CLP-77

021294

VERSAR

Case 2640/SAS 1065 C

MR2216-MR2236

021295

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

INORGANIC VALIDATION
#2 - II

DATE 05/29/84

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

LAB NAME: VERSAR, INC.

QC REPORT 9
CASE NO. 2640/SAS 10652
PROJECT NO.:854-9

SAMPLE NUMBERS

EPA NO.	LAB ID NO.	EPA NO.	LAB ID NO.
MR 2216	216	MR 2217	217
MR 2218	218	MR 2219	219
MR 2220	220	MR 2221	221
MR 2222	222	MR 2223	223
MR 2224	224	MR 2225	225
MR 2226	226	MR 2227	227
MR 2228	228	MR 2229	229
MR 2230	230	MR 2231	231
MR 2232	232	MR 2233	233
MR 2234	234	MR 2235	235
MR 2236	236	MR 2216	237
MR 2217	238	MR 2218	239
MR 2219	240	MR 2220	241
MR 2221	242	MR 2222	243
MR 2223	244	MR 2224	245
MR 2225	246	MR 2226	247
MR 2227	248	MR 2228	249
MR 2229	250	MR 2230	251
MR 2231	252	MR 2232	253
MR 2233	254	MR 2234	255
MR 2235	256	MR 2236	257
MR 2216	258	MR 2217	259
MR 2218	260	MR 2219	261
MR 2220	262	MR 2221	263
MR 2222	264	MR 2223	265
MR 2224	266	MR 2225	267
MR 2226	268	MR 2227	269

COMMENTS: BOD_5 reference standard data is not available due to an analyst error in preparation of the reference solution, otherwise control data for BOD_5 is in good order.

ICP INTERELEMENT AND BACKGROUND CORRECTION APPLIED? YES.

FOOTNOTES:

NR - NOT REQUIRED BY CONTRACT AT THIS TIME
C - BLANK CORRECTED
ND/B - NOT DETECTED DUE TO BLANK
< - INDICATES ELEMENT WAS ANALYZED FOR BUT NOT DETECTED. REPORT THE DETECTION LIMIT VALUE WITH THE < (E.G., <10)
- 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

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

DATE 05/29/84

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

LAB NAME: VERSAR, INC.

QC REPORT 9
CASE NO. 2640 / 1065C
PROJECT NO.:854-9

SAMPLE NUMBERS

EPA NO.	LAB ID NO.	EPA NO.	LAB ID NO.
MR 2228	270	MR 2229	271
MR 2230	272	MR 2231	273
MR 2232	274	MR 2233	275
MR 2234	276	MR 2235	277
MR 2236	278	MR 2216	279
MR 2217	280	MR 2218	281
MR 2219	282	MR 2220	283
MR 2221	284	MR 2222	285
MR 2223	286	MR 2224	287
MR 2225	288	MR 2226	289
MR 2227	290	MR 2228	291
MR 2229	292	MR 2230	293
MR 2231	294	MR 2232	295
MR 2233	296	MR 2234	297
MR 2235	298	MR 2236	299
MR 2216	300	MR 2217	301
MR 2218	302	MR 2219	303
MR 2220	304	MR 2221	305
MR 2222	306	MR 2223	307
MR 2224	308	MR 2225	309
MR 2226	310	MR 2227	311
MR 2228	312	MR 2229	313
MR 2230	314	MR 2231	315
MR 2232	316	MR 2233	317
MR 2234	318	MR 2235	319
MR 2236	320		

COMMENTS:

ICP INTERELEMENT AND BACKGROUND CORRECTION APPLIED? YES.

FOOTNOTES:

NR - NOT REQUIRED BY CONTRACT AT THIS TIME
C - BLANK CORRECTED
ND/B - NOT DETECTED DUE TO BLANK
< - INDICATES ELEMENT WAS ANALYZED FOR BUT NOT DETECTED. REPORT THE DETECTION LIMIT VALUE WITH THE < (E.G., <10)
- INDICATES A VALUE ESTIMATED OR NOT REPORTED DUE TO THE PRESENCE OF INTERFERENCE. EXPLANATORY NOTE INCLUDED ON COVER PAGE.
- INDICATES VALUE DETERMINED BY METHOD OF STANDARD ADDITION

021297

TY-113

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2232

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 232

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	950.
2.	ANTIMONY	<20.	14.	MANGANESE	30.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	2200.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	5900.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	3800.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	750.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	180.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

004003

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021293

TY-213

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2231

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 231

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	5550.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	200.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	3800.
6.	CADMIUM	NDIB	18.	SELENIUM	10.
7.	CALCIUM	8700.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	8950.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	100.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	140.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021293

TY-310

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2236

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640 /1065C

LAB SAMPLE ID. NO. 236

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	14100.
2.	ANTIMONY	<20.	14.	MANGANESE	585.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	31800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	28400.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	65000.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	33600.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	110.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000005

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021300

TY-312

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2216

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640 /1065C

LAB SAMPLE ID. NO. 216

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	13100.
2.	ANTIMONY	<20.	14.	MANGANESE	2490.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	2000.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	6800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	15700.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	37100.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	9050.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	20.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021301

TY-313

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2234

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/10655

LAB SAMPLE ID. NO. 234

QC REPORT NO. 9

PROJECT-TASK 654.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	80000.
2.	ANTIMONY	<20.	14.	MANGANESE	795.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	400.	16.	NICKEL	40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	200000.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	155000.C	19.	SILVER	< 10.
8.	CHROMIUM	10.	20.	SODIUM	257000.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	141000.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	130.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000007

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021302

TY-314

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2233

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.
CASE NO. 2640/1065C
LAB SAMPLE ID. NO. 233
QC REPORT NO. 9
PROJECT-TASK 854.0000
BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	11000.
2.	ANTIMONY	<20.	14.	MANGANESE	3220.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	500.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	9200.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	23800.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	18800.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	117000.	23.	VANADIUM	< 200.
12.	LEAD	70.C	24.	ZINC	20.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000003

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021303

TY-315

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2235

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640 /10652

LAB SAMPLE ID. NO. 235

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	59500.
2.	ANTIMONY	<20.	14.	MANGANESE	180.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	200.	16.	NICKEL	80.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	150000.
6.	CADMIUM	ND/B	18.	SELENIUM	<2.
7.	CALCIUM	89500.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	134000.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	20.
11.	IRON	27300.	23.	VANADIUM	< 200.
12.	LEAD	ND/B	24.	ZINC	13300.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

004009

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021304

CAVENDER

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2223

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 223

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	7550.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	2200.
6.	CADMIUM	NDIB	18.	SELENIUM	2.
7.	CALCIUM	11500.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	4100.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	50.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	< 10.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

00040

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021305

REILLY

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2229

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 229

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	4050.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	1800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	12800.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	7000.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	100.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	10.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

00001

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021303

LINDSEY

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2227

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1068

LAB SAMPLE ID. NO. 227

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	8950.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	100.	16.	NICKEL	40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	2400.
6.	CADMIUM	NDIB	18.	SELENIUM	4.
7.	CALCIUM	9600.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	7350.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	150.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	40.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

021307

FORM I

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

JONES

EPA SAMPLE NO.
MR 2228

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 228

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	7250.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	3600.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	9100.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	6600.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	50.	22.	TIN	NDIB
11.	IRON	150.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	< 10.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000013

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021303

G.E. LEWIS

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2230

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 230

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	600.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	1900.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	2150.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	150.	22.	TIN	NDIB
11.	IRON	350.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	30.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000014

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021309

W.C. NEILSON

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2224

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1066C

LAB SAMPLE ID. NO. 224

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	5600.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	1800.
6.	CADMIUM	NDIB	18.	SELENIUM	3.
7.	CALCIUM	13900.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	15000.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	50.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDB	24.	ZINC	30.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021310

WD NEILSON

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2225

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 225

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	5100.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	1800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	8100.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	7550.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	100.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	20.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021311

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2221

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 221

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	2200.
2.	ANTIMONY	<20.	14.	MANGANESE	45.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	1000.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	7900.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	2200.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	100.	22.	TIN	NDIB
11.	IRON	10500.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	20.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

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COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021312

STANLEY

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2220

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 220

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	< 50.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	< 200.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	0.ND/B	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	35800.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	< 10.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

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COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021313

HALL

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2219

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 219

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	200.	13.	MAGNESIUM	1250.
2.	ANTIMONY	<20.	14.	MANGANESE	60.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	600.
6.	CADMIUM	ND/B	18.	SELENIUM	<2.
7.	CALCIUM	3650.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	1800.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	ND/B
11.	IRON	7000.	23.	VANADIUM	< 200.
12.	LEAD	ND/B	24.	ZINC	70.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021314

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US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2226

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 226

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	3700.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	2800.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	9050.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	9900.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	150.	22.	TIN	NDIB
11.	IRON	< 50.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	10.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

FORM I

021315

C.C. LEWIS

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2222

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1066C

LAB SAMPLE ID. NO. 222

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	550.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	400.
6.	CADMIUM	ND[B]	18.	SELENIUM	<2.
7.	CALCIUM	2200.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	2100.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	400.	22.	TIN	ND[B]
11.	IRON	250.	23.	VANADIUM	< 200.
12.	LEAD	ND[B]	24.	ZINC	40.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

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COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD 021316

FORM I

OPERATORY SCHOOL GOOD WELL

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2217

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640 /1065C

LAB SAMPLE ID. NO. 217

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	< 200.	13.	MAGNESIUM	2600.
2.	ANTIMONY	<20.	14.	MANGANESE	30.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	1200.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	4450.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	5050.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	700.	22.	TIN	NDIB
11.	IRON	1150.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	140.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

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COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

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021317

FORM I

OPERATORS SCHOOL
CONDUCTED WELL

US.EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O.BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS: 8-557-2490

EPA SAMPLE NO.
MR 2218

DATE 5-29-84

INORGANIC ANALYSIS DATA SHEET

LAB NAME VERSAR INC.

CASE NO. 2640/1065C

LAB SAMPLE ID. NO. 218

QC REPORT NO. 9

PROJECT-TASK 854.0000

BATCH 9

ELEMENTS IDENTIFIED AND MEASURED

UG/L

1.	ALUMINUM	400.	13.	MAGNESIUM	3800.
2.	ANTIMONY	<20.	14.	MANGANESE	< 15.
3.	ARSENIC	<10.	15.	MERCURY	<0.2
4.	BARIUM	< 100.	16.	NICKEL	< 40.
5.	BERYLLIUM	< 5.	17.	POTASSIUM	5400.
6.	CADMIUM	NDIB	18.	SELENIUM	<2.
7.	CALCIUM	25500.C	19.	SILVER	< 10.
8.	CHROMIUM	< 10.	20.	SODIUM	6050.C
9.	COBALT	< 50.	21.	THALLIUM	<10.
10.	COPPER	< 50.	22.	TIN	NDIB
11.	IRON	600.	23.	VANADIUM	< 200.
12.	LEAD	NDIB	24.	ZINC	200.
	CYANIDE	NR		PERCENT SOLIDS	NR

FOOTNOTES: SEE COVER PAGE.

000023

COMMENTS:

LAB MANAGER

ROBERT E. MAXFIELD

021313

FORM I

INORGANIC ANALYSIS DATA SHEET

PROJECT: 854 CASE: 2640/1065C DATE 5-30-84

BATCH: 9 SITE: ZONE 1

LAB: VERSAR, INC. QC REPORT: 9

LAB SAMPLE #	FIELD SAMPLE #	PARAMETER mg/L SULFATE	CHLORIDE (→ corrected for dilution)		NITRITE-N	NITRATE
TY-312 237	MR 2216	20.4	82.6	80	<0.05	<0.05
OP SCH 6W 238	MR 2217	6.3	12.6	10	<0.05	0.31
OP SCH CW 239	MR 2218	6.3	15.8	13	<0.05	0.47
HALL 240	MR 2219	9.9	2.5	NAB	<0.05	<0.05
STRAUGH 241	MR 2220	1.	2.9	NAB	<0.05	<0.05
SIMMONS 242	MR 2221	4.4	<1.	NAB	<0.05	<0.05
GC LEWIS 243	MR 2222	1.6	<1.	NAB	<0.05	1.25
CAVENDER 244	MR 2223	14.2	11.1	8	<0.05	2.73
WC NEILSON 245	MR 2224	24.3	17.9	15	<0.05	6.15
WW NEILSON 246	MR 2225	20.9	13.1	10	<0.05	5.35
KNORR 247	MR 2226	12.2	16.2	13	<0.05	6.49
LINDSEY 248	MR 2227	28.6	12.6	10	<0.05	5.13
JONES 249	MR 2228	6.3	22.4	20	<0.05	7.00
REILLY 250	MR 2229	14.4	12.1	9	<0.05	5.81
GE LEWIS 251	MR 2230	<1.	1.4	NAB	<0.05	1.28
TY-213 252	MR 2231	21.8	14.9	12	<0.05	6.15
TY-13 253	MR 2232	7.5	1.1	NAB	<0.05	<0.05
TY-314 254	MR 2233	2.8	23.	20	0.08	<0.05
TY-313 255	MR 2234	47.	8.6	6	0.13	<0.05
TY-315 256	MR 2235	11.2	3.2	NAB	<0.05	<0.05
TY-310 257	MR 2236	2.8	161.		<0.05	<0.05

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021313

INORGANIC ANALYSIS DATA SHEET

PROJECT: 854 CASE: 2640/1065C DATE 5-30-84

BATCH: 9 SITE: ZONE 1

LAB: VERSAR, INC. QC REPORT: 9

LAB SAMPLE #	FIELD SAMPLE #	PARAMETER BICARBONATE	CARBONATE	TDS
TY-312 258	MR 2216	118.	<1.	257.
OP SCH GW 259	MR 2217	12.	<1.	61.
OP SCH CW 260	MR 2218	74.	<1.	126.
HALL 261	MR 2219	7.8	<1.	56.
STANLEY 262	MR 2220	99.	<1.	130.
SIMMARI 263	MR 2221	38.	<1.	73.
GC LEWIS 264	MR 2222	2.2	<1.	34.
CAVENDER 265	MR 2223	20.	<1.	104.
WC MORGAN 266	MR 2224	29.	<1.	119.
[illegible] 267	MR 2225	14.	<1.	79.
KNORR 268	MR 2226	10.	<1.	97.
LINDSEY 269	MR 2227	18.	<1.	102.
JONES 270	MR 2228	18.	<1.	117.
REILLY 271	MR 2229	21.	<1.	99.
GC LEWIS 272	MR 2230	6.6	<1.	28.
TY-213 273	MR 2231	8.8	<1.	85.
TY-113 274	MR 2232	29.	<1.	51.
TY-314 275	MR 2233	165.	<1.	283.
TY-313 276	MR 2234	1860.	<1.	2100.
TY-315 277	MR 2235	1530.	<1.	1169.
TY-310 278	MR 2236	273.	<1.	479.

