



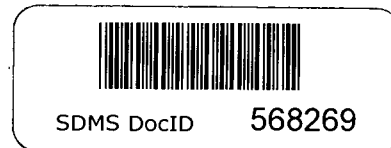
Silresim/COM

P.O. Box 956
2160 INDUSTRIAL DRIVE
SALEM, VIRGINIA 24153
(703) 387-3995

October 09, 1987

received
10-29-87
COM: SILRESIM
FROM: 3.2.68
OTHER: 568269

Mr. Wayne Wirtanen
Environmental Services Divisions
U.S. Environmental Protection Agency Region I
60 Westview Street
Lexington, Massachusetts 02173



RE: Case # 8129

Dear Mr. Wirtanen:

Enclosed find our complete data package for the captioned case.

Upon receipt of the enclosures, should you have any questions with respect to same, please feel free to contact the undersigned at the letterhead address.

Sincerely,

CENTEC ANALYTICAL SERVICES

Lewis Pillis, Laboratory Manager

LP/bd
Enclosures as Stated

cc: USEPA - SMO, w/Encls.
209 Madison Street,
Suite 200
Alexandria, Virginia 22314

USEPA - EMSL, w/Encls.
Data Audit Staff
944 E. Harmon, Executive Ctr.
Las Vegas, Nevada 89109

U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490



Date 10/9/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name CAS
 SOW No. 784

Case No. 8129
 Q.C. Report No. 205

Sample Numbers

<u>EPA No.</u>	<u>Lab ID No.</u>	<u>EPA No.</u>	<u>Lab ID No.</u>
<u>MAF 427</u>	<u>67117</u>		
<u>MAF 428</u>	<u>67118</u>		
<u>MAF 429</u>	<u>67119</u>		
<u>MAF 430</u>	<u>67120</u>		

Comments:

ICP Interelement and background corrections applied? Yes No
 If yes, corrections applied before or after generation of raw data.

Footnotes:

- NR - not required by contract at this time
- Form I:
- Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).
- U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
- E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
- s - Indicates value determined by Method of Standard Addition.
- R - Indicates spike sample recovery is not within control limits.
- * - Indicates duplicate analysis is not within control limits.
- + - Indicates the correlation coefficient for method of standard addition is less than 0.995

Form I A

 U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

 EPA Sample No.
MAF 427

 Date 10/9/87

INORGANIC ANALYSIS DATA SHEET

 LAB NAME CAS
 SOW NO. 784
 LAB SAMPLE ID. NO. 67117

 CASE NO. 8129
 Lab Receipt Date 9-25-87
 QC REPORT NO. 205

Elements Identified and Measured

 Concentration: Low Medium
 Matrix: Water Soil Sludge Other

 ug/L or mg/kg dry weight (Circle One)

1. <u>Aluminum</u>	<u>4710 *</u>	P 13. <u>Magnesium</u>	<u>3440</u>	P
2. <u>Antimony</u>	<u>26u</u>	P 14. <u>Manganese</u>	<u>251</u>	P
3. <u>Arsenic</u>	<u>9.9</u>	F 15. <u>Mercury</u>	<u>0.47</u>	CV
4. <u>Barium</u>	<u>[42]</u>	P 16. <u>Nickel</u>	<u>32</u>	P
5. <u>Beryllium</u>	<u>0.5u</u>	P 17. <u>Potassium</u>	<u>[909]</u>	P
6. <u>Cadmium</u>	<u>4.0</u>	P 18. <u>Selenium</u>	<u>1.8u R</u>	F
7. <u>Calcium</u>	<u>[1990]</u>	P 19. <u>Silver</u>	<u>3.5u</u>	P
8. <u>Chromium</u>	<u>26</u>	P 20. <u>Sodium</u>	<u>[76]</u>	P
9. <u>Cobalt</u>	<u>11u</u>	P 21. <u>Thallium</u>	<u>0.9u</u>	F
10. <u>Copper</u>	<u>53</u>	P 22. <u>Tin</u>	<u>16u</u>	P
11. <u>Iron</u>	<u>46100</u>	P 23. <u>Vanadium</u>	<u>7.5u</u>	P
12. <u>Lead S</u>	<u>255</u>	F 24. <u>Zinc</u>	<u>175</u>	P
Cyanide	<u>N/R</u>	Percent Solids (%)	<u>77.9</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

 Comments: Dry Weight Factors (for conversion to mg/kg) P=0.498
F=0.458
Sample description: Brown, medium
 Lab Manager J. H. H.

Form I B

 U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 918 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

 EPA Sample No.
MAF 428

 Date 10/9/87

INORGANIC ANALYSIS DATA SHEET

 LAB NAME CAS
 SOW NO. 784
 LAB SAMPLE ID. NO. 67118

 CASE NO. 8129
 Lab Receipt Date 9-25-87
 QC REPORT NO. 205

Elements Identified and Measured

 Concentration: Low Medium
 Matrix: Water Soil Sludge Other

 ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>9400 *</u>	P	13. Magnesium	<u>5180</u>	P
2. Antimony	<u>330</u>	P	14. Manganese	<u>643</u>	P
3. Arsenic	<u>16</u>	F	15. Mercury	<u>0.32</u>	CV
4. Barium	<u>[102]</u>	P	16. Nickel	<u>47</u>	P
5. Beryllium	<u>[0.6]</u>	P	17. Potassium	<u>[2180]</u>	P
6. Cadmium	<u>8.8</u>	P	18. Selenium	<u>2.4u R</u>	F
7. Calcium	<u>4030</u>	P	19. Silver	<u>4.4u</u>	P
8. Chromium	<u>54</u>	P	20. Sodium	<u>[245]</u>	P
9. Cobalt	<u>[18]</u>	P	21. Thallium	<u>1.2u</u>	F
10. Copper	<u>99</u>	P	22. Tin	<u>20u</u>	P
11. Iron	<u>83100</u>	P	23. Vanadium	<u>[16]</u>	P
12. Lead	<u>187</u>	F	24. Zinc	<u>515</u>	P
Cyanide	<u>N/R</u>		Percent Solids (%)	<u>78.9</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

 Comments: Dry Weight Factors (for conversion to mg/kg) P=0.632
F=0.588
Sample description: Brown medium

 Lab Manager J. P. [Signature]

Form I C

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 318 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MAF 429

Date 10/9/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CAS
SOW NO. 784
LAB SAMPLE ID. NO. 67119

CASE NO. 8129
Lab Receipt Date 9-25-87
QC REPORT NO. 205

Elements Identified and Measured

Concentration: Low Medium
Matrix: Water Soil Sludge Other

ug/L or (mg/kg) dry weight (Circle One)

1. Aluminum	<u>8250 *</u>	P 13. Magnesium	<u>5380</u>	P
2. Antimony	<u>26u</u>	P 14. Manganese	<u>727</u>	P
3. Arsenic	<u>13</u>	F 15. Mercury	<u>0.28</u>	CV
4. Barium	<u>102</u>	P 16. Nickel	<u>47</u>	P
5. Beryllium	<u>[0.5]</u>	P 17. Potassium	<u>[2180]</u>	P
6. Cadmium	<u>9.3</u>	P 18. Selenium	<u>2.3u R</u>	F
7. Calcium	<u>3100</u>	P 19. Silver	<u>3.4u</u>	P
8. Chromium	<u>61</u>	P 20. Sodium	<u>[237]</u>	P
9. Cobalt	<u>[16]</u>	P 21. Thallium	<u>1.2u</u>	F
10. Copper	<u>122</u>	P 22. Tin	<u>16u</u>	P
11. Iron	<u>84900</u>	P 23. Vanadium	<u>[17]</u>	P
12. Lead	<u>207</u>	F 24. Zinc	<u>267</u>	P
Cyanide	<u>N/R</u>	Percent Solids (%)	<u>81.4</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Dry Weight Factors (for conversion to mg/kg) P=0.487
F=0.576

Sample description: Brown medium

Lab Manager [Signature]

Form I D

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MAF 430

Date 10/9/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME CAS
SOW NO. 784
LAB SAMPLE ID. NO. 67120

CASE NO. 8129
Lab Receipt Date 9-25-87
QC REPORT NO. 205

Elements Identified and Measured

Concentration: Low Medium
Matrix: Water Soil Sludge Other

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>4990 *</u>	P 13. Magnesium	<u>[1860]</u>	P
2. Antimony	<u>28u</u>	P 14. Manganese	<u>91</u>	P
3. Arsenic	<u>[2.2]</u>	F 15. Mercury	<u>0.1u</u>	CV
4. Barium	<u>[24]</u>	P 16. Nickel	<u>11u</u>	P
5. Beryllium	<u>0.5u</u>	P 17. Potassium	<u>[1170]</u>	P
6. Cadmium	<u>3.7</u>	P 18. Selenium	<u>2.1u R</u>	F
7. Calcium	<u>[1360]</u>	P 19. Silver	<u>3.7u</u>	P
8. Chromium	<u>7.4</u>	P 20. Sodium	<u>[74]</u>	P
9. Cobalt	<u>12u</u>	P 21. Thallium	<u>1.0u</u>	F
10. Copper	<u>68</u>	P 22. Tin	<u>17u</u>	P
11. Iron	<u>6610</u>	P 23. Vanadium	<u>8.0u</u>	P
12. Lead	<u>162</u>	F 24. Zinc	<u>47</u>	P
Cyanide	<u>N/R</u>	Percent Solids (%)	<u>89.1</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Dry Weight Factors (for conversion to mg/kg) P=0.531
F=0.520

Sample description: Top, Fine
Lab Manager [Signature]

ICP - OCOSA
OC06A(Fe, Ag)

Form II-A

Q. C. Report No. 205

INITIAL AND CONTINUING CALIBRATION VERIFICATION³

LAB NAME Centec

CASE NO. 8129

SOW NO. 784

DATE 10/9/87

UNITS: ug/L

Metals:	Initial Calib. ¹			Continuing Calibration ²					Method ⁴
	True Value	Found	ZR	True Value	Found	ZR	Found	ZR	
1. Aluminum	1980	1980	100	10000	9800	98	9790	98	P
2. Antimony	1090	1040	95	1000	978	98	928	93	P
OC03B 3. Arsenic	24.7	26.4	107	20.0	20.5	102	21.5	108	F
4. Barium	1980	2040	103	2500	2450	98	2520	101	P
5. Beryllium	481	522	109	1000	999	100	1020	102	P
6. Cadmium	489	523	107	1000	1030	103	1040	104	P
7. Calcium	49800	51400	103	50000	49800	100	52000	104	P
8. Chromium	506	518	102	1000	1000	100	1020	102	P
9. Cobalt	474	520	110	2500	2510	100	2600	104	P
10. Copper	542	554	102	2500	2500	100	2520	101	P
11. Iron	1990	2040	103	10000	9760	98	9950	100	P
OC03C 12. Lead	24.5	25.2	103	20.0	21.4	107	19.3	96	F
13. Magnesium	25000	25700	103	50000	49000	98	51000	102	P
14. Manganese	513	532	104	2500	2480	99	2460	98	P
15. Mercury	3.0	3.0	100	2.0	2.2	110	2.2	110	CV
16. Nickel	496	479	97	2500	2450	98	2520	101	P
17. Potassium	50200	48300	96	50000	48400	97	49000	98	P
OC05D 18. Selenium	24.6	25.5	103	20.0	21.3	106	18.8	94	F
19. Silver	509	498	98	1000	957	96	987	99	P
20. Sodium	50700	51200	101	50000	49200	98	49500	99	P
OC05A 21. Thallium	24.3	22.1	91	20.0	21.4	107	20.8	104	F
22. Vanadium	511	533	104	2500	2450	98	2380	95	P
23. Zinc	3100	3080	99	2500	2510	100	2480	99	P
Other: Tin	1000	1090	109	2500	2560	102	2720	109	P
Cyanide				200					

¹ Initial Calibration Source EPA-LV* ² Continuing Calibration Source CAS

³ Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

⁴ Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

* With exception of Sn

Form II-B

 Q. C. Report No. 205

 INITIAL AND CONTINUING CALIBRATION VERIFICATION³

 LAB NAME Centec

 CASE NO. 8129

 SOW NO. 784

 DATE 10/9/87

 UNITS: ug/L

Compound	Initial Calib. ¹			Continuing Calibration ²					Method ⁴
	True Value	Found	%R	True Value	Found	%R	Found	%R	
Metals:									
1. Aluminum	1980			10000	10100	101	9860	99	P
2. Antimony	1090			1000	974	97	954	95	P
3. Arsenic	24.7			20.0	21.8	109			F
4. Barium	1980			2500	2600	104	2560	102	P
5. Beryllium	481			1000	1080	108	1040	104	P
6. Cadmium	489			1000	1040	104	1020	102	P
7. Calcium	49800			50000	52700	105	50300	101	P
8. Chromium	506			1000	999	100	996	100	P
9. Cobalt	474			2500	2580	103	2480	99	P
10. Copper	542			2500	2580	103	2550	102	P
11. Iron	1990			10000	9710	97	10000	100	P
12. Lead	24.5			20.0	19.3	96			F
13. Magnesium	25000			50000	51600	103	50200	100	P
14. Manganese	513			2500	2470	99	2430	97	P
15. Mercury				2.0	2.2	110			CV
16. Nickel	496			2500	2510	100	2420	97	P
17. Potassium	50200			50000	49900	100	48800	98	P
18. Selenium	24.6	23.0	93	20.0	21.0	105	19.3	96	F
19. Silver	509			1000	981	98	1020	102	P
20. Sodium	50700			50000	49900	100	49000	98	P
21. Thallium	24.3			20.0	21.2	106			F
22. Vanadium	511			2500	2400	96	2420	97	P
23. Zinc	3100			2500	2510	100	2480	99	P
Other: Tin	1000			2500	2630	105	2530	101	P
Cyanide				200					

¹ Initial Calibration Source EPA-LV*
² Continuing Calibration Source CAS
³ Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

⁴ Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

* With exception of Sn

Form II - C

 Q. C. Report No. 205

 INITIAL AND CONTINUING CALIBRATION VERIFICATION³

 LAB NAME Centec

 CASE NO. 8129

 SOW NO. 784

 DATE 10/9/87

 UNITS: ug/L

Compound	Initial Calib. ¹			Continuing Calibration ²					Method ⁴
	True Value	Found	ZR	True Value	Found	ZR	Found	ZR	
Metals:									
1. Aluminum	1980			10000					P
2. Antimony	1090			1000					P
3. Arsenic	24.7			20.0					F
4. Barium	1980			2500					P
5. Beryllium	481			1000					P
6. Cadmium	489			1000					P
7. Calcium	49800			50000					P
8. Chromium	506			1000					P
9. Cobalt	474			2500					P
10. Copper	542			2500					P
11. Iron	1990			10000					P
0005B12. Lead	24.5	23.7	97	20.0	19.8	99	20.0	100	F
13. Magnesium	25000			50000					P
14. Manganese	513			2500					P
15. Mercury				2.0					CV
16. Nickel	496			2500					P
17. Potassium	50200			50000					P
18. Selenium	24.6			20.0					F
19. Silver	509			1000					P
20. Sodium	50700			50000					P
21. Thallium	24.3			20.0					F
22. Vanadium	511			2500					P
23. Zinc	3100			2500					P
Other: Tin	1000			2500					P
Cyanide				200					

¹ Initial Calibration Source EPA-LV* ² Continuing Calibration Source CAS
³ Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

⁴ Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

* With exception of Sn

Form II - 0

Q. C. Report No. 205

INITIAL AND CONTINUING CALIBRATION VERIFICATION³

LAB NAME Centec

CASE NO. 8129

DATE 10/9/87

SOW NO. 784

UNITS: ug/L

Compound	Initial Calib. ¹			Continuing Calibration ²					
	True Value	Found	%R	True Value	Found	%R	Found	%R	Method ⁴
1. Aluminum	1980			10000					P
2. Antimony	1090			1000					P
3. Arsenic	24.7			20.0					F
4. Barium	1980			2500					P
5. Beryllium	481			1000					P
6. Cadmium	489			1000					P
7. Calcium	49800			50000					P
8. Chromium	506			1000					P
9. Cobalt	474			2500					P
10. Copper	542			2500					P
11. Iron	1990			10000					P
12. Lead	24.5			20.0	20.2	101			F
13. Magnesium	25000			50000					P
14. Manganese	513			2500					P
15. Mercury				2.0					CV
16. Nickel	496			2500					P
17. Potassium	50200			50000					P
18. Selenium	24.6			20.0					F
19. Silver	509			1000					P
20. Sodium	50700			50000					P
21. Thallium	24.3			20.0					F
22. Vanadium	511			2500					P
23. Zinc	3100			2500					P
Other: Tin	1000			2500					P
Cyanide				200					

¹ Initial Calibration Source EPA-LV* ² Continuing Calibration Source CAS

³ Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

⁴ Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

* With exception of Sn

Form II-E

 Q. C. Report No. 205

 INITIAL AND CONTINUING CALIBRATION VERIFICATION³

 LAB NAME Centec

 CASE NO. 8129

 SOW NO. 784

 DATE 10/9/87

 UNITS: ug/L

Compound	Initial Calib. ¹			Continuing Calibration ²					
	True Value	Found	%R	True Value	Found	%R	Found	%R	Method ⁴
Metals:									
1. Aluminum	1980			10000					P
2. Antimony	1090			1000					P
3. Arsenic	24.7			20.0					F
4. Barium	1980			2500					P
5. Beryllium	481			1000					P
6. Cadmium	489			1000					P
7. Calcium	49800			50000					P
8. Chromium	506			1000					P
9. Cobalt	474			2500					P
10. Copper	542			2500					P
11. Iron	1990			10000					P
0005C 12. Lead	24.5	23.6	96	20.0	18.9	94	18.6	9.3	F
13. Magnesium	25000			50000					P
14. Manganese	513			2500					P
15. Mercury				2.0					CV
16. Nickel	496			2500					P
17. Potassium	50200			50000					P
18. Selenium	24.6			20.0					F
19. Silver	509			1000					P
20. Sodium	50700			50000					P
21. Thallium	24.3			20.0					F
22. Vanadium	511			2500					P
23. Zinc	3100			2500					P
Other: Tin	1000			2500					P
Cyanide				200					

¹ Initial Calibration Source EPA-LV* ² Continuing Calibration Source CAS
³ Control Limits: Mercury and Tin 80-120; Other Metals 90-110; Cyanide 85-115

⁴ Indicate Analytical Method Used: P - ICP; A - Flame AA; F - Furnace AA

* With exception of Sn

ICP- OLOSA
0206A (Fe, Ag)



Form III - A

Q. C. Report No. 205

BLANKS

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration				Preparation Blank ¹ 1 mg/kg 2
		Blank Value	1	2	3	
Metals:						
1. Aluminum	52u	52u	52u	52u	52u	26u
2. Antimony	53u	53u	53u	53u	53u	26u
0003B 3. Arsenic	3u	3u	3u			1.5u
4. Barium	2u	2u	2u	2u	2u	1.0u
5. Beryllium	1u	1u	1u	1u	1u	0.5u
6. Cadmium	[4]	3u	[4]	3u	3u	[1.5]
7. Calcium	59u	59u	59u	59u	59u	30u
8. Chromium	9u	9u	9u	9u	9u	4.5u
9. Cobalt	23u	23u	23u	23u	23u	12u
10. Copper	7u	7u	7u	7u	7u	3.5u
11. Iron	45u	45u	45u	45u	45u	22u
0003C 12. Lead	2u	2u	2u			1.0u
13. Magnesium	95u	95u	95u	95u	95u	48u
14. Manganese	2u	2u	2u	2u	2u	1.0u
15. Mercury	0.2u	0.2u	0.2u			0.1u
16. Nickel	20u	20u	20u	20u	20u	10u
17. Potassium	738u	738u	[944]	[1340]	[1010]	369u
0005D 18. Selenium	4u	4u				2.0u
19. Silver	7u	7u	7u	7u	7u	3.5u
20. Sodium	87u	87u	87u	87u	87u	44u
0005A 21. Thallium	2u	2u	2u			1.0u
22. Tin	32u	32u	32u	32u	32u	16u
23. Vanadium	15u	15u	15u	15u	15u	7.5u
24. Zinc	11u	11u	11u	11u	11u	5.5u
Other:						
Cyanide						

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

Form III - B
 Q. C. Report No. 205

BLANKS

 LAB NAME CAS
 DATE 10/9/87

 CASE NO. 8129
 UNITS ug/L

 Matrix SOIL

Preparation Compound	Initial Calibration	Continuing Calibration				Preparation Blank ¹	
	Blank Value	1	2	3	4	1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
0005B 12. Lead	2u	2u	2u				
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
0006B 18. Selenium	4u	4u					
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

Form III-C

 Q. C. Report No. 205

BLANKS

 LAB NAME CAS

 CASE NO. 8139

 DATE 10/9/87

 UNITS ug/L

 Matrix Soil

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration				Preparation Blank ¹	
		Blank Value				1	2
		1	2	3	4	1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
OCOSC 12. Lead	<u>2u</u>	<u>2u</u>					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

Ocasa
Oc06A (Fe, Ag)

Form IV

Q. C. Report No. 205

ICP INTERFERENCE CHECK SAMPLE

LAB NAME CENTEC

CASE NO. 8129

Check Sample I.D. ICS 0387

DATE 10/9/87

Check Sample Source EPA

Units: ug/L

Compound	Control Limits ¹		True ²	Initial		Final	
	Mean	Std. Dev.		Observed	%R	Observed	%R
Metals:							
1. Aluminum			508000	524000	103	531000	105
2. Antimony				53u		53u	
3. Arsenic							
4. Barium			483	471	98	479	99
5. Beryllium			474	475	100	474	100
6. Cadmium			909	927	102	920	101
7. Calcium			516000	477000	92	480000	93
8. Chromium			513	516	101	497	97
9. Cobalt			478	494	103	491	103
10. Copper			534	511	96	527	99
11. Iron			203000	192000	95	193000	95
12. Lead			4850				
13. Magnesium			509000	473000	93	481000	94
14. Manganese			531	539	102	520	98
15. Mercury							
16. Nickel			916	880	96	878	96
17. Potassium				738u		[902]	
18. Selenium							
19. Silver			993	980	99	998	101
20. Sodium				[436]		[501]	
21. Thallium							
22. Vanadium			475	456	96	452	95
23. Zinc			973	960	99	937	96
Other: <u>TIN</u>				32u		32u	

1 Mean value based on n = _____.

2 True value of EPA ICP Interference Check Sample or contractor standard.



Form V

Q. C. Report No. 205

MAF427/67117 Mercury Spike

NR Cyanide Spike

SPIKE SAMPLE RECOVERY

MAF427/67117 Furnace Spike

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

EPA Sample No. MAF427

Lab Sample ID No. 67117

Units mg/kg

Matrix Soil

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R ¹
Metals:					
1. Aluminum	75-125		4710		NR
2. Antimony	-	250	260	298	84
3. Arsenic	-	27.7	9.9	19.6	91
4. Barium	-	1330	[42]	1190	108
5. Beryllium	-	32	0.50	30	107
6. Cadmium	-	33	4.0	30	97
7. Calcium	-		[1990]		NR
8. Chromium	-	156	26	119	109
9. Cobalt	-	330	110	298	111
10. Copper	-	228	53	149	117
11. Iron	-		46100		NR
12. Lead	-	168	255	24.4	-357**
13. Magnesium	-		3440		NR
14. Manganese	-	549	251	298	100
15. Mercury	-	1.02	0.47	0.54	102
16. Nickel	-	338	32	298	103
17. Potassium	-		[909]		NR
18. Selenium	-	6.5	1.80	4.9	133 R
19. Silver	-	29	3.50	30	97
20. Sodium	-		[76]		NR
21. Thallium	-	21.5	0.90	24.4	88
22. Vanadium	-	334	7.50	298	112
23. Zinc	-	533	175	298	120
Other: Tin		344	160	298	115
Cyanide	-				

¹ %R = [(SSR - SR)/SA] x 100

** Sample conc. 4x > Spike added

~~NR~~ out of control

NR - Not required

Comments:



Form VI

Q. C. Report No. 205

DUPLICATES

MAF427/67117 MERCURY DUP

NR CYANIDE DUP

MAF427/67117 FURNACE DUP

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

EPA Sample No. MAF427

Lab Sample ID No. 67117

Units MG/KG

Matrix SOIL

Compound	Control Limit ¹	Sample(S)	Duplicate(D)	RPD ²
Metals:				
1. Aluminum		4710	6530	32 *
2. Antimony		26u	30u	NC
3. Arsenic		9.9	9.3	6
4. Barium		[42]	[45]	NC
5. Beryllium		0.5u	0.6u	NC
6. Cadmium		4.0	4.0	0
7. Calcium		[1990]	[2150]	NC
8. Chromium		26	22	17
9. Cobalt		11u	13u	NC
10. Copper		53	59	11
11. Iron		46100	39700	15
12. Lead		255	213	18
13. Magnesium		3440	4000	15
14. Manganese		251	220	13
15. Mercury		0.47	0.43	9
16. Nickel		32	34	6
17. Potassium		[909]	[1390]	NC
18. Selenium		1.8u	2.4u	NC
19. Silver		35u	4.0u	NC
20. Sodium		[76]	[127]	NC
21. Thallium		0.9u	1.2u	NC
22. Vanadium		7.5u	[14]	NC
23. Zinc		175	161	8
Other: Tin		16u	18u	NC
Cyanide				

* Out of Control

¹ To be added at a later date.

² RPD = $[|S - D| / ((S + D) / 2)] \times 100$

NC - Non calculable RPD due to value(s) less than CRDL



Form VII

Q.C. Report No. 205

INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LCS # 1

LAB NAME CENTEC
DATE 10/9/87

CASE NO. 8129
LCS UNITS ug/l mg/kg
(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection			Lab Control Sample		
		ICP/AA PLASMA II	Furnace ZEEMANS		True	Found	ZR
Metals:							
1. Aluminum	200	52	5000	5100	4000	3840	96
2. Antimony	60	53	4	6	400	358	90
3. Arsenic	10	211	3	4	100	106	106
4. Barium	200	2			1000	979	98
5. Beryllium	5	1			400	403	101
6. Cadmium	5	3	0.4	0.4	400	407	102
7. Calcium	5000	59			20000	19300	96
8. Chromium	10	9			400	380	95
9. Cobalt	50	23			1000	991	99
10. Copper	25	7			1000	1010	101
11. Iron	100	45			4000	3760	94
12. Lead	5	96	4	2	100	108	108
13. Magnesium	5000	95			20000	19600	98
14. Manganese	15	2			1000	967	97
15. Mercury	0.2	0.2(CV)			3.0	3.1	103
16. Nickel	40	20			1000	966	97
17. Potassium	5000	738			20000	18800	94
18. Selenium	5	191	3	4	25.0	25.0	100
19. Silver	10	7			400	368	92
20. Sodium	5000	87			20000	19400	97
21. Thallium	10	188	2	6	25.1	24.4	97
22. Tin	40	32			1000	971	97
23. Vanadium	50	15			1000	943	94
24. Zinc	20	11			1000	987	99
Other:							
Cyanide	10						

Form IX



Q. C. Report No. 205

ICP SERIAL DILUTIONS

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

EPA Sample No. MAF427

Lab Sample ID No. 6717

Units: ug/L

Matrix SOIL

Compound	Initial Sample Concentration(I)	Serial Dilution ¹ Result(S)	% Difference ²
Metals:			
1. Aluminum	9470	8820	7
2. Antimony	53u	53u	NR
3. Arsenic			NA
4. Barium	[84]	80	5
5. Beryllium	1u	1u	NR
6. Cadmium	8	25	NR
7. Calcium	[4010]	3760	6
8. Chromium	52	9u	NR
9. Cobalt	23u	23u	NR
10. Copper	107	110	3
11. Iron	92600	88200	5
12. Lead			NA
13. Magnesium	6910	6750	2
14. Manganese	505	485	4
15. Nickel	64	20u	NR
16. Potassium	[1830]	3980	NR
17. Selenium			NA
18. Silver	7u	7u	NR
19. Sodium	[153]	87u	NR
20. Thallium			NA
21. Vanadium	15u	15u	NR
22. Zinc	351	390 *	11
Other: <u>TIN</u>	32u	32u	NR

¹ Diluted sample concentration corrected for 1:4 dilution (see Exhibit D)

² Percent Difference = $\frac{|I - S|}{I} \times 100$

NR - Not Required, initial sample concentration less than 10 times IDL

NA - Not Applicable, analyte not determined by ICP

* = SOC < 10X IDL

Form IX (Quarterly)
Instrument Detection Limits

Laboratory Name CENTEC ICP/Flame AA (Circle One) Model Number PLASMA II
Date 7/22/87 Furnace AA Number _____

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum	308.22	200	52 P	13. Magnesium	279.08	5000	95 P
2. Antimony	206.84	60	53 P	14. Manganese	257.61	15	2 P
3. Arsenic	193.77	10	211 P	15. Mercury	253.7	0.2	0.2 CV
4. Barium	455.39	200	2 P	16. Nickel	231.60	40	20 P
5. Beryllium	313.04	5	1 P	17. Potassium	766.46	5000	738 P
6. Cadmium	214.44	5	3 P	18. Selenium	196.10	5	191 P
7. Calcium	317.93	5000	59 P	19. Silver	328.07	10	7 P
8. Chromium	205.56	10	9 P	20. Sodium	589.58	5000	87 P
9. Cobalt	228.62	50	23 P	21. Thallium	190.86	10	188 P
10. Copper	324.75	25	7 P	22. Tin	189.99	40	32 P
11. Iron	259.94	100	45 P	23. Vanadium	292.40	50	15 P
12. Lead	220.35	5	96 P	24. Zinc	213.86	20	11 P

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments: MERCURY - PERKIN ELMER 50 B MERCURY ANALYZER

Lab Manager [Signature]

Form IX (Quarterly)
Instrument Detection Limits

Laboratory Name CENTER ICP/Flame AA (Circle One) Model Number _____
Date 7/22/87 Furnace AA Number 5000

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony	217.6 BZ	60	4 F	14. Manganese		15	
3. Arsenic	193.7 BZ	10	3 F	15. Mercury		0.2	
4. Barium		200		16. Nickel		40	
5. Beryllium		5		17. Potassium		5000	
6. Cadmium	228.8 BZ	5	0.4 F	18. Selenium	196.0 BZ	5	3 F
7. Calcium		5000		19. Silver		10	
8. Chromium		10		20. Sodium		5000	
9. Cobalt		50		21. Thallium	276.8 BZ	10	2 F
10. Copper		25		22. Tin		40	
11. Iron		100		23. Vanadium		50	
12. Lead	283.3 BZ	5	4 F	24. Zinc		20	

- Footnotes:
- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
 - Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
 - If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments: BZ - Zeeman BGC

Lab Manager [Signature]

Form IX (Quarterly)
Instrument Detection Limits

Laboratory Name CENTER ICP/Flame AA (Circle One) Model Number _____
 Date 7/22/87 Furnace AA Number 5100

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony	217.6 BZ	60	6 F	14. Manganese		15	
3. Arsenic	193.7 BZ	10	4 F	15. Mercury		0.2	
4. Barium		200		16. Nickel		40	
5. Beryllium		5		17. Potassium		5000	
6. Cadmium	228.8 BZ	5	0.4 F	18. Selenium	196.0 BZ	5	4 F
7. Calcium		5000		19. Silver		10	
8. Chromium		10		20. Sodium		5000	
9. Cobalt		50		21. Thallium	277.8 BZ	10	6 F
10. Copper		25		22. Tin		40	
11. Iron		100		23. Vanadium		50	
12. Lead	283.3 BZ	5	2 F	24. Zinc		20	

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

BZ = ZEEMAN BGC

Lab Manager Lou Ellis

Form XI (Quarterly)
ICP Linear Ranges

Laboratory Name CENTEC

ICP Model Number PLASMA II

Date 4/22/87

Upper ICP Linearity Limits

Analyte	Integration Time (Seconds)	Concentration (µg/L)	Analyte	Integration Time (Seconds)	Concentration (µg/L)
1. Aluminum	0.300	500 000	13. Magnesium	0.200	200 000
2. Antimony	1.000	20 000	14. Manganese	0.200	25 000
3. Arsenic	1.000	50 000	15. Mercury		
4. Barium	0.175	50 000	16. Nickel	0.200	25 000
5. Beryllium	0.175	10 000	17. Potassium	0.500	1 000 000
6. Cadmium	0.600	10 000	18. Selenium	1.000	25 000
7. Calcium	0.150	500 000	19. Silver	0.275	4 000
8. Chromium	1.000	20 000	20. Sodium	0.175	1 000 000
9. Cobalt	0.200	25 000	21. Thallium	1.000	5 000
10. Copper	0.200	25 000	22. Tin	0.900	50 000
11. Iron	0.100	500 000	23. Vanadium	0.150	50 000
12. Lead	0.300	50 000	24. Zinc	0.150	50 000

Footnotes: ● Indicate elements not analysed by ICP with the notation NA.

Comments: _____

Lab Manager Fernis P. Ho

Form XII (Part 1)

ICP INTERELEMENT CORRECTION FACTORS (Quarterly)

LABORATORY CENTEC ICP Model Number PLASMA II

DATE 7/22/87

Analyte	Analyte Wavelength (nm)	Interelement Correction Factors for							
		Al	Ca	Fe	Mg	Cr	Cu	Mn	Ni
1. Antimony	206.84					1540			
2. Arsenic	193.77								
3. Barium	455.39								
4. Beryllium	313.04								
5. Cadmium	214.44			7					
6. Chromium	205.56								
7. Cobalt	228.62			-10					36
8. Copper	324.75								
9. Lead	220.35								
10. Manganese	257.61			11	33				
11. TIN	189.99								
12. Nickel	231.60								
13. Potassium	766.46								
14. Selenium	196.10								
15. Silver	328.07								
16. Sodium	589.58								
17. Thallium	190.86								
18. Vanadium	292.40								
19. Zinc	213.86								423

COMMENTS: ppb / 100 ppm of Interferent

Lab Manager Lewis P. [Signature]

Form XII (Part 2)

ICP INTERELEMENT CORRECTION FACTORS (Quarterly)

LABORATORY CENTER ICP Model Number PLASMA II

DATE 7/22/87

Analyte	Analyte Wavelength (nm)	Interelement Correction Factors for							
		Ti	V						
1. Antimony	206.84								
2. Arsenic	193.77								
3. Barium	455.39								
4. Beryllium	313.04								
5. Cadmium	214.44								
6. Chromium	205.56								
7. Cobalt	228.62	162							
8. Copper	324.75								
9. Lead	220.35	-86							
10. Manganese	257.61								
11. TIN	189.99	-248							
12. Nickel	231.60								
13. Potassium	766.46								
14. Selenium	196.10								
15. Silver	328.07								
16. Sodium	589.58								
17. Thallium	190.96								
18. Vanadium	292.40								
19. Zinc	213.86	-24							

COMMENTS: ppb / 100 ppm of Interferent

Lab Manager Lewis Miller



P.O. Box 956
2160 INDUSTRIAL DRIVE
SALEM, VIRGINIA 24153
(703) 387-3995

POST SAMPLE RECEIPT STATUS REPORT
EPA CASE # 8129 SUPERFUND

EPA #	CAS #	DATE IN	TM	DM	CN	SOIL	WATER	DUE OUT
MAF 427 D/S	67117	09/25/87	1			L		10/25/87
MAF 428	67118		1			L		
MAF 429	67119		1			L		
MAF 430	67120		1			L		

TOTALS : 4

PROBLEMS As per SMD 09/30/87, case complete.
No DUPS or SPIKES designated by samplers,
one picked in lab.

EPA CASE # 8129



% SOLIDS

DATE	ANALYST	CAS #	EPA #	PAN WT	SAMPLE WET WT + PAN	SAMPLE DRY WT + PAN	% SOLIDS
10/1	BT/CS	67117	MAF427	1.5024	8.3265	6.8189	77.9
		67117dup	MAF427	1.4834	7.9726	6.5437	80.6
		67118	MAF428	1.4905	6.4058	5.3704	78.9
		67118dup	MAF428	1.5075	6.3099	5.2749	78.4
		67119	MAF429	1.4926	6.1670	5.2958	81.4
		67119dup	MAF429	1.4780	6.8691	5.8053	80.3
		67120	MAF430	1.5081	5.7710	5.3055	89.1
		67120	MAF430	1.4781	7.2731	6.5281	87.1

PERCENT SOLIDS = $\frac{(\text{DRY WEIGHT} - \text{PAN WEIGHT})}{(\text{WET WEIGHT} - \text{PAN WEIGHT})} \times 100\%$



Following are the EPA control numbers associated with our quality control samples:

EPA #	CONCENTRATE #	IDENTIFICATION
WP 283	1	EP Extract Metals
WP 283	3	EP Extract Metals
WP 1183	1	Trace Metals II
WP 1183	2	Trace Metals II
WP 1183	1	Trace Metals II
WP 1183	2	Trace Metals III
WP 179	5	Cyanide
WP 1182	8	Cyanide
WP 284	1	Trace Metals I
WP 284	2	Trace Metals I
WP 384	1	Minerals
WP 1182	8	Cyanide
-	-	Tin Standard
WP 384	2	Minerals
WP 1284	1	Demand
WP 1284	2	Demand
WP 184	3	Residue
WP 184	1	Residue
WP 284	1	Nutrients
WP 284	2	Nutrients
WP 179	4,6	Phenols
WS 378-2		Mercury
ICV 1-4		Metals
WP 386		Trace Metals I
WP1185		MINERALS
WP1085	1,2	EP METALS


PROJECT KRE Dies Pills, SF8129, SF8158, SF8112

Date	Aliquot	Stock #	Final Vol.	Final Conc.	Lab #	By:
10/1/87	50ml	917-6	100ml	50ppm	101-1	SH
	20ml			20	101-2	
	10ml			10	101-3	
	5ml			5	101-4	
	20ml	917-7	20	101-5	✓	
17% HNO ₃						
10/3/87	50ml	917-6	100ml	50ppm	102-1	SH
	20ml			20ppm	102-2	
	10ml			10ppm	102-3	
	5ml			5ppm	102-4	
	20ml	917-7	20ppm	102-5	✓	
17% HNO ₃						
10/3/87	50ml	917-6	100ml	50ppm	103-1	SH
	20			20	103-2	
	10			10	103-3	
	5			5	103-4	
	20	917-7	20	103-5	✓	
17% HNO ₃						
10/5/87	50ml	917-7	100ml	50ppm	105-1	SH
	20			20	105-2	
	10			10	105-3	
	5			5	105-4	
	20	917-6	20	105-5	✓	
17% HNO ₃						
10/6/87	5.0ml	8248	500ml	100ppm	106-1	SH
	5.0ml	824-9	50ml	100ppm	106-2	
	50ml	106-1	100ml	50ppm	106-3	
	20	106-1		20	106-4	
	10			10	106-5	
	5			5	106-6	
	20	106-2		20	106-7	
17% HNO ₃						

S. J. Hunt 10/6/87
 Signed Date

Information must indicate the stock source(s), the % acid, start and final volumes used, and date made.

PROJECT APCO, 8129, 8158

Date	Aliquot	Stock #	Final Vol.	Final Conc.	Lab #	By:
10/5/87	10ul EPA13		*100ul		1005	CD
	2ul Pb (100ppm - lead)			EPA27		
	2ul Fe	10ul Mg				
	2ul Al	10ul Na				
	10ul Ca	10ul K				
	10ul EPA7					
	10ul Ccd13		*100ul		Ccd27	1005A CD
	1ul Pb (100ppm)					
	1ul Al	5ul Mg		EPA27		
	1ul Fe	5ul Na				
	5ul Ca	5ul K				
10/6/87	10ul EPA13		*100ul		EPA27	1006 CD
	2ul Pb (100ppm - lead)					
	2ul Fe	10ul Mg				
	2ul Al	10ul Na				
	10ul Ca	10ul K				
	10ul Ccd13		*100ul		Ccd27	1006A CD
	1ul Pb (100ppm)					
	1ul Al					
	1ul Fe					
	5ul Ca					
	5ul Mg					
	5ul Na					
	5ul K					
	5ul EPA7					
						
* 5% HCl 1% HNO3						

 CD
 Signed

 10/06/87
 Date

Information must indicate the stock source(s), the % acid, start and final volumes used, and date made.



Sample Number
MAF 427

INORGANICS TRAFFIC REPORT

<p>① Case Number: <u>012</u> Sample Site Name/Code: _____ _____ _____</p>	<p>② SAMPLE CONCENTRATION (Check One) <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> Medium Concentration</p> <p>③ SAMPLE MATRIX (Check One) <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil/Sediment</p>	<p>④ Ship To: <u>Central Analytical Services</u> <u>Industrial Park</u> <u>Salmon VA 24152</u> Attn: <u>Susan Simpson</u> Transfer Ship To:</p>
<p>⑤ Sampling Office: <u>CDM/I</u> Sampling Personnel: (Name) <u>Mark Brickell</u> (Phone) <u>617-742-5151</u> Sampling Date: (Begin) <u>9/24/87</u> (End) <u>9/24/87</u></p>	<p>⑥ Shipping Information: Name Of Carrier: <u>FEDERAL EXPRESS</u> Date Shipped: <u>9/24</u> Airbill Number: <u>5848868270</u></p>	<p>⑨ ANALYSIS LAB: Recd by: <u>SBJ/gpad</u> Date Recd: <u>9-25-87</u></p>
<p>⑦ Sample Description: (Check One) <input type="checkbox"/> Surface Water <input type="checkbox"/> Ground Water <input type="checkbox"/> Leachate <input type="checkbox"/> Mixed Media <input type="checkbox"/> Solids <input checked="" type="checkbox"/> Other <u>Soil</u> (specify) <u>AH 028</u> MATCHES ORGANIC SAMPLE NO. <u>028</u></p>	<p>⑧ Mark Volume Level On Sample Bottle Check Analysis required <input checked="" type="checkbox"/> Total Metals <input type="checkbox"/> Cyanide</p>	<p>⑩ Sample Condition On Receipt: (eg. broken, leakage, chain of custody, etc.) <u>Intact</u></p>

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Sample Number
MAF 428

INORGANICS TRAFFIC REPORT

1 Case Number: 0023
Sample Site Name/Code:

2 SAMPLE CONCENTRATION
 (Check One)
 Low Concentration
 Medium Concentration
3 SAMPLE MATRIX
 (Check One)
 Water
 Soil/Sediment

4 Ship To:

Attn: Susan School
Transfer Ship To:

5 Sampling Office: CIH/Reg I
Sampling Personnel:
 (Name) Mark Brickell
 (Phone) 1017 742-5151
Sampling Date:
 (Begin) 9/24/87 (End) 9/24/87

6 Shipping Information:
 Name Of Carrier:
FEDERAL EXPRESS
 Date Shipped: 9/24/87
 Airbill Number: 5848868270

9 ANALYSIS LAB:
 Recd by: S38/gaud
 Date Recd: ~~9-25-87~~ 9-25-87

7 Sample Description:
 (Check One)
 Surface Water
 Ground Water
 Leachate
 Mixed Media
 Solids
 Other Soil Ads
 (specify) AH 827
MATCHES ORGANIC SAMPLE NO. AH 827

8 Mark Volume Level On Sample Bottle
 Check Analysis required
 Total Metals
 Cyanide

10 Sample Condition On Receipt:
 (eg. broken, leakage, chain of custody, etc.)
Intact

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INORGANICS TRAFFIC REPORT

<p>① Case Number: <u>8129</u> Sample Site Name/Code: _____ _____ _____</p>	<p>② SAMPLE CONCENTRATION (Check One) <input type="checkbox"/> Low Concentration <input type="checkbox"/> Medium Concentration ③ SAMPLE MATRIX (Check One) <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil/Sediment</p>	<p>④ Ship To: <u>Center Analytical</u> <u>2107 Industrial Plaza</u> <u>Salem, VA 24153</u> Attn: <u>Susan Shepard</u> Transfer Ship To:</p>
<p>⑤ Sampling Office: <u>EM/Reg I</u> Sampling Personnel: (Name) <u>Mark Bickel</u> (Phone) <u>617 742-5151</u> Sampling Date: (Begin) <u>9/24/87</u> (End) <u>9/24/87</u></p>	<p>⑥ Shipping Information: Name Of Carrier: <u>Federal Express</u> Date Shipped: <u>9/24/87</u> Airbill Number: <u>5848868270</u></p>	<p>⑨ ANALYSIS LAB: Recd by: <u>SB81ppaid</u> Date Recd: <u>9-25-87</u> ⑩ Sample Condition On Receipt: (eg. broken, leakage, chain of custody, etc.) <u>Intact</u></p>
<p>⑦ Sample Description: (Check One) <input type="checkbox"/> Surface Water <input type="checkbox"/> Ground Water <input type="checkbox"/> Leachate <input type="checkbox"/> Mixed Media <input type="checkbox"/> Solids <input checked="" type="checkbox"/> Other <u>Soils</u> (specify) <u>Alt 836</u> MATCHES ORGANIC SAMPLE NO. <u>Alt 836</u></p>	<p>⑧ Mark Volume Level On Sample Bottle Check Analysis required <input checked="" type="checkbox"/> Total Metals <input type="checkbox"/> Cyanide</p>	

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INORGANICS TRAFFIC REPORT

<p>① Case Number: <u>8123</u> Sample Site Name/Code: _____ _____ _____</p>	<p>② SAMPLE CONCENTRATION (Check One) <input type="checkbox"/> Low Concentration <input type="checkbox"/> Medium Concentration ③ SAMPLE MATRIX (Check One) <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil/Sediment</p>	<p>④ Ship To: <u>Case # 8123</u> <u>1400 Industrial Blvd</u> <u>Waco TX 76788</u> Attn: <u>George Shepherd</u> Transfer Ship To:</p>
<p>⑤ Sampling Office: <u>CA/1</u> Sampling Personnel: (Name) <u>Mark Brickett</u> (Phone) <u>617 942-5151</u> Sampling Date: (Begin) <u>9/24/87</u> (End) <u>9/24/87</u></p>	<p>⑥ Shipping Information: Name Of Carrier: <u>Federal Express</u> Date Shipped: <u>9/24/87</u> Airbill Number: <u>58488682</u> ²⁰ 13</p>	<p>⑨ ANALYSIS LAB: Recd by: <u>SBR/gpaud</u> Date Recd: <u>9-25-87</u></p>
<p>⑦ Sample Description: (Check One) <input type="checkbox"/> Surface Water <input type="checkbox"/> Ground Water <input type="checkbox"/> Leachate <input type="checkbox"/> Mixed Media <input type="checkbox"/> Solids <input checked="" type="checkbox"/> Other <u>Soils</u> (specify) <u>AH 831</u> MATCHES ORGANIC SAMPLE NO. <u>AH 831</u></p>	<p>⑧ Mark Volume Level On Sample Bottle Check Analysis required <input checked="" type="checkbox"/> Total Metals <input type="checkbox"/> Cyanide</p>	<p>⑩ Sample Condition On Receipt: (eg. broken, leakage, chain of custody, etc.) <u>Intact</u></p>

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DATE	ANALYST	CAS SAMPLE NUMBER	EPA SAMPLE NUMBER	INITIAL VOLUME/WEIGHT	TUBE/BOTTLE NUMBER	DIGESTION PROCEDURE USED (a-e)	FILTERED (✓)	SPIKING SOLUTION USED
10-1-87	WT	67117	MAF 427	1.4004g		a	✓	
		67117 ^{spk}		1.3138g			✓	
		67117 ^{dup}	↓	1.0919g			✓	
		67118	MAF 428	1.0785g			✓	
		67119	MAF 429	1.0663g			✓	
		67120	MAF 430	1.0794g		v	✓	
		BLK		1g		d		
		spk blk		1g				
		LC5-27		50 _{ml}		v		
		67117	MAF 427	1.2882g		b	✓	
		67117 ^{spk}		1.0769g			✓	
		67117 ^{dup}	↓	1.1241g			✓	
		67118	MAF 428	1.0021g			✓	
		67119	MAF 429	1.2615g			✓	
		67120	MAF 430	1.0569g		v	✓	
		BLK		1g		a		
		spk blk		1g				
		WP 386		50 _{ml}				
V	V	118311-1	TL	↓		v		

Digestion Procedures: (a) HNO₃-H₂O₂ (b) HNO₃-H₂O₂ HCl (c) HNO₃
(d) HNO₃HCl (e) HNO₃-H₂SO₄



