LPC 1970500005 – Will County
US Steel Coking Facility/Lockport
SF/HRS
Volume 3 of 3

CERCLA

Analytical Results

EPA Region 5 Records Ctr.
384102

Illinois Environmental
Protection Agency

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	12	ME0040	Soil

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 13, 2003

SUBJECT: Review of Data
Received for Review on November 7, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0040

Number and Type of Samples: 12 soils

Sample Numbers: ME0040-51

Laboratory: Bonner Hrs. for Review: 2

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0040
Laboratory: Bonner

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

Twelve soil samples numbered ME0040-51 were collected on October 8-16, 2003. The lab received the samples on October 17, 2003 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM05.2 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: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0040
Laboratory: Bonner

1. HOLDING TIME:

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-5 The following inorganic cyanide samples did not meet primary holding time criteria. Hits are qualified "J" and non-detects are qualified "UJ".

ME0045

DC-10 The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME0040, ME0041, ME0042, ME0043, ME0044, ME0045, ME0046, ME0047, ME0048, ME0049, ME0050, ME0051, ME0051D, ME0051S

2. CALIBRATIONS:

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

No defects found.

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

DC-2 The following inorganic samples are associated with a CRDL standard with high percent recovery. Hits and non-detects are not flagged.

Lead
ME0040, PBS01

3. BLANKS:

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0040
Laboratory: Bonner

Qualification: Laboratory Blanks **Protocol: INORG**

No defects found.

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

Date: 11/11/2003 Wincadre 3.1.3.2 Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

No defects found.

Date: 11/11/2003 Wincadre 3.1.3.2 Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Control Sample **Protocol: INORG**

DC-6 The following inorganic soil samples are associated with a solid laboratory control sample (LCS) with analyte found amounts which are high, indicating a potential positive bias in the sample results. Hits are qualified "J".

Antimony
ME0041, ME0042, ME0046, ME0048, ME0049, ME0050, ME0051

Silver
ME0041, ME0042, ME0046, ME0049, ME0050, ME0051

5. LABORATORY AND FIELD DUPLICATE

Date: 11/11/2003 Wincadre 3.1.3.2 Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

DC-3 The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Lead
ME0040, ME0041, ME0042, ME0043, ME0044, ME0045, ME0046, ME0047, ME0048, ME0049, ME0050, ME0051

Zinc
ME0040, ME0041, ME0042, ME0043, ME0044, ME0045, ME0046, ME0047, ME0048, ME0049, ME0050, ME0051

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0040
Laboratory: Bonner

ICP ANALYSIS

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Interference Check Sample **Protocol: INORG**

DC-6 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 mg/L (ppm) that may cause potential interference. Use professional judgement to qualify sample data.

ME0040
Potassium

ME0041
Manganese, Potassium

ME0042
Manganese, Potassium

ME0043
Potassium

ME0044
Potassium

ME0045
Potassium

ME0046
Potassium

ME0047
Potassium

ME0050
Potassium

ME0051
Potassium

DC-10 The following inorganic samples have one or more interferents present at concentrations more than true amounts added in the ICSAB solution. Use Professional judgement to qualify sample data.

ME0040, ME0041, ME0042, ME0043, ME0046, ME0048, ME0049, ME0050, ME0051

Date: 11/11/2003 | Wincadre 3.1.3.2 | Page: 10

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Serial Dilution **Protocol: INORG**

DC-4 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 and non-detects are not flagged.

Arsenic

Assembled By: ESAT
Date: November 13, 2003

ME0040, ME0041, ME0042, ME0043, ME0044, ME0045, ME0046, ME0047, ME0048, ME0049, ME0050, ME0051

Silver

ME0040, ME0041, ME0042, ME0043, ME0044, ME0045, ME0046, ME0047, ME0048, ME0049, ME0050, ME0051

7. GFAA ANALYSIS

8. SAMPLE RESULTS

Date: 11/11/2003 Wincadre 3.1.3.2 Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0040	SDG No.: ME0040	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

No defects found.

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 13, 2003

ILM05.2 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 result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise

Analytical Results (Qualified Data)

Case #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0040
BILL'S EXCAVATING
BONNER

Number of Soil Samples : 12
Number of Water Samples : 0

Sample Number :	ME0040		ME0041		ME0042		ME0043		ME0044	
Sampling Location :	X111		X112		X113		X211		X212	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/15/2003		10/15/2003		10/15/2003		10/15/2003		10/15/2003	
Time Sampled :	12:30		13:00		13:30		14:30		14:50	
%Solids :	84.1		89.2		81.5		71.3		53.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	7090		17700		10300		7180		13700	
ANTIMONY	14.3	U	4.9	J	11.5	J	16.8	U	22.3	U
ARSENIC	3.6	U	3.5		5.9		2.0		1.1	
BARIUM	24.3		295		212		45.5		87.6	
BERYLLIUM	0.44		2.4		1.7		0.47		0.77	
CADMIUM	0.27		3.0		2.8		0.73		1.1	
CALCIUM	105000		77500		42900		53400		29200	
CHROMIUM	10.8		18.7		15.7		11.1		21.6	
COBALT	2.1		4.8		4.8		3.4		5.7	
COPPER	1.6		96.2		87.6		21.5		41.6	
IRON	7730		38100		63100		11600		15600	
LEAD	1.0	J	168	J	247	J	22.9	J	51.6	J
MAGNESIUM	65900		29600		15700		32100		17100	
MANGANESE	184		1210		1280		145		122	
MERCURY	0.35		0.11	U	0.27		0.14	U	0.19	
NICKEL	5.4		31.1		13.8		10.2		20.1	
POTASSIUM	2590		2240		1900		1750		2770	
SELENIUM	8.3	U	3.6		25.8	U	1.7		1.9	
SILVER	2.4	U	0.44	J	0.15	J	2.8	U	3.7	U
SODIUM	142		930		474		190		204	
THALLIUM	0.78		4.3		4.4		0.94		1.3	
VANADIUM	10.6		15.8		23.6		16.9		23.3	
ZINC	13.7	J	257	J	417	J	50.3	J	116	J
CYANIDE	0.27		2.8		1.5		0.28		0.58	

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 #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0040
BILL'S EXCAVATING
BONNER

Sample Number :	ME0045		ME0046		ME0047		ME0048		ME0049	
Sampling Location :	X212 D		X213		X115		X114		X116	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/08/2003		10/15/2003		10/15/2003		10/15/2003		10/16/2003	
Time Sampled :	14:50		16:00		16:30		15:30		09:00	
%Solids :	52.0		72.2		61.3		87.4		77.5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	14600		7300		5890		3670		2730	
ANTIMONY	23.1	U	3.9	J	19.6	U	2.2	J	2.4	J
ARSENIC	1.2		3.7		5.6		3.8		9.8	
BARIUM	96.5		58.6		126		246		90.9	
BERYLLIUM	0.81		1.0		0.26		0.62		0.67	
CADMIUM	1.2		1.3		0.17		1.5		2.1	
CALCIUM	27700		81500		26600		14100		2750	
CHROMIUM	22.3		17.2		14.7		7.9		11.9	
COBALT	6.0		5.1		0.83		3.4		4.3	
COPPER	40.8		36.9		29.8		20.4		28.7	
IRON	16500		24400		1980		12600		16300	
LEAD	53.5	J	47.0	J	26.5	J	39.9	J	27.3	J
MAGNESIUM	16600		38000		2460		2880		546	
MANGANESE	122		556		48.7		254		583	
MERCURY	0.15		0.20		0.17		0.28		0.35	
NICKEL	21.0		14.4		3.6		10.7		10.8	
POTASSIUM	2970		1640		1970		644		397	
SELENIUM	2.6		2.8		11.4	U	2.4		2.7	
SILVER	3.8	U	0.10	J	3.3	U	2.3	U	0.16	J
SODIUM	210		395		147		236		166	
THALLIUM	1.3		2.3		8.2	U	1.1		1.9	
VANADIUM	25.6		18.1		16.3		8.3		6.7	
ZINC	109	J	101	J	16.9	J	67.2	J	130	J
CYANIDE	1.0	J	4.8		1.6		0.38		1.1	

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Analytical Results (Qualified Data)

Case #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0040
BILL'S EXCAVATING
BONNER

Sample Number :	ME0050		ME0051		ME0051D		ME0051S			
Sampling Location :	X214		X215		X215		X215			
Matrix :	Soil		Soil		Soil		Soil			
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg			
Date Sampled :	10/16/2003		10/16/2003		10/16/2003		10/16/2003			
Time Sampled :	09:00		09:20		09:20		09:20			
%Solids :	76.2		68.2		68.1		68.2			
Dilution Factor :	1.0		1.0		1.0		1.0			
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	7580		16700		15200		14900			
ANTIMONY	2.5	J	2.7	J	2.5		6.6			
ARSENIC	4.1		4.4		7.2		14.6			
BARIUM	77.7		86.1		98.2		644			
BERYLLIUM	0.94		1.1		1.1		14.5			
CADMIUM	1.4		2.1		3.4		15.4			
CALCIUM	39800		35700		36100		60200			
CHROMIUM	20.1		25.2		25.1		77.4			
COBALT	6.4		9.7		10.1		143			
COPPER	52.9		40.0		48.3		116			
IRON	19000		19300		21400		17500			
LEAD	87.2	J	124	J	203		162			
MAGNESIUM	22100		24300		24200		39300			
MANGANESE	247		183		195		313			
MERCURY	0.37		0.91		0.99		1.7			
NICKEL	18.2		26.9		28.0		158			
POTASSIUM	1800		3920		3320		3480			
SELENIUM	2.1		2.4		1.8		15.3			
SILVER	0.14	J	0.46	J	0.61		13.8			
SODIUM	281		277		248		262			
THALLIUM	1.6		1.6		2.2		16.8			
VANADIUM	17.9		30.7		29.7		163			
ZINC	170	J	151	J	223		312			
CYANIDE	0.15		0.58		0.38		7.5			

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0040

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023447
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630	[illegible]	10-17-03 1200
2			
3			
4			

For Lab Use Only

Lab Contract No:	68WC2067
Unit Price:	9.72
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0035	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279721 (HNO3), 5-279722 (NaOH) (2)	FB1	S: 10/15/2003 13:00	E0035	
ME0040	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279743 (Ice Only) (1)	X111	S: 10/15/2003 12:30	E0040	
ME0041	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279747 (Ice Only) (1)	X112	S: 10/15/2003 13:00	E0041	
ME0042	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279751 (Ice Only) (1)	X113	S: 10/15/2003 13:30	E0042	
ME0043	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279755 (Ice Only) (1)	X211	S: 10/15/2003 14:30	E0043	
ME0044	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279759 (Ice Only) (1)	X212	S: 10/15/2003 14:50	E0044	
ME0045	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279763 (Ice Only) (1)	X212 D	S: 10/8/2003 14:50	E0045	
ME0046	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279769 (Ice Only) (1)	X213	S: 10/15/2003 16:00	E0046	
ME0047	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279773 (Ice Only) (1)	X115	S: 10/15/2003 16:30	E0047	
ME0048	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279777 (Ice Only) (1)	X114	S: 10/15/2003 15:30	E0048	

002

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0051, ME0054		5.9	82837

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G Custody Seal Intact? Y Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101603-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0040

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023447
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630	[illegible]	10-17-03 0000
2			
3			
4			

For Lab Use Only

Lab Contract No:	68WC 2007
Unit Price:	$72.00
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0049	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279783 (Ice Only) (1)	X116	S: 10/16/2003	9:00	E0049	
ME0050	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279787 (Ice Only) (1)	X214	S: 10/16/2003	9:00	E0050	
ME0051	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279791 (Ice Only) (1)	X215	S: 10/16/2003	9:20	E0051	
ME0052	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279795 (Ice Only) (1)	X216	S: 10/16/2003	10:00	E0052	
ME0053	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279801 (Ice Only) (1)	X217	S: 10/16/2003	10:30	E0053	
ME0054	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279805 (Ice Only) (1)	X117	S: 10/16/2003	10:00	E0054	
ME0055	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279809 (Ice Only) (1)	X118	S: 10/16/2003	11:00	E0055	
ME0057	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279815 (Ice Only) (1)	X119	S: 10/16/2003	12:00	E0057	
ME0058	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279819 (Ice Only) (1)	X120	S: 10/16/2003	13:00	E0058	
ME0059	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279823 (Ice Only) (1)	X121	S: 10/16/2003	13:30	E0059	

003

Shipment for Case Complete?Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0051, ME0054		5.9°C	82831

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G Custody Seal Intact? Y Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101603-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0040
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-17-03 under UPS airbill number 1Z6215892210023447, respectively. Custody seals were present and intact, and the cooler temp measured 5.9°C, respectively. Sample ME0051 was listed for QC. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

1. These samples were scheduled for TM/CN/HG analysis but the TR/COC only lists TM/CN analysis. Please advise on what to analyze.

   Resolution: Per Region 5, the lab will note the issue in the SDG Narrative and proceed with analyzing the samples for TM/CN/HG analysis.

ICP-AES Metals

The initial run for metals began on 10/1/03 @ 1043 hrs. During the run, the matrix spike, sample ME0051S, was out for Sb. Corrective action calls for a post spike to be performed at 2 times the CRQL.

Also, Fe was out for samples ME0041 and ME0042. Corrective action calls for the dilution of the two samples and reanalysis.

Also, CRI03 and CRI05 were out for Pb. Corrective action calls for the reanalysis of the CRIs. Also, CCV05 was out for K and CCB05 was out for Pb. Corrective action calls for the reanalysis of all samples associated with the failing QC.

CV-AA Mercury

No Discrepancies

Cyanides

The analytical run for cyanides began on 10/29/02 @ 1629 hrs. During the run, two samples were switched. Corrective action calls for the reanalysis of the two samples.

CSF

No Discrepancies

Authorized by _____
Tommy Denson
Inorganic Lab Manager

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COVER PAGE

NOV 0 7 2003

004

L Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: SDG No: ME0040

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0040	BT94352
ME0041	BT94353
ME0042	BT94354
ME0043	BT94355
ME0044	BT94356
ME0045	BT94357
ME0046	BT94358
ME0047	BT94359
ME0048	BT94360
ME0049	BT94361
ME0050	BT94362
ME0051	BT94363
ME0051D	BT94363D
ME0051S	BT94363S

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Christopher M. Bonner

Date: Title: Inorganic Laboratory Manager

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1A-IN

INORGANIC ANALYSIS DATA SHEET

007

EPA SAMPLE NO.

ME0040

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94352

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 84.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7090			P
7440-36-0	Antimony	14.3	U	N	P
7440-38-2	Arsenic	3.6	U		P
7440-39-3	Barium	24.3	J		P
7440-41-7	Beryllium	0.44	J		P
7440-43-9	Cadmium	0.27	J		P
7440-70-2	Calcium	105000			P
7440-47-3	Chromium	10.8			P
7440-48-4	Cobalt	2.1	J		P
7440-50-8	Copper	1.6	J		P
7439-89-6	Iron	7730			P
7439-92-1	Lead	1.0	J	*	P
7439-95-4	Magnesium	65900			P
7439-96-5	Manganese	184			P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	5.4	J		P
7440-09-7	Potassium	2590			P
7782-49-2	Selenium	8.3	U		P
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	142	J		P
7440-28-0	Thallium	0.78	J		P
7440-62-2	Vanadium	10.6	J		P
7440-66-6	Zinc	13.7	J	*	P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ıents: Rocks

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1A-IN

INORGANIC ANALYSIS DATA SHEET

008

EPA SAMPLE NO.

ME0041

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94353

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 89.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17700			P
7440-36-0	Antimony	4.9	J	N	P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	295			P
7440-41-7	Beryllium	2.4			P
7440-43-9	Cadmium	3.0			P
7440-70-2	Calcium	77500			P
7440-47-3	Chromium	18.7			P
7440-48-4	Cobalt	4.8	J		P
7440-50-8	Copper	96.2			P
7439-89-6	Iron	38100			P
7439-92-1	Lead	168		*	P
7439-95-4	Magnesium	29600			P
7439-96-5	Manganese	1210			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	31.1			P
7440-09-7	Potassium	2240			P
7782-49-2	Selenium	3.6	J		P
7440-22-4	Silver	0.44	J		P
7440-23-5	Sodium	930	J		P
7440-28-0	Thallium	4.3	J		P
7440-62-2	Vanadium	15.8			P
7440-66-6	Zinc	257		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter, Insect

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1A-IN

INORGANIC ANALYSIS DATA SHEET

009

EPA SAMPLE NO.

ME0042

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94354

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 81.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300			P
7440-36-0	Antimony	11.5	J	N	P
7440-38-2	Arsenic	5.9	J		P
7440-39-3	Barium	212			P
7440-41-7	Beryllium	1.7			P
7440-43-9	Cadmium	2.8	J		P
7440-70-2	Calcium	42900			P
7440-47-3	Chromium	15.7			P
7440-48-4	Cobalt	4.8	J		P
7440-50-8	Copper	87.6			P
7439-89-6	Iron	63100			P
7439-92-1	Lead	247		*	P
7439-95-4	Magnesium	15700			P
7439-96-5	Manganese	1280			P
7439-97-6	Mercury	0.27			CV
7440-02-0	Nickel	13.8			P
7440-09-7	Potassium	1900			P
7782-49-2	Selenium	25.8	U		P
7440-22-4	Silver	0.15	J		P
7440-23-5	Sodium	474	J		P
7440-28-0	Thallium	4.4	J		P
7440-62-2	Vanadium	23.6			P
7440-66-6	Zinc	417		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter

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1A-IN

INORGANIC ANALYSIS DATA SHEET

010

EPA SAMPLE NO.

ME0043

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94355

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 71.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7180			P
7440-36-0	Antimony	16.8	U	N	P
7440-38-2	Arsenic	2.0	J		P
7440-39-3	Barium	45.5	J		P
7440-41-7	Beryllium	0.47	J		P
7440-43-9	Cadmium	0.73	J		P
7440-70-2	Calcium	53400			P
7440-47-3	Chromium	11.1			P
7440-48-4	Cobalt	3.4	J		P
7440-50-8	Copper	21.5			P
7439-89-6	Iron	11600			P
7439-92-1	Lead	22.9		*	P
7439-95-4	Magnesium	32100			P
7439-96-5	Manganese	145			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	10.2	J		P
7440-09-7	Potassium	1750			P
7782-49-2	Selenium	1.7	J		P
7440-22-4	Silver	2.8	U		P
7440-23-5	Sodium	190	J		P
7440-28-0	Thallium	0.94	J		P
7440-62-2	Vanadium	16.9			P
7440-66-6	Zinc	50.3		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

nents: Rocks, Plant Matter

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INORGANIC ANALYSIS DATA SHEET

011

EPA SAMPLE NO.

ME0044

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94356

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 53.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13700			P
7440-36-0	Antimony	22.3	U	N	P
7440-38-2	Arsenic	1.1	J		P
7440-39-3	Barium	87.6			P
7440-41-7	Beryllium	0.77	J		P
7440-43-9	Cadmium	1.1	J		P
7440-70-2	Calcium	29200			P
7440-47-3	Chromium	21.6			P
7440-48-4	Cobalt	5.7	J		P
7440-50-8	Copper	41.6			P
7439-89-6	Iron	15600			P
7439-92-1	Lead	51.6		*	P
7439-95-4	Magnesium	17100			P
7439-96-5	Manganese	122			P
7439-97-6	Mercury	0.19			CV
7440-02-0	Nickel	20.1			P
7440-09-7	Potassium	2770			P
7782-49-2	Selenium	1.9	J		P
7440-22-4	Silver	3.7	U		P
7440-23-5	Sodium	204	J		P
7440-28-0	Thallium	1.3	J		P
7440-62-2	Vanadium	23.3			P
7440-66-6	Zinc	116		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter, Insect

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INORGANIC ANALYSIS DATA SHEET

012

EPA SAMPLE NO.

ME0045

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94357

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 52.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14600			P
7440-36-0	Antimony	23.1	U	N	P
7440-38-2	Arsenic	1.2	J		P
7440-39-3	Barium	96.5			P
7440-41-7	Beryllium	0.81	J		P
7440-43-9	Cadmium	1.2	J		P
7440-70-2	Calcium	27700			P
7440-47-3	Chromium	22.3			P
7440-48-4	Cobalt	6.0	J		P
7440-50-8	Copper	40.8			P
7439-89-6	Iron	16500			P
7439-92-1	Lead	53.5		*	P
7439-95-4	Magnesium	16600			P
7439-96-5	Manganese	122			P
7439-97-6	Mercury	0.15	J		CV
7440-02-0	Nickel	21.0			P
7440-09-7	Potassium	2970			P
7782-49-2	Selenium	2.6	J		P
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	210	J		P
7440-28-0	Thallium	1.3	J		P
7440-62-2	Vanadium	25.6			P
7440-66-6	Zinc	109		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter

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INORGANIC ANALYSIS DATA SHEET

013

EPA SAMPLE NO.

ME0046

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94358

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 72.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7300			P
7440-36-0	Antimony	3.9	J	N	P
7440-38-2	Arsenic	3.7	J		P
7440-39-3	Barium	58.6			P
7440-41-7	Beryllium	1.0	J		P
7440-43-9	Cadmium	1.3	J		P
7440-70-2	Calcium	81500			P
7440-47-3	Chromium	17.2			P
7440-48-4	Cobalt	5.1	J		P
7440-50-8	Copper	36.9			P
7439-89-6	Iron	24400			P
7439-92-1	Lead	47.0		*	P
7439-95-4	Magnesium	38000			P
7439-96-5	Manganese	556			P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	14.4			P
7440-09-7	Potassium	1640			P
7782-49-2	Selenium	2.8	J		P
7440-22-4	Silver	0.10	J		P
7440-23-5	Sodium	395	J		P
7440-28-0	Thallium	2.3	J		P
7440-62-2	Vanadium	18.1			P
7440-66-6	Zinc	101		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

014

EPA SAMPLE NO.

ME0047

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94359

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 61.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5890			P
7440-36-0	Antimony	19.6	U	N	P
7440-38-2	Arsenic	5.6			P
7440-39-3	Barium	126			P
7440-41-7	Beryllium	0.26	J		P
7440-43-9	Cadmium	0.17	J		P
7440-70-2	Calcium	26600			P
7440-47-3	Chromium	14.7			P
7440-48-4	Cobalt	0.83	J		P
7440-50-8	Copper	29.8			P
7439-89-6	Iron	1980			P
7439-92-1	Lead	26.5		*	P
7439-95-4	Magnesium	2460			P
7439-96-5	Manganese	48.7			P
7439-97-6	Mercury	0.17			CV
7440-02-0	Nickel	3.6	J		P
7440-09-7	Potassium	1970			P
7782-49-2	Selenium	11.4	U		P
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	147	J		P
7440-28-0	Thallium	8.2	U		P
7440-62-2	Vanadium	16.3			P
7440-66-6	Zinc	16.9	J	*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

nents: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

015

EPA SAMPLE NO.

ME0048

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94360

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 87.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3670			P
7440-36-0	Antimony	2.2	J	N	P
7440-38-2	Arsenic	3.8			P
7440-39-3	Barium	246			P
7440-41-7	Beryllium	0.62	J		P
7440-43-9	Cadmium	1.5			P
7440-70-2	Calcium	14100			P
7440-47-3	Chromium	7.9			P
7440-48-4	Cobalt	3.4	J		P
7440-50-8	Copper	20.4			P
7439-89-6	Iron	12600			P
7439-92-1	Lead	39.9		*	P
7439-95-4	Magnesium	2880			P
7439-96-5	Manganese	254			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	10.7			P
7440-09-7	Potassium	644	J		P
7782-49-2	Selenium	2.4	J		P
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	236	J		P
7440-28-0	Thallium	1.1	J		P
7440-62-2	Vanadium	8.3	J		P
7440-66-6	Zinc	67.2		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

016

EPA SAMPLE NO.

ME0049

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94361

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 77.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2730			P
7440-36-0	Antimony	2.4	J	N	P
7440-38-2	Arsenic	9.8			P
7440-39-3	Barium	90.9			P
7440-41-7	Beryllium	0.67	J		P
7440-43-9	Cadmium	2.1			P
7440-70-2	Calcium	2750			P
7440-47-3	Chromium	11.9			P
7440-48-4	Cobalt	4.3	J		P
7440-50-8	Copper	28.7			P
7439-89-6	Iron	16300			P
7439-92-1	Lead	27.3		*	P
7439-95-4	Magnesium	546	J		P
7439-96-5	Manganese	583			P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	10.8			P
7440-09-7	Potassium	397	J		P
7782-49-2	Selenium	2.7	J		P
7440-22-4	Silver	0.16	J		P
7440-23-5	Sodium	166	J		P
7440-28-0	Thallium	1.9	J		P
7440-62-2	Vanadium	6.7	J		P
7440-66-6	Zinc	130		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

017

EPA SAMPLE NO.

ME0050

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94362

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 76.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7580			P
7440-36-0	Antimony	2.5	J	N	P
7440-38-2	Arsenic	4.1			P
7440-39-3	Barium	77.7			P
7440-41-7	Beryllium	0.94	J		P
7440-43-9	Cadmium	1.4			P
7440-70-2	Calcium	39800			P
7440-47-3	Chromium	20.1			P
7440-48-4	Cobalt	6.4	J		P
7440-50-8	Copper	52.9			P
7439-89-6	Iron	19000			P
7439-92-1	Lead	87.2		*	P
7439-95-4	Magnesium	22100			P
7439-96-5	Manganese	247			P
7439-97-6	Mercury	0.38			CV
7440-02-0	Nickel	18.2			P
7440-09-7	Potassium	1800			P
7782-49-2	Selenium	2.1	J		P
7440-22-4	Silver	0.14	J		P
7440-23-5	Sodium	281	J		P
7440-28-0	Thallium	1.6	J		P
7440-62-2	Vanadium	17.9			P
7440-66-6	Zinc	170		*	P

Color Before: black Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

ments: Rocks, Plant Matter, Glass, Insect

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

018

EPA SAMPLE NO.

ME0051

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Matrix (soil/water): SOIL Lab Sample ID: BT94363

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 68.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16700			P
7440-36-0	Antimony	2.7	J	N	P
7440-38-2	Arsenic	4.4	J		P
7440-39-3	Barium	86.1			P
7440-41-7	Beryllium	1.1	J		P
7440-43-9	Cadmium	2.1			P
7440-70-2	Calcium	35700			P
7440-47-3	Chromium	25.2			P
7440-48-4	Cobalt	9.7	J		P
7440-50-8	Copper	40.0			P
7439-89-6	Iron	19300			P
7439-92-1	Lead	124		*	P
7439-95-4	Magnesium	24300			P
7439-96-5	Manganese	183			P
7439-97-6	Mercury	0.91			CV
7440-02-0	Nickel	26.9			P
7440-09-7	Potassium	3920			P
7782-49-2	Selenium	2.4	J		P
7440-22-4	Silver	0.46	J		P
7440-23-5	Sodium	277	J		P
7440-28-0	Thallium	1.6	J		P
7440-62-2	Vanadium	30.7			P
7440-66-6	Zinc	151		*	P

Color Before: brown Clarity Before: Texture: medium

Color After: yellow Clarity After: Artifacts: yes

nents: Rocks

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum		193.41 J	0	194.19 J	0
Antimony	60.0	53.59 J	89	53.28 J	89
Arsenic	15.0	16.23	108	17.01	113
Barium		197.92 J	0	197.61 J	0
Beryllium	5.0	4.89 J	98	4.90 J	98
Cadmium	5.0	4.77 J	95	4.84 J	97
Calcium		4984.15 J	0	4966.47 J	0
Chromium	10.0	9.50 J	95	9.43 J	94
Cobalt	50.0	48.56 J	97	48.99 J	98
Copper	25.0	25.49	102	23.54 J	94
Iron		100.33	0	100.43	0
Lead	10.0	15.76	158	14.82	148
Magnesium		4836.73 J	0	4807.72 J	0
Manganese	15.0	14.86 J	99	14.84 J	99
Mercury	0.2	0.19 J	95	0.18 J	90
Nickel	40.0	38.53 J	96	38.63 J	97
Potassium		4742.95 J	0	4716.85 J	0
Selenium	35.0	37.36	107	30.93 J	88
Silver	10.0	9.14 J	91	9.60 J	96
Sodium		4496.90 J	0	4447.58 J	0
Thallium	25.0	24.78 J	99	25.02	100
Vanadium	50.0	48.50 J	97	48.99 J	98
Zinc	60.0	60.23	100	57.36 J	96

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				196.78 J	0
Antimony	60.0			48.26 J	80
Arsenic	15.0			18.46	123
Barium				191.54 J	0
Beryllium	5.0			4.72 J	94
Cadmium	5.0			4.66 J	93
Calcium				4797.81 J	0
Chromium	10.0			9.21 J	92
Cobalt	50.0			46.49 J	93
Copper	25.0			22.51 J	90
Iron				114.08	0
Lead	10.0			16.98	170
Magnesium				4608.55 J	0
Manganese	15.0			14.67 J	98
Nickel	40.0			37.84 J	95
Potassium				5095.61	0
Selenium	35.0			39.08	112
Silver	10.0			8.66 J	87
Sodium				4642.15 J	0
Thallium	25.0			25.51	102
Vanadium	50.0			47.56 J	95
Zinc	60.0			54.74 J	91

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

027

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				186.86 J	0
Antimony	60.0			45.81 J	76
Arsenic	15.0			16.99	113
Barium				189.97 J	0
Beryllium	5.0			4.71 J	94
Cadmium	5.0			4.50 J	90
Calcium				4760.59 J	0
Chromium	10.0			9.29 J	93
Cobalt	50.0			46.97 J	94
Copper	25.0			22.61 J	90
Iron				97.37 J	0
Lead	10.0			13.19	132
Magnesium				4584.16 J	0
Manganese	15.0			14.33 J	96
Nickel	40.0			37.64 J	94
Potassium				5007.30	0
Selenium	35.0			37.42	107
Silver	10.0			9.06 J	91
Sodium				4583.26 J	0
Thallium	25.0			25.86	103
Vanadium	50.0			47.42 J	95
Zinc	60.0			54.91 J	92

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				217.17	0
Antimony	60.0			48.10 J	80
Arsenic	15.0			15.56	104
Barium				189.11 J	0
Beryllium	5.0			4.65 J	93
Cadmium	5.0			4.64 J	93
Calcium				4687.66 J	0
Chromium	10.0			9.58 J	96
Cobalt	50.0			46.06 J	92
Copper	25.0			21.35 J	85
Iron				332.33	0
Lead	10.0			18.33	183
Magnesium				4488.85 J	0
Manganese	15.0			15.44	103
Nickel	40.0			37.54 J	94
Potassium				5391.68	0
Selenium	35.0			35.31	101
Silver	10.0			8.90 J	89
Sodium				4918.40 J	0
Thallium	25.0			25.51	102
Vanadium	50.0			47.25 J	94
Zinc	60.0			59.28 J	99

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

029

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				187.86 J	0
Antimony	60.0			47.04 J	78
Arsenic	15.0			14.14 J	94
Barium				185.91 J	0
Beryllium	5.0			4.57 J	91
Cadmium	5.0			4.52 J	90
Calcium				4641.56 J	0
Chromium	10.0			9.18 J	92
Cobalt	50.0			45.39 J	91
Copper	25.0			23.93 J	96
Iron				124.77	0
Lead	10.0			11.86	119
Magnesium				4440.38 J	0
Manganese	15.0			14.06 J	94
Nickel	40.0			36.63 J	92
Potassium				5312.62	0
Selenium	35.0			34.79 J	99
Silver	10.0			8.30 J	83
Sodium				4781.71 J	0
Thallium	25.0			25.95	104
Vanadium	50.0			46.25 J	92
Zinc	60.0			56.10 J	94

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Arsenic	15.0	18.38	123	17.23	115
Cadmium	5.0	4.51 J	90	4.63 J	93
Chromium	10.0	10.04	100	9.54 J	95
Iron		109.87	0	121.81	0
Lead	10.0	10.10	101	12.78	128
Potassium		4607.39 J	0	4742.00 J	0
Selenium	35.0	30.81 J	88	32.63 J	93
Zinc	60.0	57.66 J	96	56.84 J	95

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

031

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0040

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Iron		117.64	0	118.08	0

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

3-IN

BLANKS

032

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200.0	U	200.0	U	8.4	J	200.0	U	1.339	J	P
Antimony	60.0	U	60.0	U	60.0	U	60.0	U	12.000	U	P
Arsenic	15.0	U	15.0	U	15.0	U	15.0	U	3.000	U	P
Barium	-1.4	J	-1.2	J	-0.7	J	-1.1	J	-0.140	J	P
Beryllium	-0.05	J	-0.06	J	-0.05	J	-0.07	J	-0.007	J	P
Cadmium	-0.1	J	-0.3	J	5.0	U	-0.3	J	-0.032	J	P
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	17.096	J	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	2.000	U	P
Cobalt	-0.9	J	-0.6	J	-0.5	J	-0.8	J	-0.087	J	P
Copper	5.9	J	20.8	J	6.7	J	1.6	J	0.517	J	P
Iron	100.0	U	100.0	U	6.8	J	100.0	U	20.000	U	P
Lead	8.0	J	5.6	J	5.2	J	9.5	J	0.583	J	P
Magnesium	3.6	J	9.0	J	14.6	J	10.1	J	1.238	J	P
Manganese	-0.3	J	-0.4	J	-0.1	J	-0.4	J	-0.027	J	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	40.0	U	40.0	U	40.0	U	40.0	U	8.000	U	P
Potassium	29.9	J	37.9	J	34.1	J	28.3	J	4.159	J	P
Selenium	5.1	J	35.0	U	35.0	U	5.9	J	7.000	U	P
Silver	10.0	U	-0.7	J	10.0	U	-1.1	J	2.000	U	P
Sodium	5000.0	U	5000.0	U	99.2	J	5000.0	U	53.923	J	P
Thallium	25.0	U	25.0	U	25.0	U	25.0	U	5.000	U	P
Vanadium	-0.4	J	-0.4	J	-0.4	J	-0.5	J	-0.060	J	P
Zinc	2.7	J	10.5	J	5.4	J	60.0	U	0.614	J	P

USEPA - CLP

3-IN

BLANKS

033

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			4.9	J	14.9	J					P
Antimony			60.0	U	60.0	U					P
Arsenic			15.0	U	15.0	U					P
Barium			-1.0	J	-0.8	J					P
Beryllium			-0.06	J	-0.05	J					P
Cadmium			-0.2	J	5.0	U					P
Calcium			5000.0	U	5000.0	U					P
Chromium			10.0	U	10.0	U					P
Cobalt			-0.6	J	-0.7	J					P
Copper			5.3	J	9.0	J					P
Iron			100.0	U	6.9	J					P
Lead			4.9	J	11.7						P
Magnesium			11.0	J	22.3	J					P
Manganese			-0.4	J	-0.3	J					P
Nickel			40.0	U	40.0	U					P
Potassium			32.7	J	34.1	J					P
Selenium			35.0	U	6.1	J					P
Silver			-0.7	J	10.0	U					P
Sodium			5000.0	U	5000.0	U					P
Thallium			25.0	U	25.0	U					P
Vanadium			-0.3	J	-0.3	J					P
Zinc			2.6	J	3.9	J					P

USEPA - CLP

3-IN

BLANKS

034

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Arsenic	15.0	U	15.0	U	15.0	U					P
Cadmium	-0.5	J	-0.4	J	-0.3	J					P
Chromium	10.0	U	10.0	U	10.0	U					P
Iron	100.0	U	100.0	U	100.0	U					P
Lead	-4.9	J	10.0	U	10.0	U					P
Potassium	115.9	J	115.9	J	121.9	J					P
Selenium	35.0	U	35.0	U	35.0	U					P
Zinc	60.0	U	4.4	J	10.0	J					P

USEPA - CLP

3-IN

BLANKS

035

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Iron	100.0	U	9.4	J	27.9	J	100.0	U			P

USEPA - CLP

4A-IN

036

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

ICP-AES Instrument ID: Spectro Ciros02 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400	270053	111	267910.0	108	263326	108	260784.0	105
Antimony	0	585	-2		597.3	102	2		572.4	98
Arsenic	0	97	-8		90.2	93	-7		90.2	93
Barium	2	475	-1	-50	492.0	104	-2	-100	474.0	100
Beryllium	0	482	0		473.6	98	0		458.2	95
Cadmium	0	916	3		986.3	108	3		941.9	103
Calcium	234100	234300	246065	105	245148.0	105	236609	101	233790.0	100
Chromium	36	506	38	106	515.9	102	37	103	497.5	98
Cobalt	0	455	1		480.3	106	1		461.2	101
Copper	15	537	21	140	549.0	102	16	107	528.6	98
Iron	94900	95100	96154	101	95436.8	100	92732	98	92680.5	97
Lead	5	51	5	100	51.5	101	1	20	56.6	111
Magnesium	248800	254100	261643	105	260388.0	102	249218	100	248146.0	98
Manganese	19	483	25	132	524.5	109	24	126	506.2	105
Nickel	10	930	12	120	984.6	106	12	120	942.6	101
Potassium	0		56		45.0		46		44.0	
Selenium	0	51	14		64.8	127	18		56.7	111
Silver	0	210	0		205.4	98	-1		204.3	97
Sodium	0		725		881.4		811		980.1	
Thallium	0	96	3		107.1	112	4		101.0	105
Vanadium	1	481	1	100	495.3	103	1	100	477.2	99
Zinc	39	975	49	126	1029.6	106	42	108	984.8	101

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

037

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

ICP-AES Instrument ID: Spectro Ciros02 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					262254	108	258138.0	104
Antimony	0	585					5		561.4	96
Arsenic	0	97					-4		85.2	88
Barium	2	475					-1	-50	464.3	98
Beryllium	0	482					0		448.0	93
Cadmium	0	916					3		910.3	99
Calcium	234100	234300					231799	99	229511.0	98
Chromium	36	506					36	100	490.3	97
Cobalt	0	455					1		447.9	98
Copper	15	537					15	100	522.5	97
Iron	94900	95100					90984	96	90092.8	95
Lead	5	51					5	100	52.5	103
Magnesium	248800	254100					242489	97	239321.0	94
Manganese	19	483					24	126	497.2	103
Nickel	10	930					12	120	916.2	99
Potassium	0						49		47.4	
Selenium	0	51					8		55.5	109
Silver	0	210					0		200.6	96
Sodium	0						877		1008.8	
Thallium	0	96					4		99.9	104
Vanadium	1	481					1	100	472.8	98
Zinc	39	975					41	105	961.7	99

USEPA - CLP

4A-IN

038

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

ICP-AES Instrument ID: Spectro Ciros02 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Arsenic	0	97	-7		91.5	94	-6		87.0	90
Cadmium	0	916	3		940.8	103	3		945.4	103
Chromium	36	506	39	108	515.1	102	39	108	508.5	100
Iron	94900	95100	94347	99	93921.0	99	94999	100	95311.9	100
Lead	5	51	-8	-160	47.8	94	-3	-60	42.7	84
Potassium	0		139		130.5		131		128.7	
Selenium	0	51	4		52.9	104	6		48.5	95
Zinc	39	975	44	113	1030.3	106	42	108	1068.0	110

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

ICP-AES Instrument ID: Spectro Ciros02 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Iron	94900	95100	95195	100	94949.9	100	93518	99	93255.0	98

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

040

EPA SAMPLE NO.

ME0051S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

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

% Solids for Sample: 68.2

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
Aluminum		14879.5898		16694.2402		0.00	0		P
Antimony	75 - 125	6.5662	J	2.6783	J	29.33	13	N	P
Arsenic	75 - 125	14.6266		4.3889	J	11.73	87		P
Barium	75 - 125	643.7453		86.1341		586.51	95		P
Beryllium	75 - 125	14.4950		1.1194	J	14.66	91		P
Cadmium	75 - 125	15.3528		2.1340		14.66	90		P
Calcium		60217.1289		35709.0703		0.00	0		P
Chromium	75 - 125	77.4481		25.2345		58.65	89		P
Cobalt	75 - 125	143.2087		9.7421	J	146.63	91		P
Copper	75 - 125	115.8577		40.0410		73.31	103		P
Iron		17548.1699		19339.5605		0.00	0		P
Lead		161.8628		124.4580		5.87	637		P
Magnesium		39268.4219		24256.1992		0.00	0		P
Manganese	75 - 125	313.3712		183.4139		146.63	89		P
Mercury	75 - 125	1.6518		0.9120		0.73	101		CV
Nickel	75 - 125	157.9225		26.8982		146.63	89		P
Potassium		3480.6599		3922.8059		0.00	0		P
Selenium	75 - 125	15.2618		2.3693	J	14.66	88		P
Silver	75 - 125	13.8168		0.4635	J	14.66	91		P
Sodium		261.5790	J	277.3505	J	0.00	0		P
Thallium	75 - 125	16.7953		1.5943	J	14.66	104		P
Vanadium	75 - 125	163.2483		30.6970		146.63	90		P
Zinc	75 - 125	311.9351		151.2936		146.63	110		P

Comments:

USEPA - CLP

5B-IN

041

POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0051A

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

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		226.46		18.27	J	240.0	87		P

Comments:

USEPA - CLP

6-IN

DUPLICATES

EPA SAMPLE NO.

ME0051D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

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

% Solids for Sample: 68.2 % Solids for Duplicate: 68.1

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		16694.2402		15246.7803		9		P
Antimony		2.6783	J	2.5460	J	5		P
Arsenic	4.3988	4.3889	J	7.1661		48		P
Barium	58.6510	86.1341		98.2333		13		P
Beryllium		1.1194	J	1.0948	J	2		P
Cadmium	1.4663	2.1340		3.3942		46		P
Calcium		35709.0703		36113.4102		1		P
Chromium		25.2345		25.0975		1		P
Cobalt		9.7421	J	10.1055	J	4		P
Copper		40.0410		48.3472		19		P
Iron		19339.5605		21423.1699		10		P
Lead		124.4580		203.2136		48	*	P
Magnesium		24256.1992		24153.3809		0		P
Manganese		183.4139		195.4949		6		P
Mercury		0.9120		0.9883		8		CV
Nickel	11.7302	26.8982		27.9529		4		P
Potassium	1466.2760	3922.8059		3316.6299		17		P
Selenium		2.3693	J	1.7757	J	29		P
Silver		0.4635	J	0.6054	J	27		P
Sodium		277.3505	J	248.1453	J	11		P
Thallium		1.5943	J	2.1788	J	31		P
Vanadium	14.6628	30.6970		29.6771		3		P
Zinc		151.2936		223.1908		38	*	P

USEPA - CLP

7 - IN

LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Compan Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No: _____ SDG NO.: ME0040

Solid LCS Source: RTC

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits		%R
Aluminum				8470.0	9063.64		2660.0	14300.0	107
Antimony				0.0	1.66	J	0.0	0.0	0
Arsenic				380.0	362.75		338.9	422.0	95
Barium				75.5	75.24		50.2	101.0	100
Beryllium				0.4	0.409	J	0.2	0.7	95
Cadmium				0.9	0.60	J	0.0	2.9	65
Calcium				5420.0	5238.31		3920.0	6930.0	97
Chromium				31.0	31.60		17.2	44.9	102
Cobalt				4.7	4.42	J	3.4	6.0	94
Copper				8.9	8.84		5.7	12.2	99
Iron				10700.0	10169.68		6700.0	14400.0	95
Lead				213.0	214.09		170.0	257.0	101
Magnesium				3060.0	3051.56		2080.0	4050.0	100
Manganese				206.0	209.82		160.0	253.0	102
Mercury				12.3	11.6		7.8	16.9	94
Nickel				11.0	11.18		7.5	14.5	102
Potassium				2230.0	2079.09		578.0	3880.0	93
Selenium				105.0	102.52		82.1	128.0	98
Silver				0.0	0.094	J	0.0	0.0	0
Sodium				296.0	240.86	J	136.0	455.0	81
Thallium				111.0	111.57		85.4	138.0	101
Vanadium				21.7	21.62		8.1	35.4	100
Zinc				93.8	87.08		64.0	124.0	93

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

045

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Instrument Type: P Instrument ID: Spectro Ciros02 Date: 1/31/2003

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	4.7
Antimony	206.83	60	8.7
Arsenic	189.04	15	5.4
Barium	233.53	200	0.40
Beryllium	313.11	5	0.020
Cadmium	226.50	5	0.130
Calcium	318.13	5000	14.3
Chromium	267.72	10	0.80
Cobalt	228.62	50	0.30
Copper	324.75	25	0.5
Iron	261.19	100	6.2
Lead	168.22	10	4.4
Magnesium	279.08	5000	1.4
Manganese	257.61	15	0.10
Nickel	231.60	40	1.90
Potassium	766.49	5000	15.5
Selenium	196.09	35	4.6
Silver	328.07	10	0.60
Sodium	330.24	5000	98.7
Thallium	190.86	25	5.3
Vanadium	292.40	50	0.20
Zinc	213.86	60	1.2

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0040

Instrument Type: P Instrument ID: Spectro Ciros02 Date: 1/31/2003

Preparation Method: HS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	40	0.47
Antimony	206.83	12	0.87
Arsenic	189.04	3	0.54
Barium	233.53	40	0.04
Beryllium	313.11	1	0.002
Cadmium	226.50	1	0.013
Calcium	318.13	1000	1.4
Chromium	267.72	2	0.08
Cobalt	228.62	10	0.03
Copper	324.75	5	0.05
Iron	261.19	20	0.62
Lead	168.22	2	0.44
Magnesium	279.08	1000	0.14
Manganese	257.61	3	0.01
Nickel	231.60	8	0.19
Potassium	766.49	1000	1.55
Selenium	196.09	7	0.46
Silver	328.07	2	0.06
Sodium	330.24	1000	9.8
Thallium	190.86	5	0.53
Vanadium	292.40	10	0.02
Zinc	213.86	12	0.12

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

047

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: P Instrument ID: Spectro Ciros02 Date: 1/31/2003

Preparation Method: HS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	4.7
Antimony	206.83	60	8.7
Arsenic	189.04	15	5.4
Barium	233.53	200	0.40
Beryllium	313.11	5	0.020
Cadmium	226.50	5	0.130
Calcium	318.13	5000	14.3
Chromium	267.72	10	0.80
Cobalt	228.62	50	0.30
Copper	324.75	25	0.5
Iron	261.19	100	6.2
Lead	168.22	10	4.4
Magnesium	279.08	5000	1.4
Manganese	257.61	15	0.10
Nickel	231.60	40	1.90
Potassium	766.49	5000	15.5
Selenium	196.09	35	4.6
Silver	328.07	10	0.60
Sodium	330.24	5000	98.7
Thallium	190.86	25	5.3
Vanadium	292.40	50	0.20
Zinc	213.86	60	1.2

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

048

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

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

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.10	0.038

USEPA - CLP

9-IN

049

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.076

USEPA - CLP

9-IN

050

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

051

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

052

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	1	0.10

USEPA - CLP

12-IN

PREPARATION LOG

058

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Preparation Method: HS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ME0042	10/21/2003	1.00	100
ME0049	10/21/2003	1.00	100
ME0050	10/21/2003	1.00	100
PBS01	10/21/2003	1.00	100
LCSS01	10/21/2003	1.03	100
ME0051	10/21/2003	1.00	100
ME0051D	10/21/2003	1.00	100
ME0051S	10/21/2003	1.00	100
ME0040	10/21/2003	1.00	100
ME0041	10/21/2003	1.00	100
ME0043	10/21/2003	1.00	100
ME0044	10/21/2003	1.00	100
ME0045	10/21/2003	1.00	100
ME0046	10/21/2003	1.00	100
ME0047	10/21/2003	1.00	100
ME0048	10/21/2003	1.00	100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
S0	10/28/2003		100
S0.2	10/28/2003		100
S1	10/28/2003		100
S2	10/28/2003		100
S5	10/28/2003		100
S10	10/28/2003		100
ICV01	10/28/2003		100
ICB01	10/28/2003		100
CRI01	10/28/2003		100
CCV01	10/28/2003		100
CCB01	10/28/2003		100
PBS01	10/28/2003	0.20	100
LCSS01	10/28/2003	0.20	100
ME0040	10/28/2003	0.20	100
ME0041	10/28/2003	0.20	100
ME0042	10/28/2003	0.20	100
ME0043	10/28/2003	0.20	100
ME0044	10/28/2003	0.20	100
ME0045	10/28/2003	0.20	100
ME0046	10/28/2003	0.20	100
ME0047	10/28/2003	0.20	100
CCV02	10/28/2003		100
CCB02	10/28/2003		100
ME0048	10/28/2003	0.20	100
ME0049	10/28/2003	0.20	100
ME0050	10/28/2003	0.20	100
ME0051	10/28/2003	0.20	100
ME0051D	10/28/2003	0.20	100
ME0051S	10/28/2003	0.20	100
CRI02	10/28/2003		100
CCV03	10/28/2003		100
CCB03	10/28/2003		100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

060

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0040

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume(mL)
ICV01	10/29/2003		50
ICV02	10/29/2003		50
ICV03	10/29/2003		50
PBS01	10/29/2003	1.00	50
LCSS01	10/29/2003	1.00	50
ME0051	10/29/2003	1.00	50
ME0051D	10/29/2003	1.00	50
ME0040	10/29/2003	1.00	50
ME0041	10/29/2003	1.00	50
ME0042	10/29/2003	1.00	50
ME0043	10/29/2003	1.00	50
ME0044	10/29/2003	1.00	50
ME0045	10/29/2003	1.00	50
ME0046	10/29/2003	1.00	50
ME0047	10/29/2003	1.00	50
ME0048	10/29/2003	1.00	50
ME0049	10/29/2003	1.00	50
ME0050	10/29/2003	1.00	50
ME0051S	10/29/2003	1.00	50

Comments:

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	A4 Scientific	9	E0009	Water

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

NOV 1 9 2003

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE: _____

SUBJECT: **Electronic (Level 2) Review of Data**

Received for Review on November 6, 2003

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

TO: Data User: IEPA

The following data has been electronically reviewed by CADRE. No review of the raw data, laboratory narrative, laboratory forms or chain-of-custody forms was performed.

SITE NAME: U.S. Steel Coking Facility (IL)

CASE NUMBER: 32259 SDG NUMBER: E0009

Number and Type of Samples: 9 Waters

Sample Numbers: E0009, E0010, E0014, E0019, E0020, E0026, E0028, E0035, E0056

Laboratory: A4 Scientific Hrs. for Review: _____

Following are our findings:

CC: Cecilia Moore
Region 5 TPO
Mail Code: SMF-4J

Case Number : 32259 SDG Number: E0009
Site Name: U.S. STEEL COKING FACILITY (IL) Laboratory: A4 SCIENTIFIC

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

Nine (9) preserved water samples, numbered *E0009, E0010, E0014, E0019, E0020, E0026, E0028, E0035* and *E0056,* were collected *October 14 - 16, 2003.* The lab received the samples *October 16 - 17, 2003* in good condition. Seven (7) samples were analyzed for the full list of organic analytes. Two (2) samples, *E0028* and *E0056*, were analyzed for only the volatile list of organic analytes. All were analyzed according to CLP SOW *OLM04.2* 5/99.

Level 2 - Assembled By: Allison Harvey/ESAT
Date: November 13, 2003

Case Number : 32259 SDG Number: E0009
Site Name: U.S. STEEL COKING FACILITY (IL) Laboratory: A4 SCIENTIFIC

1. **HOLDING TIME**

No defects found.

2. **GC/MS TUNING AND GC INSTRUMENT PERFORMANCE**

No defects found.

3. **CALIBRATION**

Qualification: Calibrations **Protocol: VOA**

DC-7 The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

1,2,4-Trichlorobenzene
VBLK04, VHBLK01

DC-8 The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chloromethane, Carbon Disulfide, Methyl Acetate, Cyclohexane
E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0028, E0035, E0056, VBLKN3, VBLKN4

Trichlorofluoromethane, 1,2-Dibromo-3-chloropropane
E0035, E0056, VBLKN4

2-Butanone, 4-Methyl-2-pentanone, 2-Hexanone
E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0028, VBLKN3

Qualification: Calibrations **Protocol: BNA**

DC-6 The following semivolatile samples are associated with an initial calibration percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

2,4-Dinitrophenol
E0019, E0019MS, E0019MSD, E0026

DC-11 The following semivolatile samples are associated with a continuing calibration

percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

2,4-Dimethylphenol, Hexachlorocyclopentadiene
E0009, E0010, E0014, E0020, E0035, SBLK6N

2,4-Dinitrophenol
E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0035, SBLK6N

4,6-Dinitro-2-methylphenol, Pentachlorophenol
E0019, E0019MS, E0019MSD, E0026

Qualification: Calibrations **Protocol: PES**

No defects found.

4. BLANKS

No defects found.

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

Qualification: SMC **Protocol: VOA**

No defects found.

Qualification: Surrogate **Protocol: BNA**

No defects found.

Qualification: Surrogate **Protocol: PES**

DC-5 The following pesticide samples have surrogate percent recoveries outside the lower limit of the criteria window, but greater than 10%. Hits are qualified "J" and non-detects are qualified "UJ".

E0020, E0026

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Qualification: Matrix Spikes **Protocol: VOA**

DC-2 The relative percent difference (RPD) between the following volatile matrix spike and

matrix spike duplicate recoveries is outside criteria. Hits in the unspiked sample, E0019, are qualified "J" and non-detects are flagged "UJ".

E0019MS, E0019MSD
1,1-Dichloroethene

Qualification: Matrix Spikes **Protocol: BNA**

DC-2 The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits in the unspiked sample, E0019, are qualified "J" and non-detects are flagged "UJ".

