CENTRAL REGIONAL LABORATORY

Data Checklist

Data Set AIR 20010060 Cheshire Monitoring Suspended Particles

- ☑ Chain-of-Custody
- ☑ Analysis Request Form(s)*
- ☐ Sample Tags
- ☑ Transmittal Report w/signatures of the following
  - Analyst(s)
  - Peer reviewer
  - Data Management Coordinator

* Analysis Request Forms provide the data user a means to connect sample numbers with sampling locations.

Prepared by: Sylvia Griffin 9/5/2001
Data Management Coordinator

Rev. 6/12/00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: SEP 0 5 2001

Subject: Review of Region 5 Data for **CHESHIRE MONITORING STUDY**

From: **Francis A. Awanya, Chemist**
Region 5 Central Regional Laboratory

To:

Attached are the results for: **CHESHIRE MONITORING STUDY**

CRL data set number: **20010060**

Samples analyzed for: **Suspended Particles**

Results are reported for sample designations: **2001AH03S01, 2001AH03D01, and 2001AH03S02.**

SEP 0 5 2001

Data Management Coordinator and Date Received

Date Transmitted: SEP 0 5 2001

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

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:

Rev. 7/23/01

Data Set Number:	*20010060*	**Parameter:**	*Suspended Particles*
Facility Name:	*CHESHIRE MONITORING STUDY*		
Study Name:	*CHESHIRE MONITORING STUDY*		
Date of Narrative:	*09/04/2001*	**Analyst:**	*FAA*
		Signature:	FAA

ANALYSIS CASE NARRATIVE

Three (3) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on August 21, 2001. These three filters were fractions of 22 clean filters, prepared at the CRL between July 13 and 17, 2001 and sent to the field for exposure. Filter preparations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters were completed on 8/29/2001. All the suspended particle results are acceptable for use.

Filters ID	Samples ID	Tag Number
G1006671	2001AH03S01	5-340030-2
G1006669	2001AH03D01	5-340031-2
G1006667	2001AH03S02	5-340032-2

Parameter: Suspended Particles

Data Set Numbers: 20010060, 20010062, 20010067

Date of Analysis 8/29/2002

Analyst: FAA

Filter ID Numbers	CRL Sample I.D Numbers	Sample Tag Numbers	Station Location	Site	Pstg Avg	Weight of cond. filters	Exposed weight (g)	Suspended Particle
Data set Number 20010067								
G1006686	2001AH04S03	5-340037-2	Addaville	#3011	15.30	4.4220	4.4517	0.0297
G1006685	2001AH04S02	5-340036-2	River Valley High	#3009	15.65	4.4201	4.4400	0.0199
G1006680	2001AH04D01	5-340035-2	Guiding Hand School	#3013	14.55	4.4226	4.4870	0.0644
G1006683	2001AH04S01	5-340034-2	Guiding Hand School	#3012	15.45	4.4116	4.4799	0.0683
Data set Number 20010062								
G1006677	2001AH03S05	5-340039-2	River Valley School	RVHS#3009	15.95	4.3830	4.4878	0.1048
G1006676	2001AH03D02	5-340038-2	Guiding Hand School	GHS #3013 Dup	14.45	4.3786	4.4261	0.0475
G1006673	2001AH03S04	5-340041-2	Guiding Hand School	GHS #3012	15.05	4.4143	4.4643	0.0500
G1006665	2001AH03S06	5-340040-2	Addaville	Addaville#3011	15.65	4.4076	4.4663	0.0587
Data set Number 20010060								
G1006671	2001AH03S01	5-340030-2	Guiding Hands	Serial#3012	15.40	4.3722	4.4039	0.0317
G1006669	2001AH03D01	5-340031-2	Guiding Hands	Serial#3013	15.30	4.4150	4.4487	0.0337
G1006667	2001AH03S02	5-340032-2	RVHS	Serial#3009	15.55	4.4152	4.4946	0.0794

Project No. 01AH03 **Project Name** CHESHIRE MONITORING STUDY 901014

AIR 20010060 ARRIVAL DATE: 8/21/2001 DUE DATE: 8/28/2001

Sampler
Mike Murphy

Cooler ID 01AH031 **Page** 5-140007

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03D01	D01	05/08/2001 00:00:00	○ Grab ● Com	GUIDING HANDS	2	5-340031 1 to 2

Bottle No. 1 **Parameter** Metal analysis by ICP

Bottle No. 2 **Parameter** PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S01	S01	05/08/2001 00:00:00	○ Grab ● Com	GUIDING HANDS	2	5-340030 1 to 2

Bottle No. 1 **Parameter** Metal analysis by ICP

Bottle No. 2 **Parameter** PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S02	S02	05/08/2001 00:00:00	○ Grab ● Com	RVHS	2	5-340032 1 to 2

Bottle No. 1 **Parameter** Metal analysis by ICP

Bottle No. 2 **Parameter** PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S03	S03	05/08/2001 00:00:00	○ Grab ● Com	ADDAVILLE	1	5-340033 1 to 1

Bottle No. 1 **Parameter** Metal analysis by ICP

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

ORIGINAL

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

PROJ. NO.	PROJECT NAME
01AH03	Cheshire Monitoring Study

Activity Code: ~~12345~~ 90101A

SAMPLERS: *(Print Name and Sign)* OEPA
Mike Murphy Mike Murphy Mike Murphy

AIR 20010060

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte PM10	Analyte TCP					TAG NUMBERS
D01	8/5	00:00	X		GUIDING HANDS	2	X	X					5-340031 1 to 2
S01	8/5	00:00	X		GUIDING HANDS	2	X	X					5-340030 1 to 2
S02	8/5	00:00	X		RVHS	2	X	X					5-340032 1 to 2
S03	8/5	00:00	X		ADDAVILLE	1		X					5-340033 1 to 1

Guiding Hands school
Serial # 3012, AVG PStg = 15.4
Serial # 3013, AVG PStg = 15.3

River Valley High school
Serial # 3009, AVG PStg = 15.55

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Ship To:
Mike Murphy	8-9-01 14:20		
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	ATTN:
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time
		William Ayers	8/21/01 15:56

Airbill Number: UPS# 1Z 401 199 03 4058 6983

Chain of Custody Seal Numbers

5-140007

Central Regional Laboratory, RMD, Region 5
Customer Satisfaction Survey

The purpose of this survey is to collect information from you about your recent experience with analytical services received from the Region 5 Central Regional Laboratory (CRL). This survey is divided into 4 sections. Please fill out the information in each section as requested. Then in Section C, supply your name and contact information, and submit the form as directed at the end of the survey.

Section A -- Sample Requests

Please respond to the following questions as accurately as possible. If you have additional comments beyond the space provided, please send them to George Schupp, CRL Sample Coordinator, at ML-10C (See Form Submission).

1. What is your CRL Data Set Number(s) [i.e., the 8-digit number beginning with the 4-digit FY and followed by a 4 digit number]? (Eg.:20010099) _____

2. How easy was it to schedule samples? :

   Easy: ____ Difficult: ____

3. If not "Easy", please provide a brief explanation:

SECTION B -- Analytical Services

Please respond to the following questions concerning the analysis of your samples.

1. Overall, how would you rate the CRL analytical services you received?

   Bad ____ ; Poor ____ ; Fair ____ ; Good ____ ; Excellent ____

2. If not "Good" or "Excellent", what was the problem?

3. What type of analytical services did you request (eg, analysis of samples, etc.; lab audit; document review, other)?

4. Who performed the analytical service(s) (CRL EPA Staff, ESAT)?

SECTION C -- Comments and Suggestions

Please provide specific comments or suggestions for improving any of the aspects of CRL Analytical Services:

If you would like additional information on CRL Analytical Services, The CRL Board of Directors, or the Sample Request Process, please indicate below (✓) and provide your name and mail code).

Analytical Services ____; CRL Board of Directors ____; Sample Requests _____

Name: _____ Mail Code: _____

FORM SUBMISSION

Thank you for taking the time to answer the questions in our survey. You will receive a confirmation message from us shortly.

We will review your survey and respond to any specific concerns or problems ASAP. Your survey and others will be evaluated for trends in an effort to establish efficient support and analytical processes. The process at each stage of the analytical services we provide are critical links towards giving you the kind of timely, accurate analytical services you need. This data will also be tracked by our management and the Board of Directors so additional customer feedback can be used to plan CRL activities in the future.

Please forward this completed survey to:

CRL Sample Coordinator at **Mail code: ML-10C**

Please go to the following e-mail address at: schupp.george@epa.gov to request an electronic copy of this survey or call 312-353-1226.

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated ***B***lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (***J*** is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL ***M***ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is estimated since it falls below the lowest calibration standard in the calibration curve.
N	This flag applies to GC/MS Te***N***tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or ***Q***uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are ***R***ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed for but ***U***ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

03/07/01

ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL REGIONAL LABORATORY
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION **SAMPLING DATE:** 08/05/2001 **LAB ARRIVAL DATE:** 08/21/2001 **DUE DATE:** 08/28/2001
DU NUMBER: 90101A **DATA SET NUMBER:** 20010060 **STUDY:** CHESHIRE MONITORING STUDY **PRIORITY:** 1 **LABORATORY :**CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDED PARTICLE (g/filter)			
1	2001AH03D01	GUIDING HANDS	0.0337			
2	2001AH03S01	GUIDING HANDS	0.0317			
3	2001AH03S02	RVHS	0.0794			
DATE OF ANALYSIS			08/29/2001			
ANALYST			[illegible]			

Reviewed by: E.S **Date:** 9/4/2001

ATTACHMENT II

CRL Analytical and Inorganics Data Review Checklist

Batch Number: 20010060 Facility: CHESHIRE MONITORING STUDY

Parameter: SUSPENDED PARTICLES CRL.SOP: AIG047

Package Overview:	YES	NO
Raw Data Package Complete?	✓	
Results Reported Correctly?	✓	
Special Requests Done?	N/A	
Calculations Checked?	✓	
Calibration Not Exceeded?	N/A	
Manual Peak Integration performed? Circle one IC or GC and Check	N/A	
Field QC Checked?	N/A	
Quality Control:		
Holding Times Met?	N/A	
Preservation Checked?	N/A	
Proper Digestion Verified?	N/A	
Initial Instrument Performance Checks Verified?	✓	
Calibration Verification Checked?	✓	
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	N/A	
Matrix QC Checked?	N/A	
Digestion Blanks Checked?	N/A	
Spiked Blank Checked?	N/A	
LCS (if applicable) Checked?	N/A	
QCS (if applicable) Checked?	N/A	
Final Check		
Technical Review Done?	✓	
Narrative Complete?	✓	

Analyst: FAA Peer Reviewer: ES

Date: 8/31/2001 Date: 9/4/2001

Comments Attached? (Y/N) N

Data Set Number:	*20010060*	**Parameter:**	*Suspended Particles*
Facility Name:	*CHESHIRE MONITORING STUDY*		
Study Name:	*CHESHIRE MONITORING STUDY*		
Date of Narrative:	*09/04/2001*	**Analyst:**	*FAA*
		Signature:	FAA

ANALYSIS CASE NARRATIVE

Three (3) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on August 21, 2001. These three filters were fractions of 22 clean filters, prepared at the CRL between July 13 and 17, 2001 and sent to the field for exposure. Filter preparations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters were completed on 8/29/2001. All the suspended particle results are acceptable for use.

