FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME Bonner Analytical Testing Company

CITY/STATE Hattiesburg / MS

CASE NO. 42356 SDG NO. MF5H91

SDG NOs. TO FOLLOW N/A

MOD. REF. NO. N/A

667089

CONTRACT NO. EPW09037

SOW NO. ISM01.3

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
1.	Inventory Sheet (DC-2)	1	2	✓	✓
2.	SDG Narrative	3	3	✓	✓
3.	Sample Log-In Sheet (DC-1)	4	5	✓	✓
4.	Traffic Report/Chain of Custody Record(s)	6	8	✓	✓
5.	Cover Page	9	9	✓	✓
Inorganic Analysis					
6.	Data Sheet (Form I-IN)	10	12	✓	✓
7.	Initial & Continuing Calibration Verification (Form IIA-IN)	13	14	✓	✓
8.	Blanks (Form III-IN)	15	15	✓	✓
9.	ICP-AES Interference Check Sample (Form IVA-IN)	N/A	N/A	✓	
10.	ICP-MS Interference Check Sample (Form IVB-IN)	N/A	N/A	✓	
11.	Matrix Spike Sample Recovery (Form VA-IN)	N/A	N/A	✓	
12.	Post-Digestion Spike Sample Recovery (Form VB-IN)	N/A	N/A	✓	
13.	Duplicates (Form VI-IN)	N/A	N/A	✓	
14.	Laboratory Control Sample (Form VII-IN)	N/A	N/A	✓	
15.	ICP-AES and ICP-MS Serial Dilutions (Form VIII-IN)	N/A	N/A	✓	
16.	Method Detection Limit (Annually) (Form IX-IN)	16	16	✓	✓
17.	ICP-AES Interelement Correction Factors (Annually) (Form XA-IN)	N/A	N/A	✓	
18.	ICP-AES Interelement Correction Factors (Annually) (Form XB-IN)	N/A	N/A	✓	
19.	Internal Standard Association (Form XI-IN)	N/A	N/A	✓	
20.	Preparation Log (Form XII-IN)	17	17	✓	✓
21.	Analysis Run Log (Form XIII-IN)	18	18	✓	✓
22.	ICP-MS Tune (Form XIV-IN)	N/A	N/A	✓	

FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
23.	ICP-MS Internal Standards Relative Intensity Summary (Form XV-IN)	N/A	N/A	✓	✓
24.	Initial Calibration (Form XVI-IN)	19	21	✓	✓
25.	ICP-AES Raw Data	N/A	N/A	✓	
26.	ICP-MS Raw Data	N/A	N/A	✓	
27.	Mercury Raw Data	N/A	N/A	✓	
28.	Cyanide Raw Data	22	26		✓
29.	Preparation Logs Raw Data	27	27	✓	✓
30.	Percent Solids Determination Log	N/A	N/A	✓	
31.	USEPA Shipping/Receiving Documents	N/A	N/A	✓	
	Airbill (No. of Shipments 2)	28	29	✓	✓
	Sample Tags	N/A	N/A	✓	
	Sample Log-In Sheet (Lab)	30	32	✓	✓
32.	Misc. Shipping/Receiving Records (list all individual records)				
	Communication Logs	33	34	✓	✓
	In House Chain / Digestate	N/A	N/A	✓	
33.	Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	N/A	N/A	✓	
		N/A	N/A	✓	
34.	Internal Original Sample Prep & Analysis Records (describe or list)	N/A	N/A	✓	
	Prep Records	35	44		✓
	Analysis Records	45	45		✓
	PE Instructions	N/A	N/A	✓	
	Description	N/A	N/A	✓	
35.	Other Records (describe or list)	N/A	N/A	✓	
	Communication Logs	46	47	✓	
	e-mails				
	Corrective Actions	48	48	✓	✓

36. Comments:

Completed by: (CLP Lab) (Signature) Chris Bonner / CEA (Print Name & Title) 04/09/12 (Date)

Audited by: ~~(USEPA)~~ EST (Signature) Sonya Meekins / Data Reviewer (Print Name & Title) 4/24/10 (Date)

BONNER ANALYTICAL TESTING COMPANY

2703 OAK GROVE ROAD, HATTIESBURG, MS 39402
PHONE: (601) 264-2854 FAX: (601) 268-7084

SDG NARRATIVE:

SDG Number: MF5H91
Case Number: 42356
Contract Number: EPW09037

Sample Receipt:
On March 21, 2012 we received 2 waters via FedEx air bill 8000 6268 8119. Custody seals were present and intact. Cooler temp was determined to be 5°C. Samples were in good condition with no discrepancies.

Samples MF5H91 & -92 had a pH level of 4, $HN0_3$ was added to bring pH level to 1.

Metals:
No Discrepancies

CSF:
The analytical run began 3/27/12 at 15:04. S5 was not used in the calibration curve. Debris in the flow cell caused a baseline shift between CCB01 and CCV02; reanalyzed all samples.

Sample Equation:

Lab ID 1203291-01 EPA Sample # MF5H90

Date & Time 3/27/12 @ 15:39

CN: 6.22 µg/L * 1 (Dilution Factor) : 6.2 ug/L

Authorized By
James McGlothin
Document Control Officer

SAMPLE LOG-IN SHEET

Lab Name BONNIER ANALYTICAL		Page 1 of 2
Received By (Print Name) Patricia Aiken		Log-in Date 3-20-12
Received By (Signature) Patricia Aiken		
Case Number 42356	Sample Delivery Group No. MF5H91	Mod. Ref. No. N/A

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	8000 6268 8049 N/A
6. Sample Tags	Present/Absent*
Sample Tag Numbers	Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken*/ Leaking
8. Cooler Temperature Indicator Bottle	Present/Absent*
9. Cooler Temperature	5°C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	3-20-12
12. Time Received	0830

Sample Transfer	
Fraction Tm/Hg/CN	~~Fraction~~
Area# CLP 01	Area#
By P. Aiken	By
On 3-20-12	On

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MF5H90	3	378671	1203291-01	Ice Good
2	MF5H90	14	378672	1203291-01	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20				COPY	
21			ORIGINAL IN CSF:	MF5H90	
22			Signature	P. Aiken	

* Contact SMO and attach record of resolution

PA 3-20-12

Reviewed By	~~Logbook No.~~
Date 3-26-12	~~Logbook Page No.~~

PA

SAMPLE LOG-IN SHEET

Lab Name BONNIER ANALYTICAL		Page 1 of 2
Received By (Print Name) Patricia Aiken		Log-in Date 3-21-12
Received By (Signature) Patricia Aiken		
Case Number 42356	Sample Delivery Group No. MF5H91	Mod. Ref. No. N/A

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	8000 6268 8119 N/A
6. Sample Tags	Present/Absent*
Sample Tag Numbers	Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken*/ Leaking
8. Cooler Temperature Indicator Bottle	Present/Absent*
9. Cooler Temperature	5°C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	3-21-12
12. Time Received	~~1027~~ 0827 AM

Sample Transfer	
Fraction TM/Hg/CN	Fraction
Area# CLP01	Area#
By P. Aiken	By
On 3-21-12	On

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MF5H91	4	487271	1203291-02	Good
2	MF5H91	14	487272	1203291-02	
3	MF5H92	4	345299	1203291-03	
4	MF5H92	14	345300	1203291-03	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

COPY

ORIGINAL IN CSF: MF5H90

Signature: P. Aiken PA 3-21-12

* Contact SMO and attach record of resolution

Reviewed By MBH	Logbook No.
Date 3-26-12	Logbook Page No.

