

Daily Analysis Runlog For Sequence/QC Batch ID # LB87088

Review By

Review On

SubDirectory

LB87088

Test :

Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP54473,WP54472,WP54471,WP54470,WP54469,WP54468
ICV Standard	WP54474
CCV Standard	WP54475
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP54486,WP51276,WP53945

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	04/27/17 09:01		OK
2	S5.0	S5.0	CAL2	04/27/17 09:01		OK
3	S10.0	S10.0	CAL3	04/27/17 09:01		OK
4	S100.0	S100.0	CAL4	04/27/17 09:01		OK
5	S250.0	S250.0	CAL5	04/27/17 09:01		OK
6	S500.0	S500.0	CAL6	04/27/17 09:01		OK
7	ICV	ICV	ICV	04/27/17 09:41		OK
8	ICB	ICB	ICB	04/27/17 09:41		OK
9	CCV001	CCV001	CCV	04/27/17 09:41		OK
10	CCB001	CCB001	CCB	04/27/17 09:41		OK
11	PB98471BL	PBS006	MB	04/27/17 09:41		OK
12	I2836-01	CEM-BF001-01	SAM	04/27/17 09:41		OK
13	I2836-03	CEM-BF001-01D	DUP	04/27/17 09:41		OK
14	I2836-02	CEM-BF001-01S	MS	04/27/17 09:41		OK
15	I2836-04	CEM-BF002-01	SAM	04/27/17 09:41		OK
16	I2836-05	CEM-BF002-02	SAM	04/27/17 09:41		OK
17	I2836-06	CEM-BF003-01	SAM	04/27/17 09:48		OK
18	I2836-07	CEM-BF004-01	SAM	04/27/17 09:48		OK
19	I2836-08	CEM-BF005-01	SAM	04/27/17 09:48		OK
20	I2836-09	CEM-BF006-01	SAM	04/27/17 09:48		OK
21	I2836-10	EME-TS001-01	SAM	04/27/17 09:48		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB87088

Review By		Review On				
SubDirectory		Test : Cyanide				
LB87088						
STD. NAME		STD REF.#				
ICAL Standard		WP54473,WP54472,WP54471,WP54470,WP54469,WP54468				
ICV Standard		WP54474				
CCV Standard		WP54475				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP54486,WP51276,WP53945				
22	I2836-11	EME-TS002-01	SAM	04/27/17 09:48		OK
23	I2836-12	EME-TS003-01	SAM	04/27/17 09:48		OK
24	I2836-13	EME-TS004-01	SAM	04/27/17 09:48		OK
25	I2836-14	EME-TS005-01	SAM	04/27/17 09:48		OK
26	CCV002	CCV002	CCV	04/27/17 09:48		OK
27	CCB002	CCB002	CCB	04/27/17 09:48		OK



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87088

SDG No.: LB87088

Contract: **Lab Code:** CHEM

Case No.: LB87088 **SAS No.:** LB87088

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
ICV	Cyanide	94.9	99	96	0	85 - 115	CN	04/27/2017	09:41	LB87088



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87088

SDG No.: LB87088

Contract: _____ Lab Code: CHEM

Case No.: LB87088

SAS No.: LB87088

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	239	250	96	0	85 - 115	CN	04/27/2017	09:41	LB87088
CCV002	Cyanide	242	250	97	0	85 - 115	CN	04/27/2017	09:48	LB87088



Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87088 **SDG No.:** LB87088
Contract: **Lab Code:** CHEM **Case No.:** LB87088 **SAS No.:** LB87088

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	04/27/2017	09:41	LB87088



Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87088 **SDG No.:** LB87088
Contract: **Lab Code:** CHEM **Case No.:** LB87088 **SAS No.:** LB87088

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	04/27/2017	09:41	LB87088
CCB002	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	04/27/2017	09:48	LB87088



Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:

LB87088

SDG No.:

LB87088

Contract:

Lab Code:

CHEM

Case No.:

LB87088

SAS No.:

LB87088

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF001-01	SDG No.:	LB87088
Lab Sample ID:	I2836-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.059	0.014	0.54	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF002-01	SDG No.:	LB87088
Lab Sample ID:	I2836-04	Matrix:	Solid
Level (low/med):	low	% Solid:	88.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.059	0.014	0.54	mg/kg	04/26/2017	04/27/2017	ISM02.2_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF002-02	SDG No.:	LB87088
Lab Sample ID:	I2836-05	Matrix:	Solid
Level (low/med):	low	% Solid:	85.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.059	0.013	0.54	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF003-01	SDG No.:	LB87088
Lab Sample ID:	I2836-06	Matrix:	Solid
Level (low/med):	low	% Solid:	88.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.059	0.013	0.54	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF004-01	SDG No.:	LB87088
Lab Sample ID:	I2836-07	Matrix:	Solid
Level (low/med):	low	% Solid:	89.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.061	0.014	0.55	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF005-01	SDG No.:	LB87088
Lab Sample ID:	I2836-08	Matrix:	Solid
Level (low/med):	low	% Solid:	88.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.061	0.014	0.56	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	CEM-BF006-01	SDG No.:	LB87088
Lab Sample ID:	I2836-09	Matrix:	Solid
Level (low/med):	low	% Solid:	91.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.008	U	1	0.056	0.013	0.51	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS001-01	SDG No.:	LB87088
Lab Sample ID:	I2836-10	Matrix:	Solid
Level (low/med):	low	% Solid:	78

