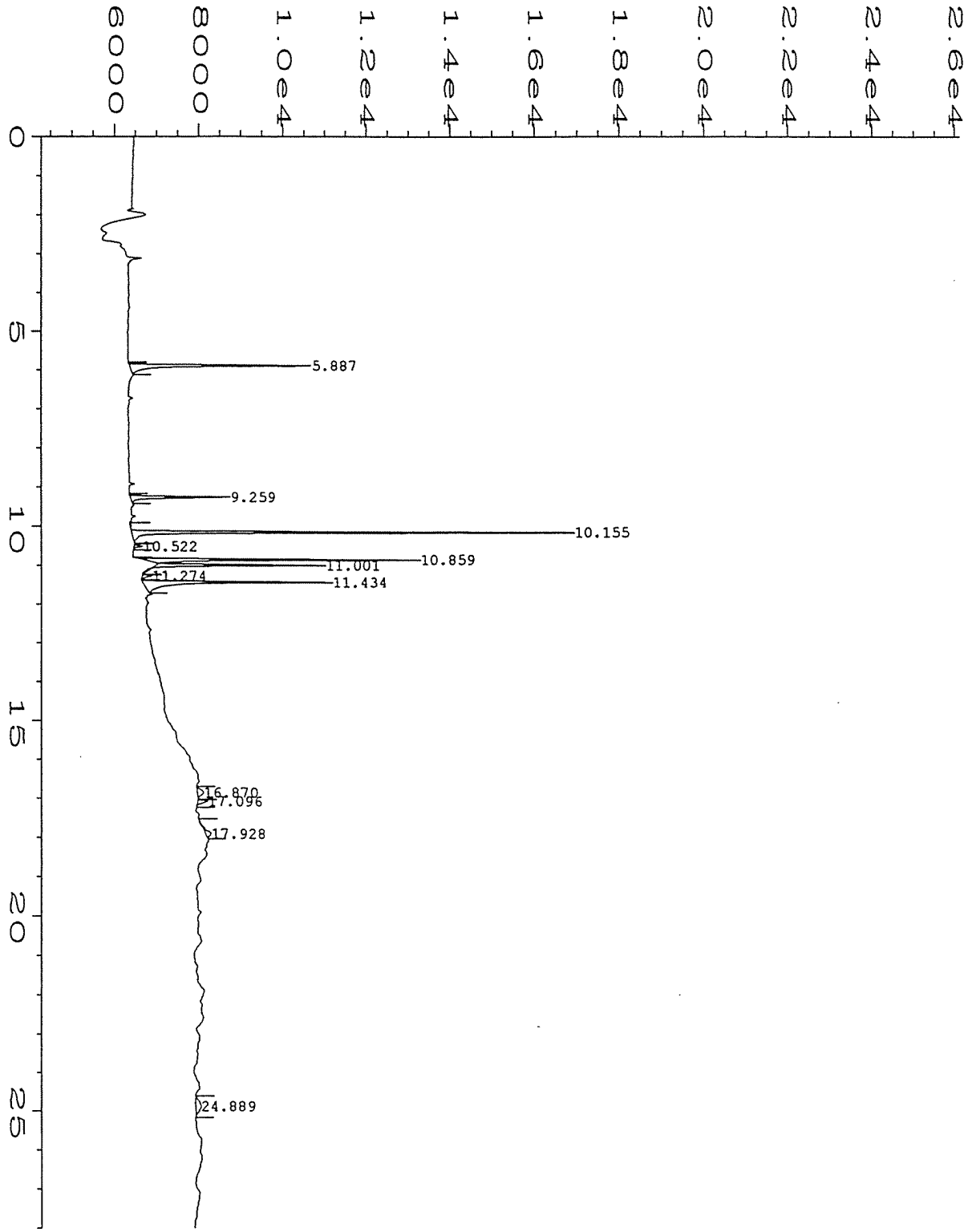
Data File Name : C:\HPCHEM\1\DATA\1222R\022F0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MSD 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 09:36 PM
Report Created on: 22 Dec 94 10:09 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

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

Sig. 1 in C:\HPCHEM\1\DATA\1222R\022F0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.136	5157	BB	0.050	1	0.000	2,4-D
10.200	16689	BB	0.040	1	0.000	2,4,5-TP (SILVEX)
10.832	14807	BB	0.049	1	0.000	2,4,5-T
11.426	9776	BB	0.057	1	0.000	2,4-DB
12.226	6606	BB	0.045	1	0.000	DINOSEB
6.957	6830	BB	0.044		6829.974	* uncalibrated *
16.637	1450	BB	0.091		1450.300	* uncalibrated *