E0019MSD
2,4-Dinitrotoluene

Qualification: Matrix Spikes **Protocol: PES**

DC-2 The following pesticide matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits in the unspiked sample, E0019, are qualified "J" and non-detects are flagged "UJ".

E0019MS
Dieldrin

E0019MSD
Dieldrin, Endrin, 4,4-DDT

7. FIELD BLANK AND FIELD DUPLICATE

Samples *E0028* and *E0056* are trip blanks. Sample *E0035* is a field blank. Sample *E0010* is a field duplicate of Sample *E0009*. Results are not qualified based upon the results of the field blank or field duplicates.

8. INTERNAL STANDARDS

No defects found.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Case Number : 32259 SDG Number: E0009
Site Name: U.S. STEEL COKING FACILITY (IL) Laboratory: A4 SCIENTIFIC

Qualification: Detection Limit **Protocol: VOA**

DC-1 The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

E0020
Trichloroethene

Qualification: Detection Limit **Protocol: BNA**

DC-1 The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

E0010, E0014
bis(2-Ethylhexyl)phthalate

E0020
Acetophenone, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo (g,h,i) perylene

E0026
Benzaldehyde, Acetophenone, 2-Methylnaphthalene, Acenaphthylene, Anthracene

Qualification: Detection Limit **Protocol: PES**

DC-3 The following pesticide samples have analytes for which the percent difference between column results exceeds primary criteria. Professional judgement should be used to qualify the data.

E0019MS, E0019MSD
gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, Endrin, 4,4-DDT

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

Qualification: CADRE Reserved **Protocol: VOA**

DC-2 Verification of non-detected results and assignment of "U" qualifier when the reported

value is less than CRQL.

E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0028, E0035, E0056, VBLK04, VBLKN3, VBLKN4, VHBLK01

Qualification: CADRE Reserved **Protocol: BNA**

DC-2 Verification of non-detected results and assignment of "U" qualifier when the reported value is less than CRQL.

E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0035, SBLK6N

Qualification: CADRE Reserved **Protocol: PES**

DC-2 Verification of non-detected results and assignment of "U" qualifier when the reported value is less than CRQL.

E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026, E0035, PBLK5C

Case Number : 32259 SDG Number: E0009
Site Name: U.S. STEEL COKING FACILITY (IL) Laboratory: A4 SCIENTIFIC

Date: 11/7/2003 Wincadre 3.1.3.2 Page: 12

Data Review Results

Lab ID: A4 Case No.: 32259 Method: OLM04.2 Flag :R5FLAG
File Name: E0009 SDG No.: E0009 Criteria: OLM04.2 Defects: R5DEFECT

Data Review Criteria Set Options:

Detection Limit CADRE association rules X
PEST pct D expanded criteria
Use MDL IPC/Tune
Expanded criteria
Holding Time
Region 3 PAH option System Performance
Region 3 PCB option Use initial PEM pct resolution X
Expanded criteria X Use continuing PEM pct resolution
Inorganic missing pH option
CRDL/CRQL Standards
Calibrations Region 2 validation rules
RRF expanded criteria Region 3 validation rules
VOA/BNA PctD expanded criteria
VOA/BNA PctRSD expanded criteria LCS
Use mean RRF Pct rec expanded criteria
Use VOA/BNA dual purpose standard option X
Use initial INDA/INDB pct resolution X Duplicates
Use continuing INDA/INDB pct resolution RPD and AD expanded criteria
Use PEST low concentration option
PEST low concentration PctRSD expanded criteria Furnace AA QC
Use DMC/SMC/Surrogate option X Pct R expanded upper criteria
Use INORG extreme high pct recovery Corr coef expanded criteria
Matrix Spikes Blanks
Use PEST low concentration rules Raise to detection limit X
Use VOA storage/inst blanks X
DMC/SMC/Surrogates Use low concentration rules
Region 3 validation rules
Check dilution factor X Field QC
Use advisory surrogates Combine method/field blanks
Use low concentration rules CRDL contamination criteria
Use BNA low concentration expanded criteria

Level 2 - Assembled By: Allison Harvey/ESAT
Date: November 13, 2003

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 anlayte 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.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Number of Soil Samples : 0
Number of Water Samples : 9

Sample Number :	E0009		E0010		E0014		E0019		E0019MS	
Sampling Location :	S201		S201 D		S202		S203		S203	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
DICHLORODIFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROMETHANE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	10	UJ	68	
1,1,2-TRICHLORO-1,2,2-TRIFLUORO	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	10	U	10	U	10	U	10	U
CARBON DISULFIDE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
METHYL ACETATE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
TRANS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
METHYL TERT-BUTYL ETHER	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CYCLOHEXANE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	10	U	10	U	10	U	51	
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	10	U	10	U	10	U	10	U	52	
METHYLCYCLOHEXANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
TOLUENE	10	U	10	U	10	U	10	U	50	
TRANS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10	U

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Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0009		E0010		E0014		E0019		E0019MS	
Sampling Location :	S201		S201 D		S202		S203		S203	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-HEXANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMOETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROBENZENE	10	U	10	U	10	U	10	U	51	
ETHYLBENZENE	10	U	10	U	10	U	10	U	10	U
XYLENES (TOTAL)	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
ISOPROPYLBENZENE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,4-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMO-3-CHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
1,2,4-TRICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0019MSD		E0020		E0026		E0028		E0035	
Sampling Location :	S203		S204		S205		TRIP BLANK		FB1	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
DICHLORODIFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROMETHANE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROFLUOROMETHANE	10	U	10	U	10	U	10	U	10	UJ
1,1-DICHLOROETHENE	50		10	U	10	U	10	U	10	U
1,1,2-TRICHLORO-1,2,2-TRIFLUORO	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	10	U	10	U	10	U	10	U
CARBON DISULFIDE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
METHYL ACETATE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
TRANS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
METHYL TERT-BUTYL ETHER	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	U
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CYCLOHEXANE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
BENZENE	51		10	U	10	U	10	U	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	51		3	J	10	U	10	U	10	U
METHYLCYCLOHEXANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	U
TOLUENE	50		10	U	10	U	10	U	10	U
TRANS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10	U

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Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0019MSD		E0020		E0026		E0028		E0035	
Sampling Location :	S203		S204		S205		TRIP BLANK		FB1	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-HEXANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	U
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMOETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROBENZENE	52		10	U	10	U	10	U	10	U
ETHYLBENZENE	10	U	10	U	10	U	10	U	10	U
XYLENES (TOTAL)	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
ISOPROPYLBENZENE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,4-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMO-3-CHLOROPROPANE	10	U	10	U	10	U	10	U	10	UJ
1,2,4-TRICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0056		VBLKN3		VBLKN4		VBLK04		VHBLK01	
Sampling Location :	TRIP BLANK2									
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
DICHLORODIFLUOROMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROMETHANE	10	UJ	10	UJ	10	UJ	10	U	10	U
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROFLUOROMETHANE	10	UJ	10	U	10	UJ	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLORO-1,2,2-TRIFLUORO	10	U	10	U	10	U	10	U	10	U
ACETONE	10	U	10	U	10	U	10	U	10	U
CARBON DISULFIDE	10	UJ	10	UJ	10	UJ	10	U	10	U
METHYL ACETATE	10	UJ	10	UJ	10	UJ	10	U	10	U
METHYLENE CHLORIDE	10	U	10	U	10	U	10	U	10	U
TRANS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
METHYL TERT-BUTYL ETHER	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	U	10	UJ	10	U	10	U	10	U
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CYCLOHEXANE	10	UJ	10	UJ	10	UJ	10	U	10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
METHYLCYCLOHEXANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
CIS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	U	10	UJ	10	U	10	U	10	U
TOLUENE	10	U	10	U	10	U	10	U	10	U
TRANS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10	U

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Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0056		VBLKN3		VBLKN4		VBLK04		VHBLK01	
Sampling Location :	TRIP BLANK2									
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-HEXANONE	10	U	10	UJ	10	U	10	U	10	U
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMOETHANE	10	U	10	U	10	U	10	U	10	U
CHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ETHYLBENZENE	10	U	10	U	10	U	10	U	10	U
XYLENES (TOTAL)	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
ISOPROPYLBENZENE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,4-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,2-DIBROMO-3-CHLOROPROPANE	10	UJ	10	U	10	UJ	10	U	10	U
1,2,4-TRICHLOROBENZENE	10	U	10	U	10	U	10	UJ	10	UJ

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Number of Soil Samples : 0
Number of Water Samples : 7

Sample Number :	E0009		E0010		E0014		E0019		E0019MS	
Sampling Location :	S201		S201 D		S202		S203		S203	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	6.8		7.0		7.3		6.5		6.5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
BENZALDEHYDE	10	U	10	U	10	U	10	U	10	U
PHENOL	10	U	10	U	10	U	10	U	30	
BIS-(2-CHLOROETHYL)ETHER	10	U	10	U	10	U	10	U	10	U
2-CHLOROPHENOL	10	U	10	U	10	U	10	U	29	
2-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
2,2'-OXYBIS(1- CHLOROPROPANE)	10	U	10	U	10	U	10	U	10	U
ACETOPHENONE	10	U	10	U	10	U	10	U	10	U
4-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
N-NITROSO-DI-N PROPYLAMINE	10	U	10	U	10	U	10	U	39	
HEXACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
NITROBENZENE	10	U	10	U	10	U	10	U	10	U
ISOPHORONE	10	U	10	U	10	U	10	U	10	U
2-NITROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4-DIMETHYLPHENOL	10	UJ	10	UJ	10	UJ	10	U	10	U
BIS(2-CHLOROETHOXY)METHANE	10	U	10	U	10	U	10	U	10	U
2,4-DICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
NAPHTHALENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROANILINE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBUTADIENE	10	U	10	U	10	U	10	U	10	U
CAPROLACTAM	10	U	10	U	10	U	10	U	10	U
4-CHLORO-3-METHYLPHENOL	10	U	10	U	10	U	10	U	28	
2-METHYLNAPHTHALENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROCYCLO-PENTADIEN	10	UJ	10	UJ	10	UJ	10	U	10	U
2,4,6-TRICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4,5-TRICHLOROPHENOL	25	U	25	U	25	U	25	U	25	U
1,1'-BIPHENYL	10	U	10	U	10	U	10	U	10	U
2-CHLORONAPHTHALENE	10	U	10	U	10	U	10	U	10	U
2-NITROANILINE	25	U	25	U	25	U	25	U	25	U
DIMETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
2,6-DINITROTOLUENE	10	U	10	U	10	U	10	U	10	U
ACENAPHTHYLENE	10	U	10	U	10	U	10	U	10	U
3-NITROANILINE	25	U	25	U	25	U	25	U	25	U
ACENAPHTHENE	10	U	10	U	10	U	10	U	35	

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Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0009		E0010		E0014		E0019		E0019MS	
Sampling Location :	S201		S201 D		S202		S203		S203	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	6.8		7.0		7.3		6.5		6.5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
4-NITROPHENOL	25	U	25	U	25	U	25	U	43	
DIBENZOFURAN	10	U	10	U	10	U	10	U	10	U
2,4-DINITROTOLUENE	10	U	10	U	10	U	10	UJ	39	
DIETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROPHENYL-PHENYL ETHER	10	U	10	U	10	U	10	U	10	U
4-NITROANILINE	25	U	25	U	25	U	25	U	25	U
4,6-DINITRO-2-METHYLPHENOL	25	U	25	U	25	U	25	UJ	25	UJ
N-NITROSO DIPHENYLAMINE	10	U	10	U	10	U	10	U	10	U
4-BROMOPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ATRAZINE	10	U	10	U	10	U	10	U	10	U
PENTACHLOROPHENOL	25	U	25	U	25	U	25	UJ	60	J
PHENANTHRENE	10	U	10	U	10	U	10	U	10	U
ANTHRACENE	10	U	10	U	10	U	10	U	10	U
CARBAZOLE	10	U	10	U	10	U	10	U	10	U
DI-N-BUTYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
PYRENE	10	U	10	U	10	U	10	U	39	
BUTYLBENZYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
3,3'-DICHLOROBENZIDINE	10	U	10	U	10	U	10	U	10	U
BENZO(A)ANTHRACENE	10	U	10	U	10	U	10	U	10	U
CHRYSENE	10	U	10	U	10	U	10	U	10	U
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	2	J	1	J	10	U	10	U
DI-N-OCTYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
BENZO(B)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(K)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(A)PYRENE	10	U	10	U	10	U	10	U	10	U
INDENO(1,2,3-CD)-PYRENE	10	U	10	U	10	U	10	U	10	U
DIBENZO(A,H)-ANTHRACENE	10	U	10	U	10	U	10	U	10	U
BENZO(G,H,I)PERYLENE	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0019MSD		E0020		E0026		E0035		SBLK6N	
Sampling Location :	S203		S204		S205		FB1			
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	6.5		7.2		7.1		6.9		7.2	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
BENZALDEHYDE	10	U	10	U	5	J	10	U	10	U
PHENOL	32		10	U	10	U	10	U	10	U
BIS-(2-CHLOROETHYL)ETHER	10	U	10	U	10	U	10	U	10	U
2-CHLOROPHENOL	31		10	U	10	U	10	U	10	U
2-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
2,2'-OXYBIS(1- CHLOROPROPANE)	10	U	10	U	10	U	10	U	10	U
ACETOPHENONE	10	U	3	J	7	J	10	U	10	U
4-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
N-NITROSO-DI-N PROPYLAMINE	43		10	U	10	U	10	U	10	U
HEXACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
NITROBENZENE	10	U	10	U	10	U	10	U	10	U
ISOPHORONE	10	U	10	U	10	U	10	U	10	U
2-NITROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4-DIMETHYLPHENOL	10	U	10	UJ	10	U	10	UJ	10	UJ
BIS(2-CHLOROETHOXY)METHANE	10	U	10	U	10	U	10	U	10	U
2,4-DICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
NAPHTHALENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROANILINE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBUTADIENE	10	U	10	U	10	U	10	U	10	U
CAPROLACTAM	10	U	10	U	10	U	10	U	10	U
4-CHLORO-3-METHYLPHENOL	36		10	U	10	U	10	U	10	U
2-METHYLNAPHTHALENE	10	U	10	U	5	J	10	U	10	U
HEXACHLOROCYCLO-PENTADIEN	10	U	10	UJ	10	U	10	UJ	10	UJ
2,4,6-TRICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4,5-TRICHLOROPHENOL	25	U	25	U	25	U	25	U	25	U
1,1'-BIPHENYL	10	U	10	U	10	U	10	U	10	U
2-CHLORONAPHTHALENE	10	U	10	U	10	U	10	U	10	U
2-NITROANILINE	25	U	25	U	25	U	25	U	25	U
DIMETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
2,6-DINITROTOLUENE	10	U	10	U	10	U	10	U	10	U
ACENAPHTHYLENE	10	U	10	U	2	J	10	U	10	U
3-NITROANILINE	25	U	25	U	25	U	25	U	25	U
ACENAPHTHENE	40		10	U	10	U	10	U	10	U

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Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0019MSD		E0020		E0026		E0035		SBLK6N	
Sampling Location :	S203		S204		S205		FB1			
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	6.5		7.2		7.1		6.9		7.2	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
4-NITROPHENOL	53		25	U	25	U	25	U	25	U
DIBENZOFURAN	10	U	10	U	10	U	10	U	10	U
2,4-DINITROTOLUENE	51		10	U	10	U	10	U	10	U
DIETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROPHENYL-PHENYL ETHER	10	U	10	U	10	U	10	U	10	U
4-NITROANILINE	25	U	25	U	25	U	25	U	25	U
4,6-DINITRO-2-METHYLPHENOL	25	UJ	25	U	25	UJ	25	U	25	U
N-NITROSO DIPHENYLAMINE	10	U	10	U	10	U	10	U	10	U
4-BROMOPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
ATRAZINE	10	U	10	U	10	U	10	U	10	U
PENTACHLOROPHENOL	76	J	25	U	25	UJ	25	U	25	U
PHENANTHRENE	10	U	2	J	10	U	10	U	10	U
ANTHRACENE	10	U	3	J	4	J	10	U	10	U
CARBAZOLE	10	U	10	U	10	U	10	U	10	U
DI-N-BUTYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORANTHENE	10	U	7	J	10	U	10	U	10	U
PYRENE	42		6	J	10	U	10	U	10	U
BUTYLBENZYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
3,3'-DICHLOROBENZIDINE	10	U	10	U	10	U	10	U	10	U
BENZO(A)ANTHRACENE	10	U	5	J	10	U	10	U	10	U
CHRYSENE	10	U	9	J	10	U	10	U	10	U
BIS(2-ETHYLHEXYL)PHTHALATE	10	U	19		37		10	U	10	U
DI-N-OCTYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
BENZO(B)FLUORANTHENE	10	U	5	J	10	U	10	U	10	U
BENZO(K)FLUORANTHENE	10	U	3	J	10	U	10	U	10	U
BENZO(A)PYRENE	10	U	2	J	10	U	10	U	10	U
INDENO(1,2,3-CD)-PYRENE	10	U	3	J	10	U	10	U	10	U
DIBENZO(A,H)-ANTHRACENE	10	U	10	U	10	U	10	U	10	U
BENZO(G,H,I)PERYLENE	10	U	2	J	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : . A4
Reviewer :
Date :

Number of Soil Samples : 0
Number of Water Samples : 7

Sample Number :	E0009		E0010		E0014		E0019		E0019MS	
Sampling Location :	S201		S201 D		S202		S203		S203	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	0		0		0		0		0	
pH :	6.8		7.0		7.3		6.5		6.5	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
BETA-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
DELTA-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
GAMMA-BHC (LINDANE)	0.050	U	0.050	U	0.050	U	0.050	U	0.55	
HEPTACHLOR	0.050	U	0.050	U	0.050	U	0.050	U	0.50	
ALDRIN	0.050	U	0.050	U	0.050	U	0.050	U	0.47	
HEPTACHLOR EPOXIDE	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
ENDOSU1FAN I	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
DIELDRIN	0.10	U	0.10	U	0.10	U	0.10	UJ	1.3	
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ENDRIN	0.10	U	0.10	U	0.10	U	0.10	UJ	1.2	
ENDOSULFAN II	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ENDOSULFAN SULFATE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	0.10	U	0.10	U	0.10	U	0.10	UJ	1.1	
METHOXYCHLOR	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
ENDRIN KETONE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ENDRIN ALDEHYDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ALPHA-CHLORDANE	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
GAMMA-CHLORDANE	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
TOXAPHENE	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
AROCLOR-1016	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
AROCLOR-1221	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
AROCLOR-1232	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
AROCLOR-1242	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
AROCLOR-1248	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
AROCLOR-1254	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
AROCLOR-1260	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

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Case #: 32259 SDG : E0009
Site : BILL'S EXCAVATING
Lab. : A4
Reviewer :
Date :

Sample Number :	E0019MSD		E0020		E0026		E0035		PBLK5C	
Sampling Location :	S203		S204		S205		FB1			
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :										
Time Sampled :										
%Moisture :	0		0		0		0		N/A	
pH :	6.5		7.2		7.1		6.9		7.2	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
BETA-BHC	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
DELTA-BHC	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
GAMMA-BHC (LINDANE)	0.55		0.050	UJ	0.050	UJ	0.050	U	0.050	U
HEPTACHLOR	0.50		0.050	UJ	0.050	UJ	0.050	U	0.050	U
ALDRIN	0.48		0.050	UJ	0.050	UJ	0.050	U	0.050	U
HEPTACHLOR EPOXIDE	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
ENDOSU1FAN I	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
DIELDRIN	1.3		0.10	UJ	0.10	UJ	0.10	U	0.10	U
4,4'-DDE	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
ENDRIN	1.4		0.10	UJ	0.10	UJ	0.10	U	0.10	U
ENDOSULFAN II	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
4,4'-DDD	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
ENDOSULFAN SULFATE	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
4,4'-DDT	1.3		0.10	UJ	0.10	UJ	0.10	U	0.10	U
METHOXYCHLOR	0.50	U	0.50	UJ	0.50	UJ	0.50	U	0.50	U
ENDRIN KETONE	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
ENDRIN ALDEHYDE	0.10	U	0.10	UJ	0.10	UJ	0.10	U	0.10	U
ALPHA-CHLORDANE	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
GAMMA-CHLORDANE	0.050	U	0.050	UJ	0.050	UJ	0.050	U	0.050	U
TOXAPHENE	5.0	U	5.0	UJ	5.0	UJ	5.0	U	5.0	U
AROCLOR-1016	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U
AROCLOR-1221	2.0	U	2.0	UJ	2.0	UJ	2.0	U	2.0	U
AROCLOR-1232	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U
AROCLOR-1242	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U
AROCLOR-1248	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U
AROCLOR-1254	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U
AROCLOR-1260	1.0	U	1.0	UJ	1.0	UJ	1.0	U	1.0	U

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Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Data
Received for Review on 11-6-03

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

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: U.S. Steel Coking Facility (IL)

CASE NUMBER: 32259 SDG NUMBER: E0009

Number and Type of Samples: 9 (Water)

Sample Numbers: E0009-10, E0014, E0019-20, E0026, E0025, E0035, E0056

Laboratory: A4 Scientific Hrs for Review:

Following are our findings:

CC: Cecilia Moore
Region 5 TPO
Mail Code: SMF-4J

Sample Delivery Group(SDG)
Cover Sheet

SDG Number: E0009

Laboratory Name.: A4 SCIENTIFIC, INC. **Laboratory Code.:** A4

Contract No.: 68W03027 **Case No.:** 32259

Analysis Price: $378.00 **SDG Turnaround:** 21 days

EPA Sample Numbers in SDG(Listed in Numerical Order)

1)E0009	7)E0028	13)	19)
2)E0010	8)E0035	14)	20)
3)E0014	9)E0056	15)	21)
4)E0019	10)	16)	22)
5)E0020	11)	17)	23)
6)E0026	12)	18)	24)

E0009
First Sample in SDG

E0056
Last Sample in SDG

10/16/2003
First Sample Receipt Date

10/17/2003
Last Sample Receipt Date

Note: There are a maximum of 20 samples (excluding PE sample) in SDG. Attach TRs to this form in alphanumeric order(the order listed above on this form).

Signature _____ **Date** 10/18/03

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ~~E0008~~ E0009 SR 10/16/03

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z6215892210022564
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730		
2			
3			
4		Suman Reddy	10/16/03 10:35

For Lab Use Only

Lab Contract No:	GSW03027
Unit Price:	$378.00
Transfer To:	
Lab Contract No:	SR 10/16/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0008	Soil/Sediment/ Ken Corkill	L/G	PEST (21)	5-279286 (Ice Only) (1)	X101	S: 10/14/2003 12:00	ME0008	4012 009
E0009	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279291 (Ice Only), 5-279292 (Ice Only), 5-279293 (HCL), 5-279294 (HCL) (4)	S201	S: 10/14/2003 12:00	ME0009	1st sx 4014 002
E0010	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279297 (Ice Only), 5-279298 (Ice Only), 5-279299 (HCL), 5-279300 (HCL) (4)	S201 D	S: 10/14/2003 12:00	ME0010	.003
E0011	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279302 (Ice Only) (1)	X201	S: 10/14/2003 12:00	ME0011	4012 002
E0012	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279306 (Ice Only) (1)	X201 D	S: 10/14/2003 12:00	ME0012	.003
E0013	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279310 (Ice Only) (1)	X202	S: 10/14/2003 12:50	ME0013	.004
E0014	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279315 (Ice Only), 5-279316 (Ice Only), 5-279317 (HCL), 5-279318 (HCL) (4)	S202	S: 10/14/2003 12:50	ME0014	4014 004
E0015	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279320 (Ice Only) (1)	X102	S: 10/14/2003 13:30	ME0015	4012 005
E0016	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279324 (Ice Only) (1)	X203	S: 10/14/2003 13:30	ME0016	.006

ORIGINAL COPY
Case: 32259 SDG: E0008
Episode: 4012 Int./Date: SR 10/16/03

007

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: E0019, E0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 27937 - 27944
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y Shipment Iced? Y

BNA = CLP TCL Semivolatiles, BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, PER_SOL = Percent Solids, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 5-314975591-101503-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to ...ple Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phoi 3/264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

EPA

Case No:	32259
DAS No.	E0009
SDG No:	~~E0008~~ SF 10/16/03

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z6215892210022564
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730		
2			
3			
4		Sumonaleddy	10/16/03 10:35

For Lab Use Only

Lab Contract No:	68D03027
Unit Price:	$318.00
Transfer To:	
Lab Contract No:	SR 10/16/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0017	Soil/Sediment/ Bruce Everetts	H/G	BNA/PEST (21)	5-279328 (Ice Only) (1)	X204	S: 10/14/2003 14:50	ME0017	4012-007
E0018	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279332 (Ice Only) (1)	X103	S: 10/14/2003 14:00	ME0018	008
E0019	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279341 (Ice Only), 5-279342 (Ice Only), 5-279343 (Ice Only), 5-279344 (Ice Only), 5-279345 (Ice Only), 5-279346 (Ice Only), 5-279347 (HCL), 5-279348 (HCL), 5-279349 (HCL), 5-279350 (HCL), 5-279351 (HCL), 5-279352 (HCL) (12)	S203	S: 10/14/2003 14:00	ME0019	4014-005
E0020	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279355 (Ice Only), 5-279356 (Ice Only), 5-279357 (HCL), 5-279358 (HCL) (4)	S204	S: 10/14/2003 14:50	ME0020	4014-006
E0021	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279360 (Ice Only) (1)	X104	S: 10/14/2003 14:30	ME0021	4012-010
E0022	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279364 (Ice Only) (1)	X105	S: 10/14/2003 15:00	ME0022	011
0023	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279368 (Ice Only) (1)	X106	S: 10/14/2003 15:00	ME0023	012

ORIGINAL COPY
Case: 32259 SDG: E0009
Episode: 4012 Int./Date: 10/16/03

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: E0019, E0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 27939-27944
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y / Shipment Iced? Y

BNA = CLP TCL Semivolatiles, BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, PER_SOL = Percent Solids, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 5-314975591-101503-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: E0009 SR ~~E0008~~ 10/16/03

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z6215892210022564
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730		
2			
3			
4		Sumaraleddy	10/16/03 10:35

For Lab Use Only

Lab Contract No:	G8W03027
Unit Price:	$B 378.00
Transfer To:	
Lab Contract No:	SR 10/16/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0024	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279372 (Ice Only) (1)	X107	S: 10/14/2003 15:30	ME0024	4012.013
E0025	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279376 (Ice Only) (1)	X205	S: 10/14/2003 15:30	ME0025	.014
E0026	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279381 (Ice Only), 5-279382 (Ice Only), 5-279383 (HCL), 5-279384 (HCL) (4)	S205	S: 10/14/2003 15:30	ME0026	SR ~~.015~~ 4014.001
E0027	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21), VOA (21)	5-279386 (Ice Only), 5-279387 (Ice Only), 5-279388 (Ice Only) (3)	X206	S: 10/15/2003 10:00	ME0027	4012.015
E0028	Surface Water/ Bruce Everetts	L/G	VOA (21)	5-279389 (HCL), 5-279390 (HCL) (2)	Trip Blank	S: 10/15/2003 10:35		4014.008
E0029	Waste/ Bruce Everetts	H/G	BNA/PEST (21), VOA (21)	5-279392 (Ice Only), 5-279393 (Ice Only), 5-279394 (Ice Only) (3)	X301	S: 10/15/2003 10:30	ME0029	
E0030	Waste/ Bruce Everetts	H/G	BNA/PEST (21), VOA (21)	5-279396 (Ice Only), 5-279397 (Ice Only), 5-279398 (Ice Only) (3)	X302	S: 10/15/2003 11:00	ME0030	
E0031	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279694 (Ice Only), 5-279695 (Ice Only), 5-279696 (Ice Only) (3)	X108	S: 10/15/2003 9:30	ME0031	
E0032	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279698 (Ice Only), 5-279699 (Ice Only), 5-279700 (Ice Only) (3)	X109	S: 10/15/2003 10:30	ME0032	
E0033	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279702 (Ice Only), 5-279703 (Ice Only), 5-279704 (Ice Only) (3)	X110	S: 10/15/2003 11:00	ME0033	

ORIGINAL COPY
Case: 32259 SDG: E0008
Episode: 4012 Int./Date: SR 10/16/03

609

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: E0019, E0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 27939-27944
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y Shipment Iced? Y

BNA = CLP TCL Semivolatiles, BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, PER_SOL = Percent Solids, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 5-314975591-101503-0002

PR provides prelir ry results. Requests for preliminary results will increase analytical costs.
Send Copy to: S e Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

EPA

Case No:	32259
DAS No:	E0009 SR
SDG No:	~~E0029~~ 10/17/03

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023465
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630		
2			
3			
4		Sumanchetty	10/17/03 10:15

Sampler Signature: Bruce Everetts

For Lab Use Only

Lab Contract No:	68W03027
Unit Price:	$1,378.00
Transfer To:	
Lab Contract No:	SR 10/17/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0035	Surface Water/ Bruce Everetts	L/G	BNA (21), PEST (21), VOA (21)	5-279723 (Ice Only), 5-279724 (Ice Only), 5-279725 (HCL), 5-279726 (HCL) (4)	FB1	S: 10/15/2003 13:00	ME0035	4021.001 Initial
E0040	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279744 (Ice Only) (1)	X111	S: 10/15/2003 12:30	ME0040	4019.001 Initial
E0041	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279748 (Ice Only) (1)	X112	S: 10/15/2003 13:00	ME0041	.002
E0042	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279752 (Ice Only) (1)	X113	S: 10/15/2003 13:30	ME0042	.003
E0043	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279756 (Ice Only) (1)	X211	S: 10/15/2003 14:30	ME0043	.004
E0044	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279760 (Ice Only) (1)	X212	S: 10/15/2003 14:50	ME0044	.005
E0045	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279764 (Ice Only) (1)	X212 D	S: 10/8/2003 14:50	ME0045	.006
E0046	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21)	5-279770 (Ice Only) (1)	X213	S: 10/15/2003 16:00	ME0046	.007
E0047	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279774 (Ice Only) (1)	X115	S: 10/15/2003 16:30	ME0047	.008
E0048	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21)	5-279778 (Ice Only) (1)	X114	S: 10/15/2003 15:30	ME0048	.009

ORIGINAL COPY
Case: 32259 SDG: E0029 SR
Episode: 4019 Int./Date: 10/17/03

010

Shipment for Case Complete?Y	Sample(s) to be used for laboratory QC: E0051, E0054	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 82838-82840
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y / Shipment Iced? Y

BNA = CLP TCL Semivolatiles, BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, PER_SOL = Percent Solids, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 5-314975591-101603-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No:	32259
DAS No:	
SDG No:	E0007 ~~E0029~~ 10/17/03

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023465
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630		
2			
3			
4		Summerfield	10/17/03 10:15

For Lab Use Only

Lab Contract No:	68W03027
Unit Price:	$375.00
Transfer To:	
Lab Contract No:	10/17/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
E0049	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279784 (Ice Only), 5-279785 (Ice Only), 5-279786 (Ice Only) (3)	X116	S: 10/16/2003 9:00	ME0049	
E0050	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21), VOA (21)	5-279788 (Ice Only), 5-279789 (Ice Only), 5-279790 (Ice Only) (3)	X214	S: 10/16/2003 9:00	ME0050	
E0051	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21), VOA (21)	5-279792 (Ice Only), 5-279793 (Ice Only), 5-279794 (Ice Only) (3)	X215	S: 10/16/2003 9:20	ME0051	4019.010 Initial SDG-First Sample
E0052	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21), VOA (21)	5-279796 (Ice Only), 5-279797 (Ice Only), 5-279798 (Ice Only) (3)	X216	S: 10/16/2003 10:00	ME0052	
E0053	Soil/Sediment/ Bruce Everetts	L/G	BNA/PEST (21), VOA (21)	5-279802 (Ice Only), 5-279803 (Ice Only), 5-279804 (Ice Only) (3)	X217	S: 10/16/2003 10:30	ME0053	
E0054	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279806 (Ice Only), 5-279807 (Ice Only), 5-279808 (Ice Only) (3)	X117	S: 10/16/2003 10:00	ME0054	
E0055	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279810 (Ice Only), 5-279811 (Ice Only), 5-279812 (Ice Only) (3)	X118	S: 10/16/2003 11.00	ME0055	
E0056	Surface Water/ Bruce Everetts	L/G	VOA (21)	5-279813 (HCL), 5-279814 (HCL) (2)	Trip Blank2	S: 10/16/2003 12:15		4021.002 Initial
E0057	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279816 (Ice Only), 5-279817 (Ice Only), 5-279818 (Ice Only) (3)	X119	S: 10/16/2003 12:00	ME0057	
E0058	Soil/Sediment/ Ken Corkill	L/G	BNA/PEST (21), PER_SOL (21), VOA (21)	5-279820 (Ice Only), 5-279821 (Ice Only), 5-279822 (Ice Only) (3)	X120	S: 10/16/2003 13:00	ME0058	

ORIGINAL COPY
Case: ~~E0029~~ 32259 SDG: E0029 Int./Date: 10/17/03
Episode: 4019 Int./Date:

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	E0051, E0054			82838 - 82840

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G Custody Seal Intact? Y Shipment Iced? Y

BNA = CLP TCL Semivolatiles, BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, PER_SOL = Percent Solids, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 5-314975591-101603-0002

PR provides prelim ry results. Requests for preliminary results will increase analytical costs.
Send Copy to: S e Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 64-9348 Fax 703/264-9222

NOV 0 6 2003

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

Contract #: 68W03027	Case #: 32259	SDG #: E0009

SDG NARRATIVE

SAMPLE RECEIPT & LOGIN

The following samples were received on the dates listed against them. The samples were logged in for analysis as listed.

EPA SAMPLE #	LAB SAMPLE #	DATE /TIME RECEIVED	AIRBILL NO.	VOA	BNA	PEST	REMARKS
E0009	4014.002	10/16/03 10:35	1Z6215892210022948	X	X	X	
E0010	4014.003	10/16/03 10:35	1Z6215892210022948	X	X	X	
E0014	4014.004	10/16/03 10:35	1Z6215892210022921	X	X	X	
E0019	4014.005	10/16/03 10:35	1Z6215892210022921, 1Z6215892210022920	X	X	X	
E0020	4014.006	10/16/03 10:35	1Z6215892210022591	X	X	X	
E0026	4014.007	10/16/03 10:35	1Z6215892210022591	X	X	X	
E0028	4014.008	10/16/03 10:35	1Z6215892210022920	X			
E0035	4021.001	10/17/03 10:15	1Z6215892210023474	X	X	X	
E0056	4021.002	10/17/03 10:15	1Z6215892210023474	X			

The cooler temperatures are listed against the coolers.

DATE RECEIVED	COOLER NO.	Temp (in °C)
10/16/03	1	4
10/16/03	2	4
10/16/03	3	3.5
10/16/03	4	3
10/17/03	1	4

Custody seals were absent and intact for cooler 4 received on 10/16/2003. One vial for Sample E0014 was received broken. SMO was notified. Resolution is enclosed. No other discrepancies or issues were noted during sample receipt and login.

VOLATILES

Samples were analyzed using instrument **A-5971**and **F-5973**.

Instrument **A-5971** consisted of an HP 5971 GC/MS with a 25-meter long DB-624 (Agilent cat# 128-1324) column having a 0.2mm ID and 1.12µm film thickness, a ENCON Purge and Trap with an Archon autosampler. The trap used was a K trap (VOCARB 3000) having 10cm of Carbopack B, 6cm of Carboxen 1000, and 1cm Carboxen 1001.

Instrument **F-5973** consisted of an Agilent 5973 GC/MS with a 25-meter long DB-624 (Agilent cat# 128-1324) column having a 0.2mm ID and 1.12µm film thickness, a Tekmar Purge and Trap Model LSC2000 with an Archon autosampler. The trap used was a K trap (Supelco Cat # 21066-U; VOCARB 3000) having 10cm of Carbopack B, 6cm of Carboxen 1000, and 1cm Carboxen 1001.

All VOA samples had the pH characteristic verified. The reading is listed below.

EPA SAMPLE #	LAB SAMPLE #	pH
E0009	4014.002	≤ 2
E0010	4014.003	≤ 2

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

Contract #: 68W03027	Case #: 32259	SDG #: E0009

SDG NARRATIVE

E0014	4014.004	≤ 2
E0019	4014.005	≤ 2
E0020	4014.006	≤ 2
E0026	4014.007	≤ 2
E0028	4014.008	≤ 2
E0035	4021.001	≤ 2
E0056	4021.002	≤ 2

MS/MSD was performed for the sample E0019.

Manual integrations were performed for the following samples for the compounds listed against them.

VSTD20003 – Methyl Acetate
VSTD10003 – Methyl Acetate
VSTD05003 – Methyl Acetate
VSTD02003 – Methyl Acetate
VSTD01003 – Methyl Acetate
VSTD05004 – Methyl Acetate

These manual integrations were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration, the scan ranges, and initials of the analyst or manager is included in the data package.

SEMI-VOLATILES

Water samples were extracted using the required continuous liquid-liquid extraction method on 10/18/2003. No problems were encountered during extraction.

All samples were analyzed on a HP5973 GC-MS using a 30-meter HP-5MS column (Agilent cat#19091S-433) having a 0.25mm ID and a 0.25μm film thickness. A 2μL injection was used.

The estimated total concentrations of alkanes by type are listed below.

EPA Sample #	Lab Sample #	Straight Chain (μg/L)	Branched (μg/L)	Cyclic (μg/L)
E0009	4014.002		5.28	
E0020	4014.006		8.81	
E0026	4014.007	33.06		9.66
E0035	4021.001		4.20	

PESTICIDES

Water samples were extracted using separatory funnel extraction method on 10/20/2003. No problems were encountered during extraction.

Samples were analyzed using instrument **C-6890**.

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

Contract #: 68W03027	Case #: 32259	SDG #: E0009

SDG NARRATIVE

Instrument C-6890 consisted of a dual inlet, dual ECD Agilent 6890 GC/ECD instrument with the following two columns manufactured by Restek. A 1µL injection was used on each column

Coulmn 1= RTX-PEST: Cat # 11140, 30m long, 0.53mm ID, 0.5µm film thickness (Instrument ID: C-6890A).
Column 2 = RTX-PEST2: Cat # 111340, 30m long, 0.53mm ID, 0.42µm film thickness (instrument ID: C-6890B)

A 1µL injection was used on each column.

Manual integrations were performed for the following compounds for the samples listed against them.

COMPOUND	*EPA SAMPLE ID (Inst=C-6890A)*	*EPA SAMPLE ID (Inst=C-6890B)*
Tetrachloro-m-xylene	PIBLK3K, E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020	INDBL5K, INDBM5K, PEM5M, PBLK5C, E0009, E0010, E0014, E0019, E0019MS, E0019MSD, E0020, E0026
Decachlorobiphenyl	RESC3K, INDAM3K, INDBM3K, PIBLK3K, PIBLK3L, INDBM3L, PIBLK3M, PBLK5C, E0009, E0010, E0020, E0026	INDAM5K, PIBLK5K, PEM5L, E0009, E0010, E0014, E0019, E0019MS, E0020, E0026
Alpha-BHC		PEM5L, PEM5M
Alpha-Chlordane		INDBL5K
Gamma-BHC	INDAH3K, E0019MSD	PEM5L, PEM5M, E0019MS, E0019MSD
Gamma-Chlordane		INDBL5K
Beta-BHC	INDBH3K	INDBL5K, INDBM5K, PEM5L, PEM5M
Delta-BHC	INDBL3K, INDBH3K	INDBL5K, INDBM5K
4,4'-DDD	INDAH3K	INDAM5K, PEM5M
4,4'-DDT		INDAM5K, PEM5L, PEM5M, E0019MS
4,4'-DDE		INDBL5K
Aldrin		INDBL5K, E0019MS, E0019MSD
Dieldrin		INDAM5K, E0019MS, E0019MSD
Methoxychlor		PEM5L
Endrin		PEM5L, PEM5M, E0019MS
Endrin Aldehyde		INDBL5K
Endirn Ketone		PEM5M
Heptachlor	E0019MSD	E0019MS, E0019MSD
Heptachlor Epoxi		INDBL5K
Endosulfan I		INDAM5K
Endosulfan II		INDBL5K
Aroclor-1016{2}		AR16605K
Aroclor-1016{3}		AR16605K
Aroclor-1221{1}		AR12215K
Aroclor-1221{2}		AR12215K
Aroclor-1221{3}		AR12215K

SDG NARRATIVE

Aroclor-1232{2}		AR12325K
Aroclor-1232{3}		AR12325K
Aroclor-1242{1}		AR12425K
Aroclor-1242{2}		AR12425K
Aroclor-1242{3}		AR12425K
Aroclor-1248{2}		AR12485K
Aroclor-1248{3}		AR12485K

These manual integrations were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration, the scan ranges, and initials of the analyst or manager is included in the data package.

The following equations are used for calculation of sample results from raw instrument output data:

Volatiles:

$$\text{Concentration } (\mu g/L) = \frac{(Ax)(Is)(Df)}{(Ais)(RRF)(Vo)}$$

A_x = Area of the characteristic ion (EICP) for the compound to be measured.
A_{is} = Area of the characteristic ion (EICP) for the specific internal standard.
= Amount of internal standard added in nanograms (ng).
RF = Relative response factor from the ambient temperature purge of the calibration standard.
V_o = Volume of water purged, in milliliters (mL).
Df = Dilution factor.

Semivolatiles:

$$\text{Concentration } (\mu g/L) = \frac{(Ax)(Is)(Vt)(Df)(GPC)}{(Ais)(RRF)(Vo)(Vi)}$$

A_x = Area of the characteristic ion for the compound to be measured.
A_{is} = Area of the characteristic ion for the internal standard.
I_s = Amount of internal standard injected in nanograms (ng).
RRF = the relative response factor determined from the 12-hour calibration standard.
V_o = Volume of water extracted in milliliters (mL).
V_i = Volume of extract injected in microliters (µL).
V_t = Volume of concentrated extract in microliters (µL). (V_t = 1000µL).
Df = Dilution factor.
GPC = GPC factor (GPC = 1.0 if sample was not subjected to GPC, GPC = 2.0 if sample was subjected to GPC)

Pesticides:

$$\text{Concentration } (\mu g/L) = \frac{(Ax)(Vt)(Df)(GPC)}{(CF)(Vo)(Vi)}$$

A_x = Area of the peak for the compound to be measured.
CF = Calibration factor from the initial calibration for the mid-point concentration external standard (area per ng).
= Volume of concentrated extract in microlitres (µL).
= Volume of extract injected in microliters (µL).
V_o = Volume of water extracted in milliliters (mL).
Df = Dilution factor.

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

Contract #: 68W03027	Case #: 32259	SDG #: E0009

SDG NARRATIVE

GPC = GPC factor (If no GPC is performed, GPC = 1.0. If GPC is performed the GPC = 2.0)

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 hard copy data package and in the computer readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature:

Simana Reddy / QC Coordinator — Signature and Title

11/05/03 — Date of Signature

vinod@a4scientific.com

From: "Mack, Carolyn" <Carolyn.Mack@dyncorp.com>
To: "Vinod (E-mail)" <vinod@a4scientific.com>
Cc: "Brown, Jessica" <Jessica.Brown@dyncorp.com>; "Howard Pham (E-mail)" <pham.howard@epa.gov>; "Carlene Thomas (E-mail)" <thomas.carlene@epa.gov>; "Jerry Willman (E-mail)" <Jerry.Willman@epa.state.il.us>; "Bob Casper (E-mail)" <epa4407@epa.state.il.us>
Sent: Monday, October 20, 2003 9:32 AM
Subject: Region 05 | Case 32259 | Lab A4 | SDG E0009 | Issue Shipping | FINAL

This is Carolyn Mack - I am helping out Jessica today.

Issue 1: The custody seal was missing on the cooler bearing airbill # 1Z6215892210022920. There was no evidence of tampering and the plastic ties were intact.
Resolution 1: In accordance with previous direction from Region 5, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please let Jessica or myself know if you have any questions or problems.

Carolyn Mack
Computer Sciences Corporation
Scheduling Team Leader
CLP Coordinator for Regions 10 and QB Samples
carolyn.mack@dyncorp.com
703.818.4240

-----Original Message-----
From: Jerry Willman [mailto:Jerry.Willman@epa.state.il.us]
Sent: Monday, October 20, 2003 9:19 AM
To: Mack, Carolyn
Subject: Re: Region 05 | Case 32259 | Lab A4 | SDG E0009 | IssueShipping

Regarding Issue #1, please just note it on the case narrative.
Regarding Issue#2, if there is any way to run the volatile analysis using just one vial, please do so. Otherwise, just note the broken vial in the case narrative.

Thank you,
Jerry Willman

-----Original Message-----
From: vinod@a4scientific.com [mailto:vinod@a4scientific.com]
Sent: Friday, October 17, 2003 9:16 PM
To: Mack, Carolyn
Subject: Re: Region 05 | Case 32259 | Lab A4 | SDG E0009 | Issue Shipping

Hi Carolyn,

Issue 1: There was no evidence of tampering. The plastic ties were intact.

Vinod.

----- Original Message -----
From: Mack, Carolyn
To: Vinod (E-mail)

935

Sent: Friday, October 17, 2003 4:10 PM
Subject: Region 05 | Case 32259 | Lab A4 | SDG E0009 | Issue Shipping

This is Carolyn Mack - I am helping out Jessica today.

Issue 1: The custody seal was missing on the cooler bearing airbill # 1Z6215892210022920.
Resolution 1: Were the plastic ties intact and/or was there evidence of tampering?

Issue 2: For sample E0014 the lab received 2 vials and two 2.5 ltr ambers, out of which 1 vial was broken.
Resolution 2: In accordance with previous direction from Region 5, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples. If re-extraction/reanalysis is necessary, the laboratory will contact the SMO coordinator and wait for a resolution.

Carolyn Mack
Computer Sciences Corporation
Scheduling Team Leader
CLP Coordinator for Regions 10 and QB Samples
carolyn.mack@dyncorp.com
703.818.4240

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

-----Original Message-----
From: Brown, Jessica
Sent: Friday, October 17, 2003 2:40 PM
To: Mack, Carolyn
Subject: FW: Case/SDG: 32259/E0009; Missing seals etc

-----Original Message-----
From: vinod@a4scientific.com [mailto:vinod@a4scientific.com]
Sent: Friday, October 17, 2003 2:33 PM
To: Brown, Jessica
Cc: Reddy pakanati
Subject: Case/SDG: 32259/E0009; Missing seals etc

Hi Jessica,

Issue 1: The custody seal was missing on the cooler bearing airbill # 1Z6215892210022920.
Issue 2: For sample E0014 the lab received 2 vials and two 2.5 ltr ambers, out of which 1 vial was broken.

Vinod.

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKN3	104	93	98		0
02	E0009	102	92	98		0
03	E0010	101	88	100		0
04	E0014	99	89	96		0
05	E0019	99	88	101		0
06	E0019MS	91	86	96		0
07	E0019MSD	98	91	98		0
08	E0026	101	92	95		0
09	E0028	101	91	99		0
10	E0020	97	88	91		0
11	VBLKN4	108	91	95		0
12	E0035	110	90	101		0
13	E0056	107	89	94		0
14	VBLK04	104	90	92		0
15	VHBLKC1	106	93	100		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Marix Spike - EPA Sample No.: E0019

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0	68	136	61-145
Trichloroethene	50	0	52	104	71-120
Benzene	50	0	51	102	76-127
Toluene	50	0	50	100	76-125
Chlorobenzene	50	0	51	102	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	50	100	31*	14	61-145
Trichloroethene	50	51	102	2	14	71-120
Benzene	50	51	102	0	11	76-127
Toluene	50	50	100	0	13	76-125
Chlorobenzene	50	52	104	2	13	75-130

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

* Values outside of QC limits.

RPD: 1 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK04

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Lab File ID: A9320 Lab Sample ID: AVBLK04

Date Analyzed: 10/31/03 Time Analyzed: 0626

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

Instrument ID: A-5971

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	4014.001	A9321	0655
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
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COMMENTS _____

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKN3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Lab File ID: F1941 Lab Sample ID: FVBLKN3

Date Analyzed: 10/17/03 Time Analyzed: 0935

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

Instrument ID: F-5973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0009	4014.002	F1942	1006
02	E0010	4014.003	F1943	1034
03	E0014	4014.004	F1944	1103
04	E0019	4014.005	F1945	1133
05	E0019MS	4014.005MS	F1946	1202
06	E0019MSD	4014.005MSD	F1947	1231
07	E0026	4014.007	F1948	1325
08	E0028	4014.008	F1949	1423
09	E0020	4014.006	F1953	1653
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COMMENTS _____

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKN4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Lab File ID: F1957 Lab Sample ID: FVBLKN4

Date Analyzed: 10/20/03 Time Analyzed: 1206

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

Instrument ID: F-5973

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E0035	4021.001	F1958	1257
02	E0056	4021.002	F1959	1325
03				
04				
05				
06				
07				
08				
09				
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11				
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COMMENTS _____

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1942

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1942

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1942

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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4.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1943

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1943

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1943

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1944

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1944

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1944

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1945

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1945

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1945

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MS

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MS

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1946

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	68	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	51	
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MS

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MS

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1946

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	52	
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	50	
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	51	
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MSD

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MSD

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1947

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	50	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	51	
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MSD

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MSD

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1947

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	51	
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	50	
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1953

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1953

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	3	J
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1953

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1948

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1948

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1948

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0028

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.008

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1949

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	CCMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0028

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.008

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1949

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0028

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.008

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1949

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1958

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1958

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1958

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0056

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1959

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0056

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1959

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0056

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.002

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1959

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK04

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: AVBLK04

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9320

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLK04

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: AVBLK04

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9320

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK04

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: AVBLK04

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9320

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKN3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN3

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1941

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKN3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN3

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1941

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKN3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN3

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1941

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/17/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKN4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN4

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1957

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKN4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN4

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1957

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKN4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: FVBLKN4

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: F1957

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/20/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9321

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-Butyl Ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
110-82-7	Cyclohexane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U

1B
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9321

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
79-01-6	Trichloroethene	10	U
108-87-2	Methylcyclohexane	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.001

Sample wt/Vol: 5.0 (g/mL) ML Lab File ID: A9321

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/31/03

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS NO.: SDG No.: E0009

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	E0009	63	56	91	58	55	78	58	48	0
02	E0010	62	56	91	56	52	77	55	45	0
03	E0014	48	37 *	95	44	42	72	44	29	1
04	E0019	37	32 *	105	39	34	66	37	26	1
05	E0019MS	76	62	109	72	67	82	72	49	0
06	E0019MSD	81	66	122	77	69	101	75	49	0
07	E0020	58	58	95	57	49	100	53	41	0
08	E0026	88	80	109	91	77	139 *	85	56	1
09	E0035	71	57	98	63	59	71	63	51	0
10	SBLK6N	54	45	88	47	45	53	48	40	0
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			QC LIMITS	
S1	(NBZ)	= Nitrobenzene-d5	(35-114)	
S2	(FBP)	= 2-Fluorobiphenyl	(43-116)	
S3	(TPH)	= TerPhenyl-d14	(33-141)	
S4	(PHL)	= Penol-d5	(10-110)	
S5	(2FP)	= 2-Fluorophenol	(21-110)	
S6	(TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7	(2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8	(DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix Spike - EPA Sample No.: E0019

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	75	0	30	40	12-110
2-Chlorophenol	75	0	29	39	27-123
N-Nitroso-di-n-prop.(1)	50	0	39	78	41-116
4-Chloro-3-methylphenol	75	0	28	37	23-97
Acenaphthene	50	0	35	70	46-118
4-Nitrophenol	75	0	43	57	10-80
2,4-Dinitrotoluene	50	0	39	78	24-96
Pentachlorophenol	75	0	60	80	9-103
Pyrene	50	0	39	78	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75	32	43	7	42	12-110
2-Chlorophenol	75	31	41	5	40	27-123
N-Nitroso-di-n-prop.(1)	50	43	86	10	38	41-116
4-Chloro-3-methylphenol	75	36	48	26	42	23-97
Acenaphthene	50	40	80	13	31	46-118
4-Nitrophenol	75	53	71	22	50	10-80
2,4-Dinitrotoluene	50	51	102 *	27	38	24-96
Pentachlorophenol	75	76	101	23	50	9-103
Pyrene	50	42	84	7	31	26-127

(1) N-Nitroso-di-n-propylamine

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

* Values outside of QC limits

RPD: 0 out of 9 outside limits

Spike Recovery: 1 out of 18 outside limits

COMMENTS: _____

_____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK6N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Lab File ID: G0266 Lab Sample ID: SVOB6N

Instrument ID: G-5973 Date Extracted: 10/18/03

Matrix: (soil/water) WATER Date Analyzed: 10/30/03

Level: (low/med) LOW Time Analyzed: 0221

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E0009	4014.002	G0268	10/30/03
02	E0010	4014.003	G0269	10/30/03
03	E0014	4014.004	G0270	10/30/03
04	E0019	4014.005	G0283	10/31/03
05	E0019MS	4014.005MS	G0284	10/31/03
06	E0019MSD	4014.005MSD	G0285	10/31/03
07	E0020	4014.006	G0271	10/30/03
08	E0026	4014.007	G0286	10/31/03
09	E0035	4021.001	G0267	10/30/03
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COMMENTS: _____

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0268

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0268

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0268

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Extraction: (Type) SEPF

Number TICS found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.14	47	J
2.	UNKNOWN	3.25	3	J
3.	UNKNOWN	3.28	3	J
4.	UNKNOWN	3.30	57	J
5.	UNKNOWN	3.38	35	J
6.	UNKNOWN	4.10	3	J
7.	UNKNOWN	4.39	2	J
8.	UNKNOWN	4.70	2	J
9.	UNKNOWN	4.89	2	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0269

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0269

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0269

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted: (Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Extraction: (Type) SEPF

Number TICS found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.14	49	J
2.	UNKNOWN	3.25	3	J
3.	UNKNOWN	3.29	6	J
4.	UNKNOWN	3.38	35	J
5.	UNKNOWN	3.95	2	J
6.	UNKNOWN	4.03	12	J
7.	UNKNOWN	4.10	2	J
8.	UNKNOWN	4.70	2	J
9.	UNKNOWN	4.89	2	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0270

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0270

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	1	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0270

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Extraction: (Type) SEPF

Number TICS found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.14	32	J
2.	UNKNOWN	3.25	2	J
3.	UNKNOWN	3.27	3	J
4.	UNKNOWN	3.29	42	J
5.	UNKNOWN	3.38	21	J
6.	UNKNOWN	4.03	8	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0283

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0283

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0283

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

Number TICS found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.12	18	J
2.	UNKNOWN	3.25	10	J
3.	UNKNOWN	3.27	29	J
4.	UNKNOWN	3.36	11	J
5.	UNKNOWN	4.02	2	J
6.	UNKNOWN	15.48	2	J
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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19.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MS

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MS

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0284

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	30	
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	29	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	39	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	28	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	35	

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MS

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MS

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0284

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	43	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	39	
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	60	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	39	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MSD

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MSD

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0285

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	32	
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	31	
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	43	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	36	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	40	

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MSD

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MSD

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0285

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	53	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	51	
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	76	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	42	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0271

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	3	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0271

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	2	J
120-12-7	Anthracene	3	J
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	7	J
129-00-0	Pyrene	6	J
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	5	J
281-01-9	Chrysene	9	J
117-81-7	bis(2-Ethylhexyl)phthalate	19	
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	5	J
207-08-9	Benzo(k)fluoranthene	3	J
50-32-8	Benzo(a)pyrene	2	J
193-39-5	Indeno(1,2,3-cd)pyrene	3	J
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	2	J

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0271

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted: (Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

Number TICS found: 27 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER		COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.14	97	J
2.		UNKNOWN	3.25	2	J
3.		UNKNOWN	3.30	49	J
4.		UNKNOWN	3.39	85	J
5.		UNKNOWN	4.10	3	J
6.		UNKNOWN	4.68	2	J
7.		UNKNOWN	4.70	2	J
8.		UNKNOWN	5.58	2	J
9.		UNKNOWN	7.24	5	J
10.		UNKNOWN	7.31	7	J
11.		UNKNOWN	8.42	3	J
12.		UNKNOWN	9.69	4	J
13.		UNKNOWN	9.78	2	J
14.		UNKNOWN	10.70	2	J
15.		UNKNOWN	10.94	3	J
16.	000260-94-6	Acridine	11.18	3	JN
17.	000084-65-1	9,10-Anthracenedione	12.33	3	JN
18.		UNKNOWN	12.55	2	J
19.		UNKNOWN	12.68	3	J
20.	005737-13-3	Cyclopenta(def)phenanthrenon	12.82	6	JN
21.	000206-49-5	Acenaphtho(1,2-B)pyridine	13.55	2	JN
22.	000082-05-3	7H-Benz[de]anthracen-7-one	14.66	2	JN
23.	000239-35-0	Benzo[b]naphtho[2,1-d]thioph	14.82	2	JN
24.	000082-05-3	7H-Benz[de]anthracen-7-one	14.99	3	JN
25.		UNKNOWN	15.69	3	J
26.		UNKNOWN	15.75	2	J
27.	000192-97-2	Benzo[e]pyrene	17.19	4	JN
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0286

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5	J
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	7	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5	J
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	2	J
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0286

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	4	J
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	37	
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0286

Level: (low/med) LOW Date Received: 10/16/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/31/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Extraction: (Type) SEPF

Number TICS found: 25 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.12	38	J
2.		UNKNOWN	3.28	75	J
3.		UNKNOWN	3.36	24	J
4.	000100-42-5	Styrene	3.87	7	JN
5.	000095-13-6	Indene	5.06	9	JN
6.	015403-89-1	5-Ethyl bicyclo[2.2.1]-2-hep	5.91	10	JN
7.	000120-74-1	Bicyclo[2.2.1]hept-5-ene-2-c	6.02	8	JN
8.		UNKNOWN	6.90	10	J
9.	1000191-39-8	Tricyclo[5.2.1.0(2,6)]dec-3-	7.17	10	JN
10.	000085-44-9	Phthalic anhydride	7.28	11	JN
11.		UNKNOWN	7.34	14	J
12.		UNKNOWN	8.90	13	J
13.		UNKNOWN	9.17	26	J
14.		UNKNOWN	9.30	21	J
15.		UNKNOWN	9.38	7	J
16.		UNKNOWN	9.57	8	J
17.	074685-42-0	Benzene, 1-methyl-2-(2-pheny	9.80	15	JN
18.		UNKNOWN	10.20	9	J
19.	035099-60-6	1H-Indene, 2-methyl-3-phenyl	10.62	8	JN
20.		UNKNOWN	11.41	6	J
21.		UNKNOWN	12.72	10	J
22.		UNKNOWN	12.80	7	J
23.		UNKNOWN	13.17	30	J
24.		UNKNOWN	13.50	21	J
25.		UNKNOWN	14.61	14	J
26.					
27.					
28.					
29.					
30.					

