UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

EPA Region 5 Records Ctr.
364218

DATE: June 13, 2001

SUBJECT: Review of Data
Received for Review on June 8, 2001

FROM: Stephen L. Ostrodka, Chief (SMF-4J)
Superfund Field Services Section

TO: Data User: IEPA

The data in this case has not been validated.
We have compiled the CADRE files into a narrative format for the following case:

SITE NAME: Wisconsin Steel

CASE NUMBER: 29334 SDG NUMBER: ME0016

Number and Type of Samples: 20 soils

Sample Numbers: ME0016-35

Laboratory: Compuchem Hrs. for Review: 2

Following are our findings:

RECEIVED
JUN 18 2001
IEPA-BOL-FSRS

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

NUMBER (##) MATRIX samples numbered ##, were collected on DATE. The lab received the samples on DATE in good condition. All samples were analyze for metals and cyanide. All samples were analyzed using CLP SOW ILM04.1 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

1. HOLDING TIME:

Holding Time Report

SDG NO: ME0016

HOLDING TIME CRITERIA

Inorganic

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

DC-274: The holding time criteria exceeded 28 days criteria for mercury. Results greater than the IDL are estimated "J", the mercury results below the IDL are unusable "R".

ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0021D, ME0021S, ME0022, ME0023, ME0024, ME0025
ME0026, ME0027, ME0028, ME0029, ME0030, ME0031
ME0032, ME0033, ME0034, ME0035

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0021D, ME0021S, ME0022, ME0023, ME0024, ME0025
ME0026, ME0027, ME0028, ME0029, ME0030, ME0031
ME0032, ME0033, ME0034, ME0035

2. CALIBRATIONS:

Calibration Report

SDG NO: ME0016

CALIBRATION CRITERIA

Inorganic

Percent Recovery Limits

--- Primary --- -- Expanded ---

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
AA	90.00	110.00	75.00	125.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems found for this qualification.

CRDL Standards Report

SDG NO: ME0016

DC-373: The following inorganic samples are associated with a CRDL standard with low percent recovery.

Lead
ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0022, ME0023, ME0024, ME0025, ME0026, ME0027
ME0028, ME0029, ME0030, ME0031, ME0032, ME0033
ME0034, ME0035, PBS01

Thallium
ME0021, PBS01

Zinc
ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0022, ME0023, ME0024, ME0025, ME0026, ME0027
ME0028, ME0029, ME0030, ME0031, ME0032, ME0033
ME0034, ME0035, PBS01

DC-374: The following inorganic samples are associated with a CRDL standard with high percent recovery.
Hits and non-detects are flagged .

Selenium
ME0034, ME0035

3. **BLANKS:**

Laboratory Blanks Report

SDG NO: ME0016

LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL). Professional judgement should be used to qualify the data.

ME0016

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

Arsenic, Cadmium, Thallium, Zinc

ME0017
Arsenic, Cadmium, Thallium, Zinc

ME0018
Arsenic, Cadmium, Thallium, Zinc

ME0019
Arsenic, Cadmium, Thallium, Zinc

ME0020
Arsenic, Cadmium, Thallium, Zinc

ME0021
Arsenic, Cadmium, Thallium, Zinc

ME0021D
Arsenic, Cadmium, Thallium, Zinc

ME0021S
Arsenic, Cadmium, Thallium, Zinc

ME0022
Arsenic, Cadmium, Thallium, Zinc

ME0023
Arsenic, Cadmium, Thallium, Zinc

ME0024
Arsenic, Cadmium, Thallium, Zinc

ME0025
Arsenic, Cadmium, Thallium, Zinc

ME0026
Arsenic, Cadmium, Thallium, Zinc

ME0027
Arsenic, Cadmium, Thallium, Zinc

ME0028
Arsenic, Cadmium, Calcium, Thallium
Zinc

ME0029
Arsenic, Cadmium, Thallium, Zinc

ME0030
Arsenic, Cadmium, Thallium, Zinc

ME0031
Arsenic, Cadmium, Thallium, Zinc

ME0032
Arsenic, Cadmium, Thallium, Zinc

ME0033
Arsenic, Cadmium, Thallium, Zinc

ME0034
Arsenic, Cadmium, Calcium, Thallium
Zinc

ME0035
Arsenic, Cadmium, Thallium, Zinc

Assembled By: ESAT
Date: June 13, 2001

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J"; non-detects are not flagged.

Beryllium
ME0016, ME0018, ME0019, ME0022, ME0023, ME0025
ME0026, ME0027, ME0028, ME0029, ME0030, ME0031
ME0032, ME0033

Sodium
ME0016, ME0018, ME0021, ME0021D, ME0022, ME0023
ME0025, ME0026, ME0027, ME0028, ME0029, ME0030
ME0031, ME0032, ME0033, ME0034, ME0035

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

Matrix Spike Report

SDG NO: ME0016

MATRIX SPIKE CRITERIA

Inorganic

Percent Recovery Limits

Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Antimony
ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0021A, ME0021D, ME0022, ME0023, ME0024, ME0025
ME0026, ME0027, ME0028, ME0029, ME0030, ME0031
ME0032, ME0033, ME0034, ME0035

LCS Report

SDG NO: ME0016

No problems found for this qualification.

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

5. LABORATORY AND FIELD DUPLICATE

Duplicates Report

SDG NO: ME0016

No problems found for this qualification.

6. ICP ANALYSIS

ICS Report

SDG NO: ME0016

DC-307: The following inorganic samples have no associated ICS analyses. Manual review of the data is required.

ME0016
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0017
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0018
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0019
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0020
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0021
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0022
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0023
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0024
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0025
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0026
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0027
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0028
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0029
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0030
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

ME0031
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0032
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0033
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0034
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

ME0035
Aluminum, Antimony, Arsenic, Barium
Beryllium, Cadmium, Calcium, Chromium
Cobalt, Copper, Iron, Lead
Magnesium, Manganese, Nickel, Selenium
Silver, Thallium, Vanadium, Zinc

Serial Dilution Report

SDG NO: ME0016

DC-294: The analyte concentration is high (>50 X the IDL) and serial dilution percent difference is not in criteria (>10%). Hits are qualified "J" and non-detects are qualified "UJ".

Potassium
ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0021D, ME0022, ME0023, ME0024, ME0025, ME0026
ME0027, ME0028, ME0029, ME0030, ME0031, ME0032
ME0033, ME0034, ME0035

DC-295: The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The serial dilution result is greater than the sample result, indicating a potential negative interference. The data must be qualified using professional judgement. Hits are qualified "J", non-detects "UJ".

Cobalt
ME0016, ME0017, ME0018, ME0019, ME0020, ME0021
ME0021D, ME0021S, ME0022, ME0023, ME0024, ME0025
ME0026, ME0027, ME0028, ME0029, ME0030, ME0031
ME0032, ME0033, ME0034, ME0035

Assembled By: ESAT
Date: June 13, 2001

Case Number : 29334
Site Name: Wisconsin Steel

SDG Number: ME0016
Laboratory: Compuchem

7. GFAA ANALYSIS

Furnace AA QC Report

SDG NO: ME0016

No problems found for this qualification.

8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Sample Result Verification Report

SDG NO: ME0016

DC-335: The following inorganic samples have analyte concentrations which exceed the ICP linear range. Professional judgement must be used to qualify the data.
Hits are flagged "J".