Calibration table contains at least one peak with amt = 0



Data File Name : C:\HPCHEM\1\DATA\1222R\022R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MSD 1/100
Time Bar Code:
Acquired on : 22 Dec 94 09:36 PM
Report Created on: 22 Dec 94 10:09 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 22
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 0
ISTD Amount :

External Standard Report

Data File Name : C:\HPCHEM\1\DATA\1222R\022R0101.D
Operator : MIKR CYMBAL
Instrument : 5890A-C
Sample Name : 5048-05MSD 1/100
Run Time Bar Code:
Acquired on : 22 Dec 94 09:36 PM
Report Created on: 22 Dec 94 10:09 PM
Last Recalib on : 06 APR 93 09:07 AM
Multiplier : 1

Page Number : 1
Vial Number : 22
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB.MTH
Analysis Method : HERBR.MTH
Sample Amount : 0
ISTD Amount :

Sig. 2 in C:\HPCHEM\1\DATA\1222R\022R0101.D

Ret Time	Area	Type	Width	Ref#	ng/ul	Name
9.259	6924	BB	0.044	1	0.000	2,4-D
10.155	28187	BB	0.041	1	0.000	2,4,5-TP (SILVEX)
10.859	17781	BB	0.041	1	0.000	2,4,5-T
11.001	9502	BB	0.037	1	0.000	DINOSEB
11.434	16216	BB	0.051	1	0.000	2,4-DB
5.887	14345	BB	0.048		14345.38	* uncalibrated *
10.522	556	BB	0.040		556.216	* uncalibrated *
11.274	738	BB	0.046		737.663	* uncalibrated *
16.870	1513	BB	0.122		1512.928	* uncalibrated *
17.096	1081	BB	0.065		1080.701	* uncalibrated *
17.928	1142	BB	0.109		1142.462	* uncalibrated *
24.889	2360	BB	0.230		2359.517	* uncalibrated *

Calibration table contains at least one peak with amt = 0

CLIENT: GEO 2 JOB #: R94/5048 METHOD: 8270 TCL EXTRACTION: 3550

INITIAL WEIGHT	EXTRACT FINAL VOL	APPEARANCE	SPIKE ADDED	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLU	DATE	COMMENTS	DATE DONE
30.0g	1cml	Black, muddy soil	For SMS, SMSD, MS;	12/20	GPC (1/5)	12/20			Concentrated to 1ml	12/21
30.0g		Black, rocky oily soil	2mL GC/MS							
30.0g		Brown, rocky soil	11 compound spike,							
30.0g		Brown, claylike rocky soil	100 → 200 ppm							
30.0g		Brown, rocky soil	9/20/94 MRL lg594							
30.0g		Brown, claylike soil								
30.0g										
30.0g										
30.0g		Na_2SO_4								
30.0g										

BY: [illegible] DATE: 12/19/94 INIT: MF 12/21/94

CLIENT: GEO 2 R94/5048 ANALYSIS: 8270 TCL ANALYST: [illegible]

COMMENTS:

Extract 30g Soil w/ 60g Na_2SO_4 in 100mls 1:1 $MeCl_2$: Acetone 3x for 1 Hour

SURROGATE: 1 ml GC/MS AE/BN Surrogate 200ppm AE/100 ppm BN in Me Cl 12/6/94 MRL p.62 GC/MS V4

CLIENT: Geo JOB #: 9411505.18 METHOD: TCLP 8150 EXTRACTION: 3510

	MATERIAL REMOVAL	EXTRACT. FINAL pH	APPEARANCE	SAMPLE AMOUNT	CONC. DATE	PRIMARY CLEAN-UP	DATE	DILUTION & SECONDARY CLU	DATE	COMMENTS	DAT DIG
$	100mls	10ml	clear colorless	For MS=MSD 1 REESPK		1/6 Hoo	12/2			Diluted to 1000mls	12/
$MS	100mls			1ml Terphenyl spike 20ppm 6/28/94 mel pg20 V1							
$MSD	100mls										
EQBLK	100mls										
BLK	1000mls										
CFSPK	1000mls										

Blank used was 9411492SI

Comments: 1ml Herb Standard 100ppm 4/108 7/28/94 D.B. pg43 V1

Extraction: 12/2/94 TIME:

Method: Geo 5017 Analysis: TCLP 8150 Analyst: DeLaney

Comments: Extraction of water samples using 150ml ETD1 - the 50ml, ETD2X at rm 62