

Daily Analysis Runlog For Sequence/QC Batch ID # LB91434

Review By		Review On				
SubDirectory		LB91434		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP59438,WP59437,WP59436WP59435,WP59434,WP59433				
ICV Standard		W1541				
CCV Standard		WP59440				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP59468,WP55836,WP53945				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	11/07/17 14:35		OK
2	S5.0	S5.0	CAL2	11/07/17 14:35		OK
3	S10.0	S10.0	CAL3	11/07/17 14:36		OK
4	S100.0	S100.0	CAL4	11/07/17 14:36		OK
5	S250.0	S250.0	CAL5	11/07/17 14:36		OK
6	S500.0	S500.0	CAL6	11/07/17 14:36		OK
7	ICV	ICV	ICV	11/07/17 15:26		OK
8	ICB	ICB	ICB	11/07/17 15:26		OK
9	CCV001	CCV001	CCV	11/07/17 15:26		OK
10	CCB001	CCB001	CCB	11/07/17 15:26		OK
11	PB104028BL	PBS006	MB	11/07/17 15:26		OK
12	I6246-06	MBDXT9	SAM	11/07/17 15:26		OK
13	I6246-07	MBDXX1	SAM	11/07/17 15:26		OK
14	I6246-11	MBDXM1	SAM	11/07/17 15:26		OK
15	I6246-15	MBDXM1D	DUP	11/07/17 15:26		OK
16	I6246-16	MBDXM1S	MS	11/07/17 15:26		OK
17	PB104029BL	PBW005	MB	11/07/17 15:26		OK
18	I6246-01	MBDXK6	SAM	11/07/17 15:33		OK
19	I6246-02	MBDXK7	SAM	11/07/17 15:33		OK
20	I6246-03	MBDXK8	SAM	11/07/17 15:33		OK
21	I6246-04	MBDXL2	SAM	11/07/17 15:33		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB91434

Review By		Review On				
SubDirectory		LB91434		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP59438,WP59437,WP59436WP59435,WP59434,WP59433				
ICV Standard		W1541				
CCV Standard		WP59440				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP59468,WP55836,WP53945				
22	I6246-05	MBDXL6	SAM	11/07/17 15:33		OK
23	I6246-08	MBDY44	SAM	11/07/17 15:33		OK
24	I6246-09	MBDXL3	SAM	11/07/17 15:33		OK
25	I6246-10	MBDXL4	SAM	11/07/17 15:33		OK
26	I6246-12	MBDY27	SAM	11/07/17 15:33		OK
27	I6246-13	MBDXL4D	DUP	11/07/17 15:34		OK
28	I6246-14	MBDXL4S	MS	11/07/17 15:34		OK
29	CCV002	CCV002	CCV	11/07/17 15:37		OK
30	CCB002	CCB002	CCB	11/07/17 15:37		OK



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXK6	SDG No.:	LB91434
Lab Sample ID:	I6246-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.1	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXK7	SDG No.:	LB91434
Lab Sample ID:	I6246-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.1	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXK8	SDG No.:	LB91434
Lab Sample ID:	I6246-03	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.9	J	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXL2	SDG No.:	LB91434
Lab Sample ID:	I6246-04	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXL6	SDG No.:	LB91434
Lab Sample ID:	I6246-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.001	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXT9	SDG No.:	LB91434
Lab Sample ID:	I6246-06	Matrix:	Solid
Level (low/med):	low	% Solid:	60.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.093	J	1	0.087	0.02	0.79	mg/kg	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDXX1	SDG No.:	LB91434
Lab Sample ID:	I6246-07	Matrix:	Solid
Level (low/med):	low	% Solid:	62.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.084	0.019	0.77	mg/kg	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/30/2017 12:00:00 AM
Project:	LB91434	Date Received:	10/31/2017 12:00:00 AM
Client Sample ID:	MBDY44	SDG No.:	LB91434
Lab Sample ID:	I6246-08	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.3	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/31/2017 12:00:00 AM
Project:	LB91434	Date Received:	11/1/2017 12:00:00 AM
Client Sample ID:	MBDXL3	SDG No.:	LB91434
Lab Sample ID:	I6246-09	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.6	J	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/31/2017 12:00:00 AM
Project:	LB91434	Date Received:	11/1/2017 12:00:00 AM
Client Sample ID:	MBDXL4	SDG No.:	LB91434
Lab Sample ID:	I6246-10	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.95	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/31/2017 12:00:00 AM
Project:	LB91434	Date Received:	11/1/2017 12:00:00 AM
Client Sample ID:	MBDXM1	SDG No.:	LB91434
Lab Sample ID:	I6246-11	Matrix:	Solid
Level (low/med):	low	% Solid:	81.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.015	U	1	0.066	0.015	0.6	mg/kg	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/31/2017 12:00:00 AM
Project:	LB91434	Date Received:	11/1/2017 12:00:00 AM
Client Sample ID:	MBDY27	SDG No.:	LB91434
Lab Sample ID:	I6246-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.14	U	1	1.5	5	10	ug/L	11/06/2017	11/07/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/31/2017 12:00:00 AM
Project:	LB91434	Date Received:	11/1/2017 12:00:00 AM
Client Sample ID:	MBDY27	SDG No.:	LB91434
Lab Sample ID:	I6246-12	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
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Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: <u>LB91434</u>	SDG No.: <u>LB91434</u>	
Contract: _____	Lab Code: <u>CHEM</u>	Method: _____
	Case No.: <u>LB91434</u>	SAS No.: <u>LB91434</u>

						Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date				
Batch Number: PB104028								
PB104028BL	PBS006	MB	SOLID	11/07/2017		1.02	50.0	100.00
I6246-06	MBDXT9	SAM	SOLID	11/07/2017		1.04	50.0	60.80
I6246-07	MBDXX1	SAM	SOLID	11/07/2017		1.05	50.0	62.10
I6246-11	MBDXM1	SAM	SOLID	11/07/2017		1.03	50.0	81.50
I6246-15	MBDXM1D	DUP	SOLID	11/07/2017		1.04	50.0	81.50
I6246-16	MBDXM1S	MS	SOLID	11/07/2017		1.03	50.0	81.50

Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: <u>LB91434</u>	SDG No.: <u>LB91434</u>	
Contract: _____	Lab Code: <u>CHEM</u>	Method: _____
	Case No.: <u>LB91434</u>	SAS No.: <u>LB91434</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB104029							
PB104029BL	PBW005	MB	WATER	11/07/2017	50.0	50.0	
I6246-01	MBDXK6	SAM	WATER	11/07/2017	50.0	50.0	
I6246-02	MBDXK7	SAM	WATER	11/07/2017	50.0	50.0	
I6246-03	MBDXK8	SAM	WATER	11/07/2017	50.0	50.0	
I6246-04	MBDXL2	SAM	WATER	11/07/2017	50.0	50.0	
I6246-05	MBDXL6	SAM	WATER	11/07/2017	50.0	50.0	
I6246-08	MBDY44	SAM	WATER	11/07/2017	50.0	50.0	
I6246-09	MBDXL3	SAM	WATER	11/07/2017	50.0	50.0	
I6246-10	MBDXL4	SAM	WATER	11/07/2017	50.0	50.0	
I6246-12	MBDY27	SAM	WATER	11/07/2017	50.0	50.0	
I6246-13	MBDXL4D	DUP	WATER	11/07/2017	50.0	50.0	
I6246-14	MBDXL4S	MS	WATER	11/07/2017	50.0	50.0	



Start Date: _____ **End Date:** _____

[illegible]

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB91434 Contract: _____
Lab Code: CHEM Case No.: LB91434 MA No.: _____ SDG No.: LB91434
Instrument ID: CN Start Date: 11/07/2017
Analytical Method: _____ Run Batch: LB91434.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0	0	0	5	3.7	-26	10	7.5	-25

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB91434 Contract: _____
Lab Code: CHEM Case No.: LB91434 MA No.: _____ SDG No.: LB91434
Instrument ID: CN Start Date: 11/07/2017
Analytical Method: _____ Run Batch: LB91434.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	100	101	1	250	257	3	500	496	-1

Metals**- 2a -****INITIAL AND CONTINUING CALIBRATION VERIFICATION****Client:** LB91434**SDG No.:** LB91434**Contract:** _____ **Lab Code:** CHEM**Case No.:** LB91434 **SAS No.:** LB91434**Initial Calibration Source:** _____**Continuing Calibration Source:** _____