Filters ID	Samples ID	Tag Number
G1006671	2001AH03S01	5-340030-2
G1006669	2001AH03D01	5-340031-2
G1006667	2001AH03S02	5-340032-2

Parameter: Suspended Particles

CRL.SOP AIG047

Data Set Numbers: 20010060, 20010062, 20010067

Date of Analysis 8/29/2002

Analyst: FAA

Filter ID Numbers	CRL Sample I.D Numbers	Sample Tag Numbers	Station Location	Site	Pstg Avg	Weight of cond. filters (g)	Exposed weight (g)	Suspended Particle (g/Filter)
Data set Number 20010067								
G1006686	2001AH04S03	5-340037-2	Addaville	#3011	15.30	4.4220	4.4517	0.0297
G1006685	2001AH04S02	5-340036-2	River Valley High	#3009	15.65	4.4201	4.4400	0.0199
G1006680	2001AH04D01	5-340035-2	Guiding Hand School	#3013	14.55	4.4226	4.4870	0.0644
G1006683	2001AH04S01	5-340034-2	Guiding Hand School	#3012	15.45	4.4116	4.4799	0.0683
Data set Number 20010062								
G1006677	2001AH03S05	5-340039-2	River Valley School	RVHS#3009	15.95	4.3830	4.4878	0.1048
G1006676	2001AH03D02	5-340038-2	Guiding Hand School	GHS #3013 Dup	14.45	4.3786	4.4261	0.0475
G1006673	2001AH03S04	5-340041-2	Guiding Hand School	GHS #3012	15.05	4.4143	4.4643	0.0500
G1006665	2001AH03S06	5-340040-2	Addaville	Addaville#3011	15.65	4.4076	4.4663	0.0587
Data set Number 20010060								
G1006671	2001AH03S01	5-340030-2	Guiding Hands	Serial#3012	15.40	4.3722	4.4039	0.0317
G1006669	2001AH03D01	5-340031-2	Guiding Hands	Serial#3013	15.30	4.4150	4.4487	0.0337
G1006667	2001AH03S02	5-340032-2	RVHS	Serial#3009	15.55	4.4152	4.4946	0.0794

Parameter: Suspended Particles **CRL.SOP AIG047**

Data Set Numbers: 20010060, 20010062, 20010067

Date of Analysis 8/29/2002

Analyst: FAA

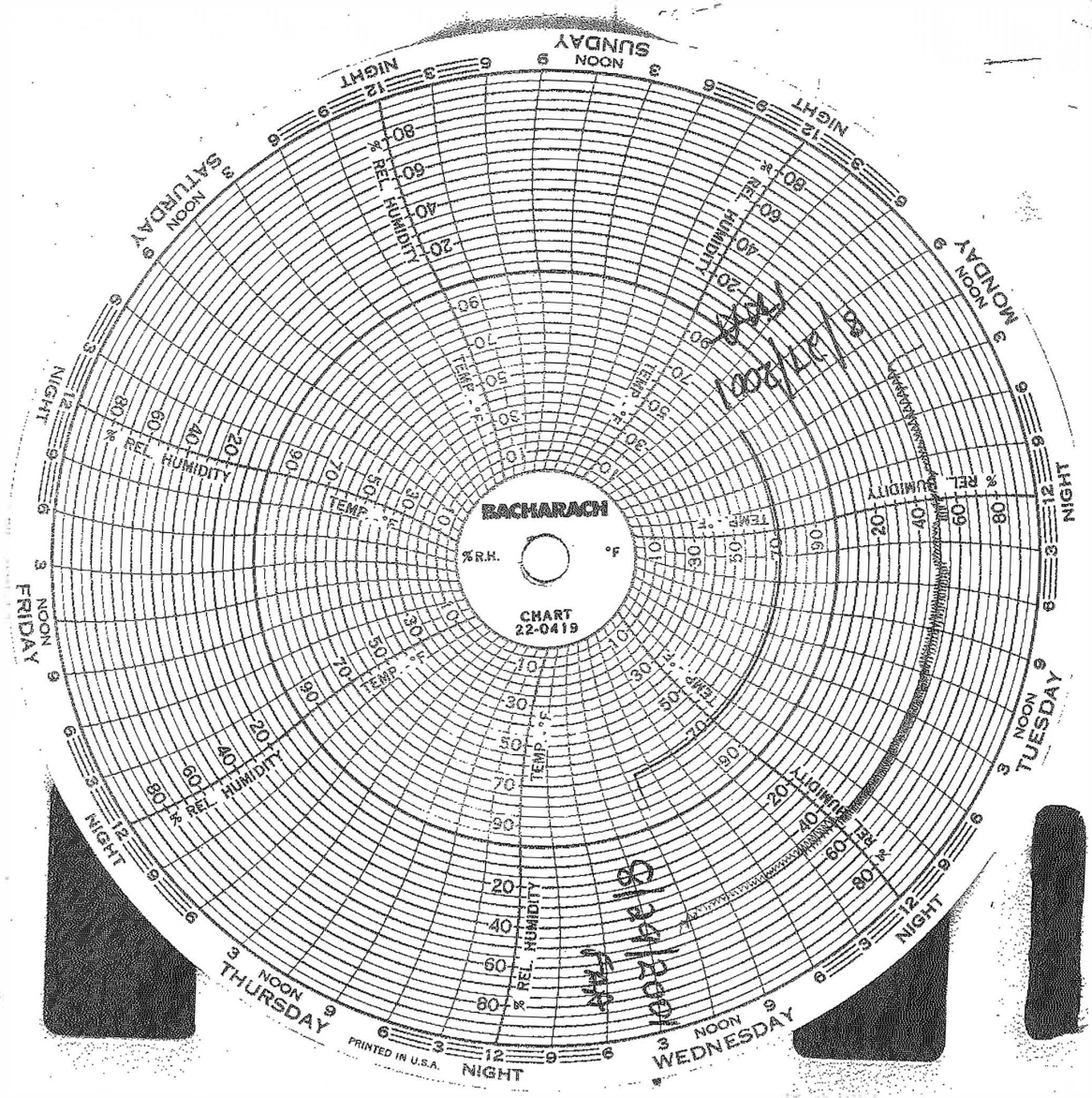
BALANCE VERIFICATION		
Actual Standard Weight (A) (g)	Measured Balanced Weights (M) (g)	Difference From Actual Limit(+/- 0.0005g) (0.0005g)
8/29/01		
1.0000	1.0000	0.0000
1.0000	1.0000	0.0000
2.0000	1.9999	0.0001
2.0000	2.0000	0.0000
5.0000	5.0000	0.0000
5.0000	4.9999	0.0001

EXPOSED FILTER REPRODUCIBILITY						
Filter ID Numbers	CRL Sample I.D Numbers	Sample Tag Numbers	Weight of cond. filters (g)	Exposed weight (g) LD1	Exposed weight (g) LD2	Duplicate Differences Limit (0+/- 5mg) (0.0050g)
Data set Number 20010067						
G1006683	2001AH04S01	5-340034-2	4.4116	4.4799	4.4801	0.0002
Data set Number 20010062						
G1006673	2001AH03S04	5-340041-2	4.4143	4.4643	4.4644	0.0001
G1006665	2001AH03S06	5-340040-2	4.4076	4.4663	4.4661	0.0002
Data set Number 20010060						
G1006669	2001AH03D01	5-340031-2	4.4150	4.4487	4.4492	0.0005

FILTER ID #	TARE Wt. (g)	DUPLICATE Wt. (g)	EXPOSED Wt. (g)	EXPOSED Dup. Wt. (g)	Comments and pr (ZERO value)
G1006694	4.4154	4.4145		-	
G1006692	4.4112			4.4359	
G1006690	4.4085				
G1006688	4.4083	4.4086 ~~4.4018~~ KS			
G1006686	4.4220	4.4212		4.4513	4.4517
G1006685	4.4201			4.4398	4.4400
G1006680	4.4226			4.4871	4.4870
G1006683	4.4116		E.S 4.4801	4.4800	4.4799
G1006681	4.4283				
G1006677	4.3830	4.3820		4.4879	4.4878
G1006676	4.3786			4.4257	4.4261
G1006673	4.4143		4.4644 E.S ~~4.4652~~	4.4643	4.4643
G1006671	4.3722			4.4041	4.4039
G1006669	4.4150		E.S 4.4492	4.4485	4.4487
G1006667	4.4152			4.4945	4.4946
G1006665	4.4076		E.S 4.4661	4.4665	4.4663
G1006663	4.3962			4.4599	
G1006661	4.4097	4.4092	4.4736 no.	4.4734	
G1006659	4.4200			4.4864	
G1006657	4.4055			4.4724	
G1006656	4.4257			4.4717	
G1006695	4.3965				
7.16.01	AR				

8/29/01

General information	Standard weights, actual (g)	Balanced weights, balanced (g)
SARTORIOUS	1.0000 A	1.0000
S/N 37010119	1.0000 B	1.0000
8/29/2001	2.0000 A	1.9999
~~FAA~~	2.0000 B	2.0000
	5.0000 A	5.0000
	5.0000 B	4.9999
8/31/2001	0.10000	0.10000
METTLER AG285	~~0.20000~~ FAA 8/21/01	~~0.20010~~ FAA 8/21
S/N 1120181838	0.20000	.20001
	0.50000	0.50002


WEDNESDAY
NOON
3
9
NIGHT
12
6
TUESDAY
MONDAY
SUNDAY
SATURDAY
FRIDAY
THURSDAY
REL. HUMIDITY
TEMP. °F
%R.H.
°F
BACHARACH
CHART
22-0419
PRINTED IN U.S.A.

Filter ID Number (A)	Tare Weight (g) (B)	CFRM1 or LD1 (C)	CFRM2 (g) (D)	Exposed weight (g) (E)	LD2 (g) (F)
G1006686	4.4220			4.4517	
G1006685	4.4201			4.4400	
G1006680	4.4226			4.4870	
G1006683	4.4116			4.4799	4.4801
G1006677	4.3830			4.4878	
G1006676	4.3786			4.4261	
G1006673	4.4143			4.4643	4.4644
G1006671	4.3722			4.4039	
G1006669	4.4150			4.4487	4.4492
G1006667	4.4152			4.4946	
G1006665	4.4076			4.4663	4.4661

Where:

A = Filter ID number(Serial Number) obtained directly from the filter.
B = Weight of clean conditioned filters from section 11.2.4.4.
C = Space to designate filter for re-weighing by a second analyst as CRFM1 (Section 9.4.3.3) or LD1 (section 9.5.1.3).
D = Clean conditioned filter. Re- weighed by a second analyst as (CRFM2) following section 9.4.3.3.
E = Weight of exposed filters from section 11.3.3.6.
F = Second weight of exposed filter, designated in C as LD1 and re-weighed by a second analyst as LD2 following section 9.5.1.3.

CENTRAL REGIONAL LABORATORY

Data Checklist

Data Set AIR 2001 0060 CHESHIRE MONITORING

- ☑ Chain-of-Custody
- ☑ Analysis Request Form(s)*
- ☐ Sample Tags
- ☑ Transmittal Report w/signatures of the following:
  - Analyst (s)
  - Data Management Coordinator

* Analysis Request Forms provide the data user a means to connect sample numbers with sampling locations

Prepared by: Sylvia Griffin 9-4-01
Data Management Coordinator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: SEP 0 4 2001

Subject: Review of Region 5 Data for **Cheshire Monitoring Study**

From: **John V. Morris, Chemist**
Region 5 Central Regional Laboratory

To:

Attached are the results for: **Cheshire Monitoring Study**

CRL data set number: **20010060**

Samples analyzed for: **Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magmesium, Manganese, Nickel and Selenium**

Results are reported for sample designations: **2001AH03S01, 2001AH03D01, 2001AH03S02 and 2001AH03S03**

SEP / 0 4 / 2001

Data Management Coordinator and Date Received

Date Transmitted: SEP 0 4 / 2001

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

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:

Rev. 7/23/01

Central Regional Laboratory, RMD, Region 5
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Please respond to the following questions as accurately as possible. If you have additional comments beyond the space provided, please send them to George Schupp, CRL Sample Coordinator, at ML-10C (See Form Submission).

1. What is your CRL Data Set Number(s) [i.e., the 8-digit number beginning with the 4-digit FY and followed by a 4 digit number]? (Eg.:20010099) _____

2. How easy was it to schedule samples? :

   Easy: _____ Difficult: _____

3. If not "Easy", please provide a brief explanation:

SECTION B -- Analytical Services

Please respond to the following questions concerning the analysis of your samples.