PA

MF5H91

USEPA CLP Inorganics COC (LAB COPY)

DateShipped: 3/19/2012
CarrierName: FedEx
AirbillNo: 800062688049

CHAIN OF CUSTODY RECORD

Case #: 42356
Cooler #: 1 of 1

No: 6-031912-141340-0001

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	For Lab Use Only
MF5H90	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-378671 (HNO3 pH<2), 6-378672 (NaOH pH>12) (2)	DECON-01	03/19/2012 14:40	F5H90	good

Special Instructions: 5°C

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/19/12 17:00	P. Aik	3-20-12	0830						

COPY

ORIGINAL IN CSF: MF5H90

Signature: P. Aik

6

MF5H91

USEPA CLP Inorganics COC (LAB COPY)

DateShipped: 3/20/2012
CarrierName: FedEx
AirbillNo: 800062688119

CHAIN OF CUSTODY RECORD

Case #: 42356
Cooler #: 1 of 1

No: 6-032012-132416-0003

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	For Lab Use Only
MF5H91	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-487271 (HNO3 pH<2), 6-487272 (NaOH pH>12) (2)	DECON-02	03/20/2012 13:30	F5H91	good
MF5H92	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-345299 (HNO3 pH<2), 6-345300 (NaOH pH>12) (2)	DECON-03	03/20/2012 13:35	F5H92	↓

Special Instructions: 5°C

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/20/12 17:00	P. Hill	3-21-12	1021						

COPY

ORIGINAL IN CSF: MF5H90

Signature: P. Hill

7

SAMPLE DELIVERY GROUP (SDG) COVER SHEET

SDG Number: MF5H91

☐ ICP-AES Analysis ☐ Mercury ☒ Cyanide ☐ ICP-MS Analysis

Laboratory Name: Bonner Analytical Testing **Laboratory Code:** BONNER

Contract No.: EPW09037 **Case No.:** 42356

Analysis Price: $ 33.00 **SDG Turnaround:** 21 day

Modified Analysis (if applicable):

Modification Reference No.: N/A

EPA Sample Nmbers in SDG (Listed in Numerical Order)

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

PA 3-21-12

MF5H90	MF5H92
First Sample in SDG	Last Sample in SDG
03/20/2012	03/21/2012
First Sample Receipt Date	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).

Patricia Aik
Signature

3-21-12
Date

USEPA - CLP

COVER PAGE

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: _____ SDG No.: MF5H91

SOW No.: ISM01.3

EPA Sample No.	Lab Sample ID
MF5H90	1203291-01
MF5H91	1203291-02
MF5H92	1203291-03

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

The laboratory did not receive any instructions with this SDG to modify the SOW standard laboratory sample preparation procedures (e.g., subsampling). To aid in the determination of data usability with respect to project decisions, any modifications performed are described below.

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 electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Brandon G. Beck For Chris Bonner

Date: 04/09/12 Title: CEO

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H90

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Matrix: Water Lab Sample ID: 1203291-01

% Solids: Date Received: 03/20/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.2	J		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H91

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Matrix: Water Lab Sample ID: 1203291-02

% Solids: Date Received: 03/21/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	5.0	J		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H92

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Matrix: Water Lab Sample ID: 1203291-03

% Solids: Date Received: 03/21/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	6.5	J		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Initial Calibration Verification Source: USEPA, Lot: ICV - 0400

Continuing Calibration Verification Source: Ricca Chemical, Lot: B8A0023

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	99.000	101	102	250.00	246	99	215	86	AS

(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Initial Calibration Verification Source: USEPA, Lot: ICV - 0400

Continuing Calibration Verification Source: Ricca Chemical, Lot: B8A0023

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				250.00	213	85			AS

(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

3-IN
BLANKS

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Preparation Blank Matrix (soil/water/wipe/filter): Water

Preparation Blank Concentration Units (ug/L, ug, 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
Cyanide	10	U	1.7	J	6.4	J	8.2	J	5.5	J	AS

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Instrument Type: AS Instrument ID: CN02 Date: 01/19/2012

Preparation Method: Midi-distillation

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

Analyte	Wavelength/Mass	MDL
Cyanide	578.00 nm	0.0023

Comments:

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: _____ SDG No.: MF5H91

Preparation Method: Midi-distillation

EPA Sample No.	Preparation Date	Initial Weight/Volume (g) or (mL)	Final Volume (mL)
S0	03/27/2012	50.00	50.00
S5	03/27/2012	50.00	50.00
S10	03/27/2012	50.00	50.00
S50	03/27/2012	50.00	50.00
S100	03/27/2012	50.00	50.00
S250	03/27/2012	50.00	50.00
S500	03/27/2012	50.00	50.00
ICV01	03/27/2012	50.00	50.00
ICB01	03/27/2012	50.00	50.00
CCV01	03/27/2012	50.00	50.00
CCB01	03/27/2012	50.00	50.00
BASELINE01	03/27/2012	50.00	50.00
CCV02	03/27/2012	50.00	50.00
CCB02	03/27/2012	50.00	50.00
BASELINE02	03/27/2012	50.00	50.00
PBW01	03/27/2012	50.00	50.00
MF5H90	03/27/2012	50.00	50.00
MF5H91	03/27/2012	50.00	50.00
MF5H92	03/27/2012	50.00	50.00
CCV03	03/27/2012	50.00	50.00
CCB03	03/27/2012	50.00	50.00
BASELINE03	03/27/2012	50.00	50.00

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Instrument ID: CN02 Analysis Method: AS

Start Date: 03/27/2012 End Date: 03/27/2012

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
S0	1.0	1504																								X		
S5	1.0	1505																										
S10	1.0	1507																								X		
S50	1.0	1508																								X		
S100	1.0	1510																								X		
S250	1.0	1511																								X		
S500	1.0	1512																								X		
ICV01	1.0	1514																								X		
ICB01	1.0	1515																								X		
CCV01	1.0	1517																								X		
CCB01	1.0	1518																								X		
BASELINE	1.0	1520																								X		
ZZZZZZ	1.0	1521																										
ZZZZZZ	1.0	1522																										
ZZZZZZ	1.0	1524																										
ZZZZZZ	1.0	1525																										
ZZZZZZ	1.0	1527																										
ZZZZZZ	1.0	1528																										
ZZZZZZ	1.0	1529																										
ZZZZZZ	1.0	1531																										
ZZZZZZ	1.0	1532																										
CCV02	1.0	1534																								X		
CCB02	1.0	1535																								X		
BASELINE	1.0	1537																								X		
PBW01	1.0	1538																								X		
MF5H90	1.0	1539																								X		
MF5H91	1.0	1541																								X		
MF5H92	1.0	1542																								X		
ZZZZZZ	1.0	1544																										
ZZZZZZ	1.0	1545																										
ZZZZZZ	1.0	1546																										
ZZZZZZ	1.0	1548																										
ZZZZZZ	1.0	1549																										
CCV03	1.0	1551																								X		
CCB03	1.0	1552																								X		
BASELINE	1.0	1554																								X		

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Instrument ID: CN02 Start Date: 03/27/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0.0	5.3913200					10.0	8.42964	16

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Instrument ID: CN02 Start Date: 03/27/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	50.0	42.8805	14	100	100.868	-1	250	254.133	-2

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H91

Instrument ID: CN02 Start Date: 03/27/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	500	498.297	0						