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021320

INORGANIC ANALYSIS DATA SHEET

PROJECT: 854 CASE: 2640/1065C DATE 5-30-84

BATCH: 9 SITE: ZONE 1

LAB: VERSAR, INC. QC REPORT: 9

LAB SAMPLE #	FIELD SAMPLE #	PARAMETER BOD-5	AMMONIA
TY-312 279, 300	MR 2216	<6.	<0.05
OP SCH GW 280, 301	MR 2217	<2.	<0.05
OP SCH GW 281, 302	MR 2218	<2.	<0.05
HALL 282, 303	MR 2219	<2.	<0.05
STANLEY 283, 304	MR 2220	<2.	<0.05
SHANNAHAN 284, 305	MR 2221	<2.	<0.05
GC LEWIS 285, 306	MR 2222	<6.	0.41
CAVENDER 286, 307	MR 2223	<2.	<0.05
WC NEILSON 287, 308	MR 2224	<2.	<0.05
WC NEILSON 288, 309	MR 2225	<2.	<0.05
KAMER 289, 310	MR 2226	<2.	<0.05
UNOSEM 290, 311	MR 2227	<2.	<0.05
JONES 291, 312	MR 2228	<2.	<0.05
REILLY 292, 313	MR 2229	<2.	<0.05
GC LEWIS 293, 314	MR 2230	<2.	<0.05
TY-213 294, 315	MR 2231	<2.	<0.05
TY-113 295, 316	MR 2232	<2.	<0.05
TY-314 296, 317	MR 2233	94.2	5.94
TY-313 297, 318	MR 2234	274.	163.
TY-315 298, 319	MR 2235	<20.	172.
TY-310 299, 320	MR 2236	7.9	25.6

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021321

INITIAL AND CONTINUING CALIBRATION VERIFICATION

LAB NAME: VERSAR, INC. CASE NO.: 2640/1065C
DATE: 5/29/84 UNITS: UG/L

COMPOUND	CONTROL LIMITS ICP/AA	CONTROL LIMITS FURN.	INITIAL CALIB.(1) TRUE VALUE	INITIAL CALIB.(1) %R	CONTINUING CALIB.(2) TRUE VALUE	CONTINUING CALIB.(2) %R	%R
1. ALUMINUM	85-115		800.	103.	800.	103.	101.
2. ANTIMONY		85-115	97.5	97.	100.	105.	110.
3. ARSENIC		86-114	81.	101.	100.	92.	92.
4. BARIUM	84-116		344.	105.	344.	105.	105.
5. BERYLLIUM	87-113		900.	101.	900.	101.	98.
6. CADMIUM		80-120	4.6	107.	10.	109.	108.
7. CALCIUM	NR		32000.	99.	32000.	99.	99.
8. CHROMIUM	88-112		250.	102.	250.	99.	98.
9. COBALT	78-122		600.	100.	600.	100.	97.
10. COPPER	83-117		350.	103.	350.	102.	101.
11. IRON	88-112		900.	102.	900.	102.	99.
12. LEAD		78-122	45.	92.	50.	94.	94.
13. MAGNESIUM	NR		7100.	96.	7100.	96.	96.
14. MANGANESE	90-110		500.	100.	500.	100.	97.
15. MERCURY	80-120		3.6	108.	5.0	106.	104.
16. NICKEL	89-111		300.	100.	300.	100.	100.
17. POTASSIUM	NR		7200.	97.	7200.	94.	97.
18. SELENIUM		85-115	18.	103.	50.	99.	104.
19. SILVER	80-120		34.	97.	34.	97.	97.
20. SODIUM	NR		40000.	101.	40000.	101.	102.
21. THALLIUM		88-112	50.4	98.	70.	97.	98.
22. TIN		75-125	70.	90.	70.	87.	84
23. VANADIUM	90-110		850.	102.	850.	101.	98.
24. ZINC	75-125		400.	99.	400.	98.	97.
25. CYANIDE	80-120		-	-	-	-	-

(1) INITIAL CALIBRATION SOURCE: EPA, VERSAR
(2) CONTINUING CALIBRATION SOURCE: EPA, VERSAR

FORM II

004027

021322

INITIAL AND CONTINUING CALIBRATION VERIFICATION

(2)

LAB NAME: VERSAR, INC. CASE NO.: 2640/1065C
DATE: 5/29/84 UNITS: UG/L

COMPOUND	CONTROL LIMITS ICP/AA	CONTROL LIMITS FURN.	INITIAL CALIB.(1) TRUE VALUE	INITIAL CALIB.(1) %R	CONTINUING CALIB.(2) TRUE VALUE	CONTINUING CALIB.(2) %R	%R
1. ALUMINUM	85-15				800.	103.	
2. ANTIMONY		85-115	—	—	100.	98.	
3. ARSENIC		86-114	—	—	100.	88.	
4. BARIUM	84-116				344.	103.	
5 BERYLLIUM	87-113				900.	99.	
6. CADMIUM		80-120	—	—	10.	117.	
7. CALCIUM	NR				32000.	97.	
8. CHROMIUM	88-112				250.	101.	
9. COBALT	78-122				600.	98.	
10. COPPER	83-117				350.	102.	
11. IRON	88-112				900.	100.	
12. LEAD		78-122	—	—	50.	90.	96.
13. MAGNESIUM	NR				7100.	96.	
14. MANGANESE	90-110				500.	98.	
15. MERCURY	80-120		—	—	5.0	110.	
16. NICKEL	89-111				300.	95.	
17. POTASSIUM	NR				7200.	100.	
18. SELENIUM		85-115	—	—	50.	100.	
19. SILVER	80-120				34.	97.	
20. SODIUM	NR				40000.	99.	
21. THALLIUM		88-112	—	—	70.	101.	
22. TIN		75-125	—	—	70.	97.	
23. VANADIUM	90-110				850.	99.	
24. ZINC	75-125				400.	96.	
25. CYANIDE	80-120				—	—	

(1) INITIAL CALIBRATION SOURCE: EPA, VERSAR
(2) CONTINUING CALIBRATION SOURCE: EPA, VERSAR

FORM II

021323

BLANKS

LAB NAME: VERSAR, INC. CASE NO.: 2640/1065C
DATE 5/29/84 UNITS: UG/L
QC REPORT 9

COMPOUND	INITIAL CALIB BLANK VALUE	CONTINUING CALIB BLANK VALUE	PREP 1.	BLANK
1. ALUMINUM	< 15.	NR	60.	
2. ANTIMONY	<20.	NR	<20.	
3. ARSENIC	<10.	NR	<10.	
4. BARIUM	< 1.	NR	< 1.	
5. BERYLLIUM	< 1.	NR	< 1.	
6. CADMIUM	<1.	NR	1.	
7. CALCIUM	< 10.	NR	70.	
8. CHROMIUM	< 4.	NR	< 4.	
9. COBALT	< 10.	NR	< 10.	
10. COPPER	< 4.	NR	< 4.	
11. IRON	< 2.	NR	28.	
12. LEAD	<5.	NR	15.	
13. MAGNESIUM	< 1.	NR	7.	
14. MANGANESE	< 1.	NR	< 1.	
15. MERCURY	<0.2	NR	<0.2	
16. NICKEL	< 15.	NR	30.	
17. POTASSIUM	< 200.	NR	< 200.	
18. SELENIUM	<2.	NR	<2.	
19. SILVER	< 3.	NR	< 3.	
20. SODIUM	< 10.	NR	120.	
21. THALLIUM	<10.	NR	<10.	
22. TIN	<20.	NR	20.	
23. VANADIUM	< 4.	NR	< 4.	
24. ZINC	< 3.	NR	3.	
25. CYANIDE	—		—	

FORM III

004033

021324

ICP INTERFERENCE CHECK SAMPLE

QC REPORT 9

LAB NAME: VERSAR, INC.
DATE: 5/29/84

CASE NO.: 2640/1065C
CHECK SAMPLE I.D.: INTER
CHECK SAMPLE SOURCE: VERSAR
UNITS: UG/L

COMPOUND	CONTROL LIMITS MEAN (1)	CONTROL LIMITS 2X STD.DEV.	TRUE	INITIAL OBSERVED	INITIAL %R	FINAL OBSERVED	FINAL %R
1. ALUMINUM	NR		100000.	104000.	104.	104000.	104.
2. ANTIMONY	NR		-	-	-	-	-
3. ARSENIC	NR		-	-	-	-	-
4. BARIUM	NR		300.	289.	96.	284.	95.
5. BERYLLIUM	NR		100.	98.	98.	96.	96.
6. CADMIUM	NR		-	-	-	-	-
7. CALCIUM	NR		200000.	206000.	103.	204000.	102.
8. CHROMIUM	NR		300.	288.	96.	284.	95.
9. COBALT	NR		300.	280.	93.	280.	93.
10. COPPER	NR		300.	292.	97.	284.	95.
11. IRON	NR		200000.	202000.	101.	198000.	99.
12. LEAD	NR		-	-	-	-	-
13. MAGNESIUM	NR		50000.	51200.	102.	51100.	102.
14. MANGANESE	NR		300.	326.	109.	318.	106.
15. MERCURY	NR		-	-	-	-	-
16. NICKEL	NR		300.	285.	95.	285.	95.
17. POTASSIUM	NR		20000.	19400.	97.	20000.	100.
18. SELENIUM	NR		-	-	-	-	-
19. SILVER	NR		300.	291.	97.	291.	97.
20. SODIUM	NR		200000.	202000.	101.	201000.	101.
21. THALLIUM	NR		-	-	-	-	-
22. TIN	NR		-	-	-	-	-
23. VANADIUM	NR		300.	296.	99.	288.	96.
24. ZINC	NR		300.	279.	93.	270.	90.

(1) MEAN BASED ON N =

021325

SPIKE SAMPLE RECOVERY

QC REPORT 9

LAB NAME: VERSAR, INC.
DATE 5/29/84

MATRIX: L-HOM

CASE NO.: 2640/1065C
EPA SAMPLE NO.: MR 2216
LAB SAMPLE ID NO.0216
UNITS: UG/L

COMPOUND	CONTROL LIMIT %R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	%R
1. ALUMINUM	80-120	195.	< 15.	200.	98.
2. ANTIMONY	75-125	91.	<20.	100.	91.
3. ARSENIC	75-125	96.	<10.	100.	96.
4. BARIUM	80-120	4200.	1980.	2200.	101.
5. BERYLLIUM	80-120	55.	< 1.	50.	110.
6. CADMIUM	75-125	12.	<1.	10.	120.
7. CALCIUM	NR	45600.	15600.	30000.	100.
8. CHROMIUM	80-120	204.	< 4.	200.	102.
9. COBALT	80-120	210.	< 10.	200.	105.
10. COPPER	80-120	200.	< 4.	200.	100.
11. IRON	80-120	39000.	9040.	30200.	99.
12. LEAD	75-125	43.	<5.	50.	86.
13. MAGNESIUM	NR	42900.	13000.	30000.	100.
14. MANGANESE	80-120	7600.	2490.	5200.	98.
15. MERCURY *	75-125	2.2	<0.2	2.0	110.
16. NICKEL	80-120	165.	< 15.	200.	83.
17. POTASSIUM	NR	16200.	6800.	10000.	94.
18. SELENIUM	75-125	50.	<2.	50.	100.
19. SILVER	80-120	90.	< 3.	100.	90.
20. SODIUM	NR	136000.	37100.	100000.	101.
21. THALLIUM	75-125	40.	<10.	50.	81.
22. TIN	75-125	70.	<20.	100.	70.
23. VANADIUM	80-120	204.	< 4.	200.	102.
24. ZINC	80-120	120.	18.	100.	102.
25. CYANIDE		—	—	—	—

(1) %R = [(SSR-SR)/SA] X 100

* Sample No. MR2227

FORM V

DUPLICATES

LAB NAME: VERSAR, INC.
DATE: 5/29/84

CASE NO.: 2640 /1065C
EPA SAMPLE NO.: MR 2216
LAB SAMPLE ID NO.: 0216

MATRIX: L-HOM

UNITS: UG/L

COMPOUND	CONTROL LIMITS (1)	SAMPLE(S)	DUPLICATE(D)	RPD(2)
1. ALUMINUM		< 15.	< 15.	-
2. ANTIMONY		<20.	<20.	—
3. ARSENIC		<10.	<10.	—
4. BARIUM		1980.	1960.	1.
5. BERYLLIUM		< 1.	< 1.	-
6. CADMIUM		<1.	<1.	—
7. CALCIUM	NR	15600.	15400.	1.
8. CHROMIUM		< 4.	< 4.	-
9. COBALT		< 10.	< 10.	-
10. COPPER		< 4.	< 4.	-
11. IRON		9040.	8950.	1.
12. LEAD		<5.	<5.	—
13. MAGNESIUM	NR	13000.	12900.	1.
14. MANGANESE		2490.	2470.	1.
15. MERCURY		<0.2	<0.2	—
16. NICKEL		< 15.	< 15.	-
17. POTASSIUM	NR	6600.	6600.	0.
18. SELENIUM		<2.	<2.	
19. SILVER		< 3.	< 3.	-
20. SODIUM	NR	37100.	36600.	1.
21. THALLIUM		<10.	<10.	—
22. TIN		<20.	<20.	—
23. VANADIUM		< 4.	< 4.	-
24. ZINC		18.	12.	40.
25. CYANIDE		-	-	-

(1) TO BE ADDED AT A LATER DATE
(2) RPD = [(S-D)/((S+D)/2)]X100

004088

FORM VI

021327

INORGANICS QUALITY ASSURANCE (Form V + VI Continued)

CASE #: 3640/1065c QC REPORT #: 9 TASK II/COLD VAPOR ATOMIC ABSORPTION

OF SAMPLES: 21 DATE: 6.4.84

LAB: Vecor BATCH #: 9

			Hg (µg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD	FOUND	—
		TRUE	
	SOURCE:	% RECOVERY	
	BLANK VALUE	RESULTS	—
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	—
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1	FOUND	—
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 2	FOUND	—
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 3	FOUND	—
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 4	FOUND	—
		TRUE	
	SOURCE:	% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1	SAMPLE RESULT	—
	SAMPLE NO.	DUPLICATE RESULT	
		RPD %	
	DUPLICATE 2	SAMPLE RESULT	<0.2
	SAMPLE NO. MR3219	DUPLICATE RESULT	<0.2
		RPD %	—
IV. SPIKED SAMPLE RESULTS	SPIKE 1	SAMPLE RESULT	—
		SPIKE RESULT	
	SAMPLE NO.	SPIKE ADDED	[illegible]
		% RECOVERY	
	SPIKE 2	SAMPLE RESULT	<0.2
		SPIKE RESULT	2.3
	SAMPLE NO. MR3231	SPIKE ADDED	2.0
		% RECOVERY	115.

021323

INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL STANDARD

LAB NAME VERSAR INC. CASE NO. 2640/1065C
DATE 5-30-89 UNITS ug/L

Compound	Required Detection Limits (CRDL)	Instrument Detection Limits (IDL) ICP/AA	Instrument Detection Limits (IDL) Furnace	Lab Control Standard True	Lab Control Standard %R
1. Aluminum	200	15	--		NR
2. Antimony	20	--	6		NR
3. Arsenic	10	--	8		NR
4. Barium	100	1	--		NR
5. Beryllium	5	1	--		NR
6. Cadmium	1	--	0.5		NR
7. Calcium	NR	--	--		NR
8. Chromium	10	4	--		NR
9. Cobalt	50	10	--		NR
10. Copper	50	4	--		NR
11. Iron	50	2	--		NR
12. Lead	5	--	2		NR
13. Magnesium	NR	--	--		NR
14. Manganese	15	1	--		NR
15. Mercury	0.2	--	0.2		NR
16. Nickel	40	15	--		NR
17. Potassium	NR	--	--		NR
18. Selenium	2	--	2		NR
19. Silver	10	3	--		NR
20. Sodium	NR	--	--		NR
21. Thallium	10	--	2		NR
22. Tin	20	--	8		NR
23. Vanadium	200	4	--		NR
24. Zinc	10	3	--		NR
25. Cyanide	10	4			NR

FORM VII 004034

30
021329

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9

OF SAMPLES: 35 DATE: 6-7-84.

LAB: Versar, Inc. BATCH #: 854.0-9,10

TASK III/Sulfate

			Sulfate (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: EPA WP 882	FOUND	88.
		TRUE	93.8
		% RECOVERY	94.
	BLANK VALUE	RESULTS	< 1.
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: EPA WP 882	FOUND	89.6
		TRUE	93.8
		% RECOVERY	96.
	STANDARD SOLUTION 2 SOURCE: EPA WP 882	FOUND	94.
		TRUE	93.8
		% RECOVERY	100.
	STANDARD SOLUTION 3 SOURCE: EPA WP 882	FOUND	92.4
		TRUE	93.8
		% RECOVERY	99.
	STANDARD SOLUTION 4 SOURCE: EPA WP 882	FOUND	91.2
		TRUE	93.8
		% RECOVERY	97.
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2218	SAMPLE RESULT	6.3
		DUPLICATE RESULT	6.3
		RPD %	—
	DUPLICATE 2 SAMPLE NO. MR2231	SAMPLE RESULT	21.6
		DUPLICATE RESULT	22.0
		RPD %	2.
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2218	SAMPLE RESULT	6.3
		SPIKE RESULT	16.9
		SPIKE ADDED	10.
		% RECOVERY	106.
	SPIKE 2 SAMPLE NO. MR2231	SAMPLE RESULT	21.8
		SPIKE RESULT	31.4
		SPIKE ADDED	10.
		% RECOVERY	96.