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0267

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0267

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0267

Level: (low/med) LOW Date Received: 10/17/03

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Extraction: (Type) SEPF

Number TICS found: 12 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.14	31	J
2.	UNKNOWN	3.25	3	J
3.	UNKNOWN	3.27	2	J
4.	UNKNOWN	3.29	46	J
5.	UNKNOWN	3.38	20	J
6.	UNKNOWN	3.68	2	J
7.	UNKNOWN	4.10	2	J
8.	UNKNOWN	4.39	2	J
9.	UNKNOWN	4.70	2	J
10.	UNKNOWN	4.89	2	J
11.	UNKNOWN	4.93	2	J
12.	UNKNOWN	6.09	2	J
13.				
14.				
15.				
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK6N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: SVOB6N

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0266

Level: (low/med) LOW Date Received: _____

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	10	U
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
98-86-2	Acetophenone	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
105-60-2	Caprolactam	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
92-52-4	1,1'-Biphenyl	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
606-20-2	2,6-Dinitrotoluene	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1D
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK6N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: SVOB6N

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0266

Level: (low/med) LOW Date Received: _____

% Moisture: ____ Decanted:(Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
1912-24-9	Atrazine	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
281-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) Cannot be separated from Diphenylamine

1G

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK6N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: SVOB6N

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: G0266

Level: (low/med) LOW Date Received: _____

% Moisture: ____ Decanted: (Y/N) N Date Extracted: 10/18/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/30/03

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Extraction: (Type) SEPF

Number TICS found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.14	25	J
2.	UNKNOWN	3.25	7	J
3.	UNKNOWN	3.27	5	J
4.	UNKNOWN	3.29	4	J
5.	UNKNOWN	3.38	16	J
6.	UNKNOWN	3.83	2	J
7.	UNKNOWN	4.03	4	J
8.	UNKNOWN	4.29	2	J
9.	UNKNOWN	4.70	3	J
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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30.				

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

GC Column (1): RTX-PEST ID: 0.5 (mm) GC Column (2): RTX-PEST2 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
05	PBLK5C	49	63	46	50			0
06	E0035	76	81	100	120			0
07	E0009	120	82	49	53			0
08	E0010	121	82	55	61			0
09	E0014	150	120	84	67			0
10	E0019	124	107	72	70			0
11	E0019MS	143	121	70	71			0
12	E0019MSD	139	116	75	87			0
13	E0020	53	31	69	14 *			1
14	E0026	88	45	38	17 *			1
15								
16								
17								
18								
19								
20								
21								
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23								
24								
25								
26								
27								
28								
29								
30								
01								
02								
03								
04								

			QC LIMITS
TCX	=	Tetrachloro-m-xylene	(30-150)
DCB	=	Decachlorobiphenyl	(30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: SDG No.: E0009

Marix Spike - EPA Sample No.: E0019

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.50	0	0.55	110	56-123
Heptachlor	0.50	0	0.50	100	40-131
Aldrin	0.50	0	0.47	94	40-120
Dieldrin	1.0	0	1.3	130 *	52-126
Endrin	1.0	0	1.2	120	56-121
4,4'-DDT	1.0	0	1.1	110	38-127

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.50	0.55	110	0	15	56-123
Heptachlor	0.50	0.50	100	0	20	40-131
Aldrin	0.50	0.48	96	2	22	40-120
Dieldrin	1.0	1.3	130 *	0	18	52-126
Endrin	1.0	1.4	140 *	15	21	56-121
4,4'-DDT	1.0	1.3	130 *	17	27	38-127

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

* Values outside of QC limits.

RPD: 0 out of 6 outside limits

Spike Recovery: 4 out of 12 outside limits

COMMENTS: _____

_____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK5C

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS NO.: _____ SDG No.: E0009

Lab Sample ID: PESB5C Lab File ID: _____

Matrix: (soil/water) WATER Extraction: (Type) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/20/03

Date Analyzed (1): 10/31/03 Date Analyzed (2): 10/31/03

Time Analyzed (1): 1531 Time Analyzed (2): 1604

Instrument ID (1): C-6890A Instrument ID (2): C-6890B

GC Column (1): RTX-PEST ID: 0.53 (mm) GC Column (2): RTX-PEST2 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	E0009	4014.002	10/31/03	10/31/03
02	E0010	4014.003	10/31/03	10/31/03
03	E0014	4014.004	10/31/03	10/31/03
04	E0019	4014.005	10/31/03	10/31/03
05	E0019MS	4014.005MS	10/31/03	10/31/03
06	E0019MSD	4014.005MSD	10/31/03	10/31/03
07	E0020	4014.006	10/31/03	10/31/03
08	E0026	4014.007	10/31/03	10/31/03
09	E0035	4021.001	10/31/03	10/31/03
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0009

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.002

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0010

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.003

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0014

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.004

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MS

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MS

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.55	P
76-44-8	Heptachlor	0.50	P
309-00-2	Aldrin	0.47	P
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	1.3	P
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	1.2	P
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	1.1	P
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0019MSD

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.005MSD

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.55	P
76-44-8	Heptachlor	0.50	P
309-00-2	Aldrin	0.48	P
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	1.3	P
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	1.4	P
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	1.3	P
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0020

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.006

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0026

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4014.007

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/16/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0035

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: 4021.001

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/17/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK5C

Lab Name: A4 SCIENTIFIC, INC. Contract: 68W03027

Lab Code: A4 Case No.: 32259 SAS No.: _____ SDG No.: E0009

Matrix: (soil/water) WATER Lab Sample ID: PESB5C

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ Decanted: (Y/N) N Date Received: 10/17/03

Extraction: (Type) SEPF Date Extracted: 10/20/03

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/31/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: E0009 CERCLIS No: ILD980704845

Case No: 32259 Site Name/Location: U.S. STEEL COKING FACILITY

Contractor or EPA Lab: A4 SCIENTIFIC Data User: IEPA

No. of Samples: 9 Date Sampled or Date Received: 11-6-03

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?
Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ✓ No ____
No of samples claimed: ____ No. of samples received: ____

Received by: EVA M. DIXON/ESAT Date: 11-6-03

Received by LSSS: EVA M. DIXON/ESAT Date: 11-6-03

Review started: ____ Reviewer Signature: ____

Total time spent on review: ____ Date review completed: ____

Copied by: EVA M. DIXON/ESAT Date: 11-14-03

Mailed to user by: EVA M. DIXON/ESAT Date: 11-14-03

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: ____ Date: ____

Data review received by: ____ Date: ____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date: ____

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	9	ME0052	Soil

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

RECEIVED
NOV 19 2003
IEPA-BOL-FSRS

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 13, 2003

SUBJECT: Review of Data
Received for Review on November 7, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0052

Number and Type of Samples: 9 soils

Sample Numbers: ME0052-55, 57-61

Laboratory: Bonner Hrs. for Review: 2

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0052
Laboratory: Bonner

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

Nine soil samples numbered ME0052-55 and ME0057-61 were collected on October 15 and 16, 2003. The lab received the samples on October 17, 2003 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM05.2 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: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0052
Laboratory: Bonner

1. HOLDING TIME:

Date: 11/10/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-10 The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME0052, ME0053, ME0054, ME0054D, ME0054S, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

2. CALIBRATIONS:

Date: 11/10/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

No defects found.

Date: 11/10/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

No defects found.

3. BLANKS:

Date: 11/10/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Blanks **Protocol: INORG**

No defects found.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

Assembled By: ESAT
Date: November 13, 2003

11/10/2003 Wincadre 3.1.3.2 Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

DC-3 The following inorganic samples are associated with a matrix spike recovery which was not within criteria and the required post digestion spike analysis was not performed. Hits and non-detects are not flagged. However, the information must be included in the IRDA report.

Antimony
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Cadmium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Chromium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Selenium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Vanadium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Zinc
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

The following inorganic samples are associated with a matrix spike recovery which is extremely low, indicating that sample results may be biased low. Hits are qualified "J" and non-detects are qualified "R".

Antimony
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Cadmium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Chromium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Mercury
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Selenium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Vanadium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Zinc
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Date: 11/10/2003 Wincadre 3.1.3.2 Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

·lification: Laboratory Control Sample **Protocol: INORG**

Assembled By: ESAT
Date: November 13, 2003

6 The following inorganic soil samples are associated with a solid laboratory control sample (LCS) with analyte found amounts which are high, indicating a potential positive bias in the sample results. Hits are qualified "J".

Antimony
ME0052, ME0054, ME0055, ME0057, ME0058, ME0060, ME0061

Silver
ME0052, ME0053, ME0054, ME0057, ME0058, ME0059, ME0060

5. LABORATORY AND FIELD DUPLICATE

Date: 11/10/2003 Wincadre 3.1.3.2 Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

DC-4 The following inorganic samples are not qualified for duplicates due to missing information. Hits and non-detects are not flagged.

Iron
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

DC-5 The following inorganic samples are associated with duplicate results which did not meet absolute difference (AD) primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chromium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

6. ICP ANALYSIS

Date: 11/10/2003 Wincadre 3.1.3.2 Page: 10

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Serial Dilution **Protocol: INORG**

DC-3 The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The detected serial dilution result is less than the initial sample result. Hits are qualified "J" and non-detects are qualified "UJ".

Arsenic
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Cadmium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Chromium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Thallium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Vanadium
ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Assembled By: ESAT
Date: November 13, 2003

Zinc

ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

DC-4 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 and non-detects are not flagged.

Iron

ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060, ME0061

Date: 11/10/2003 Wincadre 3.1.3.2 Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Interference Check Sample **Protocol: INORG**

DC-6 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 mg/L (ppm) that may cause potential interference. Use professional judgement to qualify sample data.

ME0054
Manganese

ME0055
Potassium

ME0057
Potassium

ME0058
Potassium

DC-10 The following inorganic samples have one or more interferents present at concentrations more than true amounts added in the ICSAB solution. Use Professional judgement to qualify sample data.

ME0052, ME0053, ME0054, ME0055, ME0057, ME0058, ME0059, ME0060

7. GFAA ANALYSIS

8. SAMPLE RESULTS

Date: 11/10/2003 Wincadre 3.1.3.2 Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0052	SDG No.: ME0052	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

DC-2 The following inorganic samples have analyte concentrations which exceed the ICP linear range. Professional judgement must be used to qualify the data. Hits are not flagged.

Iron

ME0060

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0052
Laboratory: Bonner

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 13, 2003

ILM05.2 Data Qualifier Sheet

alifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 32259
SDG : ME0052
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :	ME0052		ME0053		ME0054		ME0055		ME0057	
Sampling Location :	X216		X217		X117		X118		X119	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/16/2003		10/16/2003		10/16/2003		10/16/2003		10/16/2003	
Time Sampled :	10:00		10:30		10:00		11:00		12:00	
%Solids :	60.1		65.0		93.1		84.8		78.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	6450		5090		6780		9690		14700	
ANTIMONY	1.5	J	18.5	R	6.0	J	1.3	J	0.76	J
ARSENIC	4.5	J	3.7	J	7.4	J	3.5	J	3.2	J
BARIUM	77.1		48.0		96.4		32.1		63.0	
BERYLLIUM	0.45		0.37		1.2		0.60		0.94	
CADMIUM	1.4	J	0.83	J	13.5	J	0.50	J	0.82	J
CALCIUM	43900		49100		18200		99100		51800	
CHROMIUM	33.6	J	16.3	J	48.7	J	11.5	J	19.3	J
COBALT	6.2		5.0		6.7		4.9		7.9	
COPPER	46.7		36.5		21.5		5.0		24.1	
IRON	14300		12300		108000		13200		20600	
LEAD	108		51.9		40.5		3.9		10.8	
MAGNESIUM	21100		21600		7320		61400		33100	
MANGANESE	270		329		1140		309		396	
MERCURY	0.31	J	0.15	J	0.070	J	0.060	J	0.080	J
NICKEL	17.6		12.0		5.2		10.4		20.2	
POTASSIUM	1430		1290		561		2610		3880	
SELENIUM	11.6	R	10.8	R	18.7	J	8.3	R	1.4	J
SILVER	0.34	J	0.33	J	0.16	J	2.4	U	0.19	J
SODIUM	321		320		70.8		135		190	
THALLIUM	1.9	J	2.1	J	9.1	J	1.1	J	2.1	J
VANADIUM	16.3	J	13.7	J	129	J	18.3	J	25.5	J
ZINC	140	J	80.2	J	144	J	19.3	J	49.7	J
CYANIDE	3.2		0.31		0.20		0.31		0.18	

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 #: 32259 SDG : ME0052
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Sample Number :	ME0058		ME0059		ME0060		ME0061		ME0054D	
Sampling Location :	X120		X121		X122		X304		X117	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/16/2003		10/16/2003		10/16/2003		10/15/2003		10/16/2003	
Time Sampled :	13:00		13:30		14:00		15:00		10:00	
%Solids :	85.4		80.9		87.5		86.2		93.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	16300		3090		5670		775		6440	
ANTIMONY	2.6	J	14.8	R	0.54	J	0.93	J	64.4	U
ARSENIC	14.5	J	4.7	J	10.3	J	35.7	J	8.7	
BARIUM	184		80.5		117		21.5		98.8	
BERYLLIUM	3.5		0.89		0.76		0.13		1.3	
CADMIUM	1.3	J	1.0	J	2.5	J	1.4	J	3.0	
CALCIUM	51800		22300		35700		2700		19500	
CHROMIUM	11.7	J	5.8	J	16.4	J	1.7	J	6.9	
COBALT	9.4		5.8		4.9		0.77		6.1	
COPPER	54.4		22.8		43.3		19.3		21.7	
IRON	26000		30600		38300		1700		128000	
LEAD	38.4		28.4		119		167		31.3	
MAGNESIUM	20700		11000		6740		500		7790	
MANGANESE	580		399		628		60.3		1400	
MERCURY	0.050	J	0.060	J	0.59	J	0.070	J	0.060	
NICKEL	21.6		11.5		11.6		1.7		5.0	
POTASSIUM	2080		715		898		122		636	
SELENIUM	1.9	J	3.6	J	4.9	J	18.0	J	9.7	
SILVER	0.20	J	0.090	J	0.33	J	2.3	U	0.19	
SODIUM	1170		216		340		244		122	
THALLIUM	6.7	J	3.1	J	3.9	J	3.3	J	9.2	
VANADIUM	26.2	J	14.3	J	14.2	J	1.5	J	24.9	
ZINC	291	J	83.7	J	236	J	155	J	76.0	
CYANIDE	0.90		0.78		1.4		11.0		0.20	

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 #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0052
BILL'S EXCAVATING
BONNER

Sample Number :	ME0054S									
Sampling Location :	X117									
Matrix :	Soil									
Units :	mg/Kg									
Date Sampled :	10/16/2003									
Time Sampled :	10:00									
%Solids :	93.1									
Dilution Factor :	1.0									
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	11500									
ANTIMONY	7.3									
ARSENIC	16.2									
BARIUM	567									
BERYLLIUM	12.4									
CADMIUM	13.3									
CALCIUM	46000									
CHROMIUM	47.7									
COBALT	106									
COPPER	75.6									
IRON	106000									
LEAD	32.7									
MAGNESIUM	13500									
MANGANESE	1130									
MERCURY	0.10									
NICKEL	103									
POTASSIUM	544									
SELENIUM	17.2									
SILVER	10.5									
SODIUM	176									
THALLIUM	16.3									
VANADIUM	127									
ZINC	141									
CYANIDE	6.0									

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0052

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023447
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630	[illegible]	10-17-03 1000
2			
3			
4			

For Lab Use Only

Lab Contract No:	68W02067
Unit Price:	$72.00
Transfer To:	
Lab Contract No:	
Unit Price:	

BW 10-17-03

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0049	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279783 (Ice Only) (1)	X116	S: 10/16/2003	9:00	E0049	good
ME0050	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279787 (Ice Only) (1)	X214	S: 10/16/2003	9:00	E0050	
ME0051	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279791 (Ice Only) (1)	X215	S: 10/16/2003	9:20	E0051	
ME0052	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279795 (Ice Only) (1)	X216	S: 10/16/2003	10:00	E0052	
ME0053	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279801 (Ice Only) (1)	X217	S: 10/16/2003	10:30	E0053	
ME0054	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279805 (Ice Only) (1)	X117	S: 10/16/2003	10:00	E0054	
ME0055	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279809 (Ice Only) (1)	X118	S: 10/16/2003	11:00	E0055	
ME0057	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279815 (Ice Only) (1)	X119	S: 10/16/2003	12:00	E0057	
ME0058	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279819 (Ice Only) (1)	X120	S: 10/16/2003	13:00	E0058	
ME0059	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279823 (Ice Only) (1)	X121	S: 10/16/2003	13:30	E0059	

ORIGINAL RECEIPT ME0040
Signature: [illegible]

COPY

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0051, ME0054		5.9°C	82837

Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

002

TR Number: 5-314975591-101603-0001

LABORATORY COPY

PR provides preli[illegible]y results. Requests for preliminary results will increase analytical costs.
Send Copy to: S[illegible]e Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone [illegible]264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0052

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z6215892210023447
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everett

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	Bruce Everett	10/16/03 1630	[illegible]	10.17.03 1200
2				
3				
4				

For Lab Use Only

Lab Contract No:	68WO2067
Unit Price:	$72.00
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0060	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279833 (Ice Only) (1)	X122	S: 10/16/2003 14:00	E0060	good
ME0061	Waste/ Bruce Everetts	H/G	TM/CN (21)	5-279839 (Ice Only) (1)	X304	S: 10/15/2003 15:00	E0061	+

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0051, ME0054		5.9°C	82837

Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101603-0001

LABORATORY COPY

PR provides prel[illegible]ary results. Requests for preliminary results will increase analytical costs.
Send Copy to: [illegible]ple Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone [illegible]264-9348 Fax 703/264-9222

003

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0052
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-17-03 under UPS airbill number 1Z6215892210023447, respectively. Custody seals were present and intact, and the cooler temp measured 5.9°C, respectively. Sample ME0054 was listed for QC. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

1. These samples were scheduled for TM/CN/HG analysis but the TR/COC only lists TM/CN analysis. Please advise on what to analyze.

   Resolution: Per Region 5, the lab will note the issue in the SDG Narrative and proceed with analyzing the samples for TM/CN/HG analysis.

ICP-AES Metals

The first analytical run for ICP Metals was performed on 11/01/03 at 1434 hrs. This run was analyzed for arsenic only for samples ME0054, ME0054D, ME0054S, ME0054L, ME0052-ME0058, PBS01 and LCSS01.

The second analytical run was analyzed on 11/02/03 at 1054 hrs. CRI02 and CRI03 failed for arsenic, so sample associated with the CRI failures were omitted from this run and these samples results were reported from the first run. Sample ME0054 results for antimony, cadmium, chromium, selenium, vanadium, and zinc were reported from the diluted samples. While the initial (non-diluted) run did not indicate these results to be above the linear range, it was determined that the excessive levels of iron were causing false negatives for the above analytes. The analyst determined that the instrument could not correctly calculate an IEC, therefore erroneous concentrations were generated. The Matrix Spike failed for thallium, as well as other elements but were associated with the elevated iron. A Post Analytical Spike was prepared for thallium at twice the CRQL and analyzed during this run.

CV-AA Mercury

The analytical run for mercury was performed on 11/03/03. One of the initial calibration standards failed during instrument calibration, and the run was aborted at the instrument was recalibrated. The analytical run started at 1506 hrs. The Matrix Spike recovery was out of the acceptable range. The Sample was definitely spiked, and it is believed there was a matrix effect that bound the additional mercury added to the sample. The Matrix Spike Recovery was reported as analyzed and flagged in the CSF.

Cyanides

The analytical run for cyanides was performed on 10/29/03 at 1629 hrs. Autosampler ingested air on samples ME0055 and CRI03. The samples were reanalyzed and the original results were Z'd out.

CSF

No Discrepancies

Authorized by _____
Steve Flowers
Quality Assurance Officer

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COVER PAGE

NOV 0 7 2003 004

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: SDG No: ME0052

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0052	BT94364
ME0053	BT94365
ME0054	BT94366
ME0054D	BT94366D
ME0054S	BT94366S
ME0055	BT94367
ME0057	BT94368
ME0058	BT94369
ME0059	BT94370
ME0060	BT94371
ME0061	BT94372

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Cadmium, chromium, iron, vanadium and zinc flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Christopher M. Bonner

Date: 11/06/03 Title: Inorganic Laboratory Manager

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1A-IN

INORGANIC ANALYSIS DATA SHEET

007

EPA SAMPLE NO.

ME0052

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94364

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 60.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6450			P
7440-36-0	Antimony	1.5	J	N	P
7440-38-2	Arsenic	4.5	J		P
7440-39-3	Barium	77.1			P
7440-41-7	Beryllium	0.45	J		P
7440-43-9	Cadmium	1.4	J	NE*	P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	33.6		NE*	P
7440-48-4	Cobalt	6.2	J		P
7440-50-8	Copper	46.7			P
7439-89-6	Iron	14300		E	P
7439-92-1	Lead	108		*	P
7439-95-4	Magnesium	21100			P
7439-96-5	Manganese	270		*	P
7439-97-6	Mercury	0.31			CV
7440-02-0	Nickel	17.6			P
7440-09-7	Potassium	1430	J		P
7782-49-2	Selenium	11.6	U	N	P
7440-22-4	Silver	0.34	J		P
7440-23-5	Sodium	321	J		P
7440-28-0	Thallium	1.9	J	N	P
7440-62-2	Vanadium	16.3	J	NE*	P
7440-66-6	Zinc	140		NE*	P
57-12-5	Cyanide	3.2			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks, Plant Matter

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

008

EPA SAMPLE NO.

ME0053

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94365

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 65.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5090			P
7440-36-0	Antimony	18.5	U	N	P
7440-38-2	Arsenic	3.7	J		P
7440-39-3	Barium	48.0	J		P
7440-41-7	Beryllium	0.37	J		P
7440-43-9	Cadmium	0.83	J	NE*	P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	16.3		NE*	P
7440-48-4	Cobalt	5.0	J		P
7440-50-8	Copper	36.5			P
7439-89-6	Iron	12300		E	P
7439-92-1	Lead	51.9		*	P
7439-95-4	Magnesium	21600			P
7439-96-5	Manganese	329		*	P
7439-97-6	Mercury	0.14	J		CV
7440-02-0	Nickel	12.0	J		P
7440-09-7	Potassium	1290	J		P
7782-49-2	Selenium	10.8	U	N	P
7440-22-4	Silver	0.33	J		P
7440-23-5	Sodium	320	J		P
7440-28-0	Thallium	2.1	J	N	P
7440-62-2	Vanadium	13.7	J	NE*	P
7440-66-6	Zinc	80.2		NE*	P
57-12-5	Cyanide	0.31	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks, Plant Matter

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

009

EPA SAMPLE NO.

ME0054

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94366

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 93.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6780			P
7440-36-0	Antimony	6.0	J	N	P
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	96.4			P
7440-41-7	Beryllium	1.2			P
7440-43-9	Cadmium	13.5		NE*	P
7440-70-2	Calcium	18200			P
7440-47-3	Chromium	48.7		NE*	P
7440-48-4	Cobalt	6.7	J		P
7440-50-8	Copper	21.5			P
7439-89-6	Iron	108000		E	P
7439-92-1	Lead	40.5		*	P
7439-95-4	Magnesium	7320			P
7439-96-5	Manganese	1140		*	P
7439-97-6	Mercury	0.065	J		CV
7440-02-0	Nickel	5.2	J		P
7440-09-7	Potassium	561	J		P
7782-49-2	Selenium	18.7	J	N	P
7440-22-4	Silver	0.16	J		P
7440-23-5	Sodium	70.8	J		P
7440-28-0	Thallium	9.1		N	P
7440-62-2	Vanadium	129		NE*	P
7440-66-6	Zinc	144		NE*	P
57-12-5	Cyanide	0.20	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

ments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

010

EPA SAMPLE NO.

ME0055

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94367

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 84.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9690			P
7440-36-0	Antimony	1.3	J	N	P
7440-38-2	Arsenic	3.5	J		P
7440-39-3	Barium	32.1	J		P
7440-41-7	Beryllium	0.60	J		P
7440-43-9	Cadmium	0.50	J	NE*	P
7440-70-2	Calcium	99100			P
7440-47-3	Chromium	11.5		NE*	P
7440-48-4	Cobalt	4.9	J		P
7440-50-8	Copper	5.0	J		P
7439-89-6	Iron	13200		E	P
7439-92-1	Lead	3.9		*	P
7439-95-4	Magnesium	61400			P
7439-96-5	Manganese	309		*	P
7439-97-6	Mercury	0.055	J		CV
7440-02-0	Nickel	10.4			P
7440-09-7	Potassium	2610			P
7782-49-2	Selenium	8.3	U	N	P
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	135	J		P
7440-28-0	Thallium	1.1	J	N	P
7440-62-2	Vanadium	18.3		NE*	P
7440-66-6	Zinc	19.3		NE*	P
57-12-5	Cyanide	0.31	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

011

EPA SAMPLE NO.

ME0057

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94368

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 78.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14700			P
7440-36-0	Antimony	0.76	J	N	P
7440-38-2	Arsenic	3.2	J		P
7440-39-3	Barium	63.0			P
7440-41-7	Beryllium	0.94	J		P
7440-43-9	Cadmium	0.82	J	NE*	P
7440-70-2	Calcium	51800			P
7440-47-3	Chromium	19.3		NE*	P
7440-48-4	Cobalt	7.9	J		P
7440-50-8	Copper	24.1			P
7439-89-6	Iron	20600		E	P
7439-92-1	Lead	10.8		*	P
7439-95-4	Magnesium	33100			P
7439-96-5	Manganese	396		*	P
7439-97-6	Mercury	0.084	J		CV
7440-02-0	Nickel	20.2			P
7440-09-7	Potassium	3880			P
7782-49-2	Selenium	1.4	J	N	P
7440-22-4	Silver	0.19	J		P
7440-23-5	Sodium	190	J		P
7440-28-0	Thallium	2.1	J	N	P
7440-62-2	Vanadium	25.5		NE*	P
7440-66-6	Zinc	49.7		NE*	P
57-12-5	Cyanide	0.18	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

012

EPA SAMPLE NO.

ME0058

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94369

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 85.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16300			P
7440-36-0	Antimony	2.6	J	N	P
7440-38-2	Arsenic	14.5			P
7440-39-3	Barium	184			P
7440-41-7	Beryllium	3.5			P
7440-43-9	Cadmium	1.3		NE*	P
7440-70-2	Calcium	51800			P
7440-47-3	Chromium	11.7		NE*	P
7440-48-4	Cobalt	9.4	J		P
7440-50-8	Copper	54.4			P
7439-89-6	Iron	26000		E	P
7439-92-1	Lead	38.4		*	P
7439-95-4	Magnesium	20700			P
7439-96-5	Manganese	580		*	P
7439-97-6	Mercury	0.051	J		CV
7440-02-0	Nickel	21.6			P
7440-09-7	Potassium	2080			P
7782-49-2	Selenium	1.9	J	N	P
7440-22-4	Silver	0.20	J		P
7440-23-5	Sodium	1170			P
7440-28-0	Thallium	6.7		N	P
7440-62-2	Vanadium	26.2		NE*	P
7440-66-6	Zinc	291		NE*	P
57-12-5	Cyanide	0.90	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

013

EPA SAMPLE NO.

ME0059

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94370

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 80.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3090			P
7440-36-0	Antimony	14.8	U	N	P
7440-38-2	Arsenic	4.7			P
7440-39-3	Barium	80.5			P
7440-41-7	Beryllium	0.89	J		P
7440-43-9	Cadmium	1.0	J	NE*	P
7440-70-2	Calcium	22300			P
7440-47-3	Chromium	5.8		NE*	P
7440-48-4	Cobalt	5.8	J		P
7440-50-8	Copper	22.8			P
7439-89-6	Iron	30600		E	P
7439-92-1	Lead	28.4		*	P
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	399		*	P
7439-97-6	Mercury	0.055	J		CV
7440-02-0	Nickel	11.5			P
7440-09-7	Potassium	715	J		P
7782-49-2	Selenium	3.6	J	N	P
7440-22-4	Silver	0.09	J		P
7440-23-5	Sodium	216	J		P
7440-28-0	Thallium	3.1	J	N	P
7440-62-2	Vanadium	14.3		NE*	P
7440-66-6	Zinc	83.7		NE*	P
57-12-5	Cyanide	0.78	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

014

EPA SAMPLE NO.

ME0060

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94371

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 87.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5670			P
7440-36-0	Antimony	0.54	J	N	P
7440-38-2	Arsenic	10.3			P
7440-39-3	Barium	117			P
7440-41-7	Beryllium	0.76	J		P
7440-43-9	Cadmium	2.5		NE*	P
7440-70-2	Calcium	35700			P
7440-47-3	Chromium	16.4		NE*	P
7440-48-4	Cobalt	4.9	J		P
7440-50-8	Copper	43.3			P
7439-89-6	Iron	38300		E	P
7439-92-1	Lead	119		*	P
7439-95-4	Magnesium	6740			P
7439-96-5	Manganese	628		*	P
7439-97-6	Mercury	0.59			CV
7440-02-0	Nickel	11.6			P
7440-09-7	Potassium	898	J		P
7782-49-2	Selenium	4.9	J	N	P
7440-22-4	Silver	0.33	J		P
7440-23-5	Sodium	340	J		P
7440-28-0	Thallium	3.9	J	N	P
7440-62-2	Vanadium	14.2		NE*	P
7440-66-6	Zinc	236		NE*	P
57-12-5	Cyanide	1.4			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

015

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0061

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Matrix (soil/water): SOIL Lab Sample ID: BT94372

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 86.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	775			P
7440-36-0	Antimony	0.93	J	N	P
7440-38-2	Arsenic	35.7			P
7440-39-3	Barium	21.5	J		P
7440-41-7	Beryllium	0.13	J		P
7440-43-9	Cadmium	1.4		NE*	P
7440-70-2	Calcium	2700			P
7440-47-3	Chromium	1.7	J	NE*	P
7440-48-4	Cobalt	0.77	J		P
7440-50-8	Copper	19.3			P
7439-89-6	Iron	1700		E	P
7439-92-1	Lead	167		*	P
7439-95-4	Magnesium	500	J		P
7439-96-5	Manganese	60.3		*	P
7439-97-6	Mercury	0.072	J		CV
7440-02-0	Nickel	1.7	J		P
7440-09-7	Potassium	122	J		P
7782-49-2	Selenium	18.0		N	P
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	244	J		P
7440-28-0	Thallium	3.3	J	N	P
7440-62-2	Vanadium	1.5	J	NE*	P
7440-66-6	Zinc	155		NE*	P
57-12-5	Cyanide	11.00			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks, Plant Matter

USEPA - CLP

3-IN

BLANKS

029

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	22.9	J	42.7	J	21.7	J	25.8	J	1.592	J	P
Antimony	60.0	U	7.5	J	5.2	J	60.0	U	0.995	J	P
Arsenic	15.0	U	15.0	U	-3.2	J	15.0	U	-0.637	J	P
Barium	0.9	J	1.6	J	1.7	J	1.0	J	-0.175	J	P
Beryllium	0.17	J	0.10	J	0.09	J	0.07	J	1.000	U	P
Cadmium	0.3	J	0.4	J	0.3	J	5.0	U	-0.084	J	P
Calcium	32.5	J	45.5	J	33.5	J	38.2	J	15.600	J	P
Chromium	0.5	J	0.5	J	0.5	J	10.0	U	0.103	J	P
Cobalt	50.0	U	0.9	J	50.0	U	50.0	U	10.000	U	P
Copper	25.0	U	25.0	U	25.0	U	25.0	U	5.000	U	P
Iron	13.3	J	21.7	J	27.8	J	12.6	J	3.349	J	P
Lead	10.0	U	10.0	U	10.0	U	10.0	U	-0.668	J	P
Magnesium	39.1	J	60.1	J	42.2	J	44.3	J	4.399	J	P
Manganese	0.6	J	0.6	J	0.7	J	0.3	J	0.020	J	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.041	J	CV
Nickel	40.0	U	40.0	U	1.7	J	1.5	J	0.231	J	P
Potassium	59.3	J	58.5	J	58.5	J	56.3	J	6.458	J	P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U	7.000	U	P
Silver	0.5	J	1.1	J	10.0	U	0.5	J	0.063	J	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	59.545	J	P
Thallium	25.0	U	25.0	U	25.0	U	25.0	U	-0.459	J	P
Vanadium	0.8	J	0.7	J	50.0	U	0.9	J	10.000	U	P
Zinc	60.0	U	60.0	U	60.0	U	60.0	U	0.713	J	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.134	J	AS

USEPA - CLP

3-IN

BLANKS

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			25.9	J	23.7	J	13.1	J			P
Antimony			60.0	U	60.0	U	60.0	U			P
Arsenic			15.0	U	15.0	U	15.0	U			P
Barium			1.2	J	1.2	J	200.0	U			P
Beryllium			0.08	J	0.07	J	5.00	U			P
Cadmium			0.5	J	5.0	U	0.3	J			P
Calcium			44.6	J	35.2	J	19.5	J			P
Chromium			0.7	J	10.0	U	10.0	U			P
Cobalt			0.7	J	0.7	J	50.0	U			P
Copper			25.0	U	25.0	U	25.0	U			P
Iron			13.4	J	14.1	J	100.0	U			P
Lead			10.0	U	10.0	U	10.0	U			P
Magnesium			48.3	J	46.8	J	36.7	J			P
Manganese			0.3	J	0.4	J	15.0	U			P
Nickel			40.0	U	40.0	U	40.0	U			P
Potassium			56.8	J	58.0	J	55.4	J			P
Selenium			35.0	U	35.0	U	35.0	U			P
Silver			10.0	U	10.0	U	10.0	U			P
Sodium			5000.0	U	5000.0	U	5000.0	U			P
Thallium			25.0	U	25.0	U	25.0	U			P
Vanadium			50.0	U	50.0	U	50.0	U			P
Zinc			60.0	U	60.0	U	60.0	U			P
Cyanide			10.0	U	10.0	U					AS

USEPA - CLP

3-IN

BLANKS

031

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Arsenic	15.0	U	3.4	J	2.8	J	15.0	U			P

USEPA - CLP

4A-IN

032

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400	258876	106	260612.0	105	256829	105	254701.0	103
Antimony	0	585	-2		595.3	102	4		587.3	100
Arsenic	0	97	-12		98.0	101	-9		96.5	99
Barium	2	475	2	100	503.9	106	2	100	491.1	103
Beryllium	0	482	0		484.6	101	0		475.4	99
Cadmium	0	916	3		1007.0	110	3		987.1	108
Calcium	234100	234300	247956	106	248839.0	106	244505	104	243553.0	104
Chromium	36	506	35	97	519.9	103	34	94	506.9	100
Cobalt	0	455	3		492.8	108	3		485.3	107
Copper	15	537	18	120	553.5	103	17	113	546.1	102
Iron	94900	95100	96888	102	96580.0	102	94244	99	95190.8	100
Lead	5	51	-9	-180	45.1	88	-8	-160	43.6	85
Magnesium	248800	254100	260104	105	259836.0	102	251761	101	255286.0	100
Manganese	19	483	26	137	537.0	111	25	132	521.4	108
Nickel	10	930	12	120	1005.9	108	11	110	984.8	106
Potassium	0		67		64.3		68		64.3	
Selenium	0	51	4		51.5	101	7		63.2	124
Silver	0	210	0		211.6	101	0		208.3	99
Sodium	0		501		1257.5		536		1203.6	
Thallium	0	96	1		106.9	111	1		104.8	109
Vanadium	1	481	4	400	508.0	106	4	400	497.2	103
Zinc	39	975	47	121	1047.3	107	46	118	1028.6	105

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

033

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					258921	106	252091.0	101
Antimony	0	585					7		576.4	99
Arsenic	0	97					-9		91.0	94
Barium	2	475					2	100	479.0	101
Beryllium	0	482					0		462.7	96
Cadmium	0	916					2		963.1	105
Calcium	234100	234300					241840	103	238232.0	102
Chromium	36	506					34	94	494.6	98
Cobalt	0	455					3		471.4	104
Copper	15	537					18	120	536.6	100
Iron	94900	95100					93958	99	92969.1	98
Lead	5	51					-13	-260	41.6	82
Magnesium	248800	254100					245293	99	245894.0	97
Manganese	19	483					25	132	511.6	106
Nickel	10	930					11	110	963.8	104
Potassium	0						69		66.3	
Selenium	0	51					15		62.7	123
Silver	0	210					1		203.4	97
Sodium	0						616		1379.2	
Thallium	0	96					-1		100.9	105
Vanadium	1	481					3	300	488.7	102
Zinc	39	975					46	118	1008.8	103

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

034

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					246295	101	249082.0	100
Antimony	0	585					6		564.5	96
Arsenic	0	97					-11		87.7	90
Barium	2	475					2	100	475.1	100
Beryllium	0	482					0		456.4	95
Cadmium	0	916					3		949.0	104
Calcium	234100	234300					233204	100	233740.0	100
Chromium	36	506					33	92	491.2	97
Cobalt	0	455					3		465.8	102
Copper	15	537					17	113	530.7	99
Iron	94900	95100					91345	96	91498.3	96
Lead	5	51					-5	-100	39.2	77
Magnesium	248800	254100					240565	97	243087.0	96
Manganese	19	483					25	132	501.3	104
Nickel	10	930					12	120	952.2	102
Potassium	0						69		65.8	
Selenium	0	51					11		58.3	114
Silver	0	210					1		202.3	96
Sodium	0						606		1260.7	
Thallium	0	96					0		102.0	106
Vanadium	1	481					4	400	481.0	100
Zinc	39	975					46	118	994.9	102

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

035

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					246198	101	243841.0	98
Antimony	0	585					1		548.3	94
Arsenic	0	97					-9		83.3	86
Barium	2	475					2	100	462.2	97
Beryllium	0	482					0		443.4	92
Cadmium	0	916					3		913.4	100
Calcium	234100	234300					228107	97	228165.0	97
Chromium	36	506					33	92	475.8	94
Cobalt	0	455					4		450.9	99
Copper	15	537					17	113	515.6	96
Iron	94900	95100					88939	94	88877.5	93
Lead	5	51					-11	-220	42.2	83
Magnesium	248800	254100					234376	94	232965.0	92
Manganese	19	483					24	126	485.4	100
Nickel	10	930					11	110	920.6	99
Potassium	0						72		66.8	
Selenium	0	51					7		52.2	102
Silver	0	210					0		196.0	93
Sodium	0						577		1291.2	
Thallium	0	96					0		98.1	102
Vanadium	1	481					4	400	468.2	97
Zinc	39	975					44	113	953.6	98

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Arsenic	0	97	-1		97.3	100	-6		97.7	101

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

037

EPA SAMPLE NO.

ME0054S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

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

% Solids for Sample: 93.1

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
Aluminum		11496.6201		6784.3789		0.00	0		P
Antimony	75 - 125	7.3086	J	6.0389	J	21.48	6	N	P
Arsenic	75 - 125	16.1544		7.3523		8.59	102		P
Barium	75 - 125	567.1278		96.3565		429.65	110		P
Beryllium	75 - 125	12.3866		1.1816		10.74	104		P
Cadmium	75 - 125	13.3169		13.5218		10.74	-2	N	P
Calcium		46039.8594		18170.0195		0.00	0		P
Chromium	75 - 125	47.6925		48.6687		42.96	-2	N	P
Cobalt	75 - 125	105.5498		6.6637	J	107.41	92		P
Copper	75 - 125	75.6015		21.4874		53.71	101		P
Iron		105826.5000		108303.3984		0.00	0		P
Lead		32.6991		40.4885		4.30	-181		P
Magnesium		13529.0000		7319.8652		0.00	0		P
Manganese		1128.2111		1139.4110		107.41	-10		P
Mercury	75 - 125	0.0973	J	0.0652	J	0.54	6	N	CV
Nickel	75 - 125	102.7467		5.1623	J	107.41	91		P
Potassium		544.1511	J	560.5786	J	0.00	0		P
Selenium	75 - 125	17.1524	J	18.6775	J	10.74	-14	N	P
Silver	75 - 125	10.4639		0.1647	J	10.74	96		P
Sodium		176.2297	J	70.8044	J	0.00	0		P
Thallium	75 - 125	16.3396		9.0731		10.74	68	N	P
Vanadium	75 - 125	126.9360		129.3187		107.41	-2	N	P
Zinc	75 - 125	141.1480		143.5775		107.41	-2	N	P
Cyanide	75 - 125	5.9979		0.1955	J	5.37	108		AS

Comments:

USEPA - CLP

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

038

EPA SAMPLE NO.

ME0054A

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

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
Thallium		161.08		155.96		100.0	5		P

Comments:

USEPA - CLP

6-IN

DUPLICATES

039

EPA SAMPLE NO.

ME0054D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

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

% Solids for Sample: 93.1 % Solids for Duplicate: 93.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		6784.3789		6441.2998		5		P
Antimony		6.0389	J	64.4468	U	200		P
Arsenic	3.2223	7.3523		8.6511		16		P
Barium	42.9646	96.3565		98.7518		2		P
Beryllium	1.0741	1.1816		1.3226		11		P
Cadmium		13.5218		2.9661	J	128	*	P
Calcium		18170.0195		19496.1992		7		P
Chromium		48.6687		6.8557	J	151	*	P
Cobalt		6.6637	J	6.1455	J	8		P
Copper	5.3706	21.4874		21.7104		1		P
Iron		108303.3984		127572.7031		16		P
Lead		40.4885		31.2835		26	*	P
Magnesium		7319.8652		7793.8398		6		P
Manganese		1139.4110		1404.8080		21	*	P
Mercury		0.0652	J	0.0643	J	1		CV
Nickel		5.1623	J	4.9828	J	4		P
Potassium		560.5786	J	636.1730	J	13		P
Selenium		18.6775	J	9.7032	J	63		P
Silver		0.1647	J	0.1890	J	14		P
Sodium		70.8044	J	122.0986	J	53		P
Thallium	5.3706	9.0731		9.2125		2		P
Vanadium		129.3187		24.9416	J	135	*	P
Zinc	64.4468	143.5775		76.0101		62	*	P
Cyanide		0.1955	J	0.2041	J	4		AS

USEPA - CLP

7 - IN

LABORATORY CONTROL SAMPLE

040

Lab Name: Bonner Analytical Testing Compan Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No: _____ SDG NO.: ME0052

Solid LCS Source: ERA 246

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits		%R
Aluminum				8470.0	8778.51		2660.0	14300.0	104
Antimony				0.0	2.20	J	0.0	0.0	0
Arsenic				380.0	373.90		338.9	422.0	98
Barium				75.5	78.84		50.2	101.0	104
Beryllium				0.4	0.416	J	0.2	0.7	97
Cadmium				0.9	0.57	J	0.0	2.9	62
Calcium				5420.0	5283.76		3920.0	6930.0	97
Chromium				31.0	32.18		17.2	44.9	104
Cobalt				4.7	5.30	J	3.4	6.0	113
Copper				8.9	9.61		5.7	12.2	108
Iron				10700.0	10953.71		6700.0	14400.0	102
Lead				213.0	221.36		170.0	257.0	104
Magnesium				3060.0	3149.26		2080.0	4050.0	103
Manganese				206.0	218.92		160.0	253.0	106
Mercury				12.3	11.4		7.8	16.9	93
Nickel				11.0	11.84		7.5	14.5	108
Potassium				2230.0	2093.02		578.0	3880.0	94
Selenium				105.0	108.33		82.1	128.0	103
Silver				0.0	0.211	J	0.0	0.0	0
Sodium				296.0	326.98	J	136.0	455.0	110
Thallium				111.0	114.74		85.4	138.0	103
Vanadium				21.7	23.25		8.1	35.4	107
Zinc				93.8	90.88		64.0	124.0	97
Cyanide				9.6	10.4		7.4	11.8	108

041

8-IN

ICP-AES and ICP-MS SERIAL DILUTIONS

EPA SAMPLE NO.

ME0054L

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

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	63162.57		62686.53		1		P
Antimony	56.22	J	1500.00	U	100		P
Arsenic	68.45		41.28		40		P
Barium	897.08		926.07	J	3		P
Beryllium	11.00		11.49	J	4		P
Cadmium	125.89		18.12	J	86	E	P
Calcium	169162.91		175487.30		4		P
Chromium	453.11		51.16	J	89	E	P
Cobalt	62.04		62.73	J	1		P
Copper	200.05		201.65		1		P
Iron	1008305.00		1239010.00		23	E	P
Lead	376.95		369.99		2		P
Magnesium	68147.94		69860.55		3		P
Manganese	10607.92		11264.86		6		P
Nickel	48.06		49.73	J	3		P
Potassium	5218.99		5229.44	J	0		P
Selenium	173.89	J	875.00	U	100		P
Silver	1.53	J	50.00	U	100		P
Sodium	659.19	J	25000.00	U	100		P
Thallium	84.47		71.03	J	16		P
Vanadium	1203.96		200.49	J	83	E	P
Zinc	1336.71		506.57	J	62	E	P

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

042

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

043

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	40	0.91
Antimony	206.83	12	0.47
Arsenic	189.04	3	0.27
Barium	233.53	40	0.05
Beryllium	313.11	1	0.004
Cadmium	226.50	1	0.032
Calcium	318.13	1000	1.5
Chromium	267.72	2	0.05
Cobalt	228.62	10	0.05
Copper	324.75	5	0.31
Iron	261.19	20	1.17
Lead	168.22	2	0.38
Magnesium	279.08	1000	0.43
Manganese	257.61	3	0.02
Nickel	231.60	8	0.08
Potassium	766.49	1000	0.59
Selenium	196.09	7	0.89
Silver	328.07	2	0.05
Sodium	330.24	1000	17.5
Thallium	190.86	5	0.32
Vanadium	292.40	10	0.06
Zinc	213.86	12	0.20

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

044

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

045

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.076

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

046

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

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

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.10	0.038

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

047

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

048

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

049

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0052

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	1	0.10

USEPA - CLP

12-IN

PREPARATION LOG

055

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Preparation Method: HS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBS01	10/22/2003	1.00	100
LCSS01	10/22/2003	1.05	100
ME0054D	10/22/2003	1.00	100
ME0054S	10/22/2003	1.00	100
ME0054	10/22/2003	1.00	100
ME0052	10/22/2003	1.00	100
ME0053	10/22/2003	1.00	100
ME0055	10/22/2003	1.00	100
ME0057	10/22/2003	1.00	100
ME0058	10/22/2003	1.00	100
ME0059	10/22/2003	1.00	100
ME0060	10/22/2003	1.00	100
ME0061	10/22/2003	1.00	100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

056

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
S0	10/31/2003		100
S0.2	10/31/2003		100
S1	10/31/2003		100
S2	10/31/2003		100
S5	10/31/2003		100
S10	10/31/2003		100
ICV01	10/31/2003		100
ICB01	10/31/2003		100
CRI01	10/31/2003		100
CCV01	10/31/2003		100
CCB01	10/31/2003		100
PBS01	10/31/2003	0.20	100
LCSS01	10/31/2003	0.20	100
ME0052	10/31/2003	0.20	100
ME0053	10/31/2003	0.20	100
ME0054	10/31/2003	0.20	100
ME0054D	10/31/2003	0.20	100
ME0054S	10/31/2003	0.20	100
ME0055	10/31/2003	0.20	100
ME0057	10/31/2003	0.20	100
ME0058	10/31/2003	0.20	100
CCV02	10/31/2003		100
CCB02	10/31/2003		100
ME0059	10/31/2003	0.20	100
ME0060	10/31/2003	0.20	100
ME0061	10/31/2003	0.20	100
CRI02	10/31/2003		100
CCV03	10/31/2003		100
CCB03	10/31/2003		100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

057

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0052

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV01	10/29/2003		50
ICV02	10/29/2003		50
ICV03	10/29/2003		50
MIDRANGE01	10/29/2003		50
MIDRANGE02	10/29/2003		50
MIDRANGE03	10/29/2003		50
PBS01	10/29/2003	1.00	50
LCSS01	10/29/2003	1.00	50
ME0052	10/29/2003	1.00	50
ME0053	10/29/2003	1.00	50
ME0054S	10/29/2003	1.00	50
ME0054D	10/29/2003	1.00	50
ME0054	10/29/2003	1.00	50
ME0057	10/29/2003	1.00	50
ME0058	10/29/2003	1.00	50
ME0059	10/29/2003	1.00	50
ME0060	10/29/2003	1.00	50
ME0061	10/29/2003	1.00	50
ME0055	10/29/2003	1.00	50

Comments:

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	11	ME0027	Soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 1 9 2003

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 14, 2003

SUBJECT: Review of Data
Received for Review on November 6, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0027

Number and Type of Samples: 11 soils

Sample Numbers: ME0027,29-34,36-39

Laboratory: Bonner Hrs. for Review: 2

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0027
Laboratory: Bonner

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

Eleven soil samples numbered ME0027, ME0029-34, and ME0036-39 were collected on October 15, 2003. The lab received the samples on October 16, 2003. The sample cooler temperatures were 7.3 and 6.2 degrees C upon receipt. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM05.2 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: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0027
Laboratory: Bonner

1. HOLDING TIME:

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-10 The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME0027, ME0027D, ME0027S, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

2. CALIBRATIONS:

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

No defects found.