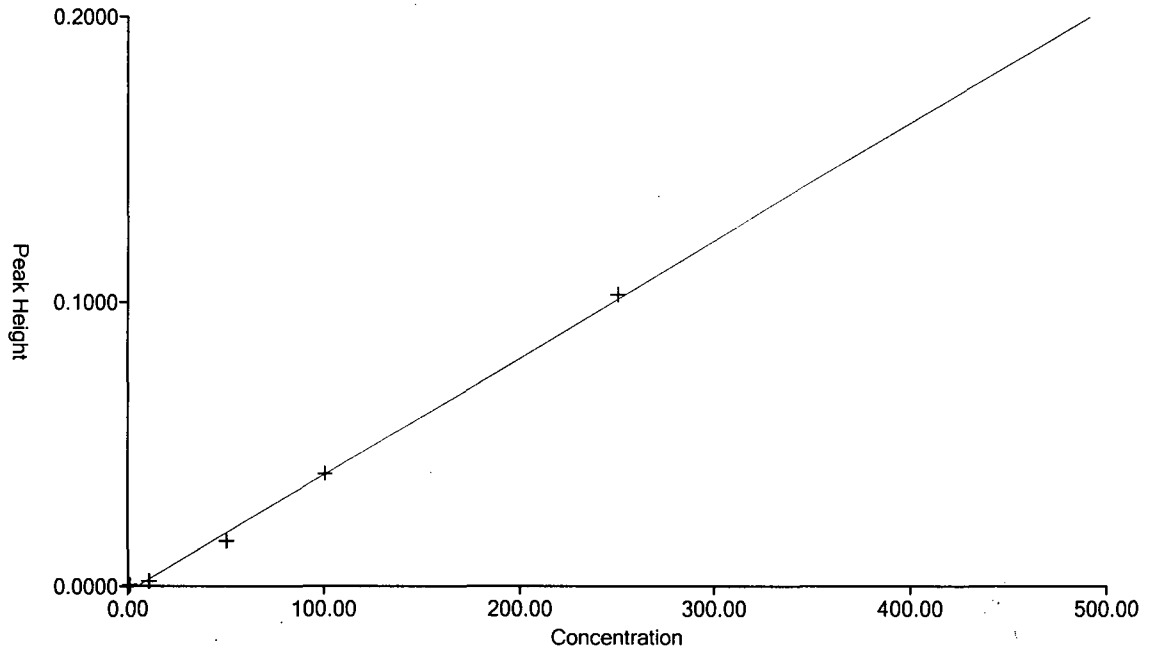
Control Limits +/- 30%

Run Name: C032712A
Configuration: CN02 Water
Run date: 3/27/2012

	Position	Identifier	Type	Date	Time	Cor Ht	CN UG/L	Status
~~1~~	~~SR:1~~	~~SYNC~~	~~SYNC~~	~~3/27/2012~~	~~3:01:04 PM~~	~~0.2069~~	~~508.25~~	~~AR,RT~~
2	SR:2	blk	Blank	3/27/2012	3:01:39 PM	0.0009	6.60	NP
~~3~~	~~SR:3~~	~~W~~	~~Wash~~	~~3/27/2012~~	~~3:03:04 PM~~	~~0.0000~~	~~4.31~~	~~NP~~ mc 032712
4	SR:4	C1 5 0	Calibrant	3/27/2012	3:04:29 PM	0.0004	5.31	NP
5	SR:5	C2 5 5	Calibrant	3/27/2012	3:05:54 PM	-0.0006	2.80	NP,DS
6	SR:6	C3 5 10	Calibrant	3/27/2012	3:07:18 PM	0.0017	8.35	NP
7	SR:7	C4 5 50	Calibrant	3/27/2012	3:08:44 PM	0.0158	42.82	
8	SR:8	C5 5 100	Calibrant	3/27/2012	3:10:09 PM	0.0396	100.84	
9	SR:9	C6 5 250	Calibrant	3/27/2012	3:11:34 PM	0.1026	254.19	
10	SR:10	C7 5 500	Calibrant	3/27/2012	3:12:59 PM	0.2029	498.49	

Curve #:	1
Curve Type:	Linear
Correlation:	0.99972
Intercept:	-0.0017681
Linear coef:	0.00041051