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9

OF SAMPLES: 35 DATE: 6-7-84

LAB: Versar, Inc. BATCH #: 854.0-9,10

TASK III/sulfate

			sulfate (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	BLANK VALUE	RESULTS	
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 2	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 3	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 4	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1	SAMPLE RESULT	7.9
	SAMPLE NO. MR2241	DUPLICATE RESULT	7.9
		RPD %	—
	DUPLICATE 2	SAMPLE RESULT	
	SAMPLE NO.	DUPLICATE RESULT	
		RPD %	
IV. SPIKED SAMPLE RESULTS	SPIKE 1	SAMPLE RESULT	7.9
	SAMPLE NO. MR2241	SPIKE RESULT	18.5
		SPIKE ADDED	10.
		% RECOVERY	106.
	SPIKE 2	SAMPLE RESULT	
	SAMPLE NO.	SPIKE RESULT	
		SPIKE ADDED	
		% RECOVERY	

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9 TASK III/Chloride

OF SAMPLES: 21 DATE: 6-6-84

LAB: Versar, Inc. BATCH #: 854.0-9

			Chloride (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: EPA WP 882	FOUND	83.1
		TRUE	85.3
		% RECOVERY	97.
	BLANK VALUE	RESULTS	2.9
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: EPA WP 882	FOUND	84.4
		TRUE	85.3
		% RECOVERY	99.
	STANDARD SOLUTION 2 SOURCE: EPA WP 882	FOUND	85.
		TRUE	85.3
		% RECOVERY	100.
	STANDARD SOLUTION 3 SOURCE: _____	FOUND	
		TRUE	
		% RECOVERY	
	STANDARD SOLUTION 4 SOURCE: _____	FOUND	
		TRUE	
		% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2217	SAMPLE RESULT	12.6
		DUPLICATE RESULT	12.7
		RPD %	1.
	DUPLICATE 2 SAMPLE NO. MR2227	SAMPLE RESULT	12.6
		DUPLICATE RESULT	12.6
		RPD %	0.
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2217	SAMPLE RESULT	12.6
		SPIKE RESULT	21.6
		SPIKE ADDED	10.
		% RECOVERY	90.
	SPIKE 2 SAMPLE NO. MR2227	SAMPLE RESULT	12.6
		SPIKE RESULT	21.8
		SPIKE ADDED	10.
		% RECOVERY	92.

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9 TASK III/ BOD_5

OF SAMPLES: 21 DATE: 6-5-84

LAB: Versar BATCH #: 854.0-9

			BOD_5 (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: EPA WP 782	FOUND	See Cover Page
		TRUE	—
		% RECOVERY	—
	BLANK VALUE	RESULTS	< 2.
II. CONTINUING CALIBRATION VERIFICATION	Seed Control BLANK 1	RESULTS	27.6
	Seed Control BLANK 2	RESULTS	28.8
	STANDARD SOLUTION 1 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	—
	STANDARD SOLUTION 2 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
	STANDARD SOLUTION 3 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
	STANDARD SOLUTION 4 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2233	SAMPLE RESULT	92.0
		DUPLICATE RESULT	96.3
		RPD %	5.
	DUPLICATE 2 SAMPLE NO.	SAMPLE RESULT	
		DUPLICATE RESULT	
		RPD %	
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO.	SAMPLE RESULT	
		SPIKE RESULT	
		SPIKE ADDED	
		% RECOVERY	
	SPIKE 2 SAMPLE NO.	SAMPLE RESULT	
		SPIKE RESULT	
		SPIKE ADDED	
		% RECOVERY	

021333

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9

OF SAMPLES: 40 DATE: 6-6-84

LAB: Versar, Inc BATCH #: 854.0-9,10,11

TASK III/AMMONIA

			AMMONIA (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: EPA WP 481	FOUND	0.566
		TRUE	0.56
		% RECOVERY	101.
	BLANK VALUE	RESULTS	<0.05
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: Versar	FOUND	0.48
		TRUE	0.50
		% RECOVERY	96.
	STANDARD SOLUTION 2 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
	STANDARD SOLUTION 3 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
	STANDARD SOLUTION 4 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2217	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
	DUPLICATE 2 SAMPLE NO. MR2224	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2217	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.46
		SPIKE ADDED	0.50
		% RECOVERY	92.
	SPIKE 2 SAMPLE NO. MR2224	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.46
		SPIKE ADDED	0.50
		% RECOVERY	92.

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1065C QC REPORT #: 9 TASK III/AMMONIA

OF SAMPLES: 40 DATE: 6-6-84.

LAB: Versar, Inc. BATCH #: 854.0-9, 10, 11

			AMMONIA (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
	BLANK VALUE	RESULTS	
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
	STANDARD SOLUTION 2 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
	STANDARD SOLUTION 3 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
	STANDARD SOLUTION 4 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2241	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
	DUPLICATE 2 SAMPLE NO. MR2255	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2241	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.51
		SPIKE ADDED	0.50
		% RECOVERY	102.
	SPIKE 2 SAMPLE NO. MR 2255	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.44
		SPIKE ADDED	0.50
		% RECOVERY	88. 90

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021335

INORGANICS QUALITY ASSURANCE

CASE # : 2640/1065C QC REPORT # : 9 TASK III/ TDS

OF SAMPLES: 21 DATE: 6-5-84

LAB: Versar, Inc. BATCH # : 854.0-9

			TDS (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD	FOUND	0.9996g
		TRUE	1.0000g
	SOURCE: 1000 ppm wt.	% RECOVERY	99.96
	BLANK VALUE	RESULTS	0.0000g
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	1.
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1	FOUND	276.
		TRUE	300.
	SOURCE: EPA WP 782	% RECOVERY	92.
	STANDARD SOLUTION 2	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 3	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
	STANDARD SOLUTION 4	FOUND	
		TRUE	
	SOURCE:	% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1	SAMPLE RESULT	99.
	SAMPLE NO. MR222-7	DUPLICATE RESULT	104.
		RPD %	5.
	DUPLICATE 2	SAMPLE RESULT	468.
	SAMPLE NO. MR223-6	DUPLICATE RESULT	490.
		RPD %	5.
IV. SPIKED SAMPLE RESULTS	SPIKE 1	SAMPLE RESULT	
		SPIKE RESULT	
	SAMPLE NO.	SPIKE ADDED	
		% RECOVERY	
	SPIKE 2	SAMPLE RESULT	
		SPIKE RESULT	
	SAMPLE NO.	SPIKE ADDED	
		% RECOVERY	

0002133

INORGANICS QUALITY ASSURANCE

CASE #: 3640/1055C QC REPORT #: 9 TASK III/CO_3/HCO_3

OF SAMPLES: 36 DATE: 6-4-84

LAB: Versar Inc. BATCH #: 854.0-8.9

			HCO_3 (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: Versar	FOUND	96.
		TRUE	100.
		% RECOVERY	96.
	BLANK VALUE	RESULTS	<1
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: Versar	FOUND	97.
		TRUE	100.
		% RECOVERY	97.
	STANDARD SOLUTION 2 SOURCE: Versar	FOUND	99.
		TRUE	100.
		% RECOVERY	99.
	STANDARD SOLUTION 3 SOURCE: Versar	FOUND	98.
		TRUE	100.
		% RECOVERY	98.
	STANDARD SOLUTION 4 SOURCE:	FOUND	
		TRUE	
		% RECOVERY	
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2208	SAMPLE RESULT	82.
		DUPLICATE RESULT	81.
		RPD %	
	DUPLICATE 2 SAMPLE NO. MR2218	SAMPLE RESULT	74.
		DUPLICATE RESULT	74.
		RPD %	0.
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2208	SAMPLE RESULT	82.
		SPIKE RESULT	177.
		SPIKE ADDED	100.
		% RECOVERY	95.
	SPIKE 2 SAMPLE NO. MR2218	SAMPLE RESULT	74.
		SPIKE RESULT	173.
		SPIKE ADDED	100.
		% RECOVERY	99.

INORGANICS QUALITY ASSURANCE

CASE #: 2640 / 1065C QC REPORT #: 9 TASK III/ Nitrite-N

OF SAMPLES: 35 DATE: 6-5-94

LAB: Versar, Inc. BATCH #: 854.0-9, 10

			Nitrite-N (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: Versar	FOUND	1.0
		TRUE	1.0
		% RECOVERY	100.
	BLANK VALUE	RESULTS	<0.05
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: Versar	FOUND	0.96
		TRUE	1.0
		% RECOVERY	96.
	STANDARD SOLUTION 2 SOURCE: Versar	FOUND	0.98
		TRUE	1.0
		% RECOVERY	98.
	STANDARD SOLUTION 3 SOURCE: Versar	FOUND	0.97
		TRUE	1.0
		% RECOVERY	97.
	STANDARD SOLUTION 4 SOURCE: Versar	FOUND	0.94
		TRUE	1.0
		% RECOVERY	94.
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2216	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
	DUPLICATE 2 SAMPLE NO. MR2237	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2216	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.98
		SPIKE ADDED	1.0
		% RECOVERY	98.
	SPIKE 2 SAMPLE NO. MR2237	SAMPLE RESULT	<0.05
		SPIKE RESULT	1.0
		SPIKE ADDED	1.0
		% RECOVERY	100.

INORGANICS QUALITY ASSURANCE

CASE #: 2640/1855C QC REPORT #: 9 TASK III/ NO_2 /NO_3

OF SAMPLES: 21 DATE: 6-6-84

LAB: Versar, Inc. BATCH #: 854.0-9

			NO_2 / NO_3 (mg/l)
I. INITIAL CALIBRATION VERIFICATION	REFERENCE STANDARD SOURCE: EPA WP 481	FOUND	0.73
		TRUE	0.70
		% RECOVERY	104.
	BLANK VALUE	RESULTS	<0.05
II. CONTINUING CALIBRATION VERIFICATION	PREPARATION BLANK 1	RESULTS	
	PREPARATION BLANK 2	RESULTS	
	STANDARD SOLUTION 1 SOURCE: Versar	FOUND	0.44
		TRUE	0.50
		% RECOVERY	88.
	STANDARD SOLUTION 2 SOURCE: Versar	FOUND	0.40
		TRUE	0.50
		% RECOVERY	81.
	STANDARD SOLUTION 3 SOURCE: Versar	FOUND	0.49
		TRUE	0.50
		% RECOVERY	98.
	STANDARD SOLUTION 4 SOURCE: Versar	FOUND	0.48
		TRUE	0.50
		% RECOVERY	97.
III. DUPLICATE SAMPLE RESULTS	DUPLICATE 1 SAMPLE NO. MR2216	SAMPLE RESULT	<0.05
		DUPLICATE RESULT	<0.05
		RPD %	—
	DUPLICATE 2 SAMPLE NO. MR2222	SAMPLE RESULT	1.28
		DUPLICATE RESULT	1.28
		RPD %	0.
IV. SPIKED SAMPLE RESULTS	SPIKE 1 SAMPLE NO. MR2216	SAMPLE RESULT	<0.05
		SPIKE RESULT	0.43
		SPIKE ADDED	0.50
		% RECOVERY	87.
	SPIKE 2 SAMPLE NO. MR2222	SAMPLE RESULT	1.28
		SPIKE RESULT	10.6
		SPIKE ADDED	10.01
		% RECOVERY	93.00

80

Versar INC.

ICP SPIKE

DATE: 5-23-84

PROJECT/BATCH 854-9

LAB SAMPLE NO.: 0216 / MR2216

SAMPLE ALIQUOT 10 ml for all elements except Ca, Mg Na: 1 ml diluted to 10 ml

MATRIX H_2O

MIXED SPIKE SOLUTION USED? Yes ☒ No ☐

ELEMENT	ml SPIKING SOLUTION	CONC. SPIKING SOLUTION (ppm)	SPIKE CONC. mg/l	SPIKE CONC. mg/Kg
Ag	0.02	50.	0.1	
Al	0.25	8.	0.2	
Ba	0.25 / 0.02	8 / 1000.	2.0	
Be	0.25	2.	0.05	
Co	0.25	8.	0.2	
Cr	0.25	8.	0.2	
Cu	0.25	8.	0.2	
Fe	0.25 / 0.2	8. / 1000.	(20.2)	
Mn	0.25 / 0.05	8. / 1000.	5.2	
Ni	0.25	8.	0.2	
V	0.25	8.	0.2	
Zn	0.25	4.	0.1	
Ca	0.03	1000.	30.	
K	0.1	1000.	10.	
Mg	0.03	1000.	30.	
Na	0.1	1000.	100.	

COMMENTS 0.25 ml of Mixed Spike Sol'n used containing 8 ppm Be 4 ppm Cd, Zn, 8 ppm Al, Ba, Co, Cr, Cu, Fe, Mn, Ni, Pb, V

SIGNED: [signature]

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021340

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VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Sn
PROJECT/BATCH: 154-7

DATE: 6-4-84

INSTRUMENT: 3
WAVELENGTH: 224.5 nm SLIT: 0.7
LIGHT SOURCE: ___ EDL X HCL
CURRENT/POWER: 30
BACKGROUND CORRECTION: D2

TUBE: P REP: 1
PURGE: 15 AR ___ N_2
PIPET VOL: 25 µl

STANDARD PREP. DATE: 5-4-84
SPIKE = 100 ppb = 20µl x 5000 ppb / 1000µl

Step	1	2	3	4	5
Temp °C	110	700	2700		
Ramp (s)	10	5	1		
Hold (s)	20	25	4		
Boc (s)	—	10	—		
Rec (s)					

CUP	LAB #	ABS	UNADJ. µg/L CONC.	D.F.	ADJ. µg/L CONC.	COMMENTS
1.	70ppb	106				r=.9983
2.	50	75				
3.	20	21				
4.	10	8				
5.	CB	-4				
6.	70ppb	94	63.		63.	90% rec.
7.	CB	10	<20.		<20.	
8.	DB	29	22.		22.	
9.	216	23	<20.		<20.	
10.	216D	26	↓		↓	
11.	216S	42	30.5	/3	70.	70% rec.
12.	217	42	<20.		<20.	
13.	218	15	↓		↓	
14.	219	18				
15.	220	17	↓		↓	

INITIALS SH

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021341

Versar

VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Sn
PROJECT/BATCH: 1541-9

CUP	LAB #	ABS	UNADJ. CONC. µg/l	D.F.	ADJ. CONC. µg/l	COMMENTS
16.	221	20	<20.		<20.	
17.	222	18	↓		↓	
18.	CB	3	↓		↓	
19.	70ppb	91	61.		61.	87% rec.
20.	223	17	<20.		<20.	
21.	224	18	↓		↓	
22.	225	15	↓		↓	
23.	226	0	↓		↓	
24.	227	7	↓		↓	
25.	228	16	↓		↓	
26.	229	17	↓		↓	
27.	230	26	↓		↓	
28.	231	13	↓		↓	
29.	232	12	↓		↓	
30.	CB	4.	↓		↓	
31.	70ppb	88	59.		59.	84% rec.
32.	233	30	<20		<20.	
33.	234	39	↓		↓	
34.	235	65	45.		23.	
35.	236	27	<20.		<20.	

INITIALS SH.

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Versar

Project 854-9 Metal Sn

CUP	LAB #	ABS	µg/ℓ UNADJ. CONC.	D.F.	µg/ℓ ADJ. CONC.	COMMENTS
1.	CB	6	<20.		<20.	
2.	70ppb	103	68.		68.	97% rec.
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
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Versar INC.