DATE	ANALYST	CAS SAMPLE NUMBER	EPA SAMPLE NUMBER	INITIAL VOLUME/WEIGHT	TUBE/BOTTLE NUMBER	DIGESTION PROCEDURE USED (a-e)	FILTERED (✓)	SPIKING SOLUTION USED
10-2-87	BT	67117	MAF 427	0.3736g		e		
		67117 spk		0.2369g				1ppb
		67117 dup	✓	0.2458g				
		67118	MAF 428	0.2826g				
		67119	MAF 429	0.3106g				
		67120	MAF 430	0.2817g				
		WP 283-2		1/100 ml				
✓	✓	BLK		100 ml		✓		

Digestion Procedures: (a) $\text{HNO}_3\text{-H}_2\text{O}_2$ (b) $\text{HNO}_3\text{-H}_2\text{O}_2$ HCl (c) HNO_3
 (d) HNO_3HCl (e) $\text{HNO}_3\text{-H}_2\text{SO}_4$

Method Name: 8129-8158

Comment: Run # _____ File # _____ Analyst _____

Read Delay : 35 sec Replicates : 2 Format name : epa

Analysis Number	AS Posn	Sample ID	Sequence Name	Dilution	Weight / Volume
1	1	wcal standard	RAS+s		
2	1	wcal standard	RAS+s		
3	2	wcal standard	RAS+s		
4	2	standard	RAS+s		
5	3	blank	RAS		
6	4	ICV1 0487	ICV1-786		
7	5	ICV3	qcsb		
8	6	ICV CAS	qcsn		
9	3	ICB	RAS		
10	7	X2CRDL	X2CRDL		
11	8	ICS 0387	RAS		
12	0	rinse	s		
13	49	CCV1	RAS+s		
14	52	CCB1	RAS		
15	10	ICS 8129	RAS		
16	11	PB 8129	RAS		
17	12	67117/MAF427	RAS		
18	13	67117 DUP	RAS		
19	14	67117 SPK	RAS		
20	15	67117 SDC	RAS		
21	16	67118/MAF428	RAS		
22	17	67119/MAF429	RAS		
23	18	67120/MAF430	RAS		
24	19	ICS 8158	RAS		
25	49	CCV2	RAS+s		
26	52	CCB2	RAS		
27	20	PB 8158	RAS		
28	21	67145/MGC357	RAS		
29	22	67145 DUP	RAS		
30	23	67145 SPK	RAS		
31	24	67145 SDC	RAS		
32	25	67146/MGC358	RAS		
33	26	67147/MGC359	RAS		
34	27	67148/MGC360	RAS		
35	28	67149/MGC361	RAS		
36	29	67150/MGC362	RAS		
37	50	CCV3	RAS+s		
38	53	CCB3	RAS		
39	30	67151/MGC363	RAS		
40	31	67152/MGC364	RAS		
41	32	67153/MGC365	RAS		
42	33	PB SPK 8129	RAS		
43	34	PB SPK 8129	RAS		
44	50	CCV4	RAS+s		
45	53	CCB4	RAS		
46	7	X2CRDL	X2CRDL		
47	8	ICS 0387	RAS		
48	0	r	s		
49	0	r	s		
50	0	r	s		
51	0	r	s		
52	0	r	s		



RAW DATA

Data For: EPA 20 Case Number(s) 8129 & 8158
Test Method ICP Analyst CS Date 10/5/87

Analyst Comments

ICP RUN # 0205A
RUN TIME 1600 → 2030
STANDARD # 1005

To Re-run:
1) Ag (ICS low)
2) Fe (CW low)

10/5/87

8129 & 8158

OLOSA

1600 → 2030

window edge CS

wcal standard	rep	1	Cr205a	em	7530.4	conc	2000	
	rep	1	Sn189b	em	2945.0	conc	5000	
	rep	1	Zn213a	em	35852.6	conc	5000	
4 1/2 hour	rep	1	Co228a	em	31145.0	conc	5000	
Continuous	rep	1	Ni231a	em	21316.7	conc	5000	
run with	rep	1	Sb206b	em	1674.4	conc	2000	window edge
4ccw/ceb-	rep	1	Mg279b	em	9356.4	conc	100000	window edge
	rep	1	Mn257a	em	42433.1	conc	5000	
2 hour time	rep	1	Fe259a	em	20262.8	conc	20000	
Cr ke. A	rep	1	Al308b	em	8420.6	conc	20000	window edge
new D	rep	1	V292a	em	28551.5	conc	5000	
	rep	1	Ca317b	em	2939.5	conc	100000	window edge
	rep	1	Cu324b	em	9420.5	conc	5000	window edge
	rep	1	Ag328a	em	24955.7	conc	2000	
	rep	1	Ba455b	em	656.1	conc	5000	window edge
	rep	1	Na589b	em	357.8	conc	100000	window edge
	rep	1	Cd214a	em	17792.6	conc	2000	
	rep	1	K766b	em	1143.1	conc	100000	window edge
	rep	1	Be313a	em	114594.4	conc	2000	
	rep	1	ara	em	35093.4	conc	1.000	window edge
	rep	1	arb	em	1770.1	conc	1.000	window edge
	rep	2	Sn189b	em	3637.3	conc	5000	
	rep	2	Cr205a	em	7605.9	conc	2000	
	rep	2	Zn213a	em	35722.8	conc	5000	
	rep	2	Co228a	em	31243.3	conc	5000	
	rep	2	Sb206b	em	1717.8	conc	2000	
	rep	2	Ni231a	em	22454.8	conc	5000	
	rep	2	Mg279b	em	35583.1	conc	100000	window edge
	rep	2	Mn257a	em	43118.1	conc	5000	
	rep	2	Al308b	em	23974.6	conc	20000	window edge
	rep	2	Fe259a	em	20704.3	conc	20000	
	rep	2	Ca317b	em	33297.2	conc	100000	window edge
	rep	2	V292a	em	29592.8	conc	5000	
	rep	2	Cu324b	em	45341.9	conc	5000	window edge
	rep	2	Ba455b	em	4472.5	conc	5000	window edge
	rep	2	Ag328a	em	25560.2	conc	2000	
	rep	2	Na589b	em	5460.4	conc	100000	window edge
	rep	2	K766b	em	1385.8	conc	100000	window edge
	rep	2	Cd214a	em	19150.7	conc	2000	
	rep	2	Be313a	em	114306.9	conc	2000	
	rep	2	arb	em	3010.8	conc	1.000	window edge
	rep	2	ara	em	50185.0	conc	1.000	

100S

wcal standard								
Sn189b	av	3291.16	sd	489.581	%cv	14.88	conc	5000
Cr205a	av	7568.19	sd	53.391	%cv	0.71	conc	2000
Zn213a	av	35787.68	sd	91.791	%cv	0.26	conc	5000
Co228a	av	31194.18	sd	69.504	%cv	0.22	conc	5000
Sb206b	av	1696.14	sd	30.699	%cv	1.81	conc	2000
Ni231a	av	21885.72	sd	804.755	%cv	3.68	conc	5000
Mg279b	av	22469.73	sd	18545.070	%cv	82.53	conc	100000
Mn257a	av	42775.58	sd	484.371	%cv	1.13	conc	5000
Al308b	av	16197.61	sd	10998.310	%cv	67.90	conc	20000
Fe259a	av	20483.57	sd	312.157	%cv	1.52	conc	20000
Ca317b	av	18118.34	sd	21466.137	%cv	118.48	conc	100000
V292a	av	29072.13	sd	736.344	%cv	2.53	conc	5000
Cu324b	av	27381.18	sd	25400.254	%cv	92.77	conc	5000
Ba455b	av	2564.28	sd	2698.631	%cv	105.24	conc	5000
Ag328a	av	25257.95	sd	427.492	%cv	1.69	conc	2000
Na589b	av	3159.11	sd	3254.493	%cv	103.02	conc	100000
K766b	av	1264.49	sd	171.625	%cv	13.57	conc	100000

Cd214a	av	18471.64	sd	960.290	%cv	5.20	conc	2000
Be313a	av	114450.65	sd	203.243	%cv	0.18	conc	2000
arb	av	2390.49	sd	877.313	%cv	36.70	conc	1.000
ara	av	42639.21	sd	10671.387	%cv	25.03	conc	1.000

wcal standard	rep	1	Sn189b	em	3593.5	conc	5000	
	rep	1	Cr205a	em	7562.1	conc	2000	
	rep	1	Zn213a	em	34996.8	conc	5000	
	rep	1	Co228a	em	31244.2	conc	5000	
	rep	1	Sb206b	em	1727.1	conc	2000	
	rep	1	Ni231a	em	21371.9	conc	5000	
	rep	1	Mg279b	em	34184.9	conc	100000	
	rep	1	Mn257a	em	42650.1	conc	5000	
	rep	1	Al308b	em	23831.8	conc	20000	
	rep	1	Fe259a	em	20329.8	conc	20000	
	rep	1	Ca317b	em	39806.7	conc	100000	
	rep	1	V292a	em	29749.8	conc	5000	
	rep	1	Cu324b	em	52847.9	conc	5000	
	rep	1	Ba455b	em	37827.9	conc	5000	window edge
	rep	1	Ag328a	em	25555.3	conc	2000	
	rep	1	Na589b	em	20096.4	conc	100000	window edge
	rep	1	K766b	em	3257.7	conc	100000	window edge
	rep	1	Cd214a	em	18510.5	conc	2000	
	rep	1	Be313a	em	111939.8	conc	2000	
	rep	1	arb	em	7824.0	conc	1.000	window edge
	rep	1	ara	em	52266.2	conc	1.000	
	rep	2	Sn189b	em	3606.9	conc	5000	
	rep	2	Cr205a	em	7517.7	conc	2000	
	rep	2	Zn213a	em	35190.4	conc	5000	
	rep	2	Co228a	em	31395.3	conc	5000	
	rep	2	Sb206b	em	1715.6	conc	2000	
	rep	2	Ni231a	em	21685.0	conc	5000	
	rep	2	Mg279b	em	34028.4	conc	100000	
	rep	2	Mn257a	em	42366.3	conc	5000	
	rep	2	Al308b	em	23969.4	conc	20000	
	rep	2	Fe259a	em	20326.1	conc	20000	
	rep	2	Ca317b	em	39621.5	conc	100000	
	rep	2	V292a	em	29358.4	conc	5000	
	rep	2	Cu324b	em	52768.9	conc	5000	
	rep	2	Ba455b	em	36799.9	conc	5000	
	rep	2	Ag328a	em	25275.6	conc	2000	
	rep	2	Na589b	em	20527.8	conc	100000	
	rep	2	K766b	em	9657.9	conc	100000	window edge
	rep	2	Cd214a	em	18310.7	conc	2000	
	rep	2	Be313a	em	114371.9	conc	2000	
	rep	2	arb	em	13236.7	conc	1.000	window edge
	rep	2	ara	em	50919.2	conc	1.000	

wcal standard	av	3600.23	sd	9.469	%cv	0.26	conc	5000
Sn189b	av	7539.89	sd	31.357	%cv	0.42	conc	2000
Cr205a	av	35093.62	sd	136.927	%cv	0.39	conc	5000
Zn213a	av	31319.76	sd	106.808	%cv	0.34	conc	5000
Co228a	av	1721.36	sd	8.174	%cv	0.47	conc	2000
Sb206b	av	21528.48	sd	221.371	%cv	1.03	conc	5000
Ni231a	av	34106.63	sd	110.662	%cv	0.32	conc	100000
Mg279b	av	42508.21	sd	200.633	%cv	0.47	conc	5000
Mn257a	av	23900.57	sd	97.327	%cv	0.41	conc	20000
Al308b	av	20327.94	sd	2.590	%cv	0.01	conc	20000
Fe259a	av	39714.12	sd	130.939	%cv	0.33	conc	100000
Ca317b	av	29554.09	sd	276.784	%cv	0.94	conc	5000
V292a	av		sd		%cv			

Cu324b	av	52808.39	sd	55.831	%cv	0.11	conc	5000
Ba455b	av	37313.92	sd	726.944	%cv	1.95	conc	5000
Ag328a	av	25415.44	sd	197.812	%cv	0.78	conc	2000
Na589b	av	20312.12	sd	305.001	%cv	1.50	conc	100000
K766b	av	6457.80	sd	4525.677	%cv	70.08	conc	100000
Cd214a	av	18410.59	sd	141.247	%cv	0.77	conc	2000
Be313a	av	113155.82	sd	1719.766	%cv	1.52	conc	2000
arb	av	10530.35	sd	3827.340	%cv	36.35	conc	1.000
ara	av	51592.73	sd	952.489	%cv	1.85	conc	1.000

wcal standard	rep	1	Sn189b	em	3490.3	conc	5000
	rep	1	Cr205a	em	7325.9	conc	2000
	rep	1	Zn213a	em	34737.8	conc	5000
	rep	1	Co228a	em	30740.2	conc	5000
	rep	1	Sb206b	em	1726.2	conc	2000
	rep	1	Ni231a	em	21174.3	conc	5000
	rep	1	Mg279b	em	33617.8	conc	100000
	rep	1	Mn257a	em	41738.9	conc	5000
	rep	1	Al308b	em	23523.4	conc	20000
	rep	1	Fe259a	em	19823.8	conc	20000
	rep	1	Ca317b	em	39127.9	conc	100000
	rep	1	V292a	em	29106.2	conc	5000
	rep	1	Cu324b	em	51545.3	conc	5000
	rep	1	Ba455b	em	36141.4	conc	5000
	rep	1	Ag328a	em	25472.2	conc	2000
	rep	1	Na589b	em	20257.1	conc	100000
	rep	1	Cd214a	em	18264.3	conc	2000
	rep	1	K766b	em	10892.1	conc	100000
	rep	1	Be313a	em	111765.1	conc	2000
	rep	1	ara	em	51657.7	conc	1.000
	rep	1	arb	em	14013.9	conc	1.000
	rep	2	Sn189b	em	3550.3	conc	5000
	rep	2	Cr205a	em	7306.6	conc	2000
	rep	2	Zn213a	em	34313.8	conc	5000
	rep	2	Co228a	em	30667.4	conc	5000
	rep	2	Sb206b	em	1688.5	conc	2000
	rep	2	Ni231a	em	21300.7	conc	5000
	rep	2	Mg279b	em	33564.9	conc	100000
	rep	2	Mn257a	em	41944.9	conc	5000
	rep	2	Al308b	em	23923.3	conc	20000
	rep	2	Fe259a	em	19755.5	conc	20000
	rep	2	Ca317b	em	38661.2	conc	100000
	rep	2	V292a	em	29419.0	conc	5000
	rep	2	Cu324b	em	52009.1	conc	5000
	rep	2	Ba455b	em	36097.2	conc	5000
	rep	2	Ag328a	em	25150.8	conc	2000
	rep	2	Na589b	em	20429.0	conc	100000
	rep	2	K766b	em	10828.0	conc	100000
	rep	2	Cd214a	em	18213.1	conc	2000
	rep	2	Be313a	em	111997.3	conc	2000
	rep	2	arb	em	14124.6	conc	1.000
	rep	2	ara	em	52116.6	conc	1.000

wcal standard	av	3520.31	sd	42.429	%cv	1.21	conc	5000
Sn189b	av	7316.25	sd	13.667	%cv	0.19	conc	2000
Cr205a	av	34525.77	sd	299.830	%cv	0.87	conc	5000
Zn213a	av	30703.79	sd	51.457	%cv	0.17	conc	5000
Co228a	av	1707.37	sd	26.651	%cv	1.56	conc	2000
Sb206b	av	21237.52	sd	89.380	%cv	0.42	conc	5000
Ni231a	av	33591.35	sd	37.352	%cv	0.11	conc	100000
Mg279b	av		sd					

Mn257a	av	41841.91	sd	145.708	%cv	0.35	conc	5000
Al308b	av	23723.37	sd	282.810	%cv	1.19	conc	20000
Fe259a	av	19789.62	sd	48.281	%cv	0.24	conc	20000
Ca317b	av	38894.58	sd	329.984	%cv	0.85	conc	100000
V292a	av	29262.57	sd	221.174	%cv	0.76	conc	5000
Cu324b	av	51777.22	sd	327.987	%cv	0.63	conc	5000
Ba455b	av	36119.29	sd	31.256	%cv	0.09	conc	5000
Ag328a	av	25311.52	sd	227.277	%cv	0.90	conc	2000
Na589b	av	20343.03	sd	121.589	%cv	0.60	conc	100000
K766b	av	10860.04	sd	45.335	%cv	0.42	conc	100000
Cd214a	av	18238.70	sd	36.234	%cv	0.20	conc	2000
Be313a	av	111881.17	sd	164.176	%cv	0.15	conc	2000
arb	av	14069.21	sd	78.282	%cv	0.56	conc	1.000
ara	av	51887.18	sd	324.479	%cv	0.63	conc	1.000

standard	rep	1	Sn189b	em	3494.2	conc	5000
	rep	1	Cr205a	em	7321.6	conc	2000
	rep	1	Zn213a	em	34683.0	conc	5000
	rep	1	Co228a	em	30436.7	conc	5000
	rep	1	Sb206b	em	1666.8	conc	2000
	rep	1	Ni231a	em	21134.3	conc	5000
	rep	1	Mg279b	em	33756.4	conc	100000
	rep	1	Mn257a	em	41614.9	conc	5000
	rep	1	Al308b	em	23578.1	conc	20000
	rep	1	Fe259a	em	19923.1	conc	20000
	rep	1	Ca317b	em	38641.9	conc	100000
	rep	1	V292a	em	29095.5	conc	5000
	rep	1	Cu324b	em	51406.0	conc	5000
	rep	1	Ba455b	em	35541.9	conc	5000
	rep	1	Ag328a	em	25006.9	conc	2000
	rep	1	Na589b	em	20096.8	conc	100000
	rep	1	K766b	em	10832.1	conc	100000
	rep	1	Cd214a	em	18176.2	conc	2000
	rep	1	Be313a	em	109888.5	conc	2000
	rep	1	arb	em	13842.2	conc	1.000
	rep	1	ara	em	51534.1	conc	1.000
	rep	2	Sn189b	em	3485.3	conc	5000
	rep	2	Cr205a	em	7316.6	conc	2000
	rep	2	Zn213a	em	34752.5	conc	5000
	rep	2	Co228a	em	30512.1	conc	5000
	rep	2	Ni231a	em	21849.3	conc	5000
	rep	2	Sb206b	em	1673.9	conc	2000
	rep	2	Mg279b	em	33676.6	conc	100000
	rep	2	Mn257a	em	41822.4	conc	5000
	rep	2	Fe259a	em	19904.8	conc	20000
	rep	2	Al308b	em	23823.3	conc	20000
	rep	2	V292a	em	28989.5	conc	5000
	rep	2	Ca317b	em	38966.9	conc	100000
	rep	2	Cu324b	em	52242.5	conc	5000
	rep	2	Ag328a	em	24946.4	conc	2000
	rep	2	Ba455b	em	35616.3	conc	5000
	rep	2	Na589b	em	20218.8	conc	100000
	rep	2	Cd214a	em	18083.1	conc	2000
	rep	2	K766b	em	10739.2	conc	100000
	rep	2	Be313a	em	110984.3	conc	2000
	rep	2	ara	em	51380.5	conc	1.000
	rep	2	arb	em	13985.8	conc	1.000

standard								
Sn189b	av	3490	sd	6.3	%cv	0.18	conc	5000
Cr205a	av	7319	sd	3.6	%cv	0.05	conc	2000

Zn213a	av	34718	sd	49.1	%CV	0.14	conc	5000
Co228a	av	30474	sd	53.3	%CV	0.17	conc	5000
Ni231a	av	21492	sd	505.6	%CV	2.35	conc	5000
Sb206b	av	1670	sd	5.0	%CV	0.30	conc	2000
Mg279b	av	33717	sd	56.5	%CV	0.17	conc	100000
Mn257a	av	41719	sd	146.7	%CV	0.35	conc	5000
Fe259a	av	19914	sd	13.0	%CV	0.07	conc	20000
Al308b	av	23701	sd	173.4	%CV	0.73	conc	20000
V292a	av	29042	sd	75.0	%CV	0.26	conc	5000
Ca317b	av	38804	sd	229.8	%CV	0.59	conc	100000
Cu324b	av	51824	sd	591.4	%CV	1.14	conc	5000
Ag328a	av	24977	sd	42.8	%CV	0.17	conc	2000
Ba455b	av	35579	sd	52.6	%CV	0.15	conc	5000
Na589b	av	20158	sd	86.3	%CV	0.43	conc	100000
Cd214a	av	18130	sd	65.8	%CV	0.36	conc	2000
K766b	av	10786	sd	65.7	%CV	0.61	conc	100000
Be313a	av	110436	sd	774.9	%CV	0.70	conc	2000
ara	av	51457.281	sd	108.5796	%CV	0.21	conc	1.000
arb	av	13913.989	sd	101.5099	%CV	0.73	conc	1.000

blank	rep	1	Sn189b	em	17.3			
	rep	1	Cr205a	em	31.4			
	rep	1	Zn213a	em	4.8			
	rep	1	Co228a	em	27.0		window edge	
	rep	1	Sb206b	em	16.7			
	rep	1	Ni231a	em	85.6			
	rep	1	Mg279b	em	531.4			
	rep	1	Mn257a	em	20.3			
	rep	1	Al308b	em	1668.8			
	rep	1	Fe259a	em	240.8			
	rep	1	Ca317b	em	170.2			
	rep	1	V292a	em	48.5			
	rep	1	Cu324b	em	80.6			
	rep	1	Ba455b	em	146.4			
	rep	1	Ag328a	em	52.3			
	rep	1	Na589b	em	219.5			
	rep	1	K766b	em	1026.0			
	rep	1	Cd214a	em	-1.5		window edge	
	rep	1	Be313a	em	540.0		window edge	
	rep	2	Cr205a	em	25.6			
	rep	2	Sn189b	em	34.7			
	rep	2	Zn213a	em	17.4			
	rep	2	Co228a	em	3.6		window edge	
	rep	2	Ni231a	em	-10.2		window edge	
	rep	2	Sb206b	em	43.5			
	rep	2	Mn257a	em	17.3			
	rep	2	Mg279b	em	529.1			
	rep	2	Fe259a	em	242.8			
	rep	2	Al308b	em	1690.4			
	rep	2	V292a	em	28.8			
	rep	2	Ca317b	em	168.2			
	rep	2	Cu324b	em	111.5			
	rep	2	Ag328a	em	110.7			
	rep	2	Ba455b	em	145.1			
	rep	2	Na589b	em	217.7			
	rep	2	Cd214a	em	-13.5		window edge	
	rep	2	Be313a	em	539.3		window edge	
	rep	2	K766b	em	1016.5			

blank								
Cr205a	av	29	sd	4.1	%CV	14.31		

Sn189b	av	26	sd	12.3 %CV	47.41
Zn213a	av	11	sd	8.9 %CV	79.87
Co228a	av	15	sd	16.6 %CV	108.33
Ni231a	av	38	sd	67.7 %CV	179.63
Sb206b	av	30	sd	19.0 %CV	63.16
Mn257a	av	19	sd	2.2 %CV	11.50
Mg279b	av	530	sd	1.6 %CV	0.31
Fe259a	av	242	sd	1.4 %CV	0.59
Al308b	av	1680	sd	15.3 %CV	0.91
V292a	av	39	sd	13.9 %CV	35.99
Ca317b	av	169	sd	1.4 %CV	0.80
Cu324b	av	96	sd	21.9 %CV	22.79
Ag328a	av	81	sd	41.3 %CV	50.72
Ba455b	av	146	sd	0.9 %CV	0.65
Na589b	av	219	sd	1.3 %CV	0.59
Cd214a	av	-8	sd	8.5 %CV	113.24
Be313a	av	540	sd	0.5 %CV	0.10
K766b	av	1021	sd	6.8 %CV	0.66

ICV1 0487	rep	1	Mg279b	conc	25774 ppb
	rep	1	Al308b	conc	1957 ppb
	rep	1	Ca317b	conc	51541 ppb
	rep	1	Cr205a	conc	514 ppb
	rep	1	Cu324b	conc	552 ppb
	rep	1	Zn213a	conc	3070 ppb
	rep	1	Ba455b	conc	2053 ppb
	rep	1	Co228a	conc	520 ppb
	rep	1	Na589b	conc	51278 ppb
	rep	1	Ni231a	conc	475 ppb
	rep	1	Mn257a	conc	533 ppb
	rep	1	Fe259a	conc	2025 ppb
	rep	1	K766b	conc	47948 ppb
	rep	1	V292a	conc	529 ppb
	rep	1	Ag328a	conc	502 ppb
	rep	1	Cd214a	conc	517 ppb
	rep	1	Be313a	conc	521 ppb
	rep	2	Mg279b	conc	25685 ppb
	rep	2	Al308b	conc	2005 ppb
	rep	2	Ca317b	conc	51222 ppb
	rep	2	Cr205a	conc	522 ppb
	rep	2	Cu324b	conc	556 ppb
	rep	2	Zn213a	conc	3095 ppb
	rep	2	Ba455b	conc	2028 ppb
	rep	2	Co228a	conc	520 ppb
	rep	2	Na589b	conc	51118 ppb
	rep	2	Ni231a	conc	484 ppb
	rep	2	Mn257a	conc	531 ppb
	rep	2	Fe259a	conc	2043 ppb
	rep	2	K766b	conc	48728 ppb
	rep	2	V292a	conc	536 ppb
	rep	2	Ag328a	conc	504 ppb
	rep	2	Cd214a	conc	529 ppb
	rep	2	Be313a	conc	524 ppb

ICV1 0487					
Mg279b	av	25730 ppb	sd	62.7 %CV	0.24
Al308b	av	1981 ppb	sd	33.8 %CV	1.71
Ca317b	av	51381 ppb	sd	226.0 %CV	0.44
Cr205a	av	518 ppb	sd	5.6 %CV	1.08
Cu324b	av	554 ppb	sd	3.3 %CV	0.59
Zn213a	av	3082 ppb	sd	17.3 %CV	0.56

Ba455b	av		2040 ppb	sd	17.6 %cv	0.86	
Co228a	av		520 ppb	sd	0.0 %cv	0.01	
Na589b	av		51198 ppb	sd	112.8 %cv	0.22	
Ni231a	av		479 ppb	sd	6.4 %cv	1.33	
Mn257a	av		532 ppb	sd	1.0 %cv	0.18	
Fe259a	av		2034 ppb	sd	13.0 %cv	0.64	
K766b	av		48338 ppb	sd	551.7 %cv	1.14	
V292a	av		533 ppb	sd	5.1 %cv	0.95	
Ag328a	av		503 ppb	sd	1.2 %cv	0.23	
Cd214a	av		523 ppb	sd	8.5 %cv	1.63	
Be313a	av		522 ppb	sd	2.1 %cv	0.41	
ICV3	rep	1	Sb206b	conc	1018 ppb		
	rep	2	Sb206b	conc	1059 ppb		
ICV3							
Sb206b	av		1038 ppb	sd	29.2 %cv	2.81	
ICV CAS	rep	1	Sn189b	conc	1071 ppb		
	rep	2	Sn189b	conc	1110 ppb		
ICV CAS							
Sn189b	av		1091 ppb	sd	27.6 %cv	2.53	
ICB	rep	1	Sn189b	conc	-20 ppb		
	rep	1	Cr205a	conc	-5 ppb		window edge
	rep	1	Zn213a	conc	-5 ppb		
	rep	1	Co228a	conc	13 ppb		
	rep	1	Sb206b	conc	-35 ppb		window edge
	rep	1	Ni231a	conc	-9 ppb		
	rep	1	Mg279b	conc	24 ppb		
	rep	1	Mn257a	conc	0 ppb		
	rep	1	Al308b	conc	18 ppb		
	rep	1	Fe259a	conc	-3 ppb		
	rep	1	Ca317b	conc	-3 ppb		
	rep	1	V292a	conc	5 ppb		
	rep	1	Cu324b	conc	-5 ppb		
	rep	1	Ag328a	conc	-4 ppb		
	rep	1	Ba455b	conc	0 ppb		
	rep	1	Na589b	conc	10 ppb		
	rep	1	Cd214a	conc	5 ppb		
	rep	1	K766b	conc	133 ppb		
	rep	1	Be313a	conc	-0 ppb		window edge
	rep	2	Cr205a	conc	-8 ppb		
	rep	2	Sn189b	conc	-14 ppb		
	rep	2	Zn213a	conc	2 ppb		
	rep	2	Co228a	conc	13 ppb		
	rep	2	Ni231a	conc	5 ppb		
	rep	2	Sb206b	conc	-24 ppb		
	rep	2	Mn257a	conc	0 ppb		
	rep	2	Mg279b	conc	-13 ppb		
	rep	2	Fe259a	conc	-6 ppb		
	rep	2	Al308b	conc	21 ppb		
	rep	2	V292a	conc	-4 ppb		
	rep	2	Ca317b	conc	-1 ppb		
	rep	2	Cu324b	conc	-4 ppb		
	rep	2	Ag328a	conc	-11 ppb		window edge
	rep	2	Ba455b	conc	0 ppb		
	rep	2	Na589b	conc	-10 ppb		
	rep	2	Cd214a	conc	3 ppb		
	rep	2	K766b	conc	68 ppb		
	rep	2	Be313a	conc	-0 ppb		window edge

ICB

Cr205a	av	-6 ppb	sd	1.8 %cv	28.31
Sn189b	av	-17 ppb	sd	4.2 %cv	24.55
Zn213a	av	-1 ppb	sd	5.1 %cv	341.58
Co228a	av	13 ppb	sd	0.0 %cv	0.10
Ni231a	av	-2 ppb	sd	10.2 %cv	570.94
Sb206b	av	-29 ppb	sd	7.5 %cv	25.57
Mn257a	av	0 ppb	sd	0.1 %cv	42.57
Mg279b	av	6 ppb	sd	26.7 %cv	477.62
Fe259a	av	-4 ppb	sd	1.5 %cv	33.43
Al308b	av	20 ppb	sd	2.2 %cv	11.10
V292a	av	0 ppb	sd	6.5 %cv	5564.1
Ca317b	av	-2 ppb	sd	1.7 %cv	76.21
Cu324b	av	-4 ppb	sd	0.2 %cv	5.43
Ag328a	av	-7 ppb	sd	5.2 %cv	69.55
Ba455b	av	0 ppb	sd	0.0 %cv	7.94
Na589b	av	0 ppb	sd	13.9 %cv	15087.
Cd214a	av	4 ppb	sd	1.3 %cv	28.87
K766b	av	100 ppb	sd	46.0 %cv	46.00
Be313a	av	-0 ppb	sd	0.0 %cv	6.48

X2CRDL	rep	1	Cr205a	conc	12 ppb
	rep	1	Sn189b	conc	62 ppb
	rep	1	Zn213a	conc	42 ppb
	rep	1	Pb220a	em	151.7
	rep	1	Co228a	conc	112 ppb
	rep	1	Sb206b	conc	136 ppb
	rep	1	Ni231a	conc	95 ppb
	rep	1	Cu324b	conc	46 ppb
	rep	1	Mn257a	conc	29 ppb
	rep	1	V292a	conc	108 ppb
	rep	1	Ag328a	conc	14 ppb
	rep	1	Cd214a	conc	18 ppb
	rep	1	Be313a	conc	10 ppb
	rep	2	Sn189b	conc	36 ppb
	rep	2	Cr205a	conc	22 ppb
	rep	2	Zn213a	conc	43 ppb
	rep	2	Pb220a	em	194.8
	rep	2	Sb206b	conc	87 ppb
	rep	2	Co228a	conc	114 ppb
	rep	2	Cu324b	conc	49 ppb
	rep	2	Ni231a	conc	81 ppb
	rep	2	Mn257a	conc	29 ppb
	rep	2	V292a	conc	98 ppb
	rep	2	Ag328a	conc	17 ppb
	rep	2	Cd214a	conc	13 ppb
	rep	2	Be313a	conc	10 ppb

X2CRDL

Sn189b	av	49 ppb	sd	18.2 %cv	36.95
Cr205a	av	17 ppb	sd	6.5 %cv	38.14
Zn213a	av	43 ppb	sd	0.3 %cv	0.69
Pb220a	av	173.27	sd	30.482 %cv	17.59
Sb206b	av	111 ppb	sd	34.7 %cv	31.24
Co228a	av	113 ppb	sd	1.3 %cv	1.18
Cu324b	av	47 ppb	sd	2.2 %cv	4.62
Ni231a	av	88 ppb	sd	10.2 %cv	11.57
Mn257a	av	29 ppb	sd	0.3 %cv	0.91
V292a	av	103 ppb	sd	7.2 %cv	7.00
Ag328a	av	15 ppb	sd	2.0 %cv	12.36
Cd214a	av	15 ppb	sd	3.6 %cv	23.56

	av	10 ppb	sd	0.2 %cv	2.46
ICS 0387	rep	1	Sn189b	conc	9 ppb
	rep	1	Cr205a	conc	515 ppb
	rep	1	Zn213a	conc	954 ppb
	rep	1	Co228a	conc	488 ppb
	rep	1	Sb206b	conc	-30 ppb
	rep	1	Ni231a	conc	877 ppb
	rep	1	Mg279b	conc	467842 ppb
	rep	1	Mn257a	conc	539 ppb
	rep	1	Al308b	conc	520143 ppb
	rep	1	Fe259a	conc	185835 ppb
	rep	1	Ca317b	conc	473512 ppb
	rep	1	V292a	conc	451 ppb
	rep	1	Cu324b	conc	510 ppb
	rep	1	Ba455b	conc	471 ppb
	rep	1	Ag328a	conc	124 ppb
	rep	1	Na589b	conc	444 ppb
	rep	1	K766b	conc	-97 ppb
	rep	1	Cd214a	conc	930 ppb
	rep	1	Be313a	conc	476 ppb
	rep	2	Cr205a	conc	517 ppb
	rep	2	Sn189b	conc	-27 ppb
	rep	2	Zn213a	conc	965 ppb
	rep	2	Co228a	conc	499 ppb
	rep	2	Ni231a	conc	883 ppb
	rep	2	Sb206b	conc	-6 ppb
	rep	2	Mn257a	conc	539 ppb
	rep	2	Mg279b	conc	477487 ppb
	rep	2	Fe259a	conc	190522 ppb
	rep	2	Al308b	conc	528444 ppb
	rep	2	V292a	conc	461 ppb
	rep	2	Ca317b	conc	481319 ppb
	rep	2	Cu324b	conc	511 ppb
	rep	2	Ag328a	conc	127 ppb
	rep	2	Ba455b	conc	471 ppb
	rep	2	Na589b	conc	427 ppb
	rep	2	Cd214a	conc	924 ppb
	rep	2	Be313a	conc	475 ppb
	rep	2	K766b	conc	158 ppb

window edge

ICS 0387	av		sd	%cv	
Cr205a	av	516 ppb	sd	1.3 %cv	0.25
Sn189b	av	-9 ppb	sd	25.2 %cv	285.37
Zn213a	av	960 ppb	sd	7.9 %cv	0.82
Co228a	av	494 ppb	sd	7.8 %cv	1.58
Ni231a	av	880 ppb	sd	3.8 %cv	0.44
Sb206b	av	-18 ppb	sd	17.2 %cv	96.55
Mn257a	av	539 ppb	sd	0.1 %cv	0.03
Mg279b	av	472665 ppb	sd	6820.4 %cv	1.44
Fe259a	av	188178 ppb	sd	3314.3 %cv	1.76
Al308b	av	524293 ppb	sd	5869.2 %cv	1.12
V292a	av	456 ppb	sd	7.3 %cv	1.60
Ca317b	av	477415 ppb	sd	5520.4 %cv	1.16
Cu324b	av	511 ppb	sd	0.4 %cv	0.09
Ag328a	av	126 ppb	sd	2.1 %cv	1.63
Ba455b	av	471 ppb	sd	0.4 %cv	0.08
Na589b	av	436 ppb	sd	12.2 %cv	2.80
Cd214a	av	927 ppb	sd	4.0 %cv	0.43
Be313a	av	475 ppb	sd	0.4 %cv	0.09
K766b	av	30 ppb	sd	180.3 %cv	599.96

rinse	rep	1	ara	conc	0.989		
	rep	1	arb	conc	1.010		
	rep	2	ara	conc	1.004		
	rep	2	arb	conc	0.983		
rinse							
ara	av		0.997	sd	0.0107	%cv	1.07
arb	av		0.996	sd	0.0189	%cv	1.90

CCV1	rep	1	Sn189b	conc	2585	ppb	
	rep	1	Cr205a	conc	1001	ppb	
	rep	1	Zn213a	conc	2477	ppb	
	rep	1	Co228a	conc	2509	ppb	
	rep	1	Sb206b	conc	965	ppb	
	rep	1	Ni231a	conc	2441	ppb	
	rep	1	Mg279b	conc	49195	ppb	
	rep	1	Mn257a	conc	2479	ppb	
	rep	1	Al308b	conc	9801	ppb	
	rep	1	Fe259a	conc	9960	ppb	
	rep	1	Ca317b	conc	49839	ppb	
	rep	1	V292a	conc	2420	ppb	
	rep	1	Cu324b	conc	2486	ppb	
	rep	1	Ba455b	conc	2446	ppb	
	rep	1	Ag328a	conc	961	ppb	
	rep	1	Na589b	conc	49813	ppb	
	rep	1	K766b	conc	48162	ppb	
	rep	1	Cd214a	conc	1046	ppb	
	rep	1	Be313a	conc	992	ppb	
	rep	1	arb	conc	1.019		
	rep	1	ara	conc	0.990		
	rep	2	Sn189b	conc	2539	ppb	
	rep	2	Cr205a	conc	998	ppb	
	rep	2	Zn213a	conc	2536	ppb	
	rep	2	Co228a	conc	2513	ppb	
	rep	2	Sb206b	conc	991	ppb	
	rep	2	Ni231a	conc	2457	ppb	
	rep	2	Mg279b	conc	48852	ppb	
	rep	2	Mn257a	conc	2473	ppb	
	rep	2	Fe259a	conc	9932	ppb	
	rep	2	Al308b	conc	9801	ppb	
	rep	2	Ca317b	conc	49775	ppb	
	rep	2	V292a	conc	2477	ppb	
	rep	2	Cu324b	conc	2511	ppb	
	rep	2	Ba455b	conc	2458	ppb	
	rep	2	Ag328a	conc	953	ppb	
	rep	2	Na589b	conc	48557	ppb	
	rep	2	K766b	conc	48588	ppb	
	rep	2	Cd214a	conc	1016	ppb	
	rep	2	Be313a	conc	1005	ppb	
	rep	2	arb	conc	0.968		
	rep	2	ara	conc	0.986		

CCV1							
Sn189b	av		2562	ppb	sd	32.9	%cv 1.28
Cr205a	av		1000	ppb	sd	2.2	%cv 0.22
Zn213a	av		2507	ppb	sd	41.8	%cv 1.67
Co228a	av		2511	ppb	sd	3.3	%cv 0.13
Sb206b	av		978	ppb	sd	18.2	%cv 1.86
Ni231a	av		2449	ppb	sd	11.1	%cv 0.45
Mg279b	av		49023	ppb	sd	242.7	%cv 0.50
Mn257a	av		2476	ppb	sd	3.8	%cv 0.15

Fe259a	av	9946 ppb	sd	19.7 %cv	0.20
Al308b	av	9801 ppb	sd	0.1 %cv	0.00
Ca317b	av	49807 ppb	sd	44.6 %cv	0.09
V292a	av	2448 ppb	sd	40.5 %cv	1.65
Cu324b	av	2498 ppb	sd	17.9 %cv	0.72
Ba455b	av	2452 ppb	sd	8.2 %cv	0.33
Ag328a	av	957 ppb	sd	5.7 %cv	0.60
Na589b	av	49185 ppb	sd	887.6 %cv	1.80
K766b	av	48375 ppb	sd	301.8 %cv	0.62
Cd214a	av	1031 ppb	sd	21.3 %cv	2.06
Be313a	av	999 ppb	sd	9.0 %cv	0.90
arb	av	0.993	sd	0.0366 %cv	3.68
ara	av	0.988	sd	0.0026 %cv	0.26

CCB1	rep	1	Sn189b	conc	5 ppb	
	rep	1	Cr205a	conc	-1 ppb	
	rep	1	Zn213a	conc	-1 ppb	
	rep	1	Co228a	conc	7 ppb	
	rep	1	Sb206b	conc	-35 ppb	window edge
	rep	1	Ni231a	conc	-5 ppb	window edge
	rep	1	Mg279b	conc	-55 ppb	window edge
	rep	1	Mn257a	conc	-2 ppb	
	rep	1	Al308b	conc	3 ppb	
	rep	1	Fe259a	conc	-26 ppb	window edge
	rep	1	Ca317b	conc	-23 ppb	
	rep	1	V292a	conc	-4 ppb	window edge
	rep	1	Cu324b	conc	-9 ppb	window edge
	rep	1	Ba455b	conc	-1 ppb	
	rep	1	Ag328a	conc	-9 ppb	window edge
	rep	1	Na589b	conc	-71 ppb	window edge
	rep	1	K766b	conc	119 ppb	
	rep	1	Cd214a	conc	2 ppb	
	rep	1	Be313a	conc	-0 ppb	window edge
	rep	2	Cr205a	conc	-3 ppb	
	rep	2	Sn189b	conc	-5 ppb	
	rep	2	Zn213a	conc	-1 ppb	window edge
	rep	2	Co228a	conc	19 ppb	
	rep	2	Ni231a	conc	-3 ppb	
	rep	2	Sb206b	conc	-49 ppb	window edge
	rep	2	Mn257a	conc	-2 ppb	
	rep	2	Mg279b	conc	-36 ppb	
	rep	2	Fe259a	conc	-23 ppb	
	rep	2	Al308b	conc	-6 ppb	
	rep	2	V292a	conc	2 ppb	
	rep	2	Ca317b	conc	-26 ppb	
	rep	2	Cu324b	conc	-6 ppb	
	rep	2	Ag328a	conc	-3 ppb	
	rep	2	Ba455b	conc	-1 ppb	window edge
	rep	2	Na589b	conc	-19 ppb	
	rep	2	Cd214a	conc	2 ppb	window edge
	rep	2	K766b	conc	103 ppb	
	rep	2	Be313a	conc	-1 ppb	window edge

CCB1	av	-2 ppb	sd	1.5 %cv	89.35
Cr205a	av	0 ppb	sd	7.2 %cv	2971.6
Sn189b	av	-1 ppb	sd	0.4 %cv	43.61
Zn213a	av	13 ppb	sd	8.5 %cv	66.64
Co228a	av	-4 ppb	sd	1.3 %cv	32.62
Ni231a	av	-42 ppb	sd	10.0 %cv	23.54
Sb206b	av	-2 ppb	sd	0.2 %cv	12.74
Mn257a	av				

Mg279b	av	-45 ppb	sd	13.2 %CV	28.96
Fe259a	av	-24 ppb	sd	1.7 %CV	7.10
Al308b	av	-2 ppb	sd	6.2 %CV	357.96
V292a	av	-1 ppb	sd	4.5 %CV	367.65
Ca317b	av	-25 ppb	sd	1.6 %CV	6.71
Cu324b	av	-7 ppb	sd	2.2 %CV	30.83
Ag328a	av	-6 ppb	sd	4.4 %CV	75.04
Ba455b	av	-1 ppb	sd	0.2 %CV	15.22
Na589b	av	-45 ppb	sd	36.8 %CV	82.54
Cd214a	av	2 ppb	sd	0.3 %CV	15.32
K766b	av	111 ppb	sd	11.6 %CV	10.47
Be313a	av	-0 ppb	sd	0.2 %CV	36.90

LCS 8129	rep	1	Cr205a	conc	369 ppb
	rep	1	Sn189b	conc	951 ppb
	rep	1	Zn213a	conc	978 ppb
	rep	1	Co228a	conc	963 ppb
	rep	1	Ni231a	conc	949 ppb
	rep	1	Sb206b	conc	377 ppb
	rep	1	Mn257a	conc	960 ppb
	rep	1	Mg279b	conc	19301 ppb
	rep	1	Fe259a	conc	3891 ppb
	rep	1	Al308b	conc	3811 ppb
	rep	1	V292a	conc	944 ppb
	rep	1	Ca317b	conc	19102 ppb
	rep	1	Cu324b	conc	992 ppb
	rep	1	Ag328a	conc	367 ppb
	rep	1	Ba455b	conc	971 ppb
	rep	1	Na589b	conc	19037 ppb
	rep	1	Cd214a	conc	401 ppb
	rep	1	K766b	conc	18840 ppb
	rep	1	Be313a	conc	398 ppb
	rep	2	Cr205a	conc	391 ppb
	rep	2	Sn189b	conc	991 ppb
	rep	2	Zn213a	conc	997 ppb
	rep	2	Co228a	conc	1018 ppb
	rep	2	Ni231a	conc	982 ppb
	rep	2	Sb206b	conc	340 ppb
	rep	2	Mn257a	conc	974 ppb
	rep	2	Mg279b	conc	19911 ppb
	rep	2	Fe259a	conc	3974 ppb
	rep	2	Al308b	conc	3879 ppb
	rep	2	V292a	conc	942 ppb
	rep	2	Ca317b	conc	19549 ppb
	rep	2	Cu324b	conc	1022 ppb
	rep	2	Ag328a	conc	369 ppb
	rep	2	Ba455b	conc	988 ppb
	rep	2	Na589b	conc	19705 ppb
	rep	2	Cd214a	conc	412 ppb
	rep	2	Be313a	conc	408 ppb
	rep	2	K766b	conc	18857 ppb

LCS 8129	av	380 ppb	sd	15.2 %CV	4.01
Cr205a	av	971 ppb	sd	27.7 %CV	2.86
Sn189b	av	987 ppb	sd	13.8 %CV	1.40
Zn213a	av	991 ppb	sd	38.7 %CV	3.91
Co228a	av	966 ppb	sd	23.8 %CV	2.46
Ni231a	av	358 ppb	sd	26.2 %CV	7.32
Sb206b	av	967 ppb	sd	9.7 %CV	1.00
Mn257a	av	19606 ppb	sd	431.2 %CV	2.20
Mg279b	av				

Fe259a	av	3932	ppb	sd	59.0	%cv	1.50
Al308b	av	3845	ppb	sd	48.1	%cv	1.25
V292a	av	943	ppb	sd	1.2	%cv	0.13
Ca317b	av	19326	ppb	sd	316.5	%cv	1.64
Cu324b	av	1007	ppb	sd	20.8	%cv	2.06
Ag328a	av	368	ppb	sd	1.3	%cv	0.35
Ba455b	av	979	ppb	sd	11.8	%cv	1.20
Na589b	av	19371	ppb	sd	472.8	%cv	2.44
Cd214a	av	407	ppb	sd	7.5	%cv	1.85
Be313a	av	403	ppb	sd	7.0	%cv	1.74
K766b	av	18848	ppb	sd	12.0	%cv	0.06

PB 8129

rep	1	Cr205a	conc	-9	ppb	
rep	1	Sn189b	conc	-27	ppb	window edge
rep	1	Zn213a	conc	0	ppb	window edge
rep	1	Co228a	conc	6	ppb	
rep	1	Ni231a	conc	3	ppb	
rep	1	Sb206b	conc	-13	ppb	
rep	1	Mg279b	conc	-9	ppb	
rep	1	Mn257a	conc	-0	ppb	
rep	1	Fe259a	conc	-7	ppb	
rep	1	Al308b	conc	24	ppb	
rep	1	V292a	conc	-9	ppb	window edge
rep	1	Ca317b	conc	-23	ppb	
rep	1	Cu324b	conc	-5	ppb	
rep	1	Ag328a	conc	-8	ppb	window edge
rep	1	Ba455b	conc	1	ppb	
rep	1	Na589b	conc	22	ppb	
rep	1	Cd214a	conc	3	ppb	
rep	1	Be313a	conc	-0	ppb	window edge
rep	1	K766b	conc	203	ppb	
rep	2	Cr205a	conc	-7	ppb	
rep	2	Sn189b	conc	-17	ppb	
rep	2	Zn213a	conc	6	ppb	
rep	2	Co228a	conc	11	ppb	
rep	2	Ni231a	conc	-7	ppb	window edge
rep	2	Sb206b	conc	-18	ppb	
rep	2	Mn257a	conc	-1	ppb	
rep	2	Mg279b	conc	15	ppb	
rep	2	Fe259a	conc	-2	ppb	
rep	2	Al308b	conc	19	ppb	
rep	2	V292a	conc	-6	ppb	window edge
rep	2	Ca317b	conc	-16	ppb	
rep	2	Cu324b	conc	-2	ppb	
rep	2	Ag328a	conc	-5	ppb	
rep	2	Ba455b	conc	1	ppb	
rep	2	Na589b	conc	-23	ppb	
rep	2	Cd214a	conc	2	ppb	window edge
rep	2	Be313a	conc	-0	ppb	window edge
rep	2	K766b	conc	277	ppb	