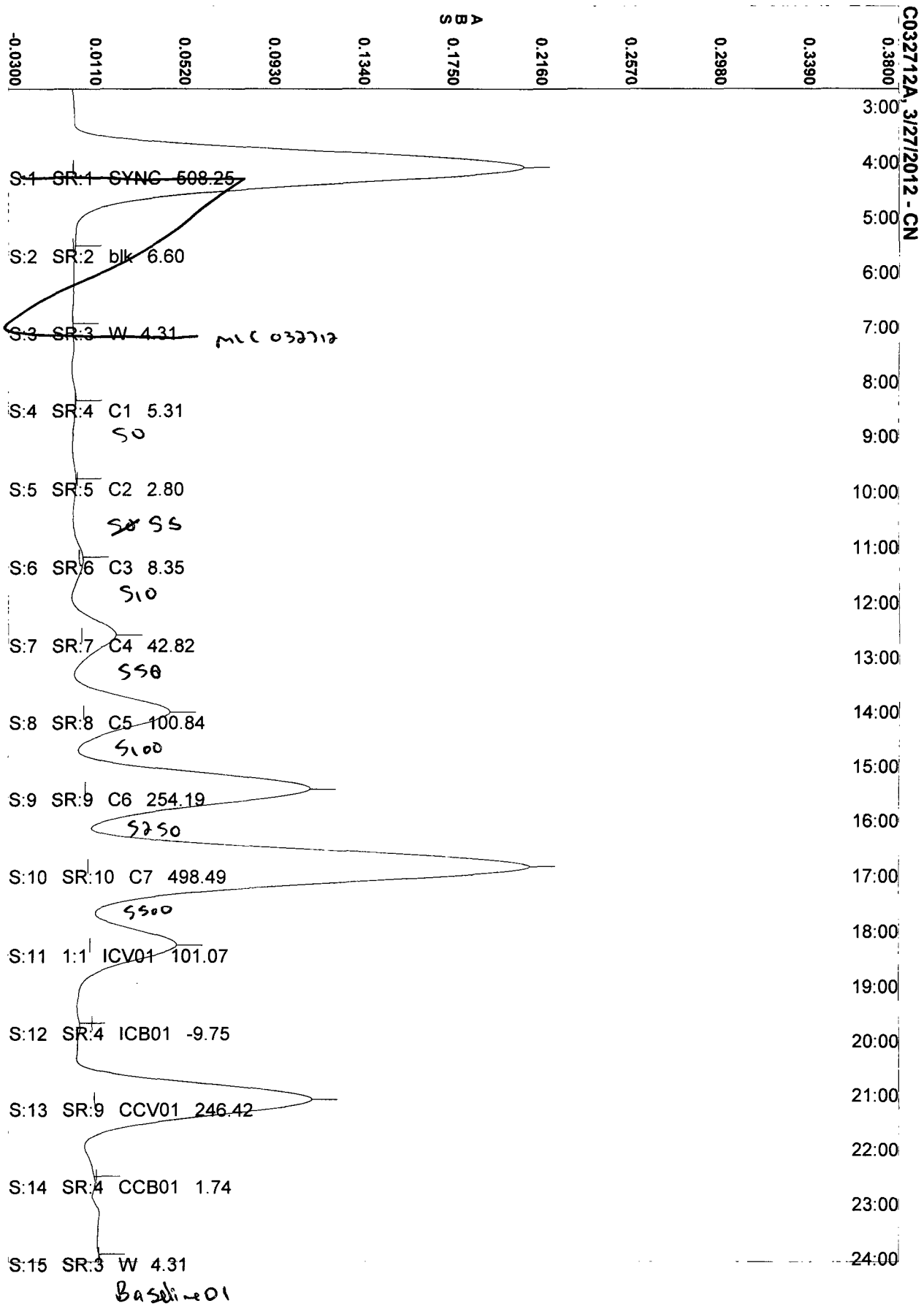
Calibration for CN



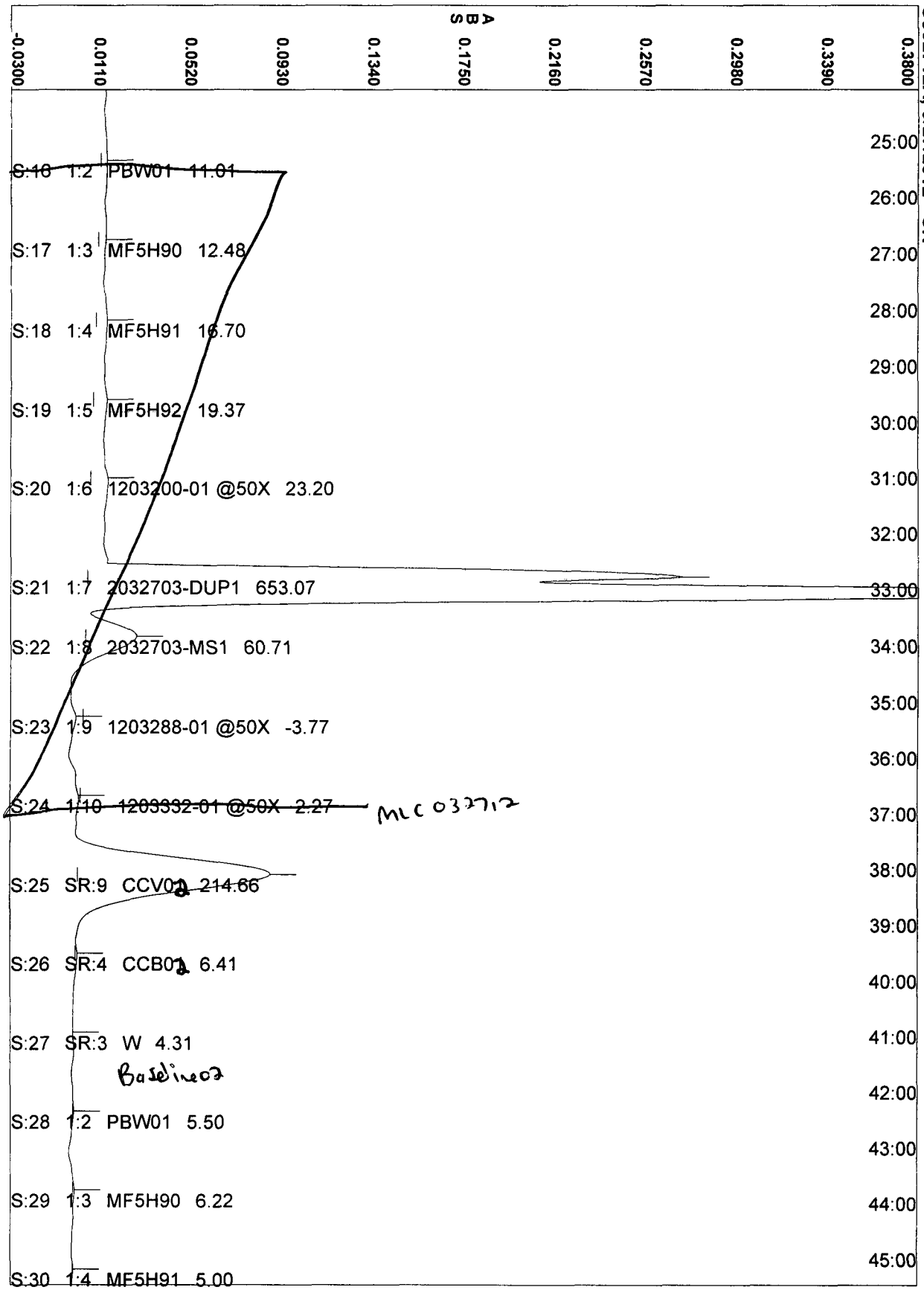
Segment 1: Equation: y = 0.0004105x + -0.001768 X Range = 0.00 to 500.00
Correlation: 0.9997 Y Range = 0.0000 to 7.2000