VERSAR INC.
TRACE METALS SECTION
COLD VAPOR Hg ANALYSIS LOG SHEET

PROJECT/BATCH: 854-9 DATE: 5/25/84

SAMPLE #s: 216-236

INSTRUMENT: 5 LIGHT SOURCE ____ EDL ✓ HCL

WAVELENGTH: 253.9 nm SLIT: W=0.7 CURRENT/POWER: 6

BACKGROUND CORRECTOR: on GAS FLOW: 3

	LAB #	ABS.	UNADJ. CONC.	D.F.	ADJ. CONC.	COMMENTS
1.	10ppb	150				r=.9985
2.	5ppb	84				
3.	10ppb	19				
4.	0.2ppb	5				
5.	C.B.	1				
6.	CB	2	<0.2		<0.2	
7.	EPA	62	3.92		3.9	108% rec.
8.	~~CB~~					
9.	216	4	<0.2		<0.2	
10.	216 Dup	4	<0.2		<0.2	
11.	217	3	<0.2		<0.2	
12.	218	3	<0.2		<0.2	
13.	219	2	<0.2		<0.2	
14.	219 Dup	2	<0.2		<0.2	
15.	220	3	<0.2		<0.2	
16.	221	3	<0.2		<0.2	
17.	222	3	<0.2		<0.2	
18.	223	2	<0.2		<0.2	
19.	5.0ppb	82	5.26		5.3	106% rec.
20.	224	2	<0.2		<0.2	
21.	225	3	<0.2		<0.2	
22.	226	2	<0.2		<0.2	
23.	227	2	<0.2		<0.2	
24.	227 Spike	36	2.18		2.2	110% rec.
25.	228	2	<0.2		<0.2	

Initials Bcy

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TRACE METALS SECTION
COLD VAPOR Hg ANALYSIS LOG SHEET

PROJECT/BATCH: 854-9 cont. DATE: 5/25/84

SAMPLE #s: 214-236

INSTRUMENT: 5 LIGHT SOURCE ____ EDL ✓ HCL

WAVELENGTH: 2537 nm SLIT: .2 - 0.7 CURRENT/POWER: 6

BACKGROUND CORRECTOR: on GAS FLOW: 3

	LAB #	ABS.	UNADJ. CONC.	D.F.	ADJ. CONC.	COMMENTS
1.	229	3	<0.2		<0.2	
2.	230	2	<0.2		<0.2	
3.	231	4	<0.2		<0.2	
4.	231spike	37	2.25		2.3	115% rec
5.	5.0ppb	81	5.19		5.2	104% rec
6.	232	1	<0.2		<0.2	
7.	233	3	<0.2		<0.2	
8.	234	4	<0.2		<0.2	
9.	235	4	<0.2		<0.2	
10.	236	5	<0.2		<0.2	
11.	cc.	3	<0.2		<0.2	
12.	5.0ppb	85	5.46		5.5	110% rec
13.						
14.						
15.						
16.						
17.						
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23.						
24.						
25.						

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TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Cd
PROJECT/BATCH: B84-9
216-236
DATE: 5-29-84

INSTRUMENT: 3
WAVELENGTH: 228.8nm SLIT: 0.7
LIGHT SOURCE: ___ EDL ✓ HCL
CURRENT/POWER: 4
BACKGROUND CORRECTION: ✓

TUBE: N REP: 1
PURGE: ~30 AR ___ N_2
PIPET VOL: 20 µl

STANDARD PREP. DATE: 5-24-84

SPIKE = 10 ppb

Step	1	2	3	4	5
Temp °C	110	260	2100		
Ramp (s)	5	5	1		
Hold (s)	20	15	5		
Bac (s)		6			
Rec (s)					

CUP	LAB #	ABS	UNADJ. CONC. ~~µg/L~~	D.F.	ADJ. CONC. ~~µg/L~~	COMMENTS
1.	10. ppb	142				.9975
2.	5.	79				
3.	2.5	43.				
4.	1.	11.				
5.	Blk	0.				
6.	EPA 7013	74.	4.9		4.9	4.6 ppb 102%
7.	Blk	2.	<1.		<1.	
8.	DB	20.	1.		1.	10-check
9.	*216	7.	<1.		<1.	
10.	216D	9.	<1.		<1	
11.	*216S	120.	6.6	12	13.	130% 120%
12.	217	7.	<1.		<1.	
13.	218	30	2.		1.	
14.	219	5.	<1.		<1.	
15.	220	5.	<1.		<1.	

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TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Cd
PROJECT/BATCH: 859-9

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
16.	221	2.	<1.		<1.	
17.	222	9.	<1.		<1.	
18.	BK	0.	<1.		<1.	
19.	10.µg/L	164.	10.9		10.9	109%
20.	223	10.	<1.		<1.	
21.	224	10.				
22.	225	9.				
23.	226	5.				
24.	227	9.				
25.	228	6.				
26.	229	5.				
27.	230	6.				
28.	231	13.	<1.		<1.	
29.	232	15.	<1.		<1.	
30.	BK	0.	<1.		<1.	
recal: 31.	10.µg/L	161.	10.8		"	108%
32.	233	10.	<1.		<1.	
33.	234	36.	2.		2.	
34.	235	21.	1.		1.	
35.	236	21.	1.		1.	
36.	10.ppb	211.	11.7		11.7	117%

INITIALS

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TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Tl
PROJECT/BATCH: B54-9
216-296
DATE: 5.29.84

INSTRUMENT: 1
WAVELENGTH: 276.9 nm SLIT: 0.7
LIGHT SOURCE: ___ EDL ✓ HCL
CURRENT/POWER: 10
BACKGROUND CORRECTION: ✓

TUBE: N REP: 1
PURGE: ~30 AR ___ N_2
PIPET VOL: 20 µl

STANDARD PREP. DATE: 4.29.84

SPIKE = 50 µg/L = 25 µl x 2 ppm

Step	1	2	3	4	5
Temp °C	110	400	2300		
Ramp (s)	/	/	/		
Hold (s)	25	20	6		
Boc (s)					
Rec (s)					

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	Blk	-2.				.9959
2.	20 µg/L	151.				
3.	50.	117.				
4.	20.	56.				
5.	10.	28.				
6.	Blk	0.				
7.	EPA 5811	112.	49.		49.	50.4 µg/L 98%
8.	Blk	-1.	<10.		<10.	
9.	DB	-1.	↓		↓	
10.	216	-2				
11.	216D	1.	↓		↓	
12.	216S	93.	40.		40.	81.%
13.	217	-1.	<10.		<10.	
14.	218	-2.	↓		↓	
15.	219	-1.	↓		↓	

INITIALS MW

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TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: TL
PROJECT/BATCH: BS9-9

CUP	LAB #	ABS	UNADJ. CONC. ug/L	D.F.	ADJ. CONC. ug/L	COMMENTS
16.	220	-1.	<10.		<10.	
17.	221	1	↓		↓	
18.	Blk	-2.	↓		↓	
19.	20 ppb	152.	68.		68	97%
20.	222	-1	<10.		<10.	
21.	223	-1.	↓		↓	
22.	224	-1	↓		↓	
23.	225	-1.	↓		↓	
24.	226	-2.	↓		↓	
25.	227	-1.	↓		↓	
26.	228	0.	↓		↓	
27.	229	-2.	↓		↓	
28.	230	-1	↓		↓	
29.	Blk	-1.	↓		↓	
30.	20 ppb	153.	69.		69.	98.7%
31.						
32.						
33.						
34.						
35.						

INITIALS AW

Versar, Inc.

Project B54-9 Metal Tl

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CUP	LAB #	ABS	ug/L UNADJ. CONC.	D.F.	ug/L ADJ. CONC.	COMMENTS
1.	231	-2.	<10.		<10.	
2.	232	-1.				
3.	233	-2.				
4.	234	-1.				
5.	235	0.				
6.	236	-1				
7.	BK	-1.				
8.	70 ppb	158	71.		71.	101%
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
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INITIALS AW

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Page 1/2

VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Pb
PROJECT/BATCH: 854-9
216-236
DATE: 6.1.84

INSTRUMENT: 2
WAVELENGTH: 283.9 nm SLIT: 0.7
LIGHT SOURCE: ___ EDL ✓ HCL
CURRENT/POWER: 10
BACKGROUND CORRECTION: ✓

TUBE: N REP: 1
PURGE: ~25 AR ___ N_2
PIPET VOL: 20 µl

STANDARD PREP. DATE: 6.1.84

SPIKE = 50 ppb

Note DB

Step	1	2	3	4	5
Temp °C	110	500	2300		
Ramp (s)	/	/	/		
Hold (s)	25	20	6		
Boc (s)					
Rec (s)					

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	Blk	-1.				9989
2.	50 ppb	122.				
3.	20	52.				
4.	10	29.				
5.	5	12.				
6.	Blk	0.				
7.	EPA 581	102.	41.		41.	45 ppb 92%
8.	Blk (DB)	36.	14.		14.	
9.	216	6	<5.		<5.	
10.	216 D	3.	<5.		<5.	
11.	216 S	54.	21.	12	42.	86%
12.	217	57.	22.		22.	
13.	218	24.	9.		9.	
14.	219	5.	<5.		<5.	
15.	220	6.	<5		<5.	

INITIALS JM

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VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Pb
PROJECT/BATCH: B54-9

CUP	LAB #	ABS	UNADJ. CONC. ug/L	D.F.	ADJ. CONC. ug/L	COMMENTS
16.	221	13.	<5.		<5.	
17.	222	10	↓		↓	
18.	Blk	-1.	↓		↓	
19.	50 ppb	116	47.		47.	94%
20.	223	21.	8.		8.	
21.	224	45.	18.		18.	
22.	225	7.	<5.		<5.	
23.	226	8.	↓		↓	
24.	227	13.	↓		↓	
25.	228	7.	↓		↓	
26.	229	7.	↓		↓	
27.	230	17.	6.		6.	
28.	231	9.	<5.		<5.	
29.	Blk	-1.	<5.		<5.	
30.	50 ppb	115.	47.		47.	94%
31.						
32.						
33.						
34.						
35.						

INITIALS MW

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Versar Inc.

Project 834-9 Metal Pb

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CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	232	5	<5.		<5.	
2.	233	183	—		—	
3.	234	23	8		8	
4.	235	18	7		7	
5.	236	5	<5.		<5.	
6.	Blk	7	<5.		<5.	
7.	50 ppb	111	45.		45	90%
8.	238	107	43.	12	86	
9.	50 ppb	118	48		48	96%
10.	* DB	40	15.		15	(Check)
11.						
12.		* run	with 834-10			
13.						
14.						
15.						
16.						
17.						
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INITIALS (JW)

Versar Inc.

VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Sb
PROJECT/BATCH: 854-9
DATE: 5.31.84

INSTRUMENT: 3
WAVELENGTH: 217.6 nm SLIT: 0.7
LIGHT SOURCE: ✓ EDL ___ HCL
CURRENT/POWER: 8
BACKGROUND CORRECTION: D_2

TUBE: W REP: 1
PURGE: 0 AR ___ N_2
PIPET VOL: 20 µl

STANDARD PREP. DATE: 5.9.84
SPIKE = 100ppb = 20µlx5ppm / 1000µl

Step	1	2	3	4	5
Temp °C	110	1000	2700		
Ramp (s)	10	5	1		
Hold (s)	20	10	5		
Boc (s)		6			
Rec (s)					

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	100ppb	142				conc=9987
2.	80ppb	115				
3.	30	78				
4.	70	32				
5.	CB	0				
6.	EPA581#2	137	95.		95.	(97%) 97%
7.	CB	5	<20.		<20.	
8.	DB	2				
9.	216	2				
10.	216MP	-1				
11.	217	-1				
12.	218	-1				
13.	219	1				
14.	220	1				
15.	221	-1				

INITIALS ___

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VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Sb
PROJECT/BATCH: 854-9

CUP	LAB #	ABS	UNADJ. CONC. ug/L	D.F.	ADJ. CONC. ug/L	COMMENTS
16.	222	1	<20.		<20.	
17.	223	2	↓		↓	
18.	BLK.	1	↓		↓	
19.	100ppb	152	105.		105.	105%
20.	224	3	<20.		<20.	
21.	225	2	↓		↓	
22.	226	1	↓		↓	
23.	227	-1	↓		↓	
24.	228	1	↓		↓	
25.	229	2	↓		↓	
26.	230	2	↓		↓	
27.	231	0	↓		↓	
28.	232	2	↓		↓	
29.	233	-3	↓		↓	
30.	BLK.	4	↓		↓	
31.	100ppb	160	111.		110.	110%
32.	234	2	<20			rerun
33.	235	2	↓			↓
34.	236	-1	↓			
35.	216 SBK.	142	98.6			
36.	BLK.	1	<20.			
37.	100ppb	170	118			

INITIALS

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Versar Inc.

Project 854-9 Metal Sb

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CUP	LAB #	ABS	µg/L UNADJ. CONC.	D.F.	µg/L ADJ. CONC.	COMMENTS
1.	100µl	180				corr: 9994
2.	80	147				
3.	50	97				
4.	20	43				
5.	CB	-3				
6.	CAA 381 #2	162	88.6		89.	(979µl)
7.	CB	4	<20.		<20.	
8.	234	3	↓		↓	
9.	235	3				
10.	236	-1				
11.	216 sek.	166	90.9		91.	
12.	DLK.	3	<20.		<20.	
13.	100µl	179	98.2		98.	982.
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INITIALS

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VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: As DATE: 5.10.84
PROJECT/BATCH: 2614-1
216-36

INSTRUMENT: 5 TUBE: LP REP: 1
WAVELENGTH: 1 nm SLIT: 0.7 PURGE: 70 AR ____ N_2
LIGHT SOURCE: ✓ EDL ____ HCL PIPET VOL: 20 µl
CURRENT/POWER: A
BACKGROUND CORRECTION: ZAA

STANDARD PREP. DATE: 5.4.84
SPIKE = 100. 50 µl : 500 mL Vol.

Step	1	2	3	4	5
Temp °C	160	1200	1600	2400	2400
Ramp (s)	1	1	0	1	1
Hold (s)	30	15	6	2	12
Boc (s)		6			
Rec (s)		15	0		

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	100 ppb	291				9999
2.	50.	116				
3.	20.	44.				
4.	10.	23				
5.	Blk	1.				
6.	EPA 3252	189	82.		82.	81 ppb 101%
7.	Blk	-1.	<10.		<10	
8.	DB	-3.				
9.	216	0.				
10.	216 D	1.				
11.	216.5	112.	98.	12	96.	96.%
12.	217	0.	<10.		<10.	
13.	218	2.				
14.	219	1.				
15.	220	-1.				

INITIALS [illegible]

021357

Versar Inc.

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VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: As
PROJECT/BATCH: 2554-9

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
16.	221	1.	<10		<10	
17.	222	0.				
18.	Blk	-1				
19.	100 ppb	213.	92.		92.	92.%
20.	223	0	<10.		<10.	
21.	224	0				
22.	225	-2.				
23.	226	-1				
24.	227	-1.				
25.	228	-1				
26.	229	-1				
27.	230	0.				
28.	231	-1.				
29.	232	2.				
30.	Blk	1				
31.	100 ppb	213.	92.		92.	92.%
32.	233	3.	<10.		<10.	
33.	234	10	4.		<10.	
34.	235	10.	4.		<10.	
35.	236	2.	<10.		<10.	
36.	100 ppb	204.	EB.		EB.	EB.%

INITIALS [signature]

021358

Versar Inc.

VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Se
PROJECT/BATCH: 1549

DATE: 6-1-84

INSTRUMENT: 5
WAVELENGTH: 196.3 nm SLIT: 0.7
LIGHT SOURCE: V EDL ___ HCL
CURRENT/POWER: 6
BACKGROUND CORRECTION: Zee

TUBE: LV REP: 1
PURGE: 0 AR ___ N_2
PIPET VOL: 20 µl

STANDARD PREP. DATE: 5-11-84
SPIKE = 50ppb: $\frac{25\mu l \times 1000 ppb}{1000\mu l} \times 2$

Step	1	2	3	4	5
Temp °C	160	1000	2000	2500	20
Ramp (s)	2	5	0	1	1
Hold (s)	33	15	6	3	12
Boc (s)	-	6	-	-	-
Rec (s)					

CUP	LAB #	ABS	UNADJ. CONC. µg/L	D.F.	ADJ. CONC. µg/L	COMMENTS
1.	50ppb	210				r = 1.0
2.	20	81				
3.	10	38				
4.	5	17				
5.	CB	-6				
6.	378 #2	75	18.6		18.6	(18.) 103% rec
7.	CB	-6	< 2.0		< 2.0	
8.	DB	-4	↓		↓	
9.	216	-4				
10.	216D	-5	↓		↓	
11.	216S	103	25.1	/2	50.2	100% rec.
12.	217	12	4.0		4.0	
13.	218	-4	< 2.0		< 2.0	
14.	219	-6	↓		↓	
15.	220	-6	↓		↓	

INITIALS SH

004064 30

021353

Versar Inc.

VERSAR INC.
TRACE METALS SECTION
FLAMELESS AAS ANALYSIS LOG SHEET

ELEMENT: Se
PROJECT/BATCH: 854-9

CUP	LAB #	ABS	UNADJ. µg/L CONC.	D.F.	ADJ. µg/L CONC.	COMMENTS
16.	221	-7	<2.0		<2.0	
17.	222	-5	↓		↓	
18.	CB	-7	↓		↓	
19.	50	208	49.5		49.5	99% rec.
20.	223	5	2.4		2.4	
21.	224	7	2.8		2.8	
22.	225	-3	<2.0		<2.0	
23.	226	-5	↓		↓	
24.	227	10	3.5		3.5	
25.	228	2	<2.0		<2.0	
26.	229	-2	↓		↓	
27.	230	-7	↓		↓	
28.	231	36	9.6		9.6	
29.	232	-6	<2.0		<2.0	
30.	CB	-8	↓		↓	
31.	50	219	52.1		52.1	104% rec.
32.	233	-4	<2.0		<2.0	
33.	234	0	↓		↓	
34.	235	2	↓		↓	
35.	236	-4	↓		↓	

INITIALS SH

021360

Versar Inc.

Project 854-9 Metal Se

Page 3/3

CUP	LAB #	ABS	µg/L UNADJ. CONC.	D.F.	µg/L ADJ. CONC.	COMMENTS
1.	CB	-6	<2.0		<2.0	
2.	50	211	50.2		50.2	100% rec.
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
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22.						
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29.						
30.						
31.						
32.						
33.						
34.						
35.						

INITIALS SH

021361

05-06-84 NITRITE (NO_2) MANUAL 353.2 524-49,10

STANDARDS	READINGS
1ml	2.4
0.05 mM	6
0.10 "	9.8
0.20 "	35.8
1.0 "	64
1.5 "	98.2

CORR: 0.99119

SAMPLE # - DATE (PM)	READINGS	UNADJ. (PM)	D.F.	ADJ. (PM)	COMMENTS
BLANK	3.0	<0.05			
1PPM	69.3	1.0			100% RECOVERY
237	5.1	<0.05			
238 DUP.	5.3	<0.05			
239 SPK. (1PPM)	63.7	0.94			94% RECOVERY
240	3.2	<0.05			
241	3.2	<0.05			
242	3.1	<0.05			
243	3.1	<0.05			
244	3.3	<0.05			
	3.0	<0.05			
1PPM	64.4	0.96			96% RECOVERY
245	3.0	<0.05			
246	2.9	<0.05			
247	2.8	<0.05			
248	2.8	<0.05			
249	5.6	<0.05			
250	3.0	<0.05			
251	2.9	<0.05			
252	2.9	<0.05			
253	4.3	<0.05			
254	8.7	0.08			

05-06-84

003067 90
021362

05-09-84

NITRITE (NO_2)

SAMPLE # - ID (PPM)	READING	UNADJ. (PPM)	D.F.	ADJ. (PPM)	COMMENTS
1 PPM	65.1	0.98			98% RECOVERY
255	11.4	0.13			
255 DUP.	11.5	0.13			
255 SPK. (1 PPM)	50.4	1.2			107 % RECOVERY
256	4	<0.05			
257	3.1	<0.05			
1 PPM	65.7	0.98			
372	3.1	<0.05			
372 DUP.	3.1	<0.05			
372 SPK. (1PPM)	67.2	1.0			100% RECOVERY
373	3	<0.05			
374	4.2	<0.05			
375	3.2	<0.05			
376	3.1	<0.05			
377	3.0	<0.05			
378	4.5	<0.05			
379	3.2	<0.05			
1PPM	64.9	0.97			97% RECOVERY
380	4.5	<0.05			
381	3.0	<0.05			
382	4.4	<0.05			* SIGNAL INTERFERENCE
383	4.7	<0.05			
384	4.8	<0.05			
385	5.1	<0.05			
1PPM	63	0.94			94% RECOVERY

05-09-84

021363

3/30/84 Ammonium 854.0 - 1, 10, 11 33

Standards	Replicates
1.0 ppm	46.0
0.5	34.0
0.1	16.5
0.05	10.0
Blk	8.5

Corr: .7777

Lab #/Units	Response	Corr. Amount (ppm)	Dil	Final Amount (Orig. ppm)	Comments
WP481-3 (0.56 ppm)	37.75	0.5257			101% recovery on 1 conc
Blk	8.5	< 0.05		< 0.05	
300	7.0				
301	6.5				
301 Dup	5.0				
301 Spike (0.5 ppm)	48.5	0.4606			94.1% recovery
302	7.0	< 0.05		< 0.05	
303	5.0				
304	4.5				
305	4.5				
306	44.25	0.4124		0.41	
307	5.0	< 0.05		< 0.05	
0.5 ppm	50.0	0.4777			93.5% recovery
308	8.5	< 0.05		< 0.05	
309	4.5				
310	5.0				
311	5.0				
312	4.0				
313	5.5				
314	4.0				
315	5.0				
316	4.0				
317	60.25	0.5741	1/10	5.74	
0.5 ppm	51.25	0.4919			98.4% recovery
318	77.5	0.8128	1/20	16.26	
317	83.75	0.8611	1/20	17.22	
320	33.0	0.3118	1/20	6.24	

Lynn Jones 4/2/84

004068

021364

5/30/84 Ammonia 804.0 · 4, 10, 11

Lab # / Site	Injection	Uncorrected (mg/L)	Dil.	Adjusted (mg/L)	Comment
310 Dup	6.0	< 0.05		< 0.05	
310 Spike (0.5ppm)	48.25	0.4578			91.5% recovery
0.5ppm	51.0	0.4880			97.8% recovery
330	70.5	0.7106	1/20	14.2.	
331	77.0	0.7844	1/20	15.7.	
332	20.0	0.1368	1/20	2.74	
333	42.5	0.0317		0.03	
334	8.0	< 0.05		< 0.05	
334 Dup	8.0	↓		↓	
334 Spike (0.5ppm)	53.0	0.5118			102% recovery
335	5.0	< 0.05		< 0.05	
336	24.5	0.1780	1/20	3.76	
337	30.0	0.4777	1/20	23.88	
0.5ppm	51.5	0.4947			98.9% recovery
338	23.25	0.1738		0.17	
339	3.0	< 0.05		< 0.05	
340	60.5	0.5970	1/20	59.7.	
341	6.0	< 0.05		< 0.05	
342	19.0	0.1233	1/20	2.51	
343	25.5	0.1993	1/20	39.87	
0.5ppm	51.5	0.4947			98.9% recovery
468	12.5	0.0971		0.10	
469	31.0	0.2618		0.26	
470	73.0	0.7390	1/10	7.39	
471	6.5	< 0.05		< 0.05	
472	6.0	↓		↓	
472 Dup	3.0				
472 Spike (0.5ppm)	47.0	0.4436			88.7% recovery
0.5ppm	50.75	0.4862			97.2% recovery

Lynn Jones 6/8/84

[redacted]

00A070

30

021365

06-04-84 SULFATES 554-9,10

STANDARDS	RESPONSE
PB	0
1 PPM	2
5 "	14
10 "	28
20 "	56
30 "	82
40 "	100

CORR: 0.9971

VIAL # & SPL (PPM)	RESPONSE	UNADJ (PPM)	D.F.	ADJ. (PPM)	COMMENTS
BLANK	0	L1.			
REF. STD. WT #62 #1 (93.6 PPM)	58	22.0	1/4	88.	94% RECOVERY
237	28	10.2	1/2	20.4	
238	18	6.3			
239	18	6.3			
239 DUP.	18	6.3			
239 SPK (100 PPM)	45	16.9			100% SPK. RECOVERY
240	27	9.9			
241	3	1.			
242	13	4.4			
243	6	1.6			
244	38	14.2			
REF. STD. WT #62 #1 (93.6 PPM)	59	22.4	1/4	89.6	96% RECOVERY
245	64	24.3			
246	55	20.8			
247	33	12.2			
248	75	28.6			
249	18	6.3			
250	39	14.4			
251	1	L1.			
252	57	21.6		X: 21.8	
252 DUP.	58	22.0			

06-06-84 021363

06-04-64 SULFATES 554-9,10

UNKN # + SPK (PPM)	TURBIDITY	UNKN. (PPM)	D.F.	ADJ. (PPM)	COMMENTS
252 SPK. (40 PPM)	82	31.4			
PUR. STD. WP 562 #1 (93.8 PPM)	62	23.5	1/4	94.	100 % RECOVERY
253	21	7.5			
254	9	2.8			
255	62	23.5	1/2	47.	
256	9	2.8	1/4	11.2	
257	9	2.8			
372	7	2.0			
373	6	1.6			
374	83	31.7			
375	4	1.			
376	22	7.9			
PUR STD. WP 562 #1 (93.8 PPM)	61	23.1	1/4	92.4	99 % RECOVERY
376 DUP.	22	7.9			
376 SPK (10 PPM)	49	18.5			106% RECOVERY
377	22	7.9			
378	84	32.1			
379	64	24.3			
380	100	38.4			
381	66	25.1			
382	58	22.0	1/20	440.	
383	38	14.2	1/4	56.8	
384	33	12.2			
385	37	13.8			
PUR. STD. WP 562 #1 (93.8 PPM)	60	22.8	1/4	91.2	97% RECOVERY

004072

06-06-64

021367

5/23/84
5/31/84

$NO_2 / NO_3 - NO_2$

834.0-9

Standards	Response
1.0 ppm	97.75
0.5	53.75
0.1	15.75
0.05	10.25
Blk	4.75

Corr: .9996

Lab #/Spike	Response	Unadjusted conc (ppm)	Adjusted conc (ppm)	$[NO_2]$ *	$[NO_3]$	Comment
WP 481 #3 (0.70 ppm)	73.5	0.7296				104% recovery 5 x conc
Blk	4.75	< 0.05	< 0.05	< 0.05	< 0.05	
237	4.0	↓	< 0.05	< 0.05	< 0.05	
237 Dup	4.0		< 0.05	< 0.05	< 0.05	
237 Spike (0.5 ppm)	46.0	0.4330				86.6% recovery
238	34.25	0.3063	0.31	< 0.05	0.31	
239	49.5	0.4707	0.47	< 0.05	0.47	
240	3.0	< 0.05	< 0.05	< 0.05	< 0.05	
241	4.5	↓	< 0.05	< 0.05	< 0.05	
242	2.0		< 0.05	< 0.05	< 0.05	
0.5 ppm	46.5	0.4384				87.7% recovery
254	4.0	< 0.05	< 0.05	0.08	< 0.05	
255	3.5	↓	< 0.05	0.13	< 0.05	
256	5.5		< 0.05	< 0.05	< 0.05	
257	4.0		< 0.05	< 0.05	< 0.05	
0.5 ppm	43.25	0.4033				80.7% recovery

* See Nomura BK XVII p54-55

(cont.)

Lynn Jones 6/1/84

021363

5/31/84 NO_2 / NO_3 - NO_2 854.0 - 7 pt 2

Standards	Response
1.0 ppm	95.25
0.5	50.5
0.1	17.25
0.05	11.5
BLK	5.5

Corr: .9996

Lab #/Spike	Response	Unadjusted conc (ppm)		Adjusted conc (ppm)	$[NO_3]^*$	$[NO_3]$	Comment
WP 481 #5 (0.70 ppm)	71.75	0.7349					105% recovery 5k conc
BLK	5.5	< 0.05		< 0.05	< 0.05	< 0.05	
243	12.5	0.0639	1/20	1.28	< 0.05	1.28	
243 Dup	12.5	0.0639	1/20	1.28			
245 Spike (0.5 ppm)	53.5	0.5482	1/20				92.8% recovery
244	41.0	0.3866	1/20	7.73	< 0.05	7.73	
245	34.0	0.3073	1/20	6.15	< 0.05	6.15	
246	30.5	0.2677	1/20	5.35	< 0.05	5.35	
247	33.5	0.3243	1/20	6.49	< 0.05	6.49	
248	29.5	0.2564	1/20	5.13	< 0.05	5.13	
249	37.75	0.3498	1/20	7.00	< 0.05	7.00	
250	32.5	0.2904	1/20	5.81	< 0.05	5.81	
0.5 ppm	50.0	0.4885	1/20				97.7% recovery
251	12.5	0.0639	1/20	1.28	< 0.05	1.28	
252	34.0	0.3074	1/20	6.15	< 0.05	6.15	
253	9.5	< 0.05		< 0.05	< 0.05	< 0.05	
0.5 ppm	49.5	0.4829					96.6% recovery

* See Narrata BK XVII p54-55

000074

Lynn Jones 6/1/84

021369

5/28-29/84 $CO_3^{=} + HCO_3^-$ 854.000-8,9

Using 0.02 N H_2SO_4

Lab # + Split (mg/l)	Sample Vol (ml)	Beg pH	Ending pH	ml of Std H_2SO_4	Report $CO_3^{=}$ (mg/l)	Report HCO_3^- (mg/l)	% Recovery
~~A-BLK~~	~~50~~	~~4.50~~					
BLK	50	5.79	4.50	0.07	—	—	
Std 100 mg/l HCO_3^-	50	8.47	↓	4.00	—	96.	96%
106	50	5.26	4.50	0.06	<1.0	<1.0	
107	50	5.52		0.26	<1.0	4.6	
108	50	6.27		0.63	<1.0	14.	
109	50	5.38		0.21	<1.0	3.4	
110	50	5.78		1.40	<1.0	32.	
111	50	7.36		9.53	<1.0	231.	
112	50	6.23		0.81	<1.0	18.	
113	50	7.77		3.42	<1.0	82.	$\bar{x}$ = 82.
113 dup	50	7.72		3.40	<1.0	81.	
113 spk 100 mg/l HCO_3^-	25	8.02		3.70	<1.0	177.	95%
114	50	5.89		0.53	<1.0	11.	
115	50	6.04		0.85	<1.0	19.	
116	50	6.14		24.08	<1.0	586.	
117	50	6.31		1.50	<1.0	35.	
118	50	7.10		16.70	<1.0	406.	
119	50	5.77		24.86	<1.0	605.	
120	5	5.79	↓	34.42	<1.0	8384.	
Std 100 mg/l HCO_3^-	50	8.49	4.50	4.05	—	97.	97%
BLK	50	5.71	4.50	0.08	—	—	
Std 100 mg/l HCO_3^-	50	8.48		4.12	—	99.	99%
258	50	6.58		4.91	<1.0	116.	
259	50	6.47		0.57	<1.0	12.	
260	50	7.11		3.11	<1.0	74.	$\bar{x}$ = 74.
260 dup	50	7.09		3.10	<1.0	74.	
260 spk 100 mg/l HCO_3^-	25	7.45		3.63	<1.0	~~87~~ 173.	
261	50	6.11		0.40	<1.0	7.8	
262	50	7.01		4.15	<1.0	99.	
263	50	6.21		1.65	<1.0	38.	
264	50	5.84	↓	0.17	<1.0	2.2	