F=0.500

PB 8129

Cr205a	av	-8	ppb	sd	1.3	%cv	16.89
Sn189b	av	-22	ppb	sd	6.7	%cv	30.22
Zn213a	av	3	ppb	sd	4.0	%cv	122.57
Co228a	av	8	ppb	sd	3.3	%cv	40.08
Ni231a	av	-2	ppb	sd	7.1	%cv	362.45
Sb206b	av	-15	ppb	sd	3.2	%cv	20.69
Mn257a	av	-1	ppb	sd	0.5	%cv	61.83
Mg279b	av	3	ppb	sd	16.7	%cv	527.32
Fe259a	av	-5	ppb	sd	3.7	%cv	77.93

Al308b	av	21 ppb	sd	3.1 %cv	14.44
V292a	av	-7 ppb	sd	2.1 %cv	28.96
Ca317b	av	-19 ppb	sd	4.4 %cv	22.80
Cu324b	av	-4 ppb	sd	2.0 %cv	54.82
Ag328a	av	-6 ppb	sd	2.6 %cv	40.48
Ba455b	av	1 ppb	sd	0.1 %cv	7.82
Na589b	av	-0 ppb	sd	32.5 %cv	7006.5
Cd214a	av	3 ppb	sd	0.7 %cv	25.44
Be313a	av	-0 ppb	sd	0.1 %cv	19.17
K766b	av	240 ppb	sd	52.1 %cv	21.73

67117/MAF427	rep	1	Cr205a	conc	52 ppb	
	rep	1	Sn189b	conc	-6 ppb	
	rep	1	Zn213a	conc	357 ppb	
	rep	1	Co228a	conc	15 ppb	
	rep	1	Ni231a	conc	62 ppb	
	rep	1	Sb206b	conc	-13 ppb	
	rep	1	Mn257a	conc	505 ppb	
	rep	1	Mg279b	conc	6856 ppb	
	rep	1	Fe259a	conc	88560 ppb	
	rep	1	Al308b	conc	9430 ppb	
	rep	1	V292a	conc	13 ppb	
	rep	1	Ca317b	conc	3909 ppb	
	rep	1	Cu324b	conc	106 ppb	
	rep	1	Ag328a	conc	-9 ppb	window edge
	rep	1	Ba455b	conc	84 ppb	
	rep	1	Na589b	conc	136 ppb	
	rep	1	Cd214a	conc	6 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	1	K766b	conc	1821 ppb	
	rep	2	Cr205a	conc	52 ppb	
	rep	2	Sn189b	conc	-16 ppb	
	rep	2	Zn213a	conc	345 ppb	
	rep	2	Co228a	conc	15 ppb	
	rep	2	Ni231a	conc	65 ppb	
	rep	2	Sb206b	conc	10 ppb	
	rep	2	Mn257a	conc	505 ppb	
	rep	2	Mg279b	conc	6972 ppb	
	rep	2	Fe259a	conc	90515 ppb	
	rep	2	Al308b	conc	9503 ppb	
	rep	2	V292a	conc	8 ppb	
	rep	2	Ca317b	conc	4103 ppb	
	rep	2	Cu324b	conc	107 ppb	
	rep	2	Ag328a	conc	-5 ppb	window edge
	rep	2	Ba455b	conc	85 ppb	
	rep	2	Na589b	conc	170 ppb	
	rep	2	Cd214a	conc	10 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	1830 ppb	

F=0.448

67117/MAF427	av	52 ppb	sd	0.1 %cv	0.24
Cr205a	av	-11 ppb	sd	6.9 %cv	62.78
Sn189b	av	351 ppb	sd	8.4 %cv	2.40
Zn213a	av	15 ppb	sd	0.0 %cv	0.23
Co228a	av	64 ppb	sd	2.4 %cv	3.75
Ni231a	av	-1 ppb	sd	16.2 %cv	1294.7
Sb206b	av	505 ppb	sd	0.1 %cv	0.02
Mn257a	av	6914 ppb	sd	81.7 %cv	1.18
Mg279b	av	89537 ppb	sd	1381.9 %cv	1.54
Fe259a	av	9466 ppb	sd	51.6 %cv	0.55
Al308b	av				

V292a	av	11 ppb	sd	3.3 %cv	30.91
Ca317b	av	4006 ppb	sd	136.8 %cv	3.41
Cu324b	av	107 ppb	sd	1.0 %cv	0.93
Ag328a	av	-7 ppb	sd	2.5 %cv	35.79
Ba455b	av	84 ppb	sd	0.3 %cv	0.38
Na589b	av	153 ppb	sd	24.4 %cv	15.94
Cd214a	av	8 ppb	sd	2.6 %cv	31.87
Be313a	av	0 ppb	sd	0.1 %cv	32.35
K766b	av	1826 ppb	sd	6.8 %cv	0.37

67117 DUP	rep	1	Cr205a	conc	33 ppb	
	rep	1	Sn189b	conc	9 ppb	
	rep	1	Zn213a	conc	281 ppb	
	rep	1	Co228a	conc	19 ppb	
	rep	1	Ni231a	conc	68 ppb	
	rep	1	Sb206b	conc	-8 ppb	
	rep	1	Mn257a	conc	386 ppb	
	rep	1	Mg279b	conc	6992 ppb	
	rep	1	Fe259a	conc	68025 ppb	
	rep	1	Al308b	conc	11419 ppb	
	rep	1	V292a	conc	25 ppb	
	rep	1	Ca317b	conc	3767 ppb	
	rep	1	Cu324b	conc	104 ppb	
	rep	1	Ag328a	conc	-7 ppb	
	rep	1	Ba455b	conc	79 ppb	
	rep	1	Na589b	conc	216 ppb	
	rep	1	Cd214a	conc	9 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	1	K766b	conc	2468 ppb	
	rep	2	Cr205a	conc	42 ppb	
	rep	2	Sn189b	conc	-16 ppb	
	rep	2	Zn213a	conc	283 ppb	
	rep	2	Co228a	conc	24 ppb	
	rep	2	Ni231a	conc	49 ppb	
	rep	2	Sb206b	conc	-10 ppb	
	rep	2	Mn257a	conc	385 ppb	
	rep	2	Mg279b	conc	7015 ppb	
	rep	2	Fe259a	conc	68542 ppb	
	rep	2	Al308b	conc	11468 ppb	
	rep	2	V292a	conc	24 ppb	
	rep	2	Ca317b	conc	3752 ppb	
	rep	2	Cu324b	conc	105 ppb	
	rep	2	Ag328a	conc	1 ppb	
	rep	2	Ba455b	conc	79 ppb	
	rep	2	Na589b	conc	229 ppb	
	rep	2	Cd214a	conc	5 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	2416 ppb	

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67117 DUP	av	38 ppb	sd	5.9 %cv	15.40
Cr205a	av	-4 ppb	sd	17.7 %cv	456.42
Sn189b	av	282 ppb	sd	1.9 %cv	0.68
Zn213a	av	21 ppb	sd	3.7 %cv	17.30
Co228a	av	59 ppb	sd	13.9 %cv	23.49
Ni231a	av	-9 ppb	sd	1.2 %cv	13.92
Sb206b	av	386 ppb	sd	0.1 %cv	0.04
Mn257a	av	7004 ppb	sd	16.3 %cv	0.23
Mg279b	av	68283 ppb	sd	365.6 %cv	0.54
Fe259a	av	11444 ppb	sd	34.7 %cv	0.30
Al308b	av	25 ppb	sd	0.9 %cv	3.35
V292a	av		sd		

Ca317b	av	3760 ppb	sd	10.7 %cv	0.29
Cu324b	av	104 ppb	sd	0.5 %cv	0.49
Ag328a	av	-3 ppb	sd	5.2 %cv	170.78
Ba455b	av	79 ppb	sd	0.0 %cv	0.04
Na589b	av	222 ppb	sd	9.9 %cv	4.44
Cd214a	av	7 ppb	sd	3.2 %cv	45.77
Be313a	av	0 ppb	sd	0.1 %cv	67.75
K766b	av	2442 ppb	sd	36.8 %cv	1.51

67117 SPK	rep	1	Cr205a	conc	269 ppb
	rep	1	Sn189b	conc	583 ppb
	rep	1	Zn213a	conc	893 ppb
	rep	1	Co228a	conc	553 ppb
	rep	1	Ni231a	conc	572 ppb
	rep	1	Sb206b	conc	416 ppb
	rep	1	Mn257a	conc	924 ppb
	rep	1	Mg279b	conc	7958 ppb
	rep	1	Fe259a	conc	60812 ppb
	rep	1	Al308b	conc	10641 ppb
	rep	1	V292a	conc	568 ppb
	rep	1	Ca317b	conc	5303 ppb
	rep	1	Cu324b	conc	379 ppb
	rep	1	Ag328a	conc	42 ppb
	rep	1	Ba455b	conc	2225 ppb
	rep	1	Na589b	conc	223 ppb
	rep	1	Cd214a	conc	54 ppb
	rep	1	Be313a	conc	54 ppb
	rep	1	K766b	conc	2558 ppb
	rep	2	Cr205a	conc	256 ppb
	rep	2	Sn189b	conc	570 ppb
	rep	2	Zn213a	conc	897 ppb
	rep	2	Co228a	conc	553 ppb
	rep	2	Ni231a	conc	562 ppb
	rep	2	Sb206b	conc	423 ppb
	rep	2	Mg279b	conc	7944 ppb
	rep	2	Mn257a	conc	917 ppb
	rep	2	Fe259a	conc	59542 ppb
	rep	2	Al308b	conc	10570 ppb
	rep	2	V292a	conc	553 ppb
	rep	2	Ca317b	conc	5249 ppb
	rep	2	Cu324b	conc	384 ppb
	rep	2	Ag328a	conc	45 ppb
	rep	2	Ba455b	conc	2231 ppb
	rep	2	Na589b	conc	232 ppb
	rep	2	Cd214a	conc	57 ppb
	rep	2	K766b	conc	2649 ppb
	rep	2	Be313a	conc	54 ppb

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67117 SPK	av	Cr205a	262 ppb	sd	9.4 %cv	3.58
	av	Sn189b	577 ppb	sd	9.4 %cv	1.63
	av	Zn213a	895 ppb	sd	2.5 %cv	0.28
	av	Co228a	553 ppb	sd	0.2 %cv	0.04
	av	Ni231a	567 ppb	sd	6.9 %cv	1.22
	av	Sb206b	419 ppb	sd	5.3 %cv	1.27
	av	Mg279b	7951 ppb	sd	10.1 %cv	0.13
	av	Mn257a	921 ppb	sd	4.8 %cv	0.52
	av	Fe259a	60177 ppb	sd	898.5 %cv	1.49
	av	Al308b	10605 ppb	sd	50.6 %cv	0.48
	av	V292a	560 ppb	sd	10.4 %cv	1.86
	av	Ca317b	5276 ppb	sd	38.0 %cv	0.72

Cu324b	av	382 ppb	sd	3.5 %cv	0.91
Ag328a	av	44 ppb	sd	2.5 %cv	5.68
Ba455b	av	2228 ppb	sd	3.9 %cv	0.18
Na589b	av	227 ppb	sd	6.4 %cv	2.82
Cd214a	av	55 ppb	sd	1.9 %cv	3.38
K766b	av	2603 ppb	sd	64.1 %cv	2.46
Be313a	av	54 ppb	sd	0.4 %cv	0.74

67117 SDC	rep	1	Cr205a	conc	6 ppb	
	rep	1	Sn189b	conc	-47 ppb	
	rep	1	Zn213a	conc	75 ppb	
	rep	1	Co228a	conc	5 ppb	
	rep	1	Ni231a	conc	21 ppb	
	rep	1	Sb206b	conc	3 ppb	
	rep	1	Mn257a	conc	95 ppb	
	rep	1	Mg279b	conc	1360 ppb	
	rep	1	Fe259a	conc	17273 ppb	
	rep	1	Al308b	conc	1759 ppb	
	rep	1	V292a	conc	-4 ppb	window edge
	rep	1	Ca317b	conc	744 ppb	
	rep	1	Cu324b	conc	21 ppb	
	rep	1	Ag328a	conc	-4 ppb	window edge
	rep	1	Ba455b	conc	16 ppb	
	rep	1	Na589b	conc	39 ppb	
	rep	1	Cd214a	conc	5 ppb	
	rep	1	Be313a	conc	-0 ppb	window edge
	rep	1	K766b	conc	769 ppb	
	rep	2	Cr205a	conc	5 ppb	
	rep	2	Sn189b	conc	-20 ppb	
	rep	2	Zn213a	conc	82 ppb	
	rep	2	Co228a	conc	15 ppb	
	rep	2	Ni231a	conc	14 ppb	
	rep	2	Sb206b	conc	-11 ppb	
	rep	2	Mn257a	conc	98 ppb	
	rep	2	Mg279b	conc	1340 ppb	
	rep	2	Fe259a	conc	17270 ppb	
	rep	2	Al308b	conc	1766 ppb	
	rep	2	V292a	conc	-8 ppb	window edge
	rep	2	Ca317b	conc	761 ppb	
	rep	2	Cu324b	conc	24 ppb	
	rep	2	Ag328a	conc	-4 ppb	
	rep	2	Ba455b	conc	16 ppb	
	rep	2	Na589b	conc	56 ppb	
	rep	2	Cd214a	conc	6 ppb	
	rep	2	K766b	conc	824 ppb	
	rep	2	Be313a	conc	-0 ppb	window edge

67117 SDC	av	5 ppb	sd	1.1 %cv	19.59
Cr205a	av	-33 ppb	sd	19.7 %cv	58.94
Sn189b	av	78 ppb	sd	5.0 %cv	6.32
Zn213a	av	10 ppb	sd	7.0 %cv	68.48
Co228a	av	17 ppb	sd	5.0 %cv	28.66
Ni231a	av	-4 ppb	sd	9.7 %cv	253.84
Sb206b	av	97 ppb	sd	2.1 %cv	2.20
Mn257a	av	1350 ppb	sd	14.1 %cv	1.04
Mg279b	av	17272 ppb	sd	1.8 %cv	0.01
Fe259a	av	1763 ppb	sd	4.8 %cv	0.27
Al308b	av	-6 ppb	sd	2.8 %cv	49.93
V292a	av	752 ppb	sd	12.1 %cv	1.61
Ca317b	av	22 ppb	sd	2.6 %cv	11.41
Cu324b	av		sd		

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Ag328a	av	-4 ppb	sd	0.0 %cv	0.25
Ba455b	av	16 ppb	sd	0.1 %cv	0.83
Na589b	av	48 ppb	sd	12.1 %cv	25.28
Cd214a	av	5 ppb	sd	0.9 %cv	16.69
K766b	av	796 ppb	sd	39.0 %cv	4.90
Be313a	av	-0 ppb	sd	0.0 %cv	11.91

67118/MAF428	rep	1	Cr205a	conc	82 ppb	
	rep	1	Sn189b	conc	-21 ppb	
	rep	1	Zn213a	conc	826 ppb	
	rep	1	Co228a	conc	29 ppb	
	rep	1	Ni231a	conc	79 ppb	
	rep	1	Sb206b	conc	-17 ppb	
	rep	1	Mn257a	conc	1022 ppb	
	rep	1	Mg279b	conc	8421 ppb	
	rep	1	Fe259a	conc	130579 ppb	
	rep	1	Al308b	conc	15131 ppb	
	rep	1	V292a	conc	28 ppb	
	rep	1	Ca317b	conc	6390 ppb	
	rep	1	Cu324b	conc	159 ppb	
	rep	1	Ag328a	conc	-5 ppb	window edge
	rep	1	Ba455b	conc	161 ppb	
	rep	1	Na589b	conc	394 ppb	
	rep	1	Cd214a	conc	13 ppb	
	rep	1	Be313a	conc	1 ppb	window edge
	rep	1	K766b	conc	3486 ppb	
	rep	2	Cr205a	conc	87 ppb	
	rep	2	Sn189b	conc	10 ppb	
	rep	2	Zn213a	conc	805 ppb	
	rep	2	Co228a	conc	28 ppb	
	rep	2	Ni231a	conc	71 ppb	
	rep	2	Sb206b	conc	34 ppb	
	rep	2	Mn257a	conc	1012 ppb	
	rep	2	Mg279b	conc	7960 ppb	
	rep	2	Fe259a	conc	128791 ppb	
	rep	2	Al308b	conc	14628 ppb	
	rep	2	V292a	conc	24 ppb	
	rep	2	Ca317b	conc	6361 ppb	
	rep	2	Cu324b	conc	154 ppb	
	rep	2	Ag328a	conc	-6 ppb	window edge
	rep	2	Ba455b	conc	161 ppb	
	rep	2	Na589b	conc	382 ppb	
	rep	2	Cd214a	conc	15 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	3414 ppb	

F. O. 632

67118/MAF428

Cr205a	av	85 ppb	sd	3.7 %cv	4.40
Sn189b	av	-5 ppb	sd	22.2 %cv	411.98
Zn213a	av	815 ppb	sd	14.4 %cv	1.77
Co228a	av	29 ppb	sd	1.1 %cv	3.81
Ni231a	av	75 ppb	sd	5.1 %cv	6.79
Sb206b	av	9 ppb	sd	35.8 %cv	417.50
Mn257a	av	1017 ppb	sd	7.5 %cv	0.74
Mg279b	av	8190 ppb	sd	325.5 %cv	3.97
Fe259a	av	129685 ppb	sd	1264.0 %cv	0.97
Al308b	av	14880 ppb	sd	355.9 %cv	2.39
V292a	av	26 ppb	sd	3.0 %cv	11.67
Ca317b	av	6376 ppb	sd	20.6 %cv	0.32
Cu324b	av	157 ppb	sd	3.6 %cv	2.31
Ag328a	av	-5 ppb	sd	1.0 %cv	18.68

Ba455b	av	161 ppb	sd	0.3 %cv	0.16
Na589b	av	388 ppb	sd	8.7 %cv	2.25
Cd214a	av	14 ppb	sd	1.4 %cv	10.09
Be313a	av	1 ppb	sd	0.1 %cv	14.02
K766b	av	3450 ppb	sd	50.8 %cv	1.47

67119/MAF429

rep	1	Cr205a	conc	130 ppb	
rep	1	Sn189b	conc	13 ppb	
rep	1	Zn213a	conc	554 ppb	
rep	1	Co228a	conc	31 ppb	
rep	1	Ni231a	conc	94 ppb	
rep	1	Sb206b	conc	-34 ppb	window edge
rep	1	Mn257a	conc	1486 ppb	
rep	1	Mg279b	conc	11033 ppb	
rep	1	Fe259a	conc	173326 ppb	
rep	1	Al308b	conc	16868 ppb	
rep	1	V292a	conc	34 ppb	
rep	1	Ca317b	conc	6296 ppb	
rep	1	Cu324b	conc	250 ppb	
rep	1	Ag328a	conc	-3 ppb	
rep	1	Ba455b	conc	207 ppb	
rep	1	Na589b	conc	485 ppb	
rep	1	Cd214a	conc	22 ppb	
rep	1	Be313a	conc	1 ppb	window edge
rep	1	K766b	conc	4471 ppb	
rep	2	Cr205a	conc	120 ppb	
rep	2	Sn189b	conc	-34 ppb	window edge
rep	2	Zn213a	conc	544 ppb	
rep	2	Co228a	conc	34 ppb	
rep	2	Ni231a	conc	98 ppb	
rep	2	Sb206b	conc	-10 ppb	
rep	2	Mg279b	conc	11058 ppb	
rep	2	Mn257a	conc	1498 ppb	
rep	2	Fe259a	conc	174010 ppb	
rep	2	Al308b	conc	17019 ppb	
rep	2	V292a	conc	33 ppb	
rep	2	Ca317b	conc	6421 ppb	
rep	2	Cu324b	conc	251 ppb	
rep	2	Ag328a	conc	-2 ppb	
rep	2	Ba455b	conc	213 ppb	
rep	2	Na589b	conc	488 ppb	
rep	2	Cd214a	conc	15 ppb	
rep	2	Be313a	conc	1 ppb	window edge
rep	2	K766b	conc	4464 ppb	

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67119/MAF429

Cr205a	av	125 ppb	sd	7.0 %cv	5.64
Sn189b	av	-10 ppb	sd	33.5 %cv	324.02
Zn213a	av	549 ppb	sd	7.4 %cv	1.35
Co228a	av	33 ppb	sd	2.3 %cv	7.08
Ni231a	av	96 ppb	sd	3.0 %cv	3.11
Sb206b	av	-22 ppb	sd	16.8 %cv	76.00
Mg279b	av	11046 ppb	sd	17.4 %cv	0.16
Mn257a	av	1492 ppb	sd	8.7 %cv	0.59
Fe259a	av	173668 ppb	sd	483.2 %cv	0.28
Al308b	av	16944 ppb	sd	106.9 %cv	0.63
V292a	av	34 ppb	sd	0.8 %cv	2.39
Ca317b	av	6359 ppb	sd	88.3 %cv	1.39
Cu324b	av	250 ppb	sd	1.2 %cv	0.50
Ag328a	av	-3 ppb	sd	0.4 %cv	15.29
Ba455b	av	210 ppb	sd	4.6 %cv	2.18

Na589b	av	487 ppb	sd	2.2 %cv	0.44
Cd214a	av	19 ppb	sd	4.9 %cv	25.96
Be313a	av	1 ppb	sd	0.1 %cv	19.07
K766b	av	4467 ppb	sd	5.2 %cv	0.12

67120/MAF430	rep	1	Cr205a	conc	12 ppb	
	rep	1	Sn189b	conc	-15 ppb	
	rep	1	Zn213a	conc	89 ppb	
	rep	1	Co228a	conc	8 ppb	window edge
	rep	1	Ni231a	conc	10 ppb	
	rep	1	Sb206b	conc	-15 ppb	
	rep	1	Mn257a	conc	173 ppb	
	rep	1	Mg279b	conc	3486 ppb	
	rep	1	Fe259a	conc	12591 ppb	
	rep	1	Al308b	conc	9398 ppb	
	rep	1	V292a	conc	9 ppb	
	rep	1	Ca317b	conc	2601 ppb	
	rep	1	Cu324b	conc	131 ppb	
	rep	1	Ag328a	conc	-9 ppb	window edge
	rep	1	Ba455b	conc	45 ppb	
	rep	1	Na589b	conc	133 ppb	
	rep	1	Cd214a	conc	8 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	1	K766b	conc	2141 ppb	
	rep	2	Cr205a	conc	16 ppb	
	rep	2	Sn189b	conc	10 ppb	
	rep	2	Zn213a	conc	88 ppb	
	rep	2	Co228a	conc	13 ppb	
	rep	2	Ni231a	conc	18 ppb	
	rep	2	Sb206b	conc	-7 ppb	
	rep	2	Mn257a	conc	170 ppb	
	rep	2	Mg279b	conc	3520 ppb	
	rep	2	Fe259a	conc	12553 ppb	
	rep	2	Al308b	conc	9414 ppb	
	rep	2	V292a	conc	12 ppb	
	rep	2	Ca317b	conc	2505 ppb	
	rep	2	Cu324b	conc	125 ppb	
	rep	2	Ag328a	conc	-4 ppb	
	rep	2	Ba455b	conc	45 ppb	
	rep	2	Na589b	conc	145 ppb	
	rep	2	Cd214a	conc	6 ppb	window edge
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	2253 ppb	

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67120/MAF430	av	Cr205a	14 ppb	sd	2.9 %cv	20.15
	av	Sn189b	-3 ppb	sd	17.7 %cv	693.84
	av	Zn213a	88 ppb	sd	0.8 %cv	0.88
	av	Co228a	10 ppb	sd	3.9 %cv	37.35
	av	Ni231a	14 ppb	sd	5.4 %cv	38.97
	av	Sb206b	-11 ppb	sd	5.7 %cv	53.81
	av	Mn257a	172 ppb	sd	2.5 %cv	1.43
	av	Mg279b	3503 ppb	sd	24.3 %cv	0.69
	av	Fe259a	12572 ppb	sd	27.4 %cv	0.22
	av	Al308b	9406 ppb	sd	11.1 %cv	0.12
	av	V292a	11 ppb	sd	1.9 %cv	17.83
	av	Ca317b	2553 ppb	sd	68.1 %cv	2.67
	av	Cu324b	128 ppb	sd	4.0 %cv	3.13
	av	Ag328a	-7 ppb	sd	3.3 %cv	48.40
	av	Ba455b	45 ppb	sd	0.3 %cv	0.74
	av	Na589b	139 ppb	sd	8.5 %cv	6.15

Cd214a	av	7 ppb	sd	1.0 %cv	14.78
Be313a	av	0 ppb	sd	0.1 %cv	18.90
K766b	av	2197 ppb	sd	79.2 %cv	3.60

LCS 8158	rep	1	Cr205a	conc	370 ppb
	rep	1	Sn189b	conc	969 ppb
	rep	1	Zn213a	conc	931 ppb
	rep	1	Co228a	conc	954 ppb
	rep	1	Ni231a	conc	896 ppb
	rep	1	Sb206b	conc	318 ppb
	rep	1	Mn257a	conc	910 ppb
	rep	1	Mg279b	conc	19061 ppb
	rep	1	Fe259a	conc	3967 ppb
	rep	1	Al308b	conc	3673 ppb
	rep	1	V292a	conc	860 ppb
	rep	1	Ca317b	conc	19416 ppb
	rep	1	Cu324b	conc	973 ppb
	rep	1	Ag328a	conc	354 ppb
	rep	1	Ba455b	conc	959 ppb
	rep	1	Na589b	conc	18681 ppb
	rep	1	Cd214a	conc	386 ppb
	rep	1	Be313a	conc	389 ppb
	rep	1	K766b	conc	18724 ppb
	rep	2	Cr205a	conc	394 ppb
	rep	2	Sn189b	conc	981 ppb
	rep	2	Zn213a	conc	951 ppb
	rep	2	Co228a	conc	961 ppb
	rep	2	Ni231a	conc	948 ppb
	rep	2	Sb206b	conc	343 ppb
	rep	2	Mg279b	conc	19479 ppb
	rep	2	Mn257a	conc	942 ppb
	rep	2	Fe259a	conc	4085 ppb
	rep	2	Al308b	conc	3743 ppb
	rep	2	V292a	conc	898 ppb
	rep	2	Ca317b	conc	20037 ppb
	rep	2	Cu324b	conc	990 ppb
	rep	2	Ag328a	conc	361 ppb
	rep	2	Ba455b	conc	980 ppb
	rep	2	Na589b	conc	19266 ppb
	rep	2	Cd214a	conc	395 ppb
	rep	2	Be313a	conc	398 ppb
	rep	2	K766b	conc	19271 ppb

LCS 8158	av	382 ppb	sd	16.8 %cv	4.39
Cr205a	av	975 ppb	sd	9.0 %cv	0.93
Sn189b	av	941 ppb	sd	14.4 %cv	1.53
Zn213a	av	957 ppb	sd	5.2 %cv	0.55
Co228a	av	922 ppb	sd	36.2 %cv	3.93
Ni231a	av	331 ppb	sd	18.2 %cv	5.51
Sb206b	av	19270 ppb	sd	295.2 %cv	1.53
Mg279b	av	926 ppb	sd	22.5 %cv	2.43
Mn257a	av	4026 ppb	sd	83.2 %cv	2.07
Fe259a	av	3708 ppb	sd	49.9 %cv	1.34
Al308b	av	879 ppb	sd	26.8 %cv	3.05
V292a	av	19726 ppb	sd	438.5 %cv	2.22
Ca317b	av	981 ppb	sd	12.3 %cv	1.25
Cu324b	av	357 ppb	sd	4.5 %cv	1.25
Ag328a	av	970 ppb	sd	14.8 %cv	1.53
Ba455b	av	18974 ppb	sd	413.9 %cv	2.18
Na589b	av	390 ppb	sd	6.1 %cv	1.57
Cd214a	av				

Be313a	av	394 ppb	sd	6.3 %cv	1.59
K766b	av	18997 ppb	sd	386.8 %cv	2.04

CCV2	rep	1	Cr205a	conc	1020 ppb
	rep	1	Sn189b	conc	2765 ppb
	rep	1	Zn213a	conc	2481 ppb
	rep	1	Co228a	conc	2661 ppb
	rep	1	Ni231a	conc	2499 ppb
	rep	1	Sb206b	conc	951 ppb
	rep	1	Mn257a	conc	2461 ppb
	rep	1	Mg279b	conc	51149 ppb
	rep	1	Fe259a	conc	11066 ppb
	rep	1	Al308b	conc	9734 ppb
	rep	1	V292a	conc	2390 ppb
	rep	1	Ca317b	conc	51458 ppb
	rep	1	Cu324b	conc	2525 ppb
	rep	1	Ag328a	conc	961 ppb
	rep	1	Ba455b	conc	2534 ppb
	rep	1	Na589b	conc	49500 ppb
	rep	1	Cd214a	conc	1053 ppb
	rep	1	K766b	conc	49228 ppb
	rep	1	Be313a	conc	1017 ppb
	rep	1	ara	conc	0.964
	rep	1	arb	conc	0.970
	rep	2	Sn189b	conc	2673 ppb
	rep	2	Cr205a	conc	1012 ppb
	rep	2	Zn213a	conc	2476 ppb
	rep	2	Co228a	conc	2532 ppb
	rep	2	Sb206b	conc	905 ppb
	rep	2	Ni231a	conc	2545 ppb
	rep	2	Mg279b	conc	50795 ppb
	rep	2	Mn257a	conc	2451 ppb
	rep	2	Fe259a	conc	10883 ppb
	rep	2	Al308b	conc	9842 ppb
	rep	2	Ca317b	conc	52486 ppb
	rep	2	V292a	conc	2362 ppb
	rep	2	Cu324b	conc	2507 ppb
	rep	2	Ba455b	conc	2507 ppb
	rep	2	Ag328a	conc	949 ppb
	rep	2	Na589b	conc	49406 ppb
	rep	2	K766b	conc	48784 ppb
	rep	2	Cd214a	conc	1036 ppb
	rep	2	Be313a	conc	1030 ppb
	rep	2	arb	conc	0.973
	rep	2	ara	conc	0.951

CCV2	av	2719 ppb	sd	65.0 %cv	2.39
Sn189b	av	1016 ppb	sd	5.7 %cv	0.56
Cr205a	av	2478 ppb	sd	3.5 %cv	0.14
Zn213a	av	2597 ppb	sd	91.3 %cv	3.52
Co228a	av	928 ppb	sd	32.8 %cv	3.53
Sb206b	av	2522 ppb	sd	32.4 %cv	1.29
Ni231a	av	50972 ppb	sd	250.5 %cv	0.49
Mg279b	av	2456 ppb	sd	6.8 %cv	0.28
Mn257a	av	10975 ppb	sd	129.3 %cv	1.18
Fe259a	av	9788 ppb	sd	76.6 %cv	0.78
Al308b	av	51972 ppb	sd	727.2 %cv	1.40
Ca317b	av	2376 ppb	sd	19.9 %cv	0.84
V292a	av	2516 ppb	sd	12.3 %cv	0.49
Cu324b	av	2520 ppb	sd	19.7 %cv	0.78
Ba455b	av		sd		

Ag328a	av	955 ppb	sd	8.6 %CV	0.90
Na589b	av	49453 ppb	sd	66.3 %CV	0.13
K766b	av	49006 ppb	sd	313.8 %CV	0.64
Cd214a	av	1045 ppb	sd	11.8 %CV	1.13
Be313a	av	1024 ppb	sd	9.3 %CV	0.90
arb	av	0.972	sd	0.0024 %CV	0.24
ara	av	0.958	sd	0.0090 %CV	0.94

CCB2	rep	1	Sn189b	conc	-23 ppb	
	rep	1	Cr205a	conc	-4 ppb	
	rep	1	Zn213a	conc	-1 ppb	
	rep	1	Co228a	conc	8 ppb	
	rep	1	Sb206b	conc	-10 ppb	
	rep	1	Ni231a	conc	-4 ppb	
	rep	1	Mg279b	conc	-4 ppb	window edge
	rep	1	Mn257a	conc	-2 ppb	window edge
	rep	1	Al308b	conc	-123 ppb	window edge
	rep	1	Fe259a	conc	-14 ppb	window edge
	rep	1	Ca317b	conc	-17 ppb	
	rep	1	V292a	conc	-13 ppb	window edge
	rep	1	Cu324b	conc	-5 ppb	
	rep	1	Ba455b	conc	-1 ppb	
	rep	1	Ag328a	conc	-4 ppb	
	rep	1	Na589b	conc	-0 ppb	
	rep	1	K766b	conc	952 ppb	
	rep	1	Cd214a	conc	6 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	2	Cr205a	conc	-1 ppb	
	rep	2	Sn189b	conc	-28 ppb	
	rep	2	Zn213a	conc	2 ppb	
	rep	2	Co228a	conc	5 ppb	
	rep	2	Ni231a	conc	-15 ppb	window edge
	rep	2	Sb206b	conc	35 ppb	
	rep	2	Mn257a	conc	-1 ppb	
	rep	2	Mg279b	conc	7 ppb	
	rep	2	Fe259a	conc	-5 ppb	
	rep	2	Al308b	conc	-125 ppb	window edge
	rep	2	V292a	conc	3 ppb	
	rep	2	Ca317b	conc	-22 ppb	
	rep	2	Cu324b	conc	0 ppb	
	rep	2	Ag328a	conc	-3 ppb	
	rep	2	Ba455b	conc	-1 ppb	
	rep	2	Na589b	conc	20 ppb	
	rep	2	Cd214a	conc	2 ppb	
	rep	2	K766b	conc	936 ppb	
	rep	2	Be313a	conc	0 ppb	window edge

CCB2	av	-3 ppb	sd	2.7 %CV	107.13
Cr205a	av	-26 ppb	sd	3.8 %CV	14.79
Sn189b	av	1 ppb	sd	1.7 %CV	259.81
Zn213a	av	7 ppb	sd	1.6 %CV	24.52
Co228a	av	-9 ppb	sd	7.9 %CV	86.44
Ni231a	av	12 ppb	sd	31.7 %CV	258.91
Sb206b	av	-2 ppb	sd	0.5 %CV	31.74
Mn257a	av	1 ppb	sd	7.3 %CV	511.48
Mg279b	av	-10 ppb	sd	6.3 %CV	65.63
Fe259a	av	-124 ppb	sd	1.4 %CV	1.16
Al308b	av	-5 ppb	sd	10.8 %CV	212.91
V292a	av	-20 ppb	sd	3.6 %CV	17.95
Ca317b	av	-3 ppb	sd	3.6 %CV	141.60
Cu324b	av		sd		

Ag328a	av	-4 ppb	sd	0.7 %CV	20.77
Ba455b	av	-1 ppb	sd	0.1 %CV	10.79
Na589b	av	10 ppb	sd	14.4 %CV	147.08
Cd214a	av	4 ppb	sd	2.6 %CV	70.92
K766b	av	944 ppb	sd	11.2 %CV	1.19
Be313a	av	0 ppb	sd	0.1 %CV	26.61

PB 8158	rep	1	Cr205a	conc	-13 ppb	window edge
	rep	1	Sn189b	conc	-3 ppb	
	rep	1	Zn213a	conc	9 ppb	
	rep	1	Co228a	conc	3 ppb	
	rep	1	Ni231a	conc	-5 ppb	
	rep	1	Sb206b	conc	1 ppb	
	rep	1	Mn257a	conc	2 ppb	
	rep	1	Mg279b	conc	3 ppb	window edge
	rep	1	Fe259a	conc	-10 ppb	window edge
	rep	1	Al308b	conc	-120 ppb	window edge
	rep	1	V292a	conc	-2 ppb	
	rep	1	Ca317b	conc	17 ppb	
	rep	1	Cu324b	conc	18 ppb	
	rep	1	Ag328a	conc	-4 ppb	
	rep	1	Ba455b	conc	14 ppb	
	rep	1	Na589b	conc	208 ppb	
	rep	1	Cd214a	conc	7 ppb	
	rep	1	K766b	conc	1011 ppb	window edge
	rep	1	Be313a	conc	0 ppb	window edge
	rep	2	Cr205a	conc	-7 ppb	
	rep	2	Sn189b	conc	-48 ppb	window edge
	rep	2	Zn213a	conc	12 ppb	
	rep	2	Co228a	conc	5 ppb	window edge
	rep	2	Ni231a	conc	-7 ppb	window edge
	rep	2	Sb206b	conc	-4 ppb	
	rep	2	Mn257a	conc	2 ppb	
	rep	2	Mg279b	conc	12 ppb	
	rep	2	Fe259a	conc	11 ppb	
	rep	2	Al308b	conc	-104 ppb	window edge
	rep	2	V292a	conc	4 ppb	
	rep	2	Ca317b	conc	14 ppb	
	rep	2	Cu324b	conc	20 ppb	
	rep	2	Ag328a	conc	-2 ppb	no peak
	rep	2	Ba455b	conc	14 ppb	
	rep	2	Na589b	conc	243 ppb	
	rep	2	Cd214a	conc	-2 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	944 ppb	window edge

PB 8158

Cr205a	av	-10 ppb	sd	4.7 %CV	47.65
Sn189b	av	-25 ppb	sd	32.2 %CV	127.41
Zn213a	av	10 ppb	sd	1.8 %CV	17.62
Co228a	av	4 ppb	sd	1.4 %CV	35.05
Ni231a	av	-6 ppb	sd	1.0 %CV	16.20
Sb206b	av	-2 ppb	sd	4.0 %CV	239.30
Mn257a	av	2 ppb	sd	0.1 %CV	4.54
Mg279b	av	8 ppb	sd	6.5 %CV	83.47
Fe259a	av	1 ppb	sd	14.7 %CV	2205.3
Al308b	av	-112 ppb	sd	12.0 %CV	10.70
V292a	av	1 ppb	sd	3.7 %CV	387.39
Ca317b	av	15 ppb	sd	1.7 %CV	11.13
Cu324b	av	19 ppb	sd	1.5 %CV	7.92
Ag328a	av	-3 ppb	sd	1.7 %CV	51.69

Ba455b	av	14 ppb	sd	0.1 %cv	0.50
Na589b	av	226 ppb	sd	24.9 %cv	11.02
Cd214a	av	2 ppb	sd	6.2 %cv	276.55
Be313a	av	0 ppb	sd	0.1 %cv	51.31
K766b	av	978 ppb	sd	47.5 %cv	4.86

67145/MGC357	rep	1	Cr205a	conc	-5 ppb	
	rep	1	Sn189b	conc	-23 ppb	
	rep	1	Zn213a	conc	6 ppb	
	rep	1	Co228a	conc	1 ppb	window edge
	rep	1	Ni231a	conc	-4 ppb	
	rep	1	Sb206b	conc	6 ppb	
	rep	1	Mn257a	conc	18 ppb	
	rep	1	Mg279b	conc	12767 ppb	
	rep	1	Fe259a	conc	288 ppb	
	rep	1	Al308b	conc	-16 ppb	window edge
	rep	1	V292a	conc	-1 ppb	
	rep	1	Ca317b	conc	66842 ppb	
	rep	1	Cu324b	conc	1 ppb	
	rep	1	Ag328a	conc	-4 ppb	
	rep	1	Ba455b	conc	104 ppb	
	rep	1	Na589b	conc	35777 ppb	
	rep	1	Cd214a	conc	5 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	1	K766b	conc	11254 ppb	
	rep	2	Cr205a	conc	-0 ppb	
	rep	2	Sn189b	conc	-48 ppb	
	rep	2	Zn213a	conc	11 ppb	
	rep	2	Co228a	conc	10 ppb	
	rep	2	Ni231a	conc	15 ppb	
	rep	2	Sb206b	conc	-20 ppb	
	rep	2	Mn257a	conc	17 ppb	
	rep	2	Mg279b	conc	12597 ppb	
	rep	2	Fe259a	conc	270 ppb	
	rep	2	Al308b	conc	-10 ppb	window edge
	rep	2	V292a	conc	7 ppb	
	rep	2	Ca317b	conc	67075 ppb	
	rep	2	Cu324b	conc	4 ppb	
	rep	2	Ag328a	conc	-2 ppb	window edge
	rep	2	Ba455b	conc	103 ppb	
	rep	2	Na589b	conc	35831 ppb	
	rep	2	Cd214a	conc	2 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	11431 ppb	

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Cr205a	av	-2 ppb	sd	3.1 %cv	125.43
Sn189b	av	-36 ppb	sd	17.6 %cv	49.04
Zn213a	av	8 ppb	sd	4.2 %cv	48.86
Co228a	av	6 ppb	sd	6.2 %cv	107.87
Ni231a	av	5 ppb	sd	13.3 %cv	244.51
Sb206b	av	-7 ppb	sd	18.7 %cv	260.25
Mn257a	av	18 ppb	sd	0.6 %cv	3.45
Mg279b	av	12682 ppb	sd	120.3 %cv	0.95
Fe259a	av	279 ppb	sd	12.3 %cv	4.42
Al308b	av	-13 ppb	sd	4.3 %cv	32.86
V292a	av	3 ppb	sd	5.7 %cv	171.97
Ca317b	av	66959 ppb	sd	164.5 %cv	0.25
Cu324b	av	2 ppb	sd	1.8 %cv	79.62
Ag328a	av	-3 ppb	sd	1.1 %cv	33.11
Ba455b	av	104 ppb	sd	0.8 %cv	0.72

Na589b	av	35804 ppb	sd	38.3 %cv	0.11
Cd214a	av	4 ppb	sd	2.1 %cv	56.88
Be313a	av	0 ppb	sd	0.0 %cv	4.21
K766b	av	11342 ppb	sd	124.8 %cv	1.10

67145 DUP

rep	1	Cr205a	conc	-8 ppb	window edge
rep	1	Sn189b	conc	-31 ppb	
rep	1	Zn213a	conc	12 ppb	
rep	1	Co228a	conc	10 ppb	
rep	1	Ni231a	conc	-4 ppb	
rep	1	Sb206b	conc	-6 ppb	
rep	1	Mn257a	conc	15 ppb	
rep	1	Mg279b	conc	12696 ppb	
rep	1	Fe259a	conc	219 ppb	
rep	1	Al308b	conc	140 ppb	
rep	1	V292a	conc	3 ppb	
rep	1	Ca317b	conc	67863 ppb	
rep	1	Cu324b	conc	1 ppb	
rep	1	Ag328a	conc	0 ppb	
rep	1	Ba455b	conc	117 ppb	
rep	1	Na589b	conc	35896 ppb	
rep	1	Cd214a	conc	2 ppb	
rep	1	Be313a	conc	0 ppb	window edge
rep	1	K766b	conc	11332 ppb	
rep	2	Cr205a	conc	-4 ppb	
rep	2	Sn189b	conc	-20 ppb	window edge
rep	2	Zn213a	conc	7 ppb	
rep	2	Co228a	conc	0 ppb	window edge
rep	2	Ni231a	conc	-9 ppb	
rep	2	Sb206b	conc	-28 ppb	
rep	2	Mg279b	conc	12577 ppb	
rep	2	Mn257a	conc	16 ppb	
rep	2	Fe259a	conc	39 ppb	window edge
rep	2	Al308b	conc	15 ppb	window edge
rep	2	V292a	conc	-13 ppb	window edge
rep	2	Ca317b	conc	68463 ppb	
rep	2	Cu324b	conc	5 ppb	
rep	2	Ag328a	conc	-3 ppb	
rep	2	Ba455b	conc	116 ppb	
rep	2	Na589b	conc	35893 ppb	
rep	2	Cd214a	conc	-1 ppb	window edge
rep	2	Be313a	conc	0 ppb	window edge
rep	2	K766b	conc	11501 ppb	

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67145 DUP

Cr205a	av	-6 ppb	sd	2.5 %cv	42.36
Sn189b	av	-25 ppb	sd	8.1 %cv	31.77
Zn213a	av	9 ppb	sd	3.2 %cv	34.35
Co228a	av	5 ppb	sd	7.0 %cv	139.62
Ni231a	av	-7 ppb	sd	3.4 %cv	49.49
Sb206b	av	-17 ppb	sd	15.3 %cv	88.49
Mg279b	av	12637 ppb	sd	84.3 %cv	0.67
Mn257a	av	16 ppb	sd	1.0 %cv	6.41
Fe259a	av	129 ppb	sd	127.3 %cv	98.37
Al308b	av	77 ppb	sd	87.9 %cv	113.58
V292a	av	-5 ppb	sd	11.4 %cv	246.57
Ca317b	av	68163 ppb	sd	424.3 %cv	0.62
Cu324b	av	3 ppb	sd	2.5 %cv	76.90
Ag328a	av	-2 ppb	sd	2.3 %cv	150.72
Ba455b	av	116 ppb	sd	0.6 %cv	0.50
Na589b	av	35894 ppb	sd	2.4 %cv	0.01

Cd214a	av	0 ppb	sd	2.3 %cv	1199.0
Be313a	av	0 ppb	sd	0.0 %cv	5.82
K766b	av	11416 ppb	sd	119.4 %cv	1.05

67145 SPK

rep	1	Cr205a	conc	186 ppb
rep	1	Sn189b	conc	395 ppb
rep	1	Zn213a	conc	209 ppb
rep	1	Co228a	conc	517 ppb
rep	1	Ni231a	conc	375 ppb
rep	1	Sb206b	conc	459 ppb
rep	1	Mn257a	conc	221 ppb
rep	1	Mg279b	conc	62398 ppb
rep	1	Fe259a	conc	1486 ppb
rep	1	Al308b	conc	2167 ppb
rep	1	V292a	conc	478 ppb
rep	1	Ca317b	conc	170107 ppb
rep	1	Cu324b	conc	255 ppb
rep	1	Ag328a	conc	40 ppb
rep	1	Ba455b	conc	2135 ppb
rep	1	Na589b	conc	138020 ppb
rep	1	Cd214a	conc	52 ppb
rep	1	Be313a	conc	53 ppb
rep	1	K766b	conc	60103 ppb
rep	2	Cr205a	conc	200 ppb
rep	2	Sn189b	conc	413 ppb
rep	2	Zn213a	conc	211 ppb
rep	2	Co228a	conc	518 ppb
rep	2	Ni231a	conc	382 ppb
rep	2	Sb206b	conc	474 ppb
rep	2	Mg279b	conc	63532 ppb
rep	2	Mn257a	conc	221 ppb
rep	2	Fe259a	conc	1446 ppb
rep	2	Al308b	conc	2124 ppb
rep	2	V292a	conc	465 ppb
rep	2	Ca317b	conc	173866 ppb
rep	2	Cu324b	conc	253 ppb
rep	2	Ag328a	conc	35 ppb
rep	2	Ba455b	conc	2155 ppb
rep	2	Na589b	conc	137995 ppb
rep	2	Cd214a	conc	52 ppb
rep	2	K766b	conc	60555 ppb
rep	2	Be313a	conc	53 ppb

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67145 SPK

Cr205a	av	193 ppb	sd	10.2 %cv	5.29
Sn189b	av	404 ppb	sd	13.0 %cv	3.21
Zn213a	av	210 ppb	sd	1.8 %cv	0.88
Co228a	av	518 ppb	sd	0.9 %cv	0.18
Ni231a	av	378 ppb	sd	4.9 %cv	1.31
Sb206b	av	466 ppb	sd	10.8 %cv	2.32
Mg279b	av	62965 ppb	sd	801.9 %cv	1.27
Mn257a	av	221 ppb	sd	0.4 %cv	0.20
Fe259a	av	1466 ppb	sd	28.1 %cv	1.92
Al308b	av	2146 ppb	sd	30.4 %cv	1.42
V292a	av	472 ppb	sd	9.0 %cv	1.91
Ca317b	av	171986 ppb	sd	2658.0 %cv	1.55
Cu324b	av	254 ppb	sd	1.4 %cv	0.54
Ag328a	av	37 ppb	sd	4.1 %cv	10.96
Ba455b	av	2145 ppb	sd	14.4 %cv	0.67
Na589b	av	138007 ppb	sd	17.6 %cv	0.01
Cd214a	av	52 ppb	sd	0.4 %cv	0.74