Position	Identifier	Type	Date	Time	Cor Ht	CN UG/L	Status

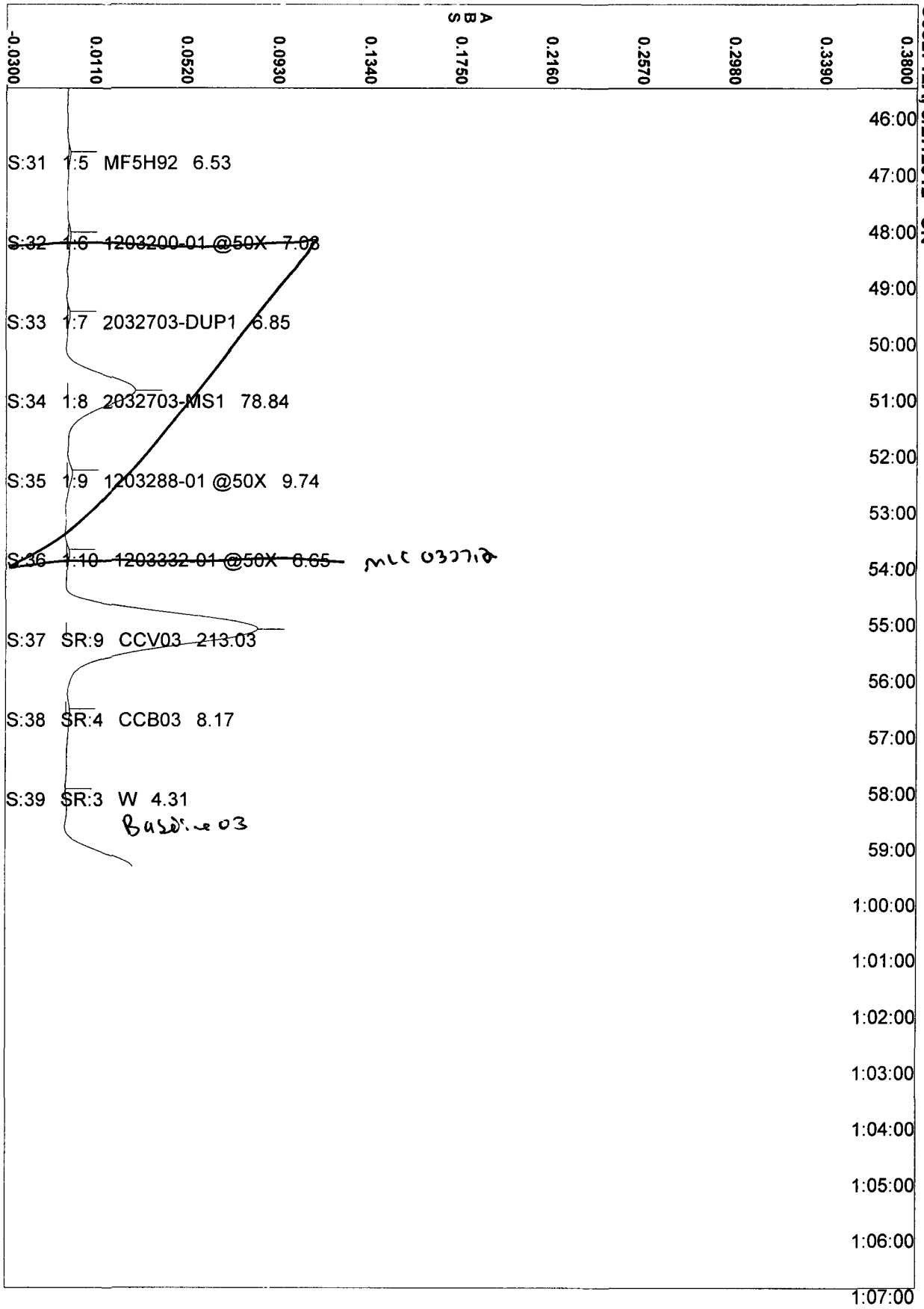
	Position	Identifier	Type	Date	Time	Cor Ht	CN UG/L	Status	
11	1:1	ICV01	Unknown	3/27/2012	3:14:24 PM	0.0397	101.07		
12	SR:4	ICB01	Unknown	3/27/2012	3:15:49 PM	-0.0058	-9.75	NP	
13	SR:9	CCV01	Unknown	3/27/2012	3:17:14 PM	0.0994	246.42		
14	SR:4	CCB01	Unknown	3/27/2012	3:18:38 PM	-0.0011	1.74	NP	
15	SR:3	W Baseline01	Wash	3/27/2012	3:20:04 PM	0.0000	4.31	NP	
~~16~~	~~1:2~~	~~PBW01~~	~~Unknown~~	~~3/27/2012~~	~~3:21:29 PM~~	~~0.0028~~	~~11.01~~	~~NP~~	
17	1:3	MF5H90	Unknown	3/27/2012	3:22:54 PM	0.0034	12.48	NP	
18	1:4	MF5H91	Unknown	3/27/2012	3:24:19 PM	0.0051	16.70	NP	
19	1:5	MF5H92	Unknown	3/27/2012	3:25:44 PM	0.0062	19.37	NP	
20	1:6	1203200-01 (	Unknown	3/27/2012	3:27:09 PM	0.0078	23.20	NP	
21	1:7	2032703-DUI	Unknown	3/27/2012	3:28:34 PM	0.2663	653.07	AR,RT	
22	1:8	2032703-MS	Unknown	3/27/2012	3:29:58 PM	0.0232	60.71		
23	1:9	1203288-01 (	Unknown	3/27/2012	3:31:24 PM	-0.0033	-3.77	NP	
~~24~~	~~1:10~~	~~1203332-01 (~~	~~Unknown~~	~~3/27/2012~~	~~3:32:49 PM~~	~~0.0008~~	~~2.27~~	~~NP~~	MLC032712
25	SR:9	CCV02	Unknown	3/27/2012	3:34:14 PM	0.0864	214.66		
26	SR:4	CCB02	Unknown	3/27/2012	3:35:39 PM	0.0009	6.41	NP	
27	SR:3	W Baseline02	Wash	3/27/2012	3:37:04 PM	0.0000	4.31	NP	
28	1:2	PBW01	Unknown	3/27/2012	3:38:29 PM	0.0005	5.50	NP	
29	1:3	MF5H90	Unknown	3/27/2012	3:39:54 PM	0.0008	6.22	NP	
30	1:4	MF5H91	Unknown	3/27/2012	3:41:18 PM	0.0003	5.00	NP	
31	1:5	MF5H92	Unknown	3/27/2012	3:42:44 PM	0.0009	6.53	NP	
~~32~~	~~1:6~~	~~1203200-01 (~~	~~Unknown~~	~~3/27/2012~~	~~3:44:09 PM~~	~~0.0011~~	~~7.08~~	~~NP~~	
33	1:7	2032703-DUI	Unknown	3/27/2012	3:45:34 PM	0.0010	6.85	NP	
34	1:8	2032703-MS	Unknown	3/27/2012	3:46:59 PM	0.0306	78.84		
35	1:9	1203288-01 (	Unknown	3/27/2012	3:48:24 PM	0.0022	9.74	NP	
~~36~~	~~1:10~~	~~1203332-01 (~~	~~Unknown~~	~~3/27/2012~~	~~3:49:49 PM~~	~~0.0010~~	~~6.65~~	~~NP~~	MLC032712
37	SR:9	CCV03	Unknown	3/27/2012	3:51:14 PM	0.0857	213.03		
38	SR:4	CCB03	Unknown	3/27/2012	3:52:38 PM	0.0016	8.17	NP	
39	SR:3	W Baseline03	Wash	3/27/2012	3:54:04 PM	0.0000	4.31	NP	
~~40~~	~~1:8~~	~~2032703-MS~~	~~Unknown~~	~~3/27/2012~~	~~3:55:29 PM~~	~~0.0302~~	~~77.82~~		
41	SR:9	CCV03	Unknown	3/27/2012	3:56:54 PM	0.0850	211.29		
42	SR:4	CCB03	Unknown	3/27/2012	3:58:19 PM	0.0010	6.78	NP	
~~43~~	~~SR:3~~	~~W~~	~~Wash~~	~~3/27/2012~~	~~3:59:44 PM~~	~~0.0000~~	~~4.31~~	~~NP~~	MLC032712


C032712A, 3/27/2012 - CN
ABS
-0.0300
0.0110
0.0520
0.0930
0.1340
0.1750
0.2160
0.2570
0.2980
0.3390
0.3800
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
24:00
S:1 SR:1 SYNC 508.25
S:2 SR:2 blk 6.60
S:3 SR:3 W 4.31
MLC 032712
S:4 SR:4 C1 5.31
50
S:5 SR:5 C2 2.80
S:6 SR:6 C3 8.35
S:7 SR:7 C4 42.82
S:8 SR:8 C5 100.84
S:9 SR:9 C6 254.19
S:10 SR:10 C7 498.49
S:11 1:1 ICV01 101.07
S:12 SR:4 ICB01 -9.75
S:13 SR:9 CCV01 246.42
S:14 SR:4 CCB01 1.74
S:15 SR:3 W 4.31
Baseline01

C032712A, 3/27/2012 - CN



C032712A, 3/27/2012 - CN



PREPARATION BENCH SHEET

2032704

Bonner Analytical Testing

Analysis: ISM013 - Cyanide

Prepared: 03/27/2012 10:50

Case: 42356

Matrix: Water

ıred using: WETCHEM - Midi-distil

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	Color Before	Color After	Clarity Before	Clarity After	pH	
1203291-01	MF5H90	50	50					colorless	colorless	clear	clear	>12	
1203291-02	MF5H91	50	50					colorless	colorless	clear	clear	>12	
1203291-03	MF5H92	50	50					colorless	colorless	clear	clear	>12	
2032704-SRM1	ICV01	50	50	B2A0062	500			colorless	colorless	clear	clear	>12	
2032704-BLK1	PBW01	50	50					colorless	colorless	clear	clear	>12	

Reagent ID	Concentration	Vendor	Lot Number
Sulfuric Acid	18.0 N	BATCO	BA030912KLP-2
Sulfamic Acid	NA	BATCO	NA
Sodium Hydroxide	0.25 N	BATCO	BA030912KLP-1
Magnesium Chloride	2.5 M	BATCO	BA0227.12KLP-2
Lead Carbonate	Neat	NA	NA
Ascorbic Acid	Neat	NA	NA
DI Water	Neat	BATCO	NA

EPA ID	Std. Discription	Spike V. (uL)	F.V. (mL)
S0/ICB/CCB	Cal Blank/ICB/CCB	0	50
S5	Cal Std 5 ppb	250	50
S10	Cal Std 10 ppb	500	50
S50	Cal Std 50 ppb	2500	50
S100	Cal Std 100 ppb	5000	50
S250/CCV	Cal Std/CCV 250 ppb	12500	50
S500	Cal Std 500 ppb	25000	50

Block ID		03		~~05~~ ALC 04			
Temp. Start	Temp. Stop	125	125	125	125		
Time Start	Time Stop	1120	1250	1120	1250		

Comments:

Negative for sulfides and oxidizing agents.