80.1 mg/l

Ray Anderson
6/1/84

5/28-21/84 $CO_3^=$ & HCO_3^- 854.000-8, 9

Lab # - Split (mg/l)	Sample Vol (ml)	Beg pH	End. pt pH	ml of std H_2SO_4	Report $CO_3^=$ (mg/l)	Report HCO_3^- (mg/l)	% Recovery
265	50	6.21	4.50	0.91	<1.0	20.	
266	50	6.26		1.25	<1.0	29.	
267	50	6.28		0.67	<1.0	14.	
268	50	5.86		0.50	<1.0	10.	
269	50	6.35		0.83	<1.0	18.	
270	50	6.26		0.83	<1.0	18.	
271	50	6.20		0.12	<1.0	21.	
272	50	5.80		0.35	<1.0	6.6	
273	50	6.06		0.44	<1.0	8.8	
274	50	6.27		1.27	<1.0	29.	
275	50	5.91		6.83	<1.0	165.	
276	25	6.80		38.23	<1.0	1862.	
277	10	6.88		12 61	<1.0	1529.	
278	50	6.80	↓	11.27	<1.0	273.	
262 dup	50	6.98	4.50	4.13	<1.0	99.	$\bar{x}$ = 99.
262 spk 100 mg/l HCO_3^-	25	7.48	↓	4.09	<1.0	196.	179
Std 100 mg/l HCO_3^-	50	8.47	4.50	4.10	<1.0	98.	98 %

004076

Ray Anderson 6/1/84

021371

5/9/91 TDS 854.0009

Sample #	ID	Sample Vol	Initial Wt	Final Wt.	Difference	Reported
Method Zero			00.0000	00.0000		
Low Standard			00.9996	00.9996		
Blank	12	100	64.4132	64.4133	0.0001	1.
WP7892	17	100	~~96.7457~~ 93.5779	93.6055	0.0276	276. 92% Recovery 300. Given.
258	31	100	113.9092	113.93~~54~~ 49	0.0257	257.
259	S3		70.6519	70.6~~580~~	0.0061	61.
260	S2		73.3574	73.3700	0.0126	126.
261	S4		68.9068	68.9124	0.0056	56.
262	S5		68.2379	68.2509	0.0130	130.
263	24		69.2489	69.2562	0.0073	73.
264	L2	100	80.8869	80.8903	0.0034	34.
265	X3		93.5156	93.5260	0.0104	104.
266	B		~~80~~ 81.0231	81.0350	0.0119	119.
267	36		104.4129	104.4208	0.0079	79.
268	C		81.5799	81.5896	0.0097	97.
269	54		92.8844	92.8943	0.0099	99. $> \bar{x} = 102$
269 Dup	51		98.2643	98.2747	0.0104	104.
270	~~8~~		90.1275	90.1394	0.0117	117.
271	~~100~~		94.2177	94.2276	0.0099	99.
272	N		95.5077	95.5105	0.0028	28.
273	F	100	94.7975	94.8060	0.0085	85.
274	-		81.8956	81.9007	0.0051	51.
275	R		80.9052	80.9335	0.0283	283.
276	X1		92.9080	93.1180	0.2100	2,100
277	K		106.7604	106.8773	0.1169	1,169
278	12		64.4095	64.4563	0.0468	468. $> \bar{x} = 479$
278 Dup	5		48.5515	48.6005	0.0490	490.

000077

Jay C. F 5/11/91

021372

5/5-5/9/84 BOD5 #seed 8541.000-9

Sample	ID #	(ml) Sample V	T°C	DO$_i$	T°C	DO$_5$	BOD	comments
Blank	49	—	21°	9.3	19.5°	8.6	- <2	
Blank	101	2*	21°	8.5	19°	8.3	- <2	
Seeded BIK	262	25*	22°	8.0	19°	5.7	27.6 ~~28.6~~	
Seeded BIK	448	25*	21°	8.2	19.5°	5.8	28.8 ~~28.8~~	
EPA 782#2	253	10(2*)	21°	8.1	19.5°	6.5	42.8	99% recovery
279	210	100	19°	7.1	19°	6.1	- <6	
	341A	30	20°	8.3	19°	7.7	-	
	51	10	21°	8.5	19°	8.4	-	
	40	6	21°	8.8	19.5°	8.3	-	
280	489	300	17°	~~8.8~~ 9	19.5°	9.4	- <2	
	251	100	18°	9.0	19°	9.3	-	
	572	30	20°	8.6	19°	8.6	-	
281	267	300	18°	6.7	19°	6.4	- <2	
	275	100	18°	7.9	19°	7.7	-	
	48	30	20°	8.3	19.5°	8.2	-	
282	285	300	17°	10.4	19°	9.5	- <2	
	412	100	18°	9.2	19°	8.8	-	
	64	30	20°	8.6	19°	8.5	-	

Sally A. Judd
5/23/84

021373

5/3-5/9/84 BOD 5 85-1000 4

Sample	ID #	Sample V (ml)	T°C	DO, (ppm)	T°C	DO5 (ppm)	BOD (mg/l)	comments
283	170	300	17°	10.8	19°	9.9	- <2	
	53	100	19°	9.2	19°	9.0	-	
	32	30	20°	8.9	19°	8.8	-	
284	297	300	17°	8.9	19°	8.4	- <2	
	239	100	20°	8.5	19°	7.6	-	
	23	30	21°	8.4	19°	8.0	-	
285	233	100	20°	8.9	19°	8.5	- 4	
	39	30	21°	8.6	19°	7.9	-	
	123	10	21.5°	8.6	19°	7.9	-	
286	54	300	18°	9.8	19°	8.9	- <2	
	39A	100	19°	9.0	19°	8.4	-	
	100	30	21°	8.7	19.5°	8.1	-	
287	204	300	18°	9.1	19.5°	8.4	- <2	
	409	100	20°	8.7	19.5°	8.3	-	
	358	30	21°	9.0	19.5°	8.5	-	
288	424	300	17°	10.8	19.5°	9.7	- <2	
	16A	100	20°	9.5	20°	9.1	-	
	575	30	21°	8.7	20°	8.5	-	

004073

Sally Ann 1/2 021374
5/10/84

5/5 - 9/84 BOD_5 854.000 · 9

Sample	ID #	(ml) Sample V	T°C	(ppm) DO_i	T°C	(ppm) DO_5	(mg/l) BOD	comments
289	473	300	17°	9.4	20°	8.8	- <2	
	102	100	20°	9.1	20°	8.8	-	
	235	30	21°	8.9	20°	8.4	-	
290	106	300	18°	9.6	20°	8.8	- <2	
	177	100	20°	9.0	20°	8.8	-	
	231	30	21°	8.6	20°	8.5	-	
291	187	300	18°	10.0	20°	9.3	- <2	
	275A	100	20°	9.1	20°	8.8	-	
	546	30	21°	8.8	20°	8.5	-	
292	406	300	17°	10.4	20°	9.5	- <2	
	195	100	20°	9.2	20°	9.2	-	
	117	30	21°	8.7	20°	8.5	-	
293	119	300	17°	9.5	20°	9.0	- <2	
	36	100	20°	9.0	20°	8.7	-	
	72	30	21°	8.9	20°	8.5	-	
294	206	300	20°	9.6	20°	8.8	- <2	
	306A	100	21°	8.9	20°	8.5	-	
	529	30	22°	8.6	20°	8.1	-	

Sally Ann Reed 30
5/23/84

021375

5/5 - 5/7/84 BOD_5

854.000 · 9

Sample	ID #	Sample V (ml)	T°C	DO,	T°C	DO_5	BOD	comments
295	352 A	300	19°	8.4	20°	8.0	- AG	<2. KW
	209	100	21°	8.5	20°	8.2	-	
	381	30	22°	8.5	20°	8.6	-	
296	57	100	22°	6.1	20°	0.4	-	
	238	30	22°	7.7	20°	0.4	-	
	129	10	22°	8.2	20°	4.9	93.4	$\bar{x}$ = 92.0
	251A	6	22°	8.3	20°	6.3	90.6	
	58	1	22°	8.4	20°	8.2	-	
296 (Dup)	133	100	22°	6.0	20°	0.5	-	
	244	30	22°	7.4	20°	0.3	-	
	37	10	22°	8.1	20°	4.5	102	$\bar{x}$ = 96.3
	12A	6	22°	8.3	20°	6.3	90.4	
	165	1	22°	8.3	20°	8.2	-	
297	78A	30	22°	5.5	20°	0.4	-	
	312	10	22°	7.0	20°	0.4	-	
	432	6	23°	7.4	20°	0.4	-	
	415	1	23°	7.9	20°	6.8	274.	MB
298	233A	30	23°	6.9	20°	6.6	- <20	<20 KW
	155	10	22°	7.1	20°	7.7	-	

00408 I.

30

Sam Ann 5/23/84

021376

5/5 - 5/9/84 BOD_5

851.000 · 7

Sample	ID #	(ml) Sample V	T°C	(ppm) DO_i	T° C	(ppm) DO_f	(mg/l) BOD	Comments
298 (rinse)	194	6	22.5°	7.2	20°	8.0	-	
	102A	1	22.5°	7.2	20°	8.2	-	
299	342	100	22°	7.0	20°	2.5	7.86	
	281A	30	23°	7.1	20°	6.2	-	
	585	10	23°	7.1	20°	7.1	-	
	306A	~~36~~	23°	7.2	20°	7.1	-	
			23°	7.0	20°	7.0	-	

004082

021377

5/23/84

5/31/84 Chlorides 85-1 000-9

$Hg(NO_3)_2$: 0.0127 N

Standard · WWP 882 #1 83.3 ppm Cl

Sample	Sample V (ml)	Titrant V	unadj. conc (ppm)	adj. conc	comments
Blank	100 DI	0.65	2.93	2.9	
Stand	40	8.03	83.1	83.1	99% recovery
237	50	9.82	82.8	82.6	
238	100	3.45	12.6	12.6	
238 (Dup)	100	3.47	12.7	12.7	RPD: 0.8%
238 (Spk)	100	5.45	21.6	21.6	89.5% recovery 2 mL 500 ppm Cl
239	50	2.40	7.88	~~7.9~~ 15.8	MD
240	100	1.20	<2.9 2.48	~~<2.9~~ 2.5	MD
241	100	1.30	2.93	2.9	
242	100	0.75	< 2.9	~~<2.9~~ <1	MD
243	100	0.65	< 1	< 1	
244	100	3.12	11.1	11.1	
245	100	4.62	~~2.46~~ 17.9	~~2.46~~ 17.9	
246	100	3.35	13.1	13.1	
Stand	40	8.15	84.4	84.4	99% recovery
247	100	4.25	16.2	16.2	
248	100	3.45	12.6	12.6	

004083

Sally Ann Rudy 021378
6 6 84

5/31/84 Chlorides 831 000.9

Sample	Sample V (ml)	Titrant V	unadj. conc. (ppm)	adj. conc	comments
248 (Dup)	100	3.45	12.6	12.6	RPD = 0.0%
248 (SpK)	100	5.50	21.8	21.8	92% recovery 2mL 100 ppm Cl
249	100	5.63	22.4	22.4	
250	100	3.33	12.1	12.1	
251	100	0.95	< 2.9	~~2.9~~ 1.4	
252	100	3.95	14.9	14.9	
253	100	0.90	< 2.9	< 2.9	
254	50	3.20	23	23	
255	50	1.60	8.65	8.6	* v. turbid. crucible not clear
256	50	1.00	3.15	3.15	
257	25	9.60	161	161	
Stand	40	8.20	84.9	85	99.6 % recovery (100)

000084

Sally Ann 821379

6.6.84.

UNITS = UG/L ALT [illegible]54-9

LINE	CLASS	SAMPLE	BURN	MODE	DATE	TIME	AG	AL	AS	B	BA
1	1.X	AR	001	CO	84/ 5/23	23:21	-4.7035E-04	-4.6263E-03	-9.0838E-03	2.0031E-03	-2.1989E-04
2	1.X	DB	001	CO	84/ 5/23	23:24	-1.0768E-04	5.4413E-02	-9.5038E-03	4.4794E-03	8.0816E-04
3	WP475	EPA6	001	CO	84/ 5/23	23:26	-2.9391E-03	8.2537E-01	2.8556E-01	3.3851E-02	2.3303E-02
4	WP478	EPA4	001	CO	84/ 5/23	23:28	-5.8016E-04	4.8162E-03	4.6463E-03	5.6987E-02	2.4987E-02
5	WS378	EPA13	001	CO	84/ 5/23	23:41	3.2950E-02	3.0172E-02	3.7742E-02	3.9982E-02	3.6089E-01
6	5*18	INTER	001	CO	84/ 5/23	23:44	2.9222E-01	1.0175E+02	5.7637E-01	3.4459E-02	2.8870E-01
7	/10.	INTER	001	CO	84/ 5/23	23:47	2.9844E-02	1.0443E+01	5.7501E-02	-1.3930E-04	3.0465E-02
8	1.X	0216	001	CO	84/ 5/23	23:49	1.3080E-03	5.2542E-02	1.6285E-02	1.0637E-02	1.9809E+00
9	1.X	0216DP	001	CO	84/ 5/23	23:58	-7.9598E-04	4.7777E-02	1.8182E-02	2.0695E-02	1.9593E+00
10	1.X	0217	001	CO	84/ 5/24	1: 9	6.9172E-04	1.1109E-01	-1.3301E-02	7.9326E-03	4.8453E-02
11	1.X	0218	001	CO	84/ 5/24	1:11	2.5267E-04	4.1005E-01	-1.4935E-02	1.5568E-02	3.4519E-02
12	1.X	0219	001	CO	84/ 5/24	1:14	7.2205E-04	2.2281E-01	-1.6908E-02	1.3574E-02	2.8884E-02
13	WP475	EPA6	001	CO	84/ 5/24	1:18	-3.0214E-03	8.2159E-01	2.9808E-01	3.9096E-02	2.2681E-02
14	WS378	EPA13	001	CO	84/ 5/24	1:20	3.4191E-02	2.7995E-02	4.2653E-02	3.1983E-02	3.5963E-01
15	WP478	EPA4	001	CO	84/ 5/24	1:22	-5.5118E-04	-7.5250E-03	-7.2559E-04	5.8958E-02	2.4983E-02
16	1.X	0220	001	CO	84/ 5/24	1:25	-3.8259E-04	4.5846E-02	-3.3460E-03	9.4752E-03	5.0546E-04
17	1.X	0221	001	CO	84/ 5/24	1:32	-8.8785E-04	4.7659E-02	-4.0369E-03	1.8631E-02	4.7787E-02
18	1.X	0222	001	CO	84/ 5/24	1:35	-6.9456E-04	4.1188E-02	-1.0707E-02	1.7322E-02	2.6858E-02
19	1.X	0223	001	CO	84/ 5/24	1:38	-8.8012E-04	5.5095E-02	3.9163E-03	1.3475E-02	1.1234E-01
20	1.X	0224	001	CO	84/ 5/24	1:41	6.3889E-04	4.2196E-02	-2.2076E-02	1.4222E-02	9.7604E-02
21	1.X	0225	001	CO	84/ 5/24	1:44	6.1291E-04	5.0074E-02	-6.6120E-03	4.9670E-03	7.1987E-02
22	1.X	0226	001	CO	84/ 5/24	1:46	-3.2907E-04	4.1600E-02	-2.0490E-02	8.2361E-03	1.1068E-01
23	1.X	0227	001	CO	84/ 5/24	1:48	-2.0108E-03	3.2542E-02	-6.7951E-03	9.9692E-03	1.1451E-01
24	1.X	0228	001	CO	84/ 5/24	1:51	4.5858E-04	3.9021E-02	-5.5335E-03	1.2629E-02	6.9471E-02
25	1.X	0229	001	CO	84/ 5/24	1:53	4.2899E-06	4.3264E-02	3.5422E-04	1.2219E-02	3.5533E-02
26	WP475	EPA6	001	CO	84/ 5/24	1:58	-1.0589E-03	8.0693E-01	2.8878E-01	3.4847E-02	2.1733E-02
27	WS378	EPA13	001	CO	84/ 5/24	2: 1	3.3362E-02	2.6737E-02	2.6221E-02	3.3733E-02	3.5963E-01
28	WP478	EPA4	001	CO	84/ 5/24	2: 3	-2.6509E-03	-1.2535E-02	-2.1581E-02	6.4471E-02	2.4700E-02
29	1.X	0230	001	CO	84/ 5/24	2: 5	6.1655E-04	4.8323E-02	-1.5296E-02	8.2359E-03	1.9286E-02
30	1.X	0231	001	CO	84/ 5/24	2: 8	-3.2329E-04	4.0753E-02	7.5618E-03	7.4370E-03	1.9849E-01
31	1.X	0232	001	CO	84/ 5/24	2:11	-8.9385E-04	4.6986E-02	-1.1162E-04	2.3460E-02	3.8400E-02
32	1.X	0233	001	CO	84/ 5/24	2:14	3.0593E-03	3.8521E-02	6.7836E-02	9.3319E-02	4.6199E-01
33	/10.	0233	001	CO	84/ 5/24	2:18	-8.6965E-04	-2.6270E-02	-3.3168E-03	9.0840E-03	4.7138E-02
34	1.X	0234	001	CO	84/ 5/24	2:21	3.3798E-03	1.9761E-01	9.9840E-02	1.3756E+00	3.5511E-01
35	/20.	0234	001	CO	84/ 5/24	2:25	-5.4260E-04	-6.1904E-03	1.0266E-03	7.2502E-02	1.9059E-02
36	1.X	0235	001	CO	84/ 5/24	2:28	8.1497E-05	1.4224E-01	3.7320E-02	1.1720E+00	1.7076E-01
37	/10.	0235	001	CO	84/ 5/24	2:33	-2.0065E-03	3.3991E-03	-1.0160E-02	1.1965E-01	1.7689E-02
38	1.X	0236	001	CO	84/ 5/24	2:36	1.2277E-04	3.4780E-02	2.5207E-02	2.5278E-01	6.5123E-02
39	WP475	EPA6	001	CO	84/ 5/24	2:39	-2.8805E-03	8.2107E-01	2.9551E-01	3.6836E-02	2.1946E-02
40	WS378	EPA13	001	CO	84/ 5/24	2:41	3.2858E-02	1.9655E-02	3.5581E-02	3.0975E-02	3.5644E-01
41	WP478	EPA4	001	CO	84/ 5/24	2:44	1.9373E-04	5.6653E-04	1.4842E-03	5.8977E-02	2.3907E-02
42	5*18	INTER	001	CO	84/ 5/24	2:58	2.9181E-01	1.0108E+02	5.8944E-01	4.5418E-02	2.8405E-01
43	/10.	INTER	001	CO	84/ 5/24	3: 1	3.0712E-02	1.0439E+01	4.5057E-02	8.1396E-03	2.9957E-02
44	1.X	0216SP	001	CO	84/ 5/24	3:16	8.8918E-02	2.5285E-01	4.4201E-02	2.2774E-01	4.2049E+00
45	/10.	0216SP	001	CO	84/ 5/24	3:19	6.6627E-04	9.3624E-03	1.1732E-02	-9.1567E-04	2.0148E-01