Sample ID	Analyte	Result	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		ug/L								
ICV	Cyanide	97.9	99	99	0	85 - 115	CN	11/07/2017	15:26	LB91434



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB91434

SDG No.: LB91434

Contract: _____ Lab Code: CHEM

Case No.: LB91434

SAS No.: LB91434

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV001	Cyanide	252	250	101	0	85 - 115	CN	11/07/2017	15:26	LB91434
CCV002	Cyanide	261	250	104	0	85 - 115	CN	11/07/2017	15:37	LB91434



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB91434 **SDG No.:** LB91434
Contract: **Lab Code:** CHEM **Case No.:** LB91434 **SAS No.:** LB91434

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	0.25	+/-10.0	U	5.0	10.0	CN	11/07/2017	15:26	LB91434



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	<u>LB91434</u>	SDG No.:	<u>LB91434</u>				
Contract:	<u> </u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>LB91434</u>	SAS No.:	<u>LB91434</u>

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	0.77	+/-10.0	U	5.0	10.0	CN	11/07/2017	15:26	LB91434
CCB002	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	11/07/2017	15:37	LB91434



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB91434

SDG No.: LB91434

Contract: Lab Code: CHEM

Case No.: LB91434

SAS No.: LB91434

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: LB91434

SDG No.: LB91434

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB104028BL	SOLID		Batch Number:		PB104028		Prep Date:		11/06/2017	
	Cyanide	0.017	<0.49	U	0.012	0.49	CN	11/07/2017	15:26	LB91434
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB104029BL	WATER		Batch Number:		PB104029		Prep Date:		11/06/2017	
	Cyanide	1.5	<10	U	5.0	10	CN	11/07/2017	15:26	LB91434



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB91434 level: low sdg no.: LB91434
contract: lab code: CHEM case no.: LB91434 sas no.: LB91434
matrix: WATER sample id: I6246-10 client id: MBDXL4S
Percent Solids for Sample: 0 Spiked ID: I6246-14 Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	ug/L	75 - 125	101		10.0	U	100	101		CN



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB91434 level: low sdg no.: LB91434
contract: lab code: CHEM case no.: LB91434 sas no.: LB91434
matrix: Solid sample id: I6246-11 client id: MBDXM1S
Percent Solids for Sample: 81.5 Spiked ID: I6246-16 Percent Solids for Spike Sample: 81.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	5.5		0.6	U	6	92		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB91434 **Level:** LOW **SDG No.:** LB91434
Contract: **Lab Code:** CHEM **Case No.:** LB91434 **SAS No.:** LB91434
Matrix: WATER **Sample ID:** I6246-10 **Client ID:** MBDXL4D
Percent Solids for Sample: 0 **Duplicate ID** I6246-13 **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	ug/L	20	10.0	U	4.7	J	200.0		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB91434 **Level:** LOW **SDG No.:** LB91434
Contract: **Lab Code:** CHEM **Case No.:** LB91434 **SAS No.:** LB91434
Matrix: Solid **Sample ID:** I6246-11 **Client ID:** MBDXM1D
Percent Solids for Sample: 81.5 **Duplicate ID** I6246-15 **Percent Solids for Spike Sample:** 81.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.6	U	0.023	U			CN



Hit Summary Sheet
SW-846

SDG No.: LB91434

Order ID: LB91434

Client: LB91434

Project ID: LB91434

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : I6246-03	MBDXK8								
	MBDXK8	WATER	Cyanide	1.900	J	1.5	5	10	ug/L
Client ID : I6246-06	MBDXT9								
	MBDXT9	Solid	Cyanide	0.093	J	0.087	0.395	0.79	mg/kg
Client ID : I6246-07	MBDXX1								
	MBDXX1	Solid	Cyanide	0.120	J	0.084	0.385	0.77	mg/kg
Client ID : I6246-09	MBDXL3								
	MBDXL3	WATER	Cyanide	1.600	J	1.5	5	10	ug/L



Metals
- 10 -

Client: LB91434

SDG No.: LB91434

Contract:

Lab Code: CHEM

Case No.: LB91434

SAS No.: LB91434

Instrument ID: P4

Preparation Method:

Analyte	Wave- length (nm)	MDL	LOD	PQL	Date:
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LIQUID

Method: Cyanide	578.00
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SOLIDS

Method: Cyanide	578.00
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