K766b	av	60329 ppb	sd	319.2 %cv	0.53
Be313a	av	53 ppb	sd	0.3 %cv	0.58

67145 SDC	rep	1	Cr205a	conc	-0 ppb	
	rep	1	Sn189b	conc	-48 ppb	window edge
	rep	1	Zn213a	conc	1 ppb	
	rep	1	Co228a	conc	4 ppb	
	rep	1	Ni231a	conc	-12 ppb	window edge
	rep	1	Sb206b	conc	-19 ppb	
	rep	1	Mg279b	conc	2576 ppb	
	rep	1	Mn257a	conc	2 ppb	
	rep	1	Fe259a	conc	58 ppb	
	rep	1	Al308b	conc	-100 ppb	window edge
	rep	1	V292a	conc	-12 ppb	window edge
	rep	1	Ca317b	conc	14113 ppb	
	rep	1	Cu324b	conc	4 ppb	
	rep	1	Ag328a	conc	-4 ppb	window edge
	rep	1	Ba455b	conc	23 ppb	
	rep	1	Na589b	conc	7470 ppb	
	rep	1	Cd214a	conc	2 ppb	
	rep	1	K766b	conc	3316 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	2	Cr205a	conc	-2 ppb	window edge
	rep	2	Sn189b	conc	-2 ppb	
	rep	2	Zn213a	conc	7 ppb	
	rep	2	Co228a	conc	1 ppb	window edge
	rep	2	Ni231a	conc	14 ppb	
	rep	2	Sb206b	conc	15 ppb	
	rep	2	Mn257a	conc	3 ppb	
	rep	2	Mg279b	conc	2620 ppb	
	rep	2	Fe259a	conc	-7 ppb	window edge
	rep	2	Al308b	conc	38 ppb	
	rep	2	V292a	conc	3 ppb	
	rep	2	Ca317b	conc	14004 ppb	
	rep	2	Cu324b	conc	-2 ppb	
	rep	2	Ag328a	conc	-7 ppb	
	rep	2	Ba455b	conc	22 ppb	
	rep	2	Na589b	conc	7559 ppb	
	rep	2	Cd214a	conc	9 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	3322 ppb	

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67145 SDC	av	-1 ppb	sd	1.3 %cv	98.41
Cr205a	av	-25 ppb	sd	32.9 %cv	132.40
Sn189b	av	4 ppb	sd	4.1 %cv	98.33
Zn213a	av	2 ppb	sd	1.7 %cv	73.17
Co228a	av	1 ppb	sd	17.9 %cv	1741.8
Ni231a	av	-2 ppb	sd	23.8 %cv	1270.1
Sb206b	av	3 ppb	sd	1.0 %cv	36.87
Mn257a	av	2598 ppb	sd	31.1 %cv	1.20
Mg279b	av	26 ppb	sd	46.1 %cv	177.97
Fe259a	av	-31 ppb	sd	98.1 %cv	316.57
Al308b	av	-5 ppb	sd	11.0 %cv	244.06
V292a	av	14059 ppb	sd	76.9 %cv	0.55
Ca317b	av	1 ppb	sd	4.6 %cv	564.09
Cu324b	av	-5 ppb	sd	1.7 %cv	31.19
Ag328a	av	22 ppb	sd	0.5 %cv	2.47
Ba455b	av	7515 ppb	sd	63.1 %cv	0.84
Na589b	av	5 ppb	sd	4.5 %cv	81.10
Cd214a	av	0 ppb	sd	0.1 %cv	26.44
Be313a	av		sd		

K766b av 3319 ppb sd 4.0 %CV 0.12

67146/MGC358	rep		conc	sd	%CV	
	1	Cr205a	-2 ppb			
	1	Sn189b	-6 ppb			
	1	Zn213a	12 ppb			
	1	Co228a	-1 ppb			window edge
	1	Ni231a	-13 ppb			
	1	Sb206b	29 ppb			
	1	Mg279b	13011 ppb			
	1	Mn257a	3 ppb			
	1	Fe259a	4 ppb			window edge
	1	Al308b	-69 ppb			window edge
	1	V292a	-0 ppb			
	1	Ca317b	72512 ppb			
	1	Cu324b	-5 ppb			
	1	Ag328a	-9 ppb			window edge
	1	Ba455b	179 ppb			
	1	Na589b	19565 ppb			
	1	Cd214a	-4 ppb			window edge
	1	K766b	10176 ppb			
	1	Be313a	0 ppb			window edge
	2	Cr205a	-2 ppb			
	2	Sn189b	-7 ppb			
	2	Zn213a	-1 ppb			window edge
	2	Co228a	-6 ppb			window edge
	2	Ni231a	0 ppb			
	2	Sb206b	-27 ppb			
	2	Mn257a	2 ppb			
	2	Mg279b	13050 ppb			
	2	Fe259a	1 ppb			window edge
	2	Al308b	-82 ppb			window edge
	2	V292a	-0 ppb			
	2	Ca317b	71857 ppb			
	2	Cu324b	-2 ppb			
	2	Ag328a	-6 ppb			
	2	Ba455b	177 ppb			
	2	Na589b	19696 ppb			
	2	Cd214a	7 ppb			
	2	K766b	10441 ppb			
	2	Be313a	0 ppb			window edge

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	av	sd	%CV
Cr205a	-2 ppb	0.4	17.41
Sn189b	-7 ppb	0.2	2.95
Zn213a	5 ppb	9.0	172.75
Co228a	-4 ppb	3.7	94.97
Ni231a	-6 ppb	9.0	146.07
Sb206b	1 ppb	39.2	4258.9
Mn257a	3 ppb	0.1	5.54
Mg279b	13031 ppb	27.7	0.21
Fe259a	2 ppb	2.5	107.18
Al308b	-76 ppb	9.6	12.72
V292a	-0 ppb	0.0	12.75
Ca317b	72184 ppb	462.5	0.64
Cu324b	-4 ppb	2.4	62.81
Ag328a	-8 ppb	2.0	27.10
Ba455b	178 ppb	1.2	0.67
Na589b	19631 ppb	92.7	0.47
Cd214a	1 ppb	7.7	603.49
K766b	10308 ppb	187.8	1.82
Be313a	0 ppb	0.0	6.03

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rep	1	Cr205a	conc	-5	ppb	
rep	1	Sn189b	conc	-17	ppb	
rep	1	Zn213a	conc	11	ppb	
rep	1	Co228a	conc	9	ppb	
rep	1	Ni231a	conc	-6	ppb	
rep	1	Sb206b	conc	-30	ppb	window edge
rep	1	Mg279b	conc	-10	ppb	
rep	1	Mn257a	conc	-1	ppb	
rep	1	Fe259a	conc	-16	ppb	window edge
rep	1	Al308b	conc	-84	ppb	window edge
rep	1	V292a	conc	-4	ppb	
rep	1	Ca317b	conc	-1	ppb	
rep	1	Cu324b	conc	-1	ppb	
rep	1	Ag328a	conc	-9	ppb	window edge
rep	1	Ba455b	conc	0	ppb	
rep	1	Na589b	conc	111	ppb	
rep	1	Cd214a	conc	3	ppb	
rep	1	K766b	conc	1327	ppb	
rep	1	Be313a	conc	0	ppb	window edge
rep	2	Cr205a	conc	-2	ppb	
rep	2	Sn189b	conc	-17	ppb	
rep	2	Zn213a	conc	11	ppb	
rep	2	Co228a	conc	9	ppb	
rep	2	Ni231a	conc	-14	ppb	window edge
rep	2	Sb206b	conc	-17	ppb	window edge
rep	2	Mn257a	conc	-0	ppb	
rep	2	Mg279b	conc	-26	ppb	window edge
rep	2	Fe259a	conc	-7	ppb	
rep	2	Al308b	conc	-74	ppb	window edge
rep	2	V292a	conc	-2	ppb	
rep	2	Ca317b	conc	-0	ppb	
rep	2	Cu324b	conc	-3	ppb	
rep	2	Ag328a	conc	-4	ppb	
rep	2	Ba455b	conc	0	ppb	
rep	2	Na589b	conc	127	ppb	
rep	2	Cd214a	conc	-2	ppb	window edge
rep	2	Be313a	conc	0	ppb	window edge
rep	2	K766b	conc	1356	ppb	

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Cr205a	av	-4	ppb	sd	1.6	%cv	45.17
Sn189b	av	-17	ppb	sd	0.3	%cv	1.50
Zn213a	av	11	ppb	sd	0.2	%cv	1.35
Co228a	av	9	ppb	sd	0.7	%cv	7.28
Ni231a	av	-10	ppb	sd	5.3	%cv	52.02
Sb206b	av	-23	ppb	sd	8.8	%cv	37.51
Mn257a	av	-1	ppb	sd	0.7	%cv	121.52
Mg279b	av	-18	ppb	sd	10.9	%cv	61.05
Fe259a	av	-11	ppb	sd	6.4	%cv	57.76
Al308b	av	-79	ppb	sd	6.8	%cv	8.63
V292a	av	-3	ppb	sd	1.6	%cv	58.52
Ca317b	av	-0	ppb	sd	0.4	%cv	100.13
Cu324b	av	-2	ppb	sd	1.8	%cv	98.50
Ag328a	av	-6	ppb	sd	3.4	%cv	53.27
Ba455b	av	0	ppb	sd	0.1	%cv	79.72
Na589b	av	119	ppb	sd	11.5	%cv	9.64
Cd214a	av	0	ppb	sd	3.4	%cv	2725.4
Be313a	av	0	ppb	sd	0.1	%cv	22.31
K766b	av	1342	ppb	sd	20.7	%cv	1.55

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rep	1	Cr205a	conc	-5	ppb	
rep	1	Sn189b	conc	3	ppb	
rep	1	Zn213a	conc	29	ppb	
rep	1	Co228a	conc	15	ppb	
rep	1	Ni231a	conc	2	ppb	
rep	1	Sb206b	conc	-10	ppb	
rep	1	Mn257a	conc	19	ppb	
rep	1	Mg279b	conc	11242	ppb	
rep	1	Fe259a	conc	21	ppb	window edge
rep	1	Al308b	conc	131	ppb	
rep	1	V292a	conc	-0	ppb	
rep	1	Ca317b	conc	49564	ppb	
rep	1	Cu324b	conc	4	ppb	
rep	1	Ag328a	conc	-1	ppb	
rep	1	Ba455b	conc	231	ppb	
rep	1	Na589b	conc	19840	ppb	
rep	1	Cd214a	conc	1	ppb	
rep	1	Be313a	conc	0	ppb	window edge
rep	1	K766b	conc	9771	ppb	
rep	2	Cr205a	conc	3	ppb	
rep	2	Sn189b	conc	-4	ppb	
rep	2	Zn213a	conc	36	ppb	
rep	2	Co228a	conc	5	ppb	window edge
rep	2	Ni231a	conc	-3	ppb	
rep	2	Sb206b	conc	29	ppb	
rep	2	Mn257a	conc	19	ppb	
rep	2	Mg279b	conc	11434	ppb	
rep	2	Fe259a	conc	19	ppb	window edge
rep	2	Al308b	conc	149	ppb	
rep	2	V292a	conc	-0	ppb	
rep	2	Ca317b	conc	52392	ppb	
rep	2	Cu324b	conc	2	ppb	
rep	2	Ag328a	conc	-7	ppb	
rep	2	Ba455b	conc	238	ppb	
rep	2	Na589b	conc	20003	ppb	
rep	2	Cd214a	conc	-4	ppb	window edge
rep	2	Be313a	conc	0	ppb	window edge
rep	2	K766b	conc	9944	ppb	

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Cr205a	av	-1	ppb	sd	5.9	%cv	635.28
Sn189b	av	-0	ppb	sd	5.0	%cv	1748.1
Zn213a	av	32	ppb	sd	5.1	%cv	15.72
Co228a	av	10	ppb	sd	6.6	%cv	64.95
Ni231a	av	-0	ppb	sd	3.7	%cv	806.05
Sb206b	av	9	ppb	sd	27.1	%cv	289.45
Mn257a	av	19	ppb	sd	0.1	%cv	0.51
Mg279b	av	11338	ppb	sd	135.3	%cv	1.19
Fe259a	av	20	ppb	sd	1.3	%cv	6.26
Al308b	av	140	ppb	sd	12.5	%cv	8.94
V292a	av	-0	ppb	sd	0.2	%cv	56.56
Ca317b	av	50978	ppb	sd	1999.8	%cv	3.92
Cu324b	av	3	ppb	sd	1.3	%cv	40.48
Ag328a	av	-4	ppb	sd	4.6	%cv	118.15
Ba455b	av	235	ppb	sd	4.5	%cv	1.90
Na589b	av	19922	ppb	sd	114.8	%cv	0.58
Cd214a	av	-2	ppb	sd	3.7	%cv	206.73
Be313a	av	0	ppb	sd	0.1	%cv	13.16
K766b	av	9857	ppb	sd	122.0	%cv	1.24

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rep	1	Cr205a	conc	-8	ppb	
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rep	1	Sn189b	conc	4	ppb	
rep	1	Zn213a	conc	11	ppb	
rep	1	Co228a	conc	6	ppb	
rep	1	Ni231a	conc	-1	ppb	
rep	1	Sb206b	conc	-11	ppb	
rep	1	Mn257a	conc	110	ppb	
rep	1	Mg279b	conc	15175	ppb	
rep	1	Fe259a	conc	65	ppb	window edge
rep	1	Al308b	conc	-10	ppb	window edge
rep	1	V292a	conc	-4	ppb	
rep	1	Ca317b	conc	93427	ppb	
rep	1	Cu324b	conc	-3	ppb	
rep	1	Ag328a	conc	-4	ppb	
rep	1	Ba455b	conc	140	ppb	
rep	1	Na589b	conc	23030	ppb	
rep	1	Cd214a	conc	1	ppb	window edge
rep	1	Be313a	conc	0	ppb	window edge
rep	1	K766b	conc	11943	ppb	
rep	2	Cr205a	conc	-5	ppb	
rep	2	Sn189b	conc	-18	ppb	
rep	2	Zn213a	conc	7	ppb	
rep	2	Co228a	conc	12	ppb	
rep	2	Ni231a	conc	17	ppb	
rep	2	Sb206b	conc	5	ppb	
rep	2	Mn257a	conc	110	ppb	
rep	2	Mg279b	conc	14796	ppb	
rep	2	Fe259a	conc	59	ppb	window edge
rep	2	Al308b	conc	-26	ppb	window edge
rep	2	V292a	conc	-2	ppb	
rep	2	Ca317b	conc	95378	ppb	
rep	2	Cu324b	conc	-2	ppb	
rep	2	Ag328a	conc	-2	ppb	
rep	2	Ba455b	conc	139	ppb	
rep	2	Na589b	conc	22437	ppb	
rep	2	Cd214a	conc	1	ppb	
rep	2	Be313a	conc	1	ppb	window edge
rep	2	K766b	conc	11797	ppb	

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Cr205a	av	-7	ppb	sd	2.2	%cv	33.54
Sn189b	av	-7	ppb	sd	15.2	%cv	212.14
Zn213a	av	9	ppb	sd	2.5	%cv	27.62
Co228a	av	9	ppb	sd	4.2	%cv	46.51
Ni231a	av	8	ppb	sd	12.7	%cv	157.63
Sb206b	av	-3	ppb	sd	11.2	%cv	422.89
Mn257a	av	110	ppb	sd	0.2	%cv	0.15
Mg279b	av	14986	ppb	sd	267.7	%cv	1.79
Fe259a	av	62	ppb	sd	4.0	%cv	6.36
Al308b	av	-18	ppb	sd	11.8	%cv	64.88
V292a	av	-3	ppb	sd	1.6	%cv	56.28
Ca317b	av	94402	ppb	sd	1379.3	%cv	1.46
Cu324b	av	-2	ppb	sd	0.8	%cv	36.84
Ag328a	av	-3	ppb	sd	1.1	%cv	38.91
Ba455b	av	140	ppb	sd	0.3	%cv	0.21
Na589b	av	22733	ppb	sd	419.3	%cv	1.84
Cd214a	av	1	ppb	sd	0.1	%cv	10.06
Be313a	av	1	ppb	sd	0.2	%cv	36.79
K766b	av	11870	ppb	sd	102.9	%cv	0.87

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rep	1	Cr205a	conc	-16	ppb	window edge
rep	1	Sn189b	conc	0	ppb	

rep	1	Zn213a	conc	15	ppb	
rep	1	Co228a	conc	2	ppb	window edge
rep	1	Ni231a	conc	6	ppb	
rep	1	Sb206b	conc	-6	ppb	
rep	1	Mn257a	conc	86	ppb	
rep	1	Mg279b	conc	13265	ppb	
rep	1	Fe259a	conc	18	ppb	window edge
rep	1	Al308b	conc	-25	ppb	window edge
rep	1	V292a	conc	1	ppb	window edge
rep	1	Ca317b	conc	77914	ppb	
rep	1	Cu324b	conc	-1	ppb	
rep	1	Ag328a	conc	-1	ppb	
rep	1	Ba455b	conc	112	ppb	
rep	1	Na589b	conc	21147	ppb	
rep	1	Cd214a	conc	2	ppb	
rep	1	Be313a	conc	1	ppb	window edge
rep	1	K766b	conc	10852	ppb	
rep	2	Cr205a	conc	-10	ppb	window edge
rep	2	Sn189b	conc	-50	ppb	window edge
rep	2	Zn213a	conc	9	ppb	
rep	2	Co228a	conc	0	ppb	window edge
rep	2	Ni231a	conc	4	ppb	
rep	2	Sb206b	conc	5	ppb	
rep	2	Mg279b	conc	13359	ppb	
rep	2	Mn257a	conc	87	ppb	
rep	2	Fe259a	conc	26	ppb	window edge
rep	2	Al308b	conc	100	ppb	
rep	2	V292a	conc	-2	ppb	
rep	2	Ca317b	conc	78761	ppb	
rep	2	Cu324b	conc	2	ppb	
rep	2	Ag328a	conc	-1	ppb	
rep	2	Ba455b	conc	111	ppb	
rep	2	Na589b	conc	20882	ppb	
rep	2	Cd214a	conc	-0	ppb	window edge
rep	2	K766b	conc	11238	ppb	
rep	2	Be313a	conc	0	ppb	window edge

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Cr205a	av	-13	ppb	sd	4.3	%CV	33.62
Sn189b	av	-25	ppb	sd	35.4	%CV	143.06
Zn213a	av	12	ppb	sd	4.5	%CV	37.34
Co228a	av	1	ppb	sd	1.4	%CV	128.63
Ni231a	av	5	ppb	sd	1.5	%CV	29.40
Sb206b	av	-1	ppb	sd	8.0	%CV	1022.0
Mg279b	av	13312	ppb	sd	66.6	%CV	0.50
Mn257a	av	87	ppb	sd	1.0	%CV	1.18
Fe259a	av	22	ppb	sd	5.5	%CV	24.89
Al308b	av	37	ppb	sd	88.4	%CV	236.67
V292a	av	-1	ppb	sd	2.5	%CV	475.06
Ca317b	av	78337	ppb	sd	599.3	%CV	0.77
Cu324b	av	0	ppb	sd	2.3	%CV	1368.3
Ag328a	av	-1	ppb	sd	0.4	%CV	36.26
Ba455b	av	112	ppb	sd	0.7	%CV	0.65
Na589b	av	21014	ppb	sd	188.0	%CV	0.89
Cd214a	av	1	ppb	sd	1.1	%CV	145.69
K766b	av	11045	ppb	sd	273.4	%CV	2.48
Be313a	av	0	ppb	sd	0.1	%CV	35.42

CCV3

rep	1	Cr205a	conc	986	ppb	
rep	1	Sn189b	conc	2655	ppb	
rep	1	Zn213a	conc	2514	ppb	

rep	1	Co228a	conc	2574	ppb
rep	1	Ni231a	conc	2524	ppb
rep	1	Sb206b	conc	950	ppb
rep	1	Mn257a	conc	2451	ppb
rep	1	Mg279b	conc	51337	ppb
rep	1	Fe259a	conc	2372	ppb
rep	1	Al308b	conc	10111	ppb
rep	1	V292a	conc	2390	ppb
rep	1	Ca317b	conc	52931	ppb
rep	1	Cu324b	conc	2587	ppb
rep	1	Ag328a	conc	974	ppb
rep	1	Ba455b	conc	2612	ppb
rep	1	Na589b	conc	50493	ppb
rep	1	Cd214a	conc	1045	ppb
rep	1	K766b	conc	49723	ppb
rep	1	Be313a	conc	1084	ppb
rep	1	ara	conc	0.959	
rep	1	arb	conc	0.994	
rep	2	Sn189b	conc	2608	ppb
rep	2	Cr205a	conc	1012	ppb
rep	2	Zn213a	conc	2513	ppb
rep	2	Co228a	conc	2577	ppb
rep	2	Sb206b	conc	998	ppb
rep	2	Ni231a	conc	2493	ppb
rep	2	Mg279b	conc	51824	ppb
rep	2	Mn257a	conc	2482	ppb
rep	2	Al308b	conc	10078	ppb
rep	2	Fe259a	conc	11490	ppb
rep	2	Ca317b	conc	52442	ppb
rep	2	V292a	conc	2410	ppb
rep	2	Cu324b	conc	2574	ppb
rep	2	Ba455b	conc	2592	ppb
rep	2	Ag328a	conc	972	ppb
rep	2	Na589b	conc	49359	ppb
rep	2	K766b	conc	50095	ppb
rep	2	Cd214a	conc	1043	ppb
rep	2	Be313a	conc	1084	ppb
rep	2	arb	conc	0.952	
rep	2	ara	conc	0.955	

window edge

CCV3

Sn189b	av	2631	ppb	sd	32.8	%cv	1.25
Cr205a	av	999	ppb	sd	18.3	%cv	1.83
Zn213a	av	2513	ppb	sd	0.6	%cv	0.02
Co228a	av	2575	ppb	sd	2.0	%cv	0.08
Sb206b	av	974	ppb	sd	33.4	%cv	3.43
Ni231a	av	2509	ppb	sd	21.9	%cv	0.87
Mg279b	av	51581	ppb	sd	343.7	%cv	0.67
Mn257a	av	2466	ppb	sd	21.7	%cv	0.88
Al308b	av	10094	ppb	sd	22.8	%cv	0.23
Fe259a	av	6931	ppb	sd	6447.9	%cv	93.03
Ca317b	av	52686	ppb	sd	346.1	%cv	0.66
V292a	av	2400	ppb	sd	14.4	%cv	0.60
Cu324b	av	2581	ppb	sd	8.7	%cv	0.34
Ba455b	av	2602	ppb	sd	14.2	%cv	0.54
Ag328a	av	973	ppb	sd	1.9	%cv	0.20
Na589b	av	49926	ppb	sd	801.9	%cv	1.61
K766b	av	49909	ppb	sd	263.3	%cv	0.53
Cd214a	av	1044	ppb	sd	1.1	%cv	0.10
Be313a	av	1084	ppb	sd	0.3	%cv	0.03
arb	av	0.973		sd	0.0297	%cv	3.05

ara av 0.957 sd 0.0025 %cv 0.26

CCB3	rep		conc			
	1	Sn189b	conc	-4	ppb	
	1	Cr205a	conc	3	ppb	
	1	Zn213a	conc	9	ppb	
	1	Co228a	conc	-4	ppb	window edge
	1	Sb206b	conc	-5	ppb	
	1	Ni231a	conc	-0	ppb	
	1	Mg279b	conc	15	ppb	
	1	Mn257a	conc	-1	ppb	
	1	Al308b	conc	-107	ppb	window edge
	1	Fe259a	conc	-4	ppb	
	1	Ca317b	conc	-16	ppb	
	1	V292a	conc	-7	ppb	
	1	Cu324b	conc	-3	ppb	
	1	Ba455b	conc	-1	ppb	
	1	Ag328a	conc	-5	ppb	
	1	Na589b	conc	31	ppb	
	1	K766b	conc	1332	ppb	
	1	Cd214a	conc	1	ppb	
	1	Be313a	conc	1	ppb	window edge
	2	Cr205a	conc	-1	ppb	
	2	Sn189b	conc	-22	ppb	
	2	Zn213a	conc	-2	ppb	window edge
	2	Co228a	conc	5	ppb	
	2	Ni231a	conc	1	ppb	
	2	Sb206b	conc	-13	ppb	
	2	Mn257a	conc	-2	ppb	window edge
	2	Mg279b	conc	-6	ppb	window edge
	2	Fe259a	conc	-10	ppb	
	2	Al308b	conc	-110	ppb	window edge
	2	V292a	conc	-5	ppb	
	2	Ca317b	conc	-19	ppb	
	2	Cu324b	conc	-5	ppb	
	2	Ag328a	conc	1	ppb	
	2	Ba455b	conc	-1	ppb	
	2	Na589b	conc	44	ppb	
	2	Cd214a	conc	2	ppb	
	2	K766b	conc	1347	ppb	
	2	Be313a	conc	0	ppb	window edge

CCB3	av		sd	%cv	
Cr205a	av	1	2.8	250.25	
Sn189b	av	-13	12.8	97.15	
Zn213a	av	3	7.5	215.56	
Co228a	av	1	6.1	1046.5	
Ni231a	av	1	0.8	145.03	
Sb206b	av	-9	5.8	66.65	
Mn257a	av	-2	1.1	60.60	
Mg279b	av	4	14.5	337.76	
Fe259a	av	-7	4.4	64.42	
Al308b	av	-108	2.2	2.08	
V292a	av	-6	1.7	29.62	
Ca317b	av	-17	2.3	13.12	
Cu324b	av	-4	1.2	33.03	
Ag328a	av	-2	4.2	247.55	
Ba455b	av	-1	0.1	14.78	
Na589b	av	37	8.9	23.79	
Cd214a	av	2	0.4	22.10	
K766b	av	1340	10.5	0.78	
Be313a	av	0	0.1	28.94	

67151/MGC363	rep	1	Cr205a	conc	-8 ppb	window edge
	rep	1	Sn189b	conc	6 ppb	
	rep	1	Zn213a	conc	10 ppb	
	rep	1	Co228a	conc	20 ppb	
	rep	1	Ni231a	conc	14 ppb	
	rep	1	Sb206b	conc	-10 ppb	
	rep	1	Mn257a	conc	90 ppb	
	rep	1	Mg279b	conc	13388 ppb	
	rep	1	Fe259a	conc	188 ppb	
	rep	1	Al308b	conc	-23 ppb	window edge
	rep	1	V292a	conc	0 ppb	
	rep	1	Ca317b	conc	76918 ppb	
	rep	1	Cu324b	conc	6 ppb	
	rep	1	Ag328a	conc	-9 ppb	window edge
	rep	1	Ba455b	conc	125 ppb	
	rep	1	Na589b	conc	21050 ppb	
	rep	1	Cd214a	conc	4 ppb	
	rep	1	Be313a	conc	0 ppb	window edge
	rep	1	K766b	conc	10964 ppb	
	rep	2	Cr205a	conc	4 ppb	
	rep	2	Sn189b	conc	-17 ppb	
	rep	2	Zn213a	conc	12 ppb	
	rep	2	Co228a	conc	13 ppb	
	rep	2	Ni231a	conc	9 ppb	
	rep	2	Sb206b	conc	-33 ppb	
	rep	2	Mn257a	conc	88 ppb	
	rep	2	Mg279b	conc	13203 ppb	
	rep	2	Fe259a	conc	193 ppb	
	rep	2	Al308b	conc	-30 ppb	window edge
	rep	2	V292a	conc	-11 ppb	window edge
	rep	2	Ca317b	conc	77032 ppb	
	rep	2	Cu324b	conc	8 ppb	
	rep	2	Ag328a	conc	-5 ppb	window edge
	rep	2	Ba455b	conc	125 ppb	
	rep	2	Na589b	conc	20136 ppb	
	rep	2	Cd214a	conc	4 ppb	
	rep	2	Be313a	conc	0 ppb	window edge
	rep	2	K766b	conc	11037 ppb	

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Cr205a	av	-2 ppb	sd	8.4 %cv	501.86
Sn189b	av	-6 ppb	sd	15.9 %cv	288.37
Zn213a	av	11 ppb	sd	1.2 %cv	10.96
Co228a	av	16 ppb	sd	5.0 %cv	30.78
Ni231a	av	12 ppb	sd	3.4 %cv	29.01
Sb206b	av	-22 ppb	sd	15.7 %cv	72.84
Mn257a	av	89 ppb	sd	1.3 %cv	1.42
Mg279b	av	13296 ppb	sd	131.0 %cv	0.99
Fe259a	av	191 ppb	sd	4.0 %cv	2.12
Al308b	av	-26 ppb	sd	4.6 %cv	17.38
V292a	av	-6 ppb	sd	7.9 %cv	141.82
Ca317b	av	76975 ppb	sd	80.6 %cv	0.10
Cu324b	av	7 ppb	sd	2.1 %cv	30.19
Ag328a	av	-7 ppb	sd	3.4 %cv	47.61
Ba455b	av	125 ppb	sd	0.2 %cv	0.19
Na589b	av	20593 ppb	sd	645.9 %cv	3.14
Cd214a	av	4 ppb	sd	0.2 %cv	5.51
Be313a	av	0 ppb	sd	0.1 %cv	25.46
K766b	av	11000 ppb	sd	51.2 %cv	0.47

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rep	1	Cr205a	conc	-10 ppb	
rep	1	Sn189b	conc	-33 ppb	window edge
rep	1	Zn213a	conc	50 ppb	
rep	1	Co228a	conc	9 ppb	
rep	1	Ni231a	conc	-4 ppb	
rep	1	Sb206b	conc	-14 ppb	
rep	1	Mg279b	conc	29592 ppb	
rep	1	Mn257a	conc	21 ppb	
rep	1	Fe259a	conc	142 ppb	
rep	1	Al308b	conc	92 ppb	
rep	1	V292a	conc	-2 ppb	
rep	1	Ca317b	conc	81988 ppb	
rep	1	Cu324b	conc	-3 ppb	
rep	1	Ag328a	conc	-0 ppb	
rep	1	Ba455b	conc	354 ppb	
rep	1	Na589b	conc	24071 ppb	
rep	1	Cd214a	conc	3 ppb	
rep	1	Be313a	conc	0 ppb	window edge
rep	1	K766b	conc	10840 ppb	
rep	2	Cr205a	conc	-11 ppb	
rep	2	Sn189b	conc	-36 ppb	window edge
rep	2	Zn213a	conc	54 ppb	
rep	2	Co228a	conc	13 ppb	
rep	2	Ni231a	conc	8 ppb	
rep	2	Sb206b	conc	6 ppb	
rep	2	Mg279b	conc	29931 ppb	
rep	2	Mn257a	conc	21 ppb	
rep	2	Fe259a	conc	133 ppb	
rep	2	Al308b	conc	92 ppb	
rep	2	V292a	conc	-6 ppb	
rep	2	Ca317b	conc	81250 ppb	
rep	2	Cu324b	conc	-3 ppb	
rep	2	Ag328a	conc	-4 ppb	
rep	2	Ba455b	conc	355 ppb	
rep	2	Na589b	conc	24099 ppb	
rep	2	Cd214a	conc	3 ppb	
rep	2	K766b	conc	10818 ppb	
rep	2	Be313a	conc	1 ppb	window edge

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Cr205a	av	-11 ppb	sd	1.1 %CV	10.23
Sn189b	av	-34 ppb	sd	1.6 %CV	4.57
Zn213a	av	52 ppb	sd	2.9 %CV	5.69
Co228a	av	11 ppb	sd	2.7 %CV	24.82
Ni231a	av	2 ppb	sd	8.3 %CV	352.41
Sb206b	av	-4 ppb	sd	14.3 %CV	329.08
Mg279b	av	29761 ppb	sd	239.5 %CV	0.80
Mn257a	av	21 ppb	sd	0.2 %CV	0.86
Fe259a	av	138 ppb	sd	6.8 %CV	4.92
Al308b	av	92 ppb	sd	0.2 %CV	0.27
V292a	av	-4 ppb	sd	2.5 %CV	64.94
Ca317b	av	81619 ppb	sd	521.9 %CV	0.64
Cu324b	av	-3 ppb	sd	0.5 %CV	16.00
Ag328a	av	-2 ppb	sd	2.8 %CV	120.04
Ba455b	av	354 ppb	sd	1.3 %CV	0.35
Na589b	av	24085 ppb	sd	20.1 %CV	0.08
Cd214a	av	3 ppb	sd	0.5 %CV	18.19
K766b	av	10829 ppb	sd	15.2 %CV	0.14
Be313a	av	0 ppb	sd	0.1 %CV	26.48

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rep	1	Cr205a	conc	88 ppb	
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rep	1	Sn189b	conc	-11	ppb	
rep	1	Zn213a	conc	104	ppb	
rep	1	Co228a	conc	102	ppb	
rep	1	Ni231a	conc	99	ppb	
rep	1	Sb206b	conc	-2	ppb	
rep	1	Mn257a	conc	100	ppb	
rep	1	Mg279b	conc	6	ppb	window edge
rep	1	Fe259a	conc	98	ppb	
rep	1	Al308b	conc	486	ppb	
rep	1	V292a	conc	241	ppb	
rep	1	Ca317b	conc	45	ppb	
rep	1	Cu324b	conc	102	ppb	
rep	1	Ag328a	conc	-5	ppb	
rep	1	Ba455b	conc	5	ppb	
rep	1	Na589b	conc	400	ppb	
rep	1	Cd214a	conc	28	ppb	
rep	1	K766b	conc	1264	ppb	
rep	1	Be313a	conc	103	ppb	
rep	2	Cr205a	conc	90	ppb	
rep	2	Sn189b	conc	-64	ppb	window edge
rep	2	Zn213a	conc	98	ppb	
rep	2	Co228a	conc	108	ppb	
rep	2	Ni231a	conc	97	ppb	
rep	2	Sb206b	conc	-25	ppb	
rep	2	Mn257a	conc	98	ppb	
rep	2	Mg279b	conc	15	ppb	
rep	2	Fe259a	conc	106	ppb	
rep	2	Al308b	conc	474	ppb	
rep	2	V292a	conc	228	ppb	
rep	2	Ca317b	conc	37	ppb	
rep	2	Cu324b	conc	101	ppb	
rep	2	Ag328a	conc	-1	ppb	
rep	2	Ba455b	conc	5	ppb	
rep	2	Na589b	conc	369	ppb	
rep	2	Cd214a	conc	26	ppb	
rep	2	K766b	conc	1352	ppb	
rep	2	Be313a	conc	102	ppb	

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Cr205a	av	89	ppb	sd	1.0	%cv	1.11
Sn189b	av	-38	ppb	sd	37.9	%cv	100.47
Zn213a	av	101	ppb	sd	4.7	%cv	4.64
Co228a	av	105	ppb	sd	4.2	%cv	3.97
Ni231a	av	98	ppb	sd	1.2	%cv	1.21
Sb206b	av	-13	ppb	sd	16.5	%cv	125.08
Mn257a	av	99	ppb	sd	1.6	%cv	1.64
Mg279b	av	10	ppb	sd	6.0	%cv	58.35
Fe259a	av	102	ppb	sd	5.9	%cv	5.79
Al308b	av	480	ppb	sd	8.6	%cv	1.79
V292a	av	235	ppb	sd	9.4	%cv	4.01
Ca317b	av	41	ppb	sd	5.3	%cv	13.09
Cu324b	av	102	ppb	sd	0.9	%cv	0.88
Ag328a	av	-3	ppb	sd	2.8	%cv	98.74
Ba455b	av	5	ppb	sd	0.1	%cv	1.16
Na589b	av	384	ppb	sd	22.4	%cv	5.82
Cd214a	av	27	ppb	sd	0.9	%cv	3.19
K766b	av	1308	ppb	sd	62.1	%cv	4.75
Be313a	av	103	ppb	sd	0.3	%cv	0.32

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rep	1	Cr205a	conc	198	ppb
rep	1	Sn189b	conc	566	ppb

rep	1	Zn213a	conc	538	ppb	
rep	1	Co228a	conc	519	ppb	
rep	1	Ni231a	conc	515	ppb	
rep	1	Sb206b	conc	461	ppb	
rep	1	Mn257a	conc	520	ppb	
rep	1	Mg279b	conc	28	ppb	
rep	1	Fe259a	conc	39	ppb	
rep	1	Al308b	conc	-85	ppb	window edge
rep	1	V292a	conc	508	ppb	
rep	1	Ca317b	conc	-6	ppb	
rep	1	Cu324b	conc	282	ppb	
rep	1	Ag328a	conc	45	ppb	
rep	1	Ba455b	conc	2096	ppb	
rep	1	Na589b	conc	23	ppb	
rep	1	Cd214a	conc	52	ppb	
rep	1	Be313a	conc	53	ppb	
rep	1	K766b	conc	1467	ppb	
rep	2	Cr205a	conc	205	ppb	
rep	2	Sn189b	conc	539	ppb	
rep	2	Zn213a	conc	541	ppb	
rep	2	Co228a	conc	515	ppb	
rep	2	Ni231a	conc	515	ppb	
rep	2	Sb206b	conc	477	ppb	
rep	2	Mn257a	conc	521	ppb	
rep	2	Mg279b	conc	-8	ppb	window edge
rep	2	Fe259a	conc	44	ppb	
rep	2	Al308b	conc	-77	ppb	window edge
rep	2	V292a	conc	505	ppb	
rep	2	Ca317b	conc	-7	ppb	
rep	2	Cu324b	conc	285	ppb	
rep	2	Ag328a	conc	51	ppb	
rep	2	Ba455b	conc	2080	ppb	
rep	2	Na589b	conc	29	ppb	
rep	2	Cd214a	conc	54	ppb	
rep	2	Be313a	conc	53	ppb	
rep	2	K766b	conc	1404	ppb	

PB SPK 8129

Cr205a	av	202	ppb	sd	5.4	%cv	2.69
Sn189b	av	552	ppb	sd	19.1	%cv	3.45
Zn213a	av	539	ppb	sd	1.8	%cv	0.33
Co228a	av	517	ppb	sd	2.9	%cv	0.57
Ni231a	av	515	ppb	sd	0.3	%cv	0.06
Sb206b	av	469	ppb	sd	11.2	%cv	2.39
Mn257a	av	520	ppb	sd	0.7	%cv	0.14
Mg279b	av	10	ppb	sd	26.0	%cv	258.53
Fe259a	av	42	ppb	sd	3.2	%cv	7.69
Al308b	av	-81	ppb	sd	5.8	%cv	7.20
V292a	av	506	ppb	sd	2.2	%cv	0.44
Ca317b	av	-7	ppb	sd	0.2	%cv	3.79
Cu324b	av	283	ppb	sd	2.1	%cv	0.72
Ag328a	av	48	ppb	sd	4.4	%cv	9.05
Ba455b	av	2088	ppb	sd	11.5	%cv	0.55
Na589b	av	26	ppb	sd	4.6	%cv	17.65
Cd214a	av	53	ppb	sd	1.0	%cv	1.83
Be313a	av	53	ppb	sd	0.1	%cv	0.23
K766b	av	1435	ppb	sd	44.9	%cv	3.12

PB SPK 8129

rep	1	Cr205a	conc	185	ppb	
rep	1	Sn189b	conc	405	ppb	
rep	1	Zn213a	conc	194	ppb	

rep	1	Co228a	conc	516	ppb
rep	1	Ni231a	conc	380	ppb
rep	1	Sb206b	conc	479	ppb
rep	1	Mg279b	conc	49505	ppb
rep	1	Mn257a	conc	200	ppb
rep	1	Fe259a	conc	1078	ppb
rep	1	Al308b	conc	2050	ppb
rep	1	V292a	conc	470	ppb
rep	1	Ca317b	conc	102772	ppb
rep	1	Cu324b	conc	248	ppb
rep	1	Ag328a	conc	39	ppb
rep	1	Ba455b	conc	2042	ppb
rep	1	Na589b	conc	98951	ppb
rep	1	Cd214a	conc	48	ppb
rep	1	Be313a	conc	51	ppb
rep	1	K766b	conc	49627	ppb
rep	2	Cr205a	conc	193	ppb
rep	2	Sn189b	conc	391	ppb
rep	2	Zn213a	conc	199	ppb
rep	2	Co228a	conc	512	ppb
rep	2	Ni231a	conc	381	ppb
rep	2	Sb206b	conc	415	ppb
rep	2	Mn257a	conc	202	ppb
rep	2	Mg279b	conc	48920	ppb
rep	2	Fe259a	conc	1054	ppb
rep	2	Al308b	conc	2004	ppb
rep	2	V292a	conc	469	ppb
rep	2	Ca317b	conc	103289	ppb
rep	2	Cu324b	conc	243	ppb
rep	2	Ag328a	conc	42	ppb
rep	2	Ba455b	conc	1988	ppb
rep	2	Na589b	conc	98827	ppb
rep	2	Cd214a	conc	52	ppb
rep	2	Be313a	conc	51	ppb
rep	2	K766b	conc	49250	ppb

PB SPK 8129

Cr205a	av	189	ppb	sd	5.9	%cv	3.13
Sn189b	av	398	ppb	sd	9.9	%cv	2.49
Zn213a	av	197	ppb	sd	3.6	%cv	1.84
Co228a	av	514	ppb	sd	3.1	%cv	0.61
Ni231a	av	381	ppb	sd	0.9	%cv	0.23
Sb206b	av	447	ppb	sd	45.0	%cv	10.07
Mn257a	av	201	ppb	sd	1.9	%cv	0.96
Mg279b	av	49212	ppb	sd	413.2	%cv	0.84
Fe259a	av	1066	ppb	sd	17.1	%cv	1.60
Al308b	av	2027	ppb	sd	32.1	%cv	1.59
V292a	av	470	ppb	sd	0.5	%cv	0.10
Ca317b	av	103030	ppb	sd	365.7	%cv	0.35
Cu324b	av	245	ppb	sd	3.7	%cv	1.51
Ag328a	av	40	ppb	sd	1.6	%cv	4.01
Ba455b	av	2015	ppb	sd	37.7	%cv	1.87
Na589b	av	98889	ppb	sd	88.1	%cv	0.09
Cd214a	av	50	ppb	sd	2.5	%cv	5.06
Be313a	av	51	ppb	sd	0.1	%cv	0.12
K766b	av	49438	ppb	sd	266.9	%cv	0.54

CCV4	rep	1	Cr205a	conc	997	ppb
	rep	1	Sn189b	conc	2542	ppb
	rep	1	Zn213a	conc	2469	ppb
	rep	1	Co228a	conc	2467	ppb

rep	1	Ni231a	conc	2457	ppb
rep	1	Sb206b	conc	937	ppb
rep	1	Mn257a	conc	2419	ppb
rep	1	Mg279b	conc	49950	ppb
rep	1	Fe259a	conc	10281	ppb
rep	1	Al308b	conc	9884	ppb
rep	1	V292a	conc	2425	ppb
rep	1	Ca317b	conc	50426	ppb
rep	1	Cu324b	conc	2542	ppb
rep	1	Ag328a	conc	963	ppb
rep	1	Ba455b	conc	2567	ppb
rep	1	Na589b	conc	49130	ppb
rep	1	Cd214a	conc	1020	ppb
rep	1	K766b	conc	48730	ppb
rep	1	Be313a	conc	1038	ppb
rep	1	ara	conc	0.988	
rep	1	arb	conc	0.986	
rep	2	Sn189b	conc	2511	ppb
rep	2	Cr205a	conc	996	ppb
rep	2	Zn213a	conc	2502	ppb
rep	2	Co228a	conc	2496	ppb
rep	2	Sb206b	conc	971	ppb
rep	2	Ni231a	conc	2393	ppb
rep	2	Mg279b	conc	50393	ppb
rep	2	Mn257a	conc	2433	ppb
rep	2	Al308b	conc	9834	ppb
rep	2	Fe259a	conc	10490	ppb
rep	2	Ca317b	conc	50224	ppb
rep	2	V292a	conc	2411	ppb
rep	2	Cu324b	conc	2561	ppb
rep	2	Ba455b	conc	2554	ppb
rep	2	Ag328a	conc	976	ppb
rep	2	Na589b	conc	48785	ppb
rep	2	K766b	conc	48911	ppb
rep	2	Cd214a	conc	1011	ppb
rep	2	Be313a	conc	1037	ppb
rep	2	arb	conc	0.976	
rep	2	ara	conc	0.980	

CCV4

Sn189b	av	2527	ppb	sd	21.4	%CV	0.85
Cr205a	av	996	ppb	sd	1.2	%CV	0.12
Zn213a	av	2485	ppb	sd	23.5	%CV	0.94
Co228a	av	2481	ppb	sd	20.3	%CV	0.82
Sb206b	av	954	ppb	sd	23.9	%CV	2.51
Ni231a	av	2425	ppb	sd	44.7	%CV	1.85
Mg279b	av	50171	ppb	sd	313.3	%CV	0.62
Mn257a	av	2426	ppb	sd	9.7	%CV	0.40
Al308b	av	9859	ppb	sd	35.2	%CV	0.36
Fe259a	av	10386	ppb	sd	148.0	%CV	1.42
Ca317b	av	50325	ppb	sd	142.8	%CV	0.28
V292a	av	2418	ppb	sd	9.9	%CV	0.41
Cu324b	av	2551	ppb	sd	13.2	%CV	0.52
Ba455b	av	2560	ppb	sd	8.7	%CV	0.34
Ag328a	av	970	ppb	sd	9.0	%CV	0.93
Na589b	av	48958	ppb	sd	243.7	%CV	0.50
K766b	av	48820	ppb	sd	127.9	%CV	0.26
Cd214a	av	1016	ppb	sd	6.6	%CV	0.65
Be313a	av	1038	ppb	sd	0.5	%CV	0.05
arb	av	0.981		sd	0.0072	%CV	0.74
ara	av	0.984		sd	0.0056	%CV	0.57

CCB4	rep	id	conc	value	unit	location
	1	Sn189b	conc	-12	ppb	
	1	Cr205a	conc	-10	ppb	
	1	Zn213a	conc	-7	ppb	window edge
	1	Co228a	conc	2	ppb	
	1	Sb206b	conc	-36	ppb	window edge
	1	Ni231a	conc	0	ppb	
	1	Mg279b	conc	10	ppb	window edge
	1	Mn257a	conc	-2	ppb	window edge
	1	Al308b	conc	-90	ppb	window edge
	1	Fe259a	conc	-11	ppb	
	1	Ca317b	conc	-13	ppb	
	1	V292a	conc	7	ppb	
	1	Cu324b	conc	-4	ppb	
	1	Ba455b	conc	-0	ppb	
	1	Ag328a	conc	-1	ppb	
	1	Na589b	conc	7	ppb	window edge
	1	Cd214a	conc	2	ppb	
	1	K766b	conc	1198	ppb	
	1	Be313a	conc	0	ppb	window edge
	2	Cr205a	conc	-8	ppb	window edge
	2	Sn189b	conc	-12	ppb	
	2	Zn213a	conc	5	ppb	
	2	Co228a	conc	3	ppb	window edge
	2	Ni231a	conc	1	ppb	
	2	Sb206b	conc	-6	ppb	
	2	Mn257a	conc	-1	ppb	
	2	Mg279b	conc	-13	ppb	window edge
	2	Fe259a	conc	-11	ppb	
	2	Al308b	conc	-84	ppb	window edge
	2	V292a	conc	-5	ppb	window edge
	2	Ca317b	conc	-10	ppb	
	2	Cu324b	conc	-4	ppb	
	2	Ag328a	conc	-4	ppb	
	2	Ba455b	conc	-0	ppb	
	2	Na589b	conc	-16	ppb	window edge
	2	Cd214a	conc	-0	ppb	window edge
	2	Be313a	conc	0	ppb	window edge
	2	K766b	conc	823	ppb	window edge