LINE	CLASS	SAMPLE	BE	CA	CD	CO	CR	CU	FE
1	1.X	AR	2.9855E-04	1.6448E-04	1.7847E-04	-3.0744E-03	-2.4958E-03	-1.3311E-03	-4.3998E-03
2	1.X	DB	-1.4923E-04	7.1997E-02	1.7828E-03	-2.0498E-03	1.8395E-03	5.1342E-04	2.8905E-02
3	WP475	EPA6	9.1277E-01	1.5936E-03	6.3640E-02	5.9737E-01	2.5443E-01	3.6126E-01	9.1942E-01
4	WP478	EPA4	4.9723E-04	3.1805E+01	-3.5111E-07	-3.0737E-03	1.9568E-02	-9.2217E-04	-2.6784E-03
5	WS378	EPA13	1.4886E-04	8.8508E-03	7.1194E-04	-3.0729E-03	4.7268E-02	-8.2058E-04	-3.3194E-03
6	5*18	INTER	9.8361E-02	1.9626E+02	2.7931E-01	2.7838E-01	2.8812E-01	2.9071E-01	1.8306E+02

021380

8	1.X	0216	-5.5035E-07	1.5740E+01	3.5471E-04	6.0532E-03	-3.6204E-04	5.5295E-04	9.0735E+00
9	1.X	0216DP	-1.4957E-04	1.5525E+01	8.8965E-04	2.1034E-03	-1.0128E-03	-1.6719E-04	8.9845E+00
10	1.X	0217	-4.2812E-07	4.4895E+00	5.3330E-04	2.0367E-03	2.3750E-03	6.7608E-01	1.1590E+00
11	1.X	0218	1.4879E-04	2.5554E+01	-5.3562E-04	3.3538E-04	5.2588E-03	1.4561E-02	6.0288E-01
12	1.X	0219	4.4701E-04	3.6973E+00	-3.9211E-03	-1.0944E-03	1.3045E-03	2.0885E-03	7.0199E+00
13	WP475	EPA6	9.0466E-01	5.8558E-03	6.5411E-02	5.9625E-01	2.4940E-01	3.5772E-01	9.1578E-01
14	WS378	EPA13	4.4710E-04	7.0467E-03	5.8792E-03	3.4143E-04	4.3719E-02	-1.4348E-03	-2.4114E-03
15	WP478	EPA4	-4.8929E-07	3.1663E+01	-1.4030E-06	-3.0722E-03	1.9689E-02	-1.7423E-03	-3.8594E-03
16	1.X	0220	2.9776E-04	9.8662E-02	3.5492E-04	-2.4804E-07	2.6242E-03	3.6825E-03	2.4805E-02
17	1.X	0221	2.9752E-04	7.9288E+00	-1.4269E-03	-2.1525E-03	3.4768E-03	1.1234E-01	1.0490E+01
18	1.X	0222	1.4857E-04	2.2316E+00	-4.8115E-03	-2.3374E-06	2.8873E-03	4.1532E-01	2.3375E-01
19	1.X	0223	1.4857E-04	1.1560E+01	-1.4267E-03	-1.7068E-03	-3.9558E-04	6.9472E-02	1.8713E-02
20	1.X	0224	2.9760E-04	1.3938E+01	-1.4268E-03	-1.0241E-03	9.1704E-04	5.6269E-02	2.0404E-02
21	1.X	0225	1.4864E-04	8.1335E+00	-1.4030E-06	-2.0486E-03	7.8639E-04	8.3089E-02	4.1362E-02
22	1.X	0226	-5.5035E-07	9.0981E+00	-2.8519E-03	-9.5984E-08	5.2263E-04	1.4590E-01	9.6029E-03
23	1.X	0227	-1.4967E-04	9.6560E+00	-1.7830E-03	-6.8298E-04	1.0487E-03	1.4151E-01	3.1606E-02
24	1.X	0228	-3.6700E-07	9.1553E+00	-3.5743E-04	-1.6184E-06	1.1825E-03	5.8956E-02	1.6185E-01
25	1.X	0229	2.9803E-04	1.2782E+01	1.0683E-03	-3.5450E-07	2.1002E-03	9.8361E-02	3.5452E-02
26	WP475	EPA6	8.8023E-01	8.6430E-03	6.5562E-02	5.8166E-01	2.4589E-01	3.5082E-01	8.9478E-01
27	WS378	EPA13	4.4710E-04	5.0797E-03	2.6718E-03	-2.7313E-03	4.4113E-02	-1.6396E-03	-3.6400E-03
28	WP478	EPA4	4.4720E-04	3.1581E+01	-1.0701E-03	4.3758E-08	1.7725E-02	-1.0253E-03	-4.3760E-03
29	1.X	0230	2.9820E-04	1.9300E+00	-4.0999E-03	-3.7303E-06	1.7115E-03	1.3555E-01	3.7305E-01
30	1.X	0231	1.4842E-04	8.7384E+00	-4.9892E-03	-1.0246E-03	-3.9798E-04	7.1654E-04	7.8717E-02
31	1.X	0232	4.4652E-04	5.9394E+00	-1.8021E-04	2.7226E-03	-1.1750E-03	1.1581E-03	7.3408E-01
32	1.X	0233	-6.7259E-07	2.3842E+01	-4.4548E-03	7.0583E-03	-4.6700E-05	-2.3217E-03	1.1323E+02
33	/10.	0233	4.4661E-04	2.4672E+00	-3.7424E-03	-1.1641E-04	-4.1871E-03	-1.3652F-03	1.1641E+01
34	1.X	0234	-1.4972E-04	1.5470E+02	-1.6049E-03	1.7808E-02	1.0009E-02	6.3160E-03	1.3048E+02
35	/20.	0234	4.4671E-04	8.1708E+00	-3.5801E-04	-7.0392E-05	-4.7284E-03	-1.0838E-03	7.0392E+00
36	1.X	0235	-4.8929E-07	8.9518E+01	3.0273E-03	1.2357E-02	4.8298E-03	1.3619E-03	2.7288E+01
37	/10.	0235	5.9593E-04	9.2110E+00	1.4236E-03	-5.4899E-03	-2.8369E-03	-1.9063E-03	2.8597E+00
38	1.X	0236	2.9769E-04	2.8451E+01	-2.6738E-03	-3.3555E-04	1.1692E-03	-1.2924E-03	3.3555E+01
39	WP475	EPA6	8.8968E-01	5.0342E-03	6.1275E-02	5.9078E-01	2.5109E-01	3.5475E-01	9.0006E-01
40	WS378	EPA13	4.4681E-04	9.6659E-03	1.0673E-03	-4.0959E-03	4.1870E-02	-1.7424E-03	-1.8226E-03
41	WP478	EPA4	4.4730E-04	3.1094E+01	-3.5714E-04	2.5575E-08	2.1797E-02	-1.0250E-03	-2.5560E-03
42	5+18	INTER	9.5792E-02	1.9337E+02	2.7971E-01	2.7745E-01	2.8362E-01	2.8347F-01	1.7851E+02
43	/10.	INTER	1.0486E-02	2.0366E+01	2.5291E-02	2.5398E-02	2.9519E-02	2.7379E-02	1.9769E+01
44	1.X	0216SP	5.5022E-02	1.5411E+01	1.0181E-01	2.0639E-01	2.0285E-01	1.9946E-01	3.9029E+01
45	/10.	0216SP	5.8273E-04	4.5645E+00	2.0142E-03	3.4701E-04	3.2266E-03	-1.0080E-03	9.2957E-01

LINE	CLASS	SAMPLE	AU	PT	K	LI	MG	MN	MO
1	1.X	AR	6.8860E+00	-1.2281E+00	-4.5509E-03	-6.8734E-04	-1.4975E-04	-2.6776E-04	8.5045E-03
2	1.X	DB	6.6634E-01	-8.9357E-02	-1.9961E-01	1.4694E-39	7.0386E-03	2.7149E-04	6.9533E-03
3	WP475	EPA6	2.4430E+00	-3.4366E-01	-3.2110E-01	-7.0170E-04	5.9896E-04	5.0006E-01	8.1542E-03
4	WP478	EPA4	4.4463E-01	5.1491E-01	6.9333E+00	1.3743E-03	6.8277E+00	9.3481E-04	1.0101F-02
5	WS378	EPA13	1.3333E+00	-9.3056E-01	-3.2380E-01	-3.6150E-05	8.9805E-04	-9.0338E-08	3.7180E-03
6	5+18	INTER	-6.4477E+02	-3.8958E+01	1.9469E+01	7.5612E-03	4.4405E+01	3.2589E-01	-1.0612E-02
7	/10.	INTER	-6.5031E+01	-2.7639E+00	1.6809E+00	-7.2278E-05	5.1190E+00	3.3668F-02	3.3305E-03
8	1.X	0216	5.5496E+00	-4.4323E-01	6.8751E+00	2.7110E-03	1.3048E+01	2.4934E+00	4.8054E-03
9	1.X	0216DP	4.1071E+00	-2.1055E+00	6.7642E+00	2.7259E-03	1.2874F+01	2.4674F+00	4.6837E-03
10	1.X	0217	-1.0954E-01	1.3984E-01	1.1637E+00	2.0318E-03	2.6166E+00	3.6585E-02	6.8815E-03
11	1.X	0218	3.5534E+00	-6.9748E-01	5.4981E+00	6.5080E-04	3.7889E+00	1.4230F-02	1.0915E-02
12	1.X	0219	4.4453E-01	-2.1108E+00	5.9041E-01	1.3376E-03	1.2315E+00	6.0333E-02	1.3199E-02
13	WP475	EPA6	4.4417E+00	-6.1092E-01	-4.0018E-01	-7.1604E-04	7.4853E-04	4.9944E-01	6.5533E-03
14	WS378	EPA13	1.9995E+00	-1.5739E+00	-2.1017E-02	-7.3756E-04	1.1973E-03	-5.3429E-04	-1.5970E-03
15	WP478	EPA4	1.9997E+00	-7.3239E-01	6.7157E+00	-5.7831F-05	6.8313F+00	8.0005E-04	5.3114E-03
16	1.X	0220	-1.5519E+00	-1.3858E+00	-3.4368E-01	-7.5190E-04	1.2272E-02	5.3722F-04	2.6925E-03
17	1.X	0221	4.4394E+00	-1.3838E+00	1.0555E+00	2.0022E-03	2.2619E+00	4.4940E-02	6.7232E-03
18	1.X	0222	4.9961E+00	1.3837E+00	4.1674F-01	6.2896F-04	5.7375F-01	1.2309F-02	8.8208E-03
19	1.X	0223	3.1095E+00	-6.8304E-01	2.1699E+00	-7.5906I-04	7.5381I+00	1.6047E-03	8.5305E-03
20	1.X	0224	2.2217E+00	4.6488E-01	1.7985E+00	-7.6623I-04	5.5795E+00	6.6995I-04	8.5323E-03
21	1.X	0225	1.1286F-01	1.2831E-01	1.7519I+00	-5.7831I-05	5.1018I+00	1.8744F-03	3.7779E-03
22	1.X	0226	1.7229F+00	-1.4857F-01	2.7872I+00	-6.5058I-05	3.7240I+00	3.2056I-03	3.7349E-03