Iron
ME0017, ME0024

Assembled By: ESAT
Date: June 13, 2001

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Analytical Results (Qualified Data)

Case #: 29334
Site :
Lab. :
Reviewer :
Date

SDG : ME0016
WISCONSIN STEEL
LIBRTY

Number of Soil Samples : 20
Number of Water Samples : 0

Sample Number :	ME0016		ME0017		ME0018		ME0019		ME0020	
Sampling Location	X228		X201		X202		X203		X204	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	04/02/2001		04/03/2001		04/03/2001		04/03/2001		04/03/2001	
Time Sampled :			14:30		14:45		15:00		15:15	
%Solids :	45.9		50.4		47.2		35.3		47.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	9550		9090		9010		11000		8820	
ANTIMONY	0.83	J	14.1	J	8.6	J	2.1	J	2.7	J
ARSENIC	17.4		42.1		17.5		13.5		16.1	
BARIUM	75.1		105		58.9		61.9		62.9	
BERYLLIUM	0.90	J	1.1		0.77	J	1.0	J	1.1	
CADMIUM	2.4		6.5		3.1		4.8		4.1	
CALCIUM	63900		52400		53700		65800		56300	
CHROMIUM	44.3		217		106		134		128	
COBALT	9.8	J	11.8	J	11.7	J	12.1	J	9.8	J
COPPER	62.1		289		112		154		158	
IRON	79400			J	113000		61600		80800	
LEAD	134		507		228		432		425	
MAGNESIUM	27000		13800		22100		28000		24000	
MANGANESE	1550		3860		1700		1650		1940	
MERCURY	0.090	R	0.75	J	0.37	J	1.0	J	0.66	J
NICKEL	31.5		184		59.1		56.1		60.3	
POTASSIUM	1990	J	1440	J	2200	J	2780	J	1810	J
SELENIUM	1.2		2.5		2.0		2.1		2.0	
SILVER	0.30	U	0.54		0.29	U	1.1		1.0	
SODIUM	458	J	63.3	U	388	J	89.5	U	68.6	U
THALLIUM	13.8		35.9		21.3		10.6		15.3	
VANADIUM	35.4		62.7		35.5		41.9		40.4	
ZINC	382		769		264		1010		854	
CYANIDE										

DISCLAIMER: This package has been electronically assessed as an added service to our customer. It has not been either validated or approved by Region 5 and any subsequent use by the data user is strictly at the risk of the data user. Region 5 assumes no responsibility for use of unvalidated data.

Analytical Results (Qualified Data)

Case #: 29334
Site
Lab.
Reviewer :
Date :

SDG : ME0016
WISCONSIN STEEL
LIBRTY

Sample Number :	ME0021		ME0022		ME0023		ME0024		ME0025	
Sampling Location :	X205		X206		X207		X208		X209	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	04/03/2001		04/03/2001		04/04/2001		04/03/2001		04/04/2001	
Time Sampled :	15:30		15:40		17:05		17:15		17:35	
%Solids :	43.7		39.0		32.6		56.8		44.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	9980		7990		10700		7970		7730	
ANTIMONY	1.1	J	0.81	UJ	4.3	J	3.4	J	1.0	J
ARSENIC	10.0		6.0		7.8		23.4		7.6	
BARIUM	56.6		44.6		61.0		65.3		55.2	
BERYLLIUM	0.51		0.81	J	1.2	J	1.0		0.88	J
CADMIUM	1.5		0.55		0.80		3.9		1.5	
CALCIUM	60300		39700		69100		48300		65000	
CHROMIUM	53.2		31.0		51.7		81.4		231	
COBALT	10.4	J	7.8	J	10.9	J	8.7	J	6.6	J
COPPER	63.6		33.7		53.2		130		69.6	
IRON	37900		23600		32400			J	34100	
LEAD	102		52.2		76.8		266		107	
MAGNESIUM	27600		17900		30300		17400		25000	
MANGANESE	1040		702		1090		2260		3160	
MERCURY	0.11	R	0.12	R	0.11	J	0.24	J	0.080	R
NICKEL	33.0		23.4		32.1		74.8		29.7	
POTASSIUM	2570	J	2200	J	2860	J	1240	J	1650	J
SELENIUM	1.3		1.2		1.4	U	2.1		1.8	
SILVER	0.32	U	0.36	U	0.43	U	0.32		0.41	
SODIUM	585	J	692	J	846	J	54.1	U	344	J
THALLIUM	6.3		2.0		5.2		27.4		5.4	
VANADIUM	33.2		23.6		35.0		33.8		65.3	
ZINC	240		133		194		658		316	
CYANIDE										

Analytical Results (Qualified Data)

Case #: 29334 SDG : ME0016
Site WISCONSIN STEEL
Lab : LIBRTY
Reviewer :
Date :

Sample Number :	ME0026		ME0027		ME0028		ME0029		ME0030	
Sampling Location :	X210		X211		X212		X213		X240	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	04/04/2001		04/04/2001		04/04/2001		04/04/2001		04/04/2001	
Time Sampled :	17:45		18:15		18:20		09:10		09:10	
%Solids :	53.8		55.0		71.2		43.2		40.2	
Dilution Factor	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	6600		6470		5150		7740		8360	
ANTIMONY	0.99	J	0.80	J	0.63	J	0.73	UJ	0.89	J
ARSENIC	11.8		7.6		7.3		9.4		9.4	
BARIUM	46.4		40.9		32.9		46.4		48.5	
BERYLLIUM	0.71	J	0.72	J	0.51	J	0.85	J	0.72	J
CADMIUM	1.8		0.62		0.69		0.87		0.98	
CALCIUM	67400		72100		71000		69200		75600	
CHROMIUM	114		45.7		49.1		58.3		70.9	
COBALT	7.7	J	7.1	J	6.4	J	8.3	J	8.9	J
COPPER	64.8		34.0		30.2		44.5		46.7	
IRON	52400		24400		21400		33500		35900	
LEAD	116		42.2		48.4		69.6		72.7	
MAGNESIUM	27300		32000		32600		30600		33400	
MANGANESE	2210		1070		1030		1370		1510	
MERCURY	0.18	J	0.080	R	0.28	J	0.11	J	0.10	R
NICKEL	30.0		25.4		23.6		27.2		29.0	
POTASSIUM	1390	J	1660	J	1210	J	1950	J	2110	J
SELENIUM	1.3		1.2		0.59	U	1.1	U	1.1	U
SILVER	0.25	U	0.25	U	0.18	U	0.32	U	0.35	U
SODIUM	420	J	523	J	410	J	507	J	636	J
THALLIUM	9.0		3.2		2.6		6.2		6.1	
VANADIUM	49.0		24.4		21.1		34.6		38.8	
ZINC	274		109		135		172		190	
CYANIDE										

Analytical Results (Qualified Data)

Case #: 29334 SDG : ME0016
Site : WISCONSIN STEEL
Lab LIBRTY
Reviewer :
Date :

Sample Number :	ME0031		ME0032		ME0033		ME0034		ME0035	
Sampling Location :	X214		X215		X216		X229		X230	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	04/04/2001		04/04/2001		04/04/2001		04/04/2001		04/04/2001	
Time Sampled :	09:30		09:45		10:05		10:20		10:30	
%Solids :	39.2		59.5		60.7		52.9		48.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	10400		4680		4270		5340		6100	
ANTIMONY	1.1	J	0.56	J	0.50	UJ	1.1	J	0.65	UJ
ARSENIC	8.0		8.2		7.8		9.2		9.1	
BARIUM	57.7		38.9		42.6		38.8		41.3	
BERYLLIUM	0.98	J	0.50	J	0.60	J	0.39		0.28	
CADMIUM	0.86		0.51		0.77		1.5		1.3	
CALCIUM	67600		81900		68900		78100		62900	
CHROMIUM	46.3		49.9		42.8		50.4		35.7	
COBALT	10.6	J	6.0	J	4.8	J	6.3	J	7.1	J
COPPER	51.8		22.0		21.7		28.6		33.9	
IRON	29300		20800		33400		44300		36900	
LEAD	71.9		34.7		50.9		55.0		55.4	
MAGNESIUM	31000		31900		29400		36200		28700	
MANGANESE	1010		1200		999		1040		901	
MERCURY	0.090	R	0.080	R	0.070	R	0.080	R	0.070	R
NICKEL	31.9		22.0		20.3		27.2		22.9	
POTASSIUM	2720	J	1020	J	981	J	1340	J	1520	J
SELENIUM	1.7		0.74	U	0.72	U	1.7		1.3	
SILVER	0.34	U	0.22	U	0.22	U	0.26	U	0.28	U
SODIUM	660	J	555	J	447	J	526	J	479	J
THALLIUM	4.8		2.5		4.1		5.4		6.0	
VANADIUM	32.7		21.3		20.0		23.5		23.4	
ZINC	185		88.2		147		165		159	
CYANIDE										