CCB4	av	value	unit	sd	value	%cv	value
Cr205a	av	-9	ppb	sd	1.3	%cv	13.70
Sn189b	av	-12	ppb	sd	0.1	%cv	1.04
Zn213a	av	-1	ppb	sd	8.4	%cv	998.87
Co228a	av	2	ppb	sd	1.3	%cv	53.84
Ni231a	av	1	ppb	sd	0.6	%cv	88.65
Sb206b	av	-21	ppb	sd	21.1	%cv	101.15
Mn257a	av	-2	ppb	sd	1.1	%cv	61.45
Mg279b	av	-2	ppb	sd	16.5	%cv	964.30
Fe259a	av	-11	ppb	sd	0.5	%cv	4.57
Al308b	av	-87	ppb	sd	4.5	%cv	5.20
V292a	av	1	ppb	sd	9.0	%cv	872.14
Ca317b	av	-12	ppb	sd	1.9	%cv	16.50
Cu324b	av	-4	ppb	sd	0.3	%cv	8.07
Ag328a	av	-3	ppb	sd	2.2	%cv	80.12
Ba455b	av	-0	ppb	sd	0.0	%cv	2.50
Na589b	av	-4	ppb	sd	16.8	%cv	380.47
Cd214a	av	1	ppb	sd	1.7	%cv	141.76
Be313a	av	0	ppb	sd	0.1	%cv	76.97
K766b	av	1010	ppb	sd	265.2	%cv	26.25

X2CRDL

rep	1	Cr205a	conc	26	ppb
rep	1	Sn189b	conc	41	ppb
rep	1	Zn213a	conc	40	ppb
rep	1	Pb220a	em	134.2	
rep	1	Co228a	conc	111	ppb
rep	1	Sb206b	conc	118	ppb
rep	1	Ni231a	conc	79	ppb
rep	1	Cu324b	conc	50	ppb
rep	1	Mn257a	conc	29	ppb
rep	1	V292a	conc	94	ppb
rep	1	Ag328a	conc	13	ppb
rep	1	Cd214a	conc	10	ppb
rep	1	Be313a	conc	10	ppb
rep	2	Sn189b	conc	42	ppb
rep	2	Cr205a	conc	14	ppb
rep	2	Zn213a	conc	44	ppb
rep	2	Pb220a	em	97.2	
rep	2	Sb206b	conc	106	ppb
rep	2	Co228a	conc	93	ppb
rep	2	Cu324b	conc	46	ppb
rep	2	Ni231a	conc	94	ppb
rep	2	Mn257a	conc	28	ppb
rep	2	V292a	conc	86	ppb
rep	2	Ag328a	conc	17	ppb
rep	2	Cd214a	conc	15	ppb
rep	2	Be313a	conc	10	ppb

X2CRDL

Sn189b	av	42	ppb	sd	0.8	%cv	2.01
Cr205a	av	20	ppb	sd	8.5	%cv	42.35
Zn213a	av	42	ppb	sd	2.5	%cv	6.01
Pb220a	av	115.71		sd	26.144	%cv	22.59
Sb206b	av	112	ppb	sd	8.5	%cv	7.58
Co228a	av	102	ppb	sd	12.6	%cv	12.37
Cu324b	av	48	ppb	sd	2.9	%cv	6.06
Ni231a	av	86	ppb	sd	10.8	%cv	12.47
Mn257a	av	28	ppb	sd	0.7	%cv	2.46
V292a	av	90	ppb	sd	5.6	%cv	6.26
Ag328a	av	15	ppb	sd	3.3	%cv	22.02
Cd214a	av	12	ppb	sd	3.2	%cv	25.60
Be313a	av	10	ppb	sd	0.3	%cv	3.12

ICS 0387

rep	1	Sn189b	conc	-18	ppb
rep	1	Cr205a	conc	495	ppb
rep	1	Zn213a	conc	937	ppb
rep	1	Co228a	conc	494	ppb
rep	1	Sb206b	conc	-14	ppb
rep	1	Ni231a	conc	873	ppb
rep	1	Mg279b	conc	482629	ppb
rep	1	Mn257a	conc	521	ppb
rep	1	Al308b	conc	529028	ppb
rep	1	Fe259a	conc	186757	ppb
rep	1	Ca317b	conc	477984	ppb
rep	1	V292a	conc	456	ppb
rep	1	Cu324b	conc	529	ppb
rep	1	Ba455b	conc	478	ppb
rep	1	Ag328a	conc	126	ppb
rep	1	Na589b	conc	484	ppb
rep	1	K766b	conc	913	ppb
rep	1	Cd214a	conc	918	ppb
rep	1	Be313a	conc	477	ppb

rep	2	Cr205a	conc	500	ppb
rep	2	Sn189b	conc	-8	ppb
rep	2	Zn213a	conc	936	ppb
rep	2	Co228a	conc	487	ppb
rep	2	Ni231a	conc	883	ppb
rep	2	Sb206b	conc	7	ppb
rep	2	Mg279b	conc	479818	ppb
rep	2	Mn257a	conc	520	ppb
rep	2	Fe259a	conc	187814	ppb
rep	2	Al308b	conc	532048	ppb
rep	2	Ca317b	conc	481935	ppb
rep	2	V292a	conc	447	ppb
rep	2	Cu324b	conc	524	ppb
rep	2	Ba455b	conc	481	ppb
rep	2	Ag328a	conc	134	ppb
rep	2	Na589b	conc	518	ppb
rep	2	K766b	conc	891	ppb
rep	2	Cd214a	conc	921	ppb
rep	2	Be313a	conc	470	ppb

ICS 0387

Cr205a	av	497	ppb	sd	4.1	%cv	0.83
Sn189b	av	-13	ppb	sd	7.1	%cv	56.34
Zn213a	av	937	ppb	sd	1.0	%cv	0.11
Co228a	av	491	ppb	sd	4.9	%cv	1.00
Ni231a	av	878	ppb	sd	7.3	%cv	0.83
Sb206b	av	-4	ppb	sd	15.0	%cv	397.87
Mg279b	av	481224	ppb	sd	1988.2	%cv	0.41
Mn257a	av	520	ppb	sd	0.6	%cv	0.12
Fe259a	av	187286	ppb	sd	747.5	%cv	0.40
Al308b	av	530538	ppb	sd	2135.6	%cv	0.40
Ca317b	av	479959	ppb	sd	2793.4	%cv	0.58
V292a	av	452	ppb	sd	6.5	%cv	1.44
Cu324b	av	527	ppb	sd	4.2	%cv	0.79
Ba455b	av	479	ppb	sd	2.3	%cv	0.49
Ag328a	av	130	ppb	sd	5.2	%cv	3.97
Na589b	av	501	ppb	sd	24.0	%cv	4.80
K766b	av	902	ppb	sd	15.7	%cv	1.74
Cd214a	av	920	ppb	sd	2.3	%cv	0.25
Be313a	av	474	ppb	sd	4.9	%cv	1.02

r	rep	1	ara	conc	0.989
	rep	1	arb	conc	1.004
	rep	2	ara	conc	1.011
	rep	2	arb	conc	1.006

ara	av	1.000	sd	0.0154	%cv	1.54
arb	av	1.005	sd	0.0021	%cv	0.21

r	rep	1	ara	conc	1.010
	rep	1	arb	conc	0.995
	rep	2	ara	conc	1.012
	rep	2	arb	conc	1.027

ara	av	1.011	sd	0.0015	%cv	0.15
arb	av	1.011	sd	0.0225	%cv	2.23

r	rep	1	ara	conc	1.011
	rep	1	arb	conc	1.018
	rep	2	ara	conc	0.994
	rep	2	arb	conc	1.010

RAW DATA

Data For: Fe, Ag Case Number(s) 8129 & 8158
Test Method ICP Analyst CD Date 10/06/97

Analyst Comments

ICP RUN # 0C06A

RUN TIME 1030 → 1145

STANDARD # 1006

10/06/87

8129, 8158

0006A

1030 → 1145

CP

wcal standard	rep	1	Fe259a	em	18820.8	conc	20000
	rep	1	Ag328a	em	23306.9	conc	2000
	rep	2	Fe259a	em	19425.6	conc	20000
	rep	2	Ag328a	em	23597.6	conc	2000

1004

wcal standard							
Fe259a	av	19123.18		sd	427.638	%cv	2.24
Ag328a	av	23452.29		sd	205.558	%cv	0.88
						conc	20000
						conc	2000

wcal standard	rep	1	Fe259a	em	19329.7	conc	20000
	rep	1	Ag328a	em	23469.2	conc	2000
	rep	2	Fe259a	em	19246.2	conc	20000
	rep	2	Ag328a	em	23399.1	conc	2000

wcal standard							
Fe259a	av	19287.96		sd	59.079	%cv	0.31
Ag328a	av	23434.16		sd	49.611	%cv	0.21
						conc	20000
						conc	2000

standard	rep	1	Fe259a	em	19398.8	conc	20000
	rep	1	Ag328a	em	23390.3	conc	2000
	rep	2	Fe259a	em	19129.0	conc	20000
	rep	2	Ag328a	em	23585.9	conc	2000

standard							
Fe259a	av	19264		sd	190.3	%cv	0.99
Ag328a	av	23488		sd	138.3	%cv	0.59
						conc	20000
						conc	2000

blank	rep	1	Fe259a	em	243.5		
	rep	1	Ag328a	em	43.3		
	rep	2	Fe259a	em	241.8		
	rep	2	Ag328a	em	63.0		

blank							
Fe259a	av	243		sd	1.2	%cv	0.50
Ag328a	av	53		sd	13.9	%cv	26.22

ICV1 0487	rep	1	Fe259a	conc	2050	ppb	
	rep	1	Ag328a	conc	494	ppb	
	rep	2	Fe259a	conc	2028	ppb	
	rep	2	Ag328a	conc	502	ppb	

ICV1 0487							
Fe259a	av	2039	ppb	sd	15.4	%cv	0.76
Ag328a	av	498	ppb	sd	5.6	%cv	1.13

ICB	rep	1	Fe259a	conc	-5	ppb	
	rep	1	Ag328a	conc	-1	ppb	
	rep	2	Fe259a	conc	-9	ppb	
	rep	2	Ag328a	conc	-3	ppb	

ICB							
Fe259a	av	-7	ppb	sd	2.5	%cv	35.34
Ag328a	av	-2	ppb	sd	1.7	%cv	86.46

X2CRDL	rep	1	Fe259a	conc	-3	ppb	
	rep	1	Ag328a	conc	14	ppb	
	rep	2	Fe259a	conc	-9	ppb	
	rep	2	Ag328a	conc	14	ppb	

X2CRDL							
Fe259a	av	-6	ppb	sd	4.5	%cv	77.43
Ag328a	av	14	ppb	sd	0.3	%cv	2.48

ICS 0387	rep	1	Fe259a	conc	190730	ppb	
	rep	1	Ag328a	conc	144	ppb	
	rep	2	Fe259a	conc	188550	ppb	
	rep	2	Ag328a	conc	144	ppb	

ICS 0387							
Fe259a	av	189640 ppb	sd	1541.5 %cv	0.81		
Ag328a	av	144 ppb	sd	0.6 %cv	0.42		
ICS 0387	rep	1 Fe259a	conc	194183 ppb			
	rep	1 Ag328a	conc	984 ppb			
	rep	2 Fe259a	conc	190669 ppb			
	rep	2 Ag328a	conc	975 ppb			
ICS 0387							
Fe259a	av	192426 ppb	sd	2484.5 %cv	1.29		
Ag328a	av	980 ppb	sd	6.5 %cv	0.66		
CCV1	rep	1 Fe259a	conc	9742 ppb			
	rep	1 Ag328a	conc	952 ppb			
	rep	2 Fe259a	conc	9771 ppb			
	rep	2 Ag328a	conc	961 ppb			
CCV1							
Fe259a	av	9756 ppb	sd	21.0 %cv	0.22		
Ag328a	av	957 ppb	sd	6.3 %cv	0.66		
CCB1	rep	1 Fe259a	conc	-0 ppb			
	rep	1 Ag328a	conc	-3 ppb			
	rep	2 Fe259a	conc	-5 ppb			
	rep	2 Ag328a	conc	1 ppb			
CCB1							
Fe259a	av	-3 ppb	sd	3.1 %cv	118.81		
Ag328a	av	-1 ppb	sd	2.8 %cv	373.21		
LCS 8129	rep	1 Fe259a	conc	3743 ppb			
	rep	1 Ag328a	conc	366 ppb			
	rep	2 Fe259a	conc	3768 ppb			
	rep	2 Ag328a	conc	370 ppb			
LCS 8129							
Fe259a	av	3756 ppb	sd	17.6 %cv	0.47		
Ag328a	av	368 ppb	sd	2.8 %cv	0.76		
PB 8129	rep	1 Fe259a	conc	16 ppb			
	rep	1 Ag328a	conc	-2 ppb			
	rep	2 Fe259a	conc	9 ppb			
	rep	2 Ag328a	conc	-1 ppb			
PB 8129							
Fe259a	av	12 ppb	sd	4.5 %cv	36.59		
Ag328a	av	-2 ppb	sd	1.2 %cv	73.31		
67117/MAF427	rep	1 Fe259a	conc	92889 ppb			
	rep	1 Ag328a	conc	-5 ppb			window edge
	rep	2 Fe259a	conc	92269 ppb			
	rep	2 Ag328a	conc	-0 ppb			
67117/MAF427							
Fe259a	av	92579 ppb	sd	438.5 %cv	0.47		
Ag328a	av	-2 ppb	sd	3.2 %cv	134.58		
67117 DUP	rep	1 Fe259a	conc	70185 ppb			
	rep	1 Ag328a	conc	0 ppb			
	rep	2 Fe259a	conc	68891 ppb			
	rep	2 Ag328a	conc	2 ppb			
67117 DUP							
Fe259a	av	69538 ppb	sd	914.6 %cv	1.32		
Ag328a	av	1 ppb	sd	1.3 %cv	98.24		

XSD

old
SD

New
SD

F=0.500

F=0.498

MAF427
F=0.51

67117 SPK	rep	1	Fe259a	conc	59801	ppb		
<i>MAF427</i>	rep	1	Ag328a	conc	48	ppb		
<i>F=0.596</i>	rep	2	Fe259a	conc	60278	ppb		
	rep	2	Ag328a	conc	50	ppb		
67117 SPK								
Fe259a	av		60040	ppb	sd	337.4	%cv	0.56
Ag328a	av		49	ppb	sd	1.4	%cv	2.89
67117 SDC	rep	1	Fe259a	conc	17864	ppb		
<i>MAF427</i>	rep	1	Ag328a	conc	0	ppb		
	rep	2	Fe259a	conc	17399	ppb		
	rep	2	Ag328a	conc	4	ppb		
67117 SDC								
Fe259a	av		17631	ppb	sd	329.2	%cv	1.87
Ag328a	av		2	ppb	sd	2.4	%cv	111.08
67118/MAF428	rep	1	Fe259a	conc	130936	ppb		
<i>F=0.632</i>	rep	1	Ag328a	conc	7	ppb		
	rep	2	Fe259a	conc	132088	ppb		
	rep	2	Ag328a	conc	-1	ppb		
67118/MAF428								
Fe259a	av		131512	ppb	sd	814.8	%cv	0.62
Ag328a	av		3	ppb	sd	5.9	%cv	200.70
67119/MAF429	rep	1	Fe259a	conc	173581	ppb		
<i>F=0.487</i>	rep	1	Ag328a	conc	-0	ppb		
	rep	2	Fe259a	conc	175150	ppb		
	rep	2	Ag328a	conc	3	ppb		window edge
67119/MAF429								
Fe259a	av		174365	ppb	sd	1109.3	%cv	0.64
Ag328a	av		1	ppb	sd	2.4	%cv	176.50
67120/MAF430	rep	1	Fe259a	conc	12542	ppb		
<i>F=0.531</i>	rep	1	Ag328a	conc	-2	ppb		
	rep	2	Fe259a	conc	12362	ppb		
	rep	2	Ag328a	conc	-3	ppb		window edge
67120/MAF430								
Fe259a	av		12452	ppb	sd	126.9	%cv	1.02
Ag328a	av		-2	ppb	sd	0.4	%cv	17.22
LCS 8158	rep	1	Fe259a	conc	3768	ppb		
	rep	1	Ag328a	conc	367	ppb		
	rep	2	Fe259a	conc	3738	ppb		
	rep	2	Ag328a	conc	363	ppb		
LCS 8158								
Fe259a	av		3753	ppb	sd	21.0	%cv	0.56
Ag328a	av		365	ppb	sd	3.0	%cv	0.83
CCV2	rep	1	Fe259a	conc	10103	ppb		
	rep	1	Ag328a	conc	992	ppb		
	rep	2	Fe259a	conc	9800	ppb		
	rep	2	Ag328a	conc	983	ppb		
CCV2								
Fe259a	av		9952	ppb	sd	214.4	%cv	2.15
Ag328a	av		987	ppb	sd	6.7	%cv	0.68
CCB2	rep	1	Fe259a	conc	-2	ppb		
	rep	1	Ag328a	conc	-3	ppb		
	rep	2	Fe259a	conc	2	ppb		
	rep	2	Ag328a	conc	-2	ppb		

CCB2

Fe259a	av	0 ppb	sd	2.8 %cv	704.26	
Ag328a	av	-2 ppb	sd	0.7 %cv	32.60	
PB 8158	rep	1 Fe259a	conc	19 ppb		
	rep	1 Ag328a	conc	-3 ppb		
	rep	2 Fe259a	conc	16 ppb		
	rep	2 Ag328a	conc	-5 ppb		window edge
PB 8158	av	18 ppb	sd	1.9 %cv	10.74	
Ag328a	av	-4 ppb	sd	0.8 %cv	20.14	
67145/MGC357	rep	1 Fe259a	conc	269 ppb		
	rep	1 Ag328a	conc	-4 ppb		window edge
	rep	2 Fe259a	conc	276 ppb		
	rep	2 Ag328a	conc	-1 ppb		
67145/MGC357	av	273 ppb	sd	5.1 %cv	1.88	
Ag328a	av	-2 ppb	sd	1.8 %cv	74.74	
67145 DUP	rep	1 Fe259a	conc	205 ppb		
	rep	1 Ag328a	conc	-1 ppb		
	rep	2 Fe259a	conc	202 ppb		
	rep	2 Ag328a	conc	-2 ppb		
67145 DUP	av	203 ppb	sd	2.1 %cv	1.02	
Ag328a	av	-1 ppb	sd	1.3 %cv	87.23	
67145 SPK	rep	1 Fe259a	conc	1308 ppb		
	rep	1 Ag328a	conc	42 ppb		
	rep	2 Fe259a	conc	1292 ppb		
	rep	2 Ag328a	conc	40 ppb		
67145 SPK	av	1300 ppb	sd	11.2 %cv	0.86	
Ag328a	av	41 ppb	sd	1.4 %cv	3.39	
67145 SDC	rep	1 Fe259a	conc	49 ppb		
	rep	1 Ag328a	conc	0 ppb		
	rep	2 Fe259a	conc	49 ppb		
	rep	2 Ag328a	conc	-3 ppb		
67145 SDC	av	49 ppb	sd	0.3 %cv	0.64	
Ag328a	av	-1 ppb	sd	2.4 %cv	193.37	
67146/MGC358	rep	1 Fe259a	conc	60 ppb		
	rep	1 Ag328a	conc	-2 ppb		
	rep	2 Fe259a	conc	64 ppb		
	rep	2 Ag328a	conc	-3 ppb		
67146/MGC358	av	62 ppb	sd	2.6 %cv	4.27	
Ag328a	av	-3 ppb	sd	0.8 %cv	29.82	
67147/MGC359	rep	1 Fe259a	conc	-2 ppb		
	rep	1 Ag328a	conc	-4 ppb		window edge
	rep	2 Fe259a	conc	-10 ppb		window edge
	rep	2 Ag328a	conc	-9 ppb		window edge
67147/MGC359	av	-6 ppb	sd	5.8 %cv	92.97	
Ag328a	av	-6 ppb	sd	3.1 %cv	47.23	

67148/MGC360	rep	1	Fe259a	conc	144 ppb		
	rep	1	Ag328a	conc	-4 ppb		window edge
	rep	2	Fe259a	conc	144 ppb		
	rep	2	Ag328a	conc	0 ppb		
67148/MGC360							
Fe259a	av		144 ppb	sd	0.1 %cv	0.09	
Ag328a	av		-2 ppb	sd	2.9 %cv	159.94	
67149/MGC361	rep	1	Fe259a	conc	329 ppb		
	rep	1	Ag328a	conc	-1 ppb		
	rep	2	Fe259a	conc	336 ppb		
	rep	2	Ag328a	conc	3 ppb		
67149/MGC361							
Fe259a	av		333 ppb	sd	4.9 %cv	1.46	
Ag328a	av		1 ppb	sd	2.3 %cv	222.54	
67150/MGC362	rep	1	Fe259a	conc	126 ppb		
	rep	1	Ag328a	conc	-3 ppb		
	rep	2	Fe259a	conc	124 ppb		
	rep	2	Ag328a	conc	-0 ppb		window edge
67150/MGC362							
Fe259a	av		125 ppb	sd	1.0 %cv	0.78	
Ag328a	av		-2 ppb	sd	2.1 %cv	113.02	
CCV3	rep	1	Fe259a	conc	9708 ppb		
	rep	1	Ag328a	conc	997 ppb		
	rep	2	Fe259a	conc	9716 ppb		
	rep	2	Ag328a	conc	964 ppb		
CCV3							
Fe259a	av		9712 ppb	sd	5.7 %cv	0.06	
Ag328a	av		981 ppb	sd	23.7 %cv	2.41	
CCB3	rep	1	Fe259a	conc	-4 ppb		
	rep	1	Ag328a	conc	-4 ppb		window edge
	rep	2	Fe259a	conc	-12 ppb		
	rep	2	Ag328a	conc	-0 ppb		
CCB3							
Fe259a	av		-8 ppb	sd	5.0 %cv	62.64	
Ag328a	av		-2 ppb	sd	3.1 %cv	135.72	
67151/MGC363	rep	1	Fe259a	conc	175 ppb		
	rep	1	Ag328a	conc	4 ppb		
	rep	2	Fe259a	conc	185 ppb		
	rep	2	Ag328a	conc	-3 ppb		
67151/MGC363							
Fe259a	av		180 ppb	sd	7.0 %cv	3.88	
Ag328a	av		0 ppb	sd	5.0 %cv	7891.3	
67152/MGC364	rep	1	Fe259a	conc	127 ppb		
	rep	1	Ag328a	conc	-11 ppb		window edge
	rep	2	Fe259a	conc	124 ppb		
	rep	2	Ag328a	conc	-3 ppb		
67152/MGC364							
Fe259a	av		126 ppb	sd	2.1 %cv	1.68	
Ag328a	av		-7 ppb	sd	5.6 %cv	85.89	
67153/MGC365	rep	1	Fe259a	conc	103 ppb		
	rep	1	Ag328a	conc	-1 ppb		
	rep	2	Fe259a	conc	105 ppb		
	rep	2	Ag328a	conc	-0 ppb		

67153/MGC365

Fe259a av 104 ppb sd 1.4 %cv 1.34
Ag328a av -0 ppb sd 0.3 %cv 105.21

PB SPK 8129 rep 1 Fe259a conc 42 ppb
rep 1 Ag328a conc 51 ppb
rep 2 Fe259a conc 35 ppb
rep 2 Ag328a conc 52 ppb

PB SPK 8129

Fe259a av 39 ppb sd 5.2 %cv 13.35
Ag328a av 52 ppb sd 0.7 %cv 1.37

PB SPK 8129 rep 1 Fe259a conc 1057 ppb
rep 1 Ag328a conc 45 ppb
rep 2 Fe259a conc 1048 ppb
rep 2 Ag328a conc 45 ppb

PB SPK 8129

Fe259a av 1052 ppb sd 6.5 %cv 0.62
Ag328a av 45 ppb sd 0.4 %cv 0.98

CCV4 rep 1 Fe259a conc 10065 ppb
rep 1 Ag328a conc 1027 ppb
rep 2 Fe259a conc 10026 ppb
rep 2 Ag328a conc 1007 ppb

CCV4

Fe259a av 10045 ppb sd 27.2 %cv 0.27
Ag328a av 1017 ppb sd 14.1 %cv 1.38

CCB4 rep 1 Fe259a conc -14 ppb window edge
rep 1 Ag328a conc -3 ppb window edge
rep 2 Fe259a conc -14 ppb
rep 2 Ag328a conc -2 ppb window edge

CCB4

Fe259a av -14 ppb sd 0.3 %cv 2.32
Ag328a av -2 ppb sd 0.8 %cv 35.91

X2CRDL rep 1 Fe259a conc -5 ppb
rep 1 Ag328a conc 18 ppb
rep 2 Fe259a conc -16 ppb window edge
rep 2 Ag328a conc 19 ppb

X2CRDL

Fe259a av -11 ppb sd 7.8 %cv 73.95
Ag328a av 18 ppb sd 0.4 %cv 2.08

ICS 0387 rep 1 Fe259a conc 193599 ppb
rep 1 Ag328a conc 1002 ppb
rep 2 Fe259a conc 191998 ppb
rep 2 Ag328a conc 995 ppb

ICS 0387

Fe259a av 192799 ppb sd 1132.4 %cv 0.59
Ag328a av 998 ppb sd 5.5 %cv 0.55



0103B

Sample Identification Program

Date: 10/3/87

Title: FURNACE METALS *As*
Filename: CASE SF 8129

Analyst: SH

No.	CAS ID/EPA ID	No.	CAS ID/EPA ID	No.	CAS ID/EPA ID
1	5	18	CCV	35	
2	10	19	MB		
3	20	20	67118/MAF428		
4	50	21	67118 SOK		
5	ICV	22	67119/MAF430		
6	ICB	23	67119 SOK		
7	CCV	24	67120/MAF430		
8	LCS	25	67120 SOK		
9	LCS SOK	26	CCV		
10	PICK	27	ICB		
11	PBOK SOK	28			
12	67117/MAF427	29			
13	67117 SOK	30			
14	67117 div	31			
15	67117 div SOK	32			
16	67117 O/SOK	33			
17	SOK WIK	34			

METHOD #
SI = 50.0ppb
RECAL #
LCS: WP 386 (XS) 20.0
CCV: 20.0ppb
QC # ICV # 2 (1:40)
24.7ppb

20ul sample vol / 10ul 0.5% $Al(NO_3)_3$

As

SF8129

0002B

SH

1.4AV	26.19CV		1.6		1.1
0.001AV	47.14CV		0.002		0.001
0.212	0.213AV		0.000AZ		0.214
5.6	5.1	1	0.66CV		50.0S1
10.4	10.5	2	5.4AV		6.61CV
20.8	21.1	3	10.4AV		0.68CV
51.0	51.9	4	21.0AV		1.01CV
26.6	26.1	5 107%	51.5AV		1.24CV
-0.5	0.7	6	26.4AV		1.34CV
20.7	20.3	7 102%	0.1AV		06 ER
21.7	20.9	8 106%	20.5AV		1.38CV
42.6	42.5	9 106%	21.3AV		2.66CV
0.0	0.1	10	42.6AV		0.17CV
22.3	23.1	11 114%	0.1AV		06 ER
22.1	21.3	12	22.7AV		2.49CV
43.0	42.2	13 104%	21.7AV		2.61CV
15.0	16.7	14	42.6AV		1.33CV
35.6	37.5	15 104%	15.8AV		7.58CV
56.6C	56.7C	16 ✓	36.6AV		3.68CV
41.1	42.0	17 ✓	56.7AV		0.13CV
21.3	21.7	18 108%	41.6AV		1.53CV
0.5	0.1	19	21.5AV		1.32CV
27.1	26.5	20	0.3AV		94.28CV
47.1	46.4	21 100%	26.8AV		1.58CV
22.1	22.7	22	46.7AV		1.06CV
43.7	44.2	23 108%	22.4AV		1.89CV
4.7	3.8	24	43.9AV		0.80CV
28.0	28.0	25 119%	4.2AV		14.97CV
22.4	21.1	26 109%	28.0AV		0.00CV
-0.7	-1.2	27	21.8AV		4.23CV
			-0.9AV		37.22CV



OCOSA

Sample Identification Program

Date: 10/5/87

Title: FURNACE METALS TL
Filename: CASE SF 8129

Analyst: SH

No.	CAS ID/EPA ID	No.	CAS ID/EPA ID	No.	CAS ID/EPA ID
1	5	18	RAW	35	
2	10	19	MR		
3	20	20	69118/MAF428		
4	50	21	69118 SOK		
5	ICV	22	69119/MAF420		
6	ICB	23	69119 SOK		
7	CCV	24	69120/MAF420		
8	LCS	25	69120 SOK		
9	LCS-SOK	26	RAW		
10	PACK	27	MR		
11	OBOK SOK	28			
12	69117/MAF427	29			
13	69117 SOK	30			
14	69117 ALO	31			
15	69117 ALO SOK	32			
16	69117 ALO SOK	33			
17	SOK WIK	34			

METHOD #
SI = 50.0ppb
RECAL #
LCS: 1183II-(25.1)
CCV: 20.0ppb
GC #ICV #4 (1:40)
24.3ppb

10 ul sample vol / 5ul 1% H₂SO₄

TL 0005A

SF 81279

SF 8158

57

0.000	-0.001		-0.000AV	06 ER
0.000AZ	0.092		0.088	0.090AV
3.14CV	50.0S1		6.3	4.8
5.5AV	19.11CV		9.6	8.4
9.0AV	9.43CV		21.3	18.2
19.7AV	11.10CV		51.3	49.8
50.5AV	2.10CV		22.7	21.5
22.1AV	3.84CV		-1.0	-0.2
0.6AV	94.28CV		21.4	21.4
21.4AV	0.00CV		24.5	24.2
24.4AV	0.87CV		48.0	43.9
46.0AV	6.31CV		-0.6	-0.8
-0.7AV	20.20CV		23.9	23.3
23.6AV	1.80CV		-1.2	3.8
1.3AV	06 ER		21.2	22.8
22.0AV	5.14CV		0.2	0.8
0.5AV	84.85CV		20.7	20.9
20.8AV	0.68CV		42.4	46.8
44.6AV	6.98CV		51.8	53.8C
52.8AV	2.68CV		20.4	21.3
20.8AV	3.05CV		0.7	1.9
1.3AV	65.27CV		2.2	0.9
1.5AV	59.31CV		19.7	22.9
21.3AV	10.62CV		-0.7	-1.9
-1.3AV	65.27CV		24.2	18.4
21.3AV	19.26CV		-1.2	-0.6
-0.9AV	47.14CV		19.9	21.7
20.8AV	6.12CV			
20.8	21.6	26 106%	21.2AV	2.67CV
-3.2	-1.1	27	-2.1AV	69.07CV

24.0	24.9	8 98%	24.5AV	2.60CV
42.1	43.0	9 90%	42.5AV	1.50CV
-3.8	-3.2	10	-3.5AV	12.12CV
17.5	19.5	11 92%	18.5AV	7.64CV
1.0	-2.6	12	-0.8AV	06 ER
14.6	15.1	13 74%	14.9AV	2.38CV
-2.3	-2.0	14	-2.1AV	9.87CV
16.2	16.2	15 81%	16.2AV	0.00CV
35.8	33.6	16	34.7AV	4.48CV
48.6	49.8	17 ✓	49.2AV	1.73CV
18.5	20.4	18 18%	19.5AV	6.91CV
-2.9	-1.8	19	-2.3AV	33.10CV
-3.0	-0.1	20	-1.5AV	06 ER
15.4	15.9	21 73%	15.7AV	2.26CV
-2.1	-1.0	22	-1.6AV	50.18CV
18.0	21.6	23 99%	19.8AV	12.86CV
-0.8	1.4	24	0.3AV	06 ER
16.4	13.9	25 76%	15.1AV	11.67CV
-2.6	-1.7	26	-2.2AV	29.60CV
16.5	16.6	27 82%	16.5AV	0.43CV
-2.1	-1.5	28	-1.8AV	23.57CV
15.2	16.4	29 79%	15.8AV	5.37CV
17.7	20.4	30 95%	19.0AV	10.02CV
-2.4	-2.6	31	-2.5AV	5.66CV
-0.1	-1.9	32	-1.0AV	06 ER
16.8	16.9	33 84%	16.9AV	0.42CV
-2.2	-2.2	34	-2.2AV	0.00CV
15.8	15.7	35 73%	15.7AV	0.45CV
-1.3	-2.7	36	-2.0AV	49.50CV
10.7	18.2	37 95%	18.0AV	5.00CV

19.5
0.5

21.2
-2.0

38.02%
39

20.3AV
-0.8AV

5.91CV
06 ER

SF 8129, SF8158

Program ID/Weight Function

06:21

Section 2

H O G L

Pb 10/03/87

Position	Sample ID	Weight	Dilution
001	ICV		
002	ICB		
003	CCV		
004	LCS-8129		
005	PBLK-8158		
006	67117/MAF427		
007	67117dup		
008	67117prespk		
009	67118/MAF428		
010	67119/MAF429		
011	67120/MAF430		
012	LCS-8158		
013	PBLK-8158		

Enter 14 characters or less.

Print Print New New Print Main
 screen Graphics Page Line Message keys



tion

Sample ID

Weight

Dilution

tion	Sample ID	Weight	Dilution
3	PBLK-8158		
4	67145/MGC357		
5	67145dup		
6	67145prespk		
7	67146/MGC358		
8	67147/MGC359		
9	67148/MGC360		
0	67149/MGC361		
1	67150/MGC362		
2	67151		
3	SH 67152/MGC363		
4	67152 MGC364		
5	SH 67153/MGC365		

Enter 14 characters or less.

Print New New Print Main
 Graphics Page Line Message Keys

DC03C

SF8129 SF8158

SH

Element File: Pb
Date: 10/03/87
Data Storage File: A710031834
Technique: HGA

Element: Pb
Time: 18:37
ID/Weight File: SF8129-58
Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.002
Background PK Area (A-s): 0.003
Blank Corrected PK Area (A-s): 0.002

Peak Height (A): 0.019
Background PK Height (A): 0.014

Peak Area (A-s): 0.005
Background PK Area (A-s): 0.011
Blank Corrected PK Area (A-s): 0.005

Peak Height (A): 0.033
Background PK Height (A): 0.031

Mean PK Area (A-s): 0.004 SD: 0.0015 RSD(%): 42.0

Auto-zero performed.

Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.028
Background PK Area (A-s): 0.020
Blank Corrected PK Area (A-s): 0.024

Peak Height (A): 0.053
Background PK Height (A): 0.027

Peak Area (A-s): 0.026
Background PK Area (A-s): 0.025

Peak Height (A): 0.055
Background PK Height (A): 0.035

Blank Corrected PK Area (A-s): 0.022

Mean PK Area (A-s): 0.023 SD: 0.0014 RSD(%): 5.9

Standard number 1 applied. [5.0]

Sample ID: Standard 2 Sequence No.: 00003 Sampler Position: 38

Peak Area (A-s): 0.048 Peak Height (A): 0.092
Background PK Area (A-s): 0.032 Background PK Height (A): 0.044
Blank Corrected PK Area (A-s): 0.044
Concentration (ug/L): 9.6

Peak Area (A-s): 0.044 Peak Height (A): 0.091
Background PK Area (A-s): 0.031 Background PK Height (A): 0.046
Blank Corrected PK Area (A-s): 0.041
Concentration (ug/L): 8.9

Mean Conc (ug/L): 9.2 SD: 0.51 RSD(%): 5.5

Standard number 2 applied. [10.0]

Sample ID: Standard 3 Sequence No.: 00004 Sampler Position: 38

Peak Area (A-s): 0.080 Peak Height (A): 0.151
Background PK Area (A-s): 0.051 Background PK Height (A): 0.078
Blank Corrected PK Area (A-s): 0.077
Concentration (ug/L): 21.3

Peak Area (A-s): 0.081 Peak Height (A): 0.154
Background PK Area (A-s): 0.051 Background PK Height (A): 0.077
Blank Corrected PK Area (A-s): 0.077
Concentration (ug/L): 21.5

Mean Conc (ug/L): 21.4 SD: 0.12 RSD(%): 0.6

Standard number 3 applied. [20.0]

Sample ID: Standard 4 Sequence No.: 00005 Sampler Position: 39

Peak Area (A-s): 0.198 Peak Height (A): 0.359
Background PK Area (A-s): 0.108 Background PK Height (A): 0.183
Blank Corrected PK Area (A-s): 0.194
Concentration (ug/L): 59.1

Peak Area (A-s): 0.200 Peak Height (A): 0.356
Background PK Area (A-s): 0.105 Background PK Height (A): 0.184
Blank Corrected PK Area (A-s): 0.197
Concentration (ug/L): 59.9

Mean Conc (ug/L): 59.5 SD: 0.60 RSD(%): 1.0

S-shaped calibration curve detected. Two-coefficient equation used.

Standard number 4 applied. [50.0]

Sample ID: ICV *14(1:40)24.5 = T.V.* Sequence No.: 00006 Sampler Position: 1

Peak Area (A-s): 0.057 Peak Height (A): 0.116
 Background PK Area (A-s): 0.042 Background PK Height (A): 0.056
 Blank Corrected PK Area (A-s): 0.053
 Concentration (ug/L): 12.5 Corrected Conc (ug/L): 25.0

Peak Area (A-s): 0.058 Peak Height (A): 0.113
 Background PK Area (A-s): 0.045 Background PK Height (A): 0.058
 Blank Corrected PK Area (A-s): 0.054
 Concentration (ug/L): 12.7 Corrected Conc (ug/L): 25.3

Mean Conc (ug/L): 12.6 SD: 0.11 RSD(%): 0.9
 Corrected Conc (ug/L): 25.2

103%

Sample ID: ICB Sequence No.: 00007 Sampler Position: 2

Peak Area (A-s): 0.002 Peak Height (A): 0.030
 Background PK Area (A-s): 0.010 Background PK Height (A): 0.033
 Blank Corrected PK Area (A-s): -0.002
 Concentration (ug/L): -0.4 Corrected Conc (ug/L): -0.9

Peak Area (A-s): 0.001 Peak Height (A): 0.014
 Background PK Area (A-s): 0.016 Background PK Height (A): 0.034
 Blank Corrected PK Area (A-s): -0.003
 Concentration (ug/L): -0.6 Corrected Conc (ug/L): -1.2

Mean Conc (ug/L): -0.5 SD: 0.10 RSD(%): 18.9
 Corrected Conc (ug/L): -1.0

Sample ID: CCV Sequence No.: 00008 Sampler Position: 3

Peak Area (A-s): 0.049 Peak Height (A): 0.096
 Background PK Area (A-s): 0.034 Background PK Height (A): 0.047
 Blank Corrected PK Area (A-s): 0.045
 Concentration (ug/L): 10.5 Corrected Conc (ug/L): 20.9

Peak Area (A-s): 0.051 Peak Height (A): 0.100
 Background PK Area (A-s): 0.040 Background PK Height (A): 0.059
 Blank Corrected PK Area (A-s): 0.047
 Concentration (ug/L): 11.0 Corrected Conc (ug/L): 21.9

Mean Conc (ug/L): 10.7 SD: 0.36 RSD(%): 3.3
 Corrected Conc (ug/L): 21.4

107%

Sample ID: LCS-8129 *w/ 250 (15) 20.0-1* Sequence No.: 00009 Sampler Position: 4

Peak Area (A-s): 0.050 Peak Height (A): 0.093
 Background PK Area (A-s): 0.040 Background PK Height (A): 0.062
 Blank Corrected PK Area (A-s): 0.046
 Concentration (ug/L): 10.7 Corrected Conc (ug/L): 21.5

Peak Area (A-s): 0.049 Peak Height (A): 0.097
 Background PK Area (A-s): 0.038 Background PK Height (A): 0.055
 Blank Corrected PK Area (A-s): 0.046
 Concentration (ug/L): 10.7 Corrected Conc (ug/L): 21.4

Mean Conc (ug/L): 10.7 SD: 0.02 RSD(%): 0.2
Corrected Conc (ug/L): 21.5 ^{108%}

Sample ID: LCS-8129 Sequence No.: 00010 Sampler Position: 4

Peak Area (A-s): 0.073 Peak Height (A): 0.148
Background PK Area (A-s): 0.052 Background PK Height (A): 0.074
Blank Corrected PK Area (A-s): 0.069
Concentration (ug/L): 16.5 Corrected Conc (ug/L): 33.0

Peak Area (A-s): 0.073 Peak Height (A): 0.139
Background PK Area (A-s): 0.048 Background PK Height (A): 0.072
Blank Corrected PK Area (A-s): 0.069
Concentration (ug/L): 16.4 Corrected Conc (ug/L): 32.8

Mean Conc (ug/L): 16.5 SD: 0.05 RSD(%): 0.3
Corrected Conc (ug/L): 32.9

Recovery is 114.5 % ^{114%}

Sample ID: PBLK-8158 Sequence No.: 00011 Sampler Position: 5

Peak Area (A-s): 0.003 Peak Height (A): 0.010
Background PK Area (A-s): 0.004 Background PK Height (A): 0.007
Blank Corrected PK Area (A-s): -0.000
Concentration (ug/L): -0.1 Corrected Conc (ug/L): -0.2

Peak Area (A-s): 0.004 Peak Height (A): 0.012
Background PK Area (A-s): 0.004 Background PK Height (A): 0.007
Blank Corrected PK Area (A-s): 0.001
Concentration (ug/L): 0.1 Corrected Conc (ug/L): 0.3

Mean Conc (ug/L): 0.0 SD: 0.15 RSD(%): 451.8
Corrected Conc (ug/L): 0.1

Sample ID: PBLK-8158 Sequence No.: 00012 Sampler Position: 5

Peak Area (A-s): 0.025 Peak Height (A): 0.053
Background PK Area (A-s): 0.016 Background PK Height (A): 0.028
Blank Corrected PK Area (A-s): 0.021
Concentration (ug/L): 4.8 Corrected Conc (ug/L): 9.6

Peak Area (A-s): 0.026 Peak Height (A): 0.098
Background PK Area (A-s): 0.026 Background PK Height (A): 0.261
Blank Corrected PK Area (A-s): 0.022
Concentration (ug/L): 5.1 Corrected Conc (ug/L): 10.2

Mean Conc (ug/L): 5.0 SD: 0.20 RSD(%): 4.1
Corrected Conc (ug/L): 9.9

Recovery is ~~98.5%~~ ^{99%}

Sample ID: 67117/MAF427 Sequence No.: 00013 Sampler Position: 6

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.664 Peak Height (A): 1.068
Background PK Area (A-s): 0.472 Background PK Height (A): 0.948
Blank Corrected PK Area (A-s): 0.661
Concentration (ug/L): 296.1 Corrected Conc (ug/L): 592.1

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.659 Peak Height (A): 1.077
Background PK Area (A-s): 0.476 Background PK Height (A): 0.980
Blank Corrected PK Area (A-s): 0.656
Concentration (ug/L): 291.5 Corrected Conc (ug/L): 583.0

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 293.8 SD: 3.23 RSD(%): 1.1
Corrected Conc (ug/L): 587.6

see Dil Rcn# 0005B ↓

Sample ID: 67117/MAF427 Sequence No.: 00014 Sampler Position: 6

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.682 Peak Height (A): 1.052
Background PK Area (A-s): 0.496 Background PK Height (A): 0.999
Blank Corrected PK Area (A-s): 0.679
Concentration (ug/L): 312.4 Corrected Conc (ug/L): 624.8

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.687 Peak Height (A): 1.083
Background PK Area (A-s): 0.509 Background PK Height (A): 0.998
Blank Corrected PK Area (A-s): 0.684
Concentration (ug/L): 317.1 Corrected Conc (ug/L): 634.2

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 314.7 SD: 3.32 RSD(%): 1.1
Corrected Conc (ug/L): 629.5

Recovery is 419.3 %

Dil

Sample ID: 67117dup Sequence No.: 00015 Sampler Position: 7

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.488 Peak Height (A): 0.886
Background PK Area (A-s): 0.313 Background PK Height (A): 0.661
Blank Corrected PK Area (A-s): 0.484
Concentration (ug/L): 171.4 Corrected Conc (ug/L): 342.8

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.485 Peak Height (A): 0.882
Background PK Area (A-s): 0.388 Background PK Height (A): 3.030
Blank Corrected PK Area (A-s): 0.481
Concentration (ug/L): 169.9 Corrected Conc (ug/L): 339.8

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 170.7 SD: 1.07 RSD(%): 0.6
Corrected Conc (ug/L): 341.3

Dil

Sample ID: 67117dup Sequence No.: 00016 Sampler Position: 7

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.515 Peak Height (A): 0.885
Background PK Area (A-s): 0.330 Background PK Height (A): 0.689
Blank Corrected PK Area (A-s): 0.512
Concentration (ug/L): 187.3 Corrected Conc (ug/L): 374.5

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.507 Peak Height (A): 0.902
Background PK Area (A-s): 0.320 Background PK Height (A): 0.687
Blank Corrected PK Area (A-s): 0.503
Concentration (ug/L): 182.2 Corrected Conc (ug/L): 364.5

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 184.7 SD: 3.56 RSD(%): 1.9
Corrected Conc (ug/L): 369.5

Recovery is 281.6 %

Dil

Sample ID: 67117prespk Sequence No.: 00017 Sampler Position: 8

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.473 Peak Height (A): 0.828
Background PK Area (A-s): 0.297 Background PK Height (A): 0.604
Blank Corrected PK Area (A-s): 0.470
Concentration (ug/L): 163.6 Corrected Conc (ug/L): 327.1

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.475 Peak Height (A): 0.847
Background PK Area (A-s): 0.296 Background PK Height (A): 0.614
Blank Corrected PK Area (A-s): 0.472
Concentration (ug/L): 164.5 Corrected Conc (ug/L): 329.1

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 164.0 SD: 0.68 RSD(%): 0.4
Corrected Conc (ug/L): 328.1

Dil

Sample ID: 67117prespk Sequence No.: 00018 Sampler Position: 8

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.498 Peak Height (A): 0.858
Background PK Area (A-s): 0.313 Background PK Height (A): 0.641
Blank Corrected PK Area (A-s): 0.495
Concentration (ug/L): 177.5 Corrected Conc (ug/L): 354.9

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.498 Peak Height (A): 0.853
Background PK Area (A-s): 0.312 Background PK Height (A): 0.635
Blank Corrected PK Area (A-s): 0.494
Concentration (ug/L): 177.0 Corrected Conc (ug/L): 354.1

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 177.3 SD: 0.30 RSD(%): 0.2
Corrected Conc (ug/L): 354.5

Recovery is 264.2 %

Dil

Sample ID: CCV Sequence No.: 00019 Sampler Position: 38

Peak Area (A-s): 0.045 Peak Height (A): 0.089
Background PK Area (A-s): 0.027 Background PK Height (A): 0.045
Blank Corrected PK Area (A-s): 0.041
Concentration (ug/L): 9.5 Corrected Conc (ug/L): 19.1

Peak Area (A-s): 0.045 Peak Height (A): 0.091
Background PK Area (A-s): 0.026 Background PK Height (A): 0.045
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 9.7 Corrected Conc (ug/L): 19.4

Mean Conc (ug/L): 9.6 SD: 0.12 RSD(%): 1.3
Corrected Conc (ug/L): 19.3 *96%*

Sample ID: CCB Sequence No.: 00020 Sampler Position: 37

Peak Area (A-s): 0.002 Peak Height (A): 0.008
Background PK Area (A-s): 0.006 Background PK Height (A): 0.006
Blank Corrected PK Area (A-s): -0.002
Concentration (ug/L): -0.4 Corrected Conc (ug/L): -0.8

Peak Area (A-s): 0.001 Peak Height (A): 0.008
Background PK Area (A-s): 0.006 Background PK Height (A): 0.008
Blank Corrected PK Area (A-s): -0.002
Concentration (ug/L): -0.5 Corrected Conc (ug/L): -1.0

Mean Conc (ug/L): -0.4 SD: 0.08 RSD(%): 17.9
Corrected Conc (ug/L): -0.9

Sample ID: 67118/MAF428 Sequence No.: 00021 Sampler Position: 9

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.444 Peak Height (A): 0.881
Background PK Area (A-s): 0.282 Background PK Height (A): 0.645
Blank Corrected PK Area (A-s): 0.441
Concentration (ug/L): 148.4 Corrected Conc (ug/L): 296.8

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.443 Peak Height (A): 0.841
Background PK Area (A-s): 0.278 Background PK Height (A): 0.612
Blank Corrected PK Area (A-s): 0.440
Concentration (ug/L): 148.0 Corrected Conc (ug/L): 296.1