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

No defects found.

3. BLANKS:

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Blanks **Protocol: INORG**

No defects found.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0027
Laboratory: Bonner

Date: 11/7/2003 Wincadre 3.1.3.2 Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

No defects found.

Date: 11/7/2003 Wincadre 3.1.3.2 Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Control Sample **Protocol: INORG**

DC-6 The following inorganic soil samples are associated with a solid laboratory control sample (LCS) with analyte found amounts which are high, indicating a potential positive bias in the sample results. Hits are qualified "J".

Antimony
ME0027, ME0029, ME0031, ME0036, ME0037, ME0038

Silver
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

5. LABORATORY AND FIELD DUPLICATE

Date: 11/7/2003 Wincadre 3.1.3.2 Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

DC-3 The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Lead
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

Manganese
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

Zinc
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0027
Laboratory: Bonner

ICP ANALYSIS

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Interference Check Sample **Protocol: INORG**

DC-6 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 mg/L (ppm) that may cause potential interference. Use professional judgement to qualify sample data.

ME0031
Potassium

ME0032
Potassium

ME0033
Potassium

ME0036
Potassium

ME0037
Potassium

ME0039
Potassium

DC-10 The following inorganic samples have one or more interferents present at concentrations more than true amounts added in the ICSAB solution. Use Professional judgement to qualify sample data.

ME0027, ME0029, ME0031, ME0032, ME0033, ME0036, ME0037, ME0039

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 10

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Serial Dilution **Protocol: INORG**

DC-3 The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The detected serial dilution result is less than the initial sample result. Hits are qualified "J" and non-detects are qualified "UJ".

Lead
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

Manganese
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

DC-4 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 and non-detects are not flagged.

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0027
Laboratory: Bonner

Sodium
ME0027, ME0029, ME0030, ME0031, ME0032, ME0033, ME0034, ME0036, ME0037, ME0038, ME0039

7. GFAA ANALYSIS

8. SAMPLE RESULTS

Date: 11/7/2003 | Wincadre 3.1.3.2 | Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0027	SDG No.: ME0027	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

DC-2 The following inorganic samples have analyte concentrations which exceed the ICP linear range. Professional judgement must be used to qualify the data. Hits are not flagged.

Calcium
ME0033

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 14, 2003

ILM05.2 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 result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0027
BILL'S EXCAVATING
BONNER

Number of Soil Samples : 11
Number of Water Samples : 0

Sample Number :	ME0027		ME0029		ME0030		ME0031		ME0032	
Sampling Location :	X206		X301		X302		X108		X109	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/15/2003		10/15/2003		10/15/2003		10/15/2003		10/15/2003	
Time Sampled :	10:00		10:30		11:00		09:30		10:30	
%Solids :	76.8		88.5		76.3		78.9		42.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	4850		4570		474		18500		20500	
ANTIMONY	1.7	J	1.2	J	15.7	U	1.4	J	28.6	U
ARSENIC	13.6		41.2		38.9		6.5		5.2	
BARIUM	139		58.4		18.5		132		184	
BERYLLIUM	1.1		0.51		0.070		1.3		3.6	
CADMIUM	15.1		5.2		3.7		1.5		2.0	
CALCIUM	5930		4630		7050		19200		77400	
CHROMIUM	11.0		19.9		1.2		22.0		11.8	
COBALT	4.9		3.0		0.67		10.1		4.6	
COPPER	64.6		17.0		12.5		20.7		130	
IRON	19000		12700		2890		26000		20400	
LEAD	75.9	J	177	J	314	J	21.4	J	178	J
MAGNESIUM	1050		2350		168		8960		9710	
MANGANESE	449	J	230	J	17.8	J	470	J	1110	J
MERCURY	3.4		0.40		0.61		0.060		2.4	
NICKEL	11.3		11.7		1.3		19.7		10.3	
POTASSIUM	798		668		126		4250		2550	
SELENIUM	2.0		9.6		18.1		4.2		11.1	
SILVER	0.19	J	0.18	J	0.11	J	0.090	J	0.58	J
SODIUM	293		336		365		166		1120	
THALLIUM	4.3		20.3		8.2		4.4		8.9	
VANADIUM	16.3		9.0		1.3		32.9		15.9	
ZINC	188	J	254	J	246	J	75.3	J	576	J
CYANIDE	8.6		6.3		17.4		0.39		17.3	

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 #: 32259
SDG : ME0027
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Sample Number :	ME0033		ME0034		ME0036		ME0037		ME0038	
Sampling Location :	X110		X303		X207		X208		X209	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/15/2003		10/15/2003		10/15/2003		10/15/2003		10/15/2003	
Time Sampled :	11:00		11:20		12:50		13:00		13:20	
%Solids :	82.3		29.7		28.0		63.6		18.4	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	16700		896		32700		12000		15600	
ANTIMONY	14.6	U	40.4	U	3.8	J	1.1	J	6.1	J
ARSENIC	5.0		22.1		24.2		9.1		16.3	U
BARIUM	123		25.2		207		95.3		208	
BERYLLIUM	2.4		0.050		1.6		0.64		0.77	
CADMIUM	1.3		0.39		4.8		1.3		3.8	
CALCIUM	162000		780		62600		52500		49200	
CHROMIUM	5.4		1.5		111		16.5		84.7	
COBALT	3.3		0.46		16.9		9.9		8.4	
COPPER	50.1		5.6		115		234		309	
IRON	20400		800		50300		21400		24200	
LEAD	79.4	J	63.3	J	401	J	50.8	J	311	J
MAGNESIUM	85700		313		36400		30800		16700	
MANGANESE	1100	J	6.3	J	278	J	426	J	308	J
MERCURY	0.080		0.54		0.92		0.16		0.80	
NICKEL	6.8		1.1		47.2		20.1		34.9	
POTASSIUM	2110		534		4270		2990		3780	
SELENIUM	3.4		20.3		11.4		2.8		38.0	U
SILVER	0.30	J	0.25	J	0.71	J	0.10	J	2.9	J
SODIUM	1100		248		682		262		1250	
THALLIUM	6.5		1.8		6.0		3.2		2.2	
VANADIUM	10.0		1.8		57.9		24.5		30.7	
ZINC	707	J	38.5	J	342	J	102	J	402	J
CYANIDE	3.9		12.0		1.3		0.28		0.95	

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 #: 32259 SDG : ME0027
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Sample Number :	ME0039		ME0027D		ME0027S					
Sampling Location :	X210		X206		X206					
Matrix :	Soil		Soil		Soil					
Units :	mg/Kg		mg/Kg		mg/Kg					
Date Sampled :	10/15/2003		10/15/2003		10/15/2003					
Time Sampled :	13:40		10:00		10:00					
%Solids :	61.8		78.6		76.8					
Dilution Factor :	1.0		1.0		1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	11800		4690		5130					
ANTIMONY	19.4	U	1.4		10.4					
ARSENIC	4.9		17.0		26.1					
BARIUM	83.0		139		658					
BERYLLIUM	0.75		1.1		13.7					
CADMIUM	2.4		19.0		27.7					
CALCIUM	51100		5570		5550					
CHROMIUM	18.3		10.4		60.8					
COBALT	6.7		5.1		132					
COPPER	30.0		64.5		123					
IRON	18700		21800		17400					
LEAD	45.2	J	147		125					
MAGNESIUM	30200		822		914					
MANGANESE	241	J	313		376					
MERCURY	0.070		4.2		4.4					
NICKEL	18.1		12.2		138					
POTASSIUM	2780		719		679					
SELENIUM	2.3		3.4		13.5					
SILVER	0.16	J	0.12		11.9					
SODIUM	612		492		370					
THALLIUM	2.5		3.9		15.7					
VANADIUM	26.1		15.3		145					
ZINC	450	J	479		325					
CYANIDE	0.31		8.4		15.4					

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0027

L

Date Shipped:	10/15/200[illegible]
Carrier Name:	UPS
Airbill:	1z621589 21C022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-[illegible]854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730	[signature]	10-16-03 0920
2			
3			
4			

For Lab Use Only

Lab Contract No:	68W02067
Unit Price:	$75.00
Transfer To:	
Lab Contract No:	
Unit Price:	

BH 10-16-03

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0018	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279331 (Ice Only) (1)	X103	S: 10/14/2003 14:00	E0018	good
ME0019	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279335 (HNO3), 5-279336 (HNO3), 5-279337 (HNO3), 5-279338 (NaOH), 5-279339 (NaOH), 5-279340 (NaOH) (6)	S203	S: 10/14/2003 14:00	E0019	
ME0020	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279353 (HNO3), 5-279354 (NaOH) (2)	S204	S: 10/14/2003 14:50	E0020	
ME0021	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279359 (Ice Only) (1)	X104	S: 10/14/2003 14:30	E0021	
ME0022	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279363 (Ice Only) (1)	X105	S: 10/14/2003 15:00	E0022	
ME0023	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279367 (Ice Only) (1)	X106	S: 10/14/2003 15:00	E0023	
ME0024	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279371 (Ice Only) (1)	X107	S: 10/14/2003 15:30	E0024	
ME0025	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279375 (1)	X205	S: 10/14/2003 15:30	E0025	
ME0026	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279379 (HNO3), 5-279380 (NaOH) (2)	S205	S: 10/14/2003 15:30	E0026	
ME0027	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279385 (Ice Only) (1)	X206	S: 10/15/2003 10:00	E0027	

COPY
ORIGINAL PLUS: ME0005
Signature: [signature]

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: ME0019, ME0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 7.3°C, 6.2°C	Chain of Custody Seal Number: 27937, 27938
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

002

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone [illegible]264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0027

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z62158[illegible]2210022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everett

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everett	10/15/03 1730	[illegible]	10-16-03 0900
2			
3			
4			

For Lab Use Only

Lab Contract No:	68WC20[illegible]
Unit Price:	$72.[illegible]
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0029	Waste/ Bruce Everetts	H/G	TM/CN (21)	5-279391 (Ice Only) (1)	X301	S: 10/15/2003 10:30	E0029	
ME0030	Waste/ Bruce Everetts	H/G	TM/CN (21)	5-279395 (Ice Only) (1)	X302	S: 10/15/2003 11:00	E0030	
ME0031	Soil/Sediment/ Ken Cockill	L/G	TM/CN (21)	5-279693 (Ice Only) (1)	X108	S: 10/15/2003 9:30	E0031	
ME0032	Soil/Sediment/ Ken Cockill	L/G	TM/CN (21)	5-279697 (Ice Only) (1)	X109	S: 10/15/2003 10:30	E0032	
ME0033	Soil/Sediment Ken Cockill	L/G	TM/CN (21)	5-279701 (Ice Only) (1)	X110	S: 10/15/2003 11:00	E0033	
ME0034	Waste/ Bruce Everetts	H/G	TM/CN (21)	5-279705 (Ice Only) (1)	X303	S: 10/15/2003 11:20	E0034	
ME0036	Soil/Sediment Bruce Everetts	L/G	TM/CN (21)	5-279727 (Ice Only) (1)	X207	S: 10/15/2003 12:50	E0036	
ME0037	Soil/Sediment Bruce Everetts	L/G	TM/CN (21)	5-279731 (1)	X208	S: 10/15/2003 13:00	E0037	
ME0038	Soil/Sediment Bruce Everetts	L/G	TM/CN (21)	5-279735 (Ice Only) (1)	X209	S: 10/15/2003 13:20	E0038	
ME0039	Soil/Sediment Bruce Everetts	L/G	TM/CN (21)	5-279739 (Ice Only) (1)	X210	S: 10/15/2003 13:40	E0039	

Shipment for Case Complete?N	Samples to be used for laboratory QC: ME0019 ME0027	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 7.3°C, 6.2°C	Chain of Custody Seal Number: 27937, 27938
Analysis Key:	Concentration: L = Low M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

003

NOV 0 6 2003

005

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0027
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-16-03 under UPS airbill number 1Z6215892210022573. Custody seals were present and intact, and the cooler temp measured 7.3°C. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

1. Several samples have standing water on top of the soil/sediment inside the sample container. The amount of water is approximately 10-20mL.

   Resolution: Per Region 5, the lab will note the issue in the SDG Narrative and proceed with homogenizing the samples with the standing water.

2. No QC was designated for this SDG on the TR/COC. We choose sample ME0027 to use as QC.

   Resolution: Per Region 5, the lab will select a sample for QC as long as the sample is not a PE, rinsate, or blank sample. The lab will notify SMO of the sample selected, note the issue in the SDG Narrative and proceed with the analysis of the samples.

ICP-AES Metals

The analytical run for metals began on 11/1/03 @ 0841 hrs. During the run, the matrix spike failed for Mn and Sb. Corrective action calls for a post spike at two times the CRQL.

Also, Ca was above the linear range for sample ME0033. Corrective action calls for the dilution and reanalysis of the sample. Also, ICS01 failed for Pb. Corrective action calls for the reanalysis of all samples associated with the failing QC. On 11/4/03 @ 1048 hrs, another run began for Pb analysis only.

CV-AA Mercury

The analytical run for mercury began on 10/27/03 @ 1705 hrs. During the run, the matrix spike for mercury exceeded 125%. No corrective action is required and data will be reported and flagged in the CSF. Also, the RPD for the sample duplicate exceeded acceptable limits. No corrective action is required and will be reported as is, but flagged in the CSF.

CSF

No Discrepancies

Authorized by _____
Tommy Derson
Inorganic Lab Manager

NOV 0 6 2003

004

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COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: _____ SDG No: ME0027

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0027	BT94340
ME0027D	BT94340D
ME0027S	BT94340S
ME0029	BT94341
ME0030	BT94342
ME0031	BT94343
ME0032	BT94344
ME0033	BT94345
ME0034	BT94346
ME0036	BT94347
ME0037	BT94348
ME0038	BT94349
ME0039	BT94350

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: Lead and manganese were flagged as "E" estimated due to interferences occurring during the analysis of the Serial Dilution.

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Christopher M. Bonner

Date: _____ Title: Inorganic Laboratory Manager

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

007

EPA SAMPLE NO.

ME0027

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94340

Level (low/med) LOW Date Received: 10/16/2003

% Solids: 76.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4850			P
7440-36-0	Antimony	1.7	J	N	P
7440-38-2	Arsenic	13.6			P
7440-39-3	Barium	139			P
7440-41-7	Beryllium	1.1	J		P
7440-43-9	Cadmium	15.1		*	P
7440-70-2	Calcium	5930			P
7440-47-3	Chromium	11.0			P
7440-48-4	Cobalt	4.9	J		P
7440-50-8	Copper	64.6			P
7439-89-6	Iron	19000			P
7439-92-1	Lead	75.9		*E	P
7439-95-4	Magnesium	1050	J		P
7439-96-5	Manganese	449		NE*	P
7439-97-6	Mercury	3.4			CV
7440-02-0	Nickel	11.3			P
7440-09-7	Potassium	798	J		P
7782-49-2	Selenium	2.0	J		P
7440-22-4	Silver	0.19	J		P
7440-23-5	Sodium	293	J		P
7440-28-0	Thallium	4.3	J		P
7440-62-2	Vanadium	16.3			P
7440-66-6	Zinc	188		*	P
57-12-5	Cyanide	8.6			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

008

EPA SAMPLE NO.

ME0029

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94341

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 83.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4570			P
7440-36-0	Antimony	1.2	J	N	P
7440-38-2	Arsenic	41.2			P
7440-39-3	Barium	58.4			P
7440-41-7	Beryllium	0.51	J		P
7440-43-9	Cadmium	5.2		*	P
7440-70-2	Calcium	4630			P
7440-47-3	Chromium	19.9			P
7440-48-4	Cobalt	3.0	J		P
7440-50-8	Copper	17.0			P
7439-89-6	Iron	12700			P
7439-92-1	Lead	177		*E	P
7439-95-4	Magnesium	2350			P
7439-96-5	Manganese	230		NE*	P
7439-97-6	Mercury	0.40			CV
7440-02-0	Nickel	11.7			P
7440-09-7	Potassium	668	J		P
7782-49-2	Selenium	9.6			P
7440-22-4	Silver	0.18	J		P
7440-23-5	Sodium	336	J		P
7440-28-0	Thallium	20.3			P
7440-62-2	Vanadium	9.0	J		P
7440-66-6	Zinc	254		*	P
57-12-5	Cyanide	6.3			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

009

EPA SAMPLE NO.

ME0030

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94342

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 76.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	474			P
7440-36-0	Antimony	15.7	U	N	P
7440-38-2	Arsenic	38.9			P
7440-39-3	Barium	18.5	J		P
7440-41-7	Beryllium	0.07	J		P
7440-43-9	Cadmium	3.7		*	P
7440-70-2	Calcium	7050			P
7440-47-3	Chromium	1.2	J		P
7440-48-4	Cobalt	0.67	J		P
7440-50-8	Copper	12.5			P
7439-89-6	Iron	2890			P
7439-92-1	Lead	314		*E	P
7439-95-4	Magnesium	168	J		P
7439-96-5	Manganese	17.8		NE*	P
7439-97-6	Mercury	0.61			CV
7440-02-0	Nickel	1.3	J		P
7440-09-7	Potassium	126	J		P
7782-49-2	Selenium	18.1			P
7440-22-4	Silver	0.11	J		P
7440-23-5	Sodium	365	J		P
7440-28-0	Thallium	8.2			P
7440-62-2	Vanadium	1.3	J		P
7440-66-6	Zinc	246		*	P
57-12-5	Cyanide	17.00			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

010

EPA SAMPLE NO.

ME0031

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94343

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 73.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18500			P
7440-36-0	Antimony	1.4	J	N	P
7440-38-2	Arsenic	6.5			P
7440-39-3	Barium	132			P
7440-41-7	Beryllium	1.3	J		P
7440-43-9	Cadmium	1.5		*	P
7440-70-2	Calcium	19200			P
7440-47-3	Chromium	22.0			P
7440-48-4	Cobalt	10.1	J		P
7440-50-8	Copper	20.7			P
7439-89-6	Iron	26000			P
7439-92-1	Lead	21.4		*E	P
7439-95-4	Magnesium	8960			P
7439-96-5	Manganese	470		NE*	P
7439-97-6	Mercury	0.056	J		CV
7440-02-0	Nickel	19.7			P
7440-09-7	Potassium	4250			P
7782-49-2	Selenium	4.2	J		P
7440-22-4	Silver	0.09	J		P
7440-23-5	Sodium	166	J		P
7440-28-0	Thallium	4.4	J		P
7440-62-2	Vanadium	32.9			P
7440-66-6	Zinc	75.3		*	P
57-12-5	Cyanide	0.39	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

011

EPA SAMPLE NO.

ME0032

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94344

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 42.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20500			P
7440-36-0	Antimony	28.6	U	N	P
7440-38-2	Arsenic	5.2	J		P
7440-39-3	Barium	184			P
7440-41-7	Beryllium	3.6			P
7440-43-9	Cadmium	2.0	J	*	P
7440-70-2	Calcium	77400			P
7440-47-3	Chromium	11.8			P
7440-48-4	Cobalt	4.6	J		P
7440-50-8	Copper	130			P
7439-89-6	Iron	20400			P
7439-92-1	Lead	178		*E	P
7439-95-4	Magnesium	9710			P
7439-96-5	Manganese	1110		NE*	P
7439-97-6	Mercury	2.4			CV
7440-02-0	Nickel	10.3	J		P
7440-09-7	Potassium	2550			P
7782-49-2	Selenium	11.1	J		P
7440-22-4	Silver	0.58	J		P
7440-23-5	Sodium	1120	J		P
7440-28-0	Thallium	8.9	J		P
7440-62-2	Vanadium	15.9	J		P
7440-66-6	Zinc	576		*	P
57-12-5	Cyanide	17.00			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

012

EPA SAMPLE NO.

ME0033

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94345

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 82.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16700			P
7440-36-0	Antimony	14.6	U	N	P
7440-38-2	Arsenic	5.0			P
7440-39-3	Barium	123			P
7440-41-7	Beryllium	2.4			P
7440-43-9	Cadmium	1.3		*	P
7440-70-2	Calcium	162000			P
7440-47-3	Chromium	5.4			P
7440-48-4	Cobalt	3.3	J		P
7440-50-8	Copper	50.1			P
7439-89-6	Iron	20400			P
7439-92-1	Lead	79.4		*E	P
7439-95-4	Magnesium	85700			P
7439-96-5	Manganese	1100		NE*	P
7439-97-6	Mercury	0.079	J		CV
7440-02-0	Nickel	6.8	J		P
7440-09-7	Potassium	2110			P
7782-49-2	Selenium	3.4	J		P
7440-22-4	Silver	0.30	J		P
7440-23-5	Sodium	1100	J		P
7440-28-0	Thallium	6.5			P
7440-62-2	Vanadium	10.0	J		P
7440-66-6	Zinc	707		*	P
57-12-5	Cyanide	3.9			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

013

EPA SAMPLE NO.

ME0034

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94346

Level (low/med) LOW Date Received: 10/16/2003

% Solids: 29.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	896			P
7440-36-0	Antimony	40.4	U	N	P
7440-38-2	Arsenic	22.1			P
7440-39-3	Barium	25.2	J		P
7440-41-7	Beryllium	0.05	J		P
7440-43-9	Cadmium	0.39	J	*	P
7440-70-2	Calcium	780	J		P
7440-47-3	Chromium	1.5	J		P
7440-48-4	Cobalt	0.46	J		P
7440-50-8	Copper	5.6	J		P
7439-89-6	Iron	800			P
7439-92-1	Lead	63.3		*E	P
7439-95-4	Magnesium	313	J		P
7439-96-5	Manganese	6.3	J	NE*	P
7439-97-6	Mercury	0.54			CV
7440-02-0	Nickel	1.1	J		P
7440-09-7	Potassium	534	J		P
7782-49-2	Selenium	20.3	J		P
7440-22-4	Silver	0.25	J		P
7440-23-5	Sodium	248	J		P
7440-28-0	Thallium	1.8	J		P
7440-62-2	Vanadium	1.8	J		P
7440-66-6	Zinc	38.5	J	*	P
57-12-5	Cyanide	12.00			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0036

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94347

Level (low/med) LOW Date Received: 10/16/2003

% Solids: 28.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32700			P
7440-36-0	Antimony	3.8	J	N	P
7440-38-2	Arsenic	24.2			P
7440-39-3	Barium	207			P
7440-41-7	Beryllium	1.6	J		P
7440-43-9	Cadmium	4.8		*	P
7440-70-2	Calcium	62600			P
7440-47-3	Chromium	111			P
7440-48-4	Cobalt	16.9	J		P
7440-50-8	Copper	115			P
7439-89-6	Iron	50300			P
7439-92-1	Lead	401		*E	P
7439-95-4	Magnesium	36400			P
7439-96-5	Manganese	278		NE*	P
7439-97-6	Mercury	0.92			CV
7440-02-0	Nickel	47.2			P
7440-09-7	Potassium	4270			P
7782-49-2	Selenium	11.4	J		P
7440-22-4	Silver	0.71	J		P
7440-23-5	Sodium	682	J		P
7440-28-0	Thallium	6.0	J		P
7440-62-2	Vanadium	57.9			P
7440-66-6	Zinc	342		*	P
57-12-5	Cyanide	1.3	J		AS

Color Before: Brown Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

015

EPA SAMPLE NO.

ME0037

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94348

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 63.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12000			P
7440-36-0	Antimony	1.1	J	N	P
7440-38-2	Arsenic	9.1			P
7440-39-3	Barium	95.3			P
7440-41-7	Beryllium	0.64	J		P
7440-43-9	Cadmium	1.3	J	*	P
7440-70-2	Calcium	52500			P
7440-47-3	Chromium	16.5			P
7440-48-4	Cobalt	9.9	J		P
7440-50-8	Copper	234			P
7439-89-6	Iron	21400			P
7439-92-1	Lead	50.8		*E	P
7439-95-4	Magnesium	30800			P
7439-96-5	Manganese	426		NE*	P
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel	20.1			P
7440-09-7	Potassium	2990			P
7782-49-2	Selenium	2.8	J		P
7440-22-4	Silver	0.10	J		P
7440-23-5	Sodium	262	J		P
7440-28-0	Thallium	3.2	J		P
7440-62-2	Vanadium	24.5			P
7440-66-6	Zinc	102		*	P
57-12-5	Cyanide	0.28	J		AS

Color Before: Brown Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

016

EPA SAMPLE NO.

ME0038

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94349

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 18.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15600			P
7440-36-0	Antimony	6.1	J	N	P
7440-38-2	Arsenic	16.3	U		P
7440-39-3	Barium	208	J		P
7440-41-7	Beryllium	0.77	J		P
7440-43-9	Cadmium	3.8	J	*	P
7440-70-2	Calcium	49200			P
7440-47-3	Chromium	84.7			P
7440-48-4	Cobalt	8.4	J		P
7440-50-8	Copper	309			P
7439-89-6	Iron	24200			P
7439-92-1	Lead	311		*E	P
7439-95-4	Magnesium	16700			P
7439-96-5	Manganese	308		NE*	P
7439-97-6	Mercury	0.80			CV
7440-02-0	Nickel	34.9	J		P
7440-09-7	Potassium	3780	J		P
7782-49-2	Selenium	38.0	U		P
7440-22-4	Silver	2.9	J		P
7440-23-5	Sodium	1250	J		P
7440-28-0	Thallium	2.2	J		P
7440-62-2	Vanadium	30.7	J		P
7440-66-6	Zinc	402		*	P
57-12-5	Cyanide	0.95	J		AS

Color Before: Black Clarity Before: _____ Texture: Medium

Color After: Yellow Clarity After: _____ Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

017

EPA SAMPLE NO.

ME0039

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Matrix (soil/water): SOIL Lab Sample ID: BT94350

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 61.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11800			P
7440-36-0	Antimony	19.4	U	N	P
7440-38-2	Arsenic	4.9			P
7440-39-3	Barium	83.0			P
7440-41-7	Beryllium	0.75	J		P
7440-43-9	Cadmium	2.4		*	P
7440-70-2	Calcium	51100			P
7440-47-3	Chromium	18.3			P
7440-48-4	Cobalt	6.7	J		P
7440-50-8	Copper	30.0			P
7439-89-6	Iron	18700			P
7439-92-1	Lead	45.2		*E	P
7439-95-4	Magnesium	30200			P
7439-96-5	Manganese	241		NE*	P
7439-97-6	Mercury	0.071	J		CV
7440-02-0	Nickel	18.1			P
7440-09-7	Potassium	2780			P
7782-49-2	Selenium	2.3	J		P
7440-22-4	Silver	0.16	J		P
7440-23-5	Sodium	612	J		P
7440-28-0	Thallium	2.5	J		P
7440-62-2	Vanadium	26.1			P
7440-66-6	Zinc	450		*	P
57-12-5	Cyanide	0.31	J		AS

Color Before: Black Clarity Before: _____ Texture: Medium

Color After: Yellow Clarity After: _____ Artifacts: Yes

Comments: Rocks

USEPA - CLP

3-IN

BLANKS

030

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200.0	U	25.2	J	30.3	J	24.2	J	4.110	J	P
Antimony	60.0	U	60.0	U	60.0	U	60.0	U	12.000	U	P
Arsenic	15.0	U	15.0	U	4.9	J	15.0	U	-0.581	J	P
Barium	200.0	U	0.9	J	1.5	J	1.0	J	-0.159	J	P
Beryllium	0.08	J	0.06	J	0.05	J	0.07	J	-0.004	J	P
Cadmium	0.3	J	5.0	U	0.6	J	5.0	U	-0.067	J	P
Calcium	5000.0	U	30.6	J	39.7	J	44.2	J	23.668	J	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	0.066	J	P
Cobalt	0.9	J	1.0	J	0.9	J	50.0	U	10.000	U	P
Copper	25.0	U	25.0	U	25.0	U	25.0	U	5.000	U	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	2.581	J	P
Lead	10.0	U	10.0	U	6.8	J	10.0	U	2.000	U	P
Magnesium	-4.5	J	18.2	J	21.1	J	17.0	J	6.954	J	P
Manganese	15.0	U	0.2	J	0.2	J	0.3	J	0.156	J	P
Mercury	0.2	U	0.2	U	0.2	U	0.1	J	0.100	U	CV
Nickel	40.0	U	-1.1	J	-1.6	J	-1.1	J	0.119	J	P
Potassium	106.4	J	108.7	J	108.0	J	109.6	J	11.621	J	P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U	-1.468	J	P
Silver	0.7	J	10.0	U	10.0	U	10.0	U	2.000	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	62.527	J	P
Thallium	25.0	U	25.0	U	25.0	U	7.7	J	5.000	U	P
Vanadium	50.0	U	50.0	U	50.0	U	50.0	U	10.000	U	P
Zinc	-3.9	J	-3.3	J	-3.5	J	-3.4	J	-0.266	J	P
Cyanide	2.1	J	10.0	U	2.3	J	2.5	J	1.000	U	AS

USEPA - CLP

3-IN

BLANKS

031

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U	28.4	J					P
Antimony			-6.7	J	-7.1	J					P
Arsenic			3.8	J	3.1	J					P
Barium			1.9	J	1.3	J					P
Beryllium			0.05	J	0.09	J					P
Cadmium			0.4	J	5.0	U					P
Calcium			20.4	J	36.6	J					P
Chromium			10.0	U	10.0	U					P
Cobalt			0.6	J	1.0	J					P
Copper			25.0	U	25.0	U					P
Iron			21.8	J	13.7	J					P
Magnesium			6.9	J	31.5	J					P
Manganese			0.8	J	0.3	J					P
Nickel			-0.9	J	40.0	U					P
Potassium			113.3	J	108.9	J					P
Selenium			35.0	U	35.0	U					P
Silver			10.0	U	10.0	U					P
Sodium			5000.0	U	5000.0	U					P
Thallium			25.0	U	5.0	J					P
Vanadium			50.0	U	50.0	U					P
Zinc			-3.0	J	-2.9	J					P
Cyanide			10.0	U							AS

USEPA - CLP

3-IN

BLANKS

032

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Preparation Blank Matrix (soil/water): WATER

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

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum	22.9	J	42.7	J	21.7	J	25.8	J			P
Antimony	60.0	U	7.5	J	5.2	J	60.0	U			P
Arsenic	15.0	U	15.0	U	-3.2	J	15.0	U			P
Barium	0.9	J	1.6	J	1.7	J	1.0	J			P
Beryllium	0.17	J	0.10	J	0.09	J	0.07	J			P
Cadmium	0.3	J	0.4	J	0.3	J	5.0	U			P
Calcium	32.5	J	45.5	J	33.5	J	38.2	J			P
Chromium	0.5	J	0.5	J	0.5	J	10.0	U			P
Cobalt	50.0	U	0.9	J	50.0	U	50.0	U			P
Copper	25.0	U	25.0	U	25.0	U	25.0	U			P
Iron	13.3	J	21.7	J	27.8	J	12.6	J			P
Magnesium	39.1	J	60.1	J	42.2	J	44.3	J			P
Manganese	0.6	J	0.6	J	0.7	J	0.3	J			P
Nickel	40.0	U	40.0	U	1.7	J	1.5	J			P
Potassium	59.3	J	58.5	J	58.5	J	56.3	J			P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U			P
Silver	0.5	J	1.1	J	10.0	U	0.5	J			P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U			P
Thallium	25.0	U	25.0	U	25.0	U	25.0	U			P
Vanadium	0.8	J	0.7	J	50.0	U	0.9	J			P
Zinc	60.0	U	60.0	U	60.0	U	60.0	U			P

USEPA - CLP

3-IN

BLANKS

033

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			25.9	J	23.7	J					P
Antimony			60.0	U	60.0	U					P
Arsenic			15.0	U	15.0	U					P
Barium			1.2	J	1.2	J					P
Beryllium			0.08	J	0.07	J					P
Cadmium			0.5	J	5.0	U					P
Calcium			44.6	J	35.2	J					P
Chromium			0.7	J	10.0	U					P
Cobalt			0.7	J	0.7	J					P
Copper			25.0	U	25.0	U					P
Iron			13.4	J	14.1	J					P
Magnesium			48.3	J	46.8	J					P
Manganese			0.3	J	0.4	J					P
Nickel			40.0	U	40.0	U					P
Potassium			56.8	J	58.0	J					P
Selenium			35.0	U	35.0	U					P
Silver			10.0	U	10.0	U					P
Sodium			5000.0	U	5000.0	U					P
Thallium			25.0	U	25.0	U					P
Vanadium			50.0	U	50.0	U					P
Zinc			60.0	U	60.0	U					P

USEPA - CLP

4A-IN

034

ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400	253175	104	256929.0	103				
Antimony	0	585	4		599.7	103				
Arsenic	0	97	-6		105.1	108				
Barium	2	475	3	150	492.1	104				
Beryllium	0	482	0		480.0	100				
Cadmium	0	916	4		990.8	108				
Calcium	234100	234300	245371	105	246088.0	105				
Chromium	36	506	34	94	508.3	100				
Cobalt	0	455	4		486.8	107				
Copper	15	537	16	107	543.2	101				
Iron	94900	95100	95912	101	96698.4	102				
Lead	5	51	-6	-120	44.9	88	3	60	46.9	92
Magnesium	248800	254100	256349	103	257005.0	101				
Manganese	19	483	26	137	528.2	109				
Nickel	10	930	10	100	994.8	107				
Potassium	0		119		118.8					
Selenium	0	51	15		50.5	99				
Silver	0	210	1		208.0	99				
Sodium	0		505		1436.6					
Thallium	0	96	6		109.5	114				
Vanadium	1	481	4	400	498.2	104				
Zinc	39	975	42	108	1036.1	106				

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

035

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					259876	107	256340.0	103
Antimony	0	585					6		598.9	102
Arsenic	0	97					0		102.5	106
Barium	2	475					3	150	495.9	104
Beryllium	0	482					0		474.9	99
Cadmium	0	916					3		999.5	109
Calcium	234100	234300					245614	105	242902.0	104
Chromium	36	506					34	94	509.2	101
Cobalt	0	455					4		491.9	108
Copper	15	537					16	107	549.6	102
Iron	94900	95100					96509	102	95937.0	101
Magnesium	248800	254100					257392	103	255338.0	100
Manganese	19	483					26	137	523.8	108
Nickel	10	930					10	100	1002.3	108
Potassium	0						119		117.8	
Selenium	0	51					-2		64.7	127
Silver	0	210					0		208.8	99
Sodium	0						662		1403.8	
Thallium	0	96					1		107.3	112
Vanadium	1	481					4	400	502.3	104
Zinc	39	975					42	108	1045.4	107

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

036

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					251048	103	251555.0	101
Antimony	0	585					4		580.5	99
Arsenic	0	97					-3		98.2	101
Barium	2	475					2	100	480.0	101
Beryllium	0	482					0		462.3	96
Cadmium	0	916					4		962.0	105
Calcium	234100	234300					236456	101	237179.0	101
Chromium	36	506					33	92	494.8	98
Cobalt	0	455					4		475.9	105
Copper	15	537					15	100	534.4	100
Iron	94900	95100					92960	98	94094.0	99
Magnesium	248800	254100					246187	99	246524.0	97
Manganese	19	483					25	132	509.8	106
Nickel	10	930					12	120	966.2	104
Potassium	0						119		120.0	
Selenium	0	51					10		62.5	123
Silver	0	210					0		203.0	97
Sodium	0						611		1458.4	
Thallium	0	96					7		105.1	109
Vanadium	1	481					4	400	486.4	101
Zinc	39	975					41	105	1004.9	103

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

037

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400	258876	106	260612.0	105	256829	105	254701.0	103
Antimony	0	585	-2		595.3	102	4		587.3	100
Arsenic	0	97	-12		98.0	101	-9		96.5	99
Barium	2	475	2	100	503.9	106	2	100	491.1	103
Beryllium	0	482	0		484.6	101	0		475.4	99
Cadmium	0	916	3		1007.0	110	3		987.1	108
Calcium	234100	234300	247956	106	248839.0	106	244505	104	243553.0	104
Chromium	36	506	35	97	519.9	103	34	94	506.9	100
Cobalt	0	455	3		492.8	108	3		485.3	107
Copper	15	537	18	120	553.5	103	17	113	546.1	102
Iron	94900	95100	96888	102	96580.0	102	94244	99	95190.8	100
Magnesium	248800	254100	260104	105	259836.0	102	251761	101	255286.0	100
Manganese	19	483	26	137	537.0	111	25	132	521.4	108
Nickel	10	930	12	120	1005.9	108	11	110	984.8	106
Potassium	0		67		64.3		68		64.3	
Selenium	0	51	4		51.5	101	7		63.2	124
Silver	0	210	0		211.6	101	0		208.3	99
Sodium	0		501		1257.5		536		1203.6	
Thallium	0	96	1		106.9	111	1		104.8	109
Vanadium	1	481	4	400	508.0	106	4	400	497.2	103
Zinc	39	975	47	121	1047.3	107	46	118	1028.6	105

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

038

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					258921	106	252091.0	101
Antimony	0	585					7		576.4	99
Arsenic	0	97					-9		91.0	94
Barium	2	475					2	100	479.0	101
Beryllium	0	482					0		462.7	96
Cadmium	0	916					2		963.1	105
Calcium	234100	234300					241840	103	238232.0	102
Chromium	36	506					34	94	494.6	98
Cobalt	0	455					3		471.4	104
Copper	15	537					18	120	536.6	100
Iron	94900	95100					93958	99	92969.1	98
Magnesium	248800	254100					245293	99	245894.0	97
Manganese	19	483					25	132	511.6	106
Nickel	10	930					11	110	963.8	104
Potassium	0						69		66.3	
Selenium	0	51					15		62.7	123
Silver	0	210					1		203.4	97
Sodium	0						616		1379.2	
Thallium	0	96					-1		100.9	105
Vanadium	1	481					3	300	488.7	102
Zinc	39	975					46	118	1008.8	103

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

039

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					246295	101	249082.0	100
Antimony	0	585					6		564.5	96
Arsenic	0	97					-11		87.7	90
Barium	2	475					2	100	475.1	100
Beryllium	0	482					0		456.4	95
Cadmium	0	916					3		949.0	104
Calcium	234100	234300					233204	100	233740.0	100
Chromium	36	506					33	92	491.2	97
Cobalt	0	455					3		465.8	102
Copper	15	537					17	113	530.7	99
Iron	94900	95100					91345	96	91498.3	96
Magnesium	248800	254100					240565	97	243087.0	96
Manganese	19	483					25	132	501.3	104
Nickel	10	930					12	120	952.2	102
Potassium	0						69		65.8	
Selenium	0	51					11		58.3	114
Silver	0	210					1		202.3	96
Sodium	0						606		1260.7	
Thallium	0	96					0		102.0	106
Vanadium	1	481					4	400	481.0	100
Zinc	39	975					46	118	994.9	102

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

040

EPA SAMPLE NO.

ME0027S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

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

% Solids for Sample: 76.8

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
Aluminum		5132.3931		4845.9541		0.00	0		P
Antimony	75 - 125	10.3635	J	1.7005	J	26.04	33	N	P
Arsenic	75 - 125	26.1480		13.6048		10.42	120		P
Barium	75 - 125	658.4793		139.4881		520.83	100		P
Beryllium	75 - 125	13.6887		1.1019	J	13.02	97		P
Cadmium	75 - 125	27.7468		15.0610		13.02	97		P
Calcium		5546.6382		5926.1509		0.00	0		P
Chromium	75 - 125	60.8165		10.9839		52.08	96		P
Cobalt	75 - 125	132.2089		4.8821	J	130.21	98		P
Copper	75 - 125	123.1039		64.6423		65.10	90		P
Iron		17431.3008		18987.0391		0.00	0		P
Lead		125.2018		75.9170		5.21	946		P
Magnesium		914.4321	J	1048.2250	J	0.00	0		P
Manganese	75 - 125	375.8212		449.0250		130.21	-56	N	P
Mercury		4.3685		3.3659		0.65	154		CV
Nickel	75 - 125	138.3605		11.3039		130.21	98		P
Potassium		678.7631	J	798.4179	J	0.00	0		P
Selenium	75 - 125	13.5204		2.0446	J	13.02	88		P
Silver	75 - 125	11.9066		0.1918	J	13.02	90		P
Sodium		370.2047	J	293.3315	J	0.00	0		P
Thallium	75 - 125	15.6961		4.2850	J	13.02	88		P
Vanadium	75 - 125	144.5931		16.2680		130.21	99		P
Zinc	75 - 125	324.9311		188.4762		130.21	105		P
Cyanide	75 - 125	15.3932		8.6289		6.51	104		AS

Comments:

USEPA - CLP

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

041

EPA SAMPLE NO.

ME0027A

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

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		4.70	U	13.06	J	240.0	-4		P
Manganese		9663.35		3448.51		6297.0	99		P

Comments:

USEPA - CLP

6-IN

DUPLICATES

042

EPA SAMPLE NO.

ME0027D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

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

% Solids for Sample: 76.8 % Solids for Duplicate: 78.6

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		4845.9541		4687.9170		3		P
Antimony		1.7005	J	1.3607	J	22		P
Arsenic	3.9063	13.6048		17.0077		22		P
Barium	52.0833	139.4881		139.1350		0		P
Beryllium		1.1019	J	1.0682	J	3		P
Cadmium		15.0610		19.0497		23	*	P
Calcium	1302.0830	5926.1509		5571.7402		6		P
Chromium	2.6042	10.9839		10.3530		6		P
Cobalt		4.8821	J	5.1408	J	5		P
Copper		64.6423		64.4904		0		P
Iron		18987.0391		21790.9102		14		P
Lead		75.9170		147.3468		64	*	P
Magnesium		1048.2250	J	822.2025	J	24		P
Manganese		449.0250		313.0839		36	*	P
Mercury		3.3659		4.1680		21	*	CV
Nickel	10.4167	11.3039		12.1526		7		P
Potassium		798.4179	J	719.4880	J	10		P
Selenium		2.0446	J	3.4495	J	51		P
Silver		0.1918	J	0.1238	J	43		P
Sodium		293.3315	J	491.7572	J	51		P
Thallium		4.2850	J	3.9039	J	9		P
Vanadium	13.0208	16.2680		15.2763		6		P
Zinc		188.4762		478.6023		87	*	P
Cyanide		8.6289		8.4277		2		AS

USEPA - CLP

7 - IN

LABORATORY CONTROL SAMPLE

043

Lab Name: Bonner Analytical Testing Compan Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No: _____ SDG NO.: ME0027

Solid LCS Source: ERA 246

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				8470.0	8491.46		2660.0	14300.0	100
Antimony				0.0	1.19	J	0.0	0.0	0
Arsenic				380.0	368.52		338.9	422.0	97
Barium				75.5	76.00		50.2	101.0	101
Beryllium				0.4	0.402	J	0.2	0.7	93
Cadmium				0.9	0.65	J	0.0	2.9	71
Calcium				5420.0	5025.08		3920.0	6930.0	93
Chromium				31.0	30.74		17.2	44.9	99
Cobalt				4.7	4.90	J	3.4	6.0	105
Copper				8.9	9.11		5.7	12.2	102
Iron				10700.0	10161.77		6700.0	14400.0	95
Lead				213.0	200.69		170.0	257.0	94
Magnesium				3060.0	3016.24		2080.0	4050.0	99
Manganese				206.0	208.80		160.0	253.0	101
Mercury				12.3	12.8		7.8	16.9	104
Nickel				11.0	11.34		7.5	14.5	103
Potassium				2230.0	1935.22		578.0	3880.0	87
Selenium				105.0	110.21		82.1	128.0	105
Silver				0.0	0.203	J	0.0	0.0	0
Sodium				296.0	331.19	J	136.0	455.0	112
Thallium				111.0	110.26		85.4	138.0	99
Vanadium				21.7	21.25		8.1	35.4	98
Zinc				93.8	87.59		64.0	124.0	93
Cyanide				9.6	9.5		7.4	11.8	99

USEPA - CLP

8-IN

ICP-AES and ICP-MS SERIAL DILUTIONS

044

EPA SAMPLE NO.

ME0027L

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

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	37216.92		35419.79		5		P
Antimony	13.06	J	300.00	U	100		P
Arsenic	104.49		113.27		8		P
Barium	1071.27		1051.94		2		P
Beryllium	8.46		8.32	J	2		P
Cadmium	115.67		114.49		1		P
Calcium	45512.84		45814.92		1		P
Chromium	84.36		75.97		10		P
Cobalt	37.49	J	35.81	J	4		P
Copper	496.45		479.63		3		P
Iron	145820.50		148225.70		2		P
Lead	583.04		514.64		12	E	P
Magnesium	8050.37		7792.80	J	3		P
Manganese	3448.51		2885.00		16	E	P
Nickel	86.81		79.64	J	8		P
Potassium	6131.85		6335.29	J	3		P
Selenium	15.70	J	175.00	U	100		P
Silver	1.47	J	50.00	U	100		P
Sodium	2252.79	J	2801.03	J	24		P
Thallium	32.91		34.91	J	6		P
Vanadium	124.94		115.27	J	8		P
Zinc	1447.50		1441.17		0		P

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

045

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

046

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	40	0.91
Antimony	206.83	12	0.47
Arsenic	189.04	3	0.27
Barium	233.53	40	0.05
Beryllium	313.11	1	0.004
Cadmium	226.50	1	0.032
Calcium	318.13	1000	1.5
Chromium	267.72	2	0.05
Cobalt	228.62	10	0.05
Copper	324.75	5	0.31
Iron	261.19	20	1.17
Lead	168.22	2	0.38
Magnesium	279.08	1000	0.43
Manganese	257.61	3	0.02
Nickel	231.60	8	0.08
Potassium	766.49	1000	0.59
Selenium	196.09	7	0.89
Silver	328.07	2	0.05
Sodium	330.24	1000	17.5
Thallium	190.86	5	0.32
Vanadium	292.40	10	0.06
Zinc	213.86	12	0.20

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

047

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

048

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

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

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.10	0.038

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

049

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.076

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

050

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

051

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0027

Instrument Type AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	1	0.10

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

052

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

12-IN

PREPARATION LOG

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Preparation Method: HS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBSC1	10/24/2003	1.00	100
LCSS01	10/24/2003	1.02	100
ME0027	10/24/2003	1.00	100
ME0027D	10/24/2003	1.00	100
ME0027S	10/24/2003	1.00	100
ME0029	10/24/2003	1.00	100
ME0030	10/24/2003	1.00	100
ME0031	10/24/2003	1.00	100
ME0032	10/24/2003	1.00	100
ME0033	10/24/2003	1.00	100
ME0034	10/24/2003	1.00	100
ME0036	10/24/2003	1.00	100
ME0037	10/24/2003	1.00	100
ME0038	10/24/2003	1.00	100
ME0039	10/24/2003	1.00	100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume(mL)
S0	10/27/2003		100
S0.2	10/27/2003		100
S1	10/27/2003		100
S2	10/27/2003		100
S5	10/27/2003		100
S10	10/27/2003		100
ICVC1	10/27/2003		100
ICBC1	10/27/2003		100
CRIC1	10/27/2003		100
CCVC1	10/27/2003		100
CCBC1	10/27/2003		100
PBSC1	10/27/2003	0.20	100
LCSS01	10/27/2003	0.20	100
ME0027	10/27/2003	0.20	100
ME0027D	10/27/2003	0.20	100
ME0027S	10/27/2003	0.20	100
ME0029	10/27/2003	0.20	100
ME0030	10/27/2003	0.20	100
ME0031	10/27/2003	0.20	100
ME0032	10/27/2003	0.20	100
ME0033	10/27/2003	0.20	100
CCVC2	10/27/2003		100
CCBC2	10/27/2003		100
ME0034	10/27/2003	0.20	100
ME0036	10/27/2003	0.20	100
ME0037	10/27/2003	0.20	100
ME0038	10/27/2003	0.20	100
ME0039	10/27/2003	0.20	100
CRIC2	10/27/2003		100
CCVC3	10/27/2003		100
CCBC3	10/27/2003		100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

060

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0027

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV01	10/27/2003		50
ICV02	10/27/2003		50
MIDRANGE01	10/27/2003		50
MIDRANGE02	10/27/2003		50
PBS01	10/27/2003	1.00	50
LCSS01	10/27/2003	1.00	50
ME0027	10/27/2003	1.00	50
ME0027D	10/27/2003	1.00	50
ME0027S	10/27/2003	1.00	50
ME0029	10/27/2003	1.00	50
ME0030	10/27/2003	1.00	50
ME0031	10/27/2003	1.00	50
ME0032	10/27/2003	1.00	50
ME0033	10/27/2003	1.00	50
ME0034	10/27/2003	1.00	50
ME0036	10/27/2003	1.00	50
ME0037	10/27/2003	1.00	50
ME0038	10/27/2003	1.00	50
ME0039	10/27/2003	1.00	50

Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CENTRAL REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Print Date: 11/13/03

Subject: Review of Region 5 Data for US Steel Coking Facility

From: Xuyen Nguyen, Chemist
Contractor to Region 5 Central Regional Laboratory
Submitted to CRL on 11/13/03

To: Superfund, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Attached are Results for: US Steel Coking Facility

Analyses included in this report:
TCLP - SVOA

RECEIVED
NOV 2 1 2003
EPA - BOL - FSRS

NOV 2 1 2003
EPA - BOL - FSRS

000006

Sylvia Griffin NOV 1 8 2003

Data Management Coordinator and Date Received

Date Transmitted: NOV 1 8 2003 / /

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML-10C

_____ / / _____

Received by and Date

Comments:

SF E310005

TCLP-SVOA

000007

Environmental Protection Agency Region 5
Central Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 10/28/03 11:30:14A**

E310005

IITRI - ESAT Contract

Client:	Superfund, US EPA Region 5	Project Manager:	Jennifer Mokos
Project:	US Steel Coking Facility	Project Number:	[none]

Report To:

Howard Pham	77 West Jackson Boulevard	Phone: (312) 353-2310
Superfund, US EPA Region 5	Chicago, IL 60604	Fax: (312) 886-5171

Date Due:	Nov-17-03 15:00 (30 day TAT)		
Received By:	Eva Dixon	Date Received:	Oct-17-03 12:07
Logged In By:	Eva Dixon	Date Logged In:	Oct-17-03 12:07

Samples Received at:	14.6°C	2004IE01
All Containers intact:	No	
Sample labels/COC agree:	No	
Samples Preserved Properly:	No	
Custody Seals Present:	No	

Analysis	Due	TAT	Expires	Comments
E310005-01 2004IE01S01 T101 (high conc.) [Soil] Sampled Oct-14-03 15:30 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-11-04 15:30	
Hg TCLP	Nov-17-03 12:00	30	Apr-11-04 15:30	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-28-03 15:30	
E310005-02 2004IE01S02 T102 (high conc.) [Soil] Sampled Oct-14-03 15:30 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-11-04 15:30	
Hg TCLP	Nov-17-03 12:00	30	Apr-11-04 15:30	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-28-03 15:30	
E310005-03 2004IE01S03 T103 (high conc.) [Soil] Sampled Oct-14-03 14:50 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-11-04 14:50	
Hg TCLP	Nov-17-03 12:00	30	Apr-11-04 14:50	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-28-03 14:50	
E310005-04 2004IE01S04 T104 [Soil] Sampled Oct-15-03 11:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-12-04 11:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-12-04 11:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-29-03 11:00	

E310005

IITRI - ESAT Contract

Client: Superfund, US EPA Region 5 Project Manager: Jennifer Mokos
Project: US Steel Coking Facility Project Number: [none]

Analysis	Due	TAT	Expires	Comments
E310005-05 2004IE01S05 T105 [Soil] Sampled Oct-15-03 11:20 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-12-04 11:20	
Hg TCLP	Nov-17-03 12:00	30	Apr-12-04 11:20	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-29-03 11:20	
E310005-06 2004IE01S06 T106 [Soil] Sampled Oct-15-03 09:30 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-12-04 09:30	
Hg TCLP	Nov-17-03 12:00	30	Apr-12-04 09:30	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-29-03 09:30	
E310005-07 2004IE01S07 T107 [Soil] Sampled Oct-15-03 13:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-12-04 13:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-12-04 13:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-29-03 13:00	
E310005-08 2004IE01S08 T108 [Soil] Sampled Oct-16-03 09:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-13-04 09:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-13-04 09:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-30-03 09:00	
E310005-09 2004IE01S09 T109 [Soil] Sampled Oct-16-03 13:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-13-04 13:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-13-04 13:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-30-03 13:00	
E310005-10 2004IE01D09 T110 [Soil] Sampled Oct-16-03 13:00 Central				**Field duplicate of E310005-09**
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-13-04 13:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-13-04 13:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-30-03 13:00	
E310005-11 2004IE01S10 T111 [Soil] Sampled Oct-16-03 15:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-13-04 15:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-13-04 15:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-30-03 15:00	
E310005-12 2004IE01S11 T112 (high conc.) [Soil] Sampled Oct-16-03 15:00 Central				
Metals ICP TCLP	Nov-17-03 12:00	30	Apr-13-04 15:00	
Hg TCLP	Nov-17-03 12:00	30	Apr-13-04 15:00	
TCLP - SVOA	Nov-15-03 12:00	28	Oct-30-03 15:00	

Reviewed By _____ Date 10/28/03

WORK ORDER

Printed: 10/28/03 11:30:14A

E310005

IITRI - ESAT Contract

Client:	Superfund, US EPA Region 5	Project Manager:	Jennifer Mokos
Project:	US Steel Coking Facility	Project Number:	[none]

Received by [illegible] 10/28/03 Date

CASE NARRATIVE

DATE: November 4, 2003

PROJECT NAME: Data set : E310005 Semi-Volatile Analysis of the US Steel Coking Facility samples.