Analytical Results (Qualified Data)

Case #: 29334
SDG : ME0016
Site: WISCONSIN STEEL
Lab: LIBRTY
Reviewer :
Date :

Sample Number :	ME0021D		ME0021S							
Sampling Location :	X205		X205							
Matrix :	Soil		Soil							
Units :	mg/Kg		mg/Kg							
Date Sampled :	04/03/2001		04/03/2001							
Time Sampled :	15:30		15:30							
%Solids :	43.7		43.7							
Dilution Factor :	1.0		1.0							
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	8520									
ANTIMONY	0.73	UJ	130							
ARSENIC	9.4		27.9							
BARIUM	50.5		1030							
BERYLLIUM	0.45		22.5							
CADMIUM	1.5		24.0							
CALCIUM	56300									
CHROMIUM	51.9		150							
COBALT	9.3	J	240	J						
COPPER	60.0		186							
IRON	35500									
LEAD	102		108							
MAGNESIUM	24800									
MANGANESE	987		1300							
MERCURY	0.12	J	1.1	J						
NICKEL	30.5		261							
POTASSIUM	2110	J								
SELENIUM	1.9		5.1							
SILVER	0.32	U	20.9							
SODIUM	521	J								
THALLIUM	6.0		28.6							
VANADIUM	29.9		271							
ZINC	248		479							
CYANIDE										

Inorganic Traffic Report

DAS No: ME0001
SDG No: ME0021

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243

Date Shipped: 4/4/01 Carrier Name: FedEx Airbill: 3497936973 Shipped to: Liberty Analytical 501 Madison Avenue Cary NC 27513 (919) 379-4080	Date Received/Received by: 4/5/01 M. Stu 8:50 Lab Contract No: 68W00082 Unit Price: 77.25 Transfer To: Date Received/Received By: Lab Contract No: Price:	Sampler (Signature): Ted Prescott Relinquished By: Ted Prescott — Date / Time: 04/04/2001 1530 — Received By: Relinquished By: — Date / Time: — Received By: Relinquished By: — Date / Time: 4/5/01 8:50 — Received By: Melissa Stu	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0016	Sediment/ Ted Prescott	L/G	TM (21)	5-43730 (1)	X228	4/2/01	E0016	Good
ME0017	Sediment/ Ted Prescott	L/G	TM (21)	5-43732 (1)	X201	4/3/01 14:30	E0017	
ME0018	Sediment/ Ted Prescott	L/G	TM (21)	5-43734 (1)	X202	4/3/01 14:45	E0018	
ME0019	Sediment/ Ted Prescott	L/G	TM (21)	5-43736 (1)	X203	4/3/01 15:00	E0019	
ME0020	Sediment/ Ted Prescott	L/G	TM (21)	5-43738 (1)	X204	4/3/01 15:15	E0020	SDG Final Samp
ME0021	Sediment/ Ted Prescott	L/G	TM (21)	5-43740 (1)	X205	4/3/01 15:30	E0021	
ME0022	Sediment/ Ted Prescott	L/G	TM (21)	5-43742 (1)	X206	4/3/01 15:40	E0022	
ME0023	Sediment/ Ted Prescott	L/G	TM (21)	5-43744 (1)	X207	4/4/01 17:05	E0023	
ME0024	Sediment/ Ted Prescott	L/G	TM (21)	5-43746 (1)	X208	4/3/01 17:15	E0024	COPY
ME0025	Sediment/ Ted Prescott	L/G	TM (21)	5-43748 (1)	X209	4/4/01 17:35	E0025	ORIGINAL DOCUMENTS INCLUDED IN CSF- ME00
ME0026	Sediment/ Ted Prescott	L/G	TM (21)	5-43750 (1)	X210	4/4/01 17:45	E0026	SIGNATURE M Stu DATE 4/5/01
ME0027	Sediment/ Ted Prescott	L/G	TM (21)	5-43752 (1)	X211	4/4/01 18:15	E0027	
ME0028	Sediment/ Ted Prescott	L/G	TM (21)	5-43754 (1)	X212	4/4/01 18:20	E0028	
ME0029	Sediment/ Ted Prescott	L/G	TM (21)	5-43756 (1)	X213	4/4/01 9:10	E0029	
ME0030	Sediment/ Ted Prescott	L/G	TM (21)	5-43758 (1)	X240	4/4/01 9:10	E0030	

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 5° C	Chain of Custody Seal Number: 20045-46
Analysis Key: TM = CLP TAL Total Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designat: Composite = C, Grab = G		Custody Seal Intact: Y — Shipment Iced: Y

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

TR Number: 5-285846426-040401-0003

Inorganic Traffic Report

8:50

Case No: 29118
DAS No:
SDG No: ME0021

L 24

Date Shipped: 4/4/01 Carrier Name: FedEx Airbill: 3497986973 Shipped to: Liberty Analytical 501 Madison Avenue Cary NC 27513 (919) 379-4080	Date Received/Received by: 4/5/01 M. Ste Lab Contract No: 68W00082 Unit Price: 77.25 Transfer To: Date Received/Received By: Lab Contract No: Price:	Sampler (Signature): [signature]	
		Relinquished By: [signature]	Date / Time: 04/01/2001 1530	Received By:
		Relinquished By:	Date / Time:	Received By:
		Relinquished By:	Date / Time: 4/5/01 8:50	Received By: [signature]

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0031	Sediment/ Ted Prescott	L/G	TM (21)	5-43760 (1)	X214	4/4/01 9:30	E0031	Good
ME0032	Sediment/ Ted Prescott	L/G	TM (21)	5-43762 (1)	X215	4/4/01 9:45	E0032	
ME0033	Sediment/ Ted Prescott	L/G	TM (21)	5-43764 (1)	X216	4/4/01 10:05	E0033	
ME0034	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43766 (1)	X229	4/4/01 10:20	E0034	
ME0035	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43768 (1)	X230	4/4/01 10:30	E0035	
ME0036	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43770 (1)	X231	4/4/01 11:05	E0036	
ME0037	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43772 (1)	X232	4/4/01 11:30	E0037	
ME0038	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43774 (1)	X233	4/4/01 12:25	E0038	
ME0039	Soil/Sediment/ Ted Prescott	L/G	TM (21)	5-43776 (1)	X234	4/4/01 12:35	E0039	SDG Final Sam

COPY

ORIGINAL DOCUMENTS INCLUDED IN CSF- ME0001

SIGNATURE M. Ste DATE 4/5/01

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 5°C	Chain of Custody Seal Number: 20045-46	
Analysis Key: TM = CLP TAL Total Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designat: Composite = C, Grab = G		Custody Seal Intact: Y	Shipment Iced: X

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

TR Number: 5-285846426-040401-0003

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

SDG NARRATIVE
CASE # 29334 SDG # ME0016
CONTRACT # 68W00082

The indicated Sample Delivery Group (SDG) consisting of twenty (20) soil samples was received into the laboratory information management system (LIMS) on May 25, 2001 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 5°C, as determined from the cooler temperature indicator bottle. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

These samples are a reanalysis of Case 29118, SDG ME0001 and ME0021.

The samples were analyzed, in accordance with EPA CLP Statement of Work (SOW) document ILM04.1, for the complete Inorganic Target Analyte List (TAL) metals.