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 148.2 SD: 0.25 RSD(%): 0.2
Corrected Conc (ug/L): 296.4

Sample ID: 67118/MAF428 Sequence No.: 00022 Sampler Position: 9

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.461 Peak Height (A): 0.887
Background PK Area (A-s): 0.291 Background PK Height (A): 0.658
Blank Corrected PK Area (A-s): 0.458
Concentration (ug/L): 157.1 Corrected Conc (ug/L): 314.3

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.457 Peak Height (A): 0.908
Background PK Area (A-s): 0.296 Background PK Height (A): 0.697
Blank Corrected PK Area (A-s): 0.453
Concentration (ug/L): 154.7 Corrected Conc (ug/L): 309.5

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 155.9 SD: 1.69 RSD(%): 1.1
Corrected Conc (ug/L): 311.9

Recovery is 154.6 %

Dil

~~~~~  
Sample ID: 67119/MAF429 Sequence No.: 00023 Sampler Position: 10

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.474 Peak Height (A): 0.872  
Background PK Area (A-s): 0.306 Background PK Height (A): 0.665  
Blank Corrected PK Area (A-s): 0.471  
Concentration (ug/L ): 164.2 Corrected Conc (ug/L ): 328.5

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.474 Peak Height (A): 0.870  
Background PK Area (A-s): 0.303 Background PK Height (A): 0.660  
Blank Corrected PK Area (A-s): 0.470  
Concentration (ug/L ): 163.8 Corrected Conc (ug/L ): 327.7

The sample absorbance is greater than that of the highest standard.  
Mean Conc (ug/L ): 164.0 SD: 0.28 RSD(%): 0.2  
Corrected Conc (ug/L ): 328.1

Dil

~~~~~  
Sample ID: 67119/MAF429 Sequence No.: 00024 Sampler Position: 10

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.493 Peak Height (A): 0.862
Background PK Area (A-s): 0.317 Background PK Height (A): 0.668
Blank Corrected PK Area (A-s): 0.489
Concentration (ug/L): 174.4 Corrected Conc (ug/L): 348.9

The sample absorbance is greater than that of the highest standard.
Peak Area (A-s): 0.489 Peak Height (A): 0.893
Background PK Area (A-s): 0.319 Background PK Height (A): 0.700
Blank Corrected PK Area (A-s): 0.486
Concentration (ug/L): 172.2 Corrected Conc (ug/L): 344.4

The sample absorbance is greater than that of the highest standard.
Mean Conc (ug/L): 173.3 SD: 1.57 RSD(%): 0.9
Corrected Conc (ug/L): 346.7

Recovery is 185.9 %

Dil

~~~~~  
Sample ID: 67120/MAF430 Sequence No.: 00025 Sampler Position: 11

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.428 Peak Height (A): 0.867  
Background PK Area (A-s): 0.272 Background PK Height (A): 0.629  
Blank Corrected PK Area (A-s): 0.425

Concentration (ug/L ): 140.5 Corrected Conc (ug/L ): 281.1

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.429 Peak Height (A): 0.865  
Background PK Area (A-s): 0.271 Background PK Height (A): 0.631  
Blank Corrected PK Area (A-s): 0.425  
Concentration (ug/L ): 140.8 Corrected Conc (ug/L ): 281.7

The sample absorbance is greater than that of the highest standard.  
Mean Conc (ug/L ): 140.7 SD: 0.22 RSD(%): 0.2  
Corrected Conc (ug/L ): 281.4

*Dil*

Sample ID: 67120/MAF430 Sequence No.: 00026 Sampler Position: 11

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.445 Peak Height (A): 0.890  
Background PK Area (A-s): 0.287 Background PK Height (A): 0.684  
Blank Corrected PK Area (A-s): 0.441  
Concentration (ug/L ): 148.8 Corrected Conc (ug/L ): 297.6

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.445 Peak Height (A): 0.895  
Background PK Area (A-s): 0.287 Background PK Height (A): 0.685  
Blank Corrected PK Area (A-s): 0.441  
Concentration (ug/L ): 148.7 Corrected Conc (ug/L ): 297.4

The sample absorbance is greater than that of the highest standard.  
Mean Conc (ug/L ): 148.8 SD: 0.06 RSD(%): 0.0  
Corrected Conc (ug/L ): 297.5

Recovery is 161.4 %

*Dil*

Sample ID: LCS-8158 Sequence No.: 00027 Sampler Position: 12

Peak Area (A-s): 0.046 Peak Height (A): 0.095  
Background PK Area (A-s): 0.029 Background PK Height (A): 0.048  
Blank Corrected PK Area (A-s): 0.043  
Concentration (ug/L ): 9.9 Corrected Conc (ug/L ): 19.8

Peak Area (A-s): 0.046 Peak Height (A): 0.096  
Background PK Area (A-s): 0.027 Background PK Height (A): 0.048  
Blank Corrected PK Area (A-s): 0.043  
Concentration (ug/L ): 9.9 Corrected Conc (ug/L ): 19.9

Mean Conc (ug/L ): 9.9 SD: 0.01 RSD(%): 0.1  
Corrected Conc (ug/L ): 19.8

*99%*

Sample ID: LCS-8158 Sequence No.: 00028 Sampler Position: 12

Peak Area (A-s): 0.070 Peak Height (A): 0.140  
Background PK Area (A-s): 0.038 Background PK Height (A): 0.068  
Blank Corrected PK Area (A-s): 0.066  
Concentration (ug/L ): 15.7 Corrected Conc (ug/L ): 31.5

Peak Area (A-s): 0.068 Peak Height (A): 0.138  
Background PK Area (A-s): 0.039 Background PK Height (A): 0.071

*wp 35b (K5) 30.0-11*

Blank Corrected PK Area (A-s): 0.064  
Concentration (ug/L ): 15.2 Corrected Conc (ug/L ): 30.3

Mean Conc (ug/L ): 15.4 SD: 0.40 RSD(%): 2.6  
Corrected Conc (ug/L ): 30.9

Recovery is 110.5 % ✓

Sample ID: PBLK-8158 Sequence No.: 00029 Sampler Position: 13

Peak Area (A-s): 0.006 Peak Height (A): 0.015  
Background PK Area (A-s): 0.006 Background PK Height (A): 0.009  
Blank Corrected PK Area (A-s): 0.003  
Concentration (ug/L ): 0.6 Corrected Conc (ug/L ): 1.3

Peak Area (A-s): 0.004 Peak Height (A): 0.014  
Background PK Area (A-s): 0.009 Background PK Height (A): 0.011  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.2 Corrected Conc (ug/L ): 0.4

Mean Conc (ug/L ): 0.4 SD: 0.29 RSD(%): 69.1  
Corrected Conc (ug/L ): 0.8

Sample ID: PBLK-8158 Sequence No.: 00030 Sampler Position: 13

Peak Area (A-s): 0.027 Peak Height (A): 0.058  
Background PK Area (A-s): 0.017 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 5.3 Corrected Conc (ug/L ): 10.5

Peak Area (A-s): 0.028 Peak Height (A): 0.057  
Background PK Area (A-s): 0.017 Background PK Height (A): 0.030  
Blank Corrected PK Area (A-s): 0.025  
Concentration (ug/L ): 5.7 Corrected Conc (ug/L ): 11.3

Mean Conc (ug/L ): 5.5 SD: 0.29 RSD(%): 5.3  
Corrected Conc (ug/L ): 10.9

Recovery is ~~101.0%~~ 109% *sk*

Sample ID: CCV Sequence No.: 00031 Sampler Position: 38

Peak Area (A-s): 0.045 Peak Height (A): 0.087  
Background PK Area (A-s): 0.028 Background PK Height (A): 0.044  
Blank Corrected PK Area (A-s): 0.042  
Concentration (ug/L ): 9.7 Corrected Conc (ug/L ): 19.3

Peak Area (A-s): 0.045 Peak Height (A): 0.088  
Background PK Area (A-s): 0.025 Background PK Height (A): 0.044  
Blank Corrected PK Area (A-s): 0.041  
Concentration (ug/L ): 9.6 Corrected Conc (ug/L ): 19.2

Mean Conc (ug/L ): 9.6 SD: 0.04 RSD(%): 0.4  
Corrected Conc (ug/L ): 19.3 *sk*

Sample ID: CCB Sequence No.: 00032 Sampler Position: 37

Peak Area (A-s): 0.002 Peak Height (A): 0.008  
Background PK Area (A-s): 0.004 Background PK Height (A): 0.006  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.3 Corrected Conc (ug/L ): -0.5

Peak Area (A-s): 0.001 Peak Height (A): 0.008  
Background PK Area (A-s): 0.006 Background PK Height (A): 0.007  
Blank Corrected PK Area (A-s): -0.003  
Concentration (ug/L ): -0.6 Corrected Conc (ug/L ): -1.3

Mean Conc (ug/L ): -0.4 SD: 0.26 RSD(%): 59.4  
Corrected Conc (ug/L ): -0.9

Sample ID: 67145/MGC357 Sequence No.: 00033 Sampler Position: 14

Peak Area (A-s): 0.005 Peak Height (A): 0.019  
Background PK Area (A-s): 0.015 Background PK Height (A): 0.027  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.3 Corrected Conc (ug/L ): 0.6

Peak Area (A-s): 0.006 Peak Height (A): 0.021  
Background PK Area (A-s): 0.016 Background PK Height (A): 0.030  
Blank Corrected PK Area (A-s): 0.002  
Concentration (ug/L ): 0.5 Corrected Conc (ug/L ): 0.9

Mean Conc (ug/L ): 0.4 SD: 0.12 RSD(%): 33.0  
Corrected Conc (ug/L ): 0.8

Sample ID: 67145/MGC357 Sequence No.: 00034 Sampler Position: 14

Peak Area (A-s): 0.029 Peak Height (A): 0.084  
Background PK Area (A-s): 0.028 Background PK Height (A): 0.056  
Blank Corrected PK Area (A-s): 0.026  
Concentration (ug/L ): 5.9 Corrected Conc (ug/L ): 11.7

Peak Area (A-s): 0.028 Peak Height (A): 0.079  
Background PK Area (A-s): 0.027 Background PK Height (A): 0.055  
Blank Corrected PK Area (A-s): 0.024  
Concentration (ug/L ): 5.6 Corrected Conc (ug/L ): 11.2

Mean Conc (ug/L ): 5.7 SD: 0.19 RSD(%): 3.4  
Corrected Conc (ug/L ): 11.5

Recovery is ~~107.0~~ %

115.1

Sample ID: 67145dup Sequence No.: 00035 Sampler Position: 15

Peak Area (A-s): 0.005 Peak Height (A): 0.019  
Background PK Area (A-s): 0.015 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.2 Corrected Conc (ug/L ): 0.4

Peak Area (A-s): 0.004 Peak Height (A): 0.019  
Background PK Area (A-s): 0.016 Background PK Height (A): 0.027

Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.1 Corrected Conc (ug/L ): 0.3  
Mean Conc (ug/L ): 0.2 SD: 0.07 RSD(%): 37.9  
Corrected Conc (ug/L ): 0.4

Sample ID: 67145dup Sequence No.: 00036 Sampler Position: 15

Peak Area (A-s): 0.026 Peak Height (A): 0.078  
Background PK Area (A-s): 0.024 Background PK Height (A): 0.055  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 5.1 Corrected Conc (ug/L ): 10.3

Peak Area (A-s): 0.027 Peak Height (A): 0.077  
Background PK Area (A-s): 0.024 Background PK Height (A): 0.053  
Blank Corrected PK Area (A-s): 0.024  
Concentration (ug/L ): 5.4 Corrected Conc (ug/L ): 10.9

Mean Conc (ug/L ): 5.3 SD: 0.21 RSD(%): 3.9  
Corrected Conc (ug/L ): 10.6

Recovery is ~~402.4~~ 5% <sup>100%</sup>

Sample ID: 67145prespk Sequence No.: 00037 Sampler Position: 16

Peak Area (A-s): 0.051 Peak Height (A): 0.139  
Background PK Area (A-s): 0.035 Background PK Height (A): 0.083  
Blank Corrected PK Area (A-s): 0.048  
Concentration (ug/L ): 11.2 Corrected Conc (ug/L ): 22.3

Peak Area (A-s): 0.050 Peak Height (A): 0.141  
Background PK Area (A-s): 0.034 Background PK Height (A): 0.082  
Blank Corrected PK Area (A-s): 0.047  
Concentration (ug/L ): 10.9 Corrected Conc (ug/L ): 21.8

Mean Conc (ug/L ): 11.0 SD: 0.19 RSD(%): 1.7  
Corrected Conc (ug/L ): 22.1 ✓

Sample ID: 67145prespk Sequence No.: 00038 Sampler Position: 16

Peak Area (A-s): 0.071 Peak Height (A): 0.190  
Background PK Area (A-s): 0.046 Background PK Height (A): 0.109  
Blank Corrected PK Area (A-s): 0.068  
Concentration (ug/L ): 16.0 Corrected Conc (ug/L ): 32.0

Peak Area (A-s): 0.070 Peak Height (A): 0.183  
Background PK Area (A-s): 0.047 Background PK Height (A): 0.103  
Blank Corrected PK Area (A-s): 0.066  
Concentration (ug/L ): 15.7 Corrected Conc (ug/L ): 31.5

Mean Conc (ug/L ): 15.9 SD: 0.19 RSD(%): 1.2  
Corrected Conc (ug/L ): 31.7

Recovery is 96.8 %





Blank Corrected PK Area (A-s): 0.020  
Concentration (ug/L ): 4.6 Corrected Conc (ug/L ): 9.3

Mean Conc (ug/L ): 4.7 SD: 0.12 RSD(%): 2.6  
Corrected Conc (ug/L ): 9.5

Recovery is ~~104.1%~~ <sup>95%</sup>

~~~~~  
Sample ID: CCV Sequence No.: 00043 Sampler Position: 38

Peak Area (A-s): 0.045 Peak Height (A): 0.086
Background PK Area (A-s): 0.024 Background PK Height (A): 0.041
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 9.7 Corrected Conc (ug/L): 19.4

Peak Area (A-s): 0.043 Peak Height (A): 0.085
Background PK Area (A-s): 0.026 Background PK Height (A): 0.043
Blank Corrected PK Area (A-s): 0.040
Concentration (ug/L): 9.2 Corrected Conc (ug/L): 18.4

Mean Conc (ug/L): 9.4 SD: 0.37 RSD(%): 3.9
Corrected Conc (ug/L): 18.9 ^{94%}

~~~~~  
Sample ID: CCB Sequence No.: 00044 Sampler Position: 37

Peak Area (A-s): 0.001 Peak Height (A): 0.010  
Background PK Area (A-s): 0.006 Background PK Height (A): 0.006  
Blank Corrected PK Area (A-s): -0.003  
Concentration (ug/L ): -0.6 Corrected Conc (ug/L ): -1.2

Peak Area (A-s): 0.000 Peak Height (A): 0.007  
Background PK Area (A-s): 0.005 Background PK Height (A): 0.006  
Blank Corrected PK Area (A-s): -0.003  
Concentration (ug/L ): -0.8 Corrected Conc (ug/L ): -1.6

Mean Conc (ug/L ): -0.7 SD: 0.11 RSD(%): 16.2  
Corrected Conc (ug/L ): -1.4

~~~~~  
Sample ID: 67148/MGC360 Sequence No.: 00045 Sampler Position: 19

Peak Area (A-s): 0.003 Peak Height (A): 0.012
Background PK Area (A-s): 0.010 Background PK Height (A): 0.019
Blank Corrected PK Area (A-s): -0.001
Concentration (ug/L): -0.1 Corrected Conc (ug/L): -0.2

Peak Area (A-s): 0.004 Peak Height (A): 0.012
Background PK Area (A-s): 0.010 Background PK Height (A): 0.019
Blank Corrected PK Area (A-s): 0.000
Concentration (ug/L): 0.0

Mean Conc (ug/L): -0.1 SD: 0.09 RSD(%): 182.4

~~~~~  
Sample ID: 67148/MGC360 Sequence No.: 00046 Sampler Position: 19

Peak Area (A-s): 0.027 Peak Height (A): 0.074

Background PK Area (A-s): 0.022  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 5.3

Background PK Height (A): 0.048  
Corrected Conc (ug/L ): 10.6

Peak Area (A-s): 0.027  
Background PK Area (A-s): 0.021  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 5.4

Peak Height (A): 0.078  
Background PK Height (A): 0.047  
Corrected Conc (ug/L ): 10.7

Mean Conc (ug/L ): 5.3  
Corrected Conc (ug/L ): 10.6

SD: 0.04 RSD(%): 0.7

Recovery is ~~107.5%~~ 5%

106%

Sample ID: 67149/MGC361 Sequence No.: 00047 Sampler Position: 20

Peak Area (A-s): 0.005  
Background PK Area (A-s): 0.011  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.2

Peak Height (A): 0.014  
Background PK Height (A): 0.020  
Corrected Conc (ug/L ): 0.5

Peak Area (A-s): 0.003  
Background PK Area (A-s): 0.013  
Blank Corrected PK Area (A-s): -0.000  
Concentration (ug/L ): -0.0

Peak Height (A): 0.015  
Background PK Height (A): 0.019

Mean Conc (ug/L ): 0.1  
Corrected Conc (ug/L ): 0.2

SD: 0.18 RSD(%): 172.7

Sample ID: 67149/MGC361 Sequence No.: 00048 Sampler Position: 20

Peak Area (A-s): 0.026  
Background PK Area (A-s): 0.023  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 5.1

Peak Height (A): 0.071  
Background PK Height (A): 0.044  
Corrected Conc (ug/L ): 10.1

Peak Area (A-s): 0.026  
Background PK Area (A-s): 0.022  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 5.0

Peak Height (A): 0.071  
Background PK Height (A): 0.049  
Corrected Conc (ug/L ): 10.1

Mean Conc (ug/L ): 5.1  
Corrected Conc (ug/L ): 10.1

SD: 0.01 RSD(%): 0.1

Recovery is ~~99.0%~~ 5%

101%

Sample ID: 67150/MGC362 Sequence No.: 00049 Sampler Position: 21

Peak Area (A-s): 0.002  
Background PK Area (A-s): 0.013  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.4

Peak Height (A): 0.014  
Background PK Height (A): 0.021  
Corrected Conc (ug/L ): -0.7

Peak Area (A-s): 0.002  
Background PK Area (A-s): 0.011  
Blank Corrected PK Area (A-s): -0.002

Peak Height (A): 0.013  
Background PK Height (A): 0.019

Concentration (ug/L ): -0.4 Corrected Conc (ug/L ): -0.9  
Mean Conc (ug/L ): -0.4 SD: 0.06 RSD(%): 14.8  
Corrected Conc (ug/L ): -0.8

Sample ID: 67150/MGC362 Sequence No.: 00050 Sampler Position: 21

Peak Area (A-s): 0.025 Peak Height (A): 0.076  
Background PK Area (A-s): 0.023 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 4.9 Corrected Conc (ug/L ): 9.9

Peak Area (A-s): 0.025 Peak Height (A): 0.070  
Background PK Area (A-s): 0.023 Background PK Height (A): 0.048  
Blank Corrected PK Area (A-s): 0.021  
Concentration (ug/L ): 4.9 Corrected Conc (ug/L ): 9.7

Mean Conc (ug/L ): 4.9 SD: 0.05 RSD(%): 1.1  
Corrected Conc (ug/L ): 9.8

Recovery is ~~105.0%~~ 5<sup>th</sup>

Sample ID: 67152/MGC363<sub>SH</sub> Sequence No.: 00051 Sampler Position: 22

Peak Area (A-s): 0.002 Peak Height (A): 0.016  
Background PK Area (A-s): 0.013 Background PK Height (A): 0.020  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.3 Corrected Conc (ug/L ): -0.6

Peak Area (A-s): 0.003 Peak Height (A): 0.015  
Background PK Area (A-s): 0.012 Background PK Height (A): 0.019  
Blank Corrected PK Area (A-s): -0.000  
Concentration (ug/L ): -0.1

Mean Conc (ug/L ): -0.2 SD: 0.17 RSD(%): 89.4  
Corrected Conc (ug/L ): -0.4

Sample ID: 67152/MGC363<sub>SH</sub> Sequence No.: 00052 Sampler Position: 22

Peak Area (A-s): 0.028 Peak Height (A): 0.079  
Background PK Area (A-s): 0.022 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.024  
Concentration (ug/L ): 5.5 Corrected Conc (ug/L ): 11.0

Peak Area (A-s): 0.025 Peak Height (A): 0.069  
Background PK Area (A-s): 0.023 Background PK Height (A): 0.044  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 5.0 Corrected Conc (ug/L ): 9.9

Mean Conc (ug/L ): 5.2 SD: 0.39 RSD(%): 7.4  
Corrected Conc (ug/L ): 10.5

Recovery is ~~108.5%~~ 5<sup>th</sup>

Sample ID: 67152/MGC363<sub>SH</sub> Sequence No.: 00053 Sampler Position: 23

Peak Area (A-s): 0.003  
Background PK Area (A-s): 0.015  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.2

Peak Height (A): 0.014  
Background PK Height (A): 0.021  
Corrected Conc (ug/L ): -0.4

Peak Area (A-s): 0.003  
Background PK Area (A-s): 0.015  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.1

Peak Height (A): 0.015  
Background PK Height (A): 0.022  
Corrected Conc (ug/L ): -0.3

Mean Conc (ug/L ): -0.2  
Corrected Conc (ug/L ): -0.4

SD: 0.05 RSD(%): 25.5

Sample ID: 67152/MGC36~~4~~<sup>SH</sup> Sequence No.: 00054 Sampler Position: 23

Peak Area (A-s): 0.025  
Background PK Area (A-s): 0.027  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 5.0

Peak Height (A): 0.072  
Background PK Height (A): 0.045  
Corrected Conc (ug/L ): 10.0

Peak Area (A-s): 0.027  
Background PK Area (A-s): 0.026  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 5.3

Peak Height (A): 0.073  
Background PK Height (A): 0.047  
Corrected Conc (ug/L ): 10.7

Mean Conc (ug/L ): 5.2  
Corrected Conc (ug/L ): 10.3

SD: 0.24 RSD(%): 4.6

Recovery is ~~106.8%~~ <sup>103%</sup> ~~st~~

Sample ID: CCV Sequence No.: 00055 Sampler Position: 38

Peak Area (A-s): 0.043  
Background PK Area (A-s): 0.025  
Blank Corrected PK Area (A-s): 0.040  
Concentration (ug/L ): 9.2

Peak Height (A): 0.087  
Background PK Height (A): 0.042  
Corrected Conc (ug/L ): 18.4

Peak Area (A-s): 0.044  
Background PK Area (A-s): 0.026  
Blank Corrected PK Area (A-s): 0.041  
Concentration (ug/L ): 9.4

Peak Height (A): 0.086  
Background PK Height (A): 0.042  
Corrected Conc (ug/L ): 18.9

Mean Conc (ug/L ): 9.3  
Corrected Conc (ug/L ): 18.6

SD: 0.17 RSD(%): 1.8

Sample ID: CCB Sequence No.: 00056 Sampler Position: 37

Peak Area (A-s): 0.001  
Background PK Area (A-s): 0.005  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.5

Peak Height (A): 0.008  
Background PK Height (A): 0.007  
Corrected Conc (ug/L ): -1.1

Peak Area (A-s): 0.001  
Background PK Area (A-s): 0.006  
Blank Corrected PK Area (A-s): -0.002

Peak Height (A): 0.010  
Background PK Height (A): 0.007

Concentration (ug/L ): -0.5 Corrected Conc (ug/L ): -1.1  
Mean Conc (ug/L ): -0.5 SD: 0.00 RSD(%): 0.4  
Corrected Conc (ug/L ): -1.1

~~~~~  
Sample ID: 24 *67153/m6c365* sequence No.: 00057 Sampler Position: 24
SH

Peak Area (A-s): 0.199 Peak Height (A): 0.388
Background PK Area (A-s): 0.104 Background PK Height (A): 0.196
Blank Corrected PK Area (A-s): 0.195
Concentration (ug/L): 51.5 Corrected Conc (ug/L): 103.1

Peak Area (A-s): 0.201 Peak Height (A): 0.397
Background PK Area (A-s): 0.104 Background PK Height (A): 0.205
Blank Corrected PK Area (A-s): 0.198
Concentration (ug/L): 52.3 Corrected Conc (ug/L): 104.6

Mean Conc (ug/L): 51.9 SD: 0.55 RSD(%): 1.1
Corrected Conc (ug/L): 103.8

~~~~~ *see Dil* *Rep# 0005B* ~~~~~  
Sample ID: 24 *67153-50K* sequence No.: 00058 Sampler Position: 24  
*SH*

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.224 Peak Height (A): 0.434  
Background PK Area (A-s): 0.117 Background PK Height (A): 0.223  
Blank Corrected PK Area (A-s): 0.221  
Concentration (ug/L ): 59.6 Corrected Conc (ug/L ): 119.2

The sample absorbance is greater than that of the highest standard.  
Peak Area (A-s): 0.222 Peak Height (A): 0.420  
Background PK Area (A-s): 0.119 Background PK Height (A): 0.220  
Blank Corrected PK Area (A-s): 0.218  
Concentration (ug/L ): 58.7 Corrected Conc (ug/L ): 117.4

The sample absorbance is greater than that of the highest standard.  
Mean Conc (ug/L ): 59.2 SD: 0.66 RSD(%): 1.1  
Corrected Conc (ug/L ): 118.3

Recovery is 144.6 % *Dil*

~~~~~  
Sample ID: CCV sequence No.: 00059 Sampler Position: 38

Peak Area (A-s): 0.046 Peak Height (A): 0.089
Background PK Area (A-s): 0.026 Background PK Height (A): 0.043
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 9.8 Corrected Conc (ug/L): 19.5

Peak Area (A-s): 0.046 Peak Height (A): 0.088
Background PK Area (A-s): 0.026 Background PK Height (A): 0.043
Blank Corrected PK Area (A-s): 0.043
Concentration (ug/L): 9.9 Corrected Conc (ug/L): 19.8

Mean Conc (ug/L): 9.8 SD: 0.09 RSD(%): 0.9
Corrected Conc (ug/L): 19.6 *98%*

~~~~~

Sample ID: CCB

Sequence No.: 00060

Sampler Position: 37

Peak Area (A-s): 0.001  
Background PK Area (A-s): 0.007  
Blank Corrected PK Area (A-s): -0.003  
Concentration (ug/L ): -0.6

Peak Height (A): 0.008  
Background PK Height (A): 0.014  
Corrected Conc (ug/L ): -1.1

Peak Area (A-s): 0.001  
Background PK Area (A-s): 0.005  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.5

Peak Height (A): 0.014  
Background PK Height (A): 0.011  
Corrected Conc (ug/L ): -1.0

Mean Conc (ug/L ): -0.5  
Corrected Conc (ug/L ): -1.1

SD: 0.04

RSD(%): 7.0

Pb: OCO5B SF8129;SF8158-Dilutions SH

Element File: Pb Element: Pb  
Date: 10/05/87 Time: 10:09  
Data Storage File: A710051005 ID/Weight File: SF8129-58  
Technique: HGA Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.001 Peak Height (A): 0.007  
Background PK Area (A-s): 0.005 Background PK Height (A): 0.007  
Blank Corrected PK Area (A-s): 0.001

Peak Area (A-s): 0.001 Peak Height (A): 0.007  
Background PK Area (A-s): 0.009 Background PK Height (A): 0.021  
Blank Corrected PK Area (A-s): 0.001

Mean PK Area (A-s): 0.001 SD: 0.0001 RSD(%): 10.2

Auto-zero performed.

Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.024 Peak Height (A): 0.047  
Background PK Area (A-s): 0.015 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): 0.023

Peak Area (A-s): 0.024 Peak Height (A): 0.045  
Background PK Area (A-s): 0.015 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): 0.023

Mean PK Area (A-s): 0.023 SD: 0.0004 RSD(%): 1.6

standard number 1 applied. [ 5.0]

Sample ID: Standard 2 Sequence No.: 00003 Sampler Position: 38

Peak Area (A-s): 0.039 Peak Height (A): 0.079  
Background PK Area (A-s): 0.028 Background PK Height (A): 0.047  
Blank Corrected PK Area (A-s): 0.037  
Concentration (ug/L ): 8.1

Peak Area (A-s): 0.040 Peak Height (A): 0.082  
Background PK Area (A-s): 0.028 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.039  
Concentration (ug/L ): 8.4

Mean Conc (ug/L ): 8.3 SD: 0.18 RSD(%): 2.2

Standard number 2 applied. [ 10.0]

Sample ID: Standard 3 Sequence No.: 00004 Sampler Position: 38

Peak Area (A-s): 0.076 Peak Height (A): 0.137  
Background PK Area (A-s): 0.047 Background PK Height (A): 0.080  
Blank Corrected PK Area (A-s): 0.075  
Concentration (ug/L ): 40.3

Peak Area (A-s): 0.075 Peak Height (A): 0.138  
Background PK Area (A-s): 0.046 Background PK Height (A): 0.079  
Blank Corrected PK Area (A-s): 0.074  
Concentration (ug/L ): 38.8

Mean Conc (ug/L ): 39.5 SD: 1.09 RSD(%): 2.8

S-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 3 applied. [ 20.0]

Sample ID: Standard 4 Sequence No.: 00005 Sampler Position: 39

Peak Area (A-s): 0.177 Peak Height (A): 0.313  
Background PK Area (A-s): 0.109 Background PK Height (A): 0.191  
Blank Corrected PK Area (A-s): 0.176  
Concentration (ug/L ): 87.8

Peak Area (A-s): 0.180 Peak Height (A): 0.308  
Background PK Area (A-s): 0.109 Background PK Height (A): 0.189  
Blank Corrected PK Area (A-s): 0.178  
Concentration (ug/L ): 90.4

Mean Conc (ug/L ): 89.1 SD: 1.86 RSD(%): 2.1

S-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 4 applied. [ 50.0]

Sample ID: Icv#4(1.40) Sequence No.: 00006 Sampler Position: 1  
*24.5 = T.V.*

Peak Area (A-s): 0.050 Peak Height (A): 0.099  
Background PK Area (A-s): 0.032 Background PK Height (A): 0.058  
Blank Corrected PK Area (A-s): 0.048  
Concentration (ug/L ): 11.9 Corrected Conc (ug/L ): 23.7

Peak Area (A-s): 0.049 Peak Height (A): 0.097  
Background PK Area (A-s): 0.032 Background PK Height (A): 0.057  
Blank Corrected PK Area (A-s): 0.048  
Concentration (ug/L ): 11.8 Corrected Conc (ug/L ): 23.6

Mean Conc (ug/L ): 11.8 SD: 0.06 RSD(%): 0.5

Corrected Conc (ug/L ): 23.7 *97%*

Sample ID: ICB Sequence No.: 00007 Sampler Position: 2

Peak Area (A-s): 0.005 Peak Height (A): 0.009  
Background PK Area (A-s): 0.003 Background PK Height (A): 0.006



Blank Corrected PK Area (A-s): 0.004  
Concentration (ug/L ): 0.9 Corrected Conc (ug/L ): 1.8  
Peak Area (A-s): 0.002 Peak Height (A): 0.007  
Background PK Area (A-s): 0.005 Background PK Height (A): 0.007  
Blank Corrected PK Area (A-s): 0.000  
Concentration (ug/L ): 0.1 Corrected Conc (ug/L ): 0.2  
Mean Conc (ug/L ): 0.5 SD: 0.56 RSD(%): 115.2  
Corrected Conc (ug/L ): 1.0

~~~~~  
Sample ID: CCV Sequence No.: 00008 Sampler Position: 3
Peak Area (A-s): 0.042 Peak Height (A): 0.083
Background PK Area (A-s): 0.028 Background PK Height (A): 0.046
Blank Corrected PK Area (A-s): 0.040
Concentration (ug/L): 9.8 Corrected Conc (ug/L): 19.6
Peak Area (A-s): 0.043 Peak Height (A): 0.082
Background PK Area (A-s): 0.027 Background PK Height (A): 0.046
Blank Corrected PK Area (A-s): 0.041
Concentration (ug/L): 10.0 Corrected Conc (ug/L): 20.1
Mean Conc (ug/L): 9.9 SD: 0.18 RSD(%): 1.8
Corrected Conc (ug/L): 19.8 *99%*

~~~~~  
Sample ID: 67117/MAF427 *(X20)* Sequence No.: 00009 Sampler Position: 6  
Peak Area (A-s): 0.061 Peak Height (A): 0.141  
Background PK Area (A-s): 0.036 Background PK Height (A): 0.075  
Blank Corrected PK Area (A-s): 0.060  
Concentration (ug/L ): 15.0 Corrected Conc (ug/L ): 29.9  
Peak Area (A-s): 0.063 Peak Height (A): 0.140  
Background PK Area (A-s): 0.036 Background PK Height (A): 0.077  
Blank Corrected PK Area (A-s): 0.062  
Concentration (ug/L ): 15.4 Corrected Conc (ug/L ): 30.7  
Mean Conc (ug/L ): 15.2 SD: 0.28 RSD(%): 1.9  
Corrected Conc (ug/L ): 30.3

~~~~~  
Sample ID: 67117/MAF427 *(X20)* Sequence No.: 00010 Sampler Position: 6
Peak Area (A-s): 0.086 *spk* Peak Height (A): 0.198
Background PK Area (A-s): 0.049 Background PK Height (A): 0.107
Blank Corrected PK Area (A-s): 0.085
Concentration (ug/L): 21.9 Corrected Conc (ug/L): 43.8
Peak Area (A-s): 0.084 Peak Height (A): 0.191
Background PK Area (A-s): 0.047 Background PK Height (A): 0.102
Blank Corrected PK Area (A-s): 0.082
Concentration (ug/L): 21.1 Corrected Conc (ug/L): 42.2
Mean Conc (ug/L): 21.5 SD: 0.55 RSD(%): 2.6
Corrected Conc (ug/L): 43.0

MSA

Recovery is 126.4 %

~~~~~

Sample ID: 67117dup (X20)      Sequence No.: 00011      Sampler Position: 7

Peak Area (A-s): 0.040      Peak Height (A): 0.087  
 Background PK Area (A-s): 0.023      Background PK Height (A): 0.047  
 Blank Corrected PK Area (A-s): 0.038  
 Concentration (ug/L ): 9.3      Corrected Conc (ug/L ): 18.6

Peak Area (A-s): 0.038      Peak Height (A): 0.090  
 Background PK Area (A-s): 0.026      Background PK Height (A): 0.047  
 Blank Corrected PK Area (A-s): 0.036  
 Concentration (ug/L ): 8.8      Corrected Conc (ug/L ): 17.6

Mean Conc (ug/L ): 9.1      SD: 0.36      RSD(%): 3.9  
 Corrected Conc (ug/L ): 18.1

~~~~~

Sample ID: 67117dup (X20) ^{spk} Sequence No.: 00012 Sampler Position: 7

Peak Area (A-s): 0.060 Peak Height (A): 0.130
 Background PK Area (A-s): 0.035 Background PK Height (A): 0.070
 Blank Corrected PK Area (A-s): 0.058
 Concentration (ug/L): 14.5 Corrected Conc (ug/L): 28.9

Peak Area (A-s): 0.060 Peak Height (A): 0.133
 Background PK Area (A-s): 0.037 Background PK Height (A): 0.072
 Blank Corrected PK Area (A-s): 0.058
 Concentration (ug/L): 14.5 Corrected Conc (ug/L): 29.0

Mean Conc (ug/L): 14.5 SD: 0.02 RSD(%): 0.1
 Corrected Conc (ug/L): 29.0

Recovery is 108.6 %

~~~~~

Sample ID: 67117prespk (X20)      Sequence No.: 00013      Sampler Position: 8

Peak Area (A-s): 0.037      Peak Height (A): 0.085  
 Background PK Area (A-s): 0.024      Background PK Height (A): 0.047  
 Blank Corrected PK Area (A-s): 0.036  
 Concentration (ug/L ): 8.7      Corrected Conc (ug/L ): 17.4

Peak Area (A-s): 0.036      Peak Height (A): 0.086  
 Background PK Area (A-s): 0.024      Background PK Height (A): 0.047  
 Blank Corrected PK Area (A-s): 0.035  
 Concentration (ug/L ): 8.5      Corrected Conc (ug/L ): 17.0

Mean Conc (ug/L ): 8.6      SD: 0.16      RSD(%): 1.9  
 Corrected Conc (ug/L ): 17.2

~~~~~

Sample ID: 67117prespk (X20) ^{spk} Sequence No.: 00014 Sampler Position: 8

Peak Area (A-s): 0.059 *not needed - SH* Peak Height (A): 0.132
 Background PK Area (A-s): 0.035 Background PK Height (A): 0.073
 Blank Corrected PK Area (A-s): 0.058
 Concentration (ug/L): 14.3 Corrected Conc (ug/L): 28.6

Peak Area (A-s): 0.057
Background PK Area (A-s): 0.033
Blank Corrected PK Area (A-s): 0.056
Concentration (ug/L): 13.8

Peak Height (A): 0.133
Background PK Height (A): 0.071
Corrected Conc (ug/L): 27.6

Mean Conc (ug/L): 14.1
Corrected Conc (ug/L): 28.1

SD: 0.34 RSD(%): 2.4

Recovery is 109.1 %

Sample ID: 67118/MAF428 (X20) Sequence No.: 00015 Sampler Position: 9

Peak Area (A-s): 0.034
Background PK Area (A-s): 0.022
Blank Corrected PK Area (A-s): 0.033
Concentration (ug/L): 7.8

Peak Height (A): 0.084
Background PK Height (A): 0.046
Corrected Conc (ug/L): 15.6

Peak Area (A-s): 0.035
Background PK Area (A-s): 0.021
Blank Corrected PK Area (A-s): 0.034
Concentration (ug/L): 8.1

Peak Height (A): 0.081
Background PK Height (A): 0.047
Corrected Conc (ug/L): 16.3

Mean Conc (ug/L): 8.0
Corrected Conc (ug/L): 15.9

SD: 0.23 RSD(%): 2.9

Sample ID: 67118/MAF428 (X20) SPK Sequence No.: 00016 Sampler Position: 9

Peak Area (A-s): 0.054
Background PK Area (A-s): 0.033
Blank Corrected PK Area (A-s): 0.053
Concentration (ug/L): 13.1

Peak Height (A): 0.134
Background PK Height (A): 0.073
Corrected Conc (ug/L): 26.2

Peak Area (A-s): 0.054
Background PK Area (A-s): 0.033
Blank Corrected PK Area (A-s): 0.053
Concentration (ug/L): 13.0

Peak Height (A): 0.138
Background PK Height (A): 0.070
Corrected Conc (ug/L): 26.0

Mean Conc (ug/L): 13.1
Corrected Conc (ug/L): 26.1

SD: 0.09 RSD(%): 0.7

Recovery is 101.6 %

Sample ID: 67119/MAF429 (X20) Sequence No.: 00017 Sampler Position: 10

Peak Area (A-s): 0.039
Background PK Area (A-s): 0.023
Blank Corrected PK Area (A-s): 0.038
Concentration (ug/L): 9.2

Peak Height (A): 0.092
Background PK Height (A): 0.050
Corrected Conc (ug/L): 18.3

Peak Area (A-s): 0.038
Background PK Area (A-s): 0.024
Blank Corrected PK Area (A-s): 0.037
Concentration (ug/L): 8.8

Peak Height (A): 0.090
Background PK Height (A): 0.051
Corrected Conc (ug/L): 17.7

Mean Conc (ug/L): 9.0

SD: 0.23 RSD(%): 2.6

Corrected Conc (ug/L): 18.0

Sample ID: 67119/MAF429 (X20) ^{SPK} Sequence No.: 00018 Sampler Position: 10

Peak Area (A-s): 0.059 Peak Height (A): 0.144
Background PK Area (A-s): 0.036 Background PK Height (A): 0.076
Blank Corrected PK Area (A-s): 0.057
Concentration (ug/L): 14.2 Corrected Conc (ug/L): 28.5

Peak Area (A-s): 0.060 Peak Height (A): 0.141
Background PK Area (A-s): 0.036 Background PK Height (A): 0.077
Blank Corrected PK Area (A-s): 0.059
Concentration (ug/L): 14.5 Corrected Conc (ug/L): 29.1

Mean Conc (ug/L): 14.4 SD: 0.21 RSD(%): 1.5
Corrected Conc (ug/L): 28.8

Recovery is 107.3 %

Sample ID: CCV Sequence No.: 00019 Sampler Position: 38

Peak Area (A-s): 0.043 Peak Height (A): 0.081
Background PK Area (A-s): 0.025 Background PK Height (A): 0.045
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 10.1 Corrected Conc (ug/L): 20.2

Peak Area (A-s): 0.042 Peak Height (A): 0.081
Background PK Area (A-s): 0.026 Background PK Height (A): 0.046
Blank Corrected PK Area (A-s): 0.041
Concentration (ug/L): 9.9 Corrected Conc (ug/L): 19.8

Mean Conc (ug/L): 10.0 SD: 0.13 RSD(%): 1.3
Corrected Conc (ug/L): 20.0

Sample ID: CCB Sequence No.: 00020 Sampler Position: 37

Peak Area (A-s): 0.002 Peak Height (A): 0.008
Background PK Area (A-s): 0.003 Background PK Height (A): 0.006
Blank Corrected PK Area (A-s): 0.001
Concentration (ug/L): 0.3 Corrected Conc (ug/L): 0.6

Peak Area (A-s): 0.002 Peak Height (A): 0.009
Background PK Area (A-s): 0.004 Background PK Height (A): 0.006
Blank Corrected PK Area (A-s): 0.001
Concentration (ug/L): 0.2 Corrected Conc (ug/L): 0.4

Mean Conc (ug/L): 0.2 SD: 0.05 RSD(%): 22.5
Corrected Conc (ug/L): 0.5

Sample ID: 67120/MAF430 (X20) Sequence No.: 00021 Sampler Position: 11

Peak Area (A-s): 0.035 Peak Height (A): 0.074
Background PK Area (A-s): 0.022 Background PK Height (A): 0.037
Blank Corrected PK Area (A-s): 0.034
Concentration (ug/L): 8.2 Corrected Conc (ug/L): 16.3

Peak Area (A-s): 0.035 Peak Height (A): 0.071
Background PK Area (A-s): 0.023 Background PK Height (A): 0.039
Blank Corrected PK Area (A-s): 0.034
Concentration (ug/L): 8.1 Corrected Conc (ug/L): 16.3
Mean Conc (ug/L): 8.2 SD: 0.02 RSD(%): 0.3
Corrected Conc (ug/L): 16.3

~~~~~  
Sample ID: 67120/MAF430 spk (x20) Sequence No.: 00022 Sampler Position: 11  
Peak Area (A-s): 0.058 Peak Height (A): 0.117  
Background PK Area (A-s): 0.033 Background PK Height (A): 0.063  
Blank Corrected PK Area (A-s): 0.057  
Concentration (ug/L ): 14.0 Corrected Conc (ug/L ): 28.0  
Peak Area (A-s): 0.059 Peak Height (A): 0.115  
Background PK Area (A-s): 0.032 Background PK Height (A): 0.061  
Blank Corrected PK Area (A-s): 0.058  
Concentration (ug/L ): 14.3 Corrected Conc (ug/L ): 28.5  
Mean Conc (ug/L ): 14.1 SD: 0.19 RSD(%): 1.4  
Corrected Conc (ug/L ): 28.3  
Recovery is 119.5 % MSA

~~~~~  
Sample ID: 24 67153 MGC365 (x5) spk Sequence No.: 00023 Sampler Position: 24
Peak Area (A-s): 0.043 Peak Height (A): 0.086
Background PK Area (A-s): 0.026 Background PK Height (A): 0.046
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 10.2 Corrected Conc (ug/L): 20.4
Peak Area (A-s): 0.044 Peak Height (A): 0.082
Background PK Area (A-s): 0.025 Background PK Height (A): 0.047
Blank Corrected PK Area (A-s): 0.043
Concentration (ug/L): 10.4 Corrected Conc (ug/L): 20.8
Mean Conc (ug/L): 10.3 SD: 0.15 RSD(%): 1.5
Corrected Conc (ug/L): 20.6

~~~~~  
Sample ID: 24 67153 (x5) spk Sequence No.: 00024 Sampler Position: 24  
Peak Area (A-s): 0.066 Peak Height (A): 0.125  
Background PK Area (A-s): 0.037 Background PK Height (A): 0.065  
Blank Corrected PK Area (A-s): 0.064  
Concentration (ug/L ): 16.1 Corrected Conc (ug/L ): 32.2  
Peak Area (A-s): 0.065 Peak Height (A): 0.127  
Background PK Area (A-s): 0.038 Background PK Height (A): 0.067  
Blank Corrected PK Area (A-s): 0.063  
Concentration (ug/L ): 15.8 Corrected Conc (ug/L ): 31.6  
Mean Conc (ug/L ): 15.9 SD: 0.20 RSD(%): 1.2  
Corrected Conc (ug/L ): 31.9



Pb: OCCSC SF8129 MSA'S SH

Element File: Pb-MSA  
Date: 10/05/87  
Data Storage File: A710051200  
Technique: HGA

Element: Pb  
Time: 12:03  
ID/Weight File: MSA  
Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.003 Peak Height (A): 0.008  
Background PK Area (A-s): 0.006 Background PK Height (A): 0.010  
Blank Corrected PK Area (A-s): 0.003

Auto-zero performed.

Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.028 Peak Height (A): 0.052  
Background PK Area (A-s): 0.018 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): 0.026

Standard number 1 applied. [ 5.0 ]

Sample ID: Standard 2                      Sequence No.: 00003                      Sampler Position: 38

Peak Area (A-s): 0.046                      Peak Height (A): 0.080  
Background PK Area (A-s): 0.028                      Background PK Height (A): 0.042  
Blank Corrected PK Area (A-s): 0.043  
Concentration (ug/L ):                      8.4

Standard number 2 applied. [                      10.0]

Sample ID: Standard 3                      Sequence No.: 00004                      Sampler Position: 38

Peak Area (A-s): 0.078                      Peak Height (A): 0.132  
Background PK Area (A-s): 0.045                      Background PK Height (A): 0.072  
Blank Corrected PK Area (A-s): 0.076  
Concentration (ug/L ):                      26.3

Calibration is questionable. Abs and conc signs may be different.  
Standard number 3 applied. [                      20.0]

Sample ID: Standard 4                      Sequence No.: 00005                      Sampler Position: 39

Peak Area (A-s): 0.188                      Peak Height (A): 0.304  
Background PK Area (A-s): 0.105                      Background PK Height (A): 0.166  
Blank Corrected PK Area (A-s): 0.185  
Concentration (ug/L ):                      55.9

S-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 4 applied. [                      50.0]

Sample ID: ICV <sup>#4(1.40)</sup> <sub>24.5=7.4</sub>                      Sequence No.: 00006                      Sampler Position: 1

Peak Area (A-s): 0.056                      Peak Height (A): 0.104  
Background PK Area (A-s): 0.034                      Background PK Height (A): 0.055  
Blank Corrected PK Area (A-s): 0.053  
Concentration (ug/L ):                      11.8                      Corrected Conc (ug/L ):                      23.6

Sample ID: ICB                      Sequence No.: 00007                      Sampler Position: 2

Peak Area (A-s): 0.004                      Peak Height (A): 0.010  
Background PK Area (A-s): 0.005                      Background PK Height (A): 0.012  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ):                      0.3                      Corrected Conc (ug/L ):                      0.6

Sample ID: CCV                      Sequence No.: 00008                      Sampler Position: 3

Peak Area (A-s): 0.046                      Peak Height (A): 0.082  
Background PK Area (A-s): 0.029                      Background PK Height (A): 0.043  
Blank Corrected PK Area (A-s): 0.043  
Concentration (ug/L ):                      9.5                      Corrected Conc (ug/L ):                      18.9

Sample ID: sample I.D. <sup>67117</sup> <sub>MAF427 (x40)</sub>                      Sequence No.: 00009                      Sampler Position: 4

Peak Area (A-s): 0.037                      Peak Height (A): 0.076



Background PK Area (A-s): 0.024 Background PK Height (A): 0.042  
Blank Corrected PK Area (A-s): 0.035 Concentration (ug/L ): 7.5 Corrected Conc (ug/L ): 15.0

Sample ID: 10ppb Sequence No.: 00010 Sampler Position: 6  
Peak Area (A-s): 0.056 Peak Height (A): 0.114  
Background PK Area (A-s): 0.031 Background PK Height (A): 0.061  
Blank Corrected PK Area (A-s): 0.053 Concentration (ug/L ): 11.8 Corrected Conc (ug/L ): 23.7

Sample ID: 20ppb Sequence No.: 00011 Sampler Position: 8  
Peak Area (A-s): 0.075 Peak Height (A): 0.153  
Background PK Area (A-s): 0.045 Background PK Height (A): 0.085  
Blank Corrected PK Area (A-s): 0.072 Concentration (ug/L ): 16.7 Corrected Conc (ug/L ): 33.3

Sample ID: 30ppb  $r = .999$   
 $b/a = 1.0$  Sequence No.: 00012 Sampler Position: 9  
 $\Sigma = 13.9$   
Peak Area (A-s): 0.095 Peak Height (A): 0.186  
Background PK Area (A-s): 0.054 Background PK Height (A): 0.106  
Blank Corrected PK Area (A-s): 0.092 Concentration (ug/L ): 22.1 Corrected Conc (ug/L ): 44.2

Sample ID: sample I.D.  $67120/$  Sequence No.: 00013 Sampler Position: 4  
 $MAF 430 (x20)$   
Peak Area (A-s): 0.038 Peak Height (A): 0.075  
Background PK Area (A-s): 0.025 Background PK Height (A): 0.041  
Blank Corrected PK Area (A-s): 0.035 Concentration (ug/L ): 7.6 Corrected Conc (ug/L ): 15.2

Sample ID: 10ppb Sequence No.: 00014 Sampler Position: 6  
Peak Area (A-s): 0.057 Peak Height (A): 0.105  
Background PK Area (A-s): 0.035 Background PK Height (A): 0.059  
Blank Corrected PK Area (A-s): 0.054 Concentration (ug/L ): 12.1 Corrected Conc (ug/L ): 24.2

Sample ID: 20ppb Sequence No.: 00015 Sampler Position: 8  
Peak Area (A-s): 0.078 Peak Height (A): 0.150  
Background PK Area (A-s): 0.046 Background PK Height (A): 0.081  
Blank Corrected PK Area (A-s): 0.075 Concentration (ug/L ): 17.4 Corrected Conc (ug/L ): 34.7

Sample ID: 30ppb  $r = 1.0$   
 $b/a = 1.0$  Sequence No.: 00016 Sampler Position: 9  
 $\Sigma = 15.6$   
Peak Area (A-s): 0.095 Peak Height (A): 0.182  
Background PK Area (A-s): 0.057 Background PK Height (A): 0.101  
Blank Corrected PK Area (A-s): 0.092 Concentration (ug/L ): 21.9 Corrected Conc (ug/L ): 43.9