1. Overall, how would you rate the CRL analytical services you received?

   Bad ____ ; Poor ____ ; Fair ____ ; Good ____ ; Excellent ____

2. If not "Good" or "Excellent", what was the problem?

3. What type of analytical services did you request (eg, analysis of samples, etc.; lab audit; document review, other)?

4. Who performed the analytical service(s) (CRL EPA Staff, ESAT)?

SECTION C -- Comments and Suggestions

Please provide specific comments or suggestions for improving any of the aspects of CRL Analytical Services:

If you would like additional information on CRL Analytical Services, The CRL Board of Directors, or the Sample Request Process, please indicate below (✓) and provide your name and mail code).

Analytical Services ____; CRL Board of Directors ____; Sample Requests _____

Name: _____ Mail Code: _____

FORM SUBMISSION

Thank you for taking the time to answer the questions in our survey. You will receive a confirmation message from us shortly.

We will review your survey and respond to any specific concerns or problems ASAP. Your survey and others will be evaluated for trends in an effort to establish efficient support and analytical processes. The process at each stage of the analytical services we provide are critical links towards giving you the kind of timely, accurate analytical services you need. This data will also be tracked by our management and the Board of Directors so additional customer feedback can be used to plan CRL activities in the future.

Please forward this completed survey to:

CRL Sample Coordinator at Mail code: ML-10C

Please go to the following e-mail address at: schupp.george@epa.gov to request an electronic copy of this survey or call 312-353-1226.

Rev. 7/23/01

CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
B	This flag is used when the analyte is found in the associated *B*lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
J	This flag is used when the analyte is estimated due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. (*J* is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL *M*ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is estimated since it falls below the lowest calibration standard in the calibration curve.
N	This flag applies to GC/MS Te*N*tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or *Q*uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are *R*ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed for but *U*ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

03/07/01

US EPA CRL - Region V
ICP Final Report Results
Air Filters

Sample Number:	2001AH03S01	Station ID:	GUIDING HANDS
Sample Batch Number:	20010060	Study:	Cheshire Monitoring Study
Collection Date:	5 Aug 01	Filter SN:	G6093525
Analysis Date:	30 Aug 01		

Element	Concentration		Units
Arsenic	9	U	µg/filter
Barium	95	U	µg/filter
Beryllium	0.6	U	µg/filter
Cadmium	1.01		µg/filter
Chromium	3.14	U	µg/filter
Cobalt	1.2	U	µg/filter
Copper	1060		µg/filter
Iron	870		µg/filter
Lead	19.8		µg/filter
Magnesium	343	U	µg/filter
Manganese	23.7		µg/filter
Nickel	5.73	U	µg/filter
Selenium	18	U	µg/filter

Jm
31 Aug 01

US EPA CRL - Region V
ICP Final Report Results
Air Filters

Sample Number:	2001AH03D01	Station ID:	GUIDING HANDS
Sample Batch Number:	20010060	Study:	Cheshire Monitoring Study
Collection Date:	5 Aug 01	Filter SN:	G6093526
Analysis Date:	30 Aug 01		

Element	Concentration		Units
Arsenic	9	U	µg/filter
Barium	95	U	µg/filter
Beryllium	0.6	U	µg/filter
Cadmium	0.6	U	µg/filter
Chromium	3.14	U	µg/filter
Cobalt	1.2	U	µg/filter
Copper	830		µg/filter
Iron	813		µg/filter
Lead	10.1		µg/filter
Magnesium	343	U	µg/filter
Manganese	45.1		µg/filter
Nickel	5.73	U	µg/filter
Selenium	18	U	µg/filter

JVM
31 Aug 01

US EPA CRL - Region V
ICP Final Report Results
Air Filters

Sample Number:	2001AH03S02	Station ID:	RVHS
Sample Batch Number:	20010060	Study:	Cheshire Monitoring Study
Collection Date:	5 Aug 01	Filter SN:	G6093527
Analysis Date:	30 Aug 01		

Element	Concentration		Units
Arsenic	9	U	µg/filter
Barium	95	U	µg/filter
Beryllium	0.6	U	µg/filter
Cadmium	0.6	U	µg/filter
Chromium	3.14	U	µg/filter
Cobalt	1.2	U	µg/filter
Copper	163		µg/filter
Iron	392		µg/filter
Lead	78.8		µg/filter
Magnesium	422		µg/filter
Manganese	31.5		µg/filter
Nickel	5.73	U	µg/filter
Selenium	19.5		µg/filter

Jcm
31 Aug 01

US EPA CRL - Region V
ICP Final Report Results
Air Filters

Sample Number:	2001AH03S03	Station ID:	ADDAVILLE
Sample Batch Number:	20010060	Study:	Cheshire Monitoring Study
Collection Date:	5 Aug 01	Filter SN:	G6093528
Analysis Date:	30 Aug 01		

Element	Concentration		Units
Arsenic	9	U	µg/filter
Barium	95	U	µg/filter
Beryllium	0.6	U	µg/filter
Cadmium	0.6	U	µg/filter
Chromium	3.14	U	µg/filter
Cobalt	1.2	U	µg/filter
Copper	102		µg/filter
Iron	276		µg/filter
Lead	9.14		µg/filter
Magnesium	343	U	µg/filter
Manganese	23.6		µg/filter
Nickel	5.73	U	µg/filter
Selenium	23.4		µg/filter

JVM
31 Aug 01

CRL Metals Data Review Checklist

Batch Number: 20010060, 62, 67 Facility: Cheshire Monitoring Study

Parameter: ICP Mn

Package Overview:	Review:	
	Analyst	Peer
Raw Data Package Complete?	✓	✓
Results Reported Correctly?	✓	✓
Special Requests Done?	✓	✓
Calculations Checked?	✓	✓
Calibration Not Exceeded?	✓	✓
Field QC Checked?	✓	✓
Quality Control:		
Holding Times Met?	NA	NA
Preservation Checked?	NA	NA
Proper Digestion Verified?	✓	✓
Initial Instrument Performance Checks Verified?	✓	✓
Calibration Verification Checked?	✓	✓
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	✓	✓
Matrix QC Checked?	✓	✓
Digestion Blanks Checked?	✓	✓
Spiked Blank Checked?	✓	✓
LCS (if applicable) Checked?	NA	NA
Species QC (if applicable) Checked?	NA	NA
Final Check:		
Technical Review Done?	✓	✓
Narrative Complete? (See sect. 7 of data review SOP, HK005)	✓	✓

Analyst: [signature] Date: 31 Aug 01

Peer Reviewer: [signature] Date: 8/31/01

CRL Form Version 03.1/00

Comments Attached? (Y/N) N

Project No. Project Name CHESHIRE MONITORING STUDY 901014

01AH03 AIR 20010060 ARRIVAL DATE: 8/21/2001 DUE DATE: 8/28/2001

Sampler

Mike Murphy

Cooler ID 01AH031 Page 5-140007

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03D01	D01	05/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS	2	5-340031 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S01	S01	05/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS	2	5-340030 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S02	S02	05/08/2001 00:00:00	◯ Grab ● Com	RVHS	2	5-340032 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03S03	S03	05/08/2001 00:00:00	◯ Grab ● Com	ADDAVILLE	1	5-340033 1 to 1

Bottle No. 1 Parameter
Metal analysis by ICP

Project No. 01AH03 | Project Name CHESHIRE MONITORING STUDY 90101A

AIR 20010062 ARRIVAL DATE: 8/22/01 DUE DATE: 8/29/2001

Sampler: Mike Murphy

Cooler ID: 01AH031 | Page: 5-140009

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03DO1	DO~~1~~2	11/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS SCHOOL	2	5-340038 1 to 2

Bottle No. 1 — Parameter: Metal analysis by ICP

Bottle No. 2 — Parameter: PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03SO1	SO~~1~~4	11/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS SCHOOL	2	5-340041 1 to 2

Bottle No. 1 — Parameter: Metal analysis by ICP

Bottle No. 2 — Parameter: PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03SO2	SO~~2~~5	11/08/2001 00:00:00	◯ Grab ● Com	RIVER VALLEY SCHOOL	2	5-340039 1 to 2

Bottle No. 1 — Parameter: Metal analysis by ICP

Bottle No. 2 — Parameter: PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH03SO3	SO~~3~~6	11/08/2001 00:00:00	◯ Grab ● Com	ADDAVILLE	2	5-340040 1 to 2

Bottle No. 1 — Parameter: Metal analysis by ICP

Bottle No. 2 — Parameter: PM10

Project No. 01AH04 | Project Name CHESHIRE MONITORING STUDY | 90101A

AIR 2001 AUG 7 ARRIVAL DATE: 8/27/2001 DUE DATE: 9/4/2001

Sampler
Mike Murphy

Cooler ID 01AH041 Page 5-140008

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH04DO1	DO1	17/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS SCHOOL	2	5-340035 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH04SO1	SO1	17/08/2001 00:00:00	◯ Grab ● Com	GUIDING HANDS SCHOOL	2	5-340034 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH04SO2	SO2	17/08/2001 00:00:00	◯ Grab ● Com	RIVER VALLEY SCHOOL	2	5-340036 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
01AH04SO3	SO3	17/08/2001 00:00:00	◯ Grab ● Com	ADDAVILLE	2	5-340037 1 to 2

Bottle No. 1 Parameter
Metal analysis by ICP

Bottle No. 2 Parameter
PM10

Date: 31 August 2001
Analyst: John V. Morris
Sample Batch Number: 20010060,20010062&20010067
Facility Name: Cheshire Monitoring Study
Analyte: ICP Metals

Narrative for the Analysis of Metals in Water in Batches 20010060,62&67

On 21, 22 and 27 August 2001, three batches of air filters, comprising four filters each were received at CRL for the analysis of metals. The sample descriptions are given in tabular form:

Batch No.	Sample ID	Serial No.	Collection Date	Station ID
20010060	2001AH03S01	G6093525	5 August 2001	GUIDING HANDS
	2001AH03D01	G6093526	5 August 2001	GUIDING HANDS
	2001AH03S02	G6093527	5 August 2001	RVHS
	2001AH03S03	G6093528	5 August 2001	ADDAVILLE
20010062	2001AH03S04	G6093519	11 August 2001	GUIDING HANDS SCHOOL
	2001AH03D02	G6093521	11 August 2001	GUIDING HANDS SCHOOL
	2001AH03S05	G6093520	11 August 2001	RIVER VALLEY SCHOOL
	2001AH03S06	G6093523	11 August 2001	ADDAVILLE
20010067	2001AH04S01	G6093515	17 August 2001	GUIDING HANDS SCHOOL
	2001AH04D01	G6093516	17 August 2001	GUIDING HANDS SCHOOL
	2001AH04S02	G6093517	17 August 2001	RIVER VALLEY SCHOOL
	2001AH03S03	G6093518	17 August 2001	ADDAVILLE

Batch 20010060 was received on 21 August 2001, batch 20010062 was received on 22 August 2001, and batch 20010067 was received on 27 August 2001. Batch 20010062 arrived with the same sample numbers as those on batch 20010060. After telephone calls to Scott Hamilton and Mike Murphy of OEPA, Scott Hamilton gave instructions to change the numbers on the second set so that analyses could proceed. The analysis was limited to the metals listed on page 15 of the QAPP (attached).

The samples were prepared on 28 August 2001. Method Metals_006, a hot block adaptation of the beaker digestion given in 40 CFR Part 50, Appendix G, was used for the digestion. The

Date: 31 August 2001
Analyst: John V. Morris
Sample Batch Number: 20010060,20010062&20010067
Facility Name: Cheshire Monitoring Study
Analyte: ICP Metals

digestion log number was 1300. There are no holding times for the air program. Duplicate filter strips from batches 20010051 and 20010052 were included with this digestion, as those were neglected when those batches were prepared.

Three filter blanks were taken from the same lot as the filters used in this study. These three filters were the same as those used in the previous digestion. Some of the elements, such as barium and iron, were significantly greater this time than last, while the analyses with digest log 1291 were consistent with an earlier analysis of the same filter lot. Those analyses, totaling eight filters, were averaged, and a standard deviation calculated for the purpose of determining true reporting limits for barium, chromium, iron, magnesium and nickel. These elements were blank subtracted, and the elevated reporting limits derived from the multiple blank values were applied. Also, there is insufficient information supplied by the field to determine the air volume, so the data for all metals are presented as μg/filter.