ANALYST: Xuyen Nguyen, ESAT

I CASE DESCRIPTION:

The Laboratory received twelve soil samples Lab ID E310005-01 to E310005-12 on October 17, 2003 for TCLP Semi-Volatile analysis using CRL SOP GCMS026 for the US Steel Coking Facility site. The samples were received at 14.6°C and the TCLP extraction were conducted on October 20 and on October 22, 2003. The TCLP extracted samples were prepared using continuous liquid/liquid extraction on October 21 and October 27, 2003. Holding time requirements of two weeks were met.

All samples extracts were analyzed on October 23 and October 29, 2003. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. Initial Calibration (IC): An acceptable five point IC is required for all target compounds before samples can be analyzed. The QC criterion for the IC states each analyte's %RSD must be <30% for soil and water samples.

All analytes met the requirements for the IC analyzed on October 6, 2003 except 2,4-Dinitrophenol (59.13%RSD). This analyte was flagged "J" for all samples positive results and "UJ" for non-detects. No other problems were observed.

2. Continuing Calibration (CC):

An acceptable CC is required for all target compounds before samples can be analyzed. The QC criteria for the CC states each analyte's %D must be < 25%.

The continuing calibration, analyzed on October 29, 2003, reported all compounds within the quality control limits except 2,4-Dinitrophenol (38%D) and 4,6-Dinitro-2-methylphenol (29%D). These analytes were flagged "J" for all samples positive results and "UJ" for non-detects.

The continuing calibration, analyzed on October 30, 2003, reported all compounds within the quality control limits except Benzoic acid (79.7%D), 2,4-Dinitrophenol (100%D), 4-Nitrophenol (32.8%D), 4,6-Dinitro-2-methylphenol (87.9%D) and Pentachlorophenol (47.5%D). These analytes were flagged "J" for all samples positive results and "UJ" for non-detects except the analyte 2,4 -Dinitrophenol was flagged "R" in associated samples. No other problems were observed.

3. Internal Standard (IS) Area and Retention Time Summary:
The QC criteria states that the IS area of the sample must range from 50 to 200% of the internal standard area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding standard.

All internal standard area met the QC requirements with the following exceptions. Naphthalene-d8 was outside of QC limits in the samples E310005-04 and E310005-12; 1,4-Dichlorobenzene-d4 was outside of QC limits in the sample E31005-12. These samples were re-analyzed with diluted samples. This time, the internal standard area met the QC limits. No other problems were observed.

III. METHOD QUALITY CONTROL:

1. Surrogate Spike Compound Results:
The surrogate spike recovery for Terphenyl-d14 was outside the QC limit for sample E310005-03. The surrogate spike recovery for Nitrobenzene-d5 was outside the QC limit for sample E310005-01. The surrogate spike recovery 2,4,6-Tribromophenol was outside the QC limit for sample E310005-06. These samples had only one surrogate outside the control QC limits, so no action was required.

The surrogates spike recoveries 2-Fluorophenol, Phenol-d6 and 2-Fluorobiphenyl were greater than the upper control limit in sample E310005-12. Therefore, the results for the acid fraction compounds are flagged "K" for detected compounds. The analytes 2,4,6-Tribromophenol and Terphenyl-d14 had recoveries below the lower control limit for sample E310005-12. This sample had only one surrogate in each fraction outside the control QC limits, so no action was required.

The sample used for the MS (EJ33001-MS1) was inadvertedly not spiked. Since the majority of the recoveries for the spiked compounds in this sample were acceptable, no action is taken.

The surrogates recoveries 2-Fluorophenol and 2,4,6-Tribromophenol were below the lower control limit in the sample EJ33001-MSD1.Therefore the results in the acid fraction for detected compounds were flagged "L" and "UJ" for non-detect compounds. No other problems were observed.

2. Laboratory Control Sample (LCS) Results:
The percent recoveries were within the QC limits for all analytes in both EJ32001-BS1 and EJ32001-BSD1 samples with the exceptions of Diethylphthalate, Hexachlorocyclopentadiene Hexachloroethane, 1,2,4- Trichlorobenzene, 2,6 -Dinitrotoluene , 4-Methylphenol, 4-Nitroaniline, 4-Nitrophenol, Pentachlorophenol, Di-n-butylphthalate ,2,4-Dinitrotoluene, Isophorone, N-Nitrosodi-n-propylamine, N-Nitrosodiphenylamine, Nitrobenzene, Hexachlorobutadiene, Butylbenzylphthalate , 4-Bromophenyl-phenylether, Hexachlorobenzene, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 3-Nitroaniline, 4-Chlorophenyl-phenylether, 4-Chloro-3-methylphenol, 4-Chloroaniline, Bis(2-

chloroethoxy)methane, Bis(2-chloroisopropyl)ether, Dimethylphthalate and 2-Nitroaniline which were less than the lower control limit in both EJ32001-BS1 and EJ32001-BSD1 samples. These analytes were flagged "L" for positive results and "UJ" for non-detects in the associated samples.

The percent recovery of 2,4-Dinitrophenol was greater than the upper control limit in both EJ32001-BS1 and EJ32001-BSD1 samples. This analyte was flagged "K" for only positive results in the associated samples.

The percent recovery of Fluoranthene was less than the lower control limit only in sample EJ32001-BSD1, so no action was required.

The relative percent differences(%RPD) were within limits except Di-n-butylphthalate, Diethylphthalate, Dimethylphthalate and 2,6-Dinitrotoluene. No action was required.

The percent recoveries were within the QC limits for all analytes in both EJ33001-BS1 and EJ33001-BSD1 samples with the exceptions of Hexachlorocyclopentadiene, 2,6 - Dinitrotoluene , 4-Nitroaniline, 4-Nitrophenol, Di-n-butylphthalate ,2,4-Dinitrotoluene, N-Nitrosodiphenylamine, Butylbenzylphthalate , 4-Bromophenyl-phenylether, 2,4,5-Trichlorophenol, 3-Nitroaniline, 4-Chlorophenyl-phenylether, 4-Chloro-3-methylphenol, 4-Chloroaniline and 2-Nitroaniline which were less than the lower control limit in both EJ33001-BS1 and EJ33001-BSD1 samples. These analytes were flagged "L" for positive results and "UJ" for non-detects in the associated samples.

The analyte 2,4-Dinitrophenol recovery was greater than the upper control limit in both EJ33001-BS1 and EJ33001-BSD1 samples. This analyte was flagged "K" for only positive results in the associated samples.

The percent recoveries of 2,4-Dichlorophenol, 2,4,6-Trichlorophenol, N-Nitrosodi-n-propylamine, Isophorone, Hexachlorobenzene, Bis(2-chloroethoxy)methane, Bis(2-chloroisopropyl)ether, Nitrobenzene and 4-Methylphenol were less than the lower control limit only in sample EJ33001-BS1, so no action was required.

The percent recoveries of 2,4-Dinitrophenol and 4,6-Dinitro-2-methylphenol were greater than the upper control limit only in sample EJ33001-BS1, so no action was required.

Since the recovery of Dimethylphthalate is zero percent in both EJ33001-BS1 and EJ33001-BSD1 samples. This analyte was flagged "L" for positive results and "R" for non-detects in the associated samples.

The recovery of Diethylphthalate which was zero percent in sample EJ33001-BSD1 and was less than the lower control limit in sample EJ33001-BS1. This analyte was flagged "L" for positive results and "R" for non-detects in the associated samples.

The percent recoveries of Bis(2-chloroisopropyl)ether, 2,4-Dimethylphenol, Benzyl alcohol 4,6-Dinitro-2-methylphenol and 2-Chlorophenol were greater than the upper control limit only in sample EJ33001-BSD1, no action was required.

The relative percent differences (%RPD) were within limits except Di-n-butylphthalate and 2,6-Dinitrotoluene, no action was required. No other problems were observed.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample E310005-07 was used as the MS1/MSD1 samples.
All the percent recoveries were within limits except Acenaphthylene, 2-Methylnaphthalene, Naphthalene, 1,3-Dichlorobenzene and 2,4-Dinitrophenol which were greater than the upper control limits in both EJ33001-MS1 and EJ33001-MSD1 samples. These analytes were flagged "K" for only positive results in the native sample.

The percent recovery of Hexachloroethane was greater than the upper control limit only in sample EJ33001-MS1, no action was required.

The percent recoveries of Di-n-butylphthalate, Pentachlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4,5-Trichlorophenol, 2-Chlorophenol, Dimethylphthalate, Diethylphthalate and 2-Nitrophenol were less than the lower control limits only in EJ33001-MSD1, so no action as required.

The relative percent differences (%RPD) were within limits except Butylbenzylphthalate, Bis(2-ethylhexyl)phthalate, Pentachlorophenol, Dimethylphthalate, Diethylphthalate, Benzo(a) pyrene, Benzo(b)fluoranthene, Benzo(g,h,i) perylene, Di-n-butylphthalate, 2-Nitrophenol, 2-Chlorophenol, 2,4,5-Trichlorophenol, 2,4-Dichlorophenol and 2,4,6-Trichlorophenol. No action was required. No other problems were observed.

IV.SAMPLES RESULTS:

In the twelve samples , many analytes exceeded the calibration range. Therefore samples were diluted and re-analyzed until they were within the concentration range of the calibration. The concentration of each analyte was reported from the least diluted analysis in which the compound was in the calibration range.

The samples were received at 14.6°C which exceeds the EPA upper limit for sample preservation. There is no regional guidance for qualifying samples received at the lab with the temperatures outside the EPA required limits. The end user must determine what if any actions are needed.

Sample E310005-01 contained phenol at 9μg/L, 2,4-Dimethylphenol at 7.13μg/L, Naphthalene at 976μg/L, 2-Methylnaphthalene at 39.2μg/L, Dibenzofuran at 6.16μg/L, Fluorene at 7.85μg/L, Phenanthrene at 6.34μg/L and Bis(2-ethylhexyl)phthalate at 25.2 μg/L.
Sample E310005-02 contained Bis(2-ethylhexyl)phthalate at 9.09 μg/L.
Sample E310005-03 contained Chrysene at 5.82 μg/L and Benzo(b) at 6.27 μg/L.
Sample E310005-06 contained Naphthalene at 5.15 μg/L.

The concentrations of Bis(2-ethylhexyl)phthalate in samples E310005-06, E310005-07,E310005-08, E310005-09 and E310005-10 were lower than the reporting limits(5 µg/L).

The sample E310005-12 contained analyte Fluoranthene at 363 µg/L and Pyrene at 304 µg/L. These concentrations which were lower than the Method Detection Limit were estimated because their results were from over dilution one over of hundred (1/100).

Please refer to the LIMS report for the others analytes of samples E310005-12, E310005-04 and sample E310005-05. These three samples formed an emulsion between the organic and aqueous layer during extraction. The emulsion was present even after allowing extracts to separate overnight. No other problems were observed.

Sample E310005-10 is the field duplicate of sample E310005-09.

All quality control measures not specifically discussed in this narrative met quality criteria stated in the SOP.

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IIT RESEARCH INSTITUTE

IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	**Reported:** Nov-13-03 15:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2004IE01S01 T101 (high conc.)	E310005-01	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S02 T102 (high conc.)	E310005-02	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S03 T103 (high conc.)	E310005-03	Soil	Oct-14-03 14:50	Oct-17-03 12:07
2004IE01S04 T104	E310005-04	Soil	Oct-15-03 11:00	Oct-17-03 12:07
2004IE01S05 T105	E310005-05	Soil	Oct-15-03 11:20	Oct-17-03 12:07
2004IE01S06 T106	E310005-06	Soil	Oct-15-03 09:30	Oct-17-03 12:07
2004IE01S07 T107	E310005-07	Soil	Oct-15-03 13:00	Oct-17-03 12:07
2004IE01S08 T108	E310005-08	Soil	Oct-16-03 09:00	Oct-17-03 12:07
2004IE01S09 T109	E310005-09	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01D09 T110	E310005-10	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01S10 T111	E310005-11	Soil	Oct-16-03 15:00	Oct-17-03 12:07
2004IE01S11 T112 (high conc.)	E310005-12	Soil	Oct-16-03 15:00	Oct-17-03 12:07

Xuyen Nguyen, Chemist

IITRI
IIT RESEARCH INSTITUTE

IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project:US Steel Coking Facility Project Number:[none] Project Manager:Howard Pham	Reported: Nov-13-03 15:04

2004IE01S01 T101 (high conc.)

E310005-01(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	9.00		0.740	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	U		0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	"	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	7.13		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	976		22.0	100	"	20	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	1	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	39.2		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	3.23		0.680	5.00	"	"	"	"	"
Dimethylphthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

000009

Xuyen Nguyen, Chemist

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536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S01 T101 (high conc.)
E310005-01(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	6.16		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	7.85		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
4-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U		1.62	5.00	"	"	"	"	"
Phenanthrene	6.34		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	25.2		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S01 T101 (high conc.)
E310005-01(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Surrogate: 2-Fluorophenol	35.8			*71.6 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	40.4			*80.8 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	54.3			*109 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	39.9			*79.8 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	56.3			*113 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	28.3			*56.6 %*		*50-144*	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S02 T102 (high conc.)

E310005-02(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"	"	"	"	"
4-Methylphenol	U	J	0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"	"	"	"	"
Hexachloroethane	U	J	2.68	5.00	"	"	"	"	"
Nitrobenzene	U	J	1.40	5.00	"	"	"	"	"
Isophorone	U	J	1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U	J	1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U	J	2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	U	J	1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S02 T102 (high conc.)

E310005-02(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	U	J	1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U	J	1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	9.09		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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2004IE01S02 T102 (high conc.)
E310005-02(Soil)
Sampled: Oct-14-03 15:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Surrogate: 2-Fluorophenol	31.2			*62.4 %*	*25-90*		"	"	"
Surrogate: Phenol-d6	32.2			*64.4 %*	*38-103*		"	"	"
Surrogate: Nitrobenzene-d5	35.5			*71.0 %*	*28-95*		"	"	"
Surrogate: 2-Fluorobiphenyl	34.3			*68.6 %*	*46-95*		"	"	"
Surrogate: 2,4,6-Tribromophenol	42.2			*84.4 %*	*47-146*		"	"	"
Surrogate: Terphenyl-d14	40.2			*80.4 %*	*50-144*		"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S03 T103 (high conc.)
E310005-03(Soil)
Sampled: Oct-14-03 14:50
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"	"	"	"	"
4-Methylphenol	U	J	0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"	"	"	"	"
Hexachloroethane	U	J	2.68	5.00	"	"	"	"	"
Nitrobenzene	U	J	1.40	5.00	"	"	"	"	"
Isophorone	U	J	1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U	J	1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U	J	2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	U	J	1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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2004IE01S03 T103 (high conc.)

E310005-03(Soil)
Sampled: Oct-14-03 14:50
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	U	J	1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
4-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U	J	1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	5.82		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	6.27		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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2004IE01S03 T103 (high conc.)

E310005-03(Soil)
Sampled: Oct-14-03 14:50
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Surrogate: 2-Fluorophenol	33.3			*66.6 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	35.1			*70.2 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	38.6			*77.2 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	36.3			*72.6 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	47.1			*94.2 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	18.6			*37.2 %*		*50-144*	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S04 T104
E310005-04(Soil)
Sampled: Oct-15-03 11:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	4690		74.0	500	ug/L	100	EJ32001	Oct-20-03	Oct-23-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	1	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	882		6.40	50.0	"	10	"	"	"
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"	1	"	"	"
4-Methylphenol	3490		80.0	500	"	100	"	"	"
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"	1	"	"	"
Hexachloroethane	U	J	2.68	5.00	"	"	"	"	"
Nitrobenzene	U	J	1.40	5.00	"	"	"	"	"
Isophorone	U	J	1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	1080		141	500	"	100	"	"	"
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"	1	"	"	"
2,4-Dichlorophenol	U	J	1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"	"	"	"	"
Naphthalene	5370		110	500	"	100	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	1	"	"	"
Hexachlorobutadiene	U	J	2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	277		11.3	50.0	"	10	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	1	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	3.37		0.680	5.00	"	"	"	"	"
Dimethylphthalate	U	J	1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S04 T104
E310005-04(Soil)
Sampled: Oct-15-03 11:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	19.1		0.600	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	88.4		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	156		10.8	50.0	"	10	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	1	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	U	J	1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U	J	1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	186		5.60	50.0	"	10	"	"	"
Anthracene	35.0		0.800	5.00	"	1	"	"	"
Carbazole	61.9		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	33.1		3.63	5.00	"	"	"	"	"
Pyrene	23.2		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3' Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	5.32		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	5.40		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S04 T104
E310005-04(Soil)
Sampled: Oct-15-03 11:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Surrogate: 2-Fluorophenol	31.8			*63.6 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	37.4			*74.8 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	48.9			*97.8 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	47.4			*94.8 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	49.6			*99.2 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	46.3			*92.6 %*		*50-144*	"	"	"

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Superfund US EPA Region 5
77 West Jackson Boulevard
Chicago IL 60604

Project: US Steel Coking Facility
Project Number: [none]
Project Manager: Howard Pham

Reported:
Nov-13-03 15:04

2004IE01S05 T105

E310005-05(Soil)
Sampled: Oct-15-03 11:20
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	134		3.70	25.0	ug/L	5	EJ33001	Oct-21-03	Oct-30-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	1	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	53.4		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	181		4.00	25.0	"	5	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	1	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	147		7.05	25.0	"	5	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	1	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	1900		55.0	250	"	50	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	1	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	110		5.65	25.0	"	5	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	1	"	"	Oct-30-03
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	Oct-30-03
2,4,6-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	8.22		0.680	5.00	"	"	"	"	"
Dimethylphthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S05 T105
E310005-05(Soil)
Sampled: Oct-15-03 11:20
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	12.2		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-30-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	51.0		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	69.6		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	75.5		0.560	5.00	"	"	"	"	"
Anthracene	17.2		0.800	5.00	"	"	"	"	"
Carbazole	16.0		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	18.1		3.63	5.00	"	"	"	"	"
Pyrene	10.1		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	3.65		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S05 T105
E310005-05(Soil)
Sampled: Oct-15-03 11:20
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-30-03
Surrogate: 2-Fluorophenol	41.8			*83.6 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	48.0			*96.0 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	45.6			*91.2 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	47.3			*94.6 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	60.0			*120 %*		*47-146*	"	"	*Oct-30-03*
Surrogate: Terphenyl-d14	39.2			*78.4 %*		*50-144*	"	"	*Oct-30-03*

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S06 T106
E310005-06(Soil)
Sampled: Oct-15-03 09:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"	"	"	"	"
4-Methylphenol	U	J	0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"	"	"	"	"
Hexachloroethane	U	J	2.68	5.00	"	"	"	"	"
Nitrobenzene	U	J	1.40	5.00	"	"	"	"	"
Isophorone	U	J	1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U	J	1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"	"	"	"	"
Naphthalene	5.15		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U	J	2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	U	J	1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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2004IE01S06 T106
E310005-06(Soil)
Sampled: Oct-15-03 09:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	U	J	1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U	J	1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	4.03		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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2004IE01S06 T106
E310005-06(Soil)
Sampled: Oct-15-03 09:30
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Surrogate: 2-Fluorophenol	17.8			*35.6 %*		*25-90*	"	"	"
Surrogate: Phenol-d5	25.6			*51.2 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	37.1			*74.2 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	35.2			*70.4 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	18.6			*37.2 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	30.4			*60.8 %*		*50-144*	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S07 T107
E310005-07(Soil)
Sampled: Oct-15-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	U		0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	"	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S07 T107
E310005-07(Soil)
Sampled: Oct-15-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U		1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	3.14		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S07 T107
E310005-07(Soil)
Sampled: Oct-15-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Surrogate: 2-Fluorophenol	30.6			*61.2 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	39.4			*78.8 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	42.6			*85.2 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	41.4			*82.8 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	44.8			*89.6 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	42.3			*84.6 %*		*50-144*	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S08 T108
E310005-08(Soil)
Sampled: Oct-16-03 09:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"	"	"	"	"
4-Methylphenol	U	J	0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"	"	"	"	"
Hexachloroethane	U	J	2.68	5.00	"	"	"	"	"
Nitrobenzene	U	J	1.40	5.00	"	"	"	"	"
Isophorone	U	J	1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U	J	1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U	J	2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	U	J	1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S08 T108
E310005-08(Soil)
Sampled: Oct-16-03 09:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	U	J	1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
4-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U	J	1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	4.46		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S08 T108
E310005-08(Soil)
Sampled: Oct-16-03 09:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ32001	Oct-20-03	Oct-23-03
Surrogate: 2-Fluorophenol	30.1			*60.2 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	35.6			*71.2 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	39.6			*79.2 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	34.2			*68.4 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	36.4			*72.8 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	40.8			*81.6 %*		*50-144*	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S09 T109
E310005-09(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	U		0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	"	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethyl phthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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2004IE01S09 T109
E310005-09(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U		1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis 2-ethylhexyl)phthalate	3.08		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S09 T109
E310005-09(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Surrogate: 2-Fluorophenol	31.7			*63.4 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	33.6			*67.2 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	40.9			*81.8 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	40.4			*80.8 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	45.9			*91.8 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	43.1			*86.2 %*		*50-144*	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01D09 T110
E310005-10(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	U		0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	"	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	3.45		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01D09 T110
E310005-10(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
4-Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U		1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	2.50		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01D09 T110
E310005-10(Soil)
Sampled: Oct-16-03 13:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Surrogate: 2-Fluorophenol	38.7			*77.4 %*	*25-90*		"	"	"
Surrogate: Phenol-d6	42.1			*84.2 %*	*38-103*		"	"	"
Surrogate: Nitrobenzene-d5	35.5			*71.0 %*	*28-95*		"	"	"
Surrogate: 2-Fluorobiphenyl	39.1			*78.2 %*	*46-95*		"	"	"
Surrogate: 2,4,6-Tribromophenol	45.1			*90.2 %*	*47-146*		"	"	"
Surrogate: Terphenyl-d14	42.8			*85.6 %*	*50-144*		"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S10 T111
E310005-11(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	U		0.740	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	"	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	U		0.640	5.00	"	"	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	"	"	"	"
4-Methylphenol	U		0.800	5.00	"	"	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	"	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	U		1.41	5.00	"	"	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	"	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	U		1.10	5.00	"	"	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	"	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	U		1.13	5.00	"	"	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	"	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethyl phthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S10 T111
E310005-11(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	U		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	U		1.58	5.00	"	"	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	"	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	U		1.08	5.00	"	"	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	"	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U		1.62	5.00	"	"	"	"	"
Phenanthrene	U		0.560	5.00	"	"	"	"	"
Anthracene	U		0.800	5.00	"	"	"	"	"
Carbazole	U		1.58	5.00	"	"	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	"	"	"	"
Fluoranthene	U		3.63	5.00	"	"	"	"	"
Pyrene	U		3.04	5.00	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	"	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	U		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	U		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	U		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	U		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	U		0.630	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S10 T111
E310005-11(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-29-03
Surrogate: 2-Fluorophenol	41.1			*82.2 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	44.4			*88.8 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	41.8			*83.6 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	42.4			*84.8 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	48.8			*97.6 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	37.6			*75.2 %*		*50-144*	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S11 T112 (high conc.)
E310005-12(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Phenol	12100		370	2500	ug/L	500	EJ33001	Oct-21-03	Oct-30-03
Bis(2-chloroethyl)ether	U		0.680	5.00	"	1	"	"	"
2-Chlorophenol	U		0.790	5.00	"	"	"	"	"
1,3-Dichlorobenzene	U		2.11	5.00	"	"	"	"	"
1,4-Dichlorobenzene	U		2.21	5.00	"	"	"	"	"
Benzyl alcohol	U		1.00	5.00	"	"	"	"	"
1,2-Dichlorobenzene	U		1.94	5.00	"	"	"	"	"
2-Methylphenol	2000		64.0	500	"	100	"	"	"
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"	1	"	"	"
4-Methylphenol	6120		80.0	500	"	100	"	"	"
N-Nitrosodi-n-propylamine	U		1.67	5.00	"	1	"	"	"
Hexachloroethane	U		2.68	5.00	"	"	"	"	"
Nitrobenzene	U		1.40	5.00	"	"	"	"	"
Isophorone	U		1.41	5.00	"	"	"	"	"
2-Nitrophenol	U		1.52	5.00	"	"	"	"	"
2,4-Dimethylphenol	1270		141	500	"	100	"	"	"
Bis(2-chloroethoxy)methane	U		1.05	5.00	"	1	"	"	"
2,4-Dichlorophenol	U		1.16	5.00	"	"	"	"	"
1,2,4-Trichlorobenzene	U		1.79	5.00	"	"	"	"	"
Naphthalene	11700		550	2500	"	500	"	"	"
4-Chloroaniline	U	J	1.61	5.00	"	1	"	"	"
Hexachlorobutadiene	U		2.50	5.00	"	"	"	"	"
2-Methylnaphthalene	460		113	500	"	100	"	"	"
4-Chloro-3-methylphenol	U	J	1.09	5.00	"	1	"	"	"
Hexachlorocyclopentadiene	U	J	2.80	5.00	"	"	"	"	"
2,4,6-Trichlorophenol	U		1.14	5.00	"	"	"	"	"
2,4,5-Trichlorophenol	U	J	1.62	5.00	"	"	"	"	"
2-Chloronaphthalene	U		1.43	5.00	"	"	"	"	"
2-Nitroaniline	U	J	2.31	5.00	"	"	"	"	"
Acenaphthylene	U		0.680	5.00	"	"	"	"	"
Dimethylphthalate	Rejected		1.23	5.00	"	"	"	"	"
2,6-Dinitrotoluene	U	J	1.57	5.00	"	"	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago Il., 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S11 T112 (high conc.)

E310005-12(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Acenaphthene	31.6		0.600	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-30-03
3-Nitroaniline	U	J	2.01	5.00	"	"	"	"	"
Dibenzofuran	303		158	500	"	100	"	"	"
2,4-Dinitrophenol	U	J	1.79	5.00	"	1	"	"	"
2,4-Dinitrotoluene	U	J	1.99	5.00	"	"	"	"	"
Fluorene	377		108	500	"	100	"	"	"
4-Nitrophenol	U	J	1.55	5.00	"	1	"	"	"
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"	"	"	"	"
Diethyl phthalate	Rejected		1.71	5.00	"	"	"	"	"
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"	"	"	"	"
N-Nitrosodiphenylamine	U	J	1.38	5.00	"	"	"	"	"
Nitroaniline	U	J	1.73	5.00	"	"	"	"	"
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"	"	"	"	"
Hexachlorobenzene	U		1.39	5.00	"	"	"	"	"
Pentachlorophenol	U	J	1.62	5.00	"	"	"	"	"
Phenanthrene	855		56.0	500	"	100	"	"	"
Anthracene	78.5		0.800	5.00	"	1	"	"	"
Carbazole	206		158	500	"	100	"	"	"
Di-n-butyl phthalate	U	J	1.88	5.00	"	1	"	"	"
Fluoranthene	U		363	500	"	100	"	"	"
Pyrene	U		304	500	"	"	"	"	"
Butyl benzyl phthalate	U	J	2.25	5.00	"	1	"	"	"
3,3'-Dichlorobenzidine	U		1.11	5.00	"	"	"	"	"
Chrysene	45.3		0.650	5.00	"	"	"	"	"
Benzo (a) anthracene	49.6		0.920	5.00	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"	"	"	"	"
Di-n-octyl phthalate	U		2.66	5.00	"	"	"	"	"
Benzo (b) fluoranthene	40.6		1.09	5.00	"	"	"	"	"
Benzo (k) fluoranthene	14.8		1.09	5.00	"	"	"	"	"
Benzo (a) pyrene	30.5		0.730	5.00	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	15.3		0.300	5.00	"	"	"	"	"
Dibenz (a,h) anthracene	6.25		0.630	5.00	"	"	"	"	"

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

2004IE01S11 T112 (high conc.)
E310005-12(Soil)
Sampled: Oct-16-03 15:00
Received: Oct-17-03 12:07

Semivolatiles by GC/MS

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Benzo (g,h,i) perylene	**17.2**		0.930	5.00	ug/L	1	EJ33001	Oct-21-03	Oct-30-03
Surrogate: 2-Fluorophenol	56.8			*100 %*		*25-90*	"	"	"
Surrogate: Phenol-d6	59.1			*104 %*		*38-103*	"	"	"
Surrogate: Nitrobenzene-d5	44.3			*78.0 %*		*28-95*	"	"	"
Surrogate: 2-Fluorobiphenyl	59.1			*104 %*		*46-95*	"	"	"
Surrogate: 2,4,6-Tribromophenol	23.9			*42.1 %*		*47-146*	"	"	"
Surrogate: Terphenyl-d14	22.7			*40.0 %*		*50-144*	"	"	"

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

Blank (EJ32001-BLK1) Prepared: Oct-20-03 Analyzed: Oct-23-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	U		0.740	5.00	ug/L						
Bis(2-chloroethyl)ether	U		0.680	5.00	"						
2-Chlorophenol	U		0.790	5.00	"						
1,3-Dichlorobenzene	U		2.11	5.00	"						
1,4-Dichlorobenzene	U		2.21	5.00	"						
Benzyl alcohol	U		1.00	5.00	"						
1,2-Dichlorobenzene	U		1.94	5.00	"						
2-Methylphenol	U		0.640	5.00	"						
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"						
4-Methylphenol	U	J	0.800	5.00	"						
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"						
Hexachloroethane	U	J	2.68	5.00	"						
Nitrobenzene	U	J	1.40	5.00	"						
Isophorone	U	J	1.41	5.00	"						
2-Nitrophenol	U		1.52	5.00	"						
2,4-Dimethylphenol	U		1.41	5.00	"						
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"						
2,4-Dichlorophenol	U	J	1.16	5.00	"						
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"						
Naphthalene	U		1.10	5.00	"						
4-Chloroaniline	U	J	1.61	5.00	"						
Hexachlorobutadiene	U	J	2.50	5.00	"						
2-Methylnaphthalene	U		1.13	5.00	"						
4-Chloro-3-methylphenol	U	J	1.09	5.00	"						
Hexachlorocyclopentadiene	U	J	2.80	5.00	"						
2,4,6-Trichlorophenol	U	J	1.14	5.00	"						
2,4,5-Trichlorophenol	U	J	1.62	5.00	"						
2-Chloronaphthalene	U		1.43	5.00	"						
2-Nitroaniline	U	J	2.31	5.00	"						
Acenaphthylene	U		0.680	5.00	"						
Dimethylphthalate	U	J	1.23	5.00	"						
2,6-Dinitrotoluene	U	J	1.57	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch E032001 - BP SVOA

Blank (E032001-BLK1) **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	U		0.600	5.00	ug/L						
3-Nitroaniline	U	J	2.01	5.00	"						
Dibenzofuran	U		1.58	5.00	"						
2,4-Dinitrophenol	U	J	1.79	5.00	"						
2,4-Dinitrotoluene	U	J	1.99	5.00	"						
Fluorene	U		1.08	5.00	"						
4-Nitrophenol	U	J	1.55	5.00	"						
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"						
Diethyl phthalate	U	J	1.71	5.00	"						
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"						
N-Nitrosodiphenylamine	U	J	1.38	5.00	"						
Nitroaniline	U	J	1.73	5.00	"						
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"						
Hexachlorobenzene	U	J	1.39	5.00	"						
Pentachlorophenol	U	J	1.62	5.00	"						
Phenanthrene	U		0.560	5.00	"						
Anthracene	U		0.800	5.00	"						
Carbazole	U		1.58	5.00	"						
Di-n-butyl phthalate	U	J	1.88	5.00	"						
Fluoranthene	U		3.63	5.00	"						
Pyrene	U		3.04	5.00	"						
Butyl benzyl phthalate	U	J	2.25	5.00	"						
3,3'-Dichlorobenzidine	U		1.11	5.00	"						
Chrysene	U		0.650	5.00	"						
Benzo (a) anthracene	U		0.920	5.00	"						
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"						
Di-n-octyl phthalate	U		2.66	5.00	"						
Benzo (b) fluoranthene	U		1.09	5.00	"						
Benzo (k) fluoranthene	U		1.09	5.00	"						
Benzo (a) pyrene	U		0.730	5.00	"						
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"						
Dibenz (a,h) anthracene	U		0.630	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

Blank (EJ32001-BLK1) — **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L						
Surrogate: 2-Fluorophenol	*35.1*				"	*50.0*		*70.2*	*25-90*		
Surrogate: Phenol-d5	*38.1*				"	*50.0*		*76.2*	*38-103*		
Surrogate: Nitrobenzene-d5	*35.8*				"	*50.0*		*71.6*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*32.4*				"	*50.0*		*64.8*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*36.5*				"	*50.0*		*73.0*	*47-146*		
Surrogate: Terphenyl-d14	*39.8*				"	*50.0*		*79.6*	*50-144*		

Blank (EJ32001-BLK2) — **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	U		0.740	5.00	ug/L						
Bis(2-chloroethyl)ether	U		0.680	5.00	"						
2-Chlorophenol	U		0.790	5.00	"						
1,3-Dichlorobenzene	U		2.11	5.00	"						
1,4-Dichlorobenzene	U		2.21	5.00	"						
Benzyl alcohol	U		1.00	5.00	"						
1,2-Dichlorobenzene	U		1.94	5.00	"						
2-Methylphenol	U		0.640	5.00	"						
Bis(2-chloroisopropyl)ether	U	J	1.78	5.00	"						
4-Methylphenol	U	J	0.800	5.00	"						
N-Nitrosodi-n-propylamine	U	J	1.67	5.00	"						
Hexachloroethane	U	J	2.68	5.00	"						
Nitrobenzene	U	J	1.40	5.00	"						
Isophorone	U	J	1.41	5.00	"						
2-Nitrophenol	U		1.52	5.00	"						
2,4-Dimethylphenol	U		1.41	5.00	"						
Bis(2-chloroethoxy)methane	U	J	1.05	5.00	"						
2,4-Dichlorophenol	U	J	1.16	5.00	"						
1,2,4-Trichlorobenzene	U	J	1.79	5.00	"						
Naphthalene	U		1.10	5.00	"						

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project:US Steel Coking Facility Project Number:[none] Project Manager:Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch E132001 - BP SVOA

Blank (E132001-BLK2) **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
4-Chloroaniline	U	J	1.61	5.00	ug/L						
Hexachlorobutadiene	U	J	2.50	5.00	"						
2-Methylnaphthalene	U		1.13	5.00	"						
4-Chloro-3-methylphenol	U	J	1.09	5.00	"						
Hexachlorocyclopentadiene	U	J	2.80	5.00	"						
2,4,6-Trichlorophenol	U	J	1.14	5.00	"						
2,4,5-Trichlorophenol	U	J	1.62	5.00	"						
2-Chloronaphthalene	U		1.43	5.00	"						
2-Nitroaniline	U	J	2.31	5.00	"						
Acenaphthylene	U		0.680	5.00	"						
Dimethyl phthalate	U	J	1.23	5.00	"						
2,6-Dinitrotoluene	U	J	1.57	5.00	"						
Acenaphthene	U		0.600	5.00	"						
3-Nitroaniline	U	J	2.01	5.00	"						
Dibenzofuran	U		1.58	5.00	"						
2,4-Dinitrophenol	U	J	1.79	5.00	"						
2,4-Dinitrotoluene	U	J	1.99	5.00	"						
Fluorene	U		1.08	5.00	"						
4-Nitrophenol	U	J	1.55	5.00	"						
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"						
Diethyl phthalate	U	J	1.71	5.00	"						
4,6-Dinitro-2-methylphenol	U		1.49	5.00	"						
N-Nitrosodiphenylamine	U	J	1.38	5.00	"						
4-Nitroaniline	U	J	1.73	5.00	"						
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"						
Hexachlorobenzene	U	J	1.39	5.00	"						
Pentachlorophenol	U	J	1.62	5.00	"						
Phenanthrene	U		0.560	5.00	"						
Anthracene	U		0.800	5.00	"						
Carbazole	U		1.58	5.00	"						
Di-n-butyl phthalate	U	J	1.88	5.00	"						
Fluoranthene	U		3.63	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

Blank (EJ32001-BLK2) — **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyrene	U		3.04	5.00	ug/L						
Butyl benzyl phthalate	U	J	2.25	5.00	"						
3,3' Dichlorobenzidine	U		1.11	5.00	"						
Chrysene	U		0.650	5.00	"						
Benzo (a) anthracene	U		0.920	5.00	"						
Bis (2-ethylhexyl)phthalate	U		2.29	5.00	"						
Di-n-octyl phthalate	U		2.66	5.00	"						
Benzo (b) fluoranthene	U		1.09	5.00	"						
Benzo (k) fluoranthene	U		1.09	5.00	"						
Benzo (a) pyrene	U		0.730	5.00	"						
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"						
Dibenz (a,h) anthracene	U		0.630	5.00	"						
Benzo (g,h,i) perylene	U		0.930	5.00	"						
Surrogate: 2-Fluorophenol	*33.5*				"	*50.0*		*67.0*	*25-90*		
Surrogate: Phenol-d5	*32.7*				"	*50.0*		*65.4*	*38-103*		
Surrogate: Nitrobenzene-d5	*36.5*				"	*50.0*		*73.0*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*35.0*				"	*50.0*		*70.0*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*41.7*				"	*50.0*		*83.4*	*47-146*		
Surrogate: Terphenyl-d14	*41.0*				"	*50.0*		*82.0*	*50-144*		

LCS (EJ32001-BS1) — **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	35.7		0.740	5.00	ug/L	50.0		71.4	64-78		
Bis (2-chloroethyl)ether	34.5		0.680	5.00	"	50.0		69.0	63-74		
2-Chlorophenol	34.5		0.790	5.00	"	50.0		69.0	59-74		
1,3 Dichlorobenzene	28.8		2.11	5.00	"	50.0		57.6	54-71		
1,4 Dichlorobenzene	29.4		2.21	5.00	"	50.0		58.8	56-72		
Benzyl alcohol	41.7		1.00	5.00	"	50.0		83.4	77-90		
1,2 Dichlorobenzene	29.9		1.94	5.00	"	50.0		59.8	57-74		
2-Methylphenol	35.5		0.640	5.00	"	50.0		71.0	67-80		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

LCS (EJ32001-BS1) Prepared: Oct-20-03 Analyzed: Oct-23-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bis(2-chloroisopropyl)ether	35.0		1.78	5.00	ug/L	50.0		70.0	73-86		
4-Methylphenol	36.5		0.800	5.00	"	50.0		73.0	76-89		
N-Nitrosodi-n-propylamine	35.6		1.67	5.00	"	50.0		71.2	75-87		
Hexachloroethane	25.5		2.68	5.00	"	50.0		51.0	54-71		
Nitrobenzene	34.6		1.40	5.00	"	50.0		69.2	74-83		
Isophorone	36.0		1.41	5.00	"	50.0		72.0	77-90		
2-Nitrophenol	37.3		1.52	5.00	"	50.0		74.6	72-85		
2,4-Dimethylphenol	30.2		1.41	5.00	"	50.0		60.4	56-68		
Bis(2-chloroethoxy)methane	35.4		1.05	5.00	"	50.0		70.8	77-84		
2,4-Dichlorophenol	36.4		1.16	5.00	"	50.0		72.8	80-90		
1,2,4-Trichlorobenzene	30.8		1.79	5.00	"	50.0		61.6	69-81		
Naphthalene	32.6		1.10	5.00	"	50.0		65.2	46.6-93.7		
4-Chloroaniline	36.4		1.61	5.00	"	50.0		72.8	91-114		
Hexachlorobutadiene	26.4		2.50	5.00	"	50.0		52.8	63-75		
2-Methylnaphthalene	33.7		1.13	5.00	"	50.0		67.4	55.2-95.6		
4-Chloro-3-methylphenol	37.8		1.09	5.00	"	50.0		75.6	90-105		
Hexachlorocyclopentadiene	6.23		2.80	5.00	"	50.0		12.5	62-79		
2,4,6-Trichlorophenol	38.0		1.14	5.00	"	50.0		76.0	80-93		
2,4,5-Trichlorophenol	37.6		1.62	5.00	"	50.0		75.2	87-105		
2-Chloronaphthalene	34.3		1.43	5.00	"	50.0		68.6	58-93		
2-Nitroaniline	40.2		2.31	5.00	"	50.0		80.4	94-109		
Acenaphthylene	35.3		0.680	5.00	"	50.0		70.6	51.2-96.9		
Dimethylphthalate	4.04		1.23	5.00	"	50.0		8.08	74.1-104.5		
2,6-Dinitrotoluene	40.9		1.57	5.00	"	50.0		81.8	95-107		
Acenaphthene	35.5		0.600	5.00	"	50.0		71.0	62.4-96.2		
3-Nitroaniline	39.5		2.01	5.00	"	50.0		79.0	114-127		
Dibenzofuran	35.5		1.58	5.00	"	50.0		71.0	63.3-99.5		
2,4-Dinitrophenol	48.9	J	1.79	5.00	"	50.0		97.8	63-87		
2,4-Dinitrotoluene	41.5		1.99	5.00	"	50.0		83.0	98-113		
Fluorene	37.0		1.08	5.00	"	50.0		74.0	65.4-100.5		
4-Nitrophenol	44.0		1.55	5.00	"	50.0		88.0	99-107		
4-Chlorophenyl phenyl ether	37.3		1.37	5.00	"	50.0		74.6	90-98		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project:US Steel Coking Facility Project Number:[none] Project Manager:Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

LCS (EJ32001-BS1) Prepared: Oct-20-03 Analyzed: Oct-23-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Diethyl phthalate	17.7		1.71	5.00	ug/L	50.0		35.4	74.5-105.1		
4,6-Dinitro-2-methylphenol	47.0		1.49	5.00	"	50.0		94.0	88-101		
N-Nitrosodiphenylamine	37.7		1.38	5.00	"	50.0		75.4	96-108		
4-Nitroaniline	44.4		1.73	5.00	"	50.0		88.8	146-169		
4-Bromophenyl phenyl ether	38.6		0.880	5.00	"	50.0		77.2	93-106		
Hexachlorobenzene	39.6		1.39	5.00	"	50.0		79.2	88-105		
Pentachlorophenol	42.8		1.62	5.00	"	50.0		85.6	93-106		
Phenanthrene	38.4		0.560	5.00	"	50.0		76.8	73.2-98.4		
Anthracene	38.0		0.800	5.00	"	50.0		76.0	73.3-97.3		
Di-n-butyl phthalate	30.5		1.88	5.00	"	50.0		61.0	68.5-111.6		
Fluoranthene	38.4		3.63	5.00	"	50.0		76.8	76.6-100.3		
Pyrene	41.3		3.04	5.00	"	50.0		82.6	75.7-109		
Butyl benzyl phthalate	24.7		2.25	5.00	"	50.0		49.4	79.2-111.7		
3,3'-Dichlorobenzidine	48.4		1.11	5.00	"	50.0		96.8	82-122		
Chrysene	41.2		0.650	5.00	"	50.0		82.4	80.4-105		
Benzo (a) anthracene	41.3		0.920	5.00	"	50.0		82.6	81.6-105.2		
Bis(2-ethylhexyl)phthalate	41.3		2.29	5.00	"	50.0		82.6	78.9-109.3		
Di-n-octyl phthalate	35.5		2.66	5.00	"	50.0		71.0	65.3-117.9		
Benzo (b) fluoranthene	40.5		1.09	5.00	"	50.0		81.0	77.5-108.1		
Benzo (k) fluoranthene	38.2		1.09	5.00	"	50.0		76.4	74-108.1		
Benzo (a) pyrene	40.8		0.730	5.00	"	50.0		81.6	77.9-105.4		
Indeno (1,2,3-cd) pyrene	47.8		0.300	5.00	"	50.0		95.6	69-125.3		
Dibenz (a,h) anthracene	48.6		0.630	5.00	"	50.0		97.2	66.9-119.5		
Benzo (g,h,i) perylene	47.2		0.930	5.00	"	50.0		94.4	58.6-107		
Surrogate: 2-Fluorophenol	*31.3*				"	*50.0*		*62.6*	*25-90*		
Surrogate: Phenol-d6	*33.5*				"	*50.0*		*67.0*	*38-103*		
Surrogate: Nitrobenzene-d5	*33.6*				"	*50.0*		*67.2*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*32.3*				"	*50.0*		*64.6*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*39.0*				"	*50.0*		*78.0*	*47-146*		
Surrogate: Terphenyl-d14	*40.4*				"	*50.0*		*80.8*	*50-144*		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

LCS Dup (EJ32001-BSD1) Prepared: Oct-20-03 Analyzed: Oct-23-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	36.2		0.740	5.00	ug/L	50.0		72.4	64-78	1.39	14
Bis(2-chloroethyl)ether	34.7		0.680	5.00	"	50.0		69.4	63-74	0.578	15
2-Chlorophenol	35.5		0.790	5.00	"	50.0		71.0	59-74	2.86	16
1,3-Dichlorobenzene	31.6		2.11	5.00	"	50.0		63.2	54-71	9.27	22
1,4-Dichlorobenzene	31.4		2.21	5.00	"	50.0		62.8	56-72	6.58	22
Benzyl alcohol	45.0		1.00	5.00	"	50.0		90.0	77-90	7.61	16
1,2-Dichlorobenzene	31.2		1.94	5.00	"	50.0		62.4	57-74	4.26	20
2-Methylphenol	35.7		0.640	5.00	"	50.0		71.4	67-80	0.562	15
Bis(2-chloroisopropyl)ether	35.4		1.78	5.00	"	50.0		70.8	73-86	1.14	10
4-Methylphenol	37.0		0.800	5.00	"	50.0		74.0	76-89	1.36	15
N-Nitrosodi-n-propylamine	36.1		1.67	5.00	"	50.0		72.2	75-87	1.39	14
Hexachloroethane	29.6		2.68	5.00	"	50.0		59.2	54-71	14.9	29
Nitrobenzene	35.9		1.40	5.00	"	50.0		71.8	74-83	3.69	13
Isophorone	37.0		1.41	5.00	"	50.0		74.0	77-90	2.74	13
2-Nitrophenol	38.4		1.52	5.00	"	50.0		76.8	72-85	2.91	11
2,4-Dimethylphenol	31.6		1.41	5.00	"	50.0		63.2	56-68	4.53	11
Bis(2-chloroethoxy)methane	35.6		1.05	5.00	"	50.0		71.2	77-84	0.563	11
2,4-Dichlorophenol	37.1		1.16	5.00	"	50.0		74.2	80-90	1.90	11
1,2,4-Trichlorobenzene	33.6		1.79	5.00	"	50.0		67.2	69-81	8.70	12
Naphthalene	33.7		1.10	5.00	"	50.0		67.4	46.6-93.7	3.32	20.5
4-Chloroaniline	37.8		1.61	5.00	"	50.0		75.6	91-114	3.77	14
Hexachlorobutadiene	31.6		2.50	5.00	"	50.0		63.2	63-75	17.9	13
2-Methylnaphthalene	35.1		1.13	5.00	"	50.0		70.2	55.2-95.6	4.07	21.8
4-Chloro-3-methylphenol	38.1		1.09	5.00	"	50.0		76.2	90-105	0.791	10
Hexachlorocyclopentadiene	8.97		2.80	5.00	"	50.0		17.9	62-79	35.5	39
2,4,6-Trichlorophenol	39.2		1.14	5.00	"	50.0		78.4	80-93	3.11	12
2,4,5-Trichlorophenol	39.2		1.62	5.00	"	50.0		78.4	87-105	4.17	12
2-Chloronaphthalene	36.2		1.43	5.00	"	50.0		72.4	58-93	5.39	10
2-Nitroaniline	41.4		2.31	5.00	"	50.0		82.8	94-109	2.94	12
Acenaphthylene	36.4		0.680	5.00	"	50.0		72.8	51.2-96.9	3.07	19.4
Dimethylphthalate	3.01		1.23	5.00	"	50.0		6.02	74.1-104.5	29.2	10.1
2,6-Dinitrotoluene	41.9		1.57	5.00	"	50.0		83.8	95-107	2.42	1

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

LCS Dup (EJ32001-BSD1) — Prepared: Oct-20-03 Analyzed: Oct-23-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	36.7		0.600	5.00	ug/L	50.0		73.4	62.4-96.2	3.32	18.1
3-Nitroaniline	39.3		2.01	5.00	"	50.0		78.6	114-127	0.508	15
Dibenzofuran	36.7		1.58	5.00	"	50.0		73.4	63.3-99.5	3.32	16.6
2,4-Dinitrophenol	50.7	J	1.79	5.00	"	50.0		101	63-87	3.22	57
2,4-Dinitrotoluene	41.8		1.99	5.00	"	50.0		83.6	98-113	0.720	12
Fluorene	37.4		1.08	5.00	"	50.0		74.8	65.4-100.5	1.08	19
4-Nitrophenol	43.4		1.55	5.00	"	50.0		86.8	99-107	1.37	34
4-Chlorophenyl phenyl ether	38.1		1.37	5.00	"	50.0		76.2	90-98	2.12	11
Diethyl phthalate	15.1		1.71	5.00	"	50.0		30.2	74.5-105.1	15.9	9.8
4,6-Dinitro-2-methylphenol	47.4		1.49	5.00	"	50.0		94.8	88-101	0.847	21
N-Nitrosodiphenylamine	38.1		1.38	5.00	"	50.0		76.2	96-108	1.06	12
Nitroaniline	44.5		1.73	5.00	"	50.0		89.0	146-169	0.225	23
4-Bromophenyl phenyl ether	39.4		0.880	5.00	"	50.0		78.8	93-106	2.05	12
Hexachlorobenzene	40.3		1.39	5.00	"	50.0		80.6	88-105	1.75	9
Pentachlorophenol	42.4		1.62	5.00	"	50.0		84.8	93-106	0.939	33
Phenanthrene	37.4		0.560	5.00	"	50.0		74.8	73.2-98.4	2.64	12.5
Anthracene	37.4		0.800	5.00	"	50.0		74.8	73.3-97.3	1.59	11.3
Di-n-butyl phthalate	24.8		1.88	5.00	"	50.0		49.6	68.5-111.6	20.6	14.4
Fluoranthene	37.3		3.63	5.00	"	50.0		74.6	76.6-100.3	2.91	10.2
Pyrene	40.9		3.04	5.00	"	50.0		81.8	75.7-109	0.973	14.1
Butylbenzyl phthalate	11.8		2.25	5.00	"	50.0		23.6	79.2-111.7	70.7	13.5
3,3'-Dichlorobenzidine	49.0		1.11	5.00	"	50.0		98.0	82-122	1.23	13
Chrysene	40.7		0.650	5.00	"	50.0		81.4	80.4-105	1.22	12.5
Benzo (a) anthracene	41.0		0.920	5.00	"	50.0		82.0	81.6-105.2	0.729	12.1
Bis(2-ethylhexyl)phthalate	45.8		2.29	5.00	"	50.0		91.6	78.9-109.3	10.3	11.3
Di-n-octyl phthalate	31.6		2.66	5.00	"	50.0		63.2	65.3-117.9	11.6	16.3
Benzo (b) fluoranthene	39.0		1.09	5.00	"	50.0		78.0	77.5-108.1	3.77	11.8
Benzo (k) fluoranthene	37.3		1.09	5.00	"	50.0		74.6	74-108.1	2.38	13.8
Benzo (a) pyrene	39.5		0.730	5.00	"	50.0		79.0	77.9-105.4	3.24	10.2
Indeno (1,2,3-cd) pyrene	49.5		0.300	5.00	"	50.0		99.0	69-125.3	3.49	40.8
Dibenz (a,h) anthracene	50.3		0.630	5.00	"	50.0		101	66.9-119.5	3.83	42.8
Benzo (g,h,i) perylene	49.1		0.930	5.00	"	50.0		98.2	58.6-107	3.95	15.1

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ32001 - BP SVOA

LCS Dup (EJ32001-BSD1) — **Prepared: Oct-20-03 Analyzed: Oct-23-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2-Fluorophenol	*32.3*				*ug/L*	*50.0*		*64.6*	*25-90*		
Surrogate: Phenol-d5	*34.2*				*"*	*50.0*		*68.4*	*38-103*		
Surrogate: Nitrobenzene-d5	*35.1*				*"*	*50.0*		*70.2*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*33.7*				*"*	*50.0*		*67.4*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*40.0*				*"*	*50.0*		*80.0*	*47-146*		
Surrogate: Terphenyl-d14	*40.2*				*"*	*50.0*		*80.4*	*50-144*		