MLF 03/27/2012 10:50

Perpared By Date

4/9/12

Preparation Reviewed By Date

INORGANIC

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8000 6268 8049

0200 Form ID No

FedEx Retrieval Copy

1 From

Date 3/19/12 [redacted]

Sender's Name Stephen Ellis Phone 512 2395337

Company TCEQ

Address 12100 Park 35 Circle MC-136

Dept./Floor/Suite/Room

City AUSTIN State TX ZIP 78753

2 Your Internal Billing Reference 12-10479/4441/70635

3 To

Recipient's Name Chris Bonner Phone 601 264 2854

Company Bonner Analytical Testing Company

Address 2703 Oak Grove Road

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Hattisburg State MS ZIP 37402

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

06 ☒ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected

01 ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

49 ☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

03 ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

04 ☐ Yes — As per attached Shipper's Declaration.

☐ Yes — Shipper's Declaration not required.

06 ☐ Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

01 ☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 42 lbs. [redacted] Credit Card Auth.

R. Aik 3-20-12 0830

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICIAL SAMPLE SEAL

SAMPLE NO. C0167 DATE 3/19/12

SIGNATURE

PRINT NAME AND TITLE Inspector, Analyst or Technician

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICIAL SAMPLE SEAL

SAMPLE NO. C0168 DATE 3/19/12

SIGNATURE

PRINT NAME AND TITLE Inspector, Analyst or Technician

COPY

ORIGINAL IN CSF: MF57190

Signature: R. Aik

FedEx Express

FO

FedEx First Overnight®

151969 REV 7/08 RRD

FedEx Express **NEW Package US Airbill**

No original (6U)

FedEx Tracking Number 8000 6268 8119 0200 Form ID No

FedEx Retrieval Copy

1 From

Date 3/20/12 [redacted]

Sender's Name Stephen Ellis Phone 512 239-5337

Company TCEQ

Address 12100 Park 35 Circle MC-136 Dept./Floor/Suite/Room

City Austin State TX ZIP 78753

2 Your Internal Billing Reference 12-10479/4441/70635

3 To

Recipient's Name Chris Bonner Phone 601 264-2854

Company Bonner Analytical Testing Company

Address 2703 Oak Grove Road Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

City Hattsburg State MS ZIP 39402

P. Aik 3-21-12 1024

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

06 ☒ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

01 ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

49 ☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

03 ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

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34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☐ Sender Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 42 lbs. [redacted] Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Signature [signature] Date 3/20/12

TNRCC 10058 (7/98)

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Signature [signature] Date [illegible]

TNRCC 10058 (7/98)

COPY

ORIGINAL IN CSF: MF51490

Signature: P. Aik

WORK ORDER

Printed: 3/21/2012 4:41:37 PM

1203291

Bonner Analytical Testing

Client: Environmental Protection Agency, Region 6
Project: 42356

Project Manager: Chris Bonner
Project Number: 42356

Report To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone: (281) 983-2139
Fax: (281) 983-2248

Invoice To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone :(281) 983-2139
Fax: (281) 983-2248

Date Due: 04/09/2012 15:00 (14 day TAT)

Received By: Trisha Aiken
Date Received: 03/20/2012 08:30

Logged In By: Trisha Aiken
Date Logged In: 03/20/2012 10:10

Samples Received at: 5°C

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confir	Yes		

Analysis	Due	TAT	Expires	Comments
1203291-01 MF5H90 [Water] Sampled 03/19/2012 14:40 Central				
ISM013 - Cyanide	04/09/2012 12:00	14	03/31/2012 14:40	
1203291-02 MF5H91 [Water] Sampled 03/20/2012 13:30 Central				
ISM013 - Cyanide	04/09/2012 12:00	14	04/01/2012 13:30	
1203291-03 MF5H92 [Water] Sampled 03/20/2012 13:35 Central				
ISM013 - Cyanide	04/09/2012 12:00	14	04/01/2012 13:35	

Reviewed By: A Horsley

Date: 3-26-12

Bonner Analytical Testing Company

22146

SAMPLE RECEIPT FORM

Client: CLP Date: 3-20-12

Sample Type: Grab Composite SDG#: MF51191 Case#: 42356

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other _____

1) Does this project fall under NPDES, RCRA, CLP, Litigation or other EPA guidelines?	NA	YES	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, FedEx, other:_____ If YES, enter airbill number here: 8000 6268 8049	NA	YES	NO
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	YES	NO
4) Are all bottles sealed in separate plastic bags?	NA	YES	NO
5) Are samples requiring no headspace, headspace free?	NA	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, ice, other:_____		YES	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		YES	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		YES	NO
9) Were all bottles received intact?		YES	NO
10) Were correct containers used for the tests indicated? Who's: BATCO/Client		YES	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		YES	NO
12) Are samples within holding times for requested analysis?		YES	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	NA	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	YES	NO
2) Temperature 5°C			
C) Were correct preservatives added to sample/s?	NA	YES	NO

14) Describe "NO" items for the above if # 1) response is NA or YES

N/A

15) Is there a Corrective Action and/or Client Contact form attached? YES NO

Signature: Patricia Ak

COPY

ORIGINAL IN CSF: MF51190

Signature:

Rev No. 1.4
Date: 07/15/05

Bonner Analytical Testing Company

SAMPLE RECEIPT FORM

22748

Client: CLP Date: 3-21-12

Sample Type: Grab Composite SDG#: MF5H91 Case#: 42356

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other water

1) Does this project fall under NPDES, RCRA, CLP, Litigation or other EPA guidelines?	NA	YES	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, FedEx, other:_____ If YES, enter airbill number here: 8000 6268 8119	NA	YES	NO
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	YES	NO
4) Are all bottles sealed in separate plastic bags?	NA	YES	NO
5) Are samples requiring no headspace, headspace free?	NA	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, ice, other:_____		YES	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		YES	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		YES	NO
9) Were all bottles received intact?		YES	NO
10) Were correct containers used for the tests indicated? Who's: BATCO/Client		YES	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		YES	NO
12) Are samples within holding times for requested analysis?		YES	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	NA	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	YES	NO
2) Temperature 5°C			
C) Were correct preservatives added to sample/s?	NA	YES	NO
14) Describe "NO" items for the above if # 1) response is NA or YES: N/A			
15) Is there a Corrective Action and/or Client Contact form attached?		YES	NO

Signature: Patricia Fick

COPY

ORIGINAL IN CSF: MF5H90

Signature: P. Fick

Rev No. 1.4

Date: 07/15/05

Bonner Analytical Testing Co.
Inhouse Chain of Custody
for Samples

SDG Number: MF5H91 **Case No.:** 42356

Work Order Number: 1203291

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: N/A

Name	Signature	Date &Time	Purpose
P. Aik	P. Aik	3-21-12 1640 3-20-12 1431	S
Michelle Cranford	Michelle Cranford	3-27-12 1040	CN
Michelle Cranford	Michelle Cranford	3-27-10 1050	S