```
~~~~~  
Sample ID: CCV Sequence No.: 00017 Sampler Position: 3
Peak Area (A-s): 0.045 Peak Height (A): 0.079
Background PK Area (A-s): 0.029 Background PK Height (A): 0.044
Blank Corrected PK Area (A-s): 0.042
Concentration (ug/L): 9.3 Corrected Conc (ug/L): 18.6
~~~~~
```

93%

```
~~~~~  
Sample ID: ICB Sequence No.: 00018 Sampler Position: 2
Peak Area (A-s): 0.004 Peak Height (A): 0.009
Background PK Area (A-s): 0.007 Background PK Height (A): 0.010
Blank Corrected PK Area (A-s): 0.001
Concentration (ug/L): 0.3 Corrected Conc (ug/L): 0.5
~~~~~
```

Mean Conc (ug/L ): 0.6 SD: 0.02 RSD(%): 3.0  
Corrected Conc (ug/L ): 1.1

Sample ID: 67117dup Sequence No.: 00018 Sampler Position: 7

Peak Area (A-s): 0.023 Peak Height (A): 0.025  
Background PK Area (A-s): 0.047 Background PK Height (A): 0.022  
Blank Corrected PK Area (A-s): 0.017  
Concentration (ug/L ): 5.2 Corrected Conc (ug/L ): 10.3

Peak Area (A-s): 0.024 Peak Height (A): 0.027  
Background PK Area (A-s): 0.030 Background PK Height (A): 0.018  
Blank Corrected PK Area (A-s): 0.019  
Concentration (ug/L ): 5.6 Corrected Conc (ug/L ): 11.2

Mean Conc (ug/L ): 5.4 SD: 0.31 RSD(%): 5.7  
Corrected Conc (ug/L ): 10.8

Recovery is 96.3 %

Sample ID: CCV Sequence No.: 00019 Sampler Position: 38

Peak Area (A-s): 0.036 Peak Height (A): 0.036  
Background PK Area (A-s): 0.036 Background PK Height (A): 0.020  
Blank Corrected PK Area (A-s): 0.031  
Concentration (ug/L ): 9.1 Corrected Conc (ug/L ): 18.3

Peak Area (A-s): 0.035 Peak Height (A): 0.038  
Background PK Area (A-s): 0.034 Background PK Height (A): 0.020  
Blank Corrected PK Area (A-s): 0.029  
Concentration (ug/L ): 8.7 Corrected Conc (ug/L ): 17.4

Mean Conc (ug/L ): 8.9 SD: 0.32 RSD(%): 3.6  
Corrected Conc (ug/L ): 17.8

*OCSD* *Se* *SFS129(4-8)* *SH*

Element File: Se Element: Se  
Date: 10/05/87 Time: 23:15  
Data Storage File: A710052313 ID/Weight File: SFS129-58  
Technique: HGA Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.004 Peak Height (A): 0.008  
Background PK Area (A-s): 0.023 Background PK Height (A): 0.018  
Blank Corrected PK Area (A-s): 0.004

Peak Area (A-s): 0.001 Peak Height (A): 0.008  
Background PK Area (A-s): 0.022 Background PK Height (A): 0.017  
Blank Corrected PK Area (A-s): 0.001

Mean PK Area (A-s): 0.002 SD: 0.0019 RSD(%): 77.6

Auto-zero performed.

Sample ID: Standard 1                      Sequence No.: 00002                      Sampler Position: 38

Peak Area (A-s): 0.022                      Peak Height (A): 0.027  
Background PK Area (A-s): 0.031                      Background PK Height (A): 0.017  
Blank Corrected PK Area (A-s): 0.020

Peak Area (A-s): 0.023                      Peak Height (A): 0.024  
Background PK Area (A-s): 0.044                      Background PK Height (A): 0.021  
Blank Corrected PK Area (A-s): 0.020

Mean PK Area (A-s):                      0.020                      SD: 0.0003                      RSD(%): 1.5

Standard number 1 applied. [                      5.0]

Sample ID: Standard 2                      Sequence No.: 00003                      Sampler Position: 38

Peak Area (A-s): 0.040                      Peak Height (A): 0.040  
Background PK Area (A-s): 0.039                      Background PK Height (A): 0.020  
Blank Corrected PK Area (A-s): 0.038  
Concentration (ug/L ):                      9.3

Peak Area (A-s): 0.038                      Peak Height (A): 0.037  
Background PK Area (A-s): 0.040                      Background PK Height (A): 0.021  
Blank Corrected PK Area (A-s): 0.035  
Concentration (ug/L ):                      8.7

Mean Conc (ug/L ):                      9.0                      SD: 0.42                      RSD(%): 4.7

Standard number 2 applied. [                      10.0]

Sample ID: Standard 3                      Sequence No.: 00004                      Sampler Position: 38

Peak Area (A-s): 0.064                      Peak Height (A): 0.066  
Background PK Area (A-s): 0.055                      Background PK Height (A): 0.032  
Blank Corrected PK Area (A-s): 0.062  
Concentration (ug/L ):                      20.3

Peak Area (A-s): 0.068                      Peak Height (A): 0.065  
Background PK Area (A-s): 0.054                      Background PK Height (A): 0.033  
Blank Corrected PK Area (A-s): 0.065  
Concentration (ug/L ):                      22.0

Mean Conc (ug/L ):                      21.1                      SD: 1.26                      RSD(%): 5.9

Standard number 3 applied. [                      20.0]

Sample ID: Standard 4                      Sequence No.: 00005                      Sampler Position: 39

Peak Area (A-s): 0.181                      Peak Height (A): 0.178  
Background PK Area (A-s): 0.097                      Background PK Height (A): 0.076  
Blank Corrected PK Area (A-s): 0.178  
Concentration (ug/L ):                      81.7

Peak Area (A-s): 0.179                      Peak Height (A): 0.183

Background PK Area (A-s): 0.096 Background PK Height (A): 0.076  
Blank Corrected PK Area (A-s): 0.177  
Concentration (ug/L ): 80.5

Mean Conc (ug/L ): 81.1 SD: 0.86 RSD(%): 1.1

-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 4 applied. [ 50.0]

Sample ID: *ICV\*2(1:30) 24.6=T.V.* Sequence No.: 00006 Sampler Position: 1

Peak Area (A-s): 0.048 Peak Height (A): 0.050  
Background PK Area (A-s): 0.044 Background PK Height (A): 0.022  
Blank Corrected PK Area (A-s): 0.046  
Concentration (ug/L ): 12.5 Corrected Conc (ug/L ): 25.0

Peak Area (A-s): 0.050 Peak Height (A): 0.050  
Background PK Area (A-s): 0.042 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): 0.048  
Concentration (ug/L ): 13.0 Corrected Conc (ug/L ): 26.0

Mean Conc (ug/L ): 12.8 SD: 0.38 RSD(%): 3.0  
Corrected Conc (ug/L ): 25.5

*103%*

Sample ID: ICB Sequence No.: 00007 Sampler Position: 2

Peak Area (A-s): 0.003 Peak Height (A): 0.009  
Background PK Area (A-s): -0.047 Background PK Height (A): 0.004  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.2 Corrected Conc (ug/L ): 0.4

Peak Area (A-s): 0.006 Peak Height (A): 0.011  
Background PK Area (A-s): 0.043 Background PK Height (A): 0.045  
Blank Corrected PK Area (A-s): 0.004  
Concentration (ug/L ): 1.0 Corrected Conc (ug/L ): 1.9

Mean Conc (ug/L ): 0.6 SD: 0.54 RSD(%): 91.6  
Corrected Conc (ug/L ): 1.2

Sample ID: CCV Sequence No.: 00008 Sampler Position: 3

Peak Area (A-s): 0.043 Peak Height (A): 0.040  
Background PK Area (A-s): 0.051 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.041  
Concentration (ug/L ): 11.0 Corrected Conc (ug/L ): 22.0

Peak Area (A-s): 0.041 Peak Height (A): 0.040  
Background PK Area (A-s): 0.058 Background PK Height (A): 0.048  
Blank Corrected PK Area (A-s): 0.038  
Concentration (ug/L ): 10.3 Corrected Conc (ug/L ): 20.6

Mean Conc (ug/L ): 10.7 SD: 0.48 RSD(%): 4.5  
Corrected Conc (ug/L ): 21.3

*106%*

Sample ID: LCS-8129 Sequence No.: 00009 Sampler Position: 4

*WP 386 (25.0=T.V.)*

Peak Area (A-s): 0.048  
Background PK Area (A-s): 0.065  
Blank Corrected PK Area (A-s): 0.046  
Concentration (ug/L ): 12.4

Peak Height (A): 0.043  
Background PK Height (A): 0.043  
Corrected Conc (ug/L ): 24.9

Peak Area (A-s): 0.049  
Background PK Area (A-s): 0.069  
Blank Corrected PK Area (A-s): 0.046  
Concentration (ug/L ): 12.6

Peak Height (A): 0.046  
Background PK Height (A): 0.083  
Corrected Conc (ug/L ): 25.2

Mean Conc (ug/L ): 12.5  
Corrected Conc (ug/L ): 25.0

SD: 0.11 RSD(%): 0.9

100%

Sample ID: LCS-8129 Sequence No.: 00010 Sampler Position: 4

Peak Area (A-s): 0.066  
Background PK Area (A-s): 0.062  
Blank Corrected PK Area (A-s): 0.064  
Concentration (ug/L ): 17.6

Peak Height (A): 0.062  
Background PK Height (A): 0.040  
Corrected Conc (ug/L ): 35.1

Peak Area (A-s): 0.061  
Background PK Area (A-s): 0.053  
Blank Corrected PK Area (A-s): 0.059  
Concentration (ug/L ): 16.1

Peak Height (A): 0.064  
Background PK Height (A): 0.037  
Corrected Conc (ug/L ): 32.2

Mean Conc (ug/L ): 16.8  
Corrected Conc (ug/L ): 33.7

SD: 1.01 RSD(%): 6.0

Recovery is 86.2 %

87%

Sample ID: PBLK-8158 Sequence No.: 00011 Sampler Position: 5

Peak Area (A-s): 0.006  
Background PK Area (A-s): 0.043  
Blank Corrected PK Area (A-s): 0.004  
Concentration (ug/L ): 0.9

Peak Height (A): 0.009  
Background PK Height (A): 0.039  
Corrected Conc (ug/L ): 1.9

Peak Area (A-s): 0.005  
Background PK Area (A-s): 0.039  
Blank Corrected PK Area (A-s): 0.002  
Concentration (ug/L ): 0.6

Peak Height (A): 0.042  
Background PK Height (A): 0.045  
Corrected Conc (ug/L ): 1.1

Mean Conc (ug/L ): 0.8  
Corrected Conc (ug/L ): 1.5

SD: 0.27 RSD(%): 35.2

Sample ID: PBLK-8158 Sequence No.: 00012 Sampler Position: 5

Peak Area (A-s): 0.021  
Background PK Area (A-s): 0.041  
Blank Corrected PK Area (A-s): 0.019  
Concentration (ug/L ): 5.1

Peak Height (A): 0.025  
Background PK Height (A): 0.041  
Corrected Conc (ug/L ): 10.2

Peak Area (A-s): 0.024  
Background PK Area (A-s): 0.063  
Blank Corrected PK Area (A-s): 0.022

Peak Height (A): 0.023  
Background PK Height (A): 0.040

Concentration (ug/L ): 5.8 Corrected Conc (ug/L ): 11.6  
Mean Conc (ug/L ): 5.5 SD: 0.52 RSD(%): 9.5  
Corrected Conc (ug/L ): 10.9

Recovery is ~~94.0~~ % <sup>109%</sup> St

Sample ID: 67117/MAF427 Sequence No.: 00013 Sampler Position: 6

Peak Area (A-s): 0.008 Peak Height (A): 0.015  
Background PK Area (A-s): 0.052 Background PK Height (A): 0.038  
Blank Corrected PK Area (A-s): 0.005  
Concentration (ug/L ): 1.4 Corrected Conc (ug/L ): 2.7

Peak Area (A-s): 0.007 Peak Height (A): 0.026  
Background PK Area (A-s): 0.050 Background PK Height (A): 0.143  
Blank Corrected PK Area (A-s): 0.005  
Concentration (ug/L ): 1.2 Corrected Conc (ug/L ): 2.5

Mean Conc (ug/L ): 1.3 SD: 0.09 RSD(%): 6.7  
Corrected Conc (ug/L ): 2.6

Sample ID: 67117/MAF427 Sequence No.: 00014 Sampler Position: 6

Peak Area (A-s): 0.025 Peak Height (A): 0.045  
Background PK Area (A-s): 0.055 Background PK Height (A): 0.045  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 6.0 Corrected Conc (ug/L ): 12.0

Peak Area (A-s): 0.024 Peak Height (A): 0.026  
Background PK Area (A-s): 0.073 Background PK Height (A): 0.045  
Blank Corrected PK Area (A-s): 0.021  
Concentration (ug/L ): 5.7 Corrected Conc (ug/L ): 11.3

Mean Conc (ug/L ): 5.8 SD: 0.24 RSD(%): 4.1  
Corrected Conc (ug/L ): 11.7

Recovery is ~~90.7~~ % <sup>117%</sup> St

Sample ID: 67117dup Sequence No.: 00015 Sampler Position: 7

Peak Area (A-s): 0.008 Peak Height (A): 0.013  
Background PK Area (A-s): 0.047 Background PK Height (A): 0.039  
Blank Corrected PK Area (A-s): 0.006  
Concentration (ug/L ): 1.5 Corrected Conc (ug/L ): 3.0

Peak Area (A-s): 0.005 Peak Height (A): 0.010  
Background PK Area (A-s): 0.061 Background PK Height (A): 0.044  
Blank Corrected PK Area (A-s): 0.002  
Concentration (ug/L ): 0.6 Corrected Conc (ug/L ): 1.2

Mean Conc (ug/L ): 1.1 SD: 0.63 RSD(%): 59.9  
Corrected Conc (ug/L ): 2.1

Sample ID: 67117dup Sequence No.: 00016 Sampler Position: 7

Peak Area (A-s): 0.025  
Background PK Area (A-s): 0.062  
Blank Corrected PK Area (A-s): 0.022  
Concentration (ug/L ): 6.0

Peak Height (A): 0.026  
Background PK Height (A): 0.037  
Corrected Conc (ug/L ): 11.9

Peak Area (A-s): 0.027  
Background PK Area (A-s): 0.072  
Blank Corrected PK Area (A-s): 0.025  
Concentration (ug/L ): 6.6

Peak Height (A): 0.025  
Background PK Height (A): 0.043  
Corrected Conc (ug/L ): 13.2

Mean Conc (ug/L ): 6.3  
Corrected Conc (ug/L ): 12.6

SD: 0.43 RSD(%): 6.9

Recovery is ~~404.5 % SM~~

126%

Sample ID: 67117prespk Sequence No.: 00017 Sampler Position: 8

Peak Area (A-s): 0.028  
Background PK Area (A-s): 0.055  
Blank Corrected PK Area (A-s): 0.026  
Concentration (ug/L ): 6.9

Peak Height (A): 0.034  
Background PK Height (A): 0.038  
Corrected Conc (ug/L ): 13.9

Peak Area (A-s): 0.026  
Background PK Area (A-s): 0.045  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 6.2

Peak Height (A): 0.026  
Background PK Height (A): 0.040  
Corrected Conc (ug/L ): 12.4

Mean Conc (ug/L ): 6.6  
Corrected Conc (ug/L ): 13.2

SD: 0.51 RSD(%): 7.8

Sample ID: 67117prespk Sequence No.: 00018 Sampler Position: 8

Peak Area (A-s): 0.040  
Background PK Area (A-s): 0.062  
Blank Corrected PK Area (A-s): 0.038  
Concentration (ug/L ): 10.3

Peak Height (A): 0.039  
Background PK Height (A): 0.038  
Corrected Conc (ug/L ): 20.6

Peak Area (A-s): 0.039  
Background PK Area (A-s): 0.070  
Blank Corrected PK Area (A-s): 0.037  
Concentration (ug/L ): 9.9

Peak Height (A): 0.040  
Background PK Height (A): 0.042  
Corrected Conc (ug/L ): 19.8

Mean Conc (ug/L ): 10.1  
Corrected Conc (ug/L ): 20.2

SD: 0.29 RSD(%): 2.9

Recovery is 70.2 %

Sample ID: CCV Sequence No.: 00019 Sampler Position: 38

Peak Area (A-s): 0.036  
Background PK Area (A-s): 0.047  
Blank Corrected PK Area (A-s): 0.034  
Concentration (ug/L ): 9.2

Peak Height (A): 0.035  
Background PK Height (A): 0.042  
Corrected Conc (ug/L ): 18.3

Peak Area (A-s): 0.038

Peak Height (A): 0.039



Background PK Area (A-s): 0.051 Background PK Height (A): 0.038  
Blank Corrected PK Area (A-s): 0.036  
Concentration (ug/L ): 9.6 Corrected Conc (ug/L ): 19.3  
Mean Conc (ug/L ): 9.4 SD: 0.33 RSD(%): 3.5  
Corrected Conc (ug/L ): 18.8

94 /

Sample ID: CCB Sequence No.: 00020 Sampler Position: 37

Peak Area (A-s): 0.004 Peak Height (A): 0.011  
Background PK Area (A-s): 0.039 Background PK Height (A): 0.036  
Blank Corrected PK Area (A-s): 0.001  
Concentration (ug/L ): 0.3 Corrected Conc (ug/L ): 0.6

Peak Area (A-s): 0.009 Peak Height (A): 0.011  
Background PK Area (A-s): 0.029 Background PK Height (A): 0.035  
Blank Corrected PK Area (A-s): 0.006  
Concentration (ug/L ): 1.6 Corrected Conc (ug/L ): 3.2

Mean Conc (ug/L ): 1.0 SD: 0.92 RSD(%): 95.3  
Corrected Conc (ug/L ): 1.9

*Following CCV <sup>SI</sup> ~~Failed~~ OK but no Chk run  
see RR's*

Sample ID: 67118/MAF428 Sequence No.: 00021 Sampler Position: 9

Peak Area (A-s): 0.011 Peak Height (A): 0.015  
Background PK Area (A-s): 0.050 Background PK Height (A): 0.041  
Blank Corrected PK Area (A-s): 0.009  
Concentration (ug/L ): 2.3 Corrected Conc (ug/L ): 4.7

Peak Area (A-s): 0.010 Peak Height (A): 0.012  
Background PK Area (A-s): 0.045 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.007  
Concentration (ug/L ): 1.9 Corrected Conc (ug/L ): 3.9

Mean Conc (ug/L ): 2.1 SD: 0.28 RSD(%): 12.9  
Corrected Conc (ug/L ): 4.3

Sample ID: 67118/MAF428 Sequence No.: 00022 Sampler Position: 9

Peak Area (A-s): 0.022 Peak Height (A): 0.027  
Background PK Area (A-s): 0.059 Background PK Height (A): 0.045  
Blank Corrected PK Area (A-s): 0.019  
Concentration (ug/L ): 5.2 Corrected Conc (ug/L ): 10.3

Peak Area (A-s): 0.028 Peak Height (A): 0.026  
Background PK Area (A-s): 0.058 Background PK Height (A): 0.044  
Blank Corrected PK Area (A-s): 0.026  
Concentration (ug/L ): 6.9 Corrected Conc (ug/L ): 13.7

Mean Conc (ug/L ): 6.0 SD: 1.21 RSD(%): 20.2  
Corrected Conc (ug/L ): 12.0

Recovery is 77.5 %

Sample ID: 67118/MAF428 Sequence No.: 00023 Sampler Position: 9

Peak Area (A-s): 0.016  
Background PK Area (A-s): 0.050  
Blank Corrected PK Area (A-s): 0.014  
Concentration (ug/L ): 3.7

Peak Height (A): 0.014  
Background PK Height (A): 0.043  
Corrected Conc (ug/L ): 7.5

Peak Area (A-s): 0.012  
Background PK Area (A-s): 0.068  
Blank Corrected PK Area (A-s): 0.010  
Concentration (ug/L ): 2.6

Peak Height (A): 0.012  
Background PK Height (A): 0.039  
Corrected Conc (ug/L ): 5.3

Mean Conc (ug/L ): 3.2  
Corrected Conc (ug/L ): 6.4

SD: 0.78 RSD(%): 24.7

Sample ID: 67118/MAF428

Sequence No.: 00024

Sampler Position: 9

Peak Area (A-s): 0.025  
Background PK Area (A-s): 0.055  
Blank Corrected PK Area (A-s): 0.023  
Concentration (ug/L ): 6.2

Peak Height (A): 0.025  
Background PK Height (A): 0.045  
Corrected Conc (ug/L ): 12.3

Peak Area (A-s): 0.029  
Background PK Area (A-s): 0.053  
Blank Corrected PK Area (A-s): 0.026  
Concentration (ug/L ): 7.1

Peak Height (A): 0.029  
Background PK Height (A): 0.020  
Corrected Conc (ug/L ): 14.2

Mean Conc (ug/L ): 6.6  
Corrected Conc (ug/L ): 13.3

SD: 0.67 RSD(%): 10.1

Recovery is 68.9 %

Sample ID: 67119/MAF429

Sequence No.: 00025

Sampler Position: 10

Peak Area (A-s): 0.007  
Background PK Area (A-s): 0.052  
Blank Corrected PK Area (A-s): 0.005  
Concentration (ug/L ): 1.2

Peak Height (A): 0.012  
Background PK Height (A): 0.046  
Corrected Conc (ug/L ): 2.4

Peak Area (A-s): 0.006  
Background PK Area (A-s): 0.044  
Blank Corrected PK Area (A-s): 0.003  
Concentration (ug/L ): 0.9

Peak Height (A): 0.011  
Background PK Height (A): 0.022  
Corrected Conc (ug/L ): 1.8

Mean Conc (ug/L ): 1.0  
Corrected Conc (ug/L ): 2.1

SD: 0.23 RSD(%): 21.6

Sample ID: 67119/MAF429

Sequence No.: 00026

Sampler Position: 10

Peak Area (A-s): 0.020  
Background PK Area (A-s): 0.057  
Blank Corrected PK Area (A-s): 0.017  
Concentration (ug/L ): 4.6

Peak Height (A): 0.026  
Background PK Height (A): 0.042  
Corrected Conc (ug/L ): 9.3

Peak Area (A-s): 0.021  
Background PK Area (A-s): 0.060  
Blank Corrected PK Area (A-s): 0.019

Peak Height (A): 0.023  
Background PK Height (A): 0.039

centration (ug/L ): 5.1 Corrected Conc (ug/L ): 10.2  
n Conc (ug/L ): 4.9 SD: 0.32 RSD(%): 6.7  
orrected Conc (ug/L ): 9.7  
covery is 76.3 %

Sample ID: 67120/MAF430 Sequence No.: 00027 Sampler Position: 11  
PK Area (A-s): 0.005 Peak Height (A): 0.010  
Background PK Area (A-s): 0.044 Background PK Height (A): 0.019  
nk Corrected PK Area (A-s): 0.002  
centration (ug/L ): 0.6 Corrected Conc (ug/L ): 1.3  
PK Area (A-s): 0.005 Peak Height (A): 0.009  
Background PK Area (A-s): 0.048 Background PK Height (A): 0.034  
nk Corrected PK Area (A-s): 0.003  
centration (ug/L ): 0.7 Corrected Conc (ug/L ): 1.5  
n Conc (ug/L ): 0.7 SD: 0.06 RSD(%): 8.6  
orrected Conc (ug/L ): 1.4

Sample ID: 67120/MAF430 Sequence No.: 00028 Sampler Position: 11  
PK Area (A-s): 0.021 Peak Height (A): 0.023  
Background PK Area (A-s): 0.053 Background PK Height (A): 0.028  
nk Corrected PK Area (A-s): 0.018  
centration (ug/L ): 4.9 Corrected Conc (ug/L ): 9.8  
PK Area (A-s): 0.024 Peak Height (A): 0.023  
Background PK Area (A-s): 0.058 Background PK Height (A): 0.033  
nk Corrected PK Area (A-s): 0.021  
centration (ug/L ): 5.7 Corrected Conc (ug/L ): 11.4  
n Conc (ug/L ): 5.3 SD: 0.58 RSD(%): 11.0  
orrected Conc (ug/L ): 10.6  
covery is 91.9 %

Sample ID: LCS-8158 Sequence No.: 00029 Sampler Position: 12  
PK Area (A-s): 0.044 Peak Height (A): 0.043  
Background PK Area (A-s): 0.061 Background PK Height (A): 0.035  
nk Corrected PK Area (A-s): 0.042  
centration (ug/L ): 11.3 Corrected Conc (ug/L ): 22.6  
PK Area (A-s): 0.044 Peak Height (A): 0.042  
Background PK Area (A-s): 0.053 Background PK Height (A): 0.025  
nk Corrected PK Area (A-s): 0.041  
centration (ug/L ): 11.2 Corrected Conc (ug/L ): 22.4  
n Conc (ug/L ): 11.2 SD: 0.07 RSD(%): 0.7  
orrected Conc (ug/L ): 22.5

Sample ID: LCS-8158 Sequence No.: 00030 Sampler Position: 12

Peak Area (A-s): 0.062  
Background PK Area (A-s): 0.062  
Blank Corrected PK Area (A-s): 0.060  
Concentration (ug/L ): 16.3

Peak Height (A): 0.059  
Background PK Height (A): 0.032  
Corrected Conc (ug/L ): 32.6

Peak Area (A-s): 0.065  
Background PK Area (A-s): 0.066  
Blank Corrected PK Area (A-s): 0.062  
Concentration (ug/L ): 17.1

Peak Height (A): 0.062  
Background PK Height (A): 0.041  
Corrected Conc (ug/L ): 34.2

Mean Conc (ug/L ): 16.7 SD: 0.56 RSD(%): 3.4  
Corrected Conc (ug/L ): 33.4

Recovery is 109.3 %

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Sample ID: CCV Sequence No.: 00031 Sampler Position: 38

Peak Area (A-s): 0.035  
Background PK Area (A-s): 0.046  
Blank Corrected PK Area (A-s): 0.033  
Concentration (ug/L ): 8.8

Peak Height (A): 0.036  
Background PK Height (A): 0.023  
Corrected Conc (ug/L ): 17.6

Peak Area (A-s): 0.036  
Background PK Area (A-s): 0.049  
Blank Corrected PK Area (A-s): 0.034  
Concentration (ug/L ): 9.1

Peak Height (A): 0.035  
Background PK Height (A): 0.020  
Corrected Conc (ug/L ): 18.2

Mean Conc (ug/L ): 8.9 SD: 0.22 RSD(%): 2.4  
Corrected Conc (ug/L ): 17.9

----- *OCDA* *Se SF8129 (4-s)* *SH* -----

Element File: Se  
Date: 10/06/87  
Data Storage File: A710060136  
Technique: HGA

Element: Se  
Time: 1:39  
ID/Weight File: SF8129-58  
Calibration Type: Nonlinear

-----  
Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.004  
Background PK Area (A-s): 0.035  
Blank Corrected PK Area (A-s): 0.004

Peak Height (A): 0.009  
Background PK Height (A): 0.020

Peak Area (A-s): 0.004  
Background PK Area (A-s): 0.034  
Blank Corrected PK Area (A-s): 0.004

Peak Height (A): 0.009  
Background PK Height (A): 0.017

Mean PK Area (A-s): 0.004 SD: 0.0000 RSD(%): 1.1

Auto-zero performed.

-----  
Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.023  
Background PK Area (A-s): 0.045  
Blank Corrected PK Area (A-s): 0.020

Peak Height (A): 0.023  
Background PK Height (A): 0.019

0006B

SF8129

SF8158

SH

Element File: Se  
Date: 10/06/87  
Data Storage File: A710061213  
Technique: HGA

Element: Se  
Time: 12:16  
ID/Weight File: SF8129-58  
Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.007  
Background PK Area (A-s): 0.064  
Blank Corrected PK Area (A-s): 0.007

Peak Height (A): 0.009  
Background PK Height (A): 0.024

Peak Area (A-s): 0.005  
Background PK Area (A-s): 0.068  
Blank Corrected PK Area (A-s): 0.005

Peak Height (A): 0.011  
Background PK Height (A): 0.025

Mean PK Area (A-s): 0.006 SD: 0.0012 RSD(%): 19.8

Auto-zero performed.

Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.022  
Background PK Area (A-s): 0.081  
Blank Corrected PK Area (A-s): 0.016

Peak Height (A): 0.027  
Background PK Height (A): 0.026

Peak Area (A-s): 0.018  
Background PK Area (A-s): 0.082  
Blank Corrected PK Area (A-s): 0.012

Peak Height (A): 0.026  
Background PK Height (A): 0.027

Mean PK Area (A-s): 0.014 SD: 0.0024 RSD(%): 16.7

Standard number 1 applied. [ 5.0]

Sample ID: Standard 2 Sequence No.: 00003 Sampler Position: 38

Peak Area (A-s): 0.039  
Background PK Area (A-s): 0.084  
Blank Corrected PK Area (A-s): 0.033  
Concentration (ug/L ): 11.6

Peak Height (A): 0.049  
Background PK Height (A): 0.030

Peak Area (A-s): 0.037 Peak Height (A): 0.049  
Background PK Area (A-s): 0.085 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): 0.031  
Concentration (ug/L ): 11.1  
Mean Conc (ug/L ): 11.4 SD: 0.32 RSD(%): 2.8  
Standard number 2 applied. [ 10.0]

Sample ID: Standard 3 Sequence No.: 00004 Sampler Position: 38  
Peak Area (A-s): 0.068 Peak Height (A): 0.088  
Background PK Area (A-s): 0.095 Background PK Height (A): 0.046  
Blank Corrected PK Area (A-s): 0.062  
Concentration (ug/L ): 16.2  
Peak Area (A-s): 0.070 Peak Height (A): 0.090  
Background PK Area (A-s): 0.099 Background PK Height (A): 0.048  
Blank Corrected PK Area (A-s): 0.064  
Concentration (ug/L ): 16.4  
Mean Conc (ug/L ): 16.3 SD: 0.17 RSD(%): 1.1  
-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 3 applied. [ 20.0]

Sample ID: Standard 4 Sequence No.: 00005 Sampler Position: 39  
Peak Area (A-s): 0.160 Peak Height (A): 0.204  
Background PK Area (A-s): 0.138 Background PK Height (A): 0.102  
Blank Corrected PK Area (A-s): 0.154  
Concentration (ug/L ): 41.8  
Peak Area (A-s): 0.161 Peak Height (A): 0.198  
Background PK Area (A-s): 0.138 Background PK Height (A): 0.095  
Blank Corrected PK Area (A-s): 0.155  
Concentration (ug/L ): 41.9  
Mean Conc (ug/L ): 41.8 SD: 0.07 RSD(%): 0.2  
-shaped calibration curve detected. Two-coefficient equation used.  
Standard number 4 applied. [ 50.0]

Sample ID: Icv #2(1.80) 24.6=TV Sequence No.: 00006 Sampler Position: 1  
Peak Area (A-s): 0.042 Peak Height (A): 0.047  
Background PK Area (A-s): 0.086 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): 0.036  
Concentration (ug/L ): 12.0 Corrected Conc (ug/L ): 24.0  
Peak Area (A-s): 0.040 Peak Height (A): 0.057  
Background PK Area (A-s): 0.090 Background PK Height (A): 0.035  
Blank Corrected PK Area (A-s): 0.034  
Concentration (ug/L ): 11.0 Corrected Conc (ug/L ): 22.1  
Mean Conc (ug/L ): 11.5 SD: 0.67 RSD(%): 5.9

Corrected Conc (ug/L ): 23.0 *93%*

Sample ID: ICB Sequence No.: 00007 Sampler Position: 2

Peak Area (A-s): 0.005 Peak Height (A): 0.012  
Background PK Area (A-s): 0.077 Background PK Height (A): 0.024  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.4 Corrected Conc (ug/L ): -0.8  
Peak Area (A-s): 0.003 Peak Height (A): 0.010  
Background PK Area (A-s): 0.070 Background PK Height (A): 0.025  
Blank Corrected PK Area (A-s): -0.003  
Concentration (ug/L ): -1.1 Corrected Conc (ug/L ): -2.2  
Mean Conc (ug/L ): -0.8 SD: 0.48 RSD(%): 63.4  
Corrected Conc (ug/L ): -1.5

Sample ID: CCV Sequence No.: 00008 Sampler Position: 3

Peak Area (A-s): 0.037 Peak Height (A): 0.049  
Background PK Area (A-s): 0.084 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): 0.031  
Concentration (ug/L ): 10.1 Corrected Conc (ug/L ): 20.3  
Peak Area (A-s): 0.039 Peak Height (A): 0.048  
Background PK Area (A-s): 0.084 Background PK Height (A): 0.029  
Blank Corrected PK Area (A-s): 0.033  
Concentration (ug/L ): 10.8 Corrected Conc (ug/L ): 21.6  
Mean Conc (ug/L ): 10.5 SD: 0.46 RSD(%): 4.4  
Corrected Conc (ug/L ): 21.0 *105%*

Sample ID: 67118/MAF428 Sequence No.: 00009 Sampler Position: 9

Peak Area (A-s): 0.008 Peak Height (A): 0.014  
Background PK Area (A-s): 0.091 Background PK Height (A): 0.027  
Blank Corrected PK Area (A-s): 0.002  
Concentration (ug/L ): 0.7 Corrected Conc (ug/L ): 1.4  
Peak Area (A-s): 0.004 Peak Height (A): 0.017  
Background PK Area (A-s): 0.090 Background PK Height (A): 0.025  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.6 Corrected Conc (ug/L ): -1.2  
Mean Conc (ug/L ): 0.1 SD: 0.92 RSD(%): 313.2

Sample ID: 67118/MAF428 Sequence No.: 00010 Sampler Position: 9

Peak Area (A-s): 0.025 Peak Height (A): 0.032  
Background PK Area (A-s): 0.096 Background PK Height (A): 0.029  
Blank Corrected PK Area (A-s): 0.019  
Concentration (ug/L ): 6.3 Corrected Conc (ug/L ): 12.6  
Peak Area (A-s): 0.025 Peak Height (A): 0.035  
Background PK Area (A-s): 0.094 Background PK Height (A): 0.028

Blank Corrected PK Area (A-s): 0.019  
Concentration (ug/L ): 6.1 Corrected Conc (ug/L ): 12.3  
Mean Conc (ug/L ): 6.2 SD: 0.12 RSD(%): 2.0  
Corrected Conc (ug/L ): 12.5

Recovery is ~~123.3%~~ <sup>125%</sup>

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Sample ID: 67119/MAF429 Sequence No.: 00011 Sampler Position: 10  
Peak Area (A-s): 0.005 Peak Height (A): 0.010  
Background PK Area (A-s): 0.085 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.5 Corrected Conc (ug/L ): -1.0  
Peak Area (A-s): 0.004 Peak Height (A): 0.012  
Background PK Area (A-s): 0.084 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): -0.002  
Concentration (ug/L ): -0.8 Corrected Conc (ug/L ): -1.6  
Mean Conc (ug/L ): -0.7 SD: 0.22 RSD(%): 33.1  
Corrected Conc (ug/L ): -1.3

-----  
Sample ID: 67119/MAF429 Sequence No.: 00012 Sampler Position: 10  
Peak Area (A-s): 0.020 Peak Height (A): 0.030  
Background PK Area (A-s): 0.094 Background PK Height (A): 0.027  
Blank Corrected PK Area (A-s): 0.014  
Concentration (ug/L ): 4.6 Corrected Conc (ug/L ): 9.2  
Peak Area (A-s): 0.020 Peak Height (A): 0.031  
Background PK Area (A-s): 0.092 Background PK Height (A): 0.026  
Blank Corrected PK Area (A-s): 0.014  
Concentration (ug/L ): 4.5 Corrected Conc (ug/L ): 9.0  
Mean Conc (ug/L ): 4.5 SD: 0.08 RSD(%): 1.7  
Corrected Conc (ug/L ): 9.1

Recovery is ~~103.6%~~ <sup>91%</sup>

-----  
Sample ID: 67120/MAF430 Sequence No.: 00013 Sampler Position: 11  
Peak Area (A-s): 0.005 Peak Height (A): 0.011  
Background PK Area (A-s): 0.086 Background PK Height (A): 0.028  
Blank Corrected PK Area (A-s): -0.001  
Concentration (ug/L ): -0.4 Corrected Conc (ug/L ): -0.8  
Peak Area (A-s): 0.006 Peak Height (A): 0.015  
Background PK Area (A-s): 0.082 Background PK Height (A): 0.025  
Blank Corrected PK Area (A-s): 0.000  
Concentration (ug/L ): 0.1  
Mean Conc (ug/L ): -0.2 SD: 0.34 RSD(%): 205.0  
Corrected Conc (ug/L ): -0.3



Sample ID: 67120/MAF430      Sequence No.: 00014      Sampler Position: 11

Peak Area (A-s): 0.018      Peak Height (A): 0.030  
 Background PK Area (A-s): 0.093      Background PK Height (A): 0.026  
 Blank Corrected PK Area (A-s): 0.012  
 Concentration (ug/L ): 4.1      Corrected Conc (ug/L ): 8.1

Peak Area (A-s): 0.016      Peak Height (A): 0.029  
 Background PK Area (A-s): 0.093      Background PK Height (A): 0.024  
 Blank Corrected PK Area (A-s): 0.010  
 Concentration (ug/L ): 3.3      Corrected Conc (ug/L ): 6.5

Mean Conc (ug/L ): 3.7      SD: 0.56      RSD(%): 15.4  
 Corrected Conc (ug/L ): 7.3

Recovery is ~~76.5%~~ <sup>13%</sup> ~~st~~

~~~~~  
 Sample ID: LCS-8158 ^{WP386(25.0)} _{T.V.} Sequence No.: 00015 Sampler Position: 12

Peak Area (A-s): 0.042 Peak Height (A): 0.048
 Background PK Area (A-s): 0.084 Background PK Height (A): 0.029
 Blank Corrected PK Area (A-s): 0.036
 Concentration (ug/L): 11.9 Corrected Conc (ug/L): 23.8

Peak Area (A-s): 0.042 Peak Height (A): 0.049
 Background PK Area (A-s): 0.087 Background PK Height (A): 0.031
 Blank Corrected PK Area (A-s): 0.036
 Concentration (ug/L): 11.7 Corrected Conc (ug/L): 23.4

Mean Conc (ug/L): 11.8 SD: 0.15 RSD(%): 1.2
 Corrected Conc (ug/L): 23.6 ^{94%}

~~~~~  
 Sample ID: LCS-8158      Sequence No.: 00016      Sampler Position: 12

Peak Area (A-s): 0.055      Peak Height (A): 0.077  
 Background PK Area (A-s): 0.098      Background PK Height (A): 0.046  
 Blank Corrected PK Area (A-s): 0.049  
 Concentration (ug/L ): 16.0      Corrected Conc (ug/L ): 32.0

Peak Area (A-s): 0.058      Peak Height (A): 0.077  
 Background PK Area (A-s): 0.094      Background PK Height (A): 0.043  
 Blank Corrected PK Area (A-s): 0.052  
 Concentration (ug/L ): 16.9      Corrected Conc (ug/L ): 33.7

Mean Conc (ug/L ): 16.4      SD: 0.62      RSD(%): 3.8  
 Corrected Conc (ug/L ): 32.8

Recovery is 92.7% <sup>92%</sup>

~~~~~  
 Sample ID: PBLK-8158 Sequence No.: 00017 Sampler Position: 13

Peak Area (A-s): 0.005 Peak Height (A): 0.011
 Background PK Area (A-s): 0.072 Background PK Height (A): 0.022
 Blank Corrected PK Area (A-s): -0.001
 Concentration (ug/L): -0.5 Corrected Conc (ug/L): -1.0

Peak Area (A-s): 0.005
Background PK Area (A-s): 0.072
Blank Corrected PK Area (A-s): -0.001
Concentration (ug/L): -0.3
Mean Conc (ug/L): -0.4
Corrected Conc (ug/L): -0.8

Peak Height (A): 0.010
Background PK Height (A): 0.024
Corrected Conc (ug/L): -0.6
SD: 0.14
RSD(%): 34.7

Sample ID: PBLK-8158

Sequence No.: 00018

Sampler Position: 13

Peak Area (A-s): 0.020
Background PK Area (A-s): 0.080
Blank Corrected PK Area (A-s): 0.014
Concentration (ug/L): 4.5

Peak Height (A): 0.028
Background PK Height (A): 0.025
Corrected Conc (ug/L): 9.0

Peak Area (A-s): 0.023
Background PK Area (A-s): 0.079
Blank Corrected PK Area (A-s): 0.017
Concentration (ug/L): 5.6

Peak Height (A): 0.029
Background PK Height (A): 0.024
Corrected Conc (ug/L): 11.3

Mean Conc (ug/L): 5.1
Corrected Conc (ug/L): 10.1

SD: 0.82
RSD(%): 16.2

Recovery is ~~100.0~~ % SH

101%

Sample ID: CCV

Sequence No.: 00019

Sampler Position: 38

Peak Area (A-s): 0.034
Background PK Area (A-s): 0.088
Blank Corrected PK Area (A-s): 0.028
Concentration (ug/L): 9.3

Peak Height (A): 0.044
Background PK Height (A): 0.028
Corrected Conc (ug/L): 18.6

Peak Area (A-s): 0.037
Background PK Area (A-s): 0.085
Blank Corrected PK Area (A-s): 0.031
Concentration (ug/L): 10.0

Peak Height (A): 0.046
Background PK Height (A): 0.027
Corrected Conc (ug/L): 20.1

Mean Conc (ug/L): 9.7
Corrected Conc (ug/L): 19.3

SD: 0.53
RSD(%): 5.5

96%

Sample ID: CCB

Sequence No.: 00020

Sampler Position: 37

Peak Area (A-s): 0.004
Background PK Area (A-s): 0.077
Blank Corrected PK Area (A-s): -0.002
Concentration (ug/L): -0.8

Peak Height (A): 0.011
Background PK Height (A): 0.026
Corrected Conc (ug/L): -1.6

Peak Area (A-s): 0.004
Background PK Area (A-s): 0.073
Blank Corrected PK Area (A-s): -0.002
Concentration (ug/L): -0.8

Peak Height (A): 0.010
Background PK Height (A): 0.024
Corrected Conc (ug/L): -1.6

Mean Conc (ug/L): -0.8
Corrected Conc (ug/L): -1.6

SD: 0.00
RSD(%): 0.2

RAW DATA

Data For: Mercury Case Number(s) 8129, 8158

Test Method 245.1 Analyst CS Date 10-6-87

Analyst Comments

Mercury Stock prep.

5mls of 1000ppm mercury reference soln
diluted to 500mls w/ DIW. & preserved
w/ HNO₃.

Working soln:

5mls of mercury stock soln diluted to
500mls w/ DIW & preserved w/ HNO₃.