Batch EJ33001 - BP SVOA

Blank (EJ33001-BLK1) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	U		0.740	5.00	ug/L						
Bis(2-chloroethyl)ether	U		0.680	5.00	"						
2-Chlorophenol	U		0.790	5.00	"						
1,3-Dichlorobenzene	U		2.11	5.00	"						
1,4-Dichlorobenzene	U		2.21	5.00	"						
Benzyl alcohol	U		1.00	5.00	"						
1,2-Dichlorobenzene	U		1.94	5.00	"						
2-Methylphenol	U		0.640	5.00	"						
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"						
4-Methylphenol	U		0.800	5.00	"						
N-Nitrosodi-n-propylamine	U		1.67	5.00	"						
Hexachloroethane	U		2.68	5.00	"						
Nitrobenzene	U		1.40	5.00	"						
Isophorone	U		1.41	5.00	"						
2-Nitrophenol	U		1.52	5.00	"						
2,4-Dimethylphenol	U		1.41	5.00	"						
Bis(2-chloroethoxy)methane	U		1.05	5.00	"						
2,4-Dichlorophenol	U		1.16	5.00	"						
1,2,4-Trichlorobenzene	U		1.79	5.00	"						
Naphthalene	U		1.10	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch E.I33001 - BP SVOA

Blank (E.I33001-BLK1) Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
4-Chloroaniline	U	J	1.61	5.00	ug/L						
Hexachlorobutadiene	U		2.50	5.00	"						
2-Methylnaphthalene	U		1.13	5.00	"						
4-Chloro-3-methylphenol	U	J	1.09	5.00	"						
Hexachlorocyclopentadiene	U	J	2.80	5.00	"						
2,4,6-Trichlorophenol	U		1.14	5.00	"						
2,4,5-Trichlorophenol	U	J	1.62	5.00	"						
2-Chloronaphthalene	U		1.43	5.00	"						
2-Nitroaniline	U	J	2.31	5.00	"						
Acenaphthylene	U		0.680	5.00	"						
Dimethylphthalate	Rejected		1.23	5.00	"						
2,6-Dinitrotoluene	U	J	1.57	5.00	"						
Acenaphthene	U		0.600	5.00	"						
3-Nitroaniline	U	J	2.01	5.00	"						
Dibenzofuran	U		1.58	5.00	"						
2,4-Dinitrophenol	U	J	1.79	5.00	"						
2,4-Dinitrotoluene	U	J	1.99	5.00	"						
Fluorene	U		1.08	5.00	"						
4-Nitrophenol	U	J	1.55	5.00	"						
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"						
Diethylphthalate	Rejected		1.71	5.00	"						
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"						
N-Nitrosodiphenylamine	U	J	1.38	5.00	"						
4-Nitroaniline	U	J	1.73	5.00	"						
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"						
Hexachlorobenzene	U		1.39	5.00	"						
Pentachlorophenol	U		1.62	5.00	"						
Phenanthrene	U		0.560	5.00	"						
Anthracene	U		0.800	5.00	"						
Carbazole	U		1.58	5.00	"						
Di-n-butylphthalate	U	J	1.88	5.00	"						
Fluoranthene	U		3.63	5.00	"						

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch E133001 - BP SVOA

Blank (E133001-BLK1) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyrene	U		3.04	5.00	ug/L						
Butyl benzyl phthalate	U	J	2.25	5.00	"						
3,3'-Dichlorobenzidine	U		1.11	5.00	"						
Chrysene	U		0.650	5.00	"						
Benzo (a) anthracene	U		0.920	5.00	"						
Bis(2-ethylhexyl)phthalate	U		2.29	5.00	"						
Di-n-octyl phthalate	U		2.66	5.00	"						
Benzo (b) fluoranthene	U		1.09	5.00	"						
Benzo (k) fluoranthene	U		1.09	5.00	"						
Benzo (a) pyrene	U		0.730	5.00	"						
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"						
Dibenz (a,h) anthracene	U		0.630	5.00	"						
Benzo (g,h,i) perylene	U		0.930	5.00	"						
Surrogate: 2-Fluorophenol	*40.0*				"	*50.0*		*80.0*	*25-90*		
Surrogate: Phenol-d6	*42.2*				"	*50.0*		*84.4*	*38-103*		
Surrogate: Nitrobenzene-d5	*41.0*				"	*50.0*		*82.0*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*39.4*				"	*50.0*		*78.8*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*43.2*				"	*50.0*		*86.4*	*47-146*		
Surrogate: Terphenyl-d14	*48.4*				"	*50.0*		*96.8*	*50-144*		

Blank (E133001-BLK2) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	U		0.740	5.00	ug/L						
Bis(2-chloroethyl)ether	U		0.680	5.00	"						
2-Chlorophenol	U		0.790	5.00	"						
1,3-Dichlorobenzene	U		2.11	5.00	"						
1,4-Dichlorobenzene	U		2.21	5.00	"						
Benzyl alcohol	U		1.00	5.00	"						
1,2-Dichlorobenzene	U		1.94	5.00	"						
2-Methylphenol	U		0.640	5.00	"						

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Semivolatiles by GC/MS - Quality Control

Batch E303001 - BP SVOA

Blank (E303001-BLK2) Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bis(2-chloroisopropyl)ether	U		1.78	5.00	ug/L						
4-Methylphenol	U		0.800	5.00	"						
N-Nitrosodi-n-propylamine	U		1.67	5.00	"						
Hexachloroethane	U		2.68	5.00	"						
Nitrobenzene	U		1.40	5.00	"						
Isophorone	U		1.41	5.00	"						
2-Nitrophenol	U		1.52	5.00	"						
2,4-Dimethylphenol	U		1.41	5.00	"						
Bis(2-chloroethoxy)methane	U		1.05	5.00	"						
2,4-Dichlorophenol	U		1.16	5.00	"						
1,2,4-Trichlorobenzene	U		1.79	5.00	"						
Naphthalene	U		1.10	5.00	"						
4-Chloroaniline	U	J	1.61	5.00	"						
Hexachlorobutadiene	U		2.50	5.00	"						
2-Methylnaphthalene	U		1.13	5.00	"						
4-Chloro-3-methylphenol	U	J	1.09	5.00	"						
Hexachlorocyclopentadiene	U	J	2.80	5.00	"						
2,4,6-Trichlorophenol	U		1.14	5.00	"						
2,4,5-Trichlorophenol	U	J	1.62	5.00	"						
2-Chloronaphthalene	U		1.43	5.00	"						
2-Nitroaniline	U	J	2.31	5.00	"						
Acenaphthylene	U		0.680	5.00	"						
Dimethylphthalate	Rejected		1.23	5.00	"						
2,6-Dinitrotoluene	U	J	1.57	5.00	"						
Acenaphthene	U		0.600	5.00	"						
3-Nitroaniline	U	J	2.01	5.00	"						
Dibenzofuran	U		1.58	5.00	"						
2,4-Dinitrophenol	U	J	1.79	5.00	"						
2,4-Dinitrotoluene	U	J	1.99	5.00	"						
Fluorene	U		1.08	5.00	"						
4-Nitrophenol	U	J	1.55	5.00	"						
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Blank (EJ33001-BLK2) **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Diethyl phthalate	Rejected		1.71	5.00	ug/L						
4,6 Dinitro-2-methylphenol	U	J	1.49	5.00	"						
N-Nitrosodiphenylamine	U	J	1.38	5.00	"						
4-Nitroaniline	U	J	1.73	5.00	"						
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"						
Hexachlorobenzene	U		1.39	5.00	"						
Pentachlorophenol	U		1.62	5.00	"						
Phenanthrene	U		0.560	5.00	"						
Anthracene	U		0.800	5.00	"						
Carbazole	U		1.58	5.00	"						
Di-n-butyl phthalate	U	J	1.88	5.00	"						
Fluoranthene	U		3.63	5.00	"						
Pyrene	U		3.04	5.00	"						
Butyl benzyl phthalate	U	J	2.25	5.00	"						
3,3' Dichlorobenzidine	U		1.11	5.00	"						
Chrysene	U		0.650	5.00	"						
Benzo (a) anthracene	U		0.920	5.00	"						
Bis(2-ethylhexyl)phthalate	10.3		2.29	5.00	"						
Di-n-octyl phthalate	U		2.66	5.00	"						
Benzo (b) fluoranthene	U		1.09	5.00	"						
Benzo (k) fluoranthene	U		1.09	5.00	"						
Benzo (a) pyrene	U		0.730	5.00	"						
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"						
Dibenz (a,h) anthracene	U		0.630	5.00	"						
Benzo (g,h,i) perylene	U		0.930	5.00	"						
Surrogate: 2-Fluorophenol	*40.4*				"	*50.0*		*80.8*	*25-90*		
Surrogate: Phenol-d5	*39.9*				"	*50.0*		*79.8*	*38-103*		
Surrogate: Nitrobenzene-d5	*42.3*				"	*50.0*		*84.6*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*41.7*				"	*50.0*		*83.4*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*47.7*				"	*50.0*		*95.4*	*47-146*		
Surrogate: Terphenyl-d14	*47.8*				"	*50.0*		*95.6*	*50-144*		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch E133001 - BP SVOA

Blank (E133001-BLK3) **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	U		0.740	5.00	ug/L						
Bis(2-chloroethyl)ether	U		0.680	5.00	"						
2-Chlorophenol	U		0.790	5.00	"						
1,3-Dichlorobenzene	U		2.11	5.00	"						
1,4-Dichlorobenzene	U		2.21	5.00	"						
Benzyl alcohol	U		1.00	5.00	"						
1,2-Dichlorobenzene	U		1.94	5.00	"						
2-Methylphenol	U		0.640	5.00	"						
Bis(2-chloroisopropyl)ether	U		1.78	5.00	"						
4-Methylphenol	U		0.800	5.00	"						
N-Nitrosodi-n-propylamine	U		1.67	5.00	"						
Hexachloroethane	U		2.68	5.00	"						
Nitrobenzene	U		1.40	5.00	"						
Isophorone	U		1.41	5.00	"						
2-Nitrophenol	U		1.52	5.00	"						
2,4-Dimethylphenol	U		1.41	5.00	"						
Bis(2-chloroethoxy)methane	U		1.05	5.00	"						
2,4-Dichlorophenol	U		1.16	5.00	"						
1,2,4-Trichlorobenzene	U		1.79	5.00	"						
Naphthalene	U		1.10	5.00	"						
4-Chloroaniline	U	J	1.61	5.00	"						
Hexachlorobutadiene	U		2.50	5.00	"						
2-Methylnaphthalene	U		1.13	5.00	"						
4-Chloro-3-methylphenol	U	J	1.09	5.00	"						
Hexachlorocyclopentadiene	U	J	2.80	5.00	"						
2,4,6-Trichlorophenol	U		1.14	5.00	"						
2,4,5-Trichlorophenol	U	J	1.62	5.00	"						
2-Chloronaphthalene	U		1.43	5.00	"						
2-Nitroaniline	U	J	2.31	5.00	"						
Acenaphthylene	U		0.680	5.00	"						
Dimethylphthalate	Rejected		1.23	5.00	"						
2,6-Dinitrotoluene	U	J	1.57	5.00	"						

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Blank (EJ33001-BLK3) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	U		0.600	5.00	ug/L						
3-Nitroaniline	U	J	2.01	5.00	"						
Dibenzofuran	U		1.58	5.00	"						
2,4-Dinitrophenol	U	J	1.79	5.00	"						
2,4-Dinitrotoluene	U	J	1.99	5.00	"						
Fluorene	U		1.08	5.00	"						
4-Nitrophenol	U	J	1.55	5.00	"						
4-Chlorophenyl phenyl ether	U	J	1.37	5.00	"						
Diethyl phthalate	Rejected		1.71	5.00	"						
4,6-Dinitro-2-methylphenol	U	J	1.49	5.00	"						
N-Nitrosodiphenylamine	U	J	1.38	5.00	"						
Nitroaniline	U	J	1.73	5.00	"						
4-Bromophenyl phenyl ether	U	J	0.880	5.00	"						
Hexachlorobenzene	U		1.39	5.00	"						
Pentachlorophenol	U		1.62	5.00	"						
Phenanthrene	U		0.560	5.00	"						
Anthracene	U		0.800	5.00	"						
Carbazole	U		1.58	5.00	"						
Di-n-butyl phthalate	U	J	1.88	5.00	"						
Fluoranthene	U		3.63	5.00	"						
Pyrene	U		3.04	5.00	"						
Butyl benzyl phthalate	U	J	2.25	5.00	"						
3,3'-Dichlorobenzidine	U		1.11	5.00	"						
Chrysene	U		0.650	5.00	"						
Benzo (a) anthracene	U		0.920	5.00	"						
Bis(2-ethylhexyl)phthalate	2.55		2.29	5.00	"						
Di-n-octyl phthalate	U		2.66	5.00	"						
Benzo (b) fluoranthene	U		1.09	5.00	"						
Benzo (k) fluoranthene	U		1.09	5.00	"						
Benzo (a) pyrene	U		0.730	5.00	"						
Indeno (1,2,3-cd) pyrene	U		0.300	5.00	"						
Dibenz (a,h) anthracene	U		0.630	5.00	"						

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Semivolatiles by GC/MS - Quality Control

Batch E133001 - BP SVOA

Blank (E133001-BLK3) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Benzo (g,h,i) perylene	U		0.930	5.00	ug/L						
Surrogate: 2-Fluorophenol	*35.9*				"	*50.0*		*71.8*	*25-90*		
Surrogate: Phenol-d6	*39.6*				"	*50.0*		*79.2*	*38-103*		
Surrogate: Nitrobenzene-d5	*41.2*				"	*50.0*		*82.4*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*41.8*				"	*50.0*		*83.6*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*45.9*				"	*50.0*		*91.8*	*47-146*		
Surrogate: Terphenyl-d14	*48.7*				"	*50.0*		*97.4*	*50-144*		

LCS (E133001-BS1) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	35.8		0.740	5.00	ug/L	50.0		71.6	64-78		
Bis(2-chloroethyl)ether	34.3		0.680	5.00	"	50.0		68.6	63-74		
2-Chlorophenol	35.6		0.790	5.00	"	50.0		71.2	59-74		
1,3-Dichlorobenzene	33.2		2.11	5.00	"	50.0		66.4	54-71		
1,4-Dichlorobenzene	33.4		2.21	5.00	"	50.0		66.8	56-72		
Benzyl alcohol	44.6		1.00	5.00	"	50.0		89.2	77-90		
1,2-Dichlorobenzene	32.8		1.94	5.00	"	50.0		65.6	57-74		
2-Methylphenol	35.2		0.640	5.00	"	50.0		70.4	67-80		
Bis(2-chloroisopropyl)ether	34.6		1.78	5.00	"	50.0		69.2	73-86		
4-Methylphenol	35.3		0.800	5.00	"	50.0		70.6	76-89		
N-Nitrosodi-n-propylamine	36.2		1.67	5.00	"	50.0		72.4	75-87		
Hexachloroethane	31.0		2.68	5.00	"	50.0		62.0	54-71		
Nitrobenzene	35.3		1.40	5.00	"	50.0		70.6	74-83		
Isophorone	36.9		1.41	5.00	"	50.0		73.8	77-90		
2-Nitrophenol	38.7		1.52	5.00	"	50.0		77.4	72-85		
2,4-Dimethylphenol	32.9		1.41	5.00	"	50.0		65.8	56-68		
Bis(2-chloroethoxy)methane	36.6		1.05	5.00	"	50.0		73.2	77-84		
2,4-Dichlorophenol	37.0		1.16	5.00	"	50.0		74.0	80-90		
1,2,4-Trichlorobenzene	34.6		1.79	5.00	"	50.0		69.2	69-81		
Naphthalene	34.9		1.10	5.00	"	50.0		69.8	46.6-93.7		

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

LCS (EJ33001-BS1) — Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
4-Chloroaniline	37.8		1.61	5.00	ug/L	50.0		75.6	91-114		
Hexachlorobutadiene	31.9		2.50	5.00	"	50.0		63.8	63-75		
2-Methylnaphthalene	36.3		1.13	5.00	"	50.0		72.6	55.2-95.6		
4-Chloro-3-methylphenol	38.3		1.09	5.00	"	50.0		76.6	90-105		
Hexachlorocyclopentadiene	5.98		2.80	5.00	"	50.0		12.0	62-79		
2,4,6-Trichlorophenol	39.6		1.14	5.00	"	50.0		79.2	80-93		
2,4,5-Trichlorophenol	39.8		1.62	5.00	"	50.0		79.6	87-105		
2-Chloronaphthalene	37.9		1.43	5.00	"	50.0		75.8	58-93		
2-Nitroaniline	42.0		2.31	5.00	"	50.0		84.0	94-109		
Acenaphthylene	38.2		0.680	5.00	"	50.0		76.4	51.2-96.9		
Dimethyl phthalate	U		1.23	5.00	"	50.0			74.1-104.5		
2,6-Dinitrotoluene	43.1		1.57	5.00	"	50.0		86.2	95-107		
Acenaphthene	38.6		0.600	5.00	"	50.0		77.2	62.4-96.2		
3-Nitroaniline	41.6		2.01	5.00	"	50.0		83.2	114-127		
Dibenzofuran	38.5		1.58	5.00	"	50.0		77.0	63.3-99.5		
2,4-Dinitrophenol	71.4	J	1.79	5.00	"	50.0		143	63-87		
2,4-Dinitrotoluene	44.0		1.99	5.00	"	50.0		88.0	98-113		
Fluorene	39.7		1.08	5.00	"	50.0		79.4	65.4-100.5		
4-Nitrophenol	45.8		1.55	5.00	"	50.0		91.6	99-107		
4-Chlorophenyl phenyl ether	40.7		1.37	5.00	"	50.0		81.4	90-98		
Diethyl phthalate	4.37		1.71	5.00	"	50.0		8.74	74.5-105.1		
4,6-Dinitro-2-methylphenol	59.5	J	1.49	5.00	"	50.0		119	88-101		
N-Nitrosodiphenylamine	38.9		1.38	5.00	"	50.0		77.8	96-108		
4-Nitroaniline	44.4		1.73	5.00	"	50.0		88.8	146-169		
4-Bromophenyl phenyl ether	42.1		0.880	5.00	"	50.0		84.2	93-106		
Hexachlorobenzene	43.7		1.39	5.00	"	50.0		87.4	88-105		
Pentachlorophenol	48.6		1.62	5.00	"	50.0		97.2	93-106		
Phenanthrene	40.8		0.560	5.00	"	50.0		81.6	73.2-98.4		
Anthracene	40.4		0.800	5.00	"	50.0		80.8	73.3-97.3		
Di-n-butyl phthalate	12.7		1.88	5.00	"	50.0		25.4	68.5-111.6		
Fluoranthene	41.3		3.63	5.00	"	50.0		82.6	76.6-100.3		
Pyrene	41.4		3.04	5.00	"	50.0		82.8	75.7-109		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

LCS (EJ33001-BS1) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Butyl benzyl phthalate	5.96		2.25	5.00	ug/L	50.0		11.9	79.2-111.7		
3,3'-Dichlorobenzidine	52.7		1.11	5.00	"	50.0		105	82-122		
Chrysene	43.5		0.650	5.00	"	50.0		87.0	80.4-105		
Benzo (a) anthracene	44.2		0.920	5.00	"	50.0		88.4	81.6-105.2		
Bis(2-ethylhexyl)phthalate	41.0		2.29	5.00	"	50.0		82.0	78.9-109.3		
Di-n-octyl phthalate	34.4		2.66	5.00	"	50.0		68.8	65.3-117.9		
Benzo (b) fluoranthene	43.5		1.09	5.00	"	50.0		87.0	77.5-108.1		
Benzo (k) fluoranthene	42.1		1.09	5.00	"	50.0		84.2	74-108.1		
Benzo (a) pyrene	41.3		0.730	5.00	"	50.0		82.6	77.9-105.4		
Indeno (1,2,3-cd) pyrene	45.7		0.300	5.00	"	50.0		91.4	69-125.3		
Dibenz (a,h) anthracene	47.2		0.630	5.00	"	50.0		94.4	66.9-119.5		
Benzo (g,h,i) perylene	44.1		0.930	5.00	"	50.0		88.2	58.6-107		
Surrogate: 2-Fluorophenol	*35.5*				"	*50.0*		*71.0*	*25-90*		
Surrogate: Phenol-d5	*35.4*				"	*50.0*		*70.8*	*38-103*		
Surrogate: Nitrobenzene-d5	*36.1*				"	*50.0*		*72.2*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*37.1*				"	*50.0*		*74.2*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*44.7*				"	*50.0*		*89.4*	*47-146*		
Surrogate: Terphenyl-d14	*43.6*				"	*50.0*		*87.2*	*50-144*		

LCS Dup (EJ33001-BSD1) — **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	38.4		0.740	5.00	ug/L	50.0		76.8	64-78	7.01	14
Bis(2-chloroethyl)ether	37.3		0.680	5.00	"	50.0		74.6	63-74	8.38	15
2-Chlorophenol	38.4		0.790	5.00	"	50.0		76.8	59-74	7.57	16
1,3-Dichlorobenzene	31.5		2.11	5.00	"	50.0		63.0	54-71	5.26	22
1,4-Dichlorobenzene	31.9		2.21	5.00	"	50.0		63.8	56-72	4.59	22
Benzyl alcohol	50.1		1.00	5.00	"	50.0		100	77-90	11.4	16
1,2-Dichlorobenzene	32.0		1.94	5.00	"	50.0		64.0	57-74	2.47	20
2-Methylphenol	38.9		0.640	5.00	"	50.0		77.8	67-80	9.99	15
Bis(2-chloroisopropyl)ether	38.2		1.78	5.00	"	50.0		76.4	73-86	9.89	10

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Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

LCS Dup (EJ33001-BSD1) Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
4-Methylphenol	38.1		0.800	5.00	ug/L	50.0		76.2	76-89	7.63	15
N-Nitrosodi-n-propylamine	39.8		1.67	5.00	"	50.0		79.6	75-87	9.47	14
Hexachloroethane	28.7		2.68	5.00	"	50.0		57.4	54-71	7.71	29
Nitrobenzene	38.8		1.40	5.00	"	50.0		77.6	74-83	9.45	13
Isophorone	40.5		1.41	5.00	"	50.0		81.0	77-90	9.30	13
2-Nitrophenol	42.4		1.52	5.00	"	50.0		84.8	72-85	9.12	11
2,4-Dimethylphenol	36.4		1.41	5.00	"	50.0		72.8	56-68	10.1	11
Bis(2-chloroethoxy)methane	39.6		1.05	5.00	"	50.0		79.2	77-84	7.87	11
2,4-Dichlorophenol	40.2		1.16	5.00	"	50.0		80.4	80-90	8.29	11
1,2,4-Trichlorobenzene	34.7		1.79	5.00	"	50.0		69.4	69-81	0.289	12
Naphthalene	36.8		1.10	5.00	"	50.0		73.6	46.6-93.7	5.30	20.5
Chloroaniline	41.6		1.61	5.00	"	50.0		83.2	91-114	9.57	14
Hexachlorobutadiene	32.1		2.50	5.00	"	50.0		64.2	63-75	0.625	13
2-Methylnaphthalene	37.9		1.13	5.00	"	50.0		75.8	55.2-95.6	4.31	21.8
4-Chloro-3-methylphenol	41.1		1.09	5.00	"	50.0		82.2	90-105	7.05	10
Hexachlorocyclopentadiene	7.56		2.80	5.00	"	50.0		15.1	62-79	22.9	39
2,4,6-Trichlorophenol	43.3		1.14	5.00	"	50.0		86.6	80-93	8.93	12
2,4,5-Trichlorophenol	43.1		1.62	5.00	"	50.0		86.2	87-105	7.96	12
2-Chloronaphthalene	40.0		1.43	5.00	"	50.0		80.0	58-93	5.39	10
2-Nitroaniline	44.9		2.31	5.00	"	50.0		89.8	94-109	6.67	12
Acenaphthylene	40.0		0.680	5.00	"	50.0		80.0	51.2-96.9	4.60	19.4
Dimethylphthalate	U		1.23	5.00	"	50.0			74.1-104.5		10.1
2,6-Dinitrotoluene	45.6		1.57	5.00	"	50.0		91.2	95-107	5.64	1
Acenaphthene	40.4		0.600	5.00	"	50.0		80.8	62.4-96.2	4.56	18.1
3-Nitroaniline	44.4		2.01	5.00	"	50.0		88.8	114-127	6.51	15
Dibenzofuran	40.3		1.58	5.00	"	50.0		80.6	63.3-99.5	4.57	16.6
2,4-Dinitrophenol	83.4	J	1.79	5.00	"	50.0		167	63-87	15.5	57
2,4-Dinitrotoluene	45.9		1.99	5.00	"	50.0		91.8	98-113	4.23	12
Fluorene	41.7		1.08	5.00	"	50.0		83.4	65.4-100.5	4.91	19
4-Nitrophenol	48.4		1.55	5.00	"	50.0		96.8	99-107	5.52	34
4-Chlorophenyl phenyl ether	42.7		1.37	5.00	"	50.0		85.4	90-98	4.80	11
Diethylphthalate	U		1.71	5.00	"	50.0			74.5-105.1		9.8

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project:US Steel Coking Facility Project Number:[none] Project Manager:Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

LCS Dup (EJ33001-BSD1) — Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	64.8	J	1.49	5.00	ug/L	50.0		130	88-101	8.84	21
N-Nitrosodiphenylamine	41.2		1.38	5.00	"	50.0		82.4	96-108	5.74	12
4-Nitroaniline	47.1		1.73	5.00	"	50.0		94.2	146-169	5.90	23
4-Bromophenyl phenyl ether	44.6		0.880	5.00	"	50.0		89.2	93-106	5.77	12
Hexachlorobenzene	45.5		1.39	5.00	"	50.0		91.0	88-105	4.04	9
Pentachlorophenol	50.2		1.62	5.00	"	50.0		100	93-106	2.84	33
Phenanthrene	42.2		0.560	5.00	"	50.0		84.4	73.2-98.4	3.37	12.5
Anthracene	41.9		0.800	5.00	"	50.0		83.8	73.3-97.3	3.65	11.3
Di-n-butyl phthalate	15.1		1.88	5.00	"	50.0		30.2	68.5-111.6	17.3	14.4
Fluoranthene	42.5		3.63	5.00	"	50.0		85.0	76.6-100.3	2.86	10.2
Pyrene	43.3		3.04	5.00	"	50.0		86.6	75.7-109	4.49	14.1
Butyl benzyl phthalate	6.56		2.25	5.00	"	50.0		13.1	79.2-111.7	9.60	13.5
3,3'-Dichlorobenzidine	55.6		1.11	5.00	"	50.0		111	82-122	5.96	13
Chrysene	45.2		0.650	5.00	"	50.0		90.4	80.4-105	3.83	12.5
Benzo (a) anthracene	45.9		0.920	5.00	"	50.0		91.8	81.6-105.2	3.77	12.1
Bis(2-ethylhexyl)phthalate	41.2		2.29	5.00	"	50.0		82.4	78.9-109.3	0.487	11.3
Di-n-octyl phthalate	34.2		2.66	5.00	"	50.0		68.4	65.3-117.9	0.583	16.3
Benzo (b) fluoranthene	46.2		1.09	5.00	"	50.0		92.4	77.5-108.1	6.02	11.8
Benzo (k) fluoranthene	41.4		1.09	5.00	"	50.0		82.8	74-108.1	1.68	13.8
Benzo (a) pyrene	43.6		0.730	5.00	"	50.0		87.2	77.9-105.4	5.42	10.2
Indeno (1,2,3-cd) pyrene	48.8		0.300	5.00	"	50.0		97.6	69-125.3	6.56	40.8
Dibenz (a,h) anthracene	50.9		0.630	5.00	"	50.0		102	66.9-119.5	7.74	42.8
Benzo (g,h,i) perylene	47.6		0.930	5.00	"	50.0		95.2	58.6-107	7.63	15.1
Surrogate: 2-Fluorophenol	*36.1*				"	*50.0*		*72.2*	*25-90*		
Surrogate: Phenol-d5	*37.2*				"	*50.0*		*74.4*	*38-103*		
Surrogate: Nitrobenzene-d5	*39.0*				"	*50.0*		*78.0*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*38.6*				"	*50.0*		*77.2*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*45.4*				"	*50.0*		*90.8*	*47-146*		
Surrogate: Terphenyl-d14	*44.7*				"	*50.0*		*89.4*	*50-144*		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ03001 - BP SVOA

Matrix Spike (EJ03001-MS1) **Source: E310005-07** **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	34.9		0.740	5.00	ug/L	50.0	U	69.8	50-98		
Bis(2-chloroethyl)ether	31.6		0.680	5.00	"	50.0	U	63.2	36-99		
2-Chlorophenol	34.0		0.790	5.00	"	50.0	U	68.0	47-89		
1,3-Dichlorobenzene	39.5		2.11	5.00	"	50.0	U	79.0	40-76		
1,4-Dichlorobenzene	37.3		2.21	5.00	"	50.0	U	74.6	40-78		
Benzyl alcohol	40.4		1.00	5.00	"	50.0	U	80.8	5-157		
1,2-Dichlorobenzene	34.2		1.94	5.00	"	50.0	U	68.4	42-82		
2-Methylphenol	42.5		0.640	5.00	"	50.0	U	85.0	55-95		
Bis(2-chloroisopropyl)ether	33.5		1.78	5.00	"	50.0	U	67.0	50-88		
4-Methylphenol	35.0		0.800	5.00	"	50.0	U	70.0	57-107		
N-Nitrosodi-n-propylamine	38.2		1.67	5.00	"	50.0	U	76.4	58-99		
Hexachloroethane	37.2		2.68	5.00	"	50.0	U	74.4	23-72		
Nitrobenzene	41.8		1.40	5.00	"	50.0	U	83.6	53-94		
Isophorone	49.0		1.41	5.00	"	50.0	U	98.0	61-100		
2-Nitrophenol	43.8		1.52	5.00	"	50.0	U	87.6	41-105		
2,4-Dimethylphenol	41.9		1.41	5.00	"	50.0	U	83.8	55-104		
Bis(2-chloroethoxy)methane	44.8		1.05	5.00	"	50.0	U	89.6	59-100		
2,4-Dichlorophenol	46.9		1.16	5.00	"	50.0	U	93.8	60-107		
1,2,4-Trichlorobenzene	39.3		1.79	5.00	"	50.0	U	78.6	50-90		
Naphthalene	50.8		1.10	5.00	"	50.0	U	102	50-78.4		
4-Chloroaniline	25.3	L	1.61	5.00	"	50.0	U	50.6	35-123		
Hexachlorobutadiene	39.0		2.50	5.00	"	50.0	U	78.0	47-87		
2-Methylnaphthalene	46.7		1.13	5.00	"	50.0	U	93.4	57.2-88.2		
4-Chloro-3-methylpheno	51.3	L	1.09	5.00	"	50.0	U	103	64-137		
Hexachlorocyclopentadiene	17.3	L	2.80	5.00	"	50.0	U	34.6	5-35		
2,4,6-Trichlorophenol	46.4		1.14	5.00	"	50.0	U	92.8	59-125		
2,4,5-Trichlorophenol	50.7	L	1.62	5.00	"	50.0	U	101	66-129		
2-Chloronaphthalene	44.2		1.43	5.00	"	50.0	U	88.4	62-105		
2-Nitroaniline	50.6	L	2.31	5.00	"	50.0	U	101	77-118		
Acenaphthylene	42.8		0.680	5.00	"	50.0	U	85.6	56.6-79.4		
Dimethylphthalate	49.5	L	1.23	5.00	"	50.0	U	99.0	72.4-103.7		
2,6-Dinitrotoluene	47.8	L	1.57	5.00	"	50.0	U	95.6	72-112		

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Matrix Spike (EJ33001-MS1) Source: E310005-07 Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	43.6		0.600	5.00	ug/L	50.0	U	87.2	64.6-91.7		
3-Nitroaniline	40.7	L	2.01	5.00	"	50.0	U	81.4	72-119		
Dibenzofuran	44.2		1.58	5.00	"	50.0	U	88.4	67.7-93.9		
2,4-Dinitrophenol	9.20	J	1.79	5.00	"	50.0	U	18.4	5-16		
2,4-Dinitrotoluene	49.1	L	1.99	5.00	"	50.0	U	98.2	76-111		
Fluorene	46.2		1.08	5.00	"	50.0	U	92.4	69.7-96.8		
4-Nitrophenol	53.7	L	1.55	5.00	"	50.0	U	107	5-200		
4-Chlorophenyl phenyl ether	47.0	L	1.37	5.00	"	50.0	U	94.0	71-109		
Diethyl phthalate	45.9	L	1.71	5.00	"	50.0	U	91.8	75.8-105.5		
4,6-Dinitro-2-methylphenol	11.5	J	1.49	5.00	"	50.0	U	23.0	16-91		
N-Nitrosodiphenylamine	44.6	L	1.38	5.00	"	50.0	U	89.2	77-120		
Nitroaniline	48.8	L	1.73	5.00	"	50.0	U	97.6	71-127		
4-Bromophenyl phenyl ether	45.6	L	0.880	5.00	"	50.0	U	91.2	70-119		
Hexachlorobenzene	45.6		1.39	5.00	"	50.0	U	91.2	78-110		
Pentachlorophenol	49.1		1.62	5.00	"	50.0	U	98.2	77-192		
Phenanthrene	44.6		0.560	5.00	"	50.0	U	89.2	64.3-104.1		
Anthracene	43.8		0.800	5.00	"	50.0	U	87.6	68.4-100.1		
Di-n-butyl phthalate	42.4	L	1.88	5.00	"	50.0	U	84.8	70-108.9		
Fluoranthene	43.6		3.63	5.00	"	50.0	U	87.2	53.2-111.1		
Pyrene	44.4		3.04	5.00	"	50.0	U	88.8	64.5-115.8		
Butyl benzyl phthalate	42.9	L	2.25	5.00	"	50.0	U	85.8	82.4-110.1		
3,3'-Dichlorobenzidine	33.3		1.11	5.00	"	50.0	U	56.6	20-121		
Chrysene	42.2		0.650	5.00	"	50.0	U	84.4	62.4-117.1		
Benzo (a) anthracene	44.5		0.920	5.00	"	50.0	U	89.0	72.7-111.4		
Bis(2-ethylhexyl)phthalate	42.9		2.29	5.00	"	50.0	3.14	79.5	71.1-109.9		
Di-n-octyl phthalate	36.1		2.66	5.00	"	50.0	U	72.2	64.9-108.1		
Benzo (b) fluoranthene	39.1		1.09	5.00	"	50.0	U	78.2	57.2-114.9		
Benzo (k) fluoranthene	40.6		1.09	5.00	"	50.0	U	81.2	68.6-105.2		
Benzo (a) pyrene	41.2		0.730	5.00	"	50.0	U	82.4	62.7-108.5		
Indeno (1,2,3-cd) pyrene	44.0		0.300	5.00	"	50.0	U	88.0	65.3-133.5		
Dibenz (a,h) anthracene	47.7		0.630	5.00	"	50.0	U	95.4	61.4-125.2		
Benzo (g,h,i) perylene	39.0		0.930	5.00	"	50.0	U	78.0	43.1-125		

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project:US Steel Coking Facility Project Number:[none] Project Manager:Howard Pham	Reported: Nov-18-03 09:39

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Matrix Spike (EJ33001-MS1) **Source: E310005-07** **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2-Fluorophenol	*0.00*				*ug/L*	*50.0*			*25-90*		
Surrogate: Phenol-d5	*0.00*				*"*	*50.0*			*38-103*		
Surrogate: Nitrobenzene-d5	*0.00*				*"*	*50.0*			*28-95*		
Surrogate: 2-Fluorobiphenyl	*0.00*				*"*	*50.0*			*46-95*		
Surrogate: 2,4,6-Tribromophenol	*0.00*				*"*	*50.0*			*47-146*		
Surrogate: Terphenyl-d14	*0.00*				*"*	*50.0*			*50-144*		

Matrix Spike Dup (EJ33001-MSD1) **Source: E310005-07** **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Phenol	**36.7**	L	0.740	5.00	ug/L	71.4	U	51.4	50-98	30.4	32
Bis(2-chloroethyl)ether	**48.3**		0.680	5.00	"	71.4	U	67.6	36-99	6.73	37
2-Chlorophenol	**22.1**	L	0.790	5.00	"	71.4	U	31.0	47-89	74.7	36
1,3-Dichlorobenzene	**58.6**		2.11	5.00	"	71.4	U	82.1	40-76	3.85	45
1,4-Dichlorobenzene	**49.3**		2.21	5.00	"	71.4	U	69.0	40-78	7.80	43
Benzyl alcohol	**63.0**		1.00	5.00	"	71.4	U	88.2	5-157	8.76	79
1,2-Dichlorobenzene	**53.0**		1.94	5.00	"	71.4	U	74.2	42-82	8.13	38
2-Methylphenol	**50.3**	L	0.640	5.00	"	71.4	U	70.4	55-95	18.8	27
Bis(2-chloroisopropyl)ether	**52.3**		1.78	5.00	"	71.4	U	73.2	50-88	8.84	28
4-Methylphenol	**49.3**	L	0.800	5.00	"	71.4	U	69.0	57-107	1.44	29
N-Nitrosodi-n-propylamine	**54.7**		1.67	5.00	"	71.4	U	76.6	58-99	0.261	26
Hexachloroethane	**46.3**		2.68	5.00	"	71.4	U	64.8	23-72	13.8	56
Nitrobenzene	**62.7**		1.40	5.00	"	71.4	U	87.8	53-94	4.90	28
Isophorone	**67.8**		1.41	5.00	"	71.4	U	95.0	61-100	3.11	26
2-Nitrophenol	**18.6**	L	1.52	5.00	"	71.4	U	26.1	41-105	108	32
2,4-Dimethylphenol	**52.3**	L	1.41	5.00	"	71.4	U	73.2	55-104	13.5	23
Bis(2-chloroethoxy)methane	**65.2**		1.05	5.00	"	71.4	U	91.3	59-100	1.88	27
2,4-Dichlorophenol	**25.4**	L	1.16	5.00	"	71.4	U	35.6	60-107	90.0	26
1,2,4-Trichlorobenzene	**59.9**		1.79	5.00	"	71.4	U	83.9	50-90	6.52	28
Naphthalene	**64.7**		1.10	5.00	"	71.4	U	90.6	50-78.4	11.8	15.3
4-Chloroaniline	**47.5**	L	1.61	5.00	"	71.4	U	66.5	35-123	27.2	62

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-18-03 09:39

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Matrix Spike Dup (EJ33001-MSD1) Source: E310005-07 Prepared: Oct-21-03 Analyzed: Oct-29-03

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobutadiene	56.5		2.50	5.00	ug/L	71.4	U	79.1	47-87	1.40	31
2-Methylnaphthalene	64.3		1.13	5.00	"	71.4	U	90.1	57.2-88.2	3.60	13.1
4-Chloro-3-methylphenol	67.8	L	1.09	5.00	"	71.4	U	95.0	64-137	8.08	16
Hexachlorocyclopentadiene	19.1	L	2.80	5.00	"	71.4	U	26.8	5-35	25.4	200
2,4,6-Trichlorophenol	4.57		1.14	5.00	"	71.4	U	6.40	59-125	174	25
2,4,5-Trichlorophenol	12.4	L	1.62	5.00	"	71.4	U	17.4	66-129	141	24
2-Chloronaphthalene	65.4		1.43	5.00	"	71.4	U	91.6	62-105	3.56	19
2-Nitroaniline	70.5	L	2.31	5.00	"	71.4	U	98.7	77-118	2.30	22
Acenaphthylene	61.9		0.680	5.00	"	71.4	U	86.7	56.6-79.4	1.28	9.1
Dimethyl phthalate	15.1	L	1.23	5.00	"	71.4	U	21.1	72.4-103.7	130	7.9
2,6-Dinitrotoluene	69.3	L	1.57	5.00	"	71.4	U	97.1	72-112	1.56	18
Acenaphthene	63.6		0.600	5.00	"	71.4	U	89.1	64.6-91.7	2.16	10.4
3-Nitroaniline	56.2	L	2.01	5.00	"	71.4	U	78.7	72-119	3.37	22
Dibenzofuran	63.1		1.58	5.00	"	71.4	U	88.4	67.7-93.9	0.00	7.8
2,4-Dinitrophenol	27.5	J	1.79	5.00	"	71.4	U	38.5	5-16	70.7	200
2,4-Dinitrotoluene	68.2	L	1.99	5.00	"	71.4	U	95.5	76-111	2.79	15
Fluorene	65.4		1.08	5.00	"	71.4	U	91.6	69.7-96.8	0.870	7.3
4-Nitrophenol	44.5	L	1.55	5.00	"	71.4	U	62.3	5-200	52.8	160
4-Chlorophenyl phenyl ether	67.7	L	1.37	5.00	"	71.4	U	94.8	71-109	0.847	15
Diethyl phthalate	37.5	L	1.71	5.00	"	71.4	U	52.5	75.8-105.5	54.5	12.7
4,6-Dinitro-2-methylphenol	24.2	J	1.49	5.00	"	71.4	U	33.9	16-91	38.3	45
N-Nitrosodiphenylamine	63.6	L	1.38	5.00	"	71.4	U	89.1	77-120	0.112	16
4-Nitroaniline	64.9	L	1.73	5.00	"	71.4	U	90.9	71-127	7.11	31
4-Bromophenyl phenyl ether	69.2	L	0.880	5.00	"	71.4	U	96.9	70-119	6.06	16
Hexachlorobenzene	71.5		1.39	5.00	"	71.4	U	100	78-110	9.21	12
Pentachlorophenol	12.0	L	1.62	5.00	"	71.4	U	16.8	77-192	142	47
Phenanthrene	63.8		0.560	5.00	"	71.4	U	89.4	64.3-104.1	0.224	12.4
Anthracene	62.2		0.800	5.00	"	71.4	U	87.1	68.4-100.1	0.572	5.5
Di-n-butyl phthalate	49.4	L	1.88	5.00	"	71.4	U	69.2	70-108.9	20.3	4.4
Fluoranthene	62.3		3.63	5.00	"	71.4	U	87.3	53.2-111.1	0.115	15.7
Pyrene	67.1		3.04	5.00	"	71.4	U	94.0	64.5-115.8	5.69	19.9
Butyl benzyl phthalate	36.7	L	2.25	5.00	"	71.4	U	51.4	82.4-110.1	50.1	6.2

Xuyen Nguyen, Chemist

000064

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IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Semivolatiles by GC/MS - Quality Control

Batch EJ33001 - BP SVOA

Matrix Spike Dup (EJ33001-MSD1) **Source: E310005-07** **Prepared: Oct-21-03 Analyzed: Oct-29-03**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
3,3' Dichlorobenzidine	49.3		1.11	5.00	ug/L	71.4	U	69.0	20-121	3.54	116
Chrysene	62.1		0.650	5.00	"	71.4	U	87.0	62.4-117.1	3.03	10.7
Benzo (a) anthracene	60.6		0.920	5.00	"	71.4	U	84.9	72.7-111.4	4.72	11.4
Bis(2-ethylhexyl)phthalate	51.6		2.29	5.00	"	71.4	3.14	67.9	71.1-109.9	15.7	13.6
Di-n-octyl phthalate	50.0		2.66	5.00	"	71.4	U	70.0	64.9-108.1	3.09	15.8
Benzo (b) fluoranthene	68.4		1.09	5.00	"	71.4	U	95.8	57.2-114.9	20.2	15.5
Benzo (k) fluoranthene	51.4		1.09	5.00	"	71.4	U	72.0	68.6-105.2	12.0	12.8
Benzo (a) pyrene	49.4		0.730	5.00	"	71.4	U	69.2	62.7-108.5	17.4	12.4
Indeno (1,2,3-cd) pyrene	57.9		0.300	5.00	"	71.4	U	81.1	65.3-133.5	8.16	48.5
Dibenz (a,h) anthracene	65.4		0.630	5.00	"	71.4	U	91.6	61.4-125.2	4.06	48.1
Benzo (g,h,i) perylene	45.5		0.930	5.00	"	71.4	U	63.7	43.1-125	20.2	15.6
Surrogate: 2-Fluorophenol	*7.21*				"	*71.4*		*10.1*	*25-90*		
Surrogate: Phenol-d5	*36.0*				"	*71.4*		*50.4*	*38-103*		
Surrogate: Nitrobenzene-d5	*62.0*				"	*71.4*		*86.8*	*28-95*		
Surrogate: 2-Fluorobiphenyl	*60.7*				"	*71.4*		*85.0*	*46-95*		
Surrogate: 2,4,6-Tribromophenol	*9.54*				"	*71.4*		*13.4*	*47-146*		
Surrogate: Terphenyl-d14	*62.5*				"	*71.4*		*87.5*	*50-144*		

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Xuyen Nguyen Chemist

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Superfund US EPA Region 5 77 West Jackson Boulevard Chicago IL 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-13-03 15:04

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
R	Rejected
U	Not Detected
N	Not Reported

000071

Xuyen Nguyen, Chemist

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	13	ME0008	Soil

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

NOV 19 2003

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 14, 2003

SUBJECT: Review of Data
Received for Review on November 6, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0008

Number and Type of Samples: 13 soils

Sample Numbers: ME0008,11-13,15-18,21-25

Laboratory: Bonner Hrs. for Review: 2

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0008
Laboratory: Bonner

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

Thirteen soil samples numbered ME0008, ME0011-13, ME0015-18, and ME0021-25 were collected on October 14, 2003. The lab received the samples on October 16, 2003. The sample cooler temperatures were 7.3 and 6.2 degrees C upon receipt. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM05.2 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: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0008
Laboratory: Bonner

1. HOLDING TIME:

Date: 11/6/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-10 The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME0008, ME0011, ME0012, ME0013, ME0015, ME0016, ME0017, ME0018, ME0021, ME0021D, ME0021S, ME0022, ME0023, ME0024, ME0025

2. CALIBRATIONS:

Date 11/6/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

None

No defects found.

Date: 11/6/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

No defects found.

3. BLANKS:

Date: 11/6/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Blanks **Protocol: INORG**

DC-2 The following inorganic samples are associated with initial or continuing calibration blanks which were not run in the required analytical frequency. Hits and non-detects are not flagged.

None Cyanide

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0008
Laboratory: Bonner

ME0016, ME0017, ME0018, ME0022, ME0023, ME0024, ME0025

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

Date: 11/6/2003 Wincadre 3.1.3.2 Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

No defects found.

Date: 11/6/2003 Wincadre 3.1.3.2 Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Control Sample **Protocol: INORG**

DC-6 The following inorganic soil samples are associated with a solid laboratory control sample (LCS) with analyte found amounts which are high, indicating a potential positive bias in the sample results. Hits are qualified "J".

Antimony
ME0008, ME0012, ME0013, ME0015, ME0016, ME0017, ME0018, ME0021, ME0022, ME0023

Silver
ME0015, ME0017, ME0018, ME0021

5. LABORATORY AND FIELD DUPLICATE

Date 11/6/2003 Wincadre 3.1.3.2 Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

No defects found

6. ICP ANALYSIS

Date: 11/6/2003 Wincadre 3.1.3.2 Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0008
Laboratory: Bonner

Qualification: Interference Check Sample **Protocol: INORG**

DC-5 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 mg/L (ppm) that may cause potential interference. Use professional judgement to qualify sample data.

ME0008
Potassium

ME0013
Potassium

ME0015
Potassium

ME0016
Potassium

ME0018
Manganese, Potassium

ME0021
Potassium

ME0024
Potassium

DC-10 The following inorganic samples have one or more interferents present at concentrations more than true amounts added in the ICSAB solution. Use Professional judgement to qualify sample data.

ME0015, ME0018, ME0024

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Serial Dilution **Protocol: INORG**

DC-3 The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The detected serial dilution result is less than the initial sample result. Hits are qualified "J" and non-detects are qualified "UJ".

Cadmium
ME0008, ME0011, ME0012, ME0013, ME0015, ME0016, ME0017, ME0018, ME0021, ME0022, ME0023, ME0024, ME0025

DC-4 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 and non-detects are not flagged.

Sodium
ME0008, ME0011, ME0012, ME0013, ME0015, ME0016, ME0017, ME0018, ME0021, ME0022, ME0023, ME0024, ME0025

7. GFAA ANALYSIS

Assembled By: ESAT
Date: November 14, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0008
Laboratory: Bonner

SAMPLE RESULTS

Date: 11/6/2003 | Wincadre 3.1.3.2 | Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0008	SDG No.: ME0008	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

No defects found

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 14, 2003

ILM05.2 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 result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 32259
SDG : ME0008
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Number of Soil Samples : 13
Number of Water Samples : 0

Sample Number :	ME0008		ME0011		ME0012		ME0013		ME0015	
Sampling Location :	X101		X201		X201 D		X202		X102	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/14/2003		10/14/2003		10/14/2003		10/14/2003		10/14/2003	
Time Sampled :	12:00		12:00		12:00		12:50		13:30	
%Solids :	89.5		11.0		15.0		33.6		73.1	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	5870		15800		20200		19500		20000	
ANTIMONY	0.73	J	109	U	4.1	J	3.1	J	1.4	J
ARSENIC	1.1		5.4		4.7		5.7		4.8	
BARIUM	32.4		139		154		138		201	
BERYLLIUM	0.47		0.67		0.89		1.0		2.3	
CADMIUM	0.39	J	1.3	J	1.6	J	1.4	J	2.7	J
CALCIUM	102000		61600		50700		63600		74500	
CHROMIUM	6.3		28.4		34.4		26.1		14.8	
COBALT	3.0		9.2		10.8		9.1		5.8	
COPPER	4.4		61.9		62.5		46.5		42.2	
IRON	7750		26100		29900		25700		27600	
LEAD	2.0		75.0		77.4		45.9		66.6	
MAGNESIUM	60300		12000		13700		8310		12200	
MANGANESE	328		771		744		456		1170	
MERCURY	0.11	U	0.51		0.27		0.17		0.12	
NICKEL	5.2		24.3		30.7		25.3		13.1	
POTASSIUM	2660		3660		4730		4420		3360	
SELENIUM	4.3		63.6	U	46.7	U	20.8	U	2.2	
SILVER	2.2	U	18.2	U	13.3	U	6.0	U	0.10	J
SODIUM	139		742		607		247		543	
THALLIUM	1.3		4.8		5.8		4.7		6.1	
VANADIUM	9.7		32.9		41.3		35.3		23.6	
ZINC	13.3		126		145		127		338	
CYANIDE	0.23		1.2		0.75		0.42		7.0	

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 #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0008
BILL'S EXCAVATING
BONNER

Sample Number :	ME0016		ME0017		ME0018		ME0021		ME0022	
Sampling Location :	X203		X204		X103		X104		X105	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/14/2003		10/14/2003		10/14/2003		10/14/2003		10/14/2003	
Time Sampled :	13:30		14:50		14:00		14:30		15:00	
%Solids :	29.3		48.7		76.0		63.6		49.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	19400		4060		26800		9020		4600	
ANTIMONY	1.6	J	3.3	J	1.9	J	1.2	J	1.1	J
ARSENIC	6.1		23.6		0.77		1.5		20.2	
BARIUM	117		399		273		123		242	
BERYLLIUM	0.91		0.33		3.6		1.4		0.69	
CADMIUM	1.5	J	0.24	J	0.69	J	0.95	J	0.28	J
CALCIUM	43100		6260		193000		72900		83600	
CHROMIUM	27.3		4.2		5.9		6.1		1.8	
COBALT	9.3		1.6		3.1		3.3		0.64	
COPPER	48.6		34.0		38.0		59.6		28.0	
IRON	27600		9430		8670		10500		3330	
LEAD	47.0		111		21.7		30.6		42.1	
MAGNESIUM	11100		1480		41600		34800		16100	
MANGANESE	438		46.5		1900		641		485	
MERCURY	0.20		0.38		0.13	U	0.14		0.20	U
NICKEL	25.9		1.5		4.6		5.3		0.87	
POTASSIUM	4380		1460		3110		2830		188	
SELENIUM	23.9	U	23.4		9.2	U	1.6		25.3	
SILVER	6.8	U	0.18	J	0.32	J	0.17	J	4.0	U
SODIUM	335		325		1020		351		376	
THALLIUM	4.4		6.2		7.8		3.7		2.1	
VANADIUM	35.1		5.4		10.1		9.1		1.1	
ZINC	162		19.5		48.6		85.4		16.6	
CYANIDE	0.98		1.5		3.7		1.0		1.8	

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Analytical Results (Qualified Data)

Case #: 32259 SDG : ME0008
Site : BILL'S EXCAVATING
Lab. : BONNER
Reviewer :
Date :

Sample Number :	ME0023		ME0024		ME0025		ME0021D		ME0021S	
Sampling Location :	X106		X107		X205		X104		X104	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	10/14/2003		10/14/2003		10/14/2003		10/14/2003		10/14/2003	
Time Sampled :	15:00		15:30		15:30		14:30		14:30	
%Solids :	50.9		82.6		32.9		64.4		63.6	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	4720		9170		6400		6800		13100	
ANTIMONY	1.5	J	14.5	U	36.5	U	0.79		10.9	
ARSENIC	12.7		6.6		6.6		1.8		16.1	
BARIUM	276		173		65.7		85.7		751	
BERYLLIUM	0.69		0.51		0.64		0.84		15.8	
CADMIUM	0.11	J	0.72	J	0.95	J	0.99		15.7	
CALCIUM	99500		90300		8790		64800		90100	
CHROMIUM	1.8		12.8		13.8		6.8		65.3	
COBALT	0.64		5.6		4.9		3.4		144	
COPPER	18.5		20.3		67.6		56.0		115	
IRON	3070		14300		14600		12700		15600	
LEAD	31.1		28.8		55.2		34.9		45.3	
MAGNESIUM	16600		50900		4240		31400		47600	
MANGANESE	478		345		176		478		986	
MERCURY	0.20	U	0.12		0.22		0.12		1.0	
NICKEL	0.82		14.4		14.2		6.1		145	
POTASSIUM	166		2520		1700		2740		3730	
SELENIUM	18.2		8.5	U	21.3	U	2.6		17.8	
SILVER	3.9	U	2.4	U	6.1	U	3.1	U	14.7	
SODIUM	385		455		227		213		499	
THALLIUM	1.6		2.6		1.3		2.3		19.6	
VANADIUM	1.1		24.5		15.2		10.3		160	
ZINC	5.9		70.4		99.8		87.7		230	
CYANIDE	4.1		0.40		6.2		1.0		8.3	

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0008

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z62158 2210022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730	[illegible]	10-16-03 0930
2			
3			
4			

For Lab Use Only

Lab Contract No:	68W02017
Unit Price:	$7.2[illegible]
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0008	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279285 (Ice Only) (1)	X101	S: 10/14/2003 12:00	E0008	
ME0009	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279289 (HNO3), 5-279290 (NaOH) (2)	S201	S: 10/14/2003 12:00	E0009	
ME0010	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279295 (HNO3), 5-279296 (NaOH) (2)	S201 D	S: 10/14/2003 12:00	E0010	
ME0011	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279301 (Ice Only) (1)	X201	S: 10/14/2003 12:00	E0011	
ME0012	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279305 (Ice Only) (1)	X201 D	S: 10/14/2003 12:00	E0012	
ME0013	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279309 (Ice Only) (1)	X202	S: 10/14/2003 12:50	E0013	
ME0014	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279313 (HNO3), 5-279314 (NaOH) (2)	S202	S: 10/14/2003 12:50	E0014	
ME0015	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279319 (Ice Only) (1)	X102	S: 10/14/2003 13:30	E0015	
ME0016	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279323 (Ice Only) (1)	X203	S: 10/14/2003 13:30	E0016	
ME0017	Soil/Sediment/ Bruce Everetts	H/G	TM/CN (21)	5-279327 (Ice Only) (1)	X204	S: 10/14/2003 14:50	E0017	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: ME0019, ME0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 7.3°C, 6.2°C	Chain of Custody Seal Number: 27937, 27938
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y / Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

002

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0008

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z62158 2210022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730	[illegible]	10/16/03 0930
2			
3			
4			

For Lab Use Only

Lab Contract No:	68D02067
Unit Price:	$75
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0018	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279331 (Ice Only) (1)	X103	S: 10/14/2003 14:00	E0018	good
ME0019	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279335 (HNO3), 5-279336 (HNO3), 5-279337 (HNO3), 5-279338 (NaOH), 5-279339 (NaOH), 5-279340 (NaOH) (6)	S203	S: 10/14/2003 14:00	E0019	
ME0020	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279353 (HNO3), 5-279354 (NaOH) (2)	S204	S: 10/14/2003 14:50	E0020	
ME0021	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279359 (Ice Only) (1)	X104	S: 10/14/2003 14:30	E0021	
ME0022	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279363 (Ice Only) (1)	X105	S: 10/14/2003 15:00	E0022	
ME0023	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279367 (Ice Only) (1)	X106	S: 10/14/2003 15:00	E0023	
ME0024	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279371 (Ice Only) (1)	X107	S: 10/14/2003 15:30	E0024	
ME0025	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279375 (1)	X205	S: 10/14/2003 15:30	E0025	
ME0026	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279379 (HNO3), 5-279380 (NaOH) (2)	S205	S: 10/14/2003 15:30	E0026	
ME0027	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279385 (Ice Only) (1)	X206	S: 10/15/2003 10:00	E0027	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0019 ME0021		7.3°C, 6.2°C	27937, 27938

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High **Type/Designate:** Composite = C, Grab = G **Custody Seal Intact?** Y **Shipment Iced?** Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

003

NOV 0 6 2003

005

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0008
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-16-03 under UPS airbill number 1Z6215892210022582, respectively. Custody seals were present and intact, and the cooler temp measured 7.3°C, respectively. Sample ME0021 was listed as QC. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

1. Several samples have standing water on top of the soil/sediment inside the sample container. The amount of water is approximately 10-20mL.