Purpose: S - Storage; W - Weigh; DP - Disposal; TS - Total Solids; P - Pour

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MF5H91 **Case No.:** 42356

Work Order Number: 1203291

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: N/A

Name: Michelle Cranford Signature: Michelle Cranford Date &Time 3-27-12 1040 Purpose: D
Name: Michelle Cranford Signature: Michelle Cranford Date &Time 3-27-12 1050 Purpose: D
Name: Michelle Cranford Signature: Michelle Cranford Date &Time 3-27-12 1430 Purpose: A
Name: Michelle Cranford Signature: Michelle Cranford Date &Time 3-28-12 930 Purpose: DP
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour

STANDARDS LOG

for C032712 Astoria 01 / 02 Daily Analysis

Analyst: Michelle Cranford Date: 3-27-12

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Initial Conc.	Lot#	Date Lot Expires	Final Conc.
Initial Calibration Working Standard	S-WS-A	1.0 mL	100 mL	Inorganic Ventures	1000 ppm	~~D2~~ MEB ~~351081~~ 391086 E2	Feb ~~12~~ 13	10 ppm
Initial Calibration Working Standard	S-WS-B	10.0 mL	100 mL	S-WS-A	10 ppm	NA	24 hours	1 ppm
Initial Calibration Blank	S0	NA	50 mL	In-house	NA	BA-030912 KLP-1	NA	NA
Initial Calibration	S5	0.25 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	5.0 ppb
Initial Calibration	S10	0.50 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	10 ppb
Initial Calibration	S50	2.5 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	50 ppb
Initial Calibration	S100	5.0 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	100 ppb
Initial Calibration	S250	12.5 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	250 ppb
Initial Calibration	S500	25.0 mL	50 mL	S-WS-B	1 ppm	NA	24 hours	500 ppb
Initial Calibration Verification	ICV	0.5 mL	50 mL	EPA	9900 ppb	0400	NA	99 ppb
Initial Calibration Blank	ICB	NA	50 mL	In-house	NA	BA-030912 KLP-1	Weekly	NA
Continuing Calibration Verification	CCV	12.5 mL	50 mL	RICCA ~~S-WS-B~~ CHEMICAL	1 ppm	B8A0023 ~~NA~~	24 hours	250 ppb
Continuing Calibration Blank	CCB	NA	50 mL	In-house	NA	BA-030912 KLP-1	Weekly	NA
Laboratory Control Standard - Soil B9H0171	LCSS	1 gram	1 gram	EPA	9.6 mg/kg	LCS-CN (0899)	NA	9.6 mg/kg

Reviewed By: Supervisor Date: 4/9/2012

4/9/12

REAGENTS PREPARATION LOG

0.25N Sodium Hydroxide Solution

Preparation Date: 3/9/12 Prepared By: Kevin Perez Batch No.: BA-030912 KP-1

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Deionized Water	Neat	6000mL	BATCO	NA	NA	NA
Sodium Hydroxide	Neat	60.000g	Fisher	110387	7/20/11	

Balance ID: Metler II

Instrument: CN01/CN02 & Distillation

Final Volume: 6L

Concentration: 0.25N

Used For: Cyanide Distillation & Development

Expiration Date: NA

Comments: 10 grams to 1 Liter Filter.

Reviewed By: [signature] 3/16/12
Supervisor/Date

REAGENTS PREPARATION LOG 50

1.25 N Sodium Hydroxide

Preparation Date: 3-27-12 Prepared By: Michelle Crawford Batch No.: BA- 032712MLC-1

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
DI Water	Neat	100 mL	BATCO	NA	NA	NA
Sodium Hydroxide	Neat	5.00g	Fisher	115786	2-27-12	NA

Balance ID: Mettler 1U

Instrument: CN01/CN02

Final Volume : 100 mL

Concentration: 1.25 N

Used For: Cyanide Standards Preparation

Expiration Date NA

Comments 50 g to 1 L. Filter

Reviewed By: 4/5/12
Supervisor/Date

REAGENTS PREPARATION LOG 9

18 n Sulfuric acid

Preparation Date: 3/6/12 Prepared By: Kw Pen Batch No.: BA- 030612KP.2

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
DI Water	Neat	1000 mL	BATCO	NA	NA	NA
Sulfuric Acid	Neat	1000 mL	Mallinckrodt ~~Fisher~~	JDGF01	4/15/11	NA

Balance ID: NA

Instrument: Distillation

Final Volume : 2L

Concentration: 18 N

Used For: Cyanide Distillation

Expiration Date NA

Comments Add 500 mL Acid to 500 mL Water

Reviewed By: 3/16/12
Supervisor/Date

REAGENTS PREPARATION LOG

57

Chloramine-T Solution

Preparation Date: 3-27-12 Prepared By: Michelle Crawford Batch No.: BA-032712MCC-2

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Deionized Water	Neat	100mL	BATCO	NA	NA	NA
Chloramine	Neat	0.40g	Aldrich	13031CD	10-5-08	NA

Balance ID: ~~Mett~~ Satorius I

Instrument: **CN01/CN02**

Final Volume: 100 mL

Concentration: NA

Used For: Cyanide Development

Expiration Date NA

Comments: 0.4 grams to 100mL

Reviewed By: 4/6/12
Supervisor/Date

REAGENTS PREPARATION LOG 32

Magnesium Chloride Solution

Preparation Date: 2/27/12 Prepared By: Ken Parker Batch No.: BA- 022711 KP-2

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
DI Water	Neat	980 ml	BATCO	NA	NA	NA
Magnesium Chloride	Neat	500.000g	Fisher	094917	2/1/10	NA

Balance ID: Mettler II

Instrument: Distillation

Final Volume : 980 ml.

Concentration: NA

Used For: Cyanide Distillation

Expiration Date NA

Comments 510 g to 1 L

Reviewed By: 02/28/12
Supervisor/Date

S9

REAGENTS PREPARATION LOG

Phosphate Buffer

Preparation Date: 3-27-12 Prepared By: Michelle Crawford Batch No.: BA-032712MLC-3

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Deionized Water	Neat	500mL	BATCO	NA	NA	NA
Sodium Phosphate	Neat	69.00g	Fisher	101168	9-2-10	NA
Brig-35	30%	3mL	Astoria Pacific	240702	NA	NA

Balance : Satorius I

Instrument: AP 01 or 02

Final Volume: 500 mL

Concentration: NA

Used For: Cyanide Development

Expiration Date 3 Months

Comments: Add 69 g. to 500 mL DI H2O. Filter with 0.45 Nylon then add 3 ml Brij-35

Reviewed By: 4/5/12
Supervisor/Date

REAGENTS PREPARATION LOG

60

Pyridine-barbituric Acid Solution

Preparation Date: 3-27-12 Prepared By: Michelle Crawford Batch No.: BA-032712MLC-4

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Deionized Water	Neat	91mL	BATCO	NA	NA	NA
Barbituric Acid	Neat	1.50g	Fisher	085272A	NA	NA
Pyridine	Neat	7.5mL	Fisher	104808	3-15-11	NA
Hydrochloric Acid	Neat	1.5mL	Fisher	4111080	12-2-11 ~~4-15-11~~ MLC	NA

Balance ID: Satorius 1

Instrument: CN01 / CN02

Final Volume: 100 mL

Concentration: NA

Used For: Cyanide Development

Expiration Date: 1 Week

Comments: Dissolve 7.5g Barbituric to minimal DI water. Add 37.5 ml Pyridine then 7.5 ml HCl Dilute to 500 mLs. Filter.