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25	1.X	0229	2.4875E+00	1.8806E+00	1.8857E+00	-7.3039E-04	4.0378E+00	1.6071E-03	1.0150E-02
26	WP475	EPA6	1.4444E+00	-2.0476E-01	1.7916E-01	6.5190E-04	1.3467E-03	4.8695E-01	9.7128E-03
27	WS3	EPA13	3.3316E+00	1.1581E+00	-5.1874E-01	2.4317E-03	1.1973E-03	-6.6800E-04	9.0335E-03
28	WP4	EPA4	3.7757E+00	-4.4547E-01	6.9957E+00	-7.3039E-04	6.8435E+00	-1.3462E-04	6.9065E-03
29	1.X	0230	4.6640E+00	-8.1994E-02	7.3206E-01	2.0614E-03	5.8103E-01	9.6596E-03	4.2263E-03
30	1.X	0231	2.5546E+00	-1.1880E+00	3.8937E+00	1.3083E-03	5.5401E+00	1.3758E-02	8.6104E-03
31	1.X	0232	1.1122E+00	-2.1327E-01	2.1956E+00	2.6886E-03	9.7086E-01	2.3440E-02	7.9006E-03
32	1.X	0233	-7.1158E+00	-1.6006E+01	9.2468E+00	5.4717E-03	1.0965E+01	3.2180E+00	-2.8390E-03
33	/10.	0233	2.2200E+00	-2.7478E+00	6.2730E-01	-7.7339E-04	1.1398E+00	3.2313E-01	6.1518E-03
34	1.X	0234	-1.5331E+01	-1.8312E+01	2.0091E+02	2.6298E-02	6.6540E+01	7.9749E-01	-2.9215E-04
35	/20.	0234	1.4439E+00	-1.1011E+00	9.9736E+00	-7.6623E-04	3.9987E+00	4.1626E-02	8.4417E-03
36	1.X	0235	4.4171E-01	-3.1909E+00	1.5383E+02	2.9787E-02	5.2411E+01	1.7445E-01	7.0752E-03
37	/10.	0235	1.6664E+00	-2.0005E+00	1.4917E+01	-6.5058E-05	5.9615E+00	1.7537E-02	1.0240E-02
38	1.X	0236	-1.1127E+00	-5.3746E+00	3.1848E+01	1.1039E-02	1.4038E+01	5.8301E-01	5.9708E-03
39	WP475	EPA6	4.1079E+00	4.6811E-01	-9.5201E-02	-4.9299E-03	2.3939E-03	4.9061E-01	1.2159E-03
40	WS378	EPA13	4.6632E+00	9.6980E-01	-2.0893E-01	-1.4531E-03	1.7955E-03	-2.6743E-04	8.5028E-03
41	WP478	EPA4	1.9994E+00	-4.7522E-01	7.1744E+00	-2.8931E-05	6.8099E+00	1.0680E-03	6.9093E-03
42	5*18	INTER	-6.2268E+02	-3.7327E+01	1.9913E+01	7.5769E-03	4.4397E+01	3.1782E-01	-1.0424E-02
43	/10.	INTER	-6.2140E+01	-4.2547E+00	1.9225E+00	-7.7339E-04	5.1152E+00	3.4821E-02	1.7143E-03
44	1.X	0216SP	-7.1740E-02	1.9104E+01	1.6218E+01	6.6300E-03	1.2734E+01	7.6044E+00	2.3421E-05
45	/10.	0216SP	8.4564E-02	2.6407E-01	6.5263E-01	2.8366E-03	4.2919E+00	2.4818E-01	6.5657E-03

LINE	CLASS	SAMPLE	NA	NI	PB	SB	SE	SI	SN
1	1.X	AR	4.8757E-05	4.8779E-03	-6.1206E-02	-1.2555E-02	-1.1832E+00	-1.7857E-03	-9.9538E-03
2	1.X	DB	1.1588E-01	2.9956E-02	-1.1990E-03	-8.2766E-03	-4.8691E-01	1.3838E-01	1.8885E-02
3	WP475	EPA6	6.2949E-01	2.9963E-01	3.7350E-01	-6.5969E-03	-1.3490E+00	3.1308E-01	-5.9005E-03
4	WP478	EPA4	4.0195E+01	7.3177E-03	-3.2950E-02	-5.2675E-03	-1.2507E+00	2.0509E-01	-1.7697E-02
5	WS378	EPA13	9.2419E-02	8.3850E-03	1.9972E-02	-8.8480E-03	-9.7430E-01	2.7483E-01	3.1546E-03
6	5*18	INTER	1.9755E+02	2.8421E-01	5.5615E-01	-5.8887E-01	-1.6712E+01	4.1380E-03	3.1769E-01
7	/10.	INTER	2.0188E+01	3.6409E-02	1.7376E-02	-8.8666E-02	-3.0258E+00	-8.1739E-03	2.6425E-02
8	1.X	0216	3.7199E+01	1.1487E-02	-1.1349E-02	-7.3552E-02	-1.4166E+00	2.0797E+00	2.6660E-02
9	1.X	0216DP	3.6669E+01	6.6911E-03	-3.5386E-02	-6.8693E-02	-2.3044E+00	3.8190E+00	5.3846E-03
10	1.X	0217	5.1300E+00	1.2876E-02	1.1373E-02	-1.2710E-02	-9.8156E-01	2.4489E+00	4.8398E-02
11	1.X	0218	6.1381E+00	1.9431E-02	-7.7443E-03	-4.1661E-04	-5.5141E-01	1.0142E+00	2.3589E-02
12	1.X	0219	1.8758E+00	1.6607E-02	-1.0721E-02	-6.7880E-02	-1.5756E+00	4.9879E+00	1.4114E-02
13	WP475	EPA6	6.4474E-01	2.9738E-01	3.8464E-01	-1.6104F-02	-8.7927E-01	3.2392E-01	-1.0483E-02
14	WS378	EPA13	8.4641E-02	4.5758E-03	1.2470E-02	-2.8000E-03	-1.5693E-01	2.7839E-01	-7.7905E-03
15	WP478	EPA4	4.0437E+01	1.1584E-02	-3.6690E-02	-2.7093E-03	-5.2018E-01	2.0788E-01	-2.1927E-02
16	1.X	0220	3.5948E+01	1.3336E-02	-2.5616E-02	7.5825E-03	-2.1198E+00	2.9971E+00	1.6649E-02
17	1.X	0221	2.3226E+00	1.4245E-02	-2.7269E-02	-1.1022E-01	-1.7024E+00	3.9426E+00	1.3835E-02
18	1.X	0222	2.1880E+00	2.1332E-02	-8.4821E-03	-2.3025E-03	-1.5980E+00	4.1108F+00	2.3617E-02
19	1.X	0223	4.2105E+01	1.7677E-02	-4.0537E-02	-2.2660E-02	-9.3908E-01	5.7276E-01	2.5996E-02
20	1.X	0224	1.5109E+01	1.9879E-03	6.9854E-03	3.7632E-03	-8.6897E-01	2.5046F+00	2.5108E-02
21	1.X	0225	7.6270E+00	1.0670E-02	-1.9061E-02	1.9327E-03	-1.3560E+00	1.5503E+00	2.2731E-02
22	1.X	0226	1.0008E+01	8.0803E-03	-3.2312E-02	-3.0411F-05	-6.9546E-01	1.8212E+00	1.9168E-02
23	1.X	0227	7.4256E+00	4.0223E-02	-3.1232E-02	-8.8225E-03	-5.2117E-02	2.2290E+00	1.1529E-02
24	1.X	0228	6.7095E+00	1.2194E-02	-1.5422E-02	-3.8436E-03	-1.6508E+00	3.7432E+00	3.0385E-02
25	1.X	0229	7.0846E+00	1.7375E-02	-1.0269E-02	1.3248E-02	-6.9535E-01	3.5234E+00	1.4193E-02
26	WP475	EPA6	6.1335E-01	3.0168E-01	3.6434E-01	-2.3041E-02	-3.9257E-01	3.1676E-01	8.7219E-03
27	WS378	EPA13	8.4641E-02	2.2903E-03	2.2451E-02	-8.1170E-03	-1.9172E-01	2.7676E-01	-2.6163E-03
28	WP478	EPA4	4.0659E+01	1.6461E-02	-4.7923E-02	-9.1983F-03	-1.5733E-02	1.9965E-01	-2.3462E-02
29	1.X	0230	2.2550E+00	1.1432E-02	-5.0518E-03	-1.5522E-02	-7.7969E-01	3.3475E+00	1.5562E-02
30	1.X	0231	9.0412E+00	7.7749E-03	-2.8077E-02	-4.5770F-03	-9.0354E-01	6.7367E-01	4.1378E-03
31	1.X	0232	3.8813E+00	1.5770E-02	-5.9368E-02	-6.7929E-03	-2.1497F+00	2.1151F+00	5.8632E-03
32	1.X	0233	1.8866E+01	2.2763E-02	1.1009E-01	-9.7586E-01	-1.2236E+01	6.8291F+00	1.2915E-02
33	/10.	0233	1.8788E+00	5.4594E-03	-4.8499E-02	-9.9304F-02	-2.4402E+00	6.6924E-01	6.4735E-03
34	1.X	0234	2.5346E+02	5.4308E-02	5.6637E-02	-1.0950E+00	-1.2306E+01	4.5226F+00	-5.3734E-03
35	/20.	0234	1.2840E+01	3.6594E-03	-3.4168E-02	-7.6950F-02	-1.3661F+00	1.9826E-01	-2.7813E-03
36	1.X	0235	1.3382E+02	8.6064E-02	7.7614F-04	-2.1667E-01	-2.9103E+00	7.3723E+00	1.9766E-02
37	/10.	0235	1.3489E+01	1.9428E-02	-3.3952E-02	-2.6845E-02	-3.3200E-01	8.8056E-01	6.7035E-04
38	1.X	0236	8.5082E+01	1.8381E-02	-8.4845E-03	-2.8097E-01	-3.7897E+00	5.2806E+00	1.2695E-03

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41	WP478	EPA4	3.9531E+01	1.1433E-02	-9.2645E-03	1.3657E-02	-3.8096E-01	2.1269E-01	-1.3585E-02
42	5*1[illegible]	INTER	1.9610E+02	2.8105E-01	5.3600E-01	[illegible].5744E-01	-1.3589E+01	1.1630E-02	3.2569E-01
43	/1[illegible]	INTER	2.0128E+01	3.8692E-02	2.7145E-02	7.5802E-02	-3.0465E+00	-5.9009E-03	4.1253E-02
44	1.X	0216SP	3.7197E+01	1.9536E-01	2.1074E-01	-3.1243E-01	-3.5847E+00	2.1191E+00	1.5029E-02
45	/10.	0216SP	1.3804E+01	-1.5233E-03	-1.1850E-02	4.3075E-03	8.1306E-01	2.2040E-01	1.3460E-02

LINE	CLASS	SAMPLE	SR	TI	TL	V	Y	ZN
1	1.X	AR	1.9575E-04	-1.1198E-04	-2.1393E-02	5.3527E-04	-1.2357E-03	-9.5123E-04
2	1.X	DB	1.9575E-04	1.1283E-01	-5.2139E-02	3.5977E-04	-2.6478E-04	3.4881E-03
3	WP475	EPA6	1.9575E-04	7.6251E-03	-2.5981E-02	8.6339E-01	-9.7076E-04	3.9451E-01
4	WP478	EPA4	1.7615E-02	7.0179E-03	-3.4431E-02	-3.9283E-04	-1.7646E-04	-9.5373E-04
5	WS378	EPA13	5.2187E-04	2.0149E-03	3.3070E-02	2.1390E-04	-1.0586E-03	-4.1099E-06
6	5*18	INTER	2.2102E-02	2.0893E-02	-5.4659E-01	2.9507E-01	-1.7623E-04	2.7945E-01
7	/10.	INTER	2.3472E-03	2.2958E-02	-8.6162E-02	3.0760E-02	3.5290E-04	2.6232E-02
8	1.X	0216	1.9841E-01	1.1082E-01	-8.6639E-02	1.7289E-03	1.7652E-04	2.1431E-02
9	1.X	0216DP	1.9629E-01	1.1013E-01	-1.5300E-01	1.1452E-03	-8.8199E-04	1.3672E-02
10	1.X	0217	4.4671E-02	1.0931E-01	-1.7647E-02	1.1459E-03	4.4115E-04	1.3948E-01
11	1.X	0218	1.7133E-01	1.2920E-01	-1.7110E-02	6.5174E-03	1.7652E-04	1.9763E-01
12	1.X	0219	4.6757E-02	1.0955E-01	-3.3783E-02	6.7822E-04	2.6473E-04	6.8168E-02
13	WP475	EPA6	4.5668E-04	7.8849E-03	2.6534E-02	8.5800E-01	-1.0588E-03	3.9112E-01
14	WS378	EPA13	4.5662E-04	2.6864E-03	-4.9031E-02	5.7081E-04	-1.7634E-04	-1.1157E-03
15	WP478	EPA4	1.7606E-02	7.1632E-03	-7.3949E-02	-3.5859E-05	-3.5269E-04	-1.5922E-03
16	1.X	0220	4.5658E-04	1.0514E-01	-4.4723E-02	9.3025F-04	-8.8085E-05	5.2255E-03
17	1.X	0221	7.7904E-02	1.0981E-01	-1.3714E-01	6.6653E-04	-9.6982E-04	1.9352E-02
18	1.X	0222	2.2299E-02	9.3871E-02	-4.4131E-02	-5.1201E-04	-7.9362E-04	3.8673E-02
19	1.X	0223	7.5047E-02	1.1879E-01	-3.2433E-02	-6.0465E-04	1.7652E-04	9.6668E-03
20	1.X	0224	7.6867E-02	1.0640E-01	3.6457E-03	-6.0461E-04	2.5576E-03	2.6797E-02
21	1.X	0225	3.6973E-02	1.0880E-01	-4.1676E-02	7.5467E-05	2.5580E-03	1.7122E-02
22	1.X	0226	6.1029E-02	1.0342E-01	-4.3352E-02	-2.8401E-04	2.2932E-03	1.1730E-02
23	1.X	0227	9.0174E-02	1.1010E-01	-5.1474E-03	-1.0318E-03	1.7652E-04	3.6000E-02
24	1.X	0228	1.0246E-01	1.0322E-01	-6.9659E-02	8.7203E-04	2.5584E-03	6.0050E-03
25	1.X	0229	8.9486E-02	1.0693E-01	-3.3509E-02	-4.6056E-04	4.4119E-04	1.4749E-02
26	WP475	EPA6	7.1741E-04	7.9184E-03	-1.4919E-03	8.3666E-01	-9.7010E-04	3.8651E-01
27	WS378	EPA13	4.5662E-04	1.9400E-03	-7.1790E-03	-1.3211E-03	-2.6456E-04	-1.7503E-03
28	WP478	EPA4	1.7023E-02	6.8293E-03	-3.3823E-02	-1.7852E-03	-1.2351E-03	-1.9075E-03
29	1.X	0230	1.7613E-02	1.1068E-01	-1.5316E-02	5.3516E-04	-1.0588E-03	2.9156E-02
30	1.X	0231	1.1845E-01	1.0355E-01	-4.0577E-02	4.7343E-04	4.4106E-04	1.3829E-01
31	1.X	0232	1.2444E-01	1.0527E-01	9.7335E-03	-1.0807E-04	8.8349E-05	1.8483E-01
32	1.X	0233	1.7158E-01	1.1528E-01	-1.1225E+00	6.1292E-03	-1.7620E-04	1.5589E-02
33	/10.	0233	1.7145E-02	1.1232E-02	-1.1851E-01	2.8501E-04	-7.9346E-04	8.1567F-04
34	1.X	0234	8.9730E-01	1.1240E-01	-1.4884E+00	6.6742E-03	2.6471E-04	1.2646E-01
35	/20.	0234	4.6550E-02	5.7773E-03	-1.3372E-01	-4.2956E-04	-1.7623E-04	5.6514E-03
36	1.X	0235	5.8028E-01	1.1131E-01	-3.9566E-01	1.8801E-03	1.7652E-04	1.3278E+01
37	/10.	0235	5.9464E-02	1.1295E-02	-4.7853E-02	-9.8848E-04	-1.6756E-03	1.3559E+00
38	1.X	0236	2.0043E-01	1.1633E-01	-3.1716E-01	1.5898E-03	1.7652E-04	1.0654F-01
39	WP475	EPA6	-1.3023E-04	7.3947E-03	-6.0447E-02	8.4570E-01	-1.9400E-03	3.8391E-01
40	WS378	EPA13	5.2176E-04	1.6781E-03	-2.8575E-02	-4.6409E-04	-1.0582E-03	-1.5936E-03
41	WP478	EPA4	1.7025E-02	7.5391E-03	-6.4531E-02	3.5678E-05	1.7652E-04	-3.8118E-03
42	5*18	INTER	2.2105E-02	2.0328E-02	-6.0730E-01	2.8696E-01	1.7652E-04	2.7054F-01
43	/10.	INTER	2.4774E-03	2.4108E-02	-7.0523E-02	3.0685L-02	-1.7620E-04	2.7230E-02
44	1.X	0216SP	1.9980E-01	1.1159E-01	-3.4433E-01	2.0449E-01	-5.8103F-04	1.2357E-01
45	/10.	0216SP	2.2646E-02	1.0661E-02	-4.8886E-02	-2.1155F-05	-5.6008E-04	2.2916E-03

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