The analysis was performed on 30 August 2001 using method Metals_003, using the Perkin-Elmer 3300DV ICP. The yttrium internal standard readings were consistent throughout the run.

For the thirteen metals reported for this study, all instrument check standards (LCM1, LCM2, Hi AQC) were in control, except for the first cadmium LCM1 (112% recovery). This affected only the cadmium results for the report level check (RLC) and the spectral interference check (SIC) solutions. For blanks straddling the sample results, beryllium, copper and magnesium were the only reported elements with flags on the instrument blank (LCB). For beryllium, the blanks are all positive, while the sample results are all non-detects, so the data was not flagged. For copper and magnesium, the data was all much higher than the reporting limit, so the data was not flagged. For the digestion blank, copper, iron, magnesium, nickel and selenium were outside the limits of ± MDL, but either the data were much greater or otherwise did not affect the data. For copper, the RLC was not recovered well, but the difference between the RLC result (0.002 mg/L) and the instrument blank (-0.002 mg/L) was just the RLC concentration. As stated above, the copper data were all much higher than the blank, so the data were not flagged. Spike recoveries for both the spiked blank (LFB) and the spiked filter blank are within the expected 100±15%. All the SIC solutions show no problems for these samples, as the concentrations of any interfering species are quite low.

Two digests were greater than the calibration standard for copper, 2001AH04S01, and the duplicate for 2001AH03S04. These were reanalyzed in the run 08301a. Initially, the analyst did not notice the internal standard was not drawing in this run, but this was found and the run restarted. Also, the first 2x dilutions were judged faulty, and the dilutions remade. The results for copper of these dilutions were included in the results.

It is worthy of note that the co-located sample pair 2001AH04S01 and 2001AH04D01 results are

Date: 31 August 2001
Analyst: John V. Morris
Sample Batch Number: 20010060,20010062&20010067
Facility Name: Cheshire Monitoring Study
Analyte: ICP Metals

quite different, unlike the other sample sets. Upon examination of the filter material itself, the exposed portion is much darker for the sample 2001AH04S01 than for sample 2001AH04D01, as is consistent with the analytical results.

The duplicate filters are generally within about ±20% for the metals that are significantly above reporting limits. The exception to this is the duplicate for 2001AH01S02, which was analyzed on different days. Copper was significantly lower on the duplicate than on the initial analysis of this filter.

All analytical results files, sample information files and reformat files for ICP analysis can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\jvmorris\20010060_62_67\3300dv\

The narrative, QC summary spreadsheets, sample result calculation spreadsheets and the final sample report for ICP analysis can be found on the R5CRL data server using the following path:
h:\r5crl\vol3\metals\jvmorris\20010060_62_67\reports\

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

Sample ID	Date	Time
Calib Blank 1	08/30/01	09:17:18 AM
Cal 1	08/30/01	09:21:46 AM
Cal 2	08/30/01	09:26:08 AM
Cal 3	08/30/01	09:30:00 AM
Cal Ag/K	08/30/01	09:37:49 AM
Cal 5	08/30/01	09:41:12 AM
Hi Cal	08/30/01	09:45:10 AM
wash	08/30/01	09:49:33 AM
BLANK	08/30/01	09:54:04 AM
LCM1	08/30/01	09:58:30 AM
LCM2	08/30/01	10:03:03 AM
Hi AQC	08/30/01	10:07:31 AM
wash	08/30/01	10:12:10 AM
RLC	08/30/01	10:16:43 AM
SIC CoV	08/30/01	10:21:39 AM
SIC Ce	08/30/01	10:27:18 AM
SIC Cr	08/30/01	10:32:13 AM
SIC Fe	08/30/01	10:36:43 AM
SIC Mn	08/30/01	10:41:19 AM
SIC Mo	08/30/01	10:45:47 AM
SIC Ni	08/30/01	10:50:17 AM
SIC Ti	08/30/01	10:54:47 AM
wash	08/30/01	10:59:18 AM
BLANK	08/30/01	11:04:15 AM
LCM1	08/30/01	11:10:27 AM
LCM2	08/30/01	11:14:57 AM
Hi AQC	08/30/01	11:19:25 AM
wash	08/30/01	11:24:04 AM
LRB	08/30/01	11:28:36 AM
LFB	08/30/01	11:33:00 AM
Filter Blank 1	08/30/01	11:37:29 AM
Filter Blank 2	08/30/01	11:42:27 AM
Filter Blank3	08/30/01	11:47:15 AM
Filter Blank 3 Spike	08/30/01	11:51:45 AM
2001AH01S02 Dup	08/30/01	11:56:17 AM
2001AH02S03 Dup	08/30/01	12:00:50 PM
wash	08/30/01	12:05:22 PM
BLANK	08/30/01	12:09:54 PM
LCM1	08/30/01	12:14:20 PM
LCM2	08/30/01	12:19:44 PM
Hi AQC	08/30/01	12:24:11 PM
wash	08/30/01	12:28:50 PM
2001AH03S01	08/30/01	12:33:23 PM
2001AH03S01 Dup	08/30/01	12:37:56 PM
2001AH03D01	08/30/01	12:42:31 PM
2001AH03S02	08/30/01	12:46:58 PM
2001AH03S03	08/30/01	12:51:25 PM

JCM
31 Aug 01

2001AH03S04	08/30/01	12:55:54 PM
2001AH03D02	08/30/01	01:00:23 PM
2001AH03S05	08/30/01	01:04:54 PM
2001AH03S05 Dup	08/30/01	01:09:25 PM
2001AH03S06	08/30/01	01:13:58 PM
wash	08/30/01	01:18:31 PM
BLANK	08/30/01	01:23:02 PM
LCM1	08/30/01	01:27:28 PM
LCM2	08/30/01	01:31:59 PM
Hi AQC	08/30/01	01:36:27 PM
wash	08/30/01	01:41:06 PM
2001AH04S01	08/30/01	01:45:38 PM
2001AH04D01	08/30/01	01:50:12 PM
2001AH04S02	08/30/01	01:54:39 PM
2001AH04S03	08/30/01	01:59:06 PM
2001AH04S03 Dup	08/30/01	02:03:35 PM
wash	08/30/01	02:08:35 PM
BLANK	08/30/01	02:13:06 PM
LCM1	08/30/01	02:17:32 PM
LCM2	08/30/01	02:22:03 PM
Hi AQC	08/30/01	02:26:31 PM

Jm
31 Aug 01

Instrument Blank First

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LCB	Ag 328.068	0.00015	0.00041	
	Ag 338.289	0.00025	0.00051	
	Al 308.215	0.03509	0.02200	out
	Al 396.153	0.00325	0.01600	
	As 193.696	0.00125	0.00340	
	B 249.677	-0.00781	0.01200	
	Ba 455.403	-0.00004	0.00050	
	Be 313.042	0.00028	0.00015	out
	Ca 315.887	0.00597	0.01400	
	Cd 226.502	-0.00005	0.00014	
	Co 228.616	-0.00012	0.00050	
	Cr 267.716	-0.00011	0.00082	
	Cu 327.393	-0.00148	0.00110	out
	Fe 259.939	0.00697	0.00540	out
	Fe 273.955	0.00854	0.00850	out
	K 766.490	0.24157	0.24000	out
	Li 670.784	-0.00155	0.00620	
	Mg 279.077	0.03271	0.02700	out
	Mg 280.271	0.00620	0.00140	out
	Mn 257.610	-0.00027	0.00050	
	Na 589.592	0.25868	0.12000	out
	Ni 231.604	0.00064	0.00040	out
	Pb 220.353	0.00479	0.00220	out
	Sb 206.836	0.00144	0.00120	out
	Se 196.026	0.00304	0.00620	
	Sr 407.771	-0.00001	0.00020	
	V 310.230	0.00286	0.00180	out
	Zn 213.857	-0.00333	0.01400	

JVM
31 Aug 01

Instrument Blank Second

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LCB	Ag 328.068	0.00028	0.00041	
	Ag 338.289	-0.00014	0.00051	
	Al 308.215	0.02173	0.02200	
	Al 396.153	0.00041	0.01600	
	As 193.696	0.00026	0.00340	
	B 249.677	-0.00090	0.01200	
	Ba 455.403	-0.00013	0.00050	
	Be 313.042	0.00030	0.00015	out
	Ca 315.887	-0.00372	0.01400	
	Cd 226.502	-0.00012	0.00014	
	Co 228.616	0.00007	0.00050	
	Cr 267.716	0.00004	0.00082	
	Cu 327.393	-0.00239	0.00110	out
	Fe 259.939	0.00095	0.00540	
	Fe 273.955	0.00762	0.00850	
	K 766.490	-0.25061	0.24000	out
	Li 670.784	-0.00410	0.00620	
	Mg 279.077	0.01881	0.02700	
	Mg 280.271	-0.00089	0.00140	
	Mn 257.610	-0.00028	0.00050	
	Na 589.592	-0.08786	0.12000	
	Ni 231.604	-0.00020	0.00040	
	Pb 220.353	-0.00063	0.00220	
	Sb 206.836	-0.00010	0.00120	
	Se 196.026	0.00039	0.00620	
	Sr 407.771	-0.00002	0.00020	
	V 310.230	0.00273	0.00180	out
	Zn 213.857	-0.00393	0.01400	

IVM
31 Aug 01

Instrument Blank Third

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LCB	Ag 328.068	0.00027	0.00041	
	Ag 338.289	0.00018	0.00051	
	Al 308.215	0.01764	0.02200	
	Al 396.153	-0.00074	0.01600	
	As 193.696	-0.00064	0.00340	
	B 249.677	-0.00568	0.01200	
	Ba 455.403	-0.00018	0.00050	
	Be 313.042	0.00021	0.00015	out
	Ca 315.887	-0.00502	0.01400	
	Cd 226.502	-0.00004	0.00014	
	Co 228.616	0.00007	0.00050	
	Cr 267.716	0.00003	0.00082	
	Cu 327.393	-0.00229	0.00110	out
	Fe 259.939	-0.00133	0.00540	
	Fe 273.955	-0.00166	0.00850	
	K 766.490	-0.06740	0.24000	
	Li 670.784	-0.00134	0.00620	
	Mg 279.077	0.00290	0.02700	
	Mg 280.271	-0.00165	0.00140	out
	Mn 257.610	-0.00040	0.00050	
	Na 589.592	0.14912	0.12000	out
	Ni 231.604	0.00017	0.00040	
	Pb 220.353	-0.00059	0.00220	
	Sb 206.836	0.00274	0.00120	out
	Se 196.026	-0.00018	0.00620	
	Sr 407.771	0.00003	0.00020	
	V 310.230	0.00212	0.00180	out
	Zn 213.857	-0.00552	0.01400	

[illegible]
31 Aug 01

Instrument Blank Fourth

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LCB	Ag 328.068	0.00004	0.00041	
	Ag 338.289	-0.00022	0.00051	
	Al 308.215	0.02345	0.02200	out
	Al 396.153	0.00123	0.01600	
	As 193.696	0.00126	0.00340	
	B 249.677	-0.00027	0.01200	
	Ba 455.403	-0.00021	0.00050	
	Be 313.042	0.00027	0.00015	out
	Ca 315.887	-0.00221	0.01400	
	Cd 226.502	0.00007	0.00014	
	Co 228.616	-0.00026	0.00050	
	Cr 267.716	-0.00012	0.00082	
	Cu 327.393	-0.00177	0.00110	out
	Fe 259.939	-0.00039	0.00540	
	Fe 273.955	0.00043	0.00850	
	K 766.490	-0.08980	0.24000	
	Li 670.784	-0.00097	0.00620	
	Mg 279.077	-0.00032	0.02700	
	Mg 280.271	-0.00212	0.00140	out
	Mn 257.610	-0.00050	0.00050	out
	Na 589.592	0.27501	0.12000	out
	Ni 231.604	-0.00009	0.00040	
	Pb 220.353	0.00044	0.00220	
	Sb 206.836	0.00035	0.00120	
	Se 196.026	-0.00086	0.00620	
	Sr 407.771	-0.00002	0.00020	
	V 310.230	0.00304	0.00180	out
	Zn 213.857	-0.00827	0.01400	