The correlation coefficient for the mercury and cyanide analytical runs are confirmed to be $\geq$ 0.9950.

EQUATIONS FOR SOLID SAMPLE CALCULATIONS:

Equation for obtaining metals sample results in mg/Kg as presented on FORM I data sheets from ICP instrument acquired results in µg/L (ppb).

$$\frac{C \times V}{W \times S}$$

Where

C = concentration (µg/L)

V = final volume in liters after sample preparation

W = weight in grams of wet sample

S = % solids/100

Example: aluminum result µg/L to mg/Kg.

$$\frac{21813.44\ \mu g/L\ (C) \times 0.2\ L\ (V)}{1.0\ g\ (W) \times 0.437\ (S)} = 9983.268\ mg/Kg \text{ reported as } 9980\ mg/Kg$$

Equation for obtaining mercury sample results in mg/Kg as presented on FORM I data sheets from instrument acquired results in µg/L (ppb).

$$\frac{C \times D \times V}{W \times S}$$

Where

C = concentration (µg/L)

W = wet weight of sample

D = dilution factor to bring sample into analysis range

S = % solids/100

V = final volume in liters

Example: mercury result µg/L to mg/Kg

$$\frac{0.0357\ \mu g/L(C) \times 1\ (D) \times 0.1\ (V)}{0.2\ g\ (W) \times 0.437\ (S)} = 0.0408\ mg/Kg \text{ reported as } 0.11\ mg/Kg\ *$$

* This sample reported down to the IDL.

SAMPLE IDs:

The following customer IDs are associated with this SDG:

ME0016 ME0017 ME0018 ME0019 ME0020 ME0021 ME0022 ME0023 ME0024 ME0025
ME0026 ME0027 ME0028 ME0029 ME0030 ME0031 ME0032 ME0033 ME0034 ME0035

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within EPA CLP allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSS & PBS) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, CCN = WG10514-1 (ME0021S) was found to be outside CLP control limits for Antimony.

CLP control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN = WG10514-2 (ME0021D) was found to be inside CLP control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = SDIME0016-6 (ME0021L) was performed in accordance with CLP requirements for ICP analysis.

The adjusted sample concentrations were outside CLP control limit for Cobalt and Potassium, which are flagged with an "E" on all associated Form I and Form IX.

CLP control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

An "E" flag indicates that a chemical or physical interference effect was encountered during the analysis of that analyte. As a result of the interference, all values for that analyte in the same matrix must be considered estimated values.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

James E. Medlin
Senior Chemist
June 7, 2001

U. S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

JUN 08 2001

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
ME0016	ME0016-1
ME0017	ME0016-2
ME0018	ME0016-3
ME0019	ME0016-4
ME0020	ME0016-5
ME0021	ME0016-6
ME0021D	WG10514-2
ME0021S	WG10514-1
ME0022	ME0016-7
ME0023	ME0016-8
ME0024	ME0016-9
ME0025	ME0016-10
ME0026	ME0016-11
ME0027	ME0016-12
ME0028	ME0016-13
ME0029	ME0016-14
ME0030	ME0016-15
ME0031	ME0016-16
ME0032	ME0016-17
ME0033	ME0016-18
ME0034	ME0016-19

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: THE FOLLOWING ANALYTES HAVE BEEN FLAGGED WITH AN "E" TO INDICATE SERIAL DILUTION RESULTS WHICH ARE NOT WITHIN CONTROL LIMITS : COBALT and POTASSIUM.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: James Medlin Name: James Medlin

Date 6/7/01 Title: Senior Chemist

U. S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG No.: ME0016

SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
ME0035	ME0016-20

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: THE FOLLOWING ANALYTES HAVE BEEN FLAGGED WITH AN "E" TO INDICATE SERIAL DILUTION RESULTS WHICH ARE NOT WITHIN CONTROL LIMITS : COBALT and POTASSIUM.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: James Medlin Name: James Medlin

Date: 6/7/01 Title: Senior Chemist

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0016

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-1

Level (low/med): LOW Date Received: 05/25/01

% Solids: 45.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9550			P
7440-36-0	Antimony	0.83	B	N	P
7440-38-2	Arsenic	17.4			P
7440-39-3	Barium	75.1	B		P
7440-41-7	Beryllium	0.90	B		P
7440-43-9	Cadmium	2.4			P
7440-70-2	Calcium	63900			P
7440-47-3	Chromium	44.2			P
7440-48-4	Cobalt	9.8	B	E	P
7440-50-8	Copper	62.1			P
7439-89-6	Iron	79400			P
7439-92-1	Lead	134			P
7439-95-4	Magnesium	27000			P
7439-96-5	Manganese	1550			P
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	31.5			P
7440-09-7	Potassium	1990	B	E	P
7782-49-2	Selenium	1.2	B		P
7440-22-4	Silver	0.30	U		P
7440-23-5	Sodium	458	B		P
7440-28-0	Thallium	13.8			P
7440-62-2	Vanadium	35.4			P
7440-66-6	Zinc	382			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0017

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-2

Level (low/med): LOW Date Received: 05/25/01

% Solids: 50.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9090			P
7440-36-0	Antimony	14.1	B	N	P
7440-38-2	Arsenic	42.1			P
7440-39-3	Barium	105			P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	6.5			P
7440-70-2	Calcium	52400			P
7440-47-3	Chromium	217			P
7440-48-4	Cobalt	11.8	B	E	P
7440-50-8	Copper	289			P
7439-89-6	Iron	207000			P
7439-92-1	Lead	507			P
7439-95-4	Magnesium	13800			P
7439-96-5	Manganese	3860			P
7439-97-6	Mercury	0.75			CV
7440-02-0	Nickel	184			P
7440-09-7	Potassium	1440	B	E	P
7782-49-2	Selenium	2.5			P
7440-22-4	Silver	0.54	B		P
7440-23-5	Sodium	63.3	U		P
7440-28-0	Thallium	35.9			P
7440-62-2	Vanadium	62.7			P
7440-66-6	Zinc	769			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0018

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-3

Level (low/med): LOW Date Received: 05/25/01

% Solids: 47.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9010			P
7440-36-0	Antimony	8.6	B	N	P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	58.9	B		P
7440-41-7	Beryllium	0.77	B		P
7440-43-9	Cadmium	3.0			P
7440-70-2	Calcium	53700			P
7440-47-3	Chromium	106			P
7440-48-4	Cobalt	11.7	B	E	P
7440-50-8	Copper	112			P
7439-89-6	Iron	113000			P
7439-92-1	Lead	228			P
7439-95-4	Magnesium	22100			P
7439-96-5	Manganese	1700			P
7439-97-6	Mercury	0.37			CV
7440-02-0	Nickel	59.1			P
7440-09-7	Potassium	2200		E	P
7782-49-2	Selenium	1.9	B		P
7440-22-4	Silver	0.28	U		P
7440-23-5	Sodium	388	B		P
7440-28-0	Thallium	21.3			P
7440-62-2	Vanadium	35.5			P
7440-66-6	Zinc	264			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0019

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-4

Level (low/med): LOW Date Received: 05/25/01

% Solids: 35.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000			P
7440-36-0	Antimony	2.1	B	N	P
7440-38-2	Arsenic	13.5			P
7440-39-3	Barium	61.9	B		P
7440-41-7	Beryllium	1.0	B		P
7440-43-9	Cadmium	4.8			P
7440-70-2	Calcium	65800			P
7440-47-3	Chromium	134			P
7440-48-4	Cobalt	12.1	B	E	P
7440-50-8	Copper	154			P
7439-89-6	Iron	61600			P
7439-92-1	Lead	432			P
7439-95-4	Magnesium	28000			P
7439-96-5	Manganese	1650			P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	56.1			P
7440-09-7	Potassium	2780		E	P
7782-49-2	Selenium	2.1	B		P
7440-22-4	Silver	1.1	B		P
7440-23-5	Sodium	89.5	U		P
7440-28-0	Thallium	10.6			P
7440-62-2	Vanadium	41.9			P
7440-66-6	Zinc	1010			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0020