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.068	0.016	0.62	mg/kg	04/26/2017	04/27/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS002-01	SDG No.:	LB87088
Lab Sample ID:	I2836-11	Matrix:	Solid
Level (low/med):	low	% Solid:	80.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.065	0.015	0.59	mg/kg	04/26/2017	04/27/2017	ISM02.2_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS003-01	SDG No.:	LB87088
Lab Sample ID:	I2836-12	Matrix:	Solid
Level (low/med):	low	% Solid:	78.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.067	0.015	0.61	mg/kg	04/26/2017	04/27/2017	ISM02.2_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS004-01	SDG No.:	LB87088
Lab Sample ID:	I2836-13	Matrix:	Solid
Level (low/med):	low	% Solid:	80

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.067	0.015	0.61	mg/kg	04/26/2017	04/27/2017	ISM02.2_CN



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Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS005-01	SDG No.:	LB87088
Lab Sample ID:	I2836-14	Matrix:	Solid
Level (low/med):	low	% Solid:	81.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0	U	1	0.065	0.015	0.59	mg/kg	04/26/2017	04/27/2017	ISM02.2_CN



Report of Analysis

Client:		Date Collected:	4/24/2017 12:00:00 AM
Project:	LB87088	Date Received:	4/25/2017 12:00:00 AM
Client Sample ID:	EME-TS005-01	SDG No.:	LB87088
Lab Sample ID:	I2836-14	Matrix:	Solid
Level (low/med):	low	% Solid:	81.2

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



SDG No.: LB87088

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB98471BL		SOLID		Batch Number:		PB98471		Prep Date:	04/26/2017	
	Cyanide	0.054	<0.49	U	0.012	0.49	CN	04/27/2017	09:41	LB87088



metals
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MATRIX SPIKE SUMMARY

client: LB87088 level: low sdg no.: LB87088
contract: lab code: CHEM case no.: LB87088 sas no.: LB87088
matrix: Solid sample id: I2836-01 client id: CEM-BF001-01S
Percent Solids for Sample: 86.5 Spiked ID: I2836-02 Percent Solids for Spike Sample: 86.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	4.6		0.54	U	5.4	85		CN

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB87088 **Level:** LOW **SDG No.:** LB87088
Contract: **Lab Code:** CHEM **Case No.:** LB87088 **SAS No.:** LB87088
Matrix: Solid **Sample ID:** I2836-01 **Client ID:** CEM-BF001-01D
Percent Solids for Sample: 86.5 **Duplicate ID** I2836-03 **Percent Solids for Spike Sample:** 86.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.54	U	0.011	U			CN

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SAMPLE PREPARATION SUMMARY

Client: <u>LB87088</u>	SDG No.: <u>LB87088</u>	
Contract: _____	Lab Code: <u>CHEM</u>	Method: _____
	Case No.: <u>LB87088</u>	SAS No.: <u>LB87088</u>

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number: PB98471							
PB98471BL	PBS006	MB	SOLID	04/27/2017	1.02	50.0	100.00
I2836-01	CEM-BF001-01	SAM	SOLID	04/27/2017	1.07	50.0	86.50
I2836-03	CEM-BF001-01D	DUP	SOLID	04/27/2017	1.03	50.0	86.50
I2836-02	CEM-BF001-01S	MS	SOLID	04/27/2017	1.08	50.0	86.50
I2836-04	CEM-BF002-01	SAM	SOLID	04/27/2017	1.04	50.0	88.90
I2836-05	CEM-BF002-02	SAM	SOLID	04/27/2017	1.08	50.0	85.90
I2836-06	CEM-BF003-01	SAM	SOLID	04/27/2017	1.05	50.0	88.30
I2836-07	CEM-BF004-01	SAM	SOLID	04/27/2017	1.01	50.0	89.50
I2836-08	CEM-BF005-01	SAM	SOLID	04/27/2017	1.02	50.0	88.20
I2836-09	CEM-BF006-01	SAM	SOLID	04/27/2017	1.08	50.0	91.40
I2836-10	EME-TS001-01	SAM	SOLID	04/27/2017	1.03	50.0	78.00
I2836-11	EME-TS002-01	SAM	SOLID	04/27/2017	1.05	50.0	80.20
I2836-12	EME-TS003-01	SAM	SOLID	04/27/2017	1.05	50.0	78.30
I2836-13	EME-TS004-01	SAM	SOLID	04/27/2017	1.03	50.0	80.00
I2836-14	EME-TS005-01	SAM	SOLID	04/27/2017	1.04	50.0	81.20