JLM
31 Aug 01

Instrument Blank Fifth

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LCB	Ag 328.068	0.00020	0.00041	
	Ag 338.289	0.00072	0.00051	out
	Al 308.215	0.02385	0.02200	out
	Al 396.153	-0.00199	0.01600	
	As 193.696	0.00019	0.00340	
	B 249.677	0.00502	0.01200	
	Ba 455.403	-0.00020	0.00050	
	Be 313.042	0.00029	0.00015	out
	Ca 315.887	-0.00312	0.01400	
	Cd 226.502	-0.00002	0.00014	
	Co 228.616	-0.00048	0.00050	
	Cr 267.716	-0.00012	0.00082	
	Cu 327.393	-0.00244	0.00110	out
	Fe 259.939	0.00017	0.00540	
	Fe 273.955	-0.00195	0.00850	
	K 766.490	-0.21040	0.24000	
	Li 670.784	-0.00446	0.00620	
	Mg 279.077	-0.00632	0.02700	
	Mg 280.271	-0.00233	0.00140	out
	Mn 257.610	-0.00039	0.00050	
	Na 589.592	0.18036	0.12000	out
	Ni 231.604	0.00034	0.00040	
	Pb 220.353	0.00003	0.00220	
	Sb 206.836	0.00153	0.00120	out
	Se 196.026	0.00197	0.00620	
	Sr 407.771	-0.00003	0.00020	
	V 310.230	0.00149	0.00180	
	Zn 213.857	-0.00789	0.01400	

JM
31 Aug 01

Instrument QC First

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LCM1	Al 396.153	1.01176	1.00000	101.18%
	As 193.696	2.02751	2.00000	101.38%
	B 249.677	0.93608	1.00000	93.61%
	Ba 455.403	0.98809	1.00000	98.81%
	Be 313.042	0.98844	1.00000	98.84%
	Cd 226.502	1.11773	1.00000	111.77%
	Co 228.616	1.00468	1.00000	100.47%
	Cr 267.716	1.00256	1.00000	100.26%
	Cu 324.752	0.99845	1.00000	99.85%
	Cu 327.393	0.99299	1.00000	99.30%
	Fe 259.939	1.00550	1.00000	100.55%
	Li 670.784	0.99522	1.00000	99.52%
	Mg 280.271	1.02424	1.00000	102.42%
	Mn 257.610	0.98691	1.00000	98.69%
	Ni 231.604	1.02181	1.00000	102.18%
	Pb 220.353	2.04550	2.00000	102.27%
	Sb 206.836	1.87141	2.00000	93.57%
	Se 196.026	1.07423	1.00000	107.42%
	Sr 407.771	0.98057	1.00000	98.06%
	V 310.230	1.00524	1.00000	100.52%
	Zn 213.857	0.96192	1.00000	96.19%
LCM2	Ag 328.068	0.04856	0.05000	97.11%
	Ag 338.289	0.04852	0.05000	97.03%
Hi AQC	Al 308.215	98.397	100.000	98.40%
	Ca 315.887	104.715	100.000	104.72%
	Fe 273.955	105.537	100.000	105.54%
	K 766.490	104.055	100.000	104.06%
	Mg 279.077	60.255	60.000	100.43%
	Na 589.592	100.431	100.000	100.43%

31 Aug 01

Instrument QC Second

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LCM1	Al 396.153	1.00372	1.00000	100.37%
	As 193.696	2.02098	2.00000	101.05%
	B 249.677	0.90656	1.00000	90.66%
	Ba 455.403	0.98111	1.00000	98.11%
	Be 313.042	0.97393	1.00000	97.39%
	Cd 226.502	0.97829	1.00000	97.83%
	Co 228.616	0.97566	1.00000	97.57%
	Cr 267.716	0.96658	1.00000	96.66%
	Cu 324.752	0.95438	1.00000	95.44%
	Cu 327.393	0.98725	1.00000	98.73%
	Fe 259.939	0.96340	1.00000	96.34%
	Li 670.784	0.98614	1.00000	98.61%
	Mg 280.271	1.00702	1.00000	100.70%
	Mn 257.610	0.97510	1.00000	97.51%
	Ni 231.604	0.98718	1.00000	98.72%
	Pb 220.353	1.98780	2.00000	99.39%
	Sb 206.836	1.83210	2.00000	91.60%
	Se 196.026	1.06612	1.00000	106.61%
	Sr 407.771	0.96552	1.00000	96.55%
	V 310.230	0.97328	1.00000	97.33%
	Zn 213.857	0.95419	1.00000	95.42%
LCM2	Ag 328.068	0.04847	0.05000	96.94%
	Ag 338.289	0.04839	0.05000	96.78%
Hi AQC	Al 308.215	95.636	100.000	95.64%
	Ca 315.887	101.840	100.000	101.84%
	Fe 273.955	102.084	100.000	102.08%
	K 766.490	101.520	100.000	101.52%
	Mg 279.077	58.302	60.000	97.17%
	Na 589.592	99.682	100.000	99.68%

[illegible]
31 Aug 01

Instrument QC Third

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LCM1	Al 396.153	1.00672	1.00000	100.67%
	As 193.696	2.02479	2.00000	101.24%
	B 249.677	0.92678	1.00000	92.68%
	Ba 455.403	0.97947	1.00000	97.95%
	Be 313.042	0.97381	1.00000	97.38%
	Cd 226.502	0.98940	1.00000	98.94%
	Co 228.616	0.98571	1.00000	98.57%
	Cr 267.716	0.97489	1.00000	97.49%
	Cu 324.752	0.96021	1.00000	96.02%
	Cu 327.393	0.98803	1.00000	98.80%
	Fe 259.939	0.96340	1.00000	96.34%
	Li 670.784	0.98522	1.00000	98.52%
	Mg 280.271	1.00373	1.00000	100.37%
	Mn 257.610	0.97375	1.00000	97.38%
	Ni 231.604	1.00878	1.00000	100.88%
	Pb 220.353	1.99182	2.00000	99.59%
	Sb 206.836	1.82971	2.00000	91.49%
	Se 196.026	1.06692	1.00000	106.69%
	Sr 407.771	0.95642	1.00000	95.64%
	V 310.230	0.99189	1.00000	99.19%
	Zn 213.857	0.96073	1.00000	96.07%
LCM2	Ag 328.068	0.04706	0.05000	94.13%
	Ag 338.289	0.04827	0.05000	96.54%
Hi AQC	Al 308.215	95.754	100.000	95.75%
	Ca 315.887	101.943	100.000	101.94%
	Fe 273.955	102.693	100.000	102.69%
	K 766.490	101.772	100.000	101.77%
	Mg 279.077	58.458	60.000	97.43%
	Na 589.592	99.655	100.000	99.65%

31 Aug 01

Instrument QC Fourth

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LCM1	Al 396.153	0.99824	1.00000	99.82%
	As 193.696	2.02144	2.00000	101.07%
	B 249.677	0.92264	1.00000	92.26%
	Ba 455.403	0.98472	1.00000	98.47%
	Be 313.042	0.97742	1.00000	97.74%
	Cd 226.502	0.99727	1.00000	99.73%
	Co 228.616	0.99057	1.00000	99.06%
	Cr 267.716	0.97995	1.00000	97.99%
	Cu 324.752	0.96809	1.00000	96.81%
	Cu 327.393	0.97620	1.00000	97.62%
	Fe 259.939	0.96340	1.00000	96.34%
	Li 670.784	0.99306	1.00000	99.31%
	Mg 280.271	1.00967	1.00000	100.97%
	Mn 257.610	0.97573	1.00000	97.57%
	Ni 231.604	1.00272	1.00000	100.27%
	Pb 220.353	2.01503	2.00000	100.75%
	Sb 206.836	1.83973	2.00000	91.99%
	Se 196.026	1.07171	1.00000	107.17%
	Sr 407.771	0.95690	1.00000	95.69%
	V 310.230	0.98809	1.00000	98.81%
	Zn 213.857	0.93698	1.00000	93.70%
LCM2	Ag 328.068	0.04772	0.05000	95.44%
	Ag 338.289	0.04729	0.05000	94.57%
Hi AQC	Al 308.215	96.846	100.000	96.85%
	Ca 315.887	102.826	100.000	102.83%
	Fe 273.955	103.559	100.000	103.56%
	K 766.490	103.035	100.000	103.03%
	Mg 279.077	59.116	60.000	98.53%
	Na 589.592	99.905	100.000	99.90%

lm
31 Aug 01

Instrument QC Fifth

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LCM1	Al 396.153	0.99385	1.00000	99.38%
	As 193.696	2.03263	2.00000	101.63%
	B 249.677	0.92428	1.00000	92.43%
	Ba 455.403	0.97756	1.00000	97.76%
	Be 313.042	0.96976	1.00000	96.98%
	Cd 226.502	1.00120	1.00000	100.12%
	Co 228.616	0.99186	1.00000	99.19%
	Cr 267.716	0.98378	1.00000	98.38%
	Cu 324.752	0.97388	1.00000	97.39%
	Cu 327.393	0.97672	1.00000	97.67%
	Fe 259.939	0.96340	1.00000	96.34%
	Li 670.784	0.98657	1.00000	98.66%
	Mg 280.271	0.99964	1.00000	99.96%
	Mn 257.610	0.96448	1.00000	96.45%
	Ni 231.604	1.00790	1.00000	100.79%
	Pb 220.353	2.02107	2.00000	101.05%
	Sb 206.836	1.85395	2.00000	92.70%
	Se 196.026	1.07884	1.00000	107.88%
	Sr 407.771	0.94982	1.00000	94.98%
	V 310.230	0.99200	1.00000	99.20%
	Zn 213.857	0.94015	1.00000	94.01%
LCM2	Ag 328.068	0.04863	0.05000	97.26%
	Ag 338.289	0.04910	0.05000	98.20%
Hi AQC	Al 308.215	94.731	100.000	94.73%
	Ca 315.887	100.594	100.000	100.59%
	Fe 273.955	101.274	100.000	101.27%
	K 766.490	100.595	100.000	100.60%
	Mg 279.077	57.767	60.000	96.28%
	Na 589.592	99.352	100.000	99.35%

Jms
31 Aug 01

Report Level Check

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

RLC	Ag 328.068	0.00188	0.00200	93.97%
	Ag 338.289	0.00225	0.00200	112.68%
	Al 308.215	0.09057	0.06000	150.94%
	Al 396.153	0.06404	0.06000	106.73%
	As 193.696	0.01739	0.01500	115.94%
	B 249.677	0.03900	0.04000	97.50%
	Ba 455.403	0.00208	0.00200	103.89%
	Be 313.042	0.00128	0.00100	128.13%
	Ca 315.887	0.10515	0.03000	350.50%
	Cd 226.502	0.00097	0.00100	96.74%
	Co 228.616	0.00151	0.00200	75.40%
	Cr 267.716	0.00317	0.00300	105.57%
	Cu 324.752	0.00212	0.00400	52.94%
	Cu 327.393	0.02410	0.00400	602.55%
	Fe 259.939	0.02229	0.02000	111.46%
	Fe 273.955	1.03356	0.02000	5167.78%
	K 766.490	0.02343	0.80000	2.93%
	Li 670.784	0.00486	0.02500	19.42%
	Mg 279.077	0.01994	0.00500	398.90%
	Mg 280.271	0.00179	0.00500	35.72%
	Mn 257.610	0.51952	0.00200	25975.94%
	Na 589.592	0.00254	0.40000	0.64%
	Ni 231.604	0.01044	0.00200	522.21%
	Pb 220.353	0.00600	0.01000	59.97%
	Sb 206.836	0.03509	0.00400	877.36%
	Se 196.026	0.00124	0.03000	4.14%
	Sr 407.771	0.00798	0.00100	797.59%
	V 310.230	0.04479	0.00600	746.56%
	Zn 213.857	0.04256	0.04500	94.59%