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-5

Level (low/med): LOW Date Received: 05/25/01

% Solids: 47.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8820			P
7440-36-0	Antimony	2.7	B	N	P
7440-38-2	Arsenic	16.1			P
7440-39-3	Barium	62.9	B		P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	4.1			P
7440-70-2	Calcium	56300			P
7440-47-3	Chromium	128			P
7440-48-4	Cobalt	9.8	B	E	P
7440-50-8	Copper	158			P
7439-89-6	Iron	80800			P
7439-92-1	Lead	425			P
7439-95-4	Magnesium	24000			P
7439-96-5	Manganese	1940			P
7439-97-6	Mercury	0.66			CV
7440-02-0	Nickel	60.3			P
7440-09-7	Potassium	1810	B	E	P
7782-49-2	Selenium	2.0	B		P
7440-22-4	Silver	1.0	B		P
7440-23-5	Sodium	68.6	U		P
7440-28-0	Thallium	15.3			P
7440-62-2	Vanadium	40.4			P
7440-66-6	Zinc	854			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0021

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-6

Level (low/med): LOW Date Received: 05/25/01

% Solids: 43.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9980			P
7440-36-0	Antimony	1.1	B	N	P
7440-38-2	Arsenic	10.0			P
7440-39-3	Barium	56.6	B		P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	60200			P
7440-47-3	Chromium	53.2			P
7440-48-4	Cobalt	10.4	B	E	P
7440-50-8	Copper	63.6			P
7439-89-6	Iron	37900			P
7439-92-1	Lead	102			P
7439-95-4	Magnesium	27600			P
7439-96-5	Manganese	1040			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	33.0			P
7440-09-7	Potassium	2570		E	P
7782-49-2	Selenium	1.3	B		P
7440-22-4	Silver	0.32	U		P
7440-23-5	Sodium	584	B		P
7440-28-0	Thallium	6.3			P
7440-62-2	Vanadium	33.2			P
7440-66-6	Zinc	240			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0022

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-7

Level (low/med): LOW Date Received: 05/25/01

% Solids: 39.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7990			P
7440-36-0	Antimony	0.81	U	N	P
7440-38-2	Arsenic	6.0			P
7440-39-3	Barium	44.6	B		P
7440-41-7	Beryllium	0.81	B		P
7440-43-9	Cadmium	0.55	B		P
7440-70-2	Calcium	39700			P
7440-47-3	Chromium	31.0			P
7440-48-4	Cobalt	7.8	B	E	P
7440-50-8	Copper	33.7			P
7439-89-6	Iron	23600			P
7439-92-1	Lead	52.2			P
7439-95-4	Magnesium	17900			P
7439-96-5	Manganese	702			P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	23.4			P
7440-09-7	Potassium	2200	B	E	P
7782-49-2	Selenium	1.2	B		P
7440-22-4	Silver	0.36	U		P
7440-23-5	Sodium	692	B		P
7440-28-0	Thallium	2.0	B		P
7440-62-2	Vanadium	23.6	B		P
7440-66-6	Zinc	133			P

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments: _____

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0023

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-8

Level (low/med): LOW Date Received: 05/25/01

% Solids: 32.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10700			P
7440-36-0	Antimony	4.3	B	N	P
7440-38-2	Arsenic	7.8			P
7440-39-3	Barium	61.0	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	0.80	B		P
7440-70-2	Calcium	69000			P
7440-47-3	Chromium	51.6			P
7440-48-4	Cobalt	10.9	B	E	P
7440-50-8	Copper	53.2			P
7439-89-6	Iron	32400			P
7439-92-1	Lead	76.8			P
7439-95-4	Magnesium	30300			P
7439-96-5	Manganese	1090			P
7439-97-6	Mercury	0.11	B		CV
7440-02-0	Nickel	32.0			P
7440-09-7	Potassium	2860	B	E	P
7782-49-2	Selenium	1.4	U		P
7440-22-4	Silver	0.43	U		P
7440-23-5	Sodium	846	B		P
7440-28-0	Thallium	5.2	B		P
7440-62-2	Vanadium	35.0			P
7440-66-6	Zinc	194			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0024

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-9

Level (low/med): LOW Date Received: 05/25/01

% Solids: 56.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7970			P
7440-36-0	Antimony	3.4	B	N	P
7440-38-2	Arsenic	23.4			P
7440-39-3	Barium	65.3			P
7440-41-7	Beryllium	1.0	B		P
7440-43-9	Cadmium	3.9			P
7440-70-2	Calcium	48300			P
7440-47-3	Chromium	81.4			P
7440-48-4	Cobalt	8.7	B	E	P
7440-50-8	Copper	130			P
7439-89-6	Iron	141000			P
7439-92-1	Lead	266			P
7439-95-4	Magnesium	17400			P
7439-96-5	Manganese	2260			P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	74.8			P
7440-09-7	Potassium	1240	B	E	P
7782-49-2	Selenium	2.0			P
7440-22-4	Silver	0.32	B		P
7440-23-5	Sodium	54.1	U		P
7440-28-0	Thallium	27.4			P
7440-62-2	Vanadium	33.8			P
7440-66-6	Zinc	658			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0025

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-10

Level (low/med): LOW Date Received: 05/25/01

% Solids: 44.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7730			P
7440-36-0	Antimony	1.0	B	N	P
7440-38-2	Arsenic	7.6			P
7440-39-3	Barium	55.2	B		P
7440-41-7	Beryllium	0.88	B		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	65000			P
7440-47-3	Chromium	231			P
7440-48-4	Cobalt	6.6	B	E	P
7440-50-8	Copper	69.6			P
7439-89-6	Iron	34100			P
7439-92-1	Lead	107			P
7439-95-4	Magnesium	25000			P
7439-96-5	Manganese	3160			P
7439-97-6	Mercury	0.084	U		CV
7440-02-0	Nickel	29.7			P
7440-09-7	Potassium	1650	B	E	P
7782-49-2	Selenium	1.8	B		P
7440-22-4	Silver	0.41	B		P
7440-23-5	Sodium	344	B		P
7440-28-0	Thallium	5.4			P
7440-62-2	Vanadium	65.3			P
7440-66-6	Zinc	316			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0026

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-11

Level (low/med): LOW Date Received: 05/25/01

% Solids: 53.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6600			P
7440-36-0	Antimony	0.99	B	N	P
7440-38-2	Arsenic	11.8			P
7440-39-3	Barium	46.4	B		P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	1.8			P
7440-70-2	Calcium	67400			P
7440-47-3	Chromium	114			P
7440-48-4	Cobalt	7.7	B	E	P
7440-50-8	Copper	64.8			P
7439-89-6	Iron	52400			P
7439-92-1	Lead	116			P
7439-95-4	Magnesium	27300			P
7439-96-5	Manganese	2210			P
7439-97-6	Mercury	0.18			CV
7440-02-0	Nickel	30.0			P
7440-09-7	Potassium	1380	B	E	P
7782-49-2	Selenium	1.3	B		P
7440-22-4	Silver	0.25	U		P
7440-23-5	Sodium	420	B		P
7440-28-0	Thallium	9.0			P
7440-62-2	Vanadium	49.0			P
7440-66-6	Zinc	274			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0027