All solns prepared 10-2-87

WP 283 = 3.0ppb

Chris A Southworth

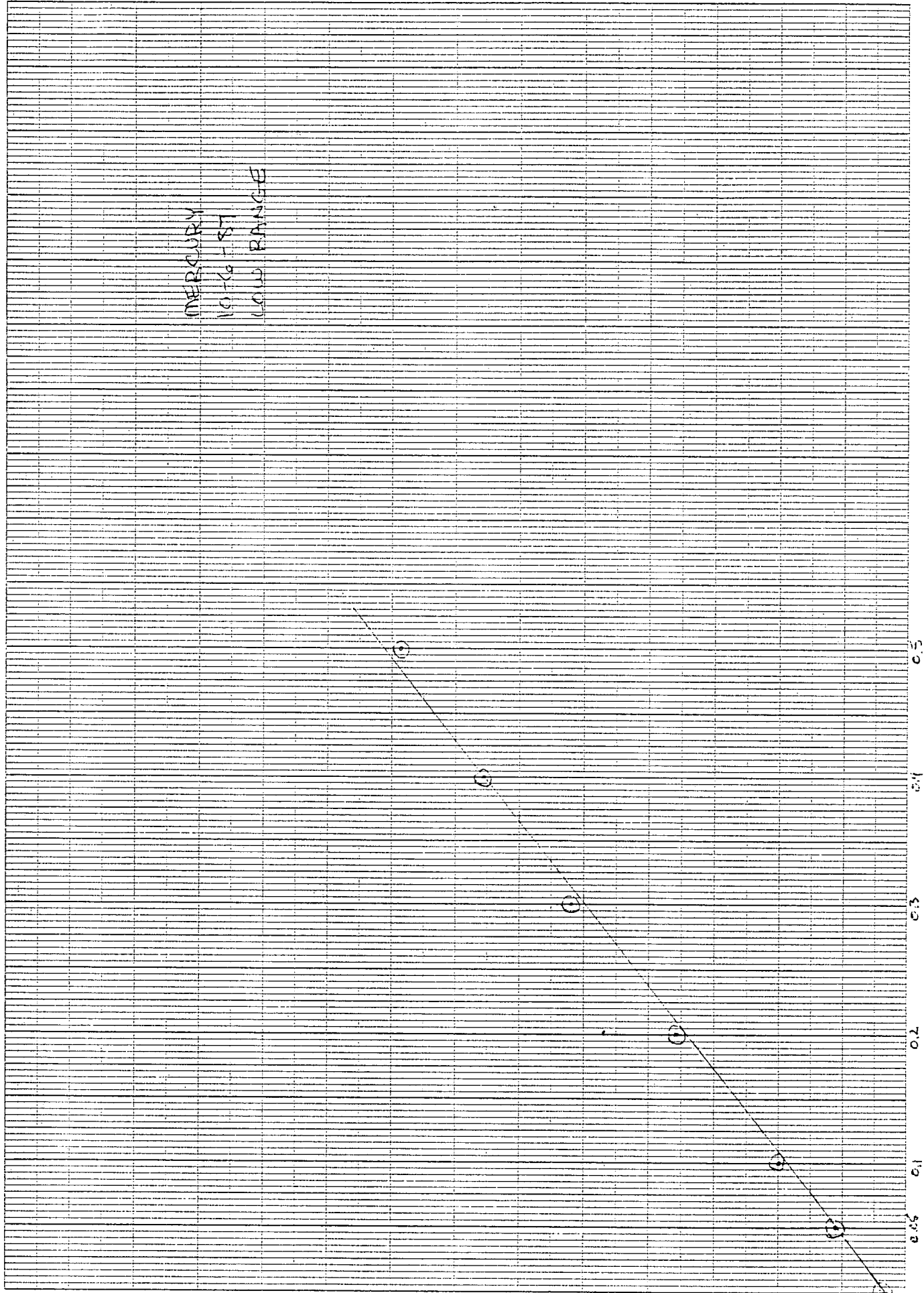
ANALYST BTDATE 10-6-87

Hg RUNS - SOIL

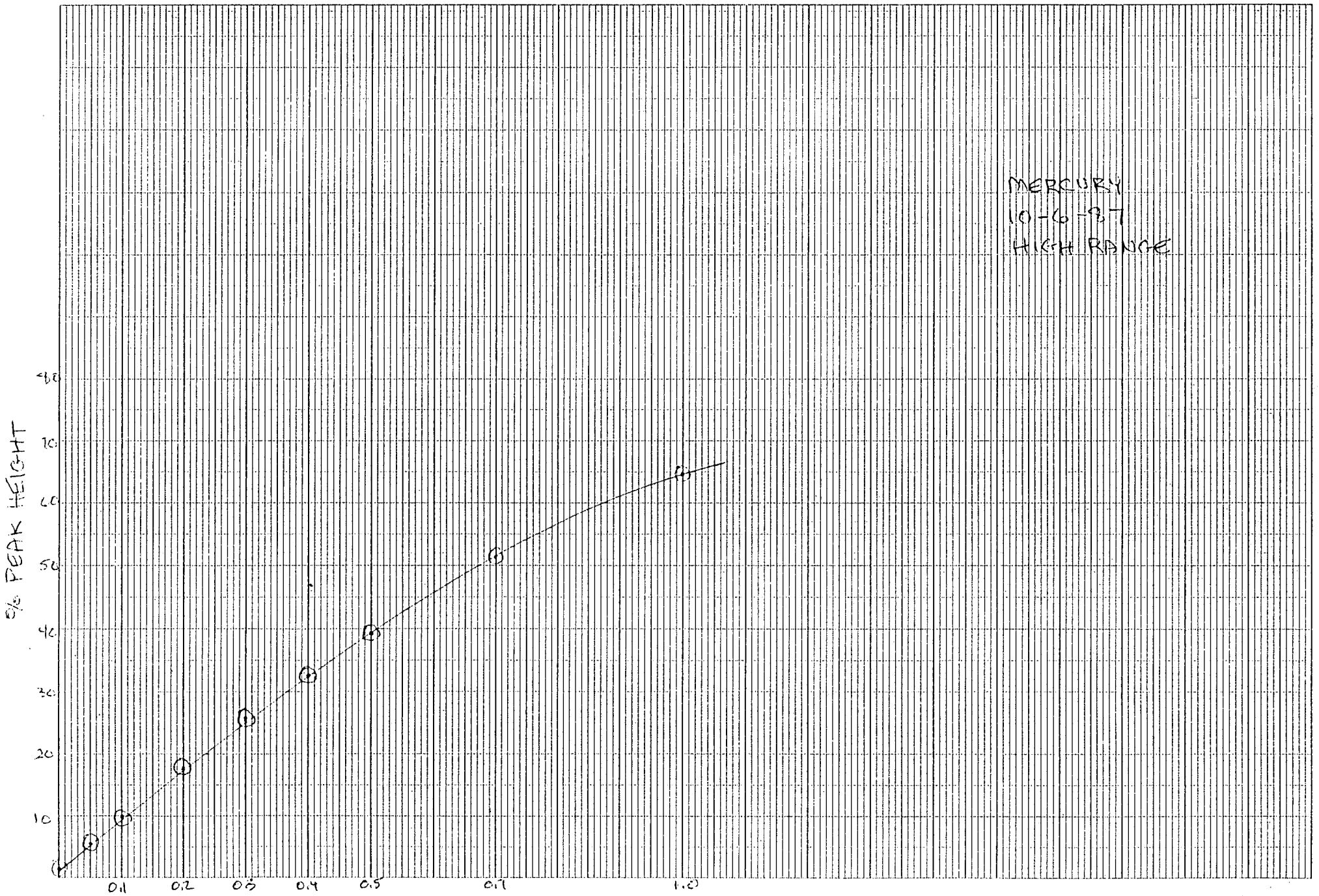
EPA Case No. 812918158

CAS #	EPA #	Chart Reading	ug	Weight (g)	Conc. (ug/g) Wet	% Solids	Conc. (ug/g) Dry
BLK		1.8					
0.05		5.5					
0.1		10.0					
0.2		17.9					
0.3		26.0					
0.4		32.7					
0.5		39.2					
0.7		51.4					
1.0		64.9					
0.02		4.0					
ICV WP	283-2	25.1	0.304	0.1002	3.0	100%	
0129 LC'S WP	283-2	25.7	0.312	0.1002	3.1	103%	
0.2 CCV	INITIAL	18.7	0.222	0.1002	2.2	110%	
C-BLK	CCB PREP INITIAL	1.8	<0.02	0.1002	0.2u		
67117	MAF 427	12.1	0.137	0.3736	0.3667	0.779	0.47
67117 dup	MAF 427	7.8	0.082	0.2458	0.3336	0.779	0.43 9%
67117 SPK	MAF 427	16.0	0.188	0.2369	0.7935	0.779	1.02 102%
67118	MAF 428	7.0	0.071	0.2826	0.2512	0.789	0.32
67119	MAF 429	6.9	0.070	0.3106	0.2253	0.814	0.28
67120	MAF 430	2.7	<0.02	0.2817	0.0709	0.891	0.08u
67145	MGC 357	1.8	<0.02	0.1002	0.2u		
67145 dup	MGC 357	1.9	<0.02	0.1002	0.2u	NC	
SPK added (MAF 427)			0.100	0.2369	0.4221	0.779	0.54

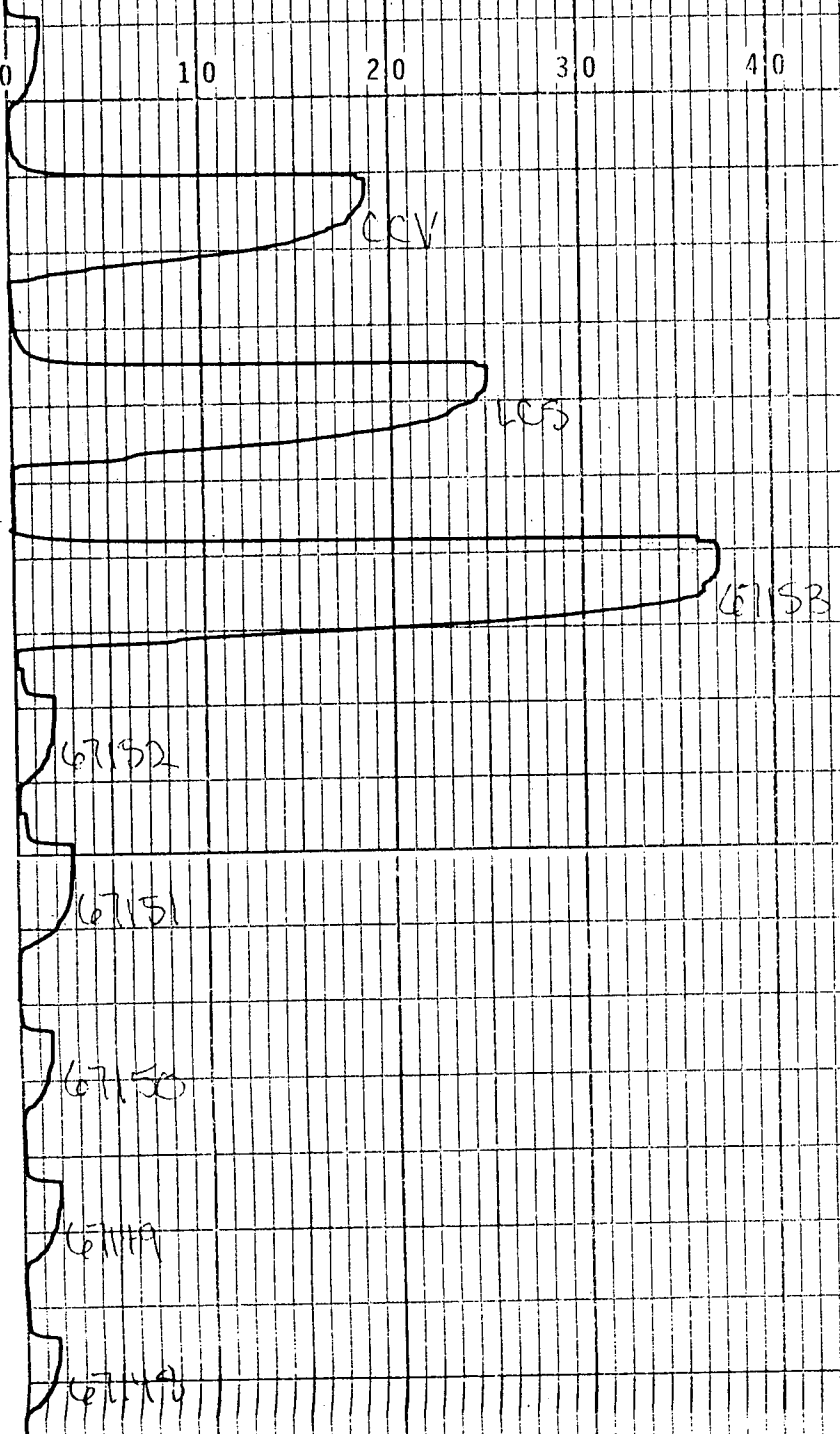
MERCURY
19-6-87
LOW RANGE



uoy

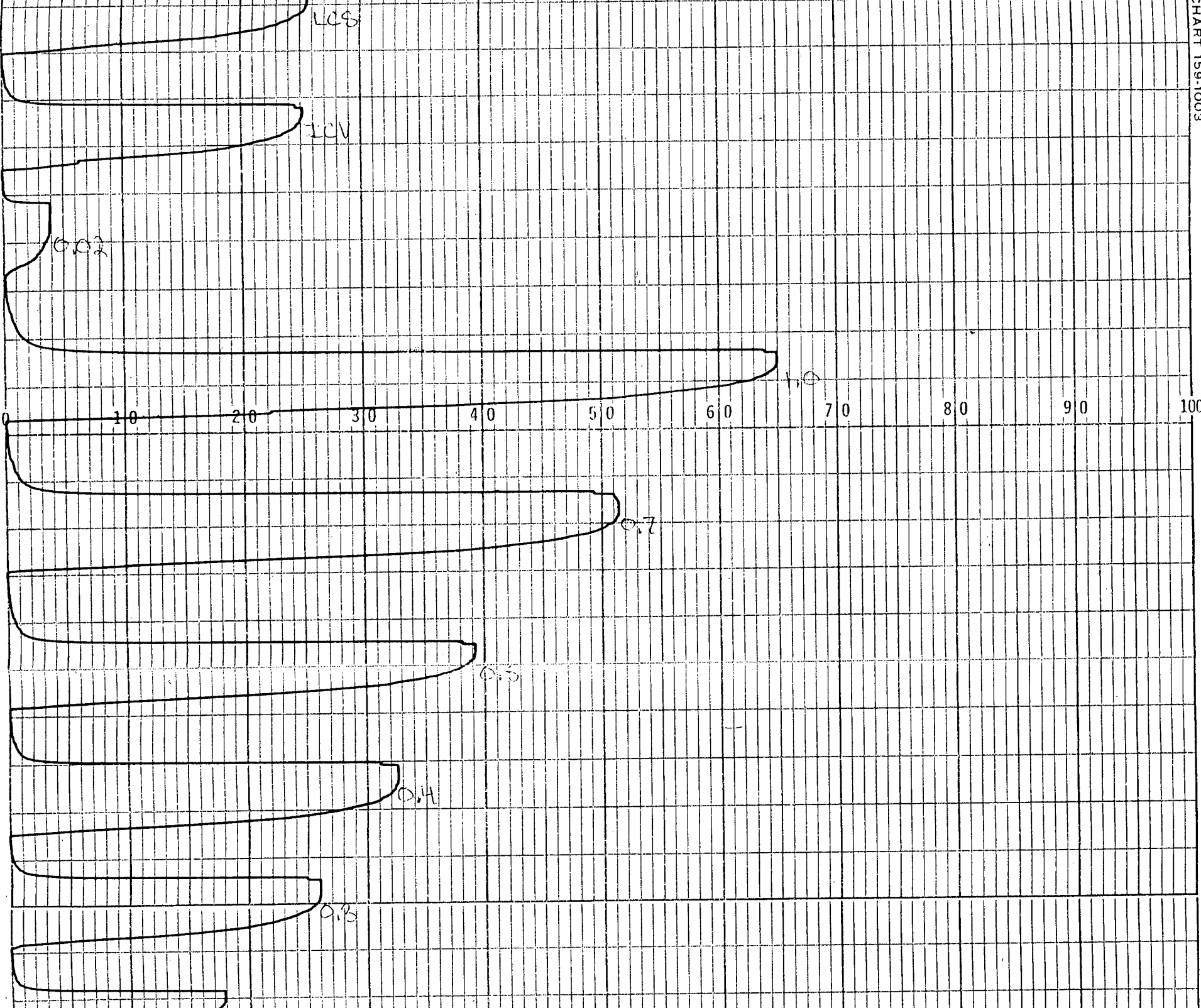


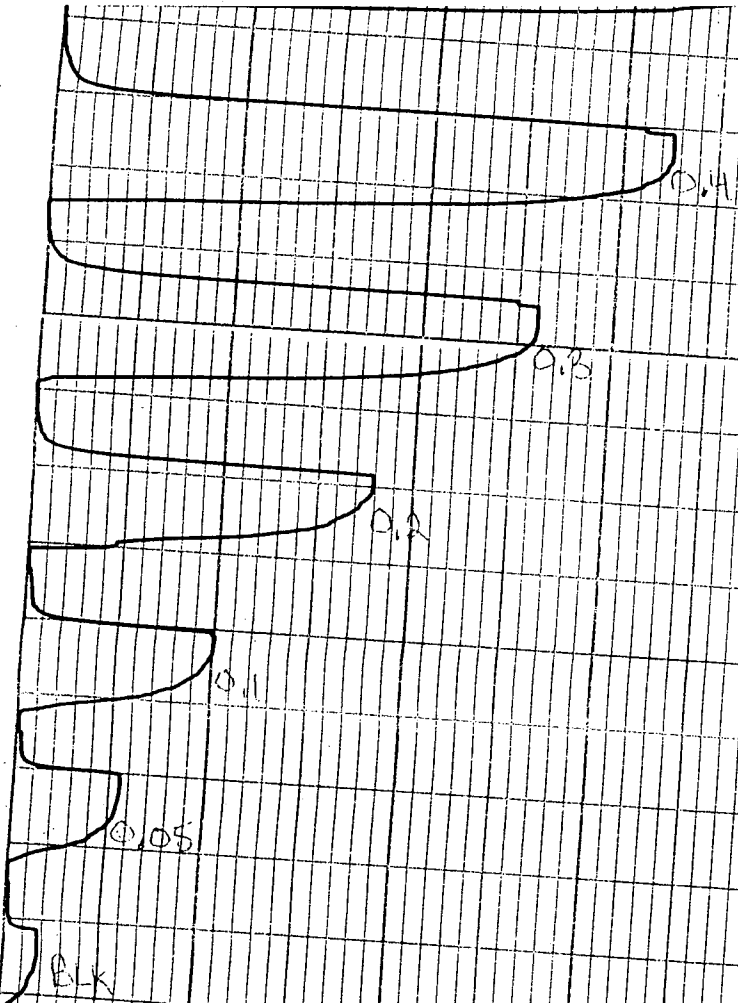
0 10 20 30 40 50 60 70 80 90 100



PERKIN-ELMER







MERCURY ANALYSIS 10-6-87

NUS Corporation
Data Review Worksheets

Project Name Silresim
TDD No. _____
Reference No. _____

REGIONAL REVIEW OF INORGANIC
CONTRACT LABORATORY DATA PACKAGE

The hardcopied (laboratory name) Centec data package received at Region I has been reviewed and the quality assurance and performance data summarized. The data reviewed included:

Case No. 8129 SAS No. _____ Sampling Date: 9-24-87
No. of samples 4 Matrix _____ Shipping Date: 9-24-87
Date Received By Lab: 9-25-87

Traffic Report Nos: MAF 427 - MAF 430

Blank No.: _____
Duplicate Nos.: MAF 428 / MAF 429

Contract No. _____ requires that specific analytical work be done and that associated reports be provided by the contractor to the Regions, EMSL-LV, and SMO. The general criteria used to determine the performance were based on an examination of:

- Holding times
- Calibration Verification
- Field and Lab Blank Analysis
- Interference QC Results
- Matrix Spike Percent Recovery Results
- Laboratory Precision Evaluation
- Field Precision Evaluation
- Lab Control Sample Results
- Detection Limit Results
- Standard Addition Results
- Serial Dilution Results

Overall Comments: Following CCS, Lead values were corrected and these corrected values are used for the validation (Samples MAF427, MAF430).
Pages not numbered

Definition of Qualifiers:

- A - Acceptable data.
- JB - Approximate data due to blank contamination.
- J - Approximate data due to other quality control criteria.
- R - Reject data due to quality control review.
- ND - Non-detected element.
- + - Positive element identification.

Reviewer: Karen Stone Date: January 20, 1988

HSL Inorganic Results

Values reported in PPB unless otherwise stated for aqueous samples
 Values reported in PPM unless otherwise stated for soil samples.

Sample Locations		Instrument							
Sample Number		Detection							
Traffic Report Number		Limits	67117	67118	67119	67120			
			MAF 427	MAF 428	MAF 429	MAF 430			
		Furnace IDL 5000/5100							
Aluminum	P	52	4710 *	9400 *	8250 *	4990*			
Antimony	PF	53	26 U	33 U	26 U	28 U			
Arsenic	F	3/4	9.9	16	13	[2.2]			
Barium	P	2	[427]	[102]	102	[24]			
Beryllium	P	1	0.5 U	[0.6]	[0.5]	0.5 U			
Cadmium	P	3	4.0	8.8	9.3	3.7			
Calcium	P	59	[1990]	4030	3100	[1360]			
Chromium	PF	9	26	54	61	7.4			
Cobalt	P	23	11 U	[18]	[16]	12 U			
Copper	P	7	53	99	122	68			
Iron	P	45	46100	83100	84900	6610			
Lead	F	4/2	273	187	207	161			
Magnesium	P	95	3440	5180	5380	[1860]			
Manganese	P	2	251	643	727	91			
Mercury	CV	0.2	0.47	0.32	0.28	0.1 U			
Nickel	P	20	32	47	47	11 U			
Potassium	P	738	[909]	[2180]	[2180]	[1170]			
Selenium	F	3/4	1.8 U R	2.4 U R	2.3 U R	2.1 U			
Silver	F	7	3.5 U	4.4 U	3.4 U	3.7 U			
Sodium	P	87	[76]	[245]	[237]	[74]			
Thallium	F	2/6	0.9 U	1.2 U	1.2 U	1.0 U			
Vanadium	P	15	7.5 U	[16]	[17]	8.0 U			
Zinc	P	11	175	515	267	47			
Other:									
% solids			77.9	78.9	81.4	89.1			
Matrix (s-soil a-aqueous)		A	S						

Lab Quality Control Qualifiers:

Factor: 0.498 0.632 0.487 0.531

Analytical Method:

- F - Furnace
- P - ICP/Flame AA
- CV - Cold Vapor

Calculating Sample Detection Limits for Soil Samples (mg/kg)

$$\frac{IDL(\mu\text{g/L})}{\% \text{solids}} \times \frac{V(\text{ml})}{W(\text{gms})} \times \frac{1\text{L}}{1,000\text{ml}} \times \frac{1,000\text{gm}}{1\text{kg}} \times \frac{1\text{mg}}{1,000\mu\text{g}}$$

- V = Volume in milliliters which sample is diluted up to. Samples were diluted to 500 milliliters after digestion.
- W = Wet weight in grams of sample digested. ___ grams of each sample was digested.
- IDL = Instrument detection limit.

NUS Quality Control Qualifiers:

- A - Acceptable data
- JB - Approximate data due to blank contamination.
- R - Reject data due to quality control review.
- ND - Not Detected.
- NA - Not Analyzed.

Case No.: 8129
 Laboratory: Centec Analytical
 Site: Silresim

NUS Corporation
Data Review Worksheets

I. Holding Times

Date samples received: 9-25-87
Date analyzed (Hg): 10-6-87
Date analyzed (all others) by: 10-6-87

Action:

If samples are analyzed for mercury (28 days), cyanide (14 days) or any other element (6 months) in excess of the holding times, approximate results for that element. If mercury or cyanide are held for over one month in excess of the contract required holding time, reject results.

Remarks: All within holding times.

II. Initial and Continuing Calibration Verification

Calibrations were performed every ten samples, and met contractual criteria.
 Calibrations were not performed every ten samples and/or did not meet contract-specified windows: (specify) _____

Action Windows:

	<u>Accept</u>	<u>Approximate</u>	<u>Reject</u>
mercury	80-120 for +/-ND <u>>121</u> for ND	50-79 for +/-ND 121-150 for +	<50 or >150 for +/-ND
all others	90-110 for +/-ND <u>>111</u> for ND	50-89 for +/-ND 111-150 for +	<50 or >150 for +/-ND

NOTE:

+ - positive values
ND - non-detected elements

Remarks: _____

See attached

III. Blank Analysis Results

<u>Contaminants</u>	<u>Initial Calibration Blank Value</u>	<u>Cont. Calib. Blank</u>		<u>Preparation Blank</u>		<u>Field Blank #:</u> _____	<u>Action</u>
		<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>		
Aluminum							
Antimony							
Arsenic							
Barium							
Beryllium							
Cadmium							
Calcium							
Chromium							
Cobalt							
Copper							
Iron							
Lead							
Magnesium							
Manganese							
Mercury							
Nickel							
Potassium							
Selenium							
Silver							
Sodium							
Thallium							
Vanadium							
Zinc							
Other:							

Note: Contamination detected above IDLs should be evaluated and qualified.

Action levels are determined by multiplying the highest concentration of contamination determined in any field or laboratory blank by five. The action level for samples which have been concentrated or diluted should be multiplied by the concentration/dilution factor.

All results less than 5x action level should be considered highly suspect and reported as "JB". No action should be taken on the blank value itself.

0003
0006A (Fe, Ag)

Form III - A

Q. C. Report No. 205

BLANKS

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration				Preparation Blank ¹ 1 mg/kg 2
		Blank Value	1	2	3	
Metals:						
1. Aluminum	52u	52u	52u	52u	52u	26u
2. Antimony	53u	53u	53u	53u	53u	26u
0003B 3. Arsenic	3u	3u	3u			1.5u
4. Barium	2u	2u	2u	2u	2u	1.0u
5. Beryllium	1u	1u	1u	1u	1u	0.5u
6. Cadmium	[4]	3u	[4]	3u	3u	[1.5]
7. Calcium	59u	59u	59u	59u	59u	30u
8. Chromium	9u	9u	9u	9u	9u	4.5u
9. Cobalt	23u	23u	23u	23u	23u	12u
10. Copper	7u	7u	7u	7u	7u	3.5u
11. Iron	45u	45u	45u	45u	45u	22u
0003C 12. Lead	2u	2u	2u			1.0u
13. Magnesium	95u	95u	95u	95u	95u	48u
14. Manganese	2u	2u	2u	2u	2u	1.0u
15. Mercury	0.2u	0.2u	0.2u			0.1u
16. Nickel	20u	20u	20u	20u	20u	10u
17. Potassium	738u	738u	[944]	[1340]	[1010]	369u
0003D 18. Selenium	4u	4u				2.0u
19. Silver	7u	7u	7u	7u	7u	3.5u
20. Sodium	87u	87u	87u	87u	87u	44u
0005A 21. Thallium	2u	2u	2u			1.0u
22. Tin	32u	32u	32u	32u	32u	16u
23. Vanadium	15u	15u	15u	15u	15u	7.5u
24. Zinc	11u	11u	11u	11u	11u	5.5u
Other:						
Cyanide						

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

Form III -B

 Q. C. Report No. 205

BLANKS

 LAB NAME CAS

 CASE NO. 8129

 DATE 10/9/87

 UNITS ug/L

 Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value				Preparation Blank ¹	
		1	2	3	4	1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
0005B 12. Lead	<u>2u</u>	<u>2u</u>	<u>2u</u>				
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
0006B 18. Selenium	<u>4u</u>	<u>4u</u>					
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

Form III-C

 Q. C. Report No. 205

BLANKS

 LAB NAME CAS

 CASE NO. 8139

 DATE 10/9/87

 UNITS ug/L

 Matrix Soil

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration				Preparation Blank ¹	
		Blank Value				1	2
		1	2	3	4		
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
OCOSC 12. Lead	<i>Lu</i>	<i>Lu</i>					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

¹ Reporting Units: aqueous, ug/l; solid, mg/kg

IV. ICP Interference Check Sample Analysis

The ICP interference check sample analysis is performed to verify the contract laboratories interelement and background correction factors.



Interference QC samples were run before and after every 10 samples and were within the control limits specified in the Inorganic DV SOW.



Interference QC samples were run, but did not meet the control limits.

In general, the sample data can be accepted without qualification if the concentrations of Al, Ca, Fe and Mg are less than 50% of the ICS concentrations.

Further evaluation of data not meeting the interference check sample control limits is beyond the scope of work for a level I data validation. Refer to Inorganics DV SOW for level II DV guidelines.

Note: The 20% contract limit is based on the true value for EPA standards, and on the mean value (run at least five times) for non-EPA standards.

Remarks:

Frequency not $\geq 10\%$. ICS run at
start of run, then 19 samples, then final ICS. Sample
data are accepted because concentrations of Al, Ca, Fe, Mg are
less than 50% of ICS concentrations.

See attached

V. Matrix Spike Results

Sample #: MAF427

Sample #: _____

Compound	SSR	SR	S	%R	Action	SSR	SR	R	%R	Action
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	168	255	24.4	357	No action because sample conc. > 4x spike conc.					
Magnesium										
Manganese										
Mercury										
Nickel										
Potassium										
Selenium	6.5	1.80	4.9	133	Accept (per DV guidelines)					
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										
Other:										

Calculation: $\% = \frac{SSR - SR}{S} \times 100$

Accept

SSR (75-125%)

Approximate

SR(+) + SSR < 30%¹

SR(+,ND) + SSR (30-74%)³

SR(+) + SSR > 125%⁴

Reject

SR(ND) + SSR < 30%²

If the sample concentration exceeds the spike concentration by a factor of 4 or more, no action is taken.

NOTE:

- S - amount of spike
- SSR - spiked sample result
- SR - unspiked sample results
- %R - percent recovery
- ND - non-detected elements
- +

- 1 - Discuss in review that sample results could be biased significantly low and that the reported concentration is the minimum concentration at which the analyte is present.
- 2 - Indicate in review memo of the possibility of false negatives, detection limits are elevated over what is reported, and that severe analytical deficiencies exist.
- 3 - Determine percent bias of results and detection limits. Report that the detection limit may be biased low.
- 4 - Determine percent bias of sample results; false positive results may potentially exist.

Q. C. Report No. 205

MAF427/67117 Mercury Spike

NR Cyanide Spike

SPIKE SAMPLE RECOVERY

MAF427/67117 Furnace Spike

LAB NAME CAS

CASE NO. 8129

DATE 10/9/87

EPA Sample No. MAF427

Lab Sample ID No. 67117

Units mg/kg

Matrix Soil

Compound	Control Limit ZR	Soiked Sample Result: (SSR)	Sample Result: (SR)	Soiked Added (SA)	ZR ¹
Metals:					
1. Aluminum	75-125		4710		NR
2. Antimony	-	250	260	298	84
3. Arsenic	-	27.7	9.9	19.6	91
4. Barium	-	1330	[42]	1190	108
5. Beryllium	-	32	0.50	30	107
6. Cadmium	-	33	4.0	30	97
7. Calcium	-		[1990]		NR
8. Chromium	-	156	26	119	109
9. Cobalt	-	330	110	298	111
10. Copper	-	228	53	149	117
11. Iron	-		46100		NR
12. Lead	-	168	25.5	24.4	-357**
13. Magnesium	-		3440		NR
14. Manganese	-	549	251	298	100
15. Mercury	-	1.02	0.47	0.54	102
16. Nickel	-	338	32	298	103
17. Potassium	-		[909]		NR
18. Selenium	-	6.5	1.80	4.9	133 R
19. Silver	-	29	3.50	30	97
20. Sodium	-		[76]		NR
21. Thallium	-	21.5	0.90	24.4	88
22. Vanadium	-	334	7.50	298	112
23. Zinc	-	533	175	298	120
Other: Tin		344	160	298	115
Cyanide	-				

¹ ZR = ((SSR - SR) / SA) x 100

** Sample conc 4x > spike added

*R out of control

NR - Not required

Comments:

NUS Corporation
Data Review Worksheets

VI. Laboratory Precision Evaluation

See attached

<u>Element</u>	<u>CRDL</u>	<u>Sample #:</u> <u>MAF 427</u>	<u>Duplicate Sample #:</u> <u>MAF 427</u>	<u>RPD</u>	<u>Action</u>
Aluminum	200	4710	6530	32	Accept; < 35% RPD for soils
Antimony	60				
Arsenic	10				
Barium	200				
Beryllium	5				
Cadmium	5				
Calcium	5000				
Chromium	10				
Cobalt	50				
Copper	25				
Iron	100				
Lead	5				
Magnesium	5000				
Manganese	15				
Mercury	0.2				
Nickel	40				
Potassium	5000				
Selenium	5				
Silver	10				
Sodium	5000				
Thallium	10				
Vanadium	50				
Zinc	20				
Other:					

Laboratory Duplicate Actions should be applied to all other samples of the same matrix type.

Actions:

For aqueous samples, 'J' results for elements which have an RPD \geq 20%.
For soil samples, 'J' results for elements which have an RPD \geq 35%. If sample results are less than 5x the CRDL, then action limits are + CRDL. For sample results less than the CRDL, the RPD is not calculated (NC).

Calculation:
$$RPD = \frac{A - B}{(A + B)/2} \times 100$$

NOTE:

- CRDL - Contract Required Detection Limit.
- RPD - Relative Percent Difference.
- A - Sample Result.
- B - Duplicate Sample Result.

Q. C. Report No. 205

MAF427/67117 MERCURY DUP

NR CYANIDE DUP

DUPLICATES

MAF427/67117 FURNACE DUP

LAB NAME CAS

CASE NO. 8129

EPA Sample No. MAF427

DATE 10/9/87

Lab Sample ID No. 67117

Units MG/KG

Matrix SOIL

Compound	Control Limit ¹	Sample(S)	Duplicate(D)	RPD ²
Metals:				
1. Aluminum		4710	6530	32 *
2. Antimony		26u	30u	NC
3. Arsenic		9.9	9.3	6
4. Barium		[42]	[45]	NC
5. Beryllium		0.5u	0.6u	NC
6. Cadmium		4.0	4.0	0
7. Calcium		[1990]	[2150]	NC
8. Chromium		26	22	17
9. Cobalt		11u	13u	NC
10. Copper		53	59	11
11. Iron		46100	39700	15
12. Lead		255	213	18
13. Magnesium		3440	4000	15
14. Manganese		251	220	13
15. Mercury		0.47	0.43	9
16. Nickel		32	34	6
17. Potassium		[909]	[1390]	NC
18. Selenium		1.8u	2.4u	NC
19. Silver		3.5u	4.0u	NC
20. Sodium		[76]	[127]	NC
21. Thallium		0.9u	1.2u	NC
22. Vanadium		7.5u	[14]	NC
23. Zinc		175	161	8
Other: Tin		16u	18u	NC
Cyanide				

* Out of Control

¹ To be added at a later date.

$$2 \text{ RPD} = \left[\frac{|S - D|}{((S + D)/2)} \right] \times 100$$

NC - Non calculable RPD due to value(s) less than CRDL

VIII. Laboratory Control Sample

- Laboratory Control analysis was performed and met contractual criteria.
- Laboratory Control analysis was performed, but did not meet the criteria for the following elements: _____

Actions:

	<u>Accept</u>	<u>Approximate</u>	<u>Reject</u>
% Recovery	80-120 for ND/+ >120 for ND	30-79 for +/-ND >120% for + <30% for +	<30 for ND

NOTE:

- + - positive results
ND - not detected elements

Note: An aqueous LCS mercury sample is not required of the laboratory.

IX. Detection Limit Results

- Instrument detection limit results were present and found to be less than the Contract Required Detection Limits.
- Detection limit results were not included in the data package.
- Detection limits were present, but the criteria was not met for the following elements:

Action:

Adjust sample detection limits for elements not meeting contractual criteria listed above. Elements detected below the adjusted detection limit should be rejected (R'd).

Calculating detection limits for soil samples:
Sample detection limit (mg/kg) =

$$\frac{\text{IDL (ug/l)}}{\% \text{ solids}} \times \frac{\text{Volume diluted to (ml)}}{\text{wet weight digested (gms)}} \times \frac{\text{1L}}{\text{1,000 ml}} \times \frac{\text{1,000 gm}}{\text{1 kg}} \times \frac{\text{1 mg}}{\text{1,000 ug}}$$

NUS Corporation
Data Review Worksheets

X. Standard Additions/Furnace Atomic Absorption Analysis

Duplicate injections and one-point analytical spikes were performed for all samples; duplicate injections were within $\pm 20\%$.

Duplicate injections and/or spikes were not performed for the following samples/elements: _____

Duplicate injections did not agree within $\pm 20\%$ for samples: _____
(J sample results)

Spike recoveries met the 85-115% recovery criteria for all samples.

Spike recoveries did not meet the 85-115% recovery criteria.
Actions should be taken as follows:

	<u>Spike Recov.</u> <u>85-115%</u>	<u>Spike Recov.</u> <u><85 or >115%</u>	<u>Spike Recov.</u> <u><10%</u>
Sample conc. > 50% of spike value	Accept	use MSA	Reject

If the spike recovery is less than 40% and the laboratory has not re-analyzed the sample, approximate (J) the data for that sample.

Method of Standard Addition (MSA) was not performed as required for sample #: _____
(J Data)

MSA was used to quantitate analytical results when contractually required.

Correlation coefficients > 0.995 (accept results)
 Correlation coefficients < 0.995 for samples numbers: _____

(J Data)

Comments: MSA performed as required for Pb MAF427, MAF430

XI. Serial Dilution Results/Inductively Coupled Plasma (ICP) Analysis

Serial dilution analysis enables the reviewer to evaluate whether significant physical or chemical interferences exist due to sample matrix for samples analyzed by ICP. Sample results for elements analyzed and quantitated by Furnace Atomic Absorption should not be evaluated.

See Attached

Serial Dilutions were performed for each matrix and results of the diluted sample analysis agreed within ten percent of the original undiluted analysis.

Serial Dilutions were not performed for the following:

Serial Dilutions were performed, but analytical results did not agree within 10% for analyte concentrations greater than 10x the IDL after dilution.

<u>Element</u>	<u>IDL</u>	<u>IDL x 10</u>	<u>Sample #:</u>	<u>Serial Diluted Sample</u>	<u>Actions</u>
Aluminum	50	500 520			
Barium	50	20			
Beryllium		10			
Cadmium		30			
Calcium		590			
Cobalt		230			
Copper		70			
Iron		450			
Magnesium		950			
Manganese		20			
Nickel		200			
Potassium		738			
Sodium		870			
Vanadium		150			
Zinc		110			

Other:

Actions: All data for samples of the same matrix for that element should be approximated (J) when the serial dilution results do not meet contractual requirements.

Note: Form IX says diluted sample conc. corrected for 1:4 dilution but results indicate dilution was 1:5

Form IX

Q. C. Report No. 205

ICP SERIAL DILUTIONS

LAB NAME CASCASE NO. 8129DATE 10/9/87EPA Sample No. MAF427Lab Sample ID No. 67117

Units: ug/L

Matrix SOIL

Compound	Initial Sample Concentration(I)	Serial Dilution ¹ Result(S)	% Difference ²
Metals:			
1. Aluminum	9470	8820	7
2. Antimony	53u	53u	NR
3. Arsenic			NA
4. Barium	[84]	80	5
5. Beryllium	1u	1u	NR
6. Cadmium	8	25	NR
7. Calcium	[4010]	3700	6
8. Chromium	52	9u	NR
9. Cobalt	23u	23u	NR
10. Copper	107	110	3
11. Iron	92600	88200	5
12. Lead			NA
13. Magnesium	6910	6750	2
14. Manganese	505	485	4
15. Nickel	64	20u	NR
16. Potassium	[1830]	3980	NR
17. Selenium			NA
18. Silver	7u	7u	NR
19. Sodium	[153]	87u	NR
20. Thallium			NA
21. Vanadium	15u	15u	NR
22. Zinc	351	390 *	11
Other: <u>TIN</u>	32u	32u	NR

¹ Diluted sample concentration corrected for 1:4 dilution (see Exhibit D)² Percent Difference = $\frac{|I - S|}{I} \times 100$

NR - Not Required, initial sample concentration less than 10 times IDL

NA - Not Applicable, analyte not determined by ICP

* = SOC < 10X IDL

XII. Calculations

For soil samples, the following equation may be necessary to convert raw data values (usually reported in ug/l) to actual sample concentrations (mg/kg):

If the lab uses 1 gm sample (wet weight) to 500 milliliters:

sample results (mg/kg) =
wet weight

$$\text{Digest result } \frac{\text{ug}}{\text{L}} \times \frac{500 \text{ ml}}{1 \text{ gm}} \times \frac{1 \text{ L}}{1,000 \text{ ml}} \times \frac{1,000 \text{ gm}}{1 \text{ kg}} \times \frac{1 \text{ mg}}{1,000 \text{ ug}}$$

In addition, the results are converted to dry weight using the percent solids calculation:

$$\frac{\text{wet weight}}{\% \text{ solids}} \times 100 = \text{final concentration, dry weight}$$

Calc. Check

Sample 427

AR

$$\frac{9466 \text{ ug/l}}{0.779} \times \frac{500 \text{ ml}}{1.2882} \times \frac{1 \text{ L}}{1000 \text{ ml}} \times \frac{1000 \text{ g}}{1 \text{ kg}} \times \frac{1 \text{ mg}}{1000 \text{ ug}} = 4716 \text{ mg/kg}$$

S. L. Vesim
CDM

COVER SHEET

LABORATORY RESPONSE TO RESULTS OF
CONTRACT COMPLIANCE SCREENING (CCS)

Response To: (check one) Organics CCS
 Inorganics CCS

Response materials sent to Organics CCS should be sent to the attention of Doris Ling, SMO.
Response materials sent to Inorganics CCS should be sent to the attention of Sa'ad Masri, SMO.

Laboratory Name	<u>CENTEC</u>	Response Date	<u>11-3-87</u>
EPA Contract No.	<u>68-01-7057</u>	Date Screening Results Received at Laboratory	<u>11-2-87</u>
Case No.	<u>8129</u>		
Sample Nos.*	<u>MAF427</u>		
	<u>MAF430</u>		

*Only list sample numbers that require reconciliation.

This form is used to identify materials sent in response to results of Contract Compliance Screening (CCS). A separate form must accompany the response for each Case.

Please indicate (on the attached continuation form) which fractions and/or which criteria correspond with your resubmission. Response materials sent to CCS should also be copied to the Region and to EMSL/LV, each with this blue Cover Sheet.

Form I A

 U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 818 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

 EPA Sample No.
MAF 427

 Date 10/9/87

INORGANIC ANALYSIS DATA SHEET

 LAB NAME CAS
 SOW NO. 784
 LAB SAMPLE ID. NO. 67117

 CASE NO. 8129
 Lab Receipt Date 9-25-87
 QC REPORT NO. 205

Elements Identified and Measured

 Concentration: Low Medium
 Matrix: Water Soil Sludge Other

 ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>4710 *</u>	P	13. Magnesium	<u>3440</u>	P
2. Antimony	<u>26u</u>	P	14. Manganese	<u>251</u>	P
3. Arsenic	<u>9.9</u>	F	15. Mercury	<u>0.47</u>	CV
4. Barium	<u>[42]</u>	P	16. Nickel	<u>32</u>	P
5. Beryllium	<u>0.5u</u>	P	17. Potassium	<u>[909]</u>	P
6. Cadmium	<u>4.0</u>	P	18. Selenium	<u>1.8u R</u>	F
7. Calcium	<u>[1990]</u>	P	19. Silver	<u>3.5u</u>	P
8. Chromium	<u>26</u>	P	20. Sodium	<u>[76]</u>	P
9. Cobalt	<u>11u</u>	P	21. Thallium	<u>0.9u</u>	F
10. Copper	<u>53</u>	P	22. Tin	<u>16u</u>	P
11. Iron	<u>46100</u>	P	23. Vanadium	<u>7.5u</u>	P
12. Lead	<u>S 273</u>	F	24. Zinc	<u>175</u>	P
Cyanide	<u>N/R</u>		Percent Solids (%)	<u>77.9</u>	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

 Comments: Dry Weight Factors (for conversion to mg/kg) P=0.498
F=0.458
Sample description: Brown, medium
 Lab Manager J. Williams

Form I **D**

 U.S. EPA Contract Laboratory Program
 Sample Management Office
 P.O. Box 318 - Alexandria, VA 22313
 703/557-2490 FTS: 8-557-2490

EPA Sample No.

MAF 430

 Date **10/9/87**

INORGANIC ANALYSIS DATA SHEET

 LAB NAME **CAS**
 SOW NO. **784**
 LAB SAMPLE ID. NO. **67120**

 CASE NO. **8129**
 Lab Receipt Date **9-25-87**
 QC REPORT NO. **205**

Elements Identified and Measured

 Concentration: Low Medium
 Matrix: Water Soil Sludge Other

 ug/L or mg/kg dry weight (Circle One)

1. Aluminum	4990 *	P 13. Magnesium	[1860]	P
2. Antimony	28u	P 14. Manganese	91	P
3. Arsenic	[2.2]	F 15. Mercury	0.11u	CV
4. Barium	[24]	P 16. Nickel	11u	P
5. Beryllium	0.5u	P 17. Potassium	[1170]	P
6. Cadmium	3.7	P 18. Selenium	2.1u R	F
7. Calcium	[1360]	P 19. Silver	3.7u	P
8. Chromium	7.4	P 20. Sodium	[74]	P
9. Cobalt	12u	P 21. Thallium	1.0u	F
10. Copper	68	P 22. Tin	17u	P
11. Iron	6610	P 23. Vanadium	8.0u	P
12. Lead S	161	F 24. Zinc	47	P
Cyanide	N/R	Percent Solids (%)	89.1	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

 Comments: Dry Weight Factors (for conversion to mg/kg) P=0.531
F=0.520

 Sample description: Soil, Fine
 Lab Manager [Signature]

Pb: OCCC SF8129 MSA'S SH

Element File: Pb-MSA
Date: 10/05/87
Data Storage File: A710051200
Technique: HGA

Element: Pb
Time: 12:03
ID/Weight File: MSA
Calibration Type: Nonlinear

Sample ID: Blank Sequence No.: 00001 Sampler Position: 0

Peak Area (A-s): 0.003 Peak Height (A): 0.008
Background PK Area (A-s): 0.006 Background PK Height (A): 0.010
Blank Corrected PK Area (A-s): 0.003

Auto-zero performed.

Sample ID: Standard 1 Sequence No.: 00002 Sampler Position: 38

Peak Area (A-s): 0.028 Peak Height (A): 0.052
Background PK Area (A-s): 0.018 Background PK Height (A): 0.028
Blank Corrected PK Area (A-s): 0.026

Standard number 1 applied. [5.0]

Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.042
Blank Corrected Pk Area (A-s): 0.035
Concentration (ug/L): 7.5 Corrected Conc (ug/L): 15.0

Sample ID: 10ppb Sequence No.: 00010 Sampler Position: 6

Peak Area (A-s): 0.056 Peak Height (A): 0.114
Background Pk Area (A-s): 0.031 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 11.8 Corrected Conc (ug/L): 23.7

Sample ID: 20ppb Sequence No.: 00011 Sampler Position: 8

Peak Area (A-s): 0.075 Peak Height (A): 0.153
Background Pk Area (A-s): 0.045 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): 0.072
Concentration (ug/L): 16.7 Corrected Conc (ug/L): 33.3

Sample ID: 30ppb $r = .999$ $b/a = 1.0 = .970$ Sequence No.: 00012 Sampler Position: 9

Peak Area (A-s): 0.095 $\sum = 13.9 + 14.9$ Peak Height (A): 0.186
Background Pk Area (A-s): 0.054 $y = 14.5$ Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 22.1 Corrected Conc (ug/L): 44.2

Sample ID: sample I.D. $67120/$ Sequence No.: 00013 Sampler Position: 4

Peak Area (A-s): 0.038 $MAF = 430 (x20)$ Peak Height (A): 0.075
Background Pk Area (A-s): 0.025 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.035
Concentration (ug/L): 7.6 Corrected Conc (ug/L): 15.2

Sample ID: 10ppb Sequence No.: 00014 Sampler Position: 6

Peak Area (A-s): 0.057 Peak Height (A): 0.105
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 12.1 Corrected Conc (ug/L): 24.2

Sample ID: 20ppb Sequence No.: 00015 Sampler Position: 8

Peak Area (A-s): 0.078 Peak Height (A): 0.150
Background Pk Area (A-s): 0.046 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.075
Concentration (ug/L): 17.4 Corrected Conc (ug/L): 34.7

Sample ID: 30ppb $r = 1.0$ $b/a = 1.0 = .966$ Sequence No.: 00016 Sampler Position: 9

Peak Area (A-s): 0.095 $\sum = 15.6 = 15.5383$ Peak Height (A): 0.182
Background Pk Area (A-s): 0.057 $y = 15.01$ Background Pk Height (A): 0.101
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 21.9 Corrected Conc (ug/L): 43.9

Sample ID: CCV

Sequence No.: 00017

Sampler Position: 3

Peak Area (A-s): 0.045

Peak Height (A): 0.079

Background PK Area (A-s): 0.029

Background PK Height (A): 0.044

Blank Corrected PK Area (A-s): 0.042

Concentration (ug/L): 9.3

Corrected Conc (ug/L): 18.6

93%

Sample ID: ICB

Sequence No.: 00018

Sampler Position: 2

Peak Area (A-s): 0.004

Peak Height (A): 0.009

Background PK Area (A-s): 0.007

Background PK Height (A): 0.010

Blank Corrected PK Area (A-s): 0.001

Concentration (ug/L): 0.3

Corrected Conc (ug/L): 0.5

Sivresim
ADM

U.S.E.P.A. - C.L.P.

PAGE : 1

SAMPLE MANAGEMENT OFFICE

INORGANICS
RESOLUTION OF CONTRACT COMPLIANCE SCREENING (CCS) RESULTS

LABORATORY NAME : CENTEC

CASE : 8129

RESPONSE RECEIPT DATE : 11/04/87

REGION : 1

QCNUM : 205

RECONCILIATION DATE : 11/06/87

RECONCILED BY : JD

ATTACHED ARE COPIES OF CCS SUMMARIES WHICH SHOW THE STATUS OF RELEVANT SAMPLES AFTER INCORPORATION OF LABORATORY RESPONSE TO SCREENING. PROBLEM CODES WHICH NO LONGER APPLY ARE MARKED WITH AN (X) CODE .

CRITERION	COMMENTS
C	THANK YOU FOR YOUR RESPONSE.