[illegible]
31 Aug 01

Digestion Blank

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			MDL	
LRB	Ag 328.068	0.00018	0.00041	
	Ag 338.289	0.00009	0.00051	
	Al 308.215	0.03490	0.02200	out
	Al 396.153	0.00002	0.01600	
	As 193.696	-0.00164	0.00340	
	B 249.677	0.00318	0.01200	
	Ba 455.403	0.00019	0.00050	
	Be 313.042	0.00010	0.00015	
	Ca 315.887	0.08249	0.01400	out
	Cd 226.502	-0.00005	0.00014	
	Co 228.616	-0.00004	0.00050	
	Cr 267.716	0.00023	0.00082	
	Cu 327.393	-0.00125	0.00110	out
	Fe 259.939	0.00742	0.00540	out
	Fe 273.955	0.00901	0.00850	out
	K 766.490	-0.06719	0.24000	
	Li 670.784	-0.00437	0.00620	
	Mg 279.077	0.01178	0.02700	
	Mg 280.271	0.00830	0.00140	out
	Mn 257.610	-0.00007	0.00050	
	Na 589.592	0.01677	0.12000	
	Ni 231.604	0.00089	0.00040	out
	Pb 220.353	-0.00124	0.00220	
	Sb 206.836	0.00154	0.00120	out
	Se 196.026	0.00740	0.00620	out
	Sr 407.771	0.00031	0.00020	out
	V 310.230	0.00273	0.00180	out
	Zn 213.857	-0.00197	0.01400	

JCM
31 Aug 01

Spiked Blank

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

LFB	Ag 328.068	0.02528	0.02500	100.41%
	Ag 338.289	0.02526	0.02500	100.67%
	Al 308.215	1.02786	1.00000	99.30%
	Al 396.153	1.03157	1.00000	103.15%
	As 193.696	0.20544	0.20000	103.54%
	B 249.677	0.86514	1.00000	86.20%
	Ba 455.403	0.19619	0.20000	98.00%
	Be 313.042	0.00996	0.01000	98.53%
	Ca 315.887	52.86281	50.00000	105.56%
	Cd 226.502	0.04877	0.05000	97.65%
	Co 228.616	0.09712	0.10000	97.16%
	Cr 267.716	0.09927	0.10000	99.04%
	Cu 327.393	0.09857	0.10000	99.82%
	Fe 259.939	0.99512	1.00000	98.77%
	Fe 273.955	1.10301	1.00000	109.40%
	K 766.490	26.24466	25.00000	105.25%
	Li 670.784	0.09416	0.10000	98.54%
	Mg 279.077	19.94532	20.00000	99.67%
	Mg 280.271	19.19909	20.00000	95.95%
	Mn 257.610	0.19255	0.20000	96.31%
	Na 589.592	51.21079	50.00000	102.39%
	Ni 231.604	0.19879	0.20000	98.95%
	Pb 220.353	0.50076	0.50000	100.40%
	Sb 206.836	0.50489	0.50000	100.67%
	Se 196.026	0.50182	0.50000	98.89%
	Sr 407.771	0.95224	1.00000	95.19%
	V 310.230	0.10332	0.10000	100.60%
	Zn 213.857	0.95425	1.00000	95.62%

km
31 Aug 01

SPIKE

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

	Element	Units	Sample	Spike	Spike Added	% Recovery
filter blank 3	Ag 328.068	mg/L	0.00030	0.02569	0.02500	101.58%
	Ag 338.289	mg/L	-0.00028	0.02621	0.02500	105.99%
	Al 308.215	mg/L	1.25804	2.32250	1.00000	106.45%
	Al 396.153	mg/L	1.22077	2.32367	1.00000	110.29%
	As 193.696	mg/L	-0.00321	0.21111	0.20000	107.16%
	B 249.677	mg/L	0.45964	1.42272	1.00000	96.31%
	Ba 455.403	mg/L	0.27264	0.46773	0.20000	97.55%
	Be 313.042	mg/L	0.00041	0.01069	0.01000	102.73%
	Ca 315.887	mg/L	3.77996	58.29021	50.00000	109.02%
	Cd 226.502	mg/L	-0.00023	0.05028	0.05000	101.03%
	Co 228.616	mg/L	0.00002	0.09865	0.10000	98.63%
	Cr 267.716	mg/L	0.00673	0.10845	0.10000	101.72%
	Cu 327.393	mg/L	-0.00015	0.10089	0.10000	101.05%
	Fe 259.939	mg/L	0.12960	1.13340	1.00000	100.38%
	Fe 273.955	mg/L	0.14274	1.24694	1.00000	110.42%
	K 766.490	mg/L	2.03220	28.76183	25.00000	106.92%
	Li 670.784	mg/L	-0.00174	0.09911	0.10000	100.85%
	Mg 279.077	mg/L	1.09263	22.06760	20.00000	104.87%
	Mg 280.271	mg/L	1.05327	21.01753	20.00000	99.82%
	Mn 257.610	mg/L	0.00105	0.19972	0.20000	99.34%
	Na 589.592	mg/L	53.51216	104.98202	50.00000	102.94%
	Ni 231.604	mg/L	0.00192	0.20341	0.20000	100.74%
	Pb 220.353	mg/L	-0.00144	0.51525	0.50000	103.34%
	Sb 206.836	mg/L	0.00295	0.46148	0.50000	91.71%
	Se 196.026	mg/L	0.00632	0.51463	0.50000	101.66%
	Sr 407.771	mg/L	0.00267	0.98918	1.00000	98.65%
	V 310.230	mg/L	0.00169	0.10686	0.10000	105.17%
	Zn 213.857	mg/L	0.02001	1.02502	1.00000	100.50%

JVM
31 Aug 01

DUPLICATE

Sample Number: 2001AH03S01
Sample Batch Number: 20010060
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb 083001a.mdb

Element	Units	Sample	Duplicate	Difference	Reporting Limit	RPD
As 193.696	µg/filter	1.16	2.56	-1.41	9.000	-75.58%
Ba 455.403	µg/filter	160.57	171.44	-10.87	1.200	-6.55%
Be 313.042	µg/filter	0.11	0.10	0.02	0.600	18.34%
Cd 226.502	µg/filter	1.01	0.94	0.06	0.600	6.57%
Cr 267.716	µg/filter	5.22	5.50	-0.28	1.800	-5.24%
Co 228.616	µg/filter	0.79	0.50	0.29	1.200	44.88%
Cu 327.393	µg/filter	1057.38	1094.76	-37.39	2.400	-3.47%
Fe 259.939	µg/filter	932.15	1018.41	-86.26	12.000	-8.84%
Pb 220.353	µg/filter	19.83	19.80	0.03	6.000	0.15%
Mg 280.27	µg/filter	794.25	860.77	-66.53	3.000	-8.04%
Mn 257.61	µg/filter	23.75	26.21	-2.46	1.200	-9.84%
Ni 231.604	µg/filter	4.14	4.00	0.14	1.200	3.41%
Se 196.026	µg/filter	7.91	10.48	-2.57	18.000	-27.97%

JM
31 Aug 01

DUPLICATE

Sample Number: 2001AH03S05
Sample Batch Number: 20010062
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

Element	Units	Sample	Duplicate	Difference	Reporting Limit	RPD
As 193.696	µg/filter	1.79	2.88	-1.10	9.000	-46.99%
Ba 455.403	µg/filter	199.13	213.41	-14.28	1.200	-6.92%
Be 313.042	µg/filter	0.23	0.25	-0.02	0.600	-7.40%
Cd 226.502	µg/filter	0.16	0.21	-0.04	0.600	-23.64%
Cr 267.716	µg/filter	7.09	8.51	-1.42	1.800	-18.20%
Co 228.616	µg/filter	0.30	0.46	-0.17	1.200	-43.73%
Cu 327.393	µg/filter	156.53	159.94	-3.41	2.400	-2.16%
Fe 259.939	µg/filter	345.92	377.74	-31.83	12.000	-8.80%
Pb 220.353	µg/filter	7.62	7.61	0.00	6.000	0.01%
Mg 280.27	µg/filter	900.41	973.42	-73.01	3.000	-7.79%
Mn 257.61	µg/filter	58.06	64.01	-5.94	1.200	-9.74%
Ni 231.604	µg/filter	3.00	3.63	-0.63	1.200	-18.96%
Se 196.026	µg/filter	13.37	12.98	0.39	18.000	2.93%

JWM
31Aug01

DUPLICATE

Sample Number: 2001AH04S03
Sample Batch Number: 20010067
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

Element	Units	Sample	Duplicate	Difference	Reporting Limit	RPD
As 193.696	µg/filter	1.12	1.63	-0.50	9.000	-36.54%
Ba 455.403	µg/filter	145.78	152.55	-6.77	1.200	-4.54%
Be 313.042	µg/filter	0.17	0.18	-0.01	0.600	-7.70%
Cd 226.502	µg/filter	1.08	1.24	-0.16	0.600	-13.92%
Cr 267.716	µg/filter	3.99	4.23	-0.25	1.800	-5.98%
Co 228.616	µg/filter	0.26	0.17	0.09	1.200	41.40%
Cu 327.393	µg/filter	56.44	59.54	-3.10	2.400	-5.34%
Fe 259.939	µg/filter	277.63	290.75	-13.12	12.000	-4.62%
Pb 220.353	µg/filter	5.39	6.05	-0.66	6.000	-11.55%
Mg 280.27	µg/filter	622.85	652.81	-29.97	3.000	-4.70%
Mn 257.61	µg/filter	10.38	10.53	-0.16	1.200	-1.48%
Ni 231.604	µg/filter	1.54	3.26	-1.73	1.200	-71.84%
Se 196.026	µg/filter	7.60	5.72	1.88	18.000	28.21%

Jm
31 Aug 01

DUPLICATE

Sample Number: 2001AH01S02
Sample Batch Number: 20010051
Analysis Date: 30 Aug 01 7 Aug 01
Results Data Set: 083001.mdb 080701.mdb

Element	Units	Sample	Duplicate	Difference	Reporting Limit	RPD
As 193.696	µg/filter	3.11	2.43	0.69	9.000	24.89%
Ba 455.403	µg/filter	144.24	159.61	-15.38	1.200	-10.12%
Be 313.042	µg/filter	-0.10	0.32	-0.42	0.600	-383.99%
Cd 226.502	µg/filter	0.69	0.53	0.17	0.600	27.32%
Cr 267.716	µg/filter	4.63	5.36	-0.72	1.800	-14.45%
Co 228.616	µg/filter	0.39	0.86	-0.48	1.200	-76.30%
Cu 327.393	µg/filter	766.85	235.25	531.60	2.400	106.10%
Fe 259.939	µg/filter	809.09	1018.56	-209.47	12.000	-22.92%
Pb 220.353	µg/filter	11.08	9.11	1.97	6.000	19.52%
Mg 280.271	µg/filter	687.59	784.98	-97.39	3.000	-13.23%
Mn 257.610	µg/filter	27.43	25.69	1.74	1.200	6.56%
Ni 231.604	µg/filter	3.65	6.01	-2.36	1.200	-48.96%
Se 196.026	µg/filter	11.49	6.07	5.41	18.000	61.63%

JM
31 Aug 01

DUPLICATE

Sample Number: 2001AH02S03
Sample Batch Number: 20010052
Analysis Date: 30 Aug 01 7 Aug 01
Results Data Set: 083001.mdb 080701a.mdb