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-12

Level (low/med): LOW Date Received: 05/25/01

% Solids: 55.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6470			P
7440-36-0	Antimony	0.80	B	N	P
7440-38-2	Arsenic	7.6			P
7440-39-3	Barium	40.9	B		P
7440-41-7	Beryllium	0.72	B		P
7440-43-9	Cadmium	0.62	B		P
7440-70-2	Calcium	72100			P
7440-47-3	Chromium	45.7			P
7440-48-4	Cobalt	7.1	B	E	P
7440-50-8	Copper	34.0			P
7439-89-6	Iron	24400			P
7439-92-1	Lead	42.2			P
7439-95-4	Magnesium	32000			P
7439-96-5	Manganese	1060			P
7439-97-6	Mercury	0.079	U		CV
7440-02-0	Nickel	25.4			P
7440-09-7	Potassium	1660	B	E	P
7782-49-2	Selenium	1.2	B		P
7440-22-4	Silver	0.25	U		P
7440-23-5	Sodium	522	B		P
7440-28-0	Thallium	3.2	B		P
7440-62-2	Vanadium	24.4			P
7440-66-6	Zinc	109			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0028

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-13

Level (low/med): LOW Date Received: 05/25/01

% Solids: 71.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5150			P
7440-36-0	Antimony	0.63	B	N	P
7440-38-2	Arsenic	7.2			P
7440-39-3	Barium	32.9	B		P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	0.69	B		P
7440-70-2	Calcium	71000			P
7440-47-3	Chromium	49.1			P
7440-48-4	Cobalt	6.4	B	E	P
7440-50-8	Copper	30.2			P
7439-89-6	Iron	21400			P
7439-92-1	Lead	48.4			P
7439-95-4	Magnesium	32600			P
7439-96-5	Manganese	1030			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	23.6			P
7440-09-7	Potassium	1210	B	E	P
7782-49-2	Selenium	0.59	U		P
7440-22-4	Silver	0.18	U		P
7440-23-5	Sodium	410	B		P
7440-28-0	Thallium	2.6	B		P
7440-62-2	Vanadium	21.1			P
7440-66-6	Zinc	135			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0029

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-14

Level (low/med): LOW Date Received: 05/25/01

% Solids: 43.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7740			P
7440-36-0	Antimony	0.73	U	N	P
7440-38-2	Arsenic	9.4			P
7440-39-3	Barium	46.4	B		P
7440-41-7	Beryllium	0.85	B		P
7440-43-9	Cadmium	0.87	B		P
7440-70-2	Calcium	69200			P
7440-47-3	Chromium	58.3			P
7440-48-4	Cobalt	8.3	B	E	P
7440-50-8	Copper	44.5			P
7439-89-6	Iron	33500			P
7439-92-1	Lead	69.6			P
7439-95-4	Magnesium	30600			P
7439-96-5	Manganese	1370			P
7439-97-6	Mercury	0.11	B		CV
7440-02-0	Nickel	27.2			P
7440-09-7	Potassium	1950	B	E	P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	0.32	U		P
7440-23-5	Sodium	507	B		P
7440-28-0	Thallium	6.2			P
7440-62-2	Vanadium	34.6			P
7440-66-6	Zinc	172			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0030

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-15

Level (low/med): LOW Date Received: 05/25/01

% Solids: 40.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8360			P
7440-36-0	Antimony	0.89	B	N	P
7440-38-2	Arsenic	9.4			P
7440-39-3	Barium	48.5	B		P
7440-41-7	Beryllium	0.72	B		P
7440-43-9	Cadmium	0.98	B		P
7440-70-2	Calcium	75600			P
7440-47-3	Chromium	70.9			P
7440-48-4	Cobalt	8.9	B	E	P
7440-50-8	Copper	46.7			P
7439-89-6	Iron	35900			P
7439-92-1	Lead	72.7			P
7439-95-4	Magnesium	33400			P
7439-96-5	Manganese	1510			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	29.0			P
7440-09-7	Potassium	2110	B	E	P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.35	U		P
7440-23-5	Sodium	636	B		P
7440-28-0	Thallium	6.1			P
7440-62-2	Vanadium	38.8			P
7440-66-6	Zinc	190			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0031

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-16

Level (low/med): LOW Date Received: 05/25/01

% Solids: 39.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10400			P
7440-36-0	Antimony	1.1	B	N	P
7440-38-2	Arsenic	8.0			P
7440-39-3	Barium	57.7	B		P
7440-41-7	Beryllium	0.98	B		P
7440-43-9	Cadmium	0.86	B		P
7440-70-2	Calcium	67600			P
7440-47-3	Chromium	46.3			P
7440-48-4	Cobalt	10.6	B	E	P
7440-50-8	Copper	51.8			P
7439-89-6	Iron	29300			P
7439-92-1	Lead	71.9			P
7439-95-4	Magnesium	31000			P
7439-96-5	Manganese	1010			P
7439-97-6	Mercury	0.088	U		CV
7440-02-0	Nickel	31.9			P
7440-09-7	Potassium	2720		E	P
7782-49-2	Selenium	1.7	B		P
7440-22-4	Silver	0.34	U		P
7440-23-5	Sodium	660	B		P
7440-28-0	Thallium	4.8	B		P
7440-62-2	Vanadium	32.7			P
7440-66-6	Zinc	185			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0032

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-17

Level (low/med): LOW Date Received: 05/25/01

% Solids: 59.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4680			P
7440-36-0	Antimony	0.56	B	N	P
7440-38-2	Arsenic	8.2			P
7440-39-3	Barium	38.9	B		P
7440-41-7	Beryllium	0.50	B		P
7440-43-9	Cadmium	0.50	B		P
7440-70-2	Calcium	81900			P
7440-47-3	Chromium	49.9			P
7440-48-4	Cobalt	6.0	B	E	P
7440-50-8	Copper	22.0			P
7439-89-6	Iron	20800			P
7439-92-1	Lead	34.6			P
7439-95-4	Magnesium	31900			P
7439-96-5	Manganese	1200			P
7439-97-6	Mercury	0.084	U		CV
7440-02-0	Nickel	22.0			P
7440-09-7	Potassium	1020	B	E	P
7782-49-2	Selenium	0.74	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	555	B		P
7440-28-0	Thallium	2.5	B		P
7440-62-2	Vanadium	21.3			P
7440-66-6	Zinc	88.2			P

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments: _____

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0033

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-18

Level (low/med): LOW Date Received: 05/25/01

% Solids: 60.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4260			P
7440-36-0	Antimony	0.50	U	N	P
7440-38-2	Arsenic	7.8			P
7440-39-3	Barium	42.6	B		P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	0.77	B		P
7440-70-2	Calcium	68800			P
7440-47-3	Chromium	42.8			P
7440-48-4	Cobalt	4.8	B	E	P
7440-50-8	Copper	21.7			P
7439-89-6	Iron	33400			P
7439-92-1	Lead	50.9			P
7439-95-4	Magnesium	29400			P
7439-96-5	Manganese	999			P
7439-97-6	Mercury	0.066	U		CV
7440-02-0	Nickel	20.3			P
7440-09-7	Potassium	981	B	E	P
7782-49-2	Selenium	0.72	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	447	B		P
7440-28-0	Thallium	4.1			P
7440-62-2	Vanadium	20.0			P
7440-66-6	Zinc	146			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0034

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-19

Level (low/med): LOW Date Received: 05/25/01

% Solids: 52.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5340			P
7440-36-0	Antimony	1.1	B	N	P
7440-38-2	Arsenic	9.2			P
7440-39-3	Barium	38.8	B		P
7440-41-7	Beryllium	0.39	B		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	78100			P
7440-47-3	Chromium	50.4			P
7440-48-4	Cobalt	6.3	B	E	P
7440-50-8	Copper	28.6			P
7439-89-6	Iron	44300			P
7439-92-1	Lead	55.0			P
7439-95-4	Magnesium	36200			P
7439-96-5	Manganese	1040			P
7439-97-6	Mercury	0.076	U		CV
7440-02-0	Nickel	27.2			P
7440-09-7	Potassium	1340	B	E	P
7782-49-2	Selenium	1.7	B		P
7440-22-4	Silver	0.26	U		P
7440-23-5	Sodium	526	B		P
7440-28-0	Thallium	5.4			P
7440-62-2	Vanadium	23.5			P
7440-66-6	Zinc	165			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