   Resolution: Per Region 5, the lab will note the issue in the SDG Narrative and proceed with homogenizing the samples with the standing water.

ICP-AES Metals

The first analytical run was performed on 10/31/03 at 1024 hrs. The Matrix Spike failed for antimony and copper. A Post Analytical Spike was prepared at twice the CRQL for antimony and analyzed during this run. Sample ME0018 was above the linear range for calcium.

The second analytical run was performed on 11/01/03 at 0841 hrs. A Post Analytical Spike was prepared at twice the indigenous level for copper at 757 ppb for the failure of the Matrix Spike from the previous run, and analyzed during this run. Sample ME0018 was diluted 1:2 and analyzed for calcium during this run.

CV-AA Mercury

No Discrepancies

CSF

No Discrepancies

Authorized by _____
Steve Flowers
Quality Assurance Officer

USEPA - CLP

NOV 0 6 2003 004

COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: _____ SDG No: ME0008

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0008	BT94327
ME0011	BT94328
ME0012	BT94329
ME0013	BT94330
ME0015	BT94331
ME0016	BT94332
ME0017	BT94333
ME0018	BT94334
ME0021	BT94335
ME0021D	BT94335D
ME0021S	BT94335S
ME0022	BT94336
ME0023	BT94337
ME0024	BT94338
ME0025	BT94339

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Christopher M. Bonner

Date: 11/04/03 Title: Inorganic Laboratory Manager

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1A-IN

INORGANIC ANALYSIS DATA SHEET

006

EPA SAMPLE NO.

ME0008

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94327

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 89.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5870		*	P
7440-36-0	Antimony	0.73	J	N	P
7440-38-2	Arsenic	1.1	J		P
7440-39-3	Barium	32.4	J		P
7440-41-7	Beryllium	0.47	J		P
7440-43-9	Cadmium	0.39	J		P
7440-70-2	Calcium	102000			P
7440-47-3	Chromium	6.3			P
7440-48-4	Cobalt	3.0	J		P
7440-50-8	Copper	4.4	J	N	P
7439-89-6	Iron	7750			P
7439-92-1	Lead	2.0	J		P
7439-95-4	Magnesium	60300			P
7439-96-5	Manganese	328		*	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	5.2	J		P
7440-09-7	Potassium	2660			P
7782-49-2	Selenium	4.3	J		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	139	J		P
7440-28-0	Thallium	1.3	J		P
7440-62-2	Vanadium	9.7	J		P
7440-66-6	Zinc	13.3	J		P
57-12-5	Cyanide	0.23	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

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1A-IN

INORGANIC ANALYSIS DATA SHEET

007

EPA SAMPLE NO.

ME0011

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94328

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 11.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15800		*	P
7440-36-0	Antimony	109	U	N	P
7440-38-2	Arsenic	5.4	J		P
7440-39-3	Barium	139	J		P
7440-41-7	Beryllium	0.67	J		P
7440-43-9	Cadmium	1.3	J		P
7440-70-2	Calcium	61600			P
7440-47-3	Chromium	28.4			P
7440-48-4	Cobalt	9.2	J		P
7440-50-8	Copper	61.9		N	P
7439-89-6	Iron	26100			P
7439-92-1	Lead	75.0			P
7439-95-4	Magnesium	12000			P
7439-96-5	Manganese	771		*	P
7439-97-6	Mercury	0.51	J		CV
7440-02-0	Nickel	24.3	J		P
7440-09-7	Potassium	3660	J		P
7782-49-2	Selenium	63.6	U		P
7440-22-4	Silver	18.2	U		P
7440-23-5	Sodium	742	J		P
7440-28-0	Thallium	4.8	J		P
7440-62-2	Vanadium	32.9	J		P
7440-66-6	Zinc	126			P
57-12-5	Cyanide	1.2	J		AS

Color Before: Black Clarity Before: Texture: Fine

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

008

EPA SAMPLE NO.

ME0012

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94329

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 15.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20200		*	P
7440-36-0	Antimony	4.1	J	N	P
7440-38-2	Arsenic	4.7	J		P
7440-39-3	Barium	154	J		P
7440-41-7	Beryllium	0.89	J		P
7440-43-9	Cadmium	1.6	J		P
7440-70-2	Calcium	50700			P
7440-47-3	Chromium	34.4			P
7440-48-4	Cobalt	10.8	J		P
7440-50-8	Copper	62.5		N	P
7439-89-6	Iron	29900			P
7439-92-1	Lead	77.4			P
7439-95-4	Magnesium	13700			P
7439-96-5	Manganese	744		*	P
7439-97-6	Mercury	0.27	J		CV
7440-02-0	Nickel	30.7	J		P
7440-09-7	Potassium	4730	J		P
7782-49-2	Selenium	46.7	U		P
7440-22-4	Silver	13.3	U		P
7440-23-5	Sodium	607	J		P
7440-28-0	Thallium	5.8	J		P
7440-62-2	Vanadium	41.3	J		P
7440-66-6	Zinc	145			P
57-12-5	Cyanide	0.75	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

009

EPA SAMPLE NO.

ME0013

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94330

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 33.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19500		*	P
7440-36-0	Antimony	3.1	J	N	P
7440-38-2	Arsenic	5.7	J		P
7440-39-3	Barium	138			P
7440-41-7	Beryllium	1.0	J		P
7440-43-9	Cadmium	1.4	J		P
7440-70-2	Calcium	63600			P
7440-47-3	Chromium	26.1			P
7440-48-4	Cobalt	9.1	J		P
7440-50-8	Copper	46.5		N	P
7439-89-6	Iron	25700			P
7439-92-1	Lead	45.9			P
7439-95-4	Magnesium	8310			P
7439-96-5	Manganese	456		*	P
7439-97-6	Mercury	0.17	J		CV
7440-02-0	Nickel	25.3			P
7440-09-7	Potassium	4420			P
7782-49-2	Selenium	20.8	U		P
7440-22-4	Silver	6.0	U		P
7440-23-5	Sodium	247	J		P
7440-28-0	Thallium	4.7	J		P
7440-62-2	Vanadium	35.3			P
7440-66-6	Zinc	127			P
57-12-5	Cyanide	0.42	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

010

EPA SAMPLE NO.

ME0015

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94331

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 73.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20000		*	P
7440-36-0	Antimony	1.4	J	N	P
7440-38-2	Arsenic	4.8			P
7440-39-3	Barium	201			P
7440-41-7	Beryllium	2.3			P
7440-43-9	Cadmium	2.7			P
7440-70-2	Calcium	74500			P
7440-47-3	Chromium	14.8			P
7440-48-4	Cobalt	5.8	J		P
7440-50-8	Copper	42.2		N	P
7439-89-6	Iron	27600			P
7439-92-1	Lead	66.6			P
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	1170		*	P
7439-97-6	Mercury	0.12	J		CV
7440-02-0	Nickel	13.1			P
7440-09-7	Potassium	3360			P
7782-49-2	Selenium	2.2	J		P
7440-22-4	Silver	0.10	J		P
7440-23-5	Sodium	543	J		P
7440-28-0	Thallium	6.1	J		P
7440-62-2	Vanadium	23.6			P
7440-66-6	Zinc	338			P
57-12-5	Cyanide	7.0			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

011
EPA SAMPLE NO.

ME0016

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94332

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 29.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19400		*	P
7440-36-0	Antimony	1.6	J	N	P
7440-38-2	Arsenic	6.1	J		P
7440-39-3	Barium	117	J		P
7440-41-7	Beryllium	0.91	J		P
7440-43-9	Cadmium	1.5	J		P
7440-70-2	Calcium	43100			P
7440-47-3	Chromium	27.3			P
7440-48-4	Cobalt	9.3	J		P
7440-50-8	Copper	48.6		N	P
7439-89-6	Iron	27600			P
7439-92-1	Lead	47.0			P
7439-95-4	Magnesium	11100			P
7439-96-5	Manganese	438		*	P
7439-97-6	Mercury	0.20	J		CV
7440-02-0	Nickel	25.9	J		P
7440-09-7	Potassium	4380			P
7782-49-2	Selenium	23.9	U		P
7440-22-4	Silver	6.8	U		P
7440-23-5	Sodium	335	J		P
7440-28-0	Thallium	4.4	J		P
7440-62-2	Vanadium	35.1			P
7440-66-6	Zinc	162			P
57-12-5	Cyanide	0.98	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

012
EPA SAMPLE NO.

ME0017

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94333

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 48.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4060		*	P
7440-36-0	Antimony	3.3	J	N	P
7440-38-2	Arsenic	23.6			P
7440-39-3	Barium	399			P
7440-41-7	Beryllium	0.33	J		P
7440-43-9	Cadmium	0.24	J		P
7440-70-2	Calcium	6260			P
7440-47-3	Chromium	4.2			P
7440-48-4	Cobalt	1.6	J		P
7440-50-8	Copper	34.0		N	P
7439-89-6	Iron	9430			P
7439-92-1	Lead	111			P
7439-95-4	Magnesium	1480	J		P
7439-96-5	Manganese	46.5		*	P
7439-97-6	Mercury	0.38			CV
7440-02-0	Nickel	1.5	J		P
7440-09-7	Potassium	1460	J		P
7782-49-2	Selenium	23.4			P
7440-22-4	Silver	0.18	J		P
7440-23-5	Sodium	325	J		P
7440-28-0	Thallium	6.2	J		P
7440-62-2	Vanadium	5.4	J		P
7440-66-6	Zinc	19.5	J		P
57-12-5	Cyanide	1.5	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

013

EPA SAMPLE NO.

ME0018

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94334

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 76.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26800		*	P
7440-36-0	Antimony	1.9	J	N	P
7440-38-2	Arsenic	0.77	J		P
7440-39-3	Barium	273			P
7440-41-7	Beryllium	3.6			P
7440-43-9	Cadmium	0.69	J		P
7440-70-2	Calcium	193000			P
7440-47-3	Chromium	5.9			P
7440-48-4	Cobalt	3.1	J		P
7440-50-8	Copper	38.0		N	P
7439-89-6	Iron	8670			P
7439-92-1	Lead	21.7			P
7439-95-4	Magnesium	41600			P
7439-96-5	Manganese	1900		*	P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	4.6	J		P
7440-09-7	Potassium	3110			P
7782-49-2	Selenium	9.2	U		P
7440-22-4	Silver	0.32	J		P
7440-23-5	Sodium	1020	J		P
7440-28-0	Thallium	7.8			P
7440-62-2	Vanadium	10.1	J		P
7440-66-6	Zinc	48.6			P
57-12-5	Cyanide	3.7			AS

Color Before: Brown Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Plant Matter, Rocks

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

014

EPA SAMPLE NO.

ME0021

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94335

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 63.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9020		*	P
7440-36-0	Antimony	1.2	J	N	P
7440-38-2	Arsenic	1.5	J		P
7440-39-3	Barium	123			P
7440-41-7	Beryllium	1.4	J		P
7440-43-9	Cadmium	0.95	J		P
7440-70-2	Calcium	72900			P
7440-47-3	Chromium	6.1			P
7440-48-4	Cobalt	3.3	J		P
7440-50-8	Copper	59.5		N	P
7439-89-6	Iron	10500			P
7439-92-1	Lead	30.6			P
7439-95-4	Magnesium	34800			P
7439-96-5	Manganese	641		*	P
7439-97-6	Mercury	0.14	J		CV
7440-02-0	Nickel	5.3	J		P
7440-09-7	Potassium	2830			P
7782-49-2	Selenium	1.6	J		P
7440-22-4	Silver	0.17	J		P
7440-23-5	Sodium	351	J		P
7440-28-0	Thallium	3.7	J		P
7440-62-2	Vanadium	9.1	J		P
7440-66-6	Zinc	85.4			P
57-12-5	Cyanide	1.0	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

015

EPA SAMPLE NO.

ME0022

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94336

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 49.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4600		*	P
7440-36-0	Antimony	1.1	J	N	P
7440-38-2	Arsenic	20.2			P
7440-39-3	Barium	242			P
7440-41-7	Beryllium	0.69	J		P
7440-43-9	Cadmium	0.28	J		P
7440-70-2	Calcium	83600			P
7440-47-3	Chromium	1.8	J		P
7440-48-4	Cobalt	0.64	J		P
7440-50-8	Copper	28.0		N	P
7439-89-6	Iron	3330			P
7439-92-1	Lead	42.1			P
7439-95-4	Magnesium	16100			P
7439-96-5	Manganese	485		*	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	0.87	J		P
7440-09-7	Potassium	188	J		P
7782-49-2	Selenium	25.3			P
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	376	J		P
7440-28-0	Thallium	2.1	J		P
7440-62-2	Vanadium	1.1	J		P
7440-66-6	Zinc	16.6	J		P
57-12-5	Cyanide	1.8	J		AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

016

EPA SAMPLE NO.

ME0023

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94337

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 50.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4720		*	P
7440-36-0	Antimony	1.5	J	N	P
7440-38-2	Arsenic	12.7			P
7440-39-3	Barium	276			P
7440-41-7	Beryllium	0.69	J		P
7440-43-9	Cadmium	0.11	J		P
7440-70-2	Calcium	99500			P
7440-47-3	Chromium	1.8	J		P
7440-48-4	Cobalt	0.64	J		P
7440-50-8	Copper	18.5		N	P
7439-89-6	Iron	3070			P
7439-92-1	Lead	31.1			P
7439-95-4	Magnesium	16600			P
7439-96-5	Manganese	478		*	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	0.82	J		P
7440-09-7	Potassium	166	J		P
7782-49-2	Selenium	18.2			P
7440-22-4	Silver	3.9	U		P
7440-23-5	Sodium	385	J		P
7440-28-0	Thallium	1.6	J		P
7440-62-2	Vanadium	1.1	J		P
7440-66-6	Zinc	5.9	J		P
57-12-5	Cyanide	4.1			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

1A-IN

017

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0024

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94338

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 82.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9170		*	P
7440-36-0	Antimony	14.5	U	N	P
7440-38-2	Arsenic	6.6			P
7440-39-3	Barium	173			P
7440-41-7	Beryllium	0.51	J		P
7440-43-9	Cadmium	0.72	J		P
7440-70-2	Calcium	90300			P
7440-47-3	Chromium	12.8			P
7440-48-4	Cobalt	5.6	J		P
7440-50-8	Copper	20.3		N	P
7439-89-6	Iron	14300			P
7439-92-1	Lead	28.8			P
7439-95-4	Magnesium	50900			P
7439-96-5	Manganese	345		*	P
7439-97-6	Mercury	0.12	J		CV
7440-02-0	Nickel	14.4			P
7440-09-7	Potassium	2520			P
7782-49-2	Selenium	8.5	U		P
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	455	J		P
7440-28-0	Thallium	2.6	J		P
7440-62-2	Vanadium	24.5			P
7440-66-6	Zinc	70.4			P
57-12-5	Cyanide	0.40	J		AS

Color Before: Brown Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts: Yes

Comments: Rocks, Worms

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

018

EPA SAMPLE NO.

ME0025

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Matrix (soil/water): SOIL Lab Sample ID: BT94339

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 32.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6400		*	P
7440-36-0	Antimony	36.5	U	N	P
7440-38-2	Arsenic	6.6	J		P
7440-39-3	Barium	65.7	J		P
7440-41-7	Beryllium	0.64	J		P
7440-43-9	Cadmium	0.95	J		P
7440-70-2	Calcium	8790			P
7440-47-3	Chromium	13.8			P
7440-48-4	Cobalt	4.9	J		P
7440-50-8	Copper	67.6		N	P
7439-89-6	Iron	14600			P
7439-92-1	Lead	55.2			P
7439-95-4	Magnesium	4240			P
7439-96-5	Manganese	176		*	P
7439-97-6	Mercury	0.22	J		CV
7440-02-0	Nickel	14.2	J		P
7440-09-7	Potassium	1700	J		P
7782-49-2	Selenium	21.3	U		P
7440-22-4	Silver	6.1	U		P
7440-23-5	Sodium	227	J		P
7440-28-0	Thallium	1.3	J		P
7440-62-2	Vanadium	15.2	J		P
7440-66-6	Zinc	99.8			P
57-12-5	Cyanide	6.2			AS

Color Before: Black Clarity Before: Texture: Medium

Color After: Yellow Clarity After: Artifacts:

Comments:

USEPA - CLP

3-IN

BLANKS

033

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200.0	U	23.9	J	29.2	J	53.8	J	1.439	J	P
Antimony	60.0	U	60.0	U	60.0	U	60.0	U	12.000	U	P
Arsenic	15.0	U	15.0	U	15.0	U	15.0	U	-0.587	J	P
Barium	200.0	U	200.0	U	2.5	J	1.9	J	-0.170	J	P
Beryllium	5.00	U	-0.06	J	5.00	U	0.04	J	-0.013	J	P
Cadmium	5.0	U	5.0	U	5.0	U	0.5	J	-0.045	J	P
Calcium	5000.0	U	29.6	J	20.1	J	68.4	J	14.033	J	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	2.000	U	P
Cobalt	50.0	U	50.0	U	50.0	U	0.7	J	0.055	J	P
Copper	25.0	U	25.0	U	25.0	U	25.0	U	5.000	U	P
Iron	100.0	U	100.0	U	63.1	J	33.6	J	1.245	J	P
Lead	10.0	U	10.0	U	10.0	U	10.0	U	-0.505	J	P
Magnesium	5000.0	U	18.2	J	6.5	J	55.6	J	0.589	J	P
Manganese	15.0	U	15.0	U	3.4	J	0.9	J	3.000	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	40.0	U	40.0	U	40.0	U	1.3	J	0.089	J	P
Potassium	-11.7	J	-9.8	J	91.3	J	37.9	J	0.786	J	P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U	7.000	U	P
Silver	10.0	U	10.0	U	10.0	U	10.0	U	-0.058	J	P
Sodium	5000.0	U	178.2	J	5000.0	U	5000.0	U	38.521	J	P
Thallium	3.2	J	6.3	J	25.0	U	3.3	J	5.000	U	P
Vanadium	50.0	U	50.0	U	50.0	U	50.0	U	-0.067	J	P
Zinc	60.0	U	60.0	U	5.0	J	60.0	U	0.390	J	P
Cyanide	10.0	U	10.0	U	2.5	J	2.2	J	1.000	U	AS

USEPA - CLP

3-IN

BLANKS

034

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			36.8	J	24.3	J	17.0	J			P
Antimony			9.6	J	60.0	U	60.0	U			P
Arsenic			4.3	J	3.7	J	2.9	J			P
Barium			1.3	J	200.0	U	1.0	J			P
Beryllium			-0.06	J	-0.07	J	-0.08	J			P
Cadmium			0.5	J	5.0	U	5.0	U			P
Calcium			5000.0	U	19.7	J	39.8	J			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			0.8	J	50.0	U	50.0	U			P
Copper			25.0	U	25.0	U	25.0	U			P
Iron			41.3	J	16.6	J	18.8	J			P
Lead			10.0	U	10.0	U	10.0	U			P
Magnesium			4.7	J	20.1	J	19.1	J			P
Manganese			2.1	J	0.3	J	0.7	J			P
Nickel			40.0	U	40.0	U	-0.8	J			P
Potassium			57.4	J	27.3	J	28.9	J			P
Selenium			35.0	U	-10.6	J	35.0	U			P
Silver			10.0	U	10.0	U	10.0	U			P
Sodium			5000.0	U	5000.0	U	5000.0	U			P
Thallium			3.2	J	25.0	U	25.0	U			P
Vanadium			50.0	U	50.0	U	50.0	U			P
Zinc			60.0	U	60.0	U	60.0	U			P

USEPA - CLP

3-IN

BLANKS

035

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			31.0	J	39.5	J					P
Antimony			5.0	J	60.0	U					P
Arsenic			15.0	U	15.0	U					P
Barium			0.8	J	1.1	J					P
Beryllium			5.00	U	5.00	U					P
Cadmium			0.4	J	0.3	J					P
Calcium			31.2	J	48.8	J					P
Chromium			10.0	U	10.0	U					P
Cobalt			0.7	J	50.0	U					P
Copper			25.0	U	25.0	U					P
Iron			17.1	J	17.9	J					P
Lead			10.0	U	10.0	U					P
Magnesium			26.5	J	35.4	J					P
Manganese			0.3	J	0.3	J					P
Nickel			40.0	U	40.0	U					P
Potassium			10.2	J	5000.0	U					P
Selenium			35.0	U	35.0	U					P
Silver			10.0	U	10.0	U					P
Sodium			196.1	J	5000.0	U					P
Thallium			3.5	J	3.5	J					P
Vanadium			50.0	U	50.0	U					P
Zinc			60.0	U	60.0	U					P

USEPA - CLP

3-IN

BLANKS

036

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Calcium	5000.0	U	30.6	J	39.7	J	44.2	J			P
Copper	25.0	U	25.0	U	25.0	U	25.0	U			P

USEPA - CLP

3-IN

BLANKS

037

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Calcium			20.4	J	36.6	J					P
Copper			25.0	U	25.0	U					P

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

038

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400	260321	107	260622.0	105	256431	105	256391.0	103
Antimony	0	585	6		604.7	103	3		593.7	101
Arsenic	0	97	-6		94.7	98	-7		93.8	97
Barium	2	475	2	100	496.3	104	2	100	484.0	102
Beryllium	0	482	0		469.8	97	0		463.1	96
Cadmium	0	916	3		989.2	108	3		958.9	105
Calcium	234100	234300	245056	105	243842.0	104	237461	101	238031.0	102
Chromium	36	506	35	97	508.8	101	34	94	495.7	98
Cobalt	0	455	3		481.0	106	3		467.4	103
Copper	15	537	17	113	539.0	100	17	113	531.4	99
Iron	94900	95100	94528	100	94706.8	100	91953	97	91957.1	97
Lead	5	51	-8	-160	46.6	91	-6	-120	43.8	86
Magnesium	248800	254100	255156	103	255656.0	101	244871	98	246406.0	97
Manganese	19	483	25	132	521.6	108	25	132	508.1	105
Nickel	10	930	11	110	979.5	105	11	110	949.6	102
Potassium	0		2		5.7		65		45.8	
Selenium	0	51	16		62.0	122	0		61.9	121
Silver	0	210	1		207.9	99	0		203.5	97
Sodium	0		604		1162.8		499		1191.8	
Thallium	0	96	6		107.0	111	3		100.4	105
Vanadium	1	481	4	400	498.5	104	4	400	485.7	101
Zinc	39	975	48	123	1042.1	107	47	121	1011.3	104

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

039

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					252324	103	254416.0	102
Antimony	0	585					6		586.4	100
Arsenic	0	97					-7		95.9	99
Barium	2	475					2	100	478.9	101
Beryllium	0	482					0		453.4	94
Cadmium	0	916					3		943.5	103
Calcium	234100	234300					234027	100	232560.0	99
Chromium	36	506					34	94	492.0	97
Cobalt	0	455					4		460.9	101
Copper	15	537					16	107	524.5	98
Iron	94900	95100					90542	95	91404.7	96
Lead	5	51					-7	-140	45.5	89
Magnesium	248800	254100					244534	98	245706.0	97
Manganese	19	483					25	132	506.2	105
Nickel	10	930					11	110	936.5	101
Potassium	0						50		36.5	
Selenium	0	51					8		50.6	99
Silver	0	210					0		201.7	96
Sodium	0						586		1261.7	
Thallium	0	96					3		101.8	106
Vanadium	1	481					4	400	480.6	100
Zinc	39	975					46	118	995.9	102

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

040

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					259530	106	253400.0	102
Antimony	0	585					15		580.3	99
Arsenic	0	97					-7		94.6	98
Barium	2	475					2	100	478.8	101
Beryllium	0	482					0		455.9	95
Cadmium	0	916					3		944.0	103
Calcium	234100	234300					236200	101	233922.0	100
Chromium	36	506					34	94	492.3	97
Cobalt	0	455					3		459.2	101
Copper	15	537					16	107	524.1	98
Iron	94900	95100					92292	97	91712.7	96
Lead	5	51					-5	-100	47.3	93
Magnesium	248800	254100					246575	99	244141.0	96
Manganese	19	483					25	132	505.2	105
Nickel	10	930					11	110	937.2	101
Potassium	0						32		28.7	
Selenium	0	51					-5		57.7	113
Silver	0	210					0		201.3	96
Sodium	0						610		1147.9	
Thallium	0	96					2		103.2	108
Vanadium	1	481					3	300	481.1	100
Zinc	39	975					46	118	997.5	102

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

041

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Aluminum	243900	248400					256596	105	252902.0	102
Antimony	0	585					2		588.7	101
Arsenic	0	97					-6		94.4	97
Barium	2	475					2	100	478.9	101
Beryllium	0	482					0		454.1	94
Cadmium	0	916					3		945.4	103
Calcium	234100	234300					238128	102	233724.0	100
Chromium	36	506					34	94	492.7	97
Cobalt	0	455					3		461.6	101
Copper	15	537					16	107	524.2	98
Iron	94900	95100					92387	97	91566.8	96
Lead	5	51					-6	-120	46.0	90
Magnesium	248800	254100					243917	98	244852.0	96
Manganese	19	483					25	132	505.4	105
Nickel	10	930					10	100	936.2	101
Potassium	0						16		13.6	
Selenium	0	51					-5		56.9	112
Silver	0	210					-1		201.9	96
Sodium	0						636		1205.2	
Thallium	0	96					4		104.6	109
Vanadium	1	481					4	400	480.6	100
Zinc	39	975					47	121	997.2	102

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

042

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Calcium	234100	234300	245371	105	246088.0	105	245614	105	242902.0	104
Copper	15	537	16	107	543.2	101	16	107	549.6	102

USEPA - CLP

4A-IN

ICP-AES INTERFERENCE CHECK SAMPLE

043

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

ICP-AES Instrument ID: Spectro Ciros01 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol.A	Sol AB	Sol.A	%R	Sol AB	%R	Sol.A	%R	Sol.AB	%R
Calcium	234100	234300					236456	101	237179.0	101
Copper	15	537					15	100	534.4	100

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

044

EPA SAMPLE NO.

ME0021S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

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

% Solids for Sample: 63.6

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
Aluminum		13064.3301		9023.6318		0.00	0		P
Antimony	75 - 125	10.8892	J	1.2094	J	31.45	31	N	P
Arsenic	75 - 125	16.1078		1.4981	J	12.58	116		P
Barium	75 - 125	751.4500		123.0980		628.93	100		P
Beryllium	75 - 125	15.8015		1.4489	J	15.72	91		P
Cadmium	75 - 125	15.6961		0.9539	J	15.72	94		P
Calcium		90137.5469		72935.0938		0.00	0		P
Chromium	75 - 125	65.3124		6.1054		62.89	94		P
Cobalt	75 - 125	143.9661		3.2620	J	157.23	89		P
Copper	75 - 125	115.0006		59.5500		78.62	71	N	P
Iron		15612.9102		10507.0596		0.00	0		P
Lead		45.3467		30.5552		6.29	235		P
Magnesium		47644.0898		34828.3711		0.00	0		P
Manganese		986.4558		640.9008		157.23	220		P
Mercury	75 - 125	0.9984		0.1362	J	0.79	109		CV
Nickel	75 - 125	144.8499		5.2881	J	157.23	89		P
Potassium		3731.8049		2834.1460		0.00	0		P
Selenium	75 - 125	17.7634		1.5996	J	15.72	103		P
Silver	75 - 125	14.6581		0.1729	J	15.72	92		P
Sodium		498.9737	J	351.0068	J	0.00	0		P
Thallium	75 - 125	19.5649		3.6519	J	15.72	101		P
Vanadium	75 - 125	159.7383		9.1341	J	157.23	96		P
Zinc	75 - 125	230.4425		85.4495		157.23	92		P
Cyanide	75 - 125	8.3491		1.0369	J	7.86	93		AS

Comments:

USEPA - CLP

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

045

EPA SAMPLE NO.

ME0021A

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

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		214.33		7.69	J	240.0	86		P
Copper		1161.70		378.74		757.0	103		P

Comments:

USEPA - CLP

6-IN

DUPLICATES

046

EPA SAMPLE NO.

ME0021D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

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

% Solids for Sample: 63.6 % Solids for Duplicate: 64.4

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		9023.6318		6796.8018		28	*	P
Antimony		1.2094	J	0.7856	J	42		P
Arsenic		1.4981	J	1.8311	J	20		P
Barium	62.8931	123.0980		85.6786		36		P
Beryllium		1.4489	J	0.8377	J	53		P
Cadmium		0.9539	J	0.9912	J	4		P
Calcium		72935.0938		64782.2695		12		P
Chromium	3.1447	6.1054		6.8452		11		P
Cobalt		3.2620	J	3.4035	J	4		P
Copper		59.5500		56.0382		6		P
Iron		10507.0596		12690.1602		19		P
Lead		30.5552		34.8549		13		P
Magnesium		34828.3711		31351.6406		11		P
Manganese		640.9008		477.6320		29	*	P
Mercury		0.1362	J	0.1171	J	15		CV
Nickel		5.2881	J	6.0652	J	14		P
Potassium	1572.3270	2834.1460		2736.8479		3		P
Selenium		1.5996	J	2.6037	J	48		P
Silver		0.1729	J	0.0088	J	181		P
Sodium		351.0068	J	213.1511	J	49		P
Thallium		3.6519	J	2.3204	J	45		P
Vanadium		9.1341	J	10.3214	J	12		P
Zinc	18.8679	85.4495		87.7206		3		P
Cyanide		1.0369	J	1.0008	J	4		AS

USEPA - CLP

7 - IN

LABORATORY CONTROL SAMPLE

047

Lab Name: Bonner Analytical Testing Compan Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No: _____ SDG NO.: ME0008

Solid LCS Source: ERA 246

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits		%R
Aluminum				8470.0	9133.25		2660.0	14300.0	108
Antimony				0.0	1.02	J	0.0	0.0	0
Arsenic				380.0	339.60		338.9	422.0	89
Barium				75.5	74.22		50.2	101.0	98
Beryllium				0.4	0.376	J	0.2	0.7	87
Cadmium				0.9	0.56	J	0.0	2.9	61
Calcium				5420.0	4780.68		3920.0	6930.0	88
Chromium				31.0	29.62		17.2	44.9	96
Cobalt				4.7	4.66	J	3.4	6.0	100
Copper				8.9	8.53		5.7	12.2	96
Iron				10700.0	10142.59		6700.0	14400.0	95
Lead				213.0	200.41		170.0	257.0	94
Magnesium				3060.0	2859.41		2080.0	4050.0	93
Manganese				206.0	210.11		160.0	253.0	102
Mercury				12.3	12.0		7.8	16.9	98
Nickel				11.0	10.51		7.5	14.5	96
Potassium				2230.0	2307.30		578.0	3880.0	103
Selenium				105.0	99.15		82.1	128.0	94
Silver				0.0	0.090	J	0.0	0.0	0
Sodium				296.0	297.54	J	136.0	455.0	101
Thallium				111.0	104.45		85.4	138.0	94
Vanadium				21.7	22.16		8.1	35.4	102
Zinc				93.8	81.94		64.0	124.0	87
Cyanide				9.6	9.4		7.4	11.8	98

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

049

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

050

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	40	0.91
Antimony	206.83	12	0.47
Arsenic	189.04	3	0.27
Barium	233.53	40	0.05
Beryllium	313.11	1	0.004
Cadmium	226.50	1	0.032
Calcium	318.13	1000	1.5
Chromium	267.72	2	0.05
Cobalt	228.62	10	0.05
Copper	324.75	5	0.31
Iron	261.19	20	1.17
Lead	168.22	2	0.38
Magnesium	279.08	1000	0.43
Manganese	257.61	3	0.02
Nickel	231.60	8	0.08
Potassium	766.49	1000	0.59
Selenium	196.09	7	0.89
Silver	328.07	2	0.05
Sodium	330.24	1000	17.5
Thallium	190.86	5	0.32
Vanadium	292.40	10	0.06
Zinc	213.86	12	0.20

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

051

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

052

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.076

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

053

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CS1

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

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.10	0.038

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

054

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

055

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

056

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DS2

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

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	1	0.10

USEPA - CLP

12-IN

PREPARATION LOG

062

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Preparation Method: HS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBS01	10/21/2003	1.00	100
LCSS01	10/21/2003	1.05	100
ME0021	10/21/2003	1.00	100
ME0021D	10/21/2003	1.00	100
ME0021S	10/21/2003	1.00	100
ME0008	10/21/2003	1.00	100
ME0011	10/21/2003	1.00	100
ME0012	10/21/2003	1.00	100
ME0013	10/21/2003	1.00	100
ME0015	10/21/2003	1.00	100
ME0016	10/21/2003	1.00	100
ME0017	10/21/2003	1.00	100
ME0018	10/21/2003	1.00	100
ME0022	10/21/2003	1.00	100
ME0023	10/21/2003	1.00	100
ME0024	10/21/2003	1.00	100
ME0025	10/21/2003	1.00	100

Comments:

USEPA - CLP

12-IN

PREPARATION LOG

063

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0008

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
S0	10/24/2003		100
S0.2	10/24/2003		100
S1	10/24/2003		100
S2	10/24/2003		100
S5	10/24/2003		100
S10	10/24/2003		100
ICV01	10/24/2003		100
ICB01	10/24/2003		100
CRI01	10/24/2003		100
CCV01	10/24/2003		100
CCB01	10/24/2003		100
PBS01	10/24/2003	0.20	100
LCSS01	10/24/2003	0.20	100
ME0008	10/24/2003	0.20	100
ME0011	10/24/2003	0.20	100
ME0012	10/24/2003	0.20	100
ME0013	10/24/2003	0.20	100
ME0015	10/24/2003	0.20	100
ME0016	10/24/2003	0.20	100
ME0017	10/24/2003	0.20	100
ME0018	10/24/2003	0.20	100
CCV02	10/24/2003		100
CCB02	10/24/2003		100
ME0021	10/24/2003	0.20	100
ME0021D	10/24/2003	0.20	100
ME0021S	10/24/2003	0.20	100
ME0022	10/24/2003	0.20	100
ME0023	10/24/2003	0.20	100
ME0024	10/24/2003	0.20	100
ME0025	10/24/2003	0.20	100
CRI02	10/24/2003		100
CCV03	10/24/2003		100
CCB03	10/24/2003		100

Comments: _____

USEPA - CLP

12-IN

PREPARATION LOG

Lab Name: Bonner Analytical Testing Comp Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0008

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV01	10/27/2003		50
MIDRANGE250	10/27/2003		50
PBS01	10/27/2003	1.00	50
LCSS01	10/27/2003	1.00	50
ME0021	10/27/2003	1.00	50
ME0021D	10/27/2003	1.00	50
ME0021S	10/27/2003	1.00	50
ME0008	10/27/2003	1.00	50
ME0011	10/27/2003	1.00	50
ME0012	10/27/2003	1.00	50
ME0013	10/27/2003	1.00	50
ME0015	10/27/2003	1.00	50
ME0016	10/27/2003	1.00	50
ME0017	10/27/2003	1.00	50
ME0018	10/27/2003	1.00	50
ME0022	10/27/2003	1.00	50
ME0023	10/27/2003	1.00	50
ME0024	10/27/2003	1.00	50
ME0025	10/27/2003	1.00	50

Comments:

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	6	ME0009	Water

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

NOV 1 9 2003
IEPA-BOL-

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 13, 2003

SUBJECT: Review of Data
Received for Review on November 6, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0009

Number and Type of Samples: 6 waters

Sample Numbers: ME0009,10,14,19,20,26

Laboratory: Bonner Hrs. for Review: /

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0009
Laboratory: Bonner

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

Six water samples numbered ME0009, ME0010, ME0014, ME0019, ME0020, and ME0026 were collected on October 14, 2003. The lab received the samples on October 16, 2003. The sample cooler temperatures were 7.3 and 6.2 degrees C upon receipt. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM05.2 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: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0009
Laboratory: Bonner

F. HOLDING TIME:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-2 The following inorganic water samples had no pH data. Hits and non-detects are not flagged.

ME0009
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

ME0010
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

ME0014
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

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

ME0019D
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

ME0019S
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

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

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

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0009
Laboratory: Bonner

2. CALIBRATIONS:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

No defects found.

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

No defects found.

3. BLANKS:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Blanks **Protocol: INORG**

No defects found.

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

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

No defects found.

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259 SDG Number: ME0009
Site Name: U.S. Steel Coking Facility Laboratory: Bonner

Name: ME0009 SDG No.: ME0009 Criteria: ILM05 Defects: ILM5

Qualification: Laboratory Control Sample **Protocol: INORG**

No defects found.

5. LABORATORY AND FIELD DUPLICATE

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

No defects found.

6. ICP ANALYSIS

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Interference Check Sample **Protocol: INORG**

DC-6 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 mg/L (ppm) that may cause potential interference. Use professional judgement to qualify sample data.

ME0009
Potassium, Sodium

ME0010
Sodium

ME0014
Potassium, Sodium

ME0019
Potassium, Sodium

DC-10 The following inorganic samples have one or more interferents present at concentrations more than true amounts added in the ICSAB solution. Use Professional judgement to qualify sample data.

ME0009, ME0020

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 10

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0009
Laboratory: Bonner

alification: Serial Dilution **Protocol: INORG**

No defects found.

7. GFAA ANALYSIS

8. SAMPLE RESULTS

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0009	SDG No.: ME0009	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

No defects found.

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 13, 2003

ILM05.2 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 result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0009
BILL'S EXCAVATING
BONNER

Number of Soil Samples : 0
Number of Water Samples : 6

Sample Number :	ME0009		ME0010		ME0014		ME0019		ME0020	
Sampling Location :	S201		S201 D		S202		S203		S204	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	10/14/2003		10/14/2003		10/14/2003		10/14/2003		10/14/2003	
Time Sampled :	12:00		12:00		12:50		14:00		14:50	
%Solids :	0.0		0.0		0.0		0.0		0.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	77300		49.8		509		78.1		9250	
ANTIMONY	60.0	U	60.0	U	60.0	U	60.0	U	60.0	U
ARSENIC	47.5		3.0		15.0	U	15.0	U	17.0	
BARIUM	831		85.5		75.1		35.2		392	
BERYLLIUM	3.9		5.0	U	5.0	U	0.050		3.0	
CADMIUM	10.8		5.0	U	5.0	U	5.0	U	2.6	
CALCIUM	449000		48100		70900		62000		273000	
CHROMIUM	139		10.0	U	10.0	U	10.0	U	4.5	
COBALT	44.5		0.72		0.61		50.0	U	2.9	
COPPER	358		4.9		3.2		25.0	U	46.6	
IRON	121000		97.5		583		87.4		12200	
LEAD	418		10.0	U	10.0	U	10.0	U	129	
MAGNESIUM	113000		40800		15300		22100		75100	
MANGANESE	5110		203		73.1		63.6		1600	
MERCURY	0.92		0.20	U	0.20	U	0.20	U	1.8	
NICKEL	131		2.7		40.0	U	40.0	U	4.9	
POTASSIUM	25600		6310		17600		17100		7570	
SELENIUM	35.0	U	35.0	U	35.0	U	35.0	U	13.0	
SILVER	1.5		10.0	U	10.0	U	10.0	U	10.0	U
SODIUM	38100		32700		14400		20800		8600	
THALLIUM	22.1		25.0	U	25.0	U	25.0	U	9.5	
VANADIUM	156		50.0	U	2.0		50.0	U	6.9	
ZINC	716		5.5		3.7		60.0	U	110	
CYANIDE	3.1		3.3		3.0		3.0		12.8	

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 #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0009
BILL'S EXCAVATING
BONNER

Sample Number :	ME0026		ME0019D		ME0019S					
Sampling Location :	S205		S203		S203					
Matrix :	Water		Water		Water					
Units :	ug/L		ug/L		ug/L					
Date Sampled :	10/14/2003		10/14/2003		10/14/2003					
Time Sampled :	15:30		14:00		14:00					
%Solids :	0.0		0.0		0.0					
Dilution Factor :	1.0		1.0		1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	51.5		72.3		1990					
ANTIMONY	60.0	U	60.0	U	109					
ARSENIC	15.0	U	15.0	U	45.8					
BARIUM	20.5		35.2		2080					
BERYLLIUM	5.0	U	5.0	U	50.6					
CADMIUM	5.0	U	5.0	U	52.2					
CALCIUM	38400		62200		62100					
CHROMIUM	10.0	U	10.0	U	198					
COBALT	50.0	U	50.0	U	498					
COPPER	3.7		25.0	U	255					
IRON	1900		85.8		1070					
LEAD	10.0	U	10.0	U	24.0					
MAGNESIUM	4700		22000		22300					
MANGANESE	299		63.6		565					
MERCURY	0.20	U	0.20	U	0.99					
NICKEL	40.0	U	40.0	U	507					
POTASSIUM	4790		16800		17200					
SELENIUM	35.0	U	35.0	U	52.1					
SILVER	10.0	U	10.0	U	48.3					
SODIUM	2770		20800		21500					
THALLIUM	25.0	U	25.0	U	52.2					
VANADIUM	50.0	U	50.0	U	512					
ZINC	4.4		60.0	U	507					
CYANIDE	2.5		3.5		100					

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0009

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z6215892210022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730	[illegible]	10-16-03 0920
2			
3			
4			

For Lab Use Only

Lab Contract No: 68W02067
Unit Price: $72.00
Transfer To:
Lab Contract No:
Unit Price:

BJ 10-16-03

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0008	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279285 (Ice Only) (1)	X101	S: 10/14/2003 12:00	E0008	good
ME0009	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279289 (HNO3), 5-279290 (NaOH) (2)	S201	S: 10/14/2003 12:00	E0009	
ME0010	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279295 (HNO3), 5-279296 (NaOH) (2)	S201 D	S: 10/14/2003 12:00	E0010	
ME0011	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279301 (Ice Only) (1)	X201	S: 10/14/2003 12:00	E0011	
ME0012	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279305 (Ice Only) (1)	X201 D	S: 10/14/2003 12:00	E0012	
ME0013	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279309 (Ice Only) (1)	X202	S: 10/14/2003 12:50	E0013	
ME0014	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279313 (HNO3), 5-279314 (NaOH) (2)	S202	S: 10/14/2003 12:50	E0014	
ME0015	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279319 (Ice Only) (1)	X102	S: 10/14/2003 13:30	E0015	
ME0016	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279323 (Ice Only) (1)	X203	S: 10/14/2003 13:30	E0016	
ME0017	Soil/Sediment/ Bruce Everetts	H/G	TM/CN (21)	5-279327 (Ice Only) (1)	X204	S: 10/14/2003 14:50	E0017	

ORIGINAL IN CSF: ME0008
Signature: [illegible]

COPY

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ME0019, ME0021	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 7.3°C, 6.2°C	Chain of Custody Seal Number: 27937, 27938
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y / Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

002

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides prelim[illegible] results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sa[illegible] Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 7[illegible]4-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0009

L

Date Shipped:	10/15/2003
Carrier Name:	UPS
Airbill:	1z6215892210022573
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/15/03 1730	Bill Weid	10-16-03 0920
2			
3			
4			

For Lab Use Only

Lab Contract No: 68W02067
Unit Price: $75.00
Transfer To:
Lab Contract No:
Unit Price:

Bill 10-16-03

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0018	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279331 (Ice Only) (1)	X103	S: 10/14/2003 14:00	E0018	good
ME0019	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279335 (HNO3), 5-279336 (HNO3), 5-279337 (HNO3), 5-279338 (NaOH), 5-279339 (NaOH), 5-279340 (NaOH) (6)	S203	S: 10/14/2003 14:00	E0019	
ME0020	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279353 (HNO3), 5-279354 (NaOH) (2)	S204	S: 10/14/2003 14:50	E0020	
ME0021	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279359 (Ice Only) (1)	X104	S: 10/14/2003 14:30	E0021	
ME0022	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279363 (Ice Only) (1)	X105	S: 10/14/2003 15:00	E0022	
ME0023	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279367 (Ice Only) (1)	X106	S: 10/14/2003 15:00	E0023	
ME0024	Soil/Sediment/ Ken Corkill	L/G	TM/CN (21)	5-279371 (Ice Only) (1)	X107	S: 10/14/2003 15:30	E0024	
ME0025	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279375 (1)	X205	S: 10/14/2003 15:30	E0025	
ME0026	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279379 (HNO3), 5-279380 (NaOH) (2)	S205	S: 10/14/2003 15:30	E0026	
ME0027	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279385 (Ice Only) (1)	X206	S: 10/15/2003 10:00	E0027	

ORIGINAL IN CSF: ME0008
Signature: Bill Weid

COPY

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0019, ME0021		7.3°C, 6.2°C	27937, 27938

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G Custody Seal Intact? Y Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

003

TR Number: 5-314975591-101503-0001

LABORATORY COPY

PR provides prelim[illegible] results. Requests for preliminary results will increase analytical costs.
Send Copy to: S[illegible] Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 7[illegible]64-9348 Fax 703/264-9222

NOV 0 6 2003

Bonner Analytical Testing Company 005

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0009
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-16-03 under UPS airbill number 1Z6215892210022573, respectively. Custody seals were present and intact, and the cooler temp measured 6.2°C, respectively. Sample ME0019 was listed as QC. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

No Discrepancies

ICP-AES Metals

No Discrepancies

CV-AA Mercury

During digestion, Sample ME0009 depleted color from potassium permanganate. Another aliquot of potassium permanganate was added to all samples and standards on the digestion block.

Cyanides

No Discrepancies

CSF

No Discrepancies

Authorized by _____
Steve Flowers
Quality Assurance Officer

NOV 0 6 2003

004

USEPA - CLP

COVER PAGE

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: SDG No: ME0009

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0009	BT94321
ME0010	BT94322
ME0014	BT94323
ME0019	BT94324
ME0019D	BT94324D
ME0019S	BT94324S
ME0020	BT94325
ME0026	BT94326

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Christopher M. Bonner

Date: 11/03/03 Title: Inorganic Laboratory Manager

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

006

EPA SAMPLE NO.

ME0009

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94321

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	77300			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	47.5			P
7440-39-3	Barium	831			P
7440-41-7	Beryllium	3.9	J		P
7440-43-9	Cadmium	10.8			P
7440-70-2	Calcium	449000			P
7440-47-3	Chromium	139			P
7440-48-4	Cobalt	44.5	J		P
7440-50-8	Copper	358			P
7439-89-6	Iron	121000			P
7439-92-1	Lead	418			P
7439-95-4	Magnesium	113000			P
7439-96-5	Manganese	5110			P
7439-97-6	Mercury	0.92			CV
7440-02-0	Nickel	131			P
7440-09-7	Potassium	25600			P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	1.5	J		P
7440-23-5	Sodium	38100			P
7440-28-0	Thallium	22.1	J		P
7440-62-2	Vanadium	156			P
7440-66-6	Zinc	716			P
57-12-5	Cyanide	3.1	J		AS

Color Before: Brown Clarity Before: Opaque Texture:

Color After: Yellow Clarity After: Clear Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

007

EPA SAMPLE NO.

ME0010

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94322

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	49.8	J		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	3.0	J		P
7440-39-3	Barium	85.5	J		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	48100			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	0.72	J		P
7440-50-8	Copper	4.9	J		P
7439-89-6	Iron	97.5	J		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	40800			P
7439-96-5	Manganese	203			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	2.7	J		P
7440-09-7	Potassium	6310			P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	32700			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	5.5	J		P
57-12-5	Cyanide	3.3	J		AS

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

008

EPA SAMPLE NO.

ME0014

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94323

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	509			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	15.0	U		P
7440-39-3	Barium	75.1	J		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	70900			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	0.61	J		P
7440-50-8	Copper	3.2	J		P
7439-89-6	Iron	583			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	15300			P
7439-96-5	Manganese	73.1			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	17600			P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	14400			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	2.0	J		P
7440-66-6	Zinc	3.7	J		P
57-12-5	Cyanide	3.0	J		AS

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

009

EPA SAMPLE NO.

ME0019

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94324

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	78.1	J		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	15.0	U		P
7440-39-3	Barium	35.2	J		P
7440-41-7	Beryllium	0.05	J		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	62000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	87.4	J		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	22100			P
7439-96-5	Manganese	63.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	17100			P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	20800			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P
57-12-5	Cyanide	3.0	J		AS

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

010

EPA SAMPLE NO.

ME0020

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94325

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9250			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	17.0			P
7440-39-3	Barium	392			P
7440-41-7	Beryllium	3.0	J		P
7440-43-9	Cadmium	2.6	J		P
7440-70-2	Calcium	273000			P
7440-47-3	Chromium	4.5	J		P
7440-48-4	Cobalt	2.9	J		P
7440-50-8	Copper	46.6			P
7439-89-6	Iron	12200			P
7439-92-1	Lead	129			P
7439-95-4	Magnesium	75100			P
7439-96-5	Manganese	1600			P
7439-97-6	Mercury	1.8			CV
7440-02-0	Nickel	4.9	J		P
7440-09-7	Potassium	7570			P
7782-49-2	Selenium	13.0	J		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	8600			P
7440-28-0	Thallium	9.5	J		P
7440-62-2	Vanadium	6.9	J		P
7440-66-6	Zinc	110			P
57-12-5	Cyanide	13.00			AS

Color Before: Brown Clarity Before: Opaque Texture:

Color After: Yellow Clarity After: Cloudy Artifacts:

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

011

EPA SAMPLE NO.