Element	Units	Sample	Duplicate	Difference	Reporting Limit	RPD
As 193.696	µg/filter	7.54	2.86	4.67	9.000	89.91%
Ba 455.403	µg/filter	174.00	167.39	6.61	1.200	3.88%
Be 313.042	µg/filter	-0.15	0.20	-0.35	0.600	-1623.10%
Cd 226.502	µg/filter	0.24	0.50	-0.26	0.600	-71.61%
Cr 267.716	µg/filter	8.38	8.24	0.14	1.800	1.72%
Co 228.616	µg/filter	0.18	0.32	-0.14	1.200	-58.25%
Cu 327.393	µg/filter	86.87	90.60	-3.73	2.400	-4.21%
Fe 259.939	µg/filter	351.54	330.65	20.90	12.000	6.13%
Pb 220.353	µg/filter	4.05	6.69	-2.64	6.000	-49.14%
Mg 280.27	µg/filter	742.81	726.48	16.33	3.000	2.22%
Mn 257.61	µg/filter	56.23	47.62	8.61	1.200	16.59%
Ni 231.604	µg/filter	3.16	3.19	-0.02	1.200	-0.78%
Se 196.026	µg/filter	95.77	77.68	18.09	18.000	20.86%

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Co V	Ag 328.068	0.00131	0.00200	
	Ag 338.289	-0.00012	0.00200	
	Al 308.215	0.12864	0.06000	out
	Al 396.153	0.14644	0.06000	out
	As 193.696	-0.00121	0.01500	
	B 249.677	0.01069	0.04000	
	Ba 455.403	0.00035	0.00200	
	Be 313.042	0.00091	0.00100	
	Ca 315.887	0.16582	0.03000	out
	Cd 226.502	-0.00021	0.00100	
	Co 228.616	9.92272	0.00200	
	Cr 267.716	-0.00102	0.00300	
	Cu 327.393	0.00079	0.00400	
	Fe 259.939	0.12910	0.02000	out
	Fe 273.955	0.13773	0.02000	out
	K 766.490	0.21991	0.80000	
	Li 670.784	0.00045	0.02500	
	Mg 279.077	0.12428	0.00500	out
	Mg 280.271	0.12458	0.00500	out
	Mn 257.610	-0.00010	0.00200	
	Na 589.592	0.20069	0.40000	
	Ni 231.604	0.00126	0.00200	
	Pb 220.353	-0.00033	0.01000	
	Sb 206.836	-0.00281	0.00400	
	Se 196.026	0.00165	0.03000	
	Sr 407.771	0.00015	0.00100	
	V 310.230	9.94182	0.00600	
	Zn 213.857	0.00291	0.04500	

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Ce	Ag 328.068	0.00002	0.00200	
	Ag 338.289	-0.00055	0.00200	
	Al 308.215	0.02605	0.06000	
	Al 396.153	0.27358	0.06000	out
	As 193.696	0.00257	0.01500	
	B 249.677	0.00675	0.04000	
	Ba 455.403	0.00014	0.00200	
	Be 313.042	-0.00005	0.00100	
	Ca 315.887	0.06856	0.03000	out
	Cd 226.502	-0.00007	0.00100	
	Co 228.616	0.00006	0.00200	
	Cr 267.716	0.00054	0.00300	
	Cu 327.393	-0.00175	0.00400	
	Fe 259.939	0.00621	0.02000	
	Fe 273.955	0.00883	0.02000	
	K 766.490	0.10883	0.80000	
	Li 670.784	0.00264	0.02500	
	Mg 279.077	0.01550	0.00500	out
	Mg 280.271	0.01068	0.00500	out
	Mn 257.610	-0.00014	0.00200	
	Na 589.592	0.10872	0.40000	
	Ni 231.604	0.00076	0.00200	
	Pb 220.353	0.00034	0.01000	
	Sb 206.836	0.00105	0.00400	
	Se 196.026	0.00346	0.03000	
	Sr 407.771	-0.00104	0.00100	out
	V 310.230	0.00298	0.00600	
	Zn 213.857	-0.00141	0.04500	

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Cr	Ag 328.068	0.00028	0.00200	
	Ag 338.289	0.00199	0.00200	
	Al 308.215	0.04433	0.06000	
	Al 396.153	0.01855	0.06000	
	As 193.696	0.00040	0.01500	
	B 249.677	0.00711	0.04000	
	Ba 455.403	0.00006	0.00200	
	Be 313.042	0.00048	0.00100	
	Ca 315.887	0.02581	0.03000	
	Cd 226.502	-0.00003	0.00100	
	Co 228.616	-0.00379	0.00200	out
	Cr 267.716	10.06251	0.00300	
	Cu 327.393	-0.00179	0.00400	
	Fe 259.939	0.00684	0.02000	
	Fe 273.955	0.01718	0.02000	
	K 766.490	-0.06371	0.80000	
	Li 670.784	-0.00224	0.02500	
	Mg 279.077	-0.01018	0.00500	out
	Mg 280.271	0.00335	0.00500	
	Mn 257.610	-0.00027	0.00200	
	Na 589.592	0.00784	0.40000	
	Ni 231.604	0.00107	0.00200	
	Pb 220.353	-0.00201	0.01000	
	Sb 206.836	0.04574	0.00400	out
	Se 196.026	0.00066	0.03000	
	Sr 407.771	0.00035	0.00100	
	V 310.230	0.00460	0.00600	
	Zn 213.857	-0.00434	0.04500	

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Fe	Ag 328.068	-0.00395	0.00200	out
	Ag 338.289	-0.00023	0.00200	
	Al 308.215	0.06208	0.06000	out
	Al 396.153	0.04709	0.06000	
	As 193.696	-0.03400	0.01500	out
	B 249.677	-0.00717	0.04000	
	Ba 455.403	0.00014	0.00200	
	Be 313.042	0.00039	0.00100	
	Ca 315.887	0.07770	0.03000	out
	Cd 226.502	0.00894	0.00100	out
	Co 228.616	0.00162	0.00200	
	Cr 267.716	-0.00073	0.00300	
	Cu 327.393	-0.00361	0.00400	
	Fe 259.939	282.08690	0.02000	
	Fe 273.955	318.62991	0.02000	
	K 766.490	0.04190	0.80000	
	Li 670.784	-0.00129	0.02500	
	Mg 279.077	0.09006	0.00500	out
	Mg 280.271	0.02151	0.00500	out
	Mn 257.610	0.01018	0.00200	out
	Na 589.592	0.00518	0.40000	
	Ni 231.604	0.00462	0.00200	out
	Pb 220.353	0.01120	0.01000	out
	Sb 206.836	0.00176	0.00400	
	Se 196.026	-0.12999	0.03000	out
	Sr 407.771	0.00004	0.00100	
	V 310.230	0.00665	0.00600	out
	Zn 213.857	-0.00416	0.04500	

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Mn	Ag 328.068	0.00061	0.00200	
	Ag 338.289	0.00012	0.00200	
	Al 308.215	0.03468	0.06000	
	Al 396.153	0.01554	0.06000	
	As 193.696	0.00297	0.01500	
	B 249.677	0.00449	0.04000	
	Ba 455.403	0.00005	0.00200	
	Be 313.042	0.00017	0.00100	
	Ca 315.887	0.05919	0.03000	out
	Cd 226.502	0.00012	0.00100	
	Co 228.616	-0.00011	0.00200	
	Cr 267.716	0.00064	0.00300	
	Cu 327.393	-0.00133	0.00400	
	Fe 259.939	0.02885	0.02000	out
	Fe 273.955	0.03611	0.02000	out
	K 766.490	-0.13111	0.80000	
	Li 670.784	-0.00062	0.02500	
	Mg 279.077	0.02253	0.00500	out
	Mg 280.271	0.01474	0.00500	out
	Mn 257.610	12.01471	0.00200	
	Na 589.592	-0.01580	0.40000	
	Ni 231.604	0.00075	0.00200	
	Pb 220.353	0.00024	0.01000	
	Sb 206.836	0.00088	0.00400	
	Se 196.026	0.00298	0.03000	
	Sr 407.771	0.00043	0.00100	
	V 310.230	0.00307	0.00600	
	Zn 213.857	0.00123	0.04500	

JVM
31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Mo	Ag 328.068	-0.00004	0.00200	
	Ag 338.289	-0.00019	0.00200	
	Al 308.215	0.08308	0.06000	out
	Al 396.153	0.03269	0.06000	
	As 193.696	0.00248	0.01500	
	B 249.677	0.00157	0.04000	
	Ba 455.403	0.00014	0.00200	
	Be 313.042	0.00032	0.00100	
	Ca 315.887	0.03948	0.03000	out
	Cd 226.502	-0.00012	0.00100	
	Co 228.616	0.00346	0.00200	out
	Cr 267.716	0.00052	0.00300	
	Cu 327.393	-0.00066	0.00400	
	Fe 259.939	0.01183	0.02000	
	Fe 273.955	0.01649	0.02000	
	K 766.490	-0.09735	0.80000	
	Li 670.784	-0.00308	0.02500	
	Mg 279.077	0.03531	0.00500	out
	Mg 280.271	0.00290	0.00500	
	Mn 257.610	0.00105	0.00200	
	Na 589.592	0.03407	0.40000	
	Ni 231.604	-0.00052	0.00200	
	Pb 220.353	-0.00292	0.01000	
	Sb 206.836	0.01133	0.00400	out
	Se 196.026	0.00215	0.03000	
	Sr 407.771	0.00039	0.00100	
	V 310.230	0.00365	0.00600	
	Zn 213.857	-0.00675	0.04500	

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31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Ni	Ag 328.068	0.00001	0.00200	
	Ag 338.289	-0.00029	0.00200	
	Al 308.215	0.04609	0.06000	
	Al 396.153	0.02063	0.06000	
	As 193.696	0.00201	0.01500	
	B 249.677	-0.00368	0.04000	
	Ba 455.403	-0.00007	0.00200	
	Be 313.042	0.00028	0.00100	
	Ca 315.887	0.03480	0.03000	out
	Cd 226.502	0.00337	0.00100	out
	Co 228.616	-0.00064	0.00200	
	Cr 267.716	0.00022	0.00300	
	Cu 327.393	-0.00093	0.00400	
	Fe 259.939	0.00473	0.02000	
	Fe 273.955	0.00668	0.02000	
	K 766.490	-0.16695	0.80000	
	Li 670.784	-0.00315	0.02500	
	Mg 279.077	-0.01449	0.00500	out
	Mg 280.271	0.00317	0.00500	
	Mn 257.610	0.00009	0.00200	
	Na 589.592	-0.00047	0.40000	
	Ni 231.604	9.96581	0.00200	
	Pb 220.353	-0.00166	0.01000	
	Sb 206.836	0.00092	0.00400	
	Se 196.026	0.00150	0.03000	
	Sr 407.771	0.00036	0.00100	
	V 310.230	-0.00018	0.00600	
	Zn 213.857	-0.00764	0.04500	

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31 Aug 01

SIC Solutions

Sample Batch Number: 20010060 62&67
Analysis Date: 30 Aug 01
Results Data Set: 083001.mdb

			RL	
SIC Ti	Ag 328.068	0.00097	0.00200	
	Ag 338.289	0.00136	0.00200	
	Al 308.215	0.06385	0.06000	out
	Al 396.153	0.02025	0.06000	
	As 193.696	0.00158	0.01500	
	B 249.677	-0.00174	0.04000	
	Ba 455.403	0.00004	0.00200	
	Be 313.042	0.00052	0.00100	
	Ca 315.887	0.03328	0.03000	out
	Cd 226.502	-0.00003	0.00100	
	Co 228.616	0.00787	0.00200	out
	Cr 267.716	0.00118	0.00300	
	Cu 327.393	-0.00076	0.00400	
	Fe 259.939	0.01055	0.02000	
	Fe 273.955	0.01435	0.02000	
	K 766.490	-0.10519	0.80000	
	Li 670.784	-0.00006	0.02500	
	Mg 279.077	0.01809	0.00500	out
	Mg 280.271	0.00351	0.00500	
	Mn 257.610	0.00010	0.00200	
	Na 589.592	-0.06223	0.40000	
	Ni 231.604	0.00172	0.00200	
	Pb 220.353	-0.00109	0.01000	
	Sb 206.836	-0.00050	0.00400	
	Se 196.026	0.00130	0.03000	
	Sr 407.771	0.00035	0.00100	
	V 310.230	0.00502	0.00600	
	Zn 213.857	-0.00297	0.04500	

Jm
31 Aug 01

METALS SAMPLE PREPARATION RECORD

Prepared by: JV Morris
Digestion Method: Metals 006

Run Number: 1300
Date: 28 Aug 01

Vessel Number	Data Set Number	Sample Number	pH < 2?	Sample Description (Color, Clarity, Texture, Artifacts, etc...)		Remarks
			Y/N*	Before Prep.	After Prep.	
1		LRB	NA			
2		LFB				
3		Filterblank 1				G6093509
4		" " 2				G6093510
5		" " 3				G6093511
6	spiked	Filter spike blank 3				G6093511
7	20010051	Dup 2001AH01502				
8	20010052	Dup 2001AH02503				
9	20010060	2001AH03501				
10	Dup	2001AH03501				
11		2001AH03D01				
12		2001AH03502				
13		2001AH03503				
14	20010062	2001AH03504				
15		2001AH03D02				
16		2001AH03505				
17	Dup	2001AH03505				
18		2001AH03506				

* Please note: A minimum of 16 hours from time of sampling must elapse before pH of sample can be taken.
If pH > 2, record and date in the Remarks column the actual pH and the amount of acid added to bring pH to < 2.