U. S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0035

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG No.: ME0016

Matrix (soil/water): SOIL Lab Sample ID: ME0016-20

Level (low/med): LOW Date Received: 05/25/01

% Solids: 48.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6100			P
7440-36-0	Antimony	0.65	U	N	P
7440-38-2	Arsenic	9.1			P
7440-39-3	Barium	41.3	B		P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	1.3	B		P
7440-70-2	Calcium	62900			P
7440-47-3	Chromium	35.7			P
7440-48-4	Cobalt	7.1	B	E	P
7440-50-8	Copper	33.9			P
7439-89-6	Iron	36900			P
7439-92-1	Lead	55.4			P
7439-95-4	Magnesium	28600			P
7439-96-5	Manganese	901			P
7439-97-6	Mercury	0.074	U		CV
7440-02-0	Nickel	22.9			P
7440-09-7	Potassium	1520	B	E	P
7782-49-2	Selenium	1.3	B		P
7440-22-4	Silver	0.28	U		P
7440-23-5	Sodium	479	B		P
7440-28-0	Thallium	6.0			P
7440-62-2	Vanadium	23.4			P
7440-66-6	Zinc	159			P

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments: _____

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3

BLANKS

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	39.1	U	39.1	U	39.1	U	39.1	U	14.184	B	P
Antimony	1.6	U	1.6	U	1.6	U	1.6	U	0.320	U	P
Arsenic	2.1	U	2.1	U	2.1	U	2.1	U	-.731	B	P
Barium	0.1	U	0.2	B	0.2	B	0.2	B	0.077	B	P
Beryllium	0.4	U	0.4	U	0.4	U	0.4	U	0.080	U	P
Cadmium	0.3	U	0.4	B	0.3	U	0.3	U	-.096	B	P
Calcium	-56.1	B	-35.6	B	-38.8	B	-70.9	B	8.268	B	P
Chromium	0.7	U	0.7	U	0.7	U	0.7	U	0.166	B	P
Cobalt	0.3	U	0.3	U	0.5	B	0.4	B	0.060	U	P
Copper	0.9	U	0.9	U	0.9	U	0.9	U	0.218	B	P
Iron	12.4	U	12.4	U	12.4	U	12.4	U	6.590	B	P
Lead	-1.0	B	-1.3	B	0.9	U	0.9	U	0.277	B	P
Magnesium	9.8	U	30.6	B	24.2	B	9.8	U	13.920	B	P
Manganese	0.1	U	0.1	B	0.1	B	0.2	B	0.265	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.050	U	CV
Nickel	0.7	U	0.7	U	0.7	U	0.7	U	0.140	U	P
Potassium	28.9	U	28.9	U	28.9	U	28.9	U	5.780	U	P
Selenium	2.3	U	2.3	U	2.3	U	2.3	U	0.460	U	P
Silver	0.7	U	0.7	U	0.7	U	0.7	U	0.140	U	P
Sodium	165.9	U	165.9	U	200.4	B	165.9	U	239.787	B	P
Thallium	3.5	U	3.5	U	3.5	U	3.5	U	-.771	B	P
Vanadium	0.4	B	0.3	U	0.3	U	0.4	B	0.060	U	P
Zinc	-4.5	B	-4.8	B	-4.9	B	-5.4	B	0.200	U	P

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BLANKS

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG NO.: ME0016

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Prepa-ration Blank	C		M
Aluminum			39.1	U	39.1	U	39.1	U					P
Antimony			1.6	U	1.6	U	1.6	U					P
Arsenic			2.1	U	2.1	U	2.1	U					P
Barium			0.4	B	0.3	B	0.2	B					P
Beryllium			0.4	U	0.4	U	0.4	U					P
Cadmium			0.4	B	0.3	B	0.3	B					P
Calcium			11.3	U	-12.9	B	-36.3	B					P
Chromium			0.7	U	0.7	U	0.7	U					P
Cobalt			0.3	U	0.5	B	0.6	B					P
Copper			0.9	U	0.9	U	0.9	U					P
Iron			19.0	B	12.4	U	12.4	U					P
Lead			0.9	U	0.9	U	0.9	U					P
Magnesium			59.5	B	22.9	B	33.2	B					P
Manganese			0.3	B	0.2	B	0.2	B					P
Mercury			0.1	U	0.1	U	0.1	U					CV
Nickel			0.7	U	0.9	B	0.7	U					P
Potassium			28.9	U	29.0	B	28.9	U					P
Selenium			2.3	U	2.3	U	2.3	U					P
Silver			0.7	U	0.7	U	0.7	U					P
Sodium			165.9	U	188.3	B	165.9	U					P
Thallium			3.5	U	3.5	U	3.5	U					P
Vanadium			0.3	U	0.3	U	0.4	B					P
Zinc			-3.2	B	-3.4	B	-4.9	B					P

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BLANKS

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG NO.: ME0016

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			39.1	U	39.1	U					P
Antimony			1.6	U	1.6	U					P
Arsenic			2.1	U	2.1	U					P
Barium			0.2	B	0.2	B					P
Beryllium			0.5	B	0.5	B					P
Cadmium			0.3	U	0.4	B					P
Calcium			-56.5	B	-45.6	B					P
Chromium			0.7	U	0.7	U					P
Cobalt			0.3	U	0.5	B					P
Copper			-.9	B	-1.0	B					P
Iron			12.4	U	12.4	U					P
Lead			0.9	U	0.9	U					P
Magnesium			14.2	B	29.5	B					P
Manganese			0.2	B	0.2	B					P
Mercury			0.1	U	0.1	U					CV
Nickel			0.7	B	0.8	B					P
Potassium			28.9	U	28.9	U					P
Selenium			2.3	U	2.3	U					P
Silver			0.7	U	0.7	U					P
Sodium			165.9	U	165.9	U					P
Thallium			3.5	U	3.5	U					P
Vanadium			0.3	U	0.4	B					P
Zinc			-5.1	B	-5.0	B					P

BLANKS

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG NO.: ME0016

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Prepa-ration Blank	C		M
Aluminum	39.1	U	39.1	U	39.1	U	39.1	U					P
Antimony	1.6	U	1.6	U	1.6	U	1.6	U					P
Arsenic	2.1	U	2.1	U	2.1	U	2.1	U					P
Barium	0.1	U	0.3	B	0.4	B	0.4	B					P
Beryllium	0.4	U	0.4	U	0.4	U	0.4	U					P
Cadmium	0.3	U	0.3	U	0.4	B	0.5	B					P
Calcium	-90.5	B	-56.5	B	-76.7	B	-39.0	B					P
Chromium	0.7	U	0.7	U	0.7	U	0.7	U					P
Cobalt	-.4	B	0.3	U	0.3	U	0.3	U					P
Copper	0.9	U	0.9	U	0.9	U	0.9	U					P
Iron	12.4	U	12.4	U	12.4	U	19.9	B					P
Lead	0.9	U	0.9	U	0.9	U	0.9	U					P
Magnesium	9.8	U	34.9	B	17.9	B	87.8	B					P
Manganese	0.1	U	0.2	B	0.4	B	0.4	B					P
Nickel	0.7	U	0.7	U	0.7	U	0.7	U					P
Potassium	28.9	U	28.9	U	28.9	U	45.3	B					P
Selenium	2.3	U	2.3	U	2.3	U	2.3	U					P
Silver	0.7	U	0.7	U	0.7	U	0.7	U					P
Sodium	165.9	U	165.9	U	165.9	U	165.9	U					P
Thallium	3.5	U	3.5	U	3.5	U	3.5	U					P
Vanadium	0.3	U	0.3	U	0.3	U	0.3	U					P
Zinc	-5.6	B	-5.6	B	-5.8	B	-5.7	B					P