ME0026

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Matrix (soil/water): WATER Lab Sample ID: BT94326

Level (low/med): LOW Date Received: 10/16/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	51.5	J		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	15.0	U		P
7440-39-3	Barium	20.5	J		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	38400			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	3.7	J		P
7439-89-6	Iron	1900			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	4700	J		P
7439-96-5	Manganese	299			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	4790	J		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	2770	J		P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	4.4	J		P
57-12-5	Cyanide	2.5	J		AS

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

USEPA - CLP

3-IN

BLANKS

019

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0009

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200.0	U	17.4	J	10.4	J	30.2	J	21.191	J	P
Antimony	5.2	J	60.0	U	60.0	U	60.0	U	60.000	U	P
Arsenic	2.8	J	15.0	U	15.0	U	3.9	J	15.000	U	P
Barium	200.0	U	200.0	U	200.0	U	0.6	J	200.000	U	P
Beryllium	0.06	J	5.00	U	5.00	U	0.07	J	5.000	U	P
Cadmium	5.0	U	5.0	U	5.0	U	0.3	J	5.000	U	P
Calcium	20.0	J	32.8	J	43.5	J	68.3	J	67.059	J	P
Chromium	10.0	U	10.0	U	10.0	U	0.6	J	0.983	J	P
Cobalt	50.0	U	50.0	U	50.0	U	0.5	J	50.000	U	P
Copper	25.0	U	25.0	U	25.0	U	25.0	U	25.000	U	P
Iron	100.0	U	100.0	U	100.0	U	15.9	J	100.000	U	P
Lead	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Magnesium	4.4	J	17.6	J	12.5	J	33.2	J	26.654	J	P
Manganese	15.0	U	0.3	J	0.4	J	0.5	J	15.000	U	P
Mercury	0.2	U	0.2	U	-0.1	J			0.200	U	CV
Nickel	-0.9	J	40.0	U	-0.8	J	40.0	U	40.000	U	P
Potassium	-71.3	J	-72.6	J	-70.8	J	-68.9	J	-65.698	J	P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U	35.000	U	P
Silver	0.7	J	10.0	U	10.0	U	0.7	J	10.000	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Thallium	25.0	U	25.0	U	25.0	U	25.0	U	25.000	U	P
Vanadium	50.0	U	50.0	U	50.0	U	50.0	U	50.000	U	P
Zinc	60.0	U	60.0	U	60.0	U	60.0	U	60.000	U	P
Cyanide	2.1	J	10.0	U	2.3	J	2.5	J	10.000	U	AS

USEPA - CLP

3-IN

BLANKS

020

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			19.5	J	22.4	J					P
Antimony			60.0	U	6.8	J					P
Arsenic			15.0	U	15.0	U					P
Barium			0.6	J	200.0	U					P
Beryllium			0.06	J	0.07	J					P
Cadmium			5.0	U	0.3	J					P
Calcium			51.7	J	55.3	J					P
Chromium			10.0	U	10.0	U					P
Cobalt			0.6	J	0.6	J					P
Copper			25.0	U	25.0	U					P
Iron			100.0	U	100.0	U					P
Lead			10.0	U	10.0	U					P
Magnesium			19.4	J	22.7	J					P
Manganese			0.6	J	0.3	J					P
Nickel			40.0	U	1.0	J					P
Potassium			-49.7	J	-61.1	J					P
Selenium			35.0	U	35.0	U					P
Silver			10.0	U	10.0	U					P
Sodium			5000.0	U	5000.0	U					P
Thallium			25.0	U	25.0	U					P
Vanadium			0.6	J	50.0	U					P
Zinc			60.0	U	60.0	U					P
Cyanide			10.0	U							AS

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME0019S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	1994.7760		78.1077	J	2000.00	96		P
Antimony	75 - 125	108.5043		60.0000	U	100.00	109		P
Arsenic	75 - 125	45.7851		15.0000	U	40.00	114		P
Barium	75 - 125	2080.2771		35.2443	J	2000.00	102		P
Beryllium	75 - 125	50.5596		0.0481	J	50.00	101		P
Cadmium	75 - 125	52.2016		5.0000	U	50.00	104		P
Calcium		62119.2500		61979.6406		0.00	0		P
Chromium	75 - 125	198.1829		10.0000	U	200.00	99		P
Cobalt	75 - 125	497.6665		50.0000	U	500.00	100		P
Copper	75 - 125	254.8897		25.0000	U	250.00	102		P
Iron	75 - 125	1073.3781		87.4467	J	1000.00	99		P
Lead	75 - 125	24.0171		10.0000	U	20.00	120		P
Magnesium		22262.2891		22123.7891		0.00	0		P
Manganese	75 - 125	565.3478		63.5536		500.00	100		P
Mercury	75 - 125	0.9900		0.2000	U	1.00	99		CV
Nickel	75 - 125	507.3045		40.0000	U	500.00	101		P
Potassium		17204.6094		17060.2695		0.00	0		P
Selenium	75 - 125	52.0559		35.0000	U	50.00	104		P
Silver	75 - 125	48.3267		10.0000	U	50.00	97		P
Sodium		21464.1406		20802.5996		0.00	0		P
Thallium	75 - 125	52.1611		25.0000	U	50.00	104		P
Vanadium	75 - 125	511.8703		50.0000	U	500.00	102		P
Zinc	75 - 125	507.4900		60.0000	U	500.00	101		P
Cyanide	75 - 125	100.3400		3.0200	J	100.00	97		AS

Comments:

USEPA - CLP

6-IN

DUPLICATES

024

EPA SAMPLE NO.

ME0019D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

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

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		78.1077	J	72.3115	J	8		P
Antimony		60.0000	U	60.0000	U			P
Arsenic		15.0000	U	15.0000	U			P
Barium		35.2443	J	35.2283	J	0		P
Beryllium		0.0481	J	5.0000	U	200		P
Cadmium		5.0000	U	5.0000	U			P
Calcium		61979.6406		62160.6484		0		P
Chromium		10.0000	U	10.0000	U			P
Cobalt		50.0000	U	50.0000	U			P
Copper		25.0000	U	25.0000	U			P
Iron		87.4467	J	85.8255	J	2		P
Lead		10.0000	U	10.0000	U			P
Magnesium	5000.0000	22123.7891		21981.8691		1		P
Manganese	15.0000	63.5536		63.6164		0		P
Mercury		0.2000	U	0.2000	U			CV
Nickel		40.0000	U	40.0000	U			P
Potassium	5000.0000	17060.2695		16805.2793		2		P
Selenium		35.0000	U	35.0000	U			P
Silver		10.0000	U	10.0000	U			P
Sodium	5000.0000	20802.5996		20827.2598		0		P
Thallium		25.0000	U	25.0000	U			P
Vanadium		50.0000	U	50.0000	U			P
Zinc		60.0000	U	60.0000	U			P
Cyanide		3.0200	J	3.4600	J	14		AS

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

027

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

028

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Instrument Type: P Instrument ID: Spectro Ciros01 Date: 11/22/2002

Preparation Method: HW1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	9.1
Antimony	206.83	60	4.7
Arsenic	189.04	15	2.7
Barium	233.53	200	0.50
Beryllium	313.11	5	0.040
Cadmium	226.50	5	0.300
Calcium	318.13	5000	15.4
Chromium	267.72	10	0.50
Cobalt	228.62	50	0.50
Copper	324.75	25	3.1
Iron	261.19	100	11.7
Lead	168.22	10	3.8
Magnesium	279.08	5000	4.3
Manganese	257.61	15	0.20
Nickel	231.60	40	0.80
Potassium	766.49	5000	5.9
Selenium	196.09	35	8.9
Silver	328.07	10	0.50
Sodium	330.24	5000	175.0
Thallium	190.86	25	3.2
Vanadium	292.40	50	0.60
Zinc	213.86	60	2.0

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

029

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Instrument Type: CV Instrument ID: Leeman02 Date: 11/6/2002

Preparation Method: CW1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.058

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

030

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

031

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0009

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DW2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: NOV 1 4 2003

Subject: Review of Region 5 Data for **US Steel Coking Facility**

From: **Stephen Connet, Chemist, IITRI/ESAT**
Contractor to Region 5 Central Regional Laboratory
Submitted to CRL on 11-12-03

To: IEPA

Attached are the results for: **US Steel Coking Facility**

CRL data set number: **E310005**

Samples analyzed for: **ICP RCRA Metals, TCLP extracts**

Results are reported for sample designations: **E310005-01, thru -12**

NOV 1 7 2003

Sylvia Griffin NOV 1 4 2003

Data Management Coordinator and Date Received

Date Transmitted: NOV 1 4/2003

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML-10C

/ /

Received by and Date

Comments:

Attached are the results for: **US Steel Coking Facility**

CRL data set number: **E310005**

Samples analyzed for: **ICP RCRA Metals, TCLP extracts**

Results are reported for sample designations: **E310005-01, thru -12**

Rev. 4/10/02

Method: 200.7 (ICP Metals)
Site: US Steel Coking Facility
Date: November 4, 2003
Prepared by: Stephen Connet

TDF: 5-02-136
Alion Job #: 249-0-1476-102-069-001
Task Order #: 05-0-02
Data Set: E310005

NARRATIVE

Twelve (12) soil samples for TCLP extraction from the US Steel Coking Facility site were collected on October 14-16, 2003 and were received by CRL on October 17, 2003. The samples were submitted to ESAT for analysis of RCRA metals by ICP. The sample point identifications are listed on the first page of the LIMS report.

The soil samples were extracted for TCLP (method 1311, CRL SOP GEN019) on October 20, 2003. Samples E310005-02, -03, -04, -05, -06, -08, -11 and -12 were extracted using TCLP extraction fluid #1, samples E310005-01, -07, -09 and -10 were extracted using TCLP extraction fluid #2. Extraction fluid blanks were prepared and analyzed for both fluids. The TCLP extracts were digested following standard CRL 200.2 hot block digestion protocols (CRL SOP METALS025) on October 27, 2003 (digestion batch EJ32301). Matrix QC were prepared for each of the extraction fluids. TCLP extracts were digested as 10X dilutions; MDLs are adjusted accordingly. Analyses were performed on October 31, 2003 according to CRL SOP METALS003.

Analysis Run 103103 TCLP

Due to instrument problems, MDLs were reanalyzed in September and October, 2003. Some of the MDL results did not meet the requirements specified by the EPA. No element requested for this analysis was affected.

29 to 31 analyte lines out of a possible 78 lines available were chosen by a plan agreed upon by Dr. J. V. Morris. These are to be used for routine reporting of analyte values that appear in the QA summary reports.

The following analytes will be addressed in this case narrative:

Ag, As, Ba, Cd, Cr, Pb, Se

The following lists the case pertinent out-of-control QC audit check results based on default QA/QC (traditional) limits:

Blanks:	IB1	As 193	9.41 ug/L
	IB2	As 193	19.36 ug/L
		Cd 226	0.58 ug/L
	IB3	As 193	12.91 ug/L
		Se 196	14.18 ug/L

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EJ32301-BLK1	Pb 220	-3.32 ug/L	(digestion blank)
EJ32301-BLK2	As 193	8.75 ug/L	
(ext. fluid #2 blank)	Ba 455	6.22 ug/L	
	Cd 226	0.75 ug/L	
EJ32301-BLK3	As 193	7.02 ug/L	
(ext. fluid #1 blank)	Ba 455	0.85 ug/L	
	Cd 226	0.48 ug/L	

Duplicates:	E310005-01:	As 193	Dup difference (13.88 ug/L) > MDL (6.1 ug/L)
	(EJ32301-DUP1)	Cr 267	Dup difference (0.60 ug/L) > MDL (0.55 ug/L)
	E310005-02:	As 193	Dup difference (6.88 ug/L) > MDL (6.1 ug/L)
	(EJ32301-DUP2)	Se 196	Dup difference (15.42 ug/L) > MDL (10.1 ug/L)

LCM1: Ag 328 outside control limits for all LCM1 audits; however, the concentration in the standard is above the linear range for the element. LCM2 is used for control purposes for Ag 328.

RL Check Soln: Presently no "control" actions are associated with the observed RL analyte values actually determined during the analysis run. RL check solution values currently are being analyzed for purposes of generating a benchmark set of values which can be used to monitor the appropriateness of any given RL level of analyte concentration. Values are subject to change pending further repairs on the instrument.

Sample element qualifications:

Control limits are normally set according to ESAT control charts. Due to work performed on the instrument, an insufficient number of data points exist for ESAT to calculate control limits. Therefore, all control limits are set according to EPA limits.

All reported TCLP results reflect the 10X dilution performed prior to digestion. MDLs are adjusted accordingly. Raw instrument values are used for evaluation of blanks.

Extraction Fluid #1 results (samples E310005-02, -03, -04, -05, -06, -08, -11 and -12):

For Ag, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Ag duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS.

For As, the sample and duplicate sample results for E310005-02 are less than the MDL. Duplicate difference is used for control purposes. Although the absolute difference is greater than the MDL, both sample and duplicate are less than the MDL and the duplicate difference is considered acceptable. The As duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS. As was detected in the extraction blank as well as all instrument blanks. The sample result for E310005-04 is flagged "K" due to

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possible contamination. That sample is also flagged "J" because it is between the MDL and RL. The raw instrument result for sample E310005-11 was less than the negative RL; E310005-11 is flagged "L".

For Ba, Ba was detected in the extraction blank. The sample results for E310005-04, -05, -08, -11 and -12 are flagged "K" due to possible contamination.

For Cd, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Cd duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS. Cd was detected in the extraction blank as well as one of the instrument blanks. The sample results for E310005-02, -03, -04, -06, -11 and -12 are flagged "K" due to possible contamination. The sample results for E310005- 02, -03, -06, -11 and -12 are also flagged "J" because the results are between the MDL and RL.

For Cr, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Cr duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS. The sample results for E310005-03, -04 and -12 are flagged "J" because they are between the MDL and RL.

For Pb, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Pb duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS. The sample results for E310005-03 and -06 are flagged "J" because they are between the MDL and RL.

For Se, the sample result for E310005-02 was less than the MDL. The duplicate result was just above the MDL. Duplicate difference is used for control purposes. Although the duplicate difference is greater than the MDL, the duplicate difference is considered acceptable. The Se duplicate (EJ32301-DUP2) result is flagged "<5X" in LIMS.

<u>Extraction Fluid #2 results (samples E310005-01, -07, -09 and -10):</u>

For Ag, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Ag duplicate (EJ32301-DUP1) result is flagged "<5X" in LIMS.

For As, the sample and duplicate sample results for E310005-01 are less than the MDL. Duplicate difference is used for control purposes. Although the absolute difference is greater than the MDL, both sample and duplicate are less than the MDL and the duplicate difference is considered acceptable. The duplicate result is flagged "<5X" in LIMS. Raw instrument results for samples E310005-07, -09 and -10 were less than the negative RL; Those results are flagged "L".

For Ba, Ba was detected in the extraction blank. The sample result for E310005-01 is flagged "K" due to possible contamination.

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For Cd, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Cd duplicate (EJ32301-DUP1) result is flagged "<5X" in LIMS. Cd was detected in the extraction and instrument blanks. The sample results for E310005-01, -07, -09 and -10 are flagged "K" due to possible contamination. The sample result for E310005-01 is flagged "J" because it is between the MDL and RL

For Cr, the sample and duplicate sample results for E310005-01 are less than 5 times the MDL. Duplicate difference is used for control purposes. The duplicate difference is greater than the MDL; Cr for samples E310005-01, -07, -09 and -10 are flagged "*" for poor precision.

For Pb, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Pb duplicate (EJ32301-DUP1) result is flagged "<5X" in LIMS.

For Se, the sample and duplicate sample results for E310005-02 are less than 5 times the MDL. Duplicate difference is used for control purposes. The Se duplicate (EJ32301-DUP1) result is flagged "<5X" in LIMS. Se was detected in one of the instrument blanks. The sample results for E310005-07 and -09 are flagged "K" due to possible contamination. The sample results for E310005-07 and -09 are flagged "J" because they are between the MDL and RL

All flagged results are considered estimated. All results are acceptable.

Other comments

Samples E310005-09 and -10 are identified as field duplicates and show good correlation for all reported elements except Cd. No results are qualified for field duplicates. It has been observed that, due to differences in the significant figures used for calculation, RPD values calculated by LIMS are not correct.

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	**Reported:** Nov-10-03 11:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2004IE01S01 T101 (high conc.)	E310005-01	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S02 T102 (high conc.)	E310005-02	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S03 T103 (high conc.)	E310005-03	Soil	Oct-14-03 14:50	Oct-17-03 12:07
2004IE01S04 T104	E310005-04	Soil	Oct-15-03 11:00	Oct-17-03 12:07
2004IE01S05 T105	E310005-05	Soil	Oct-15-03 11:20	Oct-17-03 12:07
2004IE01S06 T106	E310005-06	Soil	Oct-15-03 09:30	Oct-17-03 12:07
2004IE01S07 T107	E310005-07	Soil	Oct-15-03 13:00	Oct-17-03 12:07
2004IE01S08 T108	E310005-08	Soil	Oct-16-03 09:00	Oct-17-03 12:07
2004IE01S09 T109	E310005-09	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01D09 T110	E310005-10	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01S10 T111	E310005-11	Soil	Oct-16-03 15:00	Oct-17-03 12:07
2004IE01S11 T112 (high conc.)	E310005-12	Soil	Oct-16-03 15:00	Oct-17-03 12:07

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Metals by ICP, TCLP Extract
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2004IE01S01 T101 (high conc.) (E310005-01) Soil Sampled: Oct-14-03 15:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	516	K	5.6	20.0	"	"	"	"	"
Cadmium	11.8	J, K	3.3	20.0	"	"	"	"	"
Chromium	13.6	J, *	5.5	20.0	"	"	"	"	"
Lead	137		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S02 T102 (high conc.) (E310005-02) Soil Sampled: Oct-14-03 15:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	333		5.6	20.0	"	"	"	"	"
Cadmium	7.6	J, K	3.3	20.0	"	"	"	"	"
Chromium	U		5.5	20.0	"	"	"	"	"
Lead	U		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S03 T103 (high conc.) (E310005-03) Soil Sampled: Oct-14-03 14:50 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	151		5.6	20.0	"	"	"	"	"
Cadmium	7.8	J, K	3.3	20.0	"	"	"	"	"
Chromium	6.5	J	5.5	20.0	"	"	"	"	"
Lead	54.1	J	32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

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000011

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Metals by ICP, TCLP Extract
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2004IE01S04 T104 (E310005-04) Soil Sampled: Oct-15-03 11:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	89.3	J, K	61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	34.9	K	5.6	20.0	"	"	"	"	"
Cadmium	28.6	K	3.3	20.0	"	"	"	"	"
Chromium	15.9	J	5.5	20.0	"	"	"	"	"
Lead	915		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S05 T105 (E310005-05) Soil Sampled: Oct-15-03 11:20 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	56.9	K	5.6	20.0	"	"	"	"	"
Cadmium	U		3.3	20.0	"	"	"	"	"
Chromium	U		5.5	20.0	"	"	"	"	"
Lead	154		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S06 T106 (E310005-06) Soil Sampled: Oct-15-03 09:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	381		5.6	20.0	"	"	"	"	"
Cadmium	8.6	J, K	3.3	20.0	"	"	"	"	"
Chromium	U		5.5	20.0	"	"	"	"	"
Lead	94.7	J	32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

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Metals by ICP, TCLP Extract
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2004IE01S07 T107 (E310005-07) Soil Sampled: Oct-15-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U	L	61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	1180		5.6	20.0	"	"	"	"	"
Cadmium	46.8	K	3.3	20.0	"	"	"	"	"
Chromium	14.2	J, *	5.5	20.0	"	"	"	"	"
Lead	450		32.0	100	"	"	"	"	"
Selenium	215	J, K	101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S08 T108 (E310005-08) Soil Sampled: Oct-16-03 09:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	66.8	K	5.6	20.0	"	"	"	"	"
Cadmium	U		3.3	20.0	"	"	"	"	"
Chromium	U		5.5	20.0	"	"	"	"	"
Lead	U		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S09 T109 (E310005-09) Soil Sampled: Oct-16-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U	L	61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	882		5.6	20.0	"	"	"	"	"
Cadmium	28.3	K	3.3	20.0	"	"	"	"	"
Chromium	U	*	5.5	20.0	"	"	"	"	"
Lead	64.9	J	32.0	100	"	"	"	"	"
Selenium	123	J, K	101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

11-10-03

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Metals by ICP, TCLP Extract
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2004IE01D09 T110 (E310005-10) Soil Sampled: Oct-16-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U	L	61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	899		5.6	20.0	"	"	"	"	"
Cadmium	22.7	K	3.3	20.0	"	"	"	"	"
Chromium	U	*	5.5	20.0	"	"	"	"	"
Lead	53.7	J	32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S10 T111 (E310005-11) Soil Sampled: Oct-16-03 15:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U	L	61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	35.5	K	5.6	20.0	"	"	"	"	"
Cadmium	10.9	J, K	3.3	20.0	"	"	"	"	"
Chromium	U		5.5	20.0	"	"	"	"	"
Lead	113		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

2004IE01S11 T112 (high conc.) (E310005-12) Soil Sampled: Oct-16-03 15:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U		61.0	300	ug/L	1	EJ32301	Oct-27-03	Oct-31-03
Barium	48.2	K	5.6	20.0	"	"	"	"	"
Cadmium	11.8	J, K	3.3	20.0	"	"	"	"	"
Chromium	18.1	J	5.5	20.0	"	"	"	"	"
Lead	430		32.0	100	"	"	"	"	"
Selenium	U		101	400	"	"	"	"	"
Silver	U		11.0	40.0	"	"	"	"	"

11-10-03

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-10-03 11:28

Notes and Definitions

*	The duplicate analysis precision is not within control limits. The reported value is estimated.
< 5X	One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
K	The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
U	Not Detected
NR	Not Reported

11-10-03

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: NOV 1 4 2003

Subject: Review of Region 5 Data for **US Steel Coking Plant**

From: **James Abston, Chemist, IIT Research Institue/ESAT**
Contractor to Region 5 Central Regional Laboratory
Submitted to CRL on

James Abston
11/13/03

To: IEPA

Attached are the results for: **US Steel Coking Plant**

CRL data set number: **E310005**

Samples analyzed for: **Total Mercury** (TCLP)

Results are reported for sample designations: **E310005-01 thru -12**

Sylvia Griffin NOV 1 4 2003

Data Management Coordinator and Date Received

Date Transmitted: NOV 1 4 2003

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at 3-7444 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
ML-10C

_____ / /

Received by and Date

Attached are the results for: **US Steel Coking Plant**
CRL data set number: **E310005**
Samples analyzed for: **Total Mercury** (TCLP)
Results are reported for sample designations: **E310005-01 thru -12**

Comments:

Parameter: Total Mercury (TCLP)
Method: 245.2 *NS (AIG044)
Analyst: James Abston
Date: October 30, 2003

Data Set: E310005
TDF: 5-02-136
JOB: 249-0-1476-102-069-001
Task Order: 05-0-02

NARRATIVE

Twelve (12) sediment samples for US Steel Coking Facility were collected on October 14, 2003. The samples were received on October 17, 2003. These samples were assigned to ESAT for TCLP extraction and subsequent total mercury analysis.

The sediment samples were extracted for TCLP (Method 1311, CRL SOP GEN019) on October 20, 2003. The extracts were manually digested on October 29, 2003 (Batch EJ32801) according to SOP modifications of June 18, 2003. All digestion tubes were capped during digestion. Hydroxylamine was added and analysis was performed on October 30, 2003. All extracts were analyzed within the 28 day holding time.

Matrix QC were only performed on a extract using extraction fluid #2.

The duplicate difference was used for QC control purposes for sample E310005-07 because both the sample and matrix duplicate samples results were less than 5X the MDL. The duplicate difference is acceptable. Sample EJ32801-DUP1 is flagged "<5X".

Sample	Extraction Fluid
E310005-01	#2
E310005-02	#1
E310005-03	#1
E310005-04	#1
E310005-05	#1
E310005-06	#1
E310005-07	#2
E310005-08	#1
E310005-09	#2
E310005-10	#2
E310005-11	#1
E310005-12	#1

All instrument QC and matrix QC were acceptable. All sample results are acceptable.

Matrix and digestion QC reports and sample results are provided as LIMS printouts.

JAbston 11/6/03

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Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-10-03 09:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2004IE01S01 T101 (high conc.)	E310005-01	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S02 T102 (high conc.)	E310005-02	Soil	Oct-14-03 15:30	Oct-17-03 12:07
2004IE01S03 T103 (high conc.)	E310005-03	Soil	Oct-14-03 14:50	Oct-17-03 12:07
2004IE01S04 T104	E310005-04	Soil	Oct-15-03 11:00	Oct-17-03 12:07
2004IE01S05 T105	E310005-05	Soil	Oct-15-03 11:20	Oct-17-03 12:07
2004IE01S06 T106	E310005-06	Soil	Oct-15-03 09:30	Oct-17-03 12:07
2004IE01S07 T107	E310005-07	Soil	Oct-15-03 13:00	Oct-17-03 12:07
2004IE01S08 T108	E310005-08	Soil	Oct-16-03 09:00	Oct-17-03 12:07
2004IE01S09 T109	E310005-09	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01D09 T110	E310005-10	Soil	Oct-16-03 13:00	Oct-17-03 12:07
2004IE01S10 T111	E310005-11	Soil	Oct-16-03 15:00	Oct-17-03 12:07
2004IE01S11 T112 (high conc.)	E310005-12	Soil	Oct-16-03 15:00	Oct-17-03 12:07

James Abston 11/10/03
James Abston, Chemist

IITRI
IIT RESEARCH INSTITUTE

IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-10-03 09:14

Mercury by Cold Vapor AA, TCLP Extract
IITRI - ESAT Contract

2004IE01S01 T101 (high conc.) (E310005-01) Soil Sampled: Oct-14-03 15:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S02 T102 (high conc.) (E310005-02) Soil Sampled: Oct-14-03 15:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S03 T103 (high conc.) (E310005-03) Soil Sampled: Oct-14-03 14:50 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S04 T104 (E310005-04) Soil Sampled: Oct-15-03 11:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S05 T105 (E310005-05) Soil Sampled: Oct-15-03 11:20 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S06 T106 (E310005-06) Soil Sampled: Oct-15-03 09:30 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	0.683		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S07 T107 (E310005-07) Soil Sampled: Oct-15-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S08 T108 (E310005-08) Soil Sampled: Oct-16-03 09:00 Received: Oct-17-03 12:07

James Abston 11/10/03
James Abston, Chemist

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IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-10-03 09:14

Mercury by Cold Vapor AA, TCLP Extract
IITRI - ESAT Contract

2004IE01S08 T108 (E310005-08) Soil Sampled: Oct-16-03 09:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S09 T109 (E310005-09) Soil Sampled: Oct-16-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01D09 T110 (E310005-10) Soil Sampled: Oct-16-03 13:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S10 T111 (E310005-11) Soil Sampled: Oct-16-03 15:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

2004IE01S11 T112 (high conc.) (E310005-12) Soil Sampled: Oct-16-03 15:00 Received: Oct-17-03 12:07

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U		0.100	0.500	ug/L	1	EJ32801	Oct-29-03	Oct-30-03

James Abston 11/18/03
James Abston, Chemist

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IIT Research Institute ESAT Region 5
536 South Clark Street, Suite 734; Chicago, IL 60605
Telephone (312) 353-8302 Facsimile (312) 353-8307

Superfund, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: US Steel Coking Facility Project Number: [none] Project Manager: Howard Pham	Reported: Nov-10-03 09:14

Notes and Definitions

< 5X	One or both concentration values for the duplicate analysis audit were less than 5 times the MDL value AND the difference between the two values was less than the MDL value. The duplicate audit is acceptable. No qualification made for this QC audit.
U	Not Detected
NR	Not Reported

James Abston 11/10/03
James Abston, Chemist

DATE: November 14, 2003

IEPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Bob Casper

SITE NAME: U.S. Steel Coking Facility

CASE NO.	LAB	NO. OF SAMPLES	SDG	MATRIX
32259	Bonner	1	ME0035	Water

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

NOV 1 9 2003

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

NOV 14 2003

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: November 13, 2003

SUBJECT: Review of Data
Received for Review on November 6, 2003

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: U.S. Steel Coking Facility

CASE NUMBER: 32259 SDG NUMBER: ME0035

Number and Type of Samples: 1 water

Sample Numbers: ME0035

Laboratory: Bonner Hrs. for Review: 1

Following are our findings:

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

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0035
Laboratory: Bonner

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

One water sample numbered ME0035 was collected on October 15, 2003. The lab received the sample on October 17, 2003 in good condition. The sample was analyzed for metals and cyanide. The sample was analyzed using CLP SOW ILM05.2 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: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0035
Laboratory: Bonner

1. HOLDING TIME:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 4

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Holding Time **Protocol: INORG**

DC-2 The following inorganic water samples had no pH data. Hits and non-detects are not flagged.

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

ME0035D
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

ME0035S
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Cyanide

2. CALIBRATIONS:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 1

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Calibrations **Protocol: INORG**

No defects found.

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 2

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: CRDL/CRQL Standard **Protocol: INORG**

DC-1 The following inorganic samples are associated with a CRDL standard with low percent recovery. Hits and non-detects are not flagged.

Arsenic
ME0035, PBW01

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0035
Laboratory: Bonner

3. BLANKS:

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 6

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Blanks **Protocol: INORG**

No defects found.

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

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 8

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Matrix Spikes **Protocol: INORG**

DC-2 The following inorganic samples are associated with a matrix spike analysis performed on a field blank. The data must be qualified using professional judgement. Hits and non-detects are not flagged.

ME0035

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 7

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Laboratory Control Sample **Protocol: INORG**

No defects found.

5. LABORATORY AND FIELD DUPLICATE

Date: 11/5/2003 | Wincadre 3.1.3.2 | Page: 3

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Duplicates **Protocol: INORG**

No defects found.

6. ICP ANALYSIS

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0035
Laboratory: Bonner

11/5/2003 Wincadre 3.1.3.2 Page: 5

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Interference Check Sample **Protocol: INORG**

No defects found.

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 10

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Serial Dilution **Protocol: INORG**

DC-2 The following inorganic samples are associated with an ICP serial dilution which was performed on a field blank. The data must be qualified using professional judgement. Hits and non-detects are not flagged.

Aluminum
ME0035

Antimony
ME0035

Arsenic
ME0035

Barium
ME0035

Beryllium
ME0035

Cadmium
ME0035

Calcium
ME0035

Chromium
ME0035

Cobalt
ME0035

Copper
ME0035

Iron
ME0035

Lead
ME0035

Magnesium
ME0035

Manganese
ME0035

Assembled By: ESAT
Date: November 13, 2003

Case Number : 32259
Site Name: U.S. Steel Coking Facility

SDG Number: ME0035
Laboratory: Bonner

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 11

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Mercury
ME0035

Nickel
ME0035

Potassium
ME0035

Selenium
ME0035

Silver
ME0035

Sodium
ME0035

Thallium
ME0035

Vanadium
ME0035

Zinc
ME0035

Cyanide
ME0035

7. GFAA ANALYSIS

8. SAMPLE RESULTS

Date: 11/5/2003 Wincadre 3.1.3.2 Page: 9

Data Review Results

Lab ID: BONNER	Case No.: 32259	Method: ILM05	Flag :NFGFLAG
File Name: ME0035	SDG No.: ME0035	Criteria: ILM05	Defects: ILM5

Qualification: Sample Result Verification **Protocol: INORG**

No defects found.

All data, except those qualified above, are acceptable.

Assembled By: ESAT
Date: November 13, 2003

ILM05.2 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 result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 32259
Site :
Lab. :
Reviewer :
Date :

SDG : ME0035
BILL'S EXCAVATING
BONNER

Number of Soil Samples : 0
Number of Water Samples : 1

Sample Number :	ME0035		ME0035D		ME0035S					
Sampling Location :	FB1		FB1		FB1					
Matrix :	Water		Water		Water					
Units :	ug/L		ug/L		ug/L					
Date Sampled :	10/15/2003		10/15/2003		10/15/2003					
Time Sampled :	13:00		13:00		13:00					
%Solids :	0.0		0.0		0.0					
Dilution Factor :	1.0		1.0		1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	U	200	U	1900					
ANTIMONY	60.0	U	60.0	U	105					
ARSENIC	15.0	U	15.0	U	37.1					
BARIUM	0.99		200	U	2030					
BERYLLIUM	5.0	U	5.0	U	49.6					
CADMIUM	5.0	U	5.0	U	51.6					
CALCIUM	24.2		22.2		5000	U				
CHROMIUM	10.0	U	10.0	U	198					
COBALT	50.0	U	50.0	U	495					
COPPER	25.0	U	10.5		237					
IRON	100	U	100	U	979					
LEAD	10.0	U	10.0	U	18.6					
MAGNESIUM	5000	U	5000	U	5000	U				
MANGANESE	15.0	U	15.0	U	503					
MERCURY	0.20	U	0.20	U	0.99					
NICKEL	40.0	U	40.0	U	496					
POTASSIUM	5000	U	5000	U	5000	U				
SELENIUM	35.0	U	35.0	U	48.6					
SILVER	10.0	U	10.0	U	45.8					
SODIUM	169		320		380					
THALLIUM	25.0	U	25.0	U	55.4					
VANADIUM	50.0	U	50.0	U	499					
ZINC	60.0	U	19.3		487					
CYANIDE	4.4		2.4		90.7					

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.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 32259
DAS No:
SDG No: ME0035

L

Date Shipped:	10/16/2003
Carrier Name:	UPS
Airbill:	1z62158922100234 47
Shipped to:	Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg MS 39402 (601) 264-2854

Chain of Custody Record

Sampler Signature: Bruce Everetts

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Bruce Everetts	10/16/03 1630	[illegible]	10-17-03 1200
2			
3			
4			

For Lab Use Only

Lab Contract No:	68WO2067
Unit Price:	$72.00
Transfer To:	
Lab Contract No:	
Unit Price:	

BW 10-17-03

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME0035	Surface Water/ Bruce Everetts	L/G	CN (21), TM (21)	5-279721 (HNO3), 5-279722 (NaOH) (2)	FB1	S: 10/15/2003 13:00	E0035	good
ME0040	Soil/Sediment/ Ken Cork II	L/G	TM/CN (21)	5-279743 (Ice Only) (1)	X111	S: 10/15/2003 12:30	E0040	
ME0041	Soil/Sediment/ Ken Cork I	L/G	TM/CN (21)	5-279747 (Ice Only) (1)	X112	S: 10/15/2003 13:00	E0041	
ME0042	Soil/Sediment/ Ken Cork II	L/G	TM/CN (21)	5-279751 (Ice Only) (1)	X113	S: 10/15/2003 13:30	E0042	
ME0043	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279755 (Ice Only) (1)	X211	S: 10/15/2003 14:30	E0043	
ME0044	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279759 (Ice Only) (1)	X212	S: 10/15/2003 14:50	E0044	
ME0045	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279763 (Ice Only) (1)	X212 D	S: 10/8/2003 14:50	E0045	
ME0046	Soil/Sediment/ Bruce Everetts	L/G	TM/CN (21)	5-279769 (Ice Only) (1)	X213	S: 10/15/2003 16:00	E0046	
ME0047	Soil/Sediment/ Ken Cork I	L/G	TM/CN (21)	5-279773 (Ice Only) (1)	X115	S: 10/15/2003 16:30	E0047	
ME0048	Soil/Sediment/ Ken Cork I	L/G	TM/CN (21)	5-279777 (Ice Only) (1)	X114	S: 10/15/2003 15:30	E0048	

ME0040

002

Shipment for Case Complete?Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	ME0051, ME0054		5.9°C	82837

Analysis Key: Concentration: L = Low, M = Low/Medium, H = High **Type/Designate:** Composite = C, Grab = G

Custody Seal Intact? Y Shipment Iced? Y

CN = Cyanide, TM = CLP TAL Total Metals, TM/CN = CLP TAL Total Metals and Cyanide

TR Number: 5-314975591-101603-0001

LABORATORY COPY

PR provides prelim[illegible] results. Requests for preliminary results will increase analytical costs.
Send Copy to: S[illegible] Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: ME0035
Case Number: 32259
Contract Number: 68W02067

Samples in this SDG were received at BATCO on 10-17-03 under UPS airbill number 1Z6215892210023447, respectively. Custody seals were present and intact, and the cooler temp measured 5.9°C, respectively. Samples were processed by the Sample Custodian upon receipt. E-mails within this CSF can be referred to for discrepancies found during sample receipt.

Sample Receipt

1. These samples were scheduled for TM/CN/HG analysis but the TR/COC only lists TM/CN analysis. Please advise on what to analyze.

   Resolution: Per Region 5, the lab will note the issue in the SDG Narrative and proceed with analyzing the samples for TM/CN/HG analysis.

2. No QC was designated for this SDG on the TR/COC. We choose sample ME0035 to use as QC.

   Resolution: Per Region 5, the lab will select a sample for QC as long as the sample is not a PE, rinsate, or blank sample. The lab will notify SMO of the sample selected, note the issue in the SDG Narrative and proceed with the analysis of the samples.

ICP-AES Metals

No Discrepancies

CV-AA Mercury

No Discrepancies

Cyanides

No Discrepancies

CSF

No Discrepancies

Authorized by _____
Steve Flowers
Quality Assurance Officer

NOV 0 6 2003

USEPA - CLP

COVER PAGE

003

Lab Name: Bonner Analytical Testing Company Contract: 68W02067

Lab Code: BONNER Case No: 32259 NRAS No.: _____ SDG No: ME0035

SOW No.: ILM05.2

EPA Sample No.	Lab Sample ID
ME0035	BT94351
ME0035D	BT94351D
ME0035S	BT94351S

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	YES
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	YES
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments: _____

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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Christopher M. Bonner

Date: 11/03/03 Title: Inorganic Laboratory Manager

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

006

EPA SAMPLE NO.

ME0035

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0035

Matrix (soil/water): WATER Lab Sample ID: BT94351

Level (low/med): LOW Date Received: 10/17/2003

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	15.0	U		P
7440-39-3	Barium	0.99	J		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	24.2	J		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	15.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	169	J		P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P
57-12-5	Cyanide	4.4	J		AS

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

011

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum		183.41 J	0	185.17 J	0
Antimony	60.0	61.37	102	63.06	105
Arsenic	15.0	10.18 J	68	11.86 J	79
Barium		197.62 J	0	198.74 J	0
Beryllium	5.0	4.83 J	97	4.85 J	97
Cadmium	5.0	4.47 J	89	4.49 J	90
Calcium		4944.76 J	0	4937.94 J	0
Chromium	10.0	9.54 J	95	9.76 J	98
Cobalt	50.0	48.49 J	97	48.50 J	97
Copper	25.0	21.64 J	87	21.37 J	85
Iron		94.45 J	0	94.40 J	0
Lead	10.0	14.94	149	12.35	124
Magnesium		4760.95 J	0	4780.93 J	0
Manganese	15.0	14.85 J	99	14.82 J	99
Mercury	0.2	0.19 J	95	0.17 J	85
Nickel	40.0	37.40 J	94	37.41 J	94
Potassium		4902.22 J	0	4910.86 J	0
Selenium	35.0	32.00 J	91	35.80	102
Silver	10.0	9.47 J	95	8.97 J	90
Sodium		4542.23 J	0	4628.23 J	0
Thallium	25.0	25.60	102	24.54 J	98
Vanadium	50.0	48.98 J	98	49.27 J	99
Zinc	60.0	55.75 J	93	55.65 J	93
Cyanide	10.0	12.83	128	10.44	104

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				184.81 J	0
Antimony	60.0			59.96 J	100
Arsenic	15.0			11.05 J	74
Barium				198.35 J	0
Beryllium	5.0			4.82 J	96
Cadmium	5.0			4.37 J	87
Calcium				4937.11 J	0
Chromium	10.0			9.68 J	97
Cobalt	50.0			49.01 J	98
Copper	25.0			24.98 J	100
Iron				97.41 J	0
Lead	10.0			16.00	160
Magnesium				4761.81 J	0
Manganese	15.0			15.02	100
Nickel	40.0			37.75 J	94
Potassium				4866.40 J	0
Selenium	35.0			32.46 J	93
Silver	10.0			9.46 J	95
Sodium				4554.70 J	0
Thallium	25.0			25.26	101
Vanadium	50.0			49.27 J	99
Zinc	60.0			60.55	101
Cyanide	10.0			10.04	100

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				186.52 J	0
Antimony	60.0			59.66 J	99
Arsenic	15.0			13.58 J	91
Barium				198.59 J	0
Beryllium	5.0			4.86 J	97
Cadmium	5.0			4.58 J	92
Calcium				4962.28 J	0
Chromium	10.0			9.50 J	95
Cobalt	50.0			48.81 J	98
Copper	25.0			27.38	110
Iron				95.62 J	0
Lead	10.0			10.16	102
Magnesium				4794.17 J	0
Manganese	15.0			14.94 J	100
Nickel	40.0			37.17 J	93
Potassium				4863.90 J	0
Selenium	35.0			34.74 J	99
Silver	10.0			8.80 J	88
Sodium				4547.99 J	0
Thallium	25.0			25.95	104
Vanadium	50.0			49.23 J	98
Zinc	60.0			60.73	101
Cyanide	10.0			10.64	106

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

014

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				174.34 J	0
Antimony	60.0			60.08	100
Arsenic	15.0			9.94 J	66
Barium				196.32 J	0
Beryllium	5.0			4.83 J	97
Cadmium	5.0			4.37 J	87
Calcium				4960.34 J	0
Chromium	10.0			9.61 J	96
Cobalt	50.0			47.85 J	96
Copper	25.0			23.73 J	95
Iron				87.55 J	0
Lead	10.0			8.96 J	90
Magnesium				4829.91 J	0
Manganese	15.0			14.56 J	97
Nickel	40.0			37.09 J	93
Potassium				4538.17 J	0
Selenium	35.0			33.70 J	96
Silver	10.0			9.09 J	91
Sodium				4291.87 J	0
Thallium	25.0			25.67	103
Vanadium	50.0			48.24 J	96
Zinc	60.0			57.26 J	95

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				172.77 J	0
Antimony	60.0			56.00 J	93
Arsenic	15.0			12.27 J	82
Barium				195.52 J	0
Beryllium	5.0			4.81 J	96
Cadmium	5.0			4.34 J	87
Calcium				4937.21 J	0
Chromium	10.0			9.27 J	93
Cobalt	50.0			48.14 J	96
Copper	25.0			23.45 J	94
Iron				87.59 J	0
Lead	10.0			12.67	127
Magnesium				4813.03 J	0
Manganese	15.0			14.47 J	96
Nickel	40.0			37.33 J	93
Potassium				4540.24 J	0
Selenium	35.0			35.54	102
Silver	10.0			8.98 J	90
Sodium				4276.67 J	0
Thallium	25.0			24.39 J	98
Vanadium	50.0			48.28 J	97
Zinc	60.0			56.52 J	94

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

016

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				169.89 J	0
Antimony	60.0			59.06 J	98
Arsenic	15.0			12.02 J	80
Barium				193.63 J	0
Beryllium	5.0			4.74 J	95
Cadmium	5.0			4.39 J	88
Calcium				4880.90 J	0
Chromium	10.0			9.35 J	94
Cobalt	50.0			47.42 J	95
Copper	25.0			21.64 J	87
Iron				86.02 J	0
Lead	10.0			3.58 U	36
Magnesium				4782.38 J	0
Manganese	15.0			14.25 J	95
Nickel	40.0			37.22 J	93
Potassium				4496.32 J	0
Selenium	35.0			34.89 J	100
Silver	10.0			8.73 J	87
Sodium				4204.77 J	0
Thallium	25.0			26.26	105
Vanadium	50.0			47.81 J	96
Zinc	60.0			55.48 J	92

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

2B-IN

CRQL CHECK STANDARD

017

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG No.: ME0035

CRQL Check Standard Source: Inorganic Ventu

Concentration Units: ug/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Aluminum				171.97 J	0
Antimony	60.0			61.09	102
Arsenic	15.0			10.72 J	71
Barium				193.63 J	0
Beryllium	5.0			4.77 J	95
Cadmium	5.0			4.40 J	88
Calcium				4885.27 J	0
Chromium	10.0			9.25 J	92
Cobalt	50.0			47.42 J	95
Copper	25.0			21.28 J	85
Iron				86.24 J	0
Lead	10.0			14.19	142
Magnesium				4785.74 J	0
Manganese	15.0			14.27 J	95
Nickel	40.0			36.77 J	92
Potassium				4498.89 J	0
Selenium	35.0			37.62	107
Silver	10.0			8.57 J	86
Sodium				4318.14 J	0
Thallium	25.0			25.95	104
Vanadium	50.0			47.81 J	96
Zinc	60.0			55.21 J	92

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

USEPA - CLP

3-IN

BLANKS

018

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	-5.837	J	P
Antimony	8.7	J	60.0	U	60.0	U	60.0	U	60.000	U	P
Arsenic	15.0	U	15.0	U	15.0	U	15.0	U	15.000	U	P
Barium	-1.6	J	-1.9	J	-1.0	J	-1.4	J	-2.796	J	P
Beryllium	-0.02	J	-0.04	J	-0.03	J	-0.05	J	-0.102	J	P
Cadmium	-0.5	J	-0.5	J	-0.4	J	-0.4	J	-0.545	J	P
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Cobalt	-0.9	J	-1.0	J	-0.8	J	-0.8	J	-1.093	J	P
Copper	-1.4	J	25.0	U	-2.6	J	0.9	J	1.954	J	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	-15.163	J	P
Lead	10.0	U	10.0	U	10.0	U	10.0	U	-5.513	J	P
Magnesium	8.0	J	6.5	J	9.4	J	6.6	J	-9.870	J	P
Manganese	-0.3	J	-0.4	J	-0.1	J	-0.4	J	-0.839	J	P
Mercury	0.2	U	0.2	U	0.2	U			0.200	U	CV
Nickel	40.0	U	40.0	U	40.0	U	-2.1	J	-2.373	J	P
Potassium	-58.5	J	-72.0	J	-56.0	J	-81.5	J	-96.084	J	P
Selenium	35.0	U	35.0	U	35.0	U	35.0	U	35.000	U	P
Silver	10.0	U	10.0	U	10.0	U	10.0	U	-0.741	J	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Thallium	25.0	U	25.0	U	25.0	U	25.0	U	25.000	U	P
Vanadium	50.0	U	-0.3	J	50.0	U	50.0	U	-0.512	J	P
Zinc	-2.4	J	-1.9	J	-2.8	J	2.2	J	60.000	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	3.300	J	AS

USEPA - CLP

3-IN

BLANKS

019

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			200.0	U	5.8	J	200.0	U			P
Antimony			60.0	U	60.0	U	60.0	U			P
Arsenic			15.0	U	-6.7	J	15.0	U			P
Barium			-1.5	J	-1.0	J	-0.8	J			P
Beryllium			-0.04	J	-0.03	J	-0.02	J			P
Cadmium			-0.4	J	-0.5	J	-0.4	J			P
Calcium			5000.0	U	5000.0	U	5000.0	U			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			-0.7	J	-0.4	J	-0.6	J			P
Copper			25.0	U	-1.3	J	5.0	J			P
Iron			-7.2	J	100.0	U	100.0	U			P
Lead			10.0	U	9.4	J	10.0	U			P
Magnesium			7.6	J	17.2	J	15.3	J			P
Manganese			-0.3	J	-0.2	J	-0.3	J			P
Nickel			40.0	U	40.0	U	-2.0	J			P
Potassium			-81.4	J	-88.0	J	-84.6	J			P
Selenium			35.0	U	35.0	U	35.0	U			P
Silver			10.0	U	10.0	U	10.0	U			P
Sodium			233.9	J	5000.0	U	5000.0	U			P
Thallium			25.0	U	25.0	U	25.0	U			P
Vanadium			-0.3	J	50.0	U	50.0	U			P
Zinc			60.0	U	-1.6	J	4.6	J			P
Cyanide			10.0	U	10.0	U	10.0	U			AS

USEPA - CLP

3-IN

BLANKS

020

Lab Name: Bonner Analytical Testing Com Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			10.1	J							P
Antimony			60.0	U							P
Arsenic			15.0	U							P
Barium			-0.5	J							P
Beryllium			5.00	U							P
Cadmium			-0.4	J							P
Calcium			5000.0	U							P
Chromium			10.0	U							P
Cobalt			-0.6	J							P
Copper			4.2	J							P
Iron			100.0	U							P
Lead			10.0	U							P
Magnesium			23.7	J							P
Manganese			-0.2	J							P
Nickel			40.0	U							P
Potassium			-87.2	J							P
Selenium			35.0	U							P
Silver			10.0	U							P
Sodium			5000.0	U							P
Thallium			25.0	U							P
Vanadium			50.0	U							P
Zinc			60.0	U							P

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

024

EPA SAMPLE NO.

ME0035S

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: SDG NO.: ME0035

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	1899.3160		200.0000	U	2000.00	95		P
Antimony	75 - 125	104.5045		60.0000	U	100.00	105		P
Arsenic	75 - 125	37.1132		15.0000	U	40.00	93		P
Barium	75 - 125	2026.6440		0.9917	J	2000.00	101		P
Beryllium	75 - 125	49.5838		5.0000	U	50.00	99		P
Cadmium	75 - 125	51.5893		5.0000	U	50.00	103		P
Calcium		5000.0000	U	24.1561	J	0.00	0		P
Chromium	75 - 125	197.5238		10.0000	U	200.00	99		P
Cobalt	75 - 125	495.2308		50.0000	U	500.00	99		P
Copper	75 - 125	236.7676		25.0000	U	250.00	95		P
Iron	75 - 125	979.0039		100.0000	U	1000.00	98		P
Lead	75 - 125	18.5507		10.0000	U	20.00	93		P
Magnesium		5000.0000	U	5000.0000	U	0.00	0		P
Manganese	75 - 125	503.4793		15.0000	U	500.00	101		P
Mercury	75 - 125	0.9918		0.2000	U	1.00	99		CV
Nickel	75 - 125	495.5249		40.0000	U	500.00	99		P
Potassium		5000.0000	U	5000.0000	U	0.00	0		P
Selenium	75 - 125	48.6110		35.0000	U	50.00	97		P
Silver	75 - 125	45.8302		10.0000	U	50.00	92		P
Sodium		380.4339	J	168.6308	J	0.00	0		P
Thallium	75 - 125	55.4382		25.0000	U	50.00	111		P
Vanadium	75 - 125	499.3916		50.0000	U	500.00	100		P
Zinc	75 - 125	486.6068		60.0000	U	500.00	97		P
Cyanide	75 - 125	90.6600		4.3600	J	100.00	86		AS

Comments:

USEPA - CLP

6-IN

DUPLICATES

025

EPA SAMPLE NO.

ME0035D

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

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

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		200.0000	U	200.0000	U			P
Antimony		60.0000	U	60.0000	U			P
Arsenic		15.0000	U	15.0000	U			P
Barium		0.9917	J	200.0000	U	200		P
Beryllium		5.0000	U	5.0000	U			P
Cadmium		5.0000	U	5.0000	U			P
Calcium		24.1561	J	22.2444	J	8		P
Chromium		10.0000	U	10.0000	U			P
Cobalt		50.0000	U	50.0000	U			P
Copper		25.0000	U	10.5012	J	200		P
Iron		100.0000	U	100.0000	U			P
Lead		10.0000	U	10.0000	U			P
Magnesium		5000.0000	U	5000.0000	U			P
Manganese		15.0000	U	15.0000	U			P
Mercury		0.2000	U	0.2000	U			CV
Nickel		40.0000	U	40.0000	U			P
Potassium		5000.0000	U	5000.0000	U			P
Selenium		35.0000	U	35.0000	U			P
Silver		10.0000	U	10.0000	U			P
Sodium		168.6308	J	319.9864	J	62		P
Thallium		25.0000	U	25.0000	U			P
Vanadium		50.0000	U	50.0000	U			P
Zinc		60.0000	U	19.2669	J	200		P
Cyanide		4.3600	J	2.4200	J	57		AS

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

028

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Instrument Type: P Instrument ID: Spectro Ciros02 Date: 1/31/2003

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	4.7
Antimony	206.83	60	8.7
Arsenic	189.04	15	5.4
Barium	233.53	200	0.40
Beryllium	313.11	5	0.020
Cadmium	226.50	5	0.130
Calcium	318.13	5000	14.3
Chromium	267.72	10	0.80
Cobalt	228.62	50	0.30
Copper	324.75	25	0.5
Iron	261.19	100	6.2
Lead	168.22	10	4.4
Magnesium	279.08	5000	1.4
Manganese	257.61	15	0.10
Nickel	231.60	40	1.90
Potassium	766.49	5000	15.5
Selenium	196.09	35	4.6
Silver	328.07	10	0.60
Sodium	330.24	5000	98.7
Thallium	190.86	25	5.3
Vanadium	292.40	50	0.20
Zinc	213.86	60	1.2

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

029

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Instrument Type: P Instrument ID: Spectro Ciros02 Date: 1/31/2003

Preparation Method: HW1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Aluminum	394.40	200	4.7
Antimony	206.83	60	8.7
Arsenic	189.04	15	5.4
Barium	233.53	200	0.40
Beryllium	313.11	5	0.020
Cadmium	226.50	5	0.130
Calcium	318.13	5000	14.3
Chromium	267.72	10	0.80
Cobalt	228.62	50	0.30
Copper	324.75	25	0.5
Iron	261.19	100	6.2
Lead	168.22	10	4.4
Magnesium	279.08	5000	1.4
Manganese	257.61	15	0.10
Nickel	231.60	40	1.90
Potassium	766.49	5000	15.5
Selenium	196.09	35	4.6
Silver	328.07	10	0.60
Sodium	330.24	5000	98.7
Thallium	190.86	25	5.3
Vanadium	292.40	50	0.20
Zinc	213.86	60	1.2

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

030

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Instrument Type: CV Instrument ID: Leeman01 Date: 11/6/2002

Preparation Method: CW1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Mercury	253.70	0.20	0.075

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

031

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

032

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 32259 NRAS No.: _____ SDG NO.: ME0035

Instrument Type: AS Instrument ID: Astoria01 Date: 11/22/2002

Preparation Method: DW2

Concentration Units (ug/L or mg/kg): UG/L

Analyte	Wave-Length /Mass	CRQL	MDL
Cyanide	578.00	10	2.00