Comments:

JVM 31 Aug 01

METALS SAMPLE PREPARATION RECORD

Prepared by: JV Moore
Digestion Method: Metals 001

Run Number: 1300
Date: 28 Aug 01

Vessel Number	Data Set Number	Sample Number	pH < 2? Y/N*	Sample Description (Color, Clarity, Texture, Artifacts, etc...) Before Prep.	After Prep.	Remarks
19	20010067	2001AH04501	NA			
20		2001AH04D01	|			
21		2001AH04502	|			dropped filter section out view
22		2001AH04503	|			
23	Dup	2001AH04507	✓			

* Please note: A minimum of 16 hours from time of sampling must elapse before pH of sample can be taken.
If pH > 2, record and date in the Remarks column the actual pH and the amount of acid added to bring pH to < 2.

Comments:

KM 21 Aug 01

Sample Batch Number: 20010060 62&67
Anal ysisDate: 30 Aug 01
Results Data Set: 083001a.mdb

Sample ID	Date	Time	Aliquot Volume	Diluted to Volume
BLANK	08/30/01	02:48:21 PM		
LCM1	08/30/01	02:52:49 PM		
LCM2	08/30/01	02:57:16 PM		
Hi AQC	08/30/01	03:01:39 PM		
RLC	08/30/01	03:06:13 PM		
2001AH03S01 Dup	08/30/01	03:10:38 PM	20	40
BLANK	08/30/01	03:40:57 PM		
LCM1	08/30/01	03:45:26 PM		
LCM2	08/30/01	03:49:57 PM		
Hi AQC	08/30/01	03:54:25 PM		
RLC	08/30/01	03:59:04 PM		
2001AH03S01 Dup	08/30/01	04:03:34 PM	20	40
2001AH03S04	08/30/01	04:08:00 PM	20	40
2001AH03S04	08/30/01	04:14:21 PM	20	40
2001AH03S04	08/30/01	04:18:47 PM	10	20
2001AH03A01 Dup	08/30/01	04:23:16 PM	10	20
BLANK	08/30/01	04:27:43 PM		
LCM1	08/30/01	04:32:09 PM		
LCM2	08/30/01	04:36:40 PM		
Hi AQC	08/30/01	04:41:08 PM		

no internal standard

replaced IS tube

Jm
31 Aug 01

Instrument Blank First

Sample Batch Number: 20010060 62&67 Dilutions
Analysis Date: 30 Aug 01
Results Data Set: 083001a.mdb

			MDL	
LCB	Ag 328.068	0.00061	0.00041	out
	Ag 338.289	0.00066	0.00051	out
	Al 308.215	0.00291	0.02200	
	Al 396.153	-0.00328	0.01600	
	As 193.696	0.00365	0.00340	out
	B 249.677	-0.00078	0.01200	
	Ba 455.403	-0.00011	0.00050	
	Be 313.042	-0.00013	0.00015	
	Ca 315.887	0.00053	0.01400	
	Cd 226.502	-0.00030	0.00014	out
	Co 228.616	-0.00030	0.00050	
	Cr 267.716	0.00004	0.00082	
	Cu 327.393	-0.00298	0.00110	out
	Fe 259.939	-0.00059	0.00540	
	Fe 273.955	-0.00361	0.00850	
	K 766.490	-0.25754	0.24000	out
	Li 670.784	-0.00199	0.00620	
	Mg 279.077	0.01612	0.02700	
	Mg 280.271	-0.00148	0.00140	out
	Mn 257.610	-0.00038	0.00050	
	Na 589.592	-0.03328	0.12000	
	Ni 231.604	-0.00043	0.00040	out
	Pb 220.353	-0.00184	0.00220	
	Sb 206.836	0.00534	0.00120	out
	Se 196.026	0.00323	0.00620	
	Sr 407.771	-0.00001	0.00020	
	V 310.230	-0.03807	0.00180	out
	Zn 213.857	-0.00225	0.01400	

JW
31 Aug 01

Instrument Blank Second

Sample Batch Number: 20010060 62&67 Dilutions
Analysis Date: 30 Aug 01
Results Data Set: 083001a.mdb

			MDL	
LCB	Ag 328.068	0.00046	0.00041	out
	Ag 338.289	0.00016	0.00051	
	Al 308.215	0.00064	0.02200	
	Al 396.153	0.00043	0.01600	
	As 193.696	0.00155	0.00340	
	B 249.677	-0.00614	0.01200	
	Ba 455.403	-0.00012	0.00050	
	Be 313.042	-0.00010	0.00015	
	Ca 315.887	0.00432	0.01400	
	Cd 226.502	-0.00030	0.00014	out
	Co 228.616	-0.00046	0.00050	
	Cr 267.716	-0.00000	0.00082	
	Cu 327.393	-0.00288	0.00110	out
	Fe 259.939	0.00018	0.00540	
	Fe 273.955	0.00103	0.00850	
	K 766.490	-0.16419	0.24000	
	Li 670.784	-0.00146	0.00620	
	Mg 279.077	0.02738	0.02700	out
	Mg 280.271	-0.00116	0.00140	
	Mn 257.610	-0.00037	0.00050	
	Na 589.592	0.03724	0.12000	
	Ni 231.604	-0.00030	0.00040	
	Pb 220.353	-0.00258	0.00220	out
	Sb 206.836	0.00568	0.00120	out
	Se 196.026	0.00049	0.00620	
	Sr 407.771	0.00005	0.00020	
	V 310.230	-0.03906	0.00180	out
	Zn 213.857	-0.00510	0.01400	

31 Aug 01

Instrument Blank First

Sample Batch Number: 20010060 62&67 Dilutions
Analysis Date: 30 Aug 01
Results Data Set: 083001a.mdb

LCM1	Al 396.153	1.02702	1.00000	102.70%
	As 193.696	2.10025	2.00000	105.01%
	B 249.677	0.97215	1.00000	97.22%
	Ba 455.403	1.00467	1.00000	100.47%
	Be 313.042	1.00722	1.00000	100.72%
	Cd 226.502	1.00800	1.00000	100.80%
	Co 228.616	0.94194	1.00000	94.19%
	Cr 267.716	0.97481	1.00000	97.48%
	Cu 324.752	0.96457	1.00000	96.46%
	Cu 327.393	1.02697	1.00000	102.70%
	Fe 259.939	1.00550	1.00000	100.55%
	Li 670.784	1.03288	1.00000	103.29%
	Mg 280.271	1.05664	1.00000	105.66%
	Mn 257.610	1.01135	1.00000	101.13%
	Ni 231.604	1.07999	1.00000	108.00%
	Pb 220.353	1.95084	2.00000	97.54%
	Sb 206.836	1.96155	2.00000	98.08%
	Se 196.026	1.10815	1.00000	110.81%
	Sr 407.771	1.08311	1.00000	108.31%
	V 310.230	0.91392	1.00000	91.39%
	Zn 213.857	0.99652	1.00000	99.65%
LCM2	Ag 328.068	0.04798	0.05000	95.96%
	Ag 338.289	0.04859	0.05000	97.17%
Hi AQC	Al 308.215	97.603	100.000	97.60%
	Ca 315.887	99.990	100.000	99.99%
	Fe 273.955	105.506	100.000	105.51%
	K 766.490	105.294	100.000	105.29%
	Mg 279.077	59.445	60.000	99.08%
	Na 589.592	102.468	100.000	102.47%

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Instrument Blank Second

Sample Batch Number: 20010060 62&67 Dilutions
Analysis Date: 30 Aug 01
Results Data Set: 083001a.mdb

LCM1	Al 396.153	1.02330	1.00000	102.33%
	As 193.696	2.08921	2.00000	104.46%
	B 249.677	0.96879	1.00000	96.88%
	Ba 455.403	1.00239	1.00000	100.24%
	Be 313.042	1.00212	1.00000	100.21%
	Cd 226.502	1.00738	1.00000	100.74%
	Co 228.616	0.93231	1.00000	93.23%
	Cr 267.716	0.97371	1.00000	97.37%
	Cu 324.752	0.96393	1.00000	96.39%
	Cu 327.393	1.01888	1.00000	101.89%
	Fe 259.939	1.00550	1.00000	100.55%
	Li 670.784	1.03179	1.00000	103.18%
	Mg 280.271	1.05030	1.00000	105.03%
	Mn 257.610	1.00324	1.00000	100.32%
	Ni 231.604	1.08433	1.00000	108.43%
	Pb 220.353	1.93927	2.00000	96.96%
	Sb 206.836	1.95431	2.00000	97.72%
	Se 196.026	1.10719	1.00000	110.72%
	Sr 407.771	1.08426	1.00000	108.43%
	V 310.230	0.91155	1.00000	91.16%
	Zn 213.857	0.98323	1.00000	98.32%
LCM2	Ag 328.068	0.04769	0.05000	95.38%
	Ag 338.289	0.04824	0.05000	96.49%
Hi AQC	Al 308.215	98.141	100.000	98.14%
	Ca 315.887	99.958	100.000	99.96%
	Fe 273.955	106.137	100.000	106.14%
	K 766.490	105.969	100.000	105.97%
	Mg 279.077	59.995	60.000	99.99%
	Na 589.592	102.459	100.000	102.46%

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Report Level Check

Sample Batch Number: 20010060 62&67 Dilutions
Analysis Date: 30 Aug 01
Results Data Set: 083001a.mdb

RLC	Ag 328.068	0.00239	0.00200	119.44%
	Ag 338.289	0.00275	0.00200	137.42%
	Al 308.215	0.07467	0.06000	124.45%
	Al 396.153	0.08356	0.06000	139.27%
	As 193.696	0.02074	0.01500	138.25%
	B 249.677	0.05601	0.04000	140.03%
	Ba 455.403	0.00224	0.00200	112.06%
	Be 313.042	0.00070	0.00100	70.25%
	Ca 315.887	0.12009	0.03000	400.30%
	Cd 226.502	0.00073	0.00100	73.22%
	Co 228.616	0.00123	0.00200	61.51%
	Cr 267.716	0.00311	0.00300	103.75%
	Cu 324.752	0.00132	0.00400	32.90%
	Cu 327.393	0.03511	0.00400	877.63%
	Fe 259.939	0.03919	0.02000	195.93%
	Fe 273.955	1.14572	0.02000	5728.62%
	K 766.490	0.02444	0.80000	3.06%
	Li 670.784	0.02822	0.02500	112.89%
	Mg 279.077	0.02678	0.00500	535.55%
	Mg 280.271	0.00164	0.00500	32.76%
	Mn 257.610	0.59648	0.00200	29824.09%
	Na 589.592	0.00211	0.40000	0.53%
	Ni 231.604	0.00844	0.00200	421.88%
	Pb 220.353	0.01106	0.01000	110.55%
	Sb 206.836	0.03868	0.00400	966.98%
	Se 196.026	0.00137	0.03000	4.56%
	Sr 407.771	-0.03352	0.00100	-3352.36%
	V 310.230	0.04744	0.00600	790.63%
	Zn 213.857	0.04256	0.04500	94.59%

JVM
31 Aug 01