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0021S

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: _____ SDG NO.: ME0016

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 43.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75 - 125	129.9499		1.1349	B	228.83	56.3	N	P
Arsenic	75 - 125	27.9485		10.0003		18.31	98.0		P
Barium	75 - 125	1028.0906		56.6104	B	915.33	106.1		P
Beryllium	75 - 125	22.5020		0.5095	B	22.88	96.1		P
Cadmium	75 - 125	24.0158		1.5021	B	22.88	98.4		P
Chromium	75 - 125	150.0800		53.2008		91.53	105.8		P
Cobalt	75 - 125	240.1785		10.3974	B	228.83	100.4		P
Copper	75 - 125	186.1966		63.6124		114.42	107.1		P
Lead		108.4339		102.2152		9.15	68.0		P
Manganese		1303.7075		1043.2737		228.83	113.8		P
Mercury	75 - 125	1.0650		0.1144	U	1.14	93.4		CV
Nickel	75 - 125	261.1388		33.0002		228.83	99.7		P
Selenium	75 - 125	5.1312		1.2734	B	4.58	84.2		P
Silver	75 - 125	20.9120		0.3204	U	22.88	91.4		P
Thallium	75 - 125	28.5518		6.2980		22.88	97.3		P
Vanadium	75 - 125	270.9384		33.1949		228.83	103.9		P
Zinc	75 - 125	478.9002		240.4566		228.83	104.2		P

Comments: _____

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0021A

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony		120.74		2.48	B	120.0	98.6		P

Comments:

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DUPLICATES

EPA SAMPLE NO.

ME0021D

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 43.7 % Solids for Duplicate: 45.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		9983.2676		8520.4482		15.8		P
Antimony		1.1349	B	0.7323	U	200.0		P
Arsenic	4.6	10.0003		9.3866		6.3		P
Barium		56.6103	B	50.5024	B	11.4		P
Beryllium		0.5095	B	0.4498	B	12.4		P
Cadmium		1.5021	B	1.5486	B	3.0		P
Calcium		60256.2500		56280.1836		6.8		P
Chromium		53.2008		51.8629		2.5		P
Cobalt		10.3974	B	9.3496	B	10.6		P
Copper		63.6124		59.9856		5.9		P
Iron		37910.5039		35459.4336		6.7		P
Lead		102.2152		102.2979		0.1		P
Magnesium		27612.1230		24777.2129		10.8		P
Manganese		1043.2737		986.9996		5.5		P
Mercury		0.1144	U	0.1230	B	200.0		CV
Nickel	18.3	33.0002		30.4882		7.9		P
Potassium	2288.3	2573.7246		2107.2026	B	19.9		P
Selenium		1.2734	B	1.8796	B	38.4		P
Silver		0.3204	U	0.3204	U			P
Sodium		584.5762	B	521.3753	B	11.4		P
Thallium	4.6	6.2980		5.9947		4.9		P
Vanadium	22.9	33.1949		29.9464		10.3		P
Zinc		240.4566		248.0525		3.1		P

ICP SERIAL DILUTIONS

EPA SAMPLE NO.

ME0021L

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	21813.44		20576.17		5.7		P
Antimony	2.48	B	8.00	U	100.0		P
Arsenic	21.85		22.72	B	4.0		P
Barium	123.69	B	122.16	B	1.2		P
Beryllium	1.11	B	2.00	U	100.0		P
Cadmium	3.28	B	3.70	B	12.8		P
Calcium	131659.91		131040.40		0.5		P
Chromium	116.24		118.62		2.0		P
Cobalt	22.72	B	25.67	B	13.0	E	P
Copper	138.99		138.21		0.6		P
Iron	82834.45		83269.70		0.5		P
Lead	223.34		219.10		1.9		P
Magnesium	60332.49		58162.90		3.6		P
Manganese	2279.55		2314.61		1.5		P
Nickel	72.11		74.79	B	3.7		P
Potassium	5623.59		4531.05	B	19.4	E	P
Selenium	2.78	B	11.50	U	100.0		P
Silver	0.70	U	3.50	U			P
Sodium	1277.30	B	2553.15	B	99.9		P
Thallium	13.76		24.25	B	76.2		P
Vanadium	72.53		74.56	B	2.8		P
Zinc	525.40		519.97		1.0		P

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

ICP ID Number: Date: 04/23/01

Flame AA ID Number: V3

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Mercury	253.70		0.2	0.1	CV

Comments:

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

ICP ID Number: P3 Date: 04/16/01

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	39.1	P
Antimony	206.84		60	1.6	P
Arsenic	189.04		10	2.1	P
Barium	493.41		200	0.1	P
Beryllium	313.04		5	0.4	P
Cadmium	226.50		5	0.3	P
Calcium	317.93		5000	11.3	P
Chromium	267.72		10	0.7	P
Cobalt	228.62		50	0.3	P
Copper	324.70		25	0.9	P
Iron	271.44		100	12.4	P
Lead	220.35		3	0.9	P
Magnesium	279.08		5000	9.8	P
Manganese	257.61		15	0.1	P
Nickel	231.60		40	0.7	P
Potassium	766.49		5000	28.9	P
Selenium	196.03		5	2.3	P
Silver	328.07		10	0.7	P
Sodium	330.23		5000	165.9	P
Thallium	190.86		10	3.5	P
Vanadium	292.40		50	0.3	P
Zinc	213.86		20	1.0	P

Comments:

PREPARATION LOG

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Method: P

EPA Sample No.	Preparation Date	Weight (grams)	Volume (mL)
LCSS	05/31/01	1.00	200
ME0016	05/31/01	1.03	200
ME0017	05/31/01	1.04	200
ME0018	05/31/01	1.04	200
ME0019	05/31/01	1.05	200
ME0020	05/31/01	1.01	200
ME0021	05/31/01	1.00	200
ME0021D	05/31/01	1.00	200
ME0021S	05/31/01	1.00	200
ME0022	05/31/01	1.01	200
ME0023	05/31/01	1.00	200
ME0024	05/31/01	1.08	200
ME0025	05/31/01	1.03	200
ME0026	05/31/01	1.04	200
ME0027	05/31/01	1.03	200
ME0028	05/31/01	1.09	200
ME0029	05/31/01	1.01	200
ME0030	05/31/01	1.00	200
ME0031	05/31/01	1.05	200
ME0032	05/31/01	1.05	200
ME0033	05/31/01	1.05	200
ME0034	05/31/01	1.02	200
ME0035	05/31/01	1.03	200
PBS	05/31/01	1.00	200

PREPARATION LOG

Lab Name: COMPUCHEM Contract: 68W00082

Lab Code: LIBRTY Case No.: 29334 SAS No.: SDG NO.: ME0016

Method: CV

EPA Sample No.	Preparation Date	Weight (grams)	Volume (mL)
LCSS	05/31/01	0.20	100
ME0016	05/31/01	0.24	100
ME0017	05/31/01	0.21	100
ME0018	05/31/01	0.21	100
ME0019	05/31/01	0.21	100
ME0020	05/31/01	0.27	100
ME0021	05/31/01	0.20	100
ME0021D	05/31/01	0.20	100
ME0021S	05/31/01	0.20	100
ME0022	05/31/01	0.21	100
ME0023	05/31/01	0.29	100
ME0024	05/31/01	0.29	100
ME0025	05/31/01	0.27	100
ME0026	05/31/01	0.25	100
ME0027	05/31/01	0.23	100
ME0028	05/31/01	0.22	100
ME0029	05/31/01	0.29	100
ME0030	05/31/01	0.24	100
ME0031	05/31/01	0.29	100
ME0032	05/31/01	0.20	100
ME0033	05/31/01	0.25	100
ME0034	05/31/01	0.25	100
ME0035	05/31/01	0.28	100
PBS	05/31/01	0.20	100