Reviewed By: 4/6/12
Supervisor/Date

REAGENTS PREPARATION LOG 46

Start Up Solution

Preparation Date: 1/11/12 Prepared By: [illegible] Batch No.: BA- 011112 KLP-3

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
DI Water	Neat	500 ml.	BATCO	NA	NA	NA
Bril-35	Neat	3 ml.	Astoria Pacific	240702	NA	NA

Balance ID: NA

Instrument: CN01/CN02

Final Volume :

Concentration: NA

Used For: Cyanide Development

Expiration Date NA

Comments 3 mL Brij to 500 mL

Reviewed By: [illegible] 1/13/12
Supervisor/Date

CN Weekly Distiller Block Temperature Verification

Date	12/12/11		1/9/12		1/16/12		2/27/12	
Initials	KLP		KLP		KLP		KLP	
	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer
CN Distiller 01	124	124	125	125	126	126	125	124
CN Distiller 02	126	126	126	127	126	126	125	125
CN Distiller 03	125	126	125	125	125	124	126	125
CN Distiller 04	125	125	124	125	124	124	125	125
CN Distiller 05	Not in	use	Not in	use	Not in	use	Not in	use
Reviewed/Date:	12/12/11		1/13/12		1/20/12		2/28/12	

Date	3/9/12		3-27-12		4-2-10			
Initials	KLP		MLC		MLC			
	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer
CN Distiller 01	125	126			125	124		
CN Distiller 02	125	125			126	125		
CN Distiller 03	126	125	125	125	126	125		
CN Distiller 04	124	126	125	125	125	125		
CN Distiller 05	Not in	use						
Reviewed/Date:	5/16/12		4/6/2012		4/5/2012			

If temperature does not agree with the certified thermometer than either recalibrate the digestion block or use the thermometer to regulate the digestion block and record the thermometer temperature on digestion logs.

A copy of this page must accompany each SDG digested during the week.

Date of certified thermometer: 7/8/11
**Cannot exceed 1 year

Revision 1
12/12/11 MLC

Bonner Analytical Testing Co.

Cyanide Analytical Run Log

File Name: C032712A
Instrument: CN02
Analyst: MLC

Standards Prep Date: 3/27/12
Standards Log Page No: 21

SDG: MF5H91
Case No: 42356

Seq No	Identifier	Date	Time
4	S0	3/27/2012	3:04:29 PM
5	S5	3/27/2012	3:05:54 PM
6	S10	3/27/2012	3:07:18 PM
7	S50	3/27/2012	3:08:44 PM
8	S100	3/27/2012	3:10:09 PM
9	S250	3/27/2012	3:11:34 PM
10	S500	3/27/2012	3:12:59 PM
11	ICV01	3/27/2012	3:14:24 PM
12	ICB01	3/27/2012	3:15:49 PM
13	CCV01	3/27/2012	3:17:14 PM
14	CCB01	3/27/2012	3:18:38 PM
15	Baseline01	3/27/2012	3:20:04 PM
16	ZZZZZZ	3/27/2012	3:21:29 PM
17	ZZZZZZ	3/27/2012	3:22:54 PM
18	ZZZZZZ	3/27/2012	3:24:19 PM
19	ZZZZZZ	3/27/2012	3:25:44 PM
20	ZZZZZZ	3/27/2012	3:27:09 PM
21	ZZZZZZ	3/27/2012	3:28:34 PM
22	ZZZZZZ	3/27/2012	3:29:58 PM
23	ZZZZZZ	3/27/2012	3:31:24 PM
24	ZZZZZZ	3/27/2012	3:32:49 PM
25	CCV0~~1~~2	3/27/2012	3:34:14 PM
26	CCB0~~1~~2	3/27/2012	3:35:39 PM
27	Baseline02	3/27/2012	3:37:04 PM
28	PBW01	3/27/2012	3:38:29 PM
29	MF5H90	3/27/2012	3:39:54 PM
30	MF5H91	3/27/2012	3:41:18 PM
31	MF5H92	3/27/2012	3:42:44 PM
32	ZZZZZZ	3/27/2012	3:44:09 PM
33	ZZZZZZ	3/27/2012	3:45:34 PM
34	ZZZZZZ	3/27/2012	3:46:59 PM
35	ZZZZZZ	3/27/2012	3:48:24 PM
36	ZZZZZZ	3/27/2012	3:49:49 PM
37	CCV03	3/27/2012	3:51:14 PM
38	CCB03	3/27/2012	3:52:38 PM
39	Baseline03	3/27/2012	3:54:04 PM

4/9/12

Trisha Aiken

From: Blackmon, Jacqueline [jblackmon3@fedcsc.com]
Sent: Tuesday, March 20, 2012 10:25 AM
To: Chris Bonner; Max Bonner; Mike Bonner; Tricia Aiken
Cc: Marvelyn Humphrey; Abel Euresti; Myra Perez; Raymond Flores
Subject: Region 06 | Case 42356 | Lab BONNER | Issue pH outside allowable limits | FINAL

Tricia,

Summary Start
Issue: The one TM sample that was received was preserved with HNO_3 and had a pH of 3. The laboratory added HNO_3 to bring the pH to 1.
Resolution: In accordance with previous direction from Region 6, the laboratory will note the issue in the SDG Narrative, adjust the pH for Metals and/or Mercury analysis to <2 and/or adjust the pH for Cyanide analysis to >12. After adjusting the pH of the sample(s), allow the sample(s) to sit for at least 4 hours prior to analysis. This resolution will be applied to all Metals and/or Mercury samples received for this Case with a pH that is >2 and <7 and/or all Cyanide samples received for this Case with a pH that is >7.
Summary End

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your PO.
Thanks,
Jackie (Blackmon) Washington
Environmental Coordinator- Regions 6, 9 and ASB (QB/PE)
CSC

15000 Conference Center Drive, Chantilly VA 20151
Civil Division | office phone 703-818-4184 | fax 703-818-4601 | jblackmon3@fedcsc.com | www.csc.com

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From: Trisha Aiken [mailto:taiken@batco.com]
Sent: Tuesday, March 20, 2012 11:01 AM
To: Blackmon, Jacqueline
Cc: Max Bonner
Subject: Region 6 | Case 42356 | Sample Receipt

Jackie;

On March 20, 2012 we received 1 water via FedEx air bill 8000 6268 8049. Custody seals were present and intact. Cooler temp was determined to be 5°C. Sample was in good condition except for the following discrepancy.

1. The TM sample preserved with HNO_3 had a pH of 3; additional HNO_3 was added to bring the pH to 1. Please advise.

Thanks;
Tricia Aiken
Bonner Analytical

Trisha Aiken

From: Trisha Aiken
Sent: Thursday, March 22, 2012 9:18 AM
To: 'Blackmon, Jacqueline'
Cc: Max Bonner
Subject: Region 6 | Case 42356 | Sample Receipt

Jackie;

On March 21, 2012 we received 2 waters via FedEx air bill 8000 6268 8119. Custody seals were present and intact. Cooler temp was determined to be 5°C. Samples were in good condition with no discrepancies.

Thanks;
Tricia Aiken
Bonner Analytical

6433

Bonner Analytical Testing Company

Corrective Action

Topic: CN MFSH91 42356 Date: 3-27-12

Nature of Problem: ① SS not used in calibration curve
② Debris in flow cell caused baseline shift between CCB01 and CCV02

Action Requested:

1 New Sample Requested: YES (NO)

2 Retest or Reanalysis Necessary: (YES) NO

3 Other Action:

Submitter

Signature: [illegible] Date: 3-27-12

Corrective Action Taken: ① none taken ② reran all samples

Was the problem resolved: (YES) NO

Responder

Signature: [illegible] Date: